

NEW COMPREHENSIVE DUBLIN HIGH SCHOOL PROJECT EIR

for the [Dublin Unified School District](#)



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1. Executive Summary

This chapter presents an overview of the proposed New Comprehensive Dublin High School project, located at the southeast corner of Central Parkway and Chancery Lane in the City of Dublin, Alameda County, California, herein referred to as the “proposed project” or “project.” This executive summary also provides conclusions of the analyses contained in Subchapters 4.1 through 4.18 of this Draft Environmental Impact Report (Draft EIR), a summary of the alternatives to the project, and issues to be resolved and questions. For a complete description of the project, see Chapter 3, Project Description. For a complete discussion of alternatives to the proposed project, see Chapter 6.

This Draft EIR addresses the environmental effects associated with construction and operation of the proposed project. An EIR is a public document designed to provide the public, local, and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making. The California Environmental Quality Act (California Public Resources Code, Division 13, Section 21000, et seq.) (CEQA) requires that local government agencies consider environmental consequences prior to taking approval action on projects over which they have discretionary approval authority. School districts are considered individual local agencies that act as the lead agencies for their respective school facilities projects. Per Government Code 53094(a), school districts are not required to comply with the local zoning ordinances of a county or city in which projects are located if the governing boards of those school districts adopt an exemption resolution pursuant to that statute. This law notwithstanding, this EIR references City of Dublin regulations and standards to strengthen topical analyses.

This Draft EIR has been prepared pursuant to the requirements of CEQA and the State CEQA Guidelines (Title 14 of the California Code of Regulations, Division 6, Chapter 3, Section 15000, et seq.) to determine if the project could have a significant impact on the environment. Information for this Draft EIR was obtained from on-site field observations; discussions with public service agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, greenhouse gas emissions, noise, geotechnical, and transportation and traffic). Lead Agency Dublin Unified School District (DUSD or District) has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment including reliance on applicable DUSD technical personnel and review of all technical reports.

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1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with implementation of the proposed project. The six main objectives of this document as established by CEQA are:

- To inform decision-makers and the public of the potential, significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental impacts.
- To prevent environmental impacts through implementation of feasible alternatives or mitigation measures.
- To disclose significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the CEQA statutes and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of any environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and if needed, adopt a Statement of Overriding Considerations if the proposed project would result in significant impacts that cannot be avoided.

1.1.1 EIR ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Executive Summary.** Summarizes environmental consequences that would result from implementation of the project, describes recommended mitigation measures, and indicates the level of significance of environmental impacts before and after mitigation.
- **Chapter 2: Introduction.** Provides an overview describing the Draft EIR document.
- **Chapter 3: Project Description.** Describes the proposed project in detail, including the location, characteristics, objectives, and the structural and technical elements of the proposed action. The Project Description also includes a statement briefly describing the intended uses of the EIR.
- **Chapter 4: Environmental Evaluation.** Organized into 18 sub-chapters corresponding to the environmental resource categories identified in Appendix G of the CEQA Guidelines, this section provides a description of the physical environmental conditions in the vicinity of the proposed project as they existed at the time the Notice of Preparation was published, from both a local and regional

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perspective. Additionally, this chapter provides an analysis of the potential environmental impacts of the proposed project, and recommended mitigation measures, if required, to reduce the impacts to less than significant where possible, and to reduce their magnitude or significance when impacts cannot be reduced to a less-than-significant level. The environmental setting included in each sub-chapter provides baseline physical conditions, which provide a context, which the lead agency uses to determine the significance of environmental impacts resulting from the proposed project. Each sub-chapter also includes a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed project; and the potential cumulative impacts associated with the proposed project.

- **Chapter 5: Significant and Unavoidable Impacts.** This chapter lists the impacts that the project would create that would not be mitigated to a less-than-significant level with the implementation of proposed mitigation measures.
- **Chapter 6: Alternatives to the Proposed project.** Considers alternatives to the proposed project, including the CEQA-required “No project” Alternative, a Modified Site Plan Alternative, and a Reduced Enrollment and Recreational Facilities Alternative.
- **Chapter 7: CEQA-Mandated Sections.** Discusses growth inducing impacts and significant irreversible changes as a result of the proposed project.
- **Chapter 8: Organizations and Persons Consulted.** Lists the people and organizations that were contacted during the preparation of this EIR for the proposed project.
- **Appendices:** The appendices for this document (presented in PDF format on a CD attached to the back cover) contain the following supporting documents:
 - Appendix A: Notice of Preparation (NOP) and NOP Response Letters
 - Appendix B: Air Quality, Greenhouse Gas and Health Risk Modeling
 - Appendix C: Health Risk Assessment
 - Appendix D: Energy and Fuel Use Modeling
 - Appendix E: Geological Resources: Geotechnical Engineering Investigation, Geological and Environmental Hazards Assessment Report
 - Appendix F: Hazardous Resources Report: Phase I Environmental Site Assessment (ESA), Phase II Investigation Report, Preliminary Endangerment Assessment, Caltrans Letter, and Probabilistic Seismic Hazard Analysis (PSHA)
 - Appendix G: Hydrological Resources: Hydrology and Low Impact Development Report, Stormwater Pollution Prevention Plan, Water Flow Analysis Report
 - Appendix H: Noise Impact Report
 - Appendix I: AB 52 Consultation

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1.1.2 TYPE AND PURPOSE OF THIS EIR

According to Section 15121(a) of the CEQA Guidelines, the purpose of an EIR is to:

Inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This Draft EIR has been prepared in accordance with the CEQA with DUSD as the Lead Agency. This Draft EIR assesses the potential environmental consequences of implementing the project and identifies Mitigation Measures and Alternatives to the project that would avoid or reduce significant impacts. This Draft EIR is intended to inform DUSD decision-makers, other responsible agencies, and the general public as to the nature of the project's potential environmental impacts.

1.2 PROJECT LOCATION

The proposed school site is a 23.46-acre vacant property located at the southeast corner of Central Parkway and Chancery Lane in the City of Dublin, Alameda County, California (Assessor's Parcel Numbers [APNs] 985-78-2,-3,-4,-5,-6 and -7). The site also includes the areas that make up 0.71 acres of the total 23.46 acres and are identified as part of South Grafton Street and East Finnian Way on Assessor's Map 985 in between APNs 985-78-5,-6. And -7. The City of Dublin is surrounded by San Ramon and unincorporated Contra Costa County to the north, unincorporated Alameda County to the east and west, and Pleasanton and Livermore to the south and southeast, respectively. Regional access to the site is primarily via north-south running Tassajara Road from Interstate 580, located about 0.5 miles west of the site, and east-west running Dublin Boulevard, in the City of Dublin and on which the site is located.

1.3 PROJECT SUMMARY

The proposed comprehensive high school would be DUSD's third high school, and second comprehensive high school in the City of Dublin. The proposed school would consist of classrooms, education and administration-related indoor spaces, as well as outdoor physical education, instructional and recreational components. It would include 559 onsite surface parking spaces and internal drop-off and passing lanes designed for onsite traffic flow and reduced queuing at school entrances. Construction of the proposed project would occur on a total of approximately 23.46 acres. The new comprehensive high school is planned to ultimately accommodate approximately 2,545 students and will be built in two phases (Phase I and Phase II).

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Project phases would include:

- **Phase I:** Will accommodate 1,308 students, and will consist of the construction of a 30,110 square foot administration building and kitchen, a 13,811 square foot student union, a 21,004 square foot library, a 31,898 square foot gymnasium, a 17,597 square foot locker room, a 79,673 square foot academy, 18,563 square feet of Visual and Performing Arts Guidance (VAPA) classrooms, a 55,493 square foot all-weather track with drainage, a 96,837 square foot synthetic field with drainage, four overhead field lights, eight tennis courts consisting of 60,719 square feet, and a 135 stall parking garage consisting of 65,529 square feet.
- **Phase II:** Will accommodate the remaining 1,237 students, and will consist of a second 79,630 square foot academy, a 31,131 square foot theatre, a 831 square foot orchestra pit, a 4,800 square feet maintenance building for the pool, a 1,768 square foot maintenance building, 3,439 square feet of concessions/restrooms, a 34,506 square foot aquatic complex, and 12,733 square feet of 4,000 seat bleachers.

1.4 SUMMARY OF PROJECT ALTERNATIVES

This Draft EIR analyzes alternatives to the proposed Project that are designed to reduce the significant environmental impacts of the proposed Project and feasibly attain most of the proposed Project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the District. The following alternatives to the proposed Project were considered and analyzed in detail:

- No Project Alternative
- 180 Degree Site Plan Modification Alternative
- Reduced Enrollment and Recreational Activities Alternative

Chapter 6, Alternatives to the Proposed Project, of this Draft EIR, includes a complete discussion of these alternatives and of alternatives that were rejected for various reasons.

1.4.1 NO PROJECT ALTERNATIVE

Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, under the No Project Alternative, the proposed Project would not be adopted or implemented, the proposed project site would not be developed, and would be subject to existing policies, regulations, development standards, and land use designations under the existing City of Dublin General Plan.

1.4.2 MODIFIED SITE PLAN ALTERNATIVE

Under the Modified Site Plan Alternative, the footprint of the school buildings, stadium, tennis courts, and parking areas would be modified. The stadium would be placed on the northwest portion of the project site, the tennis courts just south of the stadium, abutting Devany Square, the buildings would be located

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in the center of the site with the gymnasium, lockers, and administration buildings towards the south; the theater, VAPA, and tower one in the middle; and tower two and tower three towards the north. The school buildings would be placed farther away from the perimeter of the site. The parking lots would be located along the eastern edge of the site directly abutting the eastern residences and the Finnian Way loop. Drop off and pick up areas would be located at the Finnian Way loops on the east and west sides of the site, as well as through access points at both Dublin Boulevard and Central Parkway. In comparison to the proposed project, this alternative would include three driveways provided on Dublin Boulevard, as well as a drop-off and pick up area along the Central Parkway frontage. This alternative's parking lot extends the entire north-south length of the site along the eastern frontage, and therefore, vehicles would be permitted to drive through the site, entering on one side and exiting on the other.

1.4.3 REDUCED ENROLLMENT AND RECREATIONAL FACILITIES ALTERNATIVE

Under the Reduced Enrollment and Recreational Facilities Alternative, the scope of the New Comprehensive Dublin High School would be modified so that only Phase I would be constructed. Phase I is designed to accommodate 1,308 students (48 percent reduction) with a total building area of 212,652 square feet of building area (36 percent reduction). Phase I facilities would include the 30,110 square foot administration building, the 13,811 square foot student union, the 21,004 square foot library, the 31,898 square foot gymnasium, the 17,597 square foot locker room, the 79,673 square foot academy, the 18,563 square feet of visual and the performing arts classrooms, recreational facilities including the 55,493 square foot all-weather track, the 96,837 square foot synthetic play field with four overhead field lights, and the eight tennis courts consisting of 60,719 square feet. Parking lots A, B, and C would remain in the same place under this alternative, and circulation and access points into the school would also remain the same. Additionally, the parking structure would be included as part of Phase I.

The project components from Phase II which would not be included in this alternative include the second academy, theatre, concessions, maintenance buildings, orchestra pit, aquatic complex, and the 4000 seat bleachers. Additionally, although the stadium lighting would be installed as part of this alternative, lighting surrounding the tennis courts would be omitted. Structures which would have been built as a component of Phase II will be hardscaped.

Under this alternative, use of the sports facilities would be restricted to regular school hours for activities which include Physical Education courses and graduation ceremonies.

1.5 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, including whether or how to mitigate potentially significant impacts and the choice among alternatives. With regard to the proposed project, the major issues to be resolved include decisions by DUSD, as Lead Agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the project.

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- Whether the proposed land use changes are compatible with the character of the existing area.
- Whether the identified mitigation measures should be adopted or modified.
- Whether there are other mitigation measures that should be applied to the project besides those Mitigation Measures identified in the Draft EIR.
- Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the project and achieve most of the basic objectives.

1.6 QUESTIONS AND CONCERNS

DUSD issued a Notice of Preparation (NOP) on September 30, 2019. A scoping meeting was held on October 10, 2019 at the Fallon Middle School gymnasium to receive oral comments. The CEQA-mandated scoping period for this EIR was from September 30, 2019 to October 30, 2019, during which interested agencies and the public could submit comments about environmental concerns regarding the proposed project to be addressed in the EIR. During this time, DUSD received four comment letters from the following state and regional agencies:

- Alameda County Transportation Commission
- California Department of Transportation
- City of Dublin
- Alameda County Flood Control and Water Conservation District, Zone 7

The comments received focused primarily on the following issues that may be of concern during the environmental review process:

- Overall reduction of Vehicle Miles Traveled (VMT).
- Required Congestion Management Program (CMP) transportation review based on new VMT.
- Potential impacts on the Metropolitan Transportation System (MTS) network and operators.
- Potential impacts to users of the Countywide Bicycle Network and Pedestrian Plan Areas of Countywide Significance.
- Request that the traffic impact analysis (TIA) be analyzed using the Citywide Travel Demand Model.
- Potential impacts to aesthetics due to proximity of existing residential development.
- Potential division of an established neighborhood.
- Potential impacts to ambient noise.
- Potential impacts to Devany Square.
- Concern that the project would not be consistent with the Dublin General Plan.

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- Analysis of stormwater runoff and artificial turf, and the potential need for a Zone 7 drilling permit for any water well or soil boring work, and a Development Impact Fee for Flood Protection and Storm Water Drainage.

Nine comment letters from members of the public were received. While every concern applicable to the CEQA process is addressed in this Draft EIR, the list above is not necessarily exhaustive, but rather attempts to capture those concerns that are likely to generate the greatest interest based on the input received during the scoping process. The NOP and comment letters are included as Appendix A.

1.7 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant impact on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance.¹

Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft EIR and presents a summary of impacts and mitigation measures identified. It is organized to correspond with the environmental issues discussed in Section 4, Chapters 4.1 through 4.18. The table is arranged in four columns: 1) environmental impacts; 2) significance prior to mitigation; 3) recommended mitigation measures; and 4) significance after mitigation. For a complete description of potential impacts, please refer to the specific discussions in Section 4, Chapters 4.1 through 4.18.

¹ California Public Resources Code §§ 21060.5 and 21068.

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
AESTHETICS			
AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.	LTS	N/A	N/A
AES-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	NI	N/A	N/A
AES-3: The proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.	LTS	N/A	N/A
AES-4: The proposed project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	S	<p>AES-4a: District shall plant supplementary trees and landscaping along the southwestern boundary of the proposed project which, in addition to existing landscaping along the southwestern boundary of the proposed project, will further screen and reduce the introduced light and glare impacts on the southwestern project perimeter. The District shall consult with a landscaping expert prior to the installation and operation of the lighting assemblies to determine the appropriate supplementary trees that would be necessary to reduce light and glare impacts. Appropriate supplementary trees and landscaping shall consider the tree species, number of trees, timing for plantings (i.e. time of day and year) as the addition of new non-deciduous trees could result in temporary shadows in the immediate project vicinity as the trees mature. Once the appropriate additional trees have been determined, the trees shall be planted according to the appropriate season as determined by the landscaping expert, which may be prior to the installation of the lighting assemblies or immediately following. The landscaping type, design, and timing shall be established prior to the installation of the field lights. The supplementary trees and landscaping shall be maintained in perpetuity by the District.</p> <p>AES-4b: The District shall install fencing along the southwestern boundary of the proposed project to reduce the effects of the project lightings light spill. The District shall consult with residents adjacent to the southwestern boundary of the project site prior to the installation and operation of the lighting assemblies to coordinate the appropriate types of fencing to install along the boundary. The fence design, and timing shall be established prior to the installation of the stadium and tennis court lights.</p> <p>AES-4c: The District shall adhere to a schedule for which lighting assemblies associated with the tennis courts shall be shut off by 9 pm daily. If the District alters the timing schedule for the tennis</p>	SU

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		court lighting, the residents adjacent to the southwestern boundary of the project site shall be consulted. AES-4d: The District shall install Musco brand lights or any other brand that demonstrates comparable or better light performance and shielding of surrounding properties.	
AES-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to aesthetics.	LTS	N/A	N/A
AIR QUALITY			
AQ-1: The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	N/A	N/A
AQ-2: Uncontrolled fugitive dust (PM10 and PM2.5) could expose the areas that are downwind of construction sites to air pollution from construction activities without the implementation of BAAQMD's best management practices.	S	<p>AQ-2: The Dublin Unified School District shall specify in the construction bid that the project contractor shall comply with the following the Bay Area Air Quality Management District's best management practices for reducing construction emissions of uncontrolled fugitive dust (coarse inhalable particulate matter [PM₁₀] and fine inhalable particulate matter [PM_{2.5}]):</p> <ul style="list-style-type: none"> Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering shall be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water shall be used whenever possible. Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads, parking areas, and staging areas at the construction site to control dust. Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material. Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (e.g., dirt, sand). Limit vehicle traffic speeds on unpaved roads to 15 miles per hour. 	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<ul style="list-style-type: none"> Replant vegetation in disturbed areas as quickly as possible. Install sandbags or other erosion control measures to prevent silt runoff from public roadways. <p>These measures shall be noted on grading plans prepared by the District. The construction contractor shall implement these measures during ground disturbing activities. The Dublin Unified School District shall verify compliance that these measures have been implemented during normal construction site inspections.</p>	
AQ-3: Construction activities of the project could expose sensitive receptors to substantial concentrations of TAC, exceeding the applicable cancer risk threshold.	S	<p>AQ-3: The Dublin Unified School District (District) shall specify in the construction bid that the project construction contractor(s) and subcontractor(s) comply with the following requirements for all off-road equipment greater than 50 hp that will be operating for more than 20 hours over the entire duration of the construction activities at the site:</p> <ul style="list-style-type: none"> Have engines that meet either US EPA or California Air Resources Board (CARB) Tier 4 Final emission standards. Ensure that all construction plans submitted to the School District clearly show the selected emission reduction strategy for construction equipment over 50 horsepower. Maintain a list of all operating equipment in use on the project site for verification by the School District official or his/her designee. The construction equipment list shall state the makes, models, and number of construction equipment on-site. Ensure that all equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Communicate with all sub-contractors in contracts and construction documents that all non-essential idling of construction equipment is restricted to 5 minutes or less in compliance with California Air Resources Board Rule 2449 and is responsible for ensuring that this requirement is met. 	LTS
AQ-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
AQ-5: The proposed project site would not be within 500 feet to the closest traffic lane of a freeway or busy traffic corridor and would not create an air quality health risk due to its placement.	LTS	N/A	N/A
AQ-6: The proposed project would not create an air quality hazard due to the placement of the school site within one-quarter mile of: (a) permitted and non-permitted facilities identified by the jurisdictional air quality control board or air pollution control district; (b) freeways and other busy traffic corridors; (c) large agricultural operations; and/or (d) a rail yard, which might reasonably be anticipated to emit hazardous air emissions, or handle hazardous or acutely hazardous material, substances, or waste.	LTS	N/A	N/A
AQ-7: Implementation of the project would cumulatively contribute to air quality impacts in the Air Basin.	S	AQ-7: Implementation of Mitigation Measures AQ-2 and AQ-3.	LTS
BIOLOGICAL RESOURCES			
BIO-1: The proposed project would 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 by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.	S	<p>Mitigation Measure BIO-1: Any active bird nests in the vicinity of proposed vegetation removal and grading shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling grading and vegetation removal during the non-nesting period (September through February), or if this is not feasible, by conducting a pre-construction survey for active nests. A pre-construction survey report verifying that no active nests are present, or that nesting has been completed as detailed below, shall be submitted to the District for review and approval prior to initiation of grading or vegetation removal during the nesting season. Provisions of the pre-construction survey and nest avoidance measures, if necessary, shall include the following:</p> <ul style="list-style-type: none"> ▪ If initial grubbing and grading is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall be retained by the applicant to conduct a pre-construction nesting survey no more than 7 days prior to initiation of grading or vegetation removal to provide confirmation on presence or absence of active nests in the vicinity. ▪ If active nests are encountered, species-specific measures shall be prepared by a qualified biologist through informal consultation with the California Department of Fish and Wildlife (CDFW) and implemented to prevent nest abandonment. At a minimum, vegetation removal 	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>and grading in the vicinity of the nest shall be deferred until the young birds have fledged. A nest setback zone of at least 100 feet for raptors and 50 feet for passerine birds shall be established, and all construction-related disturbances shall be prohibited within the nest setback zone. The perimeter of the nest setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.</p> <ul style="list-style-type: none"> ▪ If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest setback zone until a qualified biologist verifies either that a) the birds have not begun egg-laying and incubation, or b) the juveniles from the nest are foraging independently and capable of independent survival at an earlier date. ▪ A survey report of findings verifying that any young have fledged shall be submitted for review and approval by the District prior to initiation of grading or vegetation removal in the nest setback zone. Following approval by the District, grading, vegetation removal, and construction in the nest setback zone may proceed as proposed. 	
BIO-2: The proposed project would not 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 United States Fish and Wildlife Service.	NI	N/A	N/A
BIO-3: The proposed project would not 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.	NI	N/A	N/A
BIO-4: The proposed project would not substantially interfere 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.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
BIO-5: The proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LTS	N/A	N/A
BIO-6: The proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan.	NI	N/A	N/A
BIO-7: The proposed project would not result in significant cumulative impacts with respect to biological resources.	LTS	N/A	N/A
CULTURAL RESOURCES			
CULT-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.	NI	N/A	N/A
CULT-2: Implementation of the proposed project would have the potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	S	<p>CULT-2a: Worker Training: proposed project personnel shall receive training regarding the appropriate work practices necessary to effectively implement the cultural resources mitigation measures, including the potential for exposing subsurface cultural resources, including human remains. Training shall be required for all personnel before construction commences and repeated for all new personnel before they begin work on the project. This training program shall be submitted to the District for approval at least 30 days before the start of construction and include procedures to be followed upon the discovery or suspected discovery of unique or historic archaeological materials and human remains, consistent with the procedures set forth in Mitigation Measure CULT-2b and CULT-3.</p> <p>CULT-2b: If unique or historical archaeological resources are encountered during excavation or construction, construction personnel shall be instructed to immediately suspend all activity in the immediate vicinity of the suspected resources and the District, and a licensed archeologist shall be contacted to evaluate the situation. A licensed archeologist shall be retained to inspect the discovery and make any necessary recommendations to evaluate the find under current CEQA Guidelines prior to the submittal of a resource mitigation plan and monitoring program to the District for review and approval prior to the continuation of any on-site construction activity.</p>	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
CULT-3: Implementation of the proposed project would have the potential to disturb human remains, including those interred outside of formal cemeteries.	S	CULT-3: In the event a human burial or skeletal element is identified during excavation or construction, work in that location shall stop immediately until the find can be properly treated. The City and the Alameda County Coroner's office shall be notified. If deemed prehistoric, the Coroner's office would notify the Native American Heritage Commission who would identify a "Most Likely Descendant (MLD)." The archeological consultant and MLD, in conjunction with the project sponsor, shall formulate an appropriate treatment plan for the find, which might include, but not be limited to, respectful scientific recording and removal, being left in place, removal and reburial on site, or elsewhere. Associated grave goods are to be treated in the same manner.	LTS
CULT-4: The proposed project would result in less-than-significant cumulative impacts with respect to cultural resources.	LTS	N/A	N/A
ENERGY			
ENE-1: The proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	LTS	N/A	N/A
ENE-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	N/A	N/A
ENE-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to energy conservation and renewable energy.	LTS	N/A	N/A
GEOLOGY AND SOILS			
GEO-1i: The proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving the 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.	LTS	N/A	N/A
GEO-1ii: The proposed project could directly or indirectly cause potential substantial adverse	LTS	GEO-1.1: Implement the recommendations found within the project Geotechnical Engineering Investigation (Appendix E):	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
effects, including the risk of loss, injury or death involving strong seismic ground shaking.		<p>Groundwater Influence on Structures/Construction:</p> <ul style="list-style-type: none"> ▪ If groundwater is encountered during construction the relevant authority, such as a soils engineer, shall be consulted prior to dewatering the site. Installation of a standpipe piezometer is suggested prior to construction should groundwater levels be a concern. ▪ In addition to the groundwater level, if earthwork is performed during or soon after periods of precipitation, the subgrade soils may become saturated, "pump," or not respond to densification techniques. Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material; or mixing the soil with an approved lime or cement product. A relevant authority shall be consulted prior to implementing remedial measures to observe the unstable subgrade conditions and provide appropriate recommendations. <p>Site Preparation – General:</p> <ul style="list-style-type: none"> ▪ General site clearing shall include removal of vegetation; existing utilities; structures including foundations; basement walls and floors; existing stockpiled soil; trees and associated root systems; rubble; rubbish; and any loose and/or saturated materials. Site stripping shall extend to a minimum depth of two to four inches, or until all organics in excess of three percent by volume are removed. Deeper stripping may be required in localized areas. These materials will not be suitable for use as Engineered Fill. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas. ▪ It is recommended that compaction test reports be provided to the relevant authority for review. Some of the fill soils had varying strength characteristics ranging from loosely placed to compacted. Therefore, it is recommended that any fill soils which have not been properly compacted and certified be excavated and stockpiled so that the native soil can be properly prepared. Prior to fill placement, the relevant authority shall inspect the bottom of the excavation to verify no additional removal will be required. Supplemental testing shall be performed on the fill soils prior to construction to verify their suitability for use as Engineered Fill. ▪ Demolition activities shall include proper removal of any surface and buried structures. Any buried structures or loosely backfilled excavations encountered during construction shall be properly removed and the resulting excavations backfilled with Engineered Fill, compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. ▪ Following stripping, demolition activities, and fill removal operations and/or certification verification, the exposed subgrade in building pad, exterior flatwork, and pavement areas shall be excavated/scarified to a depth of at least 12 inches, worked until uniform and free from large clods, moisture-conditioned to at least two percent above optimum moisture, and recompacted 	

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Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. Limits of recompaction shall extend 5 feet beyond structural elements. This compaction effort shall stabilize the surface soils and locate any unsuitable or pliant areas not found during the GEI field investigation.</p> <ul style="list-style-type: none"> It is recommended that the upper 36 inches of soil within proposed conventional slabs-on-grade and exterior flatwork areas consist of non-expansive Engineered Fill or lime-treated Engineered Fill. The intent is to support slab-on-grade and exterior flatwork areas with 36 inches of non-expansive or lime treated fill. The fill placement serves two functions: 1) it provides a uniform amount of soil which will more evenly distribute the soil pressures and 2) it reduces moisture content fluctuation in the clayey material beneath the building area. The non-expansive fill material shall be a well-graded silty sand or sandy silt soil. The on-site, non-expansive sandy silt and silty sand soils will be suitable for this purpose. A clean sand or very sandy soil is not acceptable for this purpose. A sandy soil will allow the surface water to drain into the expansive clayey soil below, which may result in soil swelling. Imported Fill shall be approved by the soils engineer prior to placement. The fill shall be placed as specified as Engineered Fill. As an alternative, within exterior flatwork areas, the upper 18 inches of soil can consist of lime-treated clayey soils overlain by four inches of aggregate base. However, some movement of the exterior flatwork may occur with this alternative. It is recommended that any uncertified fill material encountered within pavement areas be removed and/or recompacted. The fill materials shall be moisture-conditioned to near optimum moisture and compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. As an alternative, the owner may elect not to recompact the existing fill within paved areas. However, the owner should be aware that the paved areas may settle, which may require annual maintenance. At a minimum, it is recommended that the upper 12 inches of subgrade soil be moisture-conditioned to a minimum of two percent above optimum moisture content and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. Several trees are located within the project site vicinity. If not utilized for the proposed development, tree removal operations shall include roots greater than one inch in diameter. The resulting excavations shall be backfilled with Engineered Fill, compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. Project site winterization consisting of placement of aggregate base and protecting exposed soils during the construction phase shall be performed. Excavations, depressions, or soft and pliant areas extending below planned finished subgrade levels, shall be cleaned to firm, undisturbed soil and backfilled with Engineered Fill. Any buried structures encountered during construction shall be properly removed and backfilled. In 	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>general, any septic tanks, debris pits, cesspools, or similar structures shall be entirely removed. Concrete footings shall be removed to an equivalent depth of at least three feet below proposed footing elevations or as recommended by the soils engineer. Any other buried structures shall be removed in accordance with the recommendations of the soils engineer. The resulting excavations shall be backfilled with Engineered Fill.</p> <ul style="list-style-type: none"> A relevant authority shall be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is integral as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The soils engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of the GEI report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in the GEI. <p>Supplemental Site Preparation - Geogrid Option</p> <ul style="list-style-type: none"> Subsurface soils within the site are prone to liquefaction under high groundshaking acceleration during an earthquake. If the potential differential settlement is not acceptable, the proposed structures can be constructed over a geogrid reinforced soil mat. If this option is utilized, the building area shall be excavated to a minimum depth of five feet below the bottom of the deepest foundation and the resulting excavation shall be backfilled with a layered system of Engineered Fill and geogrid reinforcement. The depth of the over-excavation shall be measured from existing ground or rough pad grade, whichever is deeper. The first layer of geogrid reinforcement will be placed directly at the bottom of the excavation. The geogrid material shall be overlapped a minimum of three feet in all directions. The geogrid strips shall be “shingled” such that the exposed geogrid edge is opposite the direction of fill placement (as roof shingles to rain runoff). The interlock between the geogrid and Engineered Fill will provide load transfer. No vehicles may traverse the geogrid prior to placement of the Engineered Fill cover. The next layer of geogrid shall be placed on top of the compacted Engineered Fill. This and subsequent layers need only be overlapped a minimum of one foot on all sides. The geogrid strips of this layer, and all subsequent layers within the footprint, shall be placed with lengths perpendicular to those in the layer immediately below. The fill soils excavated from the area beneath the structure may be moisture-conditioned and recompacted between geogrid layers as reinforced fill. The reinforced fill shall be conditioned to near optimum moisture and recompacted to a minimum of 90 percent of maximum density based on ASTM D1557 Test Method. A total of five geogrid layers, including the layer at the base of the excavation, shall be installed at vertical increments of one foot. The geogrid layers shall extend to a minimum of five feet beyond the exterior footing perimeter of the structure. The geogrid reinforcement fabric shall 	

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Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>consist of Tensar® BX 6100 Geogrid, TriAx TX-5 or equivalent. Any unstable soils within building areas shall be excavated and backfilled with Engineered Fill as requested by the soil engineer.</p> <ul style="list-style-type: none"> It is recommended that each building site be excavated at once, and soils be stockpiled. The geogrid and excavated soil may then be placed and recompactd as recommended herein. Alternatively, the contractor may elect to excavate the site in two stages, where excavated soil can be stockpiled over one half of the site while the other half is mitigated. However, if the contractor elects the option of two stages over the preferred option of using one stage, a minimum of five feet of geogrid from the first half shall overlap the second half. Furthermore, the overlapping geogrid shall be protected from damages, which may be caused by operating equipment. It is further recommended that flexible utility connections be used for the project. <p>Engineered Fill</p> <ul style="list-style-type: none"> The organic-free, on-site, upper, native and fill soils are predominately sandy clay, gravelly sandy clay, clayey sand, silty clay, and sandy clay with a trace of gravel. The clayey soils will not be suitable for reuse as non-expansive Engineered Fill. These clayey soils will be suitable for reuse for fill placement within the upper 36 inches of conventional slab-on-grade and exterior flatwork areas, provided they are lime-treated. The preliminary application rate of lime shall be five percent by dry weight. The lime material shall be calcium oxide, commonly known as quicklime. The clayey soils shall be at or near optimum moisture content during mixing operations. Additional testing is recommended to determine the appropriate application rate of lime prior to placement. These clayey soils will be suitable for reuse as General Engineered Fill, provided they are moisture-conditioned to at least two percent above optimum moisture. The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase shall be the sole responsibility of the contractor, since he has complete control of the project site at that time. Imported Fill shall consist of a well-graded, slightly cohesive, fine silty sand or sandy silt, with relatively impervious characteristics when compacted. This material shall be approved by the soils engineer prior to use and shall typically possess the following characteristics: 20 to 50 percent passing No. 200 sieve, 10 maximum plasticity index, 15 maximum UBC standard 29-2 expansion index. Fill soils shall be placed in lifts approximately six inches thick, moisture-conditioned to a minimum of two percent above optimum moisture content, and compacted to achieve at least 90 percent of maximum density as determined by ASTM Test Method D1557. Additional lifts shall not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable. 	

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Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>Drainage and Landscaping</p> <ul style="list-style-type: none"> The ground surface shall slope away from building pad and pavement areas toward appropriate drop inlets or other surface drainage devices. In accordance with Section 1804 of the California Building Code, it is recommended that the ground surface adjacent to foundations be sloped a minimum of five percent for a minimum distance of 10 feet away from structures, or to an approved alternative means of drainage conveyance. Swales used for conveyance of drainage and located within 10 feet of foundations shall be sloped a minimum of two percent. Impervious surfaces, such as pavement and exterior concrete flatwork, within 10 feet of building foundations shall be sloped a minimum of one percent away from the structure. Drainage gradients shall be maintained to carry all surface water to collection facilities and off-site. These grades shall be maintained for the life of the project. Slots or weep holes shall be placed in drop inlets or other surface drainage devices in pavement areas to allow free drainage of adjoining base course materials. Cutoff walls shall be installed at pavement edges adjacent to vehicular traffic areas; these walls shall extend to a minimum depth of six inches below pavement subgrades to limit the amount of seepage water that can infiltrate the pavements. Where cutoff walls are undesirable, subgrade drains can be constructed to transport excess water away from planters to drainage interceptors. If cutoff walls can be successfully used at the site, construction of subgrade drains is considered unnecessary. <p>Utility Trench Backfill</p> <ul style="list-style-type: none"> Utility trenches shall be excavated according to accepted engineering practices following Occupational Safety and Health Administration (OSHA) standards by a contractor experienced in such work. The responsibility for the safety of open trenches shall be borne by the contractor. Traffic and vibration adjacent to trench walls shall be reduced; cyclic wetting and drying of excavation side slopes shall be avoided. Depending upon the location and depth of some utility trenches, groundwater flow into open excavations could be experienced, especially during or shortly following periods of precipitation. Sandy and gravelly soil conditions were encountered at the site. These cohesionless soils have a tendency to cave in trench wall excavations. Shoring or sloping back trench sidewalls may be required within these sandy and gravelly soils. Utility trench backfill placed in or adjacent to buildings and exterior slabs shall be compacted to at least 90 percent of the maximum density based on ASTM Test Method D1557. The utility trench backfill placed in pavement areas shall be compacted to at least 90 percent of the maximum density based on ASTM Test Method D1557. Pipe bedding shall be in accordance with pipe manufacturer's recommendations. 	

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Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<ul style="list-style-type: none"> ▪ The Contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor shall use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction. <p>Foundations – Conventional</p> <ul style="list-style-type: none"> ▪ The proposed structures may be supported on a shallow foundation system, bearing on a minimum of 24 inches of Engineered Fill. Spread and continuous footings can be designed for the following maximum allowable soil bearing pressures: 1,875 per square foot (psf) for dead load only, 2,500 psf for dead-plus-live load, or 3,325 psf for total load, including wind or seismic loads. ▪ Exterior footings shall have a minimum depth of 18 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower. Interior footings shall have a minimum depth of 12 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower. Footings shall have a minimum width of 12 inches, regardless of load. ▪ The footing excavations shall not be allowed to dry out any time prior to pouring concrete. It is recommended that footings be reinforced by at least one No. 4 reinforcing bar in both top and bottom. <p>Foundations - Post-Tension or Structural Slab</p> <ul style="list-style-type: none"> ▪ The buildings may be supported on a post-tension slab or structural slab/foundation system. A structural slab system will help reduce structural damage caused by the potential soil movement of the clayey soils and potential settlement associated with seismic settlement. In addition, utilization of a post-tensioned slab will eliminate the requirement for 36 inches of non-expansive or lime-treated Engineered Fill below slab-on-grade. However, the previously recommended densification of the upper native soils and fill material at the site shall still be performed. In addition, the moisture content of the upper 12 inches of subgrade soil below the post-tensioned slabs shall be increased to a minimum of three percent above optimum moisture content prior to pouring the slabs. The moisture content shall be verified by relevant authorities office within 48 hours of pouring the slabs. ▪ The thickness of the slab-on-grade and locations and sizing of stiffening beams (if used) shall be determined by the structural consultant during a subsequent structural analysis, which incorporates the GEI design recommendations, including a deepened perimeter or edge section. Post-tensioned slab-on-grade foundations shall be structurally designed to resist or distribute the stresses that are anticipated to develop as the result of supporting soil movement. 	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<ul style="list-style-type: none"> To aid in reducing the potential for differential soil movement associated with shrinkage and swelling of the fine-grained soils due to changes in moisture contents with changing seasons and landscaping, it is recommended that the exterior edge of the slab be deepened to provide a moisture cut-off around the perimeter of the building. The deepened edge shall extend at least 18 inches below the top of the pad grade, where the top of pad grade is defined as the grade beneath the bottom of the capillary moisture break gravel course or the adjacent exterior subgrade, whichever is deeper. In addition, the slab shall be designed to withstand a potential total and differential static settlement of four inches and two and two thirds inches, respectively. Slabs adjacent to landscape areas may be subject to additional distress due to increased soil moisture level fluctuations from flowerbed watering, as well as drying from tree root moisture removal. Therefore, we recommend that the school district be notified of the potential for soil movement and resulting slab distress which may occur in these instances of landscape neglect. In addition, it is recommended the school site maintain consistent moisture levels and avoid extreme fluctuations in any flowerbeds adjacent to structures, and to avoid planting trees with invasive root systems within 10 feet of the structures. The thickness of the slab-on-grade and locations and sizing of stiffening beams (if used) shall be determined by the project structural engineer. Post-tensioned concrete slabs designed to be of uniform thickness without interior stiffening beams shall be designed in accordance with the procedures presented in Design of Post-Tensioned Slabs-on-Ground. Perimeter columns located outside of the main structure, such as those required for covered terraces or second floor areas projecting out beyond the building footprint shall not be founded on isolated spread footings structurally separated from the slab foundation. The post-tensioned slab-on-grade foundation system will not prevent the structure from undergoing vertical displacement as a result of shrinkage and swelling of the underlying expansive soils. However, the use of a post-tensioned slab-on-grade foundation system, as opposed to a conventionally reinforced non-structural slab-on-grade, will reduce the amount of objectionable slab cracks and vertical off-set of adjacent concrete panels. However, cracking and distress in brittle finishes, such as stucco and drywall should be anticipated. The use of post-tension reinforcement does not necessarily eliminate the development of bending stresses in the slab due to differential movement of the supporting soils. This type of slab essentially distributes the differential movement of the supported structure over a longer span through controlled bending of the slab. 	
		Floor Slabs and Exterior Flatwork	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<ul style="list-style-type: none"> Concrete slab-on-grade shall be appropriate for this project. In areas where it is desired to reduce floor dampness, such as office areas, slab-on-grade construction shall have a water vapor retarder incorporated into the floor slab design. In areas that will utilize moisture-sensitive floor coverings, concrete slab-on-grade floors shall be underlain by a water vapor retarder. The water vapor retarder shall be installed in accordance with accepted engineering practice. The water vapor retarder shall consist of a vapor retarder sheeting underlain by a minimum of three inches of compacted, clean, open graded coarse rock of three quarter of an inch maximum size. The floor slab shall be reinforced as a minimum with No. 3 reinforcement bars at 18 inches on-center, each way, within the floor slabs middle-third. Thicker floor slabs with increased concrete strength and reinforcement shall be designed wherever large vehicular loads, heavy concentrated loads, heavy equipment, or machinery is anticipated. The exterior floors shall be poured separately in order to act independently of the walls and foundation system. Exterior finish grades shall be sloped a minimum of one to one and a half percent away from all interior slab areas to preclude ponding of water adjacent to the structures. All fills required to bring the building pads to grade shall be Engineered Fills. 	
		<p>Lateral Earth Pressures and Retaining Walls</p> <ul style="list-style-type: none"> Walls retaining horizontal backfill and capable of deflecting a minimum of 0.1 percent of its height at the top may be designed using an equivalent fluid active pressure of 50 pounds per square foot per foot of depth. Walls incapable of this deflection or are fully constrained walls against deflection may be designed for an equivalent fluid at-rest pressure -of 70 pounds per square foot per foot of depth. Expansive soils shall not be used for backfill against walls. The wedge of non-expansive backfill material shall extend from the bottom of each retaining wall outward and upward at a slope of 2: 1 (horizontal to vertical) or flatter. The stated lateral earth pressures do not include the effects of hydrostatic water pressures generated by infiltrating surface water that may accumulate behind the retaining walls; or loads imposed by construction equipment, foundations or roadways. During grading and backfilling operations adjacent to any walls, heavy equipment shall not be allowed to operate within a lateral distance of five feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers", vibratory plates, or pneumatic compactors) shall be used to compact the backfill soils. Retaining and/or below grade walls shall be drained with either perforated pipe encased in free draining gravel or a prefabricated drainage system. The gravel zone shall have a minimum width of 12 inches wide and shall extend upward to within 12 inches of the top of the wall. The upper 	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>12 inches of backfill shall consist of native soils, concrete, asphaltic concrete or other suitable backfill to reduce surface drainage into the wall drain system. The aggregate shall conform to Class 2 permeable materials graded in accordance with Section 68-2.02F(3) of the Caltrans Standard Specifications (2018). Prefabricated drainage systems such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, a relevant authority shall review the system for final acceptance prior to installation.</p> <ul style="list-style-type: none"> Drainage pipes shall be placed with perforations down and shall discharge in a non-erosive manner away from foundations and other improvements. The pipes shall be placed no higher than six inches above the heel of the wall in the centerline of the drainage blanket and shall have a minimum diameter of four inches. Collector pipes may be either slotted or perforated. Slots shall be no wider than half an inch in width, while perforations shall be no more than a quarter inch in diameter. If retaining walls are less than six feet in height, the perforated pipe may be omitted in lieu of weep holes on four feet maximum spacing. The weep holes shall consist of four inch diameter holes (concrete walls) or unmortared head joints (masonry walls) and not be higher than 18 inches above the lowest adjacent grade. Two eight inch square overlapping patches of geotextile fabric (conforming to Section 88-1.02 of the Caltrans Standard Specifications for "edge drains") shall be affixed to the rear wall opening of each weep hole to retard soil piping. <p>R-Value Test Results and Pavement Design</p> <ul style="list-style-type: none"> If traffic indices are not available, an estimated (typical value) index of 4.5 may be used for light automobile traffic, and an index of 7.0 may be used for light truck traffic. As indicated previously, fill material is located throughout the site. It is recommended that any uncertified fill material encountered within pavement areas be removed and/ or recompacted. The fill material shall be moisture-conditioned to near optimum moisture and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. As an alternative, the owner may elect not to recompact the existing fill within paved areas. However, the owner shall be aware that the paved areas may settle which may require annual maintenance. At a minimum, it is recommended that the upper 12 inches of subgrade soil be moisture-conditioned as necessary and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. <p>Soil Cement Reactivity</p> <ul style="list-style-type: none"> It is recommended a Type II cement be utilized to compensate for sulfate reactivity with the cement. <p>Compacted Material Acceptance</p>	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<ul style="list-style-type: none"> Compaction specifications are not the only criteria for acceptance of the site grading or other such activities. However, the compaction test is the most universally recognized test method for assessing the performance of the grading contractor. The numerical test results from the compaction test cannot be used to predict the engineering performance of the compacted material. Therefore, the acceptance of compacted materials will also be dependent on the stability of that material. The soils engineer has the option of rejecting any compacted material regardless of the degree of compaction if that material is considered to be unstable or if future instability is suspected. A specific example of rejection of fill material passing the required percent compaction is a fill which has been compacted with an in situ moisture content significantly less than optimum moisture. This type of dry fill (brittle fill) is susceptible to future settlement if it becomes saturated or flooded. <p>Testing and Inspection</p> <ul style="list-style-type: none"> A relevant authority shall be present at the site during the earthwork activities to confirm that actual subsurface conditions are consistent with the exploratory fieldwork. This activity is an integral as acceptance of earthwork construction is dependent upon compaction testing and stability of the material. This representative can also verify that the intent of these recommendations is incorporated into the project design and construction. Grades or staking are the responsibility of the prime contractor. <p>Limitations</p> <ul style="list-style-type: none"> It is suggested that two years be considered a reasonable time for the usefulness of the GEI. If any variations or undesirable conditions are encountered during construction, the soils engineer shall be notified so that supplemental recommendations may be made. <p>Significance with Mitigation: Less than significant.</p>	
GEO-1iv: The proposed project would result in the placement of new buildings in areas susceptible to ground failure in the form of liquefaction, potentially resulting in significant loss, injury, or death.	S	GEO-1.2: Implementation of Mitigation Measure GEO-1.1.	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
GEO-1v: The proposed project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving landslides, mudslides, or other similar hazards.	LTS	LTS	LTS
GEO-2: The proposed project could result in substantial soil erosion or the loss of topsoil.	PS	GEO-2a: To minimize potential impacts of erosion during site development, the proposed project would be required to comply with the Statewide General Construction Permit as well as prepare a stormwater pollution prevention plan that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. Because the project would disturb one or more acres, coverage under the Statewide General Construction Permit would apply. The General Construction Permit also requires that, prior to the start of construction activities, the project applicant must file Permit Registration Documents with the State Water Resources Control Board, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, stormwater pollution prevention plan, and post-construction water balance calculations. Densification of upper native soils and fill material should also be performed. GEO-2b: Implementation of Mitigation Measure GEO-1.1.	LTS
GEO-3: The project could 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.	S	GEO-3: Implementation of Mitigation Measure GEO-1.1.	LTS
GEO-4: The project could be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	PS	GEO-4: Implementation of Mitigation Measure GEO-1.1.	LTS
GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
GEO-6: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	PS	GEO-6: In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery, as needed, in accordance with Society of Vertebrate Paleontology standards, evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. 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. The plan shall be submitted to the District for review and approval prior to implementation.	LTS
GEO-7: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to geology and soils.	LTS	N/A	N/A
GREENHOUSE GAS EMISSIONS			
GHG-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	S	GHG-1a: The Dublin Unified School District shall specify the installation of a photovoltaic system to offset as much electricity usage as feasible from operation of the high school. GHG-1b: The Dublin Unified School District shall design the proposed school to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall be equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.1.2. GHG-1c: The Dublin Unified School District shall design the proposed school to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.3.2.	SU
GHG-2: The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	N/A	N/A
GHG-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to greenhouse gas emissions.	S	GHG-3: Implementation of Mitigation Measures GHG-1a, 1b, and 1c.	SU

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.	LTS	N/A	N/A
HAZ-2: The project could 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.	PS	HAZ-2: The proposed project shall implement recommendations outlined in the approved project PEA.	LTS
HAZ-3: The project would not emit hazardous emissions or handle hazardous materials, substances or waste within ¼-mile of an existing or proposed school.	LTS	N/A	N/A
HAZ-4: The project would not be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.	PS	HAZ-4: Implementation of Mitigation Measure HAZ-2.	LTS
HAZ-5: The proposed school site falls inside Safety Zone 7, identified as the Airport Influence Area (AIA) which, although at a low risk from proximity to the airport, requires discretionary approval.	S	HAZ-5: The ALUCP guidance states that an avigation easement, restricting the heights of structures or trees, should be dedicated to the City of Livermore as a condition for any discretionary local approval for any property within the AIA. The avigation easement shall: <ul style="list-style-type: none"> Identify the potential hazard associated with the proposed project and its location within protected airspace; Identify the airport owner's right to clear or maintain the airspace from potential hazards; Identify the right to mark potential obstructions and notify aviators of such hazards of such hazards; and Provide the right to pass within the identified airspace. 	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
HAZ-6: Temporary modifications to Dublin Boulevard and Central Parkway during construction may temporarily interfere with emergency response.	S	HAZ-6: Implementation of Mitigation Measure TRANS-4.1.	LTS
HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	LTS	N/A	N/A
HAZ-8: The proposed project would not result in cumulative impacts with respect to hazards and hazardous materials.	LTS	N/A	N/A
HYDROLOGY AND WATER QUALITY			
HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	LTS	N/A	N/A
HYD-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	LTS	N/A	N/A
HYD-3: The proposed project would not 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 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 iv) impede or redirect flood flows.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
HYDRO-4: The proposed project would not in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.	NI	N/A	N/A
HYDRO-5: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LTS	N/A	N/A
HYDRO-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to hydrology and water quality.	LTS	N/A	N/A
LAND USE AND PLANNING			
LU-1: The proposed project would not physically divide an established community.	LTS	N/A	N/A
LU-2: The proposed school site falls inside Safety Zone 7 of the AIA, which requires that an avigation easement restricting the heights of structures or trees be dedicated to the City of Livermore as a condition for discretionary local approval of projects within the AIA.	S	LU-2: Implementation of Mitigation Measure HAZ-5.	LTS
LU-3: The proposed project would result in less-than-significant cumulative impacts with respect to land use and planning.	LTS	N/A	N/A
NOISE			
NOI-1: Traffic associated with operation of the proposed project would result in a substantial permanent noise increase.	S	No individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels along Central Parkway.	SU
NOI-1.2: Operation of the stadium and outdoor recreational activities would result in a substantial periodic noise increase.	PS	NOI-1.2: Prior to holding the first spectator event, the District shall develop and enforce a good-neighbor policy for sports field events. Signs shall be erected at entry points that state prohibited activities during an event (e.g., use of air horns, unapproved audio amplification systems, bleacher foot-stomping, loud activity in parking lots upon exiting the field), and events shall be monitored and enforced by the District staff. In addition, the following measures shall be implemented: ▪ During subsequent design phases of the bleachers and PA system, the District's sound system contractor shall create a Stadium Sound System Design Plan. The project's sound system design	SU

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>goal will be to optimize conveying information to the event attendees while minimizing off-site spill-over effects. Design measures include, but are not limited to, bandwidth and peak limiter installation, speaker angle and directivity, and setting a maximum noise level at the PA control console.</p> <ul style="list-style-type: none"> ▪ Prior to the first sports field event, the public address system contractor shall perform a system check-out to verify appropriate sound levels in the seating areas, as well as minimized spill-over sound levels into the adjacent community areas. 	
NOI-1.3: Construction activities would result in a substantial temporary noise increase.	S	<p>NOI-1.3: The project sponsor shall incorporate the following practices into the construction contract agreement documents to be implemented by the construction contractor during the entire construction phase of the project:</p> <ul style="list-style-type: none"> ▪ The project sponsor and contractors shall prepare a Construction Noise Control Plan. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set. ▪ Limit construction to daytime hours (7:00 a.m. to 7:00 p.m.) and prohibit construction on Sundays and holidays. ▪ At least 30 days prior to the start of construction activities, all off-site businesses and residents within 500' of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the District's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. ▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the District's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the District. ▪ Erect a temporary noise barrier between the construction zone and adjacent residences along the eastern and western project boundaries. The temporary sound barrier shall have a minimum height of 12 feet and be free of gaps and holes. The barrier can be (a) a ¾-inch-thick plywood wall OR (b) a hanging blanket/curtain with a surface density of at least 2 pounds per square foot. ▪ During the entire active construction period, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, 	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		<p>use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.</p> <ul style="list-style-type: none"> Require the contractor to use impact tools that are hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools. During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible. The District shall select haul routes that avoid the greatest amount of sensitive use areas. Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes. During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws. 	
NOI-2: The project could generate excessive groundborne vibration levels.	PS	NOI-2: The use of a static roller in place of a vibratory roller will be used to reduce vibration levels below the performance standard of 0.2 in/sec PPV if paving is required within 25 feet of off-site residential buildings.	LTS
NOI-3: 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 2 miles of a public airport or public use airport, the project would not expose people residing or working in the project area to excessive noise levels.	LTS	N/A	N/A
NOI-4: The project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to noise.	S	No individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels.	SU
POPULATION AND HOUSING			
POP-1: The proposed project would not induce substantial unplanned population growth or growth for which inadequate planning has	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
occurred in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).			
POP-2: The proposed project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.	NI	N/A	N/A
POP-3: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to population and housing.	LTS	N/A	N/A
PUBLIC SERVICES			
PUB-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 fire protection services.	LTS	N/A	N/A
PUB-2: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to fire protection services.	LTS	N/A	N/A
PUB-3: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
acceptable service ratios, response times, or other performance objectives for police services.			
PUB-4: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to police services.	LTS	N/A	N/A
PUB-5: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 schools.	NI	N/A	N/A
PUB-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to schools.	NI	N/A	N/A
PUB-7: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 parks and recreational facilities.	LTS	N/A	N/A
PUB-8: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to parks and recreational facilities.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
PUB-9: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 libraries.	LTS	N/A	N/A
PUB-10: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to libraries.	LTS	N/A	N/A
RECREATION			
REC-1: The proposed project would not 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.	LTS	N/A	N/A
REC-2: The project would include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment.	S	Implementation of Mitigation Measures AES-4a, 4b, 4c, 4d, and NOI-1.2.	SU
REC-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impact regarding parks and recreation.	LTS	N/A	N/A
TRANSPORTATION AND TRAFFIC			
TRANS-1.1: The proposed project would not conflict with any plans, policies, ordinances, or regulations pertaining to public transit and thus no significant adverse impacts related to public transit are anticipated.	LTS	N/A	N/A
TRANS-1.2: The project does not include a Class I connection through the project site along the	S	TRANS-1.2: The applicant shall provide a Tier 2 Class I path through the project site from Chancery Lane to Fitzwilliam Street along the Finnian Way right-of-way.	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
Finnian Way alignment between Chancery Lane and Fitzwilliam Street and is thus inconsistent with the City's Bicycle and Pedestrian Master Plan.			
TRANS-1.3: The project does not provide sufficient bicycle parking in accordance with current code requirements.	PS	TRANS-1.3: Provide at least 90 bicycle parking spaces, with a minimum of 72 student bicycle spaces and a minimum of 18 staff bicycle spaces at the project site. Provide a minimum of two permanent, secure bicycle parking spaces per new building meeting one of the following per the California Green Building Standards Code section 5.106.4.2.2: <ul style="list-style-type: none"> ▪ Covered, lockable enclosures with permanently anchored racks for bicycles ▪ Lockable bicycle rooms with permanently anchored racks ▪ Lockable, permanently anchored bicycle lockers 	LTS
TRANS-1.3: The proposed project would not conflict with any plans, policies, ordinances, or regulations pertaining to pedestrian facilities or travel and thus no significant adverse impacts are anticipated.	LTS	N/A	N/A
TRANS -1.5: The proposed project would not conflict with any plans, policies, ordinances, or regulations pertaining to the roadway system and thus no significant adverse impacts related to roadways were identified.	LTS	N/A	N/A
TRANS-2: The proposed project would not conflict with CEQA Guidelines Section 15064.3, subdivision (b)(1). The expected trip length for project students is less than the average trip length of school-based student trips within Alameda County, and the Tri-Valley area.	LTS	N/A	N/A
TRANS-3.1: The increase of pedestrian activity increases the potential for vehicle and pedestrian conflicts.	PS	TRANS-3.1a: The project shall install enhanced school crosswalks at Central Parkway and Grafton Street as well as Chancery Lane and Dunmore Lane. TRANS-3.1b: The project shall install northbound and southbound protective left-turn phasing at the signalized intersection of Central Parkway and Grafton Street to reduce the potential for pedestrian and vehicle conflict.	LTS
TRANS-3.2: The proposed design may compromise driveway sight distance.	PS	TRANS-3.2: The final site plan for the project will be analyzed by the project's Civil Engineer to ensure that adequate sight distance is maintained at all driveways. No objects (landscaping, monument signs, etc.) greater than three feet in height will be allowed within the sight distance	LTS

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
		triangles at driveway intersections. The project's Civil Engineer will review available speed survey information from the City and adjust required sight distance if required in order to comply with applicable sight distance standards.	
TRANS -3.3: The proposed design may cause an unsafe movement when exiting the site at the project driveway located on Dublin Boulevard.	PS	TRANS-3.3: Provide bollards as a vertical barrier for the westbound left turn lane at Dublin Boulevard and Grafton Street to deter vehicles exiting the site to cross multiple lanes of traffic.	LTS
TRANS -3.4: The proposed design near the first proposed driveway east of Chancery Lane would be used as a drop off and pick up zone. Loading and unloading activities in this area would create additional conflicts areas with heavy flows of vehicle, bicycle, and pedestrian traffic in this area.	PS	TRANS-3.4: Modify the proposed project to keep the existing bulb out at the bus stop in its current location. Remove the bulb out at the project driveway and stripe a right turn pocket on Central Parkway turning into the project site.	LTS
TRANS -3.5: The proposed design has Insufficient clear throat depth, for vehicles exiting the project site at this location could potentially conflict with heavy flows of vehicle, bicycle, and pedestrian traffic.	PS	TRANS-3.5: Modify the proposed design at Central Parkway and Grafton Street to provide a minimum throat depth of 100 feet (approximately four vehicles) for vehicles entering and exiting the site.	LTS
TRANS -3.6: Several circulation areas within the project site pose the potential for conflicts between vehicles, pedestrians and bicycles, potentially causing a safety hazard.	PS	TRANS-3.6a: A loading and unloading area with one lane is proposed just north of Building A. To provide for safe and efficient access, the project shall stripe the drop-off area to include two lanes, with one lane dedicated and striped for drop-off and pick-up, and one lane dedicated for passing. TRANS-3.6b: A bi-directional loading and unloading area is proposed just north of the Gymnasium Building M. To provide for safe and efficient access, the project shall restripe the area to be one way with two lanes, one lane for drop-off and pick-up and one lane dedicated for passing. TRANS-3.6c: An on-site intersection is proposed just south of the Central Parkway and Grafton Street project driveway. The proposed configuration does not align with the driveway and provides for an angled off-set intersection. To provide for safe and efficient on-site circulation, the project shall reconfigure and realign this intersection to align with the project driveway and implement side-street stop-control for vehicles leaving the drop-off area just north of Building A. Under this type of intersection control, vehicles leaving the drop off area will be required to stop. TRANS-3.6d: An on-site intersection is proposed just north of the Dublin Boulevard driveway that the project will reconfigure for modified circulation. To improve safety and circulation for vehicles, pedestrians, and bicycles at this location, the project shall extend the landscaped island adjacent to the furthest south ADA parking spot to connect to the adjacent island, install a landscaped island just north of the existing southeastern island, and direct vehicles with signs using the loading and unloading area to travel counterclockwise around the southerly parking lot.	LTS

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
TRANS-4: The proposed project would result in temporary modifications to Dublin Boulevard and Central Parkway during construction which may interfere with emergency vehicle response times and routes.	PS	<p>TRANS-4: Preparation of a traffic management plan (TMP), which would:</p> <ul style="list-style-type: none"> Provide notice to relevant emergency services, thereby avoiding interference with adopted emergency plans, emergency vehicle access, or emergency evacuation plans. Identify locations of staging areas, construction worker parking, and off-site parking staging areas, as necessary. Provide a point of contact for City of Dublin residents to obtain construction information, have questions answered, and convey complaints, as related to construction impacts to traffic. Identify the traffic controls and methods proposed during each phase of the project construction and the provision of safe and adequate access for vehicles, transit, bicycles, and pedestrians. Traffic controls and methods employed during construction shall be in accordance with City of Dublin standards and the requirements of the Manual of Uniform Traffic Control Devices (FHWA, 2009 MUTCD with Revisions 1 and 2, May 2012). The TMP shall identify safe access points, routes of travel and other means of access and circulation. Maintain bicycle and pedestrian access along the project frontage on the east-west thoroughfare on Dublin Boulevard and Central Parkway during construction, when feasible. When infeasible, provide appropriate pedestrian and bicycle detours with adequate signing and striping. 	LTS
TRANS-5: The proposed project, in combination with past, present and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to transportation and traffic.	LTS	N/A	N/A

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
TRIBAL CULTURAL RESOURCES			
TRI-1.1: Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074.	S	TRI-1.1a: Implementation of Mitigation Measure CULT-2a. TRI-1.1b: Implementation of Mitigation Measure CULT-2b.	LTS
TRI-1.2: Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	S	TRI-1.2: Implementation of Mitigation Measure CULT-3.	LTS
TRI-2: The proposed project would result in less-than-significant cumulative impacts with respect to tribal cultural resources.	LTS	N/A	N/A
UTILITIES AND SERVICE SYSTEMS			
UTIL-1: The project would not 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.	LTS	N/A	N/A
UTIL-2: The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	LTS	N/A	N/A
UTIL-3: The proposed project would result in a determination by the wastewater 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.	LTS	N/A	N/A
UTIL-4: The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local	LTS	N/A	N/A

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
infrastructure, or otherwise impair the attainment of solid waste reduction goals.			
UTIL-5: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	LTS	N/A	N/A
UTIL-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to utilities and service systems.	LTS	N/A	N/A
WILDFIRE			
WILD-1: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	LTS	N/A	N/A
WILD-2: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not, 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.	LTS	N/A	N/A

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Without Mitigation	Mitigation Measures	Significance With Mitigation
WILD-3: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not 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.	LTS	N/A	N/A
WILD-4: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not 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.	LTS	N/A	N/A
WILD-5: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to wildfires.	LTS	N/A	N/A

EXECUTIVE SUMMARY

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2. Introduction

Pursuant to the CEQA¹ Guidelines Section 15378(a),² the New Dublin Comprehensive High School Project is considered a “project” subject to environmental review as its implementation is “an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.” This Draft EIR provides an assessment of the potential environmental consequences of implementation of the project. Additionally, this Draft EIR identifies mitigation measures and alternatives to the proposed project that would avoid or reduce significant impacts. This Draft EIR compares the development of the proposed project with the existing baseline condition, described in detail in Chapter 4, Environmental Evaluation, and each subchapter (Chapters 4.1 through 4.18). The Dublin Unified School District (District) is the lead agency for the proposed project. This assessment is intended to inform the District’s decision-makers, other responsible agencies, and the public-at-large of the nature of the proposed project and its effect on the environment.

2.1 PROPOSED PROJECT

The proposed project consists of the development, construction, operation, and maintenance of a new, comprehensive District high school and related educational purposes on a 24-acre site in Dublin. The proposed school would consist of classrooms, education and administration-related indoor spaces, as well as outdoor physical education, instructional and recreational components. The new high school is planned to ultimately accommodate approximately 2,545 students, 86 employees, and 43 support staff and will be built in two phases as summarized below:

- **Phase I:** Will accommodate 1,308 students, and will consist of the construction of a 30,110 square foot (sf) administration building and kitchen, a 13,811 sf student union, a 21,004 sf library, a 31,898 sf gymnasium, a 17,597 sf locker room, a 79,673 sf academy, 18,563 sf of Visual and Performing Arts Guidance (VAPA) classrooms, a 55,493 sf all-weather track with drainage, a 96,837 sf synthetic field with drainage, four overhead field lights, eight tennis courts consisting of 60,719 sf, and a 135 stall parking garage.
- **Phase II:** Will accommodate the remaining 1,237 students, and will consist of a second 79,630 sf academy, a 31,131 sf theatre, an 831 sf orchestra pit, 6,568 sf of maintenance buildings, 3,439 sf of concessions/restrooms, a 34,506 sf aquatic complex, and a 4,000 seat bleacher.

This Draft EIR is a project-level EIR that identifies and analyzes site specific potential impacts of the project. The environmental analysis primarily focuses on the changes in the environment that would result

¹ The CEQA Statutes are found at California Public Resources Code, Division 13, Sections 21000 to 21177.

² The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 to 15387.

INTRODUCTION

from the development of the proposed project. This Draft EIR examines the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of project implementation. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4, Environmental Evaluation.

2.2 ENVIRONMENTAL REVIEW PROCESS

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the District determined that the proposed project could result in potentially significant environmental impacts and that an EIR would be required. In compliance with CEQA Section 21080.4, the District circulated the Notice of Preparation (NOP) of an EIR for the proposed project to the Office of Planning and Research State Clearinghouse and interested agencies and persons on October 1, 2019, for a 30-day review period. A public Scoping Meeting was held on October 10, 2019 at 6:00 p.m. in the Fallon Middle School library located at 3601 Kohnen Way in the City of Dublin. The NOP and scoping process solicited comments from responsible and trustee agencies regarding the scope of the Draft EIR. Appendix A of this Draft EIR contains the NOP, as well as the comments received by the District in response to the NOP.

The scope of this EIR was established through the EIR scoping process and includes an analysis of both the proposed project's impacts and cumulative impacts in the following issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- CEQA- Mandated Assessment Conclusions:
 - Impacts Found Not to Be Significant
 - Significant Unavoidable Impacts
 - Growth-Inducing Impacts
 - Significant Irreversible Changes

This Draft EIR will be available for review by the public, interested parties, agencies, and organizations for a 45-day comment period starting on June 19, 2020, and ending on August 3, 2020. During the comment period, the public is invited to submit written comments via mail or e-mail on the Draft EIR to the Dublin Unified School District. Written comments (electronic communication preferred) should be submitted to:

Chris Stevens, Chief Facilities Operations Officer
Dublin Unified School District
7471 Larkdale Avenue, Dublin, CA 94568
Email: dusdceqa@dublinusd.org

INTRODUCTION

Written and/or verbal comments on the Draft EIR will also be accepted during the public comment period at a public hearing held at the District Board of Trustee's meeting, which will be legally noticed and is tentatively scheduled for July 21, 2020, at 5:30 p.m. While this meeting will be held at the District office located at 7471 Larkdale Avenue, due to current circumstances related to the spread of COVID-19 and the need to ensure the health and safety of the Board members, staff, and the public as a whole, physical attendance at the public hearing cannot currently be accommodated. The meeting will be held by live-stream at the following link: <https://sites.google.com/dublinusd.org/dublinusdtv>.

Comments may be submitted and read aloud during the public comment period of the meeting in accordance with the Public Comment Procedure outlined in the District's published agenda for the July 21, 2020 Board meeting, which can be accessed through the District's website 72 hours before the meeting: www.dublinusd.org.

The Draft EIR is available for review on the District's website: www.dublinusd.org.

2.2.1 FINAL EIR

Upon completion of the 45-day review period for the Draft EIR, the District will review all comments received and prepare written responses for each comment on the adequacy of the Draft EIR. A Final EIR will then be prepared, which contains all comments received, responses to comments raising environmental issues, and any changes to the Draft EIR. A School Board hearing will be scheduled to consider a decision on the project and certification of the Final EIR. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the hearing. All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to the hearing.

The School Board will review and certify the Final EIR and adopt and incorporate into the project all feasible mitigation measures identified in the EIR. The Board may also require other feasible mitigation measures as conditions of approval.

2.2.2 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that the lead agency adopt a mitigation monitoring or reporting program for any project for which it has made mitigation findings pursuant to Public Resources Code Section 21081. Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR. The Mitigation Monitoring and Reporting Program for the proposed project will be completed and available to the public prior to certification of this EIR.

INTRODUCTION

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3. Project Description

3.1 INTRODUCTION

This chapter of the Draft Environmental Impact Report (Draft EIR) describes the proposed New Comprehensive Dublin Unified School District High School project in the City of Dublin, herein referred to as the “project” or “proposed project” analyzed in the EIR. The Draft EIR has been completed in accordance with the California Environmental Quality Act (CEQA). CEQA requires that State and local public agencies analyze proposed projects to determine potential impacts on the environment, disclose any such impacts, and identify ways that the impacts can be avoided or significantly reduced.¹

This chapter of the Draft EIR provides a detailed description of the project, including the lead agency, project location, existing setting (including characteristics of the site and surrounding area and General Plan and Zoning), objectives of the project, components of the project, and approximate construction phasing, as well as required permits and approvals. These activities and approvals collectively constitute the “project” for the purposes of this EIR. Additional descriptions of the environmental setting as they relate to each of the environmental issues analyzed in Chapter 4, Environmental Assessment, are included in Subchapters 4.1 through 4.18 of this Draft EIR.

In accordance with Section 15367 of the CEQA Guidelines, the District is the Lead Agency for the proposed project, since the District will serve as “the public agency which has the principal responsibility for carrying out or approving the project.”

3.2 OVERVIEW

The proposed project consists of the construction, operation, and maintenance of a District high school and related educational purposes, including all uses necessary, incidental, or convenient thereto. The new high school is planned to ultimately accommodate approximately 2,545 students and will be built in two phases (Phase I and Phase II). Using a similar teacher/student ratio as the existing Dublin High School, which as of documentation from the 2016-2017 school year is 1:29, this results in an estimate of 86 faculty employees.² With the addition of an estimated 43 support staff, the total estimated employees for the proposed project is 129. The project would be the District’s third high school in the City of Dublin, and the second comprehensive high school.³

¹ CEQA Guidelines, Section 15002(a).

² Dublin Unified School District, 2017. Dublin High School.

<https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/135/Dublin%20High%20SchoolProfile%2016-17.pdf>, accessed February 4, 2020.

³ Dublin Unified High School, 2019, Future High School Status Update, available online at <https://www.dublin.k12.ca.us/site/default.aspx?PageType=3&DomainID=1&ModuleInstanceID=1197&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=37442&PageID=1>, accessed April 28, 2020.

PROJECT DESCRIPTION

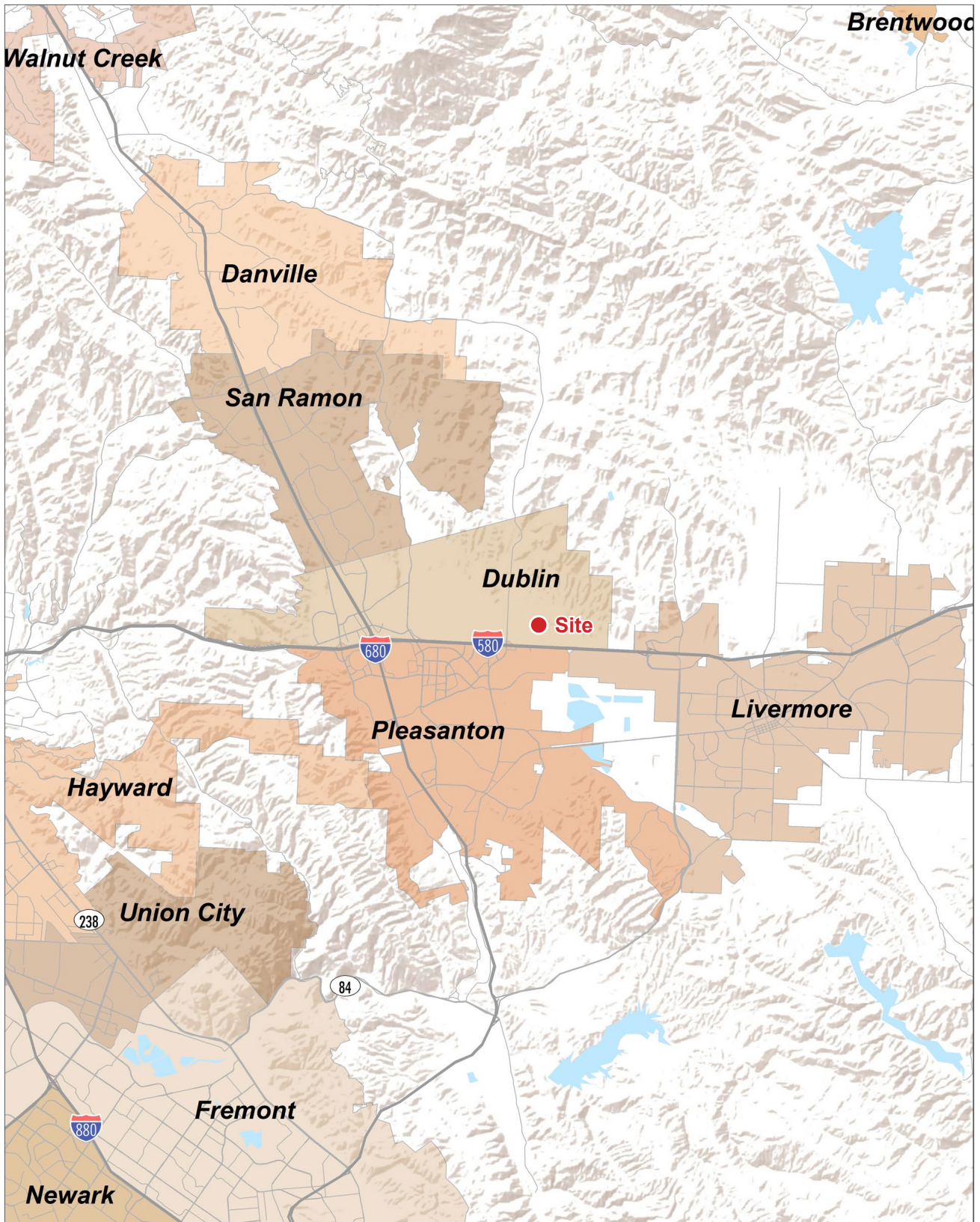
3.3 PROJECT SITE LOCATION AND CHARACTERISTICS

3.3.1 REGIONAL LOCATION AND ACCESS

The project site is located in the City of Dublin in Alameda County, California. The regional location is shown on Figure 3-1. The City of Dublin is surrounded by the City of San Ramon and unincorporated Contra Costa County to the north, unincorporated Alameda County to the east and west, and the cities of Pleasanton and Livermore to the south and southeast, respectively.

Regional access to the site is primarily via east-west running Interstate 580 (I-580), located about 0.25 miles south of the site, and north-south Interstate 680 (I-680) located about 3.4 miles west of the site. The Dublin-Pleasanton BART Station is located about two miles west of the project site.

PROJECT DESCRIPTION



Source: ArcGIS 2018.



Figure 3-1
Regional Location

PROJECT DESCRIPTION



Source: ArcGIS 2019.



Figure 3-3
Surrounding Setting

PROJECT DESCRIPTION

3.3.2 LOCAL SETTING

The proposed school site is a 23.46-acre vacant property located at the southeast corner of Central Parkway and Chancery Lane in the City of Dublin, Alameda County, California (Assessor's Parcel Numbers [APNs] 985-78-2, -3, -4, -5, -6 and -7). The site also includes the areas that make up 0.71 acres of the total 23.46 acres and are identified as part of South Grafton Street and East Finnian Way on Assessor's Map 985 in between APNs 985-78-5, -6, and -7. Figure 3-2 shows the project site in its local vicinity. Devany Square is a 2-acre public park located on the western boundary of the project site at the corner of Chancery Lane and Finnian Way and the park includes a labyrinth and a water play area, among other features. The project site is surrounded primarily by Medium/High-Density Residential and High-Density Residential land uses, pursuant to the City's General Plan, to the north, west and east. The residential housing primarily consists of single-family condominiums built in the early to mid-2000's. Commercial and retail uses are located directly across Dublin Boulevard to the south, these include Dental and Optometry offices, a restaurant, and a home improvement business. A shopping mall, restaurants, and a supermarket are located about 0.7 miles east of the proposed project near the intersection of Dublin Boulevard and Fallon Road. Commercial businesses, restaurants, and medical practices are located about 0.5 miles west of the proposed project near the intersection of Dublin Boulevard and Tassajara Road. Finally, the project site is located about 3.5 miles to the southeast of Dublin High School and about 0.6 and 0.4 miles to the south of Eleanor Murray Fallon Middle School and Kolb Elementary School, respectively.

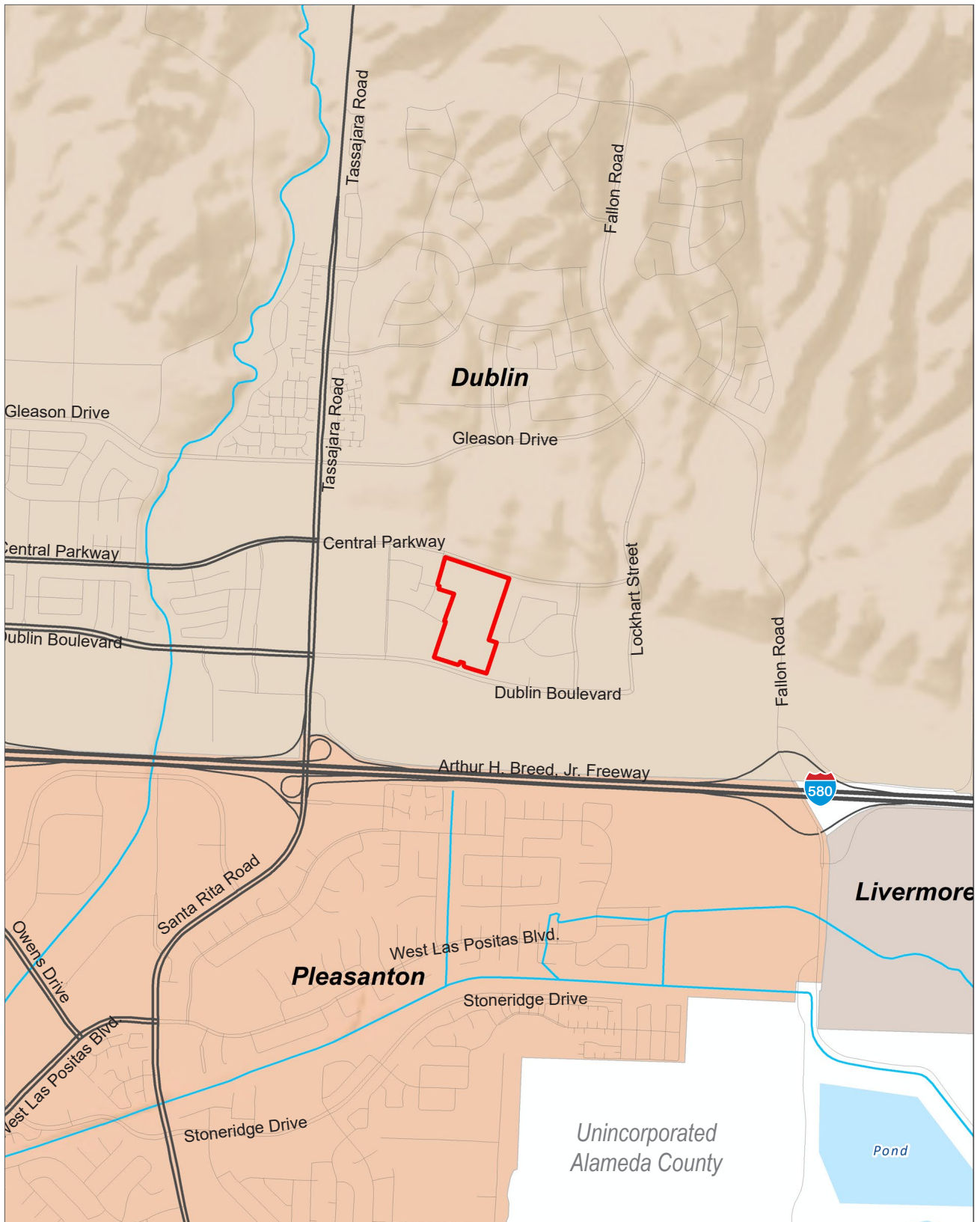
Regional access to the site is primarily via north-south running Tassajara Road from Interstate 580, located about 0.5 miles west of the site, and east-west running Dublin Boulevard, in the City of Dublin and on which the site is located.

3.3.3 EXISTING SITE CONDITIONS

The existing site is fallow, uncultivated land (see Figure 3-3, Surrounding Setting and Figure 3-4, Photographs of Existing Site). According to the USFWS National Wetlands Inventory the proposed project site is bisected by an intermittent riverine streambed habitat.⁴ However, as described in Chapter 4.3, Biological Resources, this habitat is no longer present on the site, having been completely intercepted by nearby development to the north and west so that any potential flow of water is intercepted and conveyed through a storm drainage system, bypassing the proposed project site completely. A number of easements on the site include utility, public access, and emergency access easements that are held by the City of Dublin and the Dublin San Ramon Services District (DSRSD). The DSRSD owns a 10-inch water main and 8-inch recycled water pipeline within a 43-foot-wide water line easement that bisects the site along the area of the future proposed Finnian Way extension, which would connect the segments of Finnian Way on the western and eastern portions of the site. Additionally, DSRSD owns several 8-inch sewer pipelines within 15-foot-wide easements along the western and eastern portions of the site. DSRSD also owns a 10-inch sanitary sewer main that runs north/south along the western side of the site. Several concrete pads and utility vaults exist along the proposed Finnian Way extension and along various easements throughout the site. Pacific Gas and Electric owns an aboveground transformer near the northwest corner of the site.

⁴ United States Fish and Wildlife Service. National Wetlands Inventory Wetlands Mapper. <https://www.fws.gov/wetlands/data/mapper.html>, accessed October 11, 2019.

PROJECT DESCRIPTION



Source: ArcGIS 2018.



 Project Site

Figure 3-2
Local Vicinity

PROJECT DESCRIPTION



View facing southeast from northwest portion of the site. Central Parkway is to the left.



View facing east from the western portion of the site at Finnian Way. Note the existing fencing within and bordering the site.



View facing north from the southeastern portion of the site. Note the proximity to the residences to the east.

Source: GoogleEarth 2018.

Figure 3-4
Photographs of Existing Site

PROJECT DESCRIPTION

3.3.4 GENERAL PLAN LAND USE AND ZONING

3.3.4.1 GENERAL PLAN

As illustrated in Figure 3-5, the Eastern Dublin Specific Plan planning area designates the current land use for the eastern portion of the site as Neighborhood Commercial (NC), while the northwest portion of the site is designated as public/semi-public open space. The NC land use designation provides for the creation of community- and neighborhood- oriented commercial centers that serve the retail, service, and entertainment needs of eastern Dublin. Under the NC designation, mixed-use projects incorporating combinations of commercial, service, office, and/or residential uses are strongly encouraged. The public/semi-public open space designation generally provides for governmental and institutional uses along with semi-public facilities. Examples of public/semi-public open space uses might include a performing arts center, library, community center, post office, or some other community facility.⁵

3.3.4.2 ZONING

The proposed project site is zoned PD (planned development) by the City of Dublin Municipal Code.⁶ The purpose of the PD zoning district is to encourage development that will be in accordance with General Plan policies, provide efficient land use, preserve open space and natural land forms, encourage use of common open areas for neighborhood community activities and amenities, be compatible with and enhance the development of the general area and to create an attractive, efficient, and safe environment.

3.3.4.3 MUNICIPAL CODE EXEMPTION

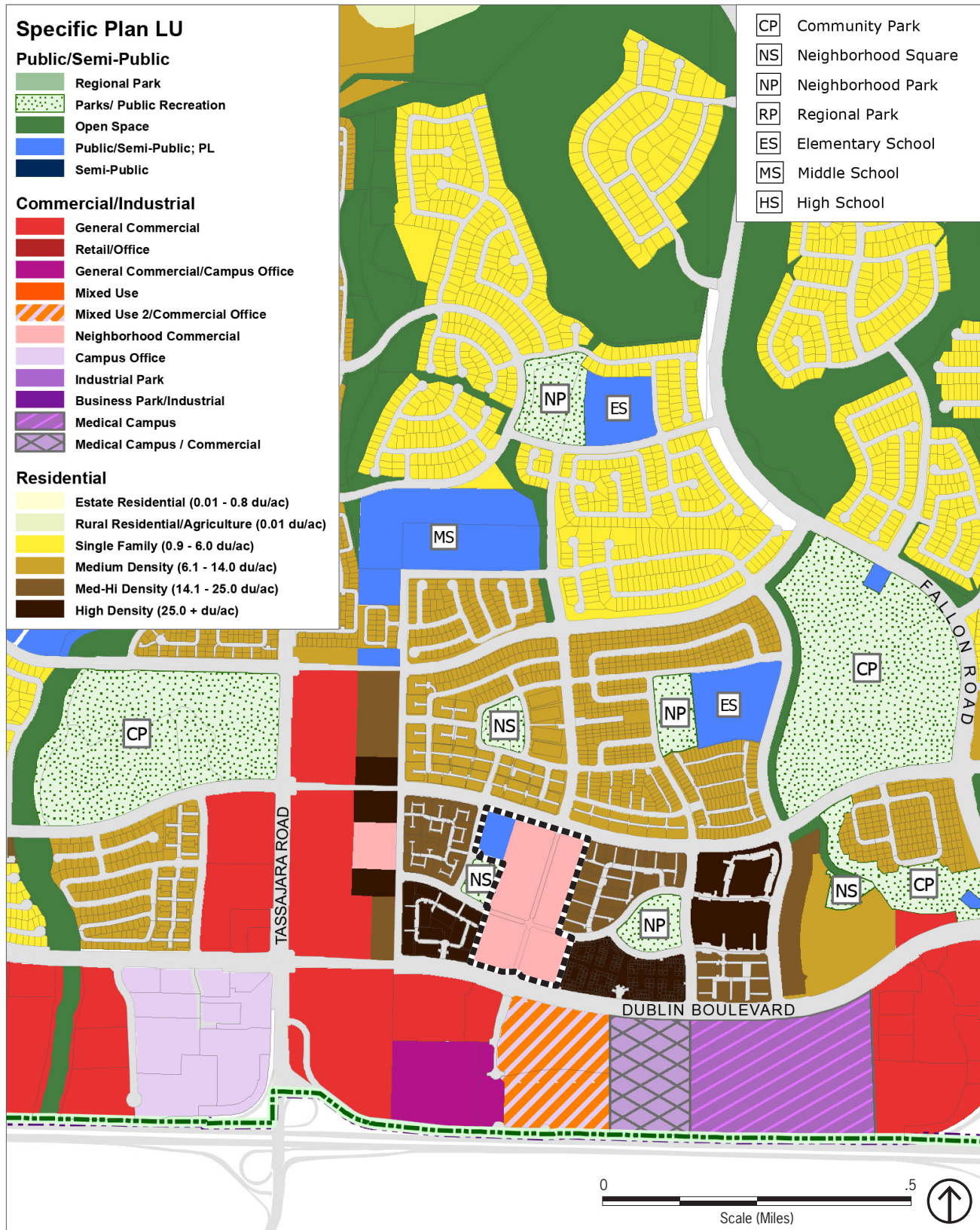
Government Code Section 53094 authorizes the board of a local school district, by two-thirds vote, to render city zoning ordinances inapplicable to the proposed use of certain property for educational purposes. On December 17, 2019, the Board of Trustees of the Dublin Unified School District took action to exempt the proposed New Comprehensive High School from the application of City of Dublin zoning ordinances and regulations. The City was formally notified of this action.

Notwithstanding the fact that the District is not bound by local zoning requirements and ordinances, this Draft EIR discloses all potentially relevant local plans, policies, and ordinances and discusses the project's consistency with those requirements for informational purposes, consistent with CEQA's purpose. Additionally, although the City of Dublin does not control or have responsibility for onsite work, the City does own several pedestrian easements on the future school's property as well as offsite which have an effect of the proposed site layout.

⁵ City of Dublin Zoning Map. December 9, 2014. <https://www.dublin.ca.gov/DocumentCenter/View/9011/Zoning-Small-Poster-201504?bidId=>

⁶ City of Dublin, 2016. Eastern Dublin Specific Plan, January 7, 1994; updated to September 20, 2016.

PROJECT DESCRIPTION



Source: Dublin Land Use Map, 2017.

Project Site Boundary

Figure 3-5
General Plan Land Use

PROJECT DESCRIPTION

3.4 PROJECT PURPOSE AND NEED

The need for the proposed project is based on population growth resulting from increased residential and commercial development in the City of Dublin, which has caused the District's school facilities to exceed capacity. According to the Davis Demographics 7-Year Student Population Projections Packet By Residence, prepared for the District in 2019, as of 2018, the District educated approximately 12,020 transitional kindergarten / kindergarten through 12th grade students in its 12 schools; approximately 2,859 of these were at the high school level.⁷ Dublin High School, the only comprehensive high school that the District operates, has current capacity for 2,481 students. Thus, as of fall of 2018, Dublin High School's student enrollment exceeds capacity of the existing facilities. According to the 2019 School Facilities Needs Analysis prepared on behalf of the District, the District identified the need for construction of new schools and the modernization and improvement of existing schools, including the construction of a new comprehensive high school.⁸

Additionally, the 2019 Davis Demographics study projects that the District will experience an increase of approximately 1,298 students overall at the high school level from fall of 2018 to the fall of 2025. Thus, according to the Davis Demographics study, Dublin High School will have a deficit of capacity of well over 1,000 students by 2022, and construction of new facilities must occur to relieve this current and projected deficiency.⁹

Within the District, the Valley High School (VHS) serves as the continuation school which exists as an option for students who need an alternative to the comprehensive high school. The District estimates an enrollment of approximately 160 students at VHS whom would be sourced from both the existing comprehensive Dublin High School and the comprehensive high school proposed within this project.¹⁰

3.4.1 PROJECT OBJECTIVES

The overarching goal of the proposed project is to increase District student capacity and alleviate overcrowding at the District's existing high schools. The District has developed the following project objectives to aid decision-makers in their review of the project, consideration of project alternatives and associated environmental impacts.

- Help relieve existing classroom overcrowding and accommodate an increasing high school student population across the District, and particularly on the east side of the District.

⁷ Dublin Unified School District, 2019, Davis Demographics, 7-Year Student Population Projections Packet By Residence, Fall 2019-2025.

⁸ Dublin Unified School District, 2019, School Facilities Needs Analysis, available online at https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/16/DUSD_2019SFNARreport_FINAL_2019_05_08.pdf, accessed April 13, 2020.

⁹ Dublin Unified School District, 2019, Davis Demographics, 7-Year Student Population Projections Packet By Residence, Fall 2019-2025.

¹⁰ Valley High School – Home of the Dragons, 2020, School Information, available online at <https://www.dublin.k12.ca.us/domain/472>, accessed June 16, 2020.

PROJECT DESCRIPTION

- Build and maintain a second comprehensive high school that reflects the efficient use of limited land and public resources.
- Provide safe, efficient, and adequate school site access, circulation, and parking areas for students and District staff.
- Offer and expand recreational and extracurricular opportunities to supplement education opportunities within the District.
- That all high school age students have access to comprehensive high school facilities, including classrooms, stadium, theater, aquatic center, and other functional components vital to their educational and recreational success.

3.5 PROJECT DESCRIPTION

As previously noted, the proposed project consists of the development, construction, operation, and maintenance of a comprehensive District high school and related educational purposes. The new high school is planned to be built in two phases and will ultimately accommodate approximately 2,500 students, 1,308 under Phase I and 1,237 under Phase II. The two phases are detailed in Tables 3.5-1 and Table 3.5-2:

TABLE 3.5-1 NEW BUILDING CONSTRUCTION SUMMARY

Project Component	New Construction (Square Feet)
Administration Building and Kitchen ¹	30,110
Student Union ¹	13,811
Library ¹	21,004
Gymnasium ¹	31,898
Locker Room ¹	17,597
First Academy ¹	79,673
VAPA Classrooms ¹	18,563
Second Academy ²	79,630
Theatre ²	31,131
Concessions/restrooms ²	3,439
Pool/Maintenance ²	4,800
Maintenance ²	1,768
Total	333,424

Source: SIM PBK Architects, 2020.

Notes: Phase I: 1, Phase II: 2.

TABLE 3.5-2 OUTDOOR CONSTRUCTION SUMMARY

Project Component	New Construction (Square Feet)
All-weather track with drainage ¹	55,493

PROJECT DESCRIPTION

TABLE 3.5-2 OUTDOOR CONSTRUCTION SUMMARY

Project Component	New Construction (Square Feet)
Synthetic field with drainage ¹	96,837
Overhead field lights ¹	-
Eight tennis courts ¹	60,719
135 stall parking garage ¹	65,529
Orchestra Pit ²	831
Aquatic Complex ²	34,506
4000 Seat Bleachers ²	12,733
Total	326,648

Source: SIM PBK Architects, 2019.

Notes: Phase I: 1, Phase II: 2.

3.5.1 SITE PLAN

The proposed project would be composed of multiple buildings, hardtops, and fields that form a generally rectangular campus spanning Dublin Boulevard on the south to Central Parkway on the north, as shown in the Conceptual Site Plan (Figure 3-6). It would include approximately 333,424 square feet of built indoor area. A two story tower consisting of Administration & Counseling, two-story Library, 125-seat Lecture Hall, food court, and student union space, as well as visual and performing arts (VAPA) classrooms and a 820-seat Performing Arts Theater with Support Facilities would be located at the northern end of the property; a three story tower (52 feet high) consisting of 20 standard classrooms, four chemistry labs, five flex science labs, one flex classroom, two life skills special education and two special education classrooms, two flex classrooms, and two electronic arts rooms, as well as a second three-story building (52 feet high) consisting of 22 standard classrooms, a special education room, seven flex science labs, two flex classrooms, and five engineering labs would be located in the center of the campus; a gymnasium consisting of three full basketball courts and 2,500 seats, a locker room consisting of boys and girls locker rooms, team rooms, and a weight room and training room, as well as an aquatic complex with 50-meter competition pool and warm-up pool would located at the eastern end of the property; and, lastly, an all-weather track, synthetic football stadium/soccer field, field lights, eight tennis courts, and 4000 seat stadium bleachers would be located on the southern end of the property. At times, individual aircraft overflights could be audible at the project site; however, the classroom buildings would be air conditioned, allowing for doors and windows to remain closed during instruction.

The proposed school's outdoor instruction and activity areas would be located between the western property line and the stadium. A hardtop recreation area would be located west of the stadium and south of the cluster of Tower campus buildings. This paved area includes the eight tennis courts described above and other surface play facilities. This area spans 60,719 square feet and extends from the south-western boundary of the proposed project site.

The stadium area covers approximately 96,837 square feet of artificial turf, 55,493 square feet of all-weather track surface, and 6,390 square feet of concrete sidewalk as well as the 4000 seat bleachers and

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the concessions and restrooms. It is located on the southern portion of the project site between the hardtop recreation area and the southeastern parking area and turnaround.

The main entryway to the school would be located in front of the administration building, accessed from Central Parkway.

As shown on Figure 3-6, the proposed project site is accessible from Dublin Boulevard to the south, Central Parkway to the north, or the Finnian Way loops to the west and east. Upon completion, the school will be accessible from all of these access points. Three areas on the proposed school site would be dedicated to circulation and parking. A turnaround loop is located at the northeast corner of the campus which would include lot A with 244 parking stalls, eight of which would be accessible stalls. This area is accessed by multiple entry/exit ways on Central Parkway. A second turnaround loop is located at the southeast corner of the campus which would include lot B with 147 pull-in parking stalls, six of which would be accessible stalls. This area is accessed by a single entry/exit way on Dublin Boulevard. A separate parking area, lot C, with 33 pull-in parking stalls, two of which would be accessible stalls, would be located on the northern portion of the school site to the west of the northern turnaround. This area is accessed by two dedicated entry/exits ways on Chancery Lane. All proposed parking would be 90-degree angled stalls. Figure 3-7 displays an aerial of the proposed project. Elevations of the buildings are shown in Figures 3-8 through 3-10, while Figures 3-11 through 3-16 display the exterior façade and interior design of the buildings.

3.5.2 PROPOSED STADIUM AND FACILITIES USES

The proposed stadium would have a seating capacity for 4,000 spectators, including two sets of bleachers, with 2,500 seats on the home side and 1,500 seats on the visitor side. For most sporting events, it is unlikely that the bleachers on either side would be filled to capacity, however a conservative analysis of the proposed field uses was generated in collaboration with DUSD with a range of attendance levels.

For the stadium, junior varsity sports games would begin at 5:30 p.m. and would be completed by 7:00 p.m., while varsity sports games would begin by 7:00 p.m. and should be completed by 10:00 p.m. After games, the lights would be manually switched to the “dimmed” setting to allow for the following actions: the team members to leave the field, spectators to vacate the bleachers, and for the high school staff to clean up before exiting the stadium. Ultimately, the lights would be manually switched off between 10:00 and 10:30 p.m., after the sports games and cleaning activities, to avoid late night use. However, in the rare event of an overtime play, the lights could extend beyond the scheduled shut-off time. For other events at the stadium, as well as events at the tennis courts and the aquatic complex, the lights would be shut off earlier than the 10:00 p.m. deadline, as they end earlier and draw fewer spectators.

As shown in Table 3.5-3, there would be an estimated number of 51 nighttime events using both the lighting and PA systems with an anticipated range of attendance of 300 – 4,000 at the field. These would include events such as the annual Graduation Ceremony, Football Championship games, other football games, band competition, lacrosse, cross country meets, and soccer games. Further, events with no spectators (i.e. practices), would possibly utilize the lighting, but not the PA system. For the purposes of this EIR, a maximum number of 52 such events have been included.

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There would be 41 events that would use the PA system but would not use the lighting system. These would include events such as lacrosse, cross country meets, soccer games, track meets, and other student assemblies as needed, with an estimated attendance of 300 to 1,000 spectators. Summer track events which takes place on campus would occur between the hours of 5:00 to 8:00 p.m. and is not anticipated to require the use of the lighting or the PA system.

Refer to Table 3.5-3 for a breakdown of the proposed annual events to be held at the stadium and facilities.

TABLE 3.5-3 SPECIAL EVENTS

Event	Events per Year	Events with Lighting	Event with PA System	Attendance
Stadium Special Events				
Graduation	1	1	1	4,000
Football (All Teams)	4	4	4	4,000
Championship Games	3	3	3	4,000
Band Competition	1	1	1	4,000
Other Capacity Events	2	1	1	4,000
Total Capacity Stadium Events	11	-	-	-
Stadium Non-Capacity Events				
Lacrosse	6	3	6	300
Cross Country Meets	6	3	6	500
Soccer Games	16	8	16	300
Track Meets	6	3	6	500
Fall Season Practices	52	26	0	150
Winter Season Practices	52	26	0	150
Spring Season Practices	52	0	0	150
Summer Season Practices	30	0	0	75
School Events	24	0	24	1,000
Total Non-Capacity Stadium Events	255	-	-	-
Theater Capacity Events	26	0	0	820
Theater Non-Capacity Events	26	0	0	410
Total Theater Events	52	-	-	-
Totals	318	79	68	-

Special event information generated in collaboration with DUSD

PROJECT DESCRIPTION



Source: Google Earth Professional, 2018. PlaceWorks, 2018.

 Project Site Boundary

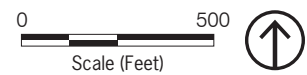


Figure 3-6
Project Site Plan

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-7
Project Site Aerial

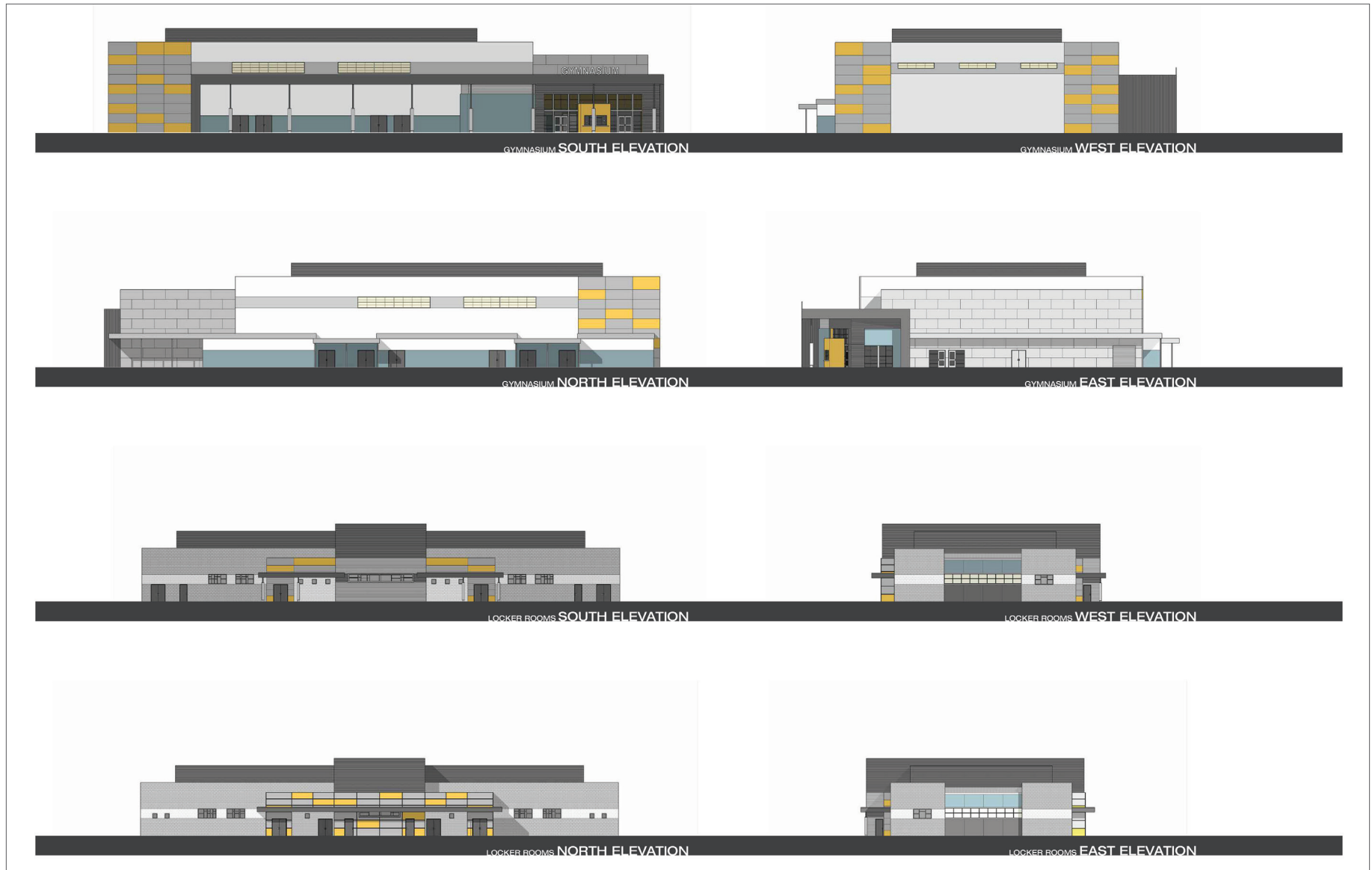
PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-8
Administration/VAPA/Library/Mall Exterior Elevations

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-9
Gymnasium/Locker Rooms Exterior Elevations

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-10
Classroom Tower Exterior Elevations

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-11
Project Renderings: Gymnasium, Student Union, Administration

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-12
Project Renderings: Student Union, Library

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-13
Project Renderings:
Towers with Bridge Connection, Food Court with Lecture Hall Entrance

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-14

Project Renderings:
Food Court, Visual and Performing Arts and Theater Entrances, and Cafeteria

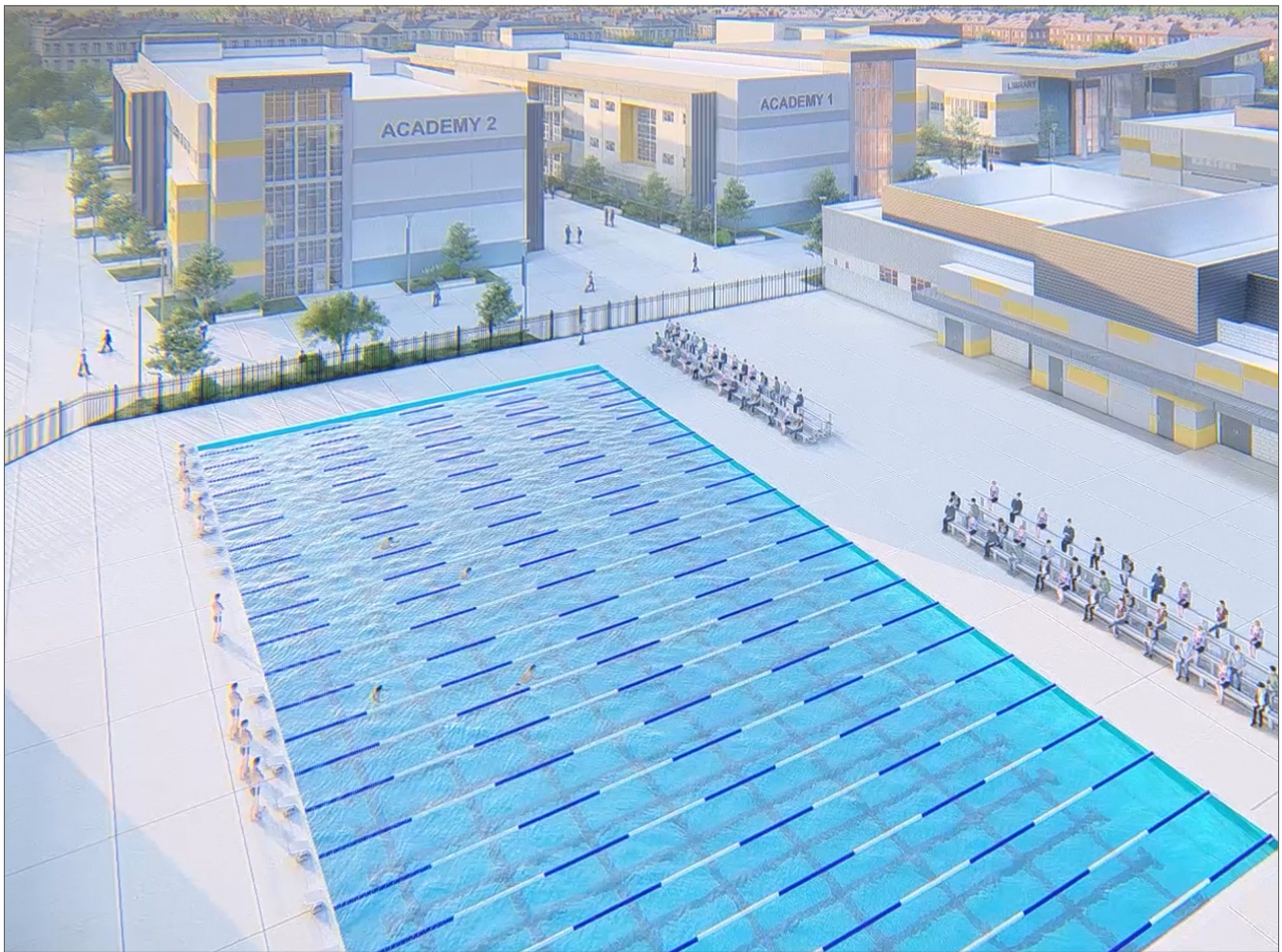
PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-15
Project Renderings: Lecture Classroom, Theater

PROJECT DESCRIPTION



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 3-16
Project Renderings: Swimming Pool, Indoor Stadium

PROJECT DESCRIPTION

3.5.3 LANDSCAPING

The proposed landscape plan is shown in Figure 3-17 below. The campus would be landscaped primarily with small flowering trees and accent trees in courtyard areas between buildings and in outdoor assembly areas, as well as along the school entrance pathway and Central Parkway pedestrian entrance. In addition, a series of bioretention areas would be installed in or near new hardscaped areas to control stormwater runoff. On-site and off-site landscaping will be supplied through the Dublin San Ramon Services District.

3.5.4 LIGHTING

Project lighting would be typical for human-scale orientation and safety. The project would include interior and exterior lighting and lighting controls for the new entryway and classroom buildings, as well as security load lighting. Exterior lighting fixtures for the buildings would utilize LED lamp sources and be designed in accordance with Title 24, architectural design criteria, and the recommendations of The Illuminating Engineering Society (IES) of North America.¹¹ Parking areas will be illuminated with pole mounted full cutoff LED area lights with IES optical patterns appropriate for the area, as well as shielding to mitigate light trespass. Campus interior walkways will be illuminated with pole mounted full cutoff “post top” LED area lights with appropriate IES optical patterns.

Lighting controls for all new buildings would include multi-zone and dimming features to allow for local and Title 24 required control. All exterior lighting shall be programmed per Title 24 requirements, with exterior lights over 30 watts provided with additional motion sensing controls to reduce overall light output.

As described in Chapter 4.1, Aesthetics, the proposed stadium lighting system would consist of two 100 foot poles and two 90 foot poles, while the tennis courts lighting system would consist of seven 50 foot poles and one 40 foot pole for a total of 118 lighting fixtures to allow use of the stadium and courts for night events. The four light poles would be situated symmetrically in a square formation surrounding the football field (at approximately the 10-yard line). Refer to Figures 4.1-2 and 4.1-3 for an illustration of the proposed lighting plan and Figure 4.1-3 for the stadium and tennis courts illuminance measurements.

¹¹ California Energy Commission. Building Energy Efficiency Standards – Title 24. 2019. Available online at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards>. Accessed October 14, 2019; Illuminating Engineering Society. 2019. Available online at <https://www.ies.org/>. Accessed October 14, 2019.

PROJECT DESCRIPTION

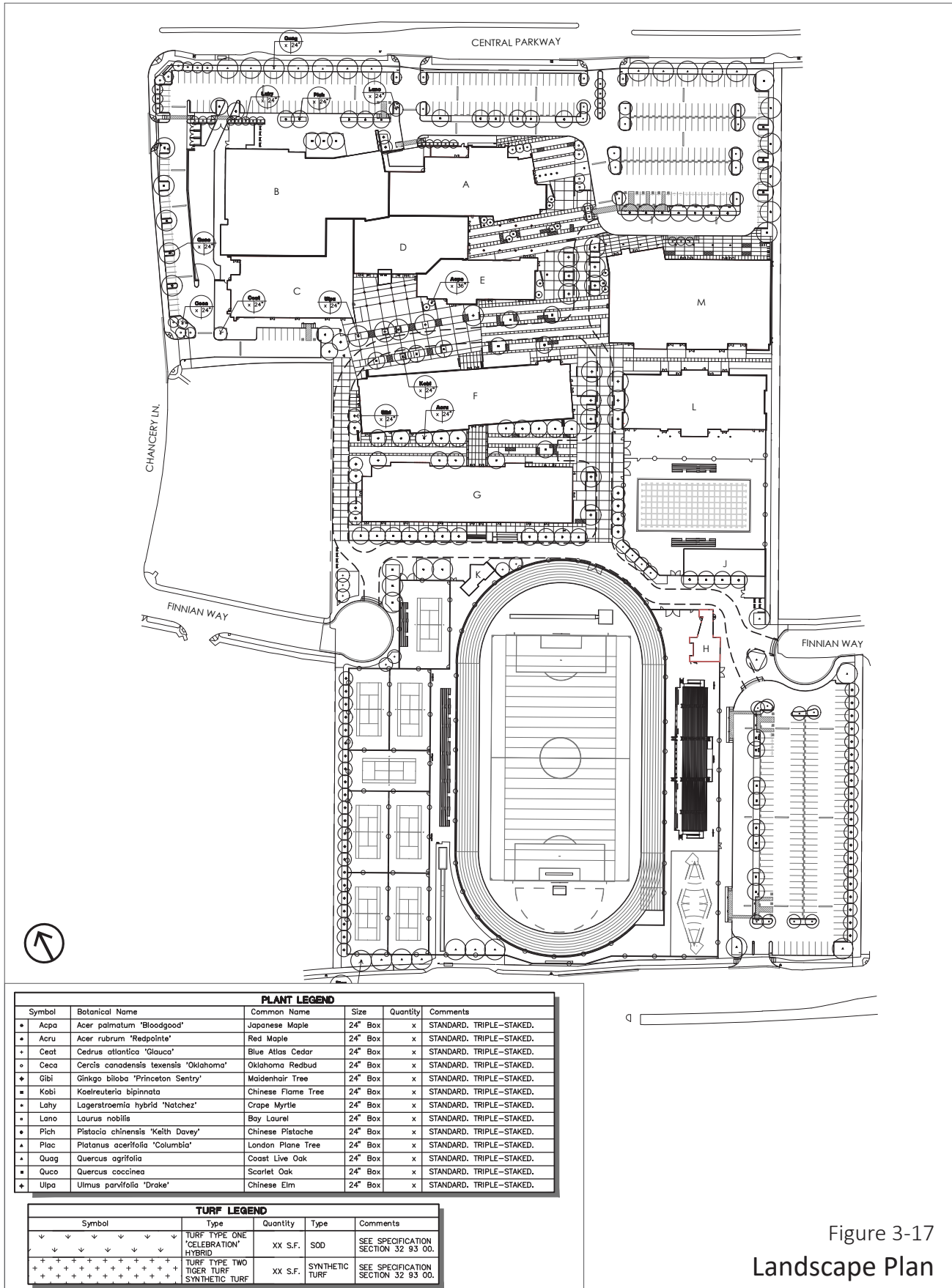


Figure 3-17
Landscape Plan

Source: SIM-PBK, 2020. PlaceWorks, 2020.

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3.5.5 STORM DRAINAGE

Most storm drains on the project site will remain in place. The existing 60-inch storm drain main that runs north/south through the site is proposed to remain in place. The existing 24-inch storm drain line from Finnian Way west of the site that connects the 60-inch storm drain main is proposed to remain in place. The existing 36-inch storm drain line from Finnian Way east of the site that connects to the 60-inch storm drain main will remain in place except for a portion that will be realigned around Building H restrooms/concessions. The existing 36-inch storm drain that extends south from Finnian Way along the east boundary is proposed to remain in place. The existing 24-inch and 30-inch storm drains that extend from Chancery Lane east and connect to the 60-inch storm drain are proposed to remain in place. All existing on-site storm drainage inlets/manholes and laterals will be removed.

3.5.6 HYDROLOGY/LOW IMPACT DEVELOPMENT

School districts are not considered to be “C-3 regulated projects” per the Municipal Regional Stormwater Permit (MRP). However, the project will incorporate site design measures, stormwater source controls and stormwater treatment measures, including bioretention basins at various locations throughout the site, to the maximum extent practical. The project will also implement hydromodification measures to offset impacts from stormwater runoff so that post development runoff rates do not exceed pre-development runoff rates.

3.5.7 UTILITIES

The Dublin San Ramon Services District (DSRSD) existing 10-inch sanitary sewer line that runs north/south through the site will be removed and replaced with realigned sanitary sewer along the east and west boundaries of the project. A DSRSD existing 8-inch sanitary sewer line that extends north from Finnian Way near the east boundary is not used and will be removed. The DSRSD existing 10-inch water main that runs east/west at Finnian Way will be realigned around the proposed athletic field, extended north to Central Parkway and Chancery Lane to serve as a fire hydrant loop system. The realigned 10-inch water main will be a DSRSD facility within an easement. The DSRSD existing 8-inch recycled water main that runs east/west at Finnian Way will be terminated in the proposed Finnian Way cul-de-sac and removed in between. The project will be required to install a new recycled water main in Brannigan Street from Whitworth Lane south to Finnian Way to complete a loop that will allow the on-site recycled water main to be removed.

There are existing improvements and facilities located within the properties in the Public Service Easement and Storm Drain Easement. The existing City facilities within the properties are a 60-inch diameter storm drain line, 30-inch diameter storm drain line, 24-inch to 30-inch diameter storm drain line, and 24-inch to 36-inch to 42-inch storm drain line, along with appurtenant structures and facilities {i.e., manholes and drainage inlets}.

An existing PG&E gas line and easement extending south from Finnian Way along the east boundary is proposed to remain in-place. A PG&E structure near the northwest corner of the site will require

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relocation out of the project driveway and remain within the existing easement. An existing SBC easement at the north side of Finnian Way along the west boundary will remain in-place.

3.6 CONSTRUCTION PHASING

As described in Section 3.5, above, project construction would occur in two phases. This phasing is intended to ensure that classroom buildings are ready for occupancy by August 2022, to coincide with the start of the 2022-2023 calendar school year.

The Division of the State Architect (DSA) and California Department of Education (CDE) will review the school site plans from November of 2019 to May of 2021. Following this review phase, project construction for Phase 1 would progress as follows:

1. Final Construction Pricing: June 2020 to July 2020
2. Site Preparation: August 2020 to September 2020
3. Construction: August 2020 to August 2022
4. Beneficial Occupancy: August 1, 2022

Project construction for Phase II would progress pending District decision.

3.7 INTENDED USES OF THIS EIR

This project-level EIR is intended to review the potential, specific environmental impacts associated with the construction and operation of the proposed project, determine corresponding mitigation measures, as necessary, and facilitate public disclosure and review of those impacts and potential mitigation measures.

3.8 PROJECT PERMITS AND APPROVALS

The proposed project would require a series of permits and approvals from various agencies with discretionary authority related to the project. These agencies and potential permits and approvals are listed below.

- Approval and EIR certification by the Dublin Unified School District Board of Trustees.
- Approval of construction plans by the State of California Division of the State Architect.
- Hazardous materials review by the State of California Division of Toxic Substances Control.
- Plan approval by the California Department of Education.
- Approval of fire truck access into gates and for hydrants, and for fire flow design by the Dublin Fire Department.

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- Approval of water systems by the Dublin San Ramon Services District.
- Approval of wastewater systems by the Dublin San Ramon Services District.
- Approval of storm drainage systems by the City of Dublin.
- Approval of off-site street improvement plans by the City of Dublin.
- Approval of the storm water pollution prevention plan by the State of California Department of Water Resources and City of Dublin.

4. Environmental Analysis

This chapter of the Draft EIR is made up of 18 sub-chapters. This introduction describes the organization of the Draft EIR and the assumptions and methodology of the cumulative impact analysis. The remaining 18 sub-chapters evaluate the direct, indirect, and cumulative environmental impacts of the proposed project.

In accordance with Appendix G, Environmental Checklist, of the 2019 CEQA Guidelines, as amended per Assembly Bill 52 (Tribal Cultural Resources) and the California Supreme Court in a December 2015 opinion [California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD), 62 Cal. 4th 369 (No. S 213478)], the potential environmental effects of the proposed project are analyzed for potential significant impacts in the following 18 environmental issue areas, which are organized with the listed abbreviations:

- | | |
|---|--|
| ▪ Aesthetics (AES) | ▪ Land Use and Planning (LU) |
| ▪ Air Quality (AIR) | ▪ Noise (NOI) |
| ▪ Biological Resources (BIO) | ▪ Population and Housing (POP) |
| ▪ Cultural Resources (CULT) | ▪ Public Services (PUB) |
| ▪ Energy (ENE) | ▪ Recreation (REC) |
| ▪ Geology and Soils (GEO) | ▪ Transportation (TRANS) |
| ▪ Greenhouse Gas Emissions (GHG) | ▪ Tribal Cultural Resources (TCR) |
| ▪ Hazards and Hazardous Materials (HAZ) | ▪ Utilities and Service Systems (UTIL) |
| ▪ Hydrology and Water Quality (HYD) | ▪ Wildfire (WILD) |

Due to the past and current uses of the project site, no environmental impacts associated with agricultural and forestry resources and mineral resources are expected to occur as a result of the proposed project. These resource topics will not be addressed further in the Draft EIR. Of the resource topics addressed within the Draft EIR, each subchapter is organized into the following sections:

- **Environmental Setting** offers a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared, and an overview of federal, State, regional, and local laws and regulations relevant to each environmental issue.
- **Thresholds of Significance** refer to the quantitative or qualitative standards, performance levels, or criteria used to evaluate the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines and may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.

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- **Impact Discussion** gives an overview of the potential impacts of the proposed project and explains why impacts are found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts related to the proposed project. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronym or abbreviated reference to the impact section.

THRESHOLDS OF SIGNIFICANCE

As noted above, significance criteria are identified before the impact discussion subsection, under the subsection, “Thresholds of Significance.” For each impact identified, a level of significance is determined using the following classifications:

- *Significant (S)* impacts include a description of the circumstances where an established or defined threshold would be exceeded.
- *Potentially Significant (PS)* impacts include a description of the circumstances where an established or defined threshold would potentially be exceeded.
- *Less-than-significant (LTS)* impacts include effects that are noticeable, but do not exceed established or defined thresholds, or can be mitigated below such thresholds.
- *No impact (NI)* describes circumstances where there is no adverse effect on the environment.

For each impact identified as being significant, the Draft EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measure(s) would reduce the impact to a less-than-significant level successfully, this is stated in the Draft EIR. *Significant and unavoidable (SU)* impacts are described where mitigation measures would not diminish these effects to less-than-significant levels. The identification of a project-level significant and unavoidable impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with the applicable regulations and meet applicable thresholds of significance.

ASSUMPTIONS AND METHODOLOGY REGARDING CUMULATIVE IMPACTS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable.”

Where the incremental effect of a project is not “cumulatively considerable,” a Lead Agency need not consider that effect significant but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. Where the cumulative impact caused by the project’s incremental effect and the effects of the other Projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant.

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The cumulative discussions in Chapters 4.1 through 4.18 of this Draft EIR explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing macro-scale air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions are the best tool for determining the cumulative impact. In assessing aesthetic impacts, on the other hand, only development within the localized area of change would contribute to a cumulative visual effect since the area of change is only visible within the vicinity of that area.

The CEQA Guidelines provide two approaches to analyzing cumulative impacts. The first is the “list approach,” which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts. The second is the projections-based approach wherein the relevant growth projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions are summarized. A reasonable combination of the two approaches may also be used.

The cumulative impact analysis in this Draft EIR relies on a combination of the two permissible approaches, with the applicable list of projects shown in Table 4-1. The cumulative analysis discussions contained in Chapters 4.1 through 4.18 include a discussion of the growth projections and references to specific projects as relevant to the impact analysis as of 2020.

The following provides a summary of the cumulative impact setting for each impact area:

- **Aesthetics:** The cumulative setting for visual impacts includes the effects of the proposed project together with other cumulative development projects in the vicinity of the project site.
- **Air Quality:** The project’s potential contribution to cumulative impacts is assessed utilizing the same significance criteria as those for project-specific impacts. Individual development projects that generate construction or operational emissions that exceed the Air District screening thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the San Francisco Bay Area Basin is in nonattainment.
- **Biological Resources:** The geographic scope of the cumulative analysis is the two-mile radius around the project site, which is contained in the largely residential and commercial portions of the City of Dublin with some interspersed undeveloped plots and mostly undeveloped land to the east.
- **Cultural Resources:** Cumulative impacts to cultural resources occur when a series of actions leads to the loss of a substantial type of site, building, or resource.
- **Energy:** Cumulative impacts to energy resources could occur from development growth within the City of Dublin, combined with impacts from projected growth in the surrounding region.
- **Geology, Soils, and Seismicity:** The cumulative setting for impacts related to geology and soils is site specific and addressed in each project’s geotechnical investigation.

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TABLE 4-1 APPROVED AND PENDING CUMULATIVE PROJECTS WITHIN THE VICINITY OF THE PROPOSED PROJECT

Project Location	Project Name	Description and Status
Residential Projects		
Panorama Drive	Jordan Ranch – Onyx (Neighborhood 7)	105 detached residential units on 10.1 acres; final action
4038 Croak Road	East Ranch (Croak Property)	96 medium density residential units; 477 low-density single-family residential units; 11.5 acres of public parks; 2.6-acre Age Qualified Amenity Site; two-acre Public/Semi-Public Site; 165.5 acres total site; pre-application
6237 Tassajara Road	Wanmei Properties, Inc.	19 single family detached homes on 2.6 acres; public hearing
DeMarcus Boulevard	Ashton at Dublin Station	220-unit apartment community; 331 parking spaces
Mixed-Use Projects		
1000 Dublin Boulevard	Grafton Plaza Daycare and Retail	10,000 SF daycare; 21,804 SF retail; 146 parking stalls; 31,804 net commercial SF; pre-application
Grafton Street	Grafton Plaza – Apex Townhomes	115 residential townhomes, 127 room hotel, 55,000 net retail commercial SF; final action
Grafton Street	Volvo Cars Dublin	23,863 SF car dealership; 149 parking spaces; application under review
Dublin Boulevard (APN:985-0061-005-00)	Tru Hotel and Element Hotel	84,476 SF hotel (Element Hotel); 53,873 SF hotel (Tru Hotel); 5041 SF pad for future development; 332 parking spaces; application under review
Dublin Boulevard	Kaiser Commercial – Nissan	35,000 SF car dealership; final action
Tassajara Road	At Dublin	566 residential units; 240,000 SF of commercial uses; public hearing
Fallon Road	Grand View	338 housing units; 2,391,668 SF retail/commercial/office uses; pre-application
Positano Parkway	Safari Kids Childcare and Community Center	10,667 SF childcare center; 4,269 SF multipurpose room; 14,936 net commercial SF; 90 parking spaces; final action
5144 Martinelli Way	IKEA Retail Center	317,000 SF IKEA store; 93,000 SF commercial center; 412,099 SF commercial net; final action
Dublin Boulevard	Zeiss Innovation Center	208,650 SF R&D building; 224,440 SF R&D building; 433,090 net commercial SF; 1,229 space parking garage; 167 surface parking spaces; final action
100 Civic Plaza	Westin Hotel	163,133 SF hotel; 198 hotel rooms, 2 large meeting rooms, restaurant; public hearing
Dublin Boulevard	Boulevard (Dublin Crossing)	1,995 residential units; 200,000 net commercial SF; 35 acres of public parkland; 12-acre elementary school; final action
School Projects		
6085 Scarlett Drive	Quarry Lane Preschool	26,000 SF school building; 10,000 SF children’s play area; final action
Total Residential		3,931 units
Total Net Commercial		4,111,069 net SF

Source: City of Dublin.¹

¹City of Dublin. *Development Activity*. Available online at <https://dublin.ca.gov/174/Development-Activity>. Accessed November 5, 2019.

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- **Greenhouse Gas Emissions:** Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative analysis focuses on the global impacts.
- **Hazards and Hazardous Materials:** The cumulative setting for impacts related to hazards and hazardous materials includes Alameda County, which is the service area for the Alameda County Department of Environmental Health.
- **Hydrology and Water Quality:** The geographic context used for the cumulative assessment of hydrology and water quality impacts includes the areas within the City of Dublin that discharge stormwater to the same storm drain system as the project site, with ultimate discharge into the lower San Francisco Bay.
- **Land Use and Planning:** The cumulative setting for land use and planning considers the effects of the proposed project and several concurrent developments in the same area of Dublin.
- **Noise:** The traffic noise levels are based on cumulative projects and traffic conditions used for the traffic impact analysis, which takes into account cumulative effects of the proposed project.
- **Population and Housing:** Impacts of cumulative growth are considered in the context of potential impacts to population and housing that could occur from a combination of the proposed project and other projects that are pending in Dublin.
- **Public Services:** Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth in the service areas of each service provider.
- **Recreation:** Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth from reasonably foreseeable projects and their cumulative impacts regarding local parks and recreation.
- **Transportation:** The cumulative setting for traffic and circulation applies the regional transportation demand model and incorporates regional growth projections to the transportation network in Dublin and the proposed project.
- **Tribal Cultural Resources:** Cumulative impacts to tribal cultural resources occur when a series of actions leads to adverse effects on local Native American tribes or tribal lands.
- **Utilities and Service Systems:** Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth in the service areas of each utility's service area.
- **Transportation:** The cumulative setting for traffic and circulation applies the regional transportation demand model and incorporates regional growth projections to the transportation network in Dublin and the proposed project.
- **Wildfire:** The analysis of the proposed project includes a discussion of how cumulative development may exacerbate wildfire risk in the City of Dublin and the surrounding area.

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4.1 AESTHETICS

This Subchapter describes the regulatory framework and existing conditions in the City of Dublin, related to the proposed project, and evaluates the potential impacts to aesthetics and visual resources associated with the proposed project.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

This section summarizes key State and local regulations and programs related to aesthetics at the project site. There are no specific federal regulations pertaining to aesthetics that directly apply to the proposed project.

State Regulations

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission (CBSC) and is updated every three years. The most current version went into effect in January 2020. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction.¹

Title 24 establishes mandatory provisions for lighting control devices and low-level luminaires. The proposed project's lighting sources would be required to be installed in accordance with the provisions of Section 110.9, Mandatory Requirements for Lighting Control Devices and Systems, Ballasts, and Luminaires, of the California Building Energy Efficiency Standards for Residential and Nonresidential Buildings.²

Title 24, Part 11, CALGreen, is the mandatory green building standards developed in 2007 to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of greenhouse gases (GHG) to 1990 levels by 2020. CBSC has the authority to propose CALGreen Standards for nonresidential structures that include, but are not limited to, new buildings or portions of new buildings, additions and alterations, and all occupancies where no other state agency has the authority to adopt green building standards applicable to those occupancies.³

¹ Building Standards Commission, 2019. California Building Standards Code, Title 24. Available online at: <https://www.dgs.ca.gov/BSC/Codes>. Accessed October 18, 2019.

² Ibid.

³ Building Standards Commission, 2019. California Green Building Standards Code, Title 24. Available online at: <https://codes.iccsafe.org/content/CAGBSC2019/cover>. Accessed October 18, 2019.

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Field Act

Under the Field Act (Ed. Code § 17280, *et seq.*; Ed. Code § 17365, *et seq.*; Ed. Code § 81130, *et seq.*), the Department of General Services (DGS) is required to supervise the design and construction of any school buildings or the reconstruction or alteration of or additional to any school building to ensure that the plans and specifications are in compliance with adopted rules, regulations, and building standards and to ensure that construction work is performed in accordance with the approved plans and specifications for the protection of life and property.⁴ Within the DGS, the Division of the State Architect (DSA) is responsible for design and construction oversight for K-12 schools to ensure application of the CBC, pursuant to the Field Act. Additionally, the DSA promotes compliance with all relevant structural, accessibility, and fire and life safety codes.⁵

California Department of Transportation – California Scenic Highway Program

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality which contains striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the travelers' enjoyment of the view. The California Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change, and the State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 *et seq.*, including Sections 260 through 263.

The status of a proposed State scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway. According to the California Scenic Highway Mapping System, administered by Caltrans, there are no officially designated scenic highways or scenic corridors in the City of Dublin.

Although there are no State designated scenic highways or scenic corridors, in 1966 Alameda County designated Interstate (I) 580, I-680, San Ramon Road, Tassajara Road, Dougherty Road, and Fallon Road as scenic routes.

⁴ California Legislative Information, 2017, AB-1545 School facilities: Field Act, available online at https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1545, accessed May 19, 2020.

⁵ Department of General Services, 2018, Division of the State Architect, available online at <https://www.dgs.ca.gov/DSA/About>, accessed May 18, 2020.

Local Regulations

City of Dublin General Plan

Goals and Policies

The City of Dublin's General Plan contains the goals and policies found within Table 4.1-1 related to visual and aesthetic resources.⁶

TABLE 4.1-1 CITY OF DUBLIN GENERAL PLAN POLICIES

Policy Number	Goal/Policy/Strategy Text
5.7.1A.1	Incorporate County-designated scenic routes, and the Fallon Road extension, in the General Plan as adopted City-designated scenic routes, and work to enhance a positive image of Dublin as seen by through travelers.
5.7.1B.1	Exercise design review of all projects visible from a designated scenic route.
5.7.1B.2	Implement the Eastern Dublin Scenic Corridors Policies and Standards for projects within the Eastern Extended Planning Area.
<i>Aesthetics Goal 10.5.2</i>	<ul style="list-style-type: none"> ■ <i>Promote a positive regional identity of the City.</i>
10.5.3.A	Incorporate distinctive design features along regional corridors that reinforce a positive image of Dublin. Both within the right-of-way and on adjacent private development, utilize features such as gateway elements, street trees, median planting, special lighting, separated and ample sidewalks, crosswalks, seating, special signs, street names, landscape, decorative paving patterns, and public art. Consider undergrounding utilities along these roadways.
10.5.3.B	Maintain views through development to distant vistas (i.e. foothills) and view corridors along regional corridors, wherever feasible.
10.5.3.C	Incorporate visual screening techniques such as berms, dense and/or fast-growing landscaping, and appropriately designed fencing where feasible, to ensure that visually challenging features, such as parking lots, loading docks, storage areas, etc. are visually attractive as seen from regional corridors.
10.5.3.D	Provide landscaping and articulated design to soften the visual appearance of existing and new walls and fences that are adjacent to regional corridors, wherever feasible.
<i>Aesthetics Goal 10.7.2</i>	<ul style="list-style-type: none"> ■ <i>Ensure quality and compatible design of the built form.</i>
10.7.3.1.A	Encourage diverse, high quality, attractive, and architecturally appealing buildings that create distinctive visual reference points, enrich the appearance of functional gathering spaces, and convey an excellence in architecture, workmanship, quality, and durability in building materials.
10.7.3.1.B	Encourage buildings with varied massing, heights, articulation techniques, and architectural and signage treatments to create visual interest and ensure compatibility with adjacent uses, in commercial, office, industrial, and mixed-use areas.
10.7.3.1.C	Ensure that building height, scale and design are compatible with the character of the surrounding natural and built environment, and are varied in their massing, scale and articulation.
10.7.3.1.D	Encourage a variety of site and building designs that are compatible and consistent with surrounding development, especially where larger scale development is adjacent to smaller scale and/or more sensitive land uses (i.e. residential, schools, and churches) to the greatest extent feasible.
10.7.3.1.E	Avoid the use of long, continuous, straight (building) walls along roadways by designing appropriate articulation, massing, and architectural features.
10.7.3.1.I	Cluster and connect buildings through a series of pedestrian pathways designed to work with each other to form a unified design character and create larger functional spaces, in campus office and commercial areas.

⁶ City of Dublin, 2016. General Plan, Community Development Department.

<https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>, accessed October 18, 2019.

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TABLE 4.1-1 CITY OF DUBLIN GENERAL PLAN POLICIES

10.7.3.1.K	Minimize the visual impacts of service/loading areas, storage areas, trash enclosures, and ground mounted mechanical equipment. When feasible, these elements should be located behind or to the sides of buildings and screened from views through a combination of walls/ fencing, and/or landscaping.
10.7.3.1.L	Minimize the visual impacts of roof mounted mechanical equipment. When feasible, such elements should be consolidated and housed in architecturally articulated enclosures.
10.7.3.2.C	Incorporate setbacks and landscaped buffers for development along collector and arterial roadways to minimize the impacts from roadway noise, where appropriate.
10.7.3.2.D	Ensure that landscaping along and adjacent to the public realm is well maintained and retains a natural appearance.
10.7.3.2.E	Encourage distinctive landscaping and signage that is aesthetically appealing from the public realm (reference: Streetscape Master Plan).
10.7.3.2.F	Encourage the use of landscaping on walls to soften and screen their visual appearance (reference: Streetscape Master Plan).
10.7.3.2.H	Preserve mature trees and vegetation, with special consideration given to the protection of groups of trees and associated undergrowth and specimen trees (reference: Heritage Tree Ordinance).
10.7.3.2.I	Preserve views of creeks, hillsides, skylines, or other natural or man-made landmarks during site planning of new developments, whenever feasible.
10.7.3.3.A	Encourage gathering spaces and amenities such as mini plazas, courtyards, benches, seating, shade, trash receptacles, and water fountains, in commercial and office areas.
10.7.3.3.B	Design attractive gathering spaces with pedestrian amenities such as landscaping, benches, shade structures, fountains, public art, and attractive lighting.
10.7.3.3.C	Encourage design treatments that enhance the attractiveness of the streetscape, public spaces, landscaped areas, and open space.
10.7.3.4.A	Ensure that perimeter areas incorporate appropriate planting, lighting, and signage.
10.7.3.4.B	Ensure that signs are constructed of high-quality materials, are compatible with their surroundings, and make a positive visual contribution to the character of the community.
10.7.3.4.D	Incorporate public art where feasible (reference: Public Art Master Plan).
10.7.3.4.E	Design and locate outdoor lighting around buildings, in parking lots, and along streets that minimize the effects of glare on adjacent properties, particularly in residential areas.
10.7.3.5.A	Provide convenient but not visually dominating parking that incorporates extensive landscaping to provide shade, promote wayfinding, visually soften views from the street and surrounding properties, and reduce the heat island effect (generally characterized with large expanses of paved and under-landscaped surfaces).
10.7.3.5.B	Buffer and screen large expanses of parking areas from the street, where practical.
10.7.3.5.C	Encourage the use of integrated circulation and parking facilities that are shared among surrounding properties.
10.8.3.A	Provide safe, visually pleasing, and comfortable pedestrian and bicycle connections between destinations within a project area by providing wide multi-use paths, generous sidewalks, and dedicated bicycle lanes on Class I and II Collector and Arterial streets.
10.8.3.B	Provide clear, identifiable, and ample pedestrian and bicycle pathways that connect sidewalks, parking areas, building entrances, trails and other site features by using wayfinding techniques such as signage, landscaping, hardscape, and prominent building entrances, where feasible (reference: Dublin Bicycle and Pedestrian Master Plan).

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Eastern Dublin Specific Plan

Goals and Policies

The Visual Resources Element of The Eastern Dublin Specific Plan (EDSP) contains the goals and policies with Table 4.1-2 related to visual and aesthetic resources.⁷

TABLE 4.1-2 SELECT EASTERN DUBLIN SPECIFIC PLAN GOALS AND POLICIES

Goal/Policy Number	Goal/Policy/Strategy Text
<i>Aesthetic Goals</i>	<i>To establish a visually distinctive community which preserves the character of the natural landscape by protecting key visual elements and maintaining views from major travel corridors and public spaces.</i>
Policy 6-4	Preserve views of designated open space areas.
Policy 6-28	Preserve the natural open beauty of the hills and other important visual resources, such as creeks and major stands of vegetation.

City of Dublin Municipal Code

Title 8, Zoning, of the City's Municipal Code establishes the City's zoning standards for future development. It establishes densities, height allowances, setbacks, and architectural design requirements for all land use zone and future development in the city. The code promotes good design and planning of development projects to enhance the visual environment of Dublin.⁸ As included in Chapter 3, Project Description, the project site is zoned as Planned Development (PD). As noted, the proposed project is exempt from the City's zoning ordinance pursuant to Government Code section 53094, however the site plan does include set-backs and landscaped buffers within and around the perimeter of the school to provide a transition to the residential development adjoining the site.

4.1.1.2 EXISTING CONDITIONS

This section describes the existing visual character of the project site and the area in the vicinity of the site, as well as the scenic resources present in the surrounding area.

Visual Character

The project site is located in a residential area on the eastern portion of the City of Dublin at the intersection of Dublin Boulevard and Grafton Street from the south. Prominent visual features of the regional landscape are described below along with the visual and aesthetic character of the project site. An aerial view of the project site and surrounding land uses is shown on Figure 3-3 in Chapter 3, Project Description, of this Draft Environmental Impact Report (EIR).

⁷ City of Dublin, 2016. Eastern Dublin Specific Plan. <https://dublin.ca.gov/DocumentCenter/View/7776/EDSP-2016-Update-Full-PDF?bidId=>, accessed October 18, 2019.

⁸ City of Dublin, 2020. Dublin Municipal Code: A Codification of the General Ordinances of the City of Dublin, California, available online at <https://www.codepublishing.com/CA/Dublin/>, accessed May 19, 2020.

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Visual Features of the Project Site

The topography of the site is generally flat at approximately 354 to 364 feet above mean sea level (amsl). As described in Chapter 3, Project Description, of this Draft EIR, the Project's area is approximately 24 acres. The project site is vacant and was previously utilized for agricultural purposes and for stockpiling of fill material. The terrain is generally flat with a slight slope from the north to the south. The majority of the vegetation found on-site is low lying native and nonnative grasses that are trimmed, disked, and managed periodically for weed abatement and fire fuel management. Grading was performed in the past as part of improvements for the previously planned extension of Finnian Way and Grafton Street. As noted in Chapter 3, the proposed project site is generally bisected by an intermittent riverine streambed habitat, as well as water and sewer pipelines along the future proposed Finnian Way extension. Several concrete pads and utility vaults exist along the proposed Finnian Way extension and along various easements held by the City of Dublin and the Dublin San Ramon Services District (DSRSD) throughout the site. Pacific Gas and Electric owns an aboveground transformer near the northwest corner of the site.

Visual Features of the Areas Surrounding the Project Site

The area surrounding the project site contains the visual features typical of a newly constructed residential neighborhood. The area to the north and east of the project site is a flat suburban neighborhood, comprised of single- and multi-family townhomes and condominiums ranging from two to four stories with the majority built in the early- to mid-2000's. A commercial zone lies to the south of the Project site across Dublin Boulevard, as well as an undeveloped vacant lot. Devany Square is a two-acre public park located on the western boundary of the project site at the corner of Chancery Lane and Finnian Way and the park includes a labyrinth and a water play area, among other features. A mix of three to four story residential buildings lies to the west of the project site, adjacent to Devany Square. Due to the relatively flat topography, landscaping surrounding the project site, and residential uses, the project site views are limited to fences, the surrounding residences, landscaped areas, and commercial area south of Dublin Boulevard.

Scenic Corridors and Vistas

Scenic corridors, along highways, consist of land visible from highway right of ways and are comprised primarily of scenic and natural features where corridor boundaries are determined by the topography, vegetation, viewing distance, and jurisdictional lines.⁹ Scenic vistas are generally interpreted as long-range views of a specific scenic feature (e.g., open space lands, mountain ridges, bay, or ocean views).

I-580 was designated as a Scenic Route by the County of Alameda in 1966 (the City of Dublin was incorporated in 1982 and recognized this scenic route designation). Tassajara Road is designated as a scenic corridor within Alameda County.

⁹ Caltrans, 2020. Scenic Highways – Frequently Asked Questions. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2>, accessed February 4, 2020.

The EDSP maintains that “it is critical that views of major ridgelines be maintained from the scenic corridors.” The City of Dublin General Plan Circulation and Scenic Highways Element states that scenic routes “are the places from which people traveling through Dublin gain their impression of the City; therefore, it is important that the quality of views be protected.”

Major ridgelines to the northeast include 3,828 acres of land known as the Doolan-Collier Canyons, which are protected from development.¹⁰ The EDSP includes policies which “preserve view of designated open space areas” and “preserve the natural open beauty of the hills and other important visual resources, such as creeks and major stands of vegetation”.

Existing Viewsheds and Viewpoints

Sensitive viewsheds refer to natural areas that provide an orientation and a sense of place within a region or community. These viewsheds typically include views of ridgelines, large contiguous open space areas, hilltops, and woodland.¹¹ As described previously, views of Doolan-Collier Canyons, located approximately 2.5 miles north of the project site, would be considered a sensitive viewshed. Public views are those which can be seen from vantage points that are publicly accessible, such as streets, freeways, parks, and vista points. These views are generally available to a greater number of persons than private views. Private views are those views that can be seen from vantage points located on private property. Private views are not necessarily considered to be impacted when interrupted by land uses on adjacent properties. CEQA case law has established that only protection of public views is emphasized, generally, rather than the private views specific to a particular person.¹²

Viewsheds and viewpoints visible from the project site are represented on Figure 4.1-1, Project Site Lines. The photos include a viewshed from Devany Square, a public park, towards the proposed project site, as well as viewpoints from outside the project boundary and towards the site to demonstrate representative views of the site from vantage points at each corner of the proposed project site. Due to the naturally flat topographical features of the sites’ surrounding area, background viewsheds and views are limited to the residential developments to the north, east, and west, as well as the commercial uses to the south. These viewpoints and viewshed are described below.

¹⁰ City of Dublin, 2016. General Plan. <https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>, accessed February 4, 2020.

¹¹ Alameda County, 1994, East County Area Plan, available online at <https://www.acgov.org/cda/planning/generalplans/documents/EastCountyAreaPlancombined.pdf>, accessed April 20, 2020.

¹² *Protect Niles v. City of Fremont* (2018) 25 Cal.App.5th 1129, 1142; Casetext, 2018, available online at <https://casetext.com/case/niles-v-city-of-fremont>, accessed April 19, 2020. See also, *Taxpayers for Accountable School Bond Spending v. San Diego Unified School District* (2013) 215 Cal.App.4th 1013, 1042 [complaints that high school stadium lights would disturb peace and calm of neighborhood were evidence of aesthetic impacts only on particular persons].

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Source: Google Earth Professional, 2018. PlaceWorks, 2020.



Project Site Boundary



Viewpoint

Figure 4.1-1
Project Site Lines

Viewpoint Location 1: From Northwest Corner of the Project Site

Views from this location span across the proposed project site from the Northwest corner and include views of the two- to three-story townhomes on the eastern boundary of the site, as well as the commercial area south of Dublin Boulevard towards the distance. Views of the southern hills in the distance are already obstructed by existing buildings.

Viewpoint Location 2: From Northeast Corner of Project Site

Views from this location span across the proposed project site from the Northeast corner and include the condominiums located to the east, as well as the commercial area south of Dublin Boulevard towards the distance. Distant views are obstructed by existing buildings.

Viewpoint Location 3: From Southeast Corner of Project Site

Views from this location span across the proposed project site from the Southeast corner and include the condominium residences on the east, Devany Square in the distance towards the northwest, as well as two and three story residences along the northern and western perimeter of the project site. Views of the northern hills in the distance are already obstructed by existing residential buildings.

Viewpoint Location 4: From Southwest Corner of Project Site

Views from this location span across the proposed project site from the Southwest corner and include the condominiums to the north and east of the site, as well as the landscaping to the west of the site. Views of the northern hills in the distance are already obstructed by existing residential buildings.

Viewshed Location 1: From Devany Square on Western portion of the Project Site

Views from Devany Square across the proposed project include the condominiums to the north and east, as well as the commercial buildings to the south. Due to the flat topography of Devany Square and the surrounding area, long range or panoramic views, which are more readily available in areas with sloping topography, are limited, and are generally obstructed by the aforementioned existing structures.

4.1.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant aesthetic impact if it would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In non-urbanized 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?
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

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5. The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in cumulative impacts with respect to aesthetics.

4.1.3 IMPACT DISCUSSION

AES-1	The proposed project would not have a substantial adverse effect on a scenic vista.
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The project would have a significant environmental impact if it would result in a substantial adverse effect on a scenic vista. The General Plan recognizes Tassajara Road as an Alameda County designated scenic route, as well as a regional corridor, for which developments must maintain views through the development to distant vistas wherever feasible. The EDSP also recognizes Tassajara Road as a scenic corridor and requires that views of major ridgeland be maintained from scenic corridors. The EDSP goals and policies, as discussed above, encourage development that maintains views from scenic corridors to Visually Sensitive Ridgeland, which includes the ridgeland north of the project site, roughly one half to one mile, with restricted or no development allowed.¹³ The proposed project site is located approximately 0.5 miles east of Tassajara Road and is separated from Tassajara Road by residential and commercial buildout.

As shown on Figure 4.1-1, views from the four corners of the project site and from Devany Square across the project site are limited to elements of the surrounding built environment, and without expansive vistas. There are no high-quality visual resources apparent from these positions. The location and flat topography of the site and surroundings restrict scenic vistas from all directions.

Although the proposed project would change immediate views within the neighborhood and project site, the major components of City-identified vistas, both near-field and mid-to-far-field, would remain. As a result, the project would result in a *less-than-significant* impact to scenic vistas.

Significance Without Mitigation: Less than significant.

AES-2	The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
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The project site is not within the viewshed of a state scenic highway and the project would have *no impact* on scenic highway resources.

Significance Without Mitigation: No Impact.

¹³ Eastern Dublin Specific Plan, 2016. Figure 6.3 Environmental Constraints.

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AES-3	The proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.
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The proposed project would develop a contemporary educational facility composed of new structures and integrated landscaping on a vacant and undeveloped lot (see Figure 3-3 of Chapter 3, Project Description). The project would complete pedestrian walkways and plantings along existing City streets and develop multi-use paths, and educational structures. The project would utilize setbacks and landscaped buffers for screening throughout the site.

As described in Chapter 3, Project Description, the District is exempt from the City of Dublin's zoning ordinance. Nevertheless, the proposed project would be consistent with policies which encourage the use of street trees, special lighting, ample sidewalks, crosswalks, special signs, street names, and landscaping, as well as policies to ensure that the school is compatible and consistent with the character of the surrounding natural and built environment. Additionally, the proposed project would be consistent with policies that encourage implementation of the Streetscape Master Plan to create a consistent visual character and aesthetically appealing quality along city streets and neighborhoods in the City of Dublin.

While the aesthetic qualities of development projects are subjective in nature, the addition of a newly designed educational facility and planned greenery associated with the implementation of the project, are not likely to be considered by observers as degrading the existing visual character or quality of the site and its surroundings. The proposed project would include three story buildings, which do not exceed 52 feet in height above grade level. Because the surrounding development consists of three to four story buildings, the proposed buildings would be consistent with surrounding development. Additionally, the project site is topographically flat and is surrounded by residential and commercial uses which obstruct views of distant areas. As a result, the project would result in a *less-than-significant* impact with respect to the visual character or quality of the site and its surroundings.

Significance Without Mitigation: Less than significant.

AES-4	The proposed project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
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Proposed School and Parking Lighting

The project site is currently undeveloped and currently contains no sources of light and glare. Nearby sources of light and glare include I-580 freeway lighting and vehicular traffic, street lighting along Dublin Boulevard and Central Parkway, and exterior residential lighting associated with multi-family residential uses surrounding the project site.

However, the proposed project would result in a new school, and thus new lighting to fulfill access and safety requirements. As explained in Chapter 3, Project Description, all exterior areas of the school, including the exterior of buildings, pedestrian pathways and parking and drop-off areas would be lit with high-efficiency LED components. All would be compliant with California's Building Energy Efficiency

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Standards for Residential and Nonresidential Buildings, Title 24, Part 6, of the California Code of Regulations. Emergency lighting would be provided at all egress doors, in compliance with building and fire codes.

Title 24 establishes mandatory provisions for lighting control devices and low-level luminaires. The proposed project's lighting sources would be required to be installed in accordance with the provisions of Section 110.9, Mandatory Requirements for Lighting Control Devices and Systems, Ballasts, and Luminaires, of the California Building Energy Efficiency Standards for Residential and Nonresidential Buildings. As discussed under *State Regulations* above, approval by the Division of the State Architect would ensure that the proposed project would be in compliance with the California Building Code.

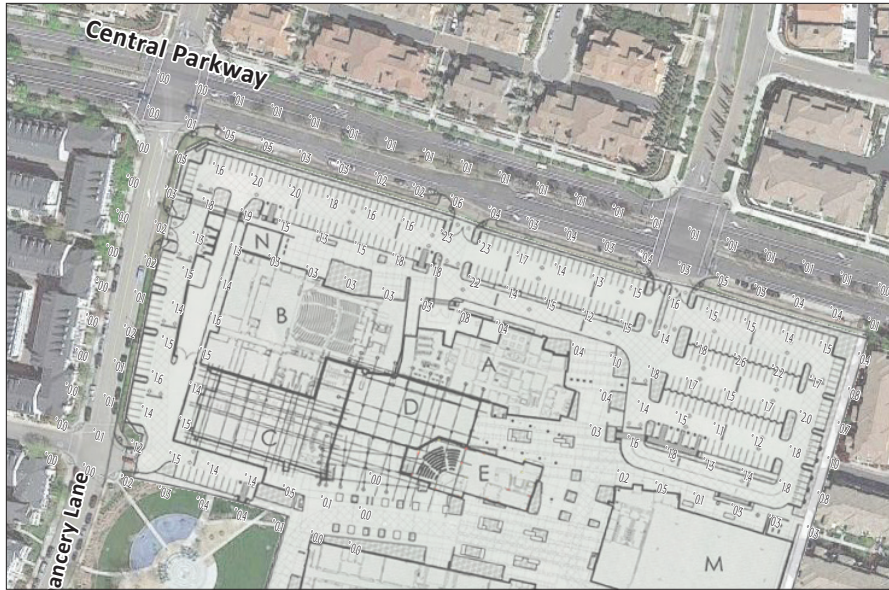
The City of Dublin Municipal Code has a lighting threshold of one footcandle for lights within designated parking areas.¹⁴ The campus light poles used within the parking areas are 40 feet high and the campus lights will be shielded and directed downward to the extent feasible to minimize glare for pedestrians and drivers and to minimize spillover light. Landscape buffers and set-backs will be utilized in the perimeter areas along all the parking lots adjacent to Chancery Lane and Central Parkway, and the residences to the east, in order to minimize and/or block campus lighting and headlights from vehicles traveling to and from or on the project site. Additionally, the exterior finish of the proposed buildings would not include any highly reflective surfaces aside from standard glass windows. As illustrated in Figure 4.1-2, a lighting analysis conducted for the project revealed that the light shining on the residences surrounding the parking areas would not exceed 0.75 footcandles which is lower than the City of Dublin's threshold of one footcandle. Given the distance of the proposed project to residential areas to the north, northwest and northeast, and that the lights are within the City threshold, the proposed lighting would not impact these areas.

Although the proposed project would introduce new lighting to the site for the purpose of parking, security, and egress lighting, the lighting would be consistent with the City of Dublin's General Plan and Municipal Code requirements, and the additional lighting created by the project would not exceed obtrusive lighting thresholds; therefore this lighting would result in a *less than significant* impact to the nighttime character of the area.

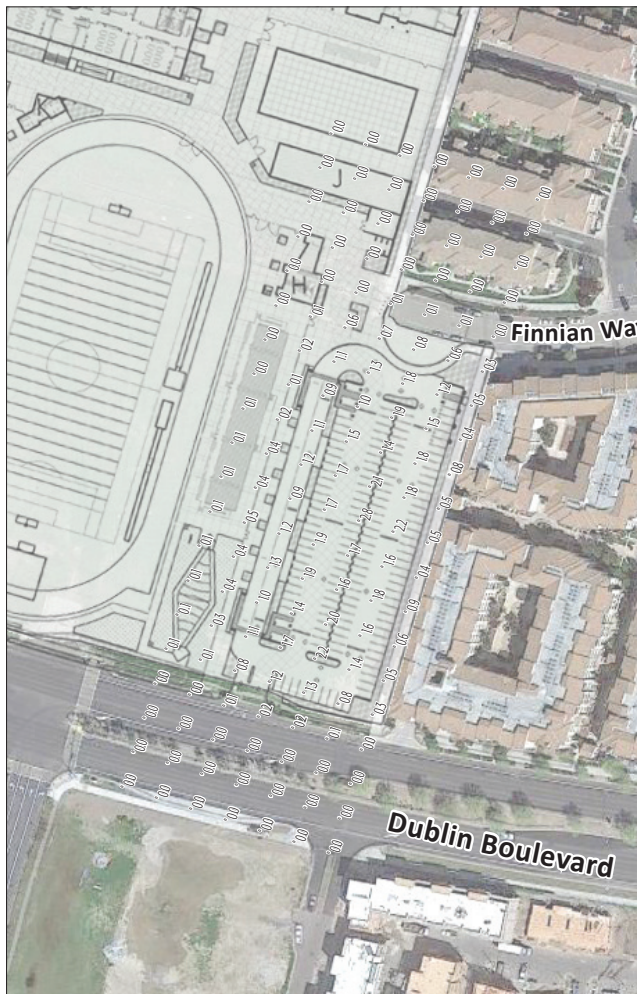
Significance Without Mitigation: Less than significant.

¹⁴ City of Dublin Municipal Code, 2020, General Regulations, available online at <https://www.codepublishing.com/CA/Dublin/#!/html/Dublin08/Dublin0876.html>, accessed June 15, 2020.

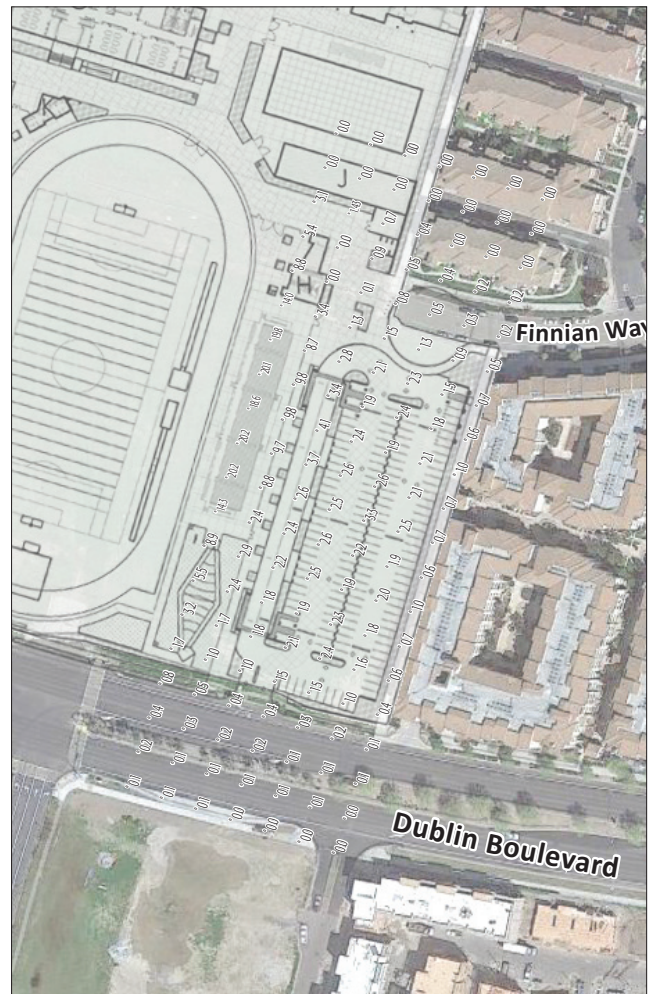
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North
Parking Lot



Parking Lot



Parking Lot with Stadium Lights on

Source: PlaceWorks, 2020.



Figure 4.1-2
Parking Lights

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Proposed Stadium and Tennis Court Lighting

The proposed project would also introduce new sources of light and glare in the project area from the proposed sports field stadium lighting, ball tracking tennis lighting, and security load lighting. Table 4.1-1 presents quantities, details, and specifications of the proposed lighting fixtures in each light pole. The proposed lighting features would allow for the safe use of the field during evening hours for football, soccer, track events and practices, as well as commencement events.

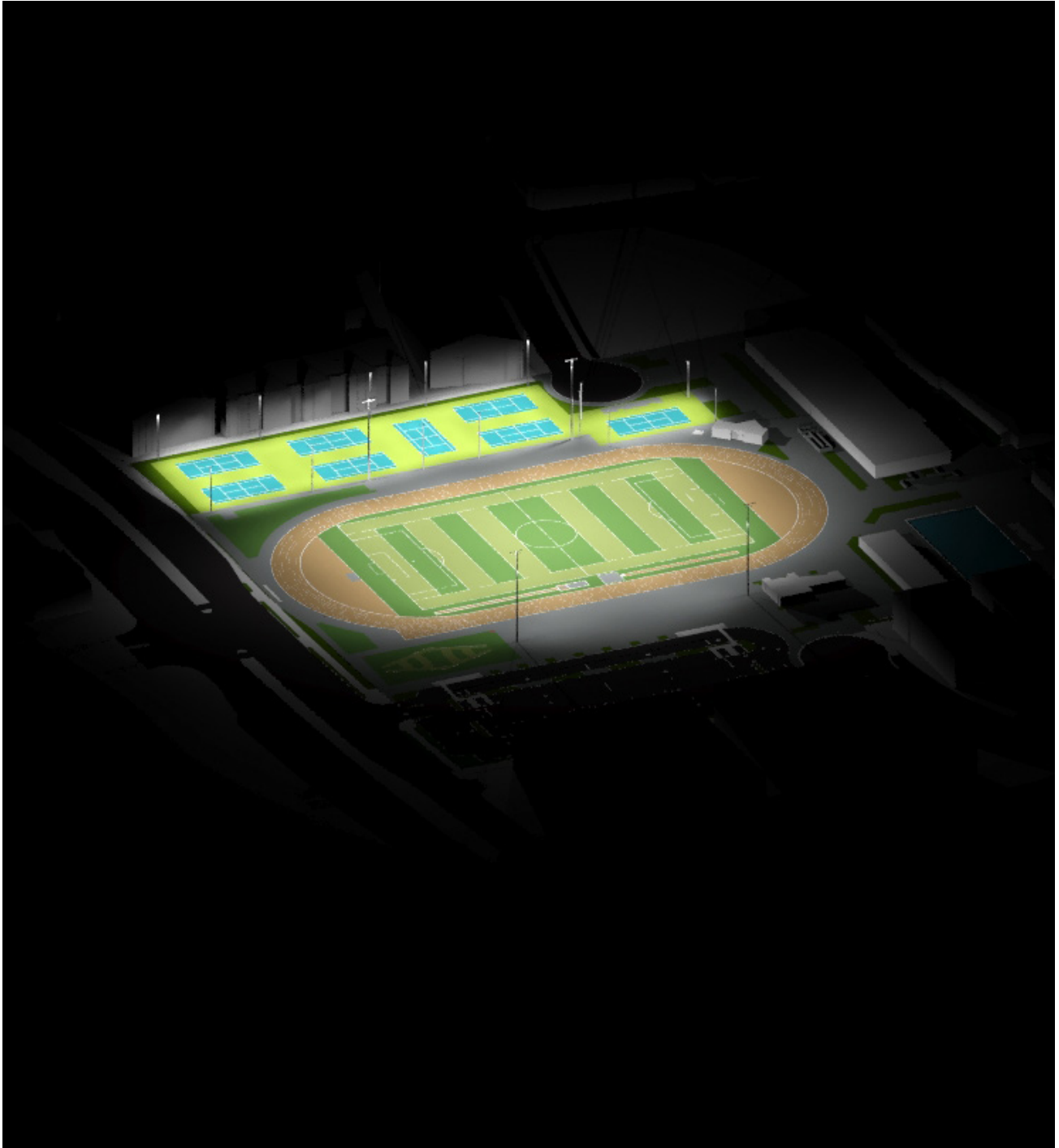
TABLE 4.4.1-1 PROJECT LIGHTING SPECIFICATIONS

Pole Height (foot)	Light	Fixture	Mounting Height (foot)	Fixture Quantity	Load (kW)	Circuit
100 (2 poles)	Sport Lighting	TLC-LED-1500	100	11	-	Football
	Ball Tracking	TLC-BT-575	27	2	-	Football
	Security Lighting	TLC-LED-400	80	2	-	Egress
90 (2 poles)	Sport Lighting	TLC-LED-1500	90	11	-	Football
	Ball Tracking	TLC-BT-575	15.5	2	-	Football
	Security Lighting	TLC-LED-400	80	1	-	Egress
Sub-Total				52	67.52	
50	Sport Lighting	TLC-LED-600	50	1	-	Tennis 1-2
50	Sport Lighting	TLC-LED-900	50	2	-	Tennis 1-2
Sub-Total				12	9.44	
50	Sport Lighting	TLC-LED-600	50	1	-	Tennis 3-4
50	Sport Lighting	TLC-LED-900	50	2	-	Tennis 3-4
Sub-Total				12	9.44	
50	Sport Lighting	TLC-LED-400	50	3	-	Tennis 5
Sub-Total					4.8	
50	Sport Lighting	TLC-LED-600	50	1	-	Tennis 6-7
50	Sport Lighting	TLC-LED-900	50	2	-	Tennis 6-7
Sub-Total				12	9.44	
40	Sport Lighting	TLC-LED-400	50	3	-	Tennis 8
Sub-Total				12	4.8	
Total				118	107.8	

Note: Project lighting manufactured by Musco Lighting
Source: PlaceWorks, 2020.

Based on the proposed lighting plan, lighting specifications, aiming direction, and proposed light fixtures' illuminating Engineering Society Photometric (IES) files, the light performance under nighttime conditions was simulated to demonstrate the proposed illumination levels across the site and potential light spill on adjacent areas. Figures 4.1-2 and 4.2-3 include a birds eye and plan view illustration of illumination levels within the vicinity of the stadium and tennis courts. The analysis includes the school site, existing and proposed buildings, seating, location and height of the light poles, as well as levels and distribution of luminaries. Other light sources, including pedestrian lighting, interior lights, moonlight are not included in the modeling analysis. Moreover, impacts from dust, ground covers, plants, or any structures that might partially or entirely block light sources is not considered in the analysis.

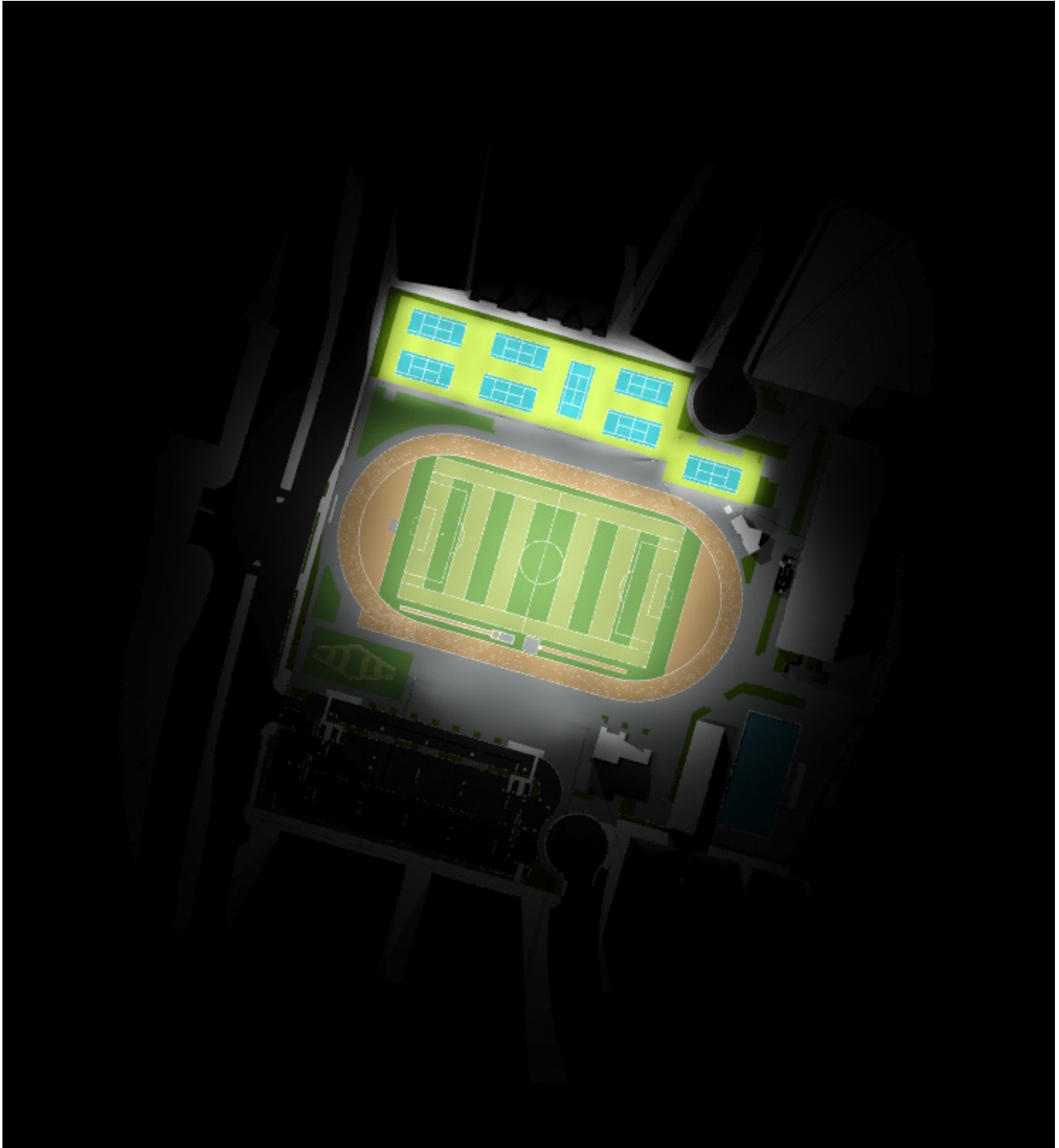
AESTHETICS



Source: Musco Lighting, 2020. PlaceWorks, 2020.

Figure 4.1-3
Birds Eye Site Lighting

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Source: Musco Lighting, 2020. PlaceWorks, 2020.

Figure 4.1-4
Plan View Site Lighting

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Figure 4.1-4 illustrates the illuminance, which is the light intensity expressed on a horizontal or vertical plane. Illuminance is measured through the footcandle (fc) unit and one footcandle is equal to one lumen per square foot. The lighting analysis indicated that the horizontal illuminance level across the football field is at an average of 50 footcandles, the seating area is at an average of 5 footcandles, and the tennis courts are at an average of 55 footcandles. These measurements meet the Class II IES standards for sports and recreational uses, which are appropriate for the players' safety and ability to play effectively under lights, and for the effective visual observation by spectators.¹⁵ The 90- and 100-foot pole height design for the football stadium and the 40- and 50-foot pole height design for the tennis courts are important for maintaining this average value. Additionally, the heights of the proposed poles are necessary for the following reasons:

- To maximize the effectiveness of lighting the field uniformly and evenly for the benefit of players and spectators;
- To minimize potential "blinding" of players when trying to visually follow a ball in the air;
- To minimize discomfort glare for players and spectators by placing the lights above the typical viewing field;
- To minimize light pollution and spill by aiming the fixtures closer to vertically down.

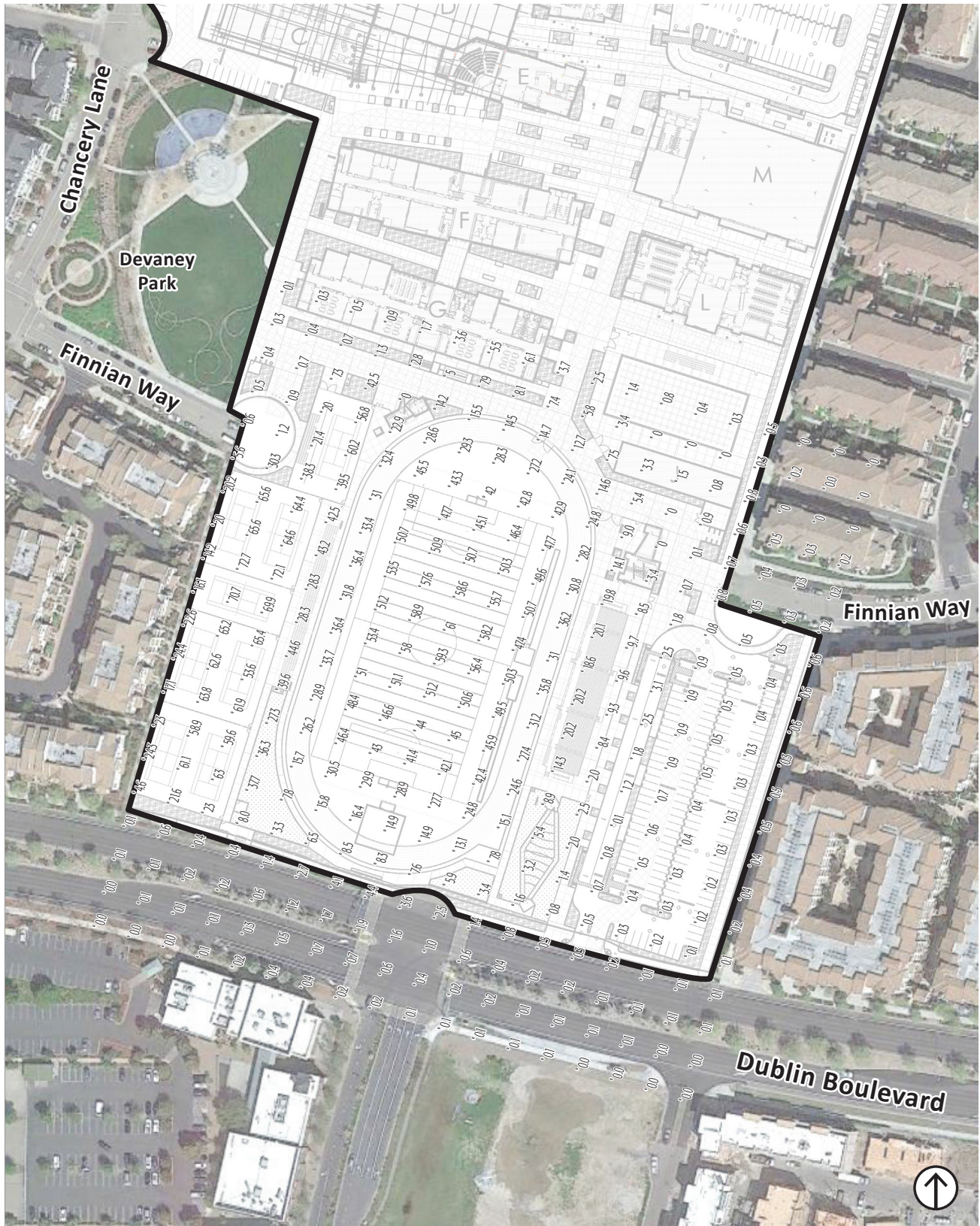
Therefore, this pole height provides a better performing lighting solution than a lower mounting height. Deviation from the orientations of the poles or reduced pole heights other than the manufacturer's proposed design could be detrimental to the functionality of the field lighting and could actually increase off-site lighting spill. Overall, the proposed lighting design is appropriate for the players' safety and ability to play and for the effective visual observation by spectators.

As part of the analysis, the footcandle values were measured at different locations within the project site to determine the measure of light spill. Light spill is defined as light that is received outside of the area that is being illuminated.¹⁶ Figure 4.1-4 illustrates that light intensity drops significantly away from the stadium to under 0.8 footcandles along the southeast residential edge and the light intensity drops to 4.4 footcandles along Dublin Boulevard and 24.4 footcandles along the residential units along the west/southwest edge by the tennis courts. Light meter readings were calculated with all lights on and without 3D elements obstructing light patterns.

¹⁵ Arch Tool Box, 2020, Recommended Lighting Levels in Buildings, available online at <https://www.archtoolbox.com/materials-systems/electrical/recommended-lighting-levels-in-buildings.html>, accessed April 19, 2020.

¹⁶ VeeLite, 2020, Glare and Light Spill, available online at <https://www.veelite.com/wp-content/uploads/Glare-Light-Spill.pdf>, accessed April 19, 2020.

AESTHETICS



Source: PlaceWorks, 2020.

 Project Site Boundary

Figure 4.1-5

Stadium and Tennis Courts Illuminance Measurements

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The anticipated amount of light spill into neighboring properties would vary from anywhere between zero to approximately 24 footcandles, and these values can be calculated, measured, and demonstrated to show their effect. Although the light spill of the ambient glow of the lighting can be measured, due to reflections and refractions through dust and moisture in the air, reflections from the playing surface, and miscellaneous light scattering, it cannot be quantified to a high level of precision. On the other hand, the ambient glow can be subjectively qualified such that the lighting originating from an illuminated field would affect the views of the nighttime sky for the immediate neighboring properties, especially when there is moisture and/or dust in the air.¹⁷

Existing nighttime light levels are typical for a residential urbanized area. The City of Dublin Municipal Code specifies minimum threshold of one footcandle of light for public thoroughfares, aisles, pedestrian walkways, passageways, parking lots, and buildings, which must be managed by a time clock that will turn the lights on at dusk and off at dawn. The Municipal Code also requires that lighting of exterior areas shall be designed to maximize surveillance while reducing conflicts with building design, mature landscaping, and to minimize glare.¹⁸ However, the Municipal Code does not include a maximum threshold for spill or obtrusive light. The nearby communities of Livermore, Pleasanton, and San Ramon or the County of Alameda also do not include a maximum threshold value for spill or obtrusive light. According to the Illuminating Engineering Society recommended roadway design criteria, the average maintained illuminance value for mixed vehicle and pedestrian areas is two footcandles.¹⁹ Therefore, the District has determined that if the proposed project were to result in spill light above two footcandles on adjacent properties, a significant impact would occur. The District has adopted the two footcandle as a threshold for this EIR because it would be protective of the existing surrounding nighttime environment, where street lighting is the predominant source of light. As described previously, the light spill occurring on nearby residences to the west/southwest of the project site could be as high as 24 footcandles.

As a result of the exceedance in light spill from the tennis courts, the proposed lighting design would also have a resultant level of glare associated with the proposed project. There are two types of glare. The first type of glare is the result of too much light or the illuminance within the visual field, while the second type of glare is the result of too much range or variance in the amount of lighting or illuminances in the visual field.²⁰ Due to the location of the poles, which is required for appropriate lighting on the stadium's playing surface, the proposed lighting system does not adequately reduce the light spill into the neighboring areas along the southwestern boundary of the project, directly adjacent to the nearby residences. The second type of glare, the range or variance of lighting or illuminances, is also not diminished by the cutoff nature of the lighting fixtures as there is still the possibility to view the very high illuminance inside the fixtures and the stadium and tennis courts in comparison to the darker surroundings characteristic of the project vicinity.

¹⁷ Colorado State University Cooperative Institute for Research in the Atmosphere, 1999, Introduction to Visibility, available online at <https://www.epa.gov/sites/production/files/2016-07/documents/introvis.pdf>, accessed April 19, 2020.

¹⁸ City of Dublin, 2020, Municipal Code, available online at <https://www.codepublishing.com/CA/Dublin/#!/html/Dublin07/Dublin0732.html>, accessed April 20, 2020.

¹⁹ U.S. Department of Transportation Federal Highway Administration, 2014, Guidelines for the Implementation of Reduced Lighting on Roadways, available online at <https://www.fhwa.dot.gov/publications/research/safety/14050/14050.pdf>, accessed April 20, 2020.

²⁰ National Highway Traffic Safety Administration, 2020, Nighttime Glare and Driving Performance, available online at https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/glare_congressional_report.pdf, accessed April 20, 2020.

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In summary, the proposed project would introduce new sources of nighttime light and glare into the project area that would be noticeable to viewers in the surrounding area, particularly by residents in the condominiums along the southwestern border of the project site where the tennis courts are located. Illumination of the tennis courts would also change the nighttime landscape and ultimately adversely affect nighttime views within the project vicinity. As illustrated in Figure 4.1-5, the footcandle measurements shining on nearby residences from the stadium lighting are low enough (less than two footcandles) that they would not result in significant impacts, however the lighting from the tennis courts would because they are above the threshold. Therefore, light and glare impacts associated with the proposed project lighting would be *significant*.

Significance Without Mitigation: Significant.

Impact AES-4: The proposed project would create a new source of substantial light or glare from the tennis courts which would adversely affect nighttime views in the area.

Mitigation Measure AES-4a: District shall plant supplementary trees and landscaping along the southwestern boundary of the proposed project which, in addition to existing landscaping along the southwestern boundary of the proposed project, will further screen and reduce the introduced light and glare impacts on the southwestern project perimeter. The District shall consult with a landscaping expert prior to the installation and operation of the lighting assemblies to determine the appropriate supplementary trees that would be necessary to reduce light and glare impacts. Appropriate supplementary trees and landscaping shall consider the tree species, number of trees, timing for plantings (i.e. time of day and year) as the addition of new non-deciduous trees could result in temporary shadows in the immediate project vicinity as the trees mature. Once the appropriate additional trees have been determined, the trees shall be planted according to the appropriate season as determined by the landscaping expert, which may be prior to the installation of the lighting assemblies or immediately following. The landscaping type, design, and timing shall be established prior to the installation of the field lights. The supplementary trees and landscaping shall be maintained in perpetuity by the District.

Mitigation Measure AES-4b: The District shall install fencing along the southwestern boundary of the proposed project to reduce the effects of the project lightings light spill. The District shall consult with residents adjacent to the southwestern boundary of the project site prior to the installation and operation of the lighting assemblies to coordinate the appropriate types of fencing to install along the boundary. The fence design, and timing shall be established prior to the installation of the stadium and tennis court lights.

Mitigation Measure AES-4c: The District shall adhere to a schedule for which lighting assemblies associated with the tennis courts shall be shut off by 9 pm daily. If the District alters the timing schedule for the tennis court lighting, the residents adjacent to the southwestern boundary of the project site shall be consulted.

Mitigation Measure AES-4d: The District shall install Musco brand lights or any other brand that demonstrates comparable or better light performance and shielding of surrounding properties.

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Significance with Mitigation: Significant and unavoidable. As discussed under Impact AES-4, several light spill reducing mitigation measures were considered such as a landscaping barrier, a fence or wall barrier, a schedule for the lighting, and a recommendation for the best performing and shielding lights. However, no individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated light and glare impacts to less than significant levels. This impact would, therefore, remain significant and unavoidable.

Automotive Lighting Impacts

During the proposed nighttime events at the stadium and tennis courts, additional automobiles are anticipated to travel to and park in the school parking lots located throughout the project site. Vehicles associated with the proposed nighttime events would temporarily increase nighttime lighting levels as they travel through the neighborhood and park on site and on surrounding streets. However, the nighttime lighting associated with these automobiles is not a new source of light or a source of light which is currently uncommon to the area. Therefore, light and glare impacts associated with the proposed automotive lighting would be less than significant and no mitigation is required.

Significance Without Mitigation: Less than significant.

4.1.4 CUMULATIVE IMPACTS

AES-5	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.
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The methodology used for cumulative impact analysis is described in Chapter 4.0, Environmental Analysis, of this Draft EIR. The cumulative impact analysis for aesthetics includes past, present and reasonably foreseeable projects within the immediate vicinity of the project site. A cumulative impact would be considered significant if, taken together with past, present and reasonably foreseeable projects in the identified area, it would result in a substantial adverse effect on a designated scenic vista or if it would result in a substantial degradation of the visual quality or character in the vicinity of the project site.

The area surrounding the project site consists of multi-family residential uses with exception to the vacant lots located south of the project site. These vacant lots are located to the east and west of Lowe's Home Improvement on the corner of Brannigan Street and Grafton Street and are included in the City of Dublin's Planning Division as active development for residential and commercial use. Specifically, these include the Volvo Cars Dublin, Grafton Plaza Daycare and Retail, Grafton Plaza Apex Townhomes, Tru Hotel and Element Hotel, Kaiser Commercial Nissan, and the At Dublin projects, which are listed in Table 4-1, Cumulative Projects Within the Vicinity of the Proposed Project, of Chapter 4, Environmental Analysis. These projects, along with the surrounding area that has been developed relatively recently, would be subject to design review to ensure compliance with relevant goals, policies, and implementation measures to ensure a visually compatible and cohesive development pattern in the surrounding area.

Cumulative impacts would primarily occur as a result of the increased light and glare from the proposed project in combination with light and glare from the various other related projects. This includes the stadium and tennis court lighting, building, pedestrian, and parking lighting, as well as automotive lighting

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associated with the proposed project, in combination with the indoor/outdoor lighting and automotive lightings associated with the nearby, related projects. Although the tennis court lights result in a significant and unavoidable project-level impact on nighttime light and glare, none of the other projects considered in the cumulative impact analysis include similar lighting immediately adjacent to the adjoining residential areas that would result in similar impacts. The automotive lighting would occur over the existing roadway network and would not be uncommon for the area. The topography of the project site is relatively flat and is surrounded by existing development, and because related projects are at a sufficient distance from the proposed project to not be visible, or are obstructed by existing development, the proposed project and the related projects would result in a less than significant cumulative light and glare impact and no additional mitigation measures are needed.

Significance Without Mitigation: Less than significant.

4.2 AIR QUALITY

This chapter describes the existing air quality in the area of the project site and evaluates the potential environmental consequences of construction and operation of the proposed project. Additionally, this chapter describes the environmental setting, including regulatory framework and the existing air quality setting and baseline conditions, and identifies mitigation measures, if required, that would avoid or reduce significant impacts.

This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD or Air District) for project-level review. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the proposed project. In this chapter “emissions” refers to the actual quantity of pollutant, measured in pounds per day or tons per year (tpy) and “concentrations” refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Construction criteria air pollutant emissions modeling is included in Appendix B, Air Quality and Greenhouse Gas Modeling, of this Draft EIR. The construction health risk assessment (HRA) is included in Appendix C, Health Risk Assessment, of this Draft EIR.

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the federal Clean Air Act (“National”) and California Clean Air Act, respectively. The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Secondary pollutants are not directly emitted as such, but form when other pollutants react in the atmosphere. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($\text{PM}_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2 , NO_2 , PM_{10} , and $\text{PM}_{2.5}$ are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants. Each of the primary and secondary criteria air pollutants and its known health effects is described here.

- **Carbon Monoxide (CO)** is a colorless, odorless 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. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people

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exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.¹

- **Nitrogen Oxides (NO_x)** are a by-product of fuel combustion and contribute to the formation of O₃, PM₁₀, and PM_{2.5}. The two major components of NO_x are nitric oxide (NO) and NO₂. The principal component of NO_x produced by combustion is NO, but NO reacts with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.⁵ NO₂ acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million (ppm).⁵
- **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 from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When SO₂ 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. At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue.²
- **Suspended Particulate Matter (PM₁₀ and PM_{2.5})** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. In the San Francisco Bay Area Air Basin (SFBAAB or Air Basin), most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch). Diesel particulate matter (DPM) is also classified a carcinogen.

Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM₁₀ bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The EPA scientific review concluded that PM_{2.5} penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM₁₀ standards. 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). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.⁷

¹ Bay Area Air Quality Management District, 2017, Revised California Environmental Quality Act Air Quality Guidelines.

² Bay Area Air Quality Management District, 2017, Revised California Environmental Quality Act Air Quality Guidelines.

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- **Ozone (O₃)** is commonly referred to as “smog” and is a gas that is formed when ROG_s and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions to the formation of this pollutant. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O₃ levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O₃ can also damage plants and trees and materials such as rubber and fabrics.³
- **Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)** are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O₃. There are no AAQS established for ROGs. However, because they contribute to the formation of O₃, the Air District has established a significance threshold for this pollutant.
- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phasing out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Because emissions of lead are found only in projects that are permitted by the Air District, lead is not an air quality of concern for the proposed project.

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 the California Air Resources Board (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.

³ Bay Area Air Quality Management District, 2017. Revised California Environmental Quality Act Air Quality Guidelines.

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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.⁴ 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 DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. According to the Air District, PM emitted from diesel engines contributes to more than 85 percent of the cancer risk within the SFBAAB and cancer risk from TACs is highest near major diesel PM sources.⁵

4.2.1.2 REGULATORY FRAMEWORK

Federal, state, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the city is subject to the rules and regulations imposed by the United States Environmental Protection Agency (USEPA), CARB, the California Environmental Protection Agency and BAAQMD. The regulatory framework that is potentially applicable to the proposed project is also summarized below.

⁴ California Air Resources Board. 1999. Final Staff Report: Update to the Toxic Contaminant List.

⁵ Bay Area Air Quality Management District, 2014, Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013).

Federal and State Regulations

Ambient air quality standards have been adopted at federal and State levels for criteria air pollutants. In addition, both the federal and State governments regulate the release of TACs. The proposed project is in the SFBAAB and is subject to the rules and regulations imposed by the Air District, the National AAQS adopted by the USEPA, and the California AAQS adopted by the CARB. 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 was passed in 1963 by the United States Congress and has been amended several times. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

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

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 4.2-1. These pollutants are O₃, NO₂, CO, SO₂, coarse inhalable PM₁₀, PM_{2.5}, and Pb. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard ^a	Federal Primary Standard ^b	Major Pollutant Sources
Ozone (O ₃) ^c	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	

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TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard ^a	Federal Primary Standard ^b	Major Pollutant Sources
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}) ^d	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m ³	
Lead (Pb)	30-Day Average	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄) ^e	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.

AIR QUALITY**TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS**

Pollutant	Averaging Time	California Standard ^a	Federal Primary Standard ^b	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.

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.
- Source: California Air Resources Board, 2017, March, Short-Lived Climate Pollutant Reduction Strategy, https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf, accessed December 5, 2018.

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

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

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

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and 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 pursuant to Section 112(b) of the federal Clean Air Act (42 US Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

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California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit 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 that are identified as having no safe threshold.

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

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

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.
- 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.
- 13 CCR Chapter 9, Section 2449, General Requirements for In-Use Off-Road Diesel-Fueled Fleets.

Regional Regulations

Bay Area Air Quality Management District

The Air District is the agency responsible for assuring that the National and California AAQS are attained and maintained in the Air Basin. Air quality conditions in the Air Basin have improved significantly since the Air District was created in 1955. The Air District prepares air quality management plans (AQMP) to attain ambient air quality standards in the Air Basin. The Air District prepares ozone attainment plans for the National O₃ standard and clean air plans for the California O₃ standard. These air quality management plans are prepared in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). The Air District adopted the 2017 Clean Air Plan, Spare the Air, Cool the Climate (2017 Clean Air Plan) on April 19, 2017, making it the most recent adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

Bay Area Air Quality Management District 2017 Clean Air Plan

The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues in providing the framework for SFBAAB to achieve attainment of the California and National AAQS. The 2017

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Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California Clean Air Act. Additionally, it sets a goal of reducing health risk impacts to local communities by 20 percent by 2020. Furthermore, the 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy has been developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
- Increase efficiency of the energy and transportation systems.
- Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
- Make the electricity supply carbon-free.
- Electrify the transportation and building sectors.

Air District Community Air Risk Evaluation Program

The Air District Community Air Risk Evaluation program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions, and benzene contributed 3 percent. Collectively, five compounds—diesel PM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal

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combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). A 75 percent reduction in DPM was predicted between 2005 and 2015 when the inventory accounted for the Air Resources Board's diesel regulations. Overall, cancer risk from TAC dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for state diesel regulations and other reductions.

Modeled cancer risks from TAC in 2005 were highest near sources of DPM: near core urban areas, along major roadways and freeways, and near maritime shipping terminals. Peak modeled risks were found to be located east of San Francisco, near West Oakland, and near the Maritime Port of Oakland. The Air District has identified seven impacted communities in the Bay Area; however, Redwood City lies outside of these seven impacted communities.

The major contributor to acute and chronic non-cancer health effects in the Air Basin is acrolein (C_3H_4O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports.⁶ Currently CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, the Air District does not conduct health risk screening analysis for acrolein emissions.⁷

Air District Rules and Regulations

Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the City. The Air District's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under the Air District Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall 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 the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property." Under the Air District's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

Other Air District Regulations

In addition to the plans and programs described above, Air District administers a number of specific regulations on various sources of pollutant emissions that would apply to individual development projects allowed under the proposed Project, including:

⁶ Bay Area Air Quality Management District, 2006. Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area. <http://www.baaqmd.gov/Divisions/Planning-and-Research/Planning-Programs-and-Initiatives/CARE-Program/~media/54D434A0EB8348B78A71C4DE32831544.ashx>, accessed March 1, 2020.

⁷ Bay Area Air Quality Management District, 2010, Air Toxics NSR Program, Health Risk Screening Analysis Guidelines. http://www.baaqmd.gov/~media/Files/Engineering/Air%20Toxics%20Programs/hrsa_guidelines.ashx, accessed March 1, 2020.

- Regulation 2, Rule 2, New Source Review
- Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- Regulation 6, Rule 1, General Requirements
- Regulation 6, Rule 2, Commercial Cooking Equipment
- Regulation 8, Rule 3, Architectural Coatings
- Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- Regulation 8, Rule 7, Gasoline Dispensing Facilities
- Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing)

Alameda County Transportation Commission

The Alameda County Transportation Commission (Alameda CTC) is the congestion management agency for Alameda County, tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. Alameda CTC's latest congestion management program (CMP) is called the 2019 Alameda County Congestion Management Program. Alameda CTC's countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, Alameda CTC's updated CMP describes strategies to measure the performance of the county's multimodal transportation system, address roadway congestion and improve the performance of a multimodal system, and connect transportation and land use planning to reduce regional vehicle miles traveled (VMT) in accordance with Senate Bill 375 (SB 375). The 2019 CMP update incorporates several actions identified as next steps in the 2017 CMP and closely aligns the CMP with the 2016 Countywide Transportation Plan, the 2040 Plan Bay Area, and other related efforts and legislative requirements (e.g., AB 32 and SB 375) to better integrate transportation and land use for achieving GHG reductions.

Plan Bay Area

Plan Bay Area is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy. The 2040 update to Plan Bay Area was adopted jointly by the ABAG and MTC on July 26, 2017. The 2040 Plan Bay Area update serves as a limited and focused update to the 2013 Plan Bay Area, with updated planning assumptions that incorporate key economic, demographic, and financial trends from the last several years. It lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by the Air Resources Board. Plan Bay Area is discussed in greater detail in Chapter 4.6, *Greenhouse Gas Emissions*, of this Draft EIR.

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4.2.1.3 EXISTING CONDITIONS

San Francisco Bay Area Air Basin Conditions

The Air Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in the SFBAAB is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.⁸ The following are the natural factors in the SFBAAB that affect air pollution:

- **Meteorology:** The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range⁹ splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley. The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.
- **Wind Patterns:** During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San José when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon and the sea breeze deepens and increases in velocity while spreading inland. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occurs when there is a lack of or little wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

⁸ Bay Area Air Quality Management District, 2017. Revised, California Environmental Quality Act Air Quality Guidelines.

⁹ The Coast Ranges traverses California's west coast from Humboldt County to Santa Barbara County.

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- **Temperature:** Summertime temperatures in the SFBAAB are determined in large part by the effect of differential heating between land and water surfaces. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.
- **Precipitation:** The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys. During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.
- **Wind Circulation:** Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthful levels.
- **Inversions:** An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the SFBAAB. Elevation inversions¹⁰ are more common in the summer and fall, and radiation inversions¹¹ are more common during the winter. The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

Attainment Status of the SFBAAB

The AQMP provides the framework for air quality basins to achieve attainment of the State and federal AAQS through the State Implementation Plan. Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O₃ range 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.

¹⁰ When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

¹¹ During the night, the ground cools off, radiating the heat to the sky.

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

The attainment status for the SFBAAB is shown in Table 4.2-2. The SFBAAB is currently designated a nonattainment area for California and National O₃, California and National PM_{2.5}, and California PM₁₀ AAQS.

TABLE 4.2-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal) ^a
PM ₁₀ – 24-hour	Nonattainment	Unclassified/ Attainment ^b
PM _{2.5} – 24-hour	Nonattainment	Nonattainment
CO – 8-hour and 1-hour	Attainment	Attainment
NO ₂ – 1-hour	Attainment	Unclassified
SO ₂ – 24-hour and 1-hour	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

a. Severity classification current as of February 13, 2017.

b. In December 2014, US EPA issued final area designations for the 2012 primary annual PM_{2.5} National AAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Source: California Air Resources Board, 2017, Area Designations Maps: State and National, <http://www.arb.ca.gov/desig/adm/adm.htm>, accessed on October 24, 2018; Bay Area Air Quality Management District. 2017. Air Quality Standards and Attainment Status.

<http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status#thirteen>, accessed on October 22, 2018.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project area have been documented and measured by the BAAQMD. BAAQMD has 24 permanent monitoring stations located around the Bay Area. The nearest station is the Livermore – 793 Rincon Avenue Monitoring Station, which monitors O₃, NO₂, and PM_{2.5}. Data from this monitoring stations are summarized in Table 4.2-3. The data show regular violations of the State and federal O₃ standards and federal PM_{2.5} standard.

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Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations				
	2014	2015	2016	2017	2018
Ozone (O₃)					
State 1-Hour \geq 0.09 ppm	0	1	2	5	2
State 8-hour \geq 0.07 ppm	6	7	4	6	3
Federal 8-Hour $>$ 0.075 ppm ^c	4	1	2	4	2
Maximum 1-Hour Conc. (ppm)	0.093	0.105	0.102	0.109	0.099
Maximum 8-Hour Conc. (ppm)	0.080	0.081	0.085	0.086	0.078
Nitrogen Dioxide (NO₂)					
State 1-Hour \geq 0.18 (ppm)	0	0	0	0	0
Maximum 1-Hour Conc. (ppb)	0.0485	0.0496	0.0413	0.0454	0.0564
Fine Particulates (PM_{2.5})					
Federal 24-Hour $>$ 35 $\mu\text{g}/\text{m}^3$	1	0	0	2	14
Maximum 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	42.9	31.1	22.3	41.5	172.6

Notes: ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; * = insufficient data; NA = Not Available

Data for O₃, NO₂, and PM_{2.5} was obtained from the Livermore – 793 Rincon Avenue Monitoring.

Source: California Air Resources Board, 2018. Air Pollution Data Monitoring Cards (2014, 2015, 2016, 2017, and 2018). <http://www.arb.ca.gov/adam/index.html>, accessed January 31, 2020.

Existing Emissions

The existing site is vacant and does not generate criteria air pollutant emissions.

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 cardiorespiratory diseases. Residential areas are also considered 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. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, since 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 population. Sensitive receptors in close proximity to the proposed project include the single- and multi-family residences along Chancery Lane and Finnian Way to the west, Central Parkway to the north, and Fitzwilliam Street to the east.

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4.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant air quality impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
5. Place the boundary of the proposed school site within 500 feet of the edge of the closest traffic lane of a freeway or busy traffic corridor, and would the create an air quality health risk due to the placement of the school [PRC § 21151.8 (a)(1)(D)].
6. Create an air quality hazard due to the placement of a school within one-quarter mile of: (a) permitted and non-permitted facilities identified by the jurisdictional air quality control board or air pollution control district; (b) freeways and other busy traffic corridors; (c) large agricultural operations; and/or (d) a rail yard, which might reasonably be anticipated to emit hazardous air emissions, or handle hazardous or acutely hazardous material, substances, or waste? [PRC § 21151.8 (a)(2)]
7. Result in significant cumulative impacts with respect to air quality.

4.2.2.1 BAY AREA AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. These thresholds are designed to establish the level at which the District believed air pollution emissions would cause significant environmental impacts under CEQA.

In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts; however, this later amendment regarding risk and hazards was the subject of the December 17, 2015, California Supreme Court decision (*California Building Industry Association v BAAQMD* (2015) 62 Cal.4th 369), which clarified that CEQA generally does not require an evaluation of impacts of the environment on a project's future users or residents. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The Supreme Court also held that public agencies

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remain free to conduct this analysis regardless of whether it is required by CEQA. To account for these updates, BAAQMD published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. This latest version of the BAAQMD CEQA Guidelines was used to prepare the analysis in this EIR.

Criteria Air Pollutant Emissions and Precursors

Regional Significance Criteria

The BAAQMD's criteria for regional significance for projects that exceed the screening thresholds are shown in Table 4.2-4. Criteria for both the construction and operational phases of the project are shown.

TABLE 4.2-4 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS

Pollutant	Construction Phase	Operational Phase	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (Exhaust)	82	15
PM _{2.5}	54 (Exhaust)	54	10
PM ₁₀ and PM _{2.5} Fugitive Dust	Best Management Practices	None	None

Source: Bay Area Air Quality Management District, 2017, CEQA Guidelines May 2017.

If projects exceed the emissions in Table 4.2-4, emissions would cumulatively contribute to the nonattainment status and would contribute in 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 further contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 4.2-4, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since 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 above. The Air District is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of emissions in the Air Basin and at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health, which would allow the lead agency to reasonably evaluate how the project's air quality impacts could cause any health impacts, as required by *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S21978 (Friant Ranch). Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants,

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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 AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the USEPA, the air districts prepare air quality management plans that detail regional programs to attain the AAQS. However, if a project within the Air District exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standards are met in the Air Basin.

CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if the following criteria are met:¹²

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and PM_{2.5} because emissions of these pollutants can have significant health impacts at the local level. The proposed high school project would generate TACs and PM_{2.5} during construction activities that could elevate concentrations of air pollutants at the nearby residential, day care, and school-based sensitive receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. The BAAQMD has adopted screening tables for air toxics evaluation during construction.¹³ Construction-related TAC and PM_{2.5} impacts should be addressed on a

¹² Bay Area Air Quality Management District, 2017, Revised, California Environmental Quality Act Air Quality Guidelines, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed October 25, 2018.

¹³ Bay Area Air Quality Management District, 2010. Screening Tables for Air Toxics Evaluations during Construction.

case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site and on-site receptors, as applicable.¹⁴

Community Risk and Hazards: Project

Project-level emissions of TACs or PM_{2.5} from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- An excess cancer risk level of more than 10 in one million, or a noncancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant project contribution.
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m³) annual average PM_{2.5} from a single source would be a significant project contribution.¹⁵

Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the project, exceeds any of the following:

- An excess cancer risk level of more than 100 in one million or a chronic noncancer hazard index (from all local sources) greater than 10.0.
- 0.8 µg/m³ annual average PM_{2.5}.¹⁶

In February 2015, Office of Environmental Health Hazard Assessment (OEHHA) adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rate.¹⁷

Odors

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall 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 the public; or which endangers the comfort, repose, health, or safety

¹⁴ Bay Area Air Quality Management District, 2017, Revised, California Environmental Quality Act Air Quality Guidelines, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed October 25, 2018.

¹⁵ Bay Area Air Quality Management District, 2017, Revised. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed October 25, 2018.

¹⁶ Bay Area Air Quality Management District, 2017, Revised. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed October 25, 2018.

¹⁷ Office of Environmental Health Hazard Assessment, 2015, February. Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.

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of any such persons or the public, or which cause, or has a natural tendency to cause, injury, or damage to business or property. Under BAAQMD's Rule 1-301, BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.¹⁸ For a plan-level analysis, BAAQMD requires:

- Identification of potential existing and planned location of odors sources.
- Policies to reduce odors.

4.2.3 IMPACT DISCUSSION

4.2.3.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur with the proposed high school project. The Air District has published the CEQA Air Quality Guidelines that provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. Construction criteria air pollutant emissions modeling is included in Appendix B of this Draft EIR. The proposed project criteria air pollutant emissions inventory was modeled utilizing the California Emissions Estimator Model (CalEEMod) Version 2016.3.2.25 and includes the following sectors:

- **On-Road Transportation.** Transportation emissions are based on the trip generation for school operations as well as stadium and theater operations and the average student trip length of 1.70 miles provided by Fehr and Peers (see Appendix B of this Draft EIR). Furthermore, high school staff and school vendor average trip lengths were estimated to be 9.50 miles and 7.30 miles, respectively, based on similar projects in the region. The fleet mix in CalEEMod was adjusted to reflect a higher proportion of passenger vehicles used for student drop off and employee vehicles.
- **Area Sources.** Area sources generated from use of consumer products and cleaning supplies are based on California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25 default emission rates and on the assumed building square footages.
- **Energy.** Criteria air pollutant emissions from energy use (natural gas used for cooking, heating, etc.) are based on the CalEEMod defaults for natural gas usage for school land uses. New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards, which are 30 percent more energy efficient for nonresidential buildings than 2016 Standards.¹⁹
- **Construction.** The proposed project is anticipated to be constructed over an approximately 25-month period from August 2020 through August 2022. Construction would entail grading, off-site hauling of earthwork material, construction of the proposed structures and buildings, architectural coating, and asphalt paving on up to 23.46 acres of the currently vacant site. The construction activities are based

¹⁸ Bay Area Air Quality Management District, 2017, May. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed October 25, 2018.

¹⁹ California Energy Commission (CEC). 2018. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

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on information provided by the District. Construction equipment mix is based on CalEEMod defaults, as are worker and vendor trips. Vendor trips have been adjusted to account for additional water truck trips and hauling trips have also been adjusted based on the soil hauling capacity.

A construction health risk assessment (HRA) for TACs and PM_{2.5} associated with construction equipment exhaust was prepared for the project and is included in Appendix C of this Draft EIR. Sources evaluated in the HRA include off-road construction equipment and heavy-duty diesel trucks along the truck haul route. Modeling is based on the USEPA's AERMOD air dispersion modeling program and the latest HRA guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to estimate excess lifetime cancer risks, chronic non-cancer hazard indices, and the PM_{2.5} maximum annual concentrations at the nearest maximum exposed off-site and on-site sensitive receptors and assumes 24-hour outdoor exposure with risks averaged over a 70-year lifetime.

DPM emissions were based on the CalEEMod construction runs, using annual exhaust PM₁₀ construction emissions presented in pounds (lbs) per day. The PM_{2.5} emissions were taken from the CalEEMod output for exhaust PM_{2.5} also presented in lbs per day. The project was assumed to take place over 25 months (535 workdays) from beginning of August 2020 to August 2022. The average daily emission rates from construction equipment used during the proposed project were determined by dividing the annual average emissions for each construction year by the number of construction days per year for each calendar year of construction (i.e., 2020 through 2022). The off-site hauling emission rates were adjusted to evaluate localized emissions from the 0.35-mile haul route within 1,000 feet of the project site.

Air dispersion modeling using the USEPA's AERMOD program was conducted to assess the impact of emitted compounds on sensitive receptors. The model is a steady state Gaussian plume model and is an approved model by BAAQMD for estimating ground level impacts from point and fugitive sources in simple and complex terrain. Meteorological data obtained from the BAAQMD for the nearest representative meteorological station (Livermore Municipal Airport) with the five latest available years (2009 to 2013) of record were used to represent local weather conditions and prevailing winds.

For all modeling runs, a unit emission rate of 1 gram per second was used. The unit emission rates were proportioned over the poly-area sources for on-site construction emissions and divided between the volume sources for off-site hauling emissions. The maximum modeled concentrations at each sensitive receptor were then multiplied by the construction emission rates to obtain the maximum concentrations at the off-site and on-site maximum exposed receptors (MER). The MER location is the receptor location associated with the maximum predicted AERMOD concentrations from the on-site construction emission source.²⁰

²⁰ The calculated on-site emission rates are approximately 2 to 3 orders of magnitude higher than the calculated off-site (hauling) emission rates (see Appendix C). Therefore, the maximum concentrations associated with the on-site emission sources produce the highest overall ground-level MER concentrations and, consequently, higher calculated health risks.

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4.2.3.2 IMPACT ANALYSIS

AQ-1	The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.
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The Air District is directly responsible for reducing emissions from area, stationary, and mobile sources in the SFBAAB to achieve National and California AAQS. The Air District's 2017 Clean Air Plan is a regional and multiagency effort to reduce air pollution in the SFBAAB. A consistency determination with the air quality management plan plays an important role in local agency project review by linking local planning and individual projects to the 2017 Clean Air Plan. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the 2017 Clean Air Plan.

The regional emissions inventory for the SFBAAB is compiled by the Air District. Regional population, housing, and employment projections developed by ABAG are based, in part, on cities' general plan land use designations. These projections form the foundation for the emissions inventory of the 2017 Clean Air Plan. These demographic trends are incorporated into Plan Bay Area, compiled by ABAG and the MTC to determine priority transportation projects and vehicle miles traveled in the Bay Area. The 2017 Clean Air Plan strategy is based on projections from local general plans. Projects that are consistent with the local general plan are considered consistent with the air quality-related regional plan. Large projects that exceed regional employment, population, and housing planning projections have the potential to be inconsistent with the regional inventory compiled as part of the 2017 Clean Air Plan.

The project consists of construction and operation a new high school with a population of 2,500 students. Based on the scope and nature of the project and that the student population would be transferred from other schools within the District, the proposed project would not substantially affect housing, employment, or population projections within the region, which are the basis of the 2017 Clean Air Plan projections. Lastly, the net increase in regional emissions generated by the proposed project would not exceed BAAQMD's emissions thresholds (see impact discussion AQ-2 below). These thresholds are established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by BAAQMD to be a substantial emitter of criteria air pollutants. Therefore, the proposed project would not conflict with or obstruct implementation of the 2017 Clean Air Plan, and impacts would be considered *less than significant*.

Significance without Mitigation: Less than significant.

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AQ-2 The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standards.

The Air District has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including ROG, NO, PM₁₀, and PM_{2.5}. Development projects below these significant thresholds (listed in Table 4.2-4) 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.

Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM₁₀ and PM_{2.5}) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. Construction activities associated with the proposed project would result in emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5}. An estimate of construction emissions associated with the proposed project are shown in Table 4.2-5.

Construction Exhaust Emissions

Construction emissions are based on the preliminary construction schedule developed for the proposed project. Activities that would take place are grading, building construction, paving, and architectural coating. To determine potential construction-related air quality impacts, criteria air pollutants generated by project-related construction activities are compared to BAAQMD's significance thresholds. Average daily emissions are based on the annual construction emissions divided by the total number of active construction days. As shown in Table 4.2-5, criteria air pollutant emissions from construction equipment exhaust would not exceed BAAQMD's average daily thresholds. Therefore, construction-related criteria pollutant emissions from exhaust would be *less than significant*.

Significance without Mitigation: Less than significant.

TABLE 4.2-5 CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATE

Year	Criteria Air Pollutants (Tons/Year) ^{a,b}					
	ROG	NO _x	Fugitive PM ₁₀ ^c	Exhaust PM ₁₀	Fugitive PM _{2.5} ^c	Exhaust PM _{2.5}
2020 Construction	<1	3	<1	<1	<1	<1
2021 Construction	1	5	1	<1	<1	<1
2022 Construction	2	2	<1	<1	<1	<1
Total Emissions	3	11	1	<1	<1	<1
Criteria Air Pollutants (Average lbs/day) ^{a,b}						

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TABLE 4.2-5 CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATE

Year	Criteria Air Pollutants (Tons/Year) ^{a,b}					
	ROG	NO _x	Fugitive PM ₁₀ ^c	Exhaust PM ₁₀	Fugitive PM _{2.5} ^c	Exhaust PM _{2.5}
Average Daily Construction Emissions at all Construction Phases ^d	11	42	4	1	1	1
Air District Average Daily Project-Level Threshold	54	54	Implement BMPs	82	Implement BMPs	54
Exceeds Average Daily Threshold	No	No	NA	No	NA	No

Notes: BMP = Best Management Practices; NA = not applicable; emissions may not total to 100 percent due to rounding; Shading represents the fugitive dust component of the emissions that are mitigated through BAAQMD's BMPs.

- Construction phasing is based on the preliminary information provided by the project applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.
- Modeling assumes building area 323,954 square feet. While the most recent site plans list a larger building area of 333,424 square feet, this change would not significantly increase construction criteria air pollutants emissions to a level beyond their respective BAAQMD threshold.
- Includes implementation of best management practices for fugitive dust control required by the Bay Area Air Quality Management District. Implementation of BAAQMD construction best management practices is considered to result in construction-related fugitive dust emissions that are acceptable. See Mitigation Measure AQ-1.
- Average daily emissions are based on the construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 535 days.

Source: CalEEMod 2016.3.2.25.

Fugitive Dust

Ground-disturbing activities during project construction could generate fugitive dust (PM₁₀ and PM_{2.5}) that, if left uncontrolled, could expose the areas downwind of the construction site to air pollution from the construction dust. Fugitive PM₁₀ is typically the most significant source of air pollution from the dust generated from construction. The amount of fugitive dust generated during construction would be highly variable and is dependent on the amount of material being demolished, the type of material, moisture content, and meteorological conditions. As described under Section 4.2.2, Standards of Significance, BAAQMD does not provide a quantitative threshold for construction-related fugitive dust emissions, and a project's fugitive dust emissions are considered to be acceptable with implementation of BAAQMD's best management practices. In other words, there could be a significant impact if the best management practices are not enforced. For this reason, the project's fugitive dust emissions with the incorporation of BAAQMD's best management practices are quantified for reference in Table 4.2-5.

As described in Section 4.2.1.1, extended exposure to particulate matter can increase the risk of chronic respiratory disease, which would be a *significant* impact. PM₁₀ bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. PM_{2.5} penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM₁₀ standards. 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).

Significance without Mitigation: Significant.

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Impact AQ-2: Uncontrolled fugitive dust (PM₁₀ and PM_{2.5}) could expose the areas that are downwind of construction sites to air pollution from construction activities without the implementation of BAAQMD's best management practices.

Mitigation Measure AQ-2: The Dublin Unified School District shall specify in the construction bid that the project construction contractor shall comply with the following the Bay Area Air Quality Management District's best management practices for reducing construction emissions of uncontrolled fugitive dust (coarse inhalable particulate matter [PM₁₀] and fine inhalable particulate matter [PM_{2.5}]):

- Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering shall be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water shall be used whenever possible.
- Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads, parking areas, and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (e.g., dirt, sand).
- Limit vehicle traffic speeds on unpaved roads to 15 miles per hour.
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.

These measures shall be noted on grading plans prepared by the District. The construction contractor shall implement these measures during ground disturbing activities. The Dublin Unified School District shall verify compliance that these measures have been implemented during normal construction site inspections.

Significance with Mitigation: Less than significant. Mitigation Measure AQ-2 would ensure that the construction contractor complies with BAAQMD's best management practices to reduce fugitive dust to less than significant levels.

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Operational Emissions

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). As shown in Table 4.2-6, the operational emissions generated by the project would not exceed the BAAQMD daily pounds per day or annual tons per year project level threshold.²¹ Therefore, the proposed project would not cumulatively contribute to the nonattainment designations of the SFBAAB. Project-related operation activities to the regional air quality would be *less than significant*.

TABLE 4.2-6 OPERATIONAL CRITERIA AIR POLLUTANT EMISSIONS ESTIMATES

Category	Criteria Air Pollutants (tons per year) ^a			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Proposed Land Use 2022 Emissions				
Area	1	<1	<1	<1
Energy	<1	<1	<1	<1
On-Road Mobile	1	1	2	1
Total	3	1	2	1
BAAQMD Annual Project-Level tons/yr Threshold	10	10	15	10
Exceeds BAAQMD's lbs/day Threshold?	No	No	No	No

Category	Criteria Air Pollutants (average pounds per day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Proposed Land Use in 2022	16	6	12	3
BAAQMD Average Daily Project-Level lbs/day Threshold	54	54	82	54
Exceeds BAAQMD's lbs/day Threshold?	No	No	No	No

Notes: Emissions may not total to 100 percent due to rounding; Reactive Organic Gases = ROG; Nitrogen Oxides = NO_x; Coarse Inhalable Particulate Matter = PM₁₀; Fine Inhalable Particulate Matter = PM_{2.5}

b. Modeling assumes building area 323,954 square feet. While the most recent site plans list a larger building area of 333,424 square feet, this change would not significantly increase operational criteria air pollutants emissions to a level beyond their respective BAAQMD threshold.

Source: California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25

Significance without Mitigation: Less than significant.

AQ-3 The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

The proposed project could expose sensitive receptors to elevated pollutant concentrations if it would cause or contribute significantly 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.

²¹ Further details are shown in Appendix B, Air Quality and Greenhouse Gas Emissions, of this Initial Study.

Construction

The project would elevate concentrations of TACs and construction exhaust PM_{2.5} in the vicinity of sensitive residential land uses (i.e., receptors) during construction activities. The nearest off-site sensitive receptors proximate to the project site include the residences surrounding the project site. Construction activities would occur near these sensitive receptor locations. Consequently, a health risk assessment (HRA) of TACs and construction exhaust PM_{2.5} was prepared for the project and is included in Appendix C of this Draft EIR.

Results of the analysis are shown in Table 4.2-7.

TABLE 4.2-7 CONSTRUCTION HEALTH RISK ASSESSMENT RESULTS – UNMITIGATED

Receptor	Project Level Risk ^{a, b}		
	Cancer Risk (per million)	Chronic Hazards	Construction Exhaust PM _{2.5} (µg/m ³) ^a
Maximum Exposed Off-Site Resident	36	0.090	0.18
Threshold	10	1.0	0.3 µg/m ³
Exceeds Threshold	Yes	No	No

Notes: Cancer risk calculated using the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Health Risk Assessment guidance.

a. Construction phasing are based on the preliminary information provided by the District. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.

b. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 535 days.

Source: Lakes AERMOD Version 9.8.3, CalEEMod Version 2016.3.2.25.

The results of the HRA are based on the maximum sensitive receptor concentration over the approximately 25-month construction exposure period for off-site and on-site receptors, assuming 24-hour outdoor exposure, and averaged over a 70-year lifetime. Risk is based on the updated Office of Environmental Health Hazard Assessment (OEHHA) Guidance as follows:

- Cancer risk for the maximum exposed off-site resident (MER), a multi-family residence immediately east of the site along Fitzwilliam Street, from unmitigated construction activities related to the project were calculated to be 36 in a million and would exceed the 10 in a million significance threshold. The calculated total cancer risk for the off-site residents incorporates the individual risk for infant and childhood exposures into one risk value.
- For non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than 1 for off-site sensitive receptors. Therefore, chronic non-carcinogenic hazards would not exceed acceptable limits.
- The highest construction exhaust PM_{2.5} annual concentration of 0.18 µg/m³ at the off-site MER were all calculated to be less than the 0.3 µg/m³ significance threshold. Therefore, impacts from PM_{2.5} concentrations are less than significant.

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Consequently, prior to mitigation, cancer risk impacts to off-site residences would be *significant* because the project would expose sensitive receptors to substantial concentrations of air pollutant emissions during construction.

Significance without Mitigation: Significant.

Impact AQ-3: Construction activities of the project could expose off-site sensitive receptors to substantial concentrations of TAC, exceeding the applicable cancer risk threshold.

Mitigation Measure AQ-3: The Dublin Unified School District (District) shall specify in the construction bid that the project construction contractor(s) and subcontractor(s) comply with the following requirements for all off-road equipment greater than 50 hp that will be operating for more than 20 hours over the entire duration of the construction activities at the site:

- Have engines that meet either US EPA or California Air Resources Board (CARB) Tier 4 Final emission standards. Ensure that all construction plans submitted to the School District clearly show the selected emission reduction strategy for construction equipment over 50 horsepower.
- Maintain a list of all operating equipment in use on the project site for verification by the School District official or his/her designee. The construction equipment list shall state the makes, models, and number of construction equipment on-site. Ensure that all equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.
- Communicate with all sub-contractors in contracts and construction documents that all non-essential idling of construction equipment is restricted to 5 minutes or less in compliance with California Air Resources Board Rule 2449 and is responsible for ensuring that this requirement is met.

Significance with Mitigation: Less than significant. Mitigation Measure AQ-3 would require equipment that meets the EPA Tier 4 (Final) emissions standards on all equipment with more than 50 horsepower (that will be operating for more than 20 hours over the entire duration of the construction activities) and would reduce cancer risk impacts to the off-site residential MER from 36 in a million to 3.4 in a million. Thus, cancer risk at the off-site residential MER would be reduced to below the BAAQMD cancer risk threshold of 10 in a million. The mitigated health risk values are summarized in Table 4.2-8. Therefore, cancer risk impacts from project-related construction activities would be reduced to less-than-significant levels with incorporation of mitigation.

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TABLE 4.2-8 CONSTRUCTION HEALTH RISK ASSESSMENT RESULTS – MITIGATED

Receptor	Project Level Risk ^{a, b, c, d}		
	Cancer Risk (per million)	Chronic Hazards	Construction Exhaust PM _{2.5} (µg/m ³) ^a
Maximum Exposed Off-Site Resident	3.4	0.008	0.02
Threshold	10	1.0	0.3 µg/m ³
Exceeds Threshold	No	No	No

Notes: Cancer risk calculated using the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Health Risk Assessment guidance.

a. Construction phasing are based on the preliminary information provided by the District. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.

b. Modeling assumes building area 323,954 square feet. While the most recent site plans list a larger building area of 333,424 square feet, this change would not significantly increase cancer risk, chronic hazards, or construction exhaust PM_{2.5} concentration to a level beyond their respective thresholds.

c. Includes implementation of Mitigation Measure AQ-3, which requires all off-road equipment which meets USEPA Tier 4 Final engine requirements for equipment over 50 horsepower that operates over 20 hours.

d. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 535.

Source: Lakes AERMOD Version 9.8.3, CalEEMod Version 2016.3.2.25

Operation

Health Risk

Exposure to elevated concentrations of vehicle-generated PM_{2.5} and TACs at sensitive land uses have been identified by CARB, the California Air Pollution Control Officer's Association, and BAAQMD as a potential air quality hazard. The project would not create new major sources of TACs, which are more commonly associated with industrial manufacturing or warehousing. Therefore, operation-related health risk impacts associated with the project are considered *less than significant*.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO, called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for periods of time and are subject to reduced speeds.

Congestion Management Plans (CMP) must align with *Plan Bay Area 2040*, and an overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle miles traveled and associated GHG emissions reductions under Senate Bill 375. While the proposed project would involve the construction of a new high school, it would be consistent with the overall goals of the MTC/ABAG's *Plan Bay Area 2040* as it would serve the population surrounding the project site. Additionally, the project would not conflict with the CMP because it would not hinder the capital improvements outlined in Alameda County's 2019 CMP

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or alter regional travel patterns.²² Furthermore, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by 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.²³ Based on the traffic analysis conducted as part of this environmental analysis, the project would generate a net increase of 1,300 peak hour trips during the AM peak hour and 825 peak hour trips during the PM peak hour and would not increase traffic volumes at affected intersections by more than BAAQMD's screening criteria of 44,000 vehicles per hour, or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Therefore, the project would not have the potential to substantially increase CO hotspots at intersections in the project vicinity. Localized air quality impacts related to mobile-source emissions would therefore be *less than significant*.

Significance without Mitigation: Less than significant.

AQ-4	The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
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The project would involve the construction of a high school campus. Based on the scope and nature of the project, it would not be a facility that generates substantial odors that would affect a substantial number of people. The type of facilities that are typically 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. School uses are not associated with foul odors that constitute a public nuisance.

During project-related construction activities on the project site, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

²² Alameda County Transportation Commission. 2017, December. 2017 Congestion Management Program Report. <https://www.alamedactc.org/planning/congestion-management-program/>

²³ Bay Area Air Quality Management District, 2017, California Environmental Quality Act Air Quality Guidelines, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed on March 20, 2020.

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AQ-5 The proposed project site would not be within 500 feet to the closest traffic lane of a freeway or busy traffic corridor and would not create an air quality health risk due to its placement.

There is a direct correlation between proximity to high traffic roadways and a variety of health effects. These effects are attributed to high concentration of air pollutants generated by vehicle exhaust.²⁴ Public Resources Code Section 21151.8(b)(9) and Education Code Section 17213(d)(9) define a “freeway or other busy traffic corridors” as roadways that on an average day have traffic in excess of 50,000 vehicles in a rural area or 100,000 vehicles in an urban area or 100,000 average daily trips (ADT).

Residential, recreational, and retail uses surround the project site. Streets within 500 feet of the site are designated as arterial, collector or local residential streets.²⁵ The traffic volume on Central Parkway was measured in 2011 near the intersection with Chancery Lane at 3,027 ADT. The traffic volume on Dublin Boulevard near the southeast corner of the Site was measured in 2016 at 14,864 ADT. Thus, while there are roadways within 500 feet of the project site, these roadways have daily traffic volumes substantially below the volumes to be considered busy traffic corridors. Therefore, the health risks from surrounding roadways to the students and staff would be *less than significant*.

Significance without Mitigation: Less than significant.

AQ-6 The proposed project would not create an air quality hazard due to the placement of the school site within one-quarter mile of: (a) permitted and non-permitted facilities identified by the jurisdictional air quality control board or air pollution control district; (b) freeways and other busy traffic corridors; (c) large agricultural operations; and/or (d) a rail yard, which might reasonably be anticipated to emit hazardous air emissions, or handle hazardous or acutely hazardous material, substances, or waste.

The BAAQMD developed screening analysis tools for identifying stationary and mobile sources within a quarter-mile radius of project sites that have the potential to generate hazardous air emissions. BAAQMD’s screening tools provide an easy-to-use initial comparison of health risks to determine if nearby emission sources may expose an existing or proposed new receptor to concentrations above BAAQMD’s thresholds of significance. According to a review of BAAQMD’s screening tools, there are two permitted facilities and two mobile sources within one-quarter mile of the site. The two stationary sources have permits for diesel-fueled emergency generators at Lowe’s on Grafton Street, about 735 feet southwest of the project site, and Terraces Homeowners Association at 3448 Finnian Way, approximately 500 feet east to the east. The two mobile sources are Interstate 580 approximately 1,300 feet south of the site and Dublin Boulevard immediately to the south.

²⁴ California Air Resources Board. 2005, April. Air Quality and Land Use Handbook: A Community Health Perspective.

²⁵ City of Dublin. 2016. Dublin General Plan. <http://www.dublin.ca.gov/171/General-Plan>.

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A screening-level health risk evaluation was conducted for the project site to gauge carcinogenic and non-carcinogenic risks from the four nearby sources. Since BAAQMD's screening level risk values are for residential receptors, the risk values were adjusted for school-based receptors (i.e., high school students and staff) per BAAQMD recommendations. As presented in Table 4.2-9, the adjusted health risk values for school-based receptors do not exceed the BAAQMD thresholds of significance for health risk. Therefore, the nearby stationary and mobile sources are not anticipated to pose an actual or potential endangerment to occupants of the proposed school and impacts would be *less than significant*.

TABLE 4.2-9 HEALTH RISK SCREENING SUMMARY

Source	Cancer Risk – Staff (per million)	Cancer Risk – Students (per million)	Chronic Hazard Index	Acute Hazard Index	PM _{2.5} (µg/m ²)
Interstate 580	0.54	0.42	0.027	0.016	0.09
Dublin Boulevard	0.33	0.26	0.030	0.030	0.07
Terraces HOA	0.60	0.60	0.001	n/a	0.006
Lowe's of Dublin	0.36	0.36	0.001	n/a	0.007
BAAQMD Significance Threshold	10.0	10.0	1.0	1.0	0.30
Exceeds Threshold?	No	No	No	No	No
Cumulative Total	1.8	1.6	0.058	0.046	0.17
BAAQMD Significance Threshold	100	100	10.0	10.0	0.80
Exceeds Threshold?	No	No	No	No	No

Source: See the Geological and Environmental Hazards Assessment Report in Appendix E.

Significance without Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACTS

AQ-7 Implementation of the project would not cumulatively contribute to air quality impacts in the Air Basin.

A project that exceeds BAAQMD's significance criteria in the context of emissions from all other development projected within the entire Air Basin would cumulatively contribute to impacts. Project-related construction activities would not generate exhaust emissions that exceed BAAQMD's regional significance thresholds for criteria air pollutants but would generate fugitive dust during ground-disturbing activities and could expose sensitive receptors to substantial pollutant concentrations of TACs. Therefore, in combination with past, present, and reasonably foreseeable projects, the project would result in a *significant* cumulative impact with respect to air quality.

Significance without Mitigation: Significant.

Mitigation Measure AQ-5: Implement Mitigation Measures AQ-2 and AQ-3.

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Significance with Mitigation: Less than significant. Mitigation Measure AQ-2 would reduce fugitive dust generated during ground-disturbing activities while Mitigation Measure AQ-3 would reduce diesel particulate matter from off-road construction equipment. With these mitigation measures, regional and localized construction emissions would not exceed BAAQMD significance thresholds. Consequently, the project would not cumulatively contribute to the nonattainment designations of the Air Basin and impacts would be less than significant following mitigation.

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4.3 BIOLOGICAL RESOURCES

This chapter provides a summary of the relevant regulatory setting, describes the existing biological resources on the site, and assesses the potential impacts that would occur by implementing the proposed project. For this analysis, biological resources associated with the site were identified through a review of available background information and a field reconnaissance survey. Available documentation was reviewed to provide information on general resources in the Dublin vicinity and any records on sensitive biological resources in the vicinity of the site. This included records on occurrences of special-status species and sensitive natural communities maintained by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW), critical habitat for listed special-status species designated by the U.S. Fish and Wildlife Service (USFWS), wetlands mapped as part of the National Wetland Inventory maintained by the USFWS, information on rare plants in the *Inventory of Rare and Endangered Plants of California* (electronic edition) maintained as part of the California Native Plant Society (CNPS), and other documents. A field reconnaissance survey was conducted by the project biologist on November 19th, 2019 to evaluate site conditions, the potential for presence of sensitive biological or wetland resources, and the significance of potential impacts associated with implementing the proposed project, as assessed below.

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Endangered Species Act

The USFWS and National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) is responsible for implementation of the Federal Endangered Species Act (FESA).¹ The Act protects fish and wildlife species that are listed as threatened or endangered, and their habitats. “Endangered” species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range, and “threatened” species, subspecies, or distinct population segments are likely to become endangered in the near future.

If a listed species or its habitat is found to be affected by a project, then according to Section 7 of the FESA, all federal agencies are required to consult with USFWS and NOAA Fisheries. The purpose of consultation with USFWS and NOAA Fisheries is to ensure that the federal agencies’ actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species.

Section 9 of the FESA prohibits the take of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species’ recovery. “Take” is defined as an action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions

¹ 16 United States Code Section 1531 *et seq.*

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also apply to threatened species unless a special rule has been defined with regard to taking at the time of listing.

Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the unlawful removal, or malicious damage or destruction, of any endangered plant from federal land. Section 9 prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in non-federal areas in knowing violation of any State law or in the course of criminal trespass. Section 9 does not provide any protection for candidate species and species that are proposed or under petition for listing.

Federal Clean Water Act

The Federal Clean Water Act (CWA) is administered by the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE). The USACE is responsible for regulating the discharge of fill material into waters of the United States, including lakes, rivers, streams, and their tributaries, as well as wetlands. Waters of the United States are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Wetlands are defined for regulatory purposes as areas “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

The Navigable Waters Protection Rule issued on April 21, 2020 identifies four categories of waters that are considered “waters of the United States” by the USACE. These include territorial seas and traditional navigable waters, tributaries with perennial and intermittent flows, lakes and other impoundments of jurisdictional waters, and adjacent wetlands. The rule also outlines features that are not considered “waters of the United States” and are not under federal jurisdictional. These include ephemeral drainages, groundwater, artificial lakes and ponds, waste treatment systems, prior converted cropland, and other features.²

The discharge of dredged or fill material into waters of the United States is subject to permitting under Section 404 (Discharges of Dredge or Fill Material). Section 401 (Certification) specifies additional requirements for permit review, particularly at the State level. Project proponents must obtain a permit from the USACE for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed action. USACE permits must be certified by the State Water Resources Control Board, discussed below, in order to be valid. Thus, certification from the Board should be requested at the same time an application is filed with the USACE.

Certification from the California Regional Water Quality Control Board (RWQCB) is also required when a proposed activity may result in discharge into navigable waters, pursuant to Section 401 of the CWA and the EPA 404(b)(1) Guidelines.

² US Environmental Protection Agency, 2020, Navigable Waters Protection Rule, Final Rule: The Navigable Waters Protection Rule, available online at <https://www.epa.gov/nwpr/final-rule-navigable-waters-protection-rule>, accessed March 24, 2020.

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Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined as “to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires.” Most bird species native to North America are covered by this act. In December 2017, the Department of the Interior (DOI) issued a memorandum³ reversing the incidental take interpretation of the MBTA. Under the latest determination of the DOI, the take of a migratory bird or its active nest (i.e., with eggs or young) that is incidental to a lawful activity does not violate the MBTA. However, this opinion from the DOI is only the latest interpretation from the current Administration of the MBTA. This legal opinion is contrary to the long-standing interpretation for over 40 years that held the MBTA strictly prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats.⁴ The CESA mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a species that is on the federal and State lists, compliance with the FESA satisfies the CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the CESA under California Fish and Game Code Section 2080.1. For projects that would result in the taking of a species that is only State listed, the project proponent must apply for a take permit under Section 2081(b).

California Fish and Game Code

Under the California Fish and Game Code, the CDFW provides protection from take for a variety of species. The CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the California Fish and Game Code. The California Fish and Game Code stipulates that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

³ United States Department of the Interior, 2017, Memorandum, Subject: The Migratory Bird Treaty Act Does Not Prohibit Incidental Take, dated December 22, 2017, <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>, accessed on January 28, 2019.

⁴ California Fish and Game Code Section 2050 *et seq.*

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California Fish and Game Code Sections 1600 through 1616 regulate development to avoid and mitigate impacts or modification to rivers, streams, or lakes. Modification is defined as diverting or obstructing the natural flow of, or substantially changing or using any material from, the bed, channel, or bank of, any river, stream, or lake.

California Fish and Game Code Section 3503.5 prohibits take, possession, or destruction of any raptor (bird of prey species in the orders Falconiformes and Strigiformes), including their nests or eggs. Violations of this law include destruction of active raptor nests as a result of tree removal and disturbance to nesting pairs by nearby human activity that causes nest abandonment and reproductive failure.

With the change to the federal MBTA that the scope of the law only extends to *intentionally* injuring birds, Fish and Game Code 3513(a) has been adopted, named the California Migratory Bird Protection Act, which makes it “unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.) before January 1, 2017, any additional migratory nongame bird that may be designated in that federal act after that date, or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act before January 1, 2017, or subsequent rules or regulations adopted pursuant to that federal act, unless those rules or regulations are inconsistent with this code.” On January 20, 2025, Code 3513(a) will be replaced by the provision that “it is unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.), or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act.”⁵

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the RWQCB to regulate the discharge of waste that could affect the quality of the State’s waters. The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the State.” Projects that do not require a federal permit may still require review and approval by the RWQCB. The RWQCB focuses on ensuring that projects do not adversely affect the “beneficial uses” associated with waters of the State. In most cases, the RWQCB requires the integration of water quality control measures into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to “projects” proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of CEQA, a species not included on any formal list “shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria” for listing. With sufficient documentation, a species could be shown to meet

⁵ California Legislative Information, 2020, AB-454 California Migratory Bird Protection Act, available online at http://leginfo.ca.gov/faces/billCompareClient.xhtml?bill_id=201920200AB454&showamends=false, accessed March 23, 2020.

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the definition of rare or endangered under CEQA and be considered a “de facto” rare or endangered species.

Other Statutes, Codes and Policies Affording Species Protection

The CDFW maintains an administrative list of Species of Special Concern (SSC), defined as a “species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the State, or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as federally, but not State-, threatened or endangered;
- Meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (nonscyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for State threatened or endangered status.”

The CDFW’s Nongame Wildlife Program is responsible for producing and updating SSC publications for mammals, birds, and reptiles and amphibians. Section 15380 of the CEQA Guidelines clearly indicates that SSC should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein. In contrast to species listed under the federal ESA or CESA, however, SSC have no formal legal status.

The CNPS is a non-profit conservation organization dedicated to the preservation of native flora in California. The CNPS has been involved in assembling, evaluating, and distributing information on special-status plant species in the state, as listed in the Inventory of Rare and Endangered Plants of California. CNPS has recently updated its rating system for the rarity of special-status plants, and now includes both a California Rare Plant Rank and a Threat Rank. CEQA requires government agencies to consider environmental impacts of discretionary projects and to avoid or mitigate them where possible. Under Section 15380, CEQA provides protection for both State-listed species and for any other species which can be shown to meet the criteria for State listing. The CDFW recognizes that special-status plants with a California Rare Plant Rank of 1A (Presumed extinct in California), 1B (Rare, threatened, or endangered in California and elsewhere), and 2 (Rare and endangered in California, but are more common elsewhere) in the CNPS Inventory consist of plants that, in a majority of cases, would qualify for listing and these species should be addressed under CEQA review. In addition, the CDFW recommends, and local governments may require, protection of species which are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants with a CNPS California Rare Plant Rank of 3 (Plant species for which additional data is needed – a review list) and 4 (Plant species of limited distribution- a watch list).

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Local Regulations

Although certain of the City of Dublin regulations do not apply to lands under District jurisdiction, the District will consider the following local regulations during project implementation and implement them as best practices when deemed necessary or appropriate.

City of Dublin General Plan

The Environmental Resources Management: Conservation Element (Chapter 7) of the City of Dublin General Plan includes guiding policies and implementing policies pertaining to habitat protection. However, these pertain to protection of riparian vegetation along stream corridors, oak woodlands, and tree resources, none of which are present on the site.

City of Dublin Municipal Code

Chapter 7.56 of the Dublin Municipal Code provides for the protection of certain tree resources, including trees defined as street trees and heritage trees. Street trees are tree plantings within the public right-of-way. A heritage tree consists of 1) any oak, bay, cypress, maple, redwood, buckeye or sycamore tree having a trunk or main stem of 24 inches or more measured at 4.5 above natural grade, 2) a tree required to be preserved as part of an approved development plan, zoning permit, use permit, site development review or subdivision map, or 3) a tree required to be planted as a replacement for an unlawfully removed tree. A permit is required for removal of any street tree, protected tree or heritage planting.

4.3.1.2 EXISTING CONDITIONS

Vegetative Cover and Wildlife Habitat

The site has been extensively modified by past grading, stockpiling of fills, and routine disking presumably as part of past agricultural practices and more recently for fire fuel management. Grading was performed in the past as part of improvements for the extension of Finnian Way and Grafton Street, which were never completed. Fills appear to have been brought in to raise the southeastern corner of the site along Dublin Boulevard, and the area was being used as a staging area by PG&E at the time of the field reconnaissance survey in November 2019. Vegetative cover on the site is now composed of ruderal (weedy) grasses and forbs. Characteristic species include: wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus mollis*), field mustard (*Brassica campestris*), wild radish (*Rhaphanus sativus*), bindweed (*Convolvulus arvensis*), bur clover (*Medicago polymorpha*), bristly oxtongue (*Helminthotheca echinoides*), curly dock (*Rumex crispus*), sweet fennel (*Foeniculum vulgare*), yellow-star thistle (*Centaurea solstitialis*), and prickly Russian thistle (*Salsola sp.*), among others.

The ruderal grassland cover continues to provide habitat for wildlife common in grassland and suburban areas. Grassland cover provides foraging and possibly nesting or denning opportunities for resident species such as western fence lizard, northern alligator lizard, gopher snake, goldfinch, red-winged blackbird, California ground squirrel, California vole, Botta's pocket gopher, and black-tailed jackrabbit. The rodent, bird, and reptile populations offer foraging opportunities for avian predators such as white-tailed kite, northern harrier, American kestrel, red-tailed hawk, barn owl, and great horned owl. Several ground

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squirrel colonies have become established along the partially improved Finnian Way alignment, with burrows excavated along the edge of elevated concrete storm drain inlets and other structures. The ground nesting burrowing owl, which is considered a California Species of Special Concern (SSC) by the CDFW, frequently occupies ground squirrel burrows. However, no signs of occupation by burrowing owl (i.e. white wash, feathers, or pellets) were observed during inspection of the ground squirrel burrows during the field reconnaissance survey.

Sensitive Natural Communities

Sensitive natural communities are community types recognized by CDFW and other agencies because of their rarity, such as native grasslands or riparian woodlands. No sensitive natural communities are present on the site, which supports a cover of ruderal non-native grasslands.

Special-Status Species

Special-status plant and wildlife species include those listed under the State and federal Endangered Species Acts, plants listed by the CNPS' *Inventory of Rare and Endangered Vascular Plants of California*, and wildlife designated as Species of Special Concern by the CDFW. The special-status species addressed in this section are based on a review of records from the CNDDDB and the CNPS on-line inventory, as well as other information sources. For the purposes of this section, special-status species include:

- Species listed, proposed, or candidate species for listing as Threatened or Endangered by the USFWS pursuant to the federal ESA of 1969, as amended;
- Species listed as Rare, Threatened, or Endangered by the CDFW pursuant to the CESA of 1970, as amended;
- Species designated as Fully Protected under Sections 3511 (birds), 4700 (mammals), and 5050 (reptiles and amphibians) of the California Fish and Game Code;
- Species designated by the CDFW as California Species of Concern (CSC); and
- Species not currently protected by statute or regulation, but considered rare, threatened, or endangered under CEQA (Section 15380).

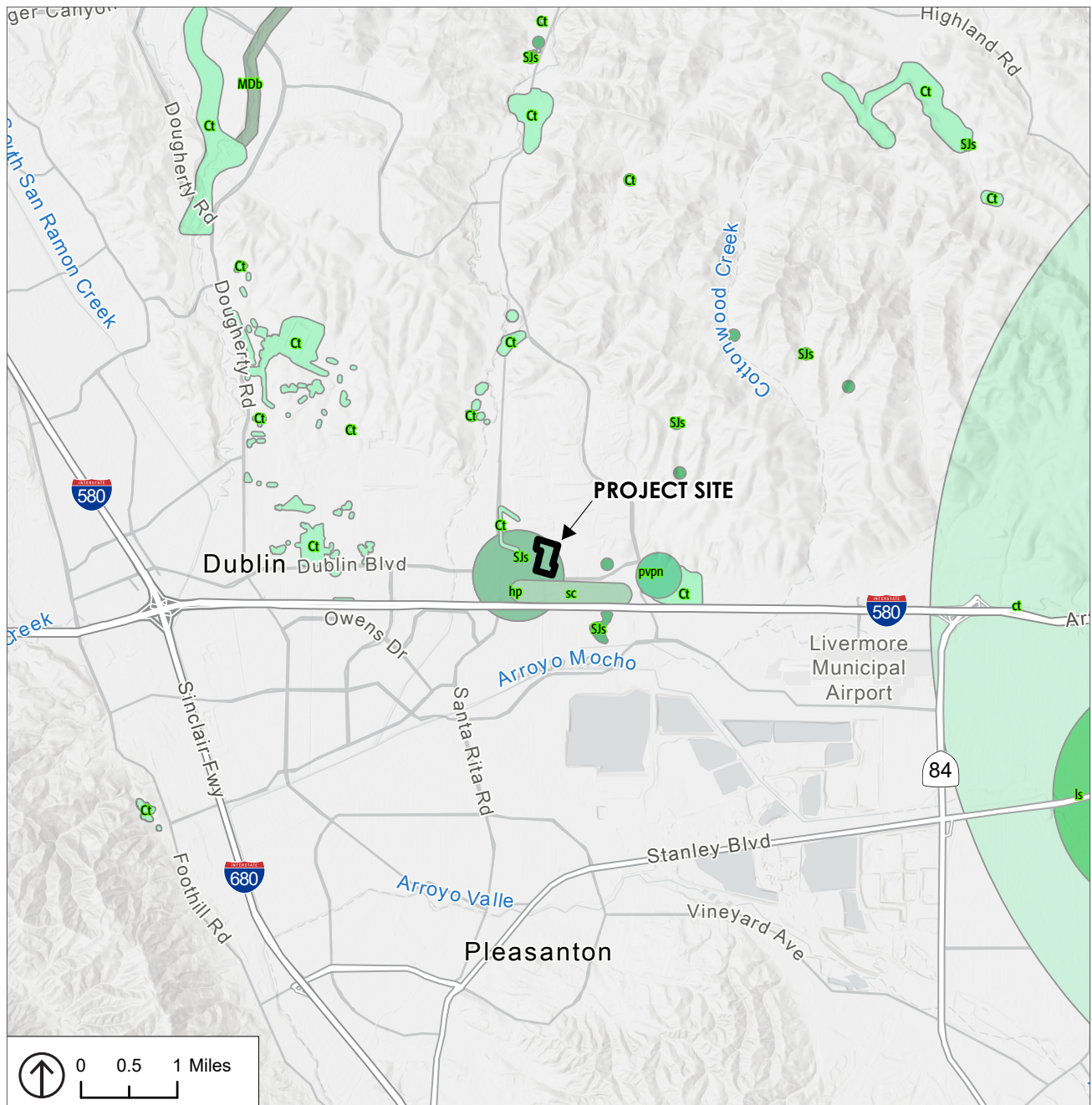
A record search conducted by the CNDDDB and the other relevant information sources indicate that numerous plant and animal species with special status have either been recorded from or are suspected to occur in the Dublin and northern Alameda County area. Figures 4.3-1 (Special Status Plant Species) and 4.3-2 (Special Status Animal Species and Critical Habitat) show the distribution of special-status plant and animal species, respectively, as reported by the CNDDDB within approximately 5 miles of the site. According to CNDDDB records, no specific occurrences of special-status plant or animal species have been reported from the site, but general occurrences of California red-legged frog (*Rana draytonii*) and San Joaquin spearscale (*Extriplex joaquinana*) extend over portions of the site. Both of these occurrence records predate the extensive development which has occurred in the vicinity of the site, and suitable habitat for these and other special-status species is now largely absent from the site. Past grading and routine diking precludes the potential for occurrence of special-status plant species on the site. The absence of suitable habitat conditions for special-status animal species precludes the potential for occurrence of special-

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status animal species on the site, with the possible exception of western burrowing owl (*Athene cunicularia*), as discussed below. This includes absence of suitable aquatic habitat necessary to support breeding activity by the federally-threatened California red-legged frog and the State and federally-threatened California tiger salamander (*Ambystoma californiense*), which were once reported from the site vicinity.

As discussed above, the site does contain marginally suitable habitat for western burrowing owl. Burrowing owl has no legal protective status under the federal or California Endangered Species Acts, however it is considered a Species of Special Concern (SSC) by the CDFW. Burrowing owls favor flat, open grassland or gentle slopes and sparse shrubland ecosystems, typically with sparse or nonexistent tree or shrub canopies. This owl species uses burrows of California ground squirrel for nesting and retreat, and forages in open grasslands and pastureland. The closest occurrences of burrowing owl reported by the CNDDDB are from the eastern edge of Tassajara Road about a half mile southwest of the site, and from the Gleason Drive vicinity about a quarter mile north of the site in an area that is now developed with dense residential use that is unsuitable for burrowing owl (see Figure 4.3-2). No individual or signs of burrowing owl were observed during the field reconnaissance survey, and the site is not considered to provide high quality habitat due to the surrounding suburban development and routine disking for fire prevention. However new nests could be established in the future until the site is developed and converted to suburban uses, such as the proposed high school facilities.

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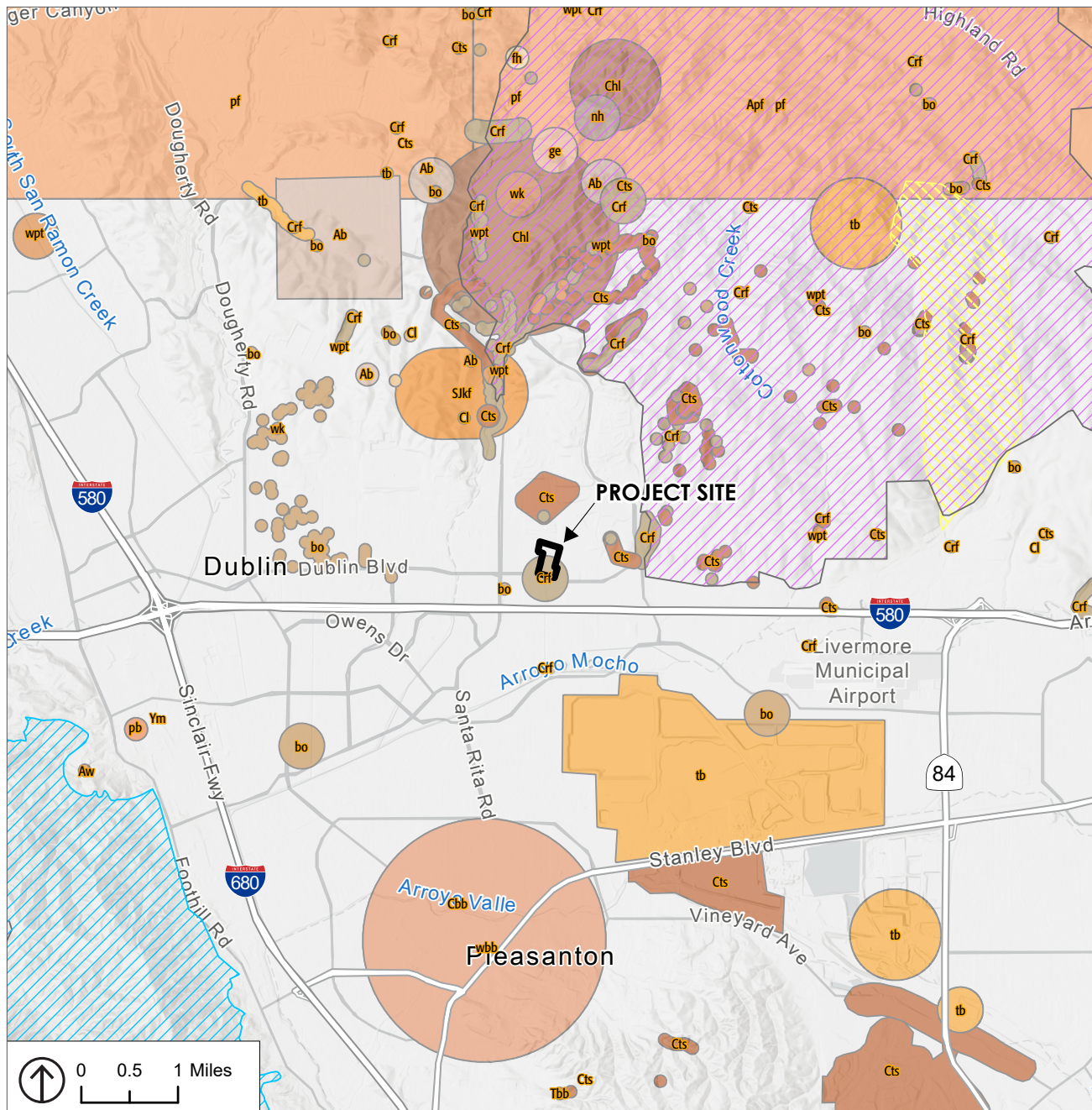


Source: California Natural Diversity Database, 2019; USFWS, 2019; ESRI, 2019; PlaceWorks, 2020.

Plants (common name and code)	hairless popcornflower (hp)
Congdon's tarplant (Ct)	long-styled sand-spurrey (lss)
Mt. Diablo buckwheat (MDb)	prostrate vernal pool navarretia (pvpn)
San Joaquin spearscale (SJs)	saline clover (sc)
caper-fruited tropidocarpum (cft)	

Figure 4.3-1
Special Status Plant Species

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Source: California Natural Diversity Database, 2019; USFWS, 2019; ESRI, 2019; PlaceWorks, 2020.

Animals (common name and code)	San Joaquin kit fox (SJKf)	tricolored blackbird (tb)
Alameda whipsnake (Aw)	Townsend's big-eared bat (Tbeb)	western bumble bee (wbb)
American badger (Ab)	Yuma myotis (Ym)	western pond turtle (wpt)
American peregrine falcon (Apf)	burrowing owl (bo)	white-tailed kite (wtk)
California horned lark (Chl)	ferruginous hawk (fh)	Critical Habitat (USFWS)
California linderella (Cl)	golden eagle (ge)	Alameda whipsnake (=striped racer)
California red-legged frog (Crfl)	northern harrier (nh)	California red-legged frog
California tiger salamander (Cts)	pallid bat (pb)	California tiger Salamander
Crotch bumble bee (Cbb)	prairie falcon (pf)	

Figure 4.3-2

Special Status Animal Species and Critical Habitat

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Wetlands and Riparian Habitats

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions.

The CDFW, USACE, and RWQCB have jurisdiction over modifications to wetlands and other "waters of the United States." Jurisdiction of the Corps is established through provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material without a permit. The RWQCB jurisdiction is established through Section 401 of the Clean Water Act, which requires certification or waiver to control discharges in water quality, and the State Porter-Cologne Act. Jurisdictional authority of the CDFW over wetland areas is established under Sections 1600-1607 of the State Fish and Game Code, which pertain to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream.

A preliminary wetland assessment was conducted during the field reconnaissance survey. No indications of any jurisdictional waters were observed on the site. Mapping prepared as part of the National Wetland Inventory shows a "riverine" drainage bisecting the site, generally from the northwestern to the southeastern corners of the site. However, this feature is no longer present on the site, based on the inspection performed during the field reconnaissance. Surface water flows were apparently intercepted as Central Parkway and residential development to the north and west were constructed, and flows are now conveyed through a storm drainage system that bypasses the site. Subsequent grading on the site has eliminated the drainage channel, and no bed or bank remains.

4.3.2 IMPACT DISCUSSION

4.3.2.1 STANDARDS OF SIGNIFICANCE

The District uses the questions in Appendix G of the CEQA Guidelines as the thresholds of significance for projects requiring environmental review under CEQA. Based on this consideration, the analysis in Section 4.3.2.2 uses the following standards of significance. The proposed project would result in a significant biological resource impact if it would:

1. 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.
2. 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.
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

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4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
7. Result in significant cumulative impacts with respect to biological resources.

4.3.2.2 IMPACT ANALYSIS

The following impact discussion analyzes the project's impact using the standards of significance as identified in Section 4.3.2.1 above.

BIO-1	The proposed project would not 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 by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.
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As discussed above, suitable habitat for special-status plant and animal species is absent from the site. This includes absence of suitable habitat for California red-legged frog, California tiger salamander, and San Joaquin spearscale, which were once reported from the site vicinity.

Although no evidence of nesting by birds was observed during the field reconnaissance surveys, there remains a potential that birds could establish new nests on the site before project construction is initiated, including the ground-nesting burrowing owl. Tree removal, vegetation clearing, or construction in the immediate vicinity of an active nest could result in the inadvertent destruction or abandonment of an active nest and loss of eggs or young. This would be a *significant* impact and a violation of State Fish and Game Code. Restricting the timing of initial tree removal and grubbing to outside the bird nesting season (from March through August) or conducting pre-construction surveys during the nesting season and implementing appropriate nest buffer measures if a nest is encountered would ensure avoidance of any adverse impacts on nesting birds. Protection of the nests, if present, would require that construction setbacks be provided during the nesting and fledging period, with the setback depending on the type of bird species, degree to which the individuals have already acclimated to other ongoing disturbance, and other factors.

Significance without Mitigation: Significant.

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Impact BIO-1: Removal of vegetative cover during project construction may result in the inadvertent destruction of active nests 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 by the California Department of Fish and Wildlife or United States Fish and Wildlife Service unless appropriate precautions are followed.

Mitigation Measure BIO-1: Any active bird nests in the vicinity of proposed vegetation removal and grading shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling grading and vegetation removal during the non-nesting period (September through February), or if this is not feasible, by conducting a pre-construction survey for active nests. A pre-construction survey report verifying that no active nests are present, or that nesting has been completed as detailed below, shall be submitted to the District for review and approval prior to initiation of grading or vegetation removal during the nesting season. Provisions of the pre-construction survey and nest avoidance measures, if necessary, shall include the following:

- If initial grubbing and grading is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall be retained by the applicant to conduct a pre-construction nesting survey no more than 7 days prior to initiation of grading or vegetation removal to provide confirmation on presence or absence of active nests in the vicinity.
- If active nests are encountered, species-specific measures shall be prepared by a qualified biologist through informal consultation with the California Department of Fish and Wildlife and implemented to prevent nest abandonment. At a minimum, vegetation removal and grading in the vicinity of the nest shall be deferred until the young birds have fledged. A nest setback zone of at least 100 feet for raptors and 50 feet for passerine birds shall be established, and all construction-related disturbances shall be prohibited within the nest setback zone. The perimeter of the nest setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.
- If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest setback zone until a qualified biologist verifies either that a) the birds have not begun egg-laying and incubation, or b) the juveniles from the nest are foraging independently and capable of independent survival at an earlier date.
- A survey report of findings verifying that any young have fledged shall be submitted for review and approval by the District prior to initiation of grading or vegetation removal in the nest setback zone. Following approval by the District, grading, vegetation removal, and construction in the nest setback zone may proceed as proposed.

Significance with Mitigation: Less than significant.

BIO-2	The proposed project would not 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 United States Fish and Wildlife Service.
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Sensitive natural communities are community types recognized by CDFW and other agencies because of their rarity. Sensitive natural community types are absent from the site and vicinity of proposed construction, and no adverse impacts are anticipated. No impacts are anticipated, and no mitigation is required.

Significance without Mitigation: No Impact.

BIO-3	The proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
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A preliminary wetland assessment was conducted for the site during the field reconnaissance survey. No indicators of wetlands were observed during the field survey and no impacts on regulated wetland are anticipated and no mitigation is required.

Although the National Wetland Inventory indicates a “riverine” drainage bisecting the site, past development upstream rerouted surface flows to the drainage around the site, and grading and routine disking on the site has eliminated any evidence of this drainage feature. No bed, bank or other wetland features remain on the site.

Significance without Mitigation: No impact.

BIO-4	The proposed project would not substantially interfere 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.
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The site is surrounded by roadways and dense suburban development with no drainages or other natural features that would serve as a corridor for movement of aquatic or terrestrial species through the area. Project implementation would convert the non-native cover on the site to school facilities, irrigated turf and ornamental landscaping, and eliminating the common terrestrial wildlife species that are unable to disperse to other ruderal grassland habitat in the surrounding area. However, these are common species, some of which would recolonize the site once construction is completed, such as Botta’s pocket gopher, western fence lizard, and numerous species of birds. No substantial interference with wildlife movement opportunities is anticipated as a result of project implementation, potential impacts on wildlife would be *less than significant* and no mitigation is required.

Significance without Mitigation: Less than Significant.

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BIO-5	The proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
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Project implementation would not conflict with any local policies or ordinances related to the protection of biological resources. No riparian corridors or oak woodlands are present on the site, and no conflicts with the Conservation Element of the City's General Plan are anticipated.

No trees are present on the site, and any street trees along the Dublin Boulevard and Central Parkway right-of-way would be protected or replaced as part of the frontage improvements of the project, consistent with the intent of the City's Street Tree Ordinance (Chapter 7.56). Detailed landscape plans would be prepared for both campuses, and would include trees, shrubs, and groundcover species. Appropriate controls would be implemented to ensure that street trees and other landscaping to be retained in the vicinity of construction are adequately protected.

Significance without Mitigation: Less than significant.

BIO-6	The proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan.
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The site is not located within the boundaries of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan, and no conflicts are anticipated.

Significance without Mitigation: No Impact.

4.3.3 CUMULATIVE IMPACTS

BIO-7	The proposed project would not result in a significant cumulative impact with respect to biological resources.
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Implementation of the proposed project in conjunction with the projects listed in Table 4-1, Approved and Pending projects, in Section 4, Environmental Analysis of this DEIR, would result in continued development in the City of Dublin and surrounding area. The potential impacts of proposed development on biological resources tends to be site specific, and the overall cumulative effect would be dependent on the degree to which significant vegetation and wildlife resources are protected on each property. This includes preservation of regulated trees, well-developed native vegetation (native grasslands, riparian woodland, and mature oaks), populations of special-status plant or wildlife species, and wetland features (including seasonal wetlands and stream channels). Further environmental review of specific development proposals in the vicinity of the site would serve to ensure that important biological

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resources are identified, protected and properly managed, and to prevent any significant adverse development-related impacts.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance would be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, private open space, or undeveloped properties. Additional development may also contribute to degradation of the aquatic habitat in creeks in the area. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality. Preparation of a SWPPP required for development sites encompassing more than an acre would serve to reduce potential indirect impacts on the quality of surface water and sensitive wetland and riparian areas. Recommendations to control erosion and sedimentation after grading should serve to minimize the potential for water quality degradation associated with the proposed development of the project site and would adequately address any possible cumulative contribution to water quality degradation.

With regard to development of the site and its relationship to surrounding habitat, the proposed project would contribute to a cumulative loss of ruderal grasslands in the Dublin vicinity. However, the site is surrounded by existing roadways and suburban development, is not an important linkage for wildlife movement, does not contain wetlands, and does not contain essential habitat for special-status species. Mitigation Measure BIO-1 would serve to address the potential for nesting birds on the site and would ensure that any new nests are adequately avoided while in active use. Given the relatively low habitat value of the site, absence of any sensitive biological resources, and measures recommended to avoid nests in active use, the projects contribution to cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.4 CULTURAL RESOURCES

This chapter describes existing cultural resources on the project site and evaluates the potential environmental consequences on cultural resources from development of the proposed project. A summary of the relevant regulatory setting and existing conditions is followed by a discussion of the proposed project and cumulative impacts.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the National Register of Historic Places (NRHP), which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations (CFR) section 60, a property is recommended for possible inclusion on the NRHP if it at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

State Regulations

California Environmental Quality Act

California State law provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in documents prepared consistent with California Environmental Quality Act (CEQA). The CEQA statutes are contained in Public Resources Code (PRC) 21000 to 21177 and the CEQA Guidelines are contained in California Code of Regulations (CCR), Title 14, Division 6, Chapter 3, Sections 15000 to 15387.

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Under CEQA, a cultural resource is considered a “historical resource” if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Under CEQA, the lead agency determines whether projects may have a significant effect on archaeological and historical resources. CEQA Guidelines Section 15064.5 defines what constitutes a historical resource, including: (1) a resource determined by the State Historical Resources Commission to be eligible for the California Register of Historical Resources (California Register) (including all properties on the National Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k); (3) a resource identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) any object, building, structure, site, area, place, record, or manuscript that the City determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the City's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered historically significant if it meets the criteria for listing on the California Register.

If the lead agency determines that a project may have a significant effect on a historical resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. However, no further environmental review needs to be completed if, under the qualifying criteria, a cultural resource is not found to be a historical resource or unique archaeological resource.

In addition, PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines specify lead agency responsibilities to determine whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project would damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The PRC also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

California Health and Safety Code

California Health and Safety Code (CHSC) Section 7052 states that it is a felony to disturb Native American cemeteries. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the County Coroner can determine whether the remains are those of a Native American. Section 7050.5(b) outlines the procedures to follow should human remains be inadvertently discovered in any location other than a dedicated cemetery. The section also states that the County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact NAHC within 24 hours. The NAHC has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant.

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Public Resources Code

PRC Section 5097.5 prohibits “knowing and willful” excavation or removal of any “vertebrate paleontological site... or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof.

State Laws Pertaining to Human Remains

Any human remains encountered during ground-disturbing activities are required to be treated in accordance with CCR Section 15064.5(e) (CEQA), PRC Section 5097.98, and the CHSC Section 7050.5. California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Specifically, Section 7050.5 of the CHSC states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. In addition, CEQA Guidelines Section 15064.5 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Local Regulations

City of Dublin General Plan

Goals and Policies

The City of Dublin’s General Plan contains the policy within Table 4.4-1 related to cultural resources.¹

TABLE 4.4-1 CITY OF DUBLIN GENERAL PLAN POLICIES

Policy Number	Goal/Policy/Strategy Text
Policy 7.7.1A.2	Follow State regulations as set forth in Public Resources Code Section 21083.2 regarding discovery of archaeological sites, and Historical Resources, as defined in Section 5020.1 of the Public Resources Code.

¹ City of Dublin, 2016. General Plan, Community Development Department. Available online at: <https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>. Accessed October 31, 2019.

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Eastern Dublin Specific Plan

Goals and Policies

The City of Dublin's Eastern Specific Plan (EDSP) contains the following goals, policies, and implementation measures found in Table 4.4-2 related to cultural resources.²

TABLE 4.4-2 SELECT EASTERN DUBLIN SPECIFIC PLAN GOALS, POLICIES, AND ACTION PROGRAMS

Goal/Policy Number	Goal/Policy/Strategy Text
<i>Cultural Resources Goals</i>	<ul style="list-style-type: none"> ▪ <i>To preserve Dublin's historic structures and cultural resources</i>
Policy 6-24	The presence and significance of archaeological or historic resources will be determined, and necessary mitigation programs formulated, prior to development approvals for any of the sites identified in the cultural resources survey prepared for this plan.
Policy 6-25	The discovery of historic or prehistoric remains during grading and construction will result in the cessation of such activities until the significance and extent of those remains can be ascertained by a certified archaeologist.
Policy 6-26	All properties with historic resources, which may be impacted by future development, shall be subjected to in-depth archival research to determine the significance of the resource prior to any alteration.
Policy 6-27	Where the disruption of historic resources is unavoidable, encourage the adaptive re-use or restoration of historic structures (such as the old schoolhouse, several barns, and Victorian residences currently in the area) whenever feasible.
Action Program 6P	<p>The City of Dublin shall require the following actions as part of the application process for development within eastern Dublin:</p> <ul style="list-style-type: none"> ▪ Site Sensitivity: Based on the first stage cultural resource survey of the area conducted as background for the Plan, the City will make a determination of whether the subject site has been identified as having prehistoric or historic resources potentially located on it. ▪ Research: For those sites with potential resources, a second level of detailed research and field reconnaissance will be required to determine the level of archaeological or historical significance. This research will be the responsibility of the development applicant and be conducted by a qualified archaeologist. The research will be consistent with the guidelines for prehistoric and historic resources provided in the cultural resources survey prepared for eastern Dublin. ▪ Mitigation: For those sites that contain significant resources, a mitigation plan must be developed which is consistent with the policies in this Specific Plan and current CEQA guidelines concerning cultural resources.

² City of Dublin, 2016. Eastern Dublin Specific Plan. Available online at: <https://dublin.ca.gov/DocumentCenter/View/7776/EDSP-2016-Update-Full-PDF?bidId=>. Accessed October 31, 2019.

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Section 8.48.020 Archaeology Regulations of the Dublin Municipal Code states that in the event that archaeological resources, prehistoric, or historic artifacts are discovered during any construction or excavation, the regulations found in Table 4.4-3 shall apply:³

TABLE 4.4-3 CITY OF DUBLIN MUNICIPAL CODE

Regulations	Goal/Policy/Strategy Text
Regulation A	Cessation of construction activities: Construction and/or excavation activities shall cease immediately, and the Department of Community Development shall be notified.
Regulation B	Procedure: A qualified archaeologist shall be consulted to determine whether any such materials are significant prior to resuming groundbreaking construction activities. Standardized procedures for evaluating accidental finds and discovery of human remains shall be followed as prescribed in Appendix G of the California Environmental Quality Act Guidelines.

4.4.1.2 EXISTING CONDITIONS

This section provides an overview of the history of Dublin and the surrounding area and resources of cultural significance that may be affected by the proposed project.

Prehistory

Archeological evidence indicates that humans began to settle in the surrounding area at least 12,000 years ago. Prehistoric occupation of California is broken into three broad periods: the Paleoindian period (10,000 – 6,000 B.C.), the Archaic period (6,000 B.C. – A.D. 500), and the Emergent period (A.D. 500 – 1800). Early occupants depended mainly on big game and minimally processed plant foods for survival. Later, as trade networks became increasingly complex, and an economy based on clam disk bead money became more prevalent, inhabitants' social status became recognizably linked to wealth.⁴

Historic Period

The documented history of the Amador Valley region, which includes the modern day City of Dublin, dates back to 1772 when Pedro Fages led an expedition of 16 mounted men on a journey to find a land route to Drake's Bay, now known as San Francisco Bay, which took them through the Amador Valley.

In approximately 1835, building began in the area. Jose Maria Amador had received a land grant of 16,517 acres in the Amador-Livermore Valley for his years of service as a Mexican soldier and administrator of Mission San Jose. He built adobe homes and shops which his Indian workers used on his ranch.

³ City of Dublin, 2019. Dublin Municipal Code: A Codification of the General Ordinances of the City of Dublin, California. Available online at: <https://www.codepublishing.com/CA/Dublin/>. Accessed October 31, 2019.

⁴ Layton, Thomas. 1984. The Status of California Archaeology in 1984 [Chartkoff and Chartkoff: The Archaeology of California; and Moratto: California Archaeology]. Available online at https://www.researchgate.net/publication/241821243_The_Status_of_California_Archaeology_in_1984_Chartkoff_and_Chartkoff_The_Archaeology_of_California_and_Moratto_California_Archaeology, accessed April 4, 2020.

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The development of the area that would become the modern City of Dublin began in 1850 when Michael Murray and Jeremiah Fallon immigrated to the area from Ireland and purchased 1,000 acres of land from Jose Amador to build homes for their families. The area began to grow as many settled in the area, and in 1853, Alameda County was created from parts of Contra Costa and Santa Clara counties. After almost 150 years as an unincorporated village, Dublin incorporated as a city with a population of 15,000 on February 1, 1982, becoming the 14th city in Alameda County. During the last 20 years, Dublin, along with the Tri-Valley area has expanded rapidly and become renowned as a place of prosperity, a center for internationally acclaimed business parks, and home to some of the world's largest corporations.⁵

Archaeological Resources

Archaeological resources may be considered either “unique archeological resources” or “historical resources” as defined by CEQA and described previously. CEQA Section 21083.2 defines a “unique archeological resource” as an archeological artifact, object, or site for which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

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

The area that is now known as Dublin was originally populated by the Ohlone of Costanoan people who lived throughout the region. The archaeological record of culture, religion, social behavior and ceremonial events shows that the Ohlone Indians can be traced back to 4,500 years within the greater Bay Area. According to the City of Dublin General Plan EIR, only one archeological resource has been identified within the planning area, however, none are currently known to exist in developed portions of the City or where development is anticipated to occur. No known archeological resources exist within the project site. Although this is true, it is possible that undiscovered archeological resources could be buried on the project site.⁶

Historical Resources

The National Register includes buildings at least 50 years old, unless deemed to be of exceptional importance. The California State Office of Historic Preservation includes buildings, structures and objects 45 years or older on the California Register. There are no local, State, or federally recognized historic properties within or near the project site. The nearest historic property is located over four miles southwest of the City of Dublin at 3459 Foothill Road in the City of Pleasanton, which is an adobe house

⁵ Dublin, California, The New American Backyard, 2019. *History of Dublin*. Available online at: <https://www.dublin.ca.gov/397/History-of-Dublin>. Accessed November 4, 2019.

⁶ City of Dublin. 1984. *General Plan*. Available online at: <https://www.dublin.ca.gov/DocumentCenter/View/5866/Dublin-General-Plan-EIR-Vol-2-Tech-Supplement?bidId=>, accessed November 5, 2019.

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erected in 1844-46 by Francisco Solano Alviso.^{7,8} According to the City of Dublin's Dublin Village Historic Area Specific Plan, the Dublin Village Historic Area includes several buildings and locations of local significance or recognized as a California Point of Historical Interest. However, these are located more than four miles west of the project area.⁹

An EIR undertaken for the nearby Kaiser Dublin Medical Center, located approximately 500 feet southeast of the project site, found two nearby sites with prehistoric archaeological resources through a review of the records at the Northwest Information Center (NWIC), the National Register of Historic Places (NR), the California Historical Landmarks (CHL), the California Points of Historical Interest (CPHI), and the California State Historic Resources Inventory (HRI). These two sites are, the Pleasanton Meadows Prehistoric Site, consisting of burials, hearths/pits, and habitation debris, located 2,600 feet south-southwest of the Kaiser Dublin Medical Center project site, as well as a historic ranch site, with a prehistoric component consisting of seed processing artifacts, located 2,025 feet northeast of the Kaiser Dublin Medical Center project site. In addition, the EIR disclosed that a records search of 27 cultural resources reports on file with the NWIC indicates that the two nearby sites are the only known sites of prehistoric cultural resources within a 0.5 mile radius of the Kaiser Dublin Medical Center project site.¹⁰

4.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant cultural resources impacts if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.
4. Result in significant cumulative impacts with respect to cultural resources.

⁷ California State Office of Historic Preservation, California Historic Resources. Available online at: http://ohp.parks.ca.gov/?page_id=21388, accessed November 5, 2019.

⁸ National Parks Service, U.S. Department of the Interior, National Register of Historic Places. <http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>, accessed November 5, 2019.

⁹ City of Dublin, 2014. *Dublin Village Historic Area Specific Plan*. Available online at <https://dublin.ca.gov/DocumentCenter/View/7780/DVHASP-FULL-PDF-10714?bidId=>, accessed November 5, 2019.

¹⁰ City of Dublin, 2019, Dublin Kaiser Medical Center – Environmental Impact Report, available online at <https://dublin.ca.gov/DocumentCenter/View/12968/App-D---Cultural-Resources-Supp-Info-ASMBLD?bidId=>, accessed May 22, 2020.

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4.4.3 IMPACT DISCUSSION

CULT-1	The project would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
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The types of cultural resources that meet the definition of historical resources under PRC Section 21084.1¹¹ generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations. Under CEQA, both prehistoric and historic-period archaeological sites may qualify based on historical associations.¹² As such, the two main historical resources that are subject to impact, and that may be impacted by development allowed under the proposed project, are historical archaeological deposits and historical architectural resources. Impacts to archaeological resources are discussed under impact discussion CULT-2 below.

The federal, State, and City historic registers do not indicate any historically or architecturally significant buildings designated on the project site. The nearest historic registers to the project site include the Dublin Village Historic District located four miles to the west¹³ as well as St. Raymond's Catholic Church also located four miles to the west.¹⁴ As described above, a cultural resources records search conducted for the nearby Kaiser Dublin Medical Center project EIR found only two known prehistoric/historic archaeological sites; these sites are not located on the project site and no known prehistoric or historic resources have been identified on the project site. Therefore, with no historical resource on the project site, there would be *no impact* as a result of project implementation.

Significance without Mitigation: No impact.

CULT-2	The project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
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Archaeological deposits that meet the definition of unique or historic archaeological resources under PRC Section 21083.2(g) could be damaged or destroyed by ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with development allowed under the proposed project. Should this occur, the ability of the deposits to convey their significance, either as containing information in prehistory or history, or as possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired. It is possible that some significant archaeological deposits may exist on the project site.

¹¹ The CEQA Statute is contained in Sections 21000 et seq. of the Public Resource Code.

¹² California Code of Regulations, Title 14, Chapter 3, Section 15064.5, Determining the Significance of Impacts on Historical and Unique Archaeological Resources.

¹³ National Register of Historic Places. *California – Alameda County*. Available online at <https://nationalregisterofhistoricplaces.com/ca/alameda/state.html>. Accessed November 27, 2019.

¹⁴ National Park Service. *National Register Digital Assets*. Available online at <https://npgallery.nps.gov/AssetDetail/NRIS/06000242>. Accessed November 27, 2019.

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As described in Section 3.3 of the Project Description, there are several easements throughout the site. These reflect prior grading and development on the project site which suggests a low possibility of unearthing archaeological artifacts. The proposed project includes major excavation components, which consists of excavation for the underground parking as well as the swimming pool. Therefore, it remains that, during excavation, it is possible that a currently unknown cultural resource, as defined by CEQA Guidelines Section 15064.5, could be encountered during construction activities. Without mitigation, potentially unearthing unique or historic archaeological artifacts on the project site would result in a *significant* impact.

Significance without Mitigation: Significant.

Impact CULT-2: Implementation of the proposed project would have the potential to cause a substantial adverse change in the significance of a unique or historic archaeological resource pursuant to CEQA Guidelines Section 15064.5.

Mitigation Measure CULT-2a: Worker Training: proposed project personnel shall receive training regarding the appropriate work practices necessary to effectively implement the cultural resources mitigation measures, including the potential for exposing subsurface cultural resources, including human remains. Training shall be required for all personnel before construction commences and repeated for all new personnel before they begin work on the project. This training program shall be submitted to the District for approval at least 30 days before the start of construction and include procedures to be followed upon the discovery or suspected discovery of unique or historic archaeological materials and human remains, consistent with the procedures set forth in Mitigation Measure CULT-2b and CULT-3.

Mitigation Measure CULT-2b: If unique or historic archaeological resources are encountered during excavation or construction, construction personnel shall be instructed to immediately suspend all activity in the immediate vicinity of the suspected resources and the District, and a licensed archeologist shall be contacted to evaluate the situation. A licensed archeologist shall be retained to inspect the discovery and make any necessary recommendations to evaluate the find under current CEQA Guidelines prior to the submittal of a resource mitigation plan and monitoring program to the District for review and approval prior to the continuation of any on-site construction activity.

Significance with Mitigation: Less than significant.

CULT-3	The project could disturb human remains, including those interred outside of dedicated cemeteries.
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Human remains associated with pre-contact archaeological deposits may exist on the project site, as sometimes previously unrecorded human remains are encountered during development projects. The proposed project would allow new construction, and the associated ground-disturbing activities would have the potential to uncover and adversely affect human remains. Descendant communities may ascribe religious or cultural significance to such remains and may view their disturbance as an immitigable impact.

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Any human remains encountered during ground-disturbing activities associated with the proposed project would be subject to federal and State regulations, such as the CHSC Section 7050.5, PRC Section 5097.98, and the CEQA Guidelines Section 15064.5(e), which state the mandated procedures of conduct following the discovery of human remains. According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken.

Without mitigation, potentially unearthing human remains on the project site would result in a *significant* impact.

Significance without Mitigation: Significant.

Impact CULT-3: Implementation of the proposed project would have the potential to disturb human remains, including those interred outside of formal cemeteries.

Mitigation Measure CULT-3: In the event a human burial or skeletal element is identified during excavation or construction, work in that location shall stop immediately until the find can be properly treated. The City and the Alameda County Coroner's office shall be notified. If deemed prehistoric, the Coroner's office would notify the Native American Heritage Commission who would identify a "Most Likely Descendant (MLD)." The archeological consultant and MLD, in conjunction with the project sponsor, shall formulate an appropriate treatment plan for the find, which might include, but not be limited to, respectful scientific recording and removal, being left in place, removal and reburial on site, or elsewhere. Associated grave goods are to be treated in the same manner.

Significance with Mitigation: Less than significant.

4.4.4 CUMULATIVE IMPACTS

CULT-4	The proposed project would result in less-than-significant cumulative impacts with respect to cultural resources
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Cumulative cultural resource impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

Development of the proposed project would comply with federal and State laws protecting cultural resources. Implementation of Mitigation Measures CULT-2a, CULT-2b and CULT-3 identified above would ensure that archaeological and cultural resources, if discovered on the project site, are protected, and

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that discovered human remains are handled appropriately. Thus, given that the proposed project's cultural resources impacts are less than significant with mitigation, the proposed project's impacts to cultural resources would not be considered cumulatively considerable. Therefore, cumulative impacts to cultural resources would be *less than significant*.

Significance Without Mitigation: Less than significant.

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4.5 ENERGY

In order to assure that energy implications are considered in project decisions, Appendix F, Energy Conservation, of the CEQA Guidelines, requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. As of April 2019, there are two specific thresholds of significance for potential energy impacts in the State CEQA Guidelines. This section provides a general description of the regulatory setting addressing existing electric and natural gas services and infrastructure, and supply and demand in the City of Dublin and the project site, and impact analysis from Appendix F and G of the CEQA Guidelines.

4.5.1 ENVIRONMENTAL SETTING

Public Resources Code Section 21100(b)(3) requires that an EIR include a detailed statement setting forth mitigation measures proposed to minimize significant effects on the environment, including but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the project description, environmental setting, and impact analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with Appendices F and G of the State CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the proposed project. This section represents a summary of the New Comprehensive Dublin High School Project's (proposed project) anticipated energy needs, impacts, and conservation measures. Information found herein, as well as other aspects of the proposed project's energy implications, are discussed in greater detail elsewhere in this EIR, including Chapter 3, Project Description; and Sections 4.2, Air Quality; 4.7, Greenhouse Gas Emissions; and 4.15, Transportation.

4.5.1.1 REGULATORY FRAMEWORK

This section summarizes key Federal, State and regional regulations related to energy use and energy conservation.

Federal Regulations

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The Act sets increased Corporate Average Fuel Economy Standards; the Renewable Fuel Standard; appliance energy efficiency standards;

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building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.¹

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

State Regulations

California Public Utilities Commission

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020;

¹ United States Environmental Protection Agency (USEPA). 2019, May 6 (updated). Summary of the Energy Independence and Security Act Public Law 110-140 (2007). <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>.

- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the State's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of State's electricity and gas use.

The CPUC and the California Energy Commission have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006, 2011 and 2018. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the State. Based on the 3rd quarter 2014 report, the three largest retail energy utilities provided an average of 20.9 percent of its supplies from renewable energy sources. Since 2003, 8,248 megawatts (MW) of renewable energy projects have started operations.² SB 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. SB

² California Public Utilities Commission, 2016, Renewables Portfolio Standard Quarterly Report: 4th Quarter 2016. https://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/Q4_2016_RPS_Report_to_the_Legislature_FINAL.pdf, accessed February 27, 2020.

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100 (de Leon) passed in 2018 puts California on the path to 100 percent fossil-fuel-free electricity by the year 2045.³

State Alternative Fuels Plan

AB 1007 requires the California Energy Commission (CEC) to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board and in consultation with other federal, state, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce greenhouse gas (GHG) emissions; and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (AB 118, Statutes of 2007) proactively implements this plan.⁴

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.⁵

Title 24, Part 6, 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 2019 (California Code of Regulations Title 24, Part 6). Title 24 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. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior

³ California Energy Commission, 2017, January, 2016 Appliance Efficiency Regulations, <https://ww2.energy.ca.gov/2017publications/CEC-400-2017-002/CEC-400-2017-002.pdf>, accessed February 27, 2020.

⁴ California Energy Commission, 2007, December, State Alternative Fuels Plan, <https://ww2.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF>, accessed February 27, 2020.

⁵ California Energy Commission, 2017, January, 2016 Appliance Efficiency Regulations, <https://ww2.energy.ca.gov/2017publications/CEC-400-2017-002/CEC-400-2017-002.pdf>, accessed February 27, 2020.

and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements.⁶ Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient.⁷ When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.⁸

Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (California Code of Regulations Title 24, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of CALGreen became effective January 1, 2011 and were last updated in 2016. The 2016 Standards became effective on January 1, 2017. On October 3, 2018, the CEC adopted the voluntary standards of the 2019 CALGreen, which became effective January 1, 2020.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.⁹

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 year 2017 through 2025 light-duty vehicles. In January

⁶ California Energy Commission, 2018, News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation, accessed February 27, 2020

⁷ California Energy Commission, 2018, 2019 Building Energy and Efficiency Standards Frequently Asked Questions, http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed February 27, 2020.

⁸ California Energy Commission, 2018, 2019 Building Energy and Efficiency Standards Frequently Asked Questions, http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed February 27, 2020.

⁹ California Energy Commission, 2019, 2019 California Code of Regulations Title 24, Part 11, <https://www.ladbs.org/docs/default-source/publications/code-amendments/2013-california-green-building-standards-code.pdf?sfvrsn=5>, accessed February 27, 2020.

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2012, the California Air Resources Board approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.¹⁰

Green Building Executive Order

In 2004, Executive Order (EO) S-20-04 was signed by the Governor, committing the State to take aggressive action to reduce State building electricity usage by retrofitting, building, and operating the most energy- and resource-efficient buildings by taking all cost-effective measures described in the Green Building Action Plan for facilities owned, funded, or leased by the State and to encourage cities, counties, and schools to do the same. It also calls for State agencies, departments, and other entities under the direct executive authority of the Governor to cooperate in taking measures to reduce grid-based energy purchases for State-owned buildings by 20 percent by 2015, through cost-effective efficiency measures and distributed generation technologies. These measures should include, but are not limited to:

- Designing, constructing and operating all new and renovated State-owned facilities paid for with State funds as "LEED Silver" or higher certified buildings;
- Identifying the most appropriate financing and project delivery mechanisms to achieve these goals;
- Seeking out office space leases in buildings with a U.S. Environmental Protection Agency (USEPA) Energy Star rating; and
- Purchasing or operating Energy Star electrical equipment whenever cost-effective.

Senate Bill 350

Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Recent CEQA Litigation

Recent case law has clarified the requirements to satisfy Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendix F: Energy Conservation, holding that an EIR must quantify energy use during

¹⁰ California Air Resources Board, 2017, January 11 (reviewed), Clean Car Standards - Pavley, Assembly Bill 1493, <https://ww3.arb.ca.gov/cc/ccms/ccms.htm>, , accessed February 27, 2020.

construction and operations, including energy associated with transportation associated with the project, and also consider the availability of measures to reduce reliance on fossil fuels.¹¹ Mere reliance on compliance with the California Building Code and other green building requirements is not sufficient to meet an agency's burden under Appendix F and Public Resources Code Section 21100(b)(3); an agency must also consider, where appropriate, whether a building should be constructed at all, how large it should be, where it should be located, and whether it should incorporate renewable energy resources.

4.5.1.2 EXISTING CONDITIONS

This section presents information on energy provision and supply in the study area. The study area for this section includes the project site, as well as the jurisdiction of the City of Dublin, and the service areas of energy providers.

Energy Provider

East Bay Community Energy

In 2018, Alameda County and the City of Dublin shifted to local Community Choice Energy (CCE) program East Bay Community Energy (EBCE). EBCE was formed as a Joint Power Authority (JPA) by Alameda County and 11 of its cities and operates as a not-for-profit public agency. EBCE offers three program options; the Brilliant Choice which provides 38 percent renewable and 47 percent carbon-free power service; the Brilliant 100 program which provides at least 40 percent renewable and an additional 60 percent carbon-free 100 percent renewable power service from solar, wind, and hydroelectric in California; and the Renewable 100 program which provides 100 percent renewable energy from solar and wind source.¹² The electric energy provided by EBCE is conveyed to customers through Pacific Gas and Electric's (PG&E) existing infrastructure. PG&E continues to maintain the grid, repair lines, and conduct customer billing within the EBCE service area.

Pacific Gas and Electric

PG&E is a publicly traded utility company which generates, purchases, and transmits energy under contract with the CPUC. Its service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada mountain range to the Pacific Ocean. The electricity distribution system of PG&E consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines. PG&E owns and maintains above and below ground networks of electric and gas transmission and distribution facilities throughout the City. As stated, it still delivers electricity and natural gas services to the City, although the City recently shifted to energy provider EBCE. Both gas and electrical service is available at the project site.

PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants or "solar farms." "The Grid," or bulk electric grid, is a network of high-voltage

¹¹ *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173.

¹² East Bay Community Energy, 2020. Power Mix. <https://ebce.org/power-mix/>. Accessed March 25, 2020.

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transmission lines, linked to power plants within the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service “drops” that connect to the individual customer.

PG&E gas transmission pipeline systems serve approximately 4.3 million gas customers in northern and central California. The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. A new program, the Pipeline 2020 program, aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely-operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders.

Regulatory requirements for efficient use of electricity and gas are contained in Title 24, Part 6, of the CCR, entitled “Energy Efficiency Standards for Residential and Nonresidential Buildings.” These regulations specify the State’s minimum energy efficiency standards and apply to new construction of both residential and nonresidential buildings. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

Existing Energy Use

The existing site is vacant and does not currently use energy.

4.5.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant energy impact if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.
3. In combination with past, present, and reasonably foreseeable projects, would result in cumulative impacts with respect to energy conservation and renewable energy.

4.5.3 IMPACT DISCUSSION

4.5.3.1 METHODOLOGY

Based on CEQA Guidelines Appendix F, Energy Conservation, in order to ensure energy implications are considered in project decisions, EIRs must include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources. Environmental effects may include the proposed project’s energy requirements and its energy use efficiencies by amount and fuel type during construction and operation; the effects of the proposed project on peak- and base-period demands for electricity and other forms of energy; the degree to which the proposed project complies with existing energy standards; the effects of the proposed

project on energy resources; and the proposed project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable.

4.5.3.2 IMPACT ANALYSIS

ENE-1	The proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
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Short-Term Construction Impacts

Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electrical Energy

Construction of the proposed project would not require electricity to power most construction equipment. Electricity use during construction would vary during different phases of construction. The majority of construction equipment during demolition and grading would be gas- or diesel-powered, and the later construction phases would require electricity-powered equipment for interior construction and architectural coatings. Overall, the use of electricity would be temporary and would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) 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, impacts would be less than significant with respect to natural gas usage.

Transportation Energy

Transportation energy use depends on the type and number of trips, vehicle miles traveled (VMT), fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that the majority of off-road construction equipment, such as those used during grading, would be gas- or diesel-powered. Energy consumption during construction (2020 through 2022) was calculated using the

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CalEEMod (v. 2016.3.2.25) computer model and data from the EMFAC2017 (v. 1.0.2) and OFFROAD2017 (v. 1.0.1) databases. The results are shown in Table 4.5-1.

TABLE 4.5-1 CONSTRUCTION-RELATED FUEL USAGE

Project Component	Gas		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh
Construction Worker Commute	2,305,515	80,805	18,415	416	40,686	13,435
Construction Vendor Trips	22,806	4,763	495,447	64,736	0	0
Construction Truck Haul Trips	54	14	91,452	14,431	0	0
Construction Off-Road Equipment	N/A	17,538	N/A	81,167	N/A	0
Total	2,328,375	103,120	605,314	160,750	40,686	13,435

Source: CalEEMod Version 2016.3.2.25; EMFAC2017 Version 1.0.2; OFFROAD2017 Version 1.0.1

Notes: VMT=vehicle miles traveled; kWh=kilowatt hour

The proposed project would not result in wasteful, inefficient, or unnecessary use of energy during construction. Use of all construction-equipment would cease upon completion of 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. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors would 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 and is served by numerous regional freeway systems (e.g., I-580 and I-680) that provide the most direct routes from various areas of the region. Moreover, electrical energy would be available for use during construction from existing power lines and connections, either precluding or minimizing the use of less efficient generators. Thus, energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant.

Long-Term Operation Impacts

Operation of the proposed project would create additional demands for electricity and natural gas compared to existing conditions and would result in increased transportation energy use. Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, use of on-site equipment and appliances; and indoor, outdoor, perimeter, stadium, and parking lot lighting.

Electrical Energy

Electrical service to the proposed project would be provided by EBCE through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.5-2, electricity use at the project site would be 2,029,573 kilowatt hours per year.

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TABLE 4.5-2 PROJECT ANNUAL ELECTRICITY CONSUMPTION

Land Use	Electricity (kWh/year)
Enclosed Parking Structure	265,442
High School ^a	1,697,806
Parking Lot	66,325
Total	2,029,573

Source: Appendix B: (AQGHG)

^a Includes the electricity use from stadium lighting (103,306 kWh/year).

The proposed project would increase energy demand at the site compared to existing conditions, but it would be required to, and will, comply with the current California Building Energy Efficiency Standards (Title 24, Part 6), and CALGreen (Title 24, Part 11). Compliance with these standards would contribute in energy efficiency and conservation. However, the proposed project would also include the following design features that would go beyond Title 24 requirements.

- **Glazing:** Low-E glazing with U-Factors and Solar Heat Gain Coefficients that are slightly better than California Building Energy Efficiency Standards requirements.
- **Roof:** Roof with a rigid insulation and R-30 insulation and a complete thermal break and with a Cool Roof Rating Council Standard (CRRC-1) certified roof (cool roof) that is slightly better than California Building Energy Efficiency Standards requirements.
- **Mechanical Systems:** Buildings with a heating, ventilation, and air conditioning (HVAC) system that utilizes the variable refrigerant flow (VRF) system combined with energy recovery ventilators (ERV), which result in an HVAC system that is more efficient than the requirements of California Building Energy Efficiency Standards. The VRF system has energy recovery, which allows the system to provide simultaneous heating and cooling and is super-efficient by taking advantage of different loads in the building and provide free cooling under certain conditions. The VRF units provide efficient tempering of the outside air by transferring the energy from the exhausted air to the incoming air.
- **Lighting:** High efficiency lighting with daylighting controls and an overall wattage per square foot below the allowed lighting power density of the California Building Energy Efficiency Standards.
- **Plumbing Fixtures:** All low flow that either meets or are slightly below CALGreen requirements (e.g., less than 1.28 gallons per flush for water closets).

In addition, the electricity demands of the proposed project would be fulfilled by EBCE, which generates at least 41 percent of its electricity from renewable sources. Therefore, the proposed project would not result in a significant impact related to electricity.

Natural Gas Energy

The proposed natural gas consumption for the project site is shown in Table 4.5-3. The proposed facilities would generate an average natural gas demand of 4,271,980 kilo British thermal units per year. Development pursuant to the proposed project would result in new natural gas demands. However,

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because the proposed project would be built to meet the Building Energy Efficiency Standards, it would not result in wasteful or unnecessary natural gas demands. In addition, as stated above, the proposed project would install HVAC systems that would be more energy efficient than required by the California Building Energy Efficiency Standards. Furthermore, the proposed project would also install high efficiency gas water heaters with sealed combustion, which would also be slightly better than required under the California Building Energy Efficiency Standards. Therefore, operation of the proposed project would result in less than significant impacts with respect to natural gas usage.

TABLE 4.5-3 PROJECT ANNUAL NATURAL GAS CONSUMPTION

Land Use	Natural Gas (kBTU/year) ^a
Enclosed Parking Structure	0
High School	4,271,980
Parking Lot	0
Total	4,271,980

Source: Appendix B: (AQGHG)

^a Accounts for total natural gas use from proposed buildings. kBTU = kilo British thermal units

Transportation Energy

The proposed project would consume transportation energy during operations from the use of motor vehicles. The efficiency of these motor vehicles is unknown, such as the average miles per gallon. Estimates of transportation energy use are based on the overall vehicle miles traveled (VMT) and its associated transportation energy use. The project related VMT would primarily come from students, staff, and visitors to the campus. As seen in Table 4.5-4, the annual VMT for the proposed project is estimated to be 5,855,581 miles. However, because the proposed project involves development of a new high school and stadium, in addition to providing more employment opportunities for residents of the city, it would also serve the local population by providing closer options for education, and thereby contribute in minimizing VMT and transportation-related fuel usage. Thus, it is expected that operation-related fuel usage associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than similar development projects. Therefore, impacts would be less than significant with respect to operation-related fuel usage.

TABLE 4.5-4 PROJECT ANNUAL OPERATION-RELATED FUEL USAGE

	Gasoline		Diesel		CNG		Electricity	
	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual kWh
Proposed Project								
Passenger Vehicles	5,637,192	192,719	104,263	7,200	235	96	131,638	43,286

Source: EMFAC2017 v. 1.0.2. Annual VMT for existing conditions and project operations are based information found in Appendix D (Energy).

ENE-2 The project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006 and 2011. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Renewable energy sources include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state's RPS to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill 350 (SB 350, de Leon) was signed into law September 2015 and establishes tiered increases to the RPS. SB 350 requires renewable energy resources of 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. On September 10, 2018, Governor Brown signed Senate Bill 100 (SB 100), which raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a 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 SB 100 the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Electrical needs to the project site would be provided by EBCE. EBCE obtains electricity from conventional and renewable sources throughout California. In 2018, 41 percent of EBCE's electricity was generated from renewable energy sources; 21 percent from large hydroelectric generators; and 38 percent from unspecified sources.¹³ The net increase in power demand associated with the Project is anticipated to be within the service capabilities of EBCE and would not impede EBCE's ability to implement California's renewable energy goals. Therefore, the Project would not obstruct a state or local plan for renewable energy. Additionally, and as demonstrated above in this Section 4.5.4, ENE-2, the project would not obstruct a state or local plan for energy efficiency.

Significance Without Mitigation: Less than significant.

4.5.4 CUMULATIVE IMPACTS

ENE-3 The project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to energy conservation and renewable energy.

The areas considered for cumulative impacts to electricity and natural gas supplies are the service areas of EBCE and PG&E, respectively, described above in Section 4.5.1.2. Other projects would also generate increased electricity and natural gas demands. However, all projects within the EBCE and PGE service

¹³ East Bay Community Energy, 2020. Power Mix. <https://ebce.org/power-mix/>. Accessed March 25, 2020.

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areas would be required to comply with the Building Energy Efficiency Standards and CALGreen, which would contribute to minimizing wasteful energy consumption and promoting renewable energy sources. Therefore, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

Significance Without Mitigation: Less than significant.

4.6 GEOLOGY AND SOILS

This subchapter describes the regulatory framework and existing conditions on the project site related to geology and soils and contains an evaluation of the potential environmental consequences associated with the construction and operation of the proposed project that are related to geology and soils.

The information in this section is based in part on the following technical studies, referenced throughout this chapter as the Geotechnical and Environmental Hazards Assessment (GEHA) and the Geotechnical Engineering Investigation (GEI), respectively:

- *Geotechnical and Environmental Hazards Assessment (GEHA) Report, Proposed Promenade School Site*, completed by PlaceWorks in August 2018.
- *Geotechnical Engineering Investigation (GEI), Proposed New High School, Central Parkway and Chancery Lane, Dublin, Alameda County, California* completed by Krazan & Associates, Inc. in September 2019

Complete copies of these reports are included in Appendix E to this Draft EIR.

4.6.1 ENVIRONMENTAL SETTING

4.6.1.1 REGULATORY FRAMEWORK

Federal Regulations

International Building Code

The International Building Code (IBC) has been adopted throughout the United States and has been in use since 2007. The purpose of the IBC is to establish minimum regulations for building systems, including fire safety, building safety, foundation, wall and roof constructions, materials used in construction, elevators and escalators, and existing structures.

National Pollutant Discharge Elimination System

The State Water Resources Control Board has implemented a National Pollutant Discharge Elimination System (NPDES) general construction permit for Alameda County. For properties of one or more acres, a Notice of Intent and a stormwater pollution prevention plan (SWPPP) must be prepared prior to commencement of construction. Construction activities subject to this permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation. The San Francisco Bay Regional Water Quality Control Board issued a Municipal Storm Water NPDES Permit to the San Francisco Bay Region, including the counties of Alameda, Contra Costa, Santa Clara, and San Mateo, and the cities of Fairfield, Suisun City and Vallejo (Permit Number CAS612008).

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Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency. Additionally, it specifies these researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and other researchers. The Paleontological Resources Preservation Act incorporates key findings of a report, *Fossils on Federal Land and Indian Lands*, issued by the Secretary of Interior in 2000, which establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.¹

State Regulations

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The 2019 CBC is based on the 2018 International Building Code (IBC), but has been modified for California conditions. The CBC is updated every three years, most recently in July 2019 with an effective date of January 1, 2020. Chapter 16 of the CBC contains specific requirements for structural design, including seismic loads. Chapter 18 of the CBC includes requirements for soil testing, excavation and grading, and foundation design.

Division of the State Architect

The Division of the State Architect (DSA) maintains requirements for the submission of a geohazard report to the California Geological Survey (CGS) per DSA requirements IR A-4.13. The report must conform to CGS content guidelines, approved by CGS and subsequently submitted to DSA. This requirement applies to all projects, such as schools, within the jurisdiction of DSA. The proposed project, characterized by the development of new structures on an existing site, and in a location within both seismic and liquefaction hazard zones as mapped in the City's General Plan, is subject to this DSA permit process.

Field Act

Under the Field Act (Ed. Code §§ 17280, *et seq.*; 17365, *et seq.*; and 81130, *et seq.*), the Department of General Services (DGS) is required to supervise the design and construction of any school buildings or the reconstruction or alteration of or additional to any school building to ensure that the plans and specifications are in compliance with adopted rules, regulations, and building standards and to ensure that construction work is performed in accordance with the approved plans and specifications for the

¹ U.S. Department of the Interior, 2000. *Fossils on Federal & Indian Lands, Report of the Secretary of the Interior*. https://www.blm.gov/sites/blm.gov/files/programs_paleontology_quick%20links_Assessment%20of%20Fossil%20Management%20on%20Federal%20&%20Indian%20Lands,%20May%202000.pdf, accessed July 31, 2018.

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protection of life and property.² Within the DGS, the Division of the State Architect (DSA) is responsible for design and construction oversight for K-12 schools to ensure application of the CBC, pursuant to the Field Act. Additionally, the DSA promotes compliance with all relevant structural, accessibility, and fire and life safety codes.³

Alquist-Priolo Earthquake Fault Zoning Act

Surface rupture is the most easily avoided seismic hazard. The Alquist-Priolo Earthquake Fault Zoning Act was passed in December 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, which was passed by the California Legislature in 1990, addresses earthquake hazards related to liquefaction and seismically induced landslides. Pursuant to requirements under this act, seismic hazard zones are mapped by the State Geologist in order to assist local governments in land use planning. The Seismic Hazards Mapping Act states that "it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety."⁴ Section 2697(a) of the Act states that "cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard."⁵

Title V, California Code of Regulations

Title V of the CCR regulates construction of school facilities within the State. Title V includes standards to ensure school safety and student comfort, including standards for school site selection to reduce susceptibility to geologic events such as landslides. Adherence to Title V requires pre-construction studies of proposed school sites, including assessments of existing geological, soils-related, flooding and landslide hazards.

Statewide General Construction Permit

Construction projects of one acre or more are regulated under the General Construction Permit, Order No. 2012-0006-DWQ, issued by the State Water Resources Control Board in 2012. Projects obtain coverage by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) estimating sediment risk from construction activities to receiving waters, and specifying Best Management Practices (BMPs) that would be used by the project to minimize pollution of stormwater.

² California Legislative Information, 2017, AB-1545 School facilities: Field Act, available online at https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1545, accessed May 19, 2020.

³ Department of General Services, 2018, Division of the State Architect, available online at <https://www.dgs.ca.gov/DSA/About>, accessed May 18, 2020.

⁴ California Public Resources Code, Division 2, Chapter 7.8, Section 2691(c).

⁵ California Public Resources Code, Division 2, Chapter 7.8, Section 2697(a).

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Local Regulations

Tri-Valley Hazard Mitigation Plan

The City of Dublin, along with the neighboring Cities of Livermore and Pleasanton, the Livermore-Pleasanton Fire Department, the Dublin San Ramon Services District, and the Lawrence Livermore National Laboratory, adopted the Tri-Valley Local Hazard Mitigation Plan in 2018. This plan acts as a uniform strategy for the Tri-Valley area in addressing a range of hazards such as earthquakes, floods, and wildland fires.

Municipal Code of Dublin

Regarding geology and soils, the Dublin Municipal Code contains standards and directions pertaining to building codes, grading regulations, solid waste management, wells, and underground utilities. These serve to regulate development and minimize hazards relating to geology, soils, and structural integrity. Development projects, prior to permitting, are reviewed and approved by the City for verification of compliance with Municipal Code regulations, among other regulations.

4.6.1.2 EXISTING CONDITIONS

Regional Geology

The project site is located in the Amador Valley, within the Coast Ranges Geomorphic Province.⁶ It is located at the base of the Mount Diablo foothills in an area bounded by Mount Diablo to the north, the Las Trampas Ridge and San Ramon Valley to the west, the Mount Diablo foothills and Las Positas Valley to the east, and the Amador Valley to the south. The Coast Ranges Geomorphic Province is a long region of ridges and valleys approximately parallel to the coast; it extends approximately 600 miles from the Oregon-California border to the Santa Ynez River.

The principal drainage courses in the area containing the project site include Tassajara Creek, Cottonwood Creek, Arroyo Las Positas, and Arroyo Valle, which form alluvial fans and flood deposits that make up the area's predominant geomorphic features. The area containing the project site includes near-surface deposits that are identified as Pliocene nonmarine Tassajara Formation, which is commonly known as the Livermore Gravels and consists of a mixture of sand, silt, clay, and gravel.

Project Site

As reported in the GEHA, the project site lies at an approximate elevation of 356 feet above sea level, with the topography in a general gradient toward the southwest. Limited subsurface investigation performed on-site under the GEI indicates that surface and near-surface deposits at the project site generally consist of silty clay, clayey silt, sandy clayey silt, silty sand, or clayey sand. Specifically, the project site contains

⁶ United States Geological Survey (USGS) 7.5-minute Topographic Series, Livermore, <https://catalog.data.gov/dataset/usgs-1-24000-scale-quadrangle-for-livermore-ca-1961431df>, Accessed October 24, 2019
California Quadrangle Map

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loose surface soils that have low strength characteristics and are highly compressible when saturated. In addition, approximately one to four feet of fill material was encountered, which consisted of clayey sand, sandy clay, gravelly sandy clay, and sandy clay with traces of gravel. Groundwater is found at depths between 15 and 21 feet below existing site grade.

Seismic Hazards*Faults*

While the project site is located on the Fault Rupture Hazard Zones Map for the Livermore Quadrangle, dated January 1, 1982, it is not within a Fault-Rupture Hazard Zone. The project site is not located on a known earthquake fault, nor within or immediately adjacent (i.e. within a few hundred feet) to an earthquake fault zone. The nearest active fault is the Pleasanton Fault, approximately 1.4 miles southwest of the site.^{7,8}

Nevertheless, the project site is mapped on the Fault Rupture Hazard Zones Map which includes fault zones, landslide, and liquefaction zones.⁹ According to the City of Dublin General Plan EIR, there are two types of damaging earthquakes which may occur within the Dublin area. The first includes a major quake on a fault at some distance from Dublin, such as the southern Calaveras, Hayward, or San Andreas faults. The second would be from a local source, such as the Greenville, Pleasanton, or northern Calaveras faults. Although the magnitude of quakes from the local sources would be smaller, the intensity could be as great as the more distant larger quakes. Within the Tri-Valley area, several faults are classified as potentially active or active. These include the Pleasanton and Calaveras Faults, which have traces passing through the Parks Reserve Forces Training Area and Dublin, respectively. The presence of two potentially active or active faults within the City indicates the potential for surface fault rupture, typically occurring along lines of previous rupture.¹⁰

Ground Shaking

The San Francisco Bay region is a seismically active region. Impacts from ground shaking could occur many miles from an earthquake epicenter. The potential severity of ground shaking depends on many factors, including the distance from the originating fault, the earthquake magnitude, and the nature of the earth materials beneath a given site. As with other areas in the San Francisco Bay region and throughout northern California, it is anticipated that the project site will likely be subject to strong ground shaking due to earthquakes on nearby faults.

⁷ City of Dublin, 2018, General Plan – Seismic Safety and Safety Element, available online at <https://www.dublin.ca.gov/DocumentCenter/View/7801/Chapter-8-Dec-2014?bidId=>, accessed April 4, 2020.

⁸ California Geological Survey (CGS), 2018, Earthquake Zones of Required Investigation, Livermore Quadrangle available online at http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/LIVERMORE_EZRIM.pdf, accessed April 4, 2020.

⁹ California Department of Conservation, 2015, CGS Information Warehouse: Regulatory Maps, available online at <https://maps.conservation.ca.gov/cgs/informationwarehouse/>, accessed May 26, 2020.

¹⁰ City of Dublin, 1984, General Plan - Volume 2: Technical Supplement Draft Environmental Impact Report, available online at <https://dublin.ca.gov/DocumentCenter/View/5866/Dublin-General-Plan-EIR-Vol-2-Tech-Supplement?bidId=>, accessed May 26, 2020.

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As earthquake waves move through the ground, they change in velocity and period. Upon exiting solid rock and entering less dense alluvial and water saturated ground, the earthquake waves become reduced in velocity, increased in amplitude, and accelerations become greater. Because ground motions become more amplified and last longer in alluvial and saturated areas, structures situated on these materials may suffer greater damage than those situated on more solid rocks. Additionally, the increased depth of alluvium heightens the ground motion and the site vibration period. All structures vibrate at a particular period, and if this period is the same as the site period, ground motions may be amplified in the structure. Therefore, caution must be taken when siting and designing structures over two stories within the City of Dublin.¹¹

Liquefaction

Liquefaction refers to loose, saturated sand or silt deposits that behave as a liquid and lose their load-supporting capability when strongly shaken. The lateral movement of soils when this occurs is referred to as lateral spreading. Loose granular soils and silts that are saturated by relatively shallow groundwater are susceptible to liquefaction. Liquefaction is a serious hazard because buildings in areas that experience liquefaction may suddenly subside and suffer major structural damage.

As described in the site Geotechnical Engineering Report, the project site is located within areas identified as susceptible to liquefaction. Based on soils investigation, the liquefaction potential on-site is considered to be “moderate”, and thus a viable geologic hazard. Potential liquefaction is required to be mitigated in accordance with the CBC.

Landslides

Landslides are the downslope movement of geologic materials. Slope failures in the form of landslides are common during strong seismic shaking in areas of steep hills. The project site and adjacent areas are relatively flat and have a slope less than 0.3 percent with no major change in grade.¹² Therefore, landslides are not considered a potential hazard for the project site.

Other Geologic Hazards

Collapsible Soils

Collapsible soils shrink upon being wetted and/or being subject to a load. Cohesionless soils, such as sand and gravel, are susceptible to collapse. The GEI indicates that native soils within the project site are not conducive to hydrocollapse, as they exhibit relatively firm to very stiff soil conditions, low void-ratio, shallow ground water, and moderate penetration resistance. However, any loose fill material, or soils in areas found during ground disturbance activities to contain a higher concentration of cohesionless soils, could be vulnerable to hydrocollapse.

¹¹ City of Dublin, 1984, General Plan - Volume 2: Technical Supplement Draft Environmental Impact Report, available online at <https://dublin.ca.gov/DocumentCenter/View/5866/Dublin-General-Plan-EIR-Vol-2-Tech-Supplement?bidId=>, accessed May 26, 2020.

¹² United States Geological Survey, 2015. 7.5' Topographic Series, Livermore, California Quadrangle Map, scale 1:24,000.

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Subsidence

Land subsidence refers to the lowering of the ground surface due to extraction or lowering of water levels or other stored fluids within the subsurface soil pores, or due to seismic activity that can cause alluvial sediments to compact.

Known current and historical instances of land subsidence in California have been recorded by the United States Geological Survey (USGS).¹³ The project site is not included in the USGS' areas of known land subsidence. In addition, the project site is located in a populous area where local water districts regularly monitor groundwater levels, and because of this the project site is not likely to be subject to significant groundwater changes that can lead to subsidence.

Dynamic Settlement

Dynamic settlement refers to the compacting of loose soils as a result of strong vibratory motion, such as those associated with an earthquake. Dynamic settlement can occur at multiple levels beneath the ground surface. Cohesionless soils are prone to dynamic settlement. As described above, the soils at the project site exhibit relatively firm to very stiff soil conditions. However, some areas contain some sandy and gravelly soil conditions. In addition, loose fill materials would be more prone to soil movement. The GEI found that based on soils testing, the total seismic-induced settlement would not be expected to exceed 4 inches. Post-tensioned or structural slab foundations may be utilized if the project Structural Engineer deems this excessive.

Expansive Soils

Expansive soils expand when wet and shrink when dry, resulting in the potential for minor to severe damage to building foundations and structures. Clayey soils are considered to be moderately to highly expansive. The soils observed on-site consist of predominantly silty clays and sandy clays which may be prone to expansion. The project GEI outlines mitigation measures to reduce the potential problems associated with expansive soils. Therefore, expansive soils would not present a significant geologic hazard to the site provided that the recommendations of the GEI are followed.

Erosion

Erosion is the movement of soil from place to place and is a natural process. The main natural agents of erosion in the region are wind and flowing water. Erosion can be accelerated dramatically by ground-disturbing activities if effective erosion control measures are not used. Soil can be carried off construction sites or bare land by wind and water and tracked off construction sites by vehicles. According to the project GEI, the general soil profile at the site consists of loose/soft to dense/very stiff silty sand, sandy gravel, silty clay, and sandy clay. As recommended in the GEI, the removal and recompacting of any loose surface soil and fill material on the site would leave the geologic subgrade of the site as "stiff soil". Due to

¹³ United States Geological Survey, Areas of Land Subsidence in California.

https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html, Accessed October 25, 2019.

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the relatively firm to very stiff soil conditions, as well as the supporting Engineered Fill for the proposed project, the site would have a low susceptibility to erosion.

Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in the geologic deposits (rock formations) in which they were originally buried. Paleontological resources represent a limited, non-renewable, sensitive scientific and educational resource.

The potential for fossil remains at a location can be predicted through previous correlations that have been established between the fossil occurrence and the geologic formations within which they are buried. For this reason, knowledge of the geology of a particular area and the paleontological resource sensitivity of rock formations make it possible to predict where fossils will or will not be encountered.

As discussed in the project GEI, the subsurface conditions encountered on-site appear typical of those found within the geologic region of the area. Generally, the upper soils consist of one to four feet of fill material consisting of clayey sand or firm to hard silty clay and sandy clay with traces of gravel. Below the fill, four to five feet of firm to hard sandy clay and gravelly sand clay or loose to very dense clayey sand are present. Further below, from six to nine feet, layers of loose to very dense silty sand, sandy silt and clayey sand or firm to hard silty clay and sandy clay are present.

According to the Dublin Boulevard – North Canyons Parkway Extension EIR, a mammoth tusk, rib bones, portion of skull, and leg bones have previously been recovered from the Jordan Ranch development approximately one mile to the northeast of the project site.¹⁴ Although no paleontological resources are currently known to exist within the project site, it is possible that undiscovered paleontological resources could be buried within the soil types found within its boundaries.

4.6.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant geology and soils impacts if it would:

1. 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; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides, mudslides, or other similar hazards.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

¹⁴ City of Dublin, 2019, Dublin Boulevard – North Canyons Parkway Extension EIR, available online at https://dublin.ca.gov/DocumentCenter/View/20117/54_Cultural-and-Tribal-Cultural-Resources---OK, accessed April 4, 2020.

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4. Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
7. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to geology and soils.

4.6.3 IMPACT DISCUSSION

GEO-1	The proposed project could 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; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides, mudslides, or other similar hazards.
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Fault Rupture

As noted in section 4.6.1.2, the project site is not located on top of an earthquake fault, nor within an earthquake fault zone. However, the project site is located on the Fault Rupture Hazard Zones Map for the Livermore Quadrangle which includes fault zones, landslide, and liquefaction zones.¹⁵ According to the project GEI, the Dublin/Livermore area has historically experienced a moderate to high degree of seismicity. Earthquake data indicated that 330 events with magnitudes greater than 4.0 occurred within 60 miles of the project site between 1800 and 2018, with one occurring within 4.8 miles of the site. Additionally, 13 events exceeded magnitudes of 5.0 have occurred within 20 miles of the project site over the same period.

As noted in the GEI, the subject site is not within a Fault-Rupture Hazard Zone and the nearest well known fault is a portion of an unnamed fault located about 1.5 miles west of the site. The closest well known fault is the Calaveras fault located more than 3.8 miles west of the subject site.

Therefore, impacts associated with fault rupture occurring on the project site are considered *less than significant*.

Significance with Mitigation: Less than significant.

¹⁵ California Department of Conservation, 2015, CGS Information Warehouse: Regulatory Maps, available online at <https://maps.conservation.ca.gov/cgs/informationwarehouse/>, accessed May 26, 2020.

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Ground Shaking

The project site is located in the San Francisco Bay region, which experiences frequent earthquakes. Though the project is not located on an earthquake fault or in an earthquake fault zone, the likelihood of the project site experiencing ground shaking due to nearby faults is high, as throughout much of the region. However, construction of the project would be required to adhere to modern safety standards established in the CBC and Title V of the CCR to minimize the shaking effects experienced during earthquakes. In accordance with the project GEI, implementation of an appropriate level of soil engineering and building design would be necessary to minimize ground-shaking hazards. As described in the regulatory section of this chapter, the project is subject to the Field Act, under which the DSA is responsible for design and construction oversight for K-12 schools to ensure application of the CBC. Therefore, impacts from strong seismic ground shaking would be *significant* and would require the implementation of mitigation.

Significance Without Mitigation: Significant.

Impact GEO-1.1: The proposed project would result in the placement of new buildings in areas susceptible to ground shaking, potentially resulting in significant loss, injury, or death.

Mitigation Measure GEO-1.1: Implement the recommendations found within the project Geotechnical Engineering Investigation (Appendix E):

Groundwater Influence on Structures/Construction

- If groundwater is encountered during construction the relevant authority, such as a soils engineer, shall be consulted prior to dewatering the site. Installation of a standpipe piezometer is suggested prior to construction should groundwater levels be a concern.
- In addition to the groundwater level, if earthwork is performed during or soon after periods of precipitation, the subgrade soils may become saturated, "pump," or not respond to densification techniques. Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material; or mixing the soil with an approved lime or cement product. A relevant authority shall be consulted prior to implementing remedial measures to observe the unstable subgrade conditions and provide appropriate recommendations.

Site Preparation- General

- General site clearing shall include removal of vegetation; existing utilities; structures including foundations; basement walls and floors; existing stockpiled soil; trees and associated root systems; rubble; rubbish; and any loose and/or saturated materials. Site stripping shall extend to a minimum depth of two to four inches, or until all organics in excess of three percent by volume are removed. Deeper stripping may be required in localized areas. These materials will not be suitable for use as Engineered Fill. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas.

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- It is recommended that compaction test reports be provided to the relevant authority for review. Some of the fill soils had varying strength characteristics ranging from loosely placed to compacted. Therefore, it is recommended that any fill soils which have not been properly compacted and certified be excavated and stockpiled so that the native soil can be properly prepared. Prior to fill placement, the relevant authority shall inspect the bottom of the excavation to verify no additional removal will be required. Supplemental testing shall be performed on the fill soils prior to construction to verify their suitability for use as Engineered Fill.
- Demolition activities shall include proper removal of any surface and buried structures. Any buried structures or loosely backfilled excavations encountered during construction shall be properly removed and the resulting excavations backfilled with Engineered Fill, compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.
- Following stripping, demolition activities, and fill removal operations and/or certification verification, the exposed subgrade in building pad, exterior flatwork, and pavement areas shall be excavated/scarified to a depth of at least 12 inches, worked until uniform and free from large clods, moisture-conditioned to at least two percent above optimum moisture, and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. Limits of recompaction shall extend 5 feet beyond structural elements. This compaction effort shall stabilize the surface soils and locate any unsuitable or pliant areas not found during the GEI field investigation.
- It is recommended that the upper 36 inches of soil within proposed conventional slabs-on-grade and exterior flatwork areas consist of non-expansive Engineered Fill or lime-treated Engineered Fill. The intent is to support slab-on-grade and exterior flatwork areas with 36 inches of non-expansive or lime treated fill. The fill placement serves two functions: 1) it provides a uniform amount of soil which will more evenly distribute the soil pressures and 2) it reduces moisture content fluctuation in the clayey material beneath the building area. The non-expansive fill material shall be a well-graded silty sand or sandy silt soil. The on-site, non-expansive sandy silt and silty sand soils will be suitable for this purpose. A clean sand or very sandy soil is not acceptable for this purpose. A sandy soil will allow the surface water to drain into the expansive clayey soil below, which may result in soil swelling. Imported Fill shall be approved by the soils engineer prior to placement. The fill shall be placed as specified as Engineered Fill. As an alternative, within exterior flatwork areas, the upper 18 inches of soil can consist of lime-treated clayey soils overlain by four inches of aggregate base. However, some movement of the exterior flatwork may occur with this alternative.
- It is recommended that any uncertified fill material encountered within pavement areas be removed and/or recompacted. The fill materials shall be moisture-conditioned to near optimum moisture and compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. As an alternative, the owner may elect not to recompact the existing fill within paved areas. However, the owner should be aware that the paved areas may settle, which may require annual maintenance. At a minimum, it is recommended that the upper 12 inches of subgrade soil be moisture-conditioned to a minimum of two percent above optimum moisture content and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.

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- Several trees are located within the project site vicinity. If not utilized for the proposed development, tree removal operations shall include roots greater than one inch in diameter. The resulting excavations shall be backfilled with Engineered Fill, compacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.
- Project site winterization consisting of placement of aggregate base and protecting exposed soils during the construction phase shall be performed.
- Excavations, depressions, or soft and pliant areas extending below planned finished subgrade levels, shall be cleaned to firm, undisturbed soil and backfilled with Engineered Fill. Any buried structures encountered during construction shall be properly removed and backfilled. In general, any septic tanks, debris pits, cesspools, or similar structures shall be entirely removed. Concrete footings shall be removed to an equivalent depth of at least three feet below proposed footing elevations or as recommended by the soils engineer. Any other buried structures shall be removed in accordance with the recommendations of the soils engineer. The resulting excavations shall be backfilled with Engineered Fill.
- A relevant authority shall be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is integral as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The soils engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of the GEI report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in the GEI.

Supplemental Site Preparation- Geogrid Option

- Subsurface soils within the site are prone to liquefaction under high groundshaking acceleration during an earthquake. If the potential differential settlement is not acceptable, the proposed structures can be constructed over a geogrid reinforced soil mat. If this option is utilized, the building area shall be excavated to a minimum depth of five feet below the bottom of the deepest foundation and the resulting excavation shall be backfilled with a layered system of Engineered Fill and geogrid reinforcement. The depth of the over-excavation shall be measured from existing ground or rough pad grade, whichever is deeper.
- The first layer of geogrid reinforcement will be placed directly at the bottom of the excavation. The geogrid material shall be overlapped a minimum of three feet in all directions. The geogrid strips shall be “shingled” such that the exposed geogrid edge is opposite the direction of fill placement (as roof shingles to rain runoff). The interlock between the geogrid and Engineered Fill will provide load transfer. No vehicles may traverse the geogrid prior to placement of the Engineered Fill cover.
- The next layer of geogrid shall be placed on top of the compacted Engineered Fill. This and subsequent layers need only be overlapped a minimum of one foot on all sides. The geogrid strips of this layer, and all subsequent layers within the footprint, shall be placed with lengths perpendicular to those in the layer immediately below. The fill soils excavated from the area beneath the structure may be moisture-conditioned and recompacted between geogrid layers as reinforced fill. The reinforced fill shall be conditioned to near optimum moisture and recompacted to a minimum of 90 percent of maximum density based on ASTM D1557 Test Method.

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- A total of five geogrid layers, including the layer at the base of the excavation, shall be installed at vertical increments of one foot. The geogrid layers shall extend to a minimum of five feet beyond the exterior footing perimeter of the structure. The geogrid reinforcement fabric shall consist of Tensar® BX 6100 Geogrid, TriAx TX-5 or equivalent. Any unstable soils within building areas shall be excavated and backfilled with Engineered Fill as requested by the soil engineer.
- It is recommended that each building site be excavated at once, and soils be stockpiled. The geogrid and excavated soil may then be placed and recompact as recommended herein.
- Alternatively, the contractor may elect to excavate the site in two stages, where excavated soil can be stockpiled over one half of the site while the other half is mitigated. However, if the contractor elects the option of two stages over the preferred option of using one stage, a minimum of five feet of geogrid from the first half shall overlap the second half. Furthermore, the overlapping geogrid shall be protected from damages, which may be caused by operating equipment. It is further recommended that flexible utility connections be used for the project.

Engineered Fill

- The organic-free, on-site, upper, native and fill soils are predominately sandy clay, gravelly sandy clay, clayey sand, silty clay, and sandy clay with a trace of gravel. The clayey soils will not be suitable for reuse as non-expansive Engineered Fill. These clayey soils will be suitable for reuse for fill placement within the upper 36 inches of conventional slab-on-grade and exterior flatwork areas, provided they are lime-treated. The preliminary application rate of lime shall be five percent by dry weight. The lime material shall be calcium oxide, commonly known as quick-lime. The clayey soils shall be at or near optimum moisture content during mixing operations. Additional testing is recommended to determine the appropriate application rate of lime prior to placement. These clayey soils will be suitable for reuse as General Engineered Fill, provided they are moisture-conditioned to at least two percent above optimum moisture.
- The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase shall be the sole responsibility of the contractor, since he has complete control of the project site at that time.
- Imported Fill shall consist of a well-graded, slightly cohesive, fine silty sand or sandy silt, with relatively impervious characteristics when compacted. This material shall be approved by the soils engineer prior to use and shall typically possess the following characteristics: 20 to 50 percent passing No. 200 sieve, 10 maximum plasticity index, 15 maximum UBC standard 29-2 expansion index.
- Fill soils shall be placed in lifts approximately six inches thick, moisture-conditioned to a minimum of two percent above optimum moisture content, and compacted to achieve at least 90 percent of maximum density as determined by ASTM Test Method D1557. Additional lifts shall not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

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Drainage and Landscaping

- The ground surface shall slope away from building pad and pavement areas toward appropriate drop inlets or other surface drainage devices. In accordance with Section 1804 of the California Building Code, it is recommended that the ground surface adjacent to foundations be sloped a minimum of five percent for a minimum distance of 10 feet away from structures, or to an approved alternative means of drainage conveyance. Swales used for conveyance of drainage and located within 10 feet of foundations shall be sloped a minimum of two percent. Impervious surfaces, such as pavement and exterior concrete flatwork, within 10 feet of building foundations shall be sloped a minimum of one percent away from the structure. Drainage gradients shall be maintained to carry all surface water to collection facilities and off-site. These grades shall be maintained for the life of the project.
- Slots or weep holes shall be placed in drop inlets or other surface drainage devices in pavement areas to allow free drainage of adjoining base course materials. Cutoff walls shall be installed at pavement edges adjacent to vehicular traffic areas; these walls shall extend to a minimum depth of six inches below pavement subgrades to limit the amount of seepage water that can infiltrate the pavements. Where cutoff walls are undesirable, subgrade drains can be constructed to transport excess water away from planters to drainage interceptors. If cutoff walls can be successfully used at the site, construction of subgrade drains is considered unnecessary.

Utility Trench Backfill

- Utility trenches shall be excavated according to accepted engineering practices following Occupational Safety and Health Administration (OSHA) standards by a contractor experienced in such work. The responsibility for the safety of open trenches shall be borne by the contractor. Traffic and vibration adjacent to trench walls shall be reduced; cyclic wetting and drying of excavation side slopes shall be avoided. Depending upon the location and depth of some utility trenches, groundwater flow into open excavations could be experienced, especially during or shortly following periods of precipitation.
- Sandy and gravelly soil conditions were encountered at the site. These cohesionless soils have a tendency to cave in trench wall excavations. Shoring or sloping back trench sidewalls may be required within these sandy and gravelly soils.
- Utility trench backfill placed in or adjacent to buildings and exterior slabs shall be compacted to at least 90 percent of the maximum density based on ASTM Test Method D1557. The utility trench backfill placed in pavement areas shall be compacted to at least 90 percent of the maximum density based on ASTM Test Method D1557. Pipe bedding shall be in accordance with pipe manufacturer's recommendations.
- The Contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor shall use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

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Foundations – Conventional

- The proposed structures may be supported on a shallow foundation system, bearing on a minimum of 24 inches of Engineered Fill. Spread and continuous footings can be designed for the following maximum allowable soil bearing pressures: 1,875 per square foot (psf) for dead load only, 2,500 psf for dead-plus-live load, or 3,325 psf for total load, including wind or seismic loads.
- Exterior footings shall have a minimum depth of 18 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower. Interior footings shall have a minimum depth of 12 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower. Footings shall have a minimum width of 12 inches, regardless of load.
- The footing excavations shall not be allowed to dry out any time prior to pouring concrete. It is recommended that footings be reinforced by at least one No. 4 reinforcing bar in both top and bottom.

Foundations- Post-Tension or Structural Slab

- The buildings may be supported on a post-tension slab or structural slab/foundation system. A structural slab system will help reduce structural damage caused by the potential soil movement of the clayey soils and potential settlement associated with seismic settlement. In addition, utilization of a post-tensioned slab will eliminate the requirement for 36 inches of non-expansive or lime-treated Engineered Fill below slab-on-grade. However, the previously recommended densification of the upper native soils and fill material at the site shall still be performed. In addition, the moisture content of the upper 12 inches of subgrade soil below the post-tensioned slabs shall be increased to a minimum of three percent above optimum moisture content prior to pouring the slabs. The moisture content shall be verified by relevant authorities office within 48 hours of pouring the slabs.
- The thickness of the slab-on-grade and locations and sizing of stiffening beams (if used) shall be determined by the structural consultant during a subsequent structural analysis, which incorporates the GEI design recommendations, including a deepened perimeter or edge section. Post-tensioned slab-on-grade foundations shall be structurally designed to resist or distribute the stresses that are anticipated to develop as the result of supporting soil movement.
- To aid in reducing the potential for differential soil movement associated with shrinkage and swelling of the fine-grained soils due to changes in moisture contents with changing seasons and landscaping, it is recommended that the exterior edge of the slab be deepened to provide a moisture cut-off around the perimeter of the building. The deepened edge shall extend at least 18 inches below the top of the pad grade, where the top of pad grade is defined as the grade beneath the bottom of the capillary moisture break gravel course or the adjacent exterior subgrade, whichever is deeper. In addition, the slab shall be designed to withstand a potential total and differential static settlement of four inches and two and two thirds inches, respectively.
- Slabs adjacent to landscape areas may be subject to additional distress due to increased soil moisture level fluctuations from flowerbed watering, as well as drying from tree root moisture removal. Therefore, we recommend that the school district be notified of the potential for soil movement and resulting slab distress which may occur in these instances of landscape neglect.

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- In addition, it is recommended the school site maintain consistent moisture levels and avoid extreme fluctuations in any flowerbeds adjacent to structures, and to avoid planting trees with invasive root systems within 10 feet of the structures.
- The thickness of the slab-on-grade and locations and sizing of stiffening beams (if used) shall be determined by the project structural engineer. Post-tensioned concrete slabs designed to be of uniform thickness without interior stiffening beams shall be designed in accordance with the procedures presented in Design of Post-Tensioned Slabs-on-Ground. Perimeter columns located outside of the main structure, such as those required for covered terraces or second floor areas projecting out beyond the building footprint shall not be founded on isolated spread footings structurally separated from the slab foundation.
- The post-tensioned slab-on-grade foundation system will not prevent the structure from undergoing vertical displacement as a result of shrinkage and swelling of the underlying expansive soils. However, the use of a post-tensioned slab-on-grade foundation system, as opposed to a conventionally reinforced non-structural slab-on-grade, will reduce the amount of objectionable slab cracks and vertical off-set of adjacent concrete panels. However, cracking and distress in brittle finishes, such as stucco and drywall should be anticipated. The use of post-tension reinforcement does not necessarily eliminate the development of bending stresses in the slab due to differential movement of the supporting soils. This type of slab essentially distributes the differential movement of the supported structure over a longer span through controlled bending of the slab.

Floor Slabs and Exterior Flatwork

- Concrete slab-on-grade shall be appropriate for this project. In areas where it is desired to reduce floor dampness, such as office areas, slab-on-grade construction shall have a water vapor retarder incorporated into the floor slab design. In areas that will utilize moisture-sensitive floor coverings, concrete slab-on-grade floors shall be underlain by a water vapor retarder. The water vapor retarder shall be installed in accordance with accepted engineering practice. The water vapor retarder shall consist of a vapor retarder sheeting underlain by a minimum of three inches of compacted, clean, open graded coarse rock of three quarter of an inch maximum size.
- The floor slab shall be reinforced as a minimum with No. 3 reinforcement bars at 18 inches on-center, each way, within the floor slabs middle-third. Thicker floor slabs with increased concrete strength and reinforcement shall be designed wherever large vehicular loads, heavy concentrated loads, heavy equipment, or machinery is anticipated.
- The exterior floors shall be poured separately in order to act independently of the walls and foundation system. Exterior finish grades shall be sloped a minimum of one to one and a half percent away from all interior slab areas to preclude ponding of water adjacent to the structures. All fills required to bring the building pads to grade shall be Engineered Fills.

Lateral Earth Pressures and Retaining Walls

- Walls retaining horizontal backfill and capable of deflecting a minimum of 0.1 percent of its height at the top may be designed using an equivalent fluid active pressure of 50 pounds per square foot per foot of depth. Walls incapable of this deflection or are fully constrained walls against

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deflection may be designed for an equivalent fluid at-rest pressure-of 70 pounds per square foot per foot of depth. Expansive soils shall not be used for backfill against walls.

- The wedge of non-expansive backfill material shall extend from the bottom of each retaining wall outward and upward at a slope of 2: 1 (horizontal to vertical) or flatter. The stated lateral earth pressures do not include the effects of hydrostatic water pressures generated by infiltrating surface water that may accumulate behind the retaining walls; or loads imposed by construction equipment, foundations or roadways.
- During grading and backfilling operations adjacent to any walls, heavy equipment shall not be allowed to operate within a lateral distance of five feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment (“whackers”, vibratory plates, or pneumatic compactors) shall be used to compact the backfill soils.
- Retaining and/or below grade walls shall be drained with either perforated pipe encased in free draining gravel or a prefabricated drainage system. The gravel zone shall have a minimum width of 12 inches wide and shall extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill shall consist of native soils, concrete, asphaltic concrete or other suitable backfill to reduce surface drainage into the wall drain system. The aggregate shall conform to Class 2 permeable materials graded in accordance with Section 68-2.02F(3) of the Caltrans Standard Specifications (2018). Prefabricated drainage systems such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, a relevant authority shall review the system for final acceptance prior to installation.
- Drainage pipes shall be placed with perforations down and shall discharge in a non-erosive manner away from foundations and other improvements. The pipes shall be placed no higher than six inches above the heel of the wall in the centerline of the drainage blanket and shall have a minimum diameter of four inches. Collector pipes may be either slotted or perforated. Slots shall be no wider than half an inch in width, while perforations shall be no more than a quarter inch in diameter. If retaining walls are less than six feet in height, the perforated pipe may be omitted in lieu of weep holes on four feet maximum spacing. The weep holes shall consist of four inch diameter holes (concrete walls) or unmortared head joints (masonry walls) and not be higher than 18 inches above the lowest adjacent grade. Two eight inch square overlapping patches of geotextile fabric (conforming to Section 88-1.02 of the Caltrans Standard Specifications for “edge drains”) shall be affixed to the rear wall opening of each weep hole to retard soil piping.

R-Value Test Results and Pavement Design

- If traffic indices are not available, an estimated (typical value) index of 4.5 may be used for light automobile traffic, and an index of 7 .0 may be used for light truck traffic.
- As indicated previously, fill material is located throughout the site. It is recommended that any uncertified fill material encountered within pavement areas be removed and/ or recompacted. The fill material shall be moisture-conditioned to near optimum moisture and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557. As an alternative, the owner may elect not to recompact the existing fill within paved areas. However,

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the owner shall be aware that the paved areas may settle which may require annual maintenance. At a minimum, it is recommended that the upper 12 inches of subgrade soil be moisture-conditioned as necessary and recompacted to a minimum of 90 percent of maximum density based on ASTM Test Method D1557.

Soil Cement Reactivity

- It is recommended a Type II cement be utilized to compensate for sulfate reactivity with the cement.

Compacted Material Acceptance

- Compaction specifications are not the only criteria for acceptance of the site grading or other such activities. However, the compaction test is the most universally recognized test method for assessing the performance of the grading contractor. The numerical test results from the compaction test cannot be used to predict the engineering performance of the compacted material. Therefore, the acceptance of compacted materials will also be dependent on the stability of that material. The soils engineer has the option of rejecting any compacted material regardless of the degree of compaction if that material is considered to be unstable or if future instability is suspected. A specific example of rejection of fill material passing the required percent compaction is a fill which has been compacted with an in situ moisture content significantly less than optimum moisture. This type of dry fill (brittle fill) is susceptible to future settlement if it becomes saturated or flooded.

Testing and Inspection

- A relevant authority shall be present at the site during the earthwork activities to confirm that actual subsurface conditions are consistent with the exploratory fieldwork. This activity is an integral as acceptance of earthwork construction is dependent upon compaction testing and stability of the material. This representative can also verify that the intent of these recommendations is incorporated into the project design and construction. Grades or staking are the responsibility of the prime contractor.

Limitations

- It is suggested that two years be considered a reasonable time for the usefulness of the GEI.
- If any variations or undesirable conditions are encountered during construction, the soils engineer shall be notified so that supplemental recommendations may be made.

Significance with Mitigation: Less than significant.

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Liquefaction

As discussed in Section 4.6.1.2, the project site is considered susceptible to liquefaction. Liquefaction of the soil at the project site could result in ground movement that causes major structural damage and risk to human safety. This is considered a significant impact.

Significance Without Mitigation: Significant.

Impact GEO-1.2: The proposed project would result in the placement of new buildings in areas susceptible to ground failure in the form of liquefaction, potentially resulting in significant loss, injury, or death.

Mitigation Measure GEO-1.2: Implement Mitigation Measure GEO-1.1.

Significance with Mitigation: Less than significant.

Landslides

The project site is located in a relatively flat area, with no major changes in grade onsite or on adjacent properties. It is not located within a landslide hazard zone. Therefore, impacts from landslides would be less than significant.

Significance without Mitigation: Less than significant.

GEO-2 The project could result in substantial soil erosion or the loss of topsoil.

Accelerated erosion within an urban area can cause damage by undermining structures, blocking storm sewers, and depositing silt, sand, or mud in roads and tunnels. Eroded materials are eventually deposited into coastal and local waters where the carried silt remains suspended in the water for some time, constituting a pollutant and altering the normal balance of plant and animal life. The site is currently undeveloped land. Clearing, grading, excavation, and other construction activities associated with the proposed project could cause soil erosion and increase the amount of silt and debris carried in runoff. As stated within the project GEI, some of the fill soils found on the site have varying strength characteristics ranging from loosely placed to compacted. Therefore, it is recommended that any fill soils which have not been properly compacted, or densified, be excavated and stockpiled so that the native soil can be properly prepared and subsequently be used as Engineered Fill. Without proper treatment of topsoil on site, soil erosion is considered a potentially significant impact.

Significance Without Mitigation: Potentially significant.

Impact GEO-2: Development of the proposed project could result in substantial soil erosion or loss of topsoil, through clearing, grading, excavation, and other related activities required for construction.

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Mitigation Measure GEO-2a: To minimize potential impacts of erosion during site development, the proposed project would be required to comply with the Statewide General Construction Permit as well as prepare a stormwater pollution prevention plan that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. Because the project would disturb one or more acres, coverage under the Statewide General Construction Permit would apply. The General Construction Permit also requires that, prior to the start of construction activities, the project applicant must file Permit Registration Documents with the State Water Resources Control Board, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, stormwater pollution prevention plan, and post-construction water balance calculations.

Mitigation Measure GEO-2b: Implement Mitigation Measure GEO-1.1.

Significance with Mitigation: Less than significant.

GEO-3	The project could 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.
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As described under Section 4.6.1.2, Existing Conditions, the soils at the project site are not conducive to hydrocollapse, and subsidence is unlikely due to the monitoring of groundwater within the region. However, the project site is located in an area identified as susceptible to liquefaction, resulting in potential related hazards to structures and human safety. This is considered a significant impact.

Significance Without Mitigation: Significant.

Impact GEO-3: The proposed project would be placed on soil that is potentially susceptible to liquefaction, resulting in a risk to the integrity of built structures and human safety.

Mitigation Measure GEO-3: Implementation of Mitigation Measure GEO-1.1.

Significance with Mitigation: Less than significant.

GEO-4	The project could be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
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As described in section 4.6.1.2, Existing Conditions, the project site consists of soils that are predominantly silty clays and sandy clays, which may be prone to expansion. Therefore, the direct or indirect risks to life or property from the presence of potentially expansive soils is considered a significant impact.

Significance without Mitigation: Potentially significant.

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Impact GEO-4: The proposed project would be placed on soil that is potentially susceptible to expansion, resulting in direct or indirect risks to life or property.

Mitigation Measure GEO-4: Implementation Mitigation Measure GEO-1.1. **Significance with Mitigation:** Less than significant.

GEO-5	The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
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The proposed project would not require the use of septic tanks or alternative wastewater disposal systems. Wastewater facilities would be connected to and discharged into the existing public sanitary sewer system for the City of Dublin, which is serviced by the Dublin San Ramon Services District. As such, there would be no impact from implementation of the proposed project at sites where soils might otherwise not be capable of supporting the use of septic tanks or alternative wastewater disposal systems.

Significance without Mitigation: Less than significant.

GEO-6	The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
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Although paleontological resources have been identified on a nearby project, they have not been identified on the project site. Because the proposed project requires ground disturbing activities, there could be fossils of potential scientific significance and other unique geologic features that are not recorded. Such ground-disturbing construction associated with development permitted under the proposed project could cause damage to, or destruction of, paleontological resources or unique geologic features. This represents a *potentially significant* impact.

Significance without Mitigation: Potentially significant.

Mitigation Measure GEO-5: In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery, as needed, in accordance with Society of Vertebrate Paleontology standards, evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. 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. The plan shall be submitted to the District for review and approval prior to implementation.

Significance with Mitigation: Less than significant.

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4.6.4 CUMULATIVE IMPACTS

GEO-7	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to geology and soils.
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Risk from fault rupture, ground shaking, and landslides are considered less than significant. Risks from liquefaction, expansive soil, and erosion would be mitigated with implementation of Mitigation Measures GEO-1, GEO-2, GEO-3, and GEO-4. The proposed project would also be required to comply with regulations set forth in the CBC pertaining to structural safety and the minimizing of geologic hazards to the extent feasible. In addition, geologic hazards described above are specific to the project site. As landslides do not pose a significant impact, movement of soils on-site would be expected to impact the project site and/or immediate area. Thus, it would not contribute to a cumulative impact regarding geologic hazards when taken into consideration with other projects. Therefore, cumulative impacts associated with the proposed project would be considered less than significant.

Significance without Mitigation: Less than significant.

GREENHOUSE GAS EMISSIONS

4.7 GREENHOUSE GAS EMISSIONS

This chapter describes the existing greenhouse gas (GHG) emissions in the area of the project site and evaluates the potential environmental consequences of construction and operation of the proposed project. Additionally, this chapter describes the environmental setting, including regulatory framework and the existing GHG setting and baseline conditions, and identifies mitigation measures, if required, that would avoid or reduce significant impacts. This evaluation is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD or Air District). GHG emissions modeling was conducted using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25, and model outputs are in Appendix B, Air Quality and Greenhouse Gas Modeling, of this Draft EIR.

4.7.1 TERMINOLOGY

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO₂) over a given period of time (20, 100, and 500 years). CO₂ has a GWP of 1.
- **Carbon dioxide-equivalent (CO₂e).** The standard unit to measure the amount of GHGs in terms of the amount of CO₂ that would cause the same amount of warming. CO₂e is based on the GWP ratios between the various GHGs relative to CO₂.
- **MTCO₂e.** Metric ton of CO₂e.
- **MMTCO₂e.** Million metric tons of CO₂e.

4.7.2 ENVIRONMENTAL SETTING

4.7.2.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to 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 likely causes of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC

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that contribute to global warming to a lesser extent are nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.^{1,2,3}

The major GHGs are briefly described as follows:

- **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.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of applicable GHG emissions are shown in Table 4.7-1. The GWP is used to convert GHGs to CO₂-equivalence (CO₂e) 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 Fourth Assessment Report (AR4) GWP values for methane (CH₄), a project that generates 10 metric tons (MT) of CH₄ would be equivalent to 250 MT of CO₂.⁴

¹ Intergovernmental Panel on Climate Change, 2001. Third Assessment Report: Climate Change 2001, New York: Cambridge University Press.

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 because it is considered part of the feedback loop of changing radiative forcing rather than a primary cause of change.

³ 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 (California Air Resources Board, 2017, March 14. Short-Lived Climate Pollutant Reduction Strategy, <https://www.arb.ca.gov/cc/shortlived/shortlived.htm>). However, State and national GHG inventories do not 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.

⁴ CO₂-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

GREENHOUSE GAS EMISSIONS**California's GHG Sources and Relative Contribution**

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.⁵ Based on these GWPs, California produced 424.10 MMTCO₂e GHG emissions in 2017. California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent), high GWP (4.7 percent), and recycling and waste (2.1 percent).⁶

TABLE 4.7-1 GHG EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO₂

GHGs	Second Assessment Report (SAR) Global Warming Potential Relative to CO ₂ ^a	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO ₂ ^a	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO ₂ ^a
Carbon Dioxide (CO ₂)	1	1	1
Methane ^b (CH ₄)	21	25	28
Nitrous Oxide (N ₂ O)	310	298	265

Notes: GWP values identified in AR4 are used by BAAQMD to maintain consistency in statewide GHG emissions modeling.

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

b. 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.

Sources: Intergovernmental Panel on Climate Change, 1995, Second Assessment Report: Climate Change 1995; Intergovernmental Panel on Climate Change, 2007, Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press; Intergovernmental Panel on Climate Change, 2014, Fifth Assessment Report: Climate Change 2014. New York: Cambridge University Press.

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG emitting activities statewide were 424 MMTCO₂e, 5 MMTCO₂e lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 MMTCO₂e below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 MTCO₂e per capita to 10.7 MTCO₂e per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, while the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy).⁷

⁵ Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

⁶ California Air Resources Board (CARB). 2019, August 26. 2019 Edition California Greenhouse Gas Inventory for 2000-2017: By Category as Defined in the 2008 Scoping Plan. <https://www.arb.ca.gov/cc/inventory/data/data.htm>.

⁷ California Air Resources Board. 2019, August 26. California Greenhouse Emissions for 2000 to 2017: Trends of Emissions and Other Indicators. <https://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed November 21, 2019.

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Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO₂ in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation.⁸ These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.⁹ In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime.¹⁰

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty—for example, on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

⁸ Intergovernmental Panel on Climate Change, 2007. *Fourth Assessment Report: Climate Change 2007*, New York: Cambridge University Press.

⁹ California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

¹⁰ Intergovernmental Panel on Climate Change, 2007. *Fourth Assessment Report: Climate Change 2007*, New York: Cambridge University Press.

GREENHOUSE GAS EMISSIONS**Potential Climate Change Impacts for California**

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide average temperatures increased by about 1.7 degrees Fahrenheit (°F) from 1895 to 2011, and warming has been greatest in the Sierra Nevada.¹¹ The years from 2014 through 2016 have shown unprecedented temperatures with 2014 being the warmest.¹² By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels.¹³

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms.¹⁴ Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, and unprecedented dry years in 2014 and 2015. Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015.¹⁵

According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 4.7-1), and the inertia of the Earth's climate system could produce as much as 0.6 degrees Celsius (°C) (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are described below and shown in Table 4.7-2.

- **Water Resources Impacts.** By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. Even in projections with relatively little or no decline in precipitation, central and southern parts of the state are expected to be drier from the warming effects alone because the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months.¹⁶

¹¹ California Climate Change Center, 2012. Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California.

¹² Office of Environmental Health Hazards Assessment, 2018. Indicators of Climate Change in California. <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>, accessed November 21, 2019.

¹³ California Climate Change Center, 2012. Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California.

¹⁴ California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

¹⁵ Office of Environmental Health Hazards Assessment, 2018. Indicators of Climate Change in California. <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>, accessed April 3, 2019.

¹⁶ California Council on Science and Technology, 2012. California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets. <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed November 21, 2019.

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- **Wildfire Risks.** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase by 58 percent to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location.¹⁷
- **Health Impacts.** Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession, and simultaneous heat waves in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California.¹⁸

TABLE 4.7-2 SUMMARY OF GHG EMISSIONS RISK TO CALIFORNIA

Impact Category	Potential Risks	
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Poor air quality made worse	Higher temperatures increase ground-level ozone (i.e., smog) levels
Water Resource Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply	Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds	Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods	Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity	Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species

Sources: California Climate Change Center, 2012, Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California. California Energy Commission, 2006. Our Changing Climate: Assessing the Risks to California, 2006 Biennial Report, CEC-500-2006-077. California Energy Commission, 2009. The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California. CEC-500-2008-0077. California Natural Resources Agency, 2014. Safeguarding California: Reducing Climate Risk, An Update to the 2009 California Climate Adaptation Strategy.

¹⁷ California Council on Science and Technology, 2012. California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets. <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed November 21, 2019.

¹⁸ California Council on Science and Technology, 2012. California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets. <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed November 21, 2019.

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- **Increase Energy Demand.** Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 percent to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand.¹⁹

4.7.2.2 REGULATORY FRAMEWORK

This section summarizes key federal, State, regional, and City regulations and programs related to GHG emissions resulting from the proposed high school development.

Federal Regulations

The United States Environmental Protection Agency (USEPA) 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 USEPA'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 did not themselves impose any emission reduction requirements but allowed the USEPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.²⁰

To regulate GHGs from passenger vehicles, the USEPA issued an endangerment finding.²¹ The finding identifies emissions of six key GHGs—CO₂, CH₄, N₂O, HCFCs, PFCs, 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 proposed project's GHG emissions inventory because they constitute the majority of GHG emissions and, per BAAQMD guidance, they are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

- **US Mandatory Report Rule for Greenhouse Gases (2009).** In response to the endangerment finding, the USEPA 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 MTCO₂e per year are required to submit an annual report.

¹⁹California Council on Science and Technology, 2012. California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets. <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed November 21, 2019.

²⁰ U.S. Environmental Protection Agency, 2009. EPA: Greenhouse Gases Threaten Public Health and the Environment. https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html, accessed November 21, 2019.

²¹ U.S. Environmental Protection Agency, 2009. EPA: Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>, accessed November 21, 2019.

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- **Update to Corporate Average Fuel Economy Standards (2017 to 2026).** The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. However, on March 30, 2020, the USEPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as The Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026. However, consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards.²²
- **USEPA Regulation of Stationary Sources under the Clean Air Act (Ongoing).** Pursuant to its authority under the Clean Air Act, the EPA has been developing 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 Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO₂ emissions from coal-fired power plants.

State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, AB 32, SB 32, Executive Order B-30-15, and SB 375. These are summarized as follows:

- **Executive Order S-03-05.** Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:
 - 2000 levels by 2010.
 - 1990 levels by 2020.
 - 80 percent below 1990 levels by 2050.

²² California Air Resources Board. California and major automakers reach groundbreaking framework agreement on clean emission standards. Accessed March 29, 2020. <https://ww2.arb.ca.gov/news/california-and-major-automakers-reach-groundbreaking-framework-agreement-clean-emission>

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- **Assembly Bill 32.** Also known as the Global Warming Solutions Act (2006), AB 32 was signed August 31, 2006, in order to reduce California's contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05. Under AB 32, California Air Resources Board (CARB) prepared the *2008 Climate Change Scoping Plan*, the *2014 Climate Change Scoping Plan*, and the *2017 Climate Change Scoping Plan*, which is discussed below.
 - CARB 2008 Scoping Plan. The 2008 Scoping Plan, adopted by CARB on December 11, 2008, identified that GHG emissions in California are anticipated to be 596 MMTCO₂e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMTCO₂e (471 million tons) for the state. To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MTCO₂e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.
 - First Update to the Scoping Plan. CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goal defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 MMTCO₂e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 MMTCO₂e.²³ As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the State to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals.²⁴ CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.²⁵
- **Executive Order B-30-15.** Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs 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 Executive Order S-03-05. It also requires the Natural Resources Agency to

²³ California Air Resources Board, 2014. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006. https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf, accessed November 21, 2019.

²⁴ California Air Resources Board, 2014. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006. https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf, accessed November 21, 2019.

²⁵ California Air Resources Board, 2014. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006. https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf, accessed November 21, 2019.

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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, SB 32 and AB 197 were signed 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 direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.
- 2017 Climate Change Scoping Plan Update. Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) to address the 2030 target for the State. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO₂e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.²⁶

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (i.e., methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and toxic air contaminants (TACs) emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE vehicle buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolios Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, and utilizes near-zero emissions technology, and deployment of ZE vehicle trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.

²⁶ California Air Resources Board, 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed November 21, 2019.

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- Post-2020 Cap-and-Trade Program that includes declining caps.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and recommended local actions to reduce GHG emissions; for example, statewide targets of no more than 6 MTCO₂e or less per capita by 2030 and 2 MTCO₂e or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the State's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have the discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population)—consistent with the Scoping Plan and the State's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the business-as-usual (BAU) yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 4.7-3. It includes the existing renewables requirements, advanced clean cars, the "10 percent" LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 MMTCO₂e above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

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TABLE 4.7-3 2017 CLIMATE CHANGE SCOPING PLAN EMISSIONS REDUCTIONS GAP TO ACHIEVE THE 2030 GHG TARGET

Modeling Scenario	2030 GHG Emissions MMTCO ₂ e
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	260
Gap to 2030 Target with Known Commitments	60

Source: California Air Resources Board, 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed on February 28, 2020.

Table 4.7-4 provides GHG emissions by sector, for 1990, and the range of GHG emissions for each sector estimated for 2030, and the percent change compared to 1990 levels.

TABLE 4.7-4 2017 CLIMATE CHANGE SCOPING PLAN EMISSIONS BY SECTOR TO ACHIEVE THE 2030 GHG TARGET

Scoping Plan Sector	1990 MMTCO ₂ e	2030 Proposed Plan Ranges MMTCO ₂ e	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink ^a	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	431	260	-40%

Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.

a. Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Source: California Air Resources Board. 2017, California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed on February 28, 2020.

- **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

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establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco Bay Area region. Pursuant to the recommendations of the Regional Transportation Advisory Committee (RTAC), CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

- 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 2018.²⁷ The updated targets became effective on October 1, 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 reduction 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 SCS to achieve the SB 375 targets. For next SCS update, CARB's updated targets for the MTC/Association of Bay Area Governments (ABAG) region are a 10 percent per capita GHG reduction in 2020 from 2005 levels (compared to 7 percent under the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 15 percent). CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies.²⁸

- **Transportation Sector Regulations – Assembly Bill 1493.** Also known as Pavley I, AB 1493 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 USEPA. In 2012, the USEPA 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 CAFE standards under the heading for Federal Regulations, above). 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 global warming gases and 75 percent less smog-forming emissions.²⁹

²⁷ California Air Resources Board, 2018. Updated Final Staff Report: Proposed Update to the SB 375 Greenhouse Gas Emissions Reduction Targets.

²⁸ California Air Resources Board, 2018. Updated Final Staff Report: Proposed Update to the SB 375 Greenhouse Gas Emissions Reduction Targets.

²⁹ See also the discussion on the update to the CAFE standards under Federal Laws, above. 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 global warming gases and requirements for greater numbers of zero-emission vehicles into a single

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- **Transportation Sector Regulations – Executive Order S-01-07.** On January 18, 2007, the state set a new Low Carbon Fuel Standard (LCFS) for transportation fuels sold in California. 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 requires 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 LCFS applies to refiners, blenders, producers, and importers of transportation fuels and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the “fuel cycle,” using the most economically feasible methods.
- **Transportation Sector Regulations – Executive Order B-16-2012.** Signed on March 23, 2012, the State required CARB, the California Energy Commission, the Public Utilities Commission, and other relevant agencies to work 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 zero-emission by 2015 and at least 25 percent by 2020. The executive order also stabled a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.
- **Renewable 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 renewable portfolios standard (RPS) 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 RPS 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.
- **Renewable Portfolio/Carbon Neutrality Regulations – Senate Bill 350.** Signed in September 2015, SB 350 establishes tiered increases in the RPS to 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.
- **Renewable Portfolio/Carbon Neutrality Regulations – Senate Bill 100.** On September 10, 2018, Governor Brown signed SB 100, which raises California’s RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill establishes a 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.

package of standards. Under California’s Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

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- **Renewable Portfolio/Carbon Neutrality Regulations – Executive Order B-55-18.** Executive Order B-55-18, signed September 10, 2018, sets 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 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 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.
- **Energy Efficiency Regulations – California Building Code: Building 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 2016 (Title 24, Part 6, of the California Code of Regulations). Title 24 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. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.³⁰ The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; and 4) nonresidential lighting requirements.³¹ Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient. When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.³²
- **Energy Efficiency Regulations – California Building Code: 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 California Code of Regulations, 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.³³ The mandatory provisions of the 2016 CalGreen building standards became effective on January 1, 2017. The CEC adopted the 2019 CALGreen on May 9, 2018, and it becomes effective January 1, 2020.

³⁰ California Energy Commission, 2015. 2016 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf, accessed November 21, 2019.

³¹ California Energy Commission, 2018. Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. News Release.

³² California Energy Commission, 2018. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed November 21, 2019.

³³ The green building standards became mandatory in the 2010 edition of the code.

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- **Energy Efficiency Regulations – 2006 Appliance Efficiency Regulations.** Adopted by the California Energy Commission on October 11, 2006, the 2006 Appliance Efficiency Regulations (Title 20, California Code of Regulations, Sections 1601 through 1608) were approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. 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 Regulations – Assembly Bill 939.** 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.
- **Solid Waste Regulations – Assembly Bill 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 in addition to schools and school districts. 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.
- **Solid Waste Regulations – Assembly Bill 1327.** The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Sections 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.
- **Solid Waste Regulations – Assembly Bill 1826.** AB 1826, signed in October 2014, requires businesses and public entities (e.g., schools) 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, including 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 in 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 to 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 requires 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.

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- **Water Efficiency Regulations –Assembly Bill 1881.** The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the Energy Commission, in consultation with the department, 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 Pollutants – 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 incomplete combustion of fuels. SB 1383 requires the State board, no later than January 1, 2018, to approve and begin implementing that 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 establishes targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the “Final Proposed Short-Lived Climate Pollutant 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.³⁴ In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

Regional Plans and Regulations

Plan Bay Area

Plan Bay Area is the Bay Area’s RTP/SCS and was adopted jointly by ABAG and MTC on July 26, 2017. It lays out a development scenario for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. The 2040 *Plan Bay Area* is a limited and focused update to the 2013 *Plan Bay Area*, with updated planning assumptions that incorporate key economic, demographic, and financial trends from the last several years. As part of the implementing framework for *Plan Bay Area*, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated in PDAs. Per the 2040 *Plan Bay Area*, while the projected number of new housing units and new jobs within PDAs would increase to 629,000 units and 707,000 jobs compared to the 2013 *Plan Bay Area*, its overall share would be reduced to 77 percent and 55 percent.³⁵ However, the 2040 *Plan Bay Area* remains on track to meet a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent

³⁴ California Air Resources Board, 2017. Short-Lived Climate Pollutant Reduction Strategy. https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf, accessed November 21, 2019.

³⁵ Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. *Plan Bay Area* 2040 Plan.

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per capita reduction by 2020 from 2005 conditions.³⁶ The project site is within the Dublin Town Center PDA.³⁷

Bay Area Clean Air Plan

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* on April 19, 2017. The 2017 *Clean Air Plan* also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.³⁸

A comprehensive multipollutant control strategy has been developed to be implemented in the next 3 to 5 years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
- Increase efficiency of the energy and transportation systems.
- Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
- Make the electricity supply carbon-free.
- Electrify the transportation and building sectors.

³⁶ Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. Plan Bay Area 2040 Plan.

³⁷ Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. Plan Bay Area 2040 Plan. Priority Development Areas (Plan Bay Area 2040) ArcGIS. <https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=56ee3b41d6a242e5a5871b043ae84dc1>, accessed November 21, 2019.

³⁸ Bay Area Air Quality Management District, 2017. Final 2017 *Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>, accessed November 21, 2019.

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Under Air District Regulation 14, Model Source Emissions Reduction Measures, Rule 1, Bay Area Commuter Benefits Program, employers with 50 or more full-time employees within the BAAQMD are required to register and offer commuter benefits to employees. Per Section 14-1-208, “employer” is defined as any public, private, or non-profit entity (person, corporation, partnership, business firm, government agency, special purpose agency, education institution, health care facility, etc.). In partnership with the BAAQMD and the Metropolitan Transportation Commission (MTC), the rule’s purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area’s traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four commuter benefit options including a pre-tax benefit, employer-provided subsidy, employer-provided transit, and alternative commute benefit.

4.7.2.3 EXISTING CONDITIONS

The existing site is vacant and does not currently generate GHG emissions.

4.7.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant greenhouse gas emission impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.
3. Result in significant cumulative impacts with respect to GHG emissions.

4.7.3.1 BAAQMD STANDARDS OF SIGNIFICANCE

BAAQMD has adopted CEQA Guidelines to evaluate GHG emissions impacts from development projects.³⁹ Land use development projects include residential, commercial, industrial, and public land use facilities. Direct sources of emissions may include on-site combustion of energy, such as natural gas used for heating and cooking, emissions from industrial processes (not applicable for most land use development projects), and fuel combustion from mobile sources. Indirect emissions are emissions produced off-site from energy production, water conveyance due to a project’s energy use and water consumption, and non-biogenic emissions from waste disposal. Biogenic CO₂ emissions are not included in the quantification of a project’s GHG emissions, because biogenic CO₂ is derived from living biomass (e.g., organic matter present in wood, paper, vegetable oils, animal fat, food, animal, and yard waste) as opposed to fossil fuels. BAAQMD is currently updating its CEQA Guidelines. Under the 2017 CEQA Guidelines, BAAQMD identified a tiered approach for assessing GHG emissions impacts of a project:

³⁹ Bay Area Air Quality Management Agency, 2017. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed November 21, 2019.

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1. **Consistency with a Qualified Greenhouse Gas Reduction Strategy.** If a project is within the jurisdiction of an agency that has a “qualified” GHG reduction strategy, the project can assess consistency of its GHG emissions impacts with the reduction strategy.
2. **BAAQMD Screening Level Sizes.** BAAQMD has adopted screening criteria for development projects, with a buildout year of 2020 and earlier, that would be applicable for a proposed project based on the square footage, units, acreage, students, and/or employees generated by a project. Typical projects that meet the screening criteria do not generate emissions greater than 1,100 MTCO₂e per year and would not generate significant GHG emissions.
3. **Brightline Screening Threshold.** BAAQMD adopted a brightline screening threshold for development projects of 1,100 MTCO₂e per year that would be applicable for projects with an opening year of 2020 and earlier. If a project exceeds the BAAQMD Guidelines’ GHG screening-level sizes or screening criteria of 1,100 MTCO₂e, the project would be required to conduct a full GHG analysis based on GHG reduction goals of AB 32 and SB 32.
4. **Efficiency Threshold.** AB 32 requires the statewide GHG emission to be reduced to 1990 levels by 2020. On a per-capita basis, that means reducing the annual emissions of 14 tons of carbon dioxide for every person in California down to about 10 tons per person by 2020.⁴⁰ Hence, BAAQMD’s per capita significance threshold is calculated based on the State’s land use sector emissions inventory prepared by CARB and the demographic forecasts for the 2008 Scoping Plan. The land use sector GHG emissions for 1990 were estimated by BAAQMD, as identified in Appendix D of the BAAQMD CEQA Guidelines, to be 295.53 MMTCO₂e and the 2020 California service population (SP) to be 64.3 million. Therefore, the threshold that would ensure consistency with the GHG reduction goals of AB 32 is estimated at 4.6 MTCO₂e per service population per year (MTCO₂e/SP/yr) for year 2020.⁴¹

For purposes of this analysis, because the District does not have a qualified GHG reduction plan, and the proposed project would have a post-year 2020 opening year (year 2022), an interpolated brightline threshold is utilized. Based on the adopted 1,100 MTCO₂e per year brightline screening threshold, and the GHG reduction target for year 2030 established under SB 32 (i.e., 40 percent 1990 levels by 2030), the interpolated brightline screening threshold of 660 MTCO₂e per year is utilized for the proposed project. If project emissions are below this brightline screening threshold, GHG emissions impacts would be considered less than significant.

4.7.4 METHODOLOGY

This GHG emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant greenhouse gas impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. The Air District has published the CEQA Air Quality Guidelines that provide local governments with guidance for analyzing and mitigating GHG emissions

⁴⁰ California Air Resources Board, 2008. Climate Change Proposed Scoping Plan, a Framework for Change. <https://ww3.arb.ca.gov/cc/scopingplan/document/psp.pdf>, accessed November 21, 2019.

⁴¹ Bay Area Air Quality Management Agency, 2017. California Environmental Quality Act Air Quality Guidelines. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed November 21, 2019.

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impacts, which was used in this analysis. The project GHG emissions inventory includes the following sectors:

- **On-Road Transportation.** Transportation emissions are based on the trip generation for school operations as well as stadium and theater operations and the average student trip length of 1.70 miles provided by Fehr and Peers (see Chapter 4.15 of this Draft EIR). The fleet mix in CalEEMod was adjusted to reflect a higher proportion of passenger vehicles used for student drop off and employee vehicles.
- **Area Sources.** Area sources generated from use of consumer products and cleaning supplies are based on California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25 default emission rates and on the assumed building square footages.
- **Energy.** GHG emissions from electricity use and energy use (natural gas used for cooking, heating, etc.) are based on the CalEEMod default energy usage for school land uses. In addition, stadium lighting was calculated manually and added to the energy-related emissions for school operations. New buildings are assumed to comply with the 2019 Building Energy Efficiency Standards, which are 30 percent more energy efficient for nonresidential buildings than 2016 Standards.⁴² The carbon intensity of electricity is based on the power mix for the East Bay Community Energy (EBCE) data and the most recent data from the USEPA's Emissions & Generation Resource Integrated Database (eGRID).⁴³
- **Solid Waste Disposal.** Indirect emissions from waste generation are based on CalRecycle solid waste generation rates in CalEEMod, based on the approximately 2,500-student capacity on the future school campus. Emissions calculated using CalEEMod include biogenic emissions generated from solid waste.
- **Water/Wastewater:** GHG emissions from this sector are associated with the embodied energy used to supply water, treat water, distribute water, and then treat wastewater and fugitive GHG emissions from wastewater treatment. Emissions are based on the CalEEMod default rates associated with the new student population for indoor and outdoor water use. In addition, water use from stadium operations was calculated manually and added to the indoor water use for the most conservative estimate for GHG emissions for school operations.
- **Construction.** The proposed project is anticipated to be constructed over an approximately 25-month period from August 2020 through August 2022. Construction would entail grading, off-site hauling of earthwork material, construction of the proposed structures and buildings, architectural coating, and asphalt paving on up to 23.46 acres of the currently vacant site. The construction activities are based on information provided by the District. Construction equipment mix is based on CalEEMod defaults, as are worker and vendor trips. Vendor trips have been adjusted to account for additional water truck trips and hauling trips have also been adjusted based on the soil hauling capacity. Construction emissions associated with the proposed project are amortized based on a 30-year building lifetime.⁴⁴

⁴² California Energy Commission (CEC). 2018. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

⁴³ East Bay Community Energy, 2019. Power Mix. <https://ebce.org/power-mix/>, accessed November 21, 2019.

⁴⁴ International Energy Agency, 2008. Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings. https://www.iea.org/publications/freepublications/publication/Building_Codes.pdf, accessed November 21, 2019.

GREENHOUSE GAS EMISSIONS

Life-cycle emissions are not included in this analysis because not enough information is available for the proposed project. Therefore, lifecycle GHG emissions would be speculative.⁴⁵ Additionally, black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the State's AB 32 inventory and treats this short-lived climate pollutant separately.⁴⁶

4.7.5 IMPACT DISCUSSION

GHG-1	The proposed project would generate greenhouse gas emissions, either directly or indirectly, that result in a significant impact on the environment.
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Development under the proposed project would contribute to global climate change through direct and indirect GHG emissions from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, waste generation, and other, off-road equipment (e.g., landscape equipment, construction activities). The following is a discussion of the project's contribution to GHG emissions during both the construction and operation phases.

Construction

The Air District does not have thresholds of significance for construction related GHG emissions, which are one-time, short-term emissions and therefore would not significantly contribute to the long-term cumulative GHG emissions impacts of the proposed project. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation.⁴⁷

⁴⁵ 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 (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction phases of individual development projects 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. (Governor's Office of Planning and Research, 2008. CEQA and Climate Change: Addressing Climate Change through CEQA Review. Technical Advisory. <http://opr.ca.gov/docs/june08-ceqa.pdf>, accessed on February 28, 2020.)

⁴⁶ 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. (California Air Resources Board, 2017a. Final Proposed Short-Lived Climate Pollutant Reduction Strategy. <https://www.arb.ca.gov/cc/shortlived/shortlived.htm>, accessed November 21, 2019.)

⁴⁷ International Energy Agency, 2008. Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings.

GREENHOUSE GAS EMISSIONS

As shown in Table 4.7-5, when evaluated over an average 30-year project lifetime, average annual construction emissions from the proposed project would represent a nominal source of GHG emissions and would not exceed the BAAQMD *de minimis* bright-line threshold of 660 MTCO₂e/year. Accordingly, construction GHG emissions from the proposed project would be *less than significant* and no mitigation measures are required.

Operation

Implementation of the proposed project would result in a new high school on the project site. From this new land use, the proposed project would generate 5,170 weekday vehicle trips during a typical non-event school day.

Furthermore, operation of the proposed project would result in new water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), energy usage (i.e., natural gas and electricity), and vehicle trips from operations pertaining to the school, stadium, and theater. The total and net increase of GHG emissions that are associated with the proposed project are shown in Table 4.7-5. As shown in this table, development of the proposed project would generate a total of 2,654 MTCO₂e per year, which would exceed the BAAQMD bright-line screening threshold of 660 MTCO₂e. Overall, it is anticipated that the proposed project would provide a closer high school option for some future students compared to attending the existing Dublin High School, which would likely contribute in reducing VMT on an areawide basis within the DUSD boundaries. However, for purposes of this analysis, because the proposed project would generate GHG emissions in exceedance of the BAAQMD bright-line screening threshold when compared to existing conditions at the project site, GHG emissions associated with the project are considered potentially significant.

TABLE 4.7-5 PROJECT GHG EMISSIONS INVENTORY

	GHG Emissions	
	MTCO ₂ e Per Year	Percent Proportion
Construction		
Total Construction Emissions ^a	2,914	NA
30-Year Amortized Construction	97	NA
BAAQMD Bright-Line Screening Threshold	660	NA
Exceeds Threshold?	No	NA
Operations		
Area Sources ^a	<1	<1%
Energy Use ^b	561	22%
Mobile Sources	1,769	66%
Waste Generation	292	11%
Water/Wastewater ^c	29	1%
Total	2,651	100%

GREENHOUSE GAS EMISSIONS

TABLE 4.7-5 PROJECT GHG EMISSIONS INVENTORY

	GHG Emissions	
	MTCO ₂ e Per Year	Percent Proportion
BAAQMD Bright-Line Screening Threshold	660	NA
Exceeds Threshold?	Yes	NA

Source: CalEEMod, Version 2016.3.2.25

Notes: Totals may not equal 100 percent due to rounding.

^a Modeling assumes building area 323,954 square feet. While the most recent site plans list a larger building area of 333,424 square feet, this change would not impact the significance finding for GHG emissions.

^b Energy -related emissions reflects annual emissions from stadium energy use calculated off model added to CalEEMod default annual energy emissions based on the number of students.

^c Water/wastewater-related emissions reflects annual emissions from stadium indoor water use calculated off model added to CalEEMod default annual emissions from indoor and outdoor water based on the number of students.

Significance without Mitigation: Potentially significant.

Impact GHG-1: Operation of the proposed project would generate a cumulatively considerable net increase in GHG emissions that would exceed the BAAQMD bright-line threshold.

Mitigation Measure GHG-1a: The Dublin Unified School District shall specify the installation of a photovoltaic system to offset as much electricity usage as feasible from operation of the high school.

Mitigation Measure GHG-1b: The Dublin Unified School District shall design the proposed school to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall be equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.1.2.

Mitigation Measure GHG-1c: The Dublin Unified School District shall design the proposed school to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.3.2.

Significance with Mitigation: Significant and Unavoidable. While Mitigation Measures GHG-1a through GHG-1c could contribute in minimizing energy sector and mobile-source GHG emissions, they would not reduce overall GHG emissions below the BAAQMD bright-line threshold.

GREENHOUSE GAS EMISSIONS

GHG -2	The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.
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The following discusses project consistency with applicable plans adopted for the purpose of reducing GHG emissions, which include CARB's Scoping Plan and MTC/ABAG's *Plan Bay Area 2040*.

CARB Scoping Plan

CARB's Climate Change Scoping Plan outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32 and SB 32. The Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Statewide strategies to reduce GHG emissions in the 2017 Climate Change Scoping Plan include: implementing SB 350, which expands the RPS to 50 percent by 2030 and doubles energy efficiency savings; expanding the Low Carbon Fuel Standards (LCFS) to 18 percent by 2030; implementing the Mobile Source Strategy to deploy zero-electric vehicle buses and trucks; implementing the Sustainable Freight Action Plan; implementing the Short-Lived Climate Pollutant Reduction Strategy, which reduces methane and hydrofluorocarbons to 40 percent below 2013 levels by 2030 and black carbon emissions to 50 percent below 2013 levels by 2030; continuing to implement SB 375; creating a post-2020 Cap-and-Trade Program; and developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

The project's GHG emissions, shown in Table 4.7-5 under the Impact GHG-1 discussion, include reductions associated with statewide strategies that have been adopted since AB 32 and SB 32. Statewide strategies to reduce GHG emissions include the low carbon fuel standards, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the CAFE standards, and other early action measures as necessary to ensure the State is on target to achieve the GHG emissions reduction goals of AB 32 and SB 32. In addition, new buildings are required to comply with the current Building Energy Efficiency Standards and CALGreen. Furthermore, the proposed school would comply with the waste diversion and recycling requirements under AB 341 and 1826. Overall, the proposed project would comply with these GHG emissions reduction measures since they are statewide strategies. The project's GHG emissions would be reduced due to compliance with statewide measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, impacts would be *less than significant*.

GREENHOUSE GAS EMISSIONS

Plan Bay Area

As discussed, as part of the implementing framework for *Plan Bay Area 2040*, local governments have identified PDAs to focus growth. The project is within the Dublin Town Center PDA.⁴⁸ While the proposed project would involve the construction of a new high school, it is an infill development that would serve the population surrounding the project site. Furthermore, based on the scope and nature of the project, while the construction and operation of a new high school would generate new trips to the project site, the project would not be a growth inducing project as it is intended to serve the local population. Thus, the project would be consistent with the overall goals of *Plan Bay Area 2040* in concentrating new development in locations where there is existing infrastructure. Therefore, the proposed project would not conflict with the land use concept plan in *Plan Bay Area 2040* and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.7.6 CUMULATIVE IMPACTS

GHG-3 The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to the emissions of greenhouse gases. Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact GHG-1 are not project-specific impacts to global warming, but the proposed project's contribution to this cumulative impact. As discussed under Impact GHG-1, implementation of the project would exceed BAAQMD's bright-line threshold even with mitigation incorporated. Therefore, project related GHG emissions and their contribution to global climate change would be cumulatively considerable, and GHG emissions impacts would be significant and unavoidable.

Significance without Mitigation: Significant and unavoidable.

Mitigation Measure GHG-3: Implement Mitigation Measures GHG-1a, 1b, and 1c.

Significance with Mitigation: Significant and unavoidable. While Mitigation Measures GHG-1a through GHG-1c could contribute in minimizing energy sector and mobile-source GHG emissions, they would not reduce overall GHG emissions below the BAAQMD bright-line threshold.

⁴⁸ Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. Plan Bay Area 2040 Plan. Priority Development Areas (Plan Bay Area 2040) ArcGIS. <https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=56ee3b41d6a242e5a5871b043ae84dc1>, accessed November 21, 2019.

HAZARDS & HAZARDOUS MATERIALS

4.8 HAZARDS AND HAZARDOUS MATERIALS

This subchapter describes the regulatory framework and existing conditions on the project site related to hazards and hazardous materials, and an evaluation of the potential environmental consequences of developing the proposed project regarding hazards and hazardous materials.

Hazardous materials may refer to hazardous substances, hazardous waste, or other materials exhibiting toxic, corrosive, flammable, and/or reactive properties, with the potential to cause harm to human or environmental health.

The analysis in this subchapter is based in part upon the following documents, referred to herein as the Phase I ESA, Phase II Investigation, PEA, PSHA, Caltrans Aeronautic Evaluation, and GEHA:

- *Phase I Environmental Site Assessment (ESA), Promenade Site*, completed by Terraphase Engineering Inc., in 2017.
- *Phase II Investigation Report, The New 2nd Comprehensive High School*, completed by Terraphase Engineering Inc., in 2019.
- *Preliminary Environmental Assessment (PEA) Report, The New 2nd Comprehensive High School*, completed by Terraphase Engineering Inc., in 2020.
- *Pipeline Safety Hazard Assessment (PSHA), Proposed Promenade School Site*, Prepared for DUSD by PlaceWorks, in 2018.
- *Aeronautic Evaluation, Department of Transportation (Caltrans), Division of Aeronautics, Promenade High School Site*, prepared for DUSD, by Caltrans, in 2018.
- *Geological and Environmental Hazards Assessment Report (GEHA), Proposed Promenade School Site*, Prepared for DUSD by PlaceWorks, in 2018.

Complete copies of the Phase I ESA, Phase II Investigation Report, PEA, Caltrans Aeronautic Evaluation, and PSHA are included in Appendix F, while the GEHA is included as part of Appendix E to this Draft EIR.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 REGULATORY FRAMEWORK

Federal Agencies and Regulations

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984. These laws provide for the “cradle to grave” regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The Department of Toxic Substances Control (DTSC) is responsible for

HAZARDS & HAZARDOUS MATERIALS

implementing the Resource Conservation and Recovery Act (RCRA) program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, the California Environmental Protection Agency (CalEPA) has in turn delegated enforcement authority to Alameda County for State law regulating hazardous waste producers or generators in Dublin. A CUPA is a local agency that has been certified by CalEPA to implement the local Unified Program, which protects Californians from hazardous waste and materials through ensuring consistency regarding the implementation of administrative requirements, inspections, permits, and enforcement at the local regulatory level, as well as ensuring consistency with the RCRA on a federal level. The CUPA can be a county, city, or joint powers authority. A participating agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A designated agency is a local agency that has not been certified by CalEPA to become a CUPA but is the responsible local agency that would implement the six Unified Programs until they are certified. The six Unified Programs are the Aboveground Petroleum Storage Act (APSA) Program, California Accidental Release Prevention (CalARP) Program, Hazardous Materials Business Plan (HMBP) Program, Hazardous Materials Management and Inventory Program, Hazardous Waste and Hazardous Waste Treatment Program, and the Underground Storage Tank (UST) Program. Currently, there are 81 CUPAs in California.¹

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act, was enacted in October 1986. This law requires any infrastructure at the State and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by U.S. Environmental Protection Agency's (USEPA) Office of Emergency Management. The USEPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, Superfund Amendments and Reauthorization Act Title III is implemented through the California Accidental Release Prevention program. The State of California has delegated local oversight authority of the California Accidental Release Prevention program to Alameda County.²

Hazardous Materials Transportation Act

The United States Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. The California State Fire Marshal's Office has oversight authority for hazardous materials liquid pipelines. The California Public

¹ California Environmental Protection Agency, 2020, Unified Program, available online at <https://calepa.ca.gov/cupa/about/>, accessed June 5, 2020.

² United States Environmental Protection Agency, 2020, The Superfund Amendments and Reauthorization Act (SARA), available online at <https://www.epa.gov/superfund/superfund-amendments-and-reauthorization-act-sara>, accessed June 5, 2020.

HAZARDS & HAZARDOUS MATERIALS

Utilities Commission has oversight authority for natural gas pipelines in California. These agencies also govern permitting for hazardous materials transportation.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: 1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated on October 2019.

Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 authorizes the federal government to aid in emergencies and disasters when State and local capabilities are exceeded. The Robert T. Stafford Disaster Relief and Emergency Assistance Act constitutes statutory authority for most federal disaster response activities, especially as they pertain to the federal Emergency Management Agency and its programs.

National Response Framework

The 2016 National Response Framework, published by the Department of Homeland Security, is a guide to how the nation responds to all types of disasters and emergencies. The Framework describes specific authorities and best practices for managing incidents that range from serious local to large-scale terrorist attacks or catastrophic natural disasters. In addition, the Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

Occupational Safety and Health Administration

The federal Occupational Safety and Health Act of 1970 authorizes each state (including California) to establish their own safety and health programs with the U.S. Department of Labor, Occupational Safety and Health Administration's (OSHA) approval. The California Department of Industrial Relations regulates implementation of worker health and safety in California. California OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices. California standards for workers dealing with hazardous materials are contained in Title 8 of the California Code of Regulations and include practices for all industries (General Industrial Safety Orders), and specific practices for construction and other industries. Workers at hazardous waste sites (or working with hazardous wastes as might be encountered during excavation of contaminated soil) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response regulations.

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OSHA Regulation 29 Code of Federal Regulations Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. Federal, State, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to demolition following all applicable regulations.

State Agencies and Regulations

California Environmental Protection Agency (CalEPA)

CalEPA is the California state level of the US EPA. It is responsible for the enforcement of EPA laws and regulations within the state to protect human and environmental health. Under the Cal EPA umbrella are the California Air Resources Board, State Water Resources Control Board, Regional Water Quality Control Boards, California Department of Resources Recycling and Recovery, Department of Toxic Substances Control, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation.

Department of Toxic Substances Control (DTSC)

The DTSC is the branch of CalEPA which oversees enforcement of hazardous waste laws, restoration of contaminated resources, and reduction of hazardous waste generation, largely under the authority of RCRA and the California Health and Safety Code. Requirements include written programs and response plans, such as Hazardous Materials Business Plans (HMBP). Pursuant to Education Code 17213 and 17213.1, the governing board of a school district may not approve a project involving the acquisition of a school site by a school district if the school is to be built on a site of a current or former hazardous waste disposal site or solid waste disposal site in which the wastes have not been removed, on a current list for hazardous substance release sites identified by the Department of Toxic Substances Control, or on a site that contains one or more pipelines which carries any hazardous substances unless it is a natural gas pipeline for the school or surrounding neighborhood.³

California Division of Occupational Safety and Health (CalOSHA)

Like OSHA at the federal level, CalOSHA is the responsible State-level agency for ensuring workplace health and safety. CalOSHA assumes primary responsibility within California for the adoption and enforcement of standards regarding workplace safety and safety practices.

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The 2019 CBC is based on the 2018 International Building Code (IBC), but has been modified for California conditions. It is updated every three years; most recently it was updated in July 2019 with an effective date of January 1, 2020. The CBC, as adopted by local cities or counties, may be further modified based on local

³ California Legislative Information, 2008, Education Code, available online at https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=EDC§ionNum=17213, accessed June 5, 2020.

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conditions. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

Field Act

Under the Field Act, the Department of General Services (DGS) is required to supervise the design and construction of any school buildings or the reconstruction or alteration of or additional to any school building to ensure that the plans and specifications are in compliance with adopted rules, regulations, and building standards and to ensure that construction work is performed in accordance with the approved plans and specifications for the protection of life and property.⁴ Within the DGS, the Division of the State Architect (DSA) is responsible for design and construction oversight for K-12 schools to ensure application of the CBC, pursuant to the Field Act. Additionally, the DSA promotes compliance with all relevant structural, accessibility, and fire and life safety codes.⁵

California Fire Code

The California Fire Code (CFC) is located in Part 9 of Title 24 of the CCR. It is updated every three years, most recently in 2019 with an effective date of January 1, 2020. The 2019 CFC is based on the 2018 International Fire Code (IFC) but has been modified for California conditions. The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

California Governor's Office of Emergency Services (CalOES)

The Governor's Office established the California Emergency Management Agency (CalEMA), created by California Assembly Bill 38, on January 1, 2009, which merged the duties, powers, purposes, and responsibilities of the former Governor's Office of Emergency Services with those of the Governor's Office of Homeland Security. CalEMA was responsible for the coordination of overall State agency response to major disasters in support of local government, for assuring the State's readiness to respond to and recover from all hazards – natural, manmade, emergencies, and disasters – and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts. On July 1, 2013, Governor Edmund G. Brown Jr.'s Reorganization Plan #2 eliminated CalEMA and restored it to the Governor's Office as CalOES, merging it with the Office of Public Safety Communications.

⁴ California Legislative Information, 2017, AB-1545 School facilities: Field Act, available online at https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1545, accessed May 19, 2020.

⁵ Department of General Services, 2018, Division of the State Architect, available online at <https://www.dgs.ca.gov/DSA/About>, accessed May 18, 2020.

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California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE has mapped fire threat potential throughout California. Fire threat is ranked based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threat. CAL FIRE produced the 2018 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California's natural and built environments.

California Department of Transportation (Caltrans) and California Highway Patrol (CHP)

Primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies lies with Caltrans and the CHP. Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on those highway and freeway lanes and intercity rail services.

The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit. The CHP also provides detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the State.

Division of the State Architect (DSA)

The DSA is in the Department of General Services and is headed by the governor-appointed State Architect. The DSA reviews seismic, fire and life safety, and accessibility of school construction and modernization projects. DSA approval is required for all school projects regardless of funding status.

Title 5 of the California Code of Regulations

The California Code of Regulations (CCR) include Title 5 related to school facilities construction. Section 14010 specifies standards for school site selection which provide safety and support learning. These standards include provisions and requirements for sufficient acreage dependent upon enrollment, prescribed distances from power lines, a safety study for sites within 1,500 feet of a railroad track easement, and a noise analysis if adjacent to a road or freeway. Additionally, the site must not be located on an earthquake fault, on a site at risk of flooding, nearby an above-ground storage tank, or a site subject to moderate to high liquefaction or landslides. Compliance with Title 5 also includes building the school on a site with a specified shape, with sufficient road access, with safe student crossing, with zoning compatible to local uses, within walking distance for students, allowing joint use of public facilities, convenient to public services, which considers environmental factors, without impediment from

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easements, which considers all costs and complications, and not within 2,000 feet of a hazardous waste disposal site.⁶

Pursuant to Section 14010(h) of Title 5 of the CCR, in order to demonstrate that the proposed school site is not located near an aboveground water or fuel storage tank or within 1,500 feet of the easement of an aboveground or underground pipeline that can pose a safety hazard, a Geological Hazards Report and a Pipeline Survey must be submitted to the School Facilities and Transportation Services Division (SFTSD) as part of a site approval request. Additionally, Education Code Section 17213(a) requires school districts to determine that the proposed school site does not contain pipelines which carry hazardous substances, acutely hazardous materials, or hazardous wastes unless the pipeline is a natural gas line used to supply gas that school or neighborhood.⁷

The District held a regular meeting of the governing board on September 25, 2018 to adopt Resolution No. 2018/19-08 which found that the project site conforms to the California Department of Education school site selection standards under Title 5.⁸

Regional Agencies and Regulations

San Francisco Bay Regional Water Quality Control Board

The Porter-Cologne Water Quality Act established the State Water Resources Control Board (SWRCB) and divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The San Francisco Bay Region (Region 2) is the RWQCB which regulates water quality in the vicinity of the project and project site itself. The San Francisco Bay RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation actions, if necessary.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution in the project site vicinity from sources other than motor vehicles and consumer products (which are the responsibility of CalEPA and the California Air Resources Board). BAAQMD is responsible for preparing attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and the issuance of permits for activities including demolition and renovation activities affecting asbestos containing materials (District Regulation 11, Rule 2) and lead (District Regulation 11, Rule 1).

⁶ California Department of Education, 2020, Title 5 – California Code of Regulations, available online at <https://www.cde.ca.gov/ls/fa/sf/title5regs.asp>, accessed June 6, 2020.

⁷ California Department of Education, 2020, Hazardous Pipeline Assessments, available online at <https://www.cde.ca.gov/ls/fa/sf/pipelineassess.asp>, accessed June 6, 2020.

⁸ Dublin Unified School District, 2018, Special Meeting of the Governing Board of Dublin Unified School District – July 17, 2018, 5:30 P.M., available online at <https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/1/Summary%20of%20Title%205%20Findings%20-%20Promenade%20Site.pdf>, accessed June 6, 2020.

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Tri-Valley Hazard Mitigation Plan

The City of Dublin, along with neighboring Cities of Livermore and Pleasanton, the Livermore-Pleasanton Fire Department, Dublin San Ramon Services District, and the Lawrence Livermore National Laboratory, adopted the Tri-Valley Local Hazard Mitigation Plan in 2018 as a uniform strategy for the Tri-Valley area in addressing a range of hazards such as earthquakes, floods, and wildland fires.

Alameda County Department of Environmental Health (ACDEH)

The ACDEH operates programs including but not limited to clean water, food safety, hazardous materials and waste, land use, solid waste, and vector control to protect the public within the county. The ACDEH is the Certified Unified Program Agency coordinating and enforcing local, state, and federal regulations pertaining to hazardous materials management and environmental protection.

Alameda County Fire Department

Fire protection services for the City of Dublin are provided under contract with the Alameda County Fire Department (ACFD). The ACFD provides fire suppression, first responder/paramedic, and hazardous materials response services, and includes specialized response teams including the Hazardous Materials Unit.

Local Regulations

City of Dublin General Plan

Goals and Policies

The City of Dublin's General Plan contains the goals and policies found within Table 4.8-1 related to hazards and hazardous materials.⁹

TABLE 4.8-1 CITY OF DUBLIN GENERAL PLAN POLICIES

Policy Number	Goal/Policy/Strategy Text
Policy 8.3.4.A.1	Maintain and enhance the ability to regulate the use, transport, and storage of hazardous materials and to quickly identify substances and take appropriate action during emergencies.
Policy 8.3.4.A.2	Minimize the risk of exposure to hazardous materials from contaminated sites.
Policy 8.3.4.B.4	Require site-specific hazardous materials studies for new development projects where there is a potential for the presence of hazardous materials from previous uses on the site. If hazardous materials are found, require the clean-up of sites to acceptable regulatory standards prior to development.
Policy 8.4.1.A.1	All proposed land uses within the Airport Influence Area (AIA) shall be reviewed for consistency with the safety compatibility policies and airspace protection policies of the Airport Land Use Compatibility Plan (ALUCP) for the Livermore Municipal Airport.

⁹ City of Dublin, 2016. General Plan, Community Development Department.
<https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>, accessed October 18, 2019.

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The Visual Resources Element of The Eastern Dublin Specific Plan (EDSP) contains the goals and policies with Table 4.8-2 related to visual and aesthetic resources.¹⁰

TABLE 4.8-2 SELECT EASTERN DUBLIN SPECIFIC PLAN GOALS AND POLICIES

Goal/Policy Number	Goal/Policy/Strategy Text
Policy 11-1	Prior to issuance of building permits for site-specific Phase I (and if necessary Phase II) environmental site assessments shall be made available to the Community Development Director, with appropriate documentation that all recommended remediation actions have been completed.

Municipal Code of Dublin

The Municipal Code of Dublin includes general ordinances of the City of Dublin, which includes its Environmental Programs Division. The Dublin Municipal Code contains directions pertaining to hazardous materials and management of hazardous waste consistent with Article 8.7 of the California Health and Safety Code, and applicable portions of the Alameda County Hazardous Waste Management Plan and the City of Dublin General Plan.¹¹

4.8.1.2 EXISTING CONDITIONS

The following sections describe existing conditions related to hazardous materials, airport hazards, and wildland fires within the project site.

Hazardous Materials Sites

A review of environmental databases was conducted through the DTSC's database of hazardous waste facilities, EnviroStor¹², as well as the California State Water Resources Control Board's database of cleanup sites that impact or have a potential to impact water quality, GeoTracker¹³, on June 7, 2020. Databases searched included lists of Leaking Underground Storage Tank cleanup sites, cleanup program sites, land disposal sites, military sites, Waste Discharge Requirement sites, Irrigated Lands Regulatory Program sites, and Permitted Underground Storage Tank facilities. According to these databases there are no hazardous materials sites within 0.25 miles of the project site. The project site itself is classified as "Cleanup Status: Active as of 11/8/2019", however this designation does not meet the criteria of being an active hazardous

¹⁰ City of Dublin, 2016. Eastern Dublin Specific Plan. <https://dublin.ca.gov/DocumentCenter/View/7776/EDSP-2016-Update-Full-PDF?bidId=>, accessed October 18, 2019.

¹¹ City of Dublin, 2020, Chapter 8.60 – Hazardous Waste Facilities Location Procedure, available online at <https://www.codepublishing.com/CA/Dublin/#!/html/Dublin08/Dublin0860.html>, accessed April 8, 2020.

¹² Department of Toxic Substances Control - EnviroStor, 2020, Search Results, available online at <https://www.envirostor.dtsc.ca.gov/public/>, accessed June 7, 2020.

¹³ State Water Resources Control Board, 2020, GeoTracker, available online at <https://geotracker.waterboards.ca.gov/>, accessed June 7, 2020.

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waste site as outlined in Title 5, Section 17213 of the California Education Code, and Section 21151.8 of the California Public Resources Code which prohibit construction of a school upon a current or former hazardous waste disposal site or solid waste disposal site. This designation is due to 600 cubic yards of soil imported to the southeast corner of the project site from the Dublin High School site. As explained further below, the PEA prepared for the project site includes a review of historic information and concluded that the project soil poses no significant risk to human health or the environment. Additionally, as reiterated in HAZ-2, during a scoping meeting held with the District on March 16, 2020, DTSC concurred that sampling conducted at the project site was considered satisfactory, and that no further environmental sampling is required at the site. Therefore, the PEA recommended that DTSC issue a “No Further Action” determination which deems that no further soils testing is recommended for the project site. It is expected that the DTSC will concur with and approve of the findings within the PEA, and subsequently the District will abide by the recommendations and conclusions outlined in the approved PEA.¹⁴

Recognized Environmental Concerns

A recognized environmental condition (REC) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The Phase I ESA identified two RECs:

- The property has been historically undeveloped land, and although predominantly used as grazing land, there is potential for agricultural chemicals to be present in shallow soil at the Site.
- Fill material was imported to the property from undocumented sources prior to construction activities in 2005. Prior soil sampling of the fill is insufficient to characterize the material for residential/school use.

A controlled recognized environmental condition (CREC) refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The Phase I ESA did not identify any CREC.

A historical recognized environmental condition (HREC) refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The Phase I ESA did not identify any HREC.

The Phase II Investigation was conducted to address the RECs identified in the Phase I ESA. During the investigation soil borings and collection of soil samples for analysis of the contaminants of potential concern (COPCs) was undertaken. COPCs for which the analysis covered include organochlorine pesticides (OCPs), lead, arsenic, heavy metals, polychlorinated biphenyl (PCBs), total petroleum hydrocarbons (TPH),

¹⁴ Department of Toxic Substances Control, 2020, EnviroStor - Promenade Site, available online at, https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60002903, accessed June 7, 2020.

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semivolatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and asbestos. The soil samples were compared with applicable residential screening levels for the project site. Additionally, the potential threat to public health and/or the environment posed by known hazardous constituents at the site was assessed. Based on the data collected, the native soils at the project site do not contain COPCs at concentrations exceeding risk based on screening criteria. Furthermore, OCPs were not detected above screening criteria, and arsenic concentrations were consistent with background concentrations for soils within the Bay Area. This suggests that previous agricultural activities at the site did not alter site soils. Additionally, the human health screening analysis found that site soils would not pose an unacceptable risk to human health, especially given the lower exposure time frame assumptions used in the residential exposure evaluation consisting of 24 hours per day; 350 days per year; for 26 years. The Phase II investigation concluded that no further action is recommended for the project site.¹⁵

The project PEA, which was submitted to the DTSC on May 7, 2020, includes information about an approximately 600 cubic yards of soil imported from the nearby Dublin High School site in February 2020. The soil was excavated from the footprint of the former auto/wood shop called Building EE, located at the nearby Dublin High School site and placed on the southeastern corner of the project site. Building EE was given unrestricted clearance from DTSC after review of a PEA and subsequent addenda were prepared for that site. The building was demolished in 2017, but was included in several assessments historically completed at the Dublin High School site under the oversight of DTSC including a Phase I ESA, a PEA, and Supplemental Site Investigation (SSI), which were completed for Dublin High School from 2006 to 2008, and a Phase I ESA Addendum which was completed in 2017 for the construction of the new science and engineering building with a focus on Building EE. Based on a review of past information compiled for Building EE, DTSC concluded that soil sampling was not warranted for the imported soil when it was located at the Dublin High School site. The PEA, based on a review of those files, as well as by DTSC's recommendation, did not include additional samples of the stockpiled soil. Additionally, in a scoping meeting held with Terraphase on March 16, 2020, DTSC concurred that Terraphase's Phase II investigation was considered satisfactory, and that no further environmental sampling is required at the project site.

School Locations

One other school, Kolb Elementary School, is located within approximately 0.25 miles of the project site.

Airport Hazards

Per State Education Code Section 17215, before acquiring or leasing property for a new school located within two miles of an airport runway, the school district must notify the Department of Education, which in turn notifies Caltrans. The Caltrans Aeronautics Program, Office of Airports is required to evaluate the suitability of these sites for proposed schools. The project site is located approximately 1.8 miles northwest of the Livermore Municipal Airport. It is within the Airport Influence Area (AIA), for which Livermore Municipal Airport Land Use Compatibility Plan policies apply.¹⁶ The California Department of

¹⁵ Terraphase Engineering, Inc., 2019, Phase II Investigation Report for the New 2nd Comprehensive High School.

¹⁶ Livermore Municipal Airport Land Use Compatibility Plan, August 2012,

https://www.acgov.org/cda/planning/generalplans/documents/LVK_ALUCP_082012_FULL.pdf, accessed October 21, 2019

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Education (CDE) performed an initial school site evaluation that recommended a Caltrans Airport Assessment. Based on the response from the Caltrans Division of Aeronautics, the school site is located outside of all California Code of Regulations Safety Zones, but within the Airport Influence Area of Livermore Municipal Airport in the Alameda County Airport Land Use Compatibility (ALUC) Plan. Caltrans identified that the Alameda County ALUC Plan recommends that an aviation easement for the site restricting the heights of structures or trees be dedicated to the City of Livermore. Additionally, Caltrans indicates that occasional noise from individual aircraft may potentially impact the site based on its location in relation to flight patterns from Livermore Municipal Airport, but that noise levels could be reduced in the buildings through acoustical design standards. A copy of the response from Caltrans is included as an attachment to the GEHA found in Appendix F.^{17,18}

Wildland Fire Hazard

CAL FIRE evaluates fire hazard severity risks according to areas of responsibility (i.e., federal, State, and local). The nearest identified risk areas to the project location are moderate fire hazard severity zones in the Alameda County State responsibility area (SRA) approximately 2 miles to the northeast. According to CAL FIRE, the project site is not located in a Fire Hazard Severity Zone in the State Responsibility Area, nor in a Very High Fire Hazard Severity Zone in the Local Responsibility Area¹⁹.

4.8.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant hazards and hazardous materials impacts if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous materials, substances or waste within ¼-mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.

¹⁷ Alameda County, 2012, Livermore Municipal Airport Land Use Compatibility Plan, available online at http://www.acgov.org/cda/planning/generalplans/documents/LVK_Ch3_Livermore_Municipal_Airport_Policies.pdf, accessed April 6, 2020.

¹⁸ Caltrans, August 22, 2018, Division of Aeronautics proposed Promenade High School Site Memo.

¹⁹ Alameda County Fire Hazard Severity Zones in SRA, Adopted by CAL FIRE on November 7, 2007, https://osfm.fire.ca.gov/media/7271/fhszs_map1.pdf; and Alameda County Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE, September 03, 2008, https://osfm.fire.ca.gov/media/6638/fhszl_map1.pdf

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6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
8. Result in cumulative impacts with respect to hazards and hazardous materials.

4.8.3 IMPACT DISCUSSION

HAZ-1	The project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.
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Construction activities for the proposed project would include the use of materials such as fuels, lubricants, and greases in construction equipment and coatings used in construction. However, the materials would be commonplace to construction and would not be used in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would be temporary for the duration of construction.

The District recognizes that operation of the proposed project may involve the routine transport, use, or disposal of potentially hazardous materials during the daily operations of the school. During the operational phase, common cleaning substances, building maintenance products, and similar items would be stored and used on-site. Potentially hazardous substances such as these would not occur in sufficient quantities to pose a significant hazard to human and environmental health. As stated in the District's Board Policies (BP) and Administrative Regulations (AR), 3514.1., the Superintendent or designee shall ensure that any potentially hazardous substances are inventoried, stored, used, and regularly disposed of in a safe and legal manner. Additionally, the District shall implement a Hazard Communication Program for the school to monitor a written hazard communication program in accordance with state law through which employees would be fully informed about the properties and potential hazards of substances from exposure and that material data sheets are readily accessible.

Therefore, the proposed project would have a *less than significant* impact to the public or the environment from the routine transport, use, or disposal of hazardous materials.²⁰

Significance Without Mitigation: Less than significant.

²⁰ GAMUT Online, 2007, Dublin USD, available online at <http://www.gamutonline.net/district/dublin/PolicyCategoryList/2340/3>, accessed June 7, 2020.

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HAZ-2	The project could 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.
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A Pipeline Safety Hazard Assessment (PSHA) was prepared for the Dublin Unified School District to meet the requirements of CCR Title 5 Sections 14010 (d) and (h) and CDE's policy on pipelines. The PSHA assessed one 16-inch natural gas transmission pipeline, as well as several high-volume water pipelines, all of which are located within 1,500 feet of the project site. For the 16-inch natural gas transmission pipeline, a screening analysis was conducted to determine the hazard footprint in case of an accidental rupture or release of natural gas from the pipe. The results indicate that the hazard footprints for this pipeline do not extend farther than 897 feet and would not reach the school site, which is approximately 1,460 feet from the pipeline. Therefore, in accordance with CDE procedures, the risk from the release of natural gas due to pipeline rupture is considered to be less than significant and no further evaluation is required.²¹

According to the Bay Area Air Quality Management District (BAAQMD), there are two permitted facilities within a one-quarter mile of the site: Lowe's on Grafton Street about 744 feet southwest of the project site, and the Terraces Homeowners Association at 3448 Finnian Way about 879 feet east of the project site. Each have a permit for an emergency generator. Based on an Operational Health Risk Assessment prepared for the site and a comparison of hazardous air emissions from the nearby stationary sources to carcinogenic and non-carcinogenic thresholds established by BAAQMD and OEHHA, the nearby stationary sources are not anticipated to pose an actual or potential endangerment to occupants of the proposed structures, and no mitigation measures are required.²²

As stated under the impact discussion HAZ-1, the District recognizes that operation of the proposed project may involve the routine transport, use, or disposal of potentially hazardous materials during the daily operations of the school. However, compliance with BP- AR 3514.1 would ensure that the District handles potentially hazardous materials in an appropriate manner.²³

The project site has been historically undeveloped land and predominantly used for grazing. In addition, fill material was imported to the property from undocumented sources prior to intended construction activities in 2005, according to the Phase I ESA, Phase II Investigation, and project PEA. As described in the Existing Conditions section of this Chapter, the Phase II Investigation found that the native soils at the project site do not contain COPCs at concentrations exceeding risk-based screening criteria for residential land use which would pose an unacceptable risk to human health. Furthermore, OCPs were not detected above screening criteria, and arsenic concentrations were consistent with background concentrations for soils within the Bay Area. As described previously, although the project site is included on the GeoTracker

²¹ Pipeline Safety Hazard Assessment (PSHA), 2018, Proposed Promenade School Site, Prepared for DUSD by PlaceWorks.

²² Geological and Environmental Hazards Assessment Report (GEHA), 2018, Proposed Promenade School Site, Prepared for DUSD by PlaceWorks (Appendix E).

²³ GAMUT Online, 2007, Dublin USD, available online at <http://www.gamutonline.net/district/dublin/PolicyCategoryList/2340/3>, accessed June 7, 2020.

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and EnviroStor database list classified as “Cleanup Status: Active as of 11/8/2019”, this designation does not meet the criteria of being an active hazardous waste site as outlined in Title 5, Section 17213 of the California Education Code, and Section 21151.8 of the California Public Resources Code, and the PEA includes a review of historic information and concluded that the soil poses no significant risk to human health or the environment.²⁴ Additionally, as described in Section 4.8.1.2, Existing Conditions, during a scoping meeting held with the District on March 16, 2020, DTSC concurred that sampling conducted under the Phase II investigation was considered satisfactory, and that no further environmental sampling is required at the site. Therefore, the PEA recommended that DTSC issue a “No Further Action” determination which deems that no further soils testing is recommended for the project site. It is expected that the DTSC will concur with and approve of the findings within the PEA, and subsequently the District will abide by the recommendations and conclusions outlined in the approved PEA. Because the PEA is still in the approval process, this would be considered a *potentially significant* impact, pending approval.

Pursuant to Public Resources Code Section 21151.8(a)²⁵ and 14 CCR 15186(c)²⁶, the Phase I ESA reviewed the National Pipeline Mapping System (NMPS) for gas transmission pipelines and hazardous liquid trunk lines on or close to the project site. It was found that a PG&E natural gas transmission pipeline is located 0.3 mile south of the project site and no other pipelines carrying hazardous substances are located nearby or on the project site. No spills or incidents were reported by the NMPS. Additionally, as described above, soil tests conducted during the Phase II indicated that there were no hazardous substance releases on the project site and, according to the Phase I ESA, all nearby listed sites are not considered a REC or environmental concern for the project site. Therefore, there would be a *less than significant* impact from the release of hazardous materials into the environment from pipelines nearby the proposed project.

Significance without Mitigation: Potentially significant.

Impact HAZ-2: The proposed project PEA is subject to the findings and recommendations pending DTSC approval.

Mitigation Measure HAZ-2: The proposed project shall implement recommendations outlined in the approved project PEA.

Significance With Mitigation: Less than Significant.

²⁴ Department of Toxic Substances Control, 2020, EnviroStor - Promenade Site, available online at, https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60002903, accessed June 7, 2020.

²⁵ California Legislative Information, 2009, Public Resources Code – PRC Division 13, Environmental Quality [21000 – 21189.57], available online at https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC§ionNum=21151.8., accessed June 8, 2020.

²⁶ GAMUT Online, 2005, Chapter 3. Guidelines for Implementation of the California Environmental Quality Act Article 12. Special Situations School Facilities, available online at <http://www.gamutonline.net/district/alhambra/displayPolicy/370309/2>, accessed June 8, 2020.

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HAZ-3	The project would not emit hazardous emissions or handle hazardous materials, substances or waste within ¼-mile of an existing or proposed school.
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The proposed project is a school and is located within approximately ¼-mile of an existing school, Kolb Elementary School. Operation of the proposed project would not emit hazardous emissions or handle hazardous substances or waste which would pose a significant hazard to nearby schools.

As stated under the impact discussion HAZ-1, the District recognizes that operation of the proposed project may involve the routine transport, use, or disposal of potentially hazardous materials during the daily operations of the school. However, compliance with BP- AR 3514.1 would ensure that the District handles potentially hazardous materials in an appropriate manner.²⁷

Therefore, this impact would be *less than significant*.

Significance Without Mitigation: Less than significant.

HAZ-4	The project would not be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
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Section 17213 of the California Education Code and Section 21151.8 of the California Public Resources Code prohibit construction of a new school on a current or former hazardous waste disposal site or solid waste disposal site. Government Code Section 65962.5 specifies lists of the following types of hazardous materials sites: hazardous waste facilities; hazardous waste discharges for which the State Water Resources Control Board has issued certain types of orders; public drinking water wells containing detectable levels of organic contaminants; underground storage tanks with reported unauthorized releases; and solid waste disposal facilities from which hazardous waste has migrated.

A review of environmental databases was conducted through EnviroStor and GeoTacker, operated by DTSC and the State Water Resources Control Board, respectively.^{28,29} Databases searched included lists of Leaking Underground Storage Tank cleanup sites, cleanup program sites, land disposal sites, military sites, Waste Discharge Requirement sites, Irrigated Lands Regulatory Program sites, and Permitted Underground Storage Tank facilities. The proposed project site is not in proximity of or located on any hazardous materials sites according to these databases.

²⁷ GAMUT Online, 2007, Dublin USD, available online at <http://www.gamutonline.net/district/dublin/PolicyCategoryList/2340/3>, accessed June 7, 2020.

²⁸ Department of Toxic Substances Control, 2019 EnviroStor, available online at <https://www.envirostor.dtsc.ca.gov/public/>, accessed October 17, 2019

²⁹ State Water Resources Control Board, 2019, GeoTracker, available online at <https://geotracker.waterboards.ca.gov/>, accessed October 17, 2019

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Furthermore, the Terraphase Phase I ESA conducted in 2017, included a search of standard federal, State, County, and City environmental records. The records found no properties surrounding the site that could represent a significant environmental concern. No CRECs or HRECs were identified on the project site. The more recent Phase II Investigation identified and assessed two RECs and found that previous agricultural activities at the site did not alter site soils and concluded that no further soils testing is recommended for the project site.

As described previously, the project site is included on the GeoTracker and EnviroStor database list as “Cleanup Status: Active as of 11/8/2019”, however, this designation does not meet the criteria of being an active hazardous waste site as outlined in Title 5, Section 17213 of the California Education Code, Government Code Section 65962.5, and Section 21151.8 of the California Public Resources Code.³⁰ The PEA includes a review of historic information and concluded that the soil poses no significant risk to human health or the environment. Additionally, as reiterated in HAZ-2, during a scoping meeting held with the District on March 16, 2020, DTSC concurred that sampling conducted under the Phase II investigation was considered satisfactory, and that no further environmental sampling is required at the site. Therefore, the PEA recommended that DTSC issue a “No Further Action” determination which deems that no further soils testing is recommended for the project site. It is expected that the DTSC will concur with and approve of the findings within the PEA, and subsequently the District will abide by the recommendations and conclusions outlined in the approved PEA. Because the PEA is still in the approval process, this would be considered a *potentially significant* impact, pending approval.

Significance without Mitigation: Potentially significant.

Impact HAZ-4: The proposed project PEA is subject to the findings and recommendations pending DTSC approval.

Mitigation Measure HAZ-4: Implementation of Mitigation Measure HAZ-2.

Significance With Mitigation: Less than Significant.

HAZ-5	The project would not, for a project located within an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.
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The proposed project location is within two miles of Livermore Municipal Airport, a General Aviation Reliever Airport that serves to relieve the three most congested Bay Area air carrier airports, namely, San Francisco, Oakland, and San Jose. The proposed school site is located outside of all California Code of Regulations runway criteria Safety Zones. However, according to the ALUCP, the proposed school site falls inside Safety Zone 7, identified as Other Airport Environs outside of Zones 1 – 6, but within the Airport Influence Area (AIA). There are seven Safety Zones, which are identified based on runway length and flight

³⁰ Department of Toxic Substances Control, 2020, EnviroStor - Promenade Site, available online at, https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60002903, accessed June 7, 2020.

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patterns. The zones are a function of risk acceptability through which certain land uses such as schools and hospitals within a designated proximity to the airport are deemed to represent unacceptable risks and must be prohibited. Where risks are significant but tolerable, restrictions may be established to reduce the risk to an acceptable level. Where there are no known risks, uses require no limitations. For Safety Zone 7, the zone with the lowest risk rating, the ALUCP guidance states that an aviation easement, restricting the heights of structures or trees, should be dedicated to the City of Livermore as a condition for any discretionary local approval for any property within the AIA. Furthermore, according to the Federal Aviation Regulations (FAR), Part 77, any construction or alteration of more than 200 feet in height above the ground level at its site would require notice to the local Federal Aviation Authority (FAA) manager. The proposed project would not include buildings exceeding 52 feet above ground level and the lighting structures for the stadium would be no higher than 100 feet above ground level. These heights are far below the 200 feet prescribed by the FAR.

Additionally, ALUCP has a list of potential flight hazards associated with land uses which should be avoided in the AIA, unless the land uses are consistent with FAA rules, regulations, and guidelines. Specific characteristics to be avoided are: glare or distracting lights that could be mistaken for airport lights, sources of dust, heat, steam, smoke that may impair pilot vision, sources of steam or other emissions that may cause thermal plumes that generate turbulence within the flight paths, sources of electrical interference with aircraft communication or navigation, and features that create an increased attraction for wildlife, such as certain recreational or agricultural uses that attract large flocks of birds.³¹ The proposed project does not include any of the ALUCP flight hazard characteristics within its scope. Although the stadium and tennis court lights may create glare that previously did not occur on the project site, these lights could not be mistaken for airport lights because they are designed to point downwards in a rectangular orientation and do not conform with characteristic airport lighting.³²

Airport management provided written comments and concerns about the proposed school site, stating that: “The proposed school site is approximately two miles from the Airport and close to the extended centerline for Runway 25R/7L. This, and the school’s location under the Airport traffic pattern, may result in regular aircraft overflights at relatively low altitude. Some staff members and students may find the noise generated by the aircraft to be objectionable.”

Caltrans conducted a flight inspection of the proposed school site on August 8, 2018, and prepared a memo with their results included within this EIR as an attachment to Appendix F. The flight evaluation revealed that there will be periodic over-flights from aircrafts departing from and arriving at the Airport from the northwest at an altitude of approximately 1,000 to 1,500 feet above ground level. Inspection of the Airport traffic pattern found that the proposed school may be exposed to individual aircraft noise events that could reach a level that could be disruptive. Although the school is outside the 55 decibel Community Noise Equivalent Level aircraft noise contour, the potential exists for persons at the site to be

³¹ Alameda County, 2012, Livermore Municipal Airport Land Use Compatibility Plan, available online at http://www.acgov.org/cda/planning/generalplans/documents/LVK_Ch3_Livermore_Municipal_Airport_Policies.pdf, accessed April 6, 2020.

³² Federal Aviation Administration, 2016, Pilot’s Handbook of Aeronautical Knowledge, Chapter 14 – Airport Operations, available online at https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/16_phak_ch14.pdf, accessed April 8, 2020.

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annoyed by individual aircraft noise events. Therefore, Caltrans recommended that buildings be constructed with air conditioning, so that windows and doors can remain closed, and that the school utilize acoustical treatment in the design and construction of any buildings for use by students, faculty, or administrators to reduce individual irritation from aircraft noise or disruption to instruction.

Caltrans concluded that it had no objections to the proposed school site. However, Caltrans recommended that the aforementioned potential flight hazards should be avoided and an aviation easement restricting the heights of structures should be dedicated to the City of Livermore.³³

Significance without Mitigation: Significant.

Impact HAZ-5: The proposed school site falls inside Safety Zone 7, identified as the Airport Influence Area (AIA) which, although at a low risk from proximity to the airport, requires discretionary approval.

Mitigation Measure HAZ-5: The ALUCP guidance states that an aviation easement, restricting the heights of structures or trees, should be dedicated to the City of Livermore as a condition for any discretionary local approval for any property within the AIA. The aviation easement shall:

- Identify the potential hazard associated with the proposed project and its location within protected airspace;
- Identify the airport owner's right to clear or maintain the airspace from potential hazards;
- Identify the right to mark potential obstructions and notify aviators of such hazards of such hazards; and
- Provide the right to pass within the identified airspace.

Significance with Mitigation: Less than significant.

HAZ-6	The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
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The proposed project would be required to comply with the 2019 CFC and 2019 CBC, which ensure that building and life safety measures are incorporated and would facilitate implementation of emergency response plans. In addition, the City of Dublin adopted the Tri-Valley Local Hazard Mitigation Plan in 2018 as a uniform strategy for the Tri-Valley area in addressing a range of hazards such as earthquakes, floods, and wildland fires in an effort to reduce risks from natural disasters that complies with federal requirements for hazard mitigation planning.³⁴ The plan outlines the potential hazards that may impact the Tri-Valley area and describes how the area will prepare for emergencies and disasters. Although the District is not bound by any requirements of the Tri-Valley Local Hazard Mitigation Plan, it is available as a

³³ Caltrans, August 22, 2018, Division of Aeronautics proposed Promenade High School Site Memo.

³⁴ Tri-Valley Local Hazard Mitigation Plan, Volume 1 – Planning Area-Wide Elements. 2018. Available online at: <https://www.dsrds.com/home/showdocument?id=5581>. Accessed October 22, 2019.

HAZARDS & HAZARDOUS MATERIALS

resource during times of emergency response and its use would enhance local coordination with nearby jurisdictions, as needed.

The project would entail construction of a new school which would not physically interfere with emergency response or evacuation plans once fully constructed. The connection of the school to the City of Dublin streetways would occur from Dublin Boulevard to the south and Central Parkway to the north. During construction, roadway modifications would occur on Dublin Boulevard and Central Parkway in the vicinity of the proposed project to allow access to residential areas, commercial areas, and emergency services. These modifications could require temporary roadway closures and detouring which would be accounted for in mitigation measure found in Section 4.15 Transportation and Traffic. This Mitigation Measure requires preparation of a traffic management plan (TMP), which would be noticed to relevant emergency services, thereby, avoiding interference with adopted emergency plans or emergency evacuation plans. During operation of the school, the existing layout of roadways in the vicinity of the proposed project would be as shown on the site plan. Current emergency response plans or emergency evacuation plans would not be affected. Therefore, due to the above, this impact would be *less than significant* with mitigation.

Significance Without Mitigation: Significant.

Impact HAZ-6: Temporary modifications to Dublin Boulevard and Central Parkway during construction may temporarily interfere with emergency response.

Mitigation Measure HAZ-6 Implementation of Mitigation Measure TRANS-4.1.

Significance Without Mitigation: Less than significant.

HAZ-7	The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
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According to CAL FIRE, the project site is not identified to be in a Fire Hazard Severity Zones in the State Responsibility Area, nor in a Very High Fire Hazard Severity Zone in the Local Responsibility Area. It is located in a suburban area surrounded by developed lands. Thus, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Furthermore, the proposed project would be required to comply with the 2019 CFC and 2019 CBC, including installation of sprinklers, proper protection systems such as fire extinguishing systems and alarms, fire hydrants, water fire flow requirements, and access points to accommodate fire equipment. Moreover, it would require approval by the DSA, which reviews seismic, fire and life safety, and accessibility. Compliance with existing codes, and the project site location outside of fire hazard areas, would ensure that impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

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4.8.4 CUMULATIVE IMPACTS

HAZ-8	The proposed project would not result in cumulative impacts with respect to hazards and hazardous materials.
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The area considered for cumulative impacts is Alameda County, which is the service area for the Alameda County Department of Environmental Health, the affected CUPA. Other development projects throughout the county would use, store, transport, and dispose of increased amounts of hazardous materials, and thus could pose substantial risks to the public and the environment. However, the use, storage, transport, and disposal of hazardous materials by other projects would conform with regulations of multiple agencies as described in Section 4.8.1.1, Regulatory Framework, above. Non-school projects would also have to comply with multiple local regulations, which vary by location.

The proposed project is located within 0.25 miles of one school but would not handle large quantities of known hazardous or acutely hazardous waste. Potential hazards of assumed ACMs would be mitigated by pre-construction review. Therefore, the proposed project would not contribute to a cumulative impact associated with schools.

The proposed project area is located within 2 miles of the Livermore Municipal Airport, a General Aviation Reliever Airport. However, as detailed in HAZ-5, potential flight hazards would be avoided and an aviation easement restricting the heights of structures should be dedicated to the City of Livermore pursuant to Mitigation Measure HAZ-5.1. Therefore, the proposed project would not contribute to a cumulative impact associated with a public or private airport.

Cumulative projects have the potential to interfere with an adopted emergency response plan or emergency evacuation plan; however, all development would be required to comply with the provisions of the local, State, and federal regulations for emergency response plans and emergency evacuation plans. Compliance with these regulations would reduce potential cumulative impacts to less than significant. Moreover, as described in Chapter 4.15, Transportation, of this EIR, the proposed project would not result in inadequate emergency access.

Cumulative projects have the potential to increase development in areas of high fire susceptibility; however, all development projects included as part of this analysis would be in an area of the City of Dublin which is outside all wildfire hazard zones.

Cumulative impacts would be less than significant after compliance with regulations, and project impacts would not be cumulatively considerable.

Significance Without Mitigation: Less than significant.

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HYDROLOGY & WATER QUALITY

4.9 HYDROLOGY AND WATER QUALITY

This chapter describes the regulatory framework and existing conditions on the project site related to hydrology and water quality, and the potential impacts of the project on hydrology and water quality.

The information in this section is based in part on the following technical studies, referenced throughout this chapter as the Hydrology and Low Impact Development (LID) Report and the Storm Water Pollution Prevention Plan (SWPPP), respectively:

- *Hydrology and Low Impact Development (LID) Report, New Dublin High School*, completed by Quad Knopf, Inc. in February 2020.
- *Storm Water Pollution Prevention Plan (SWPPP), On-Site Improvements for New Dublin High School*, completed by Quad Knopf, Inc. in February 2020.

Complete copies of these reports are included in Appendix G to this Draft EIR.

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

Federal Regulation

Clean Water Act

Under the Clean Water Act (CWA) of 1977, the United States Environmental Protection Agency (EPA) seeks to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The statute employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The CWA authorizes the EPA to implement water-quality regulations. The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402(p) of the CWA controls water pollution by regulating stormwater discharges into the waters of the US. California has an approved state NPDES program. The EPA has delegated authority for water permitting to the State Water Resources Control Board (SWRCB), which has nine regional boards.

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water-quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water-quality standards. Typically, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and non-point sources. The intent of the 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality. In accordance with Section 303(d), the Regional Water Quality Control Board (RWQCB) has identified impaired water bodies within its jurisdiction, and the pollutants or stressors responsible for impairing the water quality.

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National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4s). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring and other activities.

Under the NPDES Program, all facilities which discharge pollutants into waters of the United States are required to obtain an NPDES permit. Requirements for storm water discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The City of Dublin and the project site lie within the jurisdiction of San Francisco RWQCB (Region 2) and are subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (MRP) No. CAS612008 issued by the San Francisco RWQCB (Order No. R2-2015-0049). The MRP requires more than 70 municipalities, Counties, flood control districts, and water districts in the Bay Area to place conditions on certain development projects to incorporate site design measures, source controls, treatment measures, and on projects in hydromodification areas, flow duration controls (FDCs).

State Regulations

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water-quality control law for California. Under this Act, the SWRCB has ultimate control over state water rights and water-quality policy. In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The SWRCB, through its nine RWQCBs, carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan, or Basin Plan, that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water-quality conditions and problems. Pursuant to the Porter-Cologne Act, municipal stormwater discharges in Dublin are regulated under the MRP.

Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) for drinking water regulations, the California Department of Fish and Wildlife (CDFW), and the Office of Environmental Health and Hazard Assessment (OEHA).

Sustainable Groundwater Management Act

In the midst of a major drought, California Governor Jerry Brown signed the Sustainable Groundwater Management Act of 2014 (SGMA). The act consists of three legislative bills, Senate Bill SB 1168 (Pavley), Assembly Bill AB 1739 (Dickinson), and Senate Bill SB 1319 (Pavley). The legislation provides a framework for long-term sustainable groundwater management across California. Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins have formed

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Groundwater Sustainability Agencies (GSAs) that oversee the preparation and implementation of a local Groundwater Sustainability Plan (GSP).

The California Department of Water Resources (DWR) has developed regulations governing the content of Groundwater Sustainability Plans. Local stakeholders have until 2022 (in critically overdrafted basins until 2020) to develop, prepare, and begin implementation of Groundwater Sustainability Plans. GSAs will have until 2040 to achieve groundwater sustainability.¹

Statewide General Construction Permit

The SWRCB has adopted a statewide Construction General Permit (Order No. 2009-0009-DWQ, as amended by 2010-0014 DWQ and 2012-0006-DWQ) for stormwater discharges associated with construction activities. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance.

Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit Permit Registration Documents (PRDs) to the SWRCB for coverage under the NPDES permit prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

The NPDES Construction General Permit (CGP) requires all dischargers to (1) develop and implement a SWPPP, which specifies best management practices (BMPs) to be used during construction of the project; (2) eliminate or reduce non-storm water discharge to stormwater conveyance systems; and (3) develop and implement a monitoring program of all specified BMPs. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-storm water discharges.

Applicants must also demonstrate conformance with applicable BMPs and prepare a SWPPP, containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites also require implementation of a Rain Event Action Plan (REAP). The updated CGP (2010-0014-DWQ), effective on September 2, 2012, also requires applicants to comply with post-construction runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 permit. Since the District (and other

¹ University of California, 2020. *Sustainable Groundwater Management Act*. <http://groundwater.ucdavis.edu/SGMA/>, accessed March 1, 2020.

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school districts within California) are not covered by a Phase I or Phase II MS4 permit, the District must comply with the post-construction runoff reduction requirements of the CGP.

State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881)

The Model Water Efficient Landscape Ordinance (MWELO) requires cities and counties to adopt landscape water conservation ordinances or to adopt a different ordinance that is at least as effective in conserving water as the MWELO.

Executive Order B-29-15 required the State to revise the MWELO to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.²

Regional Regulations

San Francisco Bay Regional Water Quality Control Board Basin Plan

The Water Quality Control Plan for the San Francisco Bay RWQCB (Basin Plan) is the Board's master water quality control planning document. It was last amended in 2018. This Basin Plan gives direction on the beneficial uses of State waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The Basin Plan has been adopted and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required.

Alameda County Flood Control and Water Conservation District

The Alameda County Flood Control and Water Conservation District (ACFCD) provides flood protection for the County. The primary focus of the ACFCD is to plan, design, and construct flood control projects, such as natural creeks, channels, levees, pump stations, dams, and reservoirs. Additionally, the ACFCD maintains flood control infrastructure and preserves the natural environment through the enforcement of pollution control regulations. The ACFCD has delineated the watersheds within Alameda County into different management zones.

The Zone 7 Water Agency (Zone 7) serves the City of Dublin as well as Livermore, Pleasanton, and adjacent unincorporated areas in eastern Alameda County. Zone 7 is responsible for flood protection within the City of Dublin. Zone 7 maintains 37 miles of flood-protection channels within its service area; the remaining channels are owned by private or public utilities, which are responsible for their maintenance. Stormwater from the Livermore-Amador Valley flows towards Dublin from the north and east and continues south before being diverted towards the San Francisco Bay.³

² California Department of Water Resources, 2020. *Model Water Efficient Landscape Ordinance*. <https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Model-Water-Efficient-Landscape-Ordinance>, accessed February 6, 2020.

³ Zone 7 Water Agency, 2020. *Maps: How stormwater flows through the Valley and out toward the Bay*. http://zone7water.com/images/pdf_docs/maps/waterways_map1.pdf, accessed February 6, 2020.

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As described in Section 4.17, Utilities and Service Systems, new development and the expansion of existing development may impose a burden on the existing flood protection and storm drainage infrastructure within the Zone 7 service area. Developments creating new impervious areas within the Livermore-Amador Valley are subject to the assessment of the Development Impact Fee for Flood Protection and Storm Water Drainage. These fees are collected for Zone 7 by the local governing agency: 1) upon approval of final map for public improvements creating new impervious areas; and/or 2) upon issuance of a building or use permit required for site improvements creating new impervious areas. Fees are dependent on whether post-project impervious area conditions are greater than pre-project conditions and/or whether fees have previously been paid. The Flood Protection and Storm Water Drainage Development Impact Fee (DIF) is currently \$1.00 per square foot of new impervious area. Per Zone 7 requirements, developers need to submit to the collecting City/County agencies, prior to approval of any final map and/or issuance of any building permit, *A Development Fee Impervious Surface Calculations* worksheet and associated plot plan for each individual building lot (or parcel) requiring a building permit and parcel proposing streets, sidewalks, or other non-building impervious areas in its development.⁴

Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin

Under the SGMA, Zone 7 has been designated as the exclusive GSA for the Livermore Valley Groundwater Basin. Zone 7 is required to prepare either a GSP or an Alternative Plan for the basin. Zone 7 prepared an Alternative Plan for compliance with SGMA and GSP regulations. The Alternative Plan covers the entire groundwater basin, is functionally equivalent to a GSP, and demonstrates that the entire basin has been operating within its sustainable yield for at least 10 years.⁵

Local Regulations

City of Dublin General Plan

Policies of the City of Dublin General Plan that are relevant to hydrology, water quality, and flood hazards are listed below in Table 4.9-1.

TABLE 4.9-1 CITY OF DUBLIN GENERAL PLAN POLICIES

Section	Guiding and Implementing Policies
Chapter 12: Water Resources Element	
Section 12.3.3: <u>A. Guiding Policy</u>	
Water	1. Promote the conservation of water resources in new development.
Conservation and Efficiency in New Development	<u>B. Implementing Policies</u>
	1. Continue implementation of the Water Efficient Landscape Regulations, which requires grouping plants with the same water requirements together (hydrozoning), the installation of water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls, and the minimal use of turf.

⁴ Alameda County Flood Control and Water Conservation District, Zone 7, 2016, available online at http://www.zone7water.com/images/pdf_docs/permits/2016_dif-notice.pdf, accessed June 15, 2020.

⁵ Zone 7 Water Agency, December 2016. *Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin*. <https://www.zone7water.com/library/groundwater>, accessed March 1, 2020.

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	3. Continue implementation of the Green Building Code to ensure that design, operation, construction, use, and occupancy of every newly constructed building or structure is subject to assessment of its efficiency features.
	<u>A. Guiding Policies</u>
	1. Protect the quality and quantity of surface water and groundwater resources that serve the community.
	2. Protect water quality by minimizing stormwater runoff and providing adequate stormwater facilities.
	3. To minimize flooding in existing and future development, design stormwater facilities to handle design-year flows based on buildout of the General Plan.
	<u>B. Implementing Policies</u>
	2. With the goal of minimizing impervious surface area, encourage design and construction of new streets to have the minimum vehicular travel lane width possible while still meeting circulation, flow, and safety requirements for all modes of transportation.
Section 12.3.5: Water Quality, Flood Protection, and Stormwater Management	3. Discourage additional parking over and above the required minimum parking standards for any land use unless the developer can demonstrate a need for additional parking.
	5. Review design guidelines and standard details to ensure that developers can incorporate clean water runoff requirements into their projects.
	6. Maximize the runoff directed to permeable areas or to stormwater storage by appropriate site design and grading, using appropriate detention and/or retention structures, and orienting runoff toward permeable surfaces designed to manage water flow.
	7. Review development plans to minimize impervious surfaces and generally maximize infiltration of rainwater in soils, where appropriate. Strive to maximize permeable areas to allow more percolation of runoff into the ground through such means as bioretention areas, green strips, planter strips, decomposed granite, porous pavers, swales, and other water-permeable surfaces. Require planter strips between the street and the sidewalk within the community, wherever practical and feasible.
	8. Continue conducting construction site field inspections to ensure proper erosion control and materials/waste management implementation to effectively prohibit non-stormwater discharges.
	10. Ensure adequate setbacks from creeks/waterways and development. Retain existing vegetation where feasible and, where necessary, plant buffers with native plant species.

Source: City of Dublin General Plan, 2017.

Eastern Dublin Specific Plan

Policies of the Eastern Dublin Specific Plan relevant to hydrology, water quality, and flood hazards and that are applicable to the proposed project are listed below in Table 4.9-2.

TABLE 4.9-2 EASTERN DUBLIN SPECIFIC PLAN POLICIES RELEVANT TO HYDROLOGY AND WATER QUALITY

Policy Number	Policy
Chapter 9: Water, Wastewater and Storm Drainage	
9-7	Require drainage facilities that will minimize any increased potential for erosion or flooding.
9-9	Plan facilities and select management practices in the Eastern Dublin Specific Plan area that protect and enhance water quality.

Source: Eastern Dublin Specific Plan, 2016.

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City of Dublin Municipal Code

Chapter 7.16, *Grading Regulations* was enacted for the purpose of regulating grading on private property to avoid pollution of watercourses with nutrients, sediments, or other earthen materials. This chapter requires a detailed erosion and sediment control plan including construction details and supporting calculations for temporary and permanent sediment control structures and facilities under certain conditions.

Chapter 7.74, *Stormwater Management and Discharge Control Ordinance*, was enacted to 1) control the discharge to storm drains from spills, dumping, or the disposal of materials other than stormwater, 2) reduce pollutants in stormwater discharges to the maximum extent practicable, and 3) eliminate non-stormwater discharges to the municipal separate storm sewer.⁶ The requirements in this ordinance are consistent with the MRP and Alameda County Clean Water Program's guidance.

Chapter 8.88, *Water-Efficient Landscaping Regulations*, is consistent with the State Model Water Efficient Landscape Ordinance (MWELo). This section of the code applies to new construction projects with total landscape areas of 500 square feet or greater. The code lists requirements for water efficiency, soils, landscaping, irrigation, grading, and stormwater management. Stormwater best management practices are encouraged to be incorporated into landscaping and grading to minimize runoff and increase on-site rainwater retention and infiltration.

4.9.1.2 EXISTING CONDITIONS

Regional Drainage

The Alameda Creek Watershed covers an area of about 633 square miles in the East Bay, 30 miles southeast of San Francisco. The project site is located within the Arroyo Mocho Canal Watershed, which is a subwatershed of Alameda Creek Watershed.⁷ Tassajara Creek runs in a north-south direction just west of Tassajara Road. The project site is approximately 0.65 miles east of the Tassajara Creek.

The City of Dublin maintains storm drainpipes and inlets that are on public streets or that carry water which originates on a public street. The City conducts periodic drain inlet cleaning and storm drain flushing activities and inspects and repairs drain inlet grates for facilities within the public right-of-way. Certain watercourses within the City, primarily natural creeks and larger concrete channels, are maintained by the ACFCO Zone 7, located in Pleasanton.⁸

The local storm drainage system consists of underground pipes, local channels and watercourses, and vegetated swales throughout newer neighborhoods. These facilities carry water runoff within the drainage basin to the flood-control channels and further to regional stormwater facilities. Developers of

⁶ City of Dublin, 2019. *Municipal Code. Chapter 7.74: Stormwater Management and Discharge Control, § 7.74.070, Discharge of pollutants.*

⁷ Alameda County Flood Control & Water Conservation District, 2020. *Interactive Map: Alameda County Watersheds.* Accessed at <https://acffloodcontrol.org/resources/explore-watersheds/> on April 3, 2020.

⁸ City of Dublin, 2020. *Storm Drainage.* <https://www.dublin.ca.gov/343/Storm-Drainage>, accessed March 1, 2020.

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new projects must install adequately sized storm drains to connect to the City's existing underground storm drain network.⁹

Responsibility for flood protection in Dublin lies with Zone 7, which maintains improved flood-control channels and installs new drainage channels. Under Zone 7 permits, development projects have improved many of the existing channels and have created new flood protection facilities. Zone 7 continues to work with local jurisdictions and the development community to identify means and methods to provide greater flood protection in its service area.¹⁰

Local Drainage

The existing site is fallow, uncultivated land (see Figure 3-3, *Surrounding Setting*, and Figure 3-4, *Photographs of Existing Site*) with utility improvements. The site and surrounding land is relatively flat with topographic gradient across the site from north to south of about 11 feet.

Although the National Wetland Inventory shows an intermittent riverine streambed bisected the project site from north to south,¹¹ this drainage no longer exists on the site. As described in Chapter 4.3, Biological Resources, a preliminary wetland assessment was conducted during the field reconnaissance survey and no indications of the former creek were found. Surface water flows were intercepted with the construction of Central Parkway and residential development to the north and west. Flows are now conveyed through a storm drain system that bypasses the site. The site has subsequently been graded and no vestiges of a former drainage channel or creek remain on-site.

There is an existing 60-inch storm drain that runs north/south through the site. The storm drain is approximately 11 feet below ground surface (bgs) and connects to a 96-inch storm drain in Grafton Street. The 96-inch main then discharges storm water into the Dublin Ranch regional water quality basin, south of Dublin Boulevard and north of State Route 580.¹² Ultimately, the storm water from the water quality basin flows south into Arroyo Mocho.

Surface Water Quality

The receiving water for the project site is Arroyo Mocho, which is listed on the Section 303(d) List of Water Quality Limited Segments for diazinon related to urban storm water runoff and water temperature which is related to channelization, habitat modification, and removal of riparian vegetation.¹³ Flow from Arroyo Mocho eventually discharges into Alameda Creek and ultimately empties into San Francisco Bay.

⁹ City of Dublin, November 21, 2017. *General Plan. Chapter 12 Environmental Resources Management: Water Resources Element*. <https://www.dublin.ca.gov/171/General-Plan#Chapter 12>, accessed March 1, 2020.

¹⁰ City of Dublin, November 21, 2017. *General Plan. Chapter 12 Environmental Resources Management: Water Resources Element*. <https://www.dublin.ca.gov/171/General-Plan#Chapter 12>, accessed March 1, 2020.

¹¹ United States Fish and Wildlife Service, 2020. *National Wetlands Inventory Wetlands Mapper*. <https://www.fws.gov/wetlands/data/mapper.html>, accessed March 1, 2019.

¹² Quad Knopf, February 2020. Hydrology and Low Impact Development (LID) Draft Report, New Dublin High School.

¹³ State Water Resources Control Board, 2019, *Impaired Water Bodies*, https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml, accessed February 6, 2020.

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Groundwater Basin

Portions of the City of Dublin overlie the Livermore Valley Main Groundwater Basin (Main Basin), which covers 69,600 acres (109 square miles) in Alameda and Contra Costa Counties. However, the project site is bisected with the southern half within the Livermore Basin. The northern half of the project site is not in any designated groundwater basin. The Livermore Basin extends 14 miles east of Pleasanton Ridge to the Altamont Hills and 3 miles north from the Livermore Upland to the Orinda Upland. Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo las Positas as the principal streams and Alamo Creek, South San Ramon Creek, and Tassajara Creek as the minor streams. The general groundwater gradient is from east to west, towards Arroyo de la Laguna, and from north to south along South San Ramon Creek and Arroyo de la Laguna. The groundwater basin is not adjudicated, and the DWR has not identified the basin as either in overdraft or expected to be in overdraft.¹⁴

The Dublin San Ramon Services District (DSRSD), which supplies water to the City of Dublin, purchases potable water from Zone 7. About 80 percent of the Zone 7 water supply is surface water. Zone 7 also extracts groundwater from the Livermore Valley Groundwater Basin. The portion of the Livermore Valley Groundwater Basin that contains high yielding aquifers and good quality groundwater is called the Main Basin, which is composed of Castle, Bernal, Amador, and Mocho II sub-basins. Zone 7 supplies the DSRSD with up to 645 acre-feet per year (AFY) of groundwater from the Main Basin.¹⁵

Groundwater Quality

The main constituents of concern in the Main Basin are salts, total dissolved solids (TDS), and nitrate. Boron is another groundwater parameter of interest for the valley's agriculture and golf communities because of its potential impact on certain irrigated crops and turf.¹⁶

Flooding Hazards

Federal Emergency Management Agency Flood Zone

A review of the Federal Emergency Management Agency (FEMA) floodplain maps indicate that the project site is within FEMA Zone X, which is described as an "Area of Minimal Flood Hazard" (See Figure 4.9-1). The natural topographical gradient of the study area is from north to south. The proposed grading of the site will generally follow the natural gradient.

¹⁴ Zone 7 Water Agency, December 2016. *Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin*. <https://www.zone7water.com/library/groundwater>, accessed March 1, 2020.

¹⁵ Dublin San Ramon Services District, June 2016. *2015 Urban Water Management Plan*. <https://www.dsrds.com/about-us/library/plans-studies>, accessed March 1, 2020.

¹⁶ Dublin San Ramon Services District, June 2016. *2015 Urban Water Management Plan*. <https://www.dsrds.com/about-us/library/plans-studies>, accessed March 1, 2020.

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Dam Inundation

Portions of the City are subject to inundation from the Del Valle Dam if a failure were to occur. However, the project site is not within the dam inundation area.¹⁷ The City is not subject to inundation from any other dams.

Tsunamis

Tsunamis are large ocean waves caused by underwater seismic activity. When tsunamis hit the coast, they can cause considerable damage to property and put the public at risk. The project site is not within a tsunami hazard zone.¹⁸

Seiches

A seiche is a surface wave created in an enclosed or partially enclosed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches usually occur as a result of earthquake activity. The absence of any large bodies of water within the City of Dublin precludes the possibility of damage from seiches at the project site.

4.9.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant hydrology and water quality impacts if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. 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 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 iv) impede or redirect flood flows.
4. In a flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
6. Result in significant cumulative impacts with respect to hydrology and water quality.

¹⁷ Department of Water Resources Division of Safety of Dam, 2020. *California Dam Breach Inundation Maps*. https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2, accessed March 1, 2020.

¹⁸ California Department of Conservation, 2020. *CGS Information Warehouse: Tsunami*. <https://maps.conservation.ca.gov/cgs/informationwarehouse/tsunami/>, accessed March 1, 2020.

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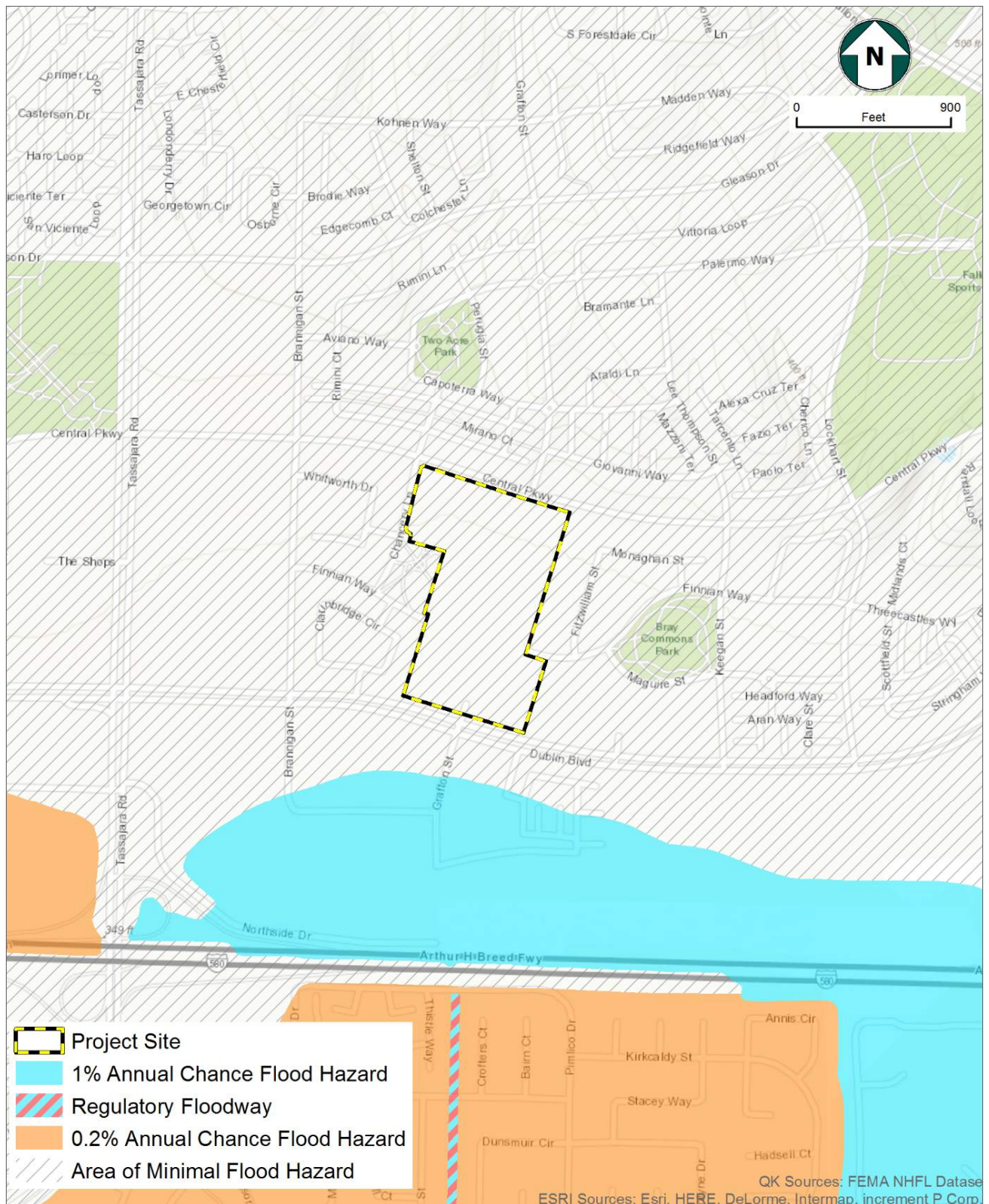


Figure 4.9-1
FEMA Floodplain Map

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4.9.3 IMPACT DISCUSSION

HYD-1	The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
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Construction

Clearing, grading, excavation, and construction activities associated with the proposed project have the potential to 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.

To minimize these potential impacts, development of the project would require compliance with the CGP which requires the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The SWRCB mandates that projects that disturb one or more acres of land must obtain coverage under the Statewide CGP. The CGP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a NOI, risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. The construction contractor is always required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the project applicant is required to provide proof of filing of the PRDs with the SWRCB, which include preparation of SWPPP.

Categories of BMPs that would be implemented for this project are described in Table 4.9-3, *Construction BMPs* and are included in Appendix G.

TABLE 4.9-3 CONSTRUCTION BMPs

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	<ul style="list-style-type: none"> Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season) Prevent or reduce erosion potential by diverting or controlling drainage Prepare and stabilize disturbed soil areas 	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization

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TABLE 4.9-3 CONSTRUCTION BMPs

Category	Purpose	Examples
Sediment Controls	<ul style="list-style-type: none"> Filter out soil particles that have been detached and transported in water 	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	<ul style="list-style-type: none"> Apply water or other dust palliatives to prevent or minimize dust nuisance 	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	<ul style="list-style-type: none"> Minimize the tracking of soil offsite by vehicles 	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.
Non-Storm Water Management Controls	<ul style="list-style-type: none"> Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges. 	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants.
Waste Management and Controls (i.e., good housekeeping practices)	<ul style="list-style-type: none"> Manage materials and wastes to avoid contamination of stormwater. 	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use.

Source: California Stormwater Quality Association (CASQA) 2015. *Stormwater Best Management Practices Handbook: Construction*.

In addition, the City of Dublin requires that provisions for erosion or sediment control be provided with the grading plans. Implementation of the erosion provisions would address any potential erosion issues associated with the proposed grading and site preparation activities.

Submittal of the PRDs and implementation of the SWPPP and the erosion provisions required by the municipal code throughout the construction phase of the proposed project will address anticipated and expected pollutants of concern as a result of construction activities. The proposed project would comply with all applicable water quality standards and waste discharge requirements. As a result, water quality impacts associated with construction activities would be less than significant.

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Operations

Once the proposed project has been constructed, urban runoff could include a variety of contaminants that could impact water quality. Runoff from buildings and parking lots typically contain oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations.

To ensure compliance with the CGP post-construction requirements that the proposed project replicates the pre-project runoff water balance, a preliminary Hydrology and Low Impact Development Report has been prepared for the proposed project.¹⁹ Because the project site is within a hydromodification (HM) area, the Bay Area Hydrology Model (BAHM) was used to size the proposed bioretention basins.

The total development area of the proposed project is approximately 23.46 acres, including approximately 21 acres of new impervious area, and approximately 2.5 acres of pervious area. The site has been divided up into 45 Drainage Management Areas (DMAs) with corresponding LID bioretention basins in each area. All impervious areas on site would convey runoff to the LID facilities by sheet flow and/or gutters. The DMAs and bioretention basins are shown in Figure 4.9-2. The bioretention basins capture and detain runoff from impervious areas including parking lots, sidewalks, buildings and other school facilities. The bioretention basins were sized and designed in accordance with the combination flow and volume method, which meets HM management requirements.²⁰ The BAHM software, which is required for HM management projects, was run for both pre-development and post-development conditions to ensure that routing post-development storm water runoff through the LID bioretention basins would meet the HM requirements (i.e., would not exceed the pre-development 10 year storm runoff rates).

The bioretention basins include gravel/rock and amended soil designed for stormwater infiltration and retention. Due to high groundwater, the basins will be lined with an impermeable liner. A perforated pipe underdrain placed within the rock layer above the liner at each basin will connect to a new drainage header that will run below ground. The basin's riser is located at the maximum ponding depth, typically 6-inches above the basin bottom. Drainage from the bioretention basins will be conveyed into a storm drainage system and tie into the existing 60-inch storm main at the south end of the school facility near Dublin Boulevard. Additionally, landscaping areas would be designed for site water quality and hydromodification management.²¹ All individual LID facilities have been designed to meet the sizing requirements and impacts from the operational phase would be less than significant.

Significance Without Mitigation: Less than significant.

¹⁹ Quad Knopf, February 2020. Hydrology and Low Impact Development (LID) Draft Report, New Dublin High School.

²⁰ Quad Knopf, February 2020. Hydrology and Low Impact Development (LID) Draft Report, New Dublin High School.

²¹ Quad Knopf, February 2020. Hydrology and Low Impact Development (LID) Draft Report, New Dublin High School.

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Source: QKINK.

DMA = Drainage Management Area

Figure 4.9-2

Proposed Low Impact Development Measures

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HYD-2	The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
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The project site is located within ACFC's Zone 7 service area and groundwater is used for municipal water supply. Zone 7 is the exclusive GSA for the Livermore Valley Groundwater Basin and has demonstrated that the entire basin has been operating within its sustainable yield for at least 10 years. Furthermore, DWR has not identified the basin as either in overdraft or expected to be in overdraft.

The proposed project would connect to the public water main and direct additions or withdrawals of groundwater are not proposed by the project. Furthermore, the project site is not in a designated groundwater recharge area and the proposed project does not propose or require facilities or operations that would otherwise adversely affect designated recharge areas.

Groundwater was encountered at depths of 15.5 feet to 21.5 feet below site grade, however, historical data indicates groundwater has been as shallow as 8 feet within the project site vicinity.²² If dewatering is required during construction, this activity would require obtaining a WDR permit from San Francisco Bay RWQCB. Limits on the quantity of groundwater withdrawal would be specified in the WDR and construction dewatering would be temporary in nature. Therefore, dewatering would not substantially lower the groundwater table.

Therefore, the potential for the project to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin is less than significant.

Significance Without Mitigation: Less than Significant.

HYD-3	The project would not 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 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 iv) impede or redirect flood flows.
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²² Krazan & Associates, Inc., September 2019, Geotechnical Engineering Investigation Proposed Dublin Unified New High School Central Parkway and Chancery Lane.

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Erosion and Siltation

The project would involve site improvements that require grading, excavation, and soil exposure during construction, with the potential for erosion or siltation to occur. If not controlled, the transport of these materials to local waterways could temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles. To minimize this impact, the project would be required to comply with the requirements in the State's General Construction Permit, including preparation of an NOI and SWPPP prior to the start of construction activities (see Impact HYD-1, above). The SWPPP would describe the BMPs to be implemented during the project's construction activities. The implementation of the BMPs during the construction phase would include the following measures to minimize erosion and siltation:

- Minimize disturbed areas of the site
- Install on-site sediment basins to prevent off-site migration of erodible materials
- Implement dust control measures, such as silt fences and regular watering of open areas
- Stabilize construction entrances/exits
- Install storm drain inlet protection measures
- Install sediment control measures around the site, including silt fences or gravel bag barriers.

In addition, the City of Dublin requires that provisions for erosion or sediment control be provided with the grading plans. Implementation of the erosion provisions would address any potential erosion issues associated with the proposed grading and site preparation activities.

Collectively, implementation of the BMPs outlined in the SWPPP, implementation of the erosion provisions of the municipal code, and the construction of the bioretention basins described in the LID plan would address the anticipated and expected erosion and siltation impacts during the construction and operational phases of the proposed project. Therefore, the proposed project would not result in substantial erosion or siltation on- or off-site.

Proposed Drainage

The proposed project would not alter the course of a stream or river; however, it would result in the addition of impervious surfaces. As discussed in Impact HYD-1, overflow from the bioretention basins would be conveyed to the existing 60-inch storm main at the south end of the school facility near Dublin Boulevard. The connection to the existing 60-inch storm drain discharge would be limited by an orifice to a maximum rate of 6.58 cubic feet per second (cfs), which is less than the predevelopment runoff rate. Two storm frequencies and intensities were used to obtain the watershed runoff peak flows, depths, and volumes for the site: a 2-year storm and a 10-year storm.²³

New development within hydromodification areas generally must follow the requirement for a C.3 regulated project per the MRP, which states "Hydromodification Management shall be designed such that

²³ A 2-year storm has a 50% chance of occurring in any given year, and a 10-year storm has a 10% chance.

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post-project stormwater discharge rates and duration match pre-project 10-year peak flow". The bioretention basins have been designed to store approximately 120,664 cubic feet of stormwater runoff. Peak depth, peak outflow, peak storage, inflow volume, and outflow volume were calculated using the Bay Area Hydrology Model software (BAHM). The BAHM results show that the proposed bioretention basins would meet this criterion.²⁴ Therefore, project implementation would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Although the drainage patterns within the site would change, the stormwater collected from the site would ultimately discharge into the existing storm drain system. As described above, there will be a flow restriction on discharge to the 60-inch storm drain so that post-development flows would not exceed pre-development runoff rates. In addition, the bioretention basins throughout the site would filter out silt and particulates and improve the water quality of the runoff prior to discharge to the storm drain system. Therefore, the proposed project would not 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.

Flood Flows

According to FEMA Flood Insurance Rate Map (FIRM) No. 06001C0328G dated August 3rd 2009, the project site is not in a 100-year flood zone.²⁵ Additionally, the project site is not in a dam or tsunami inundation zone. Therefore, there would be no impact from this project in terms of impeding or redirecting flood flows.

Significance Without Mitigation: Less than significant.

HYD-4	The project would not be in a flood hazard, tsunami, or seiche zone, therefore, there would be no risk of the release of pollutants due to project inundation.
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The project site is not within a 100-year floodplain, as per FEMA FIRM No. 06001C0328G dated August 3, 2009.²⁶ The project site is also not located in a dam inundation zone, as indicated by the DWR Division of Safety of Dam.²⁷ Additionally, there are no water storage tanks or reservoirs near the project site that would result in a seiche during seismic activity. The project site is also not at risk of flooding due to

²⁴ Quad Knopf, February 2020. Hydrology and Low Impact Development (LID) Draft Report, New Dublin High School.

²⁵ Federal Emergency Management Agency, 2019. *FEMA Flood Map Service Center: Search by Address*. <https://msc.fema.gov/portal/search?AddressQuery=700%20Alameda%20de%20las%20Pulgas%20Belmont%2C%20CA%2094002#searchresultsanchor>, accessed March 2, 2020.

²⁶ Federal Emergency Management Agency, 2019. *FEMA Flood Map Service Center: Search by Address*. <https://msc.fema.gov/portal/search?AddressQuery=700%20Alameda%20de%20las%20Pulgas%20Belmont%2C%20CA%2094002#searchresultsanchor>, accessed March 2, 2020.

²⁷ Department of Water Resources Division of Safety of Dam, 2020. *California Dam Breach Inundation Maps*. https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2, accessed March 1, 2020.

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tsunamis.²⁸ Therefore, there would be no impact associated with the release of pollutants due to inundation.

Significance Without Mitigation: No Impact.

HYD-5	The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
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Adherence to the State CGP, implementation of the SWPPP, and adherence to the City's erosion requirements, as described in detail in Impact HYD-1, would ensure that water quality is not adversely impacted during construction. In addition, implementation of the BMP measures at the site, including bioretention areas and self-treating landscaped areas, would ensure that water quality is not impacted during the operational phase of the project. As a result, site development will not obstruct or conflict with the implementation of the San Francisco Bay RWQCB Basin Plan.

The proposed project is within the ACFCD's Zone 7 service area, which uses groundwater for potable water supply. Zone 7 is the GSA for the Livermore Valley Groundwater Basin and has sustainably managed the basin for at least 10 years. The proposed project would connect to the public water main and direct additions or withdrawals of groundwater are not proposed by the project. Additionally, if any dewatering activities are required during the construction phase, the proposed project would obtain a WDR permit from San Francisco Bay RWQCB. Therefore, the proposed project would not conflict with or obstruct the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin.

Significance Without Mitigation: Less than significant.

4.9.4 CUMULATIVE IMPACTS

HYD-6	The project would not, in combination with past, present, or reasonably foreseeable projects, result in a significant impact on hydrology and water quality.
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Hydrology and Drainage

Cumulative projects within the Arroyo Mocho Canal Watershed could increase impervious areas and increase stormwater runoff rates. However, all regulated projects within the watershed are generally required to prepare and implement stormwater management plans (SWMPs) that include provisions for the capture and infiltration of runoff or the temporary detention of stormwater runoff so that 100 percent of the runoff is treated with LID treatment measures on site, in accordance with the MRP. Thus, no significant cumulative drainage impacts would occur, and project drainage impacts would not be cumulatively considerable.

²⁸ California Department of Conservation, 2020. *CGS Information Warehouse: Tsunami*.
<https://maps.conservation.ca.gov/cgs/informationwarehouse/tsunami/>, accessed March 1, 2020.

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Water Quality

Cumulative projects have the potential to generate pollutants during project construction and operation. All construction projects that disturb one acre or more of land would be required to prepare and implement SWPPPs in order to obtain coverage under the Statewide CGP. All regulated projects within the watershed would also be required to prepare and implement SWMPs specifying BMPs that would be applied during project design and project operation to minimize water pollution from project operation. Thus, no significant cumulative water quality impacts would occur, and project water quality impacts would not be cumulatively considerable.

Significance Without Mitigation: Less than significant.

4.10 LAND USE AND PLANNING

This chapter describes the regulatory framework and existing conditions on the project site related to land use and planning, and the potential impacts of the project on the environment resulting from implementation of the proposed project. This chapter contains a summary of the relevant regulatory setting and existing conditions followed by an analysis of the proposed project and cumulative impacts.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 REGULATORY FRAMEWORK

This section summarizes existing State and local agencies, regulations, and plans that pertain to land use. There are no federal land use regulations applicable to the proposed project.

State Regulation/Preemption

Government Code Section 53094

School districts are subject to numerous state requirements and state oversight regarding construction on district school sites, which requirements are designed to ensure that school construction projects are safe for students and promote the public interest. Pursuant to Government Code Section 53094, school districts are authorized to exempt themselves from city or county zoning ordinances upon a two-thirds vote from the school district's governing board. The applicable city or county may challenge such an action taken by a school district's governing board in the superior court applicable to the city or county. The superior court must then determine whether the school district board's action was arbitrary and capricious. If these findings are not made, the school district may remain exempt from the zoning requirements of the local municipal code.¹ As noted below, the District's Board of Trustees has taken action to exempt the project from the application of City of Dublin's zoning ordinance and regulations.

Airport Land Use Compatibility Plan

The State Aeronautics Act (Public Utilities Code, Section 21670, *et seq.*) requires the preparation of an airport land use compatibility plan (ALUCP) for nearly all public-use airports in the state (Section 21675). The purpose of the ALUCP is to encourage compatibility between airports and the land uses that surround them. Alameda County established an airport land use commission (ALUC) to prepare land use compatibility plans for all public airports within the County and to review general plans, changes to ordinances and zoning codes, development projects and land use actions, and airport development plans to ensure consistency with compatibility policies. The Livermore Municipal ALUCP is the primary document used by the ALUC and local jurisdictions in safeguarding the general welfare of the public and the area surrounding the Airport. The plan also serves as a tool for the ALUC to fulfill its duty to review airport and land use development proposals within the Airport Influence Area (AIA). The compatibility criteria set forth in the ALUCP shall be used by local authorities, as well as to school districts, community

¹ California Government Code Section 53094 *et seq.*

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college districts, and special districts when these entities propose the development of new facilities or the expansion of existing ones. The project site is located within Livermore Municipal Airport's AIA according to the Livermore ALUCP.²

Regional Regulations

Plan Bay Area 2040

The Association of Bay Area Governments (ABAG) is the regional planning agency and council of governments for the nine-county San Francisco Bay Area, which includes Alameda County and the City of Dublin. The Metropolitan Transportation Commission (MTC) and ABAG's *Plan Bay Area 2040* is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). *Plan Bay Area 2040* was prepared by MTC in partnership with ABAG, the Bay Area Air Quality Management District, and San Francisco Bay Conservation and Development Commission and adopted on July 26, 2017.³ The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas (GHG) emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board. An overarching goal of *Plan Bay Area 2040* is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle miles traveled and associated GHG emissions reductions. The project site is located within a Priority Development Area (PDA) by Plan Bay Area.⁴ PDAs are areas within existing communities that local city or county governments have identified and approved for future growth.⁵

Local Regulations

City of Dublin General Plan

The City of Dublin General Plan, adopted in 1985 and updated in 2017, provides a policy framework for development decisions, and serves to designate long-range development policies for the City, provide a basis for determining whether development corresponds with the policies, and allow public agencies and private developers to design projects consistent with the policies or seek to change the policies through

² County of Alameda, 2012, Livermore Executive Airport – Airport Land Use Compatibility Plan, available online at https://www.acgov.org/cda/planning/generalplans/documents/LVK_ALUCP_082012_FULL.pdf, accessed June 2, 2020.

³ Association of Bay Area Governments, 2017. *Plan Bay Area 2040*. <http://2040.planbayarea.org/>, accessed October 28, 2019.

⁴ Metropolitan Transportation Commission and Association of Bay Area Governments. http://opendata.mtc.ca.gov/datasets/56ee3b41d6a242e5a5871b043ae84dc1_0?geometry=-122.049%2C37.654%2C-121.715%2C37.749, accessed October 29, 2019.

⁵ Metropolitan Transportation Commission and Association of Bay Area Governments. Priority Development Areas. <https://mtc.ca.gov/our-work/plans-projects/focused-growth-livable-communities/priority-development-areas>, accessed October 29, 2019.

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an amendment process. The City of Dublin's General Plan contains the following land use policies within Table 4.11-1, which are applicable to public schools.⁶

TABLE 4.11-1 CITY OF DUBLIN GENERAL PLAN POLICIES

Policy Number	Goal/Policy/Strategy Text
Policy 4.2.1 A.1	Cooperate with the Dublin Unified School District to ensure preservation of surplus sites compatible with surrounding land uses and Housing Element objectives.
Policy 4.2.1 A.2	Cooperate with the Dublin Unified School District to ensure provision of school facilities in the Extended Planning Areas.
Policy 4.2.1 B.1	Initiate preparation of site plans or specific plans jointly with the Dublin Unified School District prior to sale of surplus sites.
Policy 4.2.1 B.2	As a condition of project approval in the Extended Planning Area, it is required that logical and buildable school sites be offered for dedication according to the State's Board of Education guidelines and acceptable to the Dublin Unified School District. This type of cooperation will achieve harmonious relationships between new development and existing residential areas and new park sites (See Open Space Element).
Policy 4.2.2 A.1	Provide new elementary, middle, and high schools as needed to serve the future population of the Extended Planning Area.
Policy 4.2.2. A.2	Schools located within the City should be operated by the Dublin Unified School District.
Policy 4.2.2 B.1	Require provision of school sites through dedication and/or developer fees. Establish appropriate mechanism for funding development of school facilities.
Policy 4.2.2 B.2	Work with the Livermore Joint Unified School District to revise jurisdictional boundaries to best serve the needs of Dublin students.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan, adopted in 1994 and updated in 2016, provides a framework for the future growth and development of the eastern Dublin area, approximately 3,300 acres in size.

Policies from the Specific Plan relevant to the land use of the proposed project are included in Table 4.11-2 below.

TABLE 4.11-2 SELECT EASTERN DUBLIN SPECIFIC PLAN GOALS, POLICIES, AND ACTION PROGRAMS

Goal/Policy Number	Goal/Policy/Strategy Text
<i>Land Use Goals</i>	<ul style="list-style-type: none"> ■ <i>To create a well-defined hierarchy of neighborhood, community, and regional commercial areas, that serves the shopping, entertainment and service needs of Dublin and the surrounding area.</i> ■ <i>To provide a stable and economically sound employment base for the City of Dublin, which is diverse in character and responsive to the needs of the community.</i>
Policy 4.1	Maintain a reasonable balance in residential and employment-generating land uses by adhering to the distribution of land uses depicted in Figure 4-1, Land Use Map of the Eastern Dublin Specific Plan.

⁶ City of Dublin, 2016. General Plan, Community Development Department. Available online at: <https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>. Accessed October 31, 2019.

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TABLE 4.11-2 SELECT EASTERN DUBLIN SPECIFIC PLAN GOALS, POLICIES, AND ACTION PROGRAMS

Policy 4.2	Encourage higher density residential development with convenient walking distance of shopping areas, employment centers, transit stations/stops, and other community facilities.
Policy 4-20	Encourage employment-generating uses, which provide a broad range of job types and wage/salary scales.
Policy 4-24	Require all employment-related development to provide convenient and attractive pedestrian, bicycle, and transit-related facilities to encourage alternate modes of commuting to and from work.
Circulation Goals	<ul style="list-style-type: none"> ■ <i>To establish a vehicle circulation system which provides sufficient capacity for projected traffic and allows convenient access to land uses, while maintaining a neighborhood scale to the residential street system.</i> ■ <i>To provide adequate, but not excessive amounts of parking.</i> ■ <i>To minimize the transportation-related impacts of development in eastern Dublin.</i>
Policy 5-2	Require all development to provide a balanced orientation toward pedestrian, bicycle, and automobile circulation.
Policy 5-3	<p>Plan development in eastern Dublin to maintain Level of Service D or better as the average intersection level of service at all intersections within the Specific Plan area during AM, PM and midday peak periods.</p> <p>The average intersection level of service is defined as the hourly average.</p>
Policy 5-18	Provide convenient and secure bicycle parking facilities at key destinations in eastern Dublin, such as schools, recreation areas, transit stops and commercial centers.
Policy 5-19	Parking requirements in eastern Dublin shall be kept to a minimum consistent with actual parking needs. Allowance shall be made for shared parking in mixed-use areas. Parking requirements may be reduced wherever it can be demonstrated that use of alternative transportation will reduce parking demand.
Policy 5-21	Require all non-residential projects with 50 or more employees to participate in Transportation Systems Management (TSM) program.
Resource Management Goals	<ul style="list-style-type: none"> ■ <i>To create a land use pattern that ensures public health, safety and welfare.</i> ■ <i>To preserve Dublin's historic structures and cultural resources.</i>
Policy 6-24	The presence and significance of archaeological or historic resources will be determined, and necessary mitigation programs formulated, prior to development approvals for any of the sites identified in the cultural resource survey prepared for this plan.
Policy 6-25	The discovery of historic or prehistoric remains during grading and construction will result in the cessation of such activities until the significance and extent of those remains can be ascertained by a certified archaeologist.
Policy 6-26	All properties with historic resources, which may be impacted by future development, shall be subjected to in-depth archival research to determine the significance of the resource prior to any alteration.
Policy 6-43	New development shall be designed to provide effective control of soil erosion as a result of construction activities and the alteration of site drainage characteristics.
Action Program 7A	At Design Review: The City shall establish Design Review procedures and assign review responsibilities for projects proposed in eastern Dublin. The content of the Design Review will be based on the design guidelines and development standards contained in this Specific Plan and any guidelines, which the City has established for the City as a whole. In general, it is recommended that the process include at least three steps: Conceptual Design Review, Site Plan Review and Building Design Review. The City has the option of conducting this review with planning staff and Planning Commission, or augmenting their review with a Design Review Board or a qualified design professional.

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TABLE 4.11-2 SELECT EASTERN DUBLIN SPECIFIC PLAN GOALS, POLICIES, AND ACTION PROGRAMS

Action Program 7B	<p>Design Submittals: Development applicants will be required to submit, at a minimum, the following material for review. The City may require other information to be submitted based on the specific issues involved with each project. The basic submittal will include:</p> <ul style="list-style-type: none"> Existing Conditions Map(s) including relevant information such as slope, vegetation, soils/geology, infrastructure, etc. Design Concepts including maps/illustrations of concepts for built form, landscape, circulation, and grading and drainage. Sit Plans (Preliminary and Final) including site plans, grading plans, landscape plans (planting, hardscape, and amenities), lighting plan, and drainage plans. Building Design including perspective sketches/renderings, exterior building elevations, building cross sections, floor plans, building materials and color board, and signage design. Special Concerns including visual simulations, revegetation plans, stream channel improvement plans, and site models.
<i>Community Services and Facilities Goals</i>	<ul style="list-style-type: none"> <i>To provide school facilities adequate to meet the community's need for quality education.</i> <i>To provide a full complement of community services and facilities as needed in eastern Dublin.</i>
Policy 8-1	Reserve school sites designated in the Specific Plan Land Use Map (Figure 4.1) to accommodate the future development of schools in eastern Dublin.
Policy 8-2	Promote a consolidated development pattern that supports the logical development of planning area schools, and, in consultation with the appropriate school district(s), ensure that adequate classroom space is available in coordination with occupancy of new homes.
Policy 8-3	Ensure that adequate school facilities are available prior to development in eastern Dublin, to the extent permitted by law.
Action Program 8A	Work with the Dublin Unified School District and the Livermore Joint Unified School District to resolve the jurisdictional issue regarding which district(s) should serve the eastern Dublin planning area. Determine the service district arrangement that best serves the needs of planning area students and minimizes the fiscal burden of the service providers.
Action Program 8B	Work with appropriate school district(s) to ensure that the development of new facilities is provided for through the dedication of school sites and/or the payment of development fees by developers, or any other means permitted by law.
Action Program 8C	Encourage the school district(s) to use best efforts to qualify for and obtain state funding assistance for construction of new schools. In addition, work with the district(s) to establish appropriate funding mechanism, such as a Mello-Roos Community Facilities District, development impact fees, or a general obligation bond measure, to fund new school development in eastern Dublin.
Financing Goals	<ul style="list-style-type: none"> <i>New development in the Specific Plan area should pay the full cost of infrastructure needed to serve the area and should fund the costs of mitigating adverse impacts on the City's existing infrastructure and services.</i> <i>The financing plan should provide for reimbursements from any other benefiting areas for costs that Specific Plan area owners are required to advance and should provide a fair allocation of costs among land uses.</i>

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Municipal Code of Dublin

The Municipal Code of Dublin includes general ordinances for the City of Dublin. The Municipal Code covers city personnel, financing, business regulations, public welfare (i.e. fire code, noise, alarm systems, etc.), vehicles, public works, zoning, and subdivisions. It is policy that the Zoning Ordinance be used to implement the General and Specific Plans, and that the Municipal Code be consistent with the General and Specific Plans.

On December 17, 2019, the Board of Trustees of the Dublin Unified School District took action to exempt the proposed New Comprehensive High School for the Dublin Unified School District from the application of City of Dublin zoning ordinance and regulations. Therefore, the District is not bound by local zoning requirements and ordinance. The City has been formally notified of this action.

Dublin San Ramon Services District

The Dublin San Ramon Services District (DSRSD) is an independent community services special district which focuses on public services such as the provision of water, recycled water, and wastewater services to the local community.⁷ DSRSD was founded in 1953 and serves more than 188,000 people within its service area and distributes drinking water for approximately 89,200 people. Additionally, DSRSD provides wastewater collection and treatment for approximately 163,400 people in Dublin and southern San Ramon.⁸ The DSRSD Code consists of the rules and regulations codified under the authority of Article 2 of Chapter 1 of Division 1 of Title 5 of the Government Code of the State of California. Specific requirements and conditions for construction permits for service are enumerated within the District Code.⁹ Additionally, for new development projects within the DSRSD service area, all work necessary for the installation of mains, services, and appurtenances to provide potable water, recycled water, and/or sewer service shall be shown on an Improvement Plan prepared under the direction of a registered professional engineer and submitted to the District for approval.¹⁰

4.10.1.2 EXISTING CONDITIONS

Surrounding Land Uses and Context

The project site is located in the Eastern Dublin planning area. Surrounding the project site are townhomes to the north, east, and west. Devany Square is a public park situated on the western side of the project site, on two acres of land, and includes a labyrinth and water play area. South of the project site lies commercial land use, including restaurants and businesses. Within two miles to the southeast of the project site is the Livermore Municipal Airport. Doolan Canyon Regional Preserve lies several miles to

⁷ Dublin San Ramon Services District, 2020, What is a Special District?, available online at <https://www.dsrdsd.com/home/showdocument?id=244>, accessed June 2, 2020.

⁸ Dublin San Ramon Services District, 2020, District at a Glance, available online at <https://www.dsrdsd.com/home/showdocument?id=811>, accessed June 2, 2020.

⁹ Dublin San Ramon Services District, 2010, District Codes, available online at <https://www.dsrdsd.com/about-us/district-code>, accessed June 2, 2020.

¹⁰ Dublin San Ramon Services District, 2020, Requirements, available online at <https://www.dsrdsd.com/do-business-with-us/planning-and-permitting/requirements>, accessed June 2, 2020.

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the northwest. The project site is situated approximately one-quarter mile north of Interstate 580, and the Dublin-Pleasanton BART Station is located about 2 miles west of the project site.

Existing Uses on the Project Site

As described in Chapter 3, Project Description, the existing site is fallow, uncultivated land that is mostly flat. There are several easements on the site including utility, public access, and emergency access. The Dublin San Ramon Services District owns a 10-inch water main and 8-inch recycled water pipeline within a 43-foot-wide water line easement bisecting the site, several 8-inch sewer pipelines within 15-foot wide easements along the western and eastern portions of the site, and a 10-inch sanitary sewer main along the western side of the site. Several concrete pads and utility vaults exist throughout the site, and there is a Pacific Gas and Electric aboveground transformer near the northwest corner of the site. The site is zoned as Neighborhood Commercial, with the northwest corner zoned as Public/Semi-Public, in the Eastern Dublin Specific Plan.

4.10.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant land use and planning impacts if it would:

1. Physically divide an established community.
2. 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.
3. Result in significant cumulative impacts with respect to land use and planning.

4.10.3 IMPACT DISCUSSION

LU-1 The project would not physically divide an established community.

Projects with the potential to divide an established community typically include major highways or roadways, storms channels, utility transmission lines, or the closure of bridges or roadways. The physical division of an established community would impair mobility within an existing community or between a community and outlying areas.

The proposed project would result in the construction of a high school on what is currently 23.46 acres of vacant land. Existing surrounding roadways and land uses would be retained, and the introduction of a public school is to be a resource for the surrounding eastern Dublin community. Based on the size and current land use, this would not physically divide the current community.

Significance Without Mitigation: Less than significant.

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LU-2	The project could 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.
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The northwestern corner of the project site, consisting of approximately 2.5 acres, is zoned as Public/Semi-Public (see Figure 3-5). According to the City of Dublin General Plan, this designation allows a combination of semi-public and public facilities land uses, including public schools. The remaining, majority of the project site is zoned as neighborhood commercial. According to the City of Dublin General Plan, this includes community- and neighborhood-oriented commercial centers that serve the retail, service, and entertainment needs of the community, uses of which do not include schools. This existing land use designation is not in place for the purpose of avoiding or mitigating an environmental effect, and the proposed school would serve community needs for more educational space.

However, as described in Chapter 4.9, Hazards and Hazardous Materials, the project is located within two nautical miles of the Livermore Municipal Airport. This places the project within the Airport Influence Area (AIA) for the Livermore Municipal Airport. The project falls within Safety Zone 7 of the AIA for which guidance from the Airport Land Use Compatibility Plan (ALUCP) states that an aviation easement restricting the heights of structures or trees should be dedicated to the City of Livermore as a condition for discretionary approval of properties within the AIA. Specifically, structures more than 200 feet in height above ground level would require notice to the local Federal Aviation Authority manager. The proposed project would not include buildings or infrastructure higher than 100 feet above ground level. However, an aviation easement would still be required and would serve the purpose of mitigating hazards relating to the airport. Therefore, this would result in a less than significant impact.

Significance without Mitigation: Significant.

Impact LU-2: The proposed school site falls inside Safety Zone 7 of the AIA, which requires that an aviation easement restricting the heights of structures or trees be dedicated to the City of Livermore as a condition for discretionary local approval of projects within the AIA.

Mitigation Measure LU-2: Implementation of Mitigation Measure HAZ-5.

Significance with Mitigation: Less than significant.

4.10.4 CUMULATIVE IMPACTS

LU-3	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to land use and planning.
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The cumulative impact for land use and planning includes potential future development of the proposed project combined with effects of development of the future projects listed in Table 4-1, Cumulative Projects within the Vicinity of the Proposed Project, in Chapter 4.0. A cumulative impact would be

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considered significant if, taken together with past, present and reasonably foreseeable projects in the identified area, the project would conflict with applicable land use plans, policies, or regulations.

Approval of the cumulative projects by the City of Dublin and surrounding jurisdictions would be contingent on those projects either conforming to existing zoning and General Plan land use regulations for those sites or obtaining approval of zone changes and/or General Plan amendments. As discussed above, the proposed project would not physically divide an existing community. In addition, it would not conflict with a land use plan, policy, or regulation that is intended to avoid or mitigate an environmental effect. The purpose of the proposed project is to serve the needs of the community and the growing student population. Therefore, the proposed project would not contribute to a cumulative land use and planning impact and the impact would be less than significant.

Significance Without Mitigation: Less than significant.

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4.11. NOISE

This chapter describes the regulatory framework and existing conditions of the project site related to noise and vibration, and the potential impacts of the New Comprehensive Dublin High School Project. This section examines state and local noise guidelines, policies, and standards; reviews noise levels at existing receptor locations; evaluates potential noise and vibration impacts associated with the project; and provides mitigation to reduce potential noise and vibration impacts at nearby receptors. This evaluation uses procedures and methodologies as specified by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The analysis in this section is based in part on the noise modeling data included in Appendix H of this Draft EIR.

4.11.1. ENVIRONMENTAL SETTING

4.11.1.1. NOISE DESCRIPTORS

The following are brief definitions of terminology used in this chapter. Appendix H includes a summary of noise and vibration fundamentals.

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level 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.”
- **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 p.m. to 7:00 a.m.

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- **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 p.m. to 10:00 p.m. and 10 dB from 10:00 p.m. to 7:00 p.m. 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 signal value of an oscillating vibration velocity waveform, usually expressed in inches per second (in/sec).
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

4.11.1.2. REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. There are no federal regulations that apply directly to the proposed project. The following regulations apply to the proposed project.

State Regulations

Standards for School Sites

Under Title 5 of the California Code of Regulations, Section 14010(e), the California Department of Education (CDE) requires public school districts to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

CALGreen

The California Green Building Standards Code (CALGreen) has requirements for insulation that affect exterior-interior noise transmission for nonresidential structures. Pursuant to CALGreen Section 5.507.4.1, *Exterior Noise Transmission*, an architectural acoustics study may be required when a project site is within a 65 dBA CNEL or L_{dn} noise contour of an airport, freeway or expressway, railroad, industrial source or fixed-guideway source. Where noise contours are not readily available, if buildings are exposed to a noise level of 65 dBA L_{eq} during any hour of operation, specific wall and ceiling assembly and sound-rated windows may be necessary to reduce interior noise to acceptable levels.

Local Regulations

Dublin General Plan

The City of Dublin has introduced guiding and implementing policies in the General Plan's Noise Element. The following policies are relevant to the proposed project:

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- Guiding Policy 9.2.1.A: Where feasible, mitigate traffic noise to levels indicated by Table 4.11-1, Land Use Compatibility for Community Noise Environments.
 - Implementing Policies 9.2.1.B
 - 4. Noise impacts related to all new development shall be analyzed by a certified acoustic consultant.
 - 7. Review all non-residential development proposals within the projected CNEL 65 dBA contour for compliance with exterior noise transmission standards as required by the California Green Building Standards Code.
- Guiding Policy 9.3.1.A: All proposed land uses within the Airport Influence Area (AIA) shall be reviewed for consistency with the noise compatibility policies and overflight policies of the Airport Land Use Compatibility Plan (ALUCP) for the Livermore Municipal Airport.
 - Implementing Policy 9.2.1.B
 - 1. Adopt an Airport Overlay Zoning District to ensure that all proposed development within the Airport Influence Area (AIA) is reviewed for consistency with all applicable Livermore Municipal Airport, Airport Land Use Compatibility Plan (ALUCP) policies.

TABLE 4.11-1 LAND USE COMPATIBILITY FOR COMMUNITY EXTERIOR NOISE ENVIRONMENTS, dBA

Land Use Category	Exterior Noise Exposure (CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential	60 or less	61-70	71-75	Over 75
Motels, Hotels	60 or less	61-70	71-80	Over 80
Schools, Churches, nursing homes	60 or less	61-70	71-80	Over 80
Neighborhood parks	60 or less	61-65	66-70	Over 70
Office: retail commercial	70 or less	71-75	76-80	Over 80
Industrial	70 or less	71-75	Over 75	N/A

Notes: Conditionally acceptable exposure requires noise insulation features in building design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Source: City of Dublin General Plan

Dublin Municipal Code

The City of Dublin has adopted a noise ordinance in Chapter 5.28 of the Municipal Code. The noise ordinance states it is unlawful and a nuisance for any person within the city to maintain, emit, cause, or permit any animal owned to make any loud, disturbing, unnecessary, unusual or habitual noise, or any noise which annoys, disturbs, injures or endangers the health, repose, peace or safety of any reasonable person of normal sensitivity present in the area.

The standards do not set a quantified decibel limit, though the City includes but is not limited to the following considerations in determining a noise violation:

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- The level, intensity, character and duration of the noise;
- The level, intensity and character of background noise, if any;
- The time when and the place and zoning district where the noise occurred;
- The proximity of the noise to residential sleeping facilities; and
- Whether the noise is recurrent, intermittent or constant.

Section 8.36.060(C)(3) states that equipment such as swimming pool, spa, and air conditioning equipment is required to be enclosed for lots greater than 5,000 square feet and within 10 feet of a residential use to achieve noise attenuation of noise levels of 50 dBA or less at any time at the receiving property line. The District is technically exempt from Title 8 of the City's Municipal Code pursuant to the District's Government Code section 53094 resolution adopted by its Board of Trustees on December 17, 2019. However, the District considers the above requirements relevant to the determination of whether the District's project imposes significant noise impacts, and will follow these requirements in implementing the project.

Vibration

The City of Dublin does not have specific limits for vibration from construction activities. The FTA provides criteria for acceptable levels of ground-borne vibration for various types of buildings. The FTA criteria are used for this analysis. Structures amplify groundborne vibration and wood-frame buildings, such as typical residential structures, are more affected by ground vibration than heavier buildings. The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively. The most conservative estimates are reflected in the FTA standards, shown in Table 4.11-2.

TABLE 4.11-2 CONSTRUCTION VIBRATION DAMAGE

Building Structural Category	PPV, in/sec
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September.

Existing Conditions

The project site is in a predominately residential area with a noise environment influenced primarily by roadway noise from Dublin Boulevard and Central Parkway. Noise from nearby residential uses (e.g., property maintenance), park activity, and commercial uses to the southwest also contribute to the total noise environment intermittently in the project vicinity.

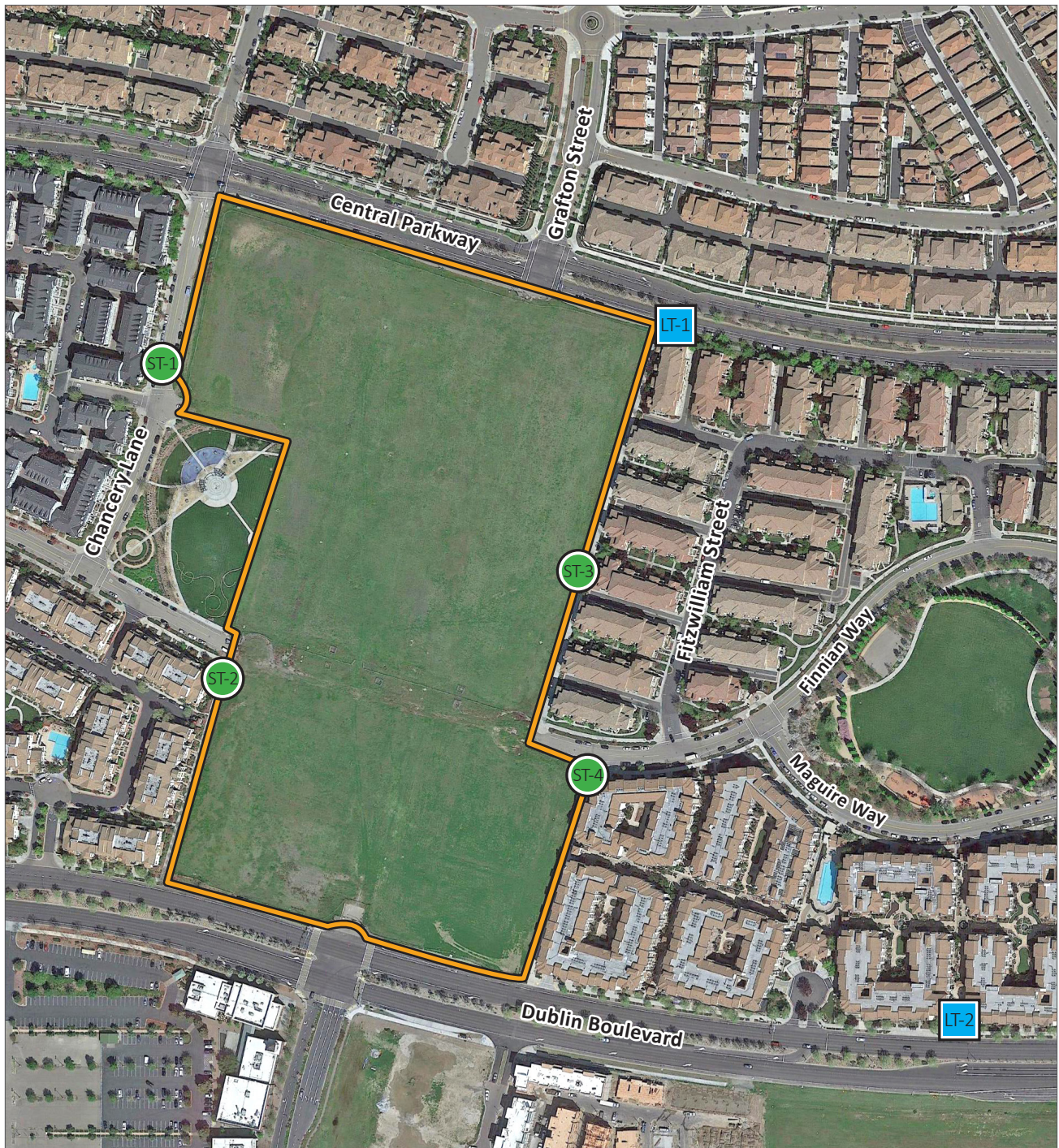
Ambient Noise Monitoring Results

To determine baseline noise levels in the project vicinity, ambient noise monitoring was conducted by PlaceWorks in January 2020. Measurements were made during weekday periods when the project area is expected to be most active. Two long-term (24 hour) measurements were conducted within the project vicinity, and short-term (15 minute) measurements were conducted at four locations in the project area. All measurements were conducted from Tuesday, January 7 through Wednesday, January 8 of 2020. The short-term measurements were conducted during evening hours (7:00 p.m. to 10:00 p.m.) to provide an ambient baseline during the time that proposed stadium events would occur.

The primary noise source around the measurements was traffic. Meteorological conditions during the measurement periods were favorable for outdoor sound measurements and were noted to be representative of the typical conditions for the season. All sound level meters used for noise monitoring satisfy the American National Standards Institute (ANSI) standard for Type 1 instrumentation.¹ The sound level meters were set to “slow” response and “A” weighting (dBA). The meters were calibrated prior to and after the monitoring period. All measurements were at least five feet above the ground and away from reflective surfaces. Noise measurement locations are described below and shown in Figure 4.11-1. A summary of the daily trend during long-term noise measurements are provided in Appendix H. The short-term noise measurement results are summarized in Table 4.11-3.

¹ Monitoring of ambient noise was performed using Larson-Davis Model LxT and 820 sound level meters.

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Source: Google Earth, 2020; PlaceWorks, 2020.






-  Project Site
-  ST = Short-term Measurement Location
-  LT = Long-term Measurement Location

Figure 4.11-1
Approximate Noise Monitoring Locations

TABLE 4.11-3 SHORT-TERM NOISE MEASUREMENTS SUMMARY IN A-WEIGHTED SOUND LEVELS

Monitoring Location	Description	15-Minute Noise Level, dBA		
		L _{min}	L _{eq}	L _{max}
ST-1	Northwestern property line, Chancery Lane – 9:28 p.m., 1/8/2020	35.1	46.9	66.0
ST-2	Southwestern property line – 9:04 p.m., 1/8/2020	42.4	46.5	56.3
ST-3	Northeastern property line – 7:58 p.m., 1/8/2020	48.8	52.5	65.5
ST-4	Southeastern property line, Finnian Way – 8:31 p.m., 1/8/2020	45.9	52.2	65.4

Source: PlaceWorks 2020

The following describes the noise monitoring locations:

- **Long-Term Location 1 (LT-1)** was approximately 25 feet south of the closest Central Parkway eastbound travel lane centerline. A 24-hour noise measurement was conducted, beginning at the 5:00 p.m. hour on Tuesday, January 7, 2020. The noise environment of this site is characterized primarily by local traffic on Central Parkway and the measured CNEL was 65 dBA.
- **Long-Term Location 1 (LT-2)** was approximately 15 feet north of the closest Dublin Boulevard westbound travel lane centerline. A 24-hour noise measurement was conducted, beginning at the 6:00 p.m. hour on Tuesday, January 7, 2020. The noise environment of this site is characterized primarily by local traffic on Dublin Boulevard and the measured CNEL was 72 dBA.
- **Short-Term Location 1 (ST-1)** was in front of residences on Chancery Lane near the northwestern project property line. A 15-minute noise measurement was conducted at 9:28 p.m. The evening noise environment of this site is characterized primarily by low vehicle volumes on Chancery Lane and distant traffic noise.
- **Short-Term Location 2 (ST-2)** was at the southwestern project property line adjacent to residences on Finnian Way/Clarinbridge Circle. A 15-minute noise measurement was conducted at 9:04 p.m. The evening noise environment of this site is characterized primarily by distant traffic noise.
- **Short-Term Location 3 (ST-3)** was at the northeastern project property line adjacent to residences on Fitzwilliam Street. A 15-minute noise measurement was conducted at 7:58 p.m. The evening noise environment of this site is characterized primarily by distant traffic noise. Secondary noise sources such as skateboard and pedestrian pass-bys, and intermittent dog barking also contributed to the noise environment at this location.
- **Short-Term Location 4 (ST-4)** was in front of 3457 Finnian Way at the southeastern project property line adjacent to residences on Fitzwilliam Street/Finnian Way. A 15-minute noise measurement was conducted at 8:31 p.m. The evening noise environment of this site is characterized primarily by low vehicle volumes on Finnian Way and distant traffic noise. Secondary noise sources such as pedestrian pass-bys also contributed to the noise environment at this location.

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Sensitive Receptors

Certain land uses, such as residences, schools, and hospitals are particularly sensitive to noise and vibration. Sensitive receptors within the City include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise or vibration.

The site is bounded by multi-family residential uses to the east and west. In addition to residential uses, Devany Square Park is adjacent to the project site to the west. Additional multi-residential uses are located further to the southeast across Dublin Boulevard and to the north across Central Parkway.

4.11.2. STANDARDS OF SIGNIFICANCE

The proposed project would result in significant noise impacts if it would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards.
2. Generate excessive groundborne vibration or groundborne noise levels.
3. 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, expose people residing or working in the project area to excessive noise levels.
4. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to noise.

4.11.1.3. CONSTRUCTION NOISE THRESHOLDS

The City has not established noise limits for temporary construction activities. The FTA recommends a noise level limit of 80 dBA $L_{eq}(8hr)$ for residential receptors, which is used in this analysis to assess construction noise impacts.

4.11.1.4. TRANSPORTATION NOISE THRESHOLDS

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions; changes of 1 to 3 dBA are detectable under quiet, controlled conditions; and changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, traffic noise impacts are considered significant if sensitive receptor locations experience a 3 dBA CNEL or more noise increase with implementation of the project. For roadway segments where the existing ambient is less than 60 dBA

CNEL, a traffic noise increase of 5 dBA CNEL or greater at sensitive receptor locations would be considered significant. This is consistent with guidance published by the FAA.²

4.11.1.5. STATIONARY NOISE THRESHOLDS

As summarized under Local Regulations, noise levels from mechanical equipment generally shall not exceed 50 dBA at any time at the receiving property line. For periodic increases in ambient noise, such as due to proposed stadium events, a threshold of 10 dBA is used, which is generally perceived to be a doubling of loudness. For periodic events, a higher increase is allowed than for permanent noise increases of 3 and 5 dBA above. Above a 10 dBA increase, periodic events (such as stadium events) would be considered significant.

4.11.1.6. VIBRATION THRESHOLDS

Per the FTA criteria, the threshold for architectural damage for buildings with non-engineered timber and masonry (i.e., residential buildings), the criterion is 0.2 in/sec PPV.

4.11.3. IMPACT DISCUSSION

NOI-1	The project would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards.
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Traffic Noise

As discussed above, only “audible” changes in noise levels at sensitive receptor locations (i.e., 3 dBA or more) are considered potentially significant. Note that a doubling of traffic flows (i.e., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dBA CNEL increase in traffic-generated noise levels. For roadway segments where the existing ambient is less than 60 dBA CNEL, a traffic noise increase of 5 dBA CNEL or greater would be considered significant. Table 4.11-4 summarizes the project and cumulative traffic noise increases on roadway segments in the traffic study area based on traffic volume data provided by Fehr & Peers for the project and the following formula: 10*LOG(Existing + Project/Existing). These are the permanent noise increases estimated to be experienced at sensitive receptor locations.

² Federal Aviation Administration, 2020. 1050.1F Desk Reference, Version 2. February.

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TABLE 4.11-4 PROJECT-RELATED INCREASE IN TRAFFIC NOISE

Roadway Segment	Daily Traffic Volumes				Project Increase (dBA)	Cumulative Increase (dBA)	Cumulative Increase due to Project (dBA)
	Existing	Existing + Project	Cumulative No Project	Cumulative + Project			
Tassajara Road - North of Gleason Drive	18,150	20,511	23,556	25,917	0.5	1.5	0.4
Tassajara Road - Central Parkway to Gleason Drive	17,750	19,517	21,611	23,378	0.4	1.2	0.3
Tassajara Road - Dublin Blvd. to Central Parkway	20,000	20,378	22,444	22,822	0.1	0.6	0.1
Tassajara Road - 580 to Dublin Boulevard	28,133	28,828	51,111	51,806	0.1	2.7	0.1
Lee Thompson Street - North of Central Parkway	1,933	3,106	2,333	3,506	2.1	2.6	1.8
Keegan Street - Dublin Blvd. to Central Parkway	1,961	2,783	3,444	4,267	1.5	3.4	0.9
Fallon Road - North of Gleason Drive	11,361	12,539	20,222	21,400	0.4	2.7	0.2
Fallon Road - I-580 to Dublin Boulevard	20,833	21,300	34,167	34,633	0.1	2.2	0.1
Fallon Road - Central Parkway to Gleason Drive	14,228	15,406	24,444	25,622	0.3	2.6	0.2
Fallon Road - Dublin Boulevard to Central Parkway	18,878	20,856	34,056	36,033	0.4	2.8	0.0
Grafton Street - Central Parkway to Gleason Drive	1,489	3,261	3,500	5,272	3.4 ¹	5.5	1.8
Chancery Lane - Finnian Way to Central Parkway	756	1,467	1,056	1,767	2.9	3.7	2.2
Dublin Blvd.- Tassajara Road to Brannigan Street	15,306	16,089	46,222	47,006	0.2	4.9	0.1
Dublin Blvd.- Brannigan Street to Grafton Street	13,583	14,044	44,778	45,239	0.1	5.2	0.0
Dublin Blvd. - Grafton Street to Keegan Street	12,972	14,650	43,500	45,178	0.5	5.4	0.2
Dublin Blvd. - Keegan Street to Fallon Road	8,478	10,589	30,778	32,889	1.0	5.9	0.3
Central Parkway - Tassajara Road to Brannigan St.	5,933	7,611	8,167	9,844	1.1	2.2	0.8
Central Parkway - Brannigan Street to Chancery Ln.	5,000	7,472	8,611	11,083	1.7	3.5	1.1
Central Parkway - Chancery Lane to Grafton Street	4,900	7,367	8,333	10,800	1.8	3.4	1.1
Central Parkway - Grafton Street to Keegan Street	4,033	8,189	7,389	11,544	3.1	4.6	1.9
Central Parkway - Keegan Street to Fallon Road	3,617	6,711	8,500	11,594	2.7	5.1	1.3

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TABLE 4.11-4 PROJECT-RELATED INCREASE IN TRAFFIC NOISE

Roadway Segment	Daily Traffic Volumes				Project Increase (dBA)	Cumulative Increase (dBA)	Cumulative Increase due to Project (dBA)
	Existing	Existing + Project	Cumulative No Project	Cumulative + Project			
Central Parkway - East of Fallon Road	7,128	8,306	8,222	9,400	0.7	1.2	0.6
Gleason Drive - Tassajara Road to Brannigan Street	7,094	7,689	9,500	10,094	0.3	1.5	0.3
Gleason Drive - Brannigan Street to Grafton Street	4,806	4,806	6,000	6,000	0.0	1.0	0.0
Gleason Drive - Grafton Street to Fallon Road	4,622	4,622	6,944	6,944	0.0	1.8	0.0

Notes: **Bold** = 3 dBA or more noise increase and/or Cumulative Increase due to Project of 1 dBA or greater.

¹ Since existing ambient noise levels along Grafton Street are less than 60 dBA CNEL, the threshold of 5 dBA CNEL would apply.

Source: Fehr & Peers, 2020, PlaceWorks, 2020.

As shown in Table 4.11-4, traffic noise increases due to the project would typically be less than 1 dBA, except for the Grafton Street segment between Central Parkway to Gleason Drive and the Central Parkway segment between Grafton Street and Keegan Street, where traffic noise is projected to increase by more than 3 dBA. However, based on the future noise contour map from the City's Noise Element, existing ambient noise levels along Grafton Street are less than 60 dBA CNEL and the threshold of 5 dBA CNEL would apply. Since the traffic noise increase along Grafton Street is not projected to exceed 5 dBA CNEL, this would be less than significant. The traffic noise impact along Central Parkway between Grafton Street and Keegan Street, where existing ambient noise levels exceed 60 dBA CNEL based on LT-1 measurement results, would be a *significant* impact to all residences along this segment. Cumulative impacts are discussed under Impact NOI-4.

Impact NOI-1: Traffic associated with operation of the proposed project would result in a substantial permanent noise increase to those residences located along the Central Parkway between Grafton Street and Keegan Street roadway segment.

Mitigation Measures Considered

In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of the project it carries out or approves whenever it is feasible to do so."³ The term "feasible" is defined in CEQA to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."⁴ Measures were considered for mitigating or avoiding the traffic noise impacts, including the two measures discussed below.

³ Public Resources Code Section 21002.1(b)

⁴ Public Resources Code Section 21061.1

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Special Roadway Paving

Notable reductions in tire noise have been achieved via the implementation of special paving materials, such as rubberized asphalt or open-grade asphalt concrete overlays. For example, the California Department of Transportation conducted a study of pavement noise along Interstate 80 in Davis⁵ and found an average improvement of 6-7 dBA compared to conventional asphalt overlay.

Although this amount of noise reduction from rubberized/special asphalt materials would be sufficient to avoid the predicted noise increase due to traffic in some cases, the potential up-front and ongoing maintenance costs are such that the cost versus benefits ratio⁶ is determined to not be feasible and reasonable due to the associated cost and City authority over public roadway improvements. In addition, the study found that noise levels increased over time due to pavement raveling, with the chance of noise level increases higher after a ten-year period.

Sound Barrier Walls

Residences along Central Parkway have pedestrian access to the associated roadway. Therefore, barrier walls would prevent access to individual properties and would be infeasible. Further, these impacted homes are on private property outside of the control of the District, so there may be limited admittance onto these properties to construct such walls.

Summary

In summary, no individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels along Central Parkway.

Significance without Mitigation: Significant and unavoidable.

Stationary Noise

Heating, ventilation, and air conditioning (HVAC) systems will be installed at the new proposed buildings. However, the exact locations and specific type are not known at this stage of the project. Per Municipal Code Section 8.36.060(C)(3), mechanical equipment within 10 feet of a residential use would be enclosed, including HVAC equipment and pool pumps. It is therefore anticipated that there will be no significant noise impacts associated with installation of such mechanical equipment, including HVAC systems.

⁵ California Department of Transportation, 2011, I-80 Davis OGAC Pavement Noise Study.

⁶ Cost versus benefit considerations are in terms of the number of households benefited, per the general methodology employed by Caltrans in the evaluation of highway sound walls.

Operational stationary noise sources from the proposed stadium PA system and crowd noise were modeled using the SoundPLAN computer program. SoundPLAN uses industry-accepted propagation algorithms based on International Organization for Standardization (ISO) and ÖAL-28 standards for outdoor sound propagation. The modeling calculations account for classical sound wave divergence (spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, ground effects, and shielding. Additionally, SoundPLAN provides for other correction factors, including level increases due to reflections, source directivity, and source tonality.

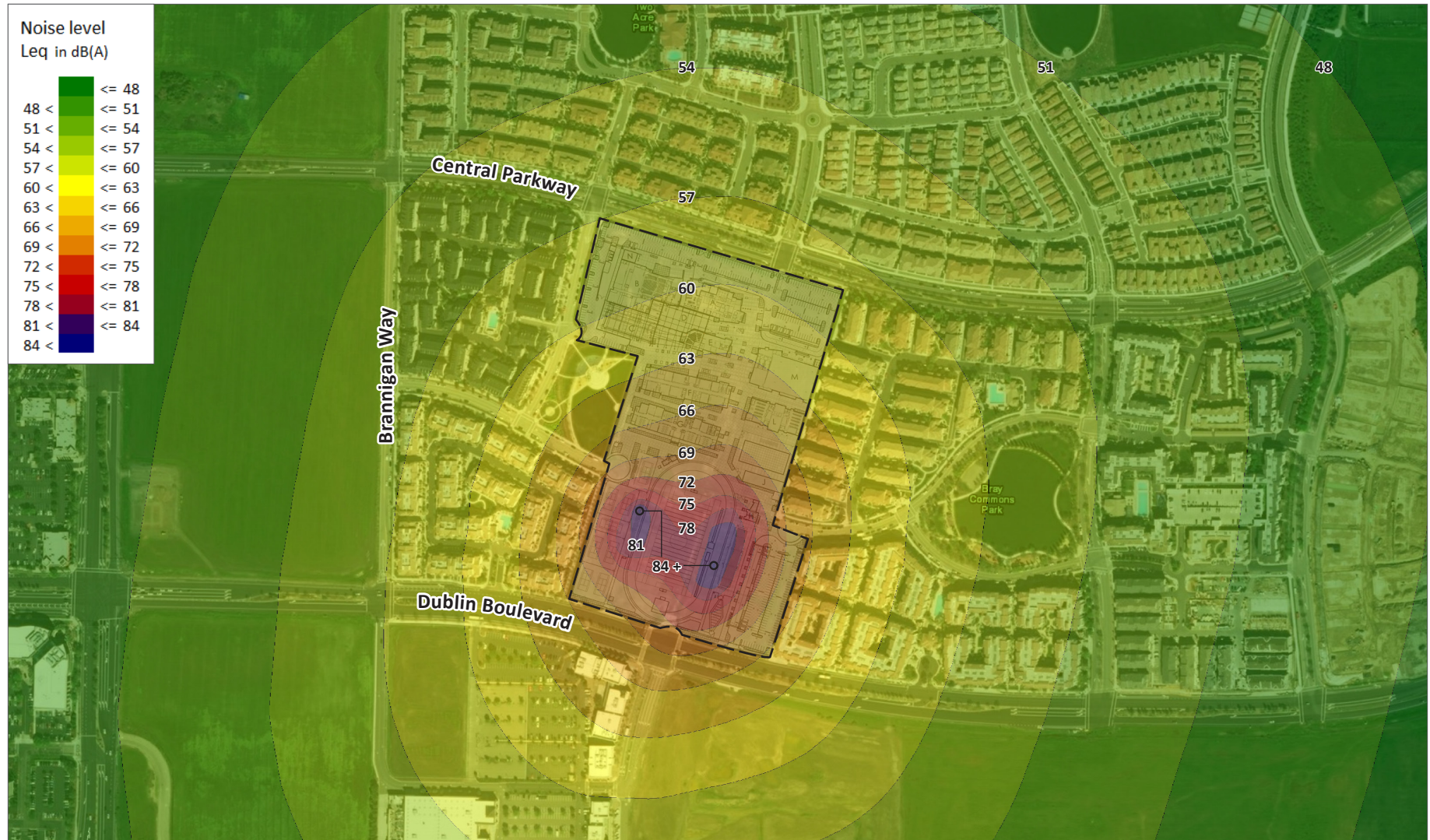
Noise modeling was conducted for residential locations closest to the project site, as shown on Figure 4.11-2, *Future Stadium Noise Contours*. The sports field is in an area that is mostly flat. The 4,000-seat stadium bleachers would be located on the southern end of the property and the proposed school's outdoor instruction and activity areas would be located between the western property line and the stadium. Ongoing operations of the stadium would generate noise associated with crowds and amplified music and speech from the proposed PA system. There are 68 events anticipated per year which would require use of the stadium with lights and sound in the evening hours. The future bleacher and PA noise was modeled assuming project operational noise between the hours of 7:00 PM and 10:00 PM. The operational noise analysis assumed full capacity of the stadium. Detailed information about stadium events is included in Section 3, Project Description.

The field would have lighting mounted on four poles. Two of the poles would be located on the west side of the stadium with the remaining two on the east side of the stadium. Speakers are proposed to be mounted on the two visitor side light poles. On the home side, speakers would be mounted to the top of the press box. Speakers would be mounted at a height of approximately 40 feet. Speakers are anticipated to be Bose Professional ArenaMatch and ArenaMatch Utility models. Each speaker set was modeled as an individual point source, and both bleachers were modeled as area sources. The SoundPLAN modeling outputs are included in Appendix H.

As shown in Table 4.11-3, during short-term noise monitoring in the project vicinity, noise levels ranged from approximately 47 to 53 dBA L_{eq} . Results of SoundPLAN modeling indicate that future operational noise levels from a full capacity stadium event are predicted to range as high as 71 dBA L_{eq} at the first row of residential property lines (third floor) to the east of the project. This would result in periodic ambient noise increases of approximately 20 dBA and exceed the significance threshold of 10 dBA for periodic events. Special events of less than full capacity would be expected to increase ambient noise levels to a lesser degree. Therefore, because operational noise from special events would cause a periodic substantial increase in ambient noise levels, this impact would be considered significant.

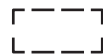
Significance without Mitigation: Significant.

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Source: Esri. PlaceWorks, 2020.

0 500
Scale (Feet)



Project Site Boundary

Figure 4.11-2
Future Stadium Noise Contours

Impact NOI-1.2: Operation of the stadium and outdoor recreational activities would result in a substantial periodic noise increase.

Mitigation Measure NOI-1.2: Prior to holding the first spectator event, the District shall develop and enforce a good-neighbor policy for sports field events. Signs shall be erected at entry points that state prohibited activities during an event (e.g., use of air horns, unapproved audio amplification systems, bleacher foot-stomping, loud activity in parking lots upon exiting the field), and events shall be monitored and enforced by the District staff. In addition, the following measures shall be implemented:

- During subsequent design phases of the bleachers and PA system, the District's sound system contractor shall create a Stadium Sound System Design Plan. The project's sound system design goal will be to optimize conveying information to the event attendees while minimizing off-site spill-over effects. Design measures include, but are not limited to, bandwidth and peak limiter installation, speaker angle and directivity, and setting a maximum noise level at the PA control console.
- Prior to the first sports field event, the sound system installation contractor shall perform a system noise level check to verify minimized spill-over noise (noise which winds up where it is not intended) into the adjacent community areas.

Mitigation Measures Considered

In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of the project it carries out or approves whenever it is feasible to do so."⁷ The term "feasible" is defined in CEQA to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."⁸ A permanent noise barrier along the property line adjacent to the proposed stadium, stadium parking, and outdoor pool was considered for mitigating the operational stadium noise impacts. However, this mitigation is determined to not be feasible and reasonable due to the associated cost, and because the proposed barrier would likely conflict with certain easements and utilities owned by the Dublin San Ramon Services District and the City of Dublin.

Significance with Mitigation: Implementation of Mitigation Measure NOISE-2 would minimize operational noise impacts during periodic special events such as sporting activities. However, the measure would not completely eliminate periodic substantial increases in ambient noise levels at the adjacent residential community. Therefore, this impact would remain significant and unavoidable with mitigation.

Construction Noise

Construction activities are anticipated to occur for approximately one and a half years. Proposed phases include site preparation, grading, building construction, paving, and architectural coating/painting. Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from transport

⁷ Public Resources Code Section 21002.1(b)

⁸ Public Resources Code Section 21061.1

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of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment. Existing uses surrounding the project site would be exposed to construction noise.

Construction Vehicles

The transport of workers and materials to and from the construction site would incrementally increase noise levels along access routes. Individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, but these occurrences would generally be infrequent and short lived and no nighttime truck hauling is proposed.

Construction Equipment

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. Each phase of construction involves the use of different kinds of construction equipment and therefore has its own distinct noise characteristics. 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. Noise levels from project-related construction activities were calculated from the simultaneous use of all applicable construction equipment at spatially averaged distances (i.e., from the center of the general construction area) to the property line of the closest sensitive receptors. Although construction may occur across the entire site, the center of the proposed project best represents the potential average construction-related noise levels to the various sensitive receptors during the overall construction portion of the proposed project.

Each phase of construction has a different equipment mix, depending on the work to be accomplished. The noise produced at each phase is determined by combining the L_{eq} contributions from each piece of equipment used at a given time. Construction activities associated with the proposed project would not require blasting or pile driving. In the construction of residential and mixed-use projects, demolition and grading typically generate the highest noise levels because they require the largest equipment. Construction noise quite often exhibits a high degree of variability because factors such as noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase result in different noise levels at a given sensitive receptor. Heavy equipment such as dozers, graders, excavators, loaders, and pavers and rollers can have maximum, short-duration noise levels of 85 dBA at 50 feet.⁹ Since noise from construction equipment is intermittent and diminishes at a rate of 6 dB per doubling distance, the average noise levels at noise-sensitive receptors could be lower, because mobile construction equipment would move around the site with different loads and power requirements.

The nearest residences are adjacent to both the east and the west and at times construction noise levels could exceed the threshold of 80 dBA L_{eq} over a more than two-year construction period. Due to the anticipated length of construction, nearby residences and the likelihood that at times construction noise

⁹ Federal Highway Administration, 2006. *Roadway Construction Noise Model User's Guide*. January.

levels would exceed the significance threshold, temporary construction noise would result in a potentially significant impact.

Impact NOI-1.3: Construction activities would result in a substantial temporary noise increase.

Mitigation Measure NOI-1.3: The project sponsor shall incorporate the following practices into the construction contract agreement documents to be implemented by the construction contractor during the entire construction phase of the project:

- The project sponsor and contractors shall prepare a Construction Noise Control Plan. The details of the Construction Noise Control Plan shall be included as part of the construction drawing set and shall include, but are not limited to, the following:
 - Limit construction to daytime hours (7:00 a.m. to 7:00 p.m.) and prohibit construction on Sundays and holidays.
 - At least 30 days prior to the start of construction activities, all off-site businesses and residents within 500' of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the District's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.
 - At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the District's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the District.
 - Erect a temporary noise barrier between the construction zone and adjacent residences along the eastern and western project boundaries. The temporary sound barrier shall have a minimum height of 12 feet and be free of gaps and holes. The barrier can be (a) a ¾-inch-thick plywood wall OR (b) a hanging blanket/curtain with a surface density of at least 2 pounds per square foot.
 - During the entire active construction period, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
 - Require the contractor to use impact tools that are hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
 - During the entire active construction period, stationary noise sources shall be located as far from sensitive receptors as possible, and they shall be muffled and enclosed within temporary sheds, or insulation barriers or other measures shall be incorporated to the extent feasible.

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- The District shall select haul routes that avoid the greatest amount of sensitive use areas.
- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.
- During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.

Significance with Mitigation: With implementation of Mitigation Measure NOI-1.3, including the provision of a temporary noise barrier, project-related construction noise would be reduced by approximately 15 dBA, reducing noise levels to below the threshold of 80 dBA L_{eq} . With mitigation, this impact would be less than significant.

Land Use Compatibility

The General Plan Noise Element provides noise compatibility guidelines for new land uses (see Table 4.11-1). The matrix shows new school uses to be Conditionally Acceptable if between 61 and 70 dBA CNEL. Based on field noise measurements, the estimated CNEL at the proposed classroom building setback nearest Central Parkway would be 59 dBA CNEL, which would fall under the Normally Acceptable range (60 dBA CNEL or less). On-site stadium special events (which would primarily occur during evening hours when classes are not in session) would not have a significant impact on the land use compatibility of the project site as a school. Therefore, the project site would be compatible as a school use based on the proposed classroom setback and this impact would be less than significant.

Significance without Mitigation: Less than significant.

NOI-2	The project could generate excessive groundborne vibration levels.
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Operational Vibration (Long-Term)

The operation of the proposed project would not include any substantial long-term vibration sources. Thus, no significant vibration effects from operations sources would occur.

Construction Vibration Impacts (Short-Term)

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation 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.

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For reference, a PPV of 0.2 in/sec is used as the limit for non-engineered timber and masonry buildings (which would apply to the surrounding structures). At a distance of 25 feet or greater, construction-generated vibration levels at the nearest building would be less than the 0.2 in/sec PPV vibration damage criterion. The nearest structures are residential homes adjacent to the proposed parking lots on the eastern property line and residences adjacent to the hardcourts proposed on the western property. This could result in vibration levels above 0.2 in/sec PPV if a vibratory roller is used within approximately 25 feet, as shown in Table 4.11-5, thereby resulting in a potentially significant impact.

TABLE 4.11-5 VIBRATION LEVELS FOR TYPICAL CONSTRUCTION EQUIPMENT

Equipment	PPV (In/Sec) at 25 Feet	PPV (In/Sec) at 20 Feet
Vibratory Roller	0.21	0.28
Large Bulldozer	0.089	0.12
Loaded Trucks	0.076	0.11
Jackhammer	0.035	0.05
Small Bulldozer	<0.01	<0.01

Source: Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment*.

Significance without Mitigation: Potentially significant.

Impact NOI-2: Vibration associated with construction of the proposed project could impact residential land uses within 25 feet of project site paving activities.

Mitigation Measure NOI-2: The use of a static roller in place of a vibratory roller will be used to reduce vibration levels below the performance standard of 0.2 in/sec PPV if paving is required within 25 feet of off-site residential buildings.

Significance with Mitigation: Implementation of Mitigation Measure NOISE-4 would reduce construction vibration levels at the surrounding residential structures to a level less than significant. Specifically, use of a static roller is predicted to generate vibration levels of approximately 0.05 in/sec PPV at a distance of 25 feet.¹⁰ This would equate to approximately 0.2 in/sec PPV or less at a distance of 10 feet or greater.

NOI-3 **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 2 miles of a public airport or public use airport, the project would not expose people residing or working in the project area to excessive noise levels.**

The nearest airport to the proposed project is the Livermore Municipal Airport, approximately two miles southeast of the project site. Based on the Livermore Municipal Airport Land Use Compatibility Plan noise compatibility figure, the project site would be well outside of the 55 dBA CNEL noise contour. At times, individual aircraft overflights could be audible at the project site; however, as discussed in the project description, the classroom buildings would be air conditioned, allowing for doors and windows to remain closed during instruction. The project would not expose people working in the project area to excessive noise levels.

¹⁰ IR McIver, GREENBeing Consulting Engineers. 2012, May. *Ground Vibration From Road Construction*. New Zealand Transport Agency Research Report 485.

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Significance Without Mitigation: Less than significant.

4.11.4. CUMULATIVE IMPACTS

NOI-4	The project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to traffic noise.
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A significant cumulative traffic noise increase would be identified if project traffic were calculated to contribute 1 dBA or more under Cumulative plus Project conditions to a significant traffic noise increase over existing conditions. That is, if a cumulative traffic noise increase of greater than the 3 dBA significance threshold of perceptibility is calculated, and the relative contribution from project traffic is calculated to contribute 1 dBA or more to this cumulative impact, it would be considered cumulatively considerable.

As shown in Table 4.11-4, several roadway segments in the traffic study area would experience a cumulative traffic noise increase above 3 dBA where the project would contribute over 1 dBA to this increase, which would be considered cumulatively considerable. This would be a *significant* impact.

Significance without Mitigation: Significant.

Impact NOI-4: The project, in combination with past, present, and reasonably foreseeable projects, would result in *significant* cumulative impacts with respect to traffic noise.

Significance with Mitigation: Significant and unavoidable. As discussed under Impact NOI-1, noise reduction measures were considered such as special roadway paving and sound barrier walls. However, no individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels. This impact would, therefore, remain significant and unavoidable.

POPULATION & HOUSING

4.12 POPULATION AND HOUSING

This chapter describes the regulatory framework and existing conditions on the project site related to population and housing, and the potential impacts of the project on population and housing.

4.12.1 ENVIRONMENTAL SETTING

4.12.1.1 REGULATORY FRAMEWORK

This section summarizes key State, regional, and local regulations and policies pertaining to population and housing that are applicable to the proposed project. There are no federal regulations regarding population and housing that are applicable to the proposed project.

State Regulations

California Housing Element Law

The California Housing Element Law¹ includes provisions related to the requirements for housing elements of local government General Plans. These requirements include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, local jurisdictions must plan for, and allow the construction of, a share of the region's projected housing needs.

Regional Regulations

Association of Bay Area Governments Projections 2013

The Association of Bay Area Governments (ABAG) is the official comprehensive planning agency for the San Francisco Bay region, which is composed of the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, and contains 101 cities. ABAG produces growth forecasts so that other regional agencies, including the Metropolitan Transportation Commission (MTC) and the Bay Area Air Quality Management District, can use the forecast to make project funding and regulatory decisions.

ABAG projections are the basis for the Regional Transportation Plan (RTP) and the regional Ozone Attainment Plan. In this way, ABAG projections have practical consequences that shape growth and environmental quality. The general plans, zoning regulations, and growth management programs of local jurisdictions inform ABAG projections. The projections are also developed to reflect the impact of "smart growth" policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout their region.

¹ Government Code Sections 65580 through 65589.8.

POPULATION & HOUSING

Regional Housing Needs Allocation

Housing Element law requires local jurisdictions to plan for, and allow the construction of, a share of the region's projected housing needs. This share is called the Regional Housing Needs Allocation. State law mandates that each jurisdiction provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community to meet or exceed the RHNA. As the regional planning agency, ABAG is responsible for taking the overall regional housing needs allocation (RHNA) provided by the State and preparing a formula for allocating that housing need by income level across its jurisdiction. ABAG calculates the RHNA for individual jurisdictions within Alameda County, including Dublin.

Plan Bay Area 2040

MTC and ABAG's *Plan Bay Area 2040* is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). *Plan Bay Area 2040* was prepared by MTC in partnership with ABAG, the Bay Area Air Quality Management District, and San Francisco Bay Conservation and Development Commission and adopted on July 26, 2017.² The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board. In 2008, MTC and ABAG initiated a regional effort (FOCUS) to link local planned development with regional land use and transportation planning objectives, and *Plan Bay Area 2040* reinforced the focus growth strategy. Through this initiative, local governments identified Priority Development Areas (PDAs). The PDAs form the implementing framework for *Plan Bay Area 2040*. The PDAs are existing neighborhoods served by public transit and have been identified for additional, compact development. Overall, well over two-thirds of all regional growth by 2040 is allocated within PDAs. The PDAs throughout the San Francisco Bay Area are expected to accommodate 77 percent (or over 629,000 units) of new housing and 55 percent (or 707,000) of new jobs.³

There are three PDAs within the City of Dublin: the Town Center PDA, the Transit Center/Dublin Crossings PDA, and the Downtown Specific Plan Area PDA. The ABAG projects that the Town Center PDA will accommodate 1,860 new housing units and 1,010 new jobs, the Transit Center/Dublin Crossings PDA will accommodate 3,140 new housing units and 6,370 new jobs, and the Downtown Specific Plan Area PDA will accommodate 960 new housing units and 3,900 new jobs by 2040.⁴ The project site is within the Town Center PDA.

² Association of Bay Area Governments, 2017. *Plan Bay Area 2040*. <http://2040.planbayarea.org/>, accessed November 6, 2019.

³ Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. *Final Plan Bay Area, Strategy for a Sustainable Region*.

⁴ Alameda County Transportation Commission, 2017. *Alameda County Priority Development Area Investment and Growth Strategy*.

POPULATION & HOUSING

Local Regulations

City of Dublin General Plan and Housing Element

The City of Dublin's General Plan, amended in 2017, contains several policies relevant to population and housing.⁵ These policies are listed in Table 4.12-1.

TABLE 4.12 - 1 CITY OF DUBLIN GENERAL PLAN POLICIES

Policy Number	Goal/Policy/Strategy Text
Policy 2.6.4 A.1	Encourage the development of a balanced mixed-use community in the Eastern Extended Planning Area, that is well integrated with both natural and urban systems, and provides a safe, comfortable and attractive environment for living and working. Any sites under Williamson Act contract are required to be maintained as open space for the term of the contract.
Policy 2.6.4 A.1	All proposed land uses within the Livermore Municipal Airport, Airport Influence Area (AIA) shall be reviewed for consistency with the compatibility policies of the Livermore Municipal Airport, Airport Land Use Compatibility Plan (ALUCP).
Policy 2.6.4 B.1	The location, extent and density of residential development in the Eastern Extended Planning Area is set forth in the General Plan Land Use Map (Figure 1-1 in the General Plan). The Eastern Dublin Specific Plan sets forth more detailed policy direction, infrastructure requirements, and development guidelines for the Extended Planning Area.
Policy 2.7.4 A.1	Encourage the development of a full range of commercial and employment-generating uses in the Eastern Extended Planning Area that will meet the needs of the City and the surrounding Tri-Valley area.
Policy 2.7.4 B.1	Require developers to remain within the amount and distribution of commercial and employment-generating land uses depicted in the General Plan Land Use Map (Figure 1-1 in the General Plan) in order to maintain a reasonable balance between jobs and housing opportunities.
Policy 2.7.4 B.2	All non-residential development must be consistent with the policies and guidelines set forth in applicable Specific Plans.

With regard to Policy 2.6.4.A.1, the project is within the Livermore Municipal Airport AIA, and this is discussed in Section 4.9, Hazards and Hazardous Materials in this Draft EIR.

The Housing Element is one of seven mandated elements of the General Plan and addresses existing and future housing needs for the entire community in Dublin at all economic levels. The current Housing Element covers the planning period of 2015 to 2023. Land developers are subject to improvements and dedication of public land, as well as fees (such as development impact fees) and exactions to cover the cost of processing permits and providing necessary services and facilities.

⁵ City of Dublin, 2016. General Plan, Community Development Department. Available online at: <https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>. Accessed October 31, 2019.

POPULATION & HOUSING

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan also addresses the need to balance jobs and housing in Dublin.⁶ Relevant policies are listed in Table 4.12 – 2.

TABLE 4.12 - 2 EASTERN DUBLIN SPECIFIC PLAN POLICIES

Policy Number	Goal/Policy/Strategy Text
Policy 4.27	Maintain sufficient land for housing in reasonable relationships to jobs (employment generating uses) in the eastern Dublin area.
Policy 4.28	Discourage amendments to the Specific Plan that would increase the employment generating potential within the planning area, without balancing it with an equivalent increase in housing potential.

Municipal Code and Zoning Ordinance

The Dublin Municipal Code is a compilation of ordinances and sets forth Dublin's laws. The City of Dublin Zoning Ordinance is Title 8 of the Dublin Municipal Code. The purpose of the Ordinance is to promote and protect public welfare and preserve and enhance the City's aesthetic quality by ensuring an appropriate mix of land uses. It is to be consistent with the General and Specific Plans.

4.12.1.2 EXISTING CONDITIONS

This section describes the existing population, housing, and employment conditions in Dublin.

Population

As shown below in Table 4.12-1, according to *ABAG Projections 2017*, Dublin's population is projected to increase from 49,980 in 2015 to 83,595 in 2040, representing an increase of approximately 67 percent.⁷ The United States Census Bureau listed Dublin's most recent population estimate, in 2018, as 63,445.⁸

Housing

In 2017, Dublin contained 19,023 occupied housing units. This represents an increase of approximately 43 percent from the 2010 Census data, which reported a total of 13,273 housing units⁹. Of the total number of existing housing units in 2017, 66 percent were owner-occupied, and 34 percent were renter-occupied.

⁶ City of Dublin, 2016. Eastern Dublin Specific Plan. Available online at: <https://dublin.ca.gov/DocumentCenter/View/7776/EDSP-2016-Update-Full-PDF?bidId=>. Accessed October 31, 2019.

⁷ Association of Bay Area Governments, 2017. *Plan Bay Area, Projections 2017*, City Table, Alameda County.

⁸ United States Census Bureau, Dublin city, California. https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml, Accessed November 8, 2019.

⁹ U.S. Census Bureau, 2013-2017 American Community Survey. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B25003&prodType=table, accessed November 8, 2019.

POPULATION & HOUSING

TABLE 4.12-1 ABAG POPULATION, HOUSEHOLD, AND JOBS PROJECTIONS FOR DUBLIN

Dublin	2015	2040	Change from 2015-2040	
			Number	Percent
Population	49,980	83,595	33,615	67%
Households	15,860	26,475	10,615	67%
Jobs	20,935	31,115	10,180	49%

Note: Percent are rounded to the nearest whole number.

Source: Association of Bay Area Governments (ABAG), 2017. *Plan Bay Area, Projections 2017*, City Table, Alameda County.

Total Jobs

As shown in Table 4.12-1, according to the *ABAG Projections 2017*, jobs are expected to increase from 20,935 in 2015 to 31,115 in 2040. This represents an increase of approximately 49 percent.¹⁰

Jobs-to-Household Balance

A jobs-to-household ratio demonstrates the balance between the number of jobs and households within a community. It is calculated by dividing the number of jobs in the community by the number of households in the same area. A high number of jobs relative to a low number of households indicates that workers must commute into the community. A low number of jobs and high number of households indicates that workers must commute out of the community for work. In contrast, a healthy jobs-to-housing ratio, which is region specific, increases opportunities for residents to work locally. According to the *ABAG Projections 2017*, Dublin's jobs-to-household ratio was 1.32¹¹ in 2015 and is expected to decrease to 1.18¹² by the year 2040.

According to the *ABAG Projections 2017*, the Bay Area region jobs-to-household ratio was 1.35 jobs per household in 2015,¹³ and is expected to increase to 1.37¹⁴ by the year 2040. Therefore, Dublin is under the proportion of jobs per household within the region as a whole. However, the extent to which residents will work locally depends in part on complex relationships between the housing types available in the City, the skills and education levels among the City's labor force, and the jobs that are located within the City. In no Bay Area community do all employed residents work in the city where they live, nor do all people employed in any given city live in that city.

¹⁰ Association of Bay Area Governments, 2017. *Plan Bay Area, Projections 2013*, City Table, Alameda County.

¹¹ 20,935 jobs (2015) divided by 15,860 households (2015) = 1.32 jobs per household.

¹² 31,115 jobs (2040) divided by 26,475 households (2040) = 1.18 jobs per household.

¹³ 3,669,990 (total jobs in Bay Area Region, 2015) divided by 2,720,410 (total households in Bay Area Region, 2015) = 1.349 jobs per household.

¹⁴ 4,698,375 (total jobs in Bay Area Regions, 2040) divided by 3,426,705 (total households in Bay Area Region, 2040) = 1.371 jobs per household.

POPULATION & HOUSING

Employment

According to ABAG projections, there are currently between 20,935 and 21,330 jobs in Dublin. As of 2019, the Dublin Unified School District (DUSD) was made up of 12 schools serving 12,300 students in grades K-12 with 995 staff members.¹⁵ The proposed project is projected to serve up to 2,545 students. Using a similar teacher/student ratio as the existing Dublin High School, which as of documentation from the 2016-2017 school year is 1:29, this results in an estimate of 86 employees.¹⁶ With the addition of an estimated 43 support staff, the total estimated employees for the proposed project is 129, of which 35 – 40 percent will be transferred from within the District, which is well within the range of the projected jobs increase in Dublin that is illustrated in Table 4.12-1.

4.12.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant population and housing impacts if it would:

1. Induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
3. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to population and housing.

4.12.3 IMPACT DISCUSSION

POP-1	The project would not induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
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Development of the proposed project would result in the construction of a new high school on vacant land. This project would accommodate up to 2,545 students, beginning with students transferred from the existing Dublin High School, which has exceeded capacity. As explained in Chapter 3, Project Description, the objective of the project is to help accommodate an increasing student population in the Dublin Unified School District and reduce overcrowding at the only other comprehensive high school within the district. In addition, the District's Draft Facilities Master Plan identified need for a new

¹⁵ Dublin Unified School District, DUSD Quick Facts.

<https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/1053/dusd-fact-sheet-2019-2020-090919.pdf>, accessed November 8, 2019.

¹⁶ Dublin Unified School District, 2017. Dublin High School.

<https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/135/Dublin%20High%20SchoolProfile%2016-17.pdf>, accessed February 4, 2020.

POPULATION & HOUSING

comprehensive high school, due to this increased population that has resulted from increased residential and commercial development in the City of Dublin. There is no housing component to the project. For these reasons, the proposed project would not induce substantial unexpected population growth. Rather it would respond to and accommodate ongoing and estimated future population growth as accounted for in the District, City, and regional plans discussed herein. The impact related to growth would be *less than significant*.

Significance without Mitigation: Less than significant.

POP-2	The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
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The proposed project would be developed completely on land that is currently undeveloped and would not require displacement of existing housing units. As discussed under POP-1 above, the proposed project is in response to increased population that is served by the DUSD from the increased residential and commercial development in the City. There would be *no impact*.

Significance without Mitigation: No impact.

4.12.4 CUMULATIVE IMPACTS

POP-3	Implementation of the proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to population and housing.
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This section analyzes potential impacts to population and housing that could occur from a combination of the project and other reasonably foreseeable projects in the surrounding area. The geographic scope of this analysis is taken as Dublin. A cumulative impact would be considered significant if the proposed project, taken together with past, present, and reasonably foreseeable projects in Dublin, would result in the displacement of either people or housing units. Impacts resulting from the displacement of both people and housing necessitating the construction of replacement housing elsewhere are site-specific and are assessed on a site-by-site basis. The significance of the impacts would depend largely on what, if any, existing housing and residents occur on or near the sites of the related projects identified in Table 4-1 in Chapter 4, Environmental Analysis, of this Draft EIR. As shown on Table 4-1, cumulative projects within the vicinity of the proposed project includes up to 3,931 new residential units. Similar to the proposed project, the determination for the displacement of a substantial number of people and housing would be made on a case-by-case basis and, if necessary, the applicants of the related projects would be required to comply with the City's development impact fees. Given that the proposed project would have no impact regarding the displacement of housing and people, the proposed project's impacts in this regard would not be cumulatively considerable. Therefore, cumulative impacts to population and housing would be *less than significant* and no mitigation measures are required.

Significance without Mitigation: Less than significant.

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4.13 PUBLIC SERVICES

This subchapter describes public services and recreation facilities in the City of Dublin and evaluates the potential impacts to public services and recreation from future development that could occur by developing the proposed project.

This subchapter covers the following public services:

- Fire Protection
- Police
- Schools
- Parks
- Libraries

4.13.1 FIRE PROTECTION SERVICES

4.13.1.1 REGULATORY FRAMEWORK

State Regulations

Public Safety

Division 1 of Title 19, Public Safety, of the California Code of Regulations (CCR) pertains to fire and life safety and constitutes the Basic Building Design and Construction Standards of the Office of the State Fire Marshal. Title 19 includes prevention and engineering measures for new construction. Title 19 is regularly reviewed and updated by the Office of the State Fire Marshal.

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The 2019 CBC is based on the 2018 International Building Code (IBC), but has been modified for California conditions. It is updated every three years; most recently it was updated in July 2019 with an effective date of January 1, 2020. The CBC, as adopted by local cities or counties, may be further modified based on local conditions. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Fire Code

The California Fire Code (CFC) is located in Part 9 of Title 24 of the CCR. It is updated every three years, most recently in 2019 with an effective date of January 1, 2020. The 2019 CFC is based on the 2018 International Fire Code (IFC) but has been modified for California conditions. The CFC includes provisions

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and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

California Health and Safety Code

The California Health and Safety Code provides regulations pertaining to the abatement of fire-related hazards. This Code also requires that local jurisdictions enforce the State Building Standards Code, which provides standards for fire-resistant building and roofing materials and other fire-related construction methods, as discussed above.

California Fire Plan

The California Fire Plan is the State's "road map" for reducing the risk of wildfire. The overall goal of the plan is to reduce total costs and losses from wildland fire in California through focused pre-fire management prescriptions and increased initial attack success. The Plan provides guidance to local jurisdictions in meeting State goals. It is a cooperative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection, CAL FIRE.

Field Act

Under the Field Act (Ed. Code § 17280, *et seq.*; Ed. Code § 17365, *et seq.*; Ed. Code § 81130, *et seq.*), the Department of General Services (DGS) is required to supervise the design and construction of any school buildings or the reconstruction or alteration of or addition to any school building to ensure that the plans and specifications are in compliance with adopted rules, regulations, and building standards and to ensure that construction work is performed in accordance with the approved plans and specifications for the protection of life and property.¹ Within the DGS, the Division of the State Architect (DSA) is responsible for design and construction oversight for K-12 schools to ensure application of the CBC, pursuant to the Field Act. Additionally, the DSA promotes compliance with all relevant structural, accessibility, and fire and life safety codes.²

Local Regulations

Alameda County Fire Department

Fire protection services for the City of Dublin are provided under contract with the Alameda County Fire Department (ACFD). The ACFD provides fire suppression, first responder/paramedic, and hazardous materials response services, and includes specialized response teams for Hazardous Materials, Urban Search and Rescue, and Water Rescue.

¹ California Legislative Information, 2017, AB-1545 School facilities: Field Act, available online at https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1545, accessed May 19, 2020.

² Department of General Services, 2018, Division of the State Architect, available online at <https://www.dgs.ca.gov/DSA/About>, accessed May 18, 2020.

City of Dublin General Plan

The City of Dublin's General Plan includes information related to fire hazard and fire protection within Section 8.3.2.

The City of Dublin General Plan references Alameda County Fire Department as the fire department for the City of Dublin, and Dublin San Ramon Services District as the water supplier for both domestic use and fire protection purposes.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan includes information about fire protection within section 3.7.3, as well as section 8.3. Section 3.7.3 confirms that the Alameda County Fire Department is responsible for the provision of fire protection services, and that maintenance of service standards, particularly response times and minimizing the risk of wildland fires are their main focus. The plan specifies that development of eastern Dublin will increase demand for fire protection services. According to the plan, the City of Dublin strives for a five-minute response time and 1.5-mile response zone. Policy 8-5 listed in the plan is to time construction of new facilities with new service demand in order to avoid periods of reduced service efficiency. Two fire stations along Madigan Avenue and Fallon Road were completed in 2003 in order to service the planning area. In addition, Policy 8-6 requires all new development adjacent to open space or rural residential areas to be designed in such a way as to minimize the potential impacts related to wildland fires.

Municipal Code of Dublin

The Municipal Code of Dublin includes general ordinances of the City of Dublin. The Dublin Municipal Code contains the city's Fire Code in chapter 5.08, adopting the International Fire Code and California Fire Code.

4.13.1.2 EXISTING CONDITIONS

The ACFD provides all-risk emergency services to the cities of Dublin, San Leandro, Newark, Union City, and Emeryville, as well as the Lawrence Berkeley National Laboratory, the Lawrence Livermore National Laboratory, and the unincorporated areas of Alameda County excluding Fairview. The ACFD has 29 fire stations located throughout the county.

The closest fire station to the project site is ACFD Fire Station 18, located at 4800 Fallon Road in Dublin. The station, located northeast of the project site, is an approximately 1.5-mile drive from the furthest, southern end of the project site.³ The City of Dublin website lists three ACFD fire stations located within the city, Stations 16, 17, and 18.⁴ These provide Dublin with 36 line personnel, assigned to the City on

³ Google Maps, 2019. <https://www.google.com/maps/dir/Fire+Station+18/37.7056265,-121.8651601/@37.7073555,-121.8682618,15.25z/data=!4m9!4m8!1m5!1m1!1s0x808fef2aceb3c9a5:0xf12c4b2c5a327456!2m2!1d-121.8543498!2d37.7149587!1m0!3e0>, Accessed October 28, 2019.

⁴ City of Dublin, California Fire Stations. <https://dublin.ca.gov/225/Fire-Stations>, Accessed October 28, 2019.

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three engine companies and one truck company. In addition, the ACFD website lists Fire Station 15 as located in Dublin and housing the apparatus and equipment for the Reserve Firefighters of the ACFD.⁵

4.13.1.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant public services impacts if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 fire protection services.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to fire protection services.

4.13.1.4 IMPACT DISCUSSION

PUB-1	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 fire protection services.
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The proposed project is located 0.8 miles from the nearest ACFD fire station, Fire Station 18 located at 4800 Fallon Rd, Dublin, CA 94568. According to the Eastern Dublin Specific Plan (EDSP), a five-minute response time would be considered adequate service. Currently, the ACFD delivers Department wide service to 90 percent of all incidents in an average response time of 7:53 minutes, as reported in 2017. The response time may vary depending on the rural, suburban, or urban nature of the area.⁶ Additionally, while traffic congestion may be a factor at times, the nearby proximity of Fire Station 18 to the proposed school, and due to access to Central Parkway and Dublin Boulevard from the Fallon Road arterial corridor, it is anticipated that congestion would be minimal and that response time would be lower than the average found County-wide.

Additionally, the EDSP planned for nine new schools, including one high school. Due to increased development, including that of the new schools, the Specific Plan planned for the addition of fire stations, including Fire Station 18, the closest one to the project site. Thus, it can be concluded that the increased population the proposed project will be servicing has been planned for in regard to fire protection services, and the proposed project would not result in substantial adverse impacts to these services.

⁵ Alameda County, Alameda County Fire Department Fire Stations/Facilities, 2019.
<http://www.acgov.org/fire/about/station15.htm>, Accessed October 28, 2019.

⁶ Alameda County Fire Department, 2017, Volume 1 of 3 – Executive Summary Standards of Coverage Review, available online at <https://www.acgov.org/fire/documents/Vol1-ACFDSOCReport-ExecutiveSummary.pdf>, accessed June 1, 2020.

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Significance Without Mitigation: Less than significant.

4.13.1.5 CUMULATIVE IMPACTS

PUB-2	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to fire protection services.
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New development on currently vacant land would increase the activity in the area and may in turn increase the need for fire protection services. However, as mentioned under PUB-1, with the City of Dublin increasing the amount of fire stations available in response to increased development in eastern Dublin, which is where the proposed project is located, it is not expected that the combination of the project along with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to fire protection services.

Significance Without Mitigation: Less than significant.

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4.13.2 POLICE SERVICES

4.13.2.1 REGULATORY FRAMEWORK

California Highway Patrol

The California Highway Patrol (CHP) was created in 1929 and provides uniform traffic law enforcement throughout the State of California. The CHP's Golden Gate Division services the City of Dublin and surrounding area, patrolling 57 miles of freeway and 275 miles of unincorporated roadways throughout Alameda and Contra Costa Counties.

Eastern Dublin Specific Plan

Police protection is covered in the Eastern Dublin Specific Plan under section 8.2. The Specific Plan indicates that proposed development should be coordinated with the City Police Department so that coverage of police services will be increased as eastern Dublin becomes increasingly developed. In addition, Police Department recommendations on project design that affect traffic safety and crime prevention should be incorporated into new development projects. As part of the City's increased development, the addition of one new high school is identified under section 8.1.1 of the Specific Plan to accommodate the increasing number of high school students in the area.

Alameda County Sheriff's Office

Police services for the City of Dublin are performed under contract with the Alameda County Sheriff's Office (ACSO). Patrol, criminal investigations, and crime prevention are performed at the Civic Center location, with dispatch and data processing handled at facilities in Oakland and San Leandro. The ACSO provides patrol and investigative services for the City of Dublin, as well as for the Peralta Community College District, Oakland-Alameda County Coliseum complex, Oakland International Airport, Highland County Hospital, Social Services, Alameda-Contra Costa Transit District, and unincorporated areas of Alameda County.

4.13.2.2 EXISTING CONDITIONS

The City of Dublin has contracted with the ACSO since 1982. According to the Eastern Dublin Specific Plan, the City of Dublin owns the Dublin Police Service's facilities and equipment, with the police personnel employed by the ACSO. The City's police department is a full-service operation with the exception of dispatch, which is provided via the ACSO dispatch office in San Leandro.

The Dublin Police Services department is located approximately 1.5 miles northwest of the project site, on Madigan Drive. As of May 15, 2018, the Dublin Police Services had 55 sworn officers, four Sheriff's Technicians, and four professional staff⁷. The Sheriff's Office Commander assigned to the Dublin Police

⁷ City of Dublin, California, Police Services, Presentation on Dublin Police Services, May 15, 2018.
<https://dublin.ca.gov/DocumentCenter/View/18450/Public-Safety-Presentation>, Accessed October 28, 2019.

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Services serves as the Chief of Police and reports to the Assistant Sheriff of Law Enforcement Services within the ACSO, as well as the Dublin City Manager. This serves a population of 63,659 people in Dublin, as of 2019⁸.

4.13.2.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant public services impacts if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 police services.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to police services.

4.13.2.4 IMPACT DISCUSSION

PUB-3	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 police services.
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The proposed project would provide another high school for the City of Dublin residents in eastern Dublin to accommodate increased population and development in the area. This high school would help to alleviate overcrowding in Dublin High School. As mentioned above in section 4.13.2.1, it is part of the Eastern Dublin Specific Plan to increase the amount of schools available to the growing community, and to also increase police services to accommodate this population growth. The addition of the proposed project is in line with the City's current plans and growth, and would not require additional facilities not contemplated by the City's current plans in order to accomplish the City's police services' performance objectives.

Significance Without Mitigation: Less than significant.

⁸ City of Dublin, California, Demographics, 2019. <https://www.dublin.ca.gov/1811/Demographics>, Accessed October 28, 2019.

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4.13.2.5 CUMULATIVE IMPACTS

PUB-4	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to police services.
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A significant cumulative environmental impact could result if, in combination with other past, present, and reasonably foreseeable projects, construction of the proposed project would exceed the ability of the Dublin Police responders to adequately serve the vicinity thereby requiring construction of new facilities or modification of existing facilities. This section analyzes potential impacts to police protection services that could occur from implementation of the project in combination with reasonably foreseeable growth. For the purposes of this analysis, the area of cumulative effect will be considered the service area of the Dublin Police Services.

New development on currently vacant land would increase the activity in the area and may in turn increase the need for police services. However, it has been described in the City's plans that police services shall be increased to accommodate new development, and that new schools are a part of the City's planned development. New development will be coordinated with the Dublin Police Services in order to ensure that police response times and other related goals can continue to be met for the community. Therefore, impacts related to the provision of police protection services resulting from buildout of the project would be less than significant.

Significance Without Mitigation: Less than significant.

4.13.3 SCHOOLS

4.13.3.1 REGULATORY FRAMEWORK

State Regulations

California Government Code (Section 65995) and Education Code (Section 17620)

The California Government Code, sections 65995, *et seq.*, and Education Code, sections 17620, *et seq.*, provide for payment of school impact fees by new residential, commercial and industrial development.

Mitigation Fee Act (California Government Code (Sections 66000 through 66008))

Enacted as Assembly Bill (AB) 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing a statutory mitigation fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put.⁹ The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This Act became enforceable on January 1, 1989.

Local Regulations

City of Dublin General Plan

The City of Dublin General Plan contains land use and circulation specifics regarding schools in Chapter 4, as well as community design in Chapter 10. At the time of the Plan's development new elementary, middle, and high schools are listed as being needed to serve the future population of the Eastern Extended Planning Area.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan includes information about schools located in the eastern Dublin area. In 2005, all lands within the City of Dublin's General Plan area, including those of the eastern Dublin area, were transferred from the Livermore Joint Unified School District to the Dublin School District. The Specific Plan notes the need for six new elementary schools, two junior high schools, and one high school.

Municipal Code of Dublin

The Municipal Code of Dublin includes school facilities dedication in chapter 9.36. Pursuant to Government Code Section 66478, a city or county has authority to adopt an ordinance requiring subdividers who complete the development of one or more subdivisions to dedicate to the school district lands the district board deems necessary for the purpose of constructing schools in order to assure

⁹ California Government Code, Sections 66000-66008.

https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV§ionNum=66000, Accessed October 28, 2019.

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adequate elementary school service for residents of the subdivision(s). In addition to this, and pursuant to Government Code Section 65971, the city can require residential subdividers to dedicate land and/or pay fees in lieu thereof for interim school facilities, consistent with the General Plan, where certain conditions are met.

4.13.3.2 EXISTING CONDITIONS

Schools within the City of Dublin are operated under the Dublin Unified School District. The District currently includes the following schools: Amador Elementary School, Cottonwood Creek K-8, Dougherty Elementary School, Dublin Elementary School, Dublin High School, Fallon Middle School, Frederiksen Elementary School, Green Elementary School, Kolb Elementary School, Murray Elementary School, Valley High School, Wells Middle School, and Dublin Adult Education School. According to the District's website, the District currently services over 12,300 students, and has a certificated staff of 623, classified staff of 324, and 48 administrators¹⁰.

Dublin High School is currently the only comprehensive high school within the District. It has capacity for 2,481 students; however, the District currently has 3,291 students at the high school level, resulting in overcrowding. The proposed project is to accommodate this excess enrollment, as well as anticipated future enrollment growth within the District, with a capacity to serve approximately 2,545 students.

4.13.3.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant public services impacts if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 schools.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to schools.

4.13.3.4 IMPACT DISCUSSION

PUB-5	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 schools.
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¹⁰ Dublin Unified School District, DUSD Quick Facts, 2019.
<https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/1053/dusd-fact-sheet-2019-2020-090919.pdf>, Accessed October 28, 2019.

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The proposed project would have a significant impact related to schools if it would increase the demand for school services to the degree that new facilities are required. As a proposed high school that would alleviate overcrowding at existing schools, the project would have no impact.

Significance Without Mitigation: No Impact.

4.13.3.5 CUMULATIVE IMPACTS

PUB-6	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to schools.
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A significant cumulative environmental impact could result if, in combination with past, present, and reasonably foreseeable projects, buildout of the proposed project would exceed the ability of DUSD to adequately serve the vicinity, thereby requiring construction of new facilities or modification of existing facilities. This section analyzes potential impacts to school services that could occur from implementation of the project in combination with reasonably foreseeable growth. As described above, the proposed project would result in the construction of a new high school, so there would be no impact.

Significance Without Mitigation: No Impact.

PUBLIC SERVICES

4.13.4 PARKS AND RECREATIONAL FACILITIES

4.13.4.1 REGULATORY FRAMEWORK

State Regulations

1975 California Government Code Section 66477 Quimby Act

The 1975 Quimby Act (California Government Code Section 66477) authorizes cities and counties to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for operation and maintenance of park facilities.¹¹ A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities with a high ratio of park space to inhabitants can set a standard of up to 5 acres per 1,000 persons for new development. Cities with a lower ratio can only require the provision of up to 3 acres of park space per 1,000 persons. The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland.

Local Regulations

East Bay Regional Parks District

The East Bay Regional Park District (EBRPD) is a special district operating in Alameda and Contra Costa Counties. It is comprised of 125,000 acres including 73 parks with 1,250 miles of trails¹² An EBRPD bond measure approved by voters in 2008 includes limited funding to local jurisdictions such for rehabilitation and maintenance of City parks. Parks in the EBRPD located in the vicinity of Dublin include Dublin Hills, Doolan Canyon Regional Preserve, and Pleasanton Ridge. Of these, Doolan Canyon is closest to the project site, located approximately two to three miles to the northeast.

City of Dublin

Dublin General Plan

The City of Dublin General Plan includes discussion of open space for preservation of natural resources and for public health and safety in section 3.2. Guiding and implementation policies include the preservation of oak woodlands, riparian vegetation, and natural creeks as open space for their natural resource value; generally maintaining slopes over 30 percent as permanent open space; and encouragement of efficient and higher intensity of flat and gently sloping portions of the planning area as a means of minimizing grading requirements and impacts to environmental and aesthetic resources.

¹¹ Westrup, Laura, 2002, Quimby Act 101: An Abbreviated Overview, Sacramento: California Department of Parks and Recreation. <https://www.parks.ca.gov/pages/795/files/quimby101.pdf>, accessed October 28, 2019.

¹² East Bay Regional Parks District, About Us, 2018. <https://www.ebparks.org/about/default.htm>, Accessed October 28, 2019.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan includes recreation in section 4.7, as well as resource management and conservation in section 3.5. It is the City's goal to develop a comprehensive, integrated park and recreational open space system to meet the needs of Dublin residents. The City shall work with the EBRPD regarding provision of staging area in the Specific Plan area. Among the policies regarding recreation is the policy to ensure that each new development provides its fair share of planned open space, parklands, and trail corridors in line with the City's zoning.

City of Dublin Parks and Recreation Master Plan

The purpose of the City of Dublin's Parks and Recreation Master Plan is to identify ways in which the City intends to build and maintain parks that enhance the image of the City and meet the City's future needs. It establishes goals, standards, policies, and programs to guide the ultimate build-out of the City in accordance with the aforementioned City of Dublin General Plan. As of 2015, the City had 166,440 acres of total active community parks, and 12.129 acres of total natural community parks. The City's standard since is to provide a minimum of five acres of parkland per 1,000 residents. Based on projected population, the City anticipated a deficit of approximately 16 acres at the build-out of the Master Plan¹³.

Municipal Code of Dublin

The Municipal Code of Dublin contains directions pertaining to parks and recreation areas and facilities in chapter 5.100, regulating the use of these facilities for optimum use and enjoyment of the residents of Dublin.

4.13.4.2 EXISTING CONDITIONS

There are a number of park and recreational facilities located in the vicinity of the project site. The nearest park and recreational facility to the project site is Devany Square, located on the western edge of the project site. Devany Square is a two-acre public park situated on the western side of the project site and includes a labyrinth and water play area. Other parks within the vicinity of the project site include Bray Commons, a 4.8 acre park featuring sports courts and play and picnic equipment, approximately 0.06 miles to the east; Piazza Sorrento, a park featuring grassy areas, a play area, and picnic tables, approximately 0.09 miles to the north; Fallon Sports Park, a 19.75 acre sports facility area approximately 0.3 miles to the northeast; and Emerald Glen Park, a 48.2 acre park featuring an aquatic complex, sports fields, and play and picnic equipment, approximately 0.3 miles to the northwest¹⁴. Other recreational areas are located throughout the eastern Dublin area. Doolan Canyon Regional Preserve lies several miles to the northwest.

¹³ City of Dublin, California, Parks and Recreation Master Plan, 2015.

<https://dublin.ca.gov/DocumentCenter/View/5063/Park-and-Recreation-Master-Plan---2015-Update?bidId=>, Accessed October 30, 2019.

¹⁴ Google Maps, 2019. <https://www.google.com/maps/@37.7096596,-121.8693794,15.33z>, Accessed October 30, 2019

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4.13.4.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant public services impacts if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 parks and recreational facilities.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to parks and recreational facilities.

4.13.4.4 IMPACT DISCUSSION

PUB-7	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 parks and recreational facilities.
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The proposed project would have a significant impact related to park facilities if it would increase the demand for park facilities in order to maintain acceptable service ratios requiring the construction of new facilities that may cause significant environmental impacts. As discussed in section 4.13.4.2, there are several park and recreational facilities located within 0.5 miles of the project site. However as described in Chapter 3, part of the school's site layout will include sports and recreational facilities such as a gymnasium, aquatic complex, track, field, and tennis courts to serve the high school's needs. Therefore, these high school facilities would offset any increase in demand for park facilities caused by the project.

Furthermore, while a small section of the project site is designated as for public/semi-public use, none of the project site is used as a public park, and the majority of the project site is not zoned for park or open space uses or located on hillsides that are to be kept as open space. The proposed project would not, therefore, result in the removal of existing park land. Additionally, in accordance with the Civic Center Act (Gov. Code § 38130, *et seq.*), the District recreational facilities located on the school site would be available for use by the public.¹⁵ As the proposed project is consistent with the City's General and Specific Plans in regards to providing more school facilities for the growing Dublin population, the construction of the proposed project would not result in the need for additional new or physically altered park and recreational facilities off-site.

Significance Without Mitigation: Less than significant.

¹⁵ California Department of Education, 2020, Public Access, available online at <https://www.cde.ca.gov/re/lr/cl/pa.asp#:~:text=Civic%20Center%20Act%E2%80%9494EC%20Section,and%20other%20organization%20may%20meet.,> accessed June 1, 2020.

4.13.4.5 CUMULATIVE IMPACTS

PUB-8	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks and recreational facilities.
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A significant cumulative environmental impact could result if, in combination with other past, present, and reasonably foreseeable projects, buildout of the proposed project would exceed the ability of the City of Dublin to adequately serve the vicinity, thereby requiring construction of new facilities or modification of existing parks.

As described above, the proposed project would be developed in response to the increasing eastern Dublin community and to prevent overcrowding at existing schools. It would accommodate existing and future students in the City of Dublin and would provide recreational facilities on-site to serve users of the school, including an aquatic facility, tennis courts, gymnasium, track, and field. While the City of Dublin anticipates the addition of future parks, the project site is already located adjacent to an existing park. Furthermore, while a portion of the project site is zoned Public/Semi-Public, hence having the zoning potential for a future park, the majority of the site is not. The proposed project would not create any increase in the demand for existing park facilities, and would not remove any existing park facilities from the City’s current inventory. Therefore, the construction of the proposed project in combination with other past, present, and reasonably foreseeable projects would result in a less than significant cumulative impact in regard to parks and recreation facilities.

Significance Without Mitigation: Less than significant.

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4.13.5 LIBRARIES

4.13.5.1 REGULATORY FRAMEWORK

This section describes current regulations relating to library services in the City of Dublin.

State Regulations

The Mello-Roos Community Facilities Act of 1982

The Mello-Roos Community Facilities Act, Government Code Section 53311 et seq., provides an alternative method of financing certain public capital facilities and services through special taxes. This State law empowers local agencies to establish Community Facilities Districts (CFDs) to levy special taxes for facilities such as libraries.

Local Regulations

City of Dublin General Plan

The City of Dublin General Plan includes specific areas of zoning for public facilities as Public/Semi-Public. Public facilities include those such as public libraries, post-offices, utilities, community centers, and government office buildings, in addition to fire stations and public schools.

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan designates the east to west corridor midway between Dublin Boulevard and Gleason Drive as a “transit spine”. This corridor extends across the width of the eastern planning area and links the Town Center to the future East Dublin BART station and downtown Dublin. Additionally, the EDSP describes a future “Main Street” running in a north-south orientation through the Town Center to run between Dublin Boulevard and Central Parkway where residential and commercial employment uses would be concentrated to encourage transit use for local and regional travel. The plan includes reservation of two sites at the midpoint of Main Street for civic/public buildings such as a library, post office, senior center, meeting hall, or theater.

The Specific Plan states that the eastern Dublin population will need a new library along with a new post office. Although no specific site has been selected for the library, several locations have been identified which would be considered ideal locations.

4.13.5.2 EXISTING CONDITIONS

The City of Dublin has one library, served by the Alameda County Library system. The Dublin library is located in central Dublin near the intersection of Interstates 580 and 680, approximately three miles west of the project site. It is the second largest branch library in the County system, and provides various programs for children, teenagers, adults, and families within the community.

4.13.5.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant public services impacts if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 libraries.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to libraries.

4.13.5.4 IMPACT DISCUSSION

PUB-9	The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 libraries.
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As previously mentioned in this chapter, and according to the Eastern Dublin Specific Plan, the project site is currently zoned as Neighborhood Commercial and Public/Semi-Public. An additional library is included in the Specific Plan as being needed to serve the eastern Dublin community, and the Public/Semi-Public zoned portion of the subject property could serve as a potential location, although no location has been specified in the Specific Plan. However, as described in Chapter 3, Project Description, the proposed project would include a library as part of the site plan to serve the associated student body. In addition, the proposed project is intended to accommodate the already growing population in eastern Dublin and is anticipated in the Eastern Dublin Specific Plan. As such, it is unlikely that the proposed project would increase demand for library services in the same way that the construction of new residential or other commercial facilities would. This would result in a less than significant impact.

Significance Without Mitigation: Less than significant.

4.13.5.5 CUMULATIVE IMPACTS

PUB-10	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to libraries.
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A significant cumulative environmental impact could result if, in combination with past, present, and reasonably foreseeable projects, buildout of the proposed project would exceed the ability of the City of Dublin to adequately serve the vicinity, thereby requiring construction of new facilities or modification of existing facilities.

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As described above, the proposed project would include the construction of a school library within the proposed high school, increasing the amount of library space available to existing students within the service area. This would result in a favorable impact to the library system and would thus not create a need for additional new or expanded library facilities by accommodating existing students in the District. Regarding cumulative analysis of the proposed project with other development projects in the area, which are listed in Table 4-1 in Chapter 4, Environmental Analysis, the proposed project is intended to be a public school serving this population. Furthermore, the proposed project is consistent with planned expansion that is integrated into the Eastern Dublin Specific Plan. Therefore, cumulative impacts in this regard would be less than significant.

Significance Without Mitigation: Less than significant.

4.14 RECREATION

This chapter describes the regulatory framework and existing conditions on the project site related to parks and recreational facilities, and the potential impacts of the project on recreational facilities.

4.14.1 ENVIRONMENTAL SETTING

4.14.1.1 REGULATORY FRAMEWORK

This section summarizes key local regulations related to recreation concerning the proposed project.

State Regulations

1975 California Government Code Section 66477 Quimby Act

The 1975 Quimby Act (California Government Code Section 66477) authorizes cities and counties to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for operation and maintenance of park facilities.¹ A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities with a high ratio of park space to inhabitants can set a standard of up to 5 acres per 1,000 persons for new development. Cities with a lower ratio can only require the provision of up to 3 acres of park space per 1,000 persons. The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland.

Local Regulations

City of Dublin General Plan

The City of Dublin General Plan includes an Open Space Element and zoning for parks and recreation sites. Open space areas are preserved for the preservation of natural resources and public health and safety. The General Plan zones designated parts of the city for public facilities, parks, and open space.

Eastern Dublin Specific Plan

Recreation is detailed under section 4.7 of the Eastern Dublin Specific Plan. The goal of this section is to develop a comprehensive, integrated park and recreational open space system to meet the diverse needs of the City. The distribution and types of park facilities planned for the Eastern Dublin planning area are based on projected buildout of the General Plan and on the City's Parks and Recreation Master Plan. Policies include ensuring that park development in eastern Dublin is consistent with recommendations in the Recreation and Parks Master Plan, that there is a multi-use network of trails and bike lanes linking

¹ Westrup, Laura, 2002, Quimby Act 101: An Abbreviated Overview, Sacramento: California Department of Parks and Recreation. <https://www.parks.ca.gov/pages/795/files/quimby101.pdf>, accessed October 28, 2019.

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areas around eastern Dublin, and that each new development provides its fair share of recreation and parkland.

City of Dublin Parks and Recreation Master Plan

As mentioned above, the City of Dublin Parks and Recreation Master Plan's purpose is to establish goals, policies, and action programs to guide the City in the acquisition, development, and management of Dublin's park and recreation facilities. This is assuming build-out of the City in accordance with the General and Specific Plans. The 2015 Master Plan lists existing facilities available for recreation throughout the City and estimated a need for an additional 102 acres of parkland to serve the projected service population of 75,000 people at build-out of the General Plan.

4.14.1.2 EXISTING CONDITIONS

The Dublin Parks and Community Services Department develops and implements programs to provide recreational experiences for the residents of Dublin. The department operates several parks and facilities that offer a range of recreation including sports fields, basketball courts, baseball and softball diamonds, BMX course, dog runs, fitness equipment, picnic and barbecue areas, play equipment, skate parks, soccer fields, tennis courts, volleyball courts, swimming pools and water play areas, and walkways and trails. The City also offers a community center, recreation center, and cultural centers/museums. A list of the parks and facilities are included in Table 4.14-1 below. The community facilities inventory contains below 90,895 square feet of existing facility space, and the parkland inventory occupies a total of 290 acres.²

TABLE 4.14-1 RECREATION FACILITIES IN DUBLIN

Type	Facilities	
Community Facilities Inventory		
Community Center Facilities	Shannon Community Center	Murray Schoolhouse and Visitor Center
	Sunday School Barn	
	Old St. Raymond Church	
Recreation Facilities	Stager Community Gymnasium (joint-use facility)	
	Dublin Swim Center	
	Emerald Glen Recreation & Aquatic Complex	
Senior Center Facilities	Dublin Senior Center	
Cultural/Museum Facilities	Kolb House Museum	
	Old House Art Building	
Parkland Inventory		
Active Community Parks	Dublin Civic Center/Library Grounds	Dublin Swim Center
	Dublin Historic Park and Museums	Emerald Glen Park
	Dublin Senior Center	Fallon Sports Park
	Dublin Sports Grounds	Shannon Park
Natural Community Parks	Iron Horse Nature Park	

² City of Dublin, Parks and Recreation Master Plan, 2015. <https://www.dublin.ca.gov/DocumentCenter/View/5063/Park-and-Recreation-Master-Plan---2015-Update?bidId=>, accessed November 27, 2019.

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TABLE 4.14-1 RECREATION FACILITIES IN DUBLIN

Type	Facilities	
Neighborhood Parks and Squares	Alamo Creek Park	Passatempo Park
	Bray Commons	Piazza Sorrento
	Devany Square	Positano Hills Park
	Dolan Park	Sean Diamond
	Dougherty Hills Dog Park	Schaefer Ranch Park
	Jordan Ranch Park	Stagecoach Park
	Kolb Park	Ted Fairfield Park
	Mape Memorial Park	
School Parks	Dublin Elementary School	Murray Elementary School
	Dublin High School	Nielsen Elementary School
	Frederiksen Elementary School	Wells Middle School

Source: City of Dublin Parks and Recreation Master Plan 2015

4.14.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant parks and recreation impacts if it would:

1. 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.
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
3. In combination with past, present, and reasonably foreseeable projects, result in a significant cumulative impact regarding parks and recreation.

4.14.3 IMPACT DISCUSSION

REC-1 The project would not 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.

The proposed project would have a significant physical impact on existing parks and recreational facilities if it would significantly increase the demand for and use of those facilities. Such an increase in demand is typically generated by development that supports new users, such as new residential development or development that replaces existing parks. As discussed in Chapter 3, Project Description, though a small portion of the project site is zoned as public/semi-public, the majority of the project site is not zoned for park or open space use. It would not replace existing park space. In addition, the proposed project is intended to accommodate the growing population served by the Dublin Unified School District and is a result of increased development around the area, which is consistent with the City's General and Specific Plans, as opposed to a cause of population growth. Furthermore, the proposed project would include the development of recreational facilities onsite, as discussed in Chapters 3 and 4.13, in order to accommodate the new high school's students. This would add to the amount of recreational facilities in the City. In accordance with the Civic Center Act, the District recreational facilities located on the school

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site would be available for use by the public and would, therefore, further reduce the demand for City recreational facilities.³ Therefore, the proposed project would not generate significant additional demand for recreational facilities in the City of Dublin, nor would it result in the deterioration of existing facilities. Impacts in these regards would be *less than significant*.

Significance Without Mitigation: Less than significant.

REC-2	The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
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As described in Chapter 3, Project Description of this DEIR, the proposed project would include recreational facilities onsite to serve the student body for the proposed new high school. These facilities include a gymnasium, all-weather track, sports field, tennis courts, and aquatic complex. Potential environmental impacts associated with the proposed recreational facilities are addressed in each environmental topic area in this Draft EIR, and significant and unavoidable impacts were identified in the areas of noise, due to operation of the public address system at the proposed track and sports field, and aesthetics, due to light and glare impacts from the proposed tennis courts. Therefore, as a result of the significant and unavoidable aesthetic and noise impacts associated with construction and operation of the on-site sports field and tennis courts, as discussed in Sections 4.1, Aesthetics, and 4.11, Noise, the proposed project would have a *significant and unavoidable impact* regarding the construction of recreational facilities, even after implementing mitigation measures.

Significance With Mitigation: Significant.

Impact REC-2: The project would include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment.

Mitigation Measure REC-2: Implementation of Mitigation Measures AES-4a, 4b, 4c, 4d, and NOI-1.2.

Significance with Mitigation: Significant and unavoidable. No individual measure and no set of feasible or practical mitigation measures are available to reduce impacts from new recreational facilities which have an adverse physical effect on the environment.

4.14.4 CUMULATIVE IMPACTS

REC-3	The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impact regarding parks and recreation.
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³ California Department of Education, 2020, Public Access, available online at <https://www.cde.ca.gov/re/lr/cl/pa.asp#:~:text=Civic%20Center%20Act%E2%80%9494EC%20Section,and%20other%20organization%20may%20meet.,> accessed June 1, 2020.

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A significant cumulative environmental impact could result if buildout of the proposed project, in combination with past, present and reasonably foreseeable projects, would exceed the ability of the Dublin Parks and Community Services Department to adequately serve the vicinity, thereby requiring construction of new facilities or modification of existing facilities. This section analyzes potential impacts to recreational facilities that could occur from implementation of the project in combination with reasonably foreseeable growth. For the purposes of this analysis the area of cumulative effect will be considered the service area of the Dublin Parks and Community Services Department which operates as a part of the City of Dublin.

As described above, the proposed project would not take the place of recreational facilities or park space, nor would it result in increased demand for additional recreational facilities. It would include the addition of recreational facilities onsite to serve the users of the proposed new high school and the public. The project would be developed on currently undeveloped land, in response to the increased surrounding development occurring as build-out of the City's General Plan for the eastern Dublin area. Although construction of the tennis courts, track and sports fields would result in significant and unavoidable aesthetic and noise impacts, there are no other projects that would, in combination with the proposed project, result in a cumulatively considerable increase in these areas. Therefore, construction and operation of the proposed new high school would result in a *less than significant* cumulative impact related to the provision of recreation facilities.

Significance Without Mitigation: Less than significant.

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4.15 TRANSPORTATION AND TRAFFIC

This section describes the transportation, circulation, and parking conditions, including transit services and pedestrian and bicycle facilities in the vicinity of the proposed project; discusses the State and local regulations and policies pertinent to transportation and circulation; and assesses the potentially significant transportation and circulation impacts that could result from implementation of the proposed project.

4.15.1 ENVIRONMENTAL SETTING

4.15.1.1 REGULATORY FRAMEWORK

State Regulations

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill 32). In December 2018, the Governor's Office of Planning and Research (OPR) finalized new CEQA guidelines (CEQA Guidelines section 15064.3), that identify vehicle miles traveled (VMT) as the most appropriate criteria to evaluate a project's transportation impacts.

The implementation of SB 743 eliminated the use of criteria such as auto delay, level of service, and similar measures of vehicle capacity of traffic congestion as the basis for determining significant impacts as part of CEQA compliance. The SB 743 VMT criteria promotes the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.

Regional Regulations

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county Bay Area, including Alameda County. It also functions as the federally mandated metropolitan planning organization (MPO) for the region. *Plan Bay Area 2040* is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). *Plan Bay Area 2040*, adopted jointly by Association of Bay Area Governments (ABAG) and MTC July 26, 2017, lays out a development scenario for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board. It serves as a limited and focused update to *Plan Bay Area* (2013), with updated planning assumptions that incorporate key economic, demographic, and financial trends from the last several years. MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California

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Transportation Commission. The project's relationship to GHG emissions reductions is discussed in detail in the Greenhouse Gas Emissions chapter of this Draft EIR.

Alameda County Transportation Commission

Congestion Management Program (CMP) 2019

The Alameda County Transportation Commission (ACTC) CMP describes the strategies to assess, monitor, and improve the performance of the county's multimodal transportation system, address congestion, and ultimately protect the environment with strategies to help reduce greenhouse gas emissions. The CMP indicates that ACTC shall take actions to encourage, supplement, and support transportation demand management (TDM) efforts.

The CMP identifies a network of roadways used to monitor performance related to level of service standards (LOS). To connect transportation and land use, a Metropolitan Transportation System (MTS) with designated roadways for land use purposes is used with the CMP network to link land use and transportation decisions.

While ACTC has not adopted thresholds of significance for land use analysis purposes, the CMP states that projects should consider impacts to all types of transportation modes on CMP MTS roadways, as described below:

- Autos: vehicle delay, if required by local jurisdiction, and consistency with adopted plans.
- Transit: effects of vehicle traffic on mixed-flow transit, transit capacity, transit access/egress, need for future transit service, consistency with adopted plans, and Circulation Element needs.
- Bicycles: effects of vehicle traffic on bicyclists conditions, site development, and roadway improvements, and consistency with adopted plans.
- Pedestrians: effects of vehicle traffic on pedestrian conditions, site development, and roadway improvements, and consistency with adopted plans.
- Other impacts and opportunities: noise impacts for projects near state highway facilities and opportunities to clear access improvements for transit-oriented development projects.

ACTC's policy regarding mitigation measures employed by lead agencies for identified transportation impacts is that, to be considered adequate, the measures must be:

- Sufficient to sustain CMP roadway and transit service standards.
- Fully funded.
- Consistent with project funding priorities established in the Capital Improvement Program of the CMP, the Countywide Transportation Plan, and the Regional Transportation Plan or the federal Transportation Improvement Program.

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The designated CMP roadway network was initially developed in 1991 and includes freeways, state highways, and principal arterials that meet criteria defined in the CMP. These roadways are significant for regional trips and connect major activity centers to the regional transportation system. Designated CMP MTS roadways within the study area that project related trips may travel on include:

- I-580 from west of Hacienda Drive to Airway Boulevard
- Fallon Road from I-580 Ramps to Tassajara Road
- Tassajara Road from I-580 Ramps to S Dublin Ranch Road
- Dublin Boulevard from Tassajara Road to Fallon Road

Safe Routes to School (SR2S)

Safe Routes to School (SR2S) is an ACTC approach and program to increase safe active modes of travel to school with the goals of reducing congestion and harmful pollutants around schools and increasing the safety and physical activity of students. The Alameda County SR2S program promotes safe, active, and shared transportation choices for students and parents to travel to and from school with goals to:

- Increase use of active and shared transportation modes to access schools.
- Promote walking, bicycling, and the use of transit as viable, everyday transportation options.
- Increase safe pedestrian/bicycling behaviors.
- Decrease incidence of collisions.
- Increase student and apparent confidence in safe walking/bicycling/transit riding abilities.

Alameda Countywide Bicycle Plan

The ACTC adopted the *Alameda Countywide Bicycle Plan* in October 2012 with the goal of increasing the number of cyclists and bicycling trips in Alameda County while improving bicycling safety. Goals and policies applicable to the proposed project include:

- Compliance with all Complete Streets policies.
- Reduce greenhouse gases (GHGs).
- Reduce the number of vehicle miles traveled.
- Increase safety of bicycle facilities.

Alameda Countywide Pedestrian Plan

The ACTC adopted the *Alameda Countywide Pedestrian Plan* in October 2012 with the goal of increasing the number of pedestrians and walking trips in Alameda County while improving pedestrian safety. Goals and policies applicable to the proposed project include:

- Compliance with all City Complete Streets policies (discussed further below).
- Reduce greenhouse gases (GHGs).

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- Reduce the number of vehicle miles traveled.
- Increase safety of pedestrian facilities.

Local Regulations

Tri-Valley Transportation Council

The Tri-Valley Transportation Council (TVTC)—made up of the Cities of Dublin, Livermore, Pleasanton, and San Ramon, the Town of Danville, and the Counties of Alameda and Contra Costa—adopted the *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance, September 2017* (Tri-Valley Transportation Plan) as a guide for transportation planning throughout the Tri-Valley. In order to be designated a Route of Regional Significance, a road must connect two or more subareas, cross county boundaries, carry a significant amount of through traffic, or provide access to a regional highway or transit facility. Routes of Regional Significance within the study area include Interstate 580, Central Parkway, Dublin Boulevard, and Fallon Road.

The Tri-Valley Transportation Plan includes the following goals and policies applicable to the proposed project:

- Integrate transportation planning with planning for air quality, community character, and other environmental factors.
- Support corridor management programs to make the most efficient, effective, and safe use of existing facilities and services.
- Support incident management programs to maintain mobility when accidents or breakdowns occur on major transportation facilities.
- Consider both the need for vehicular mobility and congestion reduction, and such livability concepts as walkability, bicycle access, and community character.
- Maintain and actively pursue enhanced and expanded public transit service, ridesharing, and non-motorized mode options and trip reduction programs in order to increase accessibility, to increase the transit share of travel in the Tri-Valley, and to increase average vehicle occupancy.
- Manage school-related traffic to enhance safety and reduce peak period traffic impacts.
- Support arterial traffic management strategies that address hotspots at critical intersections and approaches.

City of Dublin General Plan

The City of Dublin's General Plan envisions a transportation system that promotes transportation options and independent mobility, increases community safety, encourages healthy, active living, reduces environmental impacts, minimizes impacts to climate change from vehicle emissions, and supports greater social interaction and community identity. These goals can be accomplished by a comprehensive network of safe, comfortable, and convenient travel for all users and modes. The General Plan Land Use

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and Circulation Element includes the following guiding and implementing policies applicable to the proposed project:

Roadways

- Provide an integrated multi-modal circulation system that provides efficient vehicular circulation while providing a design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, seniors, children, youth, and families; and encourages pedestrian, bicycle, transit, and other non-automobile transportation alternatives.
- Provide continuity with existing streets, include sufficient capacity for projected traffic, and allow convenient access to planned land uses.

Alternative Transportation

- Support improved local transit as essential to a quality urban environment, particularly for residents who do not drive.
- Encourage improvements in the Enhanced Pedestrian Areas to improve the walkability of these areas. The purpose of the Enhanced Pedestrian Area designation is to ensure that development within the area is designed to encourage pedestrian trips. The project site is entirely within an Enhanced Pedestrian Area.
- Maintain enhanced signal coordination and limit intersection delays on major and Rapid transit routes to minimize delays to transit service.
- Require dedication of land and the construction of improvements to support the use of public transit in the community. Improvements could consist of bus turnouts, shelters, benches, real-time arrival information, and other facilities that may be appropriate.
- Require developers in the Enhanced Pedestrian Areas to provide sidewalks, landscaping and safe connections from the building to the sidewalk to encourage pedestrian use within the area.

Complete Streets

- Plan for all users by creating and maintaining Complete Streets that provide safe, comfortable, and convenient travel along and across streets (including streets, roads, highways, bridges, and other portions of the transportation system) through a comprehensive, integrated transportation network that meets the requirements of currently adopted transportation plans and serves all categories of users.

Pedestrian Routes and Bikeways

- Provide safe, continuous, comfortable and convenient bikeways throughout the City.
- Improve and maintain bikeways and pedestrian facilities and support facilities in conformance with the recommendations in the Dublin Bicycle and Pedestrian Master Plan.
- Enhance the multi-modal circulation network to better accommodate alternative transportation choices including BART, bus, bicycle, and pedestrian transportation.

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- Provide comfortable, safe, and convenient walking routes throughout the City and, in particular, to key destinations such as Downtown Dublin, the BART Stations, schools, parks, and commercial centers.
- Ensure on-going maintenance of bikeways, bicycle support facilities and pedestrian facilities that are intended for public use and located on private property in conjunction with development proposals.

City of Dublin Bicycle and Pedestrian Master Plan

The *Bicycle and Pedestrian Master Plan* (BPMP), adopted in 2014, provides an overview of the existing bicycle and pedestrian facilities within Dublin, a recommended pedestrian and bikeway network, and design guidelines. The purpose of the City of Dublin Bicycle and Pedestrian Plan is to provide a policy and implementation framework for maintaining and improving bicycle and pedestrian infrastructure in the City to provide safe, comfortable, and attractive facilities that meet the needs of users of all ages and abilities and connect users with key destinations—schools, residential neighborhoods, parks, shopping areas, and job centers— within the City and in adjacent jurisdictions. The plan is in alignment with the Transportation Element of the General Plan’s goals and policies. The BPMP has the following goals and policies:

- Support bicycling and walking as practical, healthy, and convenient alternatives to automobile use in Dublin.
- Implement a well-connected active transportation system to attract users of all ages and abilities.
- Incorporate the needs and concerns of bicyclists and pedestrians in all transportation and development projects.
- Support infrastructure investments with targeted bicycle and pedestrian education, encouragement, enforcement, and evaluation programs
- Maximize multi-modal connections in the transportation network.

4.15.1.2 EXISTING TRANSPORTATION NETWORK

Roadway Network

The City of Dublin is located in Alameda County, California, and is adjacent to the Cities of Pleasanton, Livermore, and San Ramon to the south, east, and north, respectively. The project site is in the eastern portion of Dublin, bounded by existing residences to the north, east, and west and retail to the south.

Regional access to the site is provided by Interstate 580 (I-580). Central Parkway, Dublin Boulevard, Fallon Road, Gleason Drive, and Tassajara Road provide local access. The following descriptions are provided for roadways that would provide access to the site and are most likely to serve the majority of project generated vehicle, bicycle, pedestrian and transit traffic.

Interstate 580 (I-580) is an east-west freeway that extends from San Rafael to Tracy. It is defined as a Route of Regional Significance in the *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance*. Routes of regional significance are roadways that connect two or more subareas, cross County boundaries, carry significant through traffic, and/or provide access to a regional highway or transit facility. The facility provides four general purpose travel lanes and one high occupancy vehicle (HOV)

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express lane in each direction within the study area, with interchanges at Tassajara Road and Fallon Road. Signalized intersections at the off-ramps are operated by the California Department of Transportation (Caltrans).

Central Parkway is an east-west roadway with one travel lane in each direction and a center median within the study area. It is defined as a Route of Regional Significance in the *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance*. The Dublin General Plan classifies Central Parkway as an arterial street within the study area. The Dublin General Plan states arterial streets are designed to distribute localized trips. The posted speed limit is 35 miles per hour (mph). Sidewalks with landscaped buffers are provided for the entire length of the study area. Central Parkway primarily serves residential uses.

Dublin Boulevard is an east-west roadway with four to five lanes and a center median. Two travel lanes in each direction are provided between Tassajara Road and Brannigan Street, and two travel lanes going east and three travel lanes going west are provided between Brannigan Street and Fallon Road. Dublin Boulevard is defined as a Route of Regional Significance in the *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance*. The Dublin General Plan classifies Dublin Boulevard as a collector street within the study area. The Dublin General Plan states collector streets serve primarily to circulate localized traffic and to distribute traffic to and from arterials. The posted speed limit is 45 mph. Sidewalks with landscaped buffers are provided on both sides of the road. Dublin Boulevard primarily serves commercial uses.

Fallon Road is a north-south roadway with a center median. Two travel lanes are provided in each direction between I-580 and Central Parkway and three travel lanes in each direction between Central Parkway and Gleason Drive. It is defined as a Route of Regional Significance in the *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance*. The Dublin General Plan classifies Fallon Road as an arterial street within the study area. The posted speed limit is 40 mph. Sidewalks with landscaped buffers are provided on the west side for the entire length of the study area and on the east side between Gleason Drive and Central Parkway. Fallon Road serves residential and commercial uses.

Gleason Drive is an east-west roadway with three to four lanes and a center median. One eastbound lane and two westbound lanes are provided between Tassajara Road and Brannigan Street. Two travel lanes in each direction are provided between Gleason Drive and Fallon Road. The Dublin General Plan classifies Gleason Drive as a collector street. The posted speed limit is 40 mph. A sidewalk is provided on the north side between Tassajara Road and Brannigan Street. Sidewalks with landscaped buffers are provided on both sides between Brannigan Street and Fallon Road. Gleason Drive primarily serves residential uses within the study area.

Tassajara Road is a north-south roadway with four to five lanes and a center median. Two lanes in each direction are provided between Gleason Drive and Central Parkway. Two northbound lanes and three southbound lanes are provided between Central Parkway and I-580. It is defined as a Route of Regional Significance in the *Tri-Valley Transportation Plan and Action Plan for Routes of Regional Significance*. The Dublin General Plan classifies Tassajara Road as an arterial street within the study area. The posted speed limit is 45 mph. Sidewalks are provided on the west side of the roadway. Tassajara Road primarily serves as a commercial corridor within the study area.

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Brannigan Street is a north-south roadway with one travel lane in each direction. It is classified as a collector street in the Dublin General Plan. The posted speed limit is 25 mph. Sidewalks with landscaped buffers are provided on the east side of the roadway. On-street parking is allowed on the east side of the roadway. Brannigan Street provides access to and from residences east and north of the project site.

Chancery Lane is a north-south roadway with one travel lane in each direction directly east of the project site. It is classified as a local residential street in the Dublin General Plan. The posted speed limit is 25 mph. Sidewalks are provided on the west side only south of Central Parkway and provided on both sides north of Central Parkway. On-street parking is allowed on either side of the roadway. Chancery Lane provides access to and from residences east and north of the project site.

Grafton Street is a north-south roadway with one travel lane in each direction. It is classified as a collector street in the Dublin General Plan. The speed limit is not posted within the study area. Sidewalks with landscaped buffers are provided on either side of the roadway and on-street parking is allowed. Grafton Street serves residences north of the project site.

Keegan Street is a north-south roadway with one travel lane in each direction. It is classified as a collector street in the Dublin General Plan. The speed limit is not posted. Sidewalks are provided for the entire length within the study area. On-street parking is allowed on some portions of the roadway. Keegan Street provides access to and from residences to the west and north of the project site.

Lockhart Street is a north-south roadway with one travel lane in each direction. It is classified as a collector street in the Dublin General Plan. Sidewalks are provided for the entire length within the study area. On-street parking is not allowed. Lockhart Street provides access to and from residences to the west and north of the project site.

Proposed future roadway improvements in the study area, based on the City's General Plan and Eastern Dublin Traffic Impact Fee Program, a program that defines improvements and facilities located exclusively in the Eastern Dublin Specific Plan area in which developers contribute a proportionate share to,] include:

- Tassajara Road between Gleason Drive and Central Parkway widen from two lanes to three lanes in each direction
- Tassajara Road between Central Parkway and Dublin Boulevard widen from two lanes to three lanes in the northbound direction
- Tassajara Road between Dublin Boulevard and I-580 Ramps widen from two lanes to four lanes in the northbound direction
- Dublin Boulevard between Tassajara Road and Grafton Street widen from two lanes to three lanes in the westbound direction
- Dublin Boulevard between Tassajara Road and Brannigan Street widen from three lanes to four lanes in the eastbound direction
- Dublin Boulevard between Keegan Street and Fallon Road widen from two lanes to three lanes in the eastbound direction

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- Dublin Boulevard east of Fallon road widen from one lane to three lanes in both directions
- Fallon Road between Central Parkway and I-580 Ramps widen from two lanes to three lanes in each direction

Pedestrian and Bicycle Facilities

This section identifies pedestrian and bicycle facilities in the transportation study area.

Pedestrian Facilities

Pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals. Existing pedestrian facilities are shown on Figure 4.15-1. Pedestrian facilities bordering the project site include asphalt pedestrian pathways on Central Parkway and Dublin Boulevard, a sidewalk on the eastern perimeter, and a sidewalk at the western border between Finnian Way and Dublin Boulevard. No pedestrian facilities are provided along the site's western perimeter on Chancery Lane. On project-related roadways, most roadways have sidewalks, most intersections have crosswalks, and all signalized intersections provide pedestrian push-button actuated signals. The following provides a more detailed description of existing pedestrian facilities:

Sidewalks on both sides of the road

- Gleason Drive – west of Tassajara Road; between Brannigan Street and Fallon Road
- Central Parkway – west of Tassajara Road; between Brannigan Street and Fallon Road
- Dublin Boulevard – west of Tassajara Road; between Brannigan Street and Carnmore Place; between approximately 415 feet west of Fallon Gateway and Fallon Road
- Tassajara Road – north of Gleason Drive
- Brannigan Street – north of Central Parkway
- Chancery Lane – between Dunmore Lane and Finnian Way
- Grafton Street – north of Dublin Boulevard
- Keegan Street-Lee Thompson Street
- Lockhart Street
- Fallon Road – north of approximately 590 feet north of Dublin Boulevard

Sidewalk on one side of the road

- Gleason Drive – between Tassajara Road and Brannigan Street
- Dublin Boulevard – between Tassajara Road and Brannigan Street; between Carnmore Place and approximately 415 feet west of Fallon Gateway
- Tassajara Road – south of Gleason Drive
- Brannigan Street – between Central Parkway and Dublin Boulevard

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- Chancery Lane – between Central Parkway and Dunmore Lane
- Fallon Road – south of approximately 590 feet north of Dublin Boulevard

No sidewalk

- Central Parkway – between Tassajara Road and Brannigan Street
- Brannigan Street – south of Dublin Boulevard
- Grafton Street – south of Dublin Boulevard

Signalized intersection with crosswalk(s)

- | | |
|-------------------------------------|------------------------------------|
| ▪ Tassajara Road/Gleason Drive | ▪ Grafton Street/Dublin Boulevard |
| ▪ Tassajara Road/Central Parkway | ▪ Keegan Street/Central Parkway |
| ▪ Tassajara Road/Dublin Boulevard | ▪ Keegan Street/Dublin Boulevard |
| ▪ Brannigan Street/Gleason Drive | ▪ Lockhart Street/Gleason Drive |
| ▪ Brannigan Street/Central Parkway | ▪ Lockhart Street/Central Parkway |
| ▪ Brannigan Street/Dublin Boulevard | ▪ Lockhart Street/Dublin Boulevard |
| ▪ Chancery Lane/Central Parkway | ▪ Fallon Road/Gleason Drive |
| ▪ Grafton Street/Gleason Drive | ▪ Fallon Road/Central Parkway |
| ▪ Grafton Street/Central Parkway | ▪ Fallon Road/Dublin Boulevard |

Unsignalized intersection with crosswalk(s)

- | | |
|-----------------------------------|--|
| ▪ Brannigan Street/Finnian Way | ▪ Grafton Street/Kohnen Way-Madden Way |
| ▪ Chancery Lane/Finnian Way | ▪ Keegan Street/Finnian Way |
| ▪ Finnian Way/Dublin Boulevard | ▪ Keegan Street/Maguire Way |
| ▪ Grafton Street/Brannigan Street | ▪ Lockhart Street/Finnian Way |

Unsignalized intersection without crosswalk(s)

- Lockhart Street/Maguire Way

Bicycle Facilities

Bicycle facilities in Dublin include the following:

Class I Bike Paths

Bike paths provide a completely separate right-of-way and are designated for the exclusive use of people riding bicycles and walking with minimal cross-flow traffic. Such paths can be well situated along creeks, canals, and rail lines. Class I Bikeways can also offer opportunities not provided by the road system by serving as both recreational areas and/or desirable commuter routes.

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Existing Class I bike facilities:

- Brannigan Street – north of Dublin Boulevard
- Grafton Street – north of Central Parkway; eastern border of project site between Central Parkway and Finnian Way
- Keegan Street-Lee Thompson Street – between Palermo Way and Dublin Boulevard
- Lockhart Street between Gleason Drive and Dublin Boulevard

City of Dublin Bicycle and Pedestrian Master Plan proposed Class I bike facilities:

- Gleason Drive – between Tassajara Road and Brannigan Street
- Central Parkway – east of Fallon Road
- Central Parkway – between Tassajara Road and Brannigan Street
- Dublin Boulevard – east of Fallon Road
- Finnian Way – between Chancery Lane and Fitzwilliam Street

Class II Bike Lanes

Bike lanes provide designated street space for bicyclists, typically adjacent to the outer vehicle travel lanes. Bike lanes include special lane markings, pavement legends, and signage. Existing and proposed bicycle facilities are shown on Figure 4.15-2 and described below. Bike lanes may be enhanced with painted buffers between vehicle lanes and/or parking, and green paint at conflict zones (such as driveways or intersections).

Existing Class II bike facilities on both sides of the road:

- Gleason Drive – west of Tassajara Road; between Brannigan Street and Fallon Road
- Central Parkway
- Dublin Boulevard – west of Keegan Street
- Tassajara Road
- Fallon Road – north of approximately 415 feet north of Dublin Boulevard

Existing Class II bike facilities on one side of the road:

- Dublin Boulevard – between Keegan Street and Fallon Road
- Fallon Road – between approximately 415 feet north of Dublin Boulevard and Fallon Gateway

City of Dublin Bicycle and Pedestrian Master Plan proposed Class II bike facilities on both sides of the road:

- Gleason Drive – between Tassajara Road and Brannigan Street
- Dublin Boulevard – east of Lockhart Street

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Class III Bike Routes

Bike routes provide enhanced mixed-traffic conditions for bicyclists through signage, striping, and/or traffic calming treatments, and to provide continuity to a bikeway network. Bike routes are typically designated along gaps between bike trails or bike lanes, or along low-volume, low-speed streets. Bicycle boulevards provide further enhancements to bike routes to encourage slow speeds and discourage non-local vehicle traffic via traffic diverters, chicanes, traffic circles, and/or speed tables. Bicycle boulevards can also feature special wayfinding signage to nearby destinations or other bikeways.

There are no existing Class III bike facilities within the study area.

City of Dublin Bicycle and Pedestrian Master Plan proposed Class III bike facilities:

- Grafton Street – between Gleason Drive and Central Parkway
- Lockhart Street – between Gleason Drive and Dublin Boulevard

Transit Service

Wheels

The Livermore Amador Transit Authority (LAVTA) runs the Tri-Valley Wheels transit service. Wheels provides fixed-route transit service in Alameda County, serving the communities of Dublin, Livermore, Pleasanton, and unincorporated portions of the County. Routes 2, 30R, 501, 502, and 504 operate and have stops within in the vicinity of the project site. The existing bus routes are shown on Figure 4.15-3.

Route 2 is a local connector providing hourly service during peak times on weekdays between the East Dublin/Pleasanton BART station, the office and commercial districts along Dublin Boulevard, and the residential neighborhoods in northeast Dublin. The route has designated stops along Central Parkway within the study area. Daily boardings on Route 2 are approximately 40 passengers.

Route 30R (Rapid) is a rapid bus route that provides service with approximately 15-minute headways during the day on weekdays and hourly on weekday evenings and all-day on weekends. It has designated stops along Dublin Boulevard within the study area. Route 30R provides a connection to the Dublin Bay Area Rapid Transit (BART) fixed rail transit station for regional travel. Weekday daily boardings on Route 30R are approximately 1,800 passengers according to LAVTA. With 60 weekday daily roundtrips, most buses operate with additional available capacity.

Routes 501, 502, and 504 are designated school routes operated by Wheels for the Dublin Unified School District. These routes operate on school days in the morning and afternoon according to school schedules. The routes do not operate on weekends, holidays, and non-school days. Route 501 (A, B, and C) provides service for students living near Positano Hill east of the project site to the existing Dublin High School. Route 502 provides service for students living near Emerald Glen east of the project site to Wells Middle School and Dublin High School. Route 504 provides service for students living near Dublin Ranch, which is where the project site is located, to Dublin High School. Routes 501, 502, and 504 have designated stops within the study area. The average per trip boardings on Route 501, 502 and 504 are approximately 50, 56 and 51 boardings per trip, respectively according to LAVTA ridership data.

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It should be noted that the existing Wheels school route structure is designed to carry students from residences in eastern Dublin to schools located in western and central areas of the City. With the construction of the project, many of these high school students will attend the new high school located nearer to their place of residence. With this change these students may elect to walk or bike to school or choose another alternative mode of travel. It is likely that Wheels ridership on school routes connecting east and central/west Dublin will decline and that their service will be adjusted accordingly. These adjustments would potentially include new routes providing connections for students to the new high school.

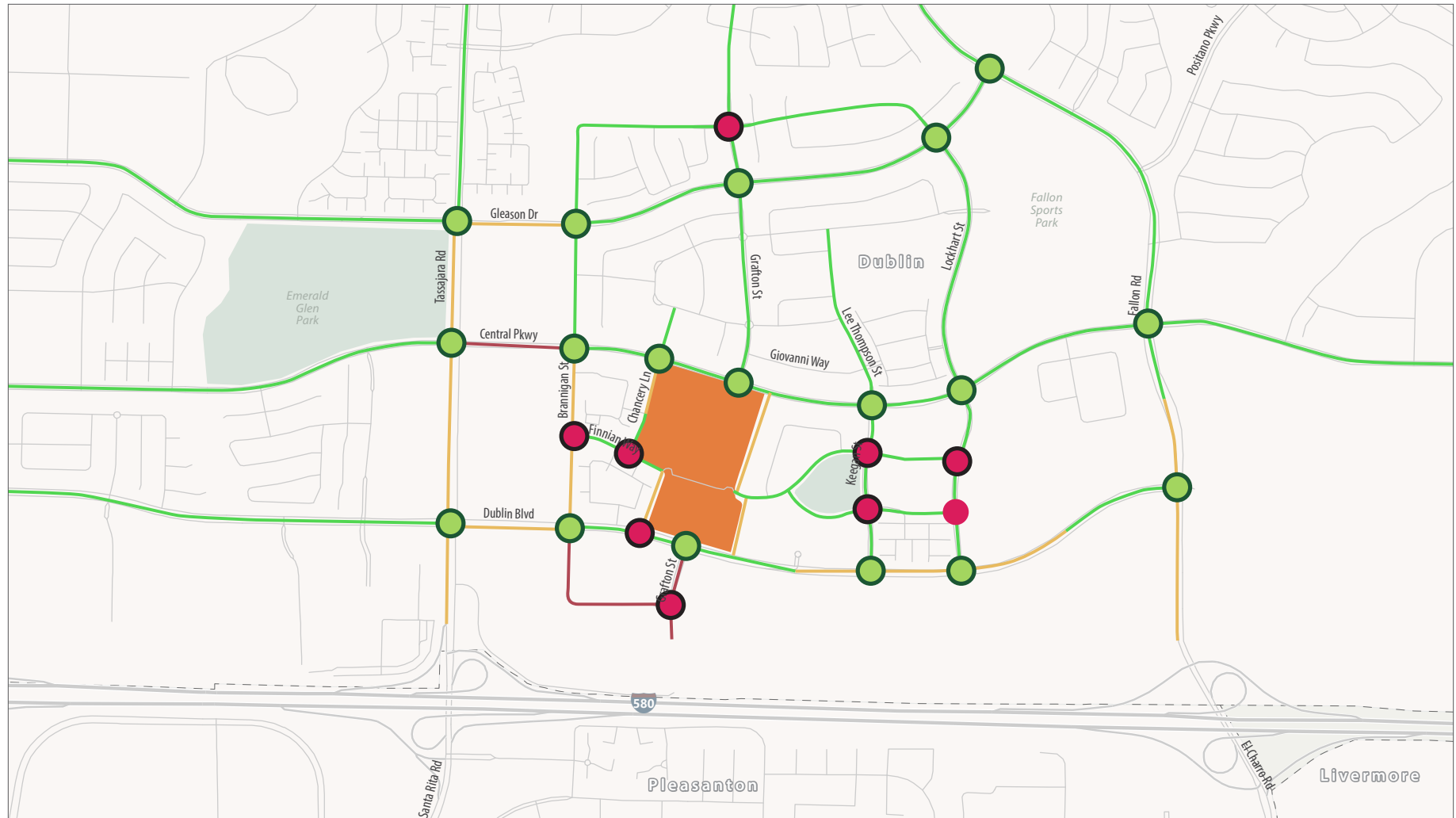
Bay Area Rapid Transit (BART)

BART provides regional transportation connections to much of the Bay Area and the Dublin/Pleasanton line provides direct access to San Francisco, with several stops in Oakland where connections may be made to other lines. The closest BART station to the project site is the East Dublin/Pleasanton Station located approximately two miles to the west. BART train frequency on this route ranges between 15 to 20 minutes from approximately 5:00 AM to 12:00 AM. Based on 2020 data from BART, approximately 8,000 passengers per day enter/exit the BART system at the East Dublin/Pleasanton station.

LAVTA GoDublin! Program

In addition to the regular transit service to the study area, the LAVTA GoDublin! Program provides dial-a-ride door-to-door service within the LAVTA service area for disabled people of all ages and senior citizens. The program will also pay for half (up to \$5) of an Uber or Lyft fare for trips starting and ending in Dublin.

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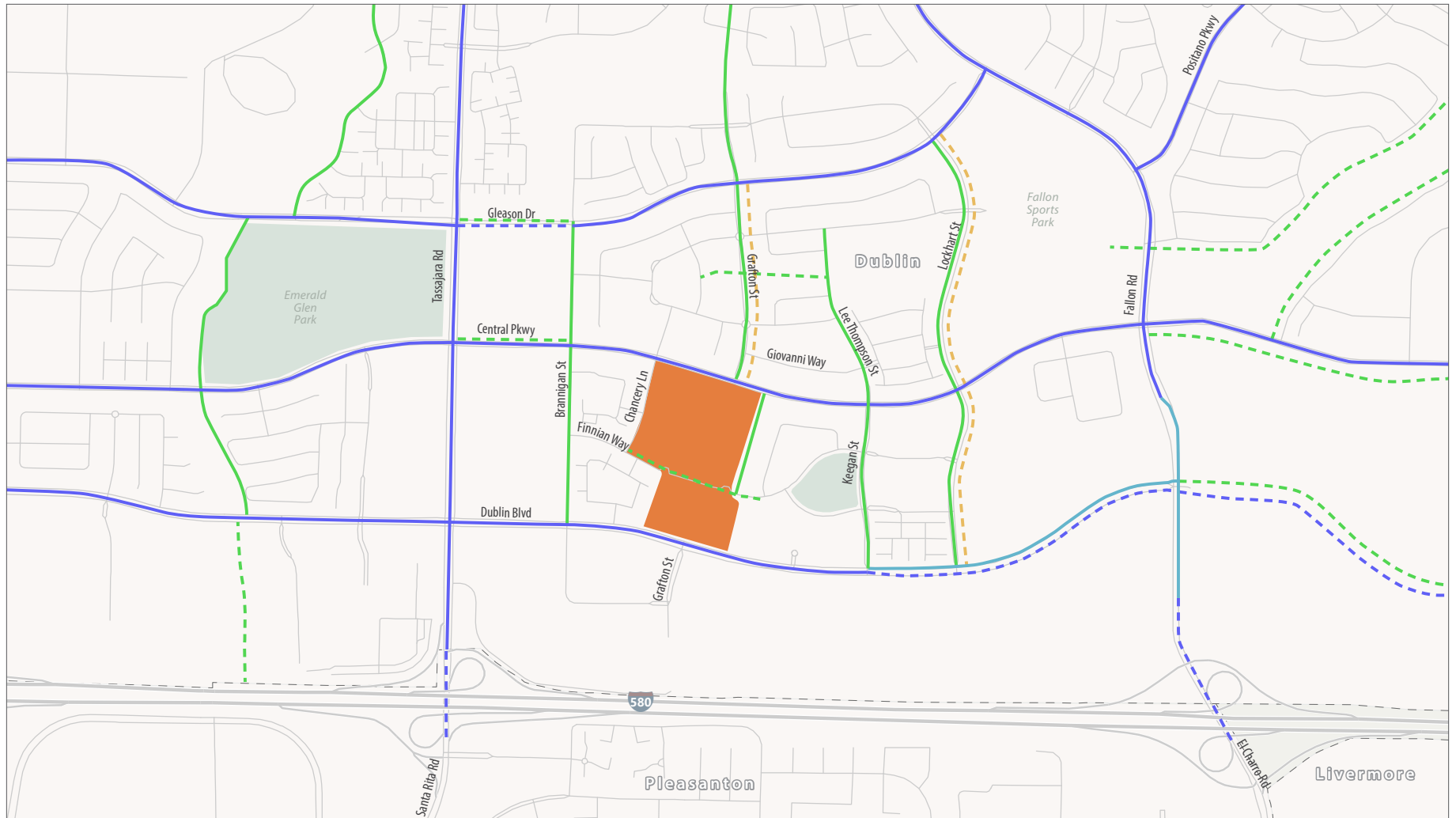


Source: Fehr & Peers, 2020. PlaceWorks, 2020.



Figure 4.15-1
Existing Pedestrian Facilities

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Source: Fehr & Peers, 2020. PlaceWorks, 2020.

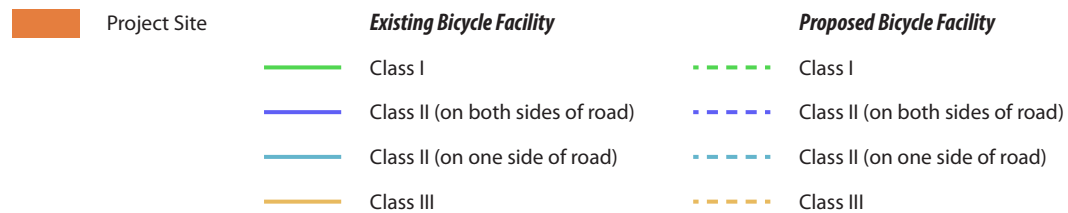
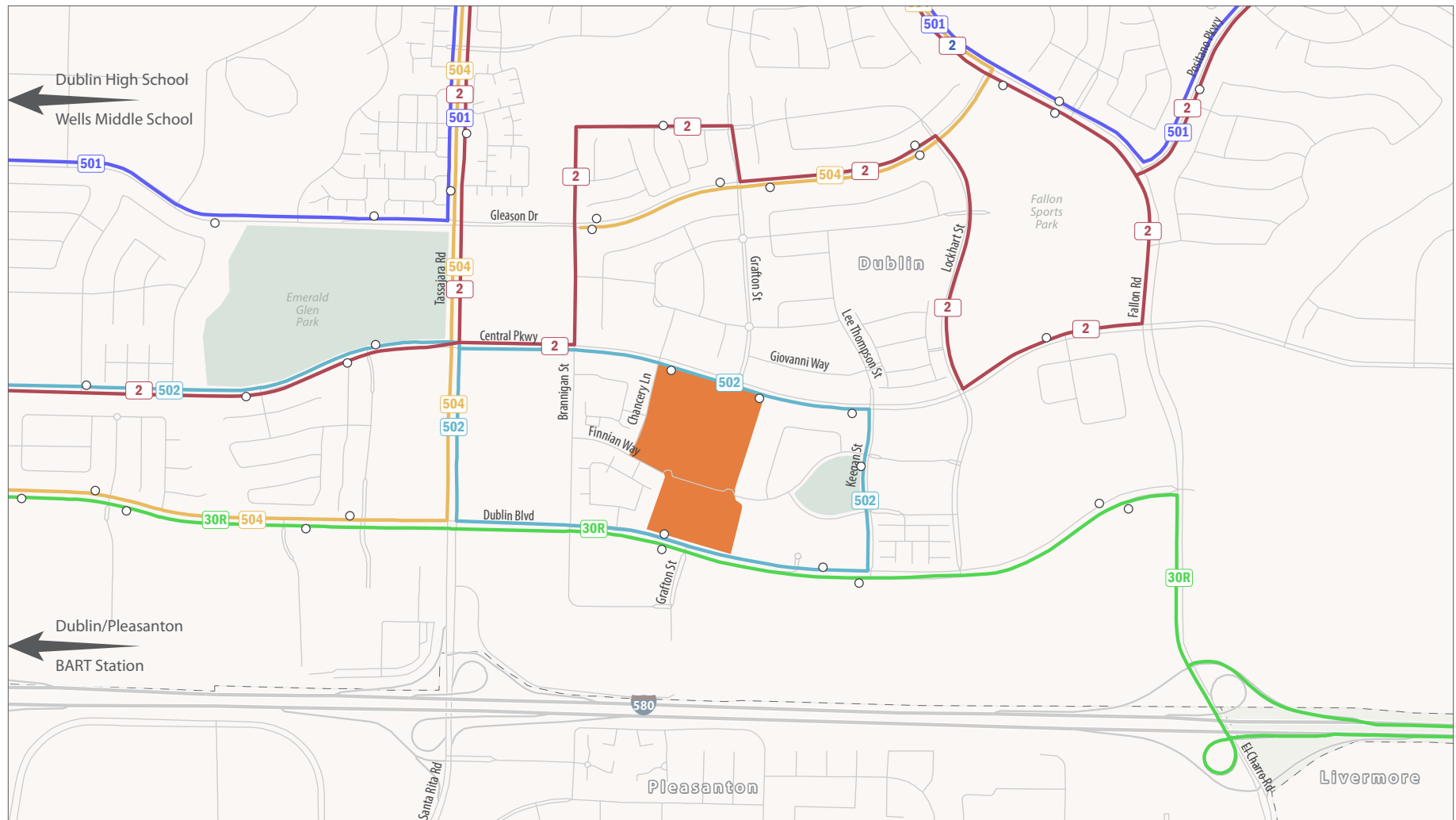


Figure 4.15-2
Existing and Proposed Bicycle Facilities

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Source: Fehr & Peers, 2020. PlaceWorks, 2020.

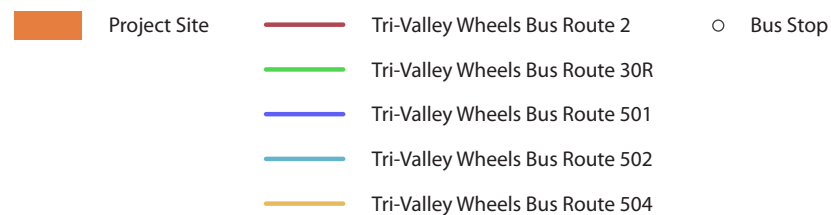


Figure 4.15-3
Existing Bus Routes

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4.15.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact regarding transportation and traffic if it would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. In combination with past, present and reasonably foreseeable projects, result in significant cumulative impacts with respect to transportation and traffic.

State Regulations

Senate Bill 743

The project would have a significant impact on the environment if it:

1. Causes substantial additional VMT per capita, per service population, or other appropriate efficiency measure. Specifically,
 - For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
 - For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.
 - For retail projects greater than 80,000 square feet, a project would cause substantial additional VMT if it results in a net increase in citywide total VMT per service population.
2. Conflicts with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay).
3. Substantially induces additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network.

As the proposed project is not residential, office or retail in nature, its effect on total VMT is measured. If the project is found to reduce overall VMT due to its development, it is considered to have a less than significant impact. (CEQA Guidelines, § 15064.3(b)(1).)

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Regional Regulations

Alameda County Transportation Commission Congestion Management Program

While Alameda CTC has not adopted thresholds of significance for land use analysis purposes, the ACTC's CMP provides that projects should consider impacts to all types of transportation modes on CMP MTS roadways, as described below:

- Autos: vehicle delay, if required by local jurisdiction, and consistency with adopted plans.
- Transit: effects of vehicle traffic on mixed-flow transit, transit capacity, transit access/egress, need for future transit service, consistency with adopted plans, and Circulation Element needs.
- Bicycles: effects of vehicle traffic on bicyclists conditions, site development, and roadway improvements, and consistency with adopted plans.
- Pedestrians: effects of vehicle traffic on pedestrian conditions, site development, and roadway improvements, and consistency with adopted plans.
- Other impacts and opportunities: noise impacts for projects near state highway facilities and opportunities to clear access improvements for transit-oriented development projects.

Local Regulations

City of Dublin

Impacts to transit, bicycle or pedestrian facilities could be identified if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decreases the performance or safety of such facilities; specifically:

- A pedestrian impact is considered significant if it would:
 - Disrupt existing pedestrian facilities;
 - Interfere with planned pedestrian facilities; or
 - Create inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.
- A bicycle impact is considered significant if it would:
 - Disrupt existing bicycle facilities;
 - Interfere with planned bicycle facilities;
 - Create inconsistencies with adopted bicycle system plans, guidelines, policies, or standards; or
 - Not provide secure and safe bicycle parking in adequate proportion to anticipated demand.
- A transit impact is considered significant if it would result in development that is inaccessible to transit riders or would generate transit demand that cannot be met by existing or planned transit in the area.

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- Transportation related impacts could also be identified if:
 - The project substantially increases traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses.
 - The project results in inadequate emergency access.

4.15.3 IMPACT DISCUSSION

TRANS-1 The proposed Project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including public transit, roadways, bicycle lanes, and pedestrian facilities.

The project site is located at the southeast corner of the Central Parkway and Chancery Lane intersection, as shown in Figure 3-2 of Chapter 3, Project Description. It is bounded by Chancery Lane to the west, Central Parkway to the north, residences to the east, and Dublin Boulevard to the south. The project proposes to construct a high school on a vacant site that would accommodate approximately 2,545 students. The project site plan is shown on Figure 3-6 of Chapter 3, Project Description.

Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. In addition to estimates of daily traffic, estimates are also created for the peak one-hour periods during the weekday morning (7:00-9:00 AM) and the afternoon peak hour of generation. The morning trip generation evaluates the period when traffic volumes on adjacent streets are typically at their highest and the project is expected to generate the most traffic. The afternoon peak hour represents the hour after school when the school generates the most traffic (3:00 to 5:00 PM).

Project trip generation was estimated using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition), land use code 530 for High School. Project trip generation estimates are presented in Table 4.15-1. The proposed project is expected to generate approximately 5,170 daily vehicle trips, including approximately 1,323 morning peak hour and 840 afternoon peak hour trips. It should be noted that these trips would not all be net new trips added to the City's roadway network. If the project was not constructed, local area students would travel to alternative high schools, with the existing Dublin High School on Village Parkway receiving the majority. With the proposed project constructed, existing vehicles on the roadway network would then travel to the proposed project rather than the alternative high schools. As the proposed project site is located closer to their place of residence, the development of the project would reduce the overall amount of net vehicle travel. Please see discussion under TRANS-2, below, for additional analysis regarding how development of the proposed project is expected to reduce the total weekday daily VMT by 20,378 vehicle miles.

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TABLE 4.15-1 PROJECT VEHICLE TRIP GENERATION

Use	Size	Daily	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
High School	2,545 Students	5,170	887	437	1,323	269	571	840

Notes: ITE land use category 530 – High School (Adj. Streets, 7-9A, PM Peak Hour Generator):

Weekday AM Peak Hour: Average rate of 0.52; Enter = 67%; Exit = 33%

Weekday PM Peak Hour: Average rate of 0.33; Enter = 32%; Exit = 68%

Source: Trip Generation Manual (10th Edition), ITE; Fehr & Peers, 2020.

A number of special events would be held at the project site throughout the year, including athletic competitions, graduation, and other miscellaneous events. The vehicle trip generation estimates associated with these special events are presented in **Table 4.15-2**. Special event trip rates per attendee were based on an average vehicle occupancy of 2.5, derived from the *Federal Highway Administration Managing Travel for Planned Special Events*, and an assumed mode split of 80 percent of trips traveling using a vehicle. Using this information, the number of vehicle trips (total two-way) were then estimated for an at-capacity event such as a graduation, and other non-capacity events.

TABLE 4.15-2 SPECIAL EVENT VEHICLE TRIP GENERATION

Event	Attendance	Rate	Vehicle Trips
Graduation	4,000	0.64	2,560
Football	4,000	0.64	2,560
Championship Games	4,000	0.64	2,560
Band Competition	4,000	0.64	2,560
Lacrosse	300	0.64	192
Cross Country Meets	500	0.64	320
Soccer Games	300	0.64	192
Track Meets	500	0.64	320
Fall Season Practices	150	0.64	96
Winter Season Practices	150	0.64	96
Spring Season Practices	150	0.64	96
Summer Season Practices	150	0.64	96
School Events	1,000	0.64	640

Source: Fehr & Peers, March 2020.

TRANSPORTATION & TRAFFIC**Public Transit**

As stated above and shown on Figure 4.15-3, Tri-Valley Wheels provides fixed-route transit service in Alameda County, serving the communities of Dublin, Livermore, Pleasanton, and unincorporated portions of the County. Routes 30R, and 502 operate and have stops along the project frontage. Two stops are provided on Central Parkway, one 100 feet east of Chancery Lane and one 180 feet east of Grafton Street, serving route 502. Another bus stop is located on Dublin Boulevard 150 feet west of Grafton Street serving routes 30R and 502. A third bus stop is located across the street from the project on Dublin Boulevard, 220 feet east of Grafton Street for route 30R. Transit amenities are provided at all three bus stops including a shelter and seating. A continuous pedestrian path would be provided from the project site to the transit stops as the project would construct new standard sidewalks along the entirety of the Dublin Boulevard and Central Parkway frontages. The buses used on these routes have a seating capacity of approximately 40 passengers, with standing room available for an additional 20 passengers.

The proposed project would not conflict with any plans, policies, ordinances, or regulations pertaining to public transit and thus no significant adverse impacts related to public transit are anticipated. The proposed project is not expected to result in ridership on the existing Wheels routes that would exceed the available capacity. The existing Wheels school routes are designed to take students from their residences to the existing schools in western and central Dublin and do not serve the project site effectively. Development of the project is expected to result in a decrease in ridership on the existing Wheels routes.

Improvement Measure Trans-1.1: Coordinate with Tri-Valley Wheels to adjust their route structure to accommodate the new high school.

Significance without Mitigation: Less than significant.

Bicycle Facilities

Proposed bicycle infrastructure is identified in the City of Dublin *Bicycle and Pedestrian Master Plan* (Master Plan), 2014. Currently within the project's vicinity, Central Parkway, Dublin Boulevard, Fallon Road, and Gleason Drive provide Class II marked bike lanes. Class I shared-use paths are provided on Grafton Street, Finnian Way and along the eastern project frontage. A number of bicycle facilities are proposed throughout the study area as described earlier and illustrated on Figure 4.15-2. A Tier 2 Class I path is proposed in the City's *Bicycle and Pedestrian Master Plan* on Finnian Way between Chancery Lane and Fitzwilliam Street, extending through the project site. As this connection is not provided, it is considered a *significant* impact.

Significance without Mitigation: Significant.

Impact TRANS-1.2: The project does not include a Class I connection through the project site along the Finnian Way alignment between Chancery Lane and Fitzwilliam Street and is thus inconsistent with the City's *Bicycle and Pedestrian Master Plan*.

Mitigation Measure TRANS-1.2: The applicant shall provide a Tier 2 Class I path through the project site from Chancery Lane to Fitzwilliam Street along the Finnian Way right-of-way.

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Significance with Mitigation: Less than Significant.

Figure 4.15-4 illustrates the location of this, and other recommended on-site transportation mitigation measures discussed herein.

No bicycle parking is currently illustrated on the project site plan. Student bicycle parking provisions from the California Green Building Standards Code section 5.106.4.2.1 require permanently anchored bicycle racks with a minimum of four two-bike capacity racks per new building. Staff bicycle parking provisions from the California Green Building Standards Code section 5.106.4.2 requires a minimum of two permanent, secure bicycle parking spaces per new building. Additionally, a minimum of 90 bicycle spaces are required at the project site, with a minimum of 72 student bicycle spaces and 18 staff bicycle spaces. Because the proposed project would not provide sufficient bicycle parking in accordance with current code requirements, this is considered to be a *significant* impact.

Significance without Mitigation: Significant.

Impact TRANS-1.3: The project does not provide sufficient bicycle parking in accordance with current code requirements.

Mitigation Measure TRANS-1.3: Provide at least 90 bicycle parking spaces, with a minimum of 72 student bicycle spaces and a minimum of 18 staff bicycle spaces at the project site. Provide a minimum of two permanent, secure bicycle parking spaces per new building meeting one of the following per the California Green Building Standards Code section 5.106.4.2.2:

- Covered, lockable enclosures with permanently anchored racks for bicycles
- Lockable bicycle rooms with permanently anchored racks
- Lockable, permanently anchored bicycle lockers.

Significance with Mitigation: Less than Significant.

The proposed project would not conflict with any plans, policies, ordinances, or regulations pertaining to pedestrian facilities or travel and thus no significant adverse impacts are anticipated.

Significance with Mitigation: Less than Significant.

Parking

The proposed project would provide three parking lots, as shown on Figure 4.15-5; lots A, B and C. Parking lot A would be accessed from Central Parkway and provide 245 parking spaces, 8 of which would be accessible stalls. Parking lot B would be accessed along Chancery Lane and provide 33 parking spaces, 2 of which would be accessible stalls. Parking lot C would be accessed along Dublin Boulevard and provide 149 parking spaces, 6 of which would be accessible stalls. A 135-stall parking structure will also be provided under parking lot C. All proposed parking would be 90-degree angled stalls.

Near the project site, on-street parking is allowed on portions of both sides on Central Parkway, both sides of Chancery Lane, Finnian Way and Grafton Street and not allowed on Dublin Boulevard. No length of stay or time of day restrictions are currently in place for the area's on-street parking.

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The City of Dublin Municipal Code Chapter 8.76.080 Parking Requirements by Use Type requires high school developments to provide:

- One parking space per classroom, plus
- One parking space per four students, plus
- 60 lineal feet of street loading area for every 200 students

The proposed project will provide 49 classrooms and have a maximum capacity of approximately 2,545 students, which requires 686 parking spaces and 750 lineal feet of off-street loading. The *ITE Parking Generation Manual, 5th Edition* estimates an average rate of 0.26 parking spaces per student for High Schools, which equates to 662 parking spaces. The site plan provides 559 parking spaces and roughly 770 feet of off-street loading. The amount of proposed parking would not meet City Code Chapter 8.76 requirements or satisfy the anticipated demand for off-street parking. However, as previously noted, the District is exempt from the City's zoning ordinance contained in Title 8 of the City's Municipal Code. The amount of off-street loading space provided meets City standards and is expected to be adequate.

The California Code of Regulations Title 24 requires a minimum of 2 percent of total spaces to be reserved for disabled accessible parking spaces. These spaces shall be located as near as practical to primary accessible entrances.

The amount of proposed off-street parking is not adequate to meet California Code Title 24 requirements or satisfy the anticipated parking demand. While the lack of sufficient parking is not considered to be a significant impact on the environment pursuant to California Public Resources Code section 21099(b)(3), the provision of insufficient parking would be expected to lead to staff and students parking within available on-street parking on the roadways surrounding the project site. The overflow of students and staff into on-street parking within the surrounding neighborhood would likely lead to resident complaints relative to pedestrian activity and the loss of on-street parking for local residences.

Roadways

The CMP indicates that ACTC shall take actions to encourage, supplement, and support transportation demand management (TDM) efforts to assess, monitor, and improve the performance of the county's multimodal transportation system, address congestion, and ultimately protect the environment with strategies to help reduce greenhouse gas emissions.

Designated CMP MTS roadways within the study area include:

- I-580 from west of Hacienda Drive to Airway Boulevard
- Fallon Road from I-580 Ramps to Tassajara Road
- Tassajara Road from I-580 Ramps to S Dublin Ranch Road
- Dublin Boulevard from Tassajara Road to Fallon Road

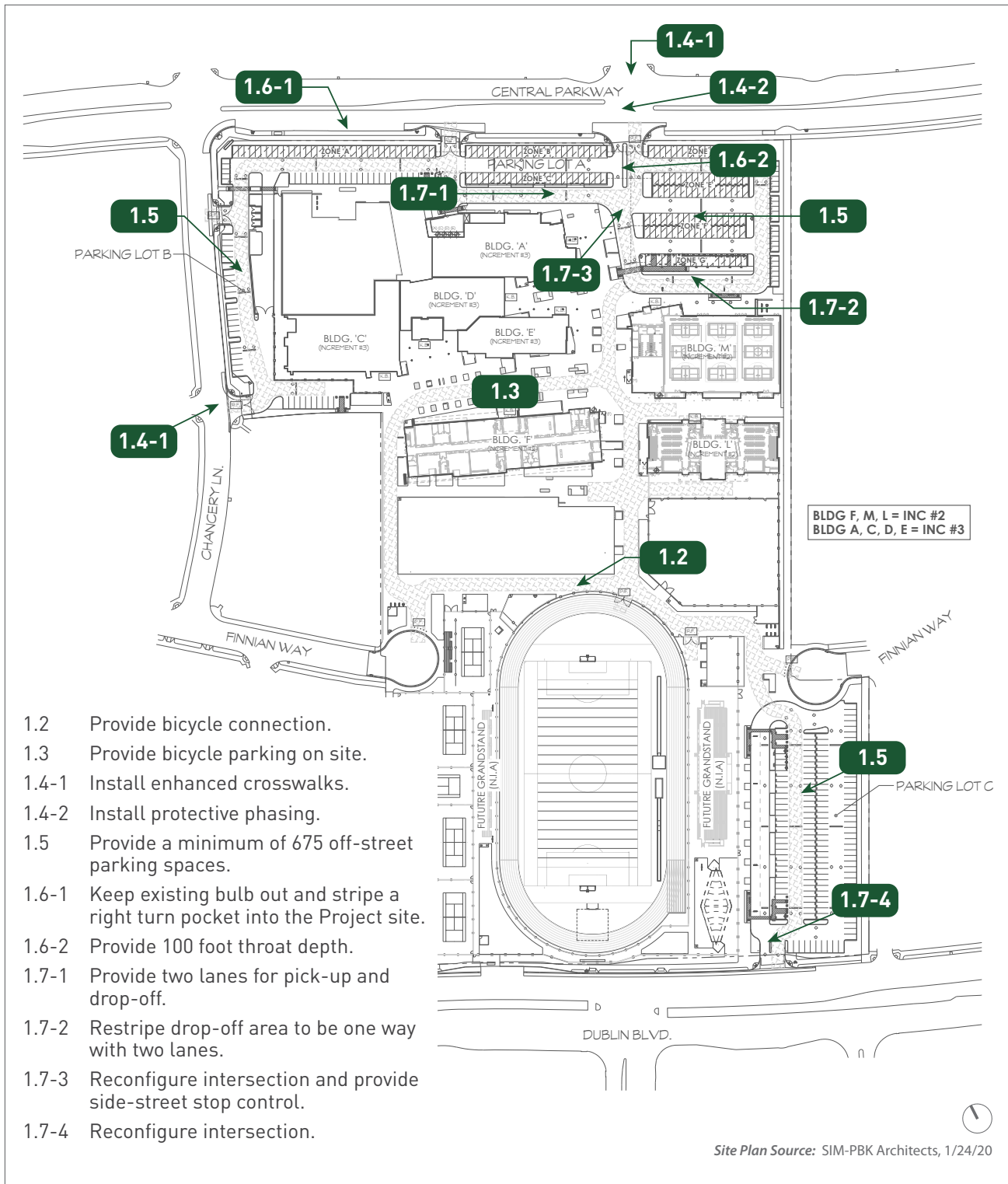
TRANSPORTATION & TRAFFIC

ACTC has not adopted thresholds of significance for land use analysis purposes but recommends the consideration of impacts. Project effects on autos, transit, bicycles, pedestrians, and safety are not expected to impact the performance of regional CMP MTS roadways. In general, development of the project would result in an overall decrease in vehicle trip making by providing a high school in an underserved area. As shown on Table 4.15-3, below, if the project were not to be developed, local students would travel farther, with fewer walk and bicycle trips, to attend alternative high schools. The overall effect of the project on the regional MTS roadway network would be a decrease in traffic levels.

The proposed project would not conflict with any plans, policies, ordinances, or regulations pertaining to the roadway system and thus no significant adverse impacts related to roadways were identified.

Significance without Mitigation: Less than Significant.

TRANSPORTATION & TRAFFIC



Source: Fehr & Peers, 2020. PlaceWorks, 2020.



Figure 4.15-4
Project Site Plan Recommendations

TRANSPORTATION & TRAFFIC

TRANS-2 The proposed Project would not conflict with CEQA Guidelines Section 15064.3, subdivision (b).

Vehicle Miles Traveled (VMT)

In response to Senate Bill 743 (SB 743), the Office of Planning and Research (OPR) has updated California Environmental Quality Act (CEQA) guidelines to include new transportation-related evaluation metrics. Drive guidelines were developed in August 2014, with updated draft guidelines prepared January 2016, which incorporated public comments from the August 2014 guidelines. OPR released final proposed Guidelines on November 27, 2017. The final proposed Guidelines include a new Section 15064.3, which establishes VMT as the most appropriate measure of transportation impacts in land use projects. OPR also released a Technical Advisory on Evaluating Transportation Impacts in CEQA. New Guidelines section 15064.3 states that they do not take effect until July 1, 2020 unless the lead agency adopts them earlier. As neither the City of Dublin nor the Alameda CTC has established standards or thresholds regarding VMT, the project's total effects on VMT have been calculated.

Analysis, Methods & Results

To estimate the project's effects on vehicle miles of travel, the total VMT without and with the project was calculated. Using the locations of student addresses shown on Figure 4.15-5, student trip lengths to the new proposed high school location and the existing Dublin High School were calculated. Employee trip lengths to both high school locations were estimated to be approximately the same and consistent with employee trip lengths in this area of the City and County. The estimate of project generated VMT is summarized in Table 4.15-3. The expected total weekday daily VMT associated with the proposed project site is approximately 15,858 vehicle miles. If the proposed project were not to be constructed, area students would need to attend another school, such as the existing Dublin High School, or another location further from their residence. To be conservative, all students were assumed to attend the existing Dublin High School in the absence of project development. For project students, the total average trip length to the new high school was calculated to be 1.7 miles, with their trip length to the existing Dublin High School being 5.9 miles. The total weekday daily VMT associated with students attending the existing high school is approximately 36,614 vehicle miles. Thus, development of the proposed project is expected to reduce the total weekday daily VMT by 20,756 vehicle miles.

TABLE 4.15-3 PROJECT EFFECT - VEHICLE MILES OF TRAVEL

	Daily Trip Generation	Average Trip Length	Daily Vehicle Miles of Travel
Proposed Project (Promenade High School)	4,942 student trips	1.7 miles/trip	8,402 vehicle miles
	228 employee trips	32.7 miles/trip	7,456 vehicle miles
Proposed Project Total	5,170 Trips	-	15,858 vehicle miles
Existing Dublin High School	4,942 trips	5.9 miles/trip	29,158 vehicle miles
	228 employee trips	32.7 miles/trip	7,456 vehicle miles
Existing DHS Total	5,170 Trips	-	36,614 vehicle miles
Total Project Effect on VMT (Project – Existing)			(20,756) vehicle miles

Source: Fehr & Peers, March 2020.

TRANSPORTATION & TRAFFIC

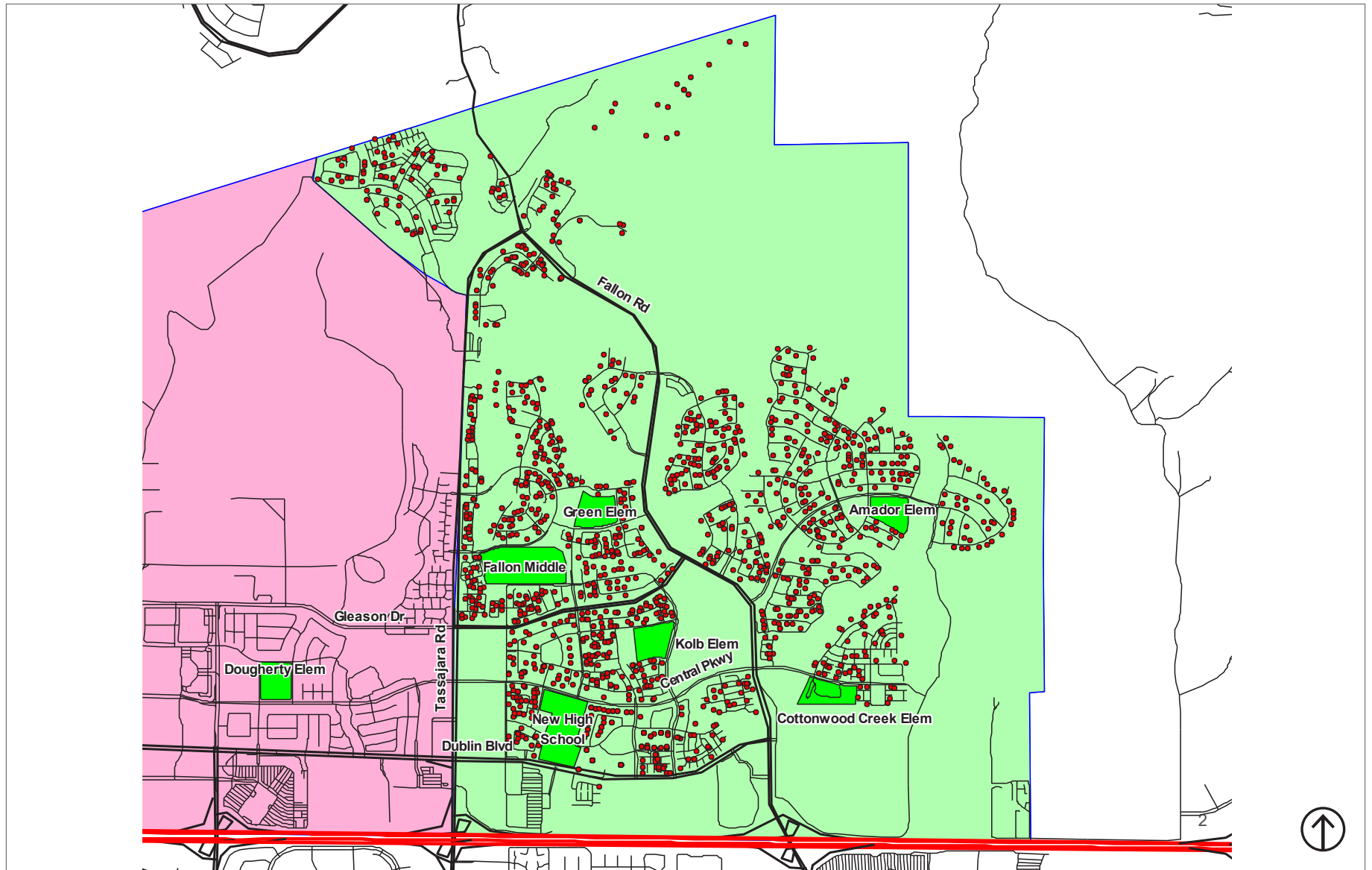
The average project trip length compared to the average trip lengths for school-based trips in Alameda County and the Tri-Valley area compiled from the California Household Travel Survey (2010-2012 *California Household Travel Survey, Final Report*, June 2013, California Department of Transportation), is summarized below:

- Proposed Project High School Students – 1.7 miles
- Alameda County Average – 2.7 miles
- Tri-Valley (Dublin/Pleasanton/Livermore) – 2.0 miles

The expected trip length for project students is less than the average trip length of school-based student trips within Alameda County, and the Tri-Valley area. The proposed project would reduce total VMT by approximately 20,800 miles per day.

Significance without Mitigation: Less than Significant

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Source: Fehr & Peers, 2020. PlaceWorks, 2020.

Figure 4.15-5

Estimated Distribution of Future Comprehensive Dublin High School Students

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TRANS -3	The proposed Project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
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Pedestrian Facilities

The project site is located within a City-designated Enhanced Pedestrian Area. An Enhanced Pedestrian Area is designated to encourage pedestrians to walk to their destination rather than using their car for trips within the area. The purpose of the Enhanced Pedestrian Area designation is to ensure that development within the area is designed to encourage pedestrian trips. The proposed project is a school use and, in conjunction with the Safe Routes to School program, encourages walking to the site.

Existing pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals as shown on Figure 4.15-1. As part of the project, new City standard sidewalks and corner ADA compliant curb ramps would be provided on all roadways abutting the project site. The amount of pedestrian activity on site area sidewalks and crosswalks will substantially grow as a result of the project, increasing the potential for vehicle and pedestrian conflicts, potentially causing a *significant* impact.

Significance without Mitigation: Potentially Significant.

Impact TRANS-3.1: The increase of pedestrian activity increases the potential for vehicle and pedestrian conflicts.

Mitigation Measure TRANS-3.1a: The project shall install enhanced school crosswalks at Central Parkway and Grafton Street as well as Chancery Lane and Dunmore Lane.

Mitigation Measure TRANS-3.1b: The project shall install northbound and southbound protective left-turn phasing at the signalized intersection of Central Parkway and Grafton Street to reduce the potential for pedestrian and vehicle **conflict**.

Significance with Mitigation: Less than Significant.

Site Circulation

Vehicular access to the project site is proposed to be provided via five access points, including:

- Intersection of Grafton Street and Central Parkway (signalized)
- Intersection of Chancery Lane and Dunmore Lane (unsignalized)
- Driveway on Chancery approximately 280 feet north of Dunmore Lane
- Driveway on Central Parkway approximately 335 feet east of Chancery Lane
- Driveway on Dublin Boulevard approximately 220 feet east of Grafton Street

Additional emergency vehicle access points to the site are included on Finnian Way from the west and east.

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The posted speed limit is 35 miles per hour on Central Parkway, 25 miles per hour on Chancery Lane and 45 miles per hour on Dublin Boulevard. Table 201.1 of the Caltrans Highway Design Manual (HDM) states that the stopping sight distance standard for a design speed of 45 miles per hour is 360 feet, 250 feet for 35 miles per hour and 150 feet for 25 miles per hour. Adequate sight distance appears to be provided at all new driveway locations proposed by the project. However, as the project's design is finalized, these distances should be checked, and the project should propose no features (signs, landscaping, etc.) that would compromise driveway sight distance resulting in a *significant* impact.

Significance without Mitigation: Potentially Significant

Impact TRANS-3.2: The proposed design may compromise driveway sight distance.

Mitigation Measure TRANS-3.2: The final site plan for the project will be analyzed by the project's Civil Engineer to ensure that adequate sight distance is maintained at all driveways. No objects (landscaping, monument signs, etc.) greater than three feet in height will be allowed within the sight distance triangles at driveway intersections. The project's Civil Engineer will review available speed survey information from the City and adjust required sight distance if required in order to comply with applicable sight distance standards.

Significance with Mitigation: Less than Significant

At the project driveway located on Dublin Boulevard, vehicles exiting the site wanting to travel east on Dublin Boulevard may attempt to cross multiple lanes of traffic in a short distance to use the westbound left turn lane at Dublin Boulevard and Grafton Street. This would be a potentially unsafe movement that could cause a *significant* impact and should be prohibited.

Significance without Mitigation: Potentially Significant

Impact TRANS-3.3: The proposed design may cause an unsafe movement when exiting the site at the project driveway located on Dublin Boulevard.

Mitigation Measure TRANS-3.3: Provide bollards as a vertical barrier for the westbound left turn lane at Dublin Boulevard and Grafton Street to deter vehicles exiting the site to cross multiple lanes of traffic.

Significance with Mitigation: Less than Significant

Three unloading zones are proposed on-site, providing roughly 770 feet of off-street loading. Two off-loading zones would be provided in the northern parking lot, and one would be provided in the southern parking lot. In the northern parking lot, vehicles traveling to the northern side of the site would primarily use the full access driveway at the intersection of Central Parkway and Grafton Street, and the right in, right out driveway located 335 feet east of Chancery Lane. Vehicles using the drop-off area north of Building A would enter at the driveway east of Chancery Lane and exit at the driveway located at Central Parkway and Grafton Street. Vehicles using the drop off area north of Building M would enter and exit at the driveway located at Central Parkway and Grafton Street. Vehicles traveling to the southern lot and

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drop off area would enter and exit the site using the right in, right out driveway located on Dublin Boulevard 220 feet east of Grafton Street.

On Central Parkway, the existing bulb out near the western bus stop is proposed to be moved to the first proposed driveway east of Chancery Lane as a part of the project. The project proposed large pull out area would likely be used as a drop off and pick up zone. Loading and unloading activities in this area would create additional conflicts areas with heavy flows of vehicle, bicycle, and pedestrian traffic in this area causing a potential *significant* impact

Significance without Mitigation: Potentially Significant.

Impact TRANS-3.4: The proposed design near the first proposed driveway east of Chancery Lane would be used as a drop off and pick up zone. Loading and unloading activities in this area would create additional conflicts areas with heavy flows of vehicle, bicycle, and pedestrian traffic in this area.

Mitigation Measure TRANS-3.4: Modify the proposed project to keep the existing bulb out at the bus stop in its current location. Remove the bulb out at the project driveway and stripe a right turn pocket on Central Parkway turning into the project site.

Significance with Mitigation: Less than Significant.

One of the main project access points will be at the signalized intersection of Central Parkway and Grafton Street. Insufficient clear throat depth, for vehicles exiting the project site at this location could potentially conflict with heavy flows of vehicle, bicycle, and pedestrian traffic. Throat depth is the distance from the outer edge of the traveled way of the roadway to the first point along the driveway at which there are conflicting vehicular traffic movements. This is the storage length available that is free for vehicles entering or exiting a site. This may cause a *significant* impact.

Significance without Mitigation: Potentially Significant.

Impact TRANS-3.5: The proposed design has Insufficient clear throat depth, for vehicles exiting the project site at this location could potentially conflict with heavy flows of vehicle, bicycle, and pedestrian traffic.

Mitigation Measure TRANS-3.5: Modify the proposed design at Central Parkway and Grafton Street to provide a minimum throat depth of 100 feet (approximately four vehicles) for vehicles entering and exiting the site.

Significance with Mitigation: Less than Significant.

Several circulation areas within the project site pose the potential for conflicts between vehicles, pedestrians and bicycles, potentially causing a safety hazard and a potential *significant* impact.

Significance without Mitigation: Potentially Significant.

TRANSPORTATION & TRAFFIC

Impact TRANS-3.6: Several circulation areas within the project site pose the potential for conflicts between vehicles, pedestrians and bicycles, potentially causing a safety hazard.

Mitigation TRANS-3.6a: A loading and unloading area with one lane is proposed just north of Building A. To provide for safe and efficient access, the project shall stripe the drop-off area to include two lanes, with one lane dedicated and striped for drop-off and pick-up, and one lane dedicated for passing.

Mitigation TRANS-3.6b: A bi-directional loading and unloading area is proposed just north of the Gymnasium Building M. To provide for safe and efficient access, the project shall restripe the area to be one way with two lanes, one lane for drop-off and pick-up and one lane dedicated for passing.

Mitigation TRANS-3.6c: An on-site intersection is proposed just south of the Central Parkway and Grafton Street project driveway. The proposed configuration does not align with the driveway and provides for an angled off-set intersection. To provide for safe and efficient on-site circulation, the project shall reconfigure and realign this intersection to align with the project driveway and implement side-street stop-control for vehicles leaving the drop-off area just north of Building A. Under this type of intersection control, vehicles leaving the drop off area will be required to stop.

Mitigation TRANS-3.6d: An on-site intersection is proposed just north of the Dublin Boulevard driveway that the project will reconfigure for modified circulation. To improve safety and circulation for vehicles, pedestrians, and bicycles at this location, the project shall extend the landscaped island adjacent to the furthest south ADA parking spot to connect to the adjacent island, install a landscaped island just north of the existing southeastern island, and direct vehicles with signs using the loading and unloading area to travel counterclockwise around the southerly parking lot.

Significance with Mitigation: Less than Significant.

TRANS-4	The proposed project would may result in inadequate emergency access.
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The project would entail construction of a new school which would not physically interfere with emergency response or evacuation plans once fully constructed, either to the new high school or to the surrounding residential and commercial development. During operation of the school, the existing layout of roadways in the vicinity of the proposed project would be as shown on the site plan. As reflected on the project's conceptual site plan, the project is in compliance with local emergency vehicle access standards and regulations. The connection of the school to the City of Dublin streetways would occur from Dublin Boulevard to the south, Central Parkway to the north and Finnian Way to the east and west.

During construction, roadway modifications would occur on Dublin Boulevard and Central Parkway in the vicinity of the proposed project to allow access to residential areas and commercial areas by emergency vehicles. These modifications could require temporary roadway closures and detouring, which would be accounted for through the preparation of a traffic management plan (TMP). All relevant emergency services would be notified of and provided with the TMP, thereby, avoiding interference with adopted emergency plans or emergency evacuation plans. Without a TMP this may cause a *significant* impact.

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Significance Without Mitigation: Potentially Significant.

Impact TRANS-4: The proposed project would result in temporary modifications to Dublin Boulevard and Central Parkway during construction which may interfere with emergency vehicle response times and routes.

Mitigation Measure TRANS-4: Preparation of a traffic management plan (TMP), which would:

- Provide notice to relevant emergency services, thereby avoiding interference with adopted emergency plans, emergency vehicle access, or emergency evacuation plans.
- Identify locations of staging areas, construction worker parking, and off-site parking staging areas, as necessary.
- Provide a point of contact for City of Dublin residents to obtain construction information, have questions answered, and convey complaints, as related to construction impacts to traffic.
- Identify the traffic controls and methods proposed during each phase of the project construction and the provision of safe and adequate access for vehicles, transit, bicycles, and pedestrians. Traffic controls and methods employed during construction shall be in accordance with City of Dublin standards and the requirements of the Manual of Uniform Traffic Control Devices (FHWA, 2009 MUTCD with Revisions 1 and 2, May 2012). The TMP shall identify safe access points, routes of travel and other means of access and circulation.
- Maintain bicycle and pedestrian access along the project frontage on the east-west thoroughfare on Dublin Boulevard and Central Parkway during construction, when feasible. When infeasible, provide appropriate pedestrian and bicycle detours with adequate signing and striping.

Significance with Mitigation: Less than Significant

The project site plan shows a total of seven access points for emergency vehicles along the street network including two on Finnian Way, two on Central Parkway, two on Chancery Lane and one on Dublin Boulevard. Additional access points located within the proposed site are located in the parking lots with one in the northern parking lot and one in the southern parking lot. Several factors determine whether a project has sufficient access for emergency vehicles, including:

- Number of access points (both public and emergency access only)
- Width of access points
- Width of internal roadways

Internal roadways and access points on the conceptual project site appear to have sufficient width to accommodate emergency vehicles. However, as the site plan is finalized, adequate and safe emergency vehicle access should be confirmed.

Improvement Measure TRANS-4.1: The final site plan shall be reviewed and approved by the Fire Marshal to ensure adequate emergency vehicle access.

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TRANS-5	The proposed project, in combination with past, present and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to transportation and traffic.
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The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to transportation and traffic. The proposed project would result in an incremental cumulative decrease in Vehicle Miles of Travel of approximately 20,800 vehicle miles per day on the area's roadway network. With respect to public transit facilities, development of the proposed project would result in a cumulative decrease in ridership on existing transit lines, which is not considered to be a significant adverse impact. The project's incremental contributions to area pedestrian and bicycle travel would not be cumulatively considerable and would not result in significant cumulative adverse impacts.

Significance without Mitigation: Less than Significant

TRIBAL CULTURAL RESOURCES

4.16 TRIBAL CULTURAL RESOURCES

This chapter describes existing tribal cultural resources on the project site and evaluates the potential environmental consequences on tribal cultural resources from development of the proposed project. A summary of the relevant regulatory setting and existing conditions is followed by a discussion of the proposed project and cumulative impacts.

4.16.1 ENVIRONMENTAL SETTING

4.16.1.1 REGULATORY FRAMEWORK

Federal Regulations

American Indian Religious Freedom and Native American Graves and Repatriation Acts

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

State Regulations

California Environmental Quality Act

California State law provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in documents prepared consistent with the California Environmental Quality Act (CEQA). The CEQA statutes are contained in Public Resources Code (PRC) Sections 21000 to 21177, and the CEQA Guidelines are contained in the California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 to 15387.

Under CEQA, a cultural resource is considered a “historical resource” if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Under CEQA, the lead agency determines whether projects may have a significant effect on archaeological and historical resources. CEQA Guidelines Section 15064.5 defines what constitutes a historical resource, including: (1) a resource determined by the State Historical Resources Commission to be eligible for the California Register of Historical Resources (including all properties on the National Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k); (3) a resource identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) any object, building, structure, site, area, place, record, or manuscript that the City determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the City's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered to be historically significant if it meets the criteria for listing on the California Register enumerated below:

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

If the lead agency determines that a project may have a significant effect on a historical resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. However, no further environmental review needs to be completed if, under the qualifying criteria, a cultural resource is not found to be a historical resource or unique archaeological resource.

In addition, PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines specify lead agency responsibilities to determine whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project would damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The PRC also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines and Public Resources Code section 5097.98 specify procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

California Health and Safety Code

California Health and Safety Code Section 7052 states that it is a felony to disturb Native American cemeteries. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the County Coroner can determine whether the remains are those of a Native American. Section 7050.5(b) outlines the procedures to follow should human remains be inadvertently discovered in any location other than a dedicated cemetery. The section also states that the County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant.

Public Resources Code

PRC Section 5097.5 prohibits "knowing and willful" excavation or removal of any "vertebrate paleontological site... or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof.

TRIBAL CULTURAL RESOURCES

State Laws Pertaining to Human Remains

Any human remains encountered during ground-disturbing activities are required to be treated in accordance with CEQA Guidelines Section 15064.5(e), PRC Section 5097.98, and the California Health and Safety Code Section 7050.5. California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Specifically, Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. In addition, CEQA Guidelines Section 15064.5 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Assembly Bill 52

Assembly Bill (AB) 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2016. AB 52 adds tribal cultural resources (TCR) to the specific cultural resources protected under CEQA. Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register, or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a TCR. AB 52 also mandates lead agencies to consult with tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, if requested by the tribe in writing, and sets the principles for conducting and concluding consultation.

California Senate Bill 18

Senate Bill (SB) 18, which went into effect January 1, 2005, set forth requirements for local governments (cities and counties) to consult with Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early stage of planning for the purpose of protecting or mitigating impacts to cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy prior to the making of individual site-specific, project-level land use designations by a local government. Under SB 18, local governments are required to conduct consultation with California Native American tribes when a General Plan Amendment occurs or if open space is being developed for the first time.

TRIBAL CULTURAL RESOURCES

Local Regulations

City of Dublin General Plan

Government Code section 65302(a) requires the City of Dublin's General Plan to designate open space for recreation, agriculture, visual enjoyment and natural resources. Government Code section 65560 defines six categories of open space lands, one of which is open space for the protection of Native American historical, cultural, and sacred sites. The Government Code requires discussion by local planning agencies of several resources which do not occur in the Dublin planning area such as open space for the protection of Native American historical, cultural, and sacred sites and therefore, have not been analyzed.¹

4.16.1.2 PREHISTORIC CONDITIONS

This section provides an overview of the history of Dublin and resources of cultural significance that may be affected by the proposed project. Archeological evidence indicates that humans began to settle in the San Francisco Bay Area at least 8,000 years ago. Prehistoric occupation of California is broken into four broad periods: the Paleoindian Period (11,500 – 8,000 B.C.), the Early Period (8,000 B.C. – 500 B.C.), Middle Period (500 B.C. to A.D. 1050), and the Late Period (A.D. 1050 – 1550). Early occupants were mainly mobile big-game hunters who also relied minimally on processed plant foods for survival. Later, groups began to establish longer-term base camps from which a more diverse range of resources could be exploited. Social complexity developed as evidenced by large central villages with artifacts like the bow and arrow, projectile points, and a range of beads and ornaments.²

The Livermore-Amador Valley, which the City of Dublin is located within, includes the northeastern portion of the territory occupied by the Ohlone-speaking people and is very close to the boundaries of three other ethnographic groups, namely, the Bay Miwok, the Northern Valley Yokuts, and the Plains Miwok. Based on a compilation of archaeological, historical, and ethnographic data, the Native American group in the Dublin area is known as the Ohlone. In the past, the Ohlone group once occupied a large territory ranging from San Francisco Bay in the north to the Big Sure and Salinas Rivers in the south. The Project is located within the greater Chochenyo tribal area, which is one of the divisions of the Ohlone group.³ The Ohlone engaged in hunting and gathering for economic means. Their territory included both open valley and coastal environments that contained a wide variety of resources. These included a variety of bird and mammal species, acorns, grass seeds, tubers, fish, and shellfish. The Ohlone acknowledged private ownership of songs and goods, and village ownership of land natural resources; often requiring monetary payment for access rights in the form of clamshell beads.⁴ The Ohlone way of life was severely

¹ City of Dublin, 2016. General Plan, Community Development Department. Available online at: <https://www.dublin.ca.gov/DocumentCenter/View/7793/General-Plan-November-2016-WEB>. Accessed October 31, 2019.

² Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson, 2007. Punctuated Culture Change in the San Francisco Bay Area, In Prehistoric California: Colonization, Culture, and Complexity. Edited by T.L. Jones and K.A. Klar, pp. 99–124, AltaMira Press.

³ Milliken, Randall T., 1995. A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769-1810. Ballena Press, Menlo Park.

⁴ Levy, Richard, 1978. Costanoan In California, edited by Robert F. Heizer, pp. 485–495. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

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affected and disrupted by introduced diseases, a declining birth rate, and the impacts of missionization established by the Spanish in 1776.⁵ Currently, the Ohlone have a strong presence in the greater Bay Area, and are active in project planning, including consultation regarding potential impacts to Native American cultural resources.⁶

Outreach to Native American Tribes

The District has not received any requests from any Tribes that are traditionally or culturally affiliated with the project's geographic area, and has not otherwise received any requests for notification or consultation from any Tribes regarding the proposed project. Nonetheless, the evaluation of potential impacts to TCRs is addressed below in Section 4.16.3, Impact Discussion, of this chapter.

4.16.2 STANDARDS OF SIGNIFICANCE

Would the project:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - 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
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.
2. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to tribal cultural resources.

⁵ Muwekma Ohlone Tribe of the San Francisco Bay Area. An Ethnohistory of Santa Clara Valley and Adjacent Regions. Available Online at http://www.muwekma.org/images/Ethnohistory_Section_from_Muwekma_Ohlone_Burial_Site_CA-SCL-894_San_Jose_Chapter_9_April_15,_2014.pdf. Accessed January 9, 2020.

⁶ Muwekma Ohlone Tribe of the San Francisco Bay Area. Available Online at <http://www.muwekma.org/home.html>. Accessed January 9th, 2020.

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4.16.3 IMPACT DISCUSSION

TRI-1	The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code Section 21074.
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The proposed project would result in a substantial adverse change in the significance of a tribal cultural resources if it altered resources listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources or a resource determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. As discussed in Chapter 4.4, Cultural Resources, no sensitive resources eligible for listing in the California Register of Historical Resources, or in a local register of historical resources have been recorded within the project site or within a half-mile radius. Furthermore, as described in Section 3.3 of the Project Description, there are several easements throughout the site. These reflect prior grading and development on the project site which suggests a low possibility of unearthing tribal cultural resources on the project site.

The District began the consultation process under Government Code Section 65352.3 (commonly known as Senate Bill [SB] 18), and Public Resources Code (PRC) sections 21080.3.1 and 21084.3(c) (commonly known as Assembly Bill [AB] 52) by contacting the Native American Heritage Commission (NAHC) to inform them about the proposed project.

In response, the NAHC completed a record search of Sacred Lands File (SLF) for the project location and the results were negative.⁷ Pursuant to AB 52, the NAHC provided a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the proposed project. With the list of tribes, the District contacted local tribal representatives by letter, inviting them to initiate consultation (see Appendix I). The purpose of the letter was to inform nearby tribes of the project. The letter provided a description of the proposed project, as well as figures of the project location and site plan. As of publication of this Draft EIR, no responses have been received from the tribes.

In addition to the contact letters and the negative NAHC record search, the federal, State, and City historic registers do not indicate any 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 designated on the project site. Furthermore, the project site is not located within a historic preservation district, nor is it identified as a historic landmark.

However, it remains possible that a currently unknown tribal cultural resource could be encountered during construction activities. Without mitigation measures, unearthing tribal cultural resources could result in a *significant* impact. In the unlikely event that tribal cultural resources are unearthed on the project site, however, Mitigation Measures CULT-2 and CULT-3 provided in Chapter 4.4 of this EIR, Cultural Resources, would apply, which include procedures to follow.

⁷ Nancy Gonzalez-Lopez, Staff Services Analyst, Native American Heritage Commission, December 9, 2019, Letter to Chris Stevens.

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Significance without Mitigation: Significant.

Impact TRI-1.1: Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074.

Mitigation Measure TRI-1.1a: Implementation of Mitigation Measure CULT-2a.

Mitigation Measure TRI-1.1b: Implementation of Mitigation Measure CULT-2b.

Significance with Mitigation: Less than significant

Impact TRI-1.2: Implementation of the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Mitigation Measure TRI-1.2: Implementation of Mitigation Measure CULT-3.

Significance with Mitigation: Less than significant

4.16.4 CUMULATIVE IMPACTS

TRI-2	The proposed project would result in less-than-significant cumulative impacts with respect to tribal cultural resources
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No tribal cultural resources have been identified on the project Site or within the immediate vicinity. Further, in association with CEQA review, future AB 52 consultations with Native American tribes in order to identify Tribal Cultural Resources would be required for projects that have the potential to cause significant impacts to tribal cultural resources.

As discussed in Chapter 4.4, Cultural Resources, development of the proposed project would comply with federal and State laws protecting cultural resources. Implementation of Mitigation Measures TRI-1.1a, TRI-1.1b, and TRI-1.2 identified above would ensure that archaeological, cultural resources, and tribal cultural resources if discovered on the project site, are protected, and that discovered human remains, including those associated with Native American tribes are handled appropriately. Thus, given that the proposed project would have a *less than significant* impact on tribal cultural resources with mitigation, the proposed project's impacts to tribal cultural resources would not be considered cumulatively considerable. Therefore, cumulative impacts to tribal cultural resources would be *less than significant*.

Significance Without Mitigation: Less than significant.

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4.17 UTILITIES AND SERVICE SYSTEMS

This subchapter describes the regulatory framework and existing conditions on the project site related to utilities and service systems, and the potential impacts of the project on utilities and service systems. Stormwater drainage systems are discussed in Chapter 4.9, Hydrology and Water Quality. Electricity and natural gas are discussed in Chapter 4.5, Energy.

This subchapter covers infrastructure relating to the following utility systems:

- Water
- Wastewater
- Solid Waste
- Energy Conservation

4.17.1 WATER

4.17.1.1 REGULATORY FRAMEWORK

Federal Regulations

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times since it came into law. The Act authorizes the United States Environmental Protection Agency (USEPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Department of Health Services conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

State Regulations

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over State water rights and water quality policy. This Act divided the State into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The City of Dublin is overseen by the San Francisco Bay RWQCB.

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California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code requires all urban water suppliers within California to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet¹ of water annually. The Act is intended to support conservation and efficient use of urban water supplies. The Act requires that total project water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single and multiple dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.

CALGreen Building Code (Part 11, Title 24, CCR)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the State of California. CALGreen established planning and design standards for sustainable site development, including water conservation measures and requirements that new buildings reduce water consumption by 20 percent. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

The California Plumbing Code (Part 5, Title 24, CCR)

The 2010 California Plumbing Code (Part 5, Title 24, CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-

¹ Once acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.

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potable water systems, and recycled water systems. Water supply and distribution shall comply will all applicable provisions of the current edition of the California Plumbing Code.

Executive Order B-40-17

Executive Order B-40-17, signed by California Governor Brown on April 7, 2017, lifted prior drought-related emergency orders (B-26-13, B-28-14, B-29-15, and B-36-15) and retained certain prohibitions on wasteful practices contained in Executive Order B-37-16, Making Water Conservation a California Way of Life. Permanent restrictions prohibit wasteful water practices including hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians. It also mandated that the Department of Water Resources continue work with the SWRCB to develop standards that urban water suppliers will use to set new urban water use efficiency targets as directed in Executive Order B-37-16.

State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881)

The updated Model Water Efficient Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Water Efficient Landscape Ordinance (MWELo). The City of Dublin adopted regulations that promote water conservation and efficient water use within landscape areas consistent with the State MWELo in Chapter 8.88 of the Municipal Code of Dublin.

Local Regulations

City of Dublin General Plan

The City of Dublin's General Plan includes a Water Resources Element as Chapter 12. While the City does not control the supply or delivery of water to customers, it does collaborate with other agencies that provide these services and must consider the adequacy of water supplies since it does have authority over development and land use within the City. This Element is intended to guide efforts of the City's collaboration with the agencies that provide water to promote and encourage water conservation among business and residential users. Guiding and implementing policies related to water supply are included below in Table 4.17-1.

TABLE 4.17-1 GENERAL PLAN POLICIES REGARDING WATER SUPPLY AND USAGE

Policy Number	Policy
	A. Guiding Policies
12.3.1	1. Work with Zone 7 ² and DSRSD to secure an adequate water supply for, and provide water delivery to, existing and future customers in Dublin.

² Zone 7 refers to the wholesale supplier of water to DSRSD, which is the Alameda County Flood Control and Water Conservation District. Zone 7 is contracted with DSRSD to establish obligations between parties to meet the demand in the DSRSD service area. Zone 7 relies on a combination of supplies, including imported surface water and local runoff, to meet

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TABLE 4.17-1 GENERAL PLAN POLICIES REGARDING WATER SUPPLY AND USAGE	
Policy Number	Policy
	<p>B. Implementing Policies</p> <ol style="list-style-type: none"> 1. In anticipation of planned future growth, continue working with DSRSD and Zone 7 to plan and provide for sufficient future water supplies.
	<p>A. Guiding Policies</p> <ol style="list-style-type: none"> 1. Increase water conservation efforts and strive to maximize water use efficiency in existing residential, commercial, and industrial buildings and grounds. 2. Support DSRSD in extending recycled water service to established areas of Dublin. <p>B. Implementing Policies</p>
12.3.2	<ol style="list-style-type: none"> 1. Encourage DSRSD to continue offering free water saving devices to any DSRSD customer. 2. Encourage Zone 7 to continue its on-going rebate program for water-conserving fixtures and appliances. 3. Continue collaborative efforts and programs with outside organizations such as the California Youth Energy Services (CYES), which trains and employs local youth to provide resource conservation audits and water/energy retrofits to local residences ("Green Home Audits"). 4. Continue collaborative efforts with DSRSD to plan for and convert existing customers to utilize recycled water.
	<p>A. Guiding Policies</p> <ol style="list-style-type: none"> 1. Promote the conservation of water resources in new development <p>B. Implementing Policies</p>
12.3.3	<ol style="list-style-type: none"> 1. Continue implementation of the Water Efficient Landscape Regulations, which requires grouping plants with the same water requirements together (hydrozoning), the installation of water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls, and the minimal use of turf. 2. Support DSRSD's ongoing efforts to extend recycled water infrastructure ("purple pipe" to new locations. 3. Continue implementation of the Green Building Code to ensure that the design, operation, construction, use, and occupancy of every newly constructed building or structure is subject to assessment of its efficiency features.
	<p>A. Guiding Policies</p> <ol style="list-style-type: none"> 1. Promote the conservation of water resources in public facilities. 2. Promote the use of recycled water in public facilities. <p>B. Implementing Policies</p>
12.3.4	<ol style="list-style-type: none"> 1. Retrofit existing parks with new irrigation controllers that link to a centralized irrigation system that downloads daily weather reports from a local weather station and adjusts the amount of irrigated water applied to each park each day. 2. At the completion of each public construction and/or capital improvement project, conduct an irrigation audit to ensure proper water utilization. 3. Ensure that future publicly-owned facilities have a healthy growing environment by receiving soil that is appropriate to support plant growth. The soil is typically provided by the developer, so the soil to be provided shall meet City standards. 4. Continue to demonstrate low water-use techniques at public parks and other City-owned facilities.

treated and untreated demands, however, if it is unable to deliver sufficient water for DSRSD's needs, the DSRSD is permitted to acquire water from other sources.

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TABLE 4.17-1 GENERAL PLAN POLICIES REGARDING WATER SUPPLY AND USAGE

Policy Number	Policy
	5. During construction or reconstruction of public facilities, institute water conservation measures such as hot-on-demand water faucets, low-flush toilets, and low water-using appliances to the greatest degree possible.
	6. In the design and construction of all public facilities, utilize Bay Friendly Landscape Guidelines for water-wise landscaping.
	7. When recycled water lines are extended to established areas in Dublin, examine retrofitting public facilities and connecting existing public landscape irrigation systems to the recycled water distribution system.

Source: City of Dublin General Plan

Eastern Dublin Specific Plan

Water supply is further detailed for the Eastern Dublin region in Chapter 9, Water, Wastewater, and Storm Drainage, of the Eastern Dublin Specific Plan. Development of the Specific Plan area will require expansion of the DSRSD boundaries and facilities to ensure adequate water supplies.

Policies within the Specific Plan relating to water supply and distribution are listed below in Table 4.17-2:

TABLE 4.17-2 SPECIFIC PLAN POLICIES AND PROGRAMS REGARDING WATER SUPPLY AND USAGE

Policy Number	Policy
9-1	Provide an adequate water supply system and related improvements and storage facilities for all new development in the Eastern Dublin Specific Plan area
9-2	Coordinate with DSRSD to expand its service boundaries to encompass the entire Eastern Dublin Specific Plan area. Expansion of the DSRSD water system into eastern Dublin should be coordinated with the Zone 7 wholesale water delivery system. The City should support DSRSD's and Zone 7's policies, capital improvement programs, and water management plans as they relate to the Eastern Dublin Specific Plan area.
9-5	Coordinate with DSRSD to expand its recycled water service boundary to encompass the entire Eastern Dublin Specific Plan area. Require recycled water use or landscape irrigation in accordance with DSRSD's Recycled Water Policy.

Source: Eastern Dublin Specific Plan

In addition, the Specific Plan includes action programs relating to water conservation, water reclamation, water system master plan, combining of water systems, DSRSD standards, consistency with Resource Management Policies, and implementation responsibilities. These require as conditions of project approval in Eastern Dublin, among other requirements, use of water-conserving devices, water efficient irrigation systems and drought resistant non-invasive plants within public areas, adoption of water efficient landscape, and encouragement of recycled water during construction for compaction and dust control.

Municipal Code of Dublin

As mentioned above under the State Regulations section, Chapter 8.88 of the Municipal Code of Dublin establishes regulations promoting water conservation and efficient water use within landscape areas consistent the State's MWELO. Requirements from this section apply to new construction projects with an

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aggregate landscape area equal to or greater than 500 square feet requiring a Site Development Review Permit or Building Permit or rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a Site Development Review Permit or Building Permit. Projects with aggregate landscape area of 2,500 square feet or less requiring a Site Development Review Permit or Building Permit may comply with the performance requirements of this chapter or the alternative prescriptive measures in Section 8.88.190. In addition, for projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2,500 square feet of landscape and meets the lot or parcel's landscape water requirements entirely with treated or untreated graywater or stored rainwater captured on site is subject only to the alternative prescription measures contained in Section 8.88.190.

4.17.1.2 EXISTING CONDITIONS

Potable water is supplied to the City of Dublin from the Dublin San Ramon Services District (DSRSD), which also services the Dougherty Valley portion of the City of San Ramon. In addition, the San Ramon Valley Recycled Water Program (SRVRWP) was created by the DSRSD and the East Bay Municipal Utility District (EBMUD) in order to improve the reliability of the Tri-Valley's water supply. The SRVRWP built a water recycling plant adjacent to the DSRSD wastewater treatment facility for recycled water use, which is primarily used by large irrigation customers such as golf courses, parks, roadway medians, greenbelts, office complexes, common areas in homeowner associations, and schools. The joint powers authority of DSRSD-EBMUD Recycled Water Authority governs the partnership.

The DSRSD released the Final 2015 Urban Water Management Plan in June 2016. This Urban Water Management Plan considers plans for increased population and development specified in city general plans. Supply and demand from this plan are summarized in Table 4.17-3 below. The supply includes potable water demand purchased from Zone 7 and recycled water, combined. The supply is anticipated to meet the demand 100 percent through 2040 population projections, and in dry years it was assumed that DSRSD would implement demand reduction measures as appropriate.

TABLE 4.17-3 DSRSD PROJECTED WATER SUPPLY AND DEMAND

		Year				
Water Supply		2020	2025	2030	2035	2040
Normal Year	Supply	17,583	18,671	19,426	20,043	20,043
	Demand	17,583	18,671	19,426	20,043	20,043
	Net	0	0	0	0	0
Single Dry Year	Supply	14,162	15,032	15,620	16,083	16,083
	Demand	14,162	15,032	15,620	16,083	16,083
	Net	0	0	0	0	0
Multiple Dry Year	Supply	15,530	16,488	17,142	17,667	17,667

UTILITIES & SERVICE SYSTEMS**TABLE 4.17-3 DSRSD PROJECTED WATER SUPPLY AND DEMAND**

Water Supply	Year				
	2020	2025	2030	2035	2040
Demand	15,530	15,530	17,142	17,667	17,667
Net	0	0	0	0	0

Source: DSRSD 2015 Urban Water Management Plan (Table 7-4. Retail: Normal Year Supply and Demand Comparison, Table 7-7. Retail: Single Dry Year Supply and Demand Comparison, and Table 7-10. Retail: Multiple Dry Years Supply and Demand Comparison)

4.17.2 WASTEWATER

4.17.2.1 REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act

The Federal Water Pollution Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law governing water pollution. Under the CWA, the USEPA implements pollution control programs and sets wastewater standards. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System

The NPDES permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

State Regulations

State Water Resources Control Board

On May 2, 2006 the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California

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with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sanitary Sewer Master Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCBs) to enforce these requirements within their region. The San Francisco Bay RWQCB issues and enforces NPDES permits in Dublin. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and requires the districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. The Act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

The California Plumbing Code (Part 5, Title 24, CCR)

The 2010 California Plumbing Code (Part 5, Title 24, and CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution in California must comply with all applicable provisions of the current edition of the California Plumbing Code

Local Regulations

Dublin General Plan

Sewage treatment and disposal is discussed under Chapter 4, Schools, Public Lands, and Utilities Element, of the General Plan. The DSRSD is the purveyor of wastewater collection and treatment services for the City of Dublin, with over 170 miles of sanitary sewers ranging from six to 42 inches in diameter. Disposal is under the management of the Livermore Amador Valley Water Management Agency (LAVWMA).

Policies in the General Plan related to wastewater are listed in Table 4.17-4:

TABLE 4.17-4 GENERAL PLAN SANITARY WASTEWATER POLICIES

Policy Number	Policy
4.5.1	A. Guiding Policies

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TABLE 4.17-4 GENERAL PLAN SANITARY WASTEWATER POLICIES

Policy Number	Policy
	1. Expand sewage treatment and disposal capacity to avoid constraining development consistent with the Dublin General Plan.
	B. Implementation Policies
	1. Prior to project approval, developers shall demonstrate that adequate capacity will exist in 4-4 City of Dublin General Plan Schools, Public Lands, and Utilities Element sewage treatment and disposal facilities for their projects prior to the issuance of building permits.

Source: Dublin General Plan.

Eastern Dublin Specific Plan

Chapter 9, Water, Wastewater, and Storm Drainage, of the Eastern Dublin Specific Plan includes description of wastewater handling for the Eastern Dublin planning area. The Specific Plan indicates that in order to provide wastewater services to the eastern Dublin area, additional wastewater collection, storage, treatment, and disposal facilities would need to be constructed. As of 2005, the DSRSD completed a sewage treatment plant expansion to treat up to 17 million gallons per day with a planned future expansion to 20.8 million gallons per day.³

Policies regarding wastewater in the Specific Plan are listed in Table 4.17-5 below:

TABLE 4.17-5 SPECIFIC PLAN SANITARY WASTEWATER POLICIES

Policy Number	Policy
9-3	Provide for public wastewater collection, treatment and disposal for all new development in the Eastern Dublin Specific Plan area.
9-4	Coordinate with DSRSD to expand its service boundaries to encompass the entire Eastern Dublin Specific Plan area. Also, coordinate with the District regarding the possible need for a wastewater storage facility in Eastern Dublin. The expansion of the DSRSD wastewater system should be coordinated with proposed TWA ⁴ wastewater facilities. The City should also support the wastewater management efforts of LAVWMA and TWA as it relates to the Eastern Dublin Specific Plan area.
9-5	Ensure wastewater treatment and disposal facilities are available to meet the needs of future development in eastern Dublin. The City should support DSRSD's and TWA's wastewater management plans as they relate to the Eastern Dublin Specific Plan area.

Source: Eastern Dublin Specific Plan

4.17.2.2 EXISTING CONDITIONS

Two wastewater treatment plants serve the Tri-Valley residents. The DSRSD operates a plant located in the City of Pleasanton, which has a capacity of 17 million gallons per day. The other plant, operated by the

³ City of Dublin. 2016. Eastern Dublin Specific Plan. Section 9.2.5 Updated Wastewater Treatment and Disposal, page 189.

⁴ TWA is the Tri-Valley Wastewater Authority. The Specific Plan still contains language referring to the TWA but notes in paragraph 9.2.5 that the TWA was replaced by the LAVWMA.

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City of Livermore, has a design capacity of 8.5 million gallons per day.⁵ LAVWMA is a joint powers authority formed in 1974 between the DSRSD and the Cities of Pleasanton and Livermore, which manages the regional wastewater disposal and maintains the pipeline that transports treated wastewater from the two plants to San Lorenzo, where it is then discharged in the San Francisco Bay by the East Bay Dischargers Authority. The DSRSD owns and operates the sewers in the Cities of Dublin and San Ramon.

The DSRSD is currently expanding wastewater treatment facilities to meet future demand, including adding a new digester and grease receiving station and expanding primary sedimentation.^{6,7}

4.17.3 SOLID WASTE

4.17.3.1 REGULATORY FRAMEWORK

State Regulations

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989, AB 939 (Sher), subsequently amended by SB 1016 (Wiggins), 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. To help achieve this, the Act required 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 on-going landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. The California Integrated Waste Management Board was replaced by the California Department of Resources Recycling and Recovery (CalRecycle) in 2010. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate. In 2017, the statewide residential per capita disposal rate was 5.2 pounds per resident per day, and the statewide employee per capita disposal rate was 11.9 pounds per employee per day.⁸

In 2011, AB 341 was passed that sets a State policy goal of not less than 75 percent of solid waste that is generated to be source reduced, recycled, or composted by the year 2020. CalRecycle was required to

⁵ Dublin San Ramon Services District, 2020. Relationships with Other Agencies. <https://www.dsrds.com/about-us/relationships-with-other-agencies>, accessed January 17, 2020.

⁶ Dublin San Ramon Services District, 2020. Current Projects, \$13.1M Digester and Grease Receiving Station. <https://www.dsrds.com/your-dollars-at-work/current-projects/13-1m-digester-and-grease-receiving-station>, accessed January 17, 2020.

⁷ Dublin San Ramon Services District, 2020. Current Projects, Primary Sedimentation Project. <https://www.dsrds.com/your-dollars-at-work/current-projects/primary-sedimentation-project>, accessed January 17, 2020.

⁸ CalRecycle, California's Statewide Per Resident, Per Employee, and Total Disposal Since 1989, <http://www.calrecycle.ca.gov/Igcentral/GoalMeasure/DisposalRate/Graphs/Disposal.htm>, accessed November 26, 2019.

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submit a report to the legislature by January 1, 2014 outlining the strategy that will be used to achieve this policy goal.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires areas in development projects to be set aside for collecting and loading recyclable materials. The Act required CalRecycle (formerly CIWMB) to develop a model ordinance for adoption by any local agency relating to 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, providing for adequate areas in development projects for the collection and loading of recyclable materials.

Mandatory Commercial Organics Recycling

In October of 2014 Governor Brown signed AB 1826⁹ 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, including multifamily residential dwellings that consist of 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 in with food waste. Greenhouse gas (GHG) emissions result from the decomposition of organic wastes in landfills. Mandatory recycling of organic waste is aimed at helping achieve California's aggressive recycling and GHG emission goals. The implementation schedule is as follows:

- **January 1, 2016:** Local jurisdictions shall have an organic waste recycling program in place. Jurisdictions shall conduct outreach and education to inform businesses how to recycle organic waste in the jurisdiction, as well as monitoring to identify those not recycling and to notify them of the law and how to comply.
- **April 1, 2016:** Businesses that generate eight cubic yards of organic waste per week shall arrange for organic waste recycling services.
- **January 1, 2017:** Businesses that generate four cubic yards of organic waste per week shall arrange for organic waste recycling services.
- **August 1, 2017 and ongoing:** Jurisdictions shall provide information about their organic waste recycling program implementation in the annual report submitted to CalRecycle. (See above for description of information to be provided.)
- **Fall 2018:** After receipt of the 2016 annual reports submitted on August 1, 2017, CalRecycle shall conduct its formal review of those jurisdictions that are on a two-year review cycle.
- **January 1, 2019:** Businesses that generate four cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services.

⁹ CalRecycle, 2019. Mandatory Commercial Organics Recycling, <http://www.calrecycle.ca.gov/recycle/commercial/organics/>, accessed November 26, 2019.

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- **Fall 2020:** After receipt of the 2019 annual reports submitted on August 1, 2020, CalRecycle shall conduct its formal review of all jurisdictions.
- **2020 Assessment:** If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

Global Warming Solutions Act of 2006, Scoping Plan¹⁰

The California Global Warming Solutions Act of 2006 (also known as AB 32) Scoping Plan, which was adopted by the Air Resources Board (ARB), included a Mandatory Commercial Recycling Measure. The Mandatory Commercial Recycling Measure focuses on diverting commercial waste as a means to reduce greenhouse gas (GHG) emissions, with the goal of reducing GHG emissions by 5 million metric tons of carbon dioxide equivalents (MTCO_{2e}), consistent with the 2020 targets set by AB 32. To achieve the Measure's objective, the commercial sector will need to recycle an additional 2 to 3 million tons of materials annually by the year 2020.

CalRecycle adopted this Measure at its January 17, 2012 Monthly Public Meeting. The regulation was approved by the Office of Administrative Law on May 7, 2012 and became effective immediately. On June 27, 2012, the Governor signed SB 1018, which included an amendment requiring both businesses that generate 4 cubic yards or more of commercial solid waste per week and multi-family residences with five or more units to arrange for recycling services. This requirement became effective on July 1, 2012.

CALGreen Building Code

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California, unless otherwise indicated in this code. Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code requires the Applicant to have a waste management plan, for on-site sorting or construction debris, which is submitted to the City of Dublin for approval. The Plan does the following:

- Identifies the materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
- Specifies if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identifies the diversion facility where the material collected can be taken.

¹⁰ CalRecycle, <http://www.calrecycle.ca.gov/Recycle/Commercial/>, accessed November 26, 2019.

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- Identifies construction methods employed to reduce the amount of waste generated.
- Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

Local Regulations

City of Dublin General Plan

The General Plan includes policies relating to solid waste under Chapter 4, Schools, Public Lands, and Utilities Element. Solid waste is managed under a franchise agreement with a private solid waste collection company for residential and commercial garbage collection, as well as for recycling and organics. Policies pertaining to solid waste in the General Plan are included below in Table 4.17-6.

TABLE 4.17-6 GENERAL PLAN SOLID WASTE POLICIES

Policy Number	Policy
	A. Guiding Policy
	1. Ensure that adequate solid waste disposal capacity is available, to avoid constraining development, consistent with the General Plan.
	B. Implementing Policies
4.4.1	1. Continue to enforce the City Source Reduction and Recycling/Household Hazardous Waste Elements.
	2. Cooperate with Alameda County, as necessary, for adoption and implementation of the County Integrated Waste Management Plan.
	2. Prior to project approval, the applicant shall demonstrate that capacity will exist in solid waste disposal facilities for their project prior to the issuance of building permits.
	3. Large scale projects should be required to submit a plan that demonstrates how they will contribute toward the City's State mandated diversion requirement.

Source: City of Dublin General Plan

Eastern Dublin Specific Plan

The Eastern Dublin Specific Plan includes details on solid waste in Chapter 8, Community Services and Facilities. It explains that coordination of solid waste management activities in Alameda County is a joint effort by the County's Waste Management Authority and local jurisdictions. Policies pertaining to solid waste in the Specific Plan are included below in Table 4.17-7.

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TABLE 4.17-7 SPECIFIC PLAN SOLID WASTE POLICIES

Policy Number	Policy
8-7	Support ACWMA efforts to develop alternate disposal facilities for organic waste in the Tri-Valley area, particularly for composting and reuse of organic materials.
8-8	Encourage separation of recyclable materials from general waste stream by supporting development of recycling collection system and facilities.

Source: Eastern Dublin Specific Plan

Municipal Code of Dublin

Solid waste management is included under Chapter 5.32 of the Municipal Code of Dublin. It seeks to maintain a readily available solid waste disposal service in order to keep the city clean and reduce the spread of disease and pollution. The solid waste management ordinance maintains a system for waste to be kept in receptacles and removed regularly with a collection service, and each property in the city shall subscribe to a minimum service level. Materials for recycling may be sourced separately and collected by licensed recycling transporters. In addition, solid waste and recycling enclosure standards are included under Chapter 7.98. Requirements under this section include specific location, user access, and design for solid waste enclosures.

4.17.3.2 EXISTING CONDITIONS

The Amador Valley Industries (AVI) is a private solid waste collection company that provides weekly collection service for garbage, recycling, and organics for the City of Dublin through a franchise agreement. All single-family residences are provided with recycling containers, as well as commercial businesses, and multi-family residences have access to recycling services. Solid waste is deposited at the Altamont Landfill, roughly 10 miles east of the City of Dublin, owned and operated by Waste Management of Alameda County.

According to 2018 data (most recent data available) from CalRecycle, 32,035 tons, roughly 84 percent of solid waste collected from the City of Dublin, was transported to the Altamont Landfill.¹¹ According to the 2017 Countywide Integrated Waste Management Plan (CoIWMP), this facility had 40 million tons remaining maximum solid waste (MSW) capacity out of the total 87 million under a 2005 permit. At the current rate, minus waste from San Francisco, the CoIWMP listed an estimated facility closure date of 2049, with a closure four years sooner if waste from San Francisco is included.¹² Maximum permitted throughput of this facility is 11,150 tons per day.¹³ Per Waste Management of Alameda County, a new section of the Altamont Landfill & Resource Recovery opened on March 23, 2019. The landfill currently accepts unlimited tons for disposal from Alameda and San Francisco counties, and does not accept waste

¹¹ CalRecycle, 2018. <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed January 17, 2020.

¹² Alameda County Integrated Waste Management Plan, 2017. <http://www.stopwaste.org/resource/reports/countywide-integrated-waste-management-plan-coiwp>, accessed January 17, 2020.

¹³ Alameda County Integrated Waste Management Plan, 2017. <http://www.stopwaste.org/resource/reports/countywide-integrated-waste-management-plan-coiwp>, accessed January 17, 2020.

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from outside of the nine Bay Area Counties which includes Alameda, Marin, Sonoma, Napa, Solano, Contra Costa, San Mateo, San Francisco and Santa Clara.¹⁴

The remaining 16 percent of solid waste from the City of Dublin in 2018 was distributed between 15 other landfills serving the San Francisco Bay Area. Roughly 15 percent of this was between the Fink Road Landfill, Foothill Sanitary Landfill, and the Vasco Road Sanitary Landfill. In total, the solid waste disposal amount for the City of Dublin in 2018 was recorded as 38,167 tons.¹⁵ The four landfills where the majority of the City of Dublin's waste was taken are briefly described in Table 4.17-7 below.

TABLE 4.17-8 PRIMARY LANDFILLS SERVING DUBLIN

Landfill	Current Remaining Capacity (Mcy)	Total Disposal Capacity (Mcy)	Maximum Permitted Throughput (Tpd)	Estimated Closing Date	Disposal for Dublin In 2018 (Tons)
Altamont Landfill & Resource Recovery					
10840 Altamont Pass Road Livermore, CA 94550	65.4 (as of 12/31/14)	124.4	11,150	2045-2049	32,035
Fink Road Landfill					
4000 Fink Road Crows Landing, CA 95313	7.2 (as of 3/1/17)	14.6	2,400	2023	1,386
Foothill Sanitary Landfill					
6484 North Waverly Road Linden, CA 95236	125 (as of 6/10/10)	138	1,500	2082	2,554
Vasco Road Sanitary Landfill					
4001 North Vasco Road Livermore, CA 94551	7.4 (as of 10/31/2016)	33	2,518	2022	1,685

Notes: MCY = million cubic yards; TPD = tons per day.

Sources:

CalRecycle, 2018, Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility, Disposal during 2018 for Dublin.

<https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed January 20, 2020.

CalRecycle, 2019, SWIS Facility/Site Search. <https://www2.calrecycle.ca.gov/swfacilities/Directory/27-AA-0010/Index>, accessed January 20, 2020.

¹⁴ Waste Management of Alameda County, Altamont Landfill webpage, <http://altamontlandfill.wm.com/index.jsp>, accessed December 9, 2019.

¹⁵ CalRecycle. Jurisdiction Disposal by Facility, Disposal during 2018 for Dublin.
<https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed April 9, 2020.

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4.17.4 ENERGY, GAS, ELECTRICITY, AND TELECOMMUNICATIONS

4.17.4.1 REGULATORY FRAMEWORK

State Regulations

Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006 and 2011. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state. Based on the third quarter 2014 report, the three largest retail energy utilities provided an average of 20.9 percent of its supplies from renewable energy sources. Since 2003, 8,248 megawatts (MW) of renewable energy projects have started operations. SB 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 (Chapter 312, Statutes of 2018)

On September 10, 2018, Governor Brown signed SB 100, which raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a 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.

Title 20, California Code of Regulations, Sections 1601 et seq.: Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations took effect on February 13, 2013. The regulations include standards for federally and non-federally regulated appliances to ensure a level of energy efficiency for specific types of appliances, and are updated regularly to apply to new types of appliances. The Appliance Efficiency Regulations are enforced by the California Energy Commission. Manufacturers and retailers that sell appliances not certified as compliant with these regulations are issued monetary penalties.

Title 24, Part 6, Energy Efficiency Standards

The California Energy Commission (CEC) regulates energy conservation standards for new residential and non-residential buildings under Title 24 of the CCR, Part 6, Energy Efficiency Standards. The most recent 2019 standards focus on smart residential photovoltaic systems, updated thermal envelope standards, residential and nonresidential ventilation requirements, and nonresidential lighting requirements.

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Nonresidential buildings will be 30 percent more energy efficient compared to the previous 2016 standards.

Title 24, Part 11, Green Building Standards

CALGreen (24 CCR Part 11) is a code with mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection; storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

Local Regulations*City of Dublin General Plan*

Under the General Plan, energy supplied to the City includes electricity, natural gas, and alternative sources such as solar. The City utilizes several means to promote energy conservation and efficiency, including the Dublin Green Building Code, implementation of the 2013 CALGreen Code, participation with organizations on programs for public education on energy conservation, such as the StopWaste-initiated Energy Upgrade California program, implementation of LED streetlights, retrofitting existing parks with efficient irrigation systems, and implementation of the City's reduced building permit fee for the installation of photovoltaic systems. Guiding and Implementing policies related to energy efficiency and conservation are listed in Table 4.17-5 below:

Table 4.17-9 General Plan Energy Efficiency and Conservation Policies

Policy Number	Policy
13.3.2 (New Development)	A. Guiding Policy
	1. Encourage the installation of alternative energy technology in new residential and commercial development.
	2. Encourage designing for solar access.
	3. Encourage energy efficiency improvements be made on residential and commercial properties.
	B. Implementing Policies
	1. New development proposals shall be reviewed to ensure lighting levels needed for safe and secure environment are provided – utilizing the most energy-efficient fixtures – while avoiding over-lighting of sites. Smart lighting technology shall also be employed in interior and exterior lighting applications where appropriate.
	2. New development projects shall install LED streetlights in compliance with the City's LED light standard.

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Table 4.17-9 General Plan Energy Efficiency and Conservation Policies

Policy Number	Policy
	<ol style="list-style-type: none"> In new commercial and residential parking lots, require the installation of conduit to serve electric vehicle parking spaces to enable the easier installation of future charging stations. Encourage the installation of charging stations for commercial projects over a certain size and any new residential project that has open parking. Encourage buildings to be designed along an east-west axis to maximize solar exposure. Where feasible, require new development projects to take advantage of shade, prevailing winds, landscaping, and sun screens to reduce energy use; and to use regenerative energy heating and cooling source alternatives to fossil fuels. Continue to implement parking lot tree planting standards that would substantially cool parking areas and help cool the surrounding environment. Encourage landscaping conducive to solar panels in areas where appropriate. Promote and encourage photovoltaic demonstration projects in association with new development. Consider creating a recognition program for commercial or residential projects that install large-scale solar or wind energy systems and to publicly commend and acknowledge businesses or individuals that construct or remodel buildings that save more energy than required by Title 24 or CALGreen.
	<p>A. Guiding Policies</p> <ol style="list-style-type: none"> Serve as a model for residents, local businesses, and public agencies by continuing to reduce the City's demand on energy resources. <p>B. Implementing Policies</p> <ol style="list-style-type: none"> When new buildings are constructed and when equipment is being replaced at existing buildings, continue to use the most energy efficient lighting, air conditioning, heating, and irrigation systems in City buildings, parks and facilities. Encourage the design of new City buildings to enable solar access. Design public facilities to incorporate lighting levels needed for a safe and secure environment – utilizing the most energy-efficient fixtures – while avoiding over-lighting of sites. Smart lighting technology shall also be employed in interior and exterior lighting applications where appropriate.
13.3.3 (Public Facilities)	

Source: City of Dublin General Plan

Eastern Dublin Specific Plan

The Specific Plan includes electricity and natural gas under Chapter 8, Community Services and Facilities. The specific plan specifies that to service the area, a distribution system will have to be constructed with the overall service upgraded to a three-phase, 21 kilovolt line. A regulator station at the north side of the I-580 and Tassajara Road crossing will be the connection point for the gas distribution system. According to the Specific Plan, PG&E had indicated that it had available power and gas to supply the area as planned. Policy 8-9 of the Specific Plan is to coordinate with PG&E and Pacific Bell (telephone service, now owned by AT&T) in planning and scheduling future facilities which will serve eastern Dublin.

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Municipal Code of Dublin

Chapter 7.12 of the City's Municipal Code covers underground utility districts. The purpose for this chapter is for whenever the City Council finds and determines that public safety requires establishment of underground utility distribution facilities, as opposed to aboveground, the Council may establish underground utility districts.

Chapter 7.94 of the City's Municipal Code is the Dublin Green Building Code. It was adopted in 2009 and requires residential projects over 20 units to reach 50 points on the GreenPoint Rated system (or approved equivalent rating from LEED for Homes).

Chapter 8.92 of the City's Municipal Code addresses wireless communications facilities. This section provides a comprehensive set of standards pertaining to the development and installation of wireless communication and related facilities, such as the siting, designing, and permitting of such facilities. These regulations serve to protect visual character and public health and safety regarding wireless communications facilities.

4.17.4.2 EXISTING CONDITIONS

Electricity and gas are supplied to the City of Dublin from Pacific Gas and Electric (PG&E). PG&E's distribution system provides electricity and gas directly to residential and commercial customers. Electricity is transported via a network of high-voltage transmission lines, and most electric power is brought to electric substations in the region via transmission lines connected to the statewide grid system.

In 2016 the Dublin City Council voted to join the East Bay Community Energy (EBCE), opting up to Renewable 100 for all of its municipal accounts. The EBCE is a local electricity supplier in Alameda County that partners with PG&E to provide electricity supplied by renewable energy, including wind and solar. Under this, all municipal buildings in the City are powered completely with renewable energy.¹⁶

Wireless communications facilities transmit and receive electromagnetic signals via a system usually consisting of antenna display, connection cables, and a tower structure for the use of telecommunications. Telecommunications facilities in the City of Dublin are owned by various private entities, including but not limited to AT&T and Comcast.¹⁷

4.17.5 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant utilities and service systems impacts if it would:

1. 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.

¹⁶ City of Dublin, 2020. Energy. <https://www.dublin.ca.gov/2020/Energy>, Accessed November 26, 2019.

¹⁷ City of Dublin. Small Cell Fact Sheet. <https://dublin.ca.gov/DocumentCenter/View/20103/Small-Cell-Wireless-Factsheet-Final?bidId=>, accessed April 9, 2020.

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2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
4. 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.
5. Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.
6. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to utilities and service systems.

4.17.6 IMPACT DISCUSSION

UTIL-1	The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
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As described in Chapter 4.9, Hydrology and Water Quality, stormwater drainage would be planned on-site to direct stormwater to bioretention basins that capture and detain runoff from impervious areas, and ultimately discharge into the existing offsite storm drain system around the project site. Discharge into the offsite storm drain system would be limited by an orifice to control the runoff rate in order to be compatible with the system. Peak volumes were calculated using the Bay Area Hydrology Model software to ensure that the proposed bioretention basins would provide sufficient control of stormwater drainage. As described in Section 3.5.5, most storm drains on the project site will remain in place, with exception to a portion of an existing 36-inch storm drain line that connects to the 60-inch storm drain line which will be realigned around Building H restrooms/concessions. Therefore, no new or expanded stormwater drainage facilities would be required offsite by the proposed project.

As described in Chapter 4.5, Energy, electricity use at the project site would be 2,029,573 kilowatt hours per year. It would connect to the existing electrical system that serves the area surrounding the project site. The proposed project would increase energy demand in the area, but it would be required to comply with applicable regulations governing energy use and efficiency including the Energy Efficiency Standards and CALGreen to ensure a level of energy efficiency that would avoid significant impacts. Similarly, the proposed project would result in new natural gas demands that would be required to comply with the Energy Efficiency Standards, and would connect to the existing natural gas distribution system that serves the surrounding area. As described in Section 3.5.7, the project would require relocation of a PG&E structure near the northwest corner of the site out of the project driveway, but remaining within the existing easement. This would not constitute a significant impact as no new electric power or natural gas

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facilities will be built on-site and the relocation of the PG&E structure would remain within the existing easement.

Telecommunications systems in the City of Dublin exist to serve the area surrounding the project site. The proposed project would connect to these existing services, which are controlled by various private entities but subject to applicable regulations, including those within the Municipal Code of Dublin. The project would not require the construction or relocation of new or expanded telecommunications facilities on-site, and this would not be a significant impact as the proposed project would connect to existing City services.

Development of the proposed project would place a new high school on currently undeveloped land, which is surrounded by existing development. The surrounding area includes homes and commercial businesses which have existing water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications facilities serving them. As described in Section 3.5.7, the proposed project would require removal, replacement, and installation of utility connections on-site. A DSRSD existing north/south 10-inch sanitary sewer line would be removed and replaced with a realigned sanitary sewer line along the east and west boundaries of the project. A DSRSD existing 8-inch sanitary sewer line that extends north from Finnian Way near the east boundary is not used and will be removed. The DSRSD existing 10-inch water main that runs east/west at Finnian Way will be realigned around the proposed athletic field, extended north to Central Parkway and Chancery Lane to serve as a fire hydrant loop system. The realigned 10-inch water main will be a DSRSD facility within an easement. The DSRSD existing 8-inch recycled water main that runs east/west at Finnian Way will be terminated in the proposed Finnian Way cul-de-sac and removed in between. The project will be required to install a new recycled water main in Brannigan Street from Whitworth Lane south to Finnian Way to complete a loop that will allow the on-site recycled water main to be removed. The removal, replacement, and installation of these lines and mains would all connect to the existing services and facilities nearby and would therefore not require the relocation or construction of new facilities on-site.

According to the Alameda County Flood Control and Water Conservation District, Zone 7, new development and the expansion of existing development may impose a burden on the existing flood protection and storm drainage infrastructure within the Zone 7 service area. Developments creating new impervious areas within the Livermore-Amador Valley are subject to the assessment of the Development Impact Fee for Flood Protection and Storm Water Drainage. These fees are collected for Zone 7 by the local governing agency: 1) upon approval of final map for public improvements creating new impervious areas; and/or 2) upon issuance of a building or use permit required for site improvements creating new impervious areas. Fees are dependent on whether post-project impervious area conditions are greater than pre-project conditions and/or whether fees have previously been paid. The Flood Protection and Storm Water Drainage Development Impact Fee (DIF) is currently \$1.00 per square foot of new impervious area. Per Zone 7 requirements, developers need to submit to the collecting City/County agencies, prior to approval of any final map and/or issuance of any building permit, A *Development Fee Impervious Surface Calculations* worksheet and associated plot plan for each individual building lot (or

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parcel) requiring a building permit and parcel proposing streets, sidewalks, or other non-building impervious areas in its development.¹⁸

According to the DSRSD's 2015 Urban Water Management Plan, supply is anticipated to be able to meet the projected water demands from buildout of the City of Dublin as according to the General and Specific Plans. As the proposed project is a public service that is proposed in order to meet this increased population, it is not anticipated that the project would require or result in the relocation or construction of new or expanded water facilities. In addition, as the current project is in line with buildout of the Dublin General Plan, and the DSRSD is currently expanding wastewater treatment facilities to accommodate future demand, the proposed project would also not require or result in further additional or expanded wastewater facilities.

Significance Without Mitigation: Less than significant.

UTIL-2	The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
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As described in Section 4.9, Hydrology and Water Quality, the DSRSD supplies water to the City of Dublin through potable water purchases from the Alameda County Flood Control and Water Conservation District Zone 7 (Zone 7). About 80 percent of the Zone 7 water supply is surface water, while the remainder is extracted from the Livermore Valley Groundwater Basin.¹⁹ Droughts and regulatory restrictions decrease the amount of surface water available to the Tri-Valley and increases reliance on the basin. However, the entire basin has been operating within its sustainable yield for at least 10 years. Additionally, the Department of Water Resources has not identified the basin as either in overdraft or expected to be in overdraft.

The proposed project would connect to the public water main and direct additions or withdrawals of groundwater are not proposed by the project. Furthermore, the project site is not in a designated groundwater recharge area and the proposed project does not propose or require facilities or operations that would otherwise adversely affect designated recharge areas.

As mentioned under the impact discussion for UTIL-1, the DSRSD anticipates that it is able to meet the water demands projected for the increased population and planned buildout of the City of Dublin through 2035. This includes for normal, dry, and multiple dry years as listed in Table 4.19-3. Although student enrollment of the DUSD is currently above 12,000 students, which is above the General Plan estimated student enrollment of 9,755 students at buildout, according to the DSRSD Water Master Plan Update (WMPU), DSRSD's potable water system should have the capability to meet a maximum day demand

¹⁸ Alameda County Flood Control and Water Conservation District, Zone 7, 2016, available online at http://www.zone7water.com/images/pdf_docs/permits/2016_dif-notice.pdf, accessed June 15, 2020.

¹⁹ Dublin San Ramon Services District, June 2016. *2015 Urban Water Management Plan*. <https://www.dsrds.com/about-us/library/plans-studies>, accessed March 1, 2020.

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condition and should meet the recommended water system service and performance standards without using storage reserves.²⁰

The 2016 DSRSD Water System Master Plan identifies projections for water demand through the horizon year of 2035. For 2020, the potable water demand is projected to be 13,690 acre feet per year (af/yr), while for 2035, the potable water demand is projected to be 15,840 af/yr.²¹ According to Zone 7's 2015 UWMP, Zone 7 does not anticipate any water supply shortage during Normal, Single Dry, and Multiple Dry water years through 2035.²²

For potable water, assuming the average high school indoor water use demand of 4,405 gallons/student/year²³ and 39,494 gallons/employee/year,²⁴ school demand generated by the 2,545 students and 129 employees as a result of this project would be 16.3 million gallons per year (mgal/yr), or when converted to acre feet per year, the demand would be 50 af/yr. The project site was accounted for in the future water projections as "Promenade", a future residential development in Eastern Dublin with a potable water demand of 78 af/yr.²⁵ Because the proposed project has a lower potable water demand, it can be reasonably foreseen that the proposed project would have sufficient water supplies available to serve the project and the foreseeable future development during normal, dry, and multiple dry years.

For exterior water, assuming the average high school outdoor water use demand of 11,327 gallons/student/year²⁶ and 101,555 gallons/employee/year,²⁷ school demand generated by the 2,545 students and 129 employees as a result of this project would be 41.9 mgal/yr, or 128 af/yr. Although DSRSD operates a water recycling program which is sourced from regional wastewater treatment facilities and distributed to water customers in its service area which could be used for project irrigation, the recycled water demand for the project site was not accounted for by the DSRSD in the Water System Master Plan and will, therefore, not be serviced by recycled water. However, the irrigation demands for the project can be met with potable water of which DSRSD anticipates there will be enough supplies available.

As described previously, according to the UWMP, Zone 7 does not anticipate any water supply shortage during Normal, Single Dry, and Multiple Dry water years through 2035. DSRSD plans to continue to

²⁰ Dublin San Ramon Services District, 2020, Plans and Studies, available online at <https://www.dsrdsd.com/about-us/library/plans-studies>, accessed June 9, 2020.

²¹ Dublin San Ramon Services District, 2016, Water System Master Plan, available online at <https://www.dsrdsd.com/home/showdocument?id=2816>, accessed June 11, 2020.

²² Dublin San Ramon Services District, June 2016. *2015 Urban Water Management Plan*. <https://www.dsrdsd.com/about-us/library/plans-studies>, accessed March 1, 2020.

²³ California Emissions Estimator Model, Appendix D, Water Use Rates, 2016. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf, accessed June 12, 2020.

²⁴ California Emissions Estimator Model, Appendix D, Water Use Rates, 2016. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf, accessed June 12, 2020.

²⁵ Dublin San Ramon Services District, 2016, Potable Water Demand Assumptions, available online at <https://www.dsrdsd.com/home/showdocument?id=2818>, accessed June 12, 2020.

²⁶ California Emissions Estimator Model, Appendix D, Water Use Rates, 2016. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf, accessed June 12, 2020.

²⁷ California Emissions Estimator Model, Appendix D, Water Use Rates, 2016. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf, accessed June 12, 2020.

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manage potable water demands within its water service area through conservation efforts and its recycled water program. However, if supply shortages should occur, DSRSD may invoke its Water Shortage Contingency and Drought Plan, described in its UWMP.²⁸

Water districts served by Zone 7 have a “Groundwater Pumping Quota” (GPQ). Quantities are maintained by allowing a carryover limited to 20 percent of the GPQ. Water Agencies pay a recharge fee for any groundwater carried over or pumped exceeding their GPQ. Zone 7 only pumps which has been recharged as a part of its artificial recharge program using surface water supplies. Zone 7 only utilizes its stored groundwater under drought conditions or in emergency situations.²⁹

In addition to information gleaned from the UWMP, the District prepared a water supply report that showed the DSRSD facilities have adequate capacity for domestic and fire service to serve the project. The water supply report was submitted to DSRSD as part of first submittal. The water supply report is included within Appendix G.

In summary, with a total water demand of approximately 58.2 mgal/yr or 178.7 af/yr, the proposed project would have sufficient water supplies during normal, dry, and multiple dry years. Impacts in this regard would be less than significant.

Significance Without Mitigation: Less than significant.

UTIL-3	The proposed project would result in a determination by the wastewater 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.
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As mentioned under UTIL-1, the wastewater treatment provider, DSRSD, is currently expanding treatment facilities to accommodate future demand corresponding to the buildout of the Dublin General Plan. The existing wastewater service area encompasses approximately 13,340 acres, or 20.85 square miles, and within the service area there are 207 miles of gravity mains, one permanent lift station, and one temporary lift station with 26 feet of force main. The DSRSD is continually planning and designing collection system improvements to ensure a safe and reliable system. The Wastewater Collection System Master Plan includes a number of recommended wastewater collection system projects under the Capital Improvement Program (CIP) to ensure future capacity is met. The recommended projects only identify improvements at the Master Planning level and do not constitute a specific design, which will occur at a subsequent date to determine the size, locations, and costs of the proposed improvements.

Nevertheless, according to the Plan, the proposed project site has been accounted for in its base wastewater flow (BWF) named “Promenade” and described as a Residential – Medium Density with a

²⁸ Dublin San Ramon Services District, 2020, Plans and Studies, available online at <https://www.dsrdsd.com/about-us/library/plans-studies>, accessed June 9, 2020.

²⁹ Dublin San Ramon Services District, 2016, Water System Master Plan, available online at <https://www.dsrdsd.com/home/showdocument?id=2816>, accessed June 11, 2020.

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BWF of 4,140 gallons per day (gpd). However, the proposed school project would have a higher BWF. Assuming that 95 percent of the indoor potable water demand for the proposed project of 16.3 mgal/yr becomes wastewater, the proposed project would generate approximately 15.5 mgal/yr, or 0.04 mgal/day.³⁰ The wastewater treatment facilities have a maximum capacity of approximately 17.0 mgal/day, and the current average dry weather flow is approximately 9.7 mgal/day and the current average weather flow is 10.3 mgal/day. These would increase to 25.8 mgal/day and 12.3 mgal/day at buildout for maximum and average dry weather flow, respectively. Therefore, the addition of wastewater influence generated by the proposed project would be less than one percent of the current average dry weather and average weather flow currently experienced by the DSRSD's wastewater capacity with approximately 7 mgal/day available capacity remaining. Furthermore, the sewer mains within the vicinity of the project area have been sized for extensive development within this portion of Dublin. The DSRSD has a recycled water program that treats effluent for irrigation purposes in Dublin.^{31,32}

As the proposed project is in line with the needs of the community as described in the General Plan, because the CIP includes a number of recommended projects to ensure future capacity is met, and the wastewater influence generated by the site would be within the capacity of the Wastewater Collection System Master Plan, the proposed project would not exceed the wastewater treatment provider's capacity.

Significance Without Mitigation: Less than significant.

UTIL-4	The proposed project would not 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.
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The proposed project may cause a strain on existing landfill capacities if waste exceeds the daily permitted capacity for any landfills serving the City of Dublin. As discussed in section 4.17.1.3, the Altamont Landfill, taking a majority of the solid waste from the City of Dublin, had remaining capacity to meet Alameda County's needs until at least 2045, with a remaining capacity of 40 million tons as of 2015. This is in addition to the various landfills that serve the San Francisco Bay Area.

As described under section 4.17.1.3, about 84 percent of solid waste collected from the City of Dublin was transported to the Altamont Landfill in 2018, which was 32,035 tons. As discussed in Chapter 4.12, Population and Housing, the proposed project would include an estimated 2,545 students, maximum, and 129 employees. Using a standard of 0.18 tons/student/year and 0.80 tons/employee/year,³³ the buildout of the proposed project is estimated to generate approximately 561.3 tons per year, which represents

³⁰ California Emissions Estimator Model, Appendix D, Water Rates, September 2016. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf, accessed December 12, 2019.

³¹ Dublin San Ramon Services District, 2017, 2017 Wastewater Collection System Master Plan, available online at <https://www.dsrdsd.com/home/showdocument?id=7233>, accessed June 10, 2020.

³² Dublin San Ramon Services District, 2017, Wastewater Treatment and Biosolids Facilities Master Plan, available online at <https://www.dsrdsd.com/home/showdocument?id=5424>, accessed June 15, 2020.

³³ California Emissions Estimator Model, Appendix D, Solid Waste Disposal Rates, September 2016. http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf, accessed June 17, 2020.

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0.014 percent of the total solid waste disposal amount for the City of Dublin from the most recent available data. As shown in Table 4.17-8, the Altamont Landfill and Resources Recovery Facility, which receives most of the City of Dublin's solid waste has a remaining capacity of 65.4 million cubic yards. The proposed project's solid waste would represent less than one percent of the remaining capacity at the Altamont Landfill. Therefore, adequate landfill capacity is available to serve the project and impacts would not conflict with the waste goals.

The proposed project will comply with all existing state and local regulations reducing the amount of solid waste. The Dublin General Plan and Eastern Dublin Specific Plan policies require measures to reduce solid waste generation from the community and increase community use of recycling and composting programs, while ensuring landfills have capacity to serve new projects. Overall, sufficient landfill capacity is available in the region for the estimated solid waste generated by the proposed project during operations, and project development would not require an expansion of landfill capacity. Furthermore, the new school would utilize trash, recycling, and organics disposal services through Amador Valley Industries (AVI), which the City of Dublin has an existing franchise agreement with for residential and commercial garbage, recycling, and organics collection.³⁴ AVI is a participant in the Go Green Initiative (GGI), which is the nation's fastest growing grassroots program with a goal of protecting human health through environmental stewardship. According to AVI, several schools in Dublin are participants in the GGI program³⁵

Therefore, impacts would be *less than significant*.

Significance Without Mitigation: Less than significant.

UTIL-5	The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.
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The proposed project would include appropriate receptacles for solid waste, including recyclable waste. These would be standard to schools and accommodate the number of people attending and working at the school. Solid waste would be removed on a regular basis by licensed solid waste transporters. Operation of the proposed school is required to comply with federal, state, and local management statutes and regulations relating to solid wastes. The proposed project would comply with the Alameda County Waste Management Authority's Mandatory Compost and Recycling Ordinance, effective January 1, 2020, within the City of Dublin, which means the school would be required to subscribe to recycling and organics collection services.³⁶ Compliance with this ordinance would ensure that the proposed project adheres to the California Integrated Waste Management Act of 1989, which requires cities and counties

³⁴ City of Dublin, 2020, Trash, Recycling, and Organics Service, available online at <https://www.dublin.ca.gov/1995/Solid-Waste-and-Recycling>, accessed June 11, 2020.

³⁵ Amador Valley Industries, 2012, Schools, available online at https://www.amadorvalleyindustries.com/s_resources.html & https://www.amadorvalleyindustries.com/s_gogreen.html, accessed June 11, 2020.

³⁶ City of Dublin, 2020, Trash, Recycling, and Organics Service, available online at <https://www.dublin.ca.gov/1995/Solid-Waste-and-Recycling>, accessed June 11, 2020.

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throughout the State to divert 50 percent of all solid wastes from landfills through source reduction, recycling, and composting. Pursuant to the City of Dublin Municipal Code Chapters 5.32 and 7.98, solid waste on site would be kept in receptacles in a specific location and design and removed regularly with a collection service. Thus, impacts related to federal, state, and local management and reduction statutes and regulations for solid waste would be less than significant.

Significance Without Mitigation: Less than significant.

4.17.7 CUMULATIVE IMPACTS

UTIL-6 The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to utilities and service systems.

This section analyzes potential impacts to utilities that could occur from the project in combination with other reasonably foreseeable projects in the surrounding area.

The expansion of the school system with the addition of a new high school for the City of Dublin is included in the considerations of the Dublin General Plan and Eastern Dublin Specific Plan. The water supply for the City of Dublin is anticipated to meet the demand 100 percent through 2035 population projections, and in dry years it was assumed that DSRSD would implement demand reduction measures as appropriate. In addition, the DSRSD is currently expanding wastewater treatment facilities to meet projected future demand, as described in Section 4.17.2, Wastewater, above. The proposed project would generate a demand for 131.55 af/yr of water. Nearby projects include the East Ranch (Croak Property) with a demand of 246 af/yr, Ashton at Dublin Station with a demand of 30 af/yr, Jordan Ranch – Onyx (Neighborhood 7) with a demand of 29 af/yr, and At Dublin with a demand of 229 af/yr. The water demand generated by the proposed project is in between those demands by the other nearby projects. Additionally, these projects are accounted for in the potable water demand assumptions by the DSRSD.³⁷ The wastewater generation of nearby projects accounted for in the DSRSD Collection System Master Plan include the Jordan Ranch – Onyx (Neighborhood 7) with 18,900 gpd, At Dublin with 264,209 gpd, Zeiss Innovation Center with 10,260 gpd, Ikea Retail Center with 19,250, and Grafton Plaza with 17,526 gpd. These projects are all accounted for within the Plan.³⁸ Therefore, cumulative impacts regarding water and wastewater utilities would be *less than significant*.

The cumulative impact for solid waste is considered in the context of estimated growth in the area served by the Altamont Landfill. While the proposed project would contribute to an increase in the cumulative demand for solid waste disposal, the increase represents a small percentage (0.014 percent) of existing solid waste transported to the Altamont Landfill. As described above, the proposed project would be served by a landfill with permitted capacity and would comply with federal, State, and local statutes and

³⁷ Dublin San Ramon Services District, 2015, Water Systems Master Plan, available online at <https://www.dsrdsd.com/home/showdocument?id=2818>, accessed June 12, 2020.

³⁸ Dublin San Ramon Services District, 2018, Collection System Master Plan, available online at <https://www.dsrdsd.com/home/showdocument?id=7233>, accessed June 12, 2020.

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regulations related to solid waste. Additionally, as described in UTIL-4, the Altamont Landfill has capacity for nearby future projects. Accordingly, cumulative impacts to solid waste would be *less than significant*.

While the project adds electric and natural gas demands to existing facilities, the Eastern Dublin Specific Plan references that PG&E has indicated that it has available power and gas to supply the area as planned, including all future development, resulting in *less than significant* effects to cumulative impacts related to electrical and gas facilities. The Eastern Dublin Specific Plan also already includes the need for expansion of telephone services to service planned development. It should be noted that this section of the Specific Plan cites Pacific Bell as the telephone service provider, which has since fallen under ownership of AT&T, and telecommunications services currently exist to serve the general area containing the project site. Therefore, cumulative impacts regarding these facilities would also be *less than significant*.

Significance Without Mitigation: Less than significant.

4.18 WILDFIRE

This chapter describes the regulatory framework and existing conditions on the project site related to wildfire, and an evaluation of the potential environmental consequences of developing the proposed project regarding wildfire.

4.18.1 ENVIRONMENTAL SETTING

4.18.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: 1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated in October of 2019.

Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 authorizes the federal government to aid in emergencies and disasters when State and local capabilities are exceeded. The Robert T. Stafford Disaster Relief and Emergency Assistance Act constitutes statutory authority for most federal disaster response activities, especially as they pertain to the federal Emergency Management Agency and its programs.

National Response Framework

The 2016 National Response Framework, published by the Department of Homeland Security, is a guide to how the nation responds to all types of disasters and emergencies. The Framework describes specific authorities and best practices for managing incidents that range from serious local to large-scale terrorist attacks or catastrophic natural disasters. In addition, the Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

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State Regulations

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The 2019 CBC is based on the 2018 International Building Code (IBC), but has been modified for California conditions. It is updated every three years; most recently it was updated in July 2019 with an effective date of January 1, 2020. The CBC, as adopted by local cities or counties, may be further modified based on local conditions. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Fire Code

The California Fire Code (CFC) is located in Part 9 of Title 24 of the CCR. It is updated every three years, most recently in 2019 with an effective date of January 1, 2020. The 2019 CFC is based on the 2018 International Fire Code (IFC) but has been modified for California conditions. The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

Field Act

Under the Field Act (Ed. Code §§ 17280, *et seq.*; 17365, *et seq.*; and 81130, *et seq.*), the Department of General Services (DGS) is required to supervise the design and construction of any school buildings or the reconstruction or alteration of or additional to any school building to ensure that the plans and specifications are in compliance with adopted rules, regulations, and building standards and to ensure that construction work is performed in accordance with the approved plans and specifications for the protection of life and property.¹ Within the DGS, the Division of the State Architect (DSA) is responsible for design and construction oversight for K-12 schools to ensure application of the CBC, pursuant to the Field Act. Additionally, the DSA promotes compliance with all relevant structural, accessibility, and fire and life safety codes.²

¹ California Legislative Information, 2017, AB-1545 School facilities: Field Act, available online at https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1545, accessed May 19, 2020.

² Department of General Services, 2018, Division of the State Architect, available online at <https://www.dgs.ca.gov/DSA/About>, accessed May 18, 2020.

California Governor's Office of Emergency Services (CalOES)

The Governor's Office established the California Emergency Management Agency (CalEMA), created by California Assembly Bill 38, on January 1, 2009, which merged the duties, powers, purposes, and responsibilities of the former Governor's Office of Emergency Services with those of the Governor's Office of Homeland Security. The CalEMA was responsible for the coordination of overall State agency response to major disasters in support of local government, for assuring the State's readiness to respond to and recover from all hazards – natural, manmade, emergencies, and disasters – and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts. On July 1, 2013, Governor Edmund G. Brown Jr.'s Reorganization Plan #2 eliminated CalEMA and restored it to the Governor's Office as CalOES, merging it with the Office of Public Safety Communications.

California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE has mapped fire threat potential throughout California. Fire threat is ranked based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threat. CAL FIRE produced the 2018 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California's natural and built environments.

Local Regulations

Tri-Valley Hazard Mitigation Plan

The City of Dublin, along with neighboring Cities of Livermore and Pleasanton, the Livermore-Pleasanton Fire Department, Dublin San Ramon Services District, and the Lawrence Livermore National Laboratory, adopted the Tri-Valley Local Hazard Mitigation Plan in 2018 as a uniform strategy for the Tri-Valley area in addressing a range of hazards such as earthquakes, floods, and wildfires. Wildfire is specifically covered in Chapter 12 of Volume I; there are two volumes that make up the Mitigation Plan.

Alameda County Fire Department

Fire protection services for the City of Dublin are provided under contract with the Alameda County Fire Department (ACFD). The ACFD provides fire suppression, first responder/paramedic, and hazardous materials response services, and includes specialized response teams including the Hazardous Materials, Urban Search & Rescue, and Water Rescue Units.

City of Dublin General Plan

Section 8.3.2 of the City of Dublin General Plan is Fire Hazard and Fire Protection. Under subsection 8.3.2.1, All Planning Areas, Guiding Policy A.1 requires special precautions against fire as a condition of development approval in the western hills and elsewhere in the Extended Planning Areas where proposed development would interface with open space. Implementing Policy B.1 is to continue enforcing the City's wild land urban interface regulations. The following local regulations include wildfire management and wildland urban interface regulations that pertain to the City.

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Eastern Dublin Specific Plan

Policy 8-6 of the Eastern Dublin Specific Plan requires all new development adjacent to open space or rural residential areas to be designed to minimize potential for impacts related to wildland fires, including at a minimum the provision of emergency vehicle access from subdivisions to open space areas; use of fire resistive landscape materials as a buffer between developed and open space areas; use of non-combustible roofing materials; and long term maintenance programs for the urban/open space interface.

City of Dublin Wildfire Management Plan

The City of Dublin Wildfire Management Plan was adopted on July 9, 1996, and updated on November 2, 2010, and applies to all new development within the City of Dublin. This Plan is implemented in conjunction with the Dublin Municipal Code which includes measures relating to materials and construction methods for exterior wildfire exposure, and the State Board of Forestry General Guidelines for Creating Defensible Space. The Plan largely relies on defensible space guidelines for the development of firebreaks and clearance areas between open space and undeveloped lands and developed properties. Finally, vegetation growth within areas affected by the Plan are to be inspected in accordance with the standards set by the local Fire Department and the Dublin Municipal Code.

4.18.1.2 EXISTING CONDITIONS

CAL FIRE evaluates fire hazard severity risks according to areas of responsibility (i.e., federal, State, and local). The project site is relatively flat, with the hillslopes in eastern Dublin increasing about half a mile to east of the project site³. It is located in a suburban area surrounded by developed lands. The nearest identified risk area to the project site is a moderate fire hazard severity zone in the Alameda County State Responsibility Area (SRA) approximately 2 miles to the northeast around Doolan Canyon Regional Preserve. The nearest Very High Fire Hazard Severity Zone in the SRA is located at Pleasanton Ridge Regional Park, approximately 4.5 miles to the southwest of the project site.

The project site is also not located in a Very High Fire Hazard Severity Zone for the Alameda County Local Responsibility Area (LRA)⁴. The nearest fire hazard severity zone in the LRA is also located near Pleasanton Ridge Regional Park, approximately 4.5 miles from the project site. This is also taking into account the LRA and SRA fire hazard severity zones for Contra Costa County, which neighbors Alameda County to the north and from which the project site is approximately two miles away.⁵

³ United States Geologic Survey, USGS US Topo 7.5-minute map for Livermore, CA 2015.
<https://www.sciencebase.gov/catalog/item/5825fe7de4b01fad86e6c79b>, Accessed October 31, 2019.

⁴ Alameda County Fire Hazard Severity Zones in SRA, Adopted by CAL FIRE on November 7, 2007, https://osfm.fire.ca.gov/media/7271/fhszs_map1.pdf; and Alameda County Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE, September 03, 2008, https://osfm.fire.ca.gov/media/6638/fhszl_map1.pdf; accessed October 30, 2019

⁵ Contra Costa County Fire Hazard Severity Zones in SRA, Adopted by CAL FIRE on November 7, 2007, https://osfm.fire.ca.gov/media/6662/fhszs_map7.pdf; and Contra Costa County Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE, January 07, 2009. https://osfm.fire.ca.gov/media/6660/fhszl_map7.pdf, Accessed October 30, 2019.

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The project site is, however, located within a wildland-urban interface (WUI) area.⁶ While not located in a Very High Fire Hazard Severity Zone, wildfires still pose a risk to the project site as they do with many areas around the San Francisco Bay Area and throughout the State of California. In recent years, the Fallon Fire burned approximately 38 acres near Fallon and Tassajara Roads in 2013, and the Harte fire burned approximately 248 acres near Camino Loop in 2019, which is approximately one mile east from the project site.

4.18.2 STANDARDS OF SIGNIFICANCE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the proposed project would result in significant wildfire impacts if it would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. 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.
3. 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.
4. 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.
5. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wildfires.

4.18.3 IMPACT DISCUSSION

WILD-1	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan.
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The proposed project is surrounded by development and is not located in or near an SRA or lands classified as very high fire hazard severity zones. The nearest Very High Fire Hazard Severity Zone is approximately 4.5 miles from the project site. Therefore, the project would have a less than significant impact on adopted emergency response or emergency evacuation plans related to very high fire hazard severity zones.

Significance Without Mitigation: Less than significant.

⁶ University of Wisconsin, Madison. 2010. Wildland-Urban Interface (WUI) Change 1990-2010. <http://silvis.forest.wisc.edu/data/wui-change/>, accessed February 18, 2020.

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WILD-2	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not, 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.
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As mentioned, the project site is not located in an SRA or lands classified as very high fire hazard severity zones, but the threat of wildfires still exists, and the project is located within a WUI. While the proposed project would introduce more built materials into the environment that may be susceptible to damage from wildfires or that may add fuel to a wildfire should one occur on or near the project site, the project site is located on relatively flat land and is surrounded by development. The proposed project would also not, as a high school, be a center for hazardous materials that may significantly increase risk of contributing to or creating a wildfire. Therefore, the proposed project would not, 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, and the impact would be *less than significant*.

Significance Without Mitigation: Less than significant.

WILD-3	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not 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.
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The proposed project would require installation and maintenance of associated utility infrastructure, and connection to existing infrastructure for natural gas, electricity, and water to serve the proposed high school. However, the project site's infrastructure would be connected to the existing utility infrastructure in the surrounding development and would not result in the creation of new power lines or roads offsite. Furthermore, the proposed project would be required to comply with all applicable regulations described above under section 4.18.1.1 including the 2019 CFC and 2019 CBC, which includes installation of sprinklers, proper protection systems such as fire extinguishing systems and alarms, fire hydrants, water fire flow requirements, and access points to accommodate fire equipment. Further, the project site is not located in or near an SRA or lands classified as very high fire hazard severity zones. Therefore, this would not exacerbate fire risk or result in temporary or ongoing impacts to the environment in the regard of associated infrastructure, and the impact would be *less than significant*.

Significance Without Mitigation: Less than significant.

WILDFIRE

WILD-4	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would not 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.
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The project site is located on relatively flat land and is not near hills that would expose people or structures on or around the project site with significant risks including downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Further, the project site is not located in or near an SRA or lands classified as very high fire hazard severity zones. Therefore, the impact here would be *less than significant*.

Significance Without Mitigation: Less than significant.

4.18.4 CUMULATIVE IMPACTS

WILD-5	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to wildfires.
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As mentioned in this chapter, the proposed project is not located within a designated fire hazard severity zone, nor a “very high” fire hazard severity zone, for both the LRA and SRA. It is located in a developed area on flat land that does not expose people to risk of flooding or landslide. The proposed project’s infrastructure would be connected to the already existing utility infrastructure in the surrounding development and would not result in the creation of new power lines, roads, or utility infrastructure other than connections. In addition, it is for an existing student population that has outgrown the current high school within Dublin. Along with any nearby development, the proposed project would be required to comply with the 2019 CFC and 2019 CBC, including installation of fire suppression systems. Therefore, the proposed project would not result in a cumulative impact regarding the impairment of emergency evacuation and response plans, installation or maintenance of service infrastructure, exposure of people to downslope or downstream flooding or landslides, or exposure of occupants to pollutant concentrations from wildfire or uncontrolled spread of wildfire due to slope or prevailing winds.

Significance Without Mitigation: Less than significant.

WILDFIRE

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5. *Significant Unavoidable Adverse Impacts*

Section 15126.2(c) of the CEQA Guidelines requires that “direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short- and long-term effects.”

Chapter 1, Executive Summary, contains Table 1-1, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. While actions from the project and mitigation measures, where feasible, would reduce the level of impact to less than significant, the following impacts would remain significant and unavoidable after mitigation measures are applied:

- **Impact AES-4:** The proposed project would create a new source of substantial light or glare from the tennis courts which would adversely affect nighttime views in the area. Several light spill reducing mitigation measures were considered and will be implemented, such as a landscaping barrier, a fence or wall barrier, a schedule for the lighting, and a recommendation for the best performing and shielding lights. However, no individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated light and glare impacts to less than significant levels. This impact would, therefore, remain significant and unavoidable.
- **Impact GHG-1:** Operation of the proposed project would generate a cumulatively considerable net increase in GHG emissions that would exceed the Bay Area Air Quality Management District (BAAQMD) bright line threshold. While mitigation measures have been identified to reduce GHG emissions, including installing a photovoltaic system to offset as much electricity usage as feasible; providing of preferential parking spaces for low-emitting, fuel-efficient, and carpool/vanpool vehicles; and a installing EV charging stations, GHG emissions would continue to exceed the BAAQMD regional significance thresholds. Therefore, this impact would remain significant and unavoidable.
- **Impact GHG-3:** The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to greenhouse gas emissions. Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. As discussed under Impact GHG-1, implementation of the project would exceed BAAQMD’s bright-line threshold even with mitigation incorporated. Therefore, project related GHG emissions and their contribution to global climate change would be cumulatively considerable, and GHG emissions impacts would be significant and unavoidable.
- **Impact NOI-1:** Traffic associated with operation of the proposed project would result in a substantial permanent noise increase. While mitigation measures have been identified to reduce project-generated traffic noise, such as special roadway paving and sound barrier walls, no individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels along Central Parkway. Therefore, this impact would remain significant and unavoidable.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

- **Impact NOI-1.2:** Operation of the stadium and outdoor recreational activities would result in a substantial periodic noise increase. Implementation of Mitigation Measure NOI-1.2, which includes enforcing a good neighbor policy for sports field events, the preparation of a Stadium Sound System Design Plan, as well as a system check-out to verify noise levels, would provide for substantial noise reduction at nearby residences. However, third and fourth floor residences would still experience periodic noise increases due to evening stadium use. Therefore, this impact would remain significant and unavoidable.
- **Impact NOI-4:** The project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to traffic noise. As discussed under Impact NOI-1, several mitigation measures were considered such as special roadway paving and sound barrier walls. However, no individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels. This impact would, therefore, remain significant and unavoidable.
- **Impact REC-2:** The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. As discussed under Impact REC-2, significant and unavoidable impacts were identified in the areas of noise, due to operation of the public address system at the proposed track and sports field, and aesthetics, due to light and glare impacts from the proposed tennis courts. Therefore, as a result of the significant and unavoidable aesthetic and noise impacts associated with construction and operation of the on-site sports field and tennis courts, as discussed in Sections 4.1, Aesthetics, and 4.11, Noise, the proposed project would have a significant and unavoidable impact regarding the construction of recreational facilities, even after implementing mitigation measures.

5.1.1 CONSIDERATION AND DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS

Section 15126.2 of the State CEQA Guidelines requires that an EIR identify and focus on the significant effects of the proposed project on the environment and the reason the project is being proposed despite these effects. As described in Section 3, Project Description, the project objectives include:

- Help relieve existing classroom overcrowding and accommodate an increasing high school student population across the District, and particularly on the east side of the District.
- Build and maintain a second comprehensive high school that reflects the efficient use of limited land and public resources.
- Provide safe, efficient, and adequate school site access, circulation, and parking areas for students and District staff.
- Offer and expand recreational and extracurricular opportunities to supplement educational opportunities within the District.
- Provide all high school age students with access to comprehensive high school facilities, including classrooms, stadium, theater, aquatic center, and other functional components vital to their educational and recreational success.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The proposed project would result in *significant and unavoidable* impacts from aesthetics, greenhouse gas, noise, and recreational components of the project, as described above. In an effort to satisfy the objectives of the project, the project is being proposed despite these *significant and unavoidable* impacts.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

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6. Alternatives to the Proposed Project

6.1 INTRODUCTION

The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any of the significant effects of the proposed project. Section 15126.6, Consideration and Discussion of Alternatives to the Proposed Project, of the California Environmental Quality Act (CEQA) Guidelines states that:

An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives, which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

A “No Project” Alternative is required as part of a “reasonable range of alternatives” that could feasibly attain most or all of the project’s objectives.

6.1.1 SIGNIFICANT IMPACTS

As described above, apart from the No Project Alternative, other alternatives chosen as part of the reasonable range of alternatives should be chosen due their ability to feasibly attain most of the basic objectives of the project and avoid or lessen the project’s significant impacts. The proposed project would result in significant and unavoidable impacts due to aesthetic impacts as a result of light spill from the tennis courts; greenhouse gas emissions which would exceed the Bay Area Air Quality Management District bright line thresholds and would also cause an exceedance resulting in significant cumulative greenhouse gas impacts; and permanent noise impacts due to traffic and operation of the stadium and outdoor recreational activities, as well as cumulative noise impacts.

6.1.2 PURPOSE

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall

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focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

6.1.3 PROJECT OBJECTIVES

As considered in Chapter 3, Project Description, of the Draft EIR, the primary goal of the proposed project is to construct a new comprehensive high school to serve the current and future student population of Dublin. The following project objectives are meant to aid decision-makers in their review of the alternatives to the proposed project and the associated environmental impacts:

- Help relieve existing classroom overcrowding and accommodate an increasing high school student population across the District, and particularly on the east side of the District.
- Build and maintain a second comprehensive high school that reflects the efficient use of limited land and public resources.
- Provide safe, efficient, and adequate school site access, circulation, and parking areas for students and District staff.
- Offer and expand recreational and extracurricular opportunities to supplement educational opportunities within the District.
- Provide all high school age students with access to comprehensive high school facilities, including classrooms, stadium, theater, aquatic center, and other functional components vital to their educational and recreational success.

6.2 SELECTION OF A REASONABLE RANGE OF ALTERNATIVES

Section 15126.6(c) of the State CEQA Guidelines states:

The range of potential alternatives to the proposed Project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

6.2.1 ALTERNATIVES CONSIDERED AND REJECTED

As described above, Section 15126.6(c) of the State CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Section 15126.6(c) provides

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that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. A project site can be considered “feasible” if it is “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” (14 CCR § 15364.)

During the process of selecting the project site for the new high school beginning in 2016, the District, with extensive input from the public, District staff, and District consultants, evaluated a number of candidate sites in Dublin. On August 8, 2017, the District’s Board of Trustees provided direction to the District’s Superintendent to create a Community Review Committee (“CRC”) to review, analyze, and recommend potential land options for a future new high school. The findings of the CRC were published on February 6, 2018. Taking into account the findings of the CRC Report, the District’s Board of Trustees determined on April 10, 2018, that the project site would be the most desirable site upon which to construct the project. Potential alternative sites are described below, together with the reasons that the candidate sites are determined to be infeasible and/or fail to meet most of the basic project objectives:^{1,2}

- Fallon Sports Park: Approximately 40 acres of existing sports fields located north of Central Parkway, east of Lockhart Street, south of Gleason Drive, and west of Fallon Road.
 - The site is infeasible and was rejected because there is a desire to maintain existing community park amenities on the site. Furthermore, selection of this site would require a joint use agreement with the City of Dublin. The City is not interested in joint use unless a similar sized park of 60 acres can be purchased within City boundaries for land swap and full reimbursement for improvements in land are made to the City. A joint use agreement would incur significant cost and the District does not own land to swap.
- Fallon Middle School: A 24-acre existing middle school located north of Kohnen Way, east of Tassajara Road, south of South Dublin Ranch Drive and Antone Way, and west of Grafton Street.
 - The site is infeasible and was rejected by the District’s Board because the site is currently an existing middle school and would create a need to accommodate the current middle school students. These middle school students would need to be moved during construction, which would complicate the construction process. Further, the site poses potential traffic issues related to limited parking and vehicular access.
- Di Manto A Property: A 30.19-acre parcel of vacant land located between Tassajara Rd. and Brannigan St., north of Dublin Blvd.

¹ Dublin Unified School District, 2016, Future High School Site Selection, available online at <https://www.dublin.k12.ca.us/cms/lib/CA01001424/Centricity/Domain/1/Future%20HS%20Site%20Selection%20Final%20June%2012%20-%20REVISED.pdf>, accessed May 1, 2020.

² Dublin Unified School District, 2016, Special Meeting of the Board of Trustees – Work Study Session Dublin USD, available online at http://www.pbtech.org/clients/dublin_cc/dublinusdw06282016.html, accessed May 4, 2020.

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- This site is infeasible and was rejected by the District's Board due to its high expected cost per acre and that fact that it is owned by an unwilling seller. Further, future residential and commercial development are currently planned on the site.³
- Di Manto B and C Properties: Two vacant parcels of land totaling 23.7 acres located between Tassajara Rd. and Brannigan St., north of Central Parkway.
 - This site is likewise infeasible and was rejected by the District's Board due to its high expected cost per acre, the fact that it is owned by an unwilling seller, and because future residential and commercial development are currently planned on the site.⁴
- SAP Site: Consists of 14 acres of office buildings and 11.4 acres of vacant land located south of Central Parkway, west of Hacienda Drive, north of Dublin Boulevard, and east of Arnold Road.
 - This site is infeasible and was rejected by the District's Board due to its high cost, because there is 405,000 square feet of existing office buildings which may not meet the Field Act which would require significant cost to repurpose, and it is undersized for a comprehensive high school.
- Nielsen Site: Consists of 9.24 acres and the land and infrastructure is currently owned by the District.
 - This site is infeasible and was rejected by the District's Board due to its high cost, because it would take three to five years to build a replacement site, it is located in West Dublin and would, therefore, not best serve East Dublin, and it is undersized for a comprehensive high school.
- Chen Site: Consists of 134 acres located south of Central Parkway, north of I-580, and east of Fallon Road.
 - This site is infeasible and was rejected by the District's Board due to offsite road and utilities infrastructure needed, its location within the eastern section of East Dublin, impacts associated with the proximity to the Livermore Municipal Airport and I-580, and because the property would require swapping its zoning to another parcel to allow high school use.
- Croak Site: Consists of 124 acres located south of the Porcellano Way development, west of Doolan Road, north of I-580, and east of the Onyx at Jordan Ranch development.
 - This site is infeasible and was rejected by the District's Board due to significant grading and infrastructure costs, a long timeline of development from seven to ten years, its location at the eastern border of the City limits, and significant topographical issues with the site.
- Camp Parks – Tassajara Site: Consists of 55 acres located south of the Wallis Ranch development, west of Tassajara Road, and north and east of Barnet Boulevard.
 - This site is infeasible and was rejected by the District's Board due to offsite road and utilities infrastructure needed and because the Army and State process could take five to ten years for delivery.

³ City of Dublin, 2020, Development Activity, available online at <https://dublin-development.icitywork.com/>, accessed April 8, 2020.

⁴ City of Dublin, 2020, Development Activity, available online at <https://dublin-development.icitywork.com/>, accessed April 8, 2020.

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- Zeiss Building Site: Consists of 13 acres with a 200,000 square foot building on site located south of Gleason Drive, west of Hacienda Drive, north of Central Parkway, and east of Arnold Drive.
 - This site is infeasible and was rejected by the District's Board due to safety concerns expressed by the public during the District's board meeting on May 23rd, 2017.⁵
- Between new Kaiser Medical facility and Target, near I-580.
 - This site is infeasible because the area is too small to accommodate the proposed project components and circulation would be diminished due to the single access point on Dublin Boulevard.
- Between new Kaiser Medical facility and Hotel Aloft, near I-580.
 - This site is infeasible because it is the site of a future planned hotel development and a Nissan auto dealership.⁶ Furthermore, the area is too small to accommodate the proposed project components and circulation would be diminished due to the single access point on Dublin Boulevard.

After considering several locations for the proposed project, District staff determined the area where the site is located will best serve the anticipated future growth due to planned and projected residential and commercial development within the District's boundaries. The proposed project site is centrally located relative to projected student population growth, surrounded by single-family subdivisions to the north and northeast, as well as four- and five-story high-density multifamily housing projects that line Tassajara Boulevard, Gleason Drive, Fallon Road, Dublin Boulevard, and Brannigan Street. The District's Board of Trustees selected the proposed project site on the recommendations of District staff and input from the community, which were based on the desirability of locating the proposed site in the eastern section of the City for access and safety reasons, the impact on existing schools, the availability of municipal services, the ease of building on the site, and the ability of the site to add capacity District-wide. Additionally, the bulk of new development in the District is proposed in the eastern portion of the District, and the existing high school is in the western portion. In conclusion, the alternative sites identified by the District are infeasible as they would not best serve the anticipated future growth due to planned and projected residential and commercial development within the District's boundaries, nor would they satisfy the objectives of the District in comparison to the proposed site.

6.2.2 ALTERNATIVES CONSIDERED

In accordance with the CEQA Guidelines, three project alternatives and the comparative merits of each are discussed below. All the potential environmental impacts associated with adoption and implementation of the proposed project were found to be either less than significant without mitigation

⁵ Dublin Unified School District, 2017, Regular Board Meeting of the Board of Trustees - Tuesday, May 23, 2017, available online at http://www.pbtech.org/clients/dublin_cc/dublinusd05232017.html, accessed June 9, 2020.

⁶ City of Dublin, 2020, Development Activity, available online at <https://dublin-development.icitywork.com/>, accessed April 8, 2020.

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or less than significant with mitigation with the exception of greenhouse gases, noise, and aesthetics, which were found to be significant and unavoidable with mitigation measures. In addition, aesthetics, greenhouse gases and noise were found to result in significant and unavoidable cumulative impacts as well. The alternatives were selected for analysis because of their potential to further reduce and avoid these significant impacts. The alternatives analyzed in comparison with the proposed project include:

- No Project Alternative
- Modified Site Plan Alternative
- Reduced Enrollment and Recreational Facilities Alternative

Under the No Project Alternative, the proposed project would not be constructed, and the project site would remain in its current condition. The Modified Site Plan Alternative would reorient the site plan so that the main campus entrance is on Dublin Boulevard on the south end of the site as opposed to Central Parkway on the north end of the site, parking would extend north to south along the entire eastern portion of the site, and the stadium and tennis courts would be located to the northwest and west, respectively. The Reduced Enrollment and Recreational Facility Alternative assumes a reduced student capacity, as well as a reduction in project components and elimination of large events at the stadium and tennis courts.

6.3 ALTERNATIVES COMPARISON

Table 6-1 presents a comparative summary of the alternatives considered in this analysis. Each alternative is analyzed against the impact factors considered for the project, according to whether it would have a mitigating or adverse effect. The basis for the determination in Table 6-1 is further discussed in the next section of this chapter.

TABLE 6-1 COMPARISON OF PROJECT ALTERNATIVES

Topic	No Project Alternative	Modified Site Plan Alternative	Reduced Enrollment and Recreational Facility Alternative
Aesthetics	-	-	-
Air Quality	-	0	-
Biological Resources	-	0	0
Cultural Resources	-	0	0
Energy	-	0	-
Geology and Soils	-	0	0
Greenhouse Gas Emissions	-	0	-
Hazards and Hazardous Materials	-	0	0
Hydrology and Water Quality	-	0	0
Land Use and Planning	-	0	0
Noise	-	0	-

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TABLE 6-1 **COMPARISON OF PROJECT ALTERNATIVES**

Topic	No Project Alternative	Modified Site Plan Alternative	Reduced Enrollment and Recreational Facility Alternative
Population and Housing	-	0	0
Public Services	0	0	0
Recreation	+	0	+
Transportation	-	+	-
Tribal Cultural Resources	-	0	0
Utilities and Service Systems	-	0	-
Wildfire	+	0	0

Note: The symbols in the table indicate the following: Similar Impacts (0), Less Severe Impacts (-), More Severe Impacts (+).

6.4 IMPACT ASSESSMENT

6.4.1 NO PROJECT ALTERNATIVE

Under the No Project Alternative, the project site would remain undeveloped. As such, the field would remain fallow and no school would be constructed. Further, under this alternative, there would be no landscaping or outdoor spaces developed throughout the project site. The existing Dublin High School would continue to exceed enrollment capacity, future enrollment growth would remain unaddressed, and the City of Dublin would remain in need of a new comprehensive high school. In addition, traffic crossing the City of Dublin to drop off/pick up students who live in the eastern neighborhoods around the project site but are currently assigned to Dublin High School would continue.

6.4.1.1 AESTHETICS

Under the No Project Alternative, the project site would remain in its current condition, as an undeveloped area of land. As described in Section 4.1, Aesthetics, of this Draft EIR, potential impacts of the proposed project related to the visual character or quality of the site and its surroundings would not be significant due to lack of surrounding scenic vistas and the introduction of a contemporary, architecturally designed structure with modern components onto a site of relatively low-visual quality. However, the proposed project introduces new sources of light, including a stadium and tennis courts with special events occurring throughout the year with occasional nighttime lighting, of which only light spill from the tennis courts would result in significant and unavoidable impacts. Therefore, because the existing conditions on-site currently do not create new sources of lighting, this alternative would result in *less severe* impacts to the environment with regards to aesthetics.

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6.4.1.2 AIR QUALITY

As described in Section 4.2, Air Quality, the project would result in significant construction-related emissions and fugitive dust. However, Mitigation Measure AQ-2 and AQ-3 would reduce those impacts to a less-than-significant level. Although the project would result in less than significant air quality impacts with implementation of mitigation measures, the No Project Alternative would not involve construction given that the project site would remain in its existing condition, and therefore would not result in construction-related emissions or fugitive dust. Therefore, this alternative would result in *less severe* air quality impacts compared to the proposed project.

6.4.1.3 BIOLOGICAL RESOURCES

Under the No Project Alternative, the existing uses of the project site would remain the same, and no structures would be constructed on the site. As described in Section 4.3, Biological Resources, potential impacts to the nests and eggs of protected birds were identified, and mitigation measures in the form of nest surveys and construction setbacks were established. Although with mitigation the proposed project would not result in a significant impact with regards to biological resources, the No Project alternative would not involve tree removal, vegetation clearing, or construction on the site which may potentially disturb suitable bird habitats. Therefore, the No Project Alternative would result in *less severe* impacts to biological resources.

6.4.1.4 CULTURAL RESOURCES

While there are no known cultural resources existing on the project site, the proposed project would result in significant impacts to cultural resources from the potential to disturb unrecorded archeological resources or human remains that may be onsite due to ground-disturbing activities during project construction. However, Mitigation Measures CULT-2a, CULT-2b, and CULT-3 would establish procedures in the event that potential cultural resource or human remains are found during construction activities and reduce the impact to less than significant. Although the project would result in less than significant impacts to cultural resources with implementation of mitigation measures, the No Project Alternative would not involve ground-disturbing activities that would have the potential of disturbing any unrecorded archaeological resources or human remains. Therefore, the No Project Alternative would result in *less severe* impacts to cultural resources compared to the proposed project.

6.4.1.5 ENERGY

Under the No Project Alternative, no new school construction or operations would occur. Net energy use on the undeveloped field would remain the same. As described in Section 4.5, the proposed project would result in increased net fuel use during construction, as well as new net fuel, natural gas and electricity use associated with project operation. While this energy use does not represent a significant impact, the No Project Alternative would result in a *less severe* impact compared to the proposed project.

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6.4.1.6 GEOLOGY AND SOILS

Under the No Project Alternative, no construction of new buildings would occur on site. As discussed in Section 4.6, Geology and Soils, of this Draft EIR, the project site is subject to soil compression and expansion due to the presence of clayey soil beneath it. Adverse effects on new buildings as a result of this soil were identified as a significant impact. However, as noted in Section 4.6, mitigation measures, as well as avoidance measures would be implemented, which include that the design of project buildings will be certified by a geotechnical engineer, will be in compliance with current building codes, will implement soil adaptive design techniques, and include a Statewide General Construction Permit and Storm Water Pollution Prevention Plan (SWPPP). Given that the No Project Alternative would not be associated with any new construction, a *less severe* impact would occur compared to the Project.

6.4.1.7 GREENHOUSE GAS EMISSIONS

Under this alternative, the existing project site would remain unchanged as an undeveloped area of land. It would not contribute any greenhouse gases emissions. Section 4.7, Greenhouse Gas Emissions, concludes that construction of the proposed project would represent a less than significant source of GHG emissions. However, the operational emissions associated with the proposed project would exceed applicable thresholds established by the BAAQMD, and therefore, would be a significant impact. Mitigation measures were developed to reduce energy sector and mobile-source GHG emissions, however, these would not reduce overall GHG emissions to a level that is below the BAAQMD bright-line threshold. Therefore, project-level and cumulative significant and unavoidable GHG impacts would occur from the proposed project. Given that the current site does not contribute any GHG emissions, the No Project Alternative would result in no emissions. Consequently, this alternative would result in *less severe* GHG impacts than the project.

6.4.1.8 HAZARDS AND HAZARDOUS MATERIALS

As described in Section 4.8, Hazards and Hazardous Materials, construction activities associated with the proposed project would include the use of materials such as fuels, lubricants, and greases in construction equipment and coatings. Further, operation of the project would involve the use of common cleaning substances, building maintenance products, and similar items stored and used on-site typical for schools. These activities would result in less than significant impacts, however. Further, although the proposed project is located within two miles of Livermore Municipal Airport, the proposed project would result in less than significant impacts related to hazardous wastes with the implementation of Mitigation Measure HAZ-5. Under the No Project Alternative, the site would remain undeveloped, and therefore there would be a *less severe* impact with regard to Hazards and Hazardous Materials.

6.4.1.9 HYDROLOGY AND WATER QUALITY

Under the No Project Alternative, the project site would remain undeveloped and in its existing conditions and construction of a new comprehensive high school would not occur. As discussed in Section 4.9, Hydrology and Water Quality, the Project would result in less than significant hydrology and water quality impacts with regards to groundwater supplies and recharge as a result of compliance with Best Management Practices (BMPs) and Low Impact Design (LID), which includes filtration features that will

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contribute to groundwater recharge and minimize stormwater runoff. The project site would result in an increase to the amount of impervious surface, whereas the No Project Alternative would allow existing conditions to remain with respect to infiltration and groundwater recharge. Therefore, this alternative would result in *less severe* hydrology and water quality impacts compared to the project.

6.4.1.10 LAND USE AND PLANNING

The proposed project would, as described in Section 4.10, Land Use and Planning, result in a less than significant impact on land use and planning with implementation of Mitigation Measure LU-2. Although the proposed project would not physically divide an established community or result in cumulative land use impacts, it would require an avigation easement, as described in Mitigation Measure LU-2, dedicated to the City of Livermore to avoid conflicting with the Airport Land Use Compatibility Plan. Under the No Project Alternative, there would be no land use impacts or conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as the site would remain undeveloped. As such, the No Project Alternative would result in a *less severe* impact in comparison with the proposed project.

6.4.1.11 NOISE

The No Project Alternative would not result in any changes to existing conditions and temporary increases in noise and vibration as a result of construction-related activities associated with the project would not occur. As discussed in Section 4.11, Noise, the proposed project would result in significant noise impacts associated with cumulative increase in traffic levels and during stadium events, due to amplified noise from the public address system. The No Project Alternative would not result in noise impacts given that the site would remain in its existing, undeveloped condition. Therefore, the No Project Alternative would result in *less severe* noise impacts compared to the proposed project.

6.4.1.12 POPULATION AND HOUSING

As described in Section 4.12, Population and Housing, development of the proposed project would result in less than significant population and housing impacts since the proposed new high school is in response to the growing population in Dublin, and overcapacity at Dublin High School, and will serve the existing population. Alternatively, the No Project Alternative would result in no change to the existing conditions of the project site, and thus would have no impact on population and housing, resulting in *less severe* impacts.

6.4.1.13 PUBLIC SERVICES

The proposed project would result in development of a high school on the currently undeveloped property. Section 4.13, Public Services, identified that any impacts related to providing fire, police, school, parks, and library services to the proposed project would be less than significant. Although, construction of the proposed project would result in an increase in police and fire calls to the project site, compared to the No Project Alternative, City plans state that police and fire services shall be increased to accommodate new development, and that new schools are a part of the City's planned development.

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Therefore, impacts from the No Project Alternative would be *similar*, as compared to the proposed project.

6.4.1.14 RECREATION

Under the No Project Alternative, the project site would continue to remain undeveloped and would not serve a designated recreational purposes. Because the proposed site does not currently provide recreational services, the proposed project would not significantly increase the demand for and use of those facilities nor would it replace existing park space. In addition, the proposed project is intended to accommodate the growing population served by the Dublin Unified School District and is a result of increased development around the area, which is consistent with the City's General and Specific Plans, as opposed to a cause of it. Furthermore, the proposed project is the addition of a school which would include the development of recreational facilities onsite, which would add to the amount of recreational facilities in the City. Therefore, the proposed project would not generate significant additional demand for recreational facilities in the City of Dublin, nor would it result in the deterioration of existing facilities. Impacts in these regards would be less than significant. Additionally, as described in Section 4.14, Recreation, in accordance with the Civic Center Act, the District recreational facilities located on the school site would be available for use by the public and would, therefore, further reduce the demand for City recreational facilities.

Because the proposed project does not increase the demand for and use of facilities located within the City of Dublin, rather, it enhances the availability of recreational facilities, while the No Project Alternative comparatively would not serve designated recreational purposes, this alternative would result in *more severe* impacts regarding recreation.

6.4.1.15 TRANSPORTATION

Under the No Project Alternative, the proposed project site would remain an undeveloped field. The proposed project would have potentially significant impacts to transportation which would be reduced to less than significant with the implementation of mitigation measures. Because the No Project Alternative would avoid transportation impacts altogether, it would have *less severe* transportation-related impacts as compared to the proposed project.

6.4.1.16 TRIBAL CULTURAL RESOURCES

As described in Section 4.16, Tribal Cultural Resources, the proposed project would have a less than significant impact on tribal cultural resources with the implementation of Mitigation Measures TRI-1.1a, TRI-1.1b, and TRI-1.2. These mitigation measures would be necessary due to the potential to disturb unrecorded tribal cultural resources or human remains on site which may be impacted due to ground-disturbing impacts during project construction. A records search by the Native American Heritage Commission (NAHC) indicated no site, feature, place, cultural landscape geographically defined in terms of size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe designated on the project site. The project site is not located within a historic preservation district or identified as a historic landmark. No Native American tribes associated with the area requested consultation. Although the project would result in less than significant impacts to tribal cultural resources

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with implementation of mitigation measures, the No Project Alternative would not involve ground disturbing activities that would have the potential of disturbing any archaeological resources or human remains. Therefore, the No Project Alternative would result in *less severe* impacts regarding tribal cultural resources compared to the proposed project.

6.4.1.17 UTILITIES AND SERVICE SYSTEMS

As analyzed in Section 4.17, the proposed project would result in no significant impacts associated with utilities and service systems. However, the proposed project would result in increases in water demand, associated wastewater output, and solid waste generation. The proposed project would not require relocation or construction of new water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Under the No Project Alternative, the project site would remain an undeveloped field and there would be no demand on utilities and services. Therefore, while the impacts of the proposed project would not be significant, these impacts would be greater than those of this alternative. Consequently, the No Project Alternative would result in *less severe* impacts compared to the project.

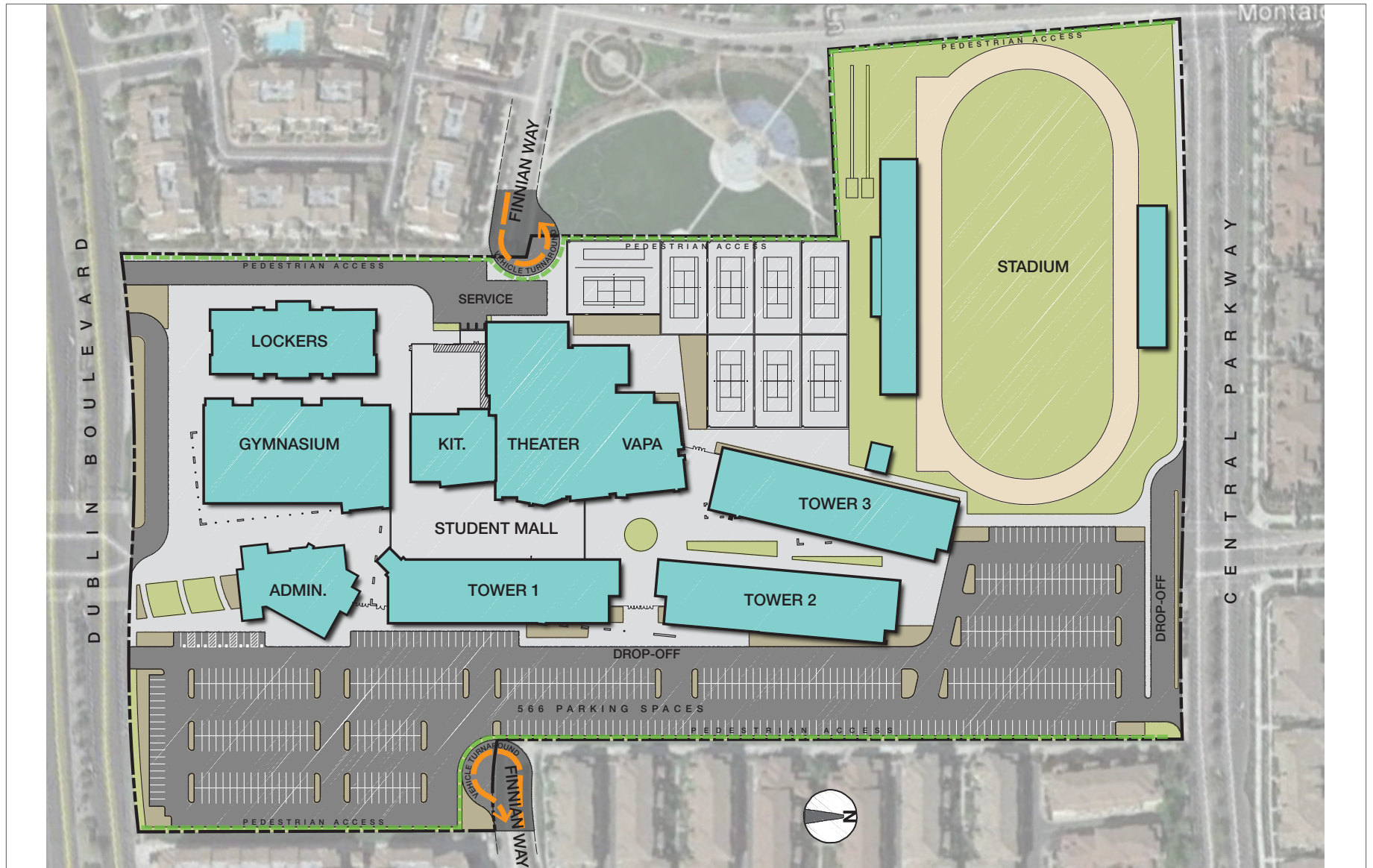
6.4.1.18 WILDFIRE

The proposed project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones, resulting in a less than significant impact conclusion. The existing project site falls under the same fire hazard designations, however, post-development, there would be a reduction in flammable ruderal grasses and organic material on the project site rendering the project site less likely to be susceptible to nearby fires. This would result in *more severe* impacts in comparison to the proposed project.

6.4.2 MODIFIED SITE PLAN ALTERNATIVE

Under the Modified Site Plan Alternative, the footprint of the school buildings, stadium, tennis courts, and parking areas would be modified. As seen on Figure 6-1, *Modified Site Plan Alternative*, the stadium would be placed on the northwest portion of the project site, the tennis courts just south of the stadium, abutting Devany Square, the buildings would be located in the center of the site with the gymnasium, lockers, and administration buildings towards the south; the theater, VAPA, and tower one in the middle; and tower two and tower three towards the north. The school buildings would be placed farther away from the perimeter of the site. The parking lots would be located along the eastern edge of the site directly abutting the eastern residences and the Finnian Way loop. Drop off and pick up areas would be located at the Finnian Way loops on the east and west sides of the site, as well as through access points at both Dublin Boulevard and Central Parkway. In comparison to the proposed project, this alternative would include three driveways provided on Dublin Boulevard, as well as a drop-off and pick up area along the Central Parkway frontage. This alternative's parking lot extends the entire north-south length of the site along the eastern frontage, and therefore, vehicles would be permitted to drive through the site, entering on one side and exiting on the other.

TRANSPORTATION & TRAFFIC



Source: SIM-PBK, 2020. PlaceWorks, 2020.

Figure 6-1
Modified Site Plan Alternative

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6.4.2.1 AESTHETICS

Under this alternative, all characteristics, elements, and building types of the proposed project would remain the same, but in a reconfigured layout. As discussed in Section 4.1, Aesthetics, the proposed project would have less than significant aesthetic impacts to scenic vistas and scenic resources but would result in significant light and glare impacts to residences to the west/southwest of the project site due to the proposed tennis court lighting. This alternative would result in lower light and glare spillover impacts to the residences along the property boundary. The tennis courts would abut Devany Square to the west, rather than the residences to the east, and the stadium would be separated from the residences across Central Parkway by the four-lane roadway, and from the residences on Chancery Lane, a two lane roadway, which are also illuminated by streetlights, thereby reducing the effects of light spillover. Similar to the proposed project, this alternative would introduce new sources of nighttime light and glare in the project area, however the illumination would have a less noticeable impact to viewers in the surrounding area, particularly by residents in the condominiums along the southwestern border of the project site where the tennis courts were located. Therefore, this alternative would result in *less severe* impacts as compared to the proposed project.

6.4.2.2 AIR QUALITY

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As site layout would not impact school operations, construction phasing, or associated transportation impacts, it is not included in the quantification of air quality emissions. As such, this alternative would result in *similar* air quality impacts as compared to the proposed Project.

6.4.2.3 BIOLOGICAL RESOURCES

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As explained in Section 4.3, Biological Resources, development of the site could result in impacts to protected bird species, an impact that would be mitigated with various protective measures. Because this alternative would result in the same degree and type of site development as the proposed project, it would result in *similar* biological impacts as compared to the proposed project.

6.4.2.4 CULTURAL RESOURCES

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As explained in Section 4.4, Cultural Resources, excavation of the site could result in disturbance of cultural and paleontological resources, an impact that would be mitigated with various protective measures. Because this alternative would result in the same degree and type of site development as the proposed project, it would result in *similar* cultural resource impacts as compared to the proposed project.

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6.4.2.5 ENERGY

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. Because buildout numbers would remain the same and student enrollment would not change, associated energy use and VMT-related energy demands would result in *similar* energy impacts as compared to the proposed project.

6.4.2.6 GEOLOGY AND SOILS

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As discussed in Section 4.6, Geology and Soils, of this Draft EIR, the project site is subject to soil compression and expansion due to the presence of clayey soil beneath it. Adverse effects on new buildings as a result of this soil were identified as a significant impact. However, as noted in Section 4.6, mitigation and avoidance measures would be implemented, which include that the design of project buildings will be certified by a geotechnical engineer, will be in compliance with current building codes, will implement soil adaptive design techniques, and include a Statewide General Construction Permit and Storm Water Pollution Prevention Plan (SWPPP). Because this alternative would result in the same degree, type and location of development as the proposed project, it would result in *similar* geological and soils impacts as compared to the proposed project.

6.4.2.7 GREENHOUSE GAS EMISSIONS

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As site layout would not impact school operations, construction phasing, or associated transportation impacts, it is not included in the quantification of GHG emissions. As such, this alternative would result in *similar* GHG impacts as compared to the proposed project.

6.4.2.8 HAZARDS AND HAZARDOUS MATERIALS

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As discussed in Section 4.8, Hazards and Hazardous Materials the proposed project would result in a less than significant impact related to hazardous wastes with the implementation of mitigation measures. Because this alternative would result in the same degree, type and site location of development as the proposed project, it would result in *similar* impacts with regard to hazards and hazardous materials as compared to the proposed project.

6.4.2.9 HYDROLOGY AND WATER QUALITY

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, including permeable surfaces, biofiltration areas and drainage management plans. This alternative would also have to comply with federal, state, and local discharge permitting requirements. As discussed

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in Section 4.9, Hydrology and Water Quality, the proposed project would result in less-than-significant hydrology and water quality impacts with regards to groundwater supplies and recharge. This is the result of compliance with Best Management Practices (BMPs) and Low Impact Design (LID), which includes filtration features that will contribute to groundwater recharge and minimize stormwater runoff. Like the proposed project, this alternative would also disturb more than one acre of land during construction, and thus be subject to compliance with the NPDES Construction General Permit and associated erosion and sediment control practices. Like the project, this alternative would require compliance with the Municipal Regional Stormwater NPDES Permit No. CAS612008 (MRP) issued by the San Francisco RWQCB (Order No. R2-2015-0049) and be consistent with the guidelines of the Alameda Countywide Clean Water Program. Similarly, this alternative would disturb in excess of 10,000 square feet of impervious surface, and thus be held to a Stormwater Management Plan consistent with C.3 provisions set by the San Francisco Bay Regional Water Quality Control Board. As concluded in Section 4.9, these measures would ensure that there would be no significant hydrology or water quality impacts from the proposed project. Therefore, this alternative would have *similar* impacts.

6.4.2.10 LAND USE AND PLANNING

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. This alternative would develop the same land use of the same intensity and size on the same project site, as the proposed project. Therefore, it would result in *similar* land use impacts as the proposed project.

6.4.2.11 NOISE

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As discussed in Section 4.11, Noise, the proposed project would result in significant and unavoidable noise impacts from operational traffic, from operation of the stadium and outdoor recreational activities, and to cumulative impacts from operational traffic. Temporary noise and vibration impacts from construction of the proposed project were considered significant, however these impacts were reduced to a less than significant level through implementation of mitigation measures. The Modified Site Plan Alternative would move the stadium closer to the residences across Central Parkway and Chancery Lane, increasing impacts to residences closest to the northwest, northeast, and northern portions of the project site as compared to the proposed project. However, impacts would be reduced to the residences closest to the southwest and southeast portions of the project site under this alternative. Additionally, traffic related noise impacts, as well as cumulative related noise impacts, would remain because the trip generation from this alternative would remain the same as the proposed project. Furthermore, this alternative would, similar to the proposed project, mitigate construction activities that would expose people to or generate groundborne vibration or temporary or permanent increases to ambient noise levels to less than significant levels. Since this alternative would move the stadium closer to residential areas nearest the northwest, northeast, and northern portions of the project site, but would move the stadium further from residences closest to the southwest and southeast portions of the project site, compared to the proposed project, this alternative would result in *similar* noise impacts and would remain significant and unavoidable.

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6.4.2.12 POPULATION AND HOUSING

As noted in Section 4.12, Population and Housing, the development of a school on an undeveloped site would not significantly displace persons or housing. Under this alternative, all characteristics and features of the proposed project would remain the same, including type, site location and size of the development. Only the site layout would change. Thus, this alternative would result in *similar* population and housing-related impacts.

6.4.2.13 PUBLIC SERVICES

As noted in Section 4.13, Public Services, the proposed project would not significantly impact parks, schools, libraries, police, or fire services within the City of Dublin. Under the Modified Site Plan Alternative, all characteristics and features of the proposed project would remain the same, including type, site location and size of the development. Only the site layout would change. Thus, this alternative would result in *similar* public services impacts.

6.4.2.14 RECREATION

This alternative would develop the same land use of the same intensity and size on the same project site, as the proposed project. Therefore, it would result in *similar* recreation impacts as the proposed project.

6.4.2.15 TRANSPORTATION

The Modified Site Plan Alternative would have trip generation and Vehicle Miles of Travel characteristics similar to that anticipated with the proposed project, which was found to have a less than significant impact with the implementation of mitigation measures. As the same number and size of special events would occur with this alternative, special event parking and traffic levels would also be expected to be similar. Transit access and usage would be like that expected to occur with the proposed project.

With this alternative, the school's administration building would front on Dublin Boulevard, with three driveways provided on Dublin Boulevard along the site's southern frontage. Higher levels of traffic on Dublin Boulevard would be expected under this alternative, with an associated decrease in traffic levels on Central Parkway. Unlike the proposed Project, this alternative's parking lot extends the entire north-south length of the site along the eastern frontage. Thus, vehicles would be permitted to drive through the site, entering on one side and exiting on the other. Operational and safety impacts along the Central Parkway frontage would occur under this alternative. As proposed, a drop-off and pick up area would be installed along the Central Parkway frontage. This drop-off and pick-up area would block a major point of pedestrian access (the Central Parkway/Grafton Street intersection) and would provide inadequate stacking and throat depth. In this configuration, pedestrians entering and exiting the site via the Central Parkway and /Grafton Street intersection would have to walk through the vehicular drop off and pick up zone, resulting in safety issues. The drop-off and pick-up zone is proposed to be directly adjacent/parallel to Central Parkway under this alternative, thereby providing no vehicular stacking or throat depth at the entrance and exit points. With the provision of no stacking or throat depth, queues will extend across the sidewalk and into the adjacent lanes of travel, resulting in conflicts. The lack of throat depth will also result in acute angle intersections with poor sight distance, potentially causing safety concerns. The

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transition between this drop-off/pick-up area and adjacent parking lot is also inadequately configured and would present operational and safety challenges. As proposed, this transition area consists of two directly adjacent tee-intersections with no spacing. In this configuration, vehicle sight distance and right-of-way assignment would be compromised, creating operational and safety concerns.

This alternative, unlike the proposed project, would not include an east-west pedestrian and bicycle connection through the project site along the Finnian Way axis, as specified in the *City of Dublin Bicycle and Pedestrian Master Plan*.

In conclusion, this alternative would result in *more severe* transportation impacts in comparison to the proposed project.

6.4.2.16 TRIBAL CULTURAL RESOURCES

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. As described in Section 4.16, the Native American Heritage Commission completed a record search of the campus site in the Sacred Lands File, with negative results. Moreover, no tribes responded to requests to consult on the EIR process. As such, this alternative would have *similar* tribal cultural resources impacts as the proposed project.

6.4.2.17 UTILITIES AND SERVICE SYSTEMS

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. Under this alternative, the land use, capacity, square footage, water use, energy use, solid waste generation, and energy-efficient characteristics of the proposed project would remain the same. As with the proposed project, this alternative would not need to relocate or construct any new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. As such, this alternative would result in *similar* utilities and service systems impacts

6.4.2.18 WILDFIRE

Under this alternative, all characteristics, elements, and designs of the proposed project would remain the same, other than the positioning and layout of the school buildings, as well as the locations of the stadium, tennis courts, and parking areas. The proposed project was indicated as having no significant impacts regarding wildfire in Section 4.18, Wildfire. It is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The existing project site is undeveloped with vegetation consisting primarily of short grasses and is surrounded by development. It does not pose a wildfire risk. Impacts from the Site Plan Modification Alternative would be *similar*.

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6.4.3 REDUCED ENROLLMENT AND RECREATIONAL FACILITIES ALTERNATIVE

Under the Reduced Enrollment and Recreational Facilities Alternative, the scope of the New Comprehensive Dublin High School would be modified so that only Phase I would be constructed. Phase I is designed to accommodate 1,308 students (48 percent reduction) with a total building area of 212,652 square feet of building area (36 percent reduction). Phase I facilities would include the 30,110 square foot administration building, the 13,811 square foot student union, the 21,004 square foot library, the 31,898 square foot gymnasium, the 17,597 square foot locker room, the 79,673 square foot academy, the 18,563 square feet of visual and the performing arts classrooms, recreational facilities including the 55,493 square foot all-weather track, the 96,837 square foot synthetic play field with four overhead field lights, and the eight tennis courts consisting of 60,719 square feet. Parking lots A, B, and C would remain in the same place under this alternative, and circulation and access points into the school would also remain the same. Additionally, the parking structure would still be included as part of Phase I.

The project components from Phase II which would not be included in this alternative include the second academy, theatre, concessions, maintenance buildings, orchestra pit, aquatic complex, and the 4000 seat bleachers. Additionally, although the stadium lighting would be installed as part of this alternative, lighting surrounding the tennis courts would be omitted. Structures which would have been built as a component of Phase II will be hardscaped.

Under this alternative, use of the sports facilities would be restricted to regular school hours for activities which include Physical Education courses and graduation ceremonies.

6.4.3.1 AESTHETICS

Under the Reduced Enrollment and Recreational Facilities Alternative, the light and glare impacts from the tennis courts would not occur since the lights would be eliminated. Lighting associated with the stadium would remain less than significant. As with the proposed project, this alternative would not result in impacts on scenic vistas or scenic resources. Therefore, by eliminating the tennis court lighting, the Reduced Enrollment and Recreational Facilities alternative would result in *less severe* aesthetic impacts as compared to the proposed project.

6.4.3.2 AIR QUALITY

As described in Section 4.2, Air Quality, the proposed project would result in less than significant impacts to air quality with the implementation of mitigation measures. Under the Reduced Enrollment and Recreational Facilities Alternative, construction activities would be limited to the first phase, and vehicle trips would be reduced due to the reduced enrollment, resulting in a reduction in air emissions during the construction and operational phases. Given that each of these activities contribute to decreased air quality, the Reduced Enrollment and Recreational Facilities Alternative would result in *less severe* air quality impacts as compared to the proposed project.

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6.4.3.3 BIOLOGICAL RESOURCES

Under this alternative, there would be a similar, yet slightly smaller degree of overall site disturbance. As explained in Section 4.3, Biological Resources, development of the site could result in significant impacts to protected bird species, an impact that would be mitigated with nesting survey measures and/or nest avoidance measures. Although there would be a reduction in site disturbance with this this alternative, tree disturbance associated with development of the school would require the same mitigation regardless of how many trees are impacted. Therefore, this alternative would result in *similar* biological impacts as compared to the proposed project.

6.4.3.4 CULTURAL RESOURCES

Under this alternative, large portions of the site would be subject to construction excavation and disturbance, as would be the case with the proposed project. As explained in Section 4.4 Cultural Resources, these actions could disturb existing cultural resources, although over a slightly smaller site footprint due to the reduced scope of work, an impact that would be mitigated by required work stoppage in the event of resource discovery. Therefore, this alternative would result in *similar* cultural resource impacts as compared to the proposed project.

6.4.3.5 ENERGY

Under the Reduced Enrollment and Recreational Facilities Alternative, overall energy usage for construction and operation of the project would be less than that of the proposed project given the reduced building area, and reduced student enrollment. Although energy impacts from the proposed project were found to be less than significant, this alternative would result in *less severe* energy impacts as compared to the proposed project.

6.4.3.6 GEOLOGY AND SOILS

As discussed in Section 4.6, Geology and Soils, any detrimental on-site soil conditions would be mitigated through implementation of the recommendations in the geotechnical evaluation and compliance with the California Building Code. Although this alternative includes a reduced scope, the entire site would undergo site preparation and all areas where structures from Phase II would be emitted would be hardscaped. Because there would be less digging for foundation for Phase II structures, it may be less likely to encounter paleontological resources in some areas, however the potential still exists. With implementation of the same mitigation measures, the Reduced Enrollment and Recreational Facilities Alternative would result in *similar* geological and soils impacts compared to the proposed project.

6.4.3.7 GREENHOUSE GAS EMISSIONS

The Reduced Enrollment and Recreational Facilities Alternative would result in less new net classroom space, a 48 percent reduction in student capacity, as well as elimination of spectator recreational activities on site, as compared to the proposed project. As a result, GHG emissions associated with construction and operational activities would be reduced. While GHG emissions were deemed a significant and unavoidable impact in Section 4.7 of this EIR, the Reduced Enrollment and Recreational Alternative would

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result in *less severe* GHG emissions impacts, yet remain significant and unavoidable, as compared to the proposed project.

6.4.3.8 HAZARDS AND HAZARDOUS MATERIALS

Although this alternative would result in less new classroom space, fewer new students, as well as a reduction in recreational activities on site, it would include the construction of new buildings and project features in the same selected areas as the proposed project. As discussed in Section 4.8, Hazards and Hazardous Materials the proposed project would result in a less than significant impact related to hazardous wastes with the implementation of mitigation measures. Due to the reduced scope from this alternative, there would be less quantities of construction-related chemicals on site, and less chemicals stored by the District during operation, however they would be of the same type. Given the shared construction components as well as the same site location between this alternative and proposed project, this alternative would have *similar* impacts related to hazards and hazardous materials.

6.4.3.9 HYDROLOGY AND WATER QUALITY

The Reduced Enrollment and Recreational Alternative would differ from the proposed project in terms of total new classroom space, total new enrollment, as well as through a reduction in recreational activities on site. However, like the project, this alternative would include new parking lots, circulation areas, recreational space, and buildings, as well as project specific permeable surfaces, biofiltration areas and drainage management plans. This alternative would also be subject to the same federal, state and local discharge permitting requirements. As discussed in Section 4.9, Hydrology and Water Quality, the proposed project would result in less-than-significant hydrology and water quality impacts with regards to groundwater supplies and recharge. This is the result of compliance with Best Management Practices (BMPs) and Low Impact Design (LID), which includes filtration features that will contribute to groundwater recharge and minimize stormwater runoff. Like the proposed project, this alternative would also disturb more than one acre of land during construction, and thus be subject to compliance with the NPDES Construction General Permit and associated erosion and sediment control practices. Like the project, this alternative would include coverage under the Municipal Regional Stormwater NPDES Permit No. CAS612008 (MRP) issued by the San Francisco RWQCB (Order No. R2-2015-0049) and be held to the guidelines of the Alameda Countywide Clean Water Program. Similarly, this alternative would disturb in excess of 10,000 square feet of pervious surface, and thus be held to a Stormwater Management Plan consistent with C.3 provisions set by the San Francisco Bay Regional Water Quality Control Board. As concluded in Section 4.9, these measures would ensure that there would be no significant hydrology or water quality impacts from the proposed project. Therefore, this alternative and the proposed project would have *similar* impacts related to hydrology and water quality.

6.4.3.10 LAND USE AND PLANNING

The proposed project would not result in land use impacts since it would not physically divide an established community, conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, or result in cumulative land use impacts. Under the Reduced Enrollment Alternative Project, the site would include less building space, accommodate fewer new students, and reduce recreational activities on site. However, this alternative would include the same

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project components as Phase I of the proposed project, which do not conflict with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect (including those policies targeting environmental stewardship), and would not physically divide an established community. Thus, the Reduced Enrollment Alternative would have *similar* land use impacts as the proposed project.

6.4.3.11 NOISE

Under the Reduced Enrollment and Recreational Facilities Alternative, student enrollment would be reduced by 48 percent, with a corresponding 36 percent reduction in building area, and the 4,000 seat bleachers and tennis court lighting would be eliminated. Physical education activities would occur only during daytime academic periods. As discussed in Section 4.11, Noise, the proposed project would result in significant noise impacts associated with increases in traffic levels under cumulative conditions. Even with the proposed mitigation measures, noise impacts would remain significant and unavoidable. Because this alternative would reduce the amount of traffic to and from the school, it would result in less severe impacts from traffic and to cumulative traffic impacts, although it would likely remain significant and unavoidable. The proposed project is also expected to pose significant and unavoidable noise impacts to those residences located west/southwest of the project site due to special events at the stadium. In comparison to the proposed project, this alternative would eliminate nighttime special events at the stadium and would, therefore, reduce these significant and unavoidable impacts to less than significant. Additionally, because the bleachers would be eliminated, large special events besides graduation ceremonies would not occur.

Therefore, taken together, this alternative would result in *less severe* noise impacts compared to the proposed project.

6.4.3.12 POPULATION AND HOUSING

As described in Section 4.12, Population and Housing, construction of the proposed project would not result in significant population and housing impacts since the project is in response to the growing population and overcapacity at the existing Dublin High School. Similar to the proposed project, this alternative would neither include nor replace housing, and, similarly, represents a response to population growth rather than a driver of population growth. As such, it would have *similar* impacts regarding population and housing as compared to the proposed project.

6.4.3.13 PUBLIC SERVICES

As noted in Section 4.13, the proposed project would result in less than significant impacts on parks, schools, libraries, police and fire services in the City of Dublin. The Reduced Enrollment and Recreational Facilities Alternative would result a 48 percent reduction in enrollment and a 36 percent reduction in building area, as well as a reduction in recreational activities on site. These operational reductions would ensure that this alternative also does not strain existing services, resulting in *similar* public services-related impacts as the proposed project.

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6.4.3.14 RECREATION

Under the Reduced Enrollment and Recreational Facilities Alternative, the same recreational facilities as the proposed project would be included with the exception of the aquatic center, the 4,000-seat stadium, the public address system, and the tennis court lighting. The proposed project was found to result in less than significant impacts to parks and recreational facilities in the City of Dublin, as it would not sufficiently increase the use of or demand for existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated. Rather, the proposed project would provide additional recreational facilities to the public. Although this alternative would not increase the demand for or use of existing parks and recreational facilities and would provide a similar range of recreational facilities, because the recreational facilities would have a reduced scope and availability for use, the impacts would be considered *more severe* in comparison to the proposed project.

6.4.3.15 TRANSPORTATION

The Reduced Enrollment and Recreational Facilities Alternative would lower trip generation rates compared to the proposed project as shown in Table 6-2.

TABLE 6-2 REDUCED ENROLLMENT AND RECREATIONAL FACILITIES ALTERNATIVE VEHICLE TRIP GENERATION

Alternative	Size (Students)	Daily	AM Peak Hour	Afternoon Peak Hour
Proposed Project	2,545	5,170	1,323	840
Reduced Student Capacity	1,308	2,660	680	430

Notes: ITE land use category 530 – High School (Adj. Streets, 7-9A, PM Peak Hour Generator):

Weekday AM Peak Hour: Average rate of 0.52; Enter = 67%; Exit = 33%

Weekday PM Peak Hour: Average rate of 0.33; Enter = 32%; Exit = 68%

Source: *Trip Generation Manual* (10th Edition), ITE; Fehr & Peers, 2020.

However, as the number of projected new students would remain static in light of growth projections for the City of Dublin, a larger number of students would need to travel a longer distance to attend the existing Dublin High School or other schools. Thus, this alternative's VMT reduction, although lower than the proposed project, would be a smaller reduction than what would be expected when compared with the proposed project. Similar to the proposed project, this alternative would not result in significant VMT impacts, but its benefits to overall citywide travel would be less.

Because this alternative would have fewer special events than would be allowed on-site under the proposed project, the localized effects of special event trip generation and parking would be lower. However, presuming that these special events would continue to occur, only at an alternative location, the parking and traffic would need to be accommodated at those venues.

Site access and circulation would be the same as with the proposed project. Transit, bicycle and pedestrian access and usage would be like that expected to occur with the proposed project.

As such, due to the VMT reduction, this alternative would have slightly *less severe* transportation-related impacts as compared to the proposed project.

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6.4.3.16 TRIBAL CULTURAL RESOURCES

Under this alternative, all characteristics and features of the proposed project would remain the same, other than the total square footage, future enrollment capacity of the school buildings, as well as the opportunity for recreational activities on site. As described in Section 4.16, the Native American Heritage Commission completed a record search of the campus site in the Sacred Lands File, with negative results. Moreover, no tribes responded to requests to consult on the EIR process. As such, this alternative would have *similar* tribal cultural resources impacts as the proposed project.

6.4.3.17 UTILITIES AND SERVICE SYSTEMS

Under this alternative, all characteristics and features of the proposed project would remain the same, other than the total square footage, future capacity of the school buildings, as well as the opportunity for recreational activities on site. As a result, construction activities would be reduced to just one phase, the overall intensity of school operations would be reduced, and energy usage would decrease. As with the proposed project, this alternative would not need to relocate or construct any new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. While the analysis in Section 4.17, Utilities and Service Systems, revealed that the proposed project would not have significant utilities and services impacts, this alternative would result in *less severe* impacts.

6.4.3.18 WILDFIRE

Under this alternative, all characteristics and features of the proposed project would remain the same, other than the total square footage, future capacity of the school buildings, as well as the potential for recreational activities on site. The proposed project was indicated as having no significant impacts regarding wildfire in Section 4.18, Wildfire. It is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The existing project site is undeveloped with vegetation consisting primarily of short grasses and is surrounded by development. It does not pose a wildfire risk. Impacts from the Reduced Enrollment and Recreational Facilities Alternative would be *similar* with regards to wildfire.

6.5 ABILITY TO MEET PROJECT OBJECTIVES

This section describes how each alternative would meet the project objectives, described in Chapter 3 of this Draft EIR and above in Section 6.1.3.

6.5.1 NO PROJECT ALTERNATIVE

The No Project Alternative would not meet any of the project objectives.

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6.5.2 MODIFIED SITE PLAN ALTERNATIVE

Under the Modified Site Plan Alternative, three of the four project objectives would be met. The Modified Site Plan Alternative would help relieve existing classroom overcrowding in the District, and would accommodate an increasing population across the District, particularly on the east side of the District. The Modified Site Plan Alternative would also reflect the efficient use of limited land and public resources, and would offer and expand recreational and extracurricular opportunities to supplement education opportunities in the District. However, as noted in Section 6.4.2.15, the reconfigured circulation plan would result in increased pedestrian and vehicle congestion on the campus in order for vehicles to access the parking lot on the east side. Additional congestion would also occur along the Central Parkway frontage, which would block a major point of pedestrian access, and would provide inadequate stacking and throat depth. In addition, the transition between the drop-off and pick-up area would present operational and safety challenges. Therefore, the Modified Site Plan Alternative would not provide as safe, efficient and adequate school site access and circulation as the proposed project.

6.5.3 REDUCED ENROLLMENT AND RECREATIONAL FACILITIES ALTERNATIVE

The Reduced Enrollment and Recreational Facilities Alternative would satisfy key objectives of the project, through providing a new comprehensive educational campus for high school aged students. Furthermore, the campus design, improved circulation, and entryway safety would also meet objectives of the new school.

Although the 48 percent reduction in new students associated with the Reduced Enrollment and Recreational Facilities Alternative from 2,545 to 1,308 students would satisfy the current exceedance of 600 students at the existing Dublin High School, the Davis Demographics study, conducted for DUSD, projected that the District will experience an increase of approximately 1,298 students overall at the high school level from fall of 2018 to the fall of 2025. Therefore, the Reduced Enrollment and Recreational Facilities Alternative would have the potential to reach capacity by 2025 which would diminish the District's capacity for expansion in the future and high school students in the City of Dublin would remain in overcrowded schools. As such, this alternative is less consistent with the primary project objective. Further, as student populations increase, they do not increase neatly or evenly between grade levels, and as a result, some grade levels become over-crowded much more quickly than others. This results in students in some overcrowded grade levels having limited educational and recreational opportunities even when a school's total enrollment, without taking grade level into account, has not yet exceeded its capacity. Because overall student enrollment capacity under this Alternative would be significantly lower, some grade levels would approach and exceed capacity immediately, and others much more quickly, as compared to the proposed project. Accordingly, this Alternative may limit the educational and recreational opportunities of certain students as compared to the proposed project.

With regards to the recreational component of this alternative, DUSD has prioritized the design of a stadium, as well as recreational areas to host events, such as graduations, sporting events, and providing community amenities. During a community meeting hosted by the District and Architectural staff from SIM-PBK, the topic of athletics was discussed which revealed that the football/soccer stadium would be

ALTERNATIVES TO THE PROPOSED PROJECT

heavily used for sporting events including Cross-Country and Track. Furthermore, both the stadium and eight tennis courts would also be available for use by the City of Dublin Community pursuant to the Civic Center Act (Gov. Code § 38130, *et seq.*).⁷ As such, this alternative is less consistent with a project objective to offer and expand recreational and extracurricular opportunities to supplement educational opportunities within the District.

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the project and the alternatives, Section 15126.6 of the State CEQA Guidelines requires that an “environmentally superior” alternative be identified. In general, the environmentally superior alternative is the alternative that would be expected to generate the least environmental impact. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets project objectives.

As shown in Table 6-1, the No Project Alternative would, in comparison to the project, result in fewer impacts when compared to those of the proposed project for all the environmental impacts. However, the No Project Alternative would not address any of the project objectives of the proposed project. In accordance with State CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the “No Project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. In this case, the environmentally superior alternative is the Reduced Enrollment and Recreational Facilities Alternative. However, as noted in Section 6.5.3, this alternative would fail to achieve maximum relief for future projected overcrowding at the existing DUSD Dublin High School, the primary objective of the project and the DUSD Facilities Master Plan. It would also fail to meet the last objective, that all high school age students have access to comprehensive high school facilities, including classrooms, stadium, theater, aquatic center, and other functional components vital to their educational and recreational success.

⁷ Dublin Unified School District, 2019, Dublin High School – Education Specifications, Athletics Meeting – April 12, Student Activities Office.

7. CEQA-Mandated Sections

This chapter provides an overview of the impacts of the proposed project based on the analyses presented in Chapters 4.1 through 4.18 of this Draft EIR. The topics covered in this chapter include impacts found not to be significant, growth-inducing impacts, and significant irreversible changes to the environment. A more detailed analysis of the effects that the proposed project would have on the environment, and proposed mitigation measures to minimize significant impacts, are provided in Chapter 4.

7.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

CEQA Guidelines Section 15128, Effects Not Found to be Significant, allows environmental issues for which there is no likelihood of significant impact to be “scoped out” and not analyzed further in the EIR. As referenced in Chapter 4, Environmental Analysis, of this Draft EIR, the disturbed nature of the project site and the urban setting within the project vicinity, combined with past and current uses, preclude environmental impacts associated with agricultural and forestry resources and mineral resources. No associated impacts would occur as a result of the proposed project.

7.1.1 AGRICULTURAL RESOURCES

The California Department of Conservation Farmland Mapping & Monitoring Program does not note any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the City of Dublin, where the proposed project is located. Furthermore, although the project site is classified as grazing land, it is completely surrounded by urban and built up land and would be unsuitable for agricultural uses.¹ The proposed project site is neither zoned for agricultural uses nor subject to a Williamson Act Contract, per the City of Dublin’s zoning map and Williamson Act information within the City’s General Plan.²³ Therefore, there would be no impact to the types of farmland addressed by CEQA or other agricultural lands/resources.

¹ California Department of Conservation, 2016, California Important Farmland Finder, available online at <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed April 14, 2020.

² City of Dublin, 2016, General Plan – Chapter 3 Land Use and Circulation: Parks and Open Space Element, available online at <https://www.dublin.ca.gov/DocumentCenter/View/7797/Chapter-3-March-2016?bidId=>, accessed April 14, 2020.

³ City of Dublin, 2019, Dublin Zoning Map, available online at <https://dublin.ca.gov/DocumentCenter/View/20627/Zoning-Map-June-2019>, accessed April 14, 2020.

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7.1.2 MINERAL RESOURCES

The California Department of Conservation, Geological Survey (CGS) has classified lands within Alameda County into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in areas. Lead agencies are required to incorporate identified MRZs resource areas delineated by the State into their General Plans.⁴ The project site, as well as the nearby vicinity, is located within a MRZ-1 area, in which there are no known mineral resources.⁵ Therefore, the proposed project does not include any significant known or inferred mineral resources. Given this, construction of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan and this issue has therefore not been analyzed further in this Draft EIR.

7.2 SIGNIFICANT IRREVERSIBLE CHANGES DUE TO THE PROPOSED PROJECT

Section 15126.2(d) of the CEQA Guidelines requires an EIR to discuss the extent to which a proposed project or plan would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

7.2.1 LAND USE CHANGES THAT COMMIT FUTURE GENERATIONS

As described in Chapter 3, Project Description, the proposed project involves development of a currently undeveloped 24-acre area into a new high school for the residents of eastern Dublin. The project would involve the construction of 660,072 square feet of building space and associated recreational, circulation, and parking spaces. Because the site is currently undeveloped land, the construction of the proposed project would permanently change the existing site and commit future generations to uses that are not already prevalent on the project site.

7.2.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Potential environmental accidents of concern include those that would have adverse effects on the environment or public health due to the nature or quantity of material released during an accident and the receptors exposed to that release. As detailed in Chapter 4.8, Hazards and Hazardous Materials, operation of the proposed project would involve the use of common cleaning substances, building maintenance products, and similar items stored and used on-site typical for schools. Potentially hazardous

⁴ Public Resources Code Section 2762(a)(1).

⁵ Department of Conservation, 1987, California Geological Survey Information Warehouse: Mineral Land Classification, available online at <https://maps.conservation.ca.gov/cgs/informationwarehouse/mlc/>, accessed April 14, 2020.

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substances such as these would not occur in sufficient quantities to pose a significant hazard to human and environmental health. Additionally, the land use proposed by the project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident. As a result, the project would not pose a substantial risk of environmental accidents.

7.2.3 LARGE COMMITMENT OF NON-RENEWABLE RESOURCES

Consumption of nonrenewable resources includes issues related to increased energy consumption, conservation of agricultural lands, and lost access to mining reserves. The project would require water, electric, and gas service, and resources for construction. The ongoing operation of the project would involve the use of nonrenewable resources. Construction and ongoing maintenance of the project would irreversibly commit some materials and nonrenewable energy resources. Materials and resources used would include, but are not limited to, nonrenewable and limited resources such as oil, gasoline, sand and gravel, asphalt, and steel. These materials and energy resources would be used for infrastructure development, transportation of people and goods, and utilities. During the operational phase of the project (post-construction), energy sources including natural gas, oil, and gasoline would be used for lighting, heating, and cooling for the school, and transportation of people to and from the project site.

The project would include several features to reduce the need for nonrenewable resources, such as the lighting efficiency features described in Chapter 3, Project Description, of this Draft EIR. The project would be required to comply with all current building and design requirements, including those set forth by Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, the project would be required to use water consumption reduction fixtures, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. Additionally, as described in Chapter 4.7, GHG Emissions, the proposed project would require mitigation measures designed to minimize energy sector and mobile source GHG emissions. These include the installation of a photovoltaic system to offset as much electricity usage as feasible, provision of parking for low-emitting, fuel-efficient, and carpool/van vehicles, and availability of electric vehicle charging stations. Lastly, the project would include design features which include bike facilities and pedestrian improvements.

The project site does not contain any agricultural land or a mining reserve, so it would not affect those natural resources.

7.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development. This section evaluates the project's potential to create such growth inducements. Not all aspects of growth inducement are negative; rather, negative impacts

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associated with growth inducement occur only where the project growth would cause adverse environmental impacts.

As discussed in Chapter 4.12, Population and Housing, the project is not expected to induce growth in excess of planned growth because it does not include construction of housing or necessitate the construction of housing. Although the total estimated employees for the new high school is 129, of which 86 would be faculty employees and 43 would be support staff, it is anticipated that approximately 35 – 45 percent of these employees are existing District employees, and the remaining increase in jobs is well within the range of the projected job increase in Dublin, according to ABAG projections for the City.⁶ Therefore, the project would also not provide significant additional employment over existing conditions. Furthermore, there are no required infrastructure improvements that would increase capacity to the degree that additional development could occur elsewhere in the city. Development of the project would involve construction activities that would generate temporary construction jobs; however, it is unlikely that construction workers would permanently relocate to the City of Dublin as a result of the project.

⁶ Association of Bay Area Governments (ABAG), 2017. *Plan Bay Area, Projections 2017*, City Table, Alameda County.

8. Organizations and Persons Consulted

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Appendices

- Appendix A:** Notice of Preparation and NOP Response Letters
- Appendix B:** Air Quality, Greenhouse Gas and Health Risk Modeling
- Appendix C:** Health Risk Assessment
- Appendix D:** Energy and Fuel Use Modeling
- Appendix E:** Geological Resources: Geotechnical Engineering Investigation, Geological and Environmental Hazards Assessment Report
- Appendix F:** Hazardous Resources Report: Phase I ESA, Phase II Investigation Report, Preliminary Endangerment Assessment, Caltrans Letter, and PSHA
- Appendix G:** Hydrological Resources: Hydrology and Low Impact Development Report, Stormwater Pollution Prevention Plan, and Water Supply Test and Site Flow Analysis
- Appendix H:** Noise Impact Report
- Appendix I:** AB 52 Consultation



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