

**DRAFT INITIAL STUDY AND  
MITIGATED NEGATIVE DECLARATION**

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**INITIAL STUDY / MITIGATED NEGATIVE  
DECLARATION**

**FREDERIKSEN ELEMENTARY SCHOOL**

**DUBLIN, CALIFORNIA**

**DUBLIN  
UNIFIED**



**School District**

**DECEMBER 2019**

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**DRAFT INITIAL STUDY AND  
MITIGATED NEGATIVE DECLARATION**

**FREDERIKSEN ELEMENTARY SCHOOL  
DUBLIN, CALIFORNIA**

**Prepared for:**

**Dublin Unified School District**  
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Dublin, CA 94568  
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## **NOTICE OF PUBLIC HEARING AND INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

This is to advise that Dublin Unified School District (DUSD) has prepared a Mitigated Negative Declaration for the Project identified below that is scheduled to be held at the Dublin Unified School District – Board of Trustees meeting on February 11, 2020.

PLEASE BE ADVISED that the Dublin Unified School District – Board of Trustees will consider adopting the Mitigated Negative Declaration at the Board’s meeting to be held on February 11, 2020. Presentations will be made at approximately 5:30 p.m. Action on items on the board agenda will occur after the presentations. The meeting will be held in the District Office Board room located at 7471 Larkdale Avenue, Dublin, CA.

An information meeting will be held during the public circulation period for this environmental document. The meeting will be held at Frederiksen Elementary School, 7243 Tamarack Drive, Dublin, California 94568 on January 7, 2020, starting at 6:30 p.m. Comments on the environmental document may be submitted at this meeting or in writing to the District by 5:00 p.m. on January 20, 2020.

### ***Project Name***

Frederiksen Elementary School

### ***Project Location***

7243 Tamarack Drive, Dublin, California 94568.

### ***Project Description***

The Dublin Unified School District (DUSD, as lead agency) has proposed to demolish and rebuild existing structures at Frederiksen Elementary School (Project) located at 7243 Tamarack Drive in Dublin, California. The elementary school campus occupies an approximately 12-acre Project site. The enrollment capacity would be approximately 900 students ranging from Kindergarten through fifth grade. The Project would include construction of multiple buildings, with an area totaling approximately 72,258 square feet (sq. ft.). Buildings would include classrooms; library, media center, administrative and multi-purpose rooms; athletic and play fields. The existing Frederiksen Elementary School facilities include 28 permanent classrooms and seven (7) portable classroom buildings. The proposed Project would include demolition of 23 permanent classrooms, removal of seven (7) portable classroom buildings, and construction of 36 permanent classrooms totaling approximately 36,900 sq. ft. The existing five-classroom kindergarten complex completed in 2008 will remain. The Project would also include reconfiguration of the current student drop-off/pick-up areas to improve traffic flow and increase student safety.

The document and documents referenced in the Initial Study/Mitigated Negative Declaration are available for review at the Dublin Unified School District Office at 7471

Larkdale Avenue, Dublin, the District's website at ([www.dublinusd.org](http://www.dublinusd.org)), and the Dublin Public Library at 200 Civic Plaza, Dublin, California.

As mandated by the California Environmental Quality Act (CEQA), the public review period for this document is 30 days (CEQA Section 15073[b]). The public review period began on December 20, 2019 and will end on January 20, 2020. Comments on the environmental document may be submitted in writing or email ([dusdceqa@dublinusd.org](mailto:dusdceqa@dublinusd.org)) to the District by 5:00 p.m. on January 20, 2020. For further information please contact Chris Stevens at (925) 828-2551.



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## ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ac	Acre
ADWF	Average Daily Wastewater Flow
afy	Acre-Foot per
APN	Assessor's Parcel Number
AQAP	Air Quality Attainment Plan
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BAU	Business-As-Usual
BMPs	Best Management Practices
CAA	Clean Air Act
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH <sub>4</sub>	Methane
CNDDB	California Natural Diversity Database
CO <sub>2</sub>	Carbon dioxide
CRECs	Controlled Recognized Environmental Concerns
CWA	Clean Water Act
dB	Decibels
District	Dublin Unified School District
DNL	Day-Night Average Level
DOC	Department of Conservation
DOGGR	Department of Oil, Gas, and Geothermal Resources
DTSC	Department of Toxic Substance Control
EIR	Environmental Impact Report
EOADP	Extreme Ozone Attainment Demonstration Plan
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESAs	Environmentally Sensitive Areas
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
g	Acceleration of Gravity
GAMAQI	Guide to Assessing and Mitigating Air Quality Impacts
GHGs	Greenhouse Gases
HAPs	Hazardous Air Pollutants
HCFCs	Halogenated Fluorocarbons
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HREC	Historical Recognized Environmental Concerns
HVAC	Heating, Ventilation, and Air Conditioning
IS	Initial Study

IS/MND	Initial Study/Mitigated Negative Declaration
ITE	Institute of Transportation Engineers
DUSD	Dublin Unified School District
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MDB&M	Mount Diablo Base and Meridian
MGD	Million Gallons per Day
MM	Mitigation Measure
MND	Mitigated Negative Declaration
MTCO <sub>2e</sub>	Metric Tons Carbon Dioxide Equivalent
N <sub>2</sub> O	Nitrous Oxide
NAHC	Native American Heritage Commission
NO <sub>x</sub>	Oxide of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NSR	New Source Review
O <sub>3</sub>	Ozone
OCPs	Organochlorine Pesticides
PEA	Preliminary Environmental Assessment
PFCs	Perfluorinated Carbons
PM <sub>2.5</sub>	Particulate Matter Less than 2.5 Microns
PM <sub>10</sub>	Particulate Matter Less than 10 Microns
PRC	Public Resources Code
ROG	Reactive Organic Gases
RSLs	Residential Screening Levels
RTIF	Regional Traffic Impact Fee
RWQCB	Regional Water Quality Control Board
SEI	Soils Engineering, Inc.
SF <sub>6</sub>	Sulfur Hexafluoride
SPAL	Small Project Analysis Level
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VMT	Vehicle Miles Traveled
WSA	Water Supply Assessment
OCPs	Organochlorine Pesticides

## **MITIGATED NEGATIVE DECLARATION**

As Lead Agency under the California Environmental Quality Act (CEQA), Dublin Unified School District (DUSD) has reviewed the Project described below to determine whether it could have a significant effect on the environment because of its development. In accordance with CEQA Guidelines Section 15382, “[s]ignificant effect on the environment” means 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 or aesthetic significance.

### ***Project Name***

Frederiksen Elementary School Renovation

### ***Project Location***

7243 Tamarack Drive, Dublin, California 94568

### ***Project Description***

The Dublin Unified School District (DUSD, as lead agency) has proposed to demolish and rebuild existing structures at Frederiksen Elementary School (Project) located at 7243 Tamarack Drive in Dublin, California. The elementary school campus occupies an approximately 12-acre Project site. The enrollment capacity would be approximately 900 students ranging from Kindergarten through fifth grade. The Project would include construction of multiple buildings, with an area totaling approximately 72,258 square feet (sq. ft.). Buildings would include classrooms; library, media center, administrative and multi-purpose rooms; athletic and play fields. The existing Frederiksen Elementary School facilities include 28 permanent classrooms and seven (7) portable classroom buildings. The proposed Project would include demolition of 23 permanent classrooms, removal of seven (7) portable classroom buildings, and construction of 36 permanent classrooms totaling approximately 36,900 sq. ft. The existing five-classroom kindergarten complex completed in 2008 will remain. The Project would also include reconfiguration of the current student drop-off/pick-up areas to improve traffic flow and increase student safety.

### ***California Department of Education, School Siting Requirements***

Education Code Section 17251 and the California Code of Regulations (CCR), Title 5, Sections 14001 through 14012, outline the powers and duties of the California Department of Education (CDE) regarding school sites and the construction of school buildings. Districts using local funds are encouraged to seek the Department's approval for the benefits that such outside, objective reviews provide to the school district and the community.

Safety is the first consideration in the selection and/or construction of school sites. Certain health and safety requirements are governed by state regulations and the policies of the Department. When selecting new school sites, the selection team considers the following

factors: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high pressure water pipelines; (8) proximity to propane tanks; (9) noise; (10) proximity to major roadways; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

During the original construction of Frederiksen Elementary School, Dublin Unified School District considered the factors which apply to new school sites. This consideration does not need to be made because the existing buildings are being demolished and rebuilt, and the school site is not changing locations. Any known hazards have been accounted for in the preparation of the Site Plan.

### ***Mailing Address and Phone Number of Contact Person***

Dublin Unified School District  
7471 Larkdale Avenue  
Dublin, CA 94568  
Contact Person: Chris Stevens  
Phone: (925) 828-2551

### ***Findings***

As Lead Agency, DUSD finds that the Project will not have a significant effect on the environment. The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) (see *Section 3 - Environmental Checklist*) identified one or more potentially significant effects on the environment, but revisions to the Project have been made before the release of this Mitigated Negative Declaration (MND) or mitigation measures would be implemented that reduce all potentially significant impacts to less-than-significant levels. The Lead Agency further finds that there is no substantial evidence that this Project would have a significant effect on the environment.

### ***Mitigation Measures Included in the Project to Avoid Potentially Significant Effects***

**MM AES-1:** Security and nighttime lighting installed at the school site shall incorporate shielding of lighting and orienting lighting downward to prevent direct uplighting. Lighting used for nighttime events shall be turned off by 11:00 p.m. All lights in excess of 150 watts shall be directed toward Project site and away from adjacent properties. All light fixtures shall be designed with appropriate reflectors, hoods and side shields to direct the angle of incidence to reflect light downward.

**MM CUL-1:** If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource

materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from Project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation. Implementation of the mitigation measure below would ensure that the proposed Project would not cause a substantial adverse change in the significance of a historical resource.

**MM CUL-2:** If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

**MM GEO-1:** Prior to ground disturbance, an erosion control plan for construction activities shall be prepared that describes the best management practices (BMPs), which shall be incorporated to reduce the potential for soil erosion and loss of topsoil. The BMPs could include soil stabilizers and silt fencing as well as other measures.

**MM GEO-2:** During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from Project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

**MM HAZ-1:** Prior to operation of the Project, the Project proponent shall prepare a Hazardous Materials Business Plan that identifies the new location of the new school campus and submit it to the Alameda County Environmental Health Services Division/Hazardous Materials Section for review and approval. The Project proponent shall provide the hazardous materials business plan to all contractors working on the Project and shall ensure that one copy is available at the Project site at all times.

**MM HYD-1:** Prior to construction, the District shall submit an approved copy of: 1) the approved Storm Water Pollution Prevention Plan (SWPPP) and 2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the San Francisco Bay Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

**MM HYD-2:** The District shall limit grading to the minimum area necessary for construction and operation of the Project. Final grading plans shall include best management practices to limit onsite and offsite erosion.

**MM NSE-1:** During construction, the contractor shall implement the following measures:

- All stationary construction equipment on the Project site shall be located so that noise emitting objects or equipment faces away from any potential sensitive receptors;
- The construction contractor shall ensure that all construction equipment is equipped with manufacturer-approved mufflers and baffles during construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers; and
- Construction activities shall comply with the noise standards specified in the City Municipal Code section 5.28.020.



## **SECTION 1 - INTRODUCTION**

### ***1.1 - Overview***

Dublin Unified School District (DUSD) is proposing to demolish and replace existing structures at Frederiksen Elementary School (Project) at 7243 Tamarack Drive in Dublin, California. Figure 1-1 is a map of the regional location and Figure 1-2 shows the Project's vicinity. Figure 1-3 provides the aerial location of the Project site.

### ***1.2 - California Environmental Quality Act***

The DUSD is the Lead Agency for this Project pursuant to the CEQA Guidelines (Public Resources Code Section 15000 et seq.). The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) (see *Section 3 – Initial Study*) provides analysis that examines the potential environmental effects of the construction and operation of the Project. Section 15063 of the CEQA Guidelines requires the Lead Agency to prepare an IS to determine whether a discretionary Project will have a significant effect on the environment. A Mitigated Negative Declaration (MND) is appropriate when an IS has been prepared and a determination can be made that no significant environmental effects will occur because revisions to the Project have been made or mitigation measures will be implemented that reduce all potentially significant impacts to less-than-significant levels. The content of an MND is the same as a Negative Declaration, with the addition of identified mitigation measures and a Mitigation Monitoring and Reporting Program (MMRP) (see *Section 6 – Mitigation Monitoring and Reporting Program*).

Based on the IS, the Lead Agency has determined that the environmental review for the proposed application can be completed with an MND.

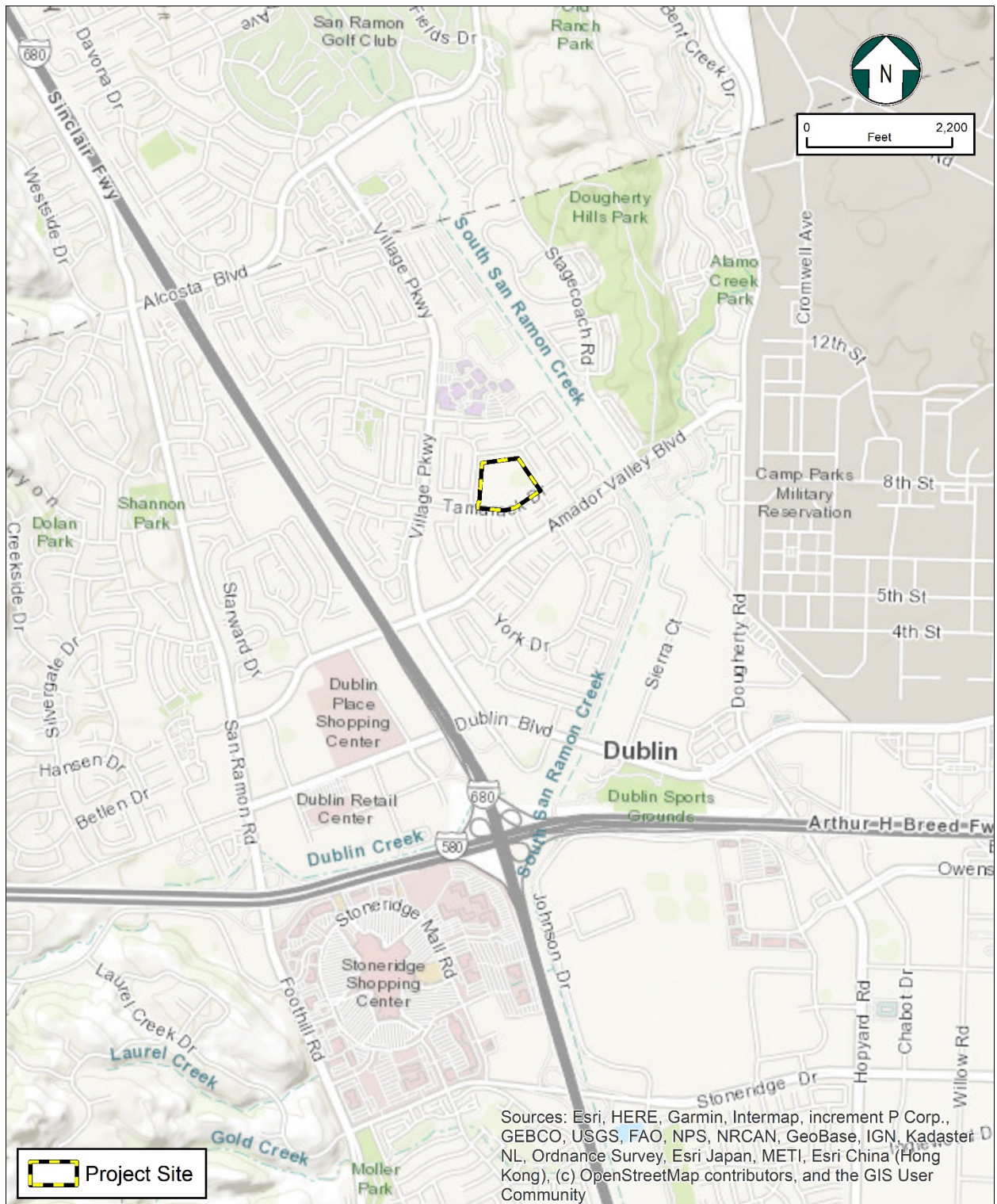
### ***1.3 - California Department of Education, School Siting Requirements***

Education Code Section 17251 and the California Code of Regulations (CCR), Title 5, Sections 14001 through 14012, outline the powers and duties of the California Department of Education (CDE) regarding school sites and the construction of school buildings. Districts using local funds are encouraged to seek the Department's approval for the benefits that such outside, objective reviews provide to the school district and the community.

Safety is the first consideration in the selection and/or construction of school sites. Certain health and safety requirements are governed by state regulations and the policies of the Department. When selecting new school sites, the selection team considers the following factors: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high pressure water pipelines; (8) proximity to propane tanks; (9) noise; (10) proximity to major roadways; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

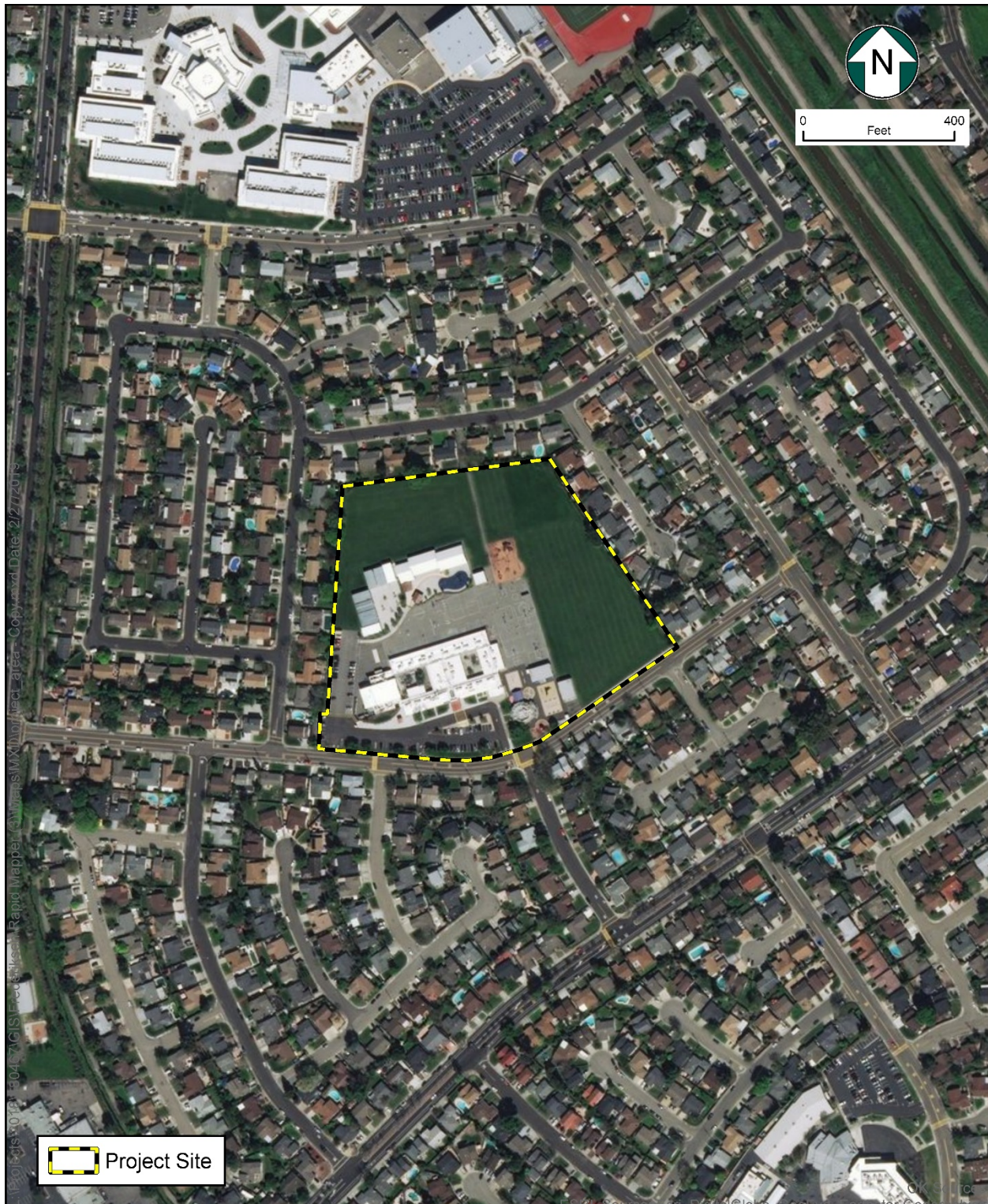






**Figure 1-2**  
**Project Vicinity Map**

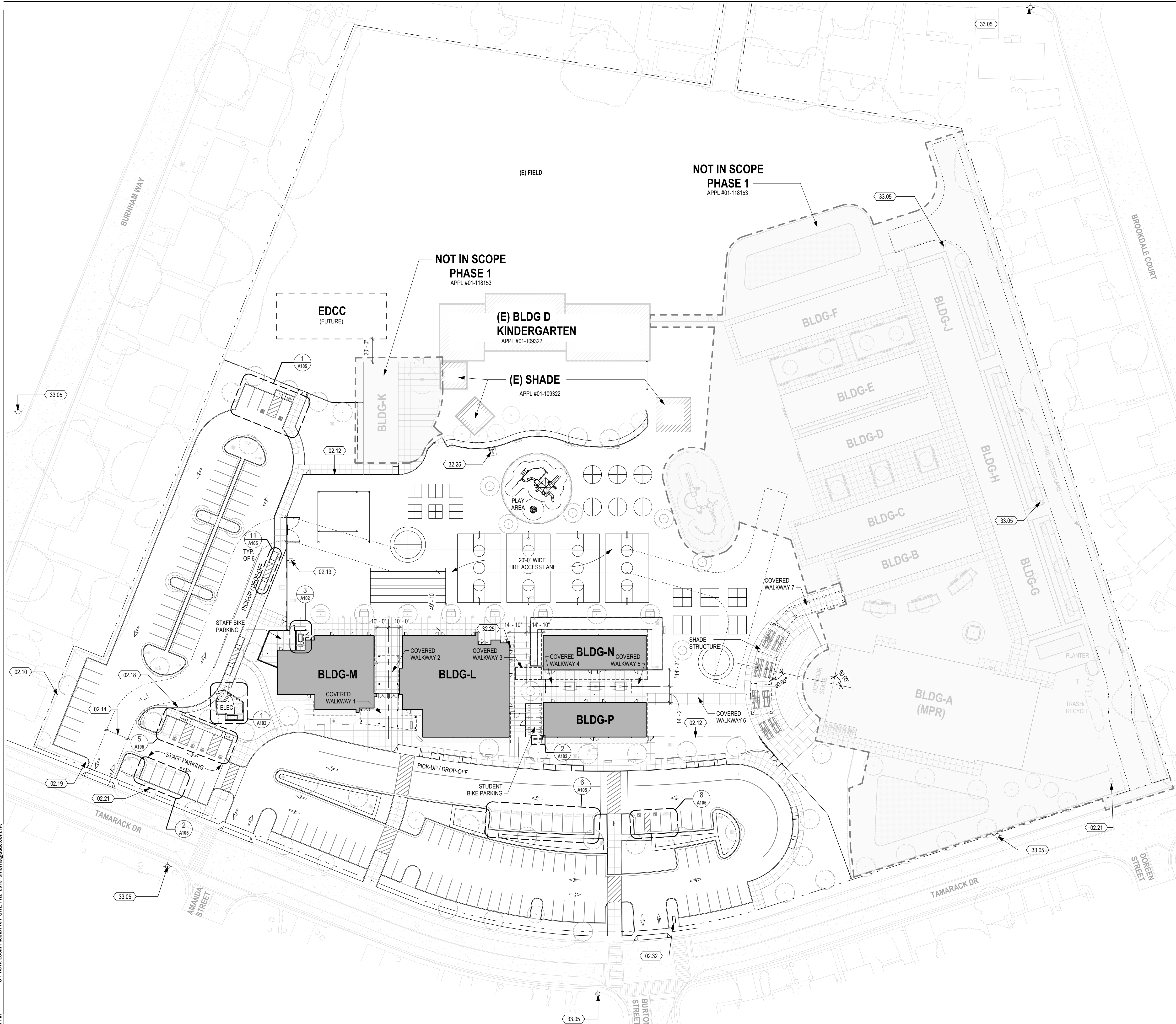




**Figure 1-3**  
**Aerial Location Map**



C:\Revit Local Files\07701 SITE PH2 2019 cmmrns@dsae.com.rvt 10/15/2019 3:04:04 PM



1 PHASE-2 SITE PLAN  
1" = 40'-0"

## GENERAL NOTES

- SEE CIVIL, LANDSCAPE, AND MEP DRAWINGS FOR RELATED SCOPE OF WORK.
- AREA OF NEW PAVING, LANDSCAPING, AND SITE FIXTURES ARE SHOWN HERE TO CONVEY GENERAL DESIGN INTENT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR EXACT LAYOUT, PATTERN, MATERIAL, QUANTITY, AND AREAS OF EXISTING PAVING TO BE PATCHED.
- SEE CIVIL DWGS FOR HORIZONTAL AND VERTICAL CONTROLS.
- SEE LANDSCAPE DWGS FOR FENCING AND GATES.
- FOR GATE PANIC HARDWARE SCHEDULE, S.A.D.

## KEYNOTES

- 02.10 (E) FENCE TO REMAIN, TYP.
- 02.12 (N) DECORATIVE METAL FENCE/GATE SYSTEM
- 02.13 RELOCATED FIRE HYDRANT, S.C.D.
- 02.14 FIRE TRUCK ACCESS, 20' WIDE MIN.
- 02.18 EMERGENCY VEHICLE ACCESS CURB AND ROAD EDGE PAINTING AS REQUIRED FOR DESIGNATING FIRE ACCESS LANE
- 02.19 FIRE LANE SIGN
- 02.21 8" BACKFLOW PREVENTER AND FIRE DEPARTMENT CONNECTION
- 02.32 RELOCATED (E) SIGN
- 32.25 SITE HI-LO DRINKING FOUNTAIN
- 33.05 (E) FIRE HYDRANT

## PARKING TABULATION

2016 CBC 11B.208.2		
PARKING LOT	REQUIRED	PROVIDED
STANDARD	-	108
ACCESSIBLE PARKING (11B-208.2) & VAN ACCESSIBLE (11B-208.4):	4 STD + 1 VAN TOTAL = 5	4 STD + 2 VAN TOTAL = 6
CLEAN AIR VEHICLES (5.106.5.2)	11 STANDARD	11 STANDARD
ELECTRIC VEHICLE (5.106.5.3) & ELECTRIC VEHICLE ACCESSIBLE: (11B-228.3.2.1)	5 STANDARD + 1 VAN ACC & 1 STD ACC TOTAL = 7	5 STANDARD + 1 VAN ACC & 1 STD ACC TOTAL = 7
DUBLIN MUNICIPAL CODE: CHAPTER 8.76 TABLE 8.76.080: 2 per classroom	2 x 41 (classrooms) TOTAL = 82	132

## BICYCLE PARKING

2016 CAL-GREEN 5.106.4.2		
TOTAL BUILDINGS = 4	REQUIRED	PROVIDED
STUDENT	32	32
STAFF AND VISITORS	8	8
TOTAL	40	40

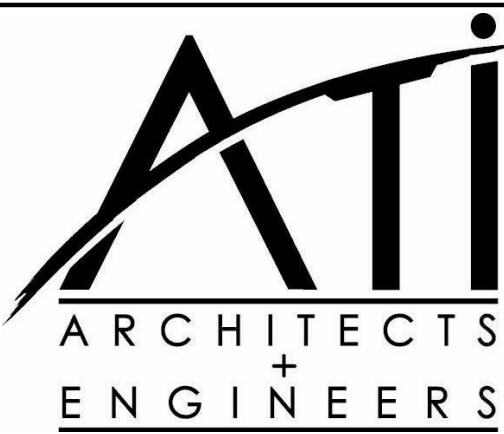
5.106.4.2 BICYCLE PARKING, [DSA-SS] FOR PUBLIC SCHOOLS AND COMMUNITY COLLEGES, COMPLY WITH SECTIONS 5.106.4.2.1 AND 5.106.4.2.2

5.106.4.2.1 SHORT-TERM BICYCLE PARKING: PROVIDE PERMANENTLY ANCHORED BICYCLE RACKS WITHIN 200 FEET OF THE STUDENT ENTRANCE, READILY VISIBLE TO PASSERS-BY, FOR 5 PERCENT OF THE STUDENT POPULATION BASED ON THE TOTAL OCCUPANT LOAD OF THE CAMPUS WITH A MINIMUM OF ONE TWO-BIKE CAPACITY

## SITE PLAN LEGEND

- (E) BUILDING TO REMAIN
- (N) BUILDING
- PROPERTY LINE
- FIRE HYDRANT

DSA:



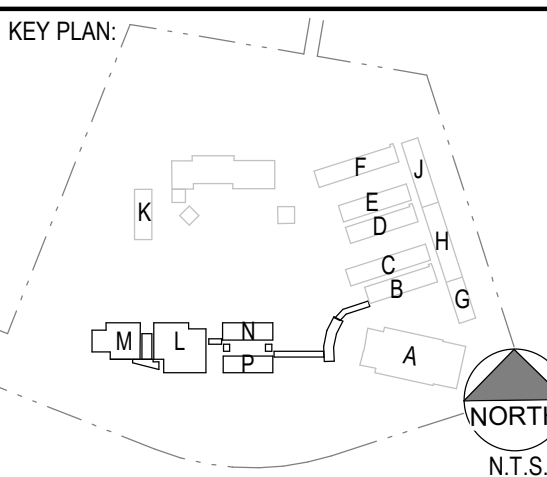
4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
3050 Pullman Street Costa Mesa, CA 92626 - T 714.338.1600

PROFESSIONAL STAMP:



CONSULTANT:

ITEM:	REVISION/ISSUE:	DATE:
	DSA SUBMITTAL	10/16/2019



DUBLIN UNIFIED SCHOOL DISTRICT  
FREDERIKSEN ELEMENTARY SCHOOL REPLACEMENT  
PHASE-2  
7243 Tamarack Dr, Dublin, CA 94568

## SITE PLAN

DRAWN BY: CM CHECKED BY: JX  
DATE: 10/16/2019 PROJECT NO: D7701\_002  
SHEET NO:

A101

## ***1.4 - Impact Terminology***

The following terminology is used to describe the level of significance of impacts.

- A finding of “no impact” is appropriate if the analysis concludes that the Project would not affect a topic area in any way.
- An impact is considered “less than significant” if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered “less than significant with mitigation incorporated” if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the applicant.
- An impact is considered “potentially significant” if the analysis concludes that it could have a substantial adverse effect on the environment.

## ***1.5 - Document Organization and Contents***

The content and format of this IS/MND is designed to meet the requirements of CEQA. The report contains the following sections:

- *Section 1 – Introduction:* This section provides an overview of CEQA requirements, intended uses of the IS/MND, document organization, and a list of regulations that have been incorporated by reference.
- *Section 2– Project Description:* This section describes the Project and provides data on the site’s location.
- *Section 3 – Initial Study:* This section contains the evaluation of 18 different environmental resource factors contained in Appendix G of the CEQA Guidelines. Each environmental resource factor is analyzed to determine whether the proposed Project would have an impact. One of four findings is made which include: no impact, less-than-significant impact, less than significant with mitigation, or significant and unavoidable. If the evaluation results in a finding of significant and unavoidable for any of the 18 environmental resource factors, then an Environmental Impact Report will be required.
- *Section 4 – List of Preparers:* This section identifies the individuals who prepared the IS/MND.
- *Section 5 – Bibliography:* This section contains a full list of references that were used in the preparation of this IS/MND.
- *Section 6 – Mitigation Monitoring and Reporting Program:* This section contains the Mitigation Monitoring and Reporting Program.

## ***1.6 - Incorporated by Reference***

The following documents and/or regulations are incorporated into this IS/MND by reference:

- City of Dublin General Plan 2018 Update;
- City of Dublin Zoning Ordinance; and
- California Department of Education, Title 5, California Code of Regulation.

## **SECTION 2 - PROJECT DESCRIPTION**

### ***2.1 - Introduction***

Dublin Unified School District is proposing to demolish and rebuild Frederiksen Elementary School (Project) in Dublin, California. Figure 1-1 is a map of the regional location and Figure 1-2 shows the Project's vicinity. Figure 1-3 provides the aerial location of the Project site. Figure 1-4 provides the proposed site plan of the Project site.

### ***2.2 - Project Location***

The project site is located within Section 21, Township 2 South, Range 1 West, Mount Diablo Base and Meridian (MDB&M), within the Dublin U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. The site encompasses approximately 12-acres at Assessor's Parcel Number (APN) 941-194-026. The Project site is located at 7243 Tamarack Drive in Dublin, California.

The proposed school site has a general plan designation of Single Family Residential, 6,500 minimum lot size (R-1) by the City of Dublin General Plan. The surrounding area consists of single-family residences.

### ***2.3 - Project Environment***

The site has been developed as Frederiksen Elementary School since 1966 (Minnear, 2018). The Project site is within the City of Dublin General Plan, a plan that consists of residential, commercial, and industrial uses (City of Dublin, 2017). The site is surrounded by single-family residences.

Police service to the Project site is provided by the Dublin Police Department. Fire service is provided by Alameda County Fire Department. Existing sewer infrastructure on the Project site is expected to be enough to serve the Project. Sanitation/garbage collection is provided by a local waste hauler. Water service is provided by Dublin San Ramon Services District.

### ***2.4 - Proposed Project***

The Dublin Unified School District (DUSD, as lead agency) has proposed to demolish and rebuild existing structures at Frederiksen Elementary School (Project) located at 7243 Tamarack Drive in Dublin, California. The elementary school campus occupies an approximately 12-acre Project site. The enrollment capacity would be approximately 900 students ranging from Kindergarten through fifth grade. The Project would include construction of multiple buildings, with an area totaling approximately 72,258 square feet (sq. ft.). Buildings would include classrooms; library, media center, administrative and multi-purpose rooms; athletic and play fields. The existing Frederiksen Elementary School facilities include 28 permanent classrooms and seven (7) portable classroom buildings. The proposed Project would include demolition of 23 permanent classrooms, removal of seven (7) portable classroom buildings, and construction of 36 permanent classrooms totaling



approximately 36,900 sq. ft. The existing five-classroom kindergarten complex completed in 2008 will remain. The Project would also include reconfiguration of the current student drop-off/pick-up areas to improve traffic flow and increase student safety.

School facilities typically include single- and multi-story, permanent building structures and some portable units on temporary or permanent foundations with room for future expansion capabilities. School facilities will also include administration offices, a library/resource center, and an outdoor playground. Outdoor lighting would be provided throughout campus and parking areas. The Project includes the construction of 132 conventional vehicle parking spaces.

Student population for the new educational facilities would come from students within the District. The enrollment in the District as of January 2019 is approximately 12,400 students (Dublin Unified School District, 2019). The District currently operates seven elementary schools, one K-8<sup>th</sup> school, two middle schools, one comprehensive high school, and one alternative high school (Dublin Unified School District, 2019) In order to meet the needs of the steadily increasing student population, the District has undertaken the construction of additional schools and classroom spaces. This Project would assist the District in achieving its goal to align resources to maximize student learning.

No known historic oil activity has occurred on the site. The Project is not located within the boundaries of an oilfield. According to the Division of Oil, Gas and Geothermal Resources (DOGGR) records and maps, no abandoned oil wells are located on the site, and the nearest well is over three miles to the northwest of the site (see Figure 3.4.8-1).

The Project site is not located within any Airport Land Use Compatibility Plan or Influence Area.

## **SECTION 3 - INITIAL STUDY**

### ***3.1 - Environmental Checklist***

**1. Project Title:**

Frederiksen Elementary School Replacement

**2. Lead Agency Name and Address:**

Dublin Unified School District  
7471 Larkdale Avenue  
Dublin, CA 94568

**3. Contact Person and Phone Number:**

Chris Stevens  
Phone: (925) 828-2551

**4. Project Location:**

7243 Tamarack Drive, Dublin CA 94568

**5. General Plan Designation:**

Single Family Residential, 6,500 square foot minimum lot size

**6. Description of Project:**

Please see Section 2.

**7. Surrounding Land Uses and Setting:**

Entirely surrounded by residential uses

**8. Other Public Agencies Whose Approval is Required:**

- California Department of Education;
- California Department of Toxic Substances Control;
- California Division of the State Architect;
- Bay Area Air Quality Management District; and
- San Francisco Bay Regional Water Quality Control Board.

### ***3.2 - Environmental Factors Potentially Affected***

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

### ***3.3 - Determination***

On the basis of this initial evaluation:

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

/S/

12/20/2019

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Signature

---

Date

Chris Stevens

---

Printed Name

---

For

### ***3.4 - Evaluation of Environmental Impacts***

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to Projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on Project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document

pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

- c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a Project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
  - a. The significance criteria or threshold, if any, used to evaluate each question; and
  - b. The mitigation measure identified, if any, to reduce the impact to less than significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.1 - AESTHETICS

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

- |    |  |                          |                                     |                                     |                          |
|----|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a. | Have a substantial adverse effect on a scenic vista?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. | 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? | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. | Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

### Discussion

**Impact #3.4.1a – Except as provided in Public Resources Code Section 21099, would the Project have a substantial adverse effect on a scenic vista?**

The Project site is located on the existing Frederiksen Elementary School campus, which is located in an area surrounded by residential development. No known aesthetic resources exist on the site. The site is less than half of a mile east of Interstate 680, which is an officially designated State Scenic Highway. However, the Project will not significantly change the existing visual character of the site because the current use as a school reflects the same use proposed in the Project and any additional construction beyond the buildings that currently exist on site would not significantly alter the visual character of the site.

Furthermore, development of the Project would not block or preclude views to any area containing important or what would be considered visually appealing landforms. Therefore, no scenic vistas will be impacted by construction of this Project. The Project does not include the removal of trees determined to be scenic or of scenic value, the destruction of rock outcroppings or degradation of any historic building. Therefore, no scenic resources will be

affected. The Project will not result in development that is substantially different than the existing campus and surrounding land uses.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.1b – Except as provided in Public Resources Code Section 21099, would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

See Impact #3.4.1a, above.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.1c – Except as provided in Public Resources Code Section 21099, in non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the Project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

The Project is in an area that is predominantly residential development. The Project campus and associated structures will be set back from the roadway but will be visible to traveling motorists. However, changes to the visual quality and character of the Project site will be similar in nature to the existing visual character of the Project site. The Project's appearance would not change or degrade the visual character of the site. Therefore, the Project would not result in a substantial impact to the visual quality of the area.

See also discussion of Impact #3.4.1a, above.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.1d – Except as provided in Public Resources Code Section 21099, would the Project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?**

Construction of the proposed Project would generally occur during daytime hours, typically from 7:00 a.m. to 6:00 p.m. All lighting would be directed downward and shielded to focus illumination on the desired work areas only and prevent light spillage onto adjacent properties. Because lighting used to illuminate work areas would be shielded, focused downward, and turned off by 6:00 p.m., the potential for lighting to affect any residents adversely is minimal. Increased truck traffic and the transport of construction materials to the Project site would temporarily increase glare conditions during construction. However, this increase in glare would be minimal. Construction activity would focus on specific areas on the sites, and any sources of glare would not be stationary for a prolonged period of time. Therefore, construction of the proposed Project would not create a new source of substantial glare that would affect daytime views in the area.

For operations, exterior lighting would be designed to minimize reflective glare and light scatter. The school facility would include lighting for classrooms, onsite security and recreational fields. State law requires the District to follow the California Code of Regulations Title 24 (Part 3) regarding indoor light design. In addition, Mitigation Measure MM AES-1 would require the school's event lighting to be shut off by 11:00 p.m. These requirements would substantially reduce potential nuisances from light or glare. With implementation of Mitigation Measure MM AES-1, the proposed Project would not create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. Therefore, the Project would have a less-than-significant impact with mitigation.

**MITIGATION MEASURE(S)**

**MM AES-1:** Security and nighttime lighting installed at the school site shall incorporate shielding of lighting and orienting lighting downward to prevent direct uplighting. Lighting used for nighttime events shall be turned off by 11:00 p.m. All lights in excess of 150 watts shall be directed toward Project site and away from adjacent properties. All light fixtures shall be designed with appropriate reflectors, hoods and side shields to direct the angle of incidence to reflect light downward.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated.*



Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.2 - AGRICULTURE AND FORESTRY RESOURCES

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

- |    |   |                          |                          |                          |                                     |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. | Conflict with existing zoning for agricultural use or a Williamson Act Contract?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. | Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. | Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. | Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### Discussion

**Impact #3.4.2a – Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?**

The Project site is not zoned for agricultural use and therefore would not convert any farmland to non-agricultural use. The proposed school site has a general plan designation of

Single Family Residential (R-1, 6,500 square foot minimum lot size) by the City of Dublin General Plan. Due to the urban environment of the Project area, there is no farmland on the Project site or in the Project vicinity as shown in Figure 3.4.2-1.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

**Impact #3.4.2b – Would the Project conflict with existing zoning for agricultural use or a Williamson Act Contract?**

The Project site is not zoned for agricultural use and is not under a Williamson Act land use contract (see Figure 3.4.2-1). The proposed school site has a general plan designation of Single Family Residential (R-1, 6,500 square foot minimum lot size) by the City of Dublin General Plan. The conversion of farmland to non-agricultural use has the potential to result in two types of impacts: 1) direct conversion impacts, which is the conversion of land within the project site boundary, or 2) indirect impacts, which is the pressure to convert other properties adjacent to the project site from agricultural to non-agricultural use. There are no lands adjacent to the that are currently held under Williamson Act Contract (see Figure 3.4.2-1). Therefore, there would be no conflict with existing agricultural zoning or Williamson Act Contracts.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

**Impact #3.4.2c – Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?**

The Public Resources Code Section 12220 (g) and Section 4526 defines “forest land” as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. There are no forest lands identified on the project site or within its vicinity; therefore, there would be no conflict with or impacts to zoning for forest land or timber land. The project would not result in the loss or conversion of forest land to a non-forest use.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

**Impact #3.4.2d – Would the Project result in the loss of forest land or conversion of forest land to non-forest use?**

See discussion of Impact #3.4.2c, above.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

**Impact #3.4.2e – Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

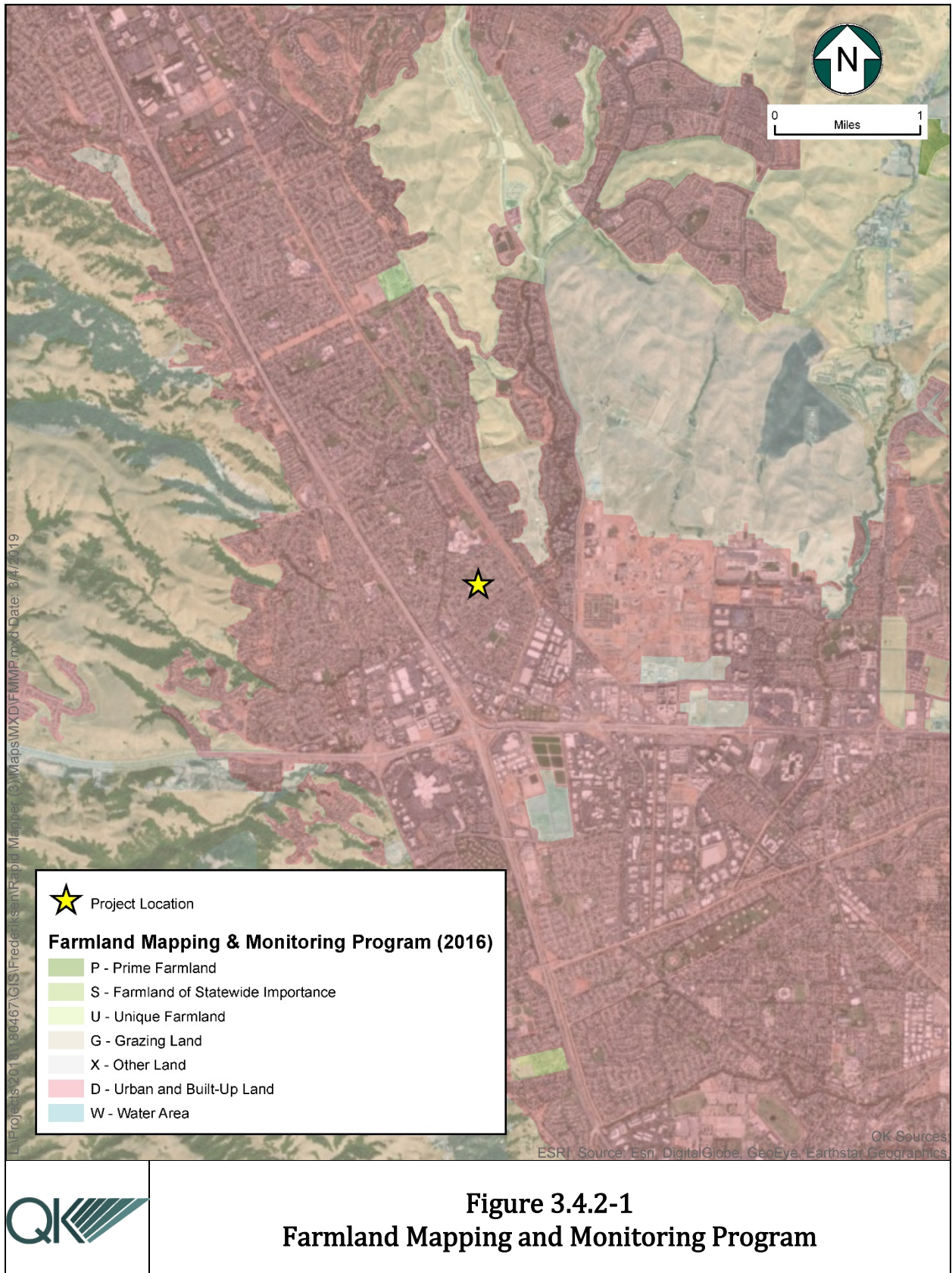
See discussion of Impacts #3.4.2a through #3.4.2c, above.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.



Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.3 - AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the Project:

a.	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion

The following analysis is based primarily on *Bay Area Air Quality Management District (BAAQMD) – CEQA Screening Assessment and report* prepared by Trinity Consultants (*see Appendix A*). This Assessment determined the proposed Project would not meet the minimum standards to require a full Air Quality Impact Analysis. In addition to providing an assessment of the project’s impacts to air quality and GHGs, the Assessment includes a detailed description of the regulatory environment as it relates to air quality.

#### Impact #3.4.3a – Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The CEQA Guidelines indicate that a significant impact would occur if the proposed project would conflict with or obstruct implementation of the applicable air quality plan. The BAAQMD created a screening assessment to streamline air quality assessments of commonly encountered projects. According the *Air Quality Guidelines (AQG) Chapter 3*, the BAAQMD “pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding the CEQA significant emissions thresholds” (Insight/Trinity, 2019).

The AQG screening process established review parameters to determine whether a project qualifies as an exempt project. A project that is found to be “less than” the established parameters, according the AQG, “would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance” (Insight/Trinity, 2019). Table 3.4.3-1 presents the screening parameters for elementary schools.

**Table 3.4.3-1  
BAAQMD Operational – Related Criteria Air Pollutant and Precursor Screening Level Sizes**

<b>Land Use Type</b>	<b>Operational Criteria Pollutant Screening Size</b>	<b>Operational GHG Screening Size</b>	<b>Construction-Related Screening Size</b>
Elementary School	271,000 square feet (NOx)	44,000 square feet	277,000 square feet (ROG)
Elementary School	2,747 students (ROG)	-	3,904 students (ROG)

NOx = Oxides of Nitrogen; ROG = Reactive Organic Gases; GHG = Greenhouse Gases

As shown in Table 3.4.3-1, the proposed Project would need to screen below a construction and operational area of 271,000 square feet with a total student capacity of less than 2,747 students for the Project to be exempted from an Air Quality Impact Assessment (AQIA). Table 3.4.3-2 presents a comparison of the Project parameters against the AQG elementary school screening parameters.

**Table 3.4.3-2  
Frederiksen Elementary School Construction Thresholds Comparison**

<b>Screening Criteria</b>		<b>Project Total Increase</b>	<b>Below Screening?</b>	<b>Actions Taken</b>
Operational NOx (sq ft)	271,000	64,019	Yes	None
Operational ROG (students)	2,747	846	Yes	None
Construction ROG (sq ft)	277,000	64,019	Yes	None
Construction ROG (students)	3,904	846	Yes	None

As shown above, the Project would not exceed additional school capacity, in either square footage or number of students, above the screening levels for NOx or ROG emissions. Therefore, an AQIA is not required to determine that the Project would not conflict with any applicable air quality plan and there would be no impact.

#### ***MITIGATION MEASURE(S)***

No mitigation is required.

#### ***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

**Impact #3.4.3b – Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?**

See Impact #3.4.3a, above. As the Project is not expected to generate a significant change in current activity levels, substantial emissions are not anticipated. The Project would not violate any air quality standard or contribute substantially to an existing or Projected air quality violation, and impacts would be less than significant.

***MITIGATION MEASURE(S)***

No mitigation is required

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.3c – Would the Project expose sensitive receptors to substantial pollutant concentrations?**

Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside. The proposed Project, because of its educational nature, is not expected to result in the generation of odors or hazardous air pollutants. The Project would not expose sensitive receptors to substantial concentrations of localized PM10, carbon monoxide, diesel particulate matter, hazardous air pollutants, or naturally occurring asbestos.

The proposed Project is located on a site that is currently developed as an elementary school. The proposed Project consists of the replacement and construction of the structures of Frederiksen Elementary School, associated parking lot, athletic facilities and playground areas. During the construction period some odors could result from vehicles and equipment using diesel fuels. However, vehicles and equipment using diesel fuels at the proposed Project site would comply with the California Air Resources Board (CARB) guidelines, which limit idling time to five minutes with the Airborne Toxic Control Measure (ATCM). In addition, the construction period would be temporary.

The CARB has an ATCM for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. This ATCM applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. No naturally occurring asbestos is suspected within 10 miles of the Project site.

The proposed Project is located near residential neighborhoods. However, expected uses of the Project are not known to be a source of nuisance odors and are not listed in Table 3-3 of the BAAQMD's CEQA AQG which defines common odor sources. Therefore, the Project is not



anticipated to have substantial odor impacts and is therefore anticipated to have a less-than-significant odor impact.

TACs are as defined by the California Health & Safety Code (CH&SC) §44321 and are listed in Appendices AI and AII of the AB 2588 Air Toxic “Hot Spots” and Assessment Act’s Emissions Inventory Criteria and Guideline Regulation document. PM2.5 is a complex mixture of substances that includes carbon, metals, nitrates, sulfates, organics and mixtures from diesel exhaust, wood smoke, etc. BAAQMD’s applicable Thresholds of Significance for TAC and PM2.5 emissions for new sources are listed in Chapter 5.2.1 of the AQG and are shown below:

- Compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) risk greater than 1.0 hazard index (HI) from a single source would be a significant cumulatively considerable contribution;
- An incremental increase of greater than 0.3 µg/m<sup>3</sup> annual average PM2.5 from a single source would be a significant cumulatively considerable contribution.

Contributors to substantial concentrations of TACs and PM2.5 include diesel generators, truck distribution centers, freeways and large diesel transportation vehicles.

The proposed Project is not expected to generate any substantial increase in PM2.5 or TAC emissions. The new school buildings will accommodate normal projected student population growth and are not proposed for the express purpose of expanding school capacity beyond normal school growth projections. Therefore, it is expected that there will be no substantial increase in diesel trucks as a result of this school modernization project. In addition, the Project will not install any new emergency diesel-powered equipment. Therefore, the Project would not generate a health risk impact due to TAC emissions or PM2.5 emissions.

The Project would remain below the excess cancer risk level of more than 10 in a million, or non-cancer risk greater than 1.0 HI from a single source. The Project would not lead to an incremental increase of greater than 0.3 µg/m<sup>3</sup> annual average PM2.5.

The Project will comply with the BAAQMD Community Risk Reduction Plan. BAAQMD has also published a guidebook for addressing local sources of air pollutants in community planning titled “Planning Healthy Places”.<sup>3</sup> The Project will include working with Dublin Unified School District to construct and operate facilities at the school according to the best practices set forth in the BAAQMD guidebook.

Since the Project is below all of the screening thresholds for TACs and PM2.5, the potential health risk impacts would be considered less than significant, and no further health risk assessment is required.

#### ***MITIGATION MEASURE(S)***

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.3d – Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

The proposed Project is located near residential neighborhoods. However, expected uses of the Project are not known to be a source of nuisance odors and are not listed in Table 3-3 of the BAAQMD's CEQA AQG that defines common odor sources. Therefore, the Project is not anticipated to have substantial odor impacts and is therefore anticipated to have a less-than-significant odor impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.4 - BIOLOGICAL RESOURCES

Would the Project:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Discussion

A literature review of the California Department of Fish and Wildlife's California Natural Diversity Database (CNDDDB) (California Department of Fish and Wildlife, 2019), California Native Plant Society (California Native Plant Society, 2019), and United States Fish and Wildlife Service Endangered Species List (US Fish and Wildlife Service, 2019) was conducted

to identify special-status plant and wildlife species with the potential to occur within the Project site and vicinity (the surrounding nine quads and a 10-mile radius). The results of the database inquiry were subsequently reviewed to evaluate the potential for occurrence of special-status species on or near the Project site prior to construction of the Project.

**Impact #3.4.4a – Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

An evaluation of the potential special-status species occurring within 10 miles of the Project site was conducted that included habitat requirements, likelihood of required habitat to occur within the Project area, and a comparison to the CNDDB records was conducted. The results of this evaluation concluded no special-status plant or wildlife species are anticipated to occur on or near the Project site.

### ***General Wildlife and Plant***

The Project site has experienced significant historical and ongoing ground disturbance from past development surrounding the Project site. The wildlife species inhabiting the Project site and immediate surrounding area include those typically found in moderate- to heavily disturbed habitats associated with urban development zones of Dublin and northern Alameda County.

### ***Sensitive Habitats and Special-Status Species***

#### **SPECIAL-STATUS PLANTS**

The literature search revealed two sensitive natural communities and 35 plant species that are found within a 10-mile buffer of the Project site. However, the Project site and vicinity has been disturbed for years due to urban development and do not provide habitat for any of these sensitive natural communities or plant species.

#### **SPECIAL-STATUS WILDLIFE**

Protocol surveys for specific special-status wildlife species were not conducted for this report as it was determined by the consulting biologist that such surveys were not warranted due to the condition of the Project site.

The CNDDB review concluded that eight special status wildlife species are found within a 10-mile buffer of the Project site. Due to the lack of suitable habitat for these species on the Project site and the developed nature of the Project area, they can be removed from further consideration in this review.

## **CONCLUSION**

The Project site and surrounding area has been disturbed for years due to urban development. The Project site and vicinity does not provide suitable habitat for any of these special-status plant species.

Special-status plant species are unlikely to be impacted by Project activities and no mitigation measures to protect, avoid, or minimize impacts to special-status plant species are warranted.

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, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the Project will have a less-than-significant impact.

## **MITIGATION MEASURES**

No mitigation is required.

## **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.4b – Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

There are three sensitive natural communities with the potential to occur within 10 miles of the Project site. These include Sycamore Alluvial Woodland, Valley Needlegrass Grassland, and Valley Sing Scrub. The Project site is highly disturbed and does not provide habitat to maintain these communities. Although protocol-level botanical surveys were not conducted, it is unlikely that these habitat communities exist in the Project area due to heavy disturbance of the Project site and surrounding vicinity. There are no anticipated impacts to sensitive natural communities as a result of the proposed Project. The Project site covers an area of approximately 12 acres in size and consists of an elementary school. The Project site is surrounded by residential development.

Riparian habitat is defined as lands that are influenced by a river, specifically the land area that encompasses the river channel and its current or potential floodplain. The Project is not located within a river or an area that encompasses a river or potential floodplain. With respect to sensitive natural communities, due to the extensive agriculture development that has occurred, there are no identified sensitive natural communities located on or near the Project site. The proposed Project would not have a substantial adverse effect on any

riparian habitat or other sensitive natural community. Therefore, the Project's impacts would be less than significant.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.4c – Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

The United States Army Corps of Engineers (USACE) has regulatory authority over the Clean Water Act (CWA), as provided for by the EPA. The USACE has established specific criteria for the determination of wetlands based upon the presence of wetland hydrology, hydric soils, and hydrophilic vegetation. There are no federally-protected wetlands or vernal pools that occur within the Project site.

Wetlands, streams, reservoirs, sloughs, and ponds typically meet the criteria for federal jurisdiction under Section 404 of the CWA and state jurisdiction under the Porter-Cologne Water Quality Control Act. Streams and ponds typically meet the criteria for State jurisdiction under Section 1602 of the California Fish and Game Code. There are no features on the Project site that would meet the criteria for either federal or State jurisdiction. Accordingly, there are no wetlands or Waters of the U.S. occurring on the Project site. There would be no impact to federally protected wetlands or waterways as a result of the proposed Project. Therefore, the Project would have no impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

There would be *no impact*.

**Impact #3.4.4d – Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Wildlife migratory corridors are described as a narrow stretch of land that connects two open pieces of habitat that would otherwise be unconnected. These routes provide shelter and sufficient food supplies to support wildlife species during migration. Movement corridors generally consist of riparian, woodlands, or forested habitats that span contiguous acres of undisturbed habitat and are important elements of resident species' home ranges.

The proposed Project would not interfere with the movement of native resident or migratory fish or wildlife species. Coyote Creek is located less than half a mile east of the Project site but will not be impacted by the construction or operation of the Project.

Additionally, the land surrounding the Project site is already developed with residences that sever wildlife movement through the site and eliminate any nursery site. The proposed Project would not 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. Therefore, the Project's impacts would be less than significant.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.4e – Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

The City of Dublin Heritage Tree Ordinance defines heritage trees as any oak, bay, cypress, maple, redwood, buckeye, or sycamore tree having a trunk or main stem of 24 inches or more in diameter measured at 54 inches above natural grade. There are no known heritage trees on the Project site; however, if one is encountered that is to be preserved under an approved development plan, these trees must be protected during site development. A tree protection plan must be approved prior to commencement of work unless the Community Development Director of the City of Dublin has specifically waived this requirement.

There are no other adopted local policies or ordinances protecting biological resources that would apply to this Project site. Therefore, implementation of the proposed Project would have no conflict related to an adopted local policies or ordinances protecting biological resources.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

There would be *no impact*.

**Impact #3.4.4f – Would the Project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?**



The Conservation Element of the City of Dublin General Plan includes goals and policies for riparian protections, erosion control, air quality management, agricultural land preservation, archaeologic/historic resource preservation, and open space management. The Project is not anticipated to conflict with any of these goals and policies. Therefore, there would be no impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.5 - CULTURAL RESOURCES

Would the Project:

- |    |   |                          |                                     |                          |                          |
|----|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a. | Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?                      | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. | Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. | Disturb any human remains, including those interred outside of formal cemeteries?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### Discussion

This section is based on a cultural resource record search obtained from the California Historical Resources Information System at the California State University, Sonoma. (see Appendix B).

#### Impact #3.4.5a – Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

As defined by CEQA Guidelines Section 15064.5, "historical resources" are:

- A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resource Code Section 5024.1, Title 14 California Code of Regulations, Section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the

California Register of Historical Resources (Public Resources Code Section 5024.1, Title 14 CCR, Section 4852) including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- 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
- Has yielded, or may be likely to yield, information important in prehistory or history.

The records search revealed that one cultural resource study has previously been conducted within the Project area, and ten previous cultural resource surveys were completed within a half-mile radius. As a result of these surveys, it was determined that there were no recorded cultural resources including unique architectural features on the Project site.

There are no historical resources on the Project site or in the Project vicinity (Parr, 2019).

On December 10, 2019, letters were mailed to each of the Native American tribes within the geographic area (see Appendix C). The letters included a brief Project description and location maps. To date, no response has been received from any tribe.

Although there is no obvious evidence of historical or archaeological resources on the Project site, there is the potential during construction for the discovery of cultural resources. Grading and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy these previously unidentified and potentially significant cultural resources within the Project area, including historical resources. Disturbance of any deposits that have the potential to provide significant cultural data would be considered a significant impact under CEQA.

#### ***MITIGATION MEASURE(S)***

**MM CUL-1:** If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from Project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation. Implementation of the mitigation measure below would ensure that the proposed Project would not cause a substantial adverse change in the significance of a historical resource. Therefore, the Project would have a less-than-significant impact with incorporation of mitigation measures.

#### **LEVEL OF SIGNIFICANCE**

Impact would be *less than significant with mitigation incorporated*.

**Impact #3.4.5b – Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?**

See discussion of Impact #3.4.5a, above.

#### **MITIGATION MEASURE(S)**

Implementation of MM CUL-1.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.5c – Would the Project disturb any human remains, including those interred outside of formal cemeteries?**

Although unlikely, subsurface construction activities, such as trenching and grading, associated with the proposed Project could potentially disturb previously undiscovered human burial sites. Accordingly, this is a potentially significant impact. Although considered unlikely subsurface construction activities could cause a potentially significant impact to previously undiscovered human burial sites. The records searches did not indicate the presence of human remains, burials, or cemeteries within the Project site. No human remains have been discovered at the Project site, and no burials or cemeteries are known to occur within the area of the site. However, construction would involve earth-disturbing activities, and it is still possible that human remains may be discovered, possibly in association with archaeological sites. Implementation of the below mitigation measure would ensure that the proposed Project would not directly or indirectly destroy previously unknown human remains. The proposed Project would not disturb any known human remains, including those interred outside of formal cemeteries. Therefore, the Project would have a less-than-significant impact with incorporation of mitigation measures.

#### **MITIGATION MEASURE(S)**

**MM CUL-2:** If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American

involvement, in the event of discovery of human remains, at the direction of the county coroner.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated.*

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.6 - ENERGY

Would the Project:

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### Discussion

**Impact #3.4.6a – Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

The construction of the proposed Project would increase local energy consumption due to activities typically associated with construction. Energy demand during the construction phase would result from the transportation of materials, construction equipment, and employee vehicle trips. Construction equipment includes excavators, graders, off-highway trucks, rubber-tired dozers, scrapers, tractors, loaders, backhoes, forklifts, cement and mortar mixers and cranes. The Project would comply with the BAAQMD requirements regarding the use of fuel-efficient vehicles and equipment, to the extent feasible. However, this increase is temporary in nature and is not expected to result in a significant increase in energy consumption.

Energy demand during the operational phase would result from ongoing school activities the use of typical appliances and school equipment, maintenance equipment and six existing school buses. It is anticipated that total fuel consumption for the Project would not increase, based on current existing bus routes, parent drop-offs, and pick-ups. The District will not be expanding their district boundaries. The operation of the proposed Project will not significantly increase the rate of consumption of energy resources beyond the existing conditions. Where applicable, lighting fixtures will be replaced with higher efficiency bulbs in order to reduce energy consumption.

The proposed Project would not result in a significant environmental impact due to inefficient consumption of energy resources. Therefore, there would be a less-than-significant impact.

### **MITIGATION MEASURE(S)**

No mitigation is required.

### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

#### **Impact #3.4.6b – Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

Chapter 7.94 of the Dublin Municipal Code has been adopted with the purpose of enhancing the design and construction of buildings and encouraging sustainable construction practices in several categories. The construction of the Project will comply with Chapter 7.94 by installing LED lights wherever additional lighting is needed and avoid the over-lighting of school facilities to reduce unnecessary energy expenditure. The Project would comply with additional components of Chapter 7.94 where applicable. The Project will use low flow toilets, xeriscaping, drought tolerant plants and drip irrigation to reduce water consumption.

The Project must comply with Title 24, Chapter 4 of the California Building Standards Commission for all school buildings and Part 6, of the California Energy Code (CEC) (California Building Standards Commission, 2019). Additionally, the Project must comply with Section 100 of the CEC for information and applications of CEC adoptions. Finally, the Project must comply with the California Code of Regulations (CCR), Title 20 with adoptions of the California Energy Commission (California Building Standards Commission, 2019).

Additional energy saving strategies will be implemented where possible to further reduce the Project's energy consumption, during the construction phase. Strategies being implemented include those recommended by the California Air Resources Board (CARB) that may reduce both the Project's energy consumption, including diesel anti-idling measures, light-duty vehicle technology, usage of alternative fuels such as biodiesel blends and ethanol, and heavy-duty vehicle design measures to reduce energy consumption.

The 2013 update to the City of Dublin Climate Action Plan outlines various state- and community-wide implementation measures aimed at reducing GHG emissions and energy consumption. One such measure applicable to the Project is the "Go Green Initiative," a local recycling and composting program that encourages schools in the city to increase their recycling and composting efforts. The Project would comply with all applicable initiatives of the Climate Action Plan where feasible.

### **MITIGATION MEASURE(S)**

No mitigation is required.

### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.



Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.7 - GEOLOGY AND SOILS

Would the Project:

a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii.	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii.	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv.	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### ***Discussion***

**Impact #3.4.7a(i) – Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?**

The Project would demolish and rebuild the existing Frederiksen Elementary School campus and associated structures. The proposed demolition, construction, and operation of the Project would not increase the potential exposure of persons living and working on the project site to seismic events including risk of loss, injury, and death related to earthquakes and related hazards.

Zones of Required Investigation referred to as "Seismic Hazard Zones" in CCR Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements. Compliance with the 2016 California Building Code (CBC) and the Dublin Municipal Code would maximize safety of Project occupants from geoseismic hazards. The Project site is not within an Alquist-Priolo zone.

In addition, pursuant to the California Educational Code Sections 17212 and 17212.5 construction of school buildings will have to comply with safety standards that prohibit schools to be located on an active earthquake fault or fault trace. The proposed project would comply with the most recent California Building Standards Code which is implemented by the State Architect and provides criteria for the seismic design of buildings.

### ***MITIGATION MEASURE(S)***

No mitigation is required.

### ***LEVEL OF SIGNIFICANCE***

Impact would be *less than significant*.

**Impact #3.4.7a(ii) – Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?**

The Project site is in proximity to several faults that, during a seismic event, would cause seismic ground shaking. Potential seismic ground shaking hazards would be minimized through application of the Dublin General Plan Implementing Policy 8.2.1.B.1, which requires adherence to structural standards delineated in the Dublin Building Code and Dublin's Grading Ordinance based on a "design earthquake" event for each structure for which ground shaking is a significant design factor.

While such shaking would be less severe from an earthquake that originates at a greater distance from the Project site, the effects could potentially be damaging to school buildings and supporting infrastructure. The Project is required to design all school development and associated infrastructure to withstand substantial ground shaking in accordance with applicable State law IBC CBC and Title 5 and Title 24 earthquake construction standards, including those relating to soil characteristics. Adherence to all applicable local and State regulations would avoid any potential impacts to structures resulting from seismic ground shaking at the Project site.

With implementation of these design criteria, the Project would not expose people or structure to adverse risks associated with seismic ground shaking, and this impact would be less than significant.

#### ***MITIGATION MEASURE(S)***

No mitigation is required.

#### ***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.7a(iii) – Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?**

The site is within the Dublin 7.5 Minute Quadrangle and according to the California Geological Survey, the site is within a liquefaction zone. Liquefaction zones are defined as areas where historical occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

In the Dublin Quadrangle, there is one catalogued instance of documented historical liquefaction recorded in association with the 1906 earthquake (Youd, 1978). The incident occurred approximately 3.67 miles to the southeast of the Project site, near the northeast corner of the intersection of Santa Rita Road and State Highway 580 along the east bank of Tassajara Creek. There are no other known instances of liquefaction in the Project vicinity.

The Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure including liquefaction. Structures constructed as part of the project would be required by State law to

be constructed in accordance with all applicable International Building Code (IBC) and California Building Code (CBC) earthquake construction standards, including those relating to soil characteristics. Adherence to all applicable regulations would avoid any potential impacts to structures resulting from liquefaction at the Project site. Therefore, there would be less-than-significant impacts as a result of ground failure and liquefaction.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.7a(iv) – Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?**

The site and surrounding area are flat, with no significant topological features. There is no potential for rock fall and landslides to impact the site in the event of a major earthquake, as the area has no dramatic elevation changes. The distance between the Project site and the more steeply inclined hills to the northeast makes the overall risk of landslide at the Project site low. Based on the topography and soil types, minor subsurface settlement may occur on site during a major earthquake, there is a low potential for landslides, and this is considered less than significant.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.7b – Would the Project result in substantial soil erosion or the loss of topsoil?**

Construction activities associated with the proposed Project would disrupt surface vegetation and soils and would expose these disturbed areas to erosion by wind and water. National Pollutant Discharge Elimination System (NPDES) stormwater permitting programs regulate stormwater quality from construction sites, which includes erosion and sedimentation. Under the NPDES permitting program, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) are required for construction activities that would disturb an area of one acre or more. As noted in Section 3.4.9, *Hydrology and Water Quality*, Impact #3.4.9a., a SWPPP must identify potential sources of erosion or sedimentation that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement best management practices (BMPs) that ensure the reduction of these pollutants during stormwater discharges. Typical BMPs intended to control erosion include sandbags, detention basins, silt fencing, storm drain inlet protection,

street sweeping, and monitoring of water bodies, as required by Mitigation Measure MM GEO-1. Mitigation Measure MM HYD-1 requires the approval of a SWPPP to comply with the NPDES General Construction Permit from the San Francisco Bay Regional Water Quality Control Board (RWQCB).

In the long-term and after construction activities have been completed on the Project site, the ground surface will have impermeable surfaces as well as permeable surfaces. The impermeable surfaces would include roadways, driveways, parking lots, and building sites. The permeable surfaces would include the ball fields and landscape areas which would stabilize the permeable areas. Overall, development of the Project would not result in conditions where substantial surface soils would be exposed to wind and water erosion.

The Project would not result in substantial soil erosion or the loss of topsoil. Impacts would be less than significant with incorporation of mitigation measures.

#### **MITIGATION MEASURE(S)**

**MM GEO-1:** Prior to ground disturbance, an erosion control plan for construction activities shall be prepared that describes the best management practices (BMPs), which shall be incorporated to reduce the potential for soil erosion and loss of topsoil. The BMPs could include soil stabilizers and silt fencing as well as other measures.

Implementation of Mitigation Measure MM HYD-1.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.7c – Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?**

According to the United States Geological Survey (USGS), the soil of the Project site is mainly Sunnyvale clay loam over clay. This soil is formed in alluvium from mixed, but predominantly sedimentary rocks. This is a poorly drained soil with low permeability and slow runoff.

The Project would not change the stability of the existing soil at the Project site. The Project is not expected to result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, the Project would have a less-than-significant impact.

#### **MITIGATION MEASURE(S)**

No mitigation is required.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.7d – Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?**

Based on the type of soils encountered in the top five feet of soil in the Project area, it was determined that it is likely that no significant areas of highly expansive soils would be encountered. The Project would comply with all applicable requirements of the California Department of Education Title 5, California Code of Regulations, and the most recent California Building Standards Code that provides criteria for the appropriate design of buildings. The proposed Project would not be located on any identified expansive soils, as defined in the California Building Code. Therefore, the Project would have a less-than-significant impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.7e – Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?**

The Project would maintain its existing connection to local wastewater infrastructure and would not require the use of septic tanks or other alternative wastewater disposal systems. The Project is not anticipated to substantially increase the volume of disposed wastewater. Therefore, there would be no impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

There would be *no impact*.

**Impact #3.4.7f – Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

There are no known unique paleontological or geologic resources in the Project site or vicinity. Given the lack of known paleontological resources and the limited new disturbance of the Project, the probability of encountering a fossil or other unique resource is low. Implementation of MM GEO-2 would further reduce potential impacts of construction. Therefore, impacts would be less than significant.

### **MITIGATION MEASURE(S)**

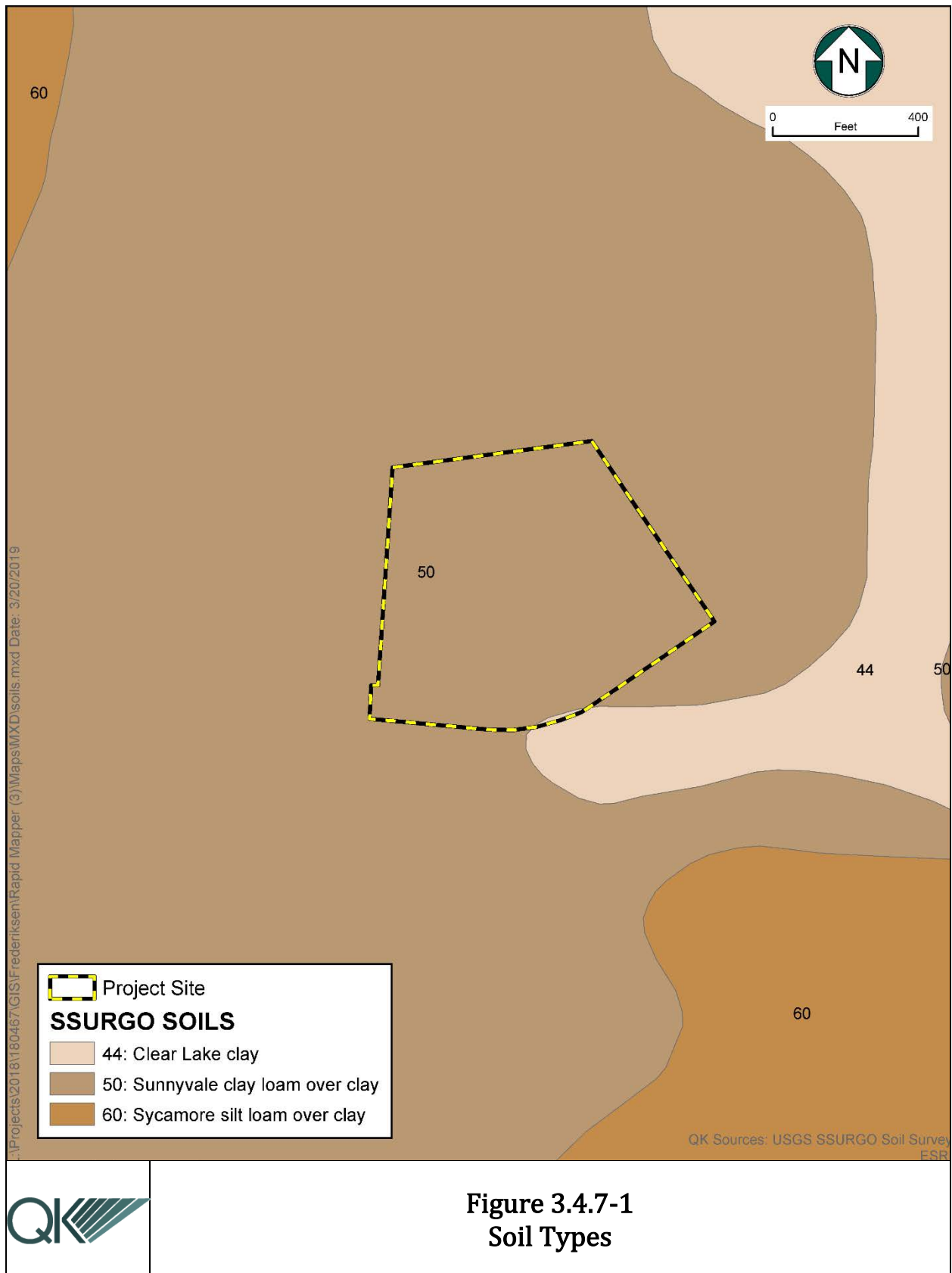
**MM GEO-2:** During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from Project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated.*





Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.8 - GREENHOUSE GAS EMISSIONS

Would the Project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?        | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### Discussion

A CEQA Screening Assessment was relied upon in the analysis of impacts related to greenhouse gases (GHGs) (see Appendix A). This report was prepared in accordance with the BAAQMD's guidelines and adopted policies of CARB.

In addition to providing an assessment of the Project's impacts to GHGs, the report includes a description of the regulatory environment as it relates to GHGs.

GHGs are identified as any gas that absorbs infrared radiation in the atmosphere. GHGs include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), halogenated fluorocarbons (HCFCs), ozone (O<sub>3</sub>), perfluorinated carbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF<sub>6</sub>). On December 7, 2009, the EPA issued an Endangerment Finding on the above referenced key well-mixed GHGs. These GHGs are considered "pollutants" under the Endangerment Finding. However, these findings do not themselves impose any requirements on industry or other entities.

The Global Warming Solutions Act [Assembly Bill (AB) 32] was passed by the California Legislature and signed into law by the Governor in 2006. AB 32 requires that GHGs emissions in 2020 be reduced to 1990 levels. GHGs rules and market mechanisms for emissions reduction were required to be in place as of January 2012.

**Impact #3.4.8a – Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

As shown in Table 3.4.3-1, the Project does exceed the operational greenhouse gas (GHG) capacity of 44,000 square feet. Therefore, the Project would follow Alameda County's Community Climate Action Plan to screen out of the GHG AQIA (Alameda County, 2014). The

Project would include, where feasible, the following components from Alameda County's qualified GHG Reduction Strategy:

- Bicycle storage area to encourage student bicycle transit;
- Integration of bicycle routes within and around school campus;
- Establishment of shade trees or solar panels throughout school campus and on parking lots;
- Maximize traffic efficiency at main traffic and drop-off areas; and
- Construct classrooms and facilities to maximize outdoor lighting and reduce indoor electricity usage.

With the incorporation of the Alameda County Community Climate Action Plan into the Project design, GHG emissions are not expected to be generated to a degree that would result in a significant impact on the environment. Therefore, impacts would be less than significant.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.8b – Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

***Scoping Plan***

Emission reductions in California alone would not be able to stabilize the concentration of GHGs in the earth's atmosphere. However, California's actions set an example and drive progress towards a reduction in GHGs elsewhere. If other states and countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases. Thus, severe consequences of climate change could also be avoided.

The CARB Governing Board approved a Climate Change Scoping Plan (CARB 2008). The Scoping Plan outlines the State's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (CARB 2008).

Project consistency with applicable strategies in the Scoping Plan is assessed in Table 3.4.8-1. As shown, the Project is consistent with the applicable strategies in the Scoping Plan.

**Table 3.4.8-3**  
**Consistency with Applicable Scoping Plan Reduction Measures**

Scoping Plan Reduction Measure	Project Consistency or Reason Why Not Applicable
California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater benefits for California.	Not Applicable. When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Not Applicable. This is a statewide measure that cannot be implemented by a Project applicant or lead agency. When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the Project site.
Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California	Consistent. This is a measure for the State to increase its energy efficiency standards. However, the applicant shall consider implementing Title 24 and Green Building Standards.
Renewable Portfolio Standard. Achieve 33% renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	Not applicable. This is not a renewable energy project.
Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard	Not Applicable. This is a Statewide measure that cannot be implemented by a Project applicant or lead agency. When this measure is initiated, the standard would be applicable to the fuel used by vehicles that would access the Project site.
Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	Not Applicable. The Project is not related to developing GHG emission reduction targets.

Scoping Plan Reduction Measure	Project Consistency or Reason Why Not Applicable
Vehicle Efficiency Measures. Implement light duty vehicle efficiency measures.	Not Applicable. When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the Project site.
Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	Not Applicable. The Project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	Consistent. This measure is being implemented by various agencies throughout California. The applicant shall consider implementing Title 24 and Green Building Standards
Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	Not Applicable. This is a Statewide measure that cannot be implemented by a Project applicant or lead agency. When this measure is initiated, the standards would be applicable to vehicles that access the Project site.
Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	Not Applicable. The Project is not an industrial land use.
High Speed Rail. Support implementation of a high-speed rail system.	Not Applicable. This is a Statewide measure that cannot be implemented by a Project applicant or the County.
Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The State's goal is to increase the use of green building practices. The Project would implement some green building strategies through Project design features.
High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	Not Applicable. When this measure is initiated, it would be applicable to those gases that have high global warming potential that would be used by the Project

Scoping Plan Reduction Measure	Project Consistency or Reason Why Not Applicable
	(such as in air conditioning and refrigerators).
Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Not applicable. The Project would not contain a landfill.
Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	Not Applicable. No forested lands exist onsite.
Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. This is a measure for state and local agencies. The Project would implement water conservation features in its BMPs.
Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	Not Applicable. The proposed Project would not include agriculture.

Source: California Air Resources Board 2008.

In summary, the Project would not obstruct attainment of any of the goals established under AB 32. The Project would comply with all present and future regulatory measures developed in accordance with AB 32 and CARB's Scoping Plan. The proposed Project would incorporate a number of design features that would minimize GHG emissions beyond existing regulatory requirements. Such measures also are consistent with the California Air Pollution Control Officers Association paper and general guidance provided by the BAAQMD.

With the incorporation of standard measures, Project design features, mitigation measures and applicable laws, the Project's forecasted emission of greenhouse gases has been determined to be less than significant.

#### **MITIGATION MEASURE(S)**

No mitigation is required.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
<b>3.4.9 - HAZARDS AND HAZARDOUS MATERIALS</b>				
Would the Project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## ***Discussion***

### **Impact #3.4.9a – Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

The building and operation of the proposed school would not involve the transport, use, and storage of large quantities of hazardous materials. Although, construction of the site would involve the transport and use of minor quantities of hazardous materials, such materials would be limited to fuels, oils, lubricants, hydraulic fluids, paints and solvents utilized at the Project site for construction purposes. Moreover, use of such materials would be temporary in nature and would cease upon completion of the Project. However, minor amounts of custodial chemicals would be used on site for cleaning supplies. The presence of such materials could present risk if not managed properly.

The presence and use of these materials, which can be classified as hazardous materials, create the potential for accidental spillage and exposure of workers to these substances. The District has procedures in place for the transport, use, and storage of hazardous materials which comply with the California Department of Education Title 5, California Code of Regulations. Hazardous and non-hazardous wastes would likely be transported to and from the Project site during the construction phase of the proposed Project. Construction would involve the use of some hazardous materials, such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products, although these materials are commonly used during construction activities and would not be disposed of on the Project site. Any hazardous waste or debris that is generated during construction of the proposed Project would be collected and transported away from the site and disposed of at an approved offsite landfill or other such facility. In addition, sanitary waste generated during construction would be managed through the use of portable toilets, which would be located at reasonably accessible onsite locations. Hazardous materials such as paint, bleach, water treatment chemicals, gasoline, oil, etc., may be used at the proposed school. These materials are stored in appropriate storage locations and containers in the manner specified by the manufacturer and disposed of in accordance with local, federal, and State regulations. Additionally, and in accordance with applicable federal and State Health and Safety Codes, and Alameda County regulations, the Project proponent would be required to prepare and submit an updated hazardous materials business plan to include the school site (Mitigation Measure MM HAZ-1) to the Alameda County Environmental Health Department. Therefore, with implementation of Mitigation Measure MM HAZ-1, no significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste during construction or operation of the Project would occur.

No known historic oil activity has occurred on the site. The Project is not located within the boundaries of an oilfield. According to the Division of Oil, Gas and Geothermal Resources (DOGGR) records and maps, no abandoned oil wells are located on the site, and the nearest well is over three miles to the northwest of the site (see Figure 3.4.9-1).



With mitigation, the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Therefore, the Project would have a less-than-significant impact with mitigation incorporated.

Based on analysis above, Mitigation Measure MM HAZ-1 have been proposed to mitigate potential impacts. With this mitigation, the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials nor 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. Therefore, impacts would be less than significant with implementation of mitigation measures.

#### **MITIGATION MEASURE(S)**

**MM HAZ-1:** Prior to operation of the Project, the Project proponent shall update its existing Hazardous Materials Business Plan that identifies the new construction at the elementary school campus and submit it to the Alameda County Environmental Health Services Department for review and approval. The Project proponent shall provide the hazardous materials business plan to all contractors working on the Project and shall ensure that one copy is available at the Project site at all times.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.9b – Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

See Impact 3.4.9a, above.

#### **MITIGATION MEASURE(S)**

Implementation of Mitigation Measure MM HAZ-1.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.9c – Would the Project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

See Impact 3.4.9a, above.

### **MITIGATION MEASURE(S)**

Implementation of Mitigation Measure MM HAZ-1.

### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.9d – Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

An on-line search was conducted of the California Environmental Protection Agency (CAL EPA) website for Cortese Act locations on or near the Project site. The Department of Toxic Substances Control (DTSC) website indicated that there are no hazardous or toxic sites within one mile of the Project site (Department of Toxic Substances Control, 2019). The State Water Resources Control Board website indicated that there are no Permitted Underground Storage Tanks or Leaking Underground Storage Tanks on or in the vicinity (within one mile) of the Project site (California Water Resources Board, n.d.).

The Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. The Project site is not within the immediate vicinity of a hazardous materials site and would not impact a listed site. Literature review of available federal, State, and local database information systems was performed for the purpose of identifying known recognized environmental conditions present on the site and the nearby properties that have the potential to adversely impact the site. There is no data identifying any facilities within one-quarter mile of the site that might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials, substances, or wastes that might affect the proposed school site. Therefore, the Project would have no impact.

### **MITIGATION MEASURE(S)**

No mitigation is required.

### **LEVEL OF SIGNIFICANCE**

There would be *no impact*.

**Impact #3.4.9e – For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for excessive noise or people residing or working in the Project area?**

The nearest airport to the Project site is Livermore Municipal Airport, approximately 5.75 miles to the southeast of the Project site. The site is not located within an airport land use

plan. Therefore, the Project would not present a hazard to people working or living in the Project area and there would have no impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.9f – Would the Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?**

The proposed Project is required to adhere to the standards set forth in the Uniform Fire Code, which identifies the design standards for emergency access during both the Project's construction and operational phases. The proposed Project would not inhibit the ability of local roadways to continue to accommodate emergency response and evacuation activities.

The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, the Project would have a less-than-significant impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.9g – Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?**

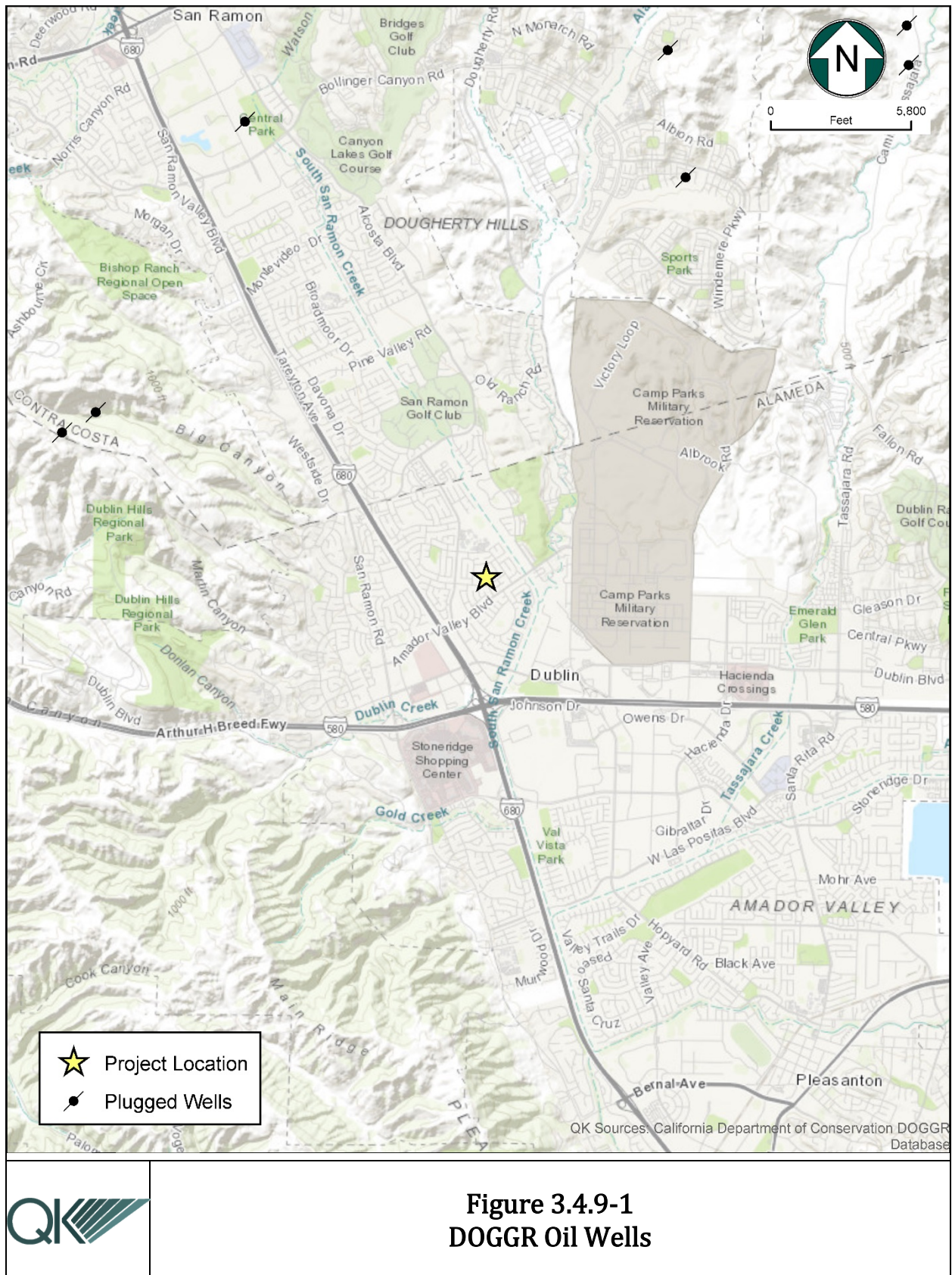
The Project vicinity is characteristic as being an urbanized and highly developed area. There are currently trees along the Project boundary, but the Project is not anticipated to directly or indirectly expose people to risk involving wildland fires. The Project site is not located within a hazard zone classified as Very High, High or Moderate for wildland fires (Cal Fire, 2006). Construction and operation of the Project is not expected to increase the risk of wildfires on and adjacent to the Project site. The Project will also be required to comply with all applicable standards as required by the State Fire Marshall, CDE Title 5 and Title 24 regulations, as well as local fire codes. Therefore, there would be no impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.10 - HYDROLOGY AND WATER QUALITY

Would the Project:

- |      |  |                          |                                     |                                     |                          |
|------|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a.   | Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b.   | Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?                                 | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c.   | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: |                          |                                     |                                     |                          |
| i.   | Result in substantial erosion or siltation on-or offsite;  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| ii.  | Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 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                              | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| iv.  | Impede or redirect flood flows?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d.   | In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ☐ ☐ ☒ ☐

### ***Discussion***

#### **Impact #3.4.10a – Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

Construction of the Project would involve excavation, soil stockpiling, mass and fine grading, the installation of supporting drainage facilities, and associated infrastructure. During site grading and construction activities, areas of bare soil could be exposed to erosive forces for extended periods of time. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters.

Additionally, accidental spills or disposal of potentially harmful materials used during construction could possibly wash into and pollute surface water runoff. Materials that could potentially contaminate the construction area, or spill or leak, include lead-based paint flakes, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. A SWPPP for construction-related activities would include, but not be limited to, the following types of BMPs to minimize the potential for pollution related to material spills:

- Vehicles and equipment will be cleaned;
- Vehicle and equipment fueling, and maintenance requirements will be established; and
- A spill containment and clean-up plan will be in place prior to and during construction activities.

In order to reduce potential impacts to water quality during construction activities, Mitigation Measure MM HYD-1 requires the Project proponent to file a Notice of Intent (NOI) to comply with the NPDES General Construction Permit and prepare a SWPPP. The Project SWPPP would include BMPs targeted at minimizing and controlling construction and post-construction runoff and erosion to the “maximum extent practicable.” Mitigation Measure MM HYD-2 requires the District to limit grading to the minimum area necessary for construction and operation of the Project. Additionally, as noted in Section 3.4.8, *Hazards and Hazardous Materials*, Mitigation Measure MM HAZ-1 requires that all hazardous wastes be stored and properly managed in accordance with the approved Alameda County Environmental Health Services Department Hazardous Materials Business Plan.

In order to reduce potential impacts to water quality during construction and operation activities, Mitigation Measures MM HAZ-1 as well as MM HYD-1 and MM HYD-2 would be required. With mitigation, the proposed Project would not violate any water quality standards or waste discharge requirements. Therefore, the Project would have a less-than-significant impact with incorporation of mitigation.

### **MITIGATION MEASURE(S)**

**MM HYD-1:** Prior to construction, the District shall submit an approved copy of: 1) the approved Storm Water Pollution Prevention Plan (SWPPP) and 2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the Bay Area Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

**MM HYD-2:** The District shall limit grading to the minimum area necessary for construction and operation of the Project. Final grading plans shall include best management practices to limit onsite and offsite erosion.

Implementation of MM HAZ-1.

### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with incorporation of mitigation.*

**Impact #3.4.10b – Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?**

The water purveyor for the project area will be Dublin San Ramon Services District, which acquires its water supply from the California Water Project, locally-collected rainwater at Del Valle Reservoir, and groundwater of local wells. The 2016 Urban Water Management Plan (UWMP) prepared by Dublin San Ramon Services District (California Water Service, 2016) concludes that additional potable water pump and storage infrastructure is required to adequately serve 2020 and 2035 projected demand. However, the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Therefore, the project would have a less-than-significant impact.

### **MITIGATION MEASURE(S)**

Implementation of MM HAZ-1, MM HYD-1, and MM HYD-2.

### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated.*



**Impact #3.4.10c(i) – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on site or off site?**

The rate and amount of surface runoff is determined by multiple factors, including the following: topography, the amount and intensity of precipitation, the amount of evaporation that occurs in the watershed and the amount of precipitation and water that infiltrates to the groundwater. The placement of permanent structures onsite could affect drainage in the long-term. Impacts from construction and operation are discussed below.

As discussed in Impact #3.4.9a. above, potential impacts on water quality arising from erosion and sedimentation are expected to be localized and temporary during construction. Construction-related erosion and sedimentation impacts as a result of soil disturbance would be less than significant after implementation of an SWPPP (see Mitigation Measure MM HYD-1) and BMPs required by the NPDES. The nearest watercourse is Coyote Creek, approximately 0.25 miles northeast of the Project site. No impacts to Coyote Creek are anticipated as a result of the Project. No drainages or other water bodies are present on the Project site, and therefore, the proposed Project would not change the course of any such drainages; however, erosion may occur onsite during rain events or high winds. Mitigation Measure MM HYD-2 requires the District to limit grading to the minimum area necessary for construction and operation of the Project. Additionally, as noted in Section 3.4.8, *Hazards and Hazardous Materials*, Mitigation Measure MM HAZ-1 requires that all hazardous wastes be stored and properly managed in accordance with applicable regulations and hazardous materials business plan.

With mitigation, 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, in a manner that would result in substantial erosion or siltation on- or offsite. Therefore, the Project would have a less-than-significant impact with incorporation of mitigation.

#### **MITIGATION MEASURE(S)**

Implementation of MM HAZ-1, MM HYD-1, and MM HYD-2.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.10c(ii) – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?**

During construction, the Project would demolish and replace structures of Frederiksen Elementary School and expand the existing parking lot to serve the student and staff

population. Mitigation Measures MM HAZ-1 would require the Project proponent to prepare and implement a Hazardous Materials Business Plan, which would minimize this impact by ensuring safe handling of hazardous materials on site and providing for cleanup in the event of an accidental release. MM HYD-1 and MM HYD-2 requires the development of a SWPPP and the use of BMPs and limit the amount of grading where feasible to reduce impacts to water quality during construction and operation activities, respectively. With implementation of these measures, as well as compliance with all applicable State and City codes and regulations to maintain stormwater on site, the potential for surface runoff to result in on- or offsite flooding is less than significant.

The Project would not substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial drainage patterns or cause substantial surface runoff that would result in flooding on- or offsite, therefore, the Project would have a less-than-significant impact with the incorporation of mitigation.

#### ***MITIGATION MEASURE(S)***

Implementation of Mitigation Measures MM HAZ-1, MM HYD-1 and MM HYD-2.

#### ***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.10c(iii) – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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?**

The rate and amount of surface runoff is determined by multiple factors, including the following: topography, the amount and intensity of precipitation, the amount of evaporation that occurs in the watershed and the amount of precipitation and water that infiltrates to the groundwater. The proposed Project would alter the existing drainage pattern of the site, which would have the potential to result in erosion, siltation, or flooding on- or offsite. The disturbance of soils onsite during construction could cause erosion, resulting in temporary construction impacts. In addition, the placement of permanent structures onsite could affect drainage in the long-term. Impacts from construction and operation are discussed below.

As discussed in Impact #3.4.9a. above, potential impacts on water quality arising from erosion and sedimentation are expected to be localized and temporary during construction. Construction-related erosion and sedimentation impacts as a result of soil disturbance would be less than significant after implementation of an SWPPP (see Mitigation Measure MM HYD-1) and BMPs required by the NPDES. No drainages or other water bodies are present on the Project site, and therefore, the proposed Project would not change the course of any such drainages; however, erosion may occur onsite during rain events or high winds.

Mitigation Measure MM HYD-2 requires the District to limit grading to the minimum area necessary for construction and operation of the Project. Additionally, as noted in Section 3.4.8, *Hazards and Hazardous Materials*, Mitigation Measure MM HAZ-1 requires that the District's hazardous materials business plan must be updated to reflect the proposed improvements to the school and that all hazardous wastes be stored in accordance with all applicable regulations.

With mitigation, 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, in a manner that would result in substantial erosion or siltation on- or offsite. Therefore, the Project would have a less-than-significant impact with incorporation of mitigation.

#### **MITIGATION MEASURE(S)**

Implementation of MM HAZ-1, MM HYD-1, and MM HYD-2.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

**Impact #3.4.10c(iv) – Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would impede or redirect flood flows?**

As discussed above Impact #3.4.10 a through c (iii), construction and operations activities could potentially degrade water quality through the occurrence of erosion or siltation at the Project site. Additionally, accidental release of potentially harmful materials, such as engine oil, diesel fuel, or other substances used in operation of the facilities, could potentially degrade water quality onsite. Construction of the Project would include soil-disturbing activities that could result in erosion and siltation, as well as the use of harmful and potentially hazardous materials required to operate vehicles and equipment. The transport of disturbed soils or the accidental release of potentially hazardous materials could result in water quality degradation.

The District would be required to request coverage under the NPDES Construction General Permit. Construction-related erosion and sedimentation impacts as a result of soil disturbance would be less than significant after implementation of an SWPPP (Mitigation Measure MM HYD-1) and BMPs required by the NPDES. Mitigation Measure MM HYD-2 requires the District to limit grading to the minimum area necessary for construction and operation of the Project. Additionally, as noted in Section 3.4.8, *Hazards and Hazardous Materials*, Mitigation Measure MM HAZ-1 requires that the District's hazardous materials business plan must be updated to reflect the proposed improvements to the school and that all hazardous wastes be stored in accordance with all applicable regulations. With implementation of the recommended measures, the Project would not impede or redirect flood flows, and impacts would be less than significant.

#### **MITIGATION MEASURE(S)**

Implementation of MM HAZ-1, MM HYD-1, and MM HYD-2.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated*.

#### **Impact #3.4.10d – Would the Project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

The Project site is not located near the ocean or a steep topographic feature (i.e., mountain, hill, bluff, etc.). Therefore, there is no potential for the site to be inundated by tsunami or mudflow. Additionally, there is no body of water within the vicinity of the Project site. There is no potential for inundation of the Project site by seiche.

As shown by flood maps provided by the Federal Emergency Management Agency (FEMA), the school property is not located within a 100-year flood zone (see Figure 3.4.9-1). The proposed Project site is located within a FEMA Flood Hazard Zone labeled “X: Area of Minimal Flood Hazard.” FEMA defines “Area of Minimal Flood Hazard”, as “usually depicted on FIRMs as above the 500-year flood zone...Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.” Therefore, the potential for flooding at the site would appear to be very low. Therefore, the Project will have a less-than-significant impact.

#### **MITIGATION MEASURE(S)**

No mitigation is required.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

#### **Impact #3.4.10e – Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

Dublin San Ramon Services District (DSRSD) has prepared the 2015 Urban Water Management Plan (USMP) that outlines goals and policies related to local water quality and supply management. The proposed Project would not conflict with the 2015 USMP prepared by DSRSD. The Zone 7 Water Agency has prepared an alternate Groundwater Sustainability Plan (GSP) for the Livermore Valley basin. The proposed Project would not conflict with policies or standards outlined in this alternate GSP.

#### **MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.





Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.11 - LAND USE AND PLANNING

Would the Project:

- |    |   |                          |                          |                          |                                     |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. | Physically divide an established community?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. | Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### **Discussion**

#### **Impact #3.4.11a – Would the Project physically divide an established community?**

The Project is the demolition, replacement, and construction of Frederiksen Elementary School in Dublin, California. The school is located in a residential neighborhood. The Project would not physically divide an established community due to the Project's maintained use as a school site. Therefore, there would be no impact.

#### **MITIGATION MEASURE(S)**

No mitigation is required.

#### **LEVEL OF SIGNIFICANCE**

There would be *no impact*.

#### **Impact #3.4.11b – Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

The Project is within the City of Dublin General Plan, which designates the project site as R-I (Single Family Residential) (Figure 3.4.10-1). The Project is not anticipated to result in substantial direct or indirect population growth that was not previously anticipated by the Dublin General Plan. The proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted

for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project would have no impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

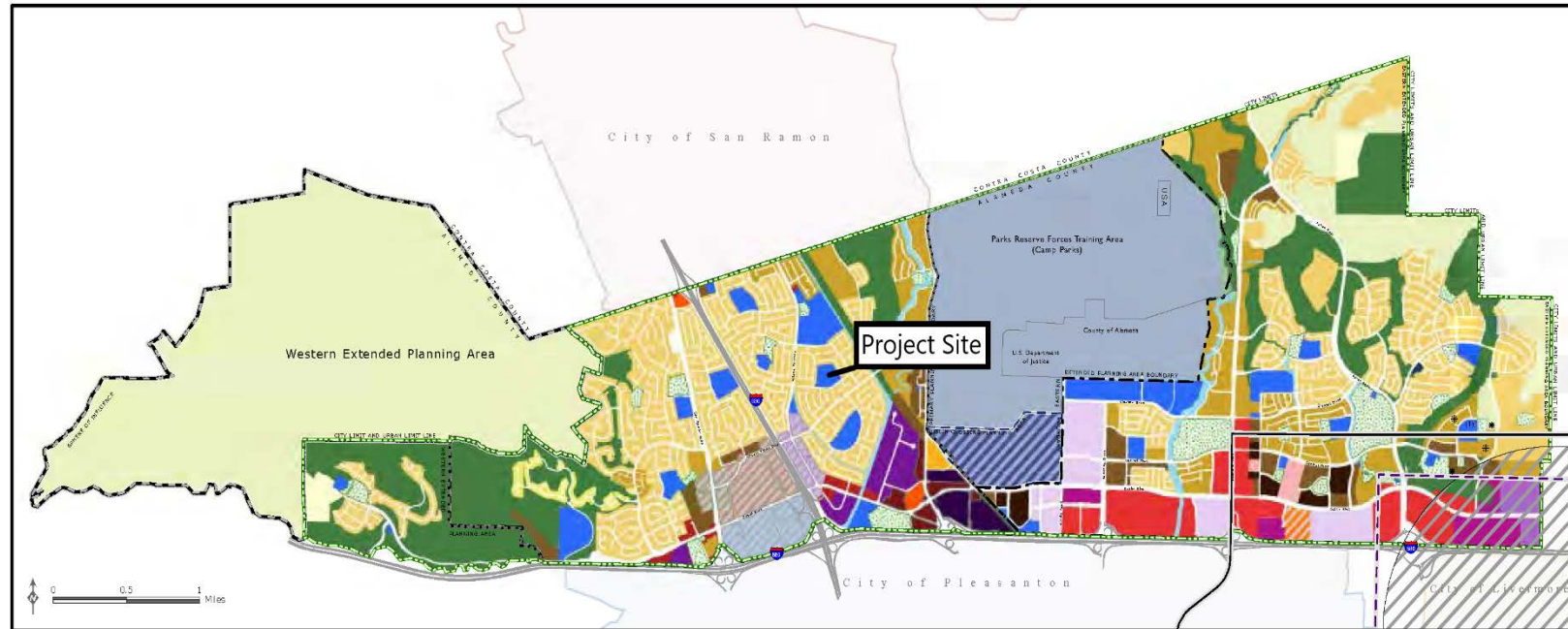
There would be *no impact*.





# DUBLIN GENERAL PLAN LAND USE

October 6, 2015



## Public/Semi-Public/Open Space

- Regional Park
- Parks/Public Recreation
- Open Space
- Stream Corridor
- Public Lands
- Public / Semi-Public
- Semi-Public

## Commercial/Industrial

- General Commercial
- Retail Office
- Retail Office and Automobile
- Neighborhood Commercial
- General Commercial/Campus Office
- Campus Office
- Industrial Park
- Business Park/Industrial
- Business Park/Industrial and Outdoor Storage
- Mixed Use
- Mixed Use 2/Campus Office
- Medium/High-Density Residential and Retail Office

## Specific Plan Districts

- Downtown Dublin - Village Parkway District
- Downtown Dublin - Transit-Oriented District
- Downtown Dublin - Retail District
- Dublin Crossing

## Residential

- Rural Residential/Agriculture (1 Unit per 100 Gross Residential Acres)
- Estate Residential (0.01 - 0.8 du/ac)
- Low-Density Single Family (0.5 - 3.8 du/ac)
- Single Family Residential (0.9 - 6.0 du/ac)
- Medium-Density Residential (6.1 - 14.0 du/ac)
- Medium/High-Density Residential (14.1 - 25.0 du/ac)
- High-Density Residential (25.1+ du/ac)

## Airport Influence Area (AIA)/Overlay Zoning District

- Airport Protection Area (APA)
- Airport Safety Zone 6
- Western Extended Planning Area Boundary
- Primary Planning Area Boundary
- Eastern Extended Planning Area Boundary
- Dublin Crossing Planning Area Boundary

## City of Dublin

- Sphere of Influence
- City of Livermore
- City of Pleasanton
- City of San Ramon

\* The location of Semi-Public sites on the Chiles and Chiles properties of Fallon Village will be determined at the time of the Stage 2 Development Plan approval. The prospective size of the sites will be 2.5 acre, and 2.0 acre on the Chiles and Chiles Properties.

\* 50% of the units within the Medium-Density land use designation on the Chiles and Fallon properties shall have private, the space.

General Plan Land Use Map should be used in combination with the General Plan and applicable Specific Plans that contain policies and development standards for specific planning areas.

While the General Plan Land Use Map shows existing development and layout, only the land use designations for the land on which such development exists are part of the General Plan.

(1) Underlying Land Use - Medium Density Residential. 100 new residential project approved on this site. (CED: 09-10 and RESO: 066-15)



**Figure 3.4.11-1**  
**Dublin General Plan Land Use Designations**



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.12 - MINERAL RESOURCES

Would the Project:

- |    |   |                          |                          |                          |                                     |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. | 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?                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. | Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### ***Discussion***

**Impact #3.4.12a – Would the Project 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?**

No current mineral extraction activities exist on the Project site nor are any mineral extraction activities included in the Project design. As illustrated in Figure 3.4.9-1, the Project site is not located in an a DOGGR identified oilfield and there are no known wells located on the site. The closest oil well is located over three miles to the west of the project site. The proposed project would not result in the loss of availability of mineral resources as the project does not propose the extraction of mineral resources. Additionally, the proposed project would not restrict the ability of mineral rights' holders, in the area, to exercise their legal rights to access surrounding sites for the exploration and/or extraction of underlying oil research or other natural resources.

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. Therefore, there would be no impact.

#### ***MITIGATION MEASURE(S)***

No mitigation is required.

#### ***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

**Impact #3.4.12b – Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

As discussed in Section 3.4.11, *Land Use and Planning*, the proposed Project is not designated as a mineral recovery area by the General Plan. The Project would not alter any existing plans that protect mineral resources. As a result, the proposed Project would not interfere with mining operations and would not result in the loss of land designated for mineral and petroleum.

The proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, the project would have no impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.13 - NOISE

Would the Project result in:

- |    |  |                          |                                     |                                     |                          |
|----|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a. | Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b. | Generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. | For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### Discussion

**Impact #3.4.13a – Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

The Dublin General Plan outlines an exposure standard of 60 or less decibels (dB) for schools, churches, and nursing homes. When the school is constructed, traffic on local roadways would be expected to increase. School-related activities could also result in an increase in ambient noise levels in the immediate project vicinity. Activities that could be expected to generate noise include voices from students and staff, bell or alarm systems, bus movements and mechanical systems related to heating, ventilation, and air conditioning (HVAC) systems on school buildings. Additionally, nearby existing sensitive uses could be affected by noise and vibration during the construction of the project.

As with the current school activities, noise levels would be intermittent and mostly occur during periods when students are arriving at school in the morning or leaving school in the afternoon, and during periods of recess or physical education classes on the play fields. The noise levels generated by such activities would occasionally be audible in the existing residential areas to the southeast of the new school but would not exceed the City's 60 dB CNEL standard. It is noted that student gathering and play areas are located near the center

of the campus at distances which range from approximately 75 feet to 300 feet from the homes abutting the campus. School bells or alarms would also be audible by the closest residence but would not generate noise levels in excess of applicable noise standards.

The closest school buildings would be at least 100 feet from the nearest homes located to the west of the school site. School buildings would have ground- or roof-mounted HVAC equipment that would generate noise. Details on the number, size and placement of such units were not available for analysis. However, based upon data from similar projects, it is estimated that hourly values from the continuous operation of HVAC systems could be less than 40 dB at the closest noise-sensitive receivers. Even if it is assumed that HVAC systems could operate continuously, 24 hours per day, HVAC system noise would not approach or exceed the City's 60 dB CNEL standard at the closest residential uses. As indicated in the foregoing discussion of the project's noise impacts, because the Project would generate noise levels below standards established in the Dublin General Plan, and applicable standards of other agencies, its permanent increase in ambient noise levels in the project vicinity and temporary or periodic increases in ambient noise levels in the project vicinity would not be considered substantial.

Construction of the proposed project would include grading, truck traffic and the various noises generally associated with construction activities. There are a few residences to the east of the project site across Burnham Way which could be affected by noise from construction of the project. All other residences or sensitive receptors are located at distances sufficient to attenuate noise to acceptable levels. Implementation of the following mitigation measures will reduce temporary noise impacts from construction of the project to levels considered less than significant.

#### **MITIGATION MEASURE(S)**

**MM NSE-1:** During construction, the contractor shall implement the following measures:

- All stationary construction equipment on the Project site shall be located so that noise emitting objects or equipment faces away from any potential sensitive receptors.
- The construction contractor shall ensure that all construction equipment is equipped with manufacturer-approved mufflers and baffles during construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Construction activities shall comply with the noise standards specified in the City Municipal Code Section 5.28.020.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation*.

### **Impact #3.4.13b – Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?**

Construction activities in general can have the potential to create groundborne vibrations. However, based on the soil types found in the general project vicinity, it is unlikely that any blasting or pile-driving would be required in connection with construction of the school. Therefore, the potential for groundborne vibrations to occur as part of the construction of the Project is considered minimal.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations (Federal Highway Administration (FHWA), U.S. Department of Transportation, 2017). In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 inch/second) appears to be conservative even for sustained pile driving. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The typical vibration produced by construction equipment is illustrated in Table 3.4.13-1.

**Table 3.4.13-1  
Typical Vibration Levels for Construction Equipment**

<b>Equipment</b>	<b>Reference peak particle velocity at 25 feet (inches/second)<sup>1</sup></b>	<b>Approximate peak particle velocity at 100 feet (inches/second)<sup>2</sup></b>
Large bulldozer	0.089	0.011
Loaded trucks	0.076	0.010
Small bulldozer	0.003	0.0004
Jackhammer	0.035	0.004
Vibratory compactor/roller	0.210	0.026

Notes:

1 – Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006. Table 12-2.

2 – Calculated using the following formula:

$$PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$$

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA Transit Noise and Vibration Impact Assessment Guidelines  
D = the distance from the equipment to the receiver

As indicated in Table 3.4.13-1, based on the FTA data, vibration velocities from typical heavy construction equipment that would be used during Project construction range from 0.003 to 0.644 inch-per-second peak particle velocity (PPV) at 25 feet from the source of activity. With regard to the proposed project, ground-borne vibration would be generated during site clearing and grading activities onsite facilitated by implementation of the proposed project. As demonstrated in Table 3.4-13-1, vibration levels at 100 feet would range from 0.0004 to

0.026 PPV. Therefore, the anticipated vibration levels would not exceed the 0.2 inch-per-second PPV significance threshold during construction operations at the nearest receptors, which are 200 feet to the south. It should be noted that 0.2 inch-per-second PPV is a conservative threshold, as that is the construction vibration damage criteria for non-engineered timber and masonry buildings. Buildings within the Project area would be better represented by the 0.5 inch-per-second PPV significance threshold (construction vibration damage criteria for a reinforced concrete, steel or timber buildings) (Kern County Planning Department, 2013). Therefore, vibration impacts associated with construction are anticipated to be less than significant.

### ***Operations***

Further, operation of the school would not include any activities that would create groundborne vibrations. The proposed Project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Therefore, the Project would have a less-than-significant impact.

### ***MITIGATION MEASURE(S)***

No mitigation is required.

### ***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.13c – For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?**

The nearest airport to the Project site is Livermore Municipal Airport (LVK) is 5.75 miles away. LVK is a General Aviation Reliever Airport that serves private, business and corporate tenants and customers (Federal Aviation Administration, 2019). LVK serves primarily the Tri-Valley region with a population of over 300,000 residents. Most of the Airport's 460 tenants are Livermore and Pleasanton residents.

In the spring and fall of 2008, Brown-Buntin Associates, Inc. (BBA) performed a LVK noise study and prepared a report, which concluded that – “the 60 dBA Community Noise Equivalent Level (CNEL) contour has not reached residential areas in Livermore as anticipated in past projections. Thus, neither Livermore nor Pleasanton community noise standards were violated.” Furthermore, LVK is approximately 5.75 miles to the southeast of the Project site. Therefore, the Project would not expose people in the area to excessive noise levels due to airport activity. Therefore, there would be no impact.

### ***MITIGATION MEASURE(S)***

No mitigation is required.



***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.14 - POPULATION AND HOUSING

Would the Project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a. Induce substantial population unplanned growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### Discussion

**Impact #3.4.14a – Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

The proposed Project does not include the construction of homes or businesses. The Project would support the goals of the Dublin General Plan related to the provision and renovation of public schools as needed in order to serve the future population of DUSD.

The proposed Project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Therefore, impacts of the project would be less than significant.

### MITIGATION MEASURE(S)

No mitigation is required.

### LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

**Impact #3.4.14b – Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

The proposed Project does not propose to displace any existing housing or people in the Project area nor would implementation of the Project require construction or replacement of housing.

In addition, it is anticipated that construction workers would come from the surrounding area and would not require new housing. The proposed Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the project would have no impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

There would be *no impact*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.15 - PUBLIC SERVICES

Would the Project:

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

i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion

The proposed project would have to comply with the California Department of Education Title 5, California Code of Regulations Section 14001, which requires that all schools are designed to meet federal, State, and local statutory requirements for structure, fire, and public safety, and be conveniently located for public services including but not limited to fire protection, police protection, public transit and trash disposal whenever feasible.

The Project is not anticipated to directly or indirectly require the employment of additional fire fighters or law enforcement officers. The Project does not significantly increase the student and staff capacity, so it is anticipated that existing and future public facilities and equipment would be able to maintain the current level of service. No other public services would be significantly affected by the project.

**Impact #3.4.15a(i) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause**

**significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services - Fire Protection?**

Alameda County Fire Department Station 15 would provide fire suppression and emergency medical services at the Project site. Station 15 is located less than two miles to the southeast of the Project site on Madigan Road.

The existing water supply system will be capable of supplying required fire flow for fire protection purposes for all portions of the school campus where buildings are located. The Project will maintain compliance with gallons-per-minute requirements for fire flow based on the Guide for Determination of Required Fire Flow, published by the State Insurance Service Office and County of Alameda's adopted Fire Code.

The District would install any required infrastructure to meet standards for municipal fire protection services. These design standards coupled with existing fire protection infrastructure would provide for proper fire suppression services on site. Further, by meeting these standards and incorporating needed design features in the project design, no additional fire protection services would be required.

As discussed above, existing fire services are anticipated to be sufficient to serve the Project. Therefore, the project would not increase the need for such services beyond the baseline condition.

#### ***MITIGATION MEASURE(S)***

No mitigation is required.

#### ***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.15a(ii) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Police Protection?**

Police services for the City of Dublin are performed under contract with Alameda County Sheriff's Office. The local police department is located at 100 Civic Plaza in Dublin, California. This location manages patrols, criminal investigations, crime prevention, and some business office functions. Dispatch and some data processing functions are handled at Sheriff's Office facilities in Oakland and San Leandro.

The Project does not substantially increase student or staff population, therefore additional police protection is not anticipated as a result of the Project.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*

**Impact #3.4.15a(iii) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Schools?**

The Project is the demolition, replacement, and construction of Frederiksen Elementary School. The school will remain open to students during reconstruction activities and is not anticipated to require additional school construction elsewhere. Therefore, there would be no impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

There would be *no impact*.

**Impact #3.4.15a(iv) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Parks?**

The Project includes the construction of recreation/athletic areas that will serve the student population. The City of Dublin Parks and Community Services Department operates community parks throughout the city. The 2015 Parks and Recreation Master Plan outlines goals and policies for the future development of parks in the City of Dublin. The Project assists the implementation of this Master Plan by providing additional and improved recreational facilities for students and other community members. Therefore, impacts would be less than significant.

**MITIGATION MEASURE(S)**

No mitigation is required.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

**Impact #3.4.15a(v) – Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services – Other Public Facilities?**

The Project would not induce the appreciable use of other public facilities such as libraries, courts, and other Alameda County or City of Dublin public services.

The proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause a significant environmental impact, in order to maintain acceptable service ratios for any of the public services. Therefore, the project would have a less-than-significant impact.

#### **MITIGATION MEASURE(S)**

No mitigation is required.

#### **LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.16 - RECREATION

Would the Project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?                        | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### Discussion

**Impact #3.4.16a – Would the Project Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

See discussion of Impact #3.4.15a(iv), above. The proposed Project would not increase the use of existing neighborhood and regional parks. Existing parks would not be affected by the project because onsite recreational space would be provided within the school campus. 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 or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Therefore, the project would have a less-than-significant impact.

### MITIGATION MEASURE(S)

No mitigation is required.

### LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

**Impact #3.4.16b – Would the Project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

See Impact #3.4.16a, above.



**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.17 - TRANSPORTATION

Would the Project:

a.	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision b?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion

A Traffic Study was prepared for this project (TJKM, 2019) found in Appendix D. The Traffic Study was prepared using trip generation and design hour volumes calculated using the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition as well as data provided in the project description.

The following traffic scenarios were analyzed in the Traffic Study:

- Existing (2019)
- Existing plus Project (2021)

**Impact #3.4.17a – Would the Project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

TJKM evaluated traffic conditions at six study intersections during the a.m. and midday peak hours of a typical weekday. The peak period observed was between 7:00 a.m. - 9:00 a.m. and 1:00 p.m. – 3:00 p.m. The highest single one-hour period recorded for the peak period is used in the analysis. The six study intersections listed below along with Mansfield Avenue driveway were evaluated during the weekday a.m. and midday peak hour under two study scenarios.

- Tamarack Drive and Frederiksen Parking Lot East Driveway
- Tamarack Drive and Frederiksen Parking Lot West Driveway
- Tamarack Drive and Burton Street
- Tamarack Drive and Burnham Way
- Tamarack Drive and Brighton Drive
- Tamarack Drive and Village Parkway

The study intersections are located within City of Dublin jurisdiction. Impacts to City of Dublin intersections could be considered significant if the Project would result in any of the following:

- The project conflicts with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. A significant impact could be identified:
  - If a signalized intersection is projected to operate within motor vehicle delay ranges associated with LOS D or better (average control delay equal to or less than 55 seconds per vehicle) without the project and the project is expected to cause the facility to operate at a LOS E or F;
  - If at a study, signalized intersection where the motor vehicle level of service is E, the project would cause an increase in the average delay for any of the critical movements of six seconds or more;
  - If at a study, signalized intersection where the motor vehicle level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more; or
  - If the operations of an unsignalized study intersection is projected to decline with the addition of project traffic, and if the installation of a traffic signal based on the Manual on Uniform Traffic Control Devices (MUTCD) Peak Hour Signal Warrant (Warrant 3) would be warranted.

For intersections that meet the above criteria, capacity enhancing measures that do not degrade other modes of travel will be considered, including upgrading or installing signal equipment, extending left-turn pocket storage, providing non-motorized facilities to reduce vehicular demand, enhancing capacity on a parallel route and/or enhancing transit access to a site. The determination of a significant impact and the appropriate mitigation measure will consider the City's Complete Streets policy.

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 decrease 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.

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; or
- The project results in inadequate emergency access.

### ***Existing and Future Traffic***

The existing operations of the study intersections were evaluated for the highest one-hour volume during the weekday morning, and midday peak periods. Turning movement counts for vehicles, bicycles, and pedestrians were conducted during typical weekday a.m. peak period (7:00-9:00 a.m.), and midday peak periods (1:00-3:00 p.m.) at the study intersections on Thursday, April 18, 2019.

Existing intersection lane configurations and peak hour turning movement volumes were used to calculate the Level of Service (LOS) for the study intersections during each peak hour. The City of Dublin provided signal timings for the study intersections. The peak hour factor based on the counts was used for all study intersections for the existing conditions analysis. The study intersections were analyzed using the 2000 Highway Capacity Manual (HCM 2000) methodology by using Synchro 9.0 software program.

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication *Trip Generation Manual (10th Edition)*. TJKM used published trip rates for the ITE Land Use Elementary School (ITE Code 520). Table 3.4.17.1 shows the trip generation expected to be generated by the proposed project. As per experience with similar elementary school projects, TJKM applied 20 percent trip discounts to the proposed project for public buses, pedestrian and bicycle uses. The project is expected to generate additional 23 daily trips, 8 weekday a.m. peak hour trips (4

inbound trips, 4 outbound trips) and 2 weekday midday peak hour trips (1 inbound trip, 1 outbound trip).

**Table 3.4.17-1  
Project Trip Generation – Frederiksen Elementary School**

Land Use	ITE Code	Size	Daily		AM Peak Hour					Midday Peak Hour				
			Rate	Trips	Rate	In %	In	Out	Total	Rate	In %	In	Out	Total
Existing School	520	845 Students	1.85	1,597	0.67	54	306	260	566	0.17	48	69	75	144
Bus/Ped/Bike Discount (20%)				319			61	52	113		10	14	15	29
Total Vehicle Trips				1,278			245	208	453			55	60	115
Proposed School	520	860 Students	1.89	1,625	0.67	54	311	265	576	0.17	48	70	76	146
Bus/Ped/Bike Discount (20%)				325			62	53	115		10	14	15	29
Total Vehicle Trips				1,300			249	212	461			56	61	117
<b>Trip Difference</b>														
Total from Proposed School				1,300			249	212	461			56	61	117
Total from Existing School				1,278			245	208	453			55	60	115
Net New Vehicle Trips				23			4	4	4			1	1	2

Source – Institute of Transportation Engineers (ITS) *Trip General Manual*, 10<sup>th</sup> Edition

Intersection levels of service were calculated with the new traffic added by the proposed project to existing volumes to evaluate the operating conditions of the intersections and identify potential impacts to the roadway system. The results of the intersection level of service calculations for Proposed Project Conditions are presented in Table 3.4.17.2. It is to be noted that the lane geometry considered in the Existing Plus Project Conditions for the intersection of Tamarack Drive and Burton Street differ from the one in the Existing Conditions due to the proposed changes as per the site plan. The intersection of Tamarack Avenue and Amanda Street was also included in the LOS analysis to incorporate changes due to the repositioning of the middle driveway. Traffic volumes for this intersection were estimated as per the count data available from intersections in the vicinity. Under this scenario, all intersections operate within the applicable jurisdictional standards of City of Dublin with LOS D or better (average control delay equal to or less than 55 seconds per vehicle) during the a.m., and midday peak hours. Under Existing plus Project Conditions, all intersections would operate within the applicable jurisdictional standards of LOS D or better during the a.m. and midday peak hours. Therefore, the impact to the circulation system is less than significant.

**Table 3.4.17-2  
Intersection Level of Service Analysis – Existing plus Project Conditions**

#	Intersection	Intersection Control	Peak Hour <sup>1</sup>	Average Delay <sup>2</sup>	LOS <sup>3</sup>
1	Tamarack Drive/Burton Street and Frederiksen Parking Lot East Driveway	All-Way Stop	AM	9.6	A
			Midday	7.8	A
2	Tamarack Drive/Amanda Street and Frederiksen Parking Lot Middle Driveway	None	AM	3.2	A
			Midday	2.8	A
3	Tamarack Drive and Frederiksen Parking Lot West Driveway	Two-Way Stop	AM	2.9	A
			Midday	3.1	A
4	Tamarack Drive and Burnham Way	One-Way Stop	AM	45.4	B
			Midday	2.6	A
5	Tamarack Drive and Brighton Drive	One-Way Stop	AM	3.5	B
			Midday	5.1	A
6	Tamarack Drive and Village Parkway	Signalized	AM	21.7	C
			Midday	17.6	B

Notes:

<sup>1</sup>AM – morning peak hour (between 7 and 9 a.m.), Midday-Midday peak hour (between 1 and 3 p.m.).

<sup>2</sup>Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.

<sup>3</sup>LOS – Level of Service calculations conducted using the Synchro 9.0 level of service analysis software package, which applies the methodology described in the 2000 HCM.

Bold text indicates intersection operates at a deficient Level of Service.

### ***Bicycle and Pedestrian Facilities***

Impact to bicyclists occurs if the proposed project will disrupt existing bicycle facilities; or conflict or create inconsistencies with adopted bicycle system plans, guidelines, and policies. A significant impact occurs if the proposed project conflicts with applicable or adopted policies, plans or programs related to bicycle facilities or otherwise decrease the performance or safety of bicycle facilities.

In conjunction with the City of Dublin, the Safe Routes to School program aims to establish routes which maximize safety for travel to and from school sites, as well as to educate school administrators, parents, and children about vehicle, bike, and pedestrian safety.

Please view the Safe Routes to School map for Frederiksen Elementary School, Figure 3.4.17-1, for more information.

At present, Class II bike lanes are available on Village Pkwy and Amador Valley Boulevard. There are no existing bike lanes on Tamarack Drive. Students arriving to school were observed to ride their bikes on the sidewalks due to the absence of bike lanes on Tamarack Drive. The proposed project does not conflict with existing and planned bicycle facilities, therefore, the impact to bicycle facilities is less than significant.

The closest bus stops to the Frederiksen Elementary School are located near the intersections of Village Parkway & Tamarack Drive, and Amador Valley Boulevard & Penn

Drive. The proposed project will generate very few trips via transit services, which can be accommodated by the existing transit capacity and hence the project is anticipated to have a less-than-significant impact on transit facilities.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

# Frederiksen Elementary School: Safe Route to School





**Impact #3.4.17b – Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?**

The Project site is surrounded by Collector Roads, which include – Tamarack Drive, Brighton Drive, and Village Parkway, and Highway-680 which is approximately 1,000-feet east of the project site and is classified as a Freeway in the City of Dublin General Plan Circulation and Scenic Highways Element. It is anticipated that construction workers would be from the area and therefore vehicle miles traveled (VMT) would be consistent with employees working on a local project. Existing students and staff would continue to travel the same amount of vehicle miles once the Project is operational. There would be no change in VMT from baseline levels with implementation of the Project.

The Project includes a minimal increase in student capacity and no increase in staff capacity. The Project would not alter or increase the distance traveled from home to school. Therefore, the operation of the Project is not anticipated to generate additional traffic beyond the baseline conditions, and the Project would be consistent with CEQA Guidelines Section 15064.3, Subdivision (b).

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.17c – Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

The Project would not introduce new curves and/or hazardous intersections into the Project vicinity. No new design or features would be introduced that would result in transportation-related hazards or safety concerns. During construction at the Project, construction-related delivery trucks would be present. However, these trucks would be traveling along the existing and proposed local roadways and rights-of-ways and would not interfere with access points surrounding the site. Coupled with this, once construction is completed, truck activity would cease to access the site with the exception of periodic operational maintenance. The Project would not result in an increase in hazards due to a design feature or incompatible use. Therefore, the project would have a less-than-significant impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

### **Impact #3.4.17d – Would the Project result in inadequate emergency access?**

The California Fire Code establishes standards by which emergency access may be determined. Site access requirements are set forth in the City Municipal Code as well as dictated by the DSA. The Project would have to provide adequate unobstructed space for fire trucks to turn around. The Project site would have adequate internal circulation capacity including entrance and exit routes to provide adequate unobstructed space for fire trucks and other emergency vehicles to gain access and to turn around.

As described above, the minimal increase of Project-related traffic would not cause a significant increase in congestion and would not reduce the existing level of service on area roads, which could indirectly affect emergency access. The Project is not expected to require closures of public roads, which could inhibit access by emergency vehicles. The Project would not result in inadequate emergency access. Therefore, the project would have a less-than-significant impact.

#### ***MITIGATION MEASURE(S)***

No mitigation is required.

#### ***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.18 - TRIBAL CULTURAL RESOURCES

Would the Project:

- a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), 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.

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### ***Discussion***

**Impact #3.4.18a(i) – Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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)?**

These questions were addressed in the discussion presented in Section 3.4.5 - *Cultural Resources*.

See discussion for Impacts #3.4.5a and #3.4.5c.

**MITIGATION MEASURE(S)**

Implementation of Mitigation Measures MM CUL-1 and MM CUL-2.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated.*

**Impact #3.4.18a(ii) – Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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?**

See discussion for Impacts #3.4.5a and #3.4.5c.

**MITIGATION MEASURE(S)**

Implementation of Mitigation Measures MM CUL-1 and MM CUL-2.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant with mitigation incorporated.*

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.19 - UTILITIES AND SERVICE SYSTEMS

Would the Project:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion

This analysis relied upon review of applicable requirements of the RWQCB- San Francisco Bay as provided on their web site and analysis provided by the Dublin San Ramon Services District (DSRSD) 2015 Urban Water Management Plan (Dublin San Ramon Services District , 2016).

**Impact #3.4.19a – Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

The infrastructure necessary to serve the Project already exists on the Project site. This system is regulated by the San Francisco Bay RWQCB and the SWRCB. The RWQCB is responsible for protecting water resources in the region, and as such prescribes standards for the treatment and disposal of wastewater.

As discussed, there is adequate capacity in the City's existing sewer system and there is adequate amount of water to continue meeting the demands of the school after the renovations are complete. Therefore, no new water or wastewater facilities or expansion to the existing facilities would be necessary.

The proposed Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. As demonstrated, the proposed Project will have adequate available water supply. Therefore, the project would have a less-than-significant impact. The proposed Project's wastewater and sewer treatment needs would ultimately be serviced by DSRSD. No additional wastewater infrastructure will be required as a result of the Project. DSRSD facilities operate according to the City of Dublin General Plan's goals, policies, and implementation measures. These policies are implemented under approval of the City Public Works Department and comply with the requirements of the San Francisco Bay RWQCB and the State Water Resources Control Board (SWRCB). Therefore, the proposed Project would not exceed the wastewater treatment requirements of the RWQCB.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.19b – Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?**

The Project would be served by water provided by the Dublin San Ramon Services District who currently supplies water to the existing school. As discussed in response to Impact #3.4.10a, above, the Project is not anticipated to significantly increase water usage, and there is adequate water supply for the Project. Therefore, the project would have a less-than-significant impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.19c – Would the Project result in a determination by the wastewater treatment provider that 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?**

The Project is not anticipated to substantially contribute to increased wastewater production. The DSRSD outlines improvements to the wastewater treatment infrastructure in the Dublin area in its Wastewater Treatment and Biosolids Facilities Master Plan that will be sufficient in serving the Project (Dublin San Ramon Services District, 2017). Therefore, impacts would be less than significant.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.19d – Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

The DSRSD Master Plan concludes that additional anaerobic digestion facility construction or improvements are required to adequately serve the DSRSD service area. DSRSD is still undergoing analysis and evaluation regarding the specific projects it will undertake to adequately serve its service area. The Project is not anticipated to substantially add to the total solid waste generated in the City of Dublin and surrounding area beyond the waste generated by the existing school, which is already being disposed of through agreements with the DSRSD. Therefore, impacts would be less than significant.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.19e – Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

The Project, in compliance with federal, State, and local statutes and regulations related to solid waste, would dispose of all waste generated onsite at an approved solid waste facility. The Project does not, and would not conflict with federal, State, or local regulations related to solid waste. Therefore, the project would have a less-than-significant impact.

**MITIGATION MEASURE(S)**

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

The Project would have a *less than significant*.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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### 3.4.20 - WILDFIRE

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

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### Impact #3.4.20a – Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

In 2010, the City of Dublin adopted a Local Hazard Mitigation Plan as an annex to the Comprehensive Emergency Management Plan to assess hazards and mitigate risks prior to a disaster event. The Project would comply with all applicable goals and policies of these plans and would not substantially impair their implementation. Therefore, impacts would be less than significant.

#### MITIGATION MEASURE(S)

No mitigation is required.

#### LEVEL OF SIGNIFICANCE

Impacts would be *less than significant*.

**Impact #3.4.20b – Would the Project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

There is currently very low potential for wildfire risk at the Project site due to its developed nature as an elementary school. Additionally, the Project site is surrounded by residential development. The Project site is relatively flat, and there are no site features that lead to increased risk of wildfire. Therefore, impacts would be less than significant.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

Impacts would be *less than significant*.

**Impact #3.4.20c – Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

The Project would not involve the construction, installation, or maintenance of any infrastructure that would exacerbate fire risk or result in impacts to the environment. Therefore, there would be no impact.

***MITIGATION MEASURE(S)***

No mitigation is required.

***LEVEL OF SIGNIFICANCE***

**Impact #3.4.20d – Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

As previously discussed, the Project site is not located in a flood zone. No flooding is anticipated as a result of post-fire slope instability due to the relatively flat nature of the Project. The Project is not anticipated to substantially alter the existing drainage of the site. The proposed Project does not increase the exposure of people or structures to risks as a result of post-fire slope instability or drainage changes. Therefore, impacts are less than significant.

***MITIGATION MEASURE(S)***

No mitigation is required.

**LEVEL OF SIGNIFICANCE**

Impacts would be *less than significant*.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
--------------------------------------	--	-------------------------------------	--------------

### 3.4.21 - MANDATORY FINDINGS OF SIGNIFICANCE

a.	Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are significant when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Does the Project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Discussion

**Impact #3.4.21a – Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?**

As evaluated in this IS/MND, the proposed Project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. As analyzed, the proposed Project would not have the potential to

degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plants or animals. With mitigation the Project is not anticipated to eliminate important examples of the major periods of California history or prehistory. Therefore, the Project would have a less-than-significant impact with mitigation incorporated.

**MITIGATION MEASURE(S)**

Implementation of Mitigation Measures MM CUL-1 and MM CUL-2.

**LEVEL OF SIGNIFICANCE**

The Project would have a *less than significant impact with mitigation incorporated.*

**Impact #3.4.21b - Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a Project are significant when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects.)?**

As described in the impact analyses in Sections 3.4.1 through 3.4.20 of this IS/MND, any potentially significant impacts of the proposed Project would be reduced to a less-than-significant level following incorporation of the mitigation measures listed in Section 6, *Mitigation Monitoring and Reporting Plan*. Projects completed in the past have also implemented mitigation as necessary. Accordingly, the proposed Project would not otherwise combine with impacts of related development to add considerably to any cumulative impacts in the region. With mitigation, the proposed project would not have impacts that are individually limited, but cumulatively considerable. Therefore, the project would have a less-than-cumulatively-considerable impact with mitigation incorporated.

**MITIGATION MEASURE(S)**

Implementation of Mitigation Measures MM AES-1, MM CUL-1 and MM CUL-2, MM GEO-1, MM GEO-2, MM HAZ-1, MM HYD-1, MM HYD-2, and MM NSE-1.

**LEVEL OF SIGNIFICANCE**

The Project would have a *less than significant impact with mitigation incorporated.*

**Impact #3.4.21c - Does the Project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?**

All of the Project’s impacts, both direct and indirect, that are attributable to the Project were identified and mitigated to be extent feasible. As shown in Section 6, *Mitigation Monitoring and Reporting Plan*, the District has agreed to implement mitigation substantially reducing or eliminating impacts as a result of the Project. Therefore, the proposed Project would not either directly or indirectly cause substantial adverse effects on human beings because all

potentially adverse direct impacts of the proposed Project are identified as having no impact, less-than-significant impact, or less-than-significant impact with mitigation.

***MITIGATION MEASURE(S)***

Implementation of Mitigation Measures MM AES-1, MM CUL-1 and MM CUL-2, MM GEO-1, MM GEO-2, MM HAZ-1, MM HYD-1, MM HYD-2, and MM NSE-1.

***LEVEL OF SIGNIFICANCE***

The Project would have a *less than significant impact with mitigation incorporated*.

## **SECTION 4 - LIST OF PREPARERS**

### ***4.1 - Lead Agency***

Dublin Unified School District  
7471 Larkdale Avenue  
Dublin, CA 94568

### ***4.2 - Consultant - QK***

Christopher Mynk, AICP – Lead Author  
Jaymie Brauer – QA/QC  
Conor McKay - Author

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## **SECTION 6 - MITIGATION MONITORING AND REPORTING PROGRAM**

Impact No.	Mitigation Measure	Implementation	Monitoring
<b>Aesthetics</b>			
3.4.1-d	<b>MM AES-1:</b> Security and nighttime lighting installed at the school site shall be designed utilizing “dark skies” standards and guidelines and shall incorporate shielding of lighting and orienting lighting downward to prevent direct uplighting. Lighting used for nighttime events shall be turned off by 11:00 p.m. All lights in excess of 150 watts shall be directed toward the stadium field and away from adjacent properties. All stadium field light fixtures shall be designed with appropriate reflectors, hoods and side shields to direct the angle of incidence to reflect light downward.	DUSD/Project Architect/ Project Contractor	DUSD Project Inspector
<b>Cultural Resources</b>			
3.4.5-a	<b>MM CUL-1:</b> If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from Project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.	DUSD/Project Contractor	DUSD Project Inspector
3.4.5-c	<b>MM CUL-2:</b> If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of	DUSD/Project Contractor	DUSD Project Inspector

the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the county coroner.

#### **Geology and Soils**

- |         |  |                         |                        |
|---------|--|-------------------------|------------------------|
| 3.4.7-b | <b>MM GEO-1:</b> Prior to ground disturbance, an erosion control plan for construction activities will be prepared that describes the best management practices (BMPs) that will be incorporated to reduce the potential for soil erosion and loss of topsoil. The BMPs could include soil stabilizers and silt fencing as well as other measures.   | DUSD/Project Contractor | DUSD Project Inspector |
|         |  |                         |                        |
| 3.4.7-f | <b>MM GEO-2:</b> During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the appropriate facility regarding any discoveries of paleontological resources. | DUSD/Project Contractor | DUSD Project Inspector |
- If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource,

additional investigations and fossil recovery may be required to mitigate adverse impacts from Project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

#### **Hazards and Hazardous Materials**

- |         |   |                         |                        |
|---------|---|-------------------------|------------------------|
| 3.4.9-a | <b>MM HAZ-1:</b> Prior to operation of the Project, the Project proponent shall prepare a hazardous materials business plan that identifies the new location of the new school campus and submit it to the Alameda County Environmental Health Services Division/Hazardous Materials Section for review and approval. The Project proponent shall provide the hazardous materials business plan to all contractors working on the Project and shall ensure that one copy is available at the Project site at all times. | DUSD/Project Contractor | DUSD Project Inspector |
| 3.4.9-a | <b>MM HAZ-2:</b> In the event that other abandoned or unrecorded wells are uncovered or damaged during excavation or grading activities, all work shall cease, and the California Department of Conservation, Division of Oil, Gas and Geothermal Resources shall be contacted for requirements and approvals. The California Department of Conservation, Division of Oil, Gas and  | DUSD/Project Contractor | DUSD Project Inspector |

Geothermal Resources may determine that remedial plugging operations may be required.

#### **Hydrology and Water Quality**

3.4.10-a	Prior to construction, the District shall submit an approved copy of: 1) the approved Storm Water Pollution Prevention Plan (SWPPP) and 2) the Notice of Intent (NOI) to comply with the General National Pollutant Discharge Elimination System (NPDES) from the San Francisco Bay Regional Water Quality Control Board. The requirements of the SWPPP and NPDES shall be incorporated into design specifications and construction contracts. Recommended best management practices for the construction phase may include the following: <ul style="list-style-type: none"><li>• Stockpiling and disposing of demolition debris, concrete, and soil properly;</li><li>• Protecting existing storm drain inlets and stabilizing disturbed areas;</li><li>• Implementing erosion controls;</li><li>• Properly managing construction materials; and</li><li>• Managing waste, aggressively controlling litter, and implementing sediment controls.</li></ul>	DUSD/Project Contractor	DUSD Project Inspector
3.4.10-a	<b>MM HYD-2:</b> The District shall limit grading to the minimum area necessary for construction and operation of the Project. Final grading plans shall include best management practices to limit onsite and offsite erosion.	DUSD/Project Contractor	DUSD Project Inspector
3.4.13-a	<b>MM NSE-1:</b> During construction, the contractor shall implement the following measures:	DUSD/Project Contractor	DUSD Project Inspector

- All stationary construction equipment on the Project site shall be located so that noise emitting objects or equipment faces away from any potential sensitive receptors;
- The construction contractor shall ensure that all construction equipment is equipped with manufacturer-approved mufflers and baffles during construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers; and
- Construction activities shall comply with the noise standards specified in the City Municipal Code Section 5.28.020.

3.4.17-a      **MM TRA-1:** The Dublin Unified School District shall establish and implement a traffic control plan for student drop-off hours from 7:45 a.m. to 8:25 a.m. on all scheduled school days throughout the school year. The traffic control plan should include measures to promote safe drop-off and efficient use of the drive approach located along Davona Drive.

DUSD

DUSD Project  
Inspector

**APPENDIX A**  
**AIR QUALITY IMPACT ANALYSIS/GREENHOUSE GASES ANALYSIS**



# **Bay Area Air Quality Management District – CEQA Screening Assessment**

**Frederiksen Elementary School Project  
7243 Tamarack Drive  
Dublin, CA 94568  
APN 941-194-26**

**Prepared by:**



5500 Ming Avenue, Suite 140  
Bakersfield, CA 93309

**For:**



**QK, Inc.**

5080 California Avenue, Suite 220  
Bakersfield, CA 93309

**June 2019**

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## EXECUTIVE SUMMARY

Insight Environmental Consultants, Inc., *a Trinity Consultants Company*, has completed a limited air quality assessment for an elementary school project to be located on APN 941-194-26 (Project). The Project site is located within the northwestern portion of the incorporated limits of Dublin, California northeast of the intersection of Amador Valley Blvd and Village Parkway. The Project includes the following construction objectives:

- Replace aging school buildings and facilities which are past useful life
- Develop new instructional, multi-use, administrative, and support facilities that will enhance opportunities for academic, social, and physical growth at the school (30,679 square feet)
- Provide additional classroom space to accommodate anticipated growth in student population (33,340 square feet, 846 students) – Note that new classroom space also includes replacement of some aging classrooms.

This limited air quality assessment uses the Bay Area Air Quality Management District's (BAAQMD) CEQA Guidelines Screening Assessment (BAAQMD, May 2017). This screening assessment was prepared pursuant to the BAAQMD's Guide for CEQA Air Quality Guidelines (CEQA AQG) (BAAQMD 2017), the California Environmental Quality Act (CEQA) (Public Resources Code 21000 to 21177), and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

## STATEMENT OF FINDING

Based on the screening thresholds established by the BAAQMD's CEQA AQG, the Project's construction and operational additions (i.e., square footage and students) do not exceed the significance thresholds established for elementary school projects. Therefore, this Project would *not pose a significant impact* to the San Francisco Bay Area Air Basin (SFBAAB) and would have a *less than significant air quality impact*.

## 1.0 INTRODUCTION

This assessment examines the projected gross impacts on air quality in the SFBAB posed by this Project in order to determine whether the Project remains below established air quality thresholds of significance.

The proposed Project includes the following construction objectives at Frederiksen Elementary School:

- Replace aging school buildings and facilities which are past useful life
- Develop new instructional, multi-use, administrative and support facilities that will enhance opportunities for academic, social, and physical growth at the school (30,679 square feet)
- Provide additional classroom space to accommodate anticipated growth in student population (33,340 square feet, 846 students)

The Project was assessed under the assumption that it would be developed in two phases. This assessment examines the projected impacts to air quality posed by this Project to the SFBAAB to determine whether or not the Project remains below established air quality thresholds of significance.

## 2.0 GENERAL PROJECT LOCATION

The Project is located in the incorporated area of Dublin, California northeast of the intersection of Amador Valley Blvd and Village Parkway. **Figure 2-1** depicts the Project location.



**Figure 2-1 –Location in Dublin, CA**

## 3.0 BAAQMD CEQA OPERATIONAL-RELATED SCREENING ANALYSIS

This assessment was prepared pursuant to the BAAQMD's CEQA AQG (BAAQMD 2017), CEQA (Public Resources Code 21000 to 21177), and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387). The BAAQMD created a screening assessment to streamline air quality assessments of commonly encountered projects. According to AQG Chapter 3, the BAAQMD

“pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding the CEQA significant emissions thresholds”<sup>1</sup>.

The AQG screening process established review parameters to determine whether a project qualifies as an exempt project.” A project that is found to be “less than” the established parameters, according to the AQG, “would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance”. **Table 3-1** presents the screening parameters for elementary schools.

**Table 3-1 BAAQMD Operational - Related Criteria Air Pollutant and Precursor Screening Level Sizes**

Land Use Type	Operational Criteria Pollutant Screening Size	Operational GHG Screening Size	Construction-Related Screening Size
Elementary School	271,000 square feet (NOx)	44,000 square feet	277,000 square feet (ROG)
Elementary School	2,747 students (ROG)	-	3,904 students (ROG)

NOx = Oxides of Nitrogen; ROG = Reactive Organic Gases; GHG = Greenhouse Gases

As shown in **Table 3-1**, the proposed Project would need to screen below a construction and operational area of 271,000 square feet at the school and the total student capacity be less than 2,747 students for the Project to be exempted from Air Quality Impact Assessment (AQIA). The project would need to screen below an additional operational area of 44,000 square feet to screen out of the GHG AQIA. Section 3.1.2 of the AQG also indicates that “if a project is located in a community with an adopted qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy”.

**Table 3-2** presents a comparison of the Project parameters against the AQG elementary school screening parameters.

**Table 3-2 Frederiksen Elementary School Construction Thresholds Comparison**

Screening Criteria		Project Total Increase	Below Screening?	Actions Taken
Operational NOx (sqft)	271,000	64,019	Yes	None
Operational ROG (students)	2,747	846	Yes	None
Construction ROG (sqft)	277,000	64,019	Yes	None
Construction ROG (students)	3,904	846	Yes	None
Operational GHG (sqft)	44,000	64,019	No	Follow Alameda County Community Climate Action Plan - GHG Reduction

As shown above the Project will not exceed additional school capacity in square footage or students for NOx and ROG emissions. The Project does exceed operational GHG capacity, and therefore will follow Alameda County’s Community Climate Action Plan (Alameda County, 2014)<sup>2</sup> to screen out of the GHG AQIA.

#### 4.0 GHG SCREENING ANALYSIS

As discussed in Chapter 4.3 of the AQG, a project that is consistent with an adopted qualified GHG

<sup>1</sup> BAAQMD CEQA Air Quality Guidelines, Chapter 3, Page 3-1.

<sup>2</sup> Alameda County, Community Climate Action Plan, February 2014

[http://www.acgov.org/cda/planning/generalplans/documents/110603\\_Alameda\\_CCAP\\_Final.pdf](http://www.acgov.org/cda/planning/generalplans/documents/110603_Alameda_CCAP_Final.pdf)

Reduction Strategy that meets the AQG standards is presumed to have less than significant GHG emission impacts. A qualified GHG Reduction Strategy includes the following:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emission resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emission level.
- Monitor the plan's progress
- Adopt the GHG Reduction Strategy in a public process following environmental review.

The Alameda County Community Climate Action Plan (CAP) performs all the requirements listed above:

- Establishes an emission inventory for the 2005 base year.
- Projects Alameda County's future GHG emissions in 2020, 2035, and 2050 to meet the goal of 15% GHG reduction by 2020 from 2005 base levels.
- Identifies breakdown of GHG emissions from Building/Energy, Transportation, Land Use, Water, Waste and Green Infrastructure sectors.
- Selects GHG reduction measures such as increase accessibility for bicycling, ridesharing, public transit, walking; change community's energy system to be more efficient, use more renewable energy/reduce fossil-fuel based energy, use more recyclable materials, and construct commercial parking lot with shade trees and/or solar panels; and adopt various water and waste management measures.
- Establishes methods to monitor and change the CAP over time to meet GHG reduction targets,
- The GHG Reduction Strategy is posted on Alameda County's website for public review.

As mentioned in Section 3, the project will work with the Dublin Unified School District on the construction of additional school facilities to follow the GHG Reduction Strategies set forth in the CAP. The project plans to incorporate measures (see Attachment A) such as:

- Construct a new bicycle storage area to encourage student bicycle transit
- Consider integrating bicycle routes within and around school campus
- Construct facilities and parking lots with shade trees for heat mitigation or install solar panels
- Construct parking and parent vehicle transit areas with a more efficient traffic flow design

Based on the measures listed above, the Project will be implementing all applicable feasible measures and policies from Alameda County's qualified GHG Reduction Strategy. Therefore, the potential impact of the Project's increase GHG emissions would be *less than significant*.

## 5.0 CARBON MONOXIDE SCREENING ANALYSIS

The BAAQMD CEQA AQG Chapter 3.3 provides screening criteria to determine if Carbon Monoxide (CO) emissions will be lower than significant emission thresholds. The following screening criteria is applied:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
  - *The project will be aligned with the county congestion management program.*
- The project's traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- *The project is expected to increase student capacity at the school to 846 students. It is expected that this increase will not lead to an increase of traffic volume at intersections around the Project site by more than 44,000 vehicles per hour.*
- The project would not increase traffic volumes at affected intersections 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).
  - *The project is expected to increase student capacity at the school to 846 students. It is expected that this increase will not lead to an increase of traffic volume where vertical and/or horizontal mixing is substantially limited around the Project site by more than 24,000 vehicles per hour.*

As discussed above, the Project will pass all of the screening criteria defined for CO. Therefore, the Project would result in a less-than-significant impact to localized CO concentrations.

## 6.0 COMMUNITY RISK SCREENING ANALYSIS

The proposed Project is located northeast of Amador Valley Boulevard and Village Parkway. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. The following sensitive receptors are located within a one mile radius of the Project site.

Receptor	Type of Facility	Distance from Project in Miles	Direction from Project
Murray Elementary School	Elementary School	0.72	NE
St Philip Lutheran School	School	0.99	NE
Dublin Senior Center	Senior Center	0.73	NW
Wells Middle School	Middle School	0.26	SE
Dublin High School	High School	0.36	N
Valley High School	High School	0.40	S
Dublin Elementary School	Elementary School	0.70	E
St Raymond School	Private School	0.98	E
City Of Dublin Preschool	Preschool	0.98	W
Learn And Play Montessori School	Preschool	0.98	W
Fountainhead Montessori School	School	0.93	S
Sunrise Villa San Ramon	Assisted Living	0.95	N
Sunny Glen Senior Community	Assisted living	0.87	N
Bright Horizons at Dublin	Day Care	0.66	S

However, based on the predicted operational emissions and activity types, the proposed Project is not expected to affect sensitive receptors and is *not expected to have any adverse impacts on sensitive receptors*.

### 6.1 Potential Odor Impacts

The proposed Project is located near residential neighborhoods. However, expected uses of the Project are not known to be a source of nuisance odors and are not listed in Table 3-3 of the BAAQMD's CEQA AQG which defines common odor sources. Therefore the Project is not anticipated to have substantial odor impacts and is therefore anticipated to have a *less than significant odor impact*.

### 6.2 Toxic Air Contaminant (TAC) and Fine Particulate Matter (PM<sub>2.5</sub>) Impacts



TACs are as defined by the California Health & Safety Code (CH&SC) §44321, and are listed in Appendices AI and AII of the AB 2588 Air Toxic “Hot Spots” and Assessment Act’s Emissions Inventory Criteria and Guideline Regulation document. PM<sub>2.5</sub> is a complex mixture of substances that includes carbon, metals, nitrates, sulfates, organics and mixtures from diesel exhaust, wood smoke, etc. BAAQMD’s applicable Thresholds of Significance for TAC and PM<sub>2.5</sub> emissions for new sources are listed in Chapter 5.2.1 of the AQG and are shown below:

- Compliance with a qualified Community Risk Reduction Plan;
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) risk greater than 1.0 hazard index (HI) from a single source would be a significant cumulatively considerable contribution;
- An incremental increase of greater than 0.3 µg/m<sup>3</sup> annual average PM<sub>2.5</sub> from a single source would be a significant cumulatively considerable contribution.

Contributors to substantial concentrations of TACs and PM<sub>2.5</sub> include diesel generators, truck distribution centers, freeways and large diesel transportation vehicles.

The proposed Project is not expected to generate any substantial increase in PM<sub>2.5</sub> or TAC emissions. The new school buildings will accommodate normal projected student population growth and are not proposed for the express purpose of expanding school capacity beyond normal school growth projections. Therefore, it is expected that there will be no substantial increase in school buses or diesel trucks as a result of this school modernization project. In addition, the Project will not install any new emergency diesel-powered equipment. Therefore, the Project would not generate a health risk impact due to TAC emissions or PM<sub>2.5</sub> emissions.

The Project would remain below the excess cancer risk level of more than 10 in a million, or non-cancer risk greater than 1.0 HI from a single source. The Project would not lead to an incremental increase of greater than 0.3 µg/m<sup>3</sup> annual average PM<sub>2.5</sub>.

The Project will comply with the BAAQMD Community Risk Reduction Plan. BAAQMD has also published a guidebook for addressing local sources of air pollutants in community planning titled “Planning Healthy Places”.<sup>3</sup> The Project will include working with Dublin Unified School District to construct and operate facilities at the school according to the best practices set forth in the BAAQMD guidebook.

Since the Project is below all of the screening thresholds for TACs and PM<sub>2.5</sub>, the potential health risk impacts would be considered *less than significant* and no further health risk assessment is required.

## 7.0 CONCLUSIONS

Based on the criteria established by the BAAQMD’s CEQA AQG, the proposed Project does not meet the minimum standards to require a full Air Quality Impact Analysis. Furthermore, the Project as proposed would not exceed the BAAQMD’s criteria air pollutant, greenhouse gas, toxic air contaminant or odor emission levels and would generate *less than significant air quality impacts*.

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<sup>3</sup> BAAQMD, Planning Healthy Places – A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning, May 2016. [http://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php\\_may20\\_2016-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en)



## **8.0 ATTACHMENTS**

### **A. Frederiksen Elementary School Program Description**

## **9.0 REFERENCES**

California Environmental Protection Agency, Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments, August 2003.

California Environmental Quality Act (CEQA). 2012. (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

----- . 2009. CEQA, Appendix G – Environmental Checklist Form, Final Text.

California Air Pollution Control Officers Association (CAPCOA). 1997. “Air Toxics Hot Spots” Program Risk Assessment Guidelines, Revised 1992.

Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. May 2017.

Alameda County. 2014. Community Climate Action Plan. February 4, 2014.

Bay Area Air Quality Management District (BAAQMD). 2016. Planning Healthy Places – A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning. May 2016.

## **ATTACHMENT A – Frederiksen Elementary School Program Description**

DUBLIN  
UNIFIED



School District

## **PROGRAM DESCRIPTION**

### **Frederiksen Elementary School REPLACEMENT**

Educational Specifications

ATI ARCHITECTS & ENGINEERS

March 22, 2019

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## **I. MISSION STATEMENTS**

### **Dublin Unified School District:**

*"Our mission is to ensure that every student becomes a lifelong learner by providing a rigorous and relevant 21st century education that builds resilience and prepares them for college and career or service to our country and for success in the global economy."*

### **Frederiksen Elementary School:**

*Building for the Future Together, we lay the foundation for life-long learning, pride in character, and a lasting commitment to the community.*

## **II. PROJECT GOALS AND OBJECTIVES**

- Replace aging school buildings and facilities which are past useful life.
- Develop new instructional, multi-use, administrative and support facilities that will enhance opportunities for academic, social, and physical growth for Frederiksen Elementary School students within a 21<sup>st</sup> Century learning environment.
- Provide additional classroom space to accommodate anticipated growth in student population.
- Create a safe and secure campus that also respects and responds to the neighborhood and community interactions with the school.
- Avoid costly interim housing by utilizing available site and staging construction for efficient transition.

### **A. General Design Guidelines**

The School District and Design Team collaboratively obtained design input from the stakeholder group which consisted of the Principal, teaching staff and parents. Discussions on programming and conceptual design of the project resulted in the following attributes as desirable outcomes of the overall improvements.

- |                          |                        |                               |
|--------------------------|------------------------|-------------------------------|
| • Inviting and welcoming | • Attractive           | • Supportive of diversity     |
| • Inspiring              | • Colorful             | • Supportive of collaboration |
| • Engaging               | • Functional           | • Avoids institutional feel   |
| • Adaptable              | • Safe                 | • Friendly scale              |
| • Durable                | • Cohesiveness         |                               |
|                          | • A sense of community |                               |

### **B. Site Considerations**

While some of the items described below may be implemented in future phases, they are documented herein as desired features to be included in the general school environment.

- |                                    |                                  |
|------------------------------------|----------------------------------|
| • Traffic Flow / Queueing          | • Outdoor Learning               |
| • Parent Loading / Unloading       | • Outdoor Lunch Shelter          |
| • Adequate Staff / Visitor Parking | • Playfields                     |
| • Fire Dept. Access                | • Playgrounds                    |
| • Site Accessibility               | • School Garden                  |
| • Pedestrian Connections           | • Extended Day Child Care (EDCC) |
| • Bicycle Routes                   | • Solar Panels / Green Features  |
| • Security / Access Control        | • Phasing of Construction        |
| • Clear Line of Sight              |                                  |

### **C. Program Considerations**

- |                              |  |
|------------------------------|--|
| • Lots of Storage            | • Flexible Spaces                      |
| • Technology / Wi-Fi / Power | • Acoustic Control                     |
| • More Spacious Library      | • Teacher Planning / PD                |
| • Computer Lab               | • STEM                                 |
| • Multi-Use Building / Stage | • Special Ed Needs                     |
| • Natural Daylighting        | • Staff Restrooms                      |
| • Access to Views            | • Mobile Furnishings                   |
| • Writable / Tackable Walls  | • Interconnectivity between classrooms |

### III. BUILDING PROGRAM

PROGRAM SPACE	ROOM AREA (SF)	QTY	TOTAL AREA (SF)	BUILDING AREA (SF)	COMMENTS
<b>Phase 1</b>					
<b>Classroom Buildings</b>					
<i>Six 4-CR Clusters</i>	960	24	23,040		
<i>Two 3-CR Clusters</i>	960	6	5,760		
<i>Kindergarten - New</i>	1350	2	2,700		
Utilities / Storage	300	2	600		
Toilets:					
<i>Boys</i>	235	2	470		
<i>Girls</i>	235	2	470		
<i>All Gender</i>	90	2	180		
<i>Staff</i>	60	2	120		
<b>SUBTOTAL</b>				<b>33,340</b>	
<b>Gym / Multi-Use Building</b>					
Multi-Purpose Room			9,595		
<i>Gym/Cafeteria</i>	7,890	1			
<i>Music Classroom/Stage</i>	1,240	1			
<i>Music Storage</i>	210	1			
<i>PE Storage</i>	165	1			
<i>Chair lift/Stairs</i>	90	1			
Kitchen/Food Service			2,120		
<i>Food Prep</i>	1,000	1			
<i>Kitchen Office</i>	90	1			
<i>Kitchen Storage</i>	215	1			
<i>Kitchen Cooler</i>	135	1			
<i>Kitchen Freezer</i>	140	1			
<i>Servery</i>	480	1			
<i>Staff Restroom</i>	60	1			
Utilities / Storage			360		
<i>Custodial</i>	60	1			
<i>AV/Storage</i>	145	1			
<i>Electrical/Low Voltage</i>	115	1			
<i>Fire Riser</i>	40	1			
Toilets:			405		
<i>Boys</i>	170	1			
<i>Girls</i>	235	1			
Circulation/Peripheral			1,248		
<b>SUBTOTAL</b>				<b>13,728</b>	
<b>PHASE 1 TOTAL</b>				<b>47,068</b>	

DUBLIN UNIFIED SCHOOL DISTRICT  
FREDERIKSEN ELEMENTARY SCHOOL REPLACEMENT  
PROGRAM DESCRIPTION

PROGRAM SPACE	ROOM AREA (SF)	QTY	TOTAL AREA (SF)	BUILDING AREA (SF)	COMMENTS
<b>Phase 2</b>					
<b>Classroom Buildings</b>					
SDC	1350	2	2,700		includes toilet rooms and shared workroom
Fine Arts / STEM	1350	2	2,700		
<b>SUBTOTAL</b>				<b>5,400</b>	
<b>Administration Office</b>			3,589		
Reception / Waiting Area	315	1			
Admin Work Area	917	1			
Principal Office	157	1			
AP Office	121	1			
Records Storage	72	1			
Admin Supplies	63	1			
Coach	48	1			Desk Space
Health Office / Toilet	281	1			
Conference Room	289	1			
Staff Workroom / Supplies	288	1			
Staff Lunchroom	979	1			
Staff Toilets	59	2	118		
Utilities	162	1	162		
Circulation / Load Factor			578		
<b>SUBTOTAL</b>				<b>4,447</b>	
<b>Learning Center</b>					
Library			3,644		
Circulation Desk	included				open area
Collections / Stacks	included				open area
Reading Area	included				open area
Soft Seating	included				open area
Workroom	133	1	133		
Book Storage	121	1	121		
Media Storage	56	1	56		
Student Toilets	53	2	106		
Resource / Support Services					
RSP/Counseling Offices	463	4	1,852		
Special Services	185	3	555		Psych/Speech/ESL
Utilities / Storage	220	1	220		
Staff Toilet	58	1	58		
Circulation / Load Factor			418		
<b>SUBTOTAL</b>				<b>7,163</b>	
<b>PHASE 2 TOTAL</b>				<b>17,010</b>	
<b>PROJECT TOTAL</b>				<b>64,078</b>	



#### **IV. FACILITIES REQUIREMENTS**

##### **A. SITE**

###### **1. Description of Site**

Frederiksen Elementary School is largely surrounded by single-family residences. The site design shall reflect the contextual fabric of its neighborhood.

The site largely remains existing in Phase 1 with the eastern portion of grass play field utilized for new construction and access. A new driveway accommodates access for emergency and service vehicles and is separated from passenger loading and drop-off zones. The fire access lane provides a buffer zone between the property fence line and the new school buildings allowing those buildings to be sufficiently set back from neighboring properties.

The site design in Phase 2 is oriented with the administration office and learning center buildings as the face of the school for the community while securing classroom and playground space beyond. Walkways, courtyards, and landscaping are designed in order to preserve space for the highest priority needs: classrooms, outdoor learning spaces, and playgrounds.

###### **a. Parking (Phase 2)**

- Existing parking lot remains in Phase 1. The entire parking lot shall be modified as part of Phase 2 construction and re-striped to accommodate new traffic flow pattern.
- Staff: Parking for approximately 75 cars on-site
- Visitors: Parking for approximately 35 cars on-site
- Accessible parking stalls to be updated where deficient.
- Temporary parking for food service delivery vehicles and other maintenance purposes is provided adjacent to new kitchen facility.
- Accommodations shall be made for Electric Vehicle parking as required by code.

###### **b. Service Areas/Access Drives (Phase 1)**

- Food service delivery vehicles separated from student play areas.
- Gated, emergency vehicle access shall be provided.
- Bollards shall be provided where appropriate.
- Place trash enclosure with easy access from the street or main drop off. The area should be screened to reduce visibility.

###### **c. Parent Vehicular Drop-off and Pick-up (Phase 2)**

- Lengthy passenger loading zones and clear signage directing vehicle flow shall be provided.
- Traffic calming devices shall be used to provide safe pedestrian crossings for students.
- Adequate separation between parking entrances shall be maintained to prevent congestion at ingress and egress points.

###### **d. Kindergarten Access**

- As part of Phase 2 construction, a passenger loading zone and turn-around loop at the end of the parking aisle shall be provided in the west parking lot to ease congestion.
- e. Bicycle Storage
  - A new secured, fenced area for student bicycles shall be located near the front of the school away from vehicular traffic, and easily observable from Admin Office for security.
  - Covered and lockable staff bicycles shall be provided as required by code.
- f. Landscape and Irrigation
  - Landscape design to utilize drought resistant, durable and low maintenance plant material which reflect the local
  - Irrigation system and controls to use reclaimed water at play fields and within planted courts and interior of campus.
  - Bio-retention planters for storm water filtration shall be provided.
- g. Security Concerns
  - Visitor access will be routed through Administration Office.
  - Site is readily secured during school hours via perimeter fencing and gates. Gates can remain locked but allow egress at all times.
  - New buildings are arranged to provide good sight lines for visual observation.
  - Provisions will be made for surveillance cameras in key locations around the campus.
- h. Fencing and Gates
  - 6 ft. tall chain link fencing and gates at perimeter of play yard and fields.
  - 6 ft. tall ornamental fencing and gates at front of campus.
  - 4 ft. tall ornamental fencing and gates at perimeter of Kindergarten area
- i. Paved Play Surfaces/Related Striping
  - Play areas meet California State Department of Education Standards and guidelines.
  - Existing blacktop displaced by new construction shall be recovered by demolition of existing buildings.
  - Blacktop play areas shall be restriped with new markings where affected by demolition and construction.
  - Resilient play surface shall be provided at new play structure.
- j. Grass Play Surfaces and Appurtenances
  - Grass fields shall meet California State Department of Education Standards and guidelines and the Dublin Unified School District Standards.
- k. Play Yard Equipment/Apparatus
  - New play structure equipment will be provided at resilient play surface. Size will be determined in coordination with play structure vendor selected by DUSD.

- Existing play equipment shall be modified, relocated, or replaced with new where affected by construction.
  - Courts and striping will be sized to meet grade level requirements
    - Basketball courts Volleyball
    - Tetherball
    - Four-square and hop scotch
    - Running lanes
  - Dodgeball
    - Ball wall
  - PE / Room Line-up
  - US map
- l. Drinking Fountains
- Exterior and interior hi/low drinking fountains shall be provided at the Multi-use building and adjacent to the new restrooms at the classroom wing.
  - Drinking fountains are located in visible areas for ease of monitoring.
  - One water bottle filler location shall be provided in the MPR.
- m. Exterior Assembly Areas
- A large roll-up door on the backside of the new stage opens up to an outdoor stage. A covered seating area shall be provided in Phase 2 when existing EDCC buildings are relocated.
  - Blacktop and grass lawn are available for large gatherings.
- n. Exterior Speakers and Public Address
- Receptacles shall be provided for portable PA system for the outdoor stage.
  - PA speakers shall be directed towards play areas
- o. Exterior Lighting
- Exterior lighting shall be a combination of building mounted lighting, decorative pole mounted path-of-travel lighting, pole-mounted parking lot lighting.
  - Solar-powered lighting shall be provided where feasible.
  - Photocell and motion sensor for nighttime security shall be provided
- p. Provisions for Future Expansion/Portables
- Dedicated space with utility stub-outs for future relocatable classroom buildings shall be provided at designated location.
  - The relocatable classroom placement shall be incorporated into the overall campus layout

## **B. CLASSROOMS**

### **1. General Description:**

The classroom is the basic component of every school and the space in which students spend the majority of their day. Classrooms must provide a safe comfortable and happy environment that promotes learning for every child. Classrooms shall allow for collaboration and project based learning. Breakout spaces with direct supervision should be provided if budget permits. Classroom areas and adjacent wall surfaces should allow for display of student work

### **2. *STANDARD CLASSROOMS – GRADES 1-5 (FLEX / FINE ARTS CLASSROOMS, SIMILAR)***

Standard primary classes reflect current classroom loading of 25-28 students depending on grade level. Amenities shall be the same as traditional classroom. Furnishings and equipment should consider scale of children

#### **a. Capacity / Student:Teacher Ratio**

- Grade 1: 25
- Grades 2-3: 26
- Grades 4-5: 28

#### **b. Number of Rooms/Area**

- Thirty (30) new classrooms
- 960 SF per classroom configured in clusters of single-story 3-classroom or 4-classroom wings for Grades 1 thru 5.
- Flex/Fine Arts Classrooms will be 1,350 SF each.

#### **c. Adjacencies/Site Orientation & Access**

- Classroom wings sited for ease of monitoring and supervision from the central quad.
- Building rooflines and clerestory window are oriented to maximize daylight into the classrooms.
- Classrooms open onto a landscaped courtyard with seat areas or onto a covered walkway. These semi-sheltered outdoor spaces are suitable for small group learning or as breakout areas as an extension of the classroom.
- All classrooms have easy access to playgrounds and play fields as well as to the new Gym/Multi-Purpose Building.
- Outside play areas should be visible from classrooms for staff supervision.
- The classroom wings are situated to enable collaboration between similar grade levels
- In addition to the main entrance door to each classroom, a secondary interconnecting door between classrooms is a standard feature.
- Restrooms are adjacent to the classroom wings with access from courtyard side to facilitate staff supervision.
- Provide weather protection between classrooms and other activity areas.

#### **d. Equipment, Furnishings, Provisions & Arrangement Concerns**

- Room to be easily supervised, but should have quiet spaces
- Provide large flexible space with natural daylight

- Sliding markerboards with trays. These should be placed to supplement the teaching wall and be sensitive to the viewing/reach height of young children.
  - Consider size of children for reach range
- e. Interior Finishes/Treatment
- Floor: Carpet tile for ease of maintenance and repair with vinyl composition tile floor surfaces at wet areas (approximately 25% of total floor area). This resilient flooring should allow for student projects and encompass the wet/sink area
  - Walls: Full height tackable wall surface; White marker boards with trays. These should be placed to supplement the teaching wall and be sensitive to the viewing height of young children.
  - Ceiling: Coordinate ceiling height to accommodate projection; Acoustically treated
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
- f. Flexibility/Multiple-Use Criteria
- Provide large, flexible space with natural daylight
- g. Plumbing Needs
- Accessible stainless steel sink with bubbler is provided in each classroom at age-appropriate height. Place bubbler at right front, faucet at left back.
- h. Casework/Storage
- Teaching wall cabinetry to match District elementary school standard with height adjusted for young children.
    - 16' wide 4-panel sliding markerboards with space behind for TV in the center 8' section and shelving on either side.
    - Provision for power within shelving for AV control system
    - Lockable 18" deep base cabinet with power for laptop storage and charging.
  - 12' wide work counter with combination of open book shelves, base cabinets, sink and bubbler. Ergonomic placement of bubbler, paper towel and soap dispensers for elementary level.
  - Tall utility cabinet with space for coats, lunches and personal belongings for staff.
  - Student backpack hooks are located just outside the door to the classroom.
  - Small shared storage closets provided near classrooms
- i. Safety/Security
- Door hardware w/ vandal locksets offer ability to lockout or lockdown from inside with free passage for egress.
  - Fire alarm with voice evacuation system is standard throughout.
  - IP based PA system will allow mass notifications.
  - Interconnecting door between classrooms offer secondary non-code required exit.

- j. Environmental Comfort Features
    - Individually controlled HVAC units are provided in each room
    - Dual-paned windows and acoustically insulated walls throughout reduce noise and provide thermal stability.
    - Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
    - Horizontal mini-blinds provided to reduce glare and adjust room light level
    - Black out curtains are not desired
    - Tinted exterior glazing
  - k. Technology/Electrical Needs
    - WiFi Access Port for laptop and digital notepad connectivity
    - Dedicated power receptacles (4 outlets/2 circuits) located at regular intervals around the classroom and for overhead projection unit.
    - Multiple hard-wired data outlets are provided adjacent to power receptacles for flexible networking of computers, printers and other electronic devices. CAT6A cabling throughout.
    - Four-plex power, quad data for VOIP phone/printer for Teacher's use
    - AV Control Panel adjacent to Teaching wall and Teacher's desk
    - Wall-mounted large-screen flat panel TV with touch interactivity. Consider glare/display technology and viewing angle (refer to Fallon School conditions)
    - IP based GPS Clock/PA system – final product selection in development at time of printing
    - Wireless Microphone and speaker system – final product selection in development at time of printing
    - Provide for CATV
3. *KINDERGARTEN (SPECIAL DAY CLASSES SIMILAR):*  
The kindergarten classes reflect current classroom loading of 24 students. The kindergarten classroom shall consider and accommodate age appropriate needs and the additional supervision required for this age group. The classroom shall have a large open area for group and movement activities and a smaller area for designated activities and projects.
- a. Number of Rooms/Area
    - Two (2) new Kindergarten classrooms are provided resulting in a total of seven (7) Kindergarten classrooms at this site.
    - DKA program does not currently exist at Frederiksen.
    - 1,350 square feet per classroom which includes toilet room, shared workroom, and associated areas for building systems.
  - b. Adjacencies/Visibility Criteria
    - Close proximity to primary classrooms
    - Sightline to administration
    - Fenced play ground specifically for kindergarten use
    - Adjacent and with view to outdoor play and learning area designated for Kindergarten use

- Hard courts with game and graphic markings
    - Shade structures
    - Play structure
    - Access to grass area
    - Access to main hard court area
  - Student toilet that is easily accessed from inside and outside
  - Staff toilet in kindergarten complex that is accessible from the play yard
  - Minimize potential classroom distractions from the play
  - Windows that open for ventilation and provide outside views without distractions
  - Interconnecting door between adjacent classrooms
- c. Site Access and/or Servicing Concerns
- Close proximity to parent drop-off/pickup area
  - Provide Parent waiting benches/tables
  - Outside storage area for large items, which are visually screened from neighbor's views
- d. Equipment, Furnishings, Provisions & Arrangement Concerns
- Room to be easily supervised, but should have quiet spaces
  - Provide large flexible space with natural daylight
  - Sliding markerboards with trays. These should be placed to supplement the teaching wall and be sensitive to the viewing/reach height of young children.
  - Consider size of children for reach range
  - *Stackable washer/dryer will be provided at SDC Classrooms*
- e. Finishes, Treatment
- Floor: Carpet in main learning area; resilient tile floor surfaces at wet areas (approximately 25% of total floor area). Resilient flooring should allow for student projects and encompass the wet/sink area; Walk-off mat at entry doors.
  - Walls: Full-height tackable wall surface; non-absorbent within 2' of door openings.
  - Ceiling: Acoustical panels
  - General: Colors to provide a welcoming environment that is light/muted and easily maintained.
- f. Flexibility/Multiple-Use Concerns
- Provide large, flexible space with natural daylight
- g. Plumbing Needs
- Accessible stainless steel sink with bubbler is provided in each classroom at age-appropriate height. Place bubbler at right front, faucet at left back.
  - Kindergarten toilet room shall be provided in each classroom.
- h. Safety/Security
- Door hardware w/ vandal locksets offer ability to lockout or lockdown from inside with free passage for egress.

- Fire alarm with voice evacuation system is standard throughout.
  - IP based PA system will allow mass notifications.
  - Interconnecting door between classrooms offer secondary non-code required exit.
- i. Environmental Comfort Features
- Individually controlled HVAC units are provided in each room
  - Dual-paned windows and acoustically insulated walls throughout reduce noise and provide thermal stability.
  - Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
  - Horizontal mini-blinds provided to reduce glare and adjust room light level
  - Black out curtains are not desired
  - Tinted exterior glazing
- j. Technology/Electrical Needs
- WiFi Access Port for laptop and digital notepad connectivity
  - Power receptacles on multiple circuits are located at regular intervals around the classroom
  - Multiple hard-wired data outlets are provided adjacent to power receptacles for flexible networking of computers, printers and other electronic devices. CAT6A cabling throughout.
  - Four-plex power, quad data for VOIP phone/printer for Teacher's use
  - AV Control Panel adjacent to Teaching wall and Teacher's desk.
  - Wall-mounted large-screen flat panel TV with touch interactivity. Consider glare/display technology and viewing angle (refer to Fallon School conditions)
  - IP based GPS Clock/PA system – final product selection in development at time of printing
  - Wireless Microphone and speaker system – final product selection in development at time of printing.
  - Provide for CATV
- k. Cabinets/Storage/Built-In Concerns
- Teaching wall cabinetry to match District elementary school standard with height adjusted for young children.
    - 16' wide 4-panel sliding markerboards with space behind for TV in the center 8' section and shelving on either side.
    - Provision for power within shelving for AV control system
    - Lockable 18" deep base cabinet with power for laptop storage and charging.
  - 12' wide work counter with combination of open book shelves, base cabinets, sink and bubbler. Ergonomic placement of bubbler, paper towel and soap dispensers for kindergarten level.
  - Tall utility cabinet with space for coats, lunches and personal belongings for staff.
  - Provide cubbies for coats, lunches, and personal belongings for students. Student coat storage in a built-in 'cubby hole' configured casework. Cubby size to accommodate two backpacks.



DUBLIN UNIFIED SCHOOL DISTRICT  
FREDERIKSEN ELEMENTARY SCHOOL REPLACEMENT  
PROGRAM DESCRIPTION

- Provide storage/shelving below window areas.
- Provide storage shelving for oversized books
- Small shared storage closets provided near classrooms

### **C. MULTI-PURPOSE BUILDING**

#### **1. General Description:**

- a. The multi-purpose building will house several functional spaces: Multi-Purpose Room, Kitchen, Performance Stage/Music Classroom, Restrooms, and peripheral storage and utility rooms.
- b. The main space is a large, flexible multi-purpose room adaptable to many activities and functions. It serves as an indoor physical education space, a cafeteria during lunchtime, a performance space, and an assembly space for school gatherings. Some of the activities, which occur in the multi-use facility, include:
  - Lunch/cafeteria space
  - P.E. classes and activities
  - Band and music performances
  - Banquets
  - School presentation/performances
  - Community-use functions

#### **2. *MULTI-PURPOSE ROOM***

##### **a. General Description**

- The multi-purpose room is used as the cafeteria, assembly, instructional and physical education space.

##### **b. Capacity**

- 400 Lunch
- 1,000 assemblies and performances

##### **c. Number of Rooms/Area**

- One Room

##### **d. Adjacencies/Visibility Issues:**

- Stage
- Kitchen and Food Service
- Student and Staff Restrooms
- Storage room directly adjacent to multi-purpose room
- Adjacent to parking for evening events
- Under stage chair storage
- Pass-through counters from kitchen/food service area
- Avoid circulating through the multi-purpose room to access other spaces
- Near trash/recycling yard

##### **e. Site Access and/or Servicing Concerns:**

- Adjacent to service yard

##### **f. Equipment, Furnishings Provisions & Arrangement Concerns:**

- In-wall folding tables with benches
- Folding chairs for assembly seating
- Large, electrically-operated projection screen
- Ceiling mounted projection system
- Built-in sound system

- Theatrical lighting
- g. Finishes/Treatments:
- MPR Floor: Resilient flooring with court striping
  - Walls: Durable surfaces and easy to maintain
  - Tackable wall surface where appropriate
  - Ceiling: Acoustically treated
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
- h. Environmental Comfort Features
- Zoned HVAC for optimum temperature control
  - Dual-paned windows and acoustically insulated walls throughout reduce noise and provide thermal stability.
  - Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
  - Horizontal mini-blinds provided to reduce glare and adjust room light level
  - Black out curtains are not desired
  - Tinted exterior glazing
- i. Flexibility/Multiple- Use Concerns:
- Traditional multi-purpose room flexibility is desired
- j. Plumbing Needs:
- Drinking fountains with bottle filler (non-filtered, non-refrigerated) to be in close proximity
- k. Technology/Electrical Needs:
- Provide closet to connect data, video and voice drops. Ability to broadcast multi-purpose or stage activities and performances into the classrooms.
  - The multi-purpose room requires the following minimum conduit drops:
    - 4 Data drops
    - 3 Video drops
    - 1 drop on the stage.
    - 2 drops on the side walls
    - 1 Telephone/Intercom drop
  - Electrical Power: Electrical receptacles throughout for flexibility including floor boxes in main space.
  - Equipment in this area is to inventoried and accommodated for electrical needs.
  - Flush, electrical floor outlets in center of room
  - Flush, electrical floor outlets on stage for lecturn
  - Tele-communications: Separate PA for this area only should be provided in addition to campus-wide PA speaker.
  - GPS Clocks: Integral with Tele-com.
- l. AV Requirements:

- Control panel at stage level
  - Microphone System TBD
  - Long throw vs. short throw projection TBD
- m. Cabinets, Storage, Built-In Concerns:
- Folding Tables
  - Understage chair storage
- n. Special Concerns:
- Space for children's belongings
  - Storage for games and equipment
  - Flexible floor area
  - Direct access to play yard
  - Easy access to kitchen
  - Wired for telephone, computers, and media projection system
  - Folding and fixed practice basketball goals
  - Folding partition to separate stage from main MPR space
3. *STAGE PLATFORM/MUSIC CLASSROOM*
- a. General Description:
- The stage should be raised from the main multi-purpose space for audience visibility. The platform can be used for both indoor and outdoor presentations and performances. When the acoustical folding partition is closed and separates stage from the multi-purpose space, it will be used as a music classroom.
- b. Capacity:
- 30 students
- c. Number of Rooms/Area:
- One 1,200 SF room
- d. Adjacencies/Visibility Issues:
- Visible and open to Multi-Purpose Room for performance
  - Opens to outdoor stage via a coiling door
- e. Site Access and or Servicing Concerns:
- Music Classroom has exterior entrances from outdoor stage accessed via accessible path and stairs on each side.
  - Chair lift shall be provided to stage for interior accessibility from MPR.
- f. Equipment, Furnishings Provisions & Arrangement Concerns:
- Equipment list to be similar to new District elementary school standards and include instrument storage cabinets and racks, music stands
  - Single light bar shall be located in front of proscenium for theatrical lighting
  - Elementary grade level stage lighting

- AV sound system with (4) drop microphones shall be provided.
  - Bi-parting stage and backdrop curtains with valance.
  - Stair access shall be provide on each side of stage
  - Markerboard for classroom use.
- g. Finishes/Treatments:
- Floor: Wood plank, painted
  - Walls: Painted drywall and acoustical treatment for Music Classroom function.
  - Ceiling: Acoustical tile ceiling
  - Corner guards where exposed to movement of equipment.
- h. Environmental Comfort Features
- HVAC separately zoned for performance and classroom uses
  - Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
- i. Flexibility/Multiple-Use Concerns:
- Operates as a performance and presentation platform along with Music Classroom functions.
  - Movable acoustic partition shall isolate stage from MPR for classroom use.
- j. Plumbing Needs:
- None
- k. Technology/Electrical Needs:
- Wireless and networking provisions compatible with the rest of the campus
  - AV Control Panel shall be located near front of stage
  - Electrical Power: Convenience outlets throughout for flexibility.
  - IP based GPS Clock/PA system – final product selection in development at time of printing
  - Wireless Microphone and speaker system – final product selection in development at time of printing.
  - Rear projection and motorized screen – final selections pending development of new District Stansdards.
- l. Cabinets, Storage, Built-In Concerns:
- Instrument storage room shall be provided adjacent to stage
  - Under-stage chair storage shall be provided
4. *KITCHEN/FOOD SERVICES*
- a. General Description:
- The kitchen is a heating and serving prep kitchen. It is complementary to the District's central kitchen facility that delivers food goods on a daily basis. A wide single opening service counter shall be provided between the kitchen and servery area. A separate self-service line warm and cold cases is provided for flexible service model.

- b. Capacity:
  - Sized to accommodate maximum student capacity of school.
- c. Number of Rooms/Area:
  - Prep kitchen with adjacent support spaces including office, staff and toilet.
  - Dry good storage and walk-in refrigerator and freezer unit
  - Servery for queuing and point of sale transactions.
- d. Adjacencies/Visibility Issues:
  - Multi-Purpose Room
  - Lunch Shelter
  - Dry food storage/pantry
  - Food service office
  - Deliveries
  - Service yard and trash compactor
- e. Site Access and/or Servicing Concerns:
  - Delivery truck access, staging and trash adjacent to kitchen
  - Service area for staging
  - Trash can wash room
  - Grease interceptor
- f. Equipment, Furnishings Provisions & Arrangement Concerns:
  - Equipment list to be similar to new District elementary school standards
  - Interior walk-in refrigerator and freezer
  - Type I Hood with Ansul fire suppression system
- g. Finishes/Treatments:
  - Floor: Quarry tile floor with coved base
  - Walls: FRP and stainless steel; washable surfaces
  - Ceiling: Washable lay-in ceiling tiles
  - Stainless steel corner guards where exposed to movement of equipment
- m. Environmental Comfort Features
  - HVAC separately zoned for kitchen use
  - Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
- h. Plumbing Needs
  - Provision made to accommodate food service equipment and use
  - Floor drains shall be provided with grease traps
  - Can wash with hot water provided in custodial room
- i. Technology/Electrical Needs
  - Power and data for one computer plus printer in office space as well as convenience power

- Power and data outlets for computerized point of sale
- Full networking provisions compatible with the rest of the campus
- Power as required for kitchen equipment as well as convenience outlets throughout for flexibility
- IP based GPS Clock/PA system – final product selection in development at time of printing

5. *LUNCH SHELTER*

- a. General Description
  - An unconditioned, outdoor covered area for student lunches. It is intended as a sun and rain protected outdoor eating space. It also frees up the multi-purpose room allowing additional activities to be scheduled.
- b. Adjacencies/Visibility Issues
  - Multi-Use Room
  - Restrooms
  - Outdoor Stage and Amphitheater
  - Play areas
- c. Site Access and/or Servicing Concerns
  - Minimize wind impact as feasible
  - No special requirements other than custodial
- d. Equipment, Furnishings, Provisions & Arrangement Concerns:
  - Fixed outdoor eating furniture.
- e. Finishes/Treatments
  - Floor: Concrete paving low maintenance.
  - Ceiling: Exposed to bottom of roof deck
- f. Flexibility/Multiple-Use Concerns
  - Use for other outdoor activities at non-lunch hour times
- g. Plumbing Needs
  - Provide hose bibbs nearby for easy clean-up.
  - Drain inlets under the covered area connected to the sewer system
- h. Technology/Electrical Needs:
  - Access to nearby WAP for wireless connectivity
  - Weatherproof convenience power nearby.
  - IP based GPS Clock/PA system – final product selection in development at time of printing

## **B. ADMINISTRATION/INSTRUCTIONAL SERVICES**

### **1. Description of Facilities**

- a. Administration and instructional services consist of the school administration and staff, who provide the leadership and management of the school. This instructional services space is the management and monitoring center of the school where visitors are funneled and greeted, information is distributed, and staff can meet. Some of the activities and services that occur in the instructional services facility include:

- Student services
- Discipline and detention
- Support of extracurricular programs
- Health services
- School management
- Public reception
- Phone and mail services
- Lost and found
- Record keeping/attendance
- Faculty services
- Distribution of information
- Safe

### **2. ADMINISTRATION/RECEPTION**

#### **a. General Description**

- The General Office is an active space throughout the day and is the 'front door' to the visiting public. It is the center of administrative functions for the school with reception counter separating waiting and administrative work areas.

#### **b. Capacity**

- Two (2) secretarial work stations
- Six (6) person waiting area in lobby/reception
- One (1) attendance clerk
- One (1) coach's desk

#### **c. Number of Rooms/Area:**

- One (1) large open space separated by public service counter

#### **d. Adjacencies/Visibility Issues:**

- Provide high visibility to the lobby, entry court and approach from visitors' parking.
- This area must be well defined for visitors.
- Provide good visibility from the secretarial area to other parts of the general office, particularly the health office.
- Provide an alcove area adjacent to secretarial station for copy/printing
- Provide visual and convenient physical connection to health office, Principal and other administrative offices.
- Adjacent to general office storage and supplies.



- Proximity to staff mailboxes but not in the same area.
  - Principal and Conference/Offices should be behind the Reception area to provide for privacy and security.
- e. Site Access and/or Servicing Concerns:
- Directly adjacent to school entry and visitor parking.
- f. Equipment, Furnishings Provisions & Arrangement Concerns:
- Provide seating in the lobby area
  - Provide minimum of 3 full-time workstations.
- g. Finishes/Treatments:
- Floor: Resilient flooring in reception area; carpet throughout work area.
  - Walls: Tackable wall surfaces
  - Lockable space maximized
  - Ceiling: Acoustically treated
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
- h. Environmental Comfort Features
- Zoned HVAC for optimum temperature control
  - Dual-paned windows and acoustically insulated walls throughout reduce noise and provide thermal stability.
  - Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
  - Horizontal mini-blinds provided to reduce glare and adjust room light level
  - Black out curtains are not desired
  - Tinted exterior glazing
- i. Technology/Electrical Needs
- WiFi Access Port wireless connectivity
  - Power receptacles on multiple circuits are located at regular intervals within the office space
  - Multiple hard-wired data outlets are provided adjacent to power receptacles for flexible networking of computers, printers and other electronic devices. CAT6A cabling throughout.
  - Four-plex power, quad data for VOIP phone/printer in each office
  - Wall-mounted flat panel TV with touch interactivity in conference room and AV Control Panel nearby.
  - IP based GPS Clock/PA system – final product selection in development at time of printing
  - Provide for CATV
  - Fire Alarm: Locate annunciator panel so that it is visible from lobby
- j. Cabinets, Storage, Built-In Concerns:
- Built-in reception counter.

- Secretarial stations may or may not be built in units
- Built-in work counter and storage cabinets and shelving
- Lockable wardrobe closet for office staff.

k. Special Concerns:

- Staff mailboxes should be convenient and accessible but should not interfere with general office functions; convenient to Staff workroom
- Administration areas shall be capable of being locked off from Teacher/Staff spaces during off-hours.

3. *PRINCIPAL'S OFFICE*

a. General Description

- The principal's office should have a sense of privacy, confidentiality and professionalism.
- This interior environment and technology requirements for this space should generally match the quality, functionality and aesthetics of the general office area. Refer to above.

b. Capacity:

- Principal plus 2-3 visitors

c. Number of Rooms:

- One (1) room

d. Adjacencies/Visibility Issues

- Visible, but not necessarily adjacent to secretarial area.
- Visibility to front of school, vehicular drop-off and parking
- Visibility to school grounds
- Prefer easy access to parking for evening events
- Staff restrooms and staff mailboxes should not be in immediate vicinity of Principal's Office.

e. Site Access and/or Servicing Concerns:

- Exterior door to/from playground

f. Equipment, Furnishings, Provisions & Arrangement Concerns:

- Desk and credenza
- 2 side chairs
- Conference table for up to 4

4. *ASSISTANT PRINCIPAL'S OFFICE (1)*

a. General Description:

- This office is similar to Principal office with exception that it is not sized to have a conference table option.
- Space to be provided for up to two student quiet time seating

5. *CONFERENCE ROOM (One)*

- a. General Description:
    - Room shall be used by administrators and teachers to hold group meetings.
    - The interior environment and technology requirements for this space should generally match the quality, functionality and aesthetics of the general office area. Refer to above.
  - b. Capacity:
    - Twelve (12) person conference table
  - c. Number of Rooms
    - One (1) rooms
  - d. Adjacencies/Visibility Issues:
    - Must be visible to secretarial area without necessarily being adjacent.
    - Prefer good visibility to front of school and parking
    - Prefer easy access to parking for evening events
    - Prefer easy access from entrance/administrative lobby area
6. *HEALTH OFFICE*
- a. General Description:
    - The Health Office serves and treats students with illnesses or injuries from accidents. It is important to students who have ongoing medical concerns that require refrigerated medicine and regular attention.
    - The interior environment and technology requirements for this space should generally match the quality, functionality and aesthetics of the general office area. Refer to above
  - b. Capacity:
    - Two cots and a chair.
  - c. Number of Rooms/Area:
    - One room with adjacent toilet room
  - d. Site Access and/or Servicing Concerns:
    - Easy access to parking area and parent pick-up.
  - e. Adjacencies/Visibility Issues:
    - a. Provide high visibility from the administration work area
    - This area must be well defined for visitors.
    - Wait area for students
  - f. Equipment, Furnishings, Provisions & Arrangement Concerns:
    - Provide space for two cots
    - Provide lockable cabinets and wardrobe
    - Provide space for full size refrigerator with freezer compartment
    - Desk for Nurse.

- g. Finishes/Treatments:
  - Floor: Sheet vinyl with covered base throughout this area.
  - Walls: Easily washable. At least one lockable wall surface.
  - Toilet room walls to be ceramic tile or FRP panels
  - Ceiling: Acoustically treated
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
  - Restroom should be easily cleaned/maintained.
- h. Plumbing Needs:
  - Provide sink with bubbler and hot and cold water.
  - Soap and paper towels need to be positioned so that they are accessible to students.
  - Single-occupancy restroom.
- i. Cabinets, Storage, Built-In Concerns:
  - Cabinet with under counter and overhead cabinets. Provide locks.
- j. Special Concerns:
  - Must have easily washable materials and surfaces.

## 7. *STAFF WORKROOM*

- a. General Description:
  - This is a work space for staff to use throughout the school day. It serves to support staff in preparing and copy instructional material. It also is used as a storage room for the office supplies and equipment that is important to the operation of the school. Space should provide island work surface and perimeter counter and storage cabinets including space for two standup printers
- b. Capacity:
  - 250 SF
- c. Number of Rooms:
  - One room.
- d. Adjacencies/Visibility Issues:
  - Direct connection to Staff Lounge and General Office areas
- e. Site Access and/or Servicing Concerns:
  - Ease of access and sufficient clearances for equipment servicing.
- f. Equipment, Furnishings Provisions & Arrangement Concerns:
  - Built-in cabinetry is preferred.
  - Provide 72 mail slots with open compartments below counter surface for larger packages.
  - Two (2) large floorstanding copy machines adjacent to counter space.
  - Provide area for waste/recycle bins

- a. Provide island work surface with storage below for supplies
- g. Finishes/Treatments:
  - Floor: Resilient throughout this area.
  - Walls: Gypsum board painted
  - Ceiling: Acoustically treated
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
- h. Interior Environmental Concerns:
  - Natural/Artificial Lighting: Fluorescent lights.
  - Prefer tinted exterior glazing only if they are on exterior wall.
  - HVAC.
- i. Flexibility/Multiple-Use Concerns:
  - Enable secured access for staff on weekends
- j.. Plumbing Needs:
  - Sink & dishwasher required.
  - Connection for ice maker at refrigerated
- k. Technology/Electrical Needs:
  - Full networking provisions compatible with the rest of the campus.
  - Electrical Power: Electrical receptacles throughout for flexibility.
  - Equipment in this area is to inventoried and coordinated for electrical requirements.
  - Tele-communications
  - PA System speaker to be provided in this area.
  - GPS Clocks
- l. Cabinets, Storage, Built-In Concerns:
  - Provide cabinetry to match the new District elementary school standard.
  - Counter space for collating, Ellison, paper cutter, etc.
  - Area to be provided for built-in colored paper bulk rolls for bulletin boards, project, etc.
  - Deep countertop workspace.
- m. Special Concerns:
  - Surfaces must be large enough to accommodate material layout and organize work

#### 8. STAFF LOUNGE

- a. General Description:
  - This is the gathering space for staff during break and lunch periods. It serves as a large meeting space for staff and the center of instructional material supplies and reproduction. It serves as a storage room for the office supplies and equipment that is important to the operation of the school. Space should be organized so that a large gathering space is separated from the storage and work area.
- b. Capacity:
  - Fifty (50)
- c. Number of Rooms:
  - One room.
- d. Adjacencies/Visibility Issues:
  - Direct visual connection to General Office area
  - Consider easy accessibility for staff
  - Outdoor area for breaks and lunch
- e. Site Access and/or Servicing Concerns:
  - Accessible to the exterior and the parking area.
- f. Equipment, Furnishings Provisions & Arrangement Concerns:
  - Built-in cabinetry is preferred
  - One whiteboard preferred.
  - Provide kitchen with sink, range, charcoal range hood, multiple microwaves, full-sized refrigerator and dishwasher.
- g. Finishes/Treatments:
  - Floor: Resilient throughout this area.
  - Walls: Tackable
  - Ceiling: Acoustically treated
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
- h. Interior Environmental Concerns:
  - Natural/Artificial Lighting: Fluorescent lights.
  - Window Coverings: Horizontal mini-blinds to reduce glare and adjust room light level only if they are on exterior walls.
  - Prefer tinted exterior glazing only if they are on exterior wall.
  - Natural/Artificial Ventilation: Operable windows if on exterior wall. Interior room is acceptable.
  - HVAC
- i. Flexibility/Multiple-Use Concerns:
  - Flexible furnishings for small and large group gatherings

- j. Plumbing Needs:
  - Sink & dishwasher required.
  - Connection for ice maker at refrigerated
- k. Technology/Electrical Needs:
  - Computer connectivity
  - Full networking provisions compatible with the rest of the campus.
  - Electrical Power: Electrical receptacles throughout for flexibility.
  - Equipment in this area is to inventoried and coordinated for electrical requirements.
  - Tele-communications
  - PA System speaker to be provided in this area.
  - GPS Clocks
- l. Cabinets, Storage, Built-In Concerns:
  - Provide cabinetry to match the new District elementary school standard.
  - Counter space for food preparation
  - Cabinet storage for general supplies
- m. Special Concerns:
  - Room must be large enough to seat staff for lunch.

#### **D. LIBRARY**

##### **1. Description of Facilities:**

The Library/Media Center is the heart of the campus, providing resources for all. It provides a place for students to access the collections; both to complete class assignments and pursue individual interests. It provides a place for teachers to access the collections for planning class assignments and pursuing individual interest in the professional library. Some of the activities that occur in the media center include:

- Research for students and teachers Development of multi-media presentations Individual and group study
- Computer and Technology access
- Meetings/conferences
- Resource center for school wide equipment and materials
- Story telling area for all grade levels

This media center should be centrally located to the classrooms. The media center may sometime used by various school organizations for activities during and after school hours. Consideration should be given to its proximity to vehicular parking and the front of the campus.

## 2. *READING ROOM/STACKS*

### a. General Description:

- Traditionally, this area housed books and reading carrels. However, it now serves a variety of functions both formal and casual functions. The space will also be used for large group meetings and instructional activities.

### b. Capacity

- 50 to 60 in auditorium style seating (minimum).

### c. Number of Rooms/Area

- A single, large space that is divided into lower and upper grade book stack areas. The separation can be created by using bookshelves. The media center includes a story telling area that is delineated from the main stack area.

### d. Adjacencies/Visibility Issues

- Good visibility and access from the reference area, circulation desk, workroom, and computer labs.
- Centrally located to all classrooms.
- Story-telling area should allow librarian to readily view other areas of the room .

### e. Site Access and/or Servicing Concerns:

- Convenient to parking for potential after-hours use.

### f. Equipment/Furnishings, Provisions & Arrangement Concerns:

- Reading tables not to exceed 36"x60"
- Provide casual seating -soft seating area
- Provide shelving for approximately 16,000 volumes or more as space allows
- Use a combination of bookshelves with 72" high units at the perimeter walls and a maximum of 42" high free-standing units.
- Provide 24 ft. of shelving for periodical display
- Provide 24ft. of shelving for back issue periodical storage
- Provide on-line card catalog system, six (6) terminals for student use.
- Provide flexible instructional area with room for approximately 50 to 60 people. This area should also have a wall and/or ceiling-mounted projection system and large format wall mounted monitor or interactive white board
- Low shelving for Primary grade books.

### g. Finishes/Treatments:

- Floor: Carpet throughout this area.
- Walls: Maximize tackable wall surface
- Ceiling: Clerestory or high windows for natural light
- Acoustically treated
- General: Colors should provide a welcoming environment that is light/muted and easily maintained.



- h. Interior Environmental Concerns:
  - Natural/Artificial Lighting: Energy-efficient fluorescent lights.
  - Clerestory or well-placed windows for natural light
  - Window Coverings/Room Dimming: Shading System to reduce glare and adjust room light level on exterior walls.
  - Black out curtains not desired.
  - Prefer tinted exterior glazing at exterior wall.
  - Acoustics: Insulated interior walls
  - Provide acoustical isolation and separation
  - Natural/Artificial Ventilation: Operable windows if on exterior wall. Interior room is acceptable.
- i. Flexibility/Multiple-Use Concerns:
  - The main space shall accommodate large group instruction, general gatherings and presentations. A large projection screen or monitor shall be provided.
- j. Plumbing Needs:
  - Hand washing sink at workroom
  - Student restrooms
- k. Technology/Electrical Needs:
  - Computers: Provide for on-line computers in stack area. Computers are also provided in computer lab.
  - Digital Pads
  - Electrical Power: Provide electrical receptacles around various areas to provide for future equipment and on-line computers in stacks and reading area.
  - Tele-communications: Speaker for public address is to be provided.
  - Multi-media: Provide for display system to be connected to instructional closet that can house video disks, VCR, remote computer monitor, etc.
  - Other: GPS Clocks
- l. Cabinets, Storage, Built-In Concerns:
  - Provide cabinetry to match District elementary school standard?
  - Stacks should be located to allow for good visual supervision.
  - Taller bookshelves should be located around the perimeter of the room with lower bookshelves (4 ft. maximum) freestanding.
- m. Special Concerns:
  - Provide browsing area
  - Provide cozy reading nook or alcove if possible
  - Provide separate "story telling" area
  - Desirable to have pull-out spaces for small groups
  - Provide display area at entry

3. *MEDIA SPECIALIST/CIRCULATION DESK*

- a. General Description
  - The media specialist assists the students in finding resource material within the media center. The circulation desk is the primary location for Media Specialist.
- b. Capacity
  - Media Specialist plus parent volunteer.
- c. Number of Rooms/Area
  - Area to be integrated within the Media Center/Stack area.
- d. Adjacencies/Visibility Issues
  - Control and monitor entry to Media Center.
  - Good visibility to all portions of Media Center and Computer Lab.
  - Must be directly visible from the entry, LAN file server location, AV equipment storage and resource center.
- e. Site Access and/or Servicing Concerns
  - Integrated into the main reading and stack area of the Media Center.
- f. Equipment, Furnishings, Provisions & Arrangement Concerns
  - Area to stage books and other items for re-shelving.
  - A built-in book drop may or may not be required depending upon the location of the circulation desk.
- g. Finishes/Treatments
  - Consistent with that of the Media Center finishes. Casework finishes should match or be complimentary to other casework.
- h. Interior Environmental Concerns
  - Integral with reading room/stacks.
- i. Flexibility/Multiple-Use Concerns
  - None: Integral with Reading Room/Stacks.
- j. Plumbing Needs
  - None
- k. Technology/Electrical Needs
  - Provide two computer workstations at Media Specialist desk: One for circulation functions and one for other library work.
- l. Cabinets, Storage, Built-In Concerns
  - Storage and shelf space

#### 4. *WORKROOM*

##### a. General Description

- The Workroom is an “integrated space” which contains much of the school-wide material and equipment. It is closely associated with the AV storage room and may be combined with the AV storage room to form a single, large room with the AV storage room, the workroom should be monitored and supervised by the library person(s).

##### b. Capacity

- N/A

##### c. Number of Rooms

- One Room

##### d. Adjacencies/Visibility Issue

- Visual Connection to Media Specialist desks
- Provide window for visibility
- Close to Media Specialist desk and circulation
- Vinyl composition tile may be integrated into carpeted area
- 

##### e. Site Access and/or Servicing Concerns:

- None

##### f. Equipment, Furnishings Provisions & Arrangement Concerns:

- Teacher desks
- Provide area for large worktable or work counter

##### g. Finishes/Treatments:

- Floor: Carpet throughout this area.
- Walls: Maximize tackable wall surface
- Ceiling: Acoustically treated
- General: Colors should provide a welcoming environment that is light/muted and easily maintained.

##### h. Interior Environmental Concerns:

- Fluorescent lights.
- Window Coverings  
Acoustics: Insulated interior walls
- Natural / Artificial Ventilation: Operable windows if on exterior wall. Interior room is acceptable.
- Other: None

##### i. Flexibility/Multiple-Use Concerns:

- None

##### j. Plumbing Needs:

- Provide sink at workroom counter
  - k. Technology/Electrical Needs:
    - 3 computers to be linked to network
  - l. Cabinets, Storage, Built-In Concerns:
    - Provide cabinetry to match the District elementary school standard.
    - Provide counter space with both upper and lower storage cabinets
    - Provide full height storage cabinets
  - m. Special Concerns:
    - None
5. *MDF/AV EQUIPMENT STORAGE*
- a. General Description
    - Storage area for both mobile and fixed media equipment and houses campus-wide electronic equipment. This area also may serve as the main networking hub for the campus computers.
  - b. Capacity
    - N/A
  - c. Number of Rooms
    - One Room
  - d. Adjacencies/Visibility Issues
    - Visibility to other space not required
    - Provide deep shelving and adequate floor space to maneuver carts
  - e. Site Access and/or Servicing Concerns
    - None
  - f. Equipment, Furnishings, Provisions & Arrangement Concerns
    - None
  - g. Finishes/Treatments
    - Floor: Vinyl compositions tile throughout this area
  - h. Interior Environmental Concerns
    - Natural/Artificial Lighting: Fluorescents
    - Window Coverings/Room Dimming: No special requirements
    - Acoustics: No special requirements
    - Natural/Artificial Ventilation: Provide cooling and exhaust fan, for electronic equipment and file server/data rack.
    - Other: None

- i. Flexibility/Multiple-Use Concerns
  - None
- j. Technology/Electrical Needs
  - Provide power to supply central computer networking hub.

**E. RESOURCE/SUPPORT SERVICES - SMALL GROUP**

1. General Description
  - Flexible common areas provide an environment for "self-contained" programs, such as ESL, Reading Assistance, Resource Specialist. Speech and Language to teach small groups of children with special educational needs. These rooms can also be used for storage of teaching materials and supplies. These rooms are to be central and convenient to classrooms and may be located in or near the Administrative Wing.
2. Capacity
  - Capacity: 1-6 Students plus Teacher
3. Number of Rooms (3)
  - Resource Area/Small Group Rooms. Provide three (3) rooms.
4. Adjacencies/Visibility Issues
  - Locate these activities in an easily accessible, common area
  - Room can be interior. Direct or proximate exterior access is desirable.
5. Site Access and/or Servicing Concerns
  - Central to the campus.
6. Equipment/Furnishings, Provisions & Arrangement Concerns
  - Provide for flexible seating arrangements.
  - Provide possibility for monitor and sound equipment.
  - District will provide portable cabinet units.
7. Finishes/Treatments:
  - Floor: Carpet throughout this area.
  - Walls: Maximize lockable wall surface area. Eight-foot long, white, marker board.
  - Ceiling: Acoustically treated.
  - General: Colors should provide a welcoming environment that is light/muted and easily maintained.
8. Environmental Comfort Features
  - HVAC with zone control
  - Dual-paned windows and acoustically insulated walls throughout reduce noise and provide thermal stability.

- Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
- Horizontal mini-blinds provided to reduce glare and adjust room light level
- Black out curtains are not desired
- Tinted exterior glazing

9. Technology/Electrical Needs

- WiFi Access Port for laptop and digital notepad connectivity
- Dedicated power receptacles (4 outlets/2 circuits) located at regular intervals around the classroom and for overhead projection unit.
- Multiple hard-wired data outlets are provided adjacent to power receptacles for flexible networking of computers, printers and other electronic devices. CAT6A cabling throughout.
- Four-plex power, quad data for VOIP phone/printer for Teacher's use
- AV Control Panel adjacent to Teaching wall and Teacher's desk
- Wall-mounted large-screen flat panel TV with touch interactivity. Consider glare/display technology and viewing angle (refer to Fallon School conditions)
- IP based GPS Clock/PA system – final product selection in development at time of printing.

**F. RESOURCE/SUPPORT SERVICES– LARGE GROUP**

1. General Description

- Large group teaching station tailored to specialized instruction for school Counseling and MTSS programs. The rooms shall permit flexible arrangement. This area should also provide for storage of teaching materials and supplies, be central and convenient to classrooms, and located adjacent to playground.

•

2. Capacity:

- Capacity: 6-30 Students & Teacher

3. Number of Rooms/Area:

- two (2) half size classroom, 480 SF each.

4. Adjacencies/Visibility Issues

- Central to the campus
- Near classrooms
- Adjacent to playground

•

5. Site Access and/or Servicing Concerns:

- Access to the exterior without disturbing other activities or classrooms

6. Equipment/Furnishing, Provisions & Arrangement Concerns:

- Provide storage area with doors and lockable cabinets
- Provide for flexible seating arrangements
- Provide for flexible I movable storage and display cabinets
- Provide for sound equipment

- District will provide portable cabinet units to supplement built-in cabinets.

7. Finishes/Treatments:

- Floor: Carpet throughout this area, VCT at wet area.
- Walls: Provide full height tackable wall surface
- White marker boards is required
- Ceiling: Acoustically treated
- General: Colors should provide a welcoming environment that is light/muted and easily maintained.

8. Environmental Comfort Features

- HVAC with zone control
- Dual-paned windows and acoustically insulated walls throughout reduce noise and provide thermal stability.
- Energy efficient LED light fixtures with dimming capability and zone control allows adjustment of artificial lighting in the room.
- Horizontal mini-blinds provided to reduce glare and adjust room light level
- Black out curtains are not desired
- Tinted exterior glazing

9. Technology/Electrical Needs

- WiFi Access Port for laptop and digital notepad connectivity
- Dedicated power receptacles (4 outlets/2 circuits) located at regular intervals around the classroom and for overhead projection unit.
- Multiple hard-wired data outlets are provided adjacent to power receptacles for flexible networking of computers, printers and other electronic devices. CAT6A cabling throughout.
- Four-plex power, quad data for VOIP phone/printer for Teacher's use
- AV Control Panel adjacent to Teaching wall and Teacher's desk
- Wall-mounted large-screen flat panel TV with touch interactivity. Consider glare/display technology and viewing angle (refer to Fallon School conditions)
- IP based GPS Clock/PA system – final product selection in development at time of printing

**G. TOILET ROOMS**

1. Student:

- Boys: size and number as required by Plumbing code
- Girls: size and number as required by Plumbing code
- Control sight lines to prevent views when door is opening or closing
- Wall hung toilets, urinals and lavatories
- Cold water service for student restrooms
- Consider appropriate placement of toilet paper, seat covers, soap dispensers, paper towel dispensers and trash receptacle
- Lighting to be activated by motion sensors
- Interior surfaces to be ceramic mosaic floor tile and ceramic wall tile
- Storage for restroom custodial supplies adjacent to toilet facilities

- Good ventilation and exhaust systems
- Locate restrooms conveniently to classrooms and play areas so that they do not interfere with classes during recess
- Consider access from both inside and outside with the ability to open or close either access
- Provide one set adjacent to the multi-purpose room
- Locate for supervision of entry.
- Consider after-hour use by community groups
- Consider scale of children and age appropriate fixtures when determining plumbing fixture height placement

2. Staff:

- Number and size of Staff Toilets as required by Plumbing code
- Control sight lines to prevent views when door is opening or closing
- All staff restrooms to have hot and cold water
- Ceramic mosaic floor tile and ceramic wall tile
- Good ventilation
- Consider after-hour use by community groups

## **H. STORAGE/MISCELLANEOUS**

1. Multi-Purpose Storage Rooms

- Provide variety of shelf depths in storage rooms.
- Allow unobstructed floor area for freestanding equipment.
- Storage room to be separated from mechanical and electrical rooms.

2. Instructional Supplies

- Long and narrow room appropriate for shelf storage layout



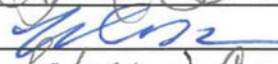
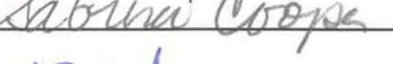


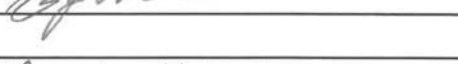

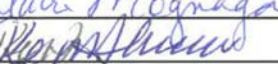




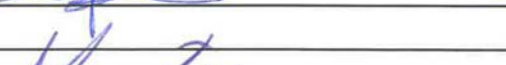

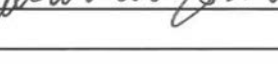
3. Custodian Rooms

- Number and size as shown on area summary sheet
- Storage for emergency/disaster supplies
- Provide variety of shelf depths in storage rooms
- Provide mop sinks with hot/cold water
- Provide FRP at walls adjacent to and behind mop sink
- Allow unobstructed floor area for equipment and cart
- Consider maneuverability of cart both inside room and directly outside of doorway
- Consider proximity to area that it will service and overall campus distribution
- Separate from mechanical and electrical equipment
- Separate from school storage rooms
- Proper shelving to meet the specific needs as to height, width and depth for custodial supplies
- Custodial closet located outside classrooms
- Provide electrical receptacles

**END**



## Fred Ed Spec Committee

NAME	SIGNATURE
Adams-Wipfli, Caitlin	
Baalman, Kelly	
Brown, Jen	
Contreras, Hilbert	
Cooper, Sabrina	
Eissler, Max	
Grimm, Nicole	
Gundell, Brenda	
Johnson, Erin	
Kiernan, Jessica	
Meyn, Danelle	
Mognaga, Claire	
Moirao, Kenna	
Perez, Jamie	
Rodriguez, Custer	
Ruch, Jennifer	never attended
Santurri, Tara	
Sevilla, Lori	
Suminski, Felicia	
Terhune, Mari	
Tischer, Jennifer	
Tsui, Lilia	

**APPENDIX B**  
**CULTURAL RESOURCES**

CALIFORNIA  
HISTORICAL  
RESOURCES  
INFORMATION  
SYSTEM



ALAMEDA  
COLUSA  
CONTRA COSTA  
DEL NORTE

HUMBOLDT  
LAKE  
MARIN  
MENDOCINO  
MONTEREY  
NAPA  
SAN BENITO

SAN FRANCISCO  
SAN MATEO  
SANTA CLARA  
SANTA CRUZ  
SOLANO  
SONOMA  
YOLO

**Northwest Information Center**  
Sonoma State University  
150 Professional Center Drive, Suite E  
Rohnert Park, California 94928-3609  
Tel: 707.588.8455  
nwic@sonoma.edu  
<http://www.sonoma.edu/nwic>

7/11/2019

NWIC File No.: 18-2453

Robert E. Parr  
Quad-Knopf, Inc.  
5080 California Avenue, Suite 220  
Bakersfield, CA 93309

re: Frederiksen Elementary School (QK #180467)

The Northwest Information Center received your record search request for the project area referenced above, located on the Dublin USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.5 mile radius:

Resources within project area:	None
Resources within 0.5 mile radius:	P-01-011774 & 011775.
Reports within project area:	S-47983.
Reports within 0.5 mile radius:	S-46220, 37500, 48567, 2021, 37985, 40758, 727, 10762, 43619, & 30628.

**Resource Database Printout (list):**

**Resource Database Printout (details):**

**Resource Digital Database Records:**

**Report Database Printout (list):**

**Report Database Printout (details):**

**Report Digital Database Records:**

**Resource Record Copies:**

**Report Copies:**

**OHP Historic Properties Directory:**

**Archaeological Determinations of Eligibility:**

**CA Inventory of Historic Resources (1976):**

**Caltrans Bridge Survey:**

**Ethnographic Information:**

**Historical Literature:**

**Historical Maps:**

**Local Inventories:**

**GLO and/or Rancho Plat Maps:**

<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<input checked="" type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<input checked="" type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
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<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<input type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input checked="" type="checkbox"/> nothing listed
<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed

**Shipwreck Inventory:**

☐ enclosed   ☒ not requested   ☐ nothing listed

**\*Notes:**

**\*\*** Current versions of these resources are available on-line:

Caltrans Bridge Survey: <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>

Soil Survey: <http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA>

Shipwreck Inventory: <http://www.slc.ca.gov/Info/Shipwrecks.html>

Let us know if you need any copies. The invoice will be kept open until 7/19/19.

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel  
Researcher

## Resource Detail: P-01-011774

### Identifying information

Primary No.: P-01-011774

Trinomial:

Name: DSRSD 1 Unnamed Railroad Grade

Other IDs:	Type	Name
	Resource Name	DSRSD 1 Unnamed Railroad Grade
	Voided	P-07-004721

Cross-refs: Subsumes 07-004721

### Attributes

Resource type: Structure

Age: Historic

Information base: Survey

Attribute codes: AH07 (Roads/trails/railroad grades)

Disclosure: Not for publication

Collections: No

Accession no(s):

Facility:

### General notes

### Recording events

	Date	Recorder(s)	Affiliation	Notes
a	6/4/2010	Carrie D. Wills	Michael Brandman Associates	

### Associated reports

Report No.	Year	Title	Affiliation
S-047983	2011	Section 106 Cultural Resources Assessment, DSRSD Central Dublin Recycled Water Distribution and Retrofit Project, City of Dublin, Alameda County, California	Michael Brandman Associates

### Location information

County: Alameda

USGS quad(s): Dublin

Address:	Address	City	Assessor's parcel no.	Zip code
	6693 Amador Valley Boulevard	San Ramon/Dublin		94568

PLSS: T2S R1W Sec. MDBM

UTMs:

### Management status

#### Database record metadata

	Date	User	
Entered:	2/16/2017	kliewerk	
Last modified:	7/11/2019	hagell	
IC actions:	Date	User	Action taken
	2/16/2017	kliewerk	record processed from S-47983
	6/28/2019	moored	Corrected disclosure, and added 'Voided' identifier.
	7/11/2019	hagell	edited other identifier
Record status:	Verified		

## Resource Detail: P-01-011775

### Identifying information

Primary No.: P-01-011775

Trinomial:

Name: DSRSD 2 S. San Ramon Creek Section

Other IDs:	Type	Name
	Resource Name	DSRSD 2 S. San Ramon Creek Section
	Other	Section of S. San Ramon Creek
	Voided	P-07-004722

Cross-refs: Subsumes 07-004722

### Attributes

Resource type: Structure

Age: Historic

Information base: Survey

Attribute codes: HP20 (Canal/aqueduct)

Disclosure: Unrestricted

Collections: No

Accession no(s):

Facility:

### General notes

### Recording events

Date	Recorder(s)	Affiliation	Notes
a 6/4/2010	Carrie D. Wills	Michael Brandman and Associates	

### Associated reports

Report No.	Year	Title	Affiliation
S-047983	2011	Section 106 Cultural Resources Assessment, DSRSD Central Dublin Recycled Water Distribution and Retrofit Project, City of Dublin, Alameda County, California	Michael Brandman Associates

### Location information

County: Alameda

USGS quad(s): Dublin

Address:	Address	City	Assessor's parcel no.	Zip code
	6693 Amador Valley Boulevard	Dublin		94568

PLSS:

UTMs:

### Management status

#### Database record metadata

Date	User	Action taken	
Entered: 2/16/2017	kliewerk		
Last modified: 7/11/2019	hagell		
IC actions:	Date	User	Action taken
	2/16/2017	kliewerk	record processed from S-47983
	6/28/2019	moored	Added Voided identifier
	7/11/2019	hagell	edited recording event
Record status:	Verified		

## Report Detail: S-000727

---

### Identifiers

*Report No.:* S-000727

*Other IDs:*

*Cross-refs:*

### Citation information

*Author(s):* Miley Holman and David Chavez

*Year:* 1977 (Mar)

*Title:* An Archaeological Reconnaissance of Two New Proposed Waste Water Pipeline Routes, Livermore-Amador Valley Water Management Agency, Alameda County, California

*Affiliation:* Holman & Chavez Consulting

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Field study

*Inventory size:* c 54 li mi

*Disclosure:* Not for publication

*Collections:* No

### General notes

### Associated resources

*No. resources:* 0

*Has informals:* No

### Location information

*County(ies):* Alameda, Contra Costa

*USGS quad(s):* Diablo, Dublin, La Costa Valley, Las Trampas Ridge, Newark, Niles, Vine Hill, Walnut Creek

*Address:*

*PLSS:*

### Database record metadata

	<i>Date</i>	<i>User</i>	
<i>Entered:</i>	4/7/2005	nwic-main	
<i>Last modified:</i>	7/10/2019	hagell	
<i>IC actions:</i>	<i>Date</i>	<i>User</i>	<i>Action taken</i>
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/9/2015	rinerg	added Affiliation
	11/3/2016	simsa	Updated GIS: moved all features to rep poly layer and mapped based on project location maps
	8/27/2018	zavalat	added affiliation
<i>Record status:</i>	Verified		

## Report Detail: S-002021

---

### Identifiers

*Report No.:* S-002021

*Other IDs:*

*Cross-refs:*

### Citation information

*Author(s):* Miley Paul Holman

*Year:* 1979 (May)

*Title:* Archaeological Field Reconnaissance of the Proposed Kemco Development Area in the City of Dublin, California (letter report)

*Affiliation:* Holman & Associates

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Field study

*Inventory size:*

*Disclosure:* Not for publication

*Collections:* No

### General notes

### Associated resources

*No. resources:* 0

*Has informals:* No

### Location information

*County(ies):* Alameda, Contra Costa

*USGS quad(s):* Dublin

*Address:* Address

*City*

*Assessor's parcel no.*

*Zip code*

Dublin

*PLSS:*

### Database record metadata

*Date*

*User*

*Entered:* 4/7/2005

nwic-main

*Last modified:* 7/10/2019

neala

*IC actions:* *Date*

*User*

*Action taken*

4/7/2005

jay

Appended records from NWICmain bibliographic database.

10/2/2009

muchb

fixed county info

2/18/2019

barnettb

PDF Verified. Oversized pages have been scanned and added to PDF

6/28/2019

moored

Added collections and corrected author.

*Record status:* Verified



## Report Detail: S-010762

---

### Identifiers

Report No.: S-010762

Other IDs:	Type	Name
	Caltrans	182-233040
	OHP PRN	FHWA900522E

Cross-refs:

### Citation information

Author(s): Mara Melandry

Year: 1990 (Apr)

Title: Historic Property Survey Report, proposed reconstruction of the I-580/I-680 interchange in the cities of Dublin and Pleasanton in Alameda County, 04-ALA-580/680, Post Miles 18.2/R21.6, 18.8/21.9, 182-233040

Affiliation: Caltrans

No. pages:

No. maps:

Attributes: Archaeological, Architectural/historical, Field study

Inventory size:

Disclosure: Not for publication

Collections: No

---

Sub-design.: a

Author(s): Marcia K. Kelly

Year: 1989 (Mar)

Title: Archaeological Survey Report, proposed reconstruction of the I-580/I-680 Interchange in the cities of Dublin and Pleasanton in Alameda County, 4-ALA-580/680, Post Miles 18.2/R21.6, 18.8/21.9, EA 4182-233040

Affiliation: California Department of Transportation

Report type(s): Archaeological, Field study

Inventory size:

No. pages:

Disclosure: Not for publication

Collections: No

PDF Pages: 5-23

Sub-design.: b

Author(s): E.W. Blackmer

Year: 1990 (Mar)

Title: Historical Architectural Survey Report, 4-Ala-580/680, 18.2/R21.6, 18.8/21.9, 182-233040 (letter report)

Affiliation: California Department of Transportation

Report type(s): Architectural/historical, Field study

Inventory size:

No. pages:

Disclosure: Not for publication

Collections: No

PDF Pages: 24-34

### General notes

### Associated resources

No. resources: 0

Has informals: No

### Location information

County(ies): Alameda

USGS quad(s): Dublin

Address:

Report Detail: S-010762

---

PLSS:		
Database record metadata		
Date		User
Entered: 4/7/2005		nwic-main
Last modified: 4/29/2019		barnettb
IC actions:	Date	User
	4/7/2005	jay
	3/28/2017	hagell
	3/7/2018	raelync
	4/29/2019	barnettb
Record status: Verified		Action taken
		Appended records from NWICmain bibliographic database.
		added additional citations, other identifiers,. Edited affiliation, title.
		entered author; FHWA900522E not on file at the NWIC at this time.
		PDF Verified. Oversized pages have been scanned and added to PDF

## Report Detail: S-030628

---

### Identifiers

*Report No.:* S-030628

<i>Other IDs:</i>	<i>Type</i>	<i>Name</i>
	Submitter	SNFCCA0065
	Submitter	SWCA 9340-168
	Submitter	RESCOM PO #0224-05

*Cross-refs:*

### Citation information

*Author(s):* Robert Herrmann

*Year:* 2005 (Feb)

*Title:* Cultural Resources Survey of the Proposed SNFCCA0065/Amador Valley Road Cellular Site, 7557 Amador Valley Road, Dublin, Alameda County, California

*Affiliation:* SWCA Environmental Consultants

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Architectural/historical, Excavation, Field study

*Inventory size:* c 0.25 ac

*Disclosure:* Not for publication

*Collections:* No

### General notes

### Associated resources

*No. resources:* 0

*Has informals:* No

### Location information

*County(ies):* Alameda

*USGS quad(s):* Dublin

<i>Address:</i>	<i>Address</i>	<i>City</i>	<i>Assessor's parcel no.</i>	<i>Zip code</i>
	7557 Amador Valley Road	Dublin		
<i>PLSS:</i>	T2S R1W			
	T3S R1W			

### Database record metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 11/7/2005	leigh	
<i>Last modified:</i> 3/8/2018	raelyn	
<i>IC actions:</i>	<i>Date</i>	<i>User</i>
	3/7/2018	raelyn
		<i>Action taken</i>
		Edited report attributes;
<i>Record status:</i>	Verified	

## Report Detail: S-037500

---

### Identifiers

*Report No.:* S-037500

*Other IDs:*

*Cross-refs:*

### Citation information

*Author(s):* Carrie D. Wills

*Year:* 2010 (May)

*Title:* Cultural Resources Records Search and Site Visit for T-Mobile West Corporation, a Delaware Corporation Candidate BA22803-A ( DSA Dublin High School), 8151 Village Parkway, Dublin, Alameda County, California. (letter report)

*Affiliation:* Michael Brandman Associates

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Architectural/historical, Field study

*Inventory size:*

*Disclosure:* Not for publication

*Collections:* No

### General notes

### Associated resources

*No. resources:* 0

*Has informals:* No

### Location information

*County(ies):* Alameda

*USGS quad(s):* Dublin

*Address:* Address

8151 Village Parkway

*City*

Dublin

*Assessor's parcel no.*

*Zip code*

94568

*PLSS:*

### Database record metadata

*Date*

*User*

*Entered:* 10/28/2010

guldenj

*Last modified:* 7/10/2019

hagell

*IC actions:* Date

*User*

*Action taken*

7/10/2019

hagell

edited title

*Record status:* Verified

## Report Detail: S-037985

---

### Identifiers

Report No.: S-037985

Other IDs:	Type	Name
	Submitter	WSA Project 2011-11
	Submitter	WSA Project 2011-13

Cross-refs:

### Citation information

Author(s): Paul Farnsworth

Year: 2011 (Apr)

Title: Archaeological Testing Report for the Arroyo Vista Project, City of Dublin, Alameda County, California.

Affiliation: William Self Associates, Inc.

No. pages:

No. maps:

Attributes: Archaeological, Excavation

Inventory size:

Disclosure: Not for publication

Collections: No

### General notes

### Associated resources

No. resources: 0

Has informals: No

### Location information

County(ies): Alameda

USGS quad(s): Dublin

Address: Address

City  
Dublin

Assessor's parcel no.

Zip code

PLSS:

### Database record metadata

Date	User	Action taken
Entered: 6/15/2011	ballesterosr	
Last modified: 7/10/2019	hagell	
IC actions: Date	User	Action taken
6/28/2019	moored	Added collections. Corrected attributes. Removed 'cross reference' to S-47805 as I'm unsure why they were associated to one another.
7/10/2019	neala	added 'other IDs' & city
7/10/2019	hagell	edited affiliation

Record status: Verified

## Report Detail: S-040758

---

### Identifiers

*Report No.:* S-040758

<i>Other IDs:</i>	<i>Type</i>	<i>Name</i>
	OHP PRN	BUR_2015_0615_001

*Cross-refs:*

### Citation information

*Author(s):* Virginia Hagensieker and Janine M. Loyd

*Year:* 2012 (Oct)

*Title:* A Cultural Resources Study for a Proposed Recycled Water Expansion Project, Dublin, Alameda County, California

*Affiliation:* Tom Origer & Associates

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Field study

*Inventory size:*

*Disclosure:* Not for publication

*Collections:* No

---

*Sub-desig.:* a

*Author(s):* Virginia Hagensieker and Janine M. Loyd

*Year:* 2013 (Mar)

*Title:* A Cultural Resources Study for a Proposed Recycled Water Expansion Project, Dublin, Alameda County, California (revised)

*Affiliation:* Tom Origer & Associates

*Report type(s):* Archaeological, Field study

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* No

*PDF Pages:* 30-60

---

*Sub-desig.:* b

*Author(s):* Julianne Polanco

*Year:* 2015 (Jul)

*Title:* BUR\_2015\_0615\_001; National Historic Preservation Act (NHPA) Section 106 Consultation for the Western Dublin Recycled Water Expansion Project, Alameda County, California (15-MPRO-110)

*Affiliation:* Office of Historic Preservation

*Report type(s):* OHP Correspondence

*Inventory size:*

*No. pages:*

*Disclosure:* Unrestricted

*Collections:* No

*PDF Pages:* 61-69

---

### General notes

#### Associated resources

*No. resources:* 0

*Has informals:* No

#### Location information

*County(ies):* Alameda

*USGS quad(s):* Dublin

*Address:*

*PLSS:*

---

## Report Detail: S-040758

---

### Database record metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 6/10/2013	baileyl	
<i>Last modified:</i> 8/16/2016	hagell	
<i>IC actions:</i> <i>Date</i>	<i>User</i>	<i>Action taken</i>
2/29/2016	paganob	Added additional citations 'a' and 'b'
8/16/2016	hagell	edited title
5/4/2017	rinerg	Recode "Concurrence Correspondence" in additional citation title to Type=OHP Correspondence
<i>Record status:</i> Verified		

## Report Detail: S-043619

---

### Identifiers

*Report No.:* S-043619

<i>Other IDs:</i>	<i>Type</i>	<i>Name</i>
	Caltrans	EA 04-3G950K (04-3G910K)
	OHP PRN	FHWA_2014_0310_001

*Cross-refs:*

### Citation information

*Author(s):* Laura Leach-Palm and Chandra Miller

*Year:* 2014 (Feb)

*Title:* Historic Property Survey Report for the MTC Interstate 680 Express Lane Phase 1 Project, Alameda and Contra Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-13.9 EA 3G950K (04-3G910K)

*Affiliation:* Far Western Anthropological Research Group, Inc.; JRP Historical Consulting, LLC

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Architectural/historical, Excavation, Field study

*Inventory size:*

*Disclosure:* Not for publication

*Collections:* No

---

*Sub-design.:* a

*Author(s):* Laura Leach-Palm and Jack Meyer

*Year:* 2014 (Feb)

*Title:* Archaeological Survey Report for the MTC Interstate 680 Express Lane Phase I Project, Alameda and Contra Costa Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-R13.9, EA 04-3G950K (04-3G910K)

*Affiliation:* Far Western Anthropological Research Group, Inc.

*Report type(s):* Archaeological, Field study

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* Unknown

*PDF Pages:* 51-207

---

*Sub-design.:* b

*Author(s):* Jack Meyer and Laura Leach-Palm

*Year:* 2014 (Feb)

*Title:* Extended Phase I Investigation for the MTC I-680 Express Lane Phase I Project between Alcosta Boulevard and Livorna Road, Alameda and Contra Costa Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-13.9, EA 04-3G950K

*Affiliation:* Far Western Anthropological Research Group, Inc.

*Report type(s):* Excavation

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* Unknown

*PDF Pages:* 208-299



## Report Detail: S-043619

---

*Sub-design:* c

*Author(s):* Chandra Miller

*Year:* 2014 (Feb)

*Title:* Historical Resource Evaluation Report for the MTC Express Lane Phase I Project, Alameda and Contra Costa Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-13.9, EA 04-3G950K, ID: 0413000110

*Affiliation:* JRP Historical Consulting, LLC

*Report type(s):* Architectural/historical, Field study

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* Unknown

*PDF Pages:* 300-343

*Sub-design:* d

*Author(s):* Laura Leach-Palm

*Year:* 2014 (Jul)

*Title:* Historic Property Survey Report for the MTC Interstate 680 Express Lane Phase 1 Project, Alameda and Contra Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-13.9

*Affiliation:* Far Western Anthropological Research Group Inc.

*Report type(s):* Archaeological, Architectural/historical, Excavation, Field study

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* No

*PDF Pages:* 344-355

*Sub-design:* e

*Author(s):* Laura Leach-Palm

*Year:* 2014 (Jul)

*Title:* Environmentally Sensitive Area Action Plan for the Metropolitan Transportation Commission's Interstate 680 Express Lane Project, Alameda and Contra Costa Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-R-13.9, EA 04-3G950K (04-3G910K)

*Affiliation:* Far Western Anthropological Research Group, Inc.

*Report type(s):* Management/planning, Other research

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* No

*PDF Pages:* 356-369

*Sub-design:* f

*Author(s):* Laura Leach-Palm

*Year:* 2015 (Jan)

*Title:* Supplemental Historic Property Survey Report for the MTC Interstate 680 Express Lane Phase I Project, Alameda and Contra Costa Counties, California; 04-ALA-680 PM R20.2-R21.88, 04-CCO-680 PM R0.0-13.9, EA 04-3G950K (04-3G910K)

*Affiliation:* Far Western Anthropological Research Group, Inc.

*Report type(s):* Archaeological, Field study, Other research

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* No

*PDF Pages:* 370-379

## Report Detail: S-043619

---

*Sub-design:* g

*Author(s):* Laura Leach-Palm

*Year:* 2015 (Jan)

*Title:* Environmentally Sensitive Area Action Plan for the Metropolitan Transportation Commission's Interstate 680 Express Lane Project, Alameda and Contra Costa Counties, California; 04-ALA-680 PM R20.2-R-21.88, 04-CCO-680 PM R0.0-R13.9, EA 04-3G950K (04-3G910K)

*Affiliation:* Far Western Anthropological Research Group, Inc.

*Report type(s):* Management/planning, Other research

*Inventory size:*

*No. pages:*

*Disclosure:* Not for publication

*Collections:* No

*PDF Pages:* 380-393

---

*Sub-design:* h

*Author(s):* Carol Roland-Nawi, Elizabeth Kee, and Valerie Shearer

*Year:* 2014 (May)

*Title:* FHWA\_2014\_3010\_001: Project Changes Affecting Request for Determination of Eligibility; Interstate 680 Express Lane Phase I Project through Alameda and Contra Costa Counties

*Affiliation:* California Office of Historic Preservation; Department of Transportation

*Report type(s):* OHP Correspondence

*Inventory size:*

*No. pages:*

*Disclosure:* Unrestricted

*Collections:* No

*PDF Pages:* 394-399

### General notes

#### Associated resources

<i>Primary No.</i>	<i>Trinomial</i>	<i>Name</i>
P-07-000185	CA-CCO-000308	Stone Valley Site
P-07-004524		Rudgear Road Buried Site
P-07-004525		APN 197-030-025

*No. resources:* 3

*Has informals:* No

#### Location information

*County(ies):* Alameda, Contra Costa

*USGS quad(s):* Diablo, Dublin, Las Trampas Ridge, Walnut Creek

*Address:*

*PLSS:*

#### Database record metadata

<i>Date</i>	<i>User</i>	
<i>Entered:</i> 4/30/2014	LucidoJ	
<i>Last modified:</i> 1/4/2019	moored	
<i>IC actions:</i> <i>Date</i>	<i>User</i>	<i>Action taken</i>
2/17/2016	paganob	added additional citation 'g'
7/20/2016	hagell	added/edited additional citations
8/24/2017	vickeryn	Added additional pages to additional citation "h". Removed duplicates of additional citations "a" "b" and "c" from report PDF
1/4/2019	moored	Corrected additional citation 'h'. Added authors, affiliation, and corrected attributes/title.

*Record status:* Verified

## Report Detail: S-046220

---

### Identifiers

Report No.: S-046220  
Other IDs: Type Name  
Submitter ESA Project #130626.04

Cross-refs:

### Citation information

Author(s): Heidi Koenig  
Year: 2015 (Mar)  
Title: Zone 7 Water Agency 2015 Maintenance Projects, Cultural Resources Survey Report  
Affiliation: Environmental Science Associates  
No. pages:  
No. maps:  
Attributes: Archaeological, Field study  
Inventory size:  
Disclosure: Not for publication  
Collections: No

---

Sub-design.: a  
Author(s): Heidi Koenig  
Year: 2015 (Oct)  
Title: Archaeological Monitoring Results - Zone 7 Water Agency 2015 Maintenance Projects (ESA #130626.04) (letter report)  
Affiliation: ESA  
Report type(s): Archaeological, Monitoring  
Inventory size:  
No. pages:  
Disclosure: Not for publication  
Collections: No  
PDF Pages: 35-44

### General notes

#### Associated resources

No. resources: 0  
Has informals: No

#### Location information

County(ies): Alameda  
USGS quad(s): Dublin  
Address: Address City Assessor's parcel no. Zip code  
Dublin  
Pleasanton  
PLSS: T3S R1E

#### Database record metadata

Date	User
Entered: 5/5/2015	guldenbreinj
Last modified: 2/20/2018	moored

IC actions: Date	User	Action taken
11/5/2015	paganob	added additional citation 'a'

Record status: Verified

## Report Detail: S-047983

---

### Identifiers

Report No.: S-047983

Other IDs:	Type	Name
	OHP PRN	BUR111208A
	Submitter	09-CCAO-165

Cross-refs:

### Citation information

Author(s): Carrie D. Wills

Year: 2011 (Oct)

Title: Section 106 Cultural Resources Assessment, DSRSD Central Dublin Recycled Water Distribution and Retrofit Project, City of Dublin, Alameda County, California

Affiliation: Michael Brandman Associates

No. pages:

No. maps:

Attributes: Archaeological, Field study

Inventory size:

Disclosure: Not for publication

Collections: No

---

Sub-design.: a

Author(s): Milford Wayne Donaldson

Year: 2012 (Feb)

Title: BUR111208A; Section 106 Compliance for the Dublin San Ramon Services District (DSRSD) Central Dublin Recycled Water Distribution and Retrofit Project in Alameda County, California (Project #09-CCAO-165)

Affiliation: Office of Historic Preservation

Report type(s): OHP Correspondence

Inventory size:

No. pages:

Disclosure: Unrestricted

Collections: No

PDF Pages: 88-94

### General notes

#### Associated resources

Primary No.	Trinomial	Name
P-01-011774		DSRSD 1 Unnamed Railroad Gr
P-01-011775		DSRSD 2 S. San Ramon Creek
P-07-004721		Voided; see P-01-011774
P-07-004722		Voided; See P-01-011775

No. resources: 4

Has informals: No

#### Location information

County(ies): Alameda

USGS quad(s): Dublin

Address:

PLSS:

#### Database record metadata

Date	User	
Entered: 8/3/2016	cabrala	
Last modified: 7/10/2019	hagell	
IC actions: Date	User	Action taken
8/3/2016	cabrala	Unprocessed records

## Report Detail: S-047983

---

2/16/2017	grahams	records processed by kliewerk on 2/8/17
5/4/2017	rinerg	Recode "Concurrence Correspondence" in additional citation title to Type=OHP Correspondence

*Record status:* Verified

## Report Detail: S-048567

---

### Identifiers

*Report No.:* S-048567

<i>Other IDs:</i>	<i>Type</i>	<i>Name</i>
	Submitter	130626.11

*Cross-refs:*

### Citation information

*Author(s):* Heidi Koenig

*Year:* 2016 (Apr)

*Title:* Zone 7 Water Agency, 2016 Maintenance Projects, Cultural Resources Survey Report

*Affiliation:* Environmental Science Associates

*No. pages:*

*No. maps:*

*Attributes:* Archaeological, Architectural/historical, Field study

*Inventory size:*

*Disclosure:* Not for publication

*Collections:* No

### General notes

### Associated resources

*No. resources:* 0

*Has informals:* No

### Location information

*County(ies):* Alameda

*USGS quad(s):* Altamont, Dublin

*Address:*

*PLSS:*

### Database record metadata

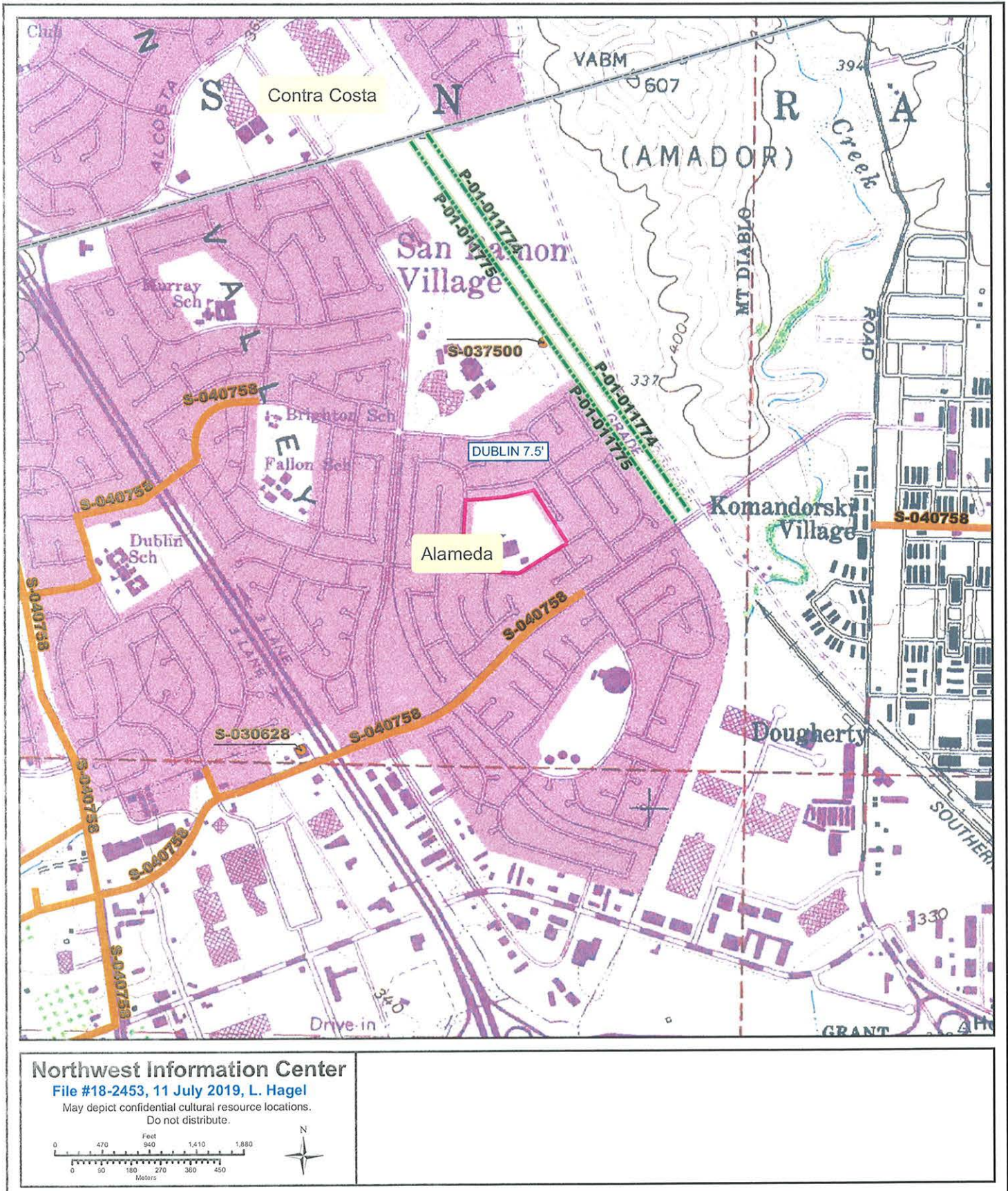
	<i>Date</i>	<i>User</i>
<i>Entered:</i>	2/11/2017	cabrala
<i>Last modified:</i>	7/10/2019	hagell

*IC actions:*

*Record status:* Verified

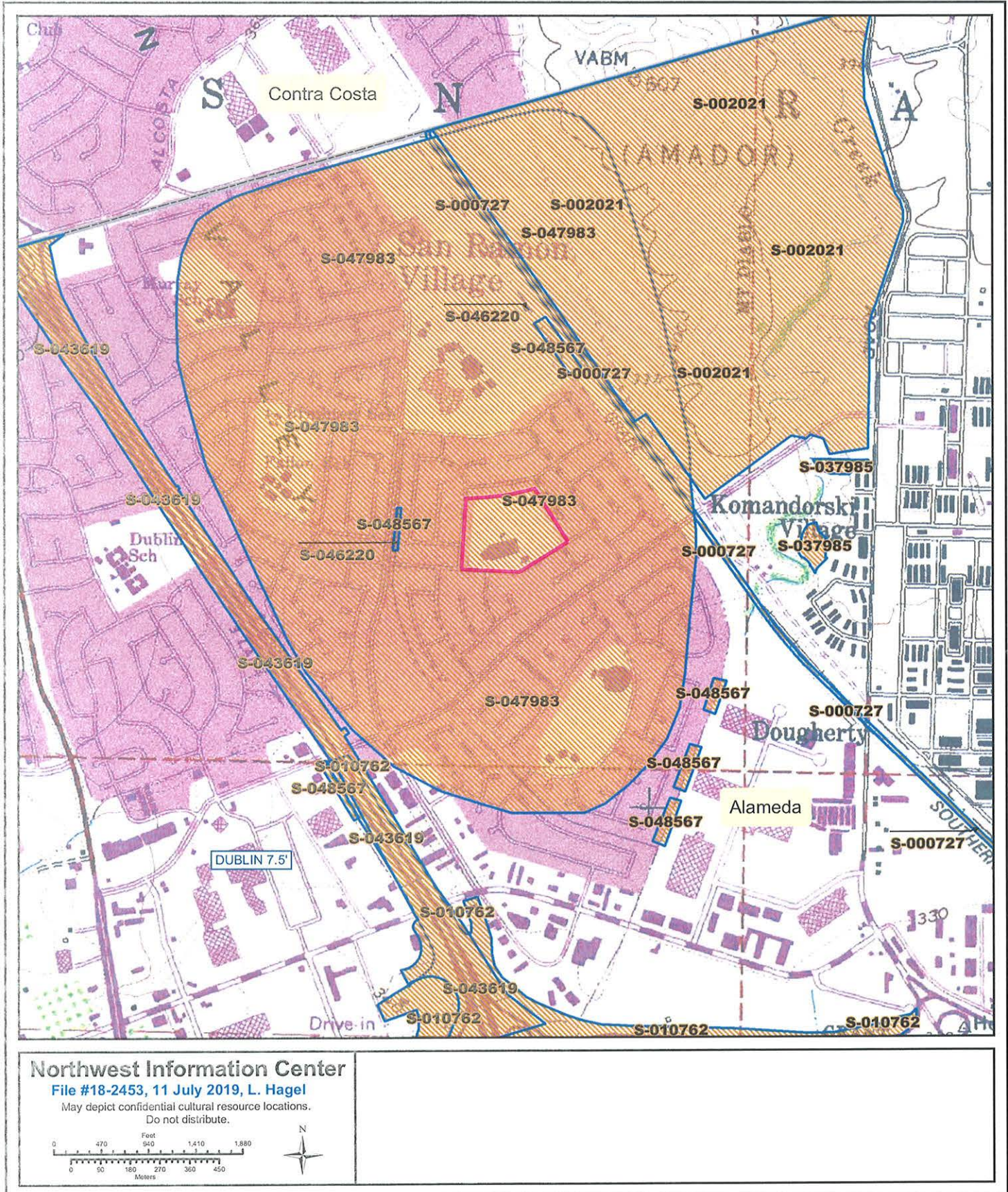


Frederiksen Elementary School (QK #180467)  
Map #1





Frederiksen Elementary School (QK #180467)  
Map #2





**Cultural and Environmental Department**  
**1550 Harbor Blvd., Suite 100**  
**West Sacramento, CA 95691 Phone: (916) 373-3710**  
**Email: [nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)**  
**Website: <http://www.nahc.ca.gov>**



Jaymie Brauer, Principal Planner  
QK, Inc.

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, **Frederiksen Elementary School Project**, City of Dublin; Dublin USGS Quadrangle, Alameda County

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) (“Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.”)

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
  - A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
  - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
  - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
  - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
  - Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.
3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative however the area is sensitive for cultural resources.
4. Any ethnographic studies conducted for any area including all or part of the APE; and
5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: [gayle.totton@nahc.ca.gov](mailto:gayle.totton@nahc.ca.gov).

Sincerely,



Gayle Totton, B.S., M.A., Ph. D  
Associate Governmental Program Analyst

Attachment

**Native American Heritage Commission  
Tribal Consultation List  
Alameda County  
3/28/2019**

***Amah Mutsun Tribal Band***

Valentin Lopez, Chairperson P.O. Box 5272 Galt, CA, 95632 Phone: (916) 743 - 5833 vlopez@amahmutsun.org	Costanoan Northern Valley Yokut
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***Amah Mutsun Tribal Band of  
Mission San Juan Bautista***

Irenne Zwielerle, Chairperson 789 Canada Road Woodside, CA, 94062 Phone: (650) 851 - 7489 Fax: (650) 332-1526 amahmutsuntribal@gmail.com	Costanoan
---	-----------

***Indian Canyon Mutsun Band of  
Costanoan***

Ann Marie Sayers, Chairperson P.O. Box 28 Hollister, CA, 95024 Phone: (831) 637 - 4238 ams@indiancanyon.org	Costanoan
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***Muwekma Ohlone Indian Tribe  
of the SF Bay Area***

Charlene Nijmeh, Chairperson 20885 Redwood Road, Suite 232 Castro Valley, CA, 94546 Phone: (408) 464 - 2892 cnijmeh@muwekma.org	Costanoan
---	-----------

***North Valley Yokuts Tribe***

Katherine Erolinda Perez, Chairperson P.O. Box 717 Linden, CA, 95236 Phone: (209) 887 - 3415 canutes@verizon.net	Costanoan Northern Valley Yokut
---	---------------------------------------

***The Ohlone Indian Tribe***

Andrew Galvan, P.O. Box 3388 Fremont, CA, 94539 Phone: (510) 882 - 0527 Fax: (510) 687-9393 chochenyo@AOL.com	Bay Miwok Ohlone Patwin Plains Miwok
--	---

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 6097.98 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Frederiksen Elementary School, Alameda County.

**APPENDIX C**  
**TRIBAL LETTERS**



# DUBLIN SCHOOLS

## DUBLIN UNIFIED SCHOOL DISTRICT

7471 Larkdale Avenue, Dublin, CA 94568-1599 ♦ 925-828-2551 ♦ FAX 925-829-6532

December 9, 2019

*Education That Inspires  
Lifelong Learning*

### SUPERINTENDENT

Dave Marken, Ed.D..  
(925) 828-2551

### BOARD OF TRUSTEES

Amy Miller  
President

Megan Rouse  
Vice President

Dan Cherrier  
Trustee

Catherine Kuo  
Area 3 Trustee

Gabrielle Blackman  
Area 4 Trustee

FROM: Dublin Unified School District

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). A Formal Notification of a Decision to Undertake a Project and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 (hereafter PRC).

Dear Chairperson Nijmeh,

The Dublin Unified School District has decided to undertake the following project: demolish and rebuild the existing structures of Frederiksen Elementary School (Project). Below please find a map showing the Project's regional location (Figure 1) and aerial location (Figure 2), as well as the name of our Project point of contact.

The Dublin Unified School District is proposing to demolish and rebuild Frederiksen Elementary School, an elementary school campus within Section 21, Township 2 South, Range 1 West, Mount Diablo Meridian, and the Dublin U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. The site encompasses approximately 12 acres of Accessor's Parcel Number (APN) 941-194-026. The Project site is located at 7243 Tamarack Drive in Dublin, California.

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Dublin Unified School District.

Should you have any comments or questions please contact our designated representative, Chris Stevens at (925) 828-2551.

Very Respectfully,

  
Lisa Caldira

Facilities Technician  
Dublin Unified School District

Enclosures: Figures 1 and 2



**Figure Error! No text of specified style in document.  
Regional Location**





**Figure 2**  
**Aerial Location**

DUBLIN  
UNIFIED



School District

*Education That Inspires  
Lifelong Learning*

**SUPERINTENDENT**

*Dave Marken, Ed.D..  
(925) 828-2551*

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*Dan Cherrier  
Trustee*

*Catherine Kuo  
Area 3 Trustee*

*Gabrielle Blackman  
Area 4 Trustee*

# DUBLIN SCHOOLS

## DUBLIN UNIFIED SCHOOL DISTRICT

7471 Larkdale Avenue, Dublin, CA 94568-1599 ♦ 925-828-2551 ♦ FAX 925-829-6532

December 9, 2019

FROM: Dublin Unified School District

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). A Formal Notification of a Decision to Undertake a Project and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 (hereafter PRC).

Dear Chairperson Perez,

The Dublin Unified School District has decided to undertake the following project: demolish and rebuild the existing structures of Frederiksen Elementary School (Project). Below please find a map showing the Project's regional location (Figure 1) and aerial location (Figure 2), as well as the name of our Project point of contact.

The Dublin Unified School District is proposing to demolish and rebuild Frederiksen Elementary School, an elementary school campus within Section 21, Township 2 South, Range 1 West, Mount Diablo Meridian, and the Dublin U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle. The site encompasses approximately 12 acres of Accessor's Parcel Number (APN) 941-194-026. The Project site is located at 7243 Tamarack Drive in Dublin, California.

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request consultation, in writing, with the Dublin Unified School District.

Should you have any comments or questions please contact our designated representative, Chris Stevens at (925) 828-2551.

Very Respectfully,

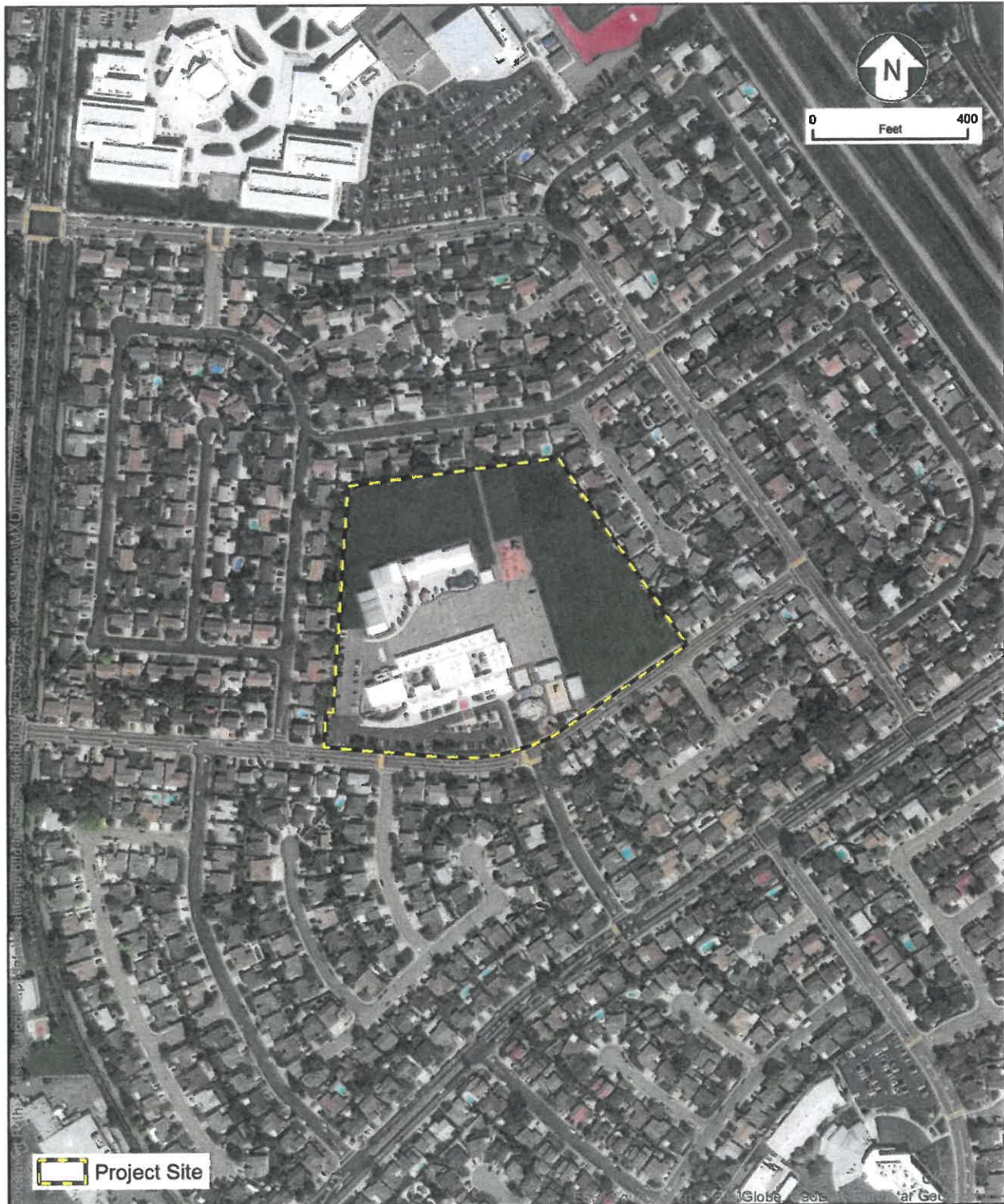
Lisa Caldira

Facilities Technician  
Dublin Unified School District

Enclosures: Figures 1 and 2







**Figure 2**  
**Aerial Location**



**DUBLIN  
UNIFIED**



**School District**

# DUBLIN SCHOOLS

## DUBLIN UNIFIED SCHOOL DISTRICT

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December 9, 2019

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*Gabrielle Blackman  
Area 4 Trustee*

FROM: Dublin Unified School District

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). A Formal Notification of a Decision to Undertake a Project and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 (hereafter PRC).

Dear Chairperson Sayers,

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Very Respectfully,

Lisa Caldara  
Facilities Technician  
Dublin Unified School District

Enclosures: Figures 1 and 2



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Regional Location**





**Figure 2**  
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FROM: Dublin Unified School District

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). A Formal Notification of a Decision to Undertake a Project and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 (hereafter PRC).

Dear Chairperson Zwierlein,

The Dublin Unified School District has decided to undertake the following project: demolish and rebuild the existing structures of Frederiksen Elementary School (Project). Below please find a map showing the Project's regional location (Figure 1) and aerial location (Figure 2), as well as the name of our Project point of contact.

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Very Respectfully,

Lisa Caldura

Facilities Technician  
Dublin Unified School District

Enclosures: Figures 1 and 2





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**Figure 2**  
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# DUBLIN SCHOOLS

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*Catherine Kuo  
Area 3 Trustee*

*Gabrielle Blackman  
Area 4 Trustee*

FROM: Dublin Unified School District

RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). A Formal Notification of a Decision to Undertake a Project and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 (hereafter PRC).

Dear Chairperson Lopez,

The Dublin Unified School District has decided to undertake the following project: demolish and rebuild the existing structures of Frederiksen Elementary School (Project). Below please find a map showing the Project's regional location (Figure 1) and aerial location (Figure 2), as well as the name of our Project point of contact.

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Very Respectfully,

Lisa Caldara  
Facilities Technician  
Dublin Unified School District

Enclosures: Figures 1 and 2



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**Figure 2**  
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December 9, 2019

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RE: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 (Gatto, 2014). A Formal Notification of a Decision to Undertake a Project and Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1 (hereafter PRC).

Dear Chairperson Galvan,

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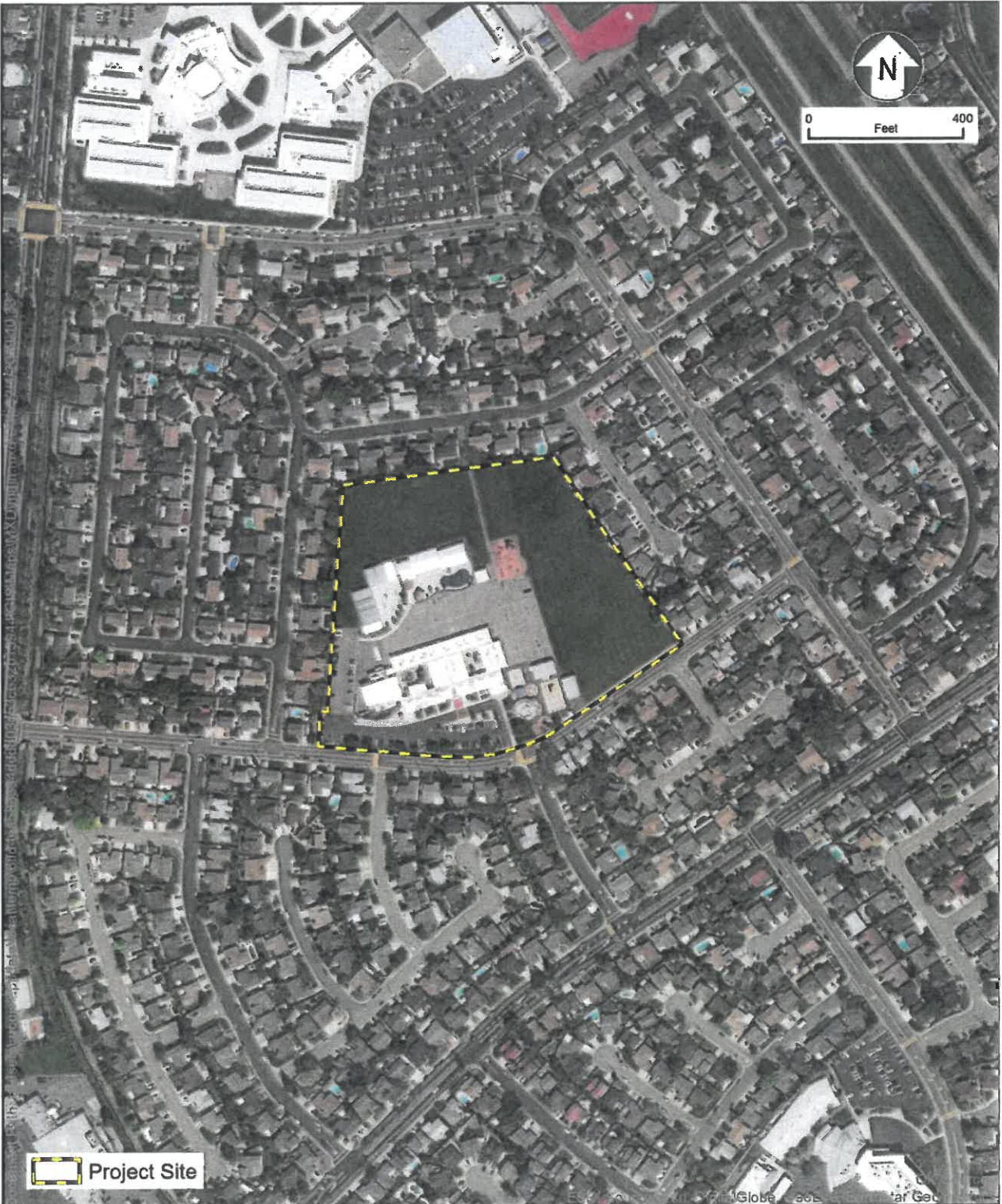
Lisa Caldrea

Facilities Technician  
Dublin Unified School District

Enclosures: Figures 1 and 2







**Figure 2**  
**Aerial Location**

**APPENDIX D**  
**TRAFFIC IMPACT ANALYSIS**



# Draft Transportation Impact Study Report

Frederiksen Elementary School

**Dublin, California**





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## **EXECUTIVE SUMMARY**

This report summarizes the results of the Traffic Impact Study (TIS) conducted for the modernization of Frederiksen Elementary School located at 7243 Tamarack Drive in the City of Dublin, CA. The purpose of this traffic impact study is to evaluate the potential traffic impacts resulting from the development of the proposed project on the surrounding transportation system.

The report also includes evaluations and recommendations concerning project site access and on-site circulation for vehicles, bicycles, and pedestrians; evaluation of on-site vehicle parking supply.

To evaluate the impacts on the transportation infrastructure due to the addition of traffic from the proposed project, six study intersections listed below along with Mansfield Avenue were evaluated during the weekday a.m. and midday peak hour under two study scenarios.

- Tamarack Drive and Fredrickson Parking Lot Driveway 1
- Tamarack Drive and Fredrickson Parking Lot Driveway 2
- Tamarack Drive and Burton Street
- Tamarack Drive and Burnham Way
- Tamarack Drive and Brighton Drive
- Tamarack Drive and Village Parkway

The study intersections were evaluated under *Existing (No Project)* and *Existing plus Project* scenarios. For the purposes of this analysis, potential traffic operational effects from the proposed project are identified based on established traffic operational thresholds of the City of Dublin. All intersections and study scenarios were reviewed by the DUSD and the City of Dublin staff to ensure the correct parameters were analyzed.

### ***Project Trip Generation***

The proposed project is expected to generate 23 additional daily vehicular trips, 8 weekday a.m. peak hour trips (4 inbound trips, 4 outbound trips) and 2 weekday midday peak hour trips (1 inbound trip, 1 outbound trip). TJKM applied 20 percent trip discounts to the proposed project for buses, pedestrian and bicycle uses.

### ***Existing Conditions***

Under this scenario, all intersections operates within the applicable jurisdictional standards of City of Dublin (LOS D) or better during the a.m., and midday peak hours.

### ***Existing plus Project Conditions***

Under this scenario, all intersections operates within the applicable jurisdictional standards of City of Dublin (LOS D) or better during the a.m., and midday peak hours.

### ***Pedestrian, Bicycle and Transit Impacts***

Pedestrian access to the site is provided though a good network of existing sidewalks. There are four bus stops within the vicinity of the project site. The proposed project does not conflict with existing and planned pedestrian or bicycle facilities and will add very few trips to existing transit facilities, which can be

accommodated by the existing transit capacity. Therefore, impact to pedestrian, bicycle, or transit facilities is *less-than-significant*.

***On-Site Circulation***

The proposed project's access will be via three entry and exit driveways on Tamarack Drive. The circulation aisle near the pick-up/drop-off zone accommodates one-way travel and the turning radii appears to be adequate for the passenger vehicles, vans and emergency vehicles. The proposed on-site vehicle circulation is adequate and should not result in any significant traffic operations issues.

***Parking***

The project provides for 132 parking spaces which is more 82 parking spaces as required by the *Dublin Municipal Code, Chapter 8.76 Table 8.76.080*. The ample supply of on-site parking will ensure there no parking impacts. The project also proposes to extend the designated drop-off zone near the building entrance.

## INTRODUCTION

This report summarizes the results of the Transportation Impact Study (TIS) conducted for the modernized Frederiksen Elementary School located at 7243 Tamarack Drive in the City of Dublin, CA. The school serves grades K-5 and is a part of Dublin Unified School District (DUSD). The school is predominantly surrounded by single family residences and can be accessed from Tamarack Drive and Mansfield Avenue.

The new construction and improvement project for Fredrickson Elementary School will be completed in two phases. The first phase will observe the expansion of multipurpose room and construction of 30 additional classrooms as shown in **Figure 2** and is expected to be completed by June of 2021. The second phase is scheduled to begin from July 2021 and will result in construction of Administration building and supplementary work rooms. The proposed project will have the capacity to accommodate 860 students, resulting in an increase of approximately 15 students. Presently, the school has 101 parking spaces including ADA and Van accessible spaces. In addition on-street parking is available on the Tamarack Drive. The proposed project will add 31 more parking spaces and increase the length of the passenger drop-off space by 10 car spaces. The schools has a year-round schedules (August-May) and serves students from the local area. The hours of operation of school varies by grade: 8:15 a.m. to 12:26 p.m. for Kindergarten, 8:25 a.m. to 2:04 p.m. for grades 1-5, Monday through Wednesday and 8:25 a.m. to 3:04 p.m. for Thursday and Friday. The schedule is subject to change for collaborative days and early release days.

This chapter discusses the TIS purpose, project study area, analysis scenarios and levels of service methodology, and criteria used to identify significant impacts.

### STUDY INTERSECTIONS AND SCENARIOS

TJKM evaluated traffic conditions at six study intersections during the a.m. and midday peak hours of a typical weekday. The peak period observed was between 7:00 a.m. - 9:00 a.m. and 1:00 p.m. – 3:00 p.m. The highest single one-hour period recorded for the peak period is used in the analysis. The six study intersections listed below along with Mansfield Avenue driveway were evaluated during the weekday a.m. and midday peak hour under two study scenarios.

- Tamarack Drive and Fredrickson Parking Lot East Driveway
- Tamarack Drive and Fredrickson Parking Lot West Driveway
- Tamarack Drive and Burton Street
- Tamarack Drive and Burnham Way
- Tamarack Drive and Brighton Drive
- Tamarack Drive and Village Parkway

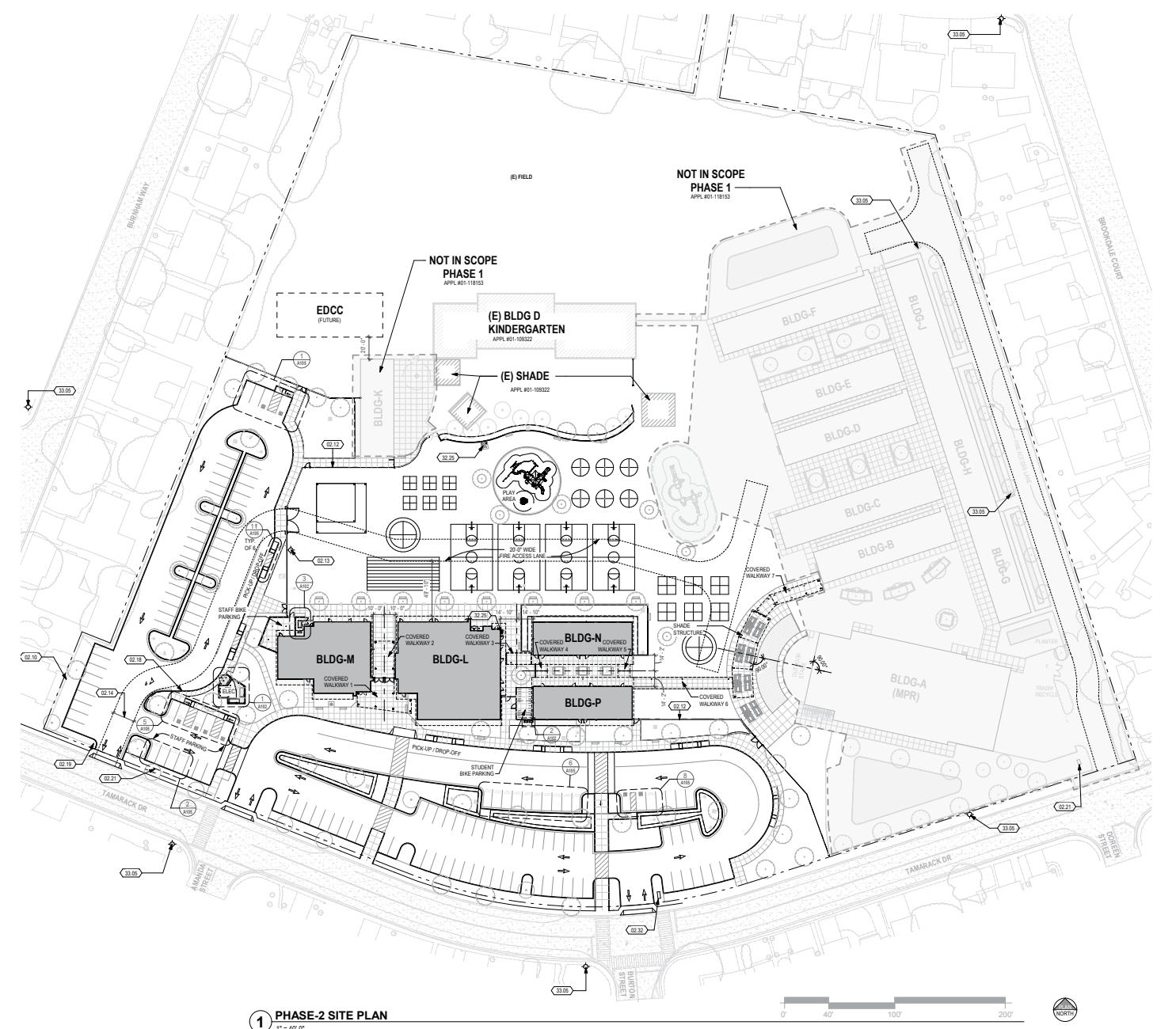
**Figure 1** illustrates the study intersections and the vicinity map of the proposed project. **Figure 2** shows the proposed project site plan. This study addresses the following two traffic scenarios:

1. **Existing Conditions** – This scenario evaluates all the study locations based on existing traffic volumes, lane geometry and traffic controls.
2. **Proposed Project Conditions**– This scenario is identical to Existing Conditions, but with the addition of traffic from the proposed changes to the elementary school.

Figure 1: Vicinity Map



Figure 2: Site Map



## STUDY METHODOLOGY

This section describes the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

### LEVEL OF SERVICE ANALYSIS METHODOLOGY

Level of Service (LOS) is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. The LOS generally describes these conditions in terms of such factors as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience and safety. The operational LOS are given letter designations from A to F, with A representing the free-flow operating conditions and F representing the severely congested flow with high delays. Typically, LOS C/D is considered as an ideal condition as it represents stable flow and efficient use of transportation facility. Intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets. The following sections provides detailed study methodology based on the type of intersections.

#### Signalized Intersections

The study intersections under traffic signal control were analyzed using the 2000 HCM Operations Methodology for signalized intersections described in Chapter 16 (HCM 2000). This methodology determines LOS based on average control delay per vehicle for the overall intersection during peak hour intersection operating conditions. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 1** summarizes the relationship between the control delay and LOS for signalized intersections.

#### Unsignalized Intersections

The study intersections under stop control (unsignalized) were analyzed using the 2000 HCM Operations Methodology for unsignalized intersections described in Chapter 17 (HCM 2000). LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At the side street, stop controlled intersections or two-way stop sign intersections; the control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. The weighted average delay for the entire intersections is presented for all-way stop controlled intersections. **Table 2** summarizes the relationship between delay and LOS for unsignalized intersections. The delay ranges for unsignalized intersections are lower than for signalized intersections as drivers expect less delay at unsignalized intersections.

Each of the study intersections was analyzed using Synchro Version 9 software and HCM 2000 methodology. The LOS assessment under all scenarios is based on current traffic controls and signal timing.



**Table 1: Level of Service Definitions for Signalized Intersections**

Level of Service	Description
A	Very low control delay, up to 10 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	Control delay greater than 10 and up to 20 seconds per vehicle. There is good progression or short cycle lengths or both. More vehicles stop causing higher levels of delay.
C	Control delay greater than 20 and up to 35 seconds per vehicle. Higher delays are caused by fair progression or longer cycle lengths or both. Individual cycle failures may begin to appear. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflow occurs. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	Control delay greater than 35 and up to 55 seconds per vehicle. The influence of congestions becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Control delay greater than 55 and up to 80 seconds per vehicle. The limit of acceptable delay. High delays usually indicate poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.
F	Control delay in excess of 80 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to higher delay.

Source: Highway Capacity Manual 2000

**Table 2: Level of Service Definitions for Stop-Controlled Intersections**

Level of Service	Description
A	Very low control delay less than 10 seconds per vehicle for each Movement subject to delay.
B	Low control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay.
C	Acceptable control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay.
D	Tolerable control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay.
E	Limit of tolerable control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay.
F	Unacceptable control delay in excess of 50 seconds per vehicle for each movement subject to delay.

Source: Highway Capacity Manual 2000

## SIGNIFICANT IMPACT CRITERIA AND LEVEL OF SERVICE STANDARDS

The study intersections are located within City of Dublin jurisdiction. Impacts to City of Dublin intersections could be considered significant if the Project would result in any of the following:

- The project conflicts with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. A significant impact could be identified:
  - If a signalized intersection is projected to operate within motor vehicle delay ranges associated with LOS D or better (average control delay equal to or less than 55 seconds per vehicle) without the project and the project is expected to cause the facility to operate at a LOS E or F;
  - If at a study, signalized intersection where the motor vehicle level of service is E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more.
  - If at a study, signalized intersection where the motor vehicle level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more.
  - If the operations of an unsignalized study intersection is projected to decline with the addition of project traffic, and if the installation of a traffic signal based on the Manual on Uniform Traffic Control Devices (MUTCD) Peak Hour Signal Warrant (Warrant 3) would be warranted.

For intersections that meet the above criteria, capacity enhancing measures that do not degrade other modes of travel will be considered, including upgrading or installing signal equipment, extending left-turn pocket storage, providing non-motorized facilities to reduce vehicular demand, enhancing capacity on a parallel route and/or enhancing transit access to a site. The determination of a significant impact and the appropriate mitigation measure will consider the City's Complete Streets policy.

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 decrease 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.

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.

## EXISTING CONDITIONS

This section describes existing conditions in the immediate project site vicinity, including roadway facilities, bicycle and pedestrian facilities, and available transit service. In addition, existing traffic volumes and operations are presented for the study intersections, including the results of LOS calculations.

### EXISTING SETTING AND ROADWAY SYSTEM

Important roadways adjacent to the project site are discussed below:

**Village Parkway** is a four-lane divided north-south collector road that lies to the east of I-680, providing access to Dublin Boulevard, Amador Valley Boulevard, and Alcosta Boulevard. Class II Bicycle lanes and continuous sidewalks are available along the roadway with crosswalks at major cross streets. The posted speed limit is 35 mph.

**Amador Valley Road** is a two-lane divided east-west collector road that connects San Ramon Road and Dougherty Road. Bicycle lanes are provided along the road. The roadway also features on-street parking facility with sidewalks and crosswalks. The posted speed limit is 30 mph.

**Tamarack Drive** is two-lane undivided collector road that merges into Brighton Drive. There are no bikeway facilities available at the roadway. The roadway features on-street parking, sidewalks, and crosswalks available only at major intersections. The posted speed limit is 25 mph.

**Brighton Drive** is two-lane undivided collector road that merges into Tamarack Drive and extends to Amador Valley Blvd in the east. There are no bikeway facilities available at the roadway. The roadway features on-street parking, sidewalks, and crosswalks which are available only at major intersections. The posted speed limit is 25 mph.

**Burton Street** is a two-lane undivided collector road that connects Amador Valley Blvd and Tamarack Drive. Continuous sidewalks are available on both sides of the street and high-visibility crosswalks are available at both the ends. The street also provides direct access to the school. The street also features on-street parking. The posted speed limit is 25.

**Burnham Way** is a local residential street with continuous sidewalks on both sides. There is on-street parking facility available on the street. The street provides the connection from Brighton Dr. through Callan Street.

**Iron Horse Regional Trail** is a north-south multi-use trail between the cities of Concord, Dublin, and Pleasanton. The trail connects residential and commercial areas, business parks, schools, public transportation (BART, County Connection), open space and parks, regional trails, and community facilities.

### EXISTING PEDESTRIAN FACILITIES

Walkability is defined as the ability to travel easily and safely between various origins and destinations without having to rely on automobiles or other motorized travel. Pedestrian facilities consist of crosswalks, sidewalks, pedestrian signals, and off-street paths, which provide safe and convenient routes for

pedestrians to access the destinations such as institutions, businesses, public transportation, and recreation facilities.

There are numerous programs that fund bicycle and pedestrian facilities near the schools. The Safe Routes to School (SRTS) is one of the program that promotes walking and bicycling to school through infrastructure improvements, enforcement, tools, safety education, and incentives to encourage walking and bicycling to school.

Continuous sidewalks and high visibility pedestrian school crossing are available in the vicinity of the project. Furthermore, the school is located half-a-mile from the Iron Horse Regional Trail, which is a whole access trail (accessible to persons in wheelchairs) and is suitable for bikers, runners and equestrians. The trail can be accessed from the Amador Valley Blvd.

The existing pedestrian facilities in the study area are shown in **Figure 3**. Existing peak hour pedestrian counts are provided in **Appendix A**.

### EXISTING BICYCLE FACILITIES

Bicycle facilities include the following:

- Bike Paths (Class I) – Paved trails that are separated from roadways
- Bike Lanes (Class II) – Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs
- Bike Routes (Class III) – Designated roadways for bicycle use by signs or other markings which may or may not include additional pavement width for cyclists

Currently Class II bicycle lanes are provided on the Amador Valley Boulevard and Village Parkway in the vicinity of the project site. The Circulation Element of the City of Dublin General Plan proposes future designation of Tamarack Drive and Brighton Drive as Class III facilities within the study area. There are adequate signage/markings for the bicyclists to maneuver without confusion.

The existing bicycle facilities in the study area are shown in **Figure 4**. Existing peak hour bicycle counts are provided in **Appendix A**.

### EXISTING TRANSIT FACILITIES

The Livermore Amador Valley Transit Authority (Wheels) provides public transit facilities for those who live or work in and visit the Tri-Valley area. These include bus connections to Bay Area Rapid Transit (BART), Altamont Commuter Express (ACE), and Central Contra County Transportation Authority (County Connection).

Wheels operates bus service dedicated to Middle and High Schools in Dublin and Pleasanton. Due to the close proximity from the Dublin High School, the Frederiksen Elementary School can be accessed through four school routes. The school routes buses usually operates during the school days and around the school hours. The closest bus stops are located near the intersections of Village Parkway & Tamarack Drive, and Amador Valley Boulevard & Penn Drive.

**Table 3** describes the services and frequency for the transit services. The existing transit facilities in the study area are shown in **Figure 5**.

**Table 3: Existing Transit Services**

Route #	From	To	Days of Operation: School Days	
			Operating Hours	Comment
501 A	Positano Hill	Dublin High School	7:04 a.m. to 7:35 a.m. 3:40 p.m. to 5:34 p.m.*	On Wednesdays, buses leave later
501 B	Positano Hill	Dublin High School	7:08 a.m. to 7:35 a.m. 3:40 p.m. to 4:16 p.m.*	On Wednesdays, buses leave later
502	Emerald Glen	Dublin High School	7:02 a.m. to 7:35 a.m. 3:40 p.m. to 4:19 p.m.	On Wednesdays, buses leave later
503	Shannon Park	Dublin High School/ Wells Middle School	7:15 a.m. to 8:20 a.m.* 3:31 p.m. to 3:59 p.m.	On Wednesdays, an extra trip is provided,
504	Dublin Ranch	Dublin High School	7:08 a.m. to 7:35 a.m. 3:40 p.m. to 4:11 p.m. <sup>1</sup>	On Wednesdays, buses leave later

Source: [www.wheelsbus.com](http://www.wheelsbus.com)

\* Two buses scheduled

<sup>1</sup> Three buses scheduled

Figure 3: Existing Pedestrian Facilities



Figure 4: Existing Bicycle Facilities

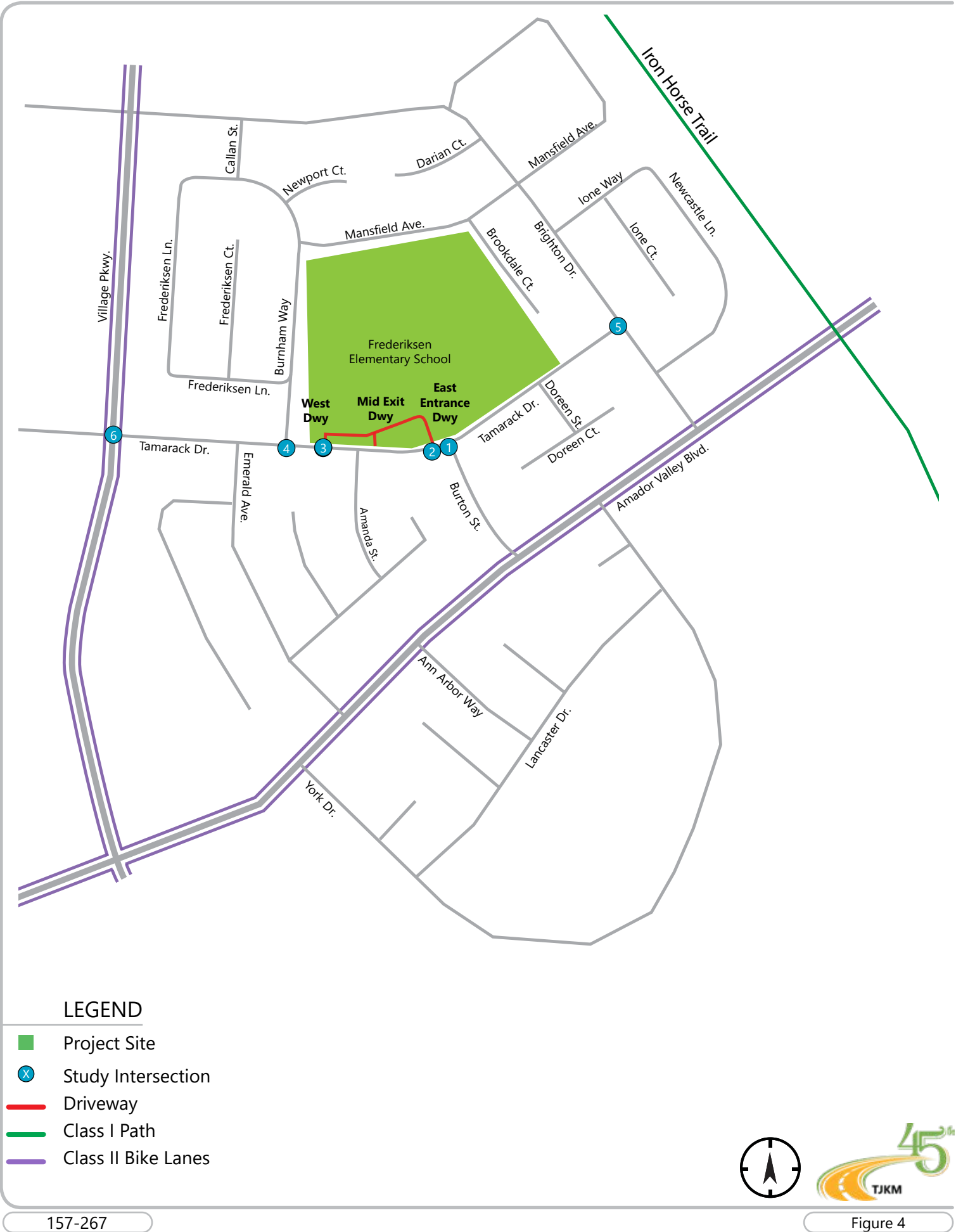




Figure 5: Existing Transit Facilities



LEGEND

- Project Site
- Study Intersection
- Driveway
- Bus Stop
- 501 A
- 501 B
- 502
- 503
- 504



### EXISTING INTERSECTION VOLUMES AND LANE CONFIGURATIONS

The existing operations of the study intersections were evaluated for the highest one-hour volume during the weekday morning, and midday peak periods. Turning movement counts for vehicles, bicycles, and pedestrians were conducted during typical weekday a.m. peak period (7:00-9:00 a.m.), and midday peak periods (1:00-3:00 p.m.) at the study intersections on Thursday, April 18, 2019. **Appendix A** includes all the data sheets for the collected vehicle, bicycle, and pedestrian counts. **Figure 6** illustrates the existing lane geometry and traffic control at the study intersections. **Figure 7** illustrates the existing conditions peak hour traffic volumes at the study intersections.

### EXISTING PARKING CONDITIONS

Frederiksen Elementary School has 101 parking stalls on-site. Parking is provided for teachers, administrative staff, visitors, and students. On-street parking is available on Tamarack Drive, Burton Street, Amanda Street, Burnham Way and Emerald Avenue in the vicinity of the school.

### FIELD OBSERVATIONS

TJKM conducted field observations within the vicinity of Frederiksen Elementary School on April 10, 2019, during both Morning and Midday hours. The drop-off and pick-up locations are situated in front of the main entrance building on Tamarack Road. Vehicles enter mostly through the east driveway next to Tamarack Drive & Burton Street to drop off/pick up the children and exit through the middle and west driveways located on the Tamarack Drive. It was observed that some of the parents park their cars in the school parking lot or around adjacent residential streets, (Burton Street, Amanda Street, and Tamarack Drive) and then walked up to school to drop-off/pick-up the children.

During the school operational hours, the traffic on Tamarack Road is relatively high with queues observed near the intersection of Tamarack Drive and Burton Street. During the school hours, queues on the school driveway were extended to the Tamarack Drive causing obstruction for the through traffic on Tamarack Drive. Due to the unaligned driveway at the east entrance, the vehicles turning left from the Tamarack Drive were observed to stop one car space behind the stop line. Some of the pavement markings were not coordinated with the signs, resulting in misleading information to the drivers. Crossing guard helped a large number of pedestrians to cross the Tamarack Drive during the school drop off/pick up hours. Some of the parents were seen using the pedestrian gate near the east entrance in front of the existing play area for drop-off/pick-up purposes. Very few were observed using the Mansfield Avenue driveway. The sidewalks were found to be busy and some parents were observed to jaywalk across the streets. Furthermore, students were observed riding their bikes on the sidewalks due to the lack of bikeway network in front of the school.

### INTERSECTION LEVEL OF SERVICE ANALYSIS – EXISTING CONDITIONS

Existing intersection lane configurations and peak hour turning movement volumes were used to calculate the Level of Service (LOS) for the study intersections during each peak hour. The City of Dublin provided signal timings for the study intersections. The peak hour factor based on the counts was used for all study intersections for the existing conditions analysis.

The study intersections were analyzed using the 2000 Highway Capacity Manual (HCM 2000) methodology by using Synchro 9.0 software program. The results of the Level of Service (LOS) analysis using the Synchro 9.0 software program for Existing Conditions are summarized in **Table 4**. Field verification of existing intersection lane configurations and traffic controls were also conducted and provided the basis for the LOS analysis for Existing Conditions. **Appendix B** contains the corresponding calculation sheets.

Under this scenario, all intersections operates within the applicable jurisdictional standards of City of Dublin with LOS D or better (average control delay equal to or less than 55 seconds per vehicle) during the a.m., and midday peak hours.

**Table 4: Intersection Level of Service Analysis – Existing Conditions**

#	Intersection	Intersection Control	Peak Hour <sup>1</sup>	Average Delay <sup>2</sup>	LOS <sup>3</sup>
1	Tamarack Drive and Burton Street	All-Way Stop	AM	9.5	A
			Midday	7.8	A
2	Tamarack Drive and Fredrickson Parking Lot East Driveway	None	AM	1.4	A
			Midday	1.5	A
3	Tamarack Drive and Fredrickson Parking Lot West Driveway	One-Way Stop	AM	5.3	A
			Midday	4.7	A
4	Tamarack Drive and Burnham Way	One-Way Stop	AM	44.9	B
			Midday	2.6	A
5	Tamarack Drive and Brighton Drive	One-Way Stop	AM	3.4	B
			Midday	4.9	A
6	Tamarack Drive and Village Parkway	Signalized	AM	21.6	C
			Midday	17.6	B

Notes:

<sup>1</sup>AM – morning peak hour (between 7 and 9 a.m.), Midday-Midday peak hour (between 1 and 3 p.m.).

<sup>2</sup>Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.

<sup>3</sup>LOS – Level of Service calculations conducted using the Synchro 9.0 level of service analysis software package, which applies the methodology described in the 2000 HCM.

**Bold** text indicates intersection operates at a deficient Level of Service.

Figure 6: Existing Lane Geometry and Traffic Controls

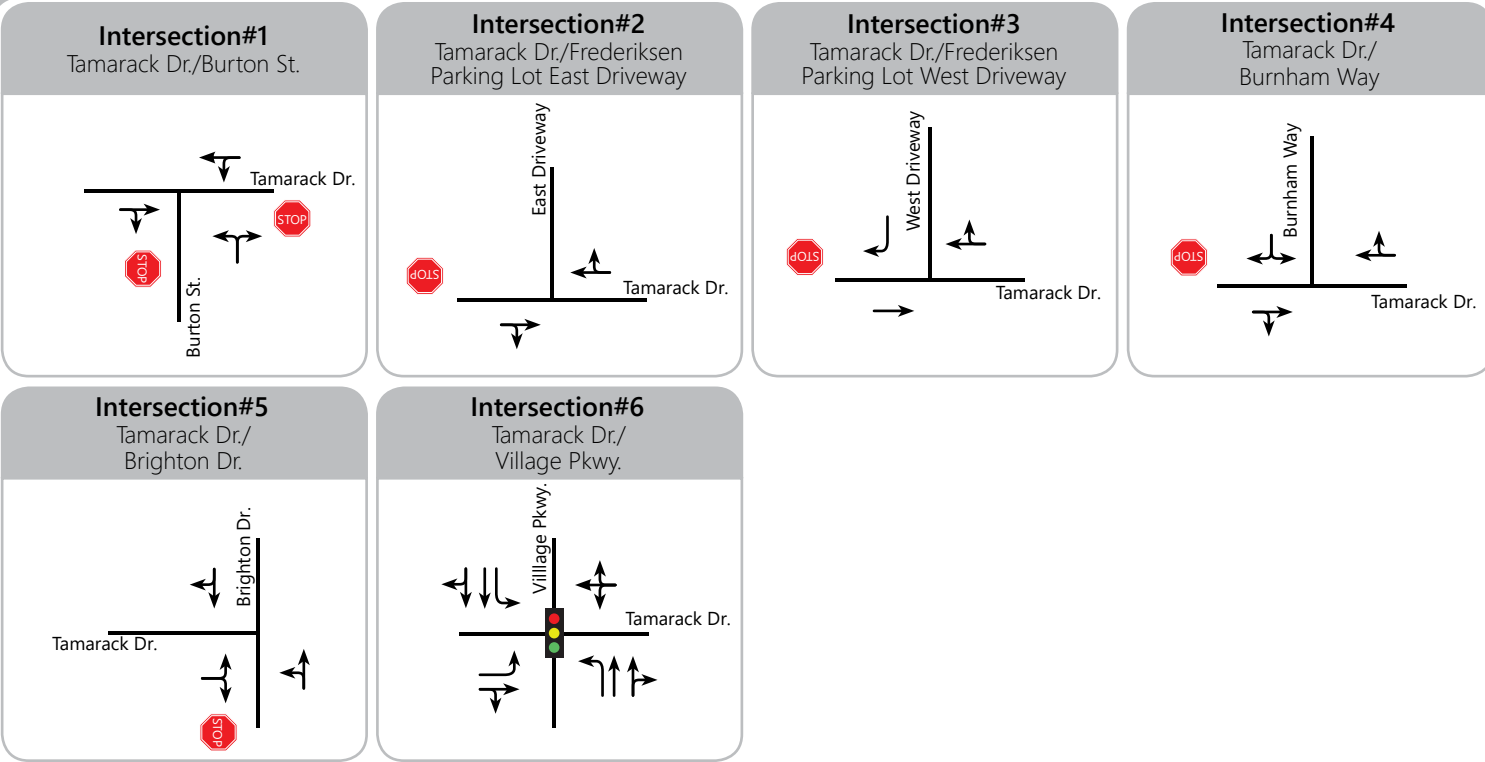
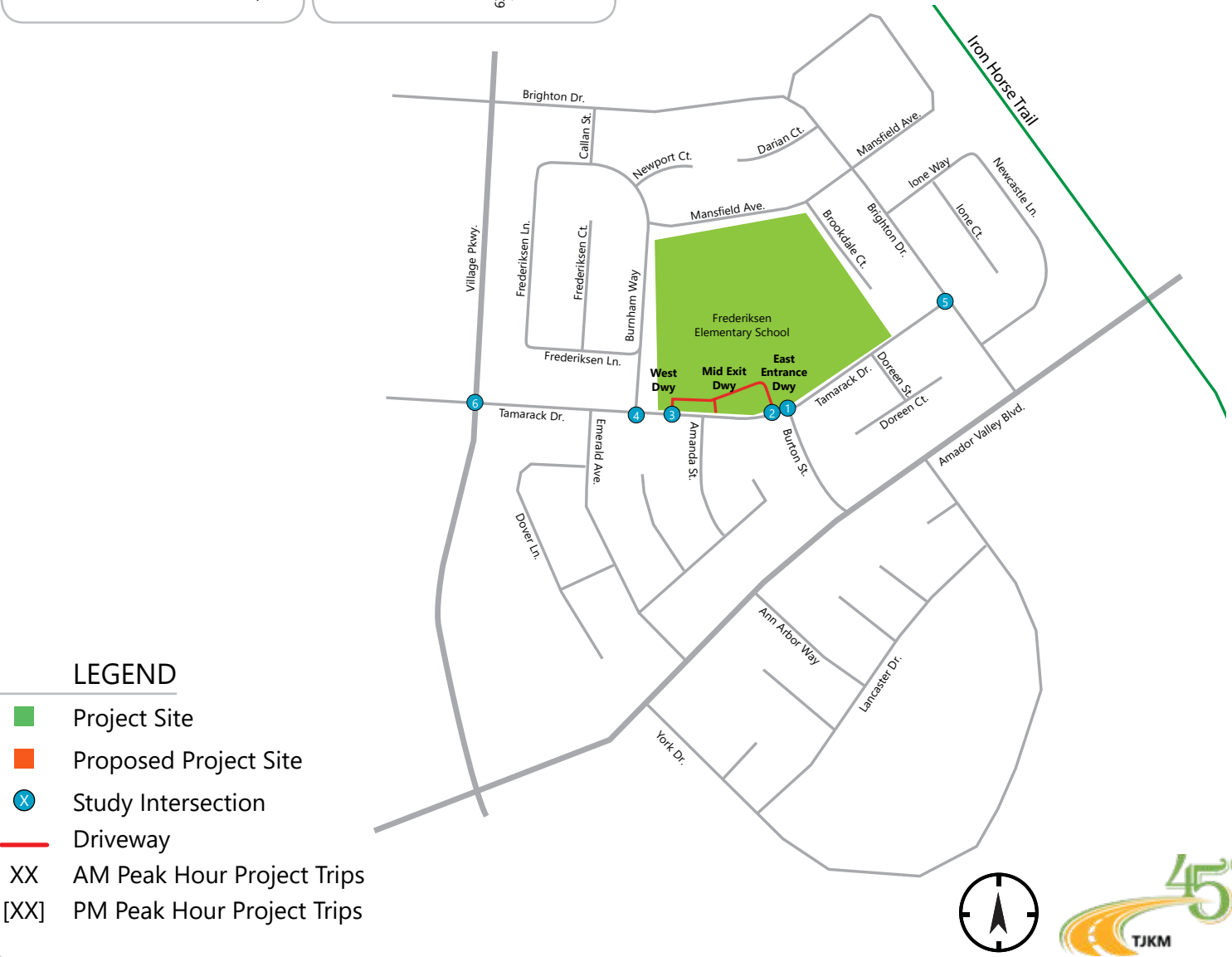
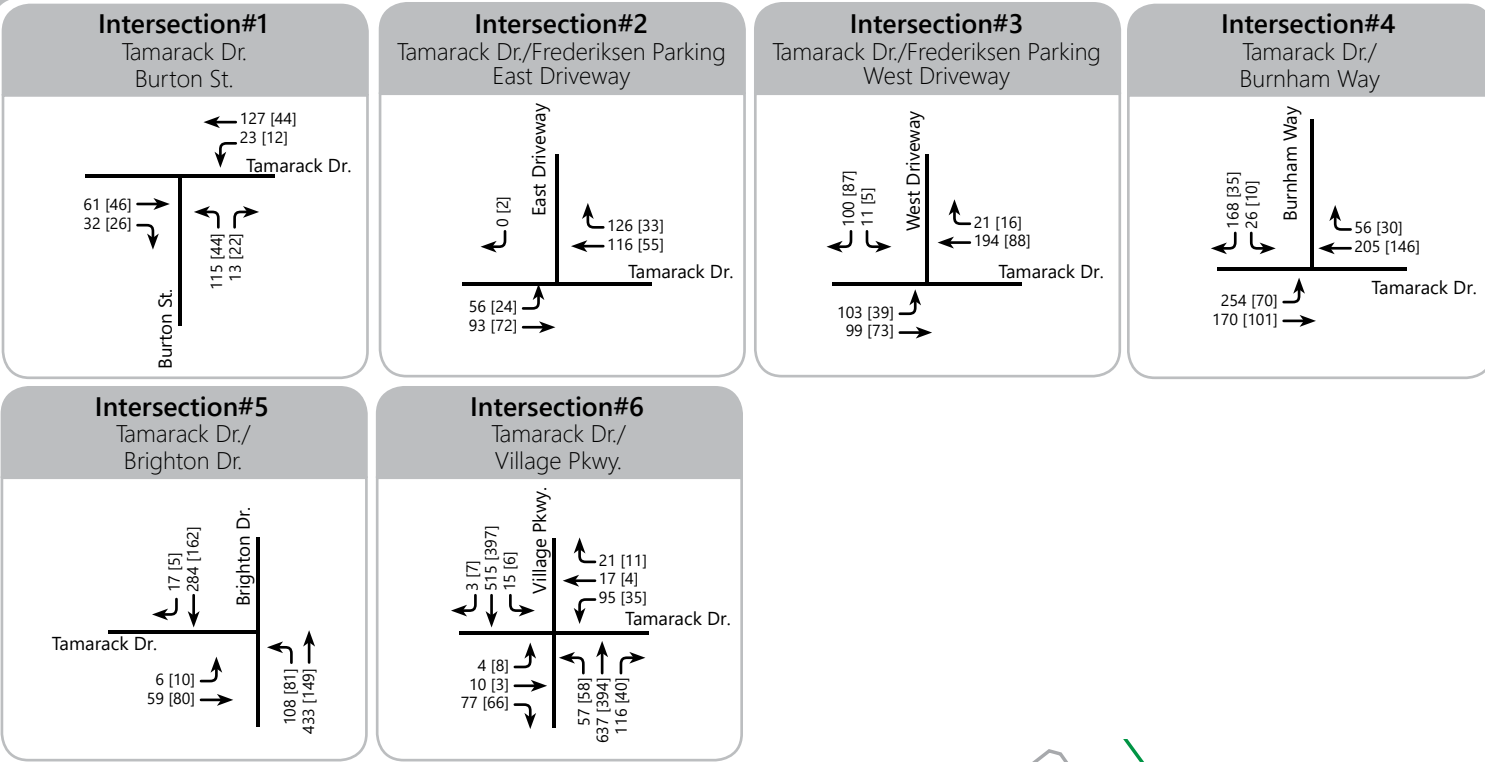


Figure 7: Existing Conditions Peak Hour Traffic Volumes



## EXISTING PLUS PROJECT CONDITIONS

The impacts of the proposed project on the transportation system are discussed in this chapter. First, the method used to estimate the amount of traffic generated by the project is described. Then, the results of the level of service calculations for Existing plus Project Conditions are presented. (Existing plus Project Conditions is defined as Existing Conditions plus traffic generated by the proposed project). A comparison of intersections under Existing plus Project Conditions and Existing Conditions is presented and the impacts of the project on the study intersections are discussed.

As per the site plan of the proposed modernization to Frederiksen Elementary School, the east driveway of the school parking lot was aligned with the intersection of Tamarack Drive and Burton Street to allow easier access to the school's pick-up/drop-off area. The middle driveway which is currently a right-only exit to Tamarack Drive was repositioned to align with Amanda Street. The lane geometry of the middle driveway was modified to include both entry (left-turn) and exit (right-turn). The trip distribution, trip assignment and Existing Plus Project Conditions reflect this change as per the repositioning of the east and middle driveway.

The amount of traffic added to the roadway system by the proposed development is estimated using a three-step process.

- Trip Generation – Estimates the amount of traffic added to the roadway network,
- Trip Distribution – Estimates the direction of travel to and from the project site,
- Trip Assignment – The new trips are assigned to specific street segments and intersection turning movements.

### PROJECT TRIP GENERATION

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication *Trip Generation Manual (10th Edition)*. TJKM used published trip rates for the ITE Land Use Elementary School (ITE Code 520). **Table 5** shows the trip generation expected to be generated by the proposed project. As per experience with similar elementary school projects, TJKM applied 20 percent trip discounts to the proposed project for buses, pedestrian and bicycle uses. The project is expected to generate additional 23 daily trips, 8 weekday a.m. peak hour trips (4 inbound trips, 4 outbound trips) and 2 weekday midday peak hour trips (1 inbound trip, 1 outbound trip).

Table 5: Project Trip Generation

Frederiksen Elementary School, Dublin, CA														
Land Use	ITE Code	Size	Daily		AM Peak Hour					Midday Peak Hour				
			Rate	Trips	Rate	In %	In	Out	Total	Rate	In %	In	Out	Total
PROPOSED BUILDING AREA														
Exisitng Elementary School <sup>1</sup>	520	845 Students	1.89	1,597	0.67	54	306	260	566	0.17	48	69	75	144
Bus/Ped/Bike Discount (20%) <sup>2</sup>				319			61	52	113		10	14	15	29
Total Vehicle Trips				1,278			245	208	453			55	60	115
PROPOSED BUILDING AREA														
Proposed Elementary School <sup>1</sup>	520	860 Students	1.89	1,625	0.67	54	311	265	576	0.17	48	70	76	146
Bus/Ped/Bike Discount (20%) <sup>2</sup>				325			62	53	115		10	14	15	29
Total Vehicle Trips				1,300			249	212	461			56	61	117
TRIP DIFFERENCE														
Total Vehicle Trips From Proposed Elementary School			1,300		249 212 461					56 61 117				
Total Vehicle Trips From Existing Elementary School			1,278		245 208 453					55 60 115				
Net New Vehicle Trips (Proposed-Existing)			23		4 4 8					1 1 2				
Source - Institute of Transportation Engineers (ITE) <i>Trip Generation Manual</i> , 10th Edition, 2017.														
1. Elementary School (ITE Land Use Code 520) vehicle trip rates are based upon number of students.														
2. A discount of 20% was applied to reflect student trips through bussing, biking and walking.														

## PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution is a process that determines in what proportion vehicles would be expected to travel between the project site and various destinations outside the project study area. Trip assignment determines the various routes that vehicles would take from the project site to each destination using the calculated trip distribution. Trip distribution assumptions for the proposed project were developed based on existing travel patterns, knowledge of the study area and reviewed by the DUSD and the City of Dublin Staff.

Project trips were assigned to the roadway network based on the trip distribution patterns as shownb in **Figure 8**. **Figure 9** illustrates the a.m., and midday peak hour project trips assigned to each turning movement at the study intersections. The assigned net additional project trips were then added to traffic volumes under Existing Conditions to generate Existing plus Project Conditions traffic volumes.

Figure 8: Trip Distribution



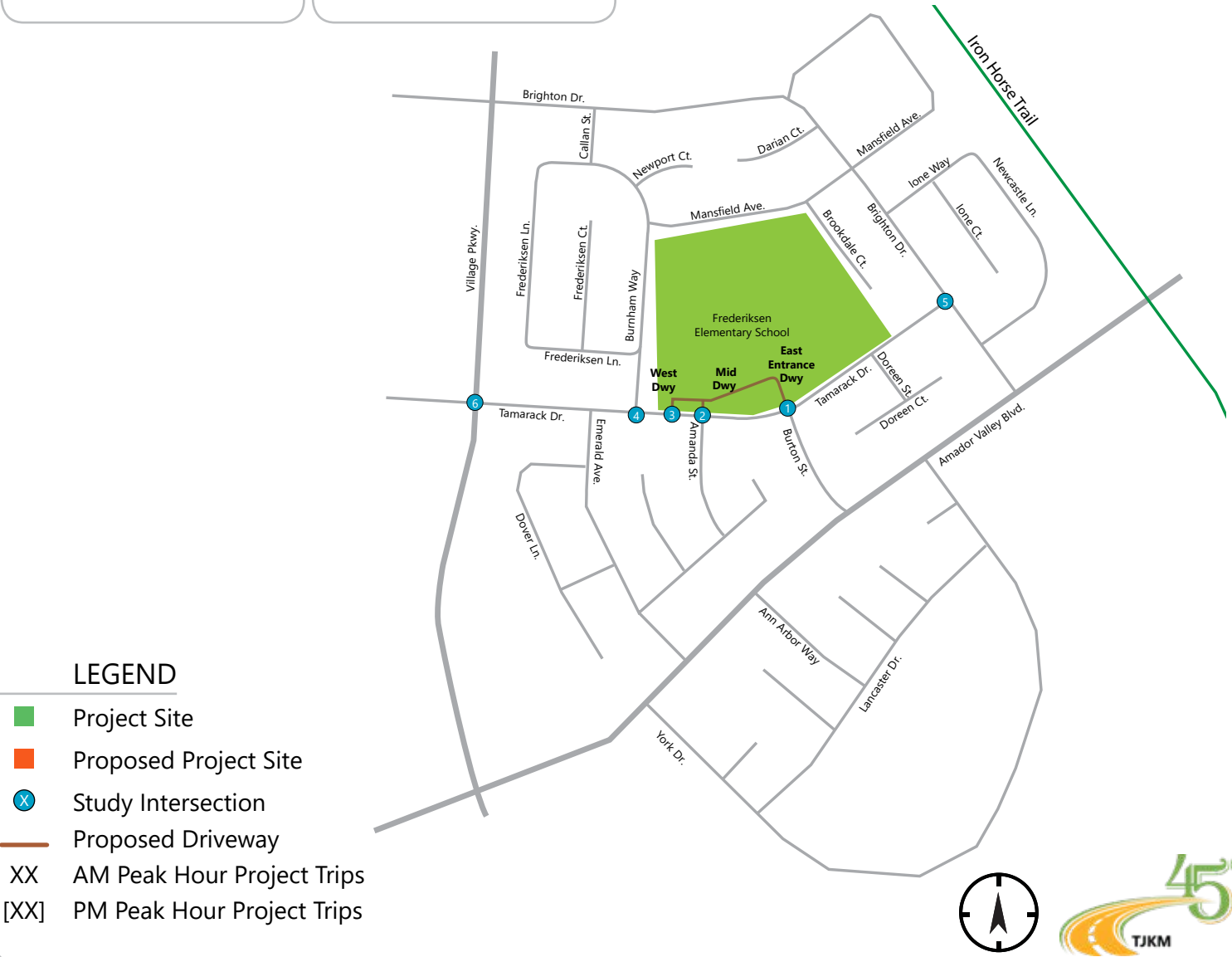
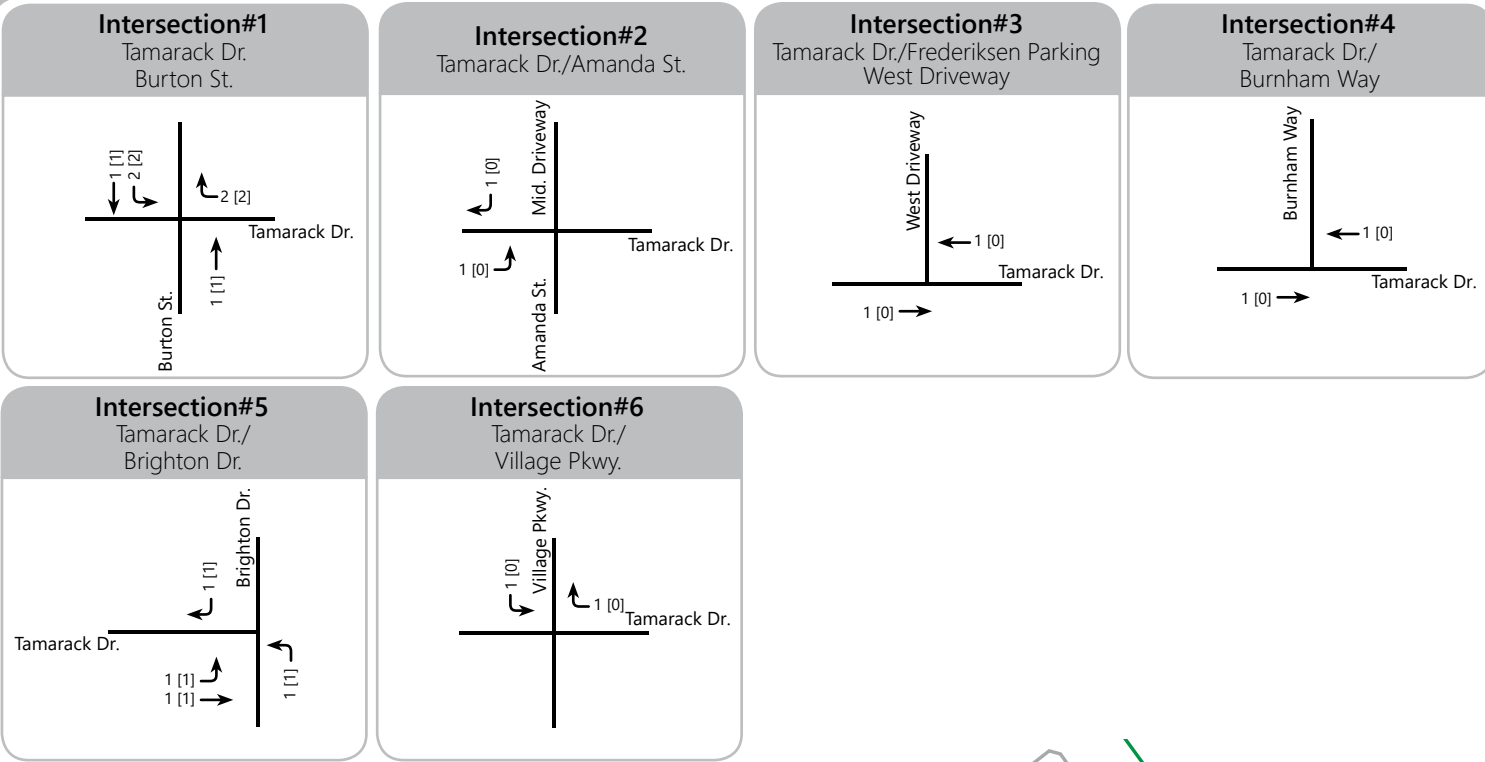
LEGEND

- Project Site
- Study Intersection
- Proposed Trip Distribution
- Proposed Driveways





Figure 9: Trip Assignment



### INTERSECTION LEVEL OF SERVICE ANALYSIS – EXISTING PLUS PROJECT CONDITIONS

Intersection levels of service were calculated with the new traffic added by the proposed project to existing volumes to evaluate the operating conditions of the intersections and identify potential impacts to the roadway system. The results of the intersection level of service calculations for Proposed Project Conditions are presented in **Table 6**. **Appendix C** contains the corresponding calculation sheets. It is to be noted that the lane geometry considered in the Existing Plus Project Conditions for the intersection of Tamarack Drive and Burton Street differ from the one in the Existing Conditions due to the proposed changes as per the site plan. The intersection of Tamarack Avenue and Amanda Street was also included in the LOS analysis to incorporate changes due to the repositioning of the middle driveway. As the project team did not have access to count data on this intersection, traffic volumes for this intersection was estimated as per the count data available from intersections in the vicinity. **Figure 10** shows projected turning movement volumes at the study intersections for Existing Plus Project Conditions. Under this scenario, all intersections operates within the applicable jurisdictional standards of City of Dublin with LOS D or better (average control delay equal to or less than 55 seconds per vehicle) during the a.m., and midday peak hours.

**Table 6: Intersection Level of Service Analysis – Existing plus Project Conditions**

#	Intersection	Intersection Control	Peak Hour <sup>1</sup>	Average Delay <sup>2</sup>	LOS <sup>3</sup>
1	Tamarack Drive/Burton Street and Frederiksen Parking Lot East Driveway	All-Way Stop	AM	9.6	A
			Midday	7.8	A
2	Tamarack Drive/Amanda Street and Frederiksen Parking Lot Middle Driveway	None	AM	3.2	A
			Midday	2.8	A
3	Tamarack Drive and Frederiksen Parking Lot West Driveway	Two-Way Stop	AM	2.9	A
			Midday	3.1	A
4	Tamarack Drive and Burnham Way	One-Way Stop	AM	45.4	B
			Midday	2.6	A
5	Tamarack Drive and Brighton Drive	One-Way Stop	AM	3.5	B
			Midday	5.1	A
6	Tamarack Drive and Village Parkway	Signalized	AM	21.7	C
			Midday	17.6	B

Notes:

<sup>1</sup>AM – morning peak hour (between 7 and 9 a.m.), Midday-Midday peak hour (between 1 and 3 p.m.).

<sup>2</sup>Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections. Total control delay for the worst movement is presented for side-street stop-controlled intersections.

<sup>3</sup>LOS – Level of Service calculations conducted using the Synchro 9.0 level of service analysis software package, which applies the methodology described in the 2000 HCM.

**Bold** text indicates intersection operates at a deficient Level of Service.

**Figure 10: Existing Plus Project Conditions**



## SITE ACCESS, ON-SITE CIRCULATION AND OTHER IMPACTS

This section analyzes site access and internal circulation based on the site plan presented in **Figure 2**. TJKM reviewed internal and external access for the project site for passenger vehicles, buses, pedestrians, and bicycles.

### ON-SITE CIRCULATION AND SAFETY

TJKM reviewed the proposed project site plan to evaluate on-site access to the project. The access to the project site will be via three driveways: the west driveway on the Tamarack Drive will remain, the east driveway will be aligned to the Burton Street and additional driveway squaring the Amanda Street will replace the existing exit only mid driveway. The spacing between the west and east driveway is approximately 450 feet. All the driveways can be used for both entry and exit. The introduction of a new entrance through the middle driveway aligned to Amanda Street will reduce the queueing of left turning vehicles onto the east parking lot driveway on Tamarack Drive. This issue of queueing will be further reduced by the additional 10 car spaces for pick-up/drop-off.

TJKM also examined the project site plan (**Figure 2**) in order to evaluate the adequacy of on-site vehicles, vans and emergency vehicles circulation. The internal circulation was reviewed for issues related to queueing, turning radii, safety and circulation aisles. The circulation aisle near the pick-up/drop-off zone accommodates one-way travel and the turning radii appears to be adequate for the passenger vehicles, vans and emergency vehicles. Emergency vehicles can access the project site via the entrance driveways. Overall, the proposed on-site vehicle circulation works well and should not result in any significant impacts either on-site or on City streets.

TJKM recommends adding additional signage such as designated drop-off and pick up locations where parking and leaving the vehicle is not allowed at the curb to avoid excessive queueing and backups during the morning and afternoon times. The parking lot parallel to Tamarack Drive should designate where there is one-way travel for drop off and where there is two-way travel and parking for drop off. Teacher and Extended Day Child Care Parking should also be designated at the site. The addition of red curb to designate no parking near entrances, and median islands on Tamarack Drive near the school driveways will assist in any sight distance issues or conflict within the parking lot. As per the University of California Berkeley's Transportation Injury Mapping System (TIMS), two vehicle/pedestrian collisions were observed in the vicinity of the project driveways between the years 2014-2019. TJKM recommends the addition of flashing beacon at crosswalks to alert drivers approaching the driveways of any students that might be crossing the street.

### PEDESTRIAN ACCESS

Pedestrian access to the project site is facilitated by a good network of existing sidewalks on Tamarack Drive, Burton Street, Amanda Street, Burnham Way, and Mansfield Drive. All the existing sidewalks are approximately five feet wide. There is adequate street lighting at the project driveways.

A significant impact occurs if the proposed project conflicts with applicable or adopted policies, plans or programs related to pedestrians facilities or otherwise decrease the performance or safety of pedestrian facilities. The proposed project will not result in any significant impacts to existing or planned pedestrian facilities in the immediate vicinity of the project because of the absence of such conflicts. The proposed project does not conflict with existing and planned pedestrian facilities, therefore, the impact to pedestrian facilities is *less-than-significant*.

### **BICYCLE ACCESS**

At present, Class II bike lanes are available on Village Pkwy and Amador Valley Boulevard. There are no existing bike lanes on Tamarack Drive. Students arriving to school were observed to ride their bikes on the sidewalks due to the absence of bike lanes on Tamarack Drive. It is recommended that Class II bike lanes be installed on Tamarack Drive to allow safe bike access to the project site.

Impact to bicyclists occurs if the proposed project disrupt existing bicycle facilities; or conflict or create inconsistencies with adopted bicycle system plans, guidelines, and policies. A significant impact occurs if the proposed project conflicts with applicable or adopted policies, plans or programs related to bicycle facilities or otherwise decrease the performance or safety of bicycle facilities. The proposed project does not conflict with existing and planned bicycle facilities, therefore, the impact to bicycle facilities is *less-than-significant*.

### **TRANSIT**

The closest bus stops to the Frederiksen Elementary School are located near the intersections of Village Parkway & Tamarack Drive, and Amador Valley Boulevard & Penn Drive. The proposed project will generate very few trips via transit services, which can be accommodated by the existing transit capacity and hence the project is anticipated to have a *less-than-significant* impact on transit facilities.

### **SIGHT DISTANCE ANALYSIS**

Sight distance is evaluated to determine if a driver will have adequate visibility to enter a roadway safely without resulting in a conflict with traffic already on the roadway. The project access points should be free and clear of any obstructions that would materially and adversely affect sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points. Sight distance triangles should be measured approximately 15 feet back from the traveled way. Sight distance requirements vary depending on the roadway speeds. The speed limit on Tamarack Drive is 25 mph. According to the Highway Design Manual (HDM), Chapter 200, 2014, the required minimum stopping sight distance for design speed of 25 mph is 150 feet. The line of sight for vehicles exiting the driveways and vehicles travelling eastbound and westbound on Tamarack Drive are clear and visible. The project does not increase hazards due to any design features. It is recommended to have at least 15 feet of red curb near the school driveways to ensure adequate sight distance.

### **PARKING**

Based on the project site plan dated October 16, 2019 (**Figure 2**), a total of 132 parking spaces are provided for the proposed project. This parking spaces are inclusive of ADA parking, clean air vehicle parking and electric vehicle parking. According to the *Dublin Municipal Code, Chapter 8.76 Table 8.76.080*, two parking spots are required per classroom. As there are 41 classrooms in the proposed project, 82 parking spaces are required. The project provides for more parking spaces that required and hence no parking impacts are projected on City streets.

#### **BELL-TIME ANALYSIS**

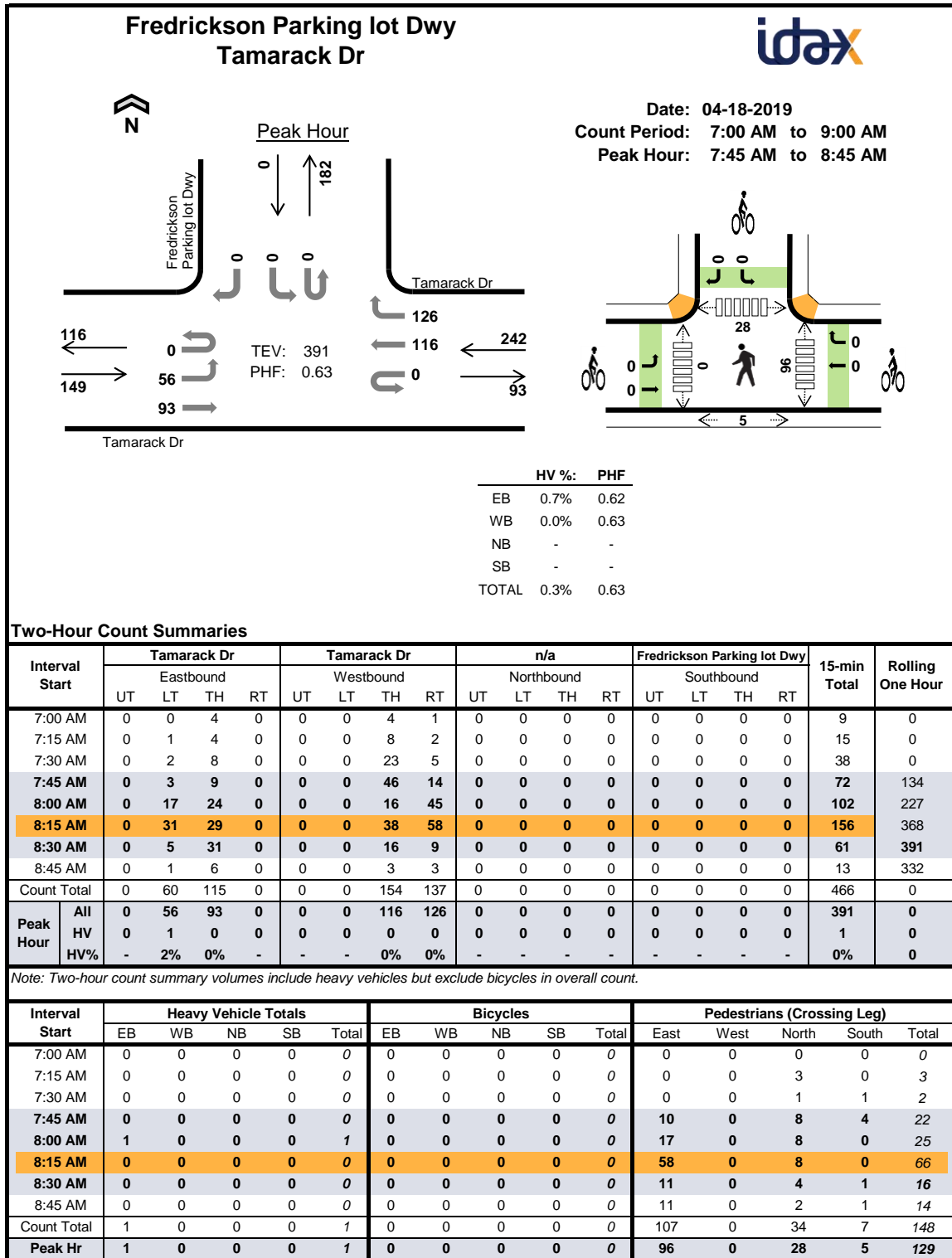
At this time, based on field observations, understanding of the addition of students, and revision of the site to provide additional driveway access and available parking, the bell schedule, which is the standard amongst all the DUSD elementary schools, is adequate and does not require any additional timing recommendations.

## CONCLUSION

- The proposed project is expected to generate 23 additional daily vehicular trips, 8 weekday a.m. peak hour trips (4 inbound trips, 4 outbound trips) and 2 weekday midday peak hour trips (1 inbound trip, 1 outbound trip). TJKM applied 20 percent trip discounts to the proposed project for buses, pedestrian and bicycle uses.
- Under Existing Conditions, all intersections operates within the applicable jurisdictional standards of the City of Dublin (LOS D) or better during the a.m., and midday peak hours.
- Under Existing plus Project Conditions, all intersections operates within the applicable jurisdictional standards of San Mateo County (LOS D) or better during the a.m., and midday peak hours.
- Pedestrian access to the project site is facilitated by a good network of existing sidewalks on Tamarack Drive, Burton Street, Amanda Street, Burnham Way, and Mansfield Drive. Bike lanes are recommended on Tamarack Drive. There are four bus stops within the vicinity of the project site. The proposed project does not conflict with existing and planned pedestrian or bicycle facilities and will add very few trips to existing transit facilities, which can be accommodated by the existing transit capacity. Therefore, there will be no degrading of pedestrian, bicycle, or transit facilities related to the school operations.
- TJKM examined the proposed project site plan in order to evaluate access to the project and the adequacy of on-site vehicle circulation including vans, delivery trucks, and emergency vehicles. The proposed project's access will be via three entry and exit driveways on Tamarack Drive. The circulation aisle near the pick-up/drop-off zone accommodates one-way travel and the turning radii appears to be adequate for the passenger vehicles, vans and emergency vehicles. Based on this evaluation, the proposed on-site vehicle circulation is adequate and should not result in any significant traffic operations issues.
- Based on the project site plan (**Figure 2**), 132 parking spaces are provided for the proposed project. Based on the City's requirements, 82 parking spaces are required for Frederiksen Elementary School. The ample supply of on-site parking will ensure there no parking impacts. The project also proposes to extend the designated drop-off zone near the building entrance.

## **Appendix A – Traffic Counts Sheets**

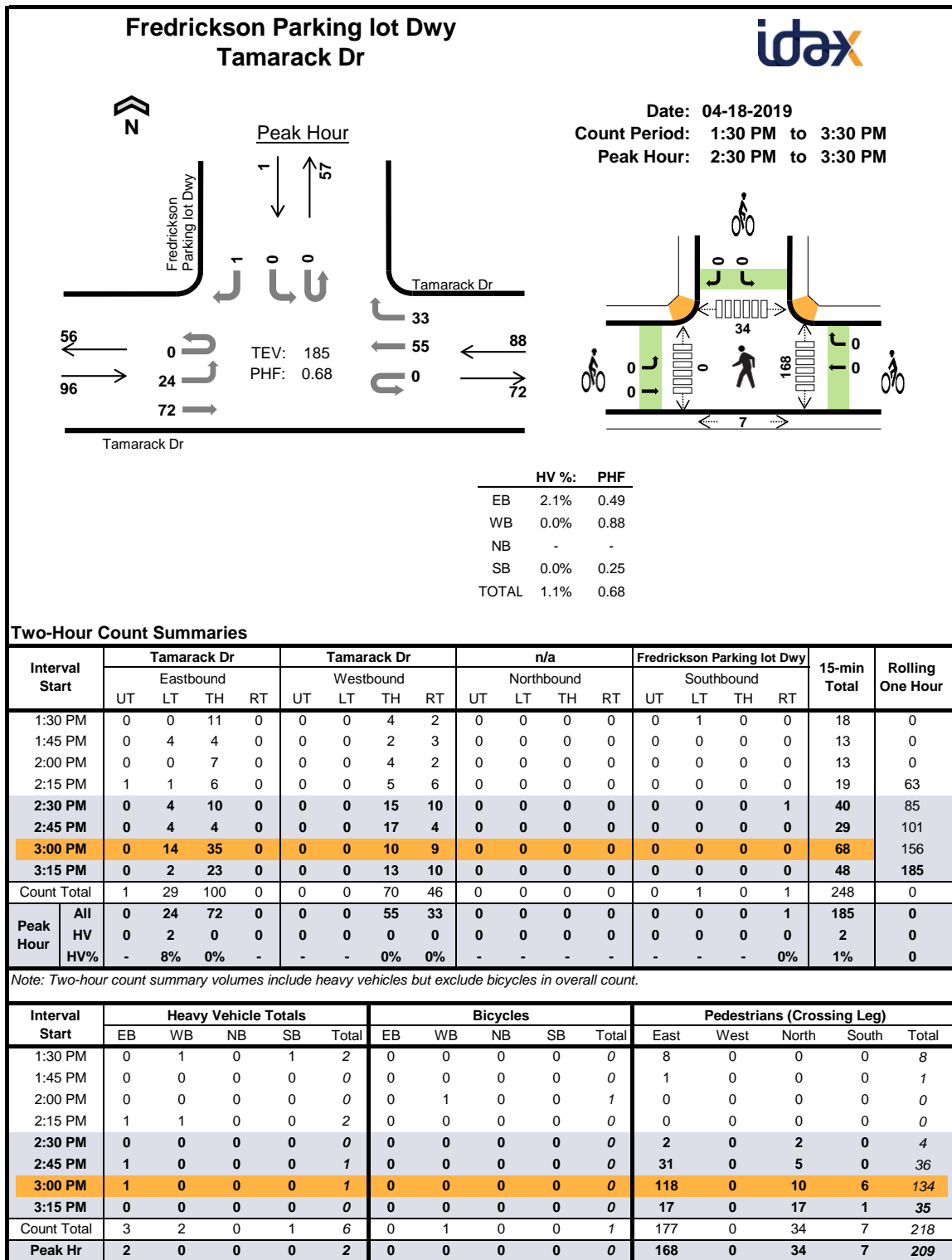




Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				n/a				Fredrickson Parking lot Dwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
Peak Hour	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	

Two-Hour Count Summaries - Bikes																	
Interval Start	Tamarack Dr			Tamarack Dr			n/a			Fredrickson Parking lot Dwy			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

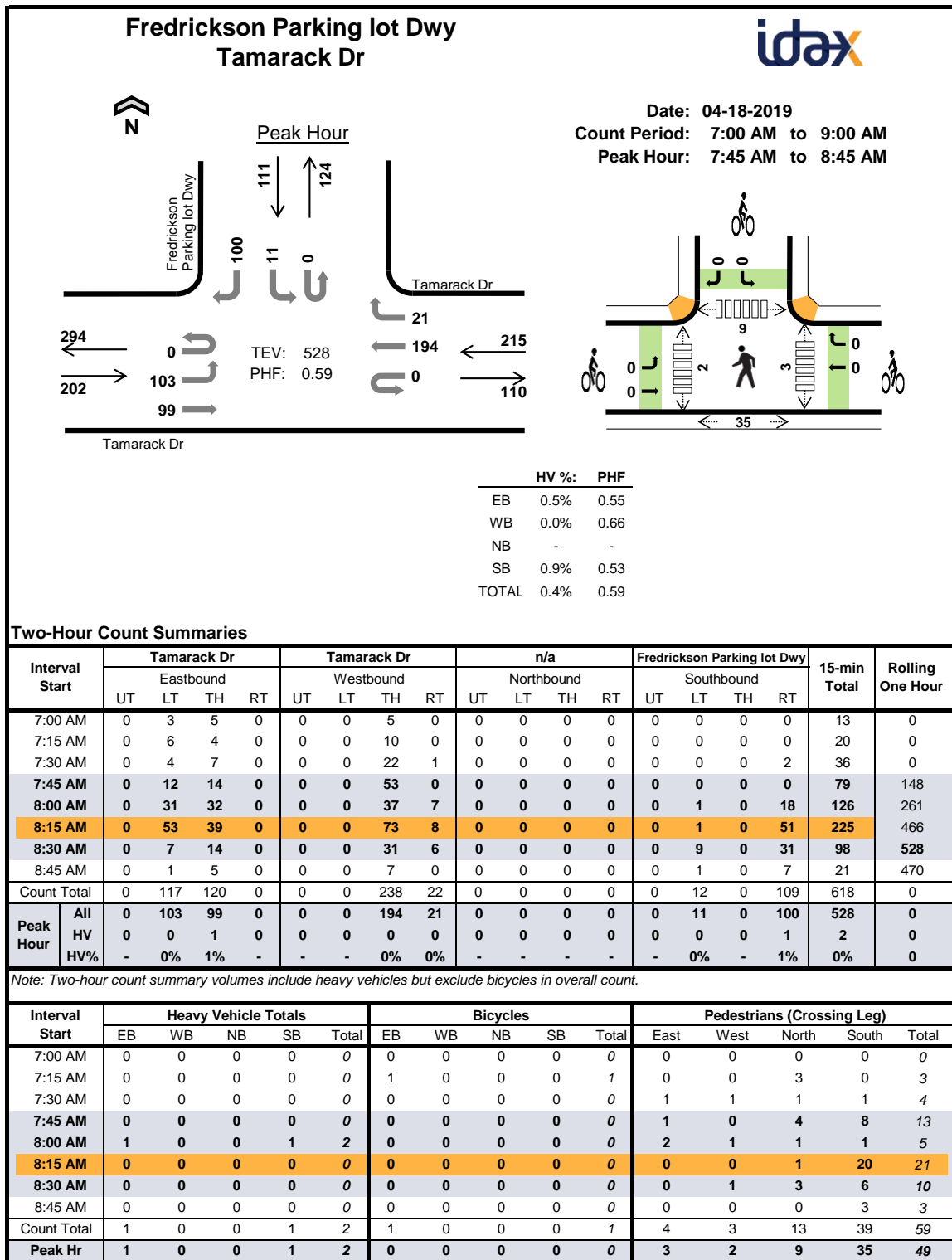
Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				n/a				Fredrickson Parking lot Dwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	2	1	0	0	0	1	1	0	0	0	0	0	1	0	0	6	0
Peak Hour	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Tamarack Dr			Tamarack Dr			n/a			Fredrickson Parking lot Dwy			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

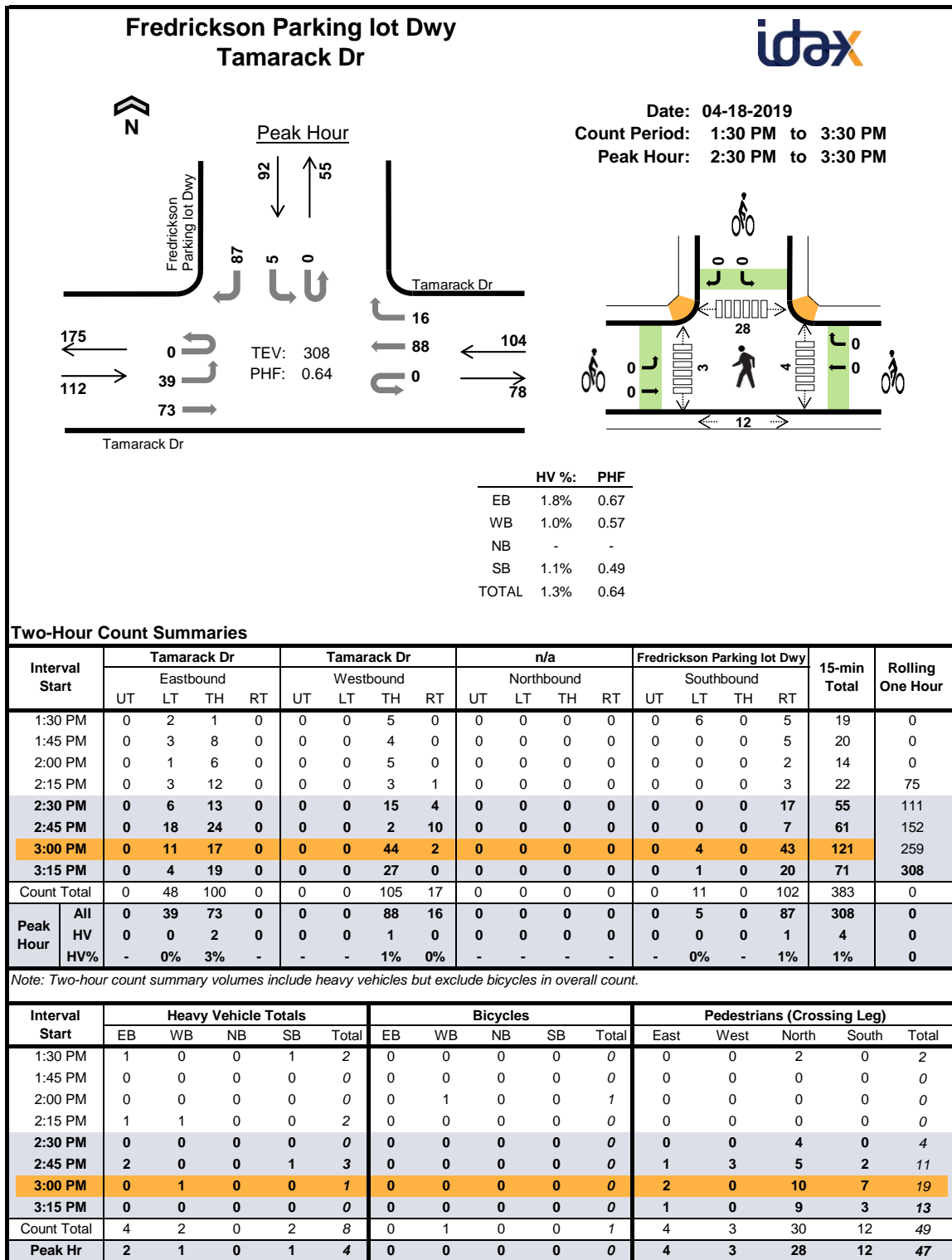
Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				n/a				Fredrickson Parking lot Dwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Count Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
Peak Hour	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	

Two-Hour Count Summaries - Bikes																	
Interval Start	Tamarack Dr			Tamarack Dr			n/a			Fredrickson Parking lot Dwy			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	1	0			
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				n/a				Fredrickson Parking lot Dwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5
3:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	6
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	1	3	0	0	0	2	0	0	0	0	0	0	0	0	2	8	0
Peak Hour	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	4	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Tamarack Dr			Tamarack Dr			n/a			Fredrickson Parking lot Dwy			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0				
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0				
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



# Burton St Tamarack Dr

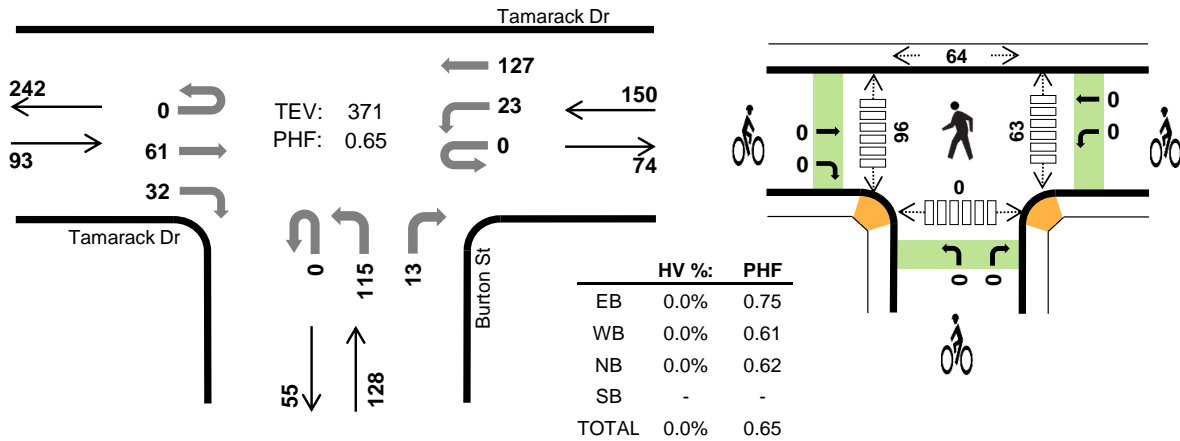


Peak Hour

Date: 04-18-2019

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



## Two-Hour Count Summaries

Interval Start	Tamarack Dr Eastbound				Tamarack Dr Westbound				Burton St Northbound				Burton St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	1	0	2	3	0	0	2	0	1	0	0	0	0	12	0
7:15 AM	0	0	3	1	0	0	8	0	0	2	0	3	0	0	0	0	17	0
7:30 AM	0	0	5	3	0	8	15	0	0	13	0	2	0	0	0	0	46	0
7:45 AM	0	0	8	1	0	4	29	0	0	31	0	3	0	0	0	0	76	151
8:00 AM	0	0	12	12	0	3	35	0	0	26	0	6	0	0	0	0	94	233
8:15 AM	0	0	17	12	0	14	47	0	0	49	0	3	0	0	0	0	142	358
8:30 AM	0	0	24	7	0	2	16	0	0	9	0	1	0	0	0	0	59	371
8:45 AM	0	0	5	1	0	5	4	0	0	2	0	1	0	0	0	0	18	313
Count Total	0	0	77	38	0	38	157	0	0	134	0	20	0	0	0	0	464	0
Peak Hour	All	0	0	61	32	0	23	127	0	0	115	0	13	0	0	0	371	0
	HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HV%	-	-	0%	0%	-	0%	0%	-	-	0%	-	0%	-	-	-	0%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	3	0	5
7:30 AM	0	0	0	0	0	0	0	0	0	0	7	0	1	1	9
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	10	2	0	13
8:00 AM	0	0	0	0	0	0	0	0	0	0	18	17	19	0	54
8:15 AM	0	0	0	0	0	0	0	0	0	0	41	58	35	0	134
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	11	8	0	22
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	11	10	2	23
Count Total	0	0	0	0	0	0	0	0	0	0	73	107	78	3	261
Peak Hr	0	0	0	0	0	0	0	0	0	0	63	96	64	0	223

**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	Tamarack Dr				Tamarack Dr				Burton St				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Two-Hour Count Summaries - Bikes**

Interval Start	Tamarack Dr			Tamarack Dr			Burton St			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

# Burton St Tamarack Dr

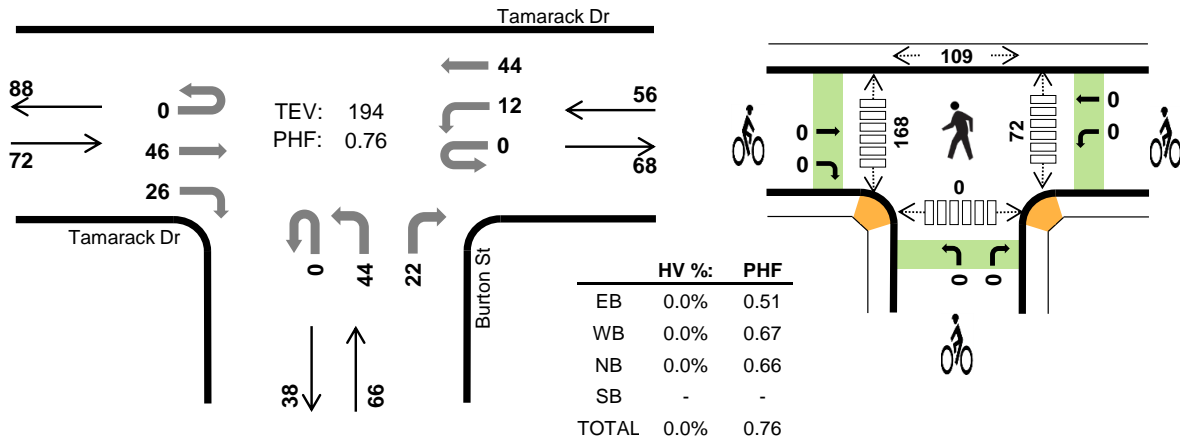


Peak Hour

Date: 04-18-2019

Count Period: 1:30 PM to 3:30 PM

Peak Hour: 2:30 PM to 3:30 PM



## Two-Hour Count Summaries

Interval Start	Tamarack Dr Eastbound				Tamarack Dr Westbound				Burton St Northbound				Burton St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	11	1	0	2	4	0	0	2	0	2	0	0	0	0	22	0
1:45 PM	0	0	2	2	0	1	4	0	0	1	0	0	0	0	0	0	10	0
2:00 PM	0	0	5	2	0	1	2	0	0	4	0	1	0	0	0	0	15	0
2:15 PM	0	0	3	3	0	1	9	0	0	2	0	3	0	0	0	0	21	68
2:30 PM	0	0	2	8	0	1	13	0	0	12	0	4	0	0	0	0	40	86
2:45 PM	0	0	1	3	0	2	7	0	0	14	0	3	0	0	0	0	30	106
3:00 PM	0	0	25	10	0	6	15	0	0	4	0	4	0	0	0	0	64	155
3:15 PM	0	0	18	5	0	3	9	0	0	14	0	11	0	0	0	0	60	194
Count Total	0	0	67	34	0	17	63	0	0	53	0	28	0	0	0	0	262	0
Peak Hour	All	0	0	46	26	0	12	44	0	0	44	0	22	0	0	0	194	0
	HV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HV%	-	-	0%	0%	-	0%	0%	-	-	0%	-	0%	-	-	-	0%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	1	1	0	0	2	0	0	0	0	0	0	8	2	2	12
1:45 PM	0	0	0	0	0	0	0	0	0	0	3	1	1	0	5
2:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3
2:15 PM	1	1	0	0	2	0	0	0	0	0	5	0	4	0	9
2:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	1	0	5
2:45 PM	0	0	0	0	0	0	0	0	0	0	8	31	23	0	62
3:00 PM	0	0	0	0	0	0	0	0	0	0	42	118	57	0	217
3:15 PM	0	0	0	0	0	0	0	0	0	0	20	17	28	0	65
Count Total	2	2	0	0	4	0	1	0	0	1	80	177	119	2	378
Peak Hr	0	0	0	0	0	0	0	0	0	0	72	168	109	0	349

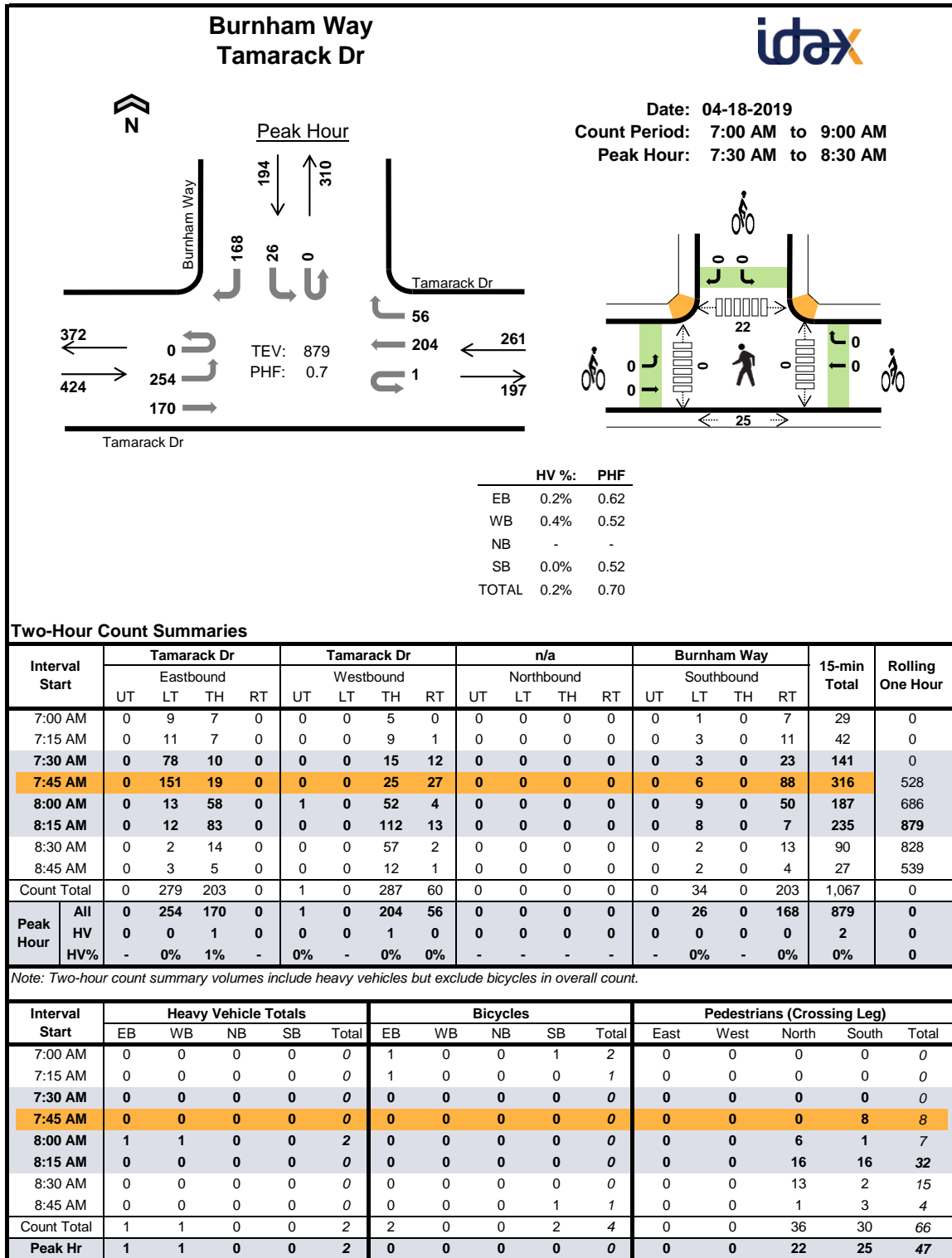
**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	Tamarack Dr				Tamarack Dr				Burton St				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Two-Hour Count Summaries - Bikes**

Interval Start	Tamarack Dr			Tamarack Dr			Burton St			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	1	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	

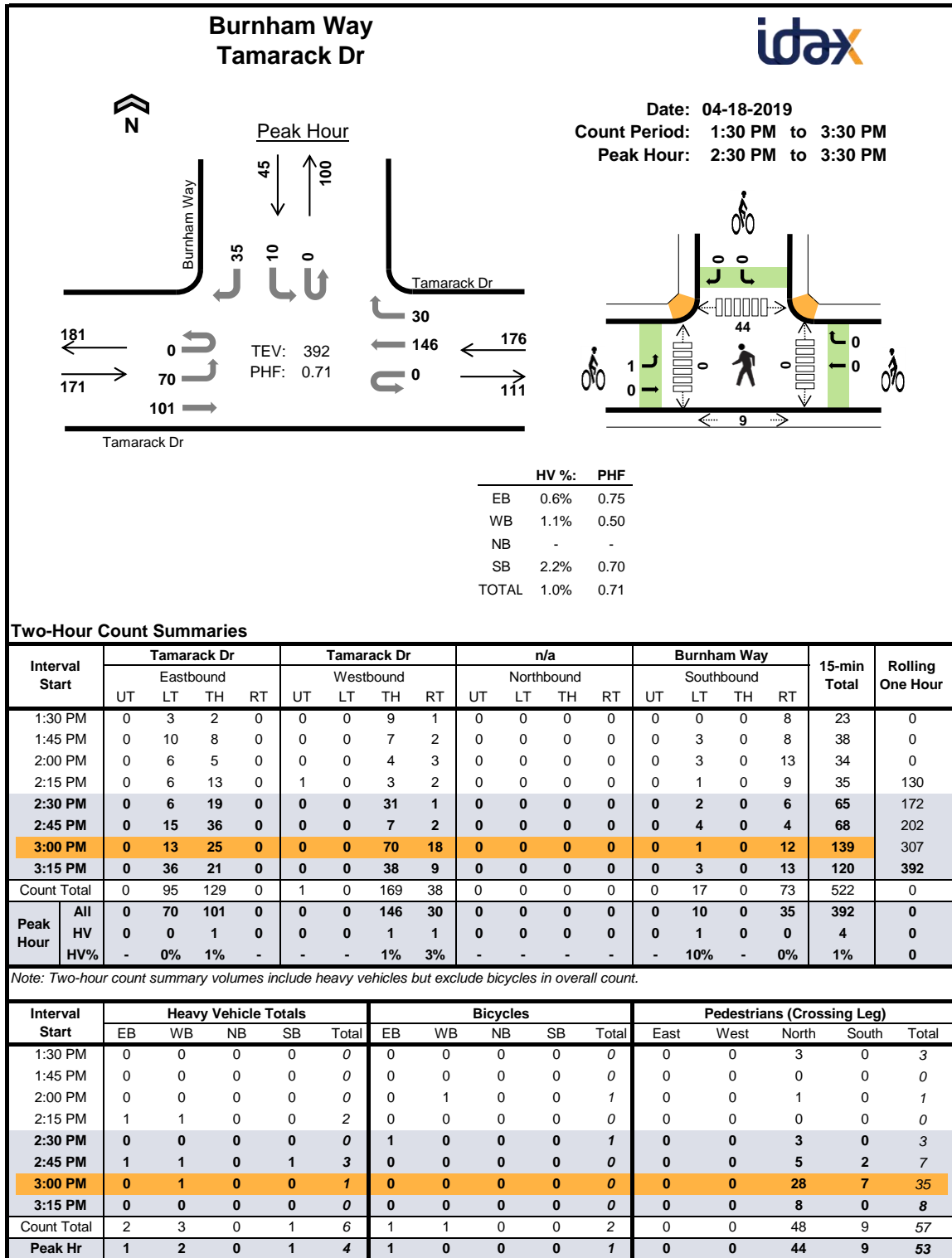
Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				n/a				Burnham Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
Peak Hour	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Tamarack Dr			Tamarack Dr			n/a			Burnham Way			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	1	2	0				
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0				
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	1				
Count Total	1	1	0	0	0	0	0	0	0	0	0	2	4	0				
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

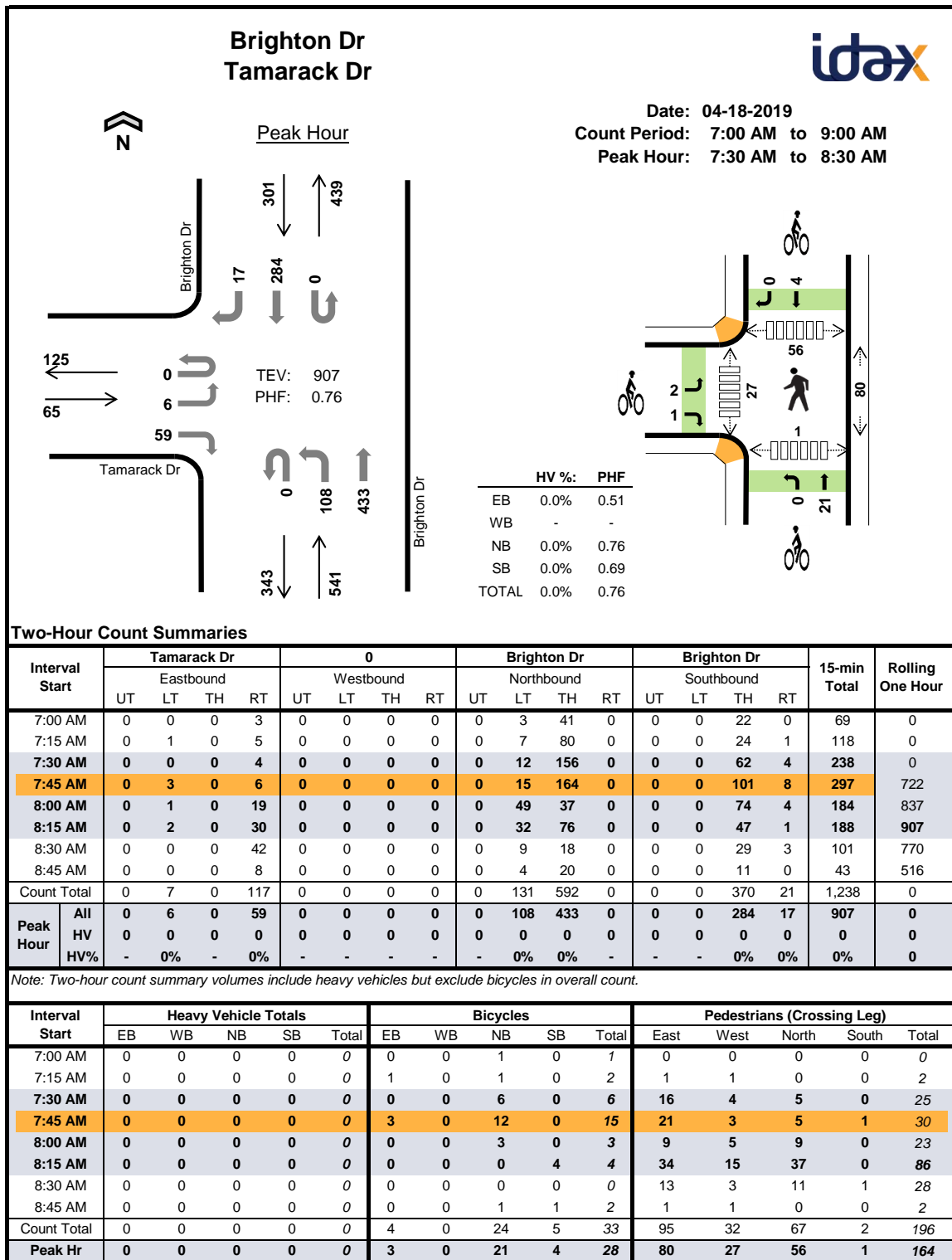


Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				n/a				Burnham Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
2:45 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	5	
3:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Count Total	0	0	2	0	0	0	2	1	0	0	0	0	0	1	0	0	0	
Peak Hour	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	

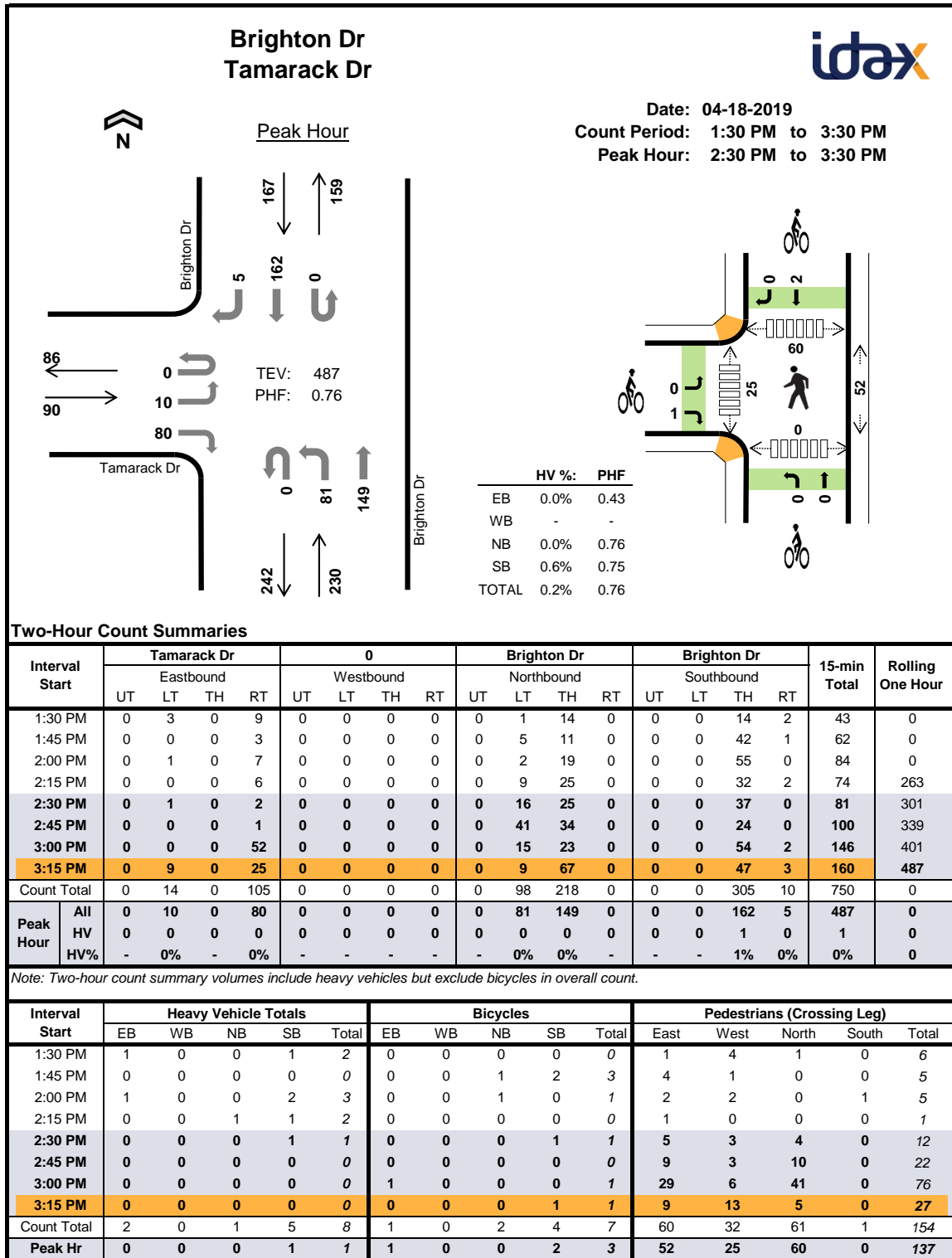
Two-Hour Count Summaries - Bikes																	
Interval Start	Tamarack Dr			Tamarack Dr			n/a			Burnham Way			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0			
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
2:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	2			
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
Count Total	1	0	0	0	1	0	0	0	0	0	0	0	2	0			
Peak Hour	1	0	0	0	0	0	0	0	0	0	0	0	1	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.





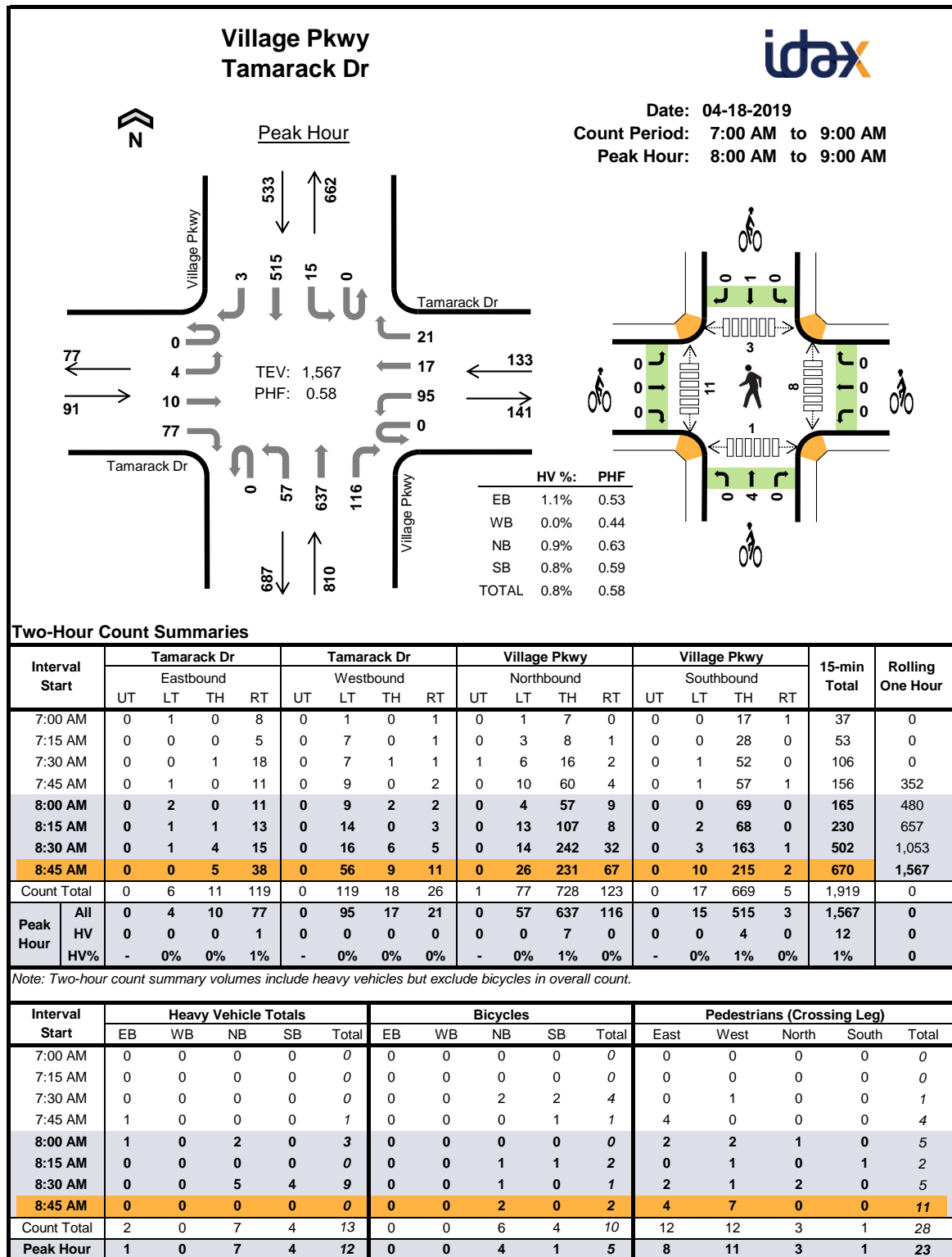
Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				0				Brighton Dr				Brighton Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Two-Hour Count Summaries - Bikes																		
Interval Start	Tamarack Dr			0			Brighton Dr			Brighton Dr			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0				
7:15 AM	0	0	1	0	0	0	0	1	0	0	0	0	2	0				
7:30 AM	0	0	0	0	0	0	0	6	0	0	0	0	6	0				
7:45 AM	2	0	1	0	0	0	0	12	0	0	0	0	15	24				
8:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	26				
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	4	28				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	22				
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	9				
Count Total	2	0	2	0	0	0	0	24	0	0	5	0	33	0				
Peak Hour	2	0	1	0	0	0	0	21	0	0	4	0	28	0				
Note: U-Turn volumes for bikes are included in Left-Turn, if any.																		



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				0				Brighton Dr				Brighton Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	7
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	2	0	0	0	0	0	0	0	0	1	0	0	0	4	1	8	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Tamarack Dr			0			Brighton Dr			Brighton Dr			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	3			
2:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1			
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	5			
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
3:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1			
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	3			
Count Total	0	0	1	0	0	0	1	1	0	0	4	0	7	0			
Peak Hour	0	0	1	0	0	0	0	0	0	0	2	0	3	0			

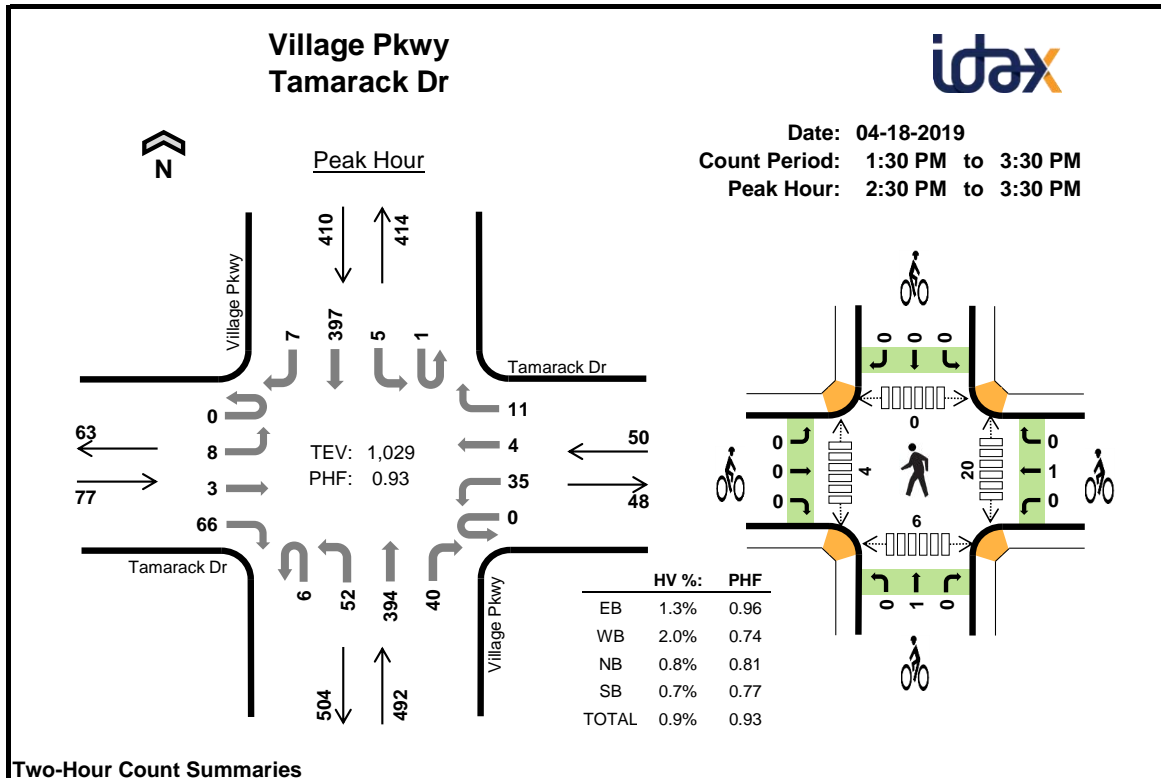
Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Tamarack Dr				Tamarack Dr				Village Pkwy				Village Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:00 AM	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	3	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	9	13
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Count Total	0	0	0	2	0	0	0	0	0	0	7	0	0	0	4	0	13	0
Peak Hour	0	0	0	1	0	0	0	0	0	0	7	0	0	0	4	0	12	0

Two-Hour Count Summaries - Bikes																		
Interval Start	Tamarack Dr			Tamarack Dr			Village Pkwy			Village Pkwy			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	5				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5				
8:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	7				
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	5				
Count Total	0	0	0	0	0	0	0	6	0	0	4	0	10	0				
Peak Hour	0	0	0	0	0	0	0	4	0	0	1	0	5	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



## Two-Hour Count Summaries

Interval Start	Tamarack Dr				Tamarack Dr				Village Pkwy				Village Pkwy				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	1	0	16	0	16	3	11	2	9	89	16	0	5	94	5	267	0	
1:45 PM	0	1	3	12	0	9	1	2	2	14	93	24	0	5	80	2	248	0	
2:00 PM	0	3	0	15	0	5	3	1	2	10	90	7	0	2	68	4	210	0	
2:15 PM	0	1	0	9	0	5	1	3	2	11	65	5	0	5	69	1	177	902	
2:30 PM	0	5	1	13	0	10	0	7	1	7	104	6	0	1	70	1	226	861	
2:45 PM	0	0	1	18	0	8	1	0	2	7	95	9	0	0	108	4	253	866	
3:00 PM	0	0	0	19	0	11	3	3	3	12	85	9	0	1	130	2	278	934	
3:15 PM	0	3	1	16	0	6	0	1	0	26	110	16	1	3	89	0	272	1,029	
Count Total	0	14	6	118	0	70	12	28	14	96	731	92	1	22	708	19	1,931	0	
Peak Hour	All	0	8	3	66	0	35	4	11	6	52	394	40	1	5	397	7	1,029	0
	HV	0	0	0	1	0	0	0	1	0	0	3	1	0	0	3	0	9	0
	HV%	-	0%	0%	2%	-	0%	0%	9%	0%	0%	1%	3%	0%	0%	1%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
1:30 PM	0	1	0	1	2	0	0	0	0	0	9	1	0	0	10
1:45 PM	0	0	0	1	1	0	0	0	0	0	4	0	0	0	4
2:00 PM	1	0	2	2	5	0	0	1	0	1	5	0	0	0	5
2:15 PM	0	0	0	3	3	0	0	0	0	0	1	1	0	0	2
2:30 PM	1	1	2	1	5	0	0	0	0	0	3	2	0	3	8
2:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	2	6
3:00 PM	0	0	1	1	2	0	1	1	0	2	7	2	0	1	10
3:15 PM	0	0	1	1	2	0	0	0	0	0	6	0	0	0	6
Count Total	2	2	6	10	20	0	1	2	0	3	39	6	0	6	51
Peak Hour	1	1	4	3	9	0	1	1	0	2	20	4	0	6	30

**Two-Hour Count Summaries - Heavy Vehicles**

Interval Start	Tamarack Dr				Tamarack Dr				Village Pkwy				Village Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
2:00 PM	0	0	0	1	0	0	0	0	0	0	2	0	0	1	1	0	5	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	11
2:30 PM	0	0	0	1	0	0	0	1	0	0	1	1	0	0	1	0	5	14
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	10
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	9
Count Total	0	0	0	2	0	1	0	1	0	0	5	1	0	2	7	1	20	0
Peak Hour	0	0	0	1	0	0	0	1	0	0	3	1	0	0	3	0	9	0

**Two-Hour Count Summaries - Bikes**

Interval Start	Tamarack Dr			Tamarack Dr			Village Pkwy			Village Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	2	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	1	0	0	2	0	0	0	0	3	0
Peak Hour	0	0	0	0	1	0	0	1	0	0	0	0	2	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.












## **Appendix B – Existing Conditions Intersections Level of Service Worksheets**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Burton St & Tamarack Dr

Timing Plan: A.M. Peak

12/04/2019











						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	61	32	23	127	115	13
Future Volume (vph)	61	32	23	127	115	13
Peak Hour Factor	0.75	0.75	0.61	0.61	0.62	0.62
Hourly flow rate (vph)	81	43	38	208	185	21
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total (vph)	124	246	206			
Volume Left (vph)	0	38	185			
Volume Right (vph)	43	0	21			
Hadj (s)	-0.17	0.06	0.15			
Departure Headway (s)	4.6	4.7	4.9			
Degree Utilization, x	0.16	0.32	0.28			
Capacity (veh/h)	735	735	688			
Control Delay (s)	8.4	9.8	9.9			
Approach Delay (s)	8.4	9.8	9.9			
Approach LOS	A	A	A			
Intersection Summary						
Delay			9.5			
Level of Service			A			
Intersection Capacity Utilization			33.9%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 1: Burton St & Tamarack Dr

Timing Plan: Midday Peak

12/04/2019

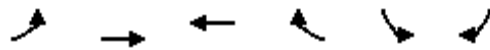
						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	46	26	12	44	44	22
Future Volume (vph)	46	26	12	44	44	22
Peak Hour Factor	0.51	0.51	0.67	0.67	0.66	0.66
Hourly flow rate (vph)	90	51	18	66	67	33
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total (vph)	141	84	100			
Volume Left (vph)	0	18	67			
Volume Right (vph)	51	0	33			
Hadj (s)	-0.22	0.04	-0.06			
Departure Headway (s)	4.0	4.3	4.3			
Degree Utilization, x	0.16	0.10	0.12			
Capacity (veh/h)	872	809	789			
Control Delay (s)	7.7	7.8	7.9			
Approach Delay (s)	7.7	7.8	7.9			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.8			
Level of Service			A			
Intersection Capacity Utilization			28.9%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 2: Tamarack Dr & Fredrickson Parking Lot East Driveway

Timing Plan: A.M. Peak

12/04/2019



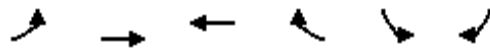
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			
Traffic Volume (veh/h)	56	93	116	126	0	0
Future Volume (Veh/h)	56	93	116	126	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.62	0.62	0.63	0.63	0.25	0.25
Hourly flow rate (vph)	90	150	184	200	0	0
Pedestrians					28	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		1314				
pX, platoon unblocked						
vC, conflicting volume	412				642	312
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	412				642	312
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				100	100
cM capacity (veh/h)	1152				404	728
Direction, Lane #	EB 1	WB 1				
Volume Total	240	384				
Volume Left	90	0				
Volume Right	0	200				
cSH	1152	1700				
Volume to Capacity	0.08	0.23				
Queue Length 95th (ft)	6	0				
Control Delay (s)	3.6	0.0				
Lane LOS	A					
Approach Delay (s)	3.6	0.0				
Approach LOS						
Intersection Summary						
Average Delay		1.4				
Intersection Capacity Utilization		29.8%		ICU Level of Service		A
Analysis Period (min)		15				

# HCM Unsignalized Intersection Capacity Analysis

## 2: Tamarack Dr & Fredrickson Parking Lot East Driveway

Timing Plan: Midday Peak

12/04/2019



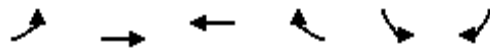
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↗
Traffic Volume (veh/h)	24	72	55	33	0	1
Future Volume (Veh/h)	24	72	55	33	0	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.49	0.49	0.88	0.88	0.25	0.25
Hourly flow rate (vph)	49	147	63	38	0	4
Pedestrians					34	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		1314				
pX, platoon unblocked						
vC, conflicting volume	135				361	116
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	135				361	116
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	100
cM capacity (veh/h)	1402				596	906
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	196	101	4			
Volume Left	49	0	0			
Volume Right	0	38	4			
cSH	1402	1700	906			
Volume to Capacity	0.03	0.06	0.00			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	2.1	0.0	9.0			
Lane LOS	A		A			
Approach Delay (s)	2.1	0.0	9.0			
Approach LOS			A			
Intersection Summary						
Average Delay		1.5				
Intersection Capacity Utilization		21.0%		ICU Level of Service		A
Analysis Period (min)		15				




# HCM Unsignalized Intersection Capacity Analysis

## 3: Tamarack Dr & Fredrickson Parking Lot West Driveway

Timing Plan: A.M. Peak

12/04/2019



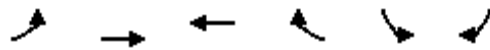
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	99	194	21	11	100
Future Volume (Veh/h)	103	99	194	21	11	100
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.55	0.55	0.66	0.66	0.53	0.53
Hourly flow rate (vph)	187	180	294	32	21	189
Pedestrians		2	3		9	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		877				
pX, platoon unblocked						
vC, conflicting volume	335				876	321
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	335				876	321
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	85				92	73
cM capacity (veh/h)	1214				267	712
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	367	326	210			
Volume Left	187	0	21			
Volume Right	0	32	189			
cSH	1214	1700	611			
Volume to Capacity	0.15	0.19	0.34			
Queue Length 95th (ft)	14	0	38			
Control Delay (s)	5.1	0.0	14.0			
Lane LOS	A		B			
Approach Delay (s)	5.1	0.0	14.0			
Approach LOS			B			
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization			40.3%		ICU Level of Service	
Analysis Period (min)			15		A	




# HCM Unsignalized Intersection Capacity Analysis

## 3: Tamarack Dr & Fredrickson Parking Lot West Driveway

Timing Plan: Midday Peak

12/04/2019



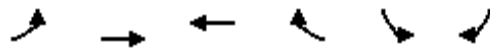
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	73	88	16	5	87
Future Volume (Veh/h)	39	73	88	16	5	87
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.57	0.57	0.49	0.49
Hourly flow rate (vph)	58	109	154	28	10	178
Pedestrians		3			28	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		877				
pX, platoon unblocked						
vC, conflicting volume	210				421	199
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	210				421	199
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				98	78
cM capacity (veh/h)	1324				550	820
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	167	182	188			
Volume Left	58	0	10			
Volume Right	0	28	178			
cSH	1324	1700	799			
Volume to Capacity	0.04	0.11	0.24			
Queue Length 95th (ft)	3	0	23			
Control Delay (s)	3.0	0.0	10.9			
Lane LOS	A		B			
Approach Delay (s)	3.0	0.0	10.9			
Approach LOS			B			
Intersection Summary						
Average Delay		4.7				
Intersection Capacity Utilization		26.0%	ICU Level of Service	A		
Analysis Period (min)		15				




# HCM Unsignalized Intersection Capacity Analysis

## 4: Tamarack Dr & Burnham Way

Timing Plan: A.M. Peak

12/04/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	254	170	204	56	26	168
Future Volume (Veh/h)	254	170	204	56	26	168
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.62	0.62	0.52	0.52	0.52	0.52
Hourly flow rate (vph)	410	274	392	108	50	323
Pedestrians					22	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		713				
pX, platoon unblocked						
vC, conflicting volume	522				1562	468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1562	468
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	60				31	45
cM capacity (veh/h)	1023				72	583
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	684	500	373			
Volume Left	410	0	50			
Volume Right	0	108	323			
cSH	1023	1700	299			
Volume to Capacity	0.40	0.29	1.25			
Queue Length 95th (ft)	49	0	433			
Control Delay (s)	8.6	0.0	171.8			
Lane LOS	A		F			
Approach Delay (s)	8.6	0.0	171.8			
Approach LOS			F			
Intersection Summary						
Average Delay		44.9				
Intersection Capacity Utilization		59.4%	ICU Level of Service		B	
Analysis Period (min)		15				

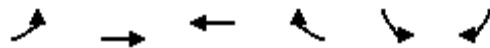





# HCM Unsignalized Intersection Capacity Analysis

## 4: Tamarack Dr & Burnham Way

Timing Plan: Midday Peak

12/04/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	101	146	30	10	35
Future Volume (Veh/h)	70	101	146	30	10	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.50	0.50	0.70	0.70
Hourly flow rate (vph)	93	135	292	60	14	50
Pedestrians					44	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		713				
pX, platoon unblocked						
vC, conflicting volume	396				687	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396				687	366
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				96	92
cM capacity (veh/h)	1119				363	651
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	228	352	64			
Volume Left	93	0	14			
Volume Right	0	60	50			
cSH	1119	1700	554			
Volume to Capacity	0.08	0.21	0.12			
Queue Length 95th (ft)	7	0	10			
Control Delay (s)	3.9	0.0	12.3			
Lane LOS	A		B			
Approach Delay (s)	3.9	0.0	12.3			
Approach LOS			B			
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			35.1%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 5: Brighton Dr & Tamarack Dr

Timing Plan: A.M. Peak










12/04/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Volume (veh/h)	6	59	108	433	284	17
Future Volume (Veh/h)	6	59	108	433	284	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.51	0.51	0.76	0.76	0.69	0.69
Hourly flow rate (vph)	12	116	142	570	412	25
Pedestrians	27			1	56	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	3			0	5	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1362	452	464			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1362	452	464			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	80	87			
cM capacity (veh/h)	131	591	1069			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	128	712	437			
Volume Left	12	142	0			
Volume Right	116	0	25			
cSH	444	1069	1700			
Volume to Capacity	0.29	0.13	0.26			
Queue Length 95th (ft)	29	11	0			
Control Delay (s)	16.4	3.2	0.0			
Lane LOS	C	A				
Approach Delay (s)	16.4	3.2	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			3.4			
Intersection Capacity Utilization			59.3%	ICU Level of Service		B
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis 5: Brighton Dr & Tamarack Dr

Timing Plan: Midday Peak  
12/04/2019









						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	80	81	149	162	5
Future Volume (Veh/h)	10	80	81	149	162	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.43	0.43	0.76	0.76	0.75	0.75
Hourly flow rate (vph)	23	186	107	196	216	7
Pedestrians	25				60	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	2				6	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	714	244	248			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	714	244	248			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	76	92			
cM capacity (veh/h)	338	780	1298			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	209	303	223			
Volume Left	23	107	0			
Volume Right	186	0	7			
cSH	682	1298	1700			
Volume to Capacity	0.31	0.08	0.13			
Queue Length 95th (ft)	32	7	0			
Control Delay (s)	12.6	3.3	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.6	3.3	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		4.9				
Intersection Capacity Utilization		36.6%		ICU Level of Service	A	
Analysis Period (min)		15				

# HCM Signalized Intersection Capacity Analysis

## 6: Village Parkway & Tamarack Dr

Timing Plan: A.M. Peak

12/04/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	10	77	95	17	21	57	637	116	15	515	3
Future Volume (vph)	4	10	77	95	17	21	57	637	116	15	515	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	5.0		4.5	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.98		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1767	1597			1755		1770	3437		1770	3535	
Flt Permitted	0.63	1.00			0.66		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1163	1597			1207		1770	3437		1770	3535	
Peak-hour factor, PHF	0.53	0.53	0.53	0.44	0.44	0.44	0.63	0.63	0.63	0.59	0.59	0.59
Adj. Flow (vph)	8	19	145	216	39	48	90	1011	184	25	873	5
RTOR Reduction (vph)	0	97	0	0	6	0	0	12	0	0	1	0
Lane Group Flow (vph)	8	67	0	0	297	0	90	1183	0	25	877	0
Confl. Peds. (#/hr)	3		1	1		3			8			11
Confl. Bikes (#/hr)									4			1
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	26.4	26.4			26.4		7.3	37.6		2.5	32.8	
Effective Green, g (s)	26.4	26.4			26.4		7.3	37.6		2.5	32.8	
Actuated g/C Ratio	0.33	0.33			0.33		0.09	0.47		0.03	0.41	
Clearance Time (s)	4.5	4.5			4.5		4.5	5.0		4.5	5.0	
Vehicle Extension (s)	2.0	2.0			2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	381	523			395		160	1605		54	1440	
v/s Ratio Prot		0.04					c0.05	c0.34		0.01	0.25	
v/s Ratio Perm	0.01				c0.25							
v/c Ratio	0.02	0.13			0.75		0.56	0.74		0.46	0.61	
Uniform Delay, d1	18.3	19.0			24.1		35.1	17.4		38.3	18.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0			7.0		2.7	1.9		2.3	0.9	
Delay (s)	18.3	19.0			31.1		37.8	19.4		40.6	19.7	
Level of Service	B	B			C		D	B		D	B	
Approach Delay (s)		19.0			31.1			20.6			20.2	
Approach LOS		B			C			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			21.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			80.5				Sum of lost time (s)			14.0		
Intersection Capacity Utilization			51.5%				ICU Level of Service			A		
Analysis Period (min)			15									




















c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis

## 6: Village Parkway & Tamarack Dr

Timing Plan: Midday Peak

12/04/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	8	3	66	35	4	11	6	52	394	40	1	5
Future Volume (vph)	8	3	66	35	4	11	6	52	394	40	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5	5.0			4.5
Lane Util. Factor	1.00	1.00			1.00			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.98			1.00			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00			1.00			1.00	1.00			0.99
Frt	1.00	0.86			0.97			1.00	0.99			1.00
Flt Protected	0.95	1.00			0.97			0.95	1.00			0.95
Satd. Flow (prot)	1787	1586			1741			1787	3507			1768
Flt Permitted	0.72	1.00			0.75			0.16	1.00			0.28
Satd. Flow (perm)	1358	1586			1343			303	3507			517
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.80	0.80	0.80	0.80	0.77	0.77
Adj. Flow (vph)	8	3	69	38	4	12	8	65	492	50	1	6
RTOR Reduction (vph)	0	61	0	0	11	0	0	0	6	0	0	0
Lane Group Flow (vph)	8	11	0	0	43	0	0	73	537	0	0	7
Confl. Peds. (#/hr)			6	6				4		20		20
Confl. Bikes (#/hr)										1		
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA			Prot	NA			Prot
Protected Phases		4			8			5	2			1
Permitted Phases	4			8								
Actuated Green, G (s)	8.4	8.4			8.4			24.8	32.6			14.4
Effective Green, g (s)	8.4	8.4			8.4			24.8	32.6			14.4
Actuated g/C Ratio	0.12	0.12			0.12			0.36	0.47			0.21
Clearance Time (s)	4.5	4.5			4.5			4.5	5.0			4.5
Vehicle Extension (s)	2.0	2.0			2.0			2.0	4.0			2.0
Lane Grp Cap (vph)	164	191			162			108	1647			107
v/s Ratio Prot		0.01							0.15			
v/s Ratio Perm	0.01				c0.03			c0.24				0.01
v/c Ratio	0.05	0.06			0.27			0.68	0.33			0.07
Uniform Delay, d1	27.0	27.0			27.7			18.9	11.5			22.1
Progression Factor	1.00	1.00			1.00			1.00	1.00			1.00
Incremental Delay, d2	0.0	0.0			0.3			12.4	0.2			0.1
Delay (s)	27.0	27.1			28.0			31.3	11.7			22.2
Level of Service	C	C			C			C	B			C
Approach Delay (s)		27.0			28.0				14.0			
Approach LOS		C			C				B			
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			69.4			Sum of lost time (s)			14.0			
Intersection Capacity Utilization			38.9%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 6: Village Parkway & Tamarack Dr

Timing Plan: Midday Peak

12/04/2019



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	397	7
Future Volume (vph)	397	7
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3563	
Flt Permitted	1.00	
Satd. Flow (perm)	3563	
Peak-hour factor, PHF	0.77	0.77
Adj. Flow (vph)	516	9
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	524	0
Confl. Peds. (#/hr)		4
Confl. Bikes (#/hr)		1
Heavy Vehicles (%)	1%	1%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	22.2	
Effective Green, g (s)	22.2	
Actuated g/C Ratio	0.32	
Clearance Time (s)	5.0	
Vehicle Extension (s)	4.0	
Lane Grp Cap (vph)	1139	
v/s Ratio Prot	c0.15	
v/s Ratio Perm		
v/c Ratio	0.46	
Uniform Delay, d1	18.8	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	19.2	
Level of Service	B	
Approach Delay (s)	19.3	
Approach LOS	B	
Intersection Summary		

















## **Appendix C – Existing plus Project Conditions Intersections Level of Service Worksheets**

# HCM Unsignalized Intersection Capacity Analysis

## 1: Burton St/Frederiksen Parking Lot East Driveway & Tamarack Dr

Timing Plan: A.M. Peak

12/04/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	56	61	32	23	93	34	57	59	13	2	1	99
Future Volume (vph)	56	61	32	23	93	34	57	59	13	2	1	99
Peak Hour Factor	0.92	0.75	0.75	0.61	0.61	0.92	0.62	0.92	0.62	0.92	0.92	0.92
Hourly flow rate (vph)	61	81	43	38	152	37	92	64	21	2	1	108
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	185	227	177	111								
Volume Left (vph)	61	38	92	2								
Volume Right (vph)	43	37	21	108								
Hadj (s)	-0.04	-0.03	0.07	-0.55								
Departure Headway (s)	4.9	4.9	5.1	4.7								
Degree Utilization, x	0.25	0.31	0.25	0.14								
Capacity (veh/h)	678	693	644	690								
Control Delay (s)	9.6	10.0	9.9	8.4								
Approach Delay (s)	9.6	10.0	9.9	8.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.6									
Level of Service			A									
Intersection Capacity Utilization			37.8%		ICU Level of Service				A			
Analysis Period (min)			15									



















# HCM Unsignalized Intersection Capacity Analysis

Timing Plan: Midday Peak

## 1: Burton St/Fredrickson Parking Lot East Driveway & Tamarack Dr

12/04/2019

















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	46	26	12	27	19	28	17	22	2	1	49
Future Volume (vph)	12	46	26	12	27	19	28	17	22	2	1	49
Peak Hour Factor	0.92	0.51	0.51	0.67	0.67	0.92	0.66	0.92	0.66	0.92	0.92	0.92
Hourly flow rate (vph)	13	90	51	18	40	21	42	18	33	2	1	53
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	154	79	93	56								
Volume Left (vph)	13	18	42	2								
Volume Right (vph)	51	21	33	53								
Hadj (s)	-0.18	-0.10	-0.12	-0.53								
Departure Headway (s)	4.1	4.3	4.4	4.0								
Degree Utilization, x	0.18	0.09	0.11	0.06								
Capacity (veh/h)	836	793	778	834								
Control Delay (s)	8.0	7.7	7.9	7.3								
Approach Delay (s)	8.0	7.7	7.9	7.3								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay				7.8								
Level of Service				A								
Intersection Capacity Utilization				25.5%	ICU Level of Service	A						
Analysis Period (min)				15								

# HCM Unsignalized Intersection Capacity Analysis

## 2: Tamarack Dr & Frederiksen Parking Lot Middle Dwy

Timing Plan: A.M. Peak

12/04/2019

















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	110	0	5	210	34	5	0	5	34	0	51
Future Volume (Veh/h)	52	110	0	5	210	34	5	0	5	34	0	51
Sign Control	Free				Free				Stop		Stop	
Grade	0%				0%				0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	120	0	5	228	37	5	0	5	37	0	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None						None					
Median storage (veh)												
Upstream signal (ft)	1001											
pX, platoon unblocked												
vC, conflicting volume	265			120			546	509	120	496	490	246
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	265			120			546	509	120	496	490	246
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			99	100	99	92	100	93
cM capacity (veh/h)	1299			1468			403	445	931	465	456	792
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	177	270	10	92								
Volume Left	57	5	5	37								
Volume Right	0	37	5	55								
cSH	1299	1468	562	617								
Volume to Capacity	0.04	0.00	0.02	0.15								
Queue Length 95th (ft)	3	0	1	13								
Control Delay (s)	2.8	0.2	11.5	11.9								
Lane LOS	A	A	B	B								
Approach Delay (s)	2.8	0.2	11.5	11.9								
Approach LOS			B	B								
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			37.9%	ICU Level of Service				A				
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 2: Tamarack Dr & New Middle Dwy

Timing Plan: Midday Peak

12/04/2019

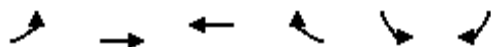
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	66	0	2	94	8	2	0	2	16	0	43
Future Volume (Veh/h)	12	66	0	2	94	8	2	0	2	16	0	43
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	72	0	2	102	9	2	0	2	17	0	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	1001											
pX, platoon unblocked												
vC, conflicting volume	111			72			256	213	72	210	208	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	111			72			256	213	72	210	208	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	98	100	95
cM capacity (veh/h)	1479			1528			658	678	990	739	681	948
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	85	113	4	64								
Volume Left	13	2	2	17								
Volume Right	0	9	2	47								
cSH	1479	1528	791	882								
Volume to Capacity	0.01	0.00	0.01	0.07								
Queue Length 95th (ft)	1	0	0	6								
Control Delay (s)	1.2	0.1	9.6	9.4								
Lane LOS	A	A	A	A								
Approach Delay (s)	1.2	0.1	9.6	9.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.8								
Intersection Capacity Utilization				20.8%	ICU Level of Service				A			
Analysis Period (min)				15								




# HCM Unsignalized Intersection Capacity Analysis

## 3: Tamarack Dr & Frederiksen Parking Lot West Driveway

Timing Plan: A.M. Peak

12/04/2019



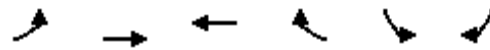
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	52	151	245	21	11	50
Future Volume (Veh/h)	52	151	245	21	11	50
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.55	0.55	0.66	0.66	0.53	0.53
Hourly flow rate (vph)	95	275	371	32	21	94
Pedestrians		2	3		9	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		1	
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		877				
pX, platoon unblocked						
vC, conflicting volume	412				864	398
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	412				864	398
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				93	85
cM capacity (veh/h)	1137				294	645
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	370	403	115			
Volume Left	95	0	21			
Volume Right	0	32	94			
cSH	1137	1700	530			
Volume to Capacity	0.08	0.24	0.22			
Queue Length 95th (ft)	7	0	20			
Control Delay (s)	2.8	0.0	13.7			
Lane LOS	A		B			
Approach Delay (s)	2.8	0.0	13.7			
Approach LOS			B			
Intersection Summary						
Average Delay			2.9			
Intersection Capacity Utilization			39.5%	ICU Level of Service		A
Analysis Period (min)			15			




# HCM Unsignalized Intersection Capacity Analysis

## 3: Tamarack Dr & Fredrickson Parking Lot West Driveway

Timing Plan: Midday Peak

12/04/2019



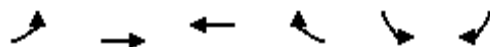
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	73	131	8	5	44
Future Volume (Veh/h)	39	73	131	8	5	44
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.67	0.67	0.57	0.57	0.49	0.49
Hourly flow rate (vph)	58	109	230	14	10	90
Pedestrians		3			28	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		0			3	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		877				
pX, platoon unblocked						
vC, conflicting volume	272				490	268
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272				490	268
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				98	88
cM capacity (veh/h)	1257				501	750
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	167	244	100			
Volume Left	58	0	10			
Volume Right	0	14	90			
cSH	1257	1700	715			
Volume to Capacity	0.05	0.14	0.14			
Queue Length 95th (ft)	4	0	12			
Control Delay (s)	3.0	0.0	10.9			
Lane LOS	A		B			
Approach Delay (s)	3.0	0.0	10.9			
Approach LOS			B			
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			31.3%	ICU Level of Service	A	
Analysis Period (min)			15			




# HCM Unsignalized Intersection Capacity Analysis

## 4: Tamarack Dr & Burnham Way

Timing Plan: A.M. Peak

12/04/2019



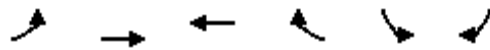
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	254	171	205	56	26	168
Future Volume (Veh/h)	254	171	205	56	26	168
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.62	0.62	0.52	0.52	0.52	0.52
Hourly flow rate (vph)	410	276	394	108	50	323
Pedestrians					22	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					2	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		713				
pX, platoon unblocked						
vC, conflicting volume	524				1566	470
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	524				1566	470
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	60				30	44
cM capacity (veh/h)	1021				72	581
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	686	502	373			
Volume Left	410	0	50			
Volume Right	0	108	323			
cSH	1021	1700	298			
Volume to Capacity	0.40	0.30	1.25			
Queue Length 95th (ft)	49	0	436			
Control Delay (s)	8.6	0.0	174.3			
Lane LOS	A		F			
Approach Delay (s)	8.6	0.0	174.3			
Approach LOS			F			
Intersection Summary						
Average Delay		45.4				
Intersection Capacity Utilization		59.5%		ICU Level of Service	B	
Analysis Period (min)		15				




# HCM Unsignalized Intersection Capacity Analysis

## 4: Tamarack Dr & Burnham Way

Timing Plan: Midday Peak

12/04/2019












Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	101	146	30	10	35
Future Volume (Veh/h)	70	101	146	30	10	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.75	0.75	0.50	0.50	0.70	0.70
Hourly flow rate (vph)	93	135	292	60	14	50
Pedestrians					44	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					4	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		713				
pX, platoon unblocked						
vC, conflicting volume	396				687	366
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396				687	366
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				96	92
cM capacity (veh/h)	1119				363	651
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	228	352	64			
Volume Left	93	0	14			
Volume Right	0	60	50			
cSH	1119	1700	554			
Volume to Capacity	0.08	0.21	0.12			
Queue Length 95th (ft)	7	0	10			
Control Delay (s)	3.9	0.0	12.3			
Lane LOS	A		B			
Approach Delay (s)	3.9	0.0	12.3			
Approach LOS			B			
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			35.1%		ICU Level of Service	
Analysis Period (min)			15		A	

# HCM Unsignalized Intersection Capacity Analysis

## 5: Brighton Dr & Tamarack Dr

Timing Plan: A.M. Peak

12/04/2019

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	60	108	433	284	17
Future Volume (Veh/h)	7	60	108	433	284	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.51	0.51	0.76	0.76	0.69	0.69
Hourly flow rate (vph)	14	118	142	570	412	25
Pedestrians	27			1	56	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	3.5			3.5	3.5	
Percent Blockage	3			0	5	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1362	452	464			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1362	452	464			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	80	87			
cM capacity (veh/h)	131	591	1069			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	132	712	437			
Volume Left	14	142	0			
Volume Right	118	0	25			
cSH	430	1069	1700			
Volume to Capacity	0.31	0.13	0.26			
Queue Length 95th (ft)	32	11	0			
Control Delay (s)	17.0	3.2	0.0			
Lane LOS	C	A				
Approach Delay (s)	17.0	3.2	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay		3.5				
Intersection Capacity Utilization		59.4%		ICU Level of Service		B
Analysis Period (min)		15				



# HCM Unsignalized Intersection Capacity Analysis

## 5: Brighton Dr & Tamarack Dr

Timing Plan: Midday Peak

12/04/2019











Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	81	82	149	162	6
Future Volume (Veh/h)	11	81	82	149	162	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.43	0.43	0.76	0.76	0.75	0.75
Hourly flow rate (vph)	26	188	108	196	216	8
Pedestrians	25				60	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	2				6	
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	717	245	249			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	717	245	249			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	76	92			
cM capacity (veh/h)	337	780	1297			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	214	304	224			
Volume Left	26	108	0			
Volume Right	188	0	8			
cSH	672	1297	1700			
Volume to Capacity	0.32	0.08	0.13			
Queue Length 95th (ft)	34	7	0			
Control Delay (s)	12.8	3.3	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.8	3.3	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			36.9%	ICU Level of Service		A
Analysis Period (min)			15			

# HCM Signalized Intersection Capacity Analysis

## 6: Village Parkway & Tamarack Dr

Timing Plan: A.M. Peak

12/04/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	10	77	95	17	22	57	637	116	16	515	3
Future Volume (vph)	4	10	77	95	17	22	57	637	116	16	515	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	5.0		4.5	5.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.98		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1767	1597			1754		1770	3437		1770	3535	
Flt Permitted	0.62	1.00			0.67		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1159	1597			1209		1770	3437		1770	3535	
Peak-hour factor, PHF	0.53	0.53	0.53	0.44	0.44	0.44	0.63	0.63	0.63	0.59	0.59	0.59
Adj. Flow (vph)	8	19	145	216	39	50	90	1011	184	27	873	5
RTOR Reduction (vph)	0	97	0	0	7	0	0	12	0	0	1	0
Lane Group Flow (vph)	8	67	0	0	298	0	90	1183	0	27	877	0
Confl. Peds. (#/hr)	3		1	1		3			8			11
Confl. Bikes (#/hr)									4			1
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	26.5	26.5			26.5		7.3	37.6		2.5	32.8	
Effective Green, g (s)	26.5	26.5			26.5		7.3	37.6		2.5	32.8	
Actuated g/C Ratio	0.33	0.33			0.33		0.09	0.47		0.03	0.41	
Clearance Time (s)	4.5	4.5			4.5		4.5	5.0		4.5	5.0	
Vehicle Extension (s)	2.0	2.0			2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	381	525			397		160	1603		54	1438	
v/s Ratio Prot		0.04					c0.05	c0.34		0.02	0.25	
v/s Ratio Perm	0.01				c0.25							
v/c Ratio	0.02	0.13			0.75		0.56	0.74		0.50	0.61	
Uniform Delay, d1	18.3	18.9			24.1		35.1	17.5		38.4	18.9	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0			7.0		2.7	1.9		2.6	0.9	
Delay (s)	18.3	19.0			31.1		37.8	19.4		41.1	19.7	
Level of Service	B	B			C		D	B		D	B	
Approach Delay (s)		19.0			31.1			20.7			20.4	
Approach LOS		B			C			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			21.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			80.6				Sum of lost time (s)			14.0		
Intersection Capacity Utilization			51.6%				ICU Level of Service			A		
Analysis Period (min)			15									




















c Critical Lane Group

# HCM Signalized Intersection Capacity Analysis

## 6: Village Parkway & Tamarack Dr

Timing Plan: Midday Peak

12/04/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	8	3	66	35	4	11	6	52	394	40	1	5
Future Volume (vph)	8	3	66	35	4	11	6	52	394	40	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5	5.0			4.5
Lane Util. Factor	1.00	1.00			1.00			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.98			1.00			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00			1.00			1.00	1.00			0.99
Frt	1.00	0.86			0.97			1.00	0.99			1.00
Flt Protected	0.95	1.00			0.97			0.95	1.00			0.95
Satd. Flow (prot)	1787	1586			1741			1787	3507			1768
Flt Permitted	0.72	1.00			0.75			0.16	1.00			0.28
Satd. Flow (perm)	1358	1586			1343			303	3507			517
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.80	0.80	0.80	0.80	0.77	0.77
Adj. Flow (vph)	8	3	69	38	4	12	8	65	492	50	1	6
RTOR Reduction (vph)	0	61	0	0	11	0	0	0	6	0	0	0
Lane Group Flow (vph)	8	11	0	0	43	0	0	73	537	0	0	7
Confl. Peds. (#/hr)			6	6				4		20		20
Confl. Bikes (#/hr)										1		
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA			Prot	NA			Prot
Protected Phases		4			8			5	2			1
Permitted Phases	4			8								
Actuated Green, G (s)	8.4	8.4			8.4			24.8	32.6			14.4
Effective Green, g (s)	8.4	8.4			8.4			24.8	32.6			14.4
Actuated g/C Ratio	0.12	0.12			0.12			0.36	0.47			0.21
Clearance Time (s)	4.5	4.5			4.5			4.5	5.0			4.5
Vehicle Extension (s)	2.0	2.0			2.0			2.0	4.0			2.0
Lane Grp Cap (vph)	164	191			162			108	1647			107
v/s Ratio Prot		0.01							0.15			
v/s Ratio Perm	0.01				c0.03			c0.24				0.01
v/c Ratio	0.05	0.06			0.27			0.68	0.33			0.07
Uniform Delay, d1	27.0	27.0			27.7			18.9	11.5			22.1
Progression Factor	1.00	1.00			1.00			1.00	1.00			1.00
Incremental Delay, d2	0.0	0.0			0.3			12.4	0.2			0.1
Delay (s)	27.0	27.1			28.0			31.3	11.7			22.2
Level of Service	C	C			C			C	B			C
Approach Delay (s)		27.0			28.0				14.0			
Approach LOS		C			C				B			
<b>Intersection Summary</b>												
HCM 2000 Control Delay			17.6									
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			69.4									
Intersection Capacity Utilization			38.9%									
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 6: Village Parkway & Tamarack Dr

Timing Plan: Midday Peak

12/04/2019



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	397	7
Future Volume (vph)	397	7
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3563	
Flt Permitted	1.00	
Satd. Flow (perm)	3563	
Peak-hour factor, PHF	0.77	0.77
Adj. Flow (vph)	516	9
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	524	0
Confl. Peds. (#/hr)		4
Confl. Bikes (#/hr)		1
Heavy Vehicles (%)	1%	1%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	22.2	
Effective Green, g (s)	22.2	
Actuated g/C Ratio	0.32	
Clearance Time (s)	5.0	
Vehicle Extension (s)	4.0	
Lane Grp Cap (vph)	1139	
v/s Ratio Prot	c0.15	
v/s Ratio Perm		
v/c Ratio	0.46	
Uniform Delay, d1	18.8	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	19.2	
Level of Service	B	
Approach Delay (s)	19.3	
Approach LOS	B	
Intersection Summary		