Town of Truckee
Planning Division

Golden Valley Tahoe School Project

Initial Study/Mitigated Negative Declaration

November 2022

Prepared by

RANEY PLANNING & MANAGEMENT, INC. 20 years
1501 Sports Drive, Suite A, Sacramento, CA 95834

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APPENDICES:

INITIAL STUDY
November 2022

A. PROJECT SUMMARY

1. Project Title: Golden Valley Tahoe School Project

2. Lead Agency Name and Address:
Town of Truckee
Planning Division
10183 Truckee Airport Road
Truckee, CA 96161

3. Contact Person and Phone Number:
Chantal Birnberg
Associate Planner
(530) 582-2927

4. Project Location:
12640 Union Mills Road
Truckee, CA 96161
APN: 048-210-012-000

6. Project Sponsor:
Martin Wood
Friends of Tahoe Truckee Waldorf
140 Litton Drive Suite #240
Grass Valley, CA 95945

7. Existing Land Use Designation: Open Space and Recreation (OSR)

9. Existing Zoning Designation: Rural Residential with one dwelling unit per 10 acres (RR-0.10)

11. Potentially Required Approvals from Other Public Agencies:

Nevada County Environmental Health Department (NCEHD)

12. Surrounding Land Uses and Setting:

The project site, identified by Assessor's Parcel Number (APN) 048-210-012-000, consists of an approximately 40.1-acre parcel located at 12640 Union Mills Road in the Town of Truckee, California. The parcel is developed with an existing 4,560-square foot (sf) school building and a driveway, which slopes downward to connect to Union Mills Road. Surrounding existing uses include Interstate-80 (I-80) to the south, U.S. Forest Service land and Prosser Creek to the north, and rural residences to the east and west. The Town of Truckee 2025 General Plan designates the project site as Open Space and Recreation (OSR) and the site is zoned Rural Residential with one dwelling unit per ten acres (RR-0.10).

13. Project Description Summary:

    The Golden Valley Tahoe School Project (proposed project) would expand the Golden Valley Tahoe School at the existing school site, to construct four new buildings on four permanent foundations that would support four new classroom buildings. The classroom buildings would be made up of modular buildings, five of which have already been purchased from the Truckee Elementary School District and are being temporarily stored on-site. Three of the proposed buildings would be created by combining two modulars, and one building would consist of one standard size modular. The school would operate out of the existing 4,560-sf building, as well as the proposed modular buildings. It should be noted that all structures would be located immediately adjacent to previously disturbed areas of the site. The proposed project would increase the approved student capacity from 44 to 240 students. The proposed project would also include widening the existing 12-foot paved entrance road (Union Mills Road) to a 24-foot roadway with a two-foot-wide shoulder on both sides. A reconfiguration of the parking/drop off area is also proposed as part of the project. An additional 13 parking stalls would be developed on-site, for a total of 22 surface parking stalls, including two accessible stalls, to be located throughout the site.

14. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1:

    In compliance with Assembly Bill (AB) 52 (Public Resources Code [PRC] Section 21080.3.1), project notification letters were distributed to the T'si Akim Maidu, United Auburn Indian Community of the Auburn Rancheria and the Washoe Tribe. The letters were distributed on October 8, 2021, and requests to consult have not been received to date.

B. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies and analyzes the potential environmental impacts of the proposed project. The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed.

The mitigation measures prescribed for environmental effects described in this IS/MND would be implemented in conjunction with the project, as required by CEQA. The mitigation measures would be incorporated into the project through conditions of approval. The Town of Truckee would adopt a Mitigation Monitoring/Reporting Program for the project in conjunction with approval of the project.

On November 16, 2006, the Town of Truckee adopted a comprehensive update to the Town's General Plan and certified an associated Environmental Impact Report (EIR).[1] The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations [CCR], Sections 15000 et seq.). The General Plan EIR analyzed full implementation of the General Plan and identified measures to mitigate the significant adverse impacts associated with the General Plan to the maximum extent feasible.

[1] Town of Truckee. *Town of Truckee General Plan.* Adopted November 16, 2006.
Town of Truckee. *Town of Truckee Draft Environmental Impact Report.* July 2006.

Pursuant to Section 15152 of the CEQA Guidelines, a project which is consistent with the General Plan and zoning of the agency may tier from the analysis contained in the General Plan EIR, incorporating by reference the general discussions from the broader EIR. The negative declaration on a later project should limit analysis to effects which:

1) Were not examined as significant effects on the environment in the prior EIR; or
2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means.

The proposed project would be consistent with the site's current General Plan land use designation, subject to approval of a Conditional Use Permit. Thus, the environmental analysis contained in this IS/MND tiers, where applicable, from the General Plan EIR, in accordance with CEQA Guidelines Section 15152.

The Town is currently in the process of updating the General Plan so the document can continue to provide critical guidance for development in the Town through the year 2040. A draft of the General Plan Update was released in June 2022. However, the General Plan Update has not been completed, and an EIR has not yet been prepared for the General Plan Update. Thus, the current General Plan and General Plan EIR remain the relevant documents for the purposes of the analysis included in this IS/MND.

In terms of the project site's background, it should be noted that in 1994, the Town of Truckee approved a Conditional Use Permit (CUP) for the development of a private education facility at the project site, and an IS/MND was adopted as part of the approval. As the Town of Truckee incorporated in 1993, the project and the IS/MND were analyzed under Nevada County's General Plan and Zoning Ordinance in effect at that time. Cedar Smoke School was a 40-student private middle/high school, which operated under the 1994 CUP. Phase I of the Cedar Smoke School development included construction of the existing on-site 4,560-sf building, as well as a production well, septic system, access road, and parking for 33 cars. Phase II of the Cedar Smoke School development would have included construction of an additional building and parking; however, Phase II was not developed.

In 2001, the Town of Truckee approved a CUP to construct and operate a charter school for primary and secondary students at the proposed project site, for which an IS/MND was adopted, known as the Prosser Creek Charter School Project. This project was analyzed under the Town of Truckee's 1995 General Plan. The project would have constructed four new buildings, adding approximately 63,800 sf of floor area to accommodate 500 students, teachers and administration. The Prosser Creek Charter School Project would have also included athletic fields and infrastructure improvements; however, the project was not developed. It should be noted that Prosser Creek Charter School ceased operation in 2005 and the CUP expired.

C. PROJECT DESCRIPTION

The following provides a description of the project site's current location and setting, as well as the proposed project components and discretionary actions required for the project.

Project Location and Setting

The project site is located at 12640 Union Mills Road in the Town of Truckee, California. The Town of Truckee is located within the Lake Tahoe region of California, just east of Donner Pass, within the valley of the Truckee River and surrounding upland areas. Truckee is in the eastern part of Nevada County, approximately 12 miles north of Lake Tahoe and 30 miles west of Reno.

The project site is located in a generally rural area. The area to the north of the project site is located within unincorporated Nevada County and contains undeveloped forest land which is part of the Tahoe National Forest, and is designated by Nevada County as Rural 10 acre (RUR-10) and zoned General Agriculture (AG-10). Prosser Creek is located approximately 1,500 feet north of the project site. Rural residences are located to the east and west of the project site, on lands also designated OSR and zoned RR-0.10 by the Town of Truckee, while an equestrian center is located further west. I-80 is located approximately 100 feet south of the project site and is zoned Public Facility (PF). In addition, the Truckee River is located approximately 700 feet south of the project site, and the Truckee Tahoe Airport and State Route (SR) 267 (which runs southeast from I-80 to Lake Tahoe), are located approximately 2.65 and 2.75 miles southwest of the project site, respectively (see Figure 1 and Figure 2).

The 40.1-acre project site slopes approximately five percent to 10 percent to the northwest. Existing development on the project site is clustered in the northwest portion of the site, and includes a 4,560-sf school building, propane tanks, septic and leach fields, well and water tank systems, and parking lot, which make up the existing Golden Valley Tahoe School. A paved access driveway slopes downward from the northwest to intersect with Union Mills Road in the southern portion of the project site. The remaining portions of the project site are undeveloped and include grassland and 166 trees scattered throughout the site.

The one-mile-long Union Mills Road provides access to three State-operated services, three commercial businesses, and four residences. The three State-operated services are located on the southside of Union Mills Road directly adjacent to I-80 and include the State Agriculture Inspection Station, Caltrans sand facility, the California Highway Patrol (CHP) I-80 station, and related parking and office space. The three commercial operations located along Union Mills Road include a commercial firewood business, contractor storage yard for heavy equipment and materials, and Piping Rock Equestrian Center that offers horseback riding instruction and boarding facilities. All three operations are located on the north side of Union Mills Road.

Project Components

The existing Golden Valley Tahoe School is currently enrolled with 44 students, ranging from kindergarten to eighth grade. The school currently operates out of the one existing 4,560-sf school building, and includes a total of nine parking stalls on-site.

The proposed project would include the expansion of the Golden Valley Tahoe School at the existing school site, to construct four new buildings on four permanent foundations that would support four new classroom buildings. All structures would be located immediately adjacent to previously disturbed areas. The classroom buildings would be made up of modular buildings, five of which have already been purchased from the Truckee Elementary School District and are being temporarily stored on-site (see Figure 3 and Figure 4). The new buildings are designated on the site plan as Buildings B, C, D, and E. Buildings B, C, and E would be created by combining two modulars (see Figure 5), and building D would consist of one standard size modular (see Figure 6). Overall, the proposed project would increase the approved student capacity from 44 to 240 students.

Figure 1
Regional Project Location

Figure 2
Project Location

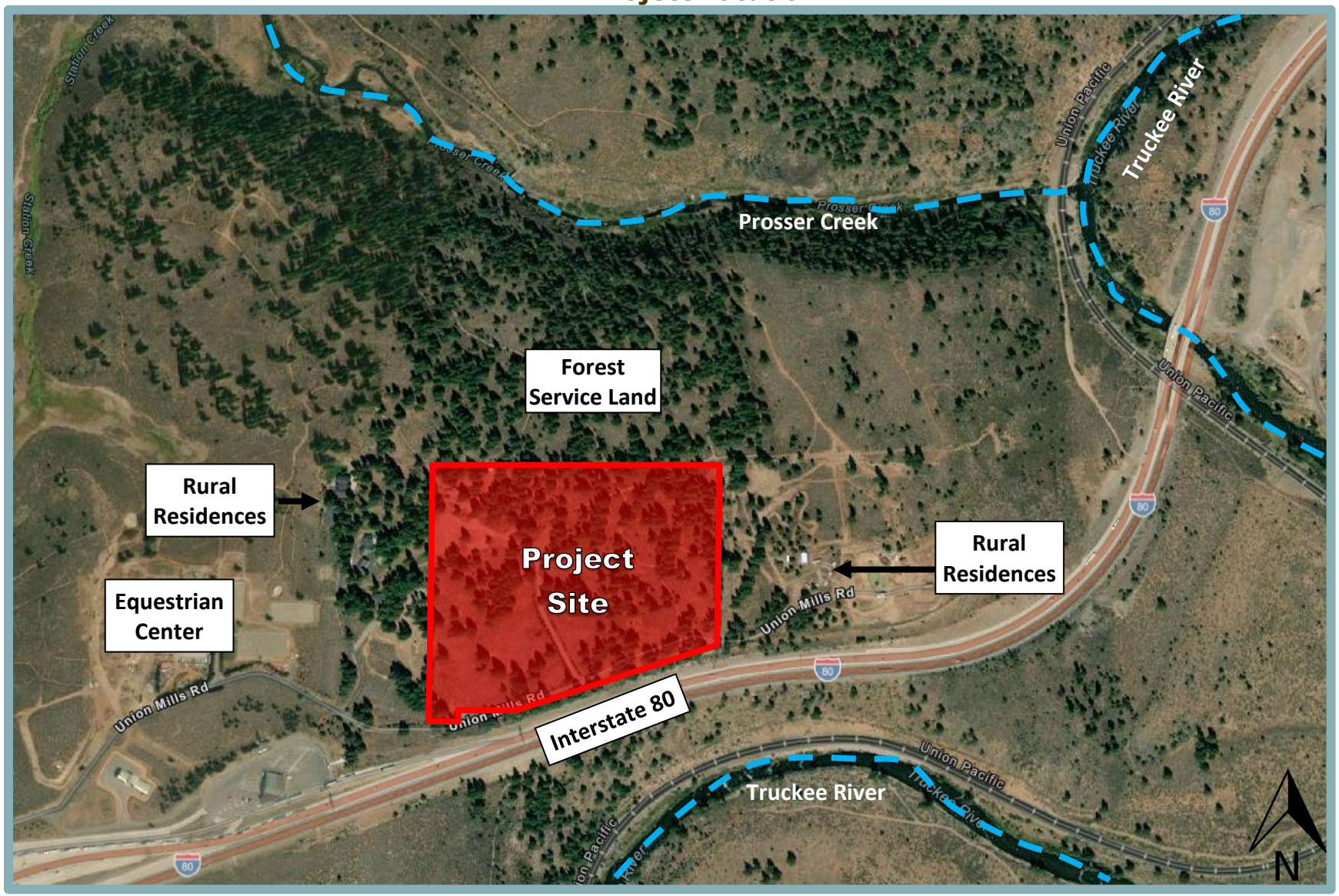
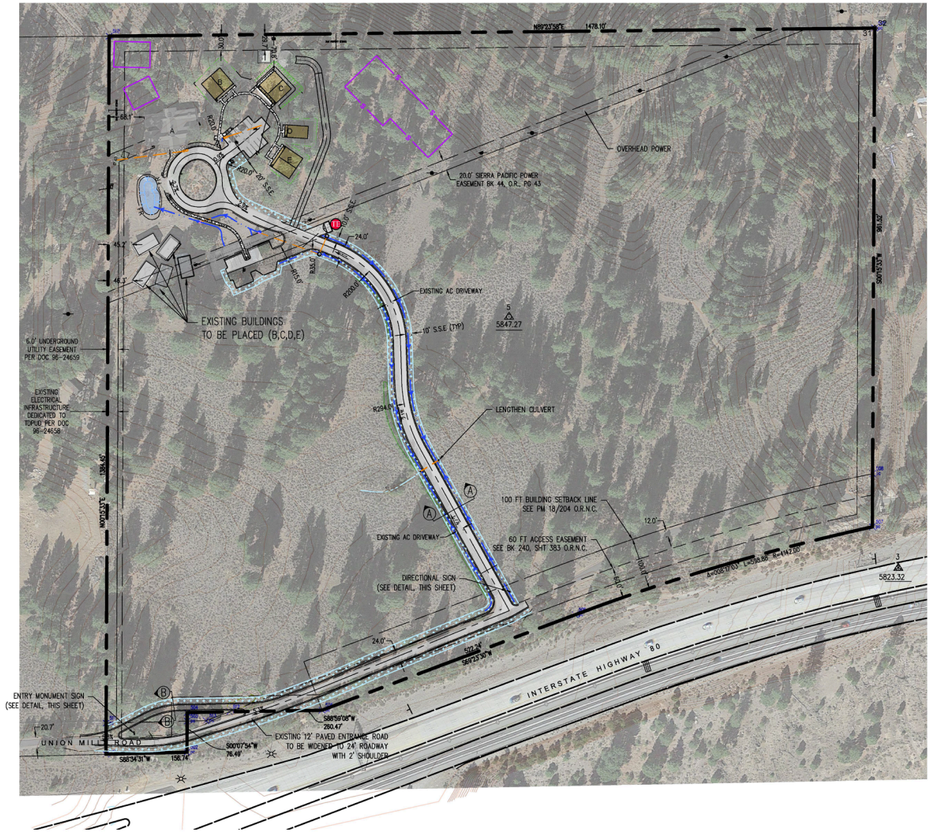


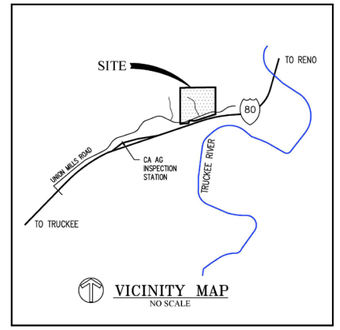
Figure 3
Site Plan, Sheet 1

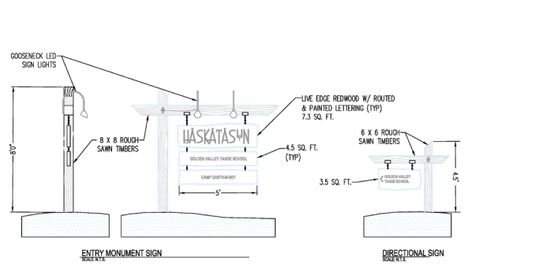
OVERALL SITE PLAN

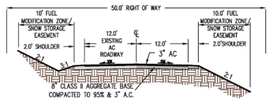
SITE, SIGN, TREE PROTECTION, AND SNOW STORAGE PLANS
FOR:
GOLDEN VALLEY TAHOE SCHOOL



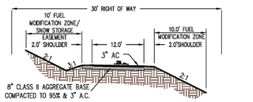
LEGEND	
	EXISTING TOPOGRAPHY (1' CONTOUR INTERVALS)
	PROPERTY LINE
	SECTION / QUARTER SECTION MARKER
	DEVELOPMENT AREA (159,530 SF)
	V-DITCH - FLOW LINE
	PROPOSED HDPE STORM DRAIN (10-15")
	PROPOSED RETENTION BASIN
	PROPOSED ASPHALT SURFACE
	PROPOSED CONCRETE SURFACE
	PROPOSED SNOW STORAGE
	PROPOSED TRASH ENCLOSURE







TYPICAL ONSITE ROADWAY A -A'
N.T.S.



TYPICAL ONEWAY ROADWAY B -B'
N.T.S.

0 100
SCALE: 1" = 100'

PROPERTY ADDRESS
12640 UNION MILLS ROAD
TRUCKEE, CA, 96162

OWNER
FRIENDS OF CEDAR SAGE WALDORF SCHOOL
P.O.B. 10922
TRUCKEE, CA, 96162

MAP PREPARED BY
SCO PLANNING & ENGINEERING, INC.
140 LITTON DRIVE, SUITE 240
GRASS VALLEY, CA 95945
(530) 272-5841
CONTACT: MARTIN WOOD, P.L.S.

ASSESSOR'S PARCEL NUMBER
048-210-012-000

LOT AREA
40.1 ACRES, 1,746,756 SF

ZONING
RR-0.10 (RURAL RESIDENTIAL)

PARKING STATISTICS
PARKING: REQUIRED – 18 SPACES, PROPOSED REGULAR – 20, ADA – 2
BICYCLE: REQUIRED – 3, PROPOSED – 3

AREA OF IMPERVIOUS:

	EXISTING	PROPOSED
BUILDING FOOTPRINT	4,560 SF	13,670 SF
AC DRIVEWAY	31,975 SF	45,730 SF
AC UNION MILLS RD	10,450 SF	21,110 SF
CONCRETE SIDEWALK	1,000 SF	4,675 SF
TOTAL AREA	50,095 SF	80,125 SF
PARCEL AREA	1,746,756 SF (40.1 AC)	
TOTAL PERCENT IMPERVIOUS	4.5%	
TOTAL DISTURBED/ DEVELOPMENT AREA	9.1% (3.6 AC)	
PERCENT INCREASE OF IMPERVIOUS	59.9%	

SERVICES
ELECTRICITY: T.D.P.U.D.
TELEPHONE: A.T.& T.
WATER: WELL/STORAGE TANK/PUMP SYSTEM
SEWER: ON SITE SEPTIC

AREA SNOW STORAGE:
TOTAL ASPHALT AREA: 61,780 SF
TOTAL SNOW STORAGE PROPOSED: 38,112 SF (62%)

PRELIMINARY
LAND SURVEYOR MARTIN D. WOOD L.S. 6774 STATE OF CALIFORNIA

DESIGNED: MDW
DRAWN: KST
PROJ. NO: 202125
DWG. SEE DAY STAMP
DATE: JUNE, 2022

NO.	REVISIONS	DATE

FRIENDS OF TRUCKEE TAHOE WALDORF
USE PERMIT
SITE PLAN
TRUCKEE CA

SCO PLANNING & ENGINEERING & SURVEYING
GRASS VALLEY (530) 272-5841
TRUCKEE (530) 587-5843
FAX (530) 272-5880

1 OF 4

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Figure 4
Site Plan, Sheet 2

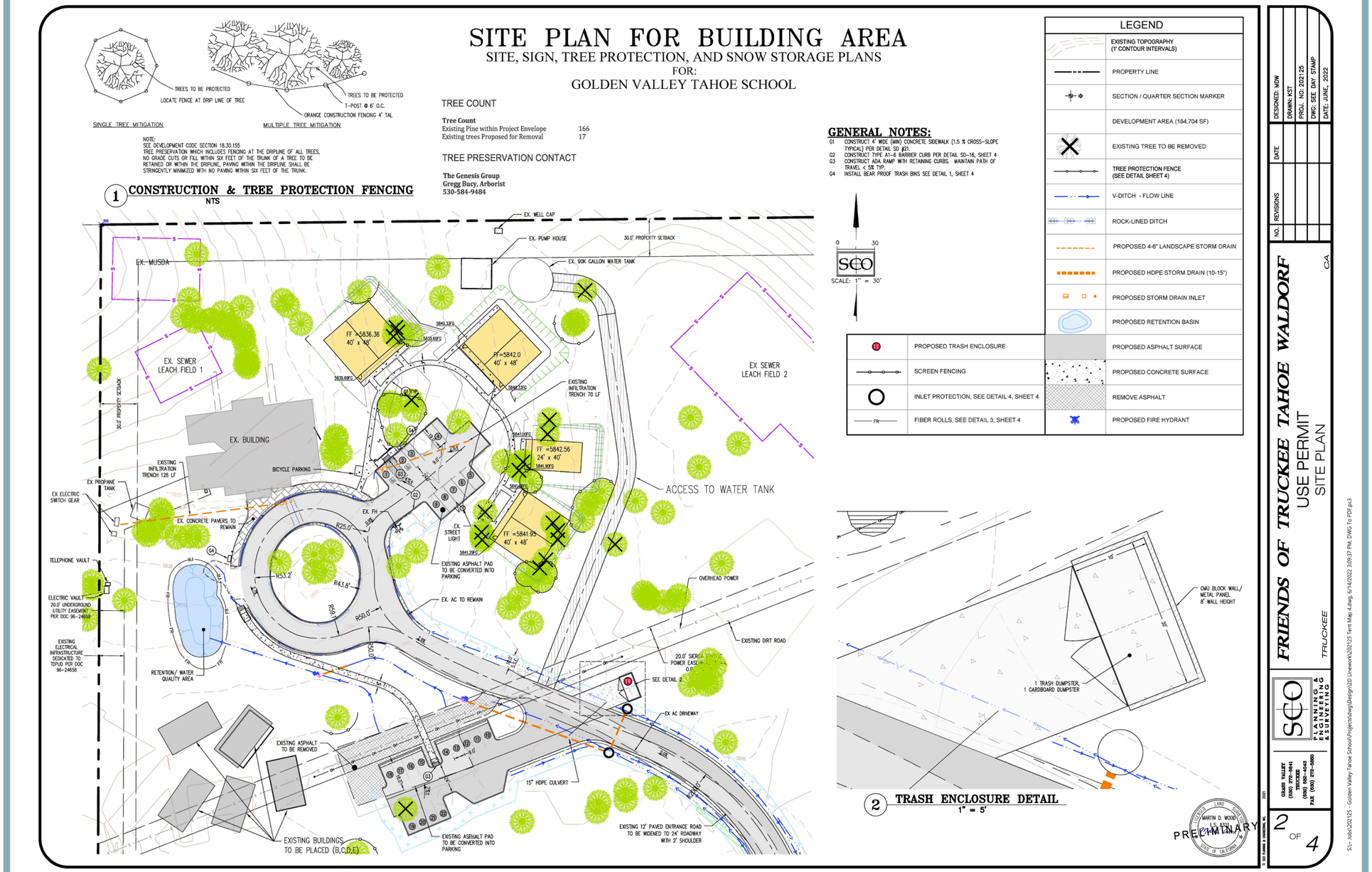
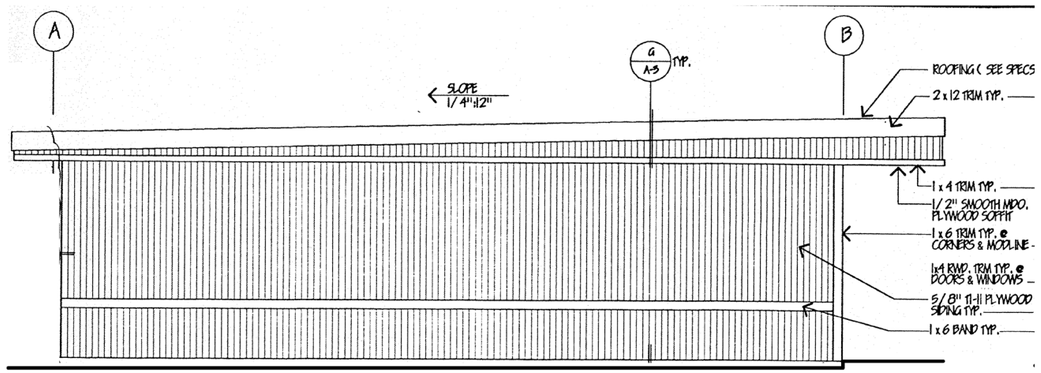
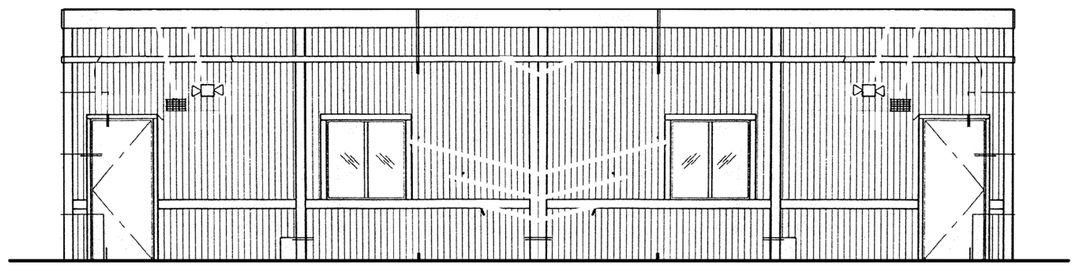


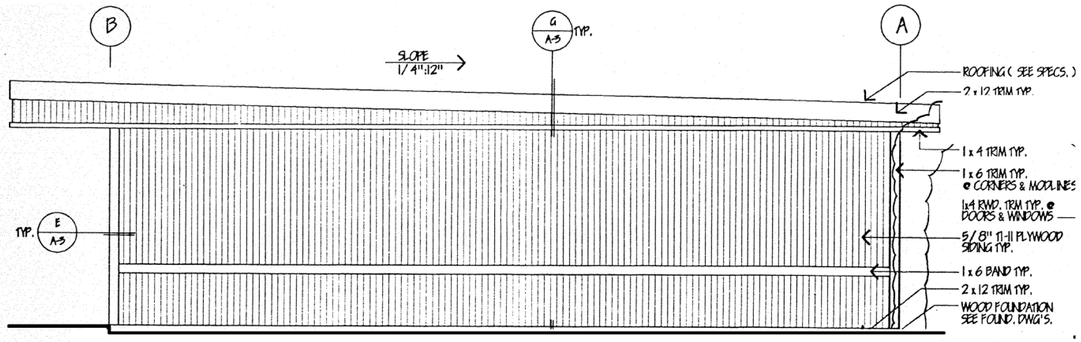
Figure 5
Exterior Elevations: Buildings B, C, and E



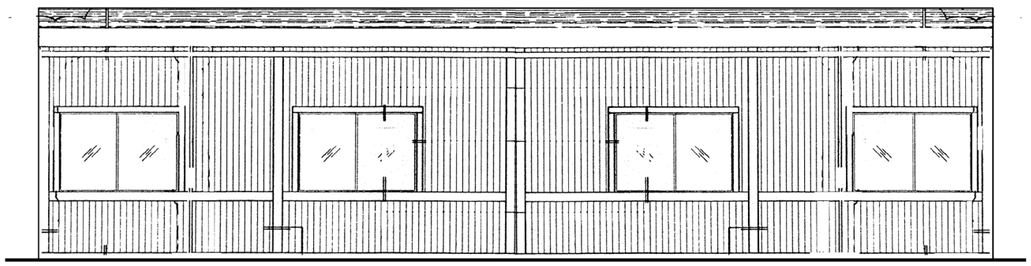
1 SIDE ELEVATION BLDG B (BLDG C & E SIM.)
Scale: 1/4" = 1'-0"



2 FRONT ELEVATION BLDG B (BLDG C & E SIM.)
Scale: 1/4" = 1'-0"

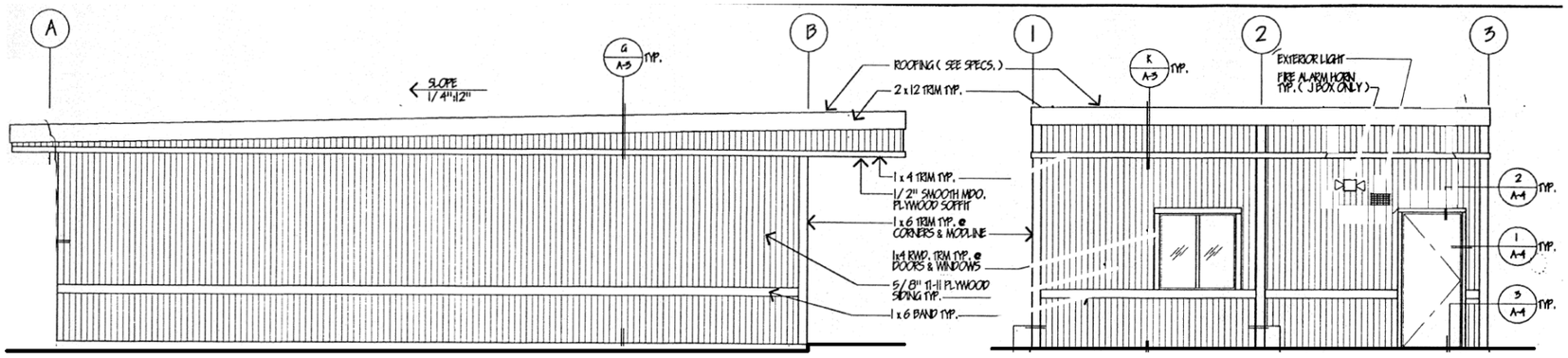


3 SIDE ELEVATION BLDG B (BLDG C & E SIM.)
Scale: 1/4" = 1'-0"



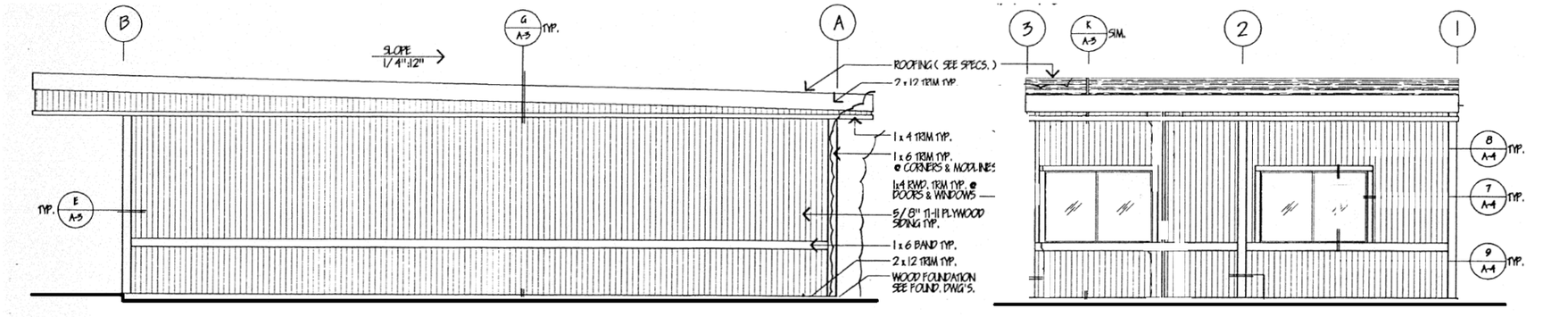
4 REAR ELEVATION BLDG B (BLDG C & E SIM.)
Scale: 1/4" = 1'-0"

Figure 6
Exterior Elevations: Building D



1 SIDE ELEVATION BLDG D
Scale: 1/4" = 1'-0"

2 FRONT ELEVATION BLDG D
Scale: 1/4" = 1'-0"



3 SIDE ELEVATION BLDG D
Scale: 1/4" = 1'-0"

4 REAR ELEVATION BLDG D
Scale: 1/4" = 1'-0"

Site Access and Circulation

The proposed project would include widening the existing approximately 1,000 foot long, 12-foot-wide paved access road to a 24-foot-wide roadway with a two-foot-wide gravel shoulder on both sides. The project site currently contains nine existing parking stalls. An additional 22 parking stalls would be developed as part of the proposed project for a total of 31 on-site parking stalls including two Americans with Disabilities Act (ADA) accessible parking stalls. Two existing 60-foot by 100-foot asphalt pads would be converted to add additional parking spaces.

Utilities and Service Systems

The project site currently uses an existing 1,348-gallon per day (GPD) gravity septic system, located north of the existing school building, which was permitted for use by Nevada County in 1994. The proposed project proposes the recommission of a second on-site 2,475 GPD pressure-dosed septic system that was abandoned in 2006. The Nevada County Department of Environmental Health (NCEHD) determined that the two septic systems, if the second is able to be fully recommissioned, could accommodate up to 254 students and staff per day.[2] Issuance of a permit would be required by the NCEHD to recommission the second septic system.

Water is provided to the site by the Friends of Tahoe Truckee Waldorf (FOTTW) Water System, which was permitted in March 2021 by the NCEHD as a Non-Transient/Non-Community Water System. The system is regulated by NCEHD operating under the Facility ID: FA0005994. The FOTTW Water System has been approved by the California Waterboard and the California Department of Drinking Water as well as Nevada County. The existing FOTTW Water System provides both potable water as well as water for fire flow, including a 90,000-gallon steel storage tank for fire protection. The Water System is only authorized to provide water to the Golden Valley Tahoe School. The Water System is limited to a maximum of 44 students. However, the Water System has a capacity to serve 157 students. The Water System would be required to go through a permit amendment to increase the number of water users in the future, as well as increase water storage capacity to accommodate 240 students and staff.

The proposed project would include the development of HDPE storm drains and drainage ditches along both sides of the roadway that would allow stormwater to flow to a proposed retention basin along the project site's western boundary.

A trash enclosure would be designed to provide on-site storage of a minimum of 162 cubic feet of solid waste and would conform with the design requirements outlined in section 18.30.150 - Solid Waste/Recyclable Materials Storage of the Town of Truckee Development Code.

The project site is currently provided electrical service through two 120/240 transformers fed by the TDPUD. The existing structure is currently serviced by the aforementioned connections. Each transformer feeds a 600 Amp exterior switchgear. The main building, the pump house, and parking lot lighting are fed off of one of the 600 Amp panels. The second panel would service the modulars, the proposed recommissioned wastewater system, and the proposed parking lot lighting. On-site lighting would consist of bollard path lighting, pole mounted area lights, and shielded wall sconce lighting, which would be located around the perimeter of the proposed parking areas, as well as along the paved pathways leading to the proposed buildings, and along the front of the new buildings (see Figure 7).

[2] Jo Paden, REHS, Nevada County Department of Environmental Health. Personal Communication [email] with Nick Pappani, Vice President, Raney Planning & Management, Inc. February 14, 2022.

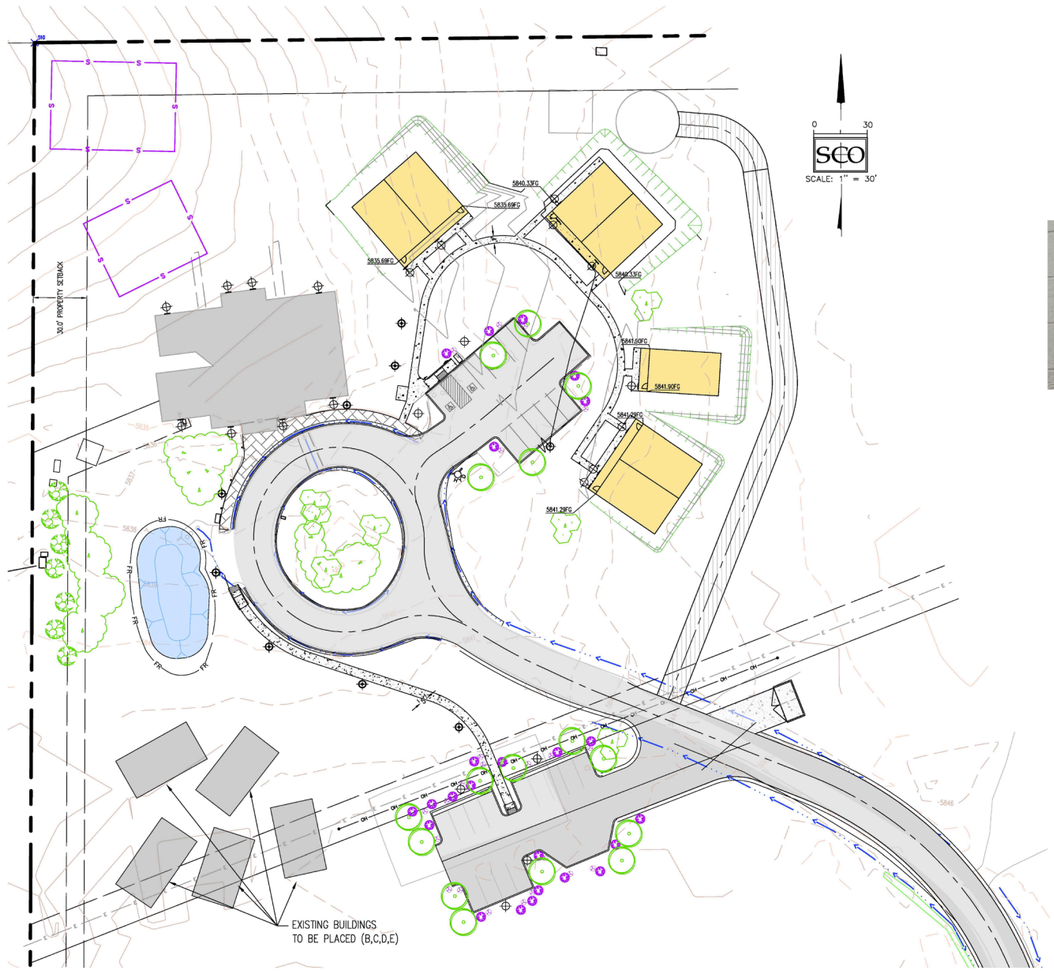
Figure 7
Exterior Lighting and Landscape Plan

EXTERIOR LIGHTING & LANDSCAPE PLAN

FOR:
GOLDEN VALLEY TAHOE SCHOOL

SYMBOL	DESCRIPTION / MODEL	WATTS	LUMENS
⌖	BOLLARD PATH LIGHT;	10W	750LM
⌖	POLE MOUNTED AREA LIGHT; LIGHT: RUGGED GRADE, RG-NEXTGEN-S-G07-150_WCT3A1, POST: AFFORDABLE LIGHTING, CLS-SSS16B4, 16'	150W	19500LM
⌖	WALL SCONCE; NEW SCONCE UNLESS OTHERWISE NOTED:	W	

	KEYNOTES
1	EXISTING WALL SCONCE TO REMAIN; SHIELDED
2	PROVIDE ADDITIONAL LIGHTING AT MONUMENT SIGN, NOT SHOW; SEE SIGN DRAWINGS, SHEET 1



PROPOSED BOLLARD PATH LIGHT

PROPOSED SHIELDED WALL SCONCE

RuggedGrade

NEXTGEN II TECHNICAL DATA SHEET

PROPOSED POLE MOUNTED LIGHT

P/N. RG-NextGen-2--S-G07-150WCT3B1-abcdef
Note:
The letter "a" can be can be 2 letters represent lamp colors;
"BH = Black、WH=White、BR=Brown or Customized"
The letter "b" can be "P" or blank to represent Photocell or None Photocell;
The letter "c" can be "S" or blank to represent Surge protector or None Surge protector;
The letter "d" can be "M" or None, represent Motion sensor or No Motion sensor.
The letter "e" can be "AM","DM","YM","A&D" represent bracket type.
The letter "f"can be any two-digit number to represent CCT. "40=4000k、45=4500k、50=5000k、57=5700k"

16' 4X4 11 GA (CLS-SSS16B4-11QS)

PROPOSED POLE MOUNT

Description	Specifications

Designed for parking lot lighting, street lighting and security style lighting with cameras.

CLS-SSS16B4-4-** 16 foot 4" Galvanized/Bronze square steel light pole with 4 Bolt Base

16 ft 4x4 11 gauge bronze steel square light pole

Quick Ship Pole finish
- Bronze powder coated over hot dipped galvanized steel

Luminaire mounting
- Tenon top with 4" x 2-3/8 tenon
- Drill style with 1-2-3-4 side drilling available

Pole Shipping

Free pole shipping on quantities of 4 or more, only to commercial locations with docks and or forklifts

PRELIMINARY LANDSCAPE NOTES

- PRESERVATION OF EXISTING VEGETATION
  THIS PROJECT INTENDS TO RETAIN A MAJORITY OF THE NATIVE AND EXISTING VEGETATION AS CREDIT TOWARDS THE MINIMUM PERCENTAGES OF SITE AREA REQUIRED TO BE LANDSCAPED AND THE MINIMUM NUMBER OF TREES REQUIRED TO BE PLANTED. EXISTING VEGETATION TO REMAIN SHALL BE PROTECTED FROM IMPACTS DURING CONSTRUCTION. ANY ADDITIONAL LANDSCAPING PROVIDED HAS BEEN PLANNED AS A SITE-SPECIFIC AND INTEGRAL PART OF THE OVERALL PROJECT DESIGN AND AESTHETICS (TOWN OF TRUCKEE DEVELOPMENT CODE, SECTION 18.40.050.A1).
- LANDSCAPE PLANTING
  IN ACCORDANCE WITH THE TOWN OF TRUCKEE DEVELOPMENT CODE, THE PROPOSED PLANTING PALLET STRESSES NATIVE, ADAPTIVE, AND DROUGHT-TOLERANT PLANT MATERIALS. THESE SPECIES WILL MINIMIZE THE USE OF EXTENSIVE WATER, FERTILIZERS, HERBICIDES, AND OTHER INTERVENTION. APPROPRIATE PLANTINGS WILL ALSO PROVIDE REPLACEMENT OF HABITAT FOR THE LOCAL FAUNA. PLANTINGS SHALL BE HYDROZONED "IN GROUPING OF LIKE-WATER USAGE FOR MAXIMUM WATER CONSERVATION." FINAL LANDSCAPE PLANS WILL INCLUDE ALL REQUIRED TABLES AND CALCULATIONS TO DEMONSTRATE COMPLIANCE WITH THE TOWN OF TRUCKEE WATER EFFICIENT LANDSCAPE STANDARDS (SECTION 18.40.060) AND MAWA. ANY DISTURBED AREAS NOT PLANTED WITH TREES OR SHRUBS WILL BE HYDROSEEDED WITH A NATIVE RESTORATION MIX.
- LANDSCAPE IRRIGATION
  FINAL IRRIGATION PLANS WILL BE PREPARED FOR ALL PROPOSED LANDSCAPING. ALL IRRIGATION SYSTEMS SHALL BE DESIGNED TO MINIMIZE THE AMOUNT OF WATER USED FOR IRRIGATION PURPOSES. AUTOMATIC SYSTEMS WILL INCLUDE DRIP SYSTEMS, WATER SENSORS AND CHECK VALVES TO PRECENT LOW POINT DRAINAGE.

PLANT LEGEND

NATURALIZED ASPEN GROVE
1" to 2" Caliper Size
To Include: Quaking Aspen

DECIDUOUS TREES
(QTY 24) #15 gal Size
To Include: Vine Maple, Crabapple, Japanese Maple

NATIVE AND ADAPTIVE SHRUBS
(QTY 46) #5 gal Size
To Include: Dogwood, Spirea, Viburnum, Elderberry, Sweetspire, Deutzia, Summersweet, Vine Maple

PERENNIAL FLOWER BEDS,ORNAMENTAL GRASS AND NATIVE RESTORATION MIX
#1 gal Size and Seed Mix
To Include: Yarrow, Autumn Moor Grass, Shasta Daisy, Catmint, Beardtongue, Coneflower, Sweet Woodruff, Foxglove, Coreopsis, Stonecrop, Joe Pye Weed

EXISTING TREES TO REMAIN

NO.	REVISIONS	DATE

DESIGNED: MDW
DRAWN: HST
PROJ. NO: 202125
DWG: SEE DAY STAMP
DATE: JUNE, 2022

FRIENDS OF TRUCKEE TAHOE WALDORF
USE PERMIT
EXTERIOR LIGHTING AND LANDSCAPE PLAN
TRUCKEE CA

3 OF 4

S:\- Jobs\202125 - Golden Valley Tahoe School\Projects\dwg\Design\2D Linework\202125 Tent Map 4.dwg, 6/14/2022 3:09:42 PM, DWG To PDF.pc3

Site Work

A summary of the existing on-site impervious areas as compared to the proposed coverage is provided in Table 1. Approximately 4.5 percent of the project site is currently impervious, and approximately 9.1 percent of the project site, constituting approximately 3.6 acres, would be disturbed as part of the proposed project.

Table 1
Site Work and Area of Disturbance

Site Area	Existing (sf)	Proposed (sf)
Building Footprint	4,560	13,670
On-Site Driveway	31,975	45,730
Union Mills Road	10,450	21,110
Concrete Sidewalk	1,000	4,675
Total Area	**50,095**	**80,185**

Landscaping Plan

A total of 166 existing trees are located within the project site. The proposed project would include the removal of 19 on-site trees. The project would retain a majority of the native and existing vegetation on-site as credit toward the minimum percentages of site area required to be landscaped and the minimum number of trees required to be planted (see Figure 7).

Existing vegetation to remain would be protected from impacts during construction. All additional landscaping has been planned as a site-specific and integral part of the overall project design and aesthetics, pursuant to Section 18.40.050.A1 of the Town's Development Code.

In accordance with the Town of Truckee Development Code, the proposed planting palate prioritizes native, adaptive, and drought-tolerant species. The aforementioned species would minimize the extensive use of water, fertilizers, herbicides, and other intervention. Appropriate plantings would also provide replacement of habitat for the local fauna. Plantings would be grouped on the basis of like-water usage for maximum water conservation.

Discretionary Actions

The proposed project requires the following approvals from the Town of Truckee:

- Use Permit approval for a school; and
- Development Permit approval for projects with 7,500 sf or more of floor area and a total disturbance area of 26,000 sf or more.

Each approval is discussed below.

Use Permit

Public and private schools are conditionally allowed within the RR-0.10 zoning district with a Use Permit. As such, the proposed project would require the approval of a Use Permit to expand the existing school use on-site.

Development Permit

Development Permits are required for all permitted commercial, industrial, and public uses that include 7,500 sf of floor area (5,000 sf in Downtown zoning districts) or disturb more than 26,000 sf of ground area, and for all permitted multi-family residential projects with 11 or more dwelling units. Because the proposed project would include greater than 7,500 sf of floor area total, and

would cumulatively disturb more than 26,000 sf of ground area, a Development Permit would be required.

D. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

E. DETERMINATION

On the basis of this initial study:

☐ 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 applicant. 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" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

11-9-22
Date

Chantal Birnberg, Associate Planner
Printed Name

Town of Truckee
For

F. ENVIRONMENTAL CHECKLIST

The following checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	✖	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	✖	☐
c. In 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?	☐	☐	✖	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	✖	☐

Discussion

a,b. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. The mountain landscape dominates the built environment in Truckee. Scenic views in the area include surrounding mountain peaks and ridgelines, and sweeping vistas of the forested hillsides, meadows, and the river valley in which the Town lies. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista.

According to Figure 4.1-1 of the Town of Truckee General Plan EIR, the project site is located within a scenic vista area. However, the project site is not visible from I-80 due to existing intervening vegetation, which obstructs views. Therefore, the proposed project would not further impact the quality of the scenic vistas in the project vicinity. In addition, the nearby portion of I-80 is not officially designated as a State Scenic Highway.[3] Rather, the Town's scenic corridor designation recognizes the high scenic value of the landscape along the thoroughfare, and the need to actively protect the corridor from the encroachment of visually incompatible development and advertising signage that could impair the scenic quality within the roadway's viewshed.[4] Furthermore, Section 18.46.080, Scenic Corridor Standards, of the Truckee Development Code, identifies areas that are subject to the Town's Scenic Corridor Development Standards, as being areas that extend 300 feet on each side of the I-80 right-of-way (ROW) (except those areas located within the Downtown Study Area as shown on the General Plan Land Use Diagram). The site is located approximately 1,116 feet north of I-80, well outside of the 300-foot corridor range set by Section 18.46.080 of the Town's Development Code. Thus, the proposed project would not have a significant impact on a State Scenic Highway.

Based on the above, development of the proposed project would not have a substantial adverse effect on a scenic vista and would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Thus, a ***less-than-significant*** impact would occur.

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[3] California Department of Transportation. *California Scenic Highway Mapping System*. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983. Accessed December 2021.

[4] Town of Truckee. *Town of Truckee 2025 General Plan* [pg 3-9]. Adopted November 16, 2006.

c. The project site and all surrounding parcels are zoned RR-0.10. The site is developed with an existing 4,560-sf school building and a driveway which slopes downward to connect to Union Mills Road. Surrounding existing uses include U.S. Forest Service land and Prosser Creek to the north, I-80 to the south, and rural residences to the east and west. Therefore, the project site is located in a non-urbanized area.

CEQA (PRC, Section 21000 et seq.) case law has established that only public views, not private views, are protected under CEQA. For example, in *Association for Protection etc. Values v. City of Ukiah* (1991) 2 Cal.App.4th 720 [3 Cal. Rptr.2d 488] the court determined that "we must differentiate between adverse impacts upon particular persons and adverse impacts upon the environment of persons in general. As recognized by the court in *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188 [129 Cal.Rptr. 739]: '[A]ll government activity has some direct or indirect adverse effect on some persons. The issue is not whether [the project] will adversely affect particular persons but whether [the project] will adversely affect the environment of persons in general.'" Such a conclusion is consistent with the thresholds of significance established in Appendix G of the CEQA Guidelines.

Public views of the project site can be seen from Union Mills Road, which is located approximately 1,110 feet to the south. Changes to the existing public views towards the site due to development of the proposed project are discussed below. For the purpose of this analysis, public views consist of views towards the site from both westbound and eastbound motorists, and/or bicyclists traveling along Union Mills Road.

Currently, the existing public view from Union Mills Road, looking north, consists of the tree-lined driveway winding towards the project site in the immediate foreground. The midground features dense coniferous trees interrupted by open spaces consisting of native grasses and young trees. As the midground transitions to the background, several existing trees to the south of the project site are within the viewshed, largely obscuring the school site. The background consists entirely of trees against the backdrop of the sky. While the proposed project would result in the removal of 19 trees on-site, given the forested nature of the site, and the fact that the project would retain the remaining 147 existing trees located within the project site, the removal of 19 trees would not be expected to alter the existing public views of the site.

It should be noted that the proposed project involves the relocation of five modular classroom buildings, already present on the project site, onto permanent foundations located further into the site and away from Union Mills Road. It is also important to note that these modular classrooms would be relocated onto land that is immediately adjacent to portions of the site that are already disturbed. Given that the proposed project would be comprised of minimal, single-story development in portions of the site adjacent to disturbed areas, and that such above-ground development would be screened from public roadways by existing vegetation, impacts to visual character or quality of public views to the site would be minimal.

Based on the above, the proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, and a ***less-than-significant*** impact would occur.

d. Development of the proposed project would involve new sources of light and glare associated with lighting fixtures within the proposed buildings and parking areas (see Figure 7). On-site lighting would consist of bollard path lighting, pole mounted area lights, and shielded wall sconce lighting, which would be located around the perimeter of the proposed parking areas, as well as along the paved pathways leading to the proposed buildings, and along the front of the new buildings. Headlights from vehicles driving within the project site would also result in sources of light and glare. Additionally, light and glare are generated by vehicles traveling on Union Mills Road in the project vicinity.

Although the project site is already partially developed with the school, sources of light and glare attributable to the school may be more intensive than what currently occurs with implementation of the proposed project. However, all outdoor lighting would be required to comply with the Town's Development Code, Section 18.30.060, Exterior Lighting and Night Sky, which outlines safe lighting practices while minimizing light pollution. Section 18.30.060 requires the project to use shielded and pedestrian-scale lighting fixtures. Furthermore, Section G, Outdoor Lighting Standards, states, "All light fixtures, including security lighting, shall be aimed and shielded so that the direct illumination shall be confined to the property boundaries of the source. Particular care is to be taken to assure that the direct illumination does not fall onto or across any public or private street or road." Compliance with the Town's standards would ensure that project effects on the nighttime lighting environment are minimized. Furthermore, the existing intervening vegetation that surrounds the project site, almost completely comprised of evergreen trees, would further ensure that the single-family residences located in the project vicinity are screened from lighting associated with the proposed project.

Given the general consistency of the proposed project with surrounding development and compliance with the Town's lighting standards, implementation of the proposed project would result in a ***less-than-significant*** impact related to creating a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

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

Discussion

a,e. The project site currently consists of an existing school, and is immediately surrounded by coniferous trees and native grasses. As such, the site is not currently being used for agricultural purposes.

Per the California Department of Conservation Farmland Mapping and Monitoring Program, the project site is located in an area which has not been mapped for agricultural resources.[5] According to the Town of Truckee's General Plan Land Use map, the Town does not currently include any areas designated for agricultural uses. Due to the lack of farmland mapping or designated agricultural areas, the site is not considered Farmland. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use, and ***no impact*** would occur.

b. As noted above, the project site is currently zoned RR-0.10 and designated OSR by the Town's General Plan. Agricultural production is not considered a permitted or conditionally permitted use under either the RR-0.10 zoning or OSR land use designation. In addition, the project site is not under a Williamson Act contract. Therefore, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract, and ***no impact*** would occur.

c,d. The project site is not considered forest land (as defined in PRC Section 12220[g]), and is not zoned Timberland Production (as defined by Government Code Section 51104[g]). In addition, the site is zoned as RR-0.10 and designated OSR. According to the California Department of Forestry and Fire Protection (CAL FIRE) the project site is considered timberland (as defined by PRC Section 4526).

[5] California Department of Conservation. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 2021.

Nonetheless pursuant to Section 1104.1 of the California Code of Regulations (CCR), a conversion exemption is applicable for a conversion of Timberland to a non-timber use for land less than three acres in one contiguous ownership, so long as the property owner seeking the exemption has not obtained such an exemption in the prior five years. While the total acreage of the parcel on which the project site is located is 40.1 acres, existing development on the project site is clustered in the northwest portion of the site, and includes a 4,560-sf school building, propane tanks, septic and leach fields, well and water tank systems, and parking lot, which make up the existing Golden Valley Tahoe School. Following development of the proposed project, a total of 80,125 sf, or 1.84 acres of the site would be converted to non-forest related uses. As such, the proposed project would require preparation of a Notice of Conversion Exemption Timber Operations in accordance with CCR Section 1104.1(a). Additionally, a substantial number of trees would remain in the immediate vicinity of the project site. Furthermore, the area is not currently used for Timberland Production; rather, the site has previously been partially developed as a school. Therefore, timberland production at the project site would be generally incompatible with the site and the surrounding area.

Based on the above, the proposed project the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, the proposed project would have a ***less-than-significant*** impact with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

III. AIR QUALITY. *Would the project:*		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	✖	☐	☐
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	✖	☐	☐
c.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a,b. The Town of Truckee is located in the Mountain Counties Air Basin (MCAB), and is under the jurisdiction of the Northern Sierra Air Quality Management District (NSAQMD). In addition to the Truckee area, the NSAQMD has jurisdiction over an area encompassing Nevada, Plumas, and Sierra counties. Topography and meteorological conditions vary widely in the areas under the NSAQMD's jurisdiction and air quality conditions can be heavily influenced by local factors. Consequently, air quality conditions within the MCAB vary, resulting in differing attainment status designations for State and federal ambient air quality standards (AAQS) within various portions of the MCAB. The attainment status for ozone (O_3), fine particulate matter 2.5 microns in diameter ($PM_{2.5}$), respirable particulate matter 10 microns in diameter (PM_{10}), and carbon monoxide (CO) AAQS are presented in Table 2.

Ozone is a secondary pollutant generated from ozone precursor gases, primarily oxides of nitrogen (NO_X) and reactive organic gases (ROG), which react with sunlight to create ozone. Reductions in ozone are accomplished through reducing precursor emissions. Western Nevada County is designated as nonattainment for the federal 8-hour ozone standard and all of Nevada County is designated as being in nonattainment for the State 1-hour ozone standard. Ozone exceedances in Nevada County are primarily due to transport of emissions from the broader Sacramento area and San Francisco Bay Area. As a result, the NSAQMD has jurisdiction over a relatively small portion of the pollutants causing nonattainment within the MCAB. Nevertheless, because portions of the MCAB have been designated as nonattainment, NSAQMD is preparing a federally enforceable State Implementation Plan (SIP) for western Nevada County in accordance with the Clean Air Act. The only current attainment plan adopted by NSAQMD is for the City of Portola. Given that the attainment plan only applies to the City of Portola and surrounding areas of Plumas County, the proposed project would not affect implementation of the attainment plan.

The SIP is an air quality attainment plan designed to reduce emissions of ozone precursors sufficient to attain the federal ozone standard by the earliest practicable date. The SIP under preparation would include various pollution control strategies. Overall emissions of ozone precursors must be reduced in western Nevada County (consistent with Reasonable Further Progress requirements specified in the Clean Air Act) until attainment is reached.

Table 2
Attainment of AAQS within NSAQMD

Pollutant	State Designation	Federal Designation
O_3	Nevada County: Nonattainment (due to overwhelming transport) Sierra and Plumas County: Unclassified	**2008 Standard** • Western Nevada County: Serious Nonattainment • Sierra, Plumas, and Eastern Nevada County: Unclassifiable **2015 Standard** • Western Nevada County: Moderate Nonattainment • Sierra Plumas, Eastern Nevada County: Unclassifiable
PM_{10}	Nevada, Sierra, and Plumas Counties: Nonattainment	Unclassified
$PM_{2.5}$	Portola area in Plumas County: Nonattainment Nevada, Sierra, and remainder of Plumas County: Unclassified	**2012 Annual Standard** • Portola area in Plumas County: Nonattainment • Nevada, Sierra, and Remainder of Plumas County: Unclassifiable/Attainment **2012 24-hour Standard** • Unclassifiable/Attainment
CO	Plumas County: Attainment Nevada, Sierra County: Unclassified	Unclassifiable/Attainment

Source: NSAQMD. Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. August 15, 2019.

Most of the reductions are expected to come from motor vehicles throughout the MCAB, Sacramento region, and San Francisco Bay Area becoming cleaner and from State regulations mandating further emissions reductions. Failure to submit and implement the SIP in a timely manner could result in federal sanctions, including the loss of federal highway funds, greater emission offset ratios for new sources, and other requirements that the U.S. Environmental Protection Agency (USEPA) may deem necessary.

The NSAQMD has established significance thresholds associated with development projects for emissions of the ozone precursors ROG and NO_X, as well as for PM_{10}. Adopted NSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment. The significance levels, expressed in pounds per day (lbs/day), are listed in Table 3.

As shown in the table, NSAQMD has developed a tiered approach to determine significance levels based on a range of emissions levels. All projects, Level A or greater, are required to implement the following basic measures recommended by NSAQMD:

- Alternatives to open burning of vegetative material will be used unless otherwise deemed infeasible by the NSAQMD. Among suitable alternatives are chipping, mulching, or conversion to biomass fuel; and
- Grid power shall be used (as opposed to diesel generators) for job site power needs where feasible during construction.

Table 3 **NSAQMD Thresholds (lbs/day)**		
NO_X	**ROG**	**PM_{10}**
Level A		
<24 lbs/day	<24 lbs/day	<79 lbs/day
Level B		
24-136 lbs/day	24-136 lbs/day	79-136 lbs/day
Level C		
>136 lbs/day	>136 lbs/day	>136 lbs/day
Source: NSAQMD. Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects. August 15, 2019.		

Projects that fall within the Level B emissions level thresholds require implementation of additional measures recommended by NSAQMD in order to result in a less-than-significant impact. Projects that exceed Level C emission level thresholds are required to implement further additional measures sufficient to reduce emissions to a level below significant. If, even after implementation of all such mitigation measures, a project would result in emissions in excess of the Level C thresholds, impacts would be considered significant and unavoidable.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 – a State-wide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including greenhouse gas (GHG) emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates, vehicle mix, trip length, average speed, compliance with the California Building Standards Code (CBSC), etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumes the following inherent site design features and project-specific information:

- Construction would begin in April 2022;[6]
- Construction would occur over an approximately two-month period;
- Approximately 98 cubic yards (CY) of soil would be imported during site grading;
- Vehicle miles travelled (VMT) and trip generation rates associated with the proposed project were adjusted to be consistent with project-specific transportation data;
- The project would include water conservation strategies to reduce indoor water use by 30 percent and outdoor water use by 25 percent; and
- The project would exceed Title 24 energy efficiency standards by five percent.

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the proposed project's contribution to cumulative air quality conditions is provided below as well. All emissions modeling results are included in Appendix A to this IS/MND.

[6] It is noted that when the air quality analysis was conducted, project construction was anticipated to commence in April 2022. While this is no longer the case, the analysis conducted for this IS/MND is conservative because construction fleets and electricity generation are becoming more efficient over time due to increasingly stringent State regulations; thus, modeling construction at an earlier start date provides a more conservative analysis.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction emissions as shown in Table 4. As shown in the table, the proposed project's construction emissions would be within the Level A thresholds for ROG and PM_{10} and the Level B thresholds for NO_X.

Table 4
Maximum Unmitigated Construction Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold Level
ROG	10.32	Level A
NO_X	33.15	Level B
PM_{10}	21.42	Level A

Source: CalEEMod, February 2022 (see Appendix A).

As stated and presented above, all projects, including the proposed project, are required to comply with the basic measures recommended by NSAQMD, which would help to reduce the construction emissions from the levels presented in Table 4. In addition, all development projects under the jurisdiction of the NSAQMD are required to prepare a Dust Control Plan pursuant to Rule 226 (Dust Control). The proposed project's required implementation of the Dust Control Plan would help to further minimize construction-related emissions of fugitive dust, which is a component of PM_{10}, from the levels presented in Table 4. With implementation of the Dust Control Plan, the actual emissions of PM_{10} would be lower than the levels presented in Table 4.

Nonetheless, due to the Level B emissions of NO_X, pursuant to the NSAQMD guidelines, the proposed project would be required to implement NSAQMD-recommended mitigation measures in order to reduce the impact to a less-than-significant level.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 5.

Table 5
Maximum Unmitigated Operational Emissions (lbs/day)

Pollutant	Proposed Project Emissions	Threshold Level
ROG	2.07	Level A
NO_X	3.54	Level A
PM_{10}	2.55	Level A

Source: CalEEMod, February 2022 (see Appendix A).

As shown in the table, the proposed project's operational emissions would be within threshold Level A. Consequently, the proposed project would be considered to result in a less-than-significant impact related to operational emissions.

Cumulative Emissions

Due to the dispersive nature and regional sourcing of air pollutants, air pollution is already largely a cumulative impact. The nonattainment status of regional pollutants, including

ozone and PM, is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

To improve air quality and attain the health-based standards, reductions in emissions are necessary within nonattainment areas. Adopted NSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of NSAQMD's planning efforts, by exceeding the NSAQMD's Level C thresholds for construction or operational emissions, a project could contribute to the region's nonattainment status for ozone and PM emissions and could be considered to conflict with or obstruct implementation of the NSAQMD's air quality planning efforts.

As discussed above, the proposed project would result in construction emissions that could be reduced to less-than-significant levels with implementation of Mitigation Measure III-1. Additionally, the proposed project would result in operational emissions that would be within the Level A threshold. Therefore, the proposed project would not be considered to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment, and the project's incremental contribution to cumulative emissions would be considered less than significant.

Conclusion

Because the proposed project would result in Level B construction-related emissions of NO_X, pursuant to NSAQMD guidelines, the proposed project could be considered to result in emissions that would conflict with or obstruct implementation of the applicable regional air quality plans. Thus, a ***potentially significant*** impact could occur during construction of the proposed project.

Mitigation Measure(s)

Consistent with NSAQMD's Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects, implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

III-1. *The following language shall be included, via written notation, on project improvement plans, subject to review and approval by the Town of Truckee:*

- *Temporary traffic control shall be provided during all phases of the construction to improve traffic flow as deemed appropriate by local transportation agencies and/or Caltrans; and*
- *Construction activities shall be scheduled to direct traffic flow to off-peak hours as much as practicable.*

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly,

the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest sensitive receptors to the project site include existing single-family residential uses located approximately 500 feet to the west.

The major pollutant concentrations of concern are localized CO emissions, toxic air contaminant (TAC) emissions, and criteria pollutant emissions, which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood.

Although NSAQMD does not have an established threshold for CO emissions, daily maximum CO emissions are presented herein in order to inform the public. Maximum unmitigated daily construction and operational emissions of CO are provided in Table 6 below.

Table 6
Maximum Unmitigated Emissions of CO (lbs/day)

Project Phase	CO Emissions
Construction	20.35
Operations	18.26

Source: CalEEMod, February 2022 (see Appendix A).

Although NSAQMD does not have an established threshold for CO, the nearby air district, Placer County Air Pollution Control District (PCAPCD), who has authority over a portion of the MCAB, has a screening level for localized CO impacts. Consistent with previous practice, the Town of Truckee has elected to use the PCAPCD screening threshold for this environmental review.

According to the PCAPCD screening levels, a project could result in a significant impact if the project would result in CO emissions from vehicle operations in excess of 550 lbs/day, and if the project would increase vehicle trips such that the peak hour level of service (LOS) at an intersection would degrade from an acceptable LOS to an unacceptable LOS or if project-generated trips would result in an increase in delay by 10 seconds or more at an intersection that already operates at an unacceptable LOS. However, considering that the law has changed with respect to how transportation-related impacts may be addressed under CEQA such that unacceptable LOS is no longer considered a significant impact on the environment under CEQA, this analysis relies on the 550 lbs/day of CO emissions screening criterion only.

As shown in Table 6, CO emissions associated with the proposed project would be well below the PCAPCD's 550 lbs/day screening level. Therefore, based on the nearby PCAPCD's screening levels for localized CO impacts, the proposed project would not be expected to result in substantial localized CO concentrations, and, thus, the proposed

project would not be considered to expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The California Air Resources Board (CARB) has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk.

The proposed project does not include any operational activities that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. Construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately two months. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within each site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for extended periods of time. Furthermore, the prevailing wind direction in the Town of Truckee is from the west.[7] As a result, during the construction period, the wind would primarily blow construction exhaust and DPM in the eastward direction and not directly towards the nearest sensitive receptors, which are located to the west.

Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low. Thus, construction of the proposed project would not be expected to expose any nearby sensitive receptors to substantial pollutant concentrations.

[7] Weather Spark. *Average Weather in Truckee California, United States*. Available at: https://weatherspark.com/y/1377/Average-Weather-in-Truckee-California-United-States-Year-Round#:~:text=The%20predominant%20average%20hourly%20wind,of%2056%25%20on%20July%2023.. Accessed February 2022.

Criteria Pollutants

The NSAQMD thresholds of significance were established with consideration given to the health-based air quality standards established by the Federal and State AAQS, and are designed to aid the NSAQMD in achieving attainment of such AAQS.[8] Although the NSAQMD's thresholds of significance are intended to aid achievement of the AAQS for which the MCAB is in nonattainment, the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Nevertheless, a project's compliance with the NSAQMD's thresholds of significance provides an indication that criteria pollutants released as a result of project implementation would not inhibit attainment of the health-based AAQS. Because the proposed project would result in Level B construction-related emissions of NO_X, pursuant to NSAQMD guidelines, Mitigation Measure III-1 would be required as part of the proposed project. Therefore, project-related emissions would not exceed the NSAQMD thresholds for criteria pollutant emissions and, thus, would not inhibit attainment of the federal and State AAQS, the criteria pollutants emitted during project implementation would not be anticipated to result in measurable health impacts to sensitive receptors. Accordingly, the proposed project would not expose sensitive receptors to excess concentrations of criteria pollutants.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to excess concentrations of localized CO, TACs, or criteria pollutants during operations of the project. Consequently, the proposed project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Emissions of principal concern include emissions leading to odors, emission that have the potential to cause dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Emissions such as those leading to odor have the potential to adversely affect people. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction is temporary and construction equipment would operate intermittently throughout the course of a day, and would likely only occur over portions of the site at a time. In addition, all construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. Project construction would also be required to comply with all applicable NSAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions, as well as any associated odors related to operation of construction equipment. Considering the short-term nature of construction

[8] Northern Sierra Air Quality Management District. *Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects*. August 18, 2009.

activities, as well as the regulated and intermittent nature of the operation of construction equipment, the proposed project would not be expected to create objectionable odors affecting a substantial number of people.

Furthermore, the NSAQMD regulates objectionable odors through Rule 205 (Nuisance), which prohibits any person or source from emitting air contaminants or other material that result in any of the following: cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or have a natural tendency to cause injury or damage to business or property. Rule 205 is enforced based on complaints. If complaints are received, the NSAQMD is required to investigate the complaint, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications. Thus, although not anticipated, if odor complaints are made during construction or operation of the project, the NSAQMD would ensure that such odors are addressed, and any potential odor effects eliminated.

With respect to dust, as noted previously, the proposed project would be required to comply with all applicable NSAQMD rules and regulations. Specifically, implementation of a Dust Control Plan pursuant to District Rule 906, and Section 18.30.030 of the Town's Development Code, which provides dust suppression requirements, would be sufficient to reduce potential emissions of dust during construction. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	✖	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	✖
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	✖
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	✖	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	✖	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	✖

Discussion

a. Currently, the project site contains many trees and is mostly undeveloped, with the exception of the access driveway leading to the existing school in the northwest corner of the parcel.

A search of published records of special-status plant and wildlife species was conducted using the California Natural Diversity Database (CNDDB). The intent of the database review was to identify documented occurrences of special-status species in the vicinity of the project area, to determine the locations of the species relative to the project site, and to evaluate their habitat requirements of the species. Special-status species include the following:

- Plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal and State Endangered Species Acts. Both acts afford protection to listed species;
- California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue;
- CDFW fully protected species; and
- Species on California Native Plant Society (CNPS) Lists 1 and 2.

Although CDFW Species of Special Concern generally do not have special legal status, they are given special consideration under CEQA. In addition to regulations for special-

status species, most birds in the U.S., including non-special-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal.

The results of the database review are discussed below.

Special-Status Plants

Based on the results of the CNDDB search, a total of 31 special-status plant species have been documented to occur within the project region. However, because the project site lacks vernal pools, wetlands, riparian forest, and other forms of aquatic habitat, 12 of the 31 species were eliminated from further consideration due to lack of suitable on-site habitat. With the exception of the trees that would be removed as part of the proposed project, the areas on the project site where the roadway improvements and installation of modular classroom buildings would occur have previously been subjected to disturbance. Thus, the proposed project would be unlikely to result in impacts to special-status plant species.

Special-Status Wildlife

Based on the CNDDB search, a total of 20 special-status wildlife species have been documented within the project region. However, 14 of the 20 species were eliminated from further consideration due to a lack of suitable on-site habitat. The remaining six species with the potential to occur on the project site include three mammals (Sierra Nevada red fox, American badger, and wolverine) and three birds (northern goshawk, bald eagle, and yellow warbler).

While the Sierra Nevada red fox and the American badger can occur in a wide variety of habitats, both species use rock outcrops, hollow logs and stumps, and deep, loose soil as burrow/den sites. Additionally, the Sierra Nevada red fox prefers forests interspersed with meadows or alpine fell-fields, and the American badger are most commonly found in drier open stages of most shrub, forest and herbaceous habitats with friable soils. The known range of Sierra Nevada red fox today is limited to two small populations in California—one near Lassen Peak, and a second near Sonora Pass on the Humboldt-Toiyabe and Stanislaus National Forests. The Lassen population is limited to a small area that includes portions of the Lassen Volcanic National Park and Lassen National Forest. In August 2010 a red fox was detected at a camera station on the Humboldt-Toiyabe National Forest near Sonora Pass. The size and distribution of the Sonora Pass population is unknown but believed to be small. Due to its rarity, and distant locations of known populations, it is reasonable to conclude that Sierra Nevada red fox does not occur in the project area.

According to the CNDDB, the nearest occurrence of the American Badger was recorded in 1985, approximately 10 miles from the site. In addition, the last confirmed Sierra wolverine was shot as a specimen in 1922. In late February of 2008, a wolverine was photographed in the Tahoe National Forest, near Truckee, while an Oregon State University student conducted research on pine martens with a remote-controlled camera. DNA tests of collected scat samples, however, prove the animal is related to wolverines in the Rocky Mountains rather than historic California specimens found only in museums.[9] How the photographed wolverine got to California is unknown, but the species frequently travels long distances. In 2016, a wolverine was photographed in a similar location; this

[9] National Park Service. *Yosemite: Threatened Mammals*. Available at: https://www.nps.gov/yose/learn/nature/threatened-mammals.htm. Accessed June 21, 2022.

individual is believed to be the same as the 2008 wolverine. As a result, California-wolverines are not believed to be present in the project area. In addition, wolverines are known to den in alpine, subalpine, taiga, boreal forest, and tundra habitats. Sites where wolverine dens have been found include ravines or drainages where snow accumulates, snow-covered rocky scree or boulder talus, snow-covered fallen trees usually near timberline, including trees downed by avalanches, taiga peat bogs or conifer forest with rocky areas and fallen trees, and mountain birch woodlands near fells or alpine areas.[10] None of these conditions are inherent at the project site. Thus, evidence suggests that it is reasonable to conclude denning wolverine would not occur on-site.

The proposed project involves the removal of approximately 19 trees, which could result in potentially significant impacts to migratory birds if any of the trees proposed for removal include nests or are regularly used as perches for foraging. However, given the habitat requirements of northern goshawk, bald eagle, and yellow warbler, the three special-status birds are unlikely to nest within the project site. The northern goshawk usually nests on north facing slopes near water and riparian habitat, and a minimum canopy closure for goshawk foraging habitat is generally considered to be 40 percent. Similarly, the yellow warbler breeds in riparian thickets of alder, willow and cottonwoods, which are absent from the project site. Finally, bald eagle nests are usually located near a permanent water source due to the bald eagle's feeding habits, which require large bodies of water or free flowing rivers with abundant fish. During the five phases of the bald eagle nesting period, the species' sensitivity to human activity ranges from very sensitive to moderately sensitive, with the most sensitive period occurring during courtship and nest building. Given the existing school operations, as well as the lack of required habitats on-site, there is no likely potential for any of the three special-status birds to nest on-site.

Nonetheless, the project site contains existing trees and brush that could be used by nesting birds and raptors protected by the MBTA. Ground surface disturbance during construction activities could adversely affect the nesting success of migratory birds and raptors (i.e., lead to the abandonment of active nests) or result in mortality of individual birds, which would constitute a violation of State and federal laws. Thus, in the event that such species occur on the project site during the breeding season, project construction activities could result in a substantial adverse effect to species protected under the MBTA.

Conclusion

Based on the above, the proposed project could have an adverse effect, either directly or through habitat modifications, on nesting birds and raptors which could be considered species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the U.S. Fish and Wildlife Service (USFWS), and a ***potentially significant*** impact could result.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

IV-1. *Prior to initiation of ground-disturbing activities for project construction, if construction is expected to occur during the avian nesting season (May 1*

[10] The Wolverine Foundation. *Denning.* Available at: http://wolverinefoundation.org/denning. Accessed October 26, 2022.

to August 31), a qualified biologist shall conduct a preconstruction survey prior to vegetation removal. The pre-construction survey shall be conducted within 7 days prior to commencement of ground-disturbing activities. The survey shall be conducted within all areas of proposed disturbance and all accessible areas within 250 feet of proposed disturbance. If the pre-construction survey does not show evidence of active nests, a letter report documenting the results of the survey shall be provided to the Town of Truckee Planning Department, and additional measures are not required. If construction does not commence within 7 days of the pre-construction survey, or halts for more than 14 days, an additional pre-construction survey shall be required.

If any active nests are located within the proposed disturbance area, an appropriate buffer zone shall be established around the nests, as determined by the project biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or the young have successfully fledged. Buffer zones are typically 100 feet for migratory bird nests and 500 feet for raptor nests. If active nests are found within the disturbance footprint, a qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. Guidance from CDFW shall be required if establishing the typical buffer zone is impractical. If construction activities cause the nesting bird(s) to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased, as determined by the qualified biologist, such that activities are far enough from the nest to stop the agitated behavior. The exclusionary buffer shall remain in place until the young have fledged or as otherwise determined by a qualified biologist.

b,c. The project site does not contain riparian habitat or other sensitive natural communities, including wetlands. Natural drainage channels and adjacent wetlands may be considered "waters of the U.S." or "jurisdictional waters" subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The Truckee River is the nearest jurisdictional water to the project site which lies, generally, approximately 700 feet south of the project site. In addition, the USFWS National Wetlands Inventory identified Station Creek, a freshwater emergent wetland approximately 0.4-mile west of the project site, as the nearest riparian habitat, after the Truckee River.[11] The proposed project would not include any construction activities adjacent to or within the Truckee River or any other jurisdictional water. Therefore, the proposed project would not have a substantial adverse effect on riparian habitat, sensitive natural communities, or State or federally protected wetlands, and ***no impact*** would occur.

d. Wildlife movement corridors are routes that animals regularly use and follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. While the area surrounding the project site is generally rural, the site is currently developed with the existing roadway and school. In addition, the project site does not contain streams or other

[11] USFWS. *National Wetlands Inventory*. Available at: https://www.fws.gov/wetlands/data/Mapper.html. Accessed December 2021.

waterways that could be used by migratory fish. According to the CDFW Biogeographic Information and Observation System (BIOS), the project site is located within the outer margins of the Loyalton Mule Deer Verdi-Truckee migration corridor.[12]. However, in addition to the above, ample undisturbed habitat exists in the project vicinity, including a forest to the north, and similar habitat to that found within the project site is found throughout the Sierra Nevada mountain range.

Based on the above, the proposed project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. Thus, a ***less-than-significant*** impact would occur.

e. The proposed project would involve the removal of 19 trees. The Town's General Plan and Development Code encourage future development to consider retention of trees to the maximum extent feasible due to their ecological importance. The proposed project would be required to comply with the tree preservation requirements set forth in Section 18.30.155(G) of the Town Development Code, as well as Section 18.30.155(H) related to tree protection procedures for those trees that are not proposed for removal, including the placement of fencing at the dripline of the trees.

Approval of the requested Development Permit for the project would authorize removal of on-site trees. The Planning Commission has discretion to require compliance with the replacement standards identified by the Town in accordance with Section 18.30.155(F) of the Town Development Code, which requires one or more of the following:

- Replanting on-site – either a minimum one- and one-half inch caliper healthy and well-branched deciduous tree or a five to six-foot-tall evergreen tree for each tree removed.
- Replanting off-site – If there is insufficient available space on the property, the required replanting shall occur on other property owned or controlled by the same owner within the town, in an open space area that is part of the same subdivision, or in a publicly-owned or dedicated open space or park. Such mitigation planting is subject to property owner approval. If planting on publicly-owned or dedicated property, the public owner may specify the species and size of the tree(s).
- Unpermitted removal of trees – Any trees determined to have been accidently or purposely removed shall be required to be replaced at a 2:1 ratio (two new 15-gallon trees for each tree removed), or at an equivalent ratio to be approved by the Community Development Director.

The proposed project would retain a majority of the native and existing vegetation as credit toward the minimum percentages of site area required to be landscaped and the minimum number of trees required to be planted. In addition, the OSR designation requires that 90 percent of the parcel remains open space, which would ensure that minimal numbers of trees would be impacted. Furthermore, the proposed project would plant 24, 15-gallon deciduous trees, the majority of which would be located around the perimeter of the two proposed parking areas, as well as a quaking aspen grove, which would be located within the roundabout at the top of the project driveway.

[12] CDFW. *BIOS*. Available at: https://apps.wildlife.ca.gov/bios6/. Accessed July 2022.

Given required compliance with the Town's standards related to tree protection, and the proposed landscape plantings, which would more than offset any tree removal, a ***less-than-significant*** impact would occur related to conflicting with local policies or ordinances protecting biological resources.

f. The project site is not located within an area that is subject to an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the proposed project would have ***no impact*** related to a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

V. CULTURAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	✖	☐
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries.	☐	✖	☐	☐

Discussion

The following is based primarily on a Records Search of the California Historical Resources Information System (CHRIS) performed by the North Central Information Center (NCIC)[13]. Sources of information included, but were not limited to, the current listings of properties on the National Register of Historic Places, California Historical Landmarks, California Register of Historical Resources, and California Points of Historical Interest as listed in the California Office of Historic Preservation's Historic Property Directory and the Built Environment Resources Directory. Archival research included an examination of 19th and 20th century maps and aerial photographs to gain insight into the nature and extent of historical development in the general project vicinity as well as within the study area. Ethnographic literature that describes appropriate Native American groups, county histories, and other primary and secondary sources were also reviewed.

a. Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics.

   The CHRIS search indicated that the project area contains zero recorded historical resources on-site or within 0.25-mile of the project site. The only structures on the project site are related to the school, and were constructed circa 1994. Therefore, the proposed project would have a ***less-than-significant*** impact related to the substantial adverse change of a known historical resource.

b,c. The CHRIS records search results identified three prehistoric resource sites that exist outside the project area, within a 0.25-mile radius of the project site. However, the CHRIS search concluded that previously recorded cultural resources do not exist within the project site.

   Correspondence regarding the proposed project was sent to the Native American Heritage Commission (NAHC). A response was received from the NAHC indicating that the Sacred Lands File search produced negative results for the project site.[14]

According to the CHRIS search conducted for the project site, indigenous-period/ethnographic-period habitation sites have been located within the project region along streams or on ridges

[13] North Central Information Center. *Records Search Results for Golden Valley Tahoe School.* January 3, 2022.
[14] Native American Heritage Commission. *Re: Golden Valley Tahoe School Project, Nevada County.* March 11, 2022.

or knolls, especially with southern exposure. The project region is known as the ethnographic-period territory of the Washoe. The proposed project is situated in the Sierra Nevada Mountains approximately 630 feet north of the Truckee River and approximately 1,230 feet south of Prosser Creek. Given the extent of known cultural resources and the environmental setting of the project region, a moderate potential exists for locating cultural resources in the immediate vicinity of the project site. Thus, although the project area has been subject to a records search that does not indicate known resources on-site, the possibility exists that unknown archaeological resources, including human remains, may be uncovered during ground-disturbing activities at the project site.

Therefore, if previously unknown resources are encountered during construction activities, the proposed project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or disturb human remains, including those interred outside of dedicated cemeteries, during construction. Therefore, impacts are considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

V-1. *Prior to grading permit issuance, the developer shall submit plans to the Town of Truckee for review and approval which indicate (via notation on the improvement plans) that if unknown cultural resources, including unique historical, archeological, or paleontological resources, are encountered during site grading or other site work, all such work shall be halted immediately within 200 feet and the developer shall immediately notify the Town of Truckee Community Development Department of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist, paleontologist, or historian, as applicable, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist, paleontologist, or historian shall be required to submit a report of the findings and method of curation or protection of the resources to the Town of Truckee Community Development Department for review and approval. Further grading or site work within the area of discovery shall not be allowed until the preceding work has occurred.*

V-2. *If human remains, or remains that are potentially human, are found during construction, all work shall be halted immediately within 200 feet, and a professional archeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance. The archaeologist shall notify the Nevada County Coroner (per §7050.5 of the State Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, §5097.98 of the California PRC, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the applicant does not agree with the recommendations*

of the MLD, the NAHC can mediate (§5097.94 of the PRC). If an agreement is not reached, the qualified archaeologist or MLD must rebury the remains where they will not be further disturbed (§5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center, using an open space or conservation zoning designation or easement, or recording a reinternment document with the county in which the property is located (AB 2641). Work cannot resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to the Town's satisfaction.

VI. ENERGY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	✖	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	✖	☐

Discussion

a,b. The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2019 California Green Building Standards Code and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2019 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the California CBSC, which became effective with the rest of the CBSC on January 1, 2020. The purpose of the CAL Green Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The CALGreen standards regulate the method of use, properties, performance, types of materials used in construction, alteration repair, improvement and rehabilitation of a structure or improvement to property. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of Electric Vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

Building Energy Efficiency Standards

The 2019 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2016 Building Energy Efficiency Standards resulting in a seven percent reduction in energy consumption from the 2016 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls.

Construction Energy Use

Construction of the proposed project would involve increased energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met through a hookup to the existing electricity grid; however, the NSAQMD requires grid power to be used as opposed to diesel generators, where feasible.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated pursuant to the CARB In-Use Off-Road Diesel Vehicle Regulation, which is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

The CARB has prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),[15] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The In-Use Off-Road Diesel Vehicle Regulation described above, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the proposed project, TDPUD would provide electricity to the project site, and natural gas would be provided by Southwest Gas. Energy use associated with operation of the proposed project would be typical of school uses, requiring electricity

[15] California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* November 2017.

and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed development.

The proposed project would be subject to all relevant provisions of the CBSC, including the Building Energy Efficiency Standards and CALGreen Code. Adherence to the CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. Further discussion of VMT associated with the proposed project is provided in Section XVII, Transportation, of this IS/MND.

Conclusion

Based on the above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

VII. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	✖	☐
ii. Strong seismic ground shaking?	☐	☐	✖	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	✖	☐
iv. Landslides?	☐	☐	✖	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	✖	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	✖	☐
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	✖	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	✖	☐
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	✖	☐

Discussion

ai-ii. According to the Town's General Plan EIR, faults located near Truckee include the Mohawk Valley Fault and the Dog Valley Fault. The Mohawk Valley Fault is located approximately 20 miles northwest of Truckee, while the northern portion of the Dog Valley Fault is located southwest of Truckee near Donner Lake. Although California is known for seismic activity, the Town of Truckee has a relatively low risk of seismic hazard. In addition, the project site is not located within a State-designated Alquist-Priolo Fault Zone. Thus, the potential for fault rupture risk at the project site is relatively low.

An earthquake of moderate to high magnitude generated by the above faults could cause considerable ground shaking at the project site. However, the proposed buildings would be properly engineered in accordance with the CBSC, which includes engineering standards appropriate for the seismic area in which the project site is located. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Proper engineering of the proposed buildings would ensure that the project would not be subject to substantial risks related to seismic ground shaking.

Based on the above, a ***less-than-significant*** impact would occur related to seismic surface rupture and strong seismic ground shaking.

aiii-iv,
c,d. The proposed project's potential effects related to liquefaction, landslides, lateral spreading, subsidence, and expansive soils are discussed in detail below.

Liquefaction

Liquefaction is a phenomenon where loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup. Soil liquefaction results from loss of strength during cyclic loading, such as that which is imposed by earthquake ground shaking. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, and fine-grained sediment.

The Department of Conservation has not mapped the Town of Truckee to identify potential liquefaction zones; however, according to the U.S. Department of Agriculture (USDA) Web Soil Survey, the soils within the project site consist entirely of Martis-Euer variant complex with 2 to 5 percent slopes, which has low liquefaction potential.[16] As noted in the Town of Truckee General Plan EIR, the areas most susceptible to liquefaction within the Town include areas along the Truckee River. Given that the project site is located 0.15-mile from the Truckee River, the likelihood of liquefaction at the site is relatively low. Additionally, the project site is currently developed, and the proposed project involves improvements to areas of land that have previously been subjected to disturbance; thus, any issues related to geology and soils on the site would have been addressed at the time of previous construction. Significant geological issues have not occurred at the project site under the current developed conditions. As such, redevelopment of the site would not expose persons to substantial adverse effects from ground failure, including liquefaction.

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. Due to the relatively level topography of the project site and general surrounding area, the potential for slope instability is considered low. Thus, landslides would not occur on- or off-site as a result of the proposed project.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. The project site does not contain any open faces that would be considered susceptible to lateral spreading. In addition, as noted above, the site is not anticipated to be subject to substantial liquefaction hazards. Therefore, the potential for lateral spreading to pose a risk to the proposed development is relatively low.

Subsidence and Expansive Soils

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. Martis-Euer Variant Complex soil is comprised of well-drained sandy and gravelly loam. Additionally, according to the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey program, Euer-

[16] U.S. Department of Agriculture. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 2021.

Martis Variant Complex soils have a linear extensibility rating of 1.5 and contain approximately 15.6 percent clay content. Based on the NRCS calculated coefficients of linear extensibility, the project site contains soils that are not considered to be highly expansive. As discussed above, on-site soils are generally not considered to be subject to substantial liquefaction risks. Because the site presents low potential for liquefaction, the potential for seismically induced settlement or expansion to occur at the project site is also considered to be low.

Conclusion

The project site is currently partially developed with existing structures, which have not resulted in substantial adverse effects related to the topics discussed above. As such, construction of the proposed project is not anticipated to directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving liquefaction, subsidence, or settlement. In addition, the proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site subsidence, liquefaction, or collapse. Furthermore, the proposed project would not create substantial direct or indirect risks to life or property related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. Thus, a ***less-than-significant*** impact would occur.

b. Issues related to erosion and degradation of water quality during construction are discussed in Section X, Hydrology and Water Quality, of this IS/MND, under question 'a'. As noted therein, the proposed project would not result in substantial soil erosion or the loss of topsoil. Thus, a ***less-than-significant*** impact would occur.

e. The project site currently uses an existing 1,348 GPD gravity septic system, located north of the existing school building, permitted for use by Nevada County in 1994. The proposed project would include the recommission of a second 2,475 GPD pressure-dosed septic system that was abandoned in 2006. The NCEHD determined that that the two septic systems, if the second is able to be fully recommissioned, could accommodate up to 254 students and staff per day.[17] NCEHD regulates all wastewater systems under 10,000 GPD. As designed, both systems can accommodate up to 4,010 GPD of untreated sewage. Issuance of a permit would be required by the NCEHD to recommission the second septic system. With the existing and recommissioned system activated, the system would have the capacity to serve both the existing and proposed school use. Therefore, a ***less-than-significant*** impact regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

f. The Town's General Plan EIR indicates that known paleontological resources exist approximately four miles southwest of Downtown Truckee and approximately five miles northeast of Truckee, near the Boca Reservoir. The two resources located near the Boca Reservoir are from the Quaternary period and the Pleistocene epoch, whereas the resource southwest of Downtown Truckee is from the Quaternary period and the Holocene epoch. The Town's General Plan EIR concluded that with implementation of the policies under Goal CC-19, which is intended to identify and protect paleontological resources from Truckee's early history, impacts related to disturbance of paleontological resources would be less than significant. Furthermore, the project site has been disturbed, and the

[17] Jo Paden, REHS, Nevada County Department of Environmental Health. Personal Communication [email] with Nick Pappani, Vice President, Raney Planning & Management, Inc. February 14, 2022.

Town's General Plan does not note the existence of any unique geologic features within the vicinity of the project site. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features. Thus, a ***less-than-significant*** impact would occur.

VIII. GREENHOUSE GAS EMISSIONS. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	✖	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✖	☐

a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

In September 2006, AB 32, the California Climate Solutions Act of 2006, was enacted. Among other requirements, AB 32 required the CARB to identify the State-wide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and to develop and implement a Scoping Plan. On September 8, 2016, AB 197 and Senate Bill (SB) 32 were enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030.

The proposed project is located within the jurisdictional boundaries of NSAQMD, which does not currently have any established thresholds for GHG emissions. However, NSAQMD prefers that GHG emissions are quantified for decision-makers and the public to consider. Similar to the NSAQMD, the Town of Truckee does not have adopted GHG emission thresholds. Thus, this IS/MND takes the reasonable approach of applying thresholds of the nearby air pollution control districts of PCAPCD and Sacramento Metropolitan Air Quality Management District (SMAQMD). The PCAPCD and SMAQMD thresholds of significance were adopted to aid in compliance with the Statewide goals established by AB 32 and SB 32, and are presented in Table 7.

Table 7 GHG Thresholds of Significance (MTCO2e/yr)		
Air District	**Construction Threshold**	**Operational Threshold**
PCAPCD	10,000	1,100
SMAQMD	1,100	1,100
Sources: PCAPCD. CEQA Handbook Thresholds of Significance Justification Report. October 2016. SMAQMD. CEQA Guide, SMAQMD Thresholds of Significance Table. May 2015.		

GHG emissions resulting from construction and operations of the proposed project were modeled using the CalEEMod emissions model under the same assumptions as discussed in Section III, Air Quality, of this IS/MND. Each phase of the proposed project and the associated GHG emissions is discussed below, and all modeling outputs are included in the Appendix A to this IS/MND.

Construction

Construction of the proposed project would occur over the course of approximately two months. It should be noted that construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. As discussed above, neither NSAQMD nor the Town of Truckee has adopted thresholds of significance for construction-related GHG emissions. Therefore, the total emissions have been compared to the thresholds of significance used by the nearby air districts, PCAPCD and SMAQMD. The maximum unmitigated GHG emissions from construction of the proposed project are presented in Table 8 below.

Table 8 Unmitigated Construction GHG Emissions ($MTCO_2e$/yr)	
Construction Emissions	**Maximum Annual GHG Emissions**
Project Emissions	69.78
PCAPCD Threshold	10,000.00
SMAQMD Threshold	1,100.00
Exceeds Thresholds?	**NO**
Source: CalEEMod, February 2022 (see Appendix A).	

As shown above, construction of the proposed project would result in maximum annual GHG emissions far below both applicable thresholds of significance.

Operations

The estimated unmitigated operational GHG emissions at full buildout of the proposed project in the year 2023 are presented in Table 9.

Table 9 Unmitigated Operational GHG Emissions ($MTCO_2e$/yr)	
Operational Emissions	**Maximum Annual GHG Emissions**
Project Emissions	371.90
PCAPCD Threshold	1,100.00
SMAQMD Threshold	1,100.00
Exceeds Thresholds?	**NO**
Source: CalEEMod, February 2022 (see Appendix A).	

Because NSAQMD has not adopted operational GHG thresholds, the total emissions were compared to both PCAPCD and SMAQMD operational GHG thresholds of significance. As shown in the table, the proposed project's maximum unmitigated operational GHG emissions fall well below both PCAPCD's and SMAQMD's 1,100 $MTCO_2e$/yr threshold. As such, the implementation of the project would not conflict with achievements of the Statewide GHG reduction goals established by AB 32 and SB 32.

Conclusion

As discussed above, the NSAQMD does not currently have any established thresholds for GHG emissions, and, thus, this IS/MND has presented the project emissions as compared to the thresholds of the PCAPCD and SMAQMD for disclosure purposes. Based on the above, both sources of emissions would fall under the applicable thresholds of significance. Therefore, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and a ***less-than-significant*** impact would occur.

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

Discussion

a. Schools are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. On-site maintenance may involve the use of common household cleaning products, fertilizers, and herbicides, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and the amount anticipated to be used on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. The project site is developed with the existing school and consists primarily of trees and ruderal vegetation. Known hazards (e.g., underground storage tanks, abandoned wells, structures containing lead-based paint or asbestos) are not located on-site. According to the California Department of Toxic Substances Control's Envirostor Database, hazardous material sites do not exist at the project site or in the project vicinity.[18]

Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g.,

[18] California Department of Toxic Substances Control. *Envirostor Database.* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed December 2021.

petroleum and other chemicals used to operate and maintain construction equipment) would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local County and Town ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Thus, construction of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

During project operation, hazardous materials use would be limited to landscaping products such as fertilizer and pesticides/herbicides. Such chemicals would be utilized in limited quantities according to label instructions.

Because the proposed project would involve limited use of hazardous materials, primarily limited to the construction phase of the project, during which the contractor would be required to adhere to all relevant guidelines and ordinances regulating the handling, storage, and transportation of hazardous materials, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment, and a ***less-than-significant*** impact would occur.

c. The proposed project includes improvements to an existing school located on the project site. Thus, an existing/proposed school is located within one-quarter mile of the project site. However, as discussed above, school developments typically do not result in substantial amounts of hazardous emissions or the handling of hazardous materials. Additionally, the project contractor would be required to comply with all California Health and Safety Codes and local County and Town ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Therefore, the proposed project would result in a ***less-than-significant*** impact related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. According to the Department of Toxic Substances Control, the project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[19] Thus, the proposed project would not create a significant hazard to the public or the environment, and ***no impact*** would occur.

e. The nearest public airport to the project site is the Truckee Tahoe Airport, located approximately 2.65 miles to the southeast. According to the Truckee Tahoe Airport Land Use Compatibility Plan (LUCP), the southwestern portion of the project site is located within Zone E, which is designated "Other Airport Environs," and identified for low noise impacts and low safety risks.[20] About 10 to 15 percent of general aviation accidents take place in Zone E, but the large area encompassed means a low likelihood of accident occurrence in any given location. From a safety perspective, prohibited uses within Zone E consist of uses which would be considered hazards to flight. According to the LUCP, hazards to flight include physical (e.g., tall objects), visual, and electronic forms of

[19] Department of Toxic Substances Control. *Hazardous Waste and Substances Site List (Cortese).* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed December 2021.

[20] Truckee Tahoe Airport Land Use Commission. *Truckee Tahoe Airport Land Use Compatibility Plan* [page 2-47]. October 27, 2016.

interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also prohibited. Because the modular building improvements and septic system reconnection are located in the northern portion of the project site outside of the boundaries of the LUCP, and considering that the only component of the proposed project located within Zone E would be the proposed expansion of the existing access road, the proposed project would not be considered a hazard to flight, and would therefore not be a prohibited land use within Zone E. With regard to the low noise impact, the LUCP requires airspace review for objects greater than 100 feet tall, and discourages sports stadia, amphitheaters, and concert halls. The proposed project does not include components that would exceed 100 feet in height and does not include sports stadia, amphitheaters, or concert halls; thus, rules regarding noise hazards would not apply to the proposed project. Further discussion of noise-related impacts is provided in Section XIII, Noise, of this IS/MND. Therefore, a ***less-than-significant*** impact would occur related to a safety hazard or excessive noise for people residing or working in the project area associated with the project being located within an airport land use plan or within two miles of a public airport or public use airport.

f. The Town of Truckee does not have an adopted emergency response plan or emergency evacuation plan, with which the proposed project could interfere. Nevertheless, this section will more broadly consider emergency response and evacuation and the project's potential effects thereupon.

During construction of the proposed project, all construction equipment would be staged on-site so as to prevent obstruction of local and regional travel routes in the Town that could be used as evacuation routes during emergency events. With respect to project operations, the proposed project would not alter the existing circulation system in the surrounding area. The proposed project's roadway improvements would facilitate access for emergency vehicles by way of the widened access road However, in the event of an evacuation, the proposed project, at full capacity, would result in the need to evacuate an additional 196 students, which could interfere with evacuation of nearby residents or emergency vehicles responding to the area. As a result, the project could have a ***potentially significant*** impact with respect to impairing the implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

IX-1. *Prior to an increase in school capacity beyond 44 students, the applicant shall submit a Town-approved emergency response/evacuation plan outlining the procedure for offsite evacuation of the entire campus. This plan must identify the measures that will be implemented by the school to ensure orderly evacuation of the entire campus population during an evacuation warning or evacuation order (as determined by the California Department of Forestry and Fire Protection [CAL FIRE] and the California Governor's Office of Emergency Services [Cal-OES], and defined by the Cal-OES Evacuation Terminology Working Group), using no more than 50 vehicles. Measures could include but not necessarily be limited to use of on-site shuttles, contracting with a transportation company, and/or a establishing a designated classroom evacuation carpool system. The plan*

should also account for an evacuation order, which requires campus evacuation with vehicles located onsite.

g. Issues related to wildfire hazards are further discussed in Section XX, Wildfire, of this IS/MND. As noted therein, per the Town's General Plan,[21] the entire Truckee area is considered to be in a high fire hazard severity zone, as defined by CAL FIRE. However, according to CAL FIRE's online Fire Hazard Severity Zones Viewer, the project site is located within a Non-Very High Fire Hazard Severity Zone, within a Local Responsibility Area.[22] Additionally, the proposed project would be required to comply with all applicable requirements of the California Fire Code through the installation of automatic fire alarm systems, fire hydrants, and other applicable requirements. The proposed project would also be situated near existing roads and other utilities, that would help reduce risks related to wildfire. Furthermore, the on-site Water System also includes a 90,000-gallon steel storage tank that contains water for fire protection. Based on the above, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, and a ***less-than-significant*** impact would occur.

[21] Town of Truckee. *Truckee 2025 General Plan Safety Element* [pg. 9-7]. Adopted November 16, 2006

[22] California Department of Forestry and Fire Protection. *Map of CAL FIRE's Fire Hazard Severity Zones in Local Responsibility Areas – Truckee*. Available at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed December 2021.

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

Discussion

a. During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the existing roadway site and the proposed concrete building pad sites for the modulars. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. Given that the proposed project would disturb approximately 3.6 acres of land, the proposed construction activities would be subject to applicable SWRCB regulations. For example, the project shall comply the Statewide Construction General Permit No. 2009-009-DWQ (or most current permit). Prior to building (grading) permit issuance, the applicant shall provide the Waste Discharger Identification (WDID) number issued by the SWRCB and prepare a Storm Water Pollution Prevention Plan (SWPPP). Additionally, the Town's Development Code, Section 18.30.050, Drainage and Storm Water Runoff, requires drainage and erosion control plans be submitted to the Town for review, and Section 18.30.050 requires a SWPPP to be prepared for the proposed project. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts. The Town of Truckee requires all

development projects to use BMPs to treat runoff, which would include implementation of both temporary and permanent BMPs, in accordance with the Town's Erosion Prevention Standards, to ensure that the water quality of drainages within the Town is not adversely impacted. Temporary construction phase BMPs are anticipated to include silt fencing, straw wattles, staging areas, tree protection fencing, dust control, and other miscellaneous provisions as required by the regulatory agencies. It should be noted that BMPs would ensure that water quality is not degraded during the construction of the proposed project. In addition to the stormwater treatment BMPs, other permanent BPMs include soil stabilization, revegetation, and landscaping of all non-hardscaped disturbed areas of the project site.

Site Design Measures (SDMs) would be implemented on-site to treat storm water runoff, in accordance with SWRQB regulations. Runoff from rooftops (through rooftop disconnection) or impervious surfaces would be directed to pervious landscape areas for infiltration into underlying soils. The remaining areas of the project site, such as the parking lot, would be graded to drain into the proposed retention basin swales along the project's western boundary. Thus, overall drainage patterns on the project site are not anticipated to be substantially altered through development of the proposed project.

Based on the above, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Thus, a ***less-than-significant*** impact would occur.

B,e. Water supplies for the project site would be provided by the FOTTW Water System's existing on-site well, which draws groundwater from the Martis Valley Groundwater Basin (MVGB). The FOTTW Water System was permitted in March 2021 by the NCEHD as a Non-Transient/Non-Community Water System. The system is regulated by NCEHD operating under the Facility ID: FA0005994. While the groundwater well was permitted to serve a maximum of 44 students, according to a Source Capacity Test conducted for the permitting process of the well, the current Water System has a capacity to serve 157 students with a MDD of 1,609.25 GPD and a PHD of 471 gallons per hour (GPH).[23] According to the Source Capacity Test, at any time that the school wishes to exceed 157 students, additional storage capacity must be added to the Water System. As such, the FOTTW Water System would be required to submit a Permit Amendment Application to the NCEHD to evaluate the proposed increased use to determine if the well and/or storage is sufficient. The Permit Amendment Application would be approved ministerially at a staff level by the NCEHD.

According to a Hydrogeologic Support Study conducted for the MVGB, groundwater levels have largely remained stable in the MVGB for at least 25 years, including during the drought of the early 1990s, the wet years of the late 1990s, and recent drought conditions.[24] In addition, average annual groundwater extractions in the basin since 1990 were estimated to be approximately 7,000 acre-feet per year (AFY), which is less than one third of the estimated sustainable yield of 22,000 AFY for the basin. The Hydrogeologic Support Study also found that future groundwater demands, which were based on 2035 buildout conditions included in the TDPUD 2015 Urban Water Management Plan (UWMP), are estimated at approximately 13,000 AFY, which is still well below the sustainable yield estimate for the basin. For the purposes of the UWMP

[23] Balance Hydrologics, Inc. *Source Capacity Test Results, Truckee-Tahoe Waldorf School Water Well, Nevada County, California.* January 22, 2021.

[24] GEI Consultants. *Alternative Submittal Hydrogeologic Support Study.* November 18, 2016.

analysis, buildout of the TDPUD service area is assumed to include continued operations of all existing land uses, as well as development of all currently vacant parcels consistent with their respective jurisdiction's General Plans. Consequently, on-site water demand was generally included in the UWMP analysis reflected within the Hydrogeologic Support Study conducted for the MVGB. As such, adequate water supply exists to serve the increase in groundwater demand generated by the proposed project without resulting in a significant decrease in the available water supplies such that the project may interfere with management of the MVGB.

Stormwater falling on undeveloped portions of the project site currently flows to the existing retention basin in the western portion of the project site, and facilitating groundwater recharge by allowing natural percolation through on-site soils. The proposed project would include the development of impervious surfaces, which would result in decreased percolation of stormwater within developed areas of the site. However, overall drainage patterns on the project site are not anticipated to be substantially altered through development of the proposed project. Consequently, the proposed project would not result in substantial interference with groundwater recharge in the area.

Based on the above, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the proposed project would result in a ***less-than-significant*** impact with respect to substantially decreasing groundwater supplies or interfering substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin.

ci-iii. The Town of Truckee Public Improvement and Engineering Standards (TOT Standards) include requirements relative to drainage design for projects. The TOT Standards, in addition to project specific design criteria, and the standards of the Town of Truckee Storm Water Quality Plan (TOT SWQP), as approved by the Regional Water Quality Control Board, largely comprise the overall design requirements to which the proposed project shall adhere. The various conditions and requirements can be summarized in the following basic criteria:

- Drainage pipes shall be sized for the 10-year storm event and assessed for the 100-year event;
- Collected runoff from impervious surfaces shall be treated on-site as determined by the TOT SWQP during final design;
- Storm drainage facilities will be designed to provide groundwater recharge, attenuate peak flows, and minimize risk of erosion;
- Maintain pre-project watershed boundaries and drainage patterns;
- Flow concentrations shall not cause property damage or erosion;
- Energy dissipaters shall be included in outfall designs; and
- All construction activities and permanent improvements shall include BMPs for the protection of water resources.

The proposed project includes proposed HDPE storm drains and drainage ditches along both sides of the roadway that would allow stormwater to flow to a proposed retention basin along the project site's western boundary.

Because the proposed project would increase the amount of impervious surface on the project site from 50,095 sf to 80,125 sf as a result of the roadway improvements and the

construction of the four building pads for the modular classroom buildings, the drainage patterns could be impacted. Thus, without preparation of a final drainage report to verify the adequacy of the final drainage system design, the proposed project could result in a ***potentially significant*** impact with respect to substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site, creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or providing substantial additional sources of polluted runoff.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

X-1. *In conjunction with the submittal of project improvement plans, the developer shall submit a Final Drainage Report that includes pre- and post-development hydrology calculations, as well as calculations for the required treatment areas to ensure that the on-site drainage system complies with the Town of Truckee Post-Construction Storm Water Quality Plan/State Municipal Phase 2 Stormwater General Permit, and any other applicable regulations at time of permit issuance. The drainage report shall be submitted to the Town of Truckee for review and approval.*

civ. According to Figure 4.7-1, Areas Subject to Flooding, of the Town's General Plan EIR, the project site is not located within a 100-year or 500-year floodplain. Additionally, the project site is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 06057C0532E, which is within Zone X, and considered an area of minimal flood hazard.[25] Thus, the proposed project would not include development within a Special Flood Hazard Area and would not be subject to project-specific design features related to flood hazards. Therefore, development of the proposed project would not impede or redirect flood flows, and a ***less-than-significant*** impact would result.

d. As discussed under question 'civ' above, development of the project would not impede or redirect flood flows. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. The project site is not located in proximity to a coastline and would not be potentially affected by flooding risks associated with tsunamis. The project site is located approximately 6.6 miles from Donner Lake which could be prone to seiches due to seismic activity. The project site is also located approximately 2.8 miles northwest of Martis Lake, which also could be prone to seiches due to seismic activity. However, given the distance from Donner Lake and Martis Lake, the project site is not anticipated to be exposed to the impacts of seiches. Based on the above, the proposed project would not pose a risk related to the release of pollutants due to project inundation due to flooding, tsunami, or seiche, and a ***less-than-significant*** impact would occur.

[25] FEMA. *FEMA Flood Map Service Center*. Available at: https://msc.fema.gov/portal/home. Accessed December 2021.

XI. LAND USE AND PLANNING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	✖	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	✖	☐

Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. Surrounding existing uses include I-80 to the south, U.S. Forest Service land and Prosser Creek to the north, and rural residences to the east and west. The proposed project is an expansion of the existing on-site school, which would not divide an established community. Additionally, the proposed project is consistent with the land use and zoning designations of the project site, and would not isolate an existing land use. Therefore, the proposed project would not physically divide an established community and a ***less-than-significant*** impact would occur.

b. The project site is currently designated OSR per the Town's General Plan and is zoned RR-0.10. The proposed project is an extension of the existing on-site school, and, following the approval of a Use Permit, would therefore be consistent with the site's current General Plan land use designation.

In addition, as discussed in detail throughout this IS/MND, the proposed project would not conflict with Town policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect, including, but not limited to, the Town's noise standards and applicable SWRCB regulations related to stormwater. In addition, as discussed throughout this IS/MND, the proposed project would not result in any significant environmental effects that could not be mitigated to a less-than-significant level by the mitigation measures provided herein.

Therefore, the proposed project would not 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, and a ***less-than-significant*** impact would occur.

XII. MINERAL RESOURCES. *Would the project:*		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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?	☐	☐	☐	✖
b.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	✖

Discussion

a,b. According to the Town's General Plan EIR, mineral resources within the Town of Truckee primarily include alluvial deposits along the Truckee River Valley, while some resources are associated with volcanic features. Aggregate mining operations in the Town of Truckee are currently limited to the aggregate mining area in the far southeast portion of Truckee. According to Figure 4.5-2 of the General Plan EIR, the project site is not located in an area with important mineral resources.[26] Therefore, 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 residents of the State or 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. Thus, ***no impact*** to mineral resources would occur.

[26] Town of Truckee. *Town of Truckee 2025 General Plan EIR* [4.5-10]. April 2014.

XIII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	✖	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	✖	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	✖	☐

Discussion

The following discussion is based primarily on an Environmental Noise Assessment prepared for the proposed project by Saxelby Acoustics, LLC. (see Appendix B).[27]

a. The following sections present information regarding sensitive noise receptors in proximity to the project site, the existing noise environment, and the potential for the proposed project to result in impacts during project construction and operation. The following terms are referenced in the sections below:

- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to dB in this section will be A-weighted unless noted otherwise.
- Day-Night Average Level (L_{dn}): The average sound level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours.
- Equivalent Sound Level (L_{eq}): The average sound level over a given time-period.
- Maximum Sound Level (L_{max}): The maximum sound level over a given time-period.
- Median Sound Level (L_{50}): The sound level exceeded 50 percent of the time over a given time-period.
- Community Noise Equivalent Level (CNEL): The 24-hour average noise level with noise occurring during evening (7:00 PM to 10:00 PM) hours weighted by a factor of three and nighttime hours weighted by a factor of ten prior to averaging.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

[27] Saxelby Acoustics LLC. *Environmental Noise Assessment, Golden Valley Tahoe School.* June 17, 2022.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. The nearest noise sensitive receptors to the project site include the existing single-family residences located approximately 500 feet to the west. However, it should be noted that single-family residences are also located approximately 1,500 feet east of the project site.

Existing Noise Environment

The existing noise environment in the project area is primarily defined by traffic on I-80. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous (24-hour) noise level measurement at two locations on the project site: Long Term 1 (LT-1) and LT-2, located in the northwest and southeast corners of the project site, respectively, as shown in Figure 2 of the Environmental Noise Assessment (Appendix B). Table 10 below provides a summary of the noise measurement results.

Table 10
Existing Ambient Noise Monitoring Results

Site	Date	24-hr L_{dn}/ CNEL	Average Measured Hourly Noise Levels (dBA)					
			Daytime (7 AM to 10 PM)			Nighttime (10 PM to 7 AM)		
			L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
Continuous 24-Hour Noise Measurement Results								
LT-1	Thursday, January 27,2022	56	51	49	62	50	48	63
LT-1	Friday, January 28, 2022	55	51	50	64	49	48	60
LT-2	Thursday, January 27, 2022	59	56	55	67	52	50	65
LT-2	Friday, January 28, 2022	59	57	56	67	52	50	62

***Source:** Saxelby Acoustics, LLC, Environmental Noise Assessment, Golden Valley Tahoe School, June 17, 2022.*

Standards of Significance

The Town's General Plan exterior standards for residential uses range between 60 dB and 65 dB L_{dn}/CNEL. The lower standard of 60 dB L_{dn}/CNEL is considered the "Normally Acceptable" standard and 65 dB L_{dn}/CNEL is the "Conditionally Acceptable" standard. Ambient noise in excess of 75 dBA L_{dn}/CNEL is considered "Unacceptable."

In addition to the noise standards in the General Plan, the Town's Development Code includes noise level performance criteria applicable to non-transportation noise sources. Specifically, Table 3-8 of the Town's Development Code provides the noise level performance criteria for sensitive land uses, such as hospital, residential, and school uses. It should be noted that according to Section 18.44.070 of the Town's Development Code, such criteria do not apply to construction noise sources associated with non-single-family residential construction (such as the nearest sensitive receptors to the project site; i.e., single-family residential uses to the east and west of the project site), provided that the activities do not take place before 7:00 AM or after 9:00 PM on any day, except Sunday, or before 9:00 AM or after 6:00 PM.

In practice, a noise impact may be considered significant if the project would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. Research into the human perception of changes in sound level indicates the following: a 3 dB change is barely perceptible; a 5 dB change

is clearly perceptible; and a 10 dB change is perceived as being twice or half as loud. For the purpose of this analysis, the lead agency has determined a 5 dB increase in overall noise levels is considered to be significant.

In addition, the use of the FICON standards is considered conservative relative to thresholds used by other agencies in the State of California. For example, the California Department of Transportation (Caltrans) requires a project-related traffic noise level increase of 12 dB for a finding of significance, and the California Energy Commission (CEC) considers project-related noise level increases between 5 to 10 dB significant, depending on local factors. Therefore, the use of the FICON standards, which set the threshold for finding of significant noise impacts as low as 1.5 dB, provides a very conservative approach to the impact assessment for the proposed project.

Based on the FICON research, as shown in Table 11, a 5 dB increase in noise levels due to a project is required for a finding of significant noise impact where ambient noise levels without the project are less than 60 dB L_{dn}. Where pre-project ambient conditions are between 60 and 65 dB L_{dn}, a 3 dB increase is applied as the standard of significance. Finally, in areas already exposed to higher noise levels, specifically pre-project noise levels in excess of 65 dB L_{dn}, a 1.5 dB increase is considered by FICON as the threshold of significance.

Table 11
FICON Noise Exposure Increases for Determining Level of Significance

Noise Exposure without Project	Potential Significant Impact
< 60 dB CNEL	5 dB or more
60-65 dB CNEL	3 dB or more
>65 dB CNEL	1.5 dB or more

Source: Saxelby Acoustics, LLC, Environmental Noise Assessment, Golden Valley Tahoe School, June 17, 2022.

Impact Analysis

The following sections provide an analysis of potential noise impacts associated with construction and operation of the proposed project.

Construction Noise

During construction of the proposed project, heavy-duty equipment would be used for demolition, grading, excavation, paving, and building construction, which would result in temporary noise level increases. Project haul truck traffic on local roadways would also result in a temporary noise level increase during construction activities. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point. Standard construction equipment, such as graders, backhoes, loaders, and haul trucks would be used on-site. Construction activities would be temporary in nature and are anticipated to occur during normal daytime work hours.

Table 12 shows maximum noise levels associated with typical construction equipment. Based on the table, activities involved in typical construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

Table 12
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: Federal Highway Administration, Roadway Construction Noise Model User's Guide, January 2006.

Construction of the proposed project would be required to comply with limited construction hours set forth within Section 18.44.070 of the Town's Development Code. The project would also comply with General Plan Policy 3.13, which includes standard construction noise control measures to be included as requirements at construction sites in order to minimize construction noise impacts. For example, construction noise control measures set forth in Policy 3.13 include, but are not limited to, locating stationary noise generating equipment as far as possible from sensitive receptors in the project vicinity and adding mufflers to noise generating equipment to reduce noise levels.

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given the noise attenuation rate and assuming a lack of noise shielding from either natural or human-made features (e.g., trees, buildings, fences), outdoor receptors within approximately 1,600 feet of construction sites could experience maximum instantaneous noise levels of greater than 60 dBA when on-site construction-related noise levels exceed approximately 90 dBA at the boundary of the construction site. As previously discussed, nearby noise-sensitive receptors consist predominantly of residential dwellings located near the western and eastern boundaries of the project site.

The Town of Truckee Noise Ordinance places limitations on the acceptable hours of construction. During development of the proposed project, construction activities occurring between 7:00 AM and 9:00 PM Monday through Saturday and 9:00 AM and 6:00 PM on Sunday are exempt from the noise standards included in the Development Code. Nonetheless, several residential uses are located approximately 500 feet from the center of the construction area, and may be subject to construction noise. As a result, noise-generating construction activities would be considered to have a potentially significant short-term impact.

Operational Noise

Children playing outdoors and traffic circulation are considered to be the primary noise sources for the proposed project. While formal playgrounds are not located on-site, a conservative assumption was made that children playing in areas around the proposed classrooms would result in noise levels of 55 dBA L_{50} and 75 dBA L_{max} at 100 feet, based on previous measurements conducted by Saxelby Acoustics at similar outdoor play areas. In addition, the proposed project is predicted to generate a new project trip generation of

up to 513 peak hour trips during drop-offs and pick-ups, assuming one auto arriving and departing per each student and one auto arriving or departing for each staff member. Parking lot movement for cars was predicted to generate a sound exposure level (SEL) of 71 dBA SEL at 50 feet. Additionally, the assumption was made that several truck deliveries could also occur on the project site during the peak hour at a level of 85 dBA SEL at 50 feet.

Given that the nearest sensitive receptors are located approximately 500 feet to the west of the project site, the proposed project is expected to expose nearby residences to daytime noise levels up to 47 dBA L_{50} and 67 dBA L_{max} during daytime (7:00 AM to 10:00 PM) hours. Nighttime operation of the proposed project is not expected to occur. Thus, the proposed project would meet the Town of Truckee daytime standards of 50 dBA, L_{50}, and 70 dBA L_{max} for non-transportation noise sources consisting of impulsive noise, simple tone noise, or noise consisting primarily of speech or music. Therefore, the proposed project's operational noise would comply with the Town's L_{50} and L_{max} noise level standards, resulting in a less-than-significant impact.

Traffic Noise Increases at Off-Site Receptors

The proposed project could generate a maximum of 1,026 total daily trips, assuming two trips per 33 faculty and four trips per 240 students. It should be noted that mitigation measures in Section XVII, Transportation of this IS/MND, could result in fewer total daily trips. As such, the assumptions above would result in a conservative analysis regarding traffic noise increases associated with the proposed project.

The closest existing noise receptor located along Union Mills Road is located approximately 250 feet from the centerline of Union Mills Road (approximately 0.33 mile east of Overland Trail). However, I-80, which parallels Union Mills Road, is the primary noise source at the sensitive receptor. The existing traffic noise level at the receptor is estimated to be 65.5 dBA L_{dn} due to traffic on I-80. The project-only traffic noise level from vehicles on Union Mills Road would generate a noise level of 42.1 dBA L_{dn}, which would be 23.4 dBA less than existing I-80 traffic noise levels and would result in a total increase of less than 0.02 dBA. A 0.02 dBA increase would not constitute an audible increase and would be less than the FICON noise level thresholds of +1.5 dB L_{dn} where existing noise levels exceed 65 dBA. Therefore, project impacts resulting from increased traffic noise would be considered less-than-significant.

Conclusion

As described above, the proposed project would not result in significant noise impacts related to project operations or increased traffic generation. However, construction of the proposed project could result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan, the Town's noise ordinance, or applicable standards of other agencies. Therefore, the proposed project would result in a ***potentially significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XIII-1. *Prior to approval of grading and/or building permits, the Town shall establish the following as conditions of approval for any permit that results*

in the use of the construction equipment, subject to enforcement and monitoring from the Town's Community Development Department:

- *Construction shall be limited to between 7:00 AM and 9:00 PM Monday through Saturday and 9:00 AM and 6:00 PM on Sunday;*
- *Unnecessary idling of internal combustion engines is prohibited;*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction;*
- *Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment;*
- *Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area;*
- *Utilize "quiet" air compressors and other stationary noise-generating equipment where appropriate technology exists; and*
- *The project sponsor shall designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint and shall require that reasonable measures warranted to correct the problem be implemented. The project sponsor shall also post a telephone number for excessive noise complaints in conspicuous locations in the vicinity of the project site. Additionally, the project sponsor shall send a notice to neighbors in the project vicinity with the information on the construction schedule and the telephone number for noise complaints.*

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 13, which was developed by the California Department of Transportation (Caltrans), shows that the vibration levels that would normally be required to result in damage to structures range from 0.2 to 0.6 in/sec PPV. The general threshold at which human annoyance could occur is 0.10 in/sec PPV.

Table 13
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

The primary vibration-generating activities associated with the proposed project would occur during grading, placement of underground utilities, and construction of foundations. Table 14 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could be required during construction of the proposed on-site drive aisles and parking areas.

Table 14
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)	PPV at 100 feet (in/sec)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/Drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210	0.074	0.026

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

The proposed project would only cause elevated vibration levels during construction, as the project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with construction of the

project would add to the noise and vibration environment in the immediate project vicinity, construction activities would be temporary in nature and would occur during normal daytime working hours. In addition, the proposed construction activities would occur at distances nearly equal to or greater than 50 to 100 feet from the nearest existing buildings, which would be the school buildings on-site. Therefore, according to the vibration levels shown in Table 14, groundborne vibration levels at the nearest buildings would be less than the 0.20 in/sec PPV threshold established by Caltrans for architectural damage to buildings.

Based on the above, the proposed project would not expose people to or generate excessive groundborne vibration or groundborne noise levels, and a ***less-than-significant*** impact would occur.

c. The nearest public airport to the site is the Truckee Tahoe Airport, located approximately 2.65 mile to the southeast of the project site. According to the Truckee Tahoe Airport LUCP, the southwestern portion of the project site is located within Zone E, which is designated "Other Airport Environs," and identified for low noise impacts and low safety risks.[28] Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airports, and a ***less-than-significant*** impact would occur.

[28] Truckee Tahoe Airport Land Use Commission. *Truckee Tahoe Airport Land Use Compatibility Plan* [page 2-47]. October 27, 2016.

XIV. POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	✖	☐

Discussion

a. The proposed project would involve the expansion of a school in a non-urbanized area of the Town. Given that the proposed project would not include any residential development, the proposed project would not directly induce population growth. While the proposed project could create new jobs in the area which could potentially result in an increase in the housing demand, such an increase would be minimal due to the relatively small scale of the proposed project. In addition, the proposed project would not include the extension of any infrastructure. As such, the proposed project would create employment, but would not lead to influx of new residents to the project area.

As discussed in Section XIX, Utilities and Services Systems, of this IS/MND, adequate utility infrastructure and services exist to meet the additional demand that would be created by the project. Similarly, as discussed in Section XV, Public Services, public service providers, such as local police and fire departments, would be capable of accommodating the demands of the proposed project. Therefore, the proposed project would not induce substantial unplanned population growth either directly or indirectly, and a ***less-than-significant*** impact would occur.

b. The proposed project would not require the demolition of any existing residences or any other structures within the project site. As such, the proposed project would not displace a substantial number of existing housing or people and would not necessitate the construction of replacement housing elsewhere. Therefore, a ***less-than-significant*** impact would occur.

XV. PUBLIC SERVICES. *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 other performance objectives for any of the public services:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	☐	☐	✖	☐
b. Police protection?	☐	☐	✖	☐
c. Schools?	☐	☐	✖	☐
d. Parks?	☐	☐	✖	☐
e. Other Public Facilities?	☐	☐	✖	☐

Discussion

a-e. Fire protection services are currently provided to the surrounding area by the Truckee Fire Protection District (TFPD). The TFPD is comprised of 40 full-time and 10 part-time firefighters and paramedics. TFPD Station 95 is the nearest station to the project site and is located approximately 8.2 miles by car to the west, at 10900 Manchester Drive. Additionally, the Truckee Police Department provides law enforcement services to the project area. The Truckee Police Department is located at Town Hall at 10183 Truckee Airport Road, approximately 5.4 miles southwest of the project site. The Town of Truckee 2025 General Plan EIR determined that buildout of the General Plan would increase the overall demand on fire and law enforcement services. While an existing school currently is in use on the project site, the proposed project would allow the school population to increase from 44 students to approximately 240 students. Thus, some increase in demand for fire and law enforcement services could occur as a result of the increase in the student population of the school. However, the increase would not be considered substantial and could be met by current service providers, without the need for expanding existing facilities or constructing new facilities, the construction of which could cause significant environmental effects.

Because the proposed project itself involves improvements to an existing private school, the proposed project would not create a need to physically alter existing public schools. All other potential impacts, including growth inducing impacts, associated with facilitating an increased student population at the project site are addressed throughout this IS/MND.

While the proposed project would not include any designated parkland, the project site is located approximately six miles by car from the nearest park, Truckee River Regional Park. In addition, as stated in the Town's General Plan, the Town strives to maintain at least five acres of parkland for every 1,000 residents. According to the Town's General Plan, in 2004, the population of Truckee was approximately 15,000, and the Town provided approximately eight acres of parkland per 1,000 residents (i.e., a total of 120 acres). Since 2004, the Town has grown to have approximately 16,735 residents, and has added the Truckee Recreation and Aquatic Center (approximately 1.5 acres). As such, just over seven acres of parkland per 1,000 residents is available and the Town is still well within their goal of maintaining five acres of parkland per 1,000 residents. Because the proposed project includes improvements to an existing school, the proposed project would not directly generate new residents in the Town. Therefore, the proposed project would

not be anticipated to increase the population such that the Town's parkland requirement would no longer be met.

Based on the above, the proposed project would have a ***less-than-significant*** impact related to the need for new or physically altered fire protection, law enforcement, schools, parks, or other public facilities, the construction of which could cause significant environmental impacts.

XVI. RECREATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. 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?	☐	☐	☐	✖
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	✖

Discussion

a,b. The proposed project would not result in any population growth that could increase the use of existing recreational facilities, nor would the proposed project include or require construction or expansion of new or existing recreational facilities. In addition, the proposed project would not involve the extension of major infrastructure associated with water, sanitary sewer, storm drainage, or energy services. Therefore, the project would not generate population growth and additional demand for recreational facilities, either directly or indirectly.

Currently, the Town of Truckee includes an ample amount of community and recreation facilities. For example, the proposed project would be located within six miles of the Truckee River Regional Park. Additionally, the Town of Truckee includes recreation facilities run by the Truckee Donner Recreation and Park District, such as the Recreation and Aquatic Center and the Community Arts Center. The Recreation Center is located approximately 3.7 miles southwest of the project site, and the Community Arts Center is located approximately 5.7 miles southwest of the project site. Additional community and recreation facilities in the Town of Truckee include the Donner Memorial State Park, Meadow Park, Riverview Sports Park, Truckee Community Pool, and Truckee Bike Park, and a total of 101 miles of bike trails and facilities. Due to the ample amount of existing recreational facilities in the Town of Truckee, the proposed project would not substantially 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.

Based on the above, the proposed project would not result in population growth that could increase the use of existing recreational facilities, nor would the proposed project include or require construction or expansion of new or existing recreational facilities which might have an adverse physical effect on the environment. Thus, a ***no impact*** would occur.

XVII. TRANSPORTATION. *Would the project:*		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	✖	☐
b.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	✖	☐	☐
c.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	✖	☐
d.	Result in inadequate emergency access?	☐	☐	✖	☐

Discussion

a. The law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used Level of Service (LOS) to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own environmental impacts (e.g., to biological resources). Depending on circumstances, and an agency's tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. In 2013, however, the Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of SB 743 (2013), PRC Section 21099, subdivision (b)(1), directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

CEQA Guidelines Section 21099(b)(2) further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any."

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."

Please refer to Question 'b' for a discussion of VMT.

Pedestrian, Bicycle, and Transit Facilities

The proposed project's potential impacts related to pedestrian, bicycle, and transit facilities are discussed below.

Pedestrian Facilities

The only access to the project site is provided by Union Mills Road, which is paved, but lacks a centerline, sidewalks, or shoulders. The proposed project would include improvements to Union Mills Road, such as widening the existing 12-foot paved entrance road to a 24-foot roadway with a two-foot-wide shoulder on both sides. However, the project is not proposed to include dedicated pedestrian or bicycle facilities along the roadway that would connect to the existing Town of Truckee pedestrian and bicycle facilities. Nonetheless, implementation of the proposed project would not conflict with any planned pedestrian facilities. In addition, the proposed future pedestrian facilities in the Town of Truckee are anticipated to have capacity to accommodate any pedestrian traffic generated from implementation of the proposed project.

Bicycle Facilities

Currently, the Town of Truckee includes 18 miles of Class I paved trails, 38 miles of Class II bike lanes, and 32 miles of Class III bike routes. The Town also includes 13 miles of dirt trails, resulting in a total of 101 miles.[29] The Truckee Trails and Bikeway Master Plan would increase the network of bike lanes and bike routes by connecting to existing paved and dirt trails. Ultimately, the Truckee Trails and Bikeway Master Plan would result in the development of 67 miles of additional dirt trails, paved trails, bike lanes, and bike routes.

According to Figure CIR-2 on the Town of Truckee 2025 General Plan Circulation Element, a Recreational Trail/Class I Bike Path is planned along Union Mills Road. Improvements to Union Mills Road included as part of the proposed project would not preclude future construction of the planned Class I Bike Path along Union Mills Road, and could potentially allow for safer bicycle access in the immediate vicinity of the proposed project, by increasing the roadway width, and thereby allowing for more room between bicycle and vehicle traffic. Therefore, future proposed bicycle facilities within the Town of Truckee are anticipated to have capacity to accommodate any bicycle traffic generated from implementation of the proposed project.

Transit Facilities

Placer County operates Tahoe Area Regional Transit (TART) that provides transit service between Truckee and Tahoe City along the SR 89 corridor. The Town of Truckee operates Truckee TART that includes the Truckee Local Route, operating within Truckee, and the Truckee TART Night Service, operating between Truckee and the Northstar and Palisades Tahoe Resorts. Service is provided seven days a week. However, TART routes and/or stops are not located within the vicinity of the project site. The nearest route goes through Downtown Truckee, approximately five miles southwest of the project site.

Truckee Dial-A-Ride also operates within the Town of Truckee as a curb-to-curb demand response service to persons with disabilities with ADA certification and the general public.

[29] Town of Truckee. *Truckee Trails and Bikeway Master Plan* [Appendix A]. September 2015.

Service is provided between 7:00 AM and 7:00 PM Monday through Friday, and 9:00 AM to 5:00 PM on Saturdays.

As discussed further under Item (b), transit to and from the project site would primarily be provided by personal vehicle use. Therefore, the proposed project would not overburden existing transit resources and conflict with a program, plan, ordinance, or policy addressing transit facilities.

Conclusion

Based on the above, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and a ***less-than-significant*** impact could occur.

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Pursuant to Section 15064.3, analysis of VMT attributable to a project is the most appropriate measure of transportation impacts. Other relevant considerations may include the effects of the project on transit and non-motorized travel. The Town of Truckee adopted VMT thresholds of significance on June 23, 2020, pursuant to CEQA Guidelines 15064.7(b). The Town of Truckee's thresholds of significance are based upon the Governor's OPR's *Technical Advisory on Evaluating Transportation Impacts In CEQA*, which includes screening thresholds to identify when a lead agency may screen out VMT impacts.[30]

The Town of Truckee VMT Thresholds identify different project types that are assumed to cause a less-than-significant transportation impact and for which a detailed VMT study is not necessary. Because school projects are not included in the Town's screening criteria at this time, the preparation of a full VMT analysis is required for the proposed project. The following discussion is based on the VMT Analysis prepared by Kimley Horn.[31]

According to the VMT Analysis, the proposed project would be required to produce a daily VMT per unit that is less than 85 percent of the Townwide average for the same land use type in order to have a less-than-significant VMT impact. For the purposes of this analysis, VMT per unit is defined as the VMT per charter school student. The Town's regional average was defined as the average VMT per students who attend the following charter schools:

- Waldorf School (Union Mills Campus);
- Waldorf School (at Sierra College);
- Forest Charter School; and
- Sierra Expeditionary Learning School (SELS).

Anonymized student addresses provided by the project applicant for the Waldorf and Forest Charter schools were used to locate homes of existing students and faculty to determine the trip length and average VMT for each student and faculty member to and from the existing schools and proposed project. Neighborhood locations and travel distances for the SELS students were obtained from a previous VMT Assessment prepared by LSC Transportation Consultants.

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30 Governor's Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.

31 Kimley Horn. *Truckee Waldorf School Expansion – VMT Analysis.* August 31, 2022

Based on existing conditions in the Town, the net VMT per student for Truckee is 16.5, which is calculated by dividing the total VMT for each charter school by the total number of students. In addition, the Town's threshold, set 15-percent below the townwide average, is 14.0 VMT per student.

Table 15 summarizes the VMT per student for the proposed project.

Table 15
Project VMT

Metric	Project Amount
Existing Student Households[1]	74
Existing Student VMT[2]	2,172.8
Existing Faculty VMT	125.7
New Student Households	166
New Student VMT	4,874.0
New Faculty VMT[3]	209.4
Gross Total VMT	7,381.9
Gross VMT/Student	30.8
Combined Campus Reduction	-198.6
Bike to School Reduction (Existing)	-72.5
Bike to School Reduction (Future)	-162.7
Carpool & Sibling Reduction Factor (Existing)	-0.41
Carpool & Sibling Reduction Factor (Future)	-0.38
Net Total VMT	4,052.5
Net VMT/Student	18.3
Mitigation Reduction Required	23.2%
Mitigated VMT/Student	14.0

Notes:

1 Includes the 42 students from the Union Mills Campus and the 32 students from the Sierra College Campus.
2 Calculated based on the addresses of students from Union Mills and Sierra College traveling to the Union Mills Campus.
3 Assumes 16 total (10 new) faculty.

Source: Kimley Horn, 2022.

As shown in the table, the proposed project is anticipated to produce 18.3 net VMT per student. Therefore, the proposed project's VMT would be above the Town threshold of 14.0. To reduce VMT below the Town significance threshold of 14.0 VMT per student, a 23.2 percent reduction of VMT per student is required. Without implementation of reduction measures, the proposed project would result in a ***potentially significant*** VMT impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XVII-1. *Prior to the issuance of grading permits, the project applicant shall provide documentation, subject to review and approval by the Town of Truckee, showing that VMT reduction measures, will be incorporated into project operations. VMT reduction measures may include, but are not limited to, the following:*

- *A corresponding reduction in on-campus school days as compared to the Tahoe Truckee Unified School District's annual number of on-campus school days. This reduction may be provided over the course of the school year to account for part of or the entirety of the required mitigation percentage of 23.2 percent. This measure shall be documented by means of submittal of the school's academic calendar to the Town for review and approval;*
- *School-provided bussing/vanpool program that is monitored based on the number of students and origination point of each student who utilizes the program. This measure may require further study by the applicant and review/approval by the Town prior to implementation; and/or*
- *Other Town programs or measures that become available and demonstrate a 23.2 percent reduction in VMT per student.*

c,d. The proposed project includes improvements to Union Mills Road, including widening the existing 12-foot-wide paved access road to a 24-foot-wide roadway with a two-foot-wide gravel shoulder on both sides. The project site has nine existing parking stalls, and the proposed project would include the development of an additional 13 parking stalls on-site for a total of 22 parking stalls, including two ADA parking stalls. In addition, the improvements could allow for improved emergency vehicle access. All roadway improvements would be required to be constructed in accordance with the Town of Truckee standards.

Construction traffic associated with the proposed project would include heavy-duty vehicles associated with transport of construction material, as well as daily construction employee trips to and from the site that would share the area roadways with normal vehicle traffic, creating potential conflicts with other roadway users. Although construction traffic could affect traffic flows, traffic control measures would be implemented during construction activities to control traffic flows in the project area, consistent with the requirements of Mitigation Measure III-1, as described in Section III, Air Quality, of this IS/MND. Implementation of traffic control measures would ensure that construction traffic does not conflict with other roadway users along Union Mills Road.

Based on the above, the project would not substantially increase hazards due to design features or incompatible uses, and emergency access to the site would be adequate. Therefore, the project would result in a ***less-than-significant*** impact.

XVIII. TRIBAL CULTURAL RESOURCES. *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:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	☐	✖	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	✖	☐	☐

Discussion

a, b. As discussed in Section V, Cultural Resources, of this IS/MND the Cultural Resources Study prepared for the proposed project included a CHRIS records search and literature review. In addition, the NAHC was contacted by letter on December 23, 2021 and a response was received on March 11, 2022, which indicated that the NAHC Sacred Lands File (SLF) search produced negative results for the project site.[32]

In compliance with AB 52 (PRC Section 21080.3.1), project notification letters were distributed to the T'si Akim Maidu, United Auburn Indian Community of the Auburn Rancheria and the Washoe Tribe. The letters were distributed October, 8, 2021, and requests to consult have not been received to date.

Although the project area has been subject to a records search which indicated that known tribal cultural resources are not present on the project site, unknown tribal cultural resources have the potential to be uncovered during ground-disturbing activities at the proposed project site. Therefore, the proposed project could result in a substantial adverse change in the significance of a tribal cultural resource. Thus, impacts could be considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XVIII-1. Implement Mitigation Measures V-1 and V-2.

[32] Native American Heritage Commission. *Re: Golden Valley Tahoe School Project, Nevada County*. March 11, 2022.

XIX. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	✖	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	✖	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	✖	☐
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?	☐	☐	✖	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	✖	☐

Discussion

a-c. Electricity, natural gas, telecommunications, water, and sanitary sewer services would be provided by way of connections to existing infrastructure in the project area. Brief discussions of the water, sewer service, stormwater drainage, electrical, natural gas, and telecommunications facilities that would serve the proposed project are included below.

Water

As previously described, water is provided to the site by the FOTTW Water System, which was permitted in March 2021 by the NCEHD as a Non-Transient/Non-Community Water System. The system is regulated by NCEHD operating under the Facility ID: FA0005994. The FOTTW Water System has been approved by the California Waterboard and the California Department of Drinking Water as well as Nevada County, to provide water to 12640 Union Mills Road (i.e., the existing school). While the Water System was permitted to serve a maximum of 44 students, according to a Source Capacity Test conducted for the permitting process of the well, the current Water System has a capacity to serve 157 students with a MDD of 1,609.25 GPD and a PHD of 471 GPH.[33] However, in order to increase usage above the permitted 44 students, the applicant would be required to submit a Permit Amendment Application to the NCEHD to evaluate the proposed increased use to determine if the well and/or storage is sufficient. The Permit Amendment Application would be approved ministerially at a staff level by the NCEHD.[34] In addition, according to the Source Capacity Test, at any time that the school wishes to exceed 157 students, additional storage capacity must be added to the Water System. Added capacity could

[33] Balance Hydrologics, Inc. *Source Capacity Test Results, Truckee-Tahoe Waldorf School Water Well, Nevada County, California*. January 22, 2021.

[34] Catrie Levenson, REHS, Nevada County Department of Environmental Health. Personal Communication [email] with Nick Pappani, Vice President, Raney Planning & Management, Inc. September 2, 2022.

include the addition of a new water storage tank on-site, or expansion of the existing water storage tank. Additional permitting would be required for approval of the water system expansion.

In addition, as discussed under Section X, Hydrology and Water Quality, groundwater demands in the MVGB are well below the sustainable yield estimate for the basin, and groundwater levels have largely remained stable in the MVGB for at least 25 years, including during the drought of the early 1990s, the wet years of the late 1990s, and recent drought conditions.[35] Therefore, the MVGB would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Sewer Service

The project site currently uses an existing 1,348 GPD gravity septic system, located north of the existing school building, permitted through Nevada County in 1994. The proposed project would include the recommission of a second on-site 2,475 GPD pressure-dosed septic system that was abandoned in 2006. In correspondence with the NCEHD, it was determined that that the two septic systems, if the second is able to be fully recommissioned, could accommodate up to 254 students and staff per day.[36] NCEHD regulates all wastewater systems under 10,000 GPD. As designed, both systems can accommodate up to 3,823 GPD of untreated sewage. Issuance of a permit would be required by the NCEHD to recommission the second septic system. The permit would be approved ministerially at a staff level by the NCEHD. With the existing and recommissioned system activated, the system would have the capacity to serve both the existing and proposed school use. Connection to the TSD was determined to be infeasible.

Stormwater Systems

The proposed project would not significantly alter the existing drainage pattern on-site. The physical effects to the on-site stormwater system have been discussed throughout this IS/MND. In addition, Mitigation Measure X-1 requires the project applicant to submit a Final Drainage Report to ensure that on-site drainage systems comply with the Town of Truckee Post-Construction SWQP.

Other Utilities

The project site is provided electrical service through two 120/240 transformers fed by the TDPUD. The existing structure is currently serviced by the aforementioned connections. Each transformer feeds a 600 Amp exterior switchgear. The main building, the pump house, and parking lot lighting are fed off of one of the 600 Amp panels. The second panel would service the modulars, the future recommissioned wastewater system, and the proposed parking lot lighting. Telephone service would be provided by AT&T, and natural gas would be provided by Southwest Gas. The proposed project would not require major upgrades to, or extension of, existing electricity, natural gas, or telecommunications infrastructure. Thus, impacts to electricity, natural gas, and telecommunications infrastructure would be less than significant.

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35 GEI Consultants. *Alternative Submittal Hydrogeologic Support Study.* November 18, 2016.

36 Jo Paden, REHS, Nevada County Department of Environmental Health. Personal Communication [email] with Nick Pappani, Vice President, Raney Planning & Management, Inc. February 14, 2022.

Conclusion

Given that the utility infrastructure within the project vicinity has been designed with adequate capacity to accommodate demand from the proposed project, the increase in students allowed by the proposed school expansion would not be substantial enough to require the construction of new utility infrastructure. Therefore, the project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

d,e. An on-site trash enclosure would be designed to provide a minimum of 162 cubic feet of solid waste disposal storage on-site in conformance with the design requirements outlined in Section 18.30.150, Solid Waste/Recyclable Materials Storage of the Town's Development Code.

Solid waste, recyclable materials, and compostable material collection within the project area is operated by the Tahoe Truckee Sierra Disposal. All solid waste is disposed and/or processed at the waste facility at the Eastern Regional Landfill Material Recovery Facility. The Eastern Regional Landfill Material Recovery Facility covers seven acres of land and currently handles 445 tons of waste per day, although the permit for the site allows up to 600 tons of waste per day to be managed at the facility. After the solid waste has been sorted, materials that cannot be recycled would be taken to Lockwood Regional Landfill, which is a municipal solid waste facility located in Storey County, Nevada. The capacity of the Landfill is 302.5 million cubic yards (CY) with a disposal area of 856.5 acres. The Lockwood Regional Landfill has a waste volume of approximately 32.8 million CY.[37] Thus, the Lockwood Landfill has sufficient capacity to accommodate the project's construction and operational solid waste.

Pursuant to the CALGreen Code, at least 65 percent diversion of construction waste is required for projects permitted after January 1, 2017. Because the landfill is not operating at maximum capacity and the project would only create a temporary increase in the amount of waste during construction activities, the proposed project would not result in a significant impact related to solid waste generation.

With respect to operational solid waste generation, the nature of the proposed project would not be expected to generate substantial amounts of solid waste due to the relatively small scale of the project. In addition, the proposed project would be required to comply with all applicable provisions of Section 18.30.150, Solid Waste/Recyclable Materials Storage, of the Town's Development Code.

Therefore, the proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, a ***less-than-significant*** impact would occur.

[37] Nevada Division of Environmental Protection. *Lockwood Fact Sheet.* Available at: https://ndep.nv.gov/uploads/land-waste-solid-fac-docs/lockwood-fact-sheet.pdf. Accessed June 2022.

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

Discussion

a-d. According to the Town's General Plan,[38] the entire Truckee area is considered to be in a high fire hazard severity zone, as defined by CAL FIRE. Additionally, according to Figure SAF-4 of the General Plan, "Community Areas at Risk from Wildland Fire", the project site is mapped in an area of "High" fire risk. However, according to CAL FIRE's online Fire Hazard Severity Zones Viewer, the project site is located within a Non-Very High Fire Hazard Severity Zone, within a Local Responsibility area.[39] Nonetheless, the proposed project would be required to comply with all applicable requirements of the California Fire Code through the installation of fire sprinkler systems, fire hydrants, and other applicable requirements. The proposed project would also be situated near existing roads, water lines, and other utilities, which would reduce risks related to wildfire. The on-site Water System also includes a 90,000-gallon steel storage tank for fire protection. Furthermore, during operation, the proposed project would provide adequate access for emergency vehicles by way of the widened access road. However, as discussed in Section IX, Hazards and Hazardous Materials, of this IS/MND, in the event of an evacuation, the proposed project, at full capacity, would result in the need to evacuate an additional 196 students, which could interfere with evacuation of nearby residents or emergency vehicles responding to the area. As a result, the project could have a ***potentially significant*** impact with respect to wildfire.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XX-1. Implement Mitigation Measure IX-1.

[38] Town of Truckee. *Truckee 2025 General Plan Safety Element* [pg. 9-7]. Adopted November 16, 2006

[39] California Department of Forestry and Fire Protection. *Map of CAL FIRE's Fire Hazard Severity Zones in Local Responsibility Areas – Truckee*. Available at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed December 2021.

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

Discussion

a. As discussed in Section IV, Biological Resources, of this IS/MND, while a limited potential exists for nesting raptors and migratory birds protected by the MBTA to occur on-site, Mitigation Measure IV-1 would ensure that any impacts related to special-status species would be reduced to a less-than-significant level. The project site is not known to contain a previous archaeological site or contain any cultural resources. However, a limited potential exists for cultural resources to occur beneath the ground surface. As such, Mitigation Measures V-1 and V-2 ensure that in the event that prehistoric resources are discovered within the project site, such resources would be protected in compliance with the requirements of CEQA and other State standards.

Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat of fish or wildlife species, cause fish or wildlife populations 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 plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant*** impact would occur.

b. The proposed project, in conjunction with other development within the Town of Truckee, could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable General Plan policies, Development Code standards, and other applicable local and State regulations.

Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts in the Town of

Truckee, and the project's incremental contribution to cumulative impacts would be ***less than significant***.

c. As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Development Code standards, and other applicable local and State regulations, in addition to the mitigation measures included herein. Additionally, as discussed in Section III, Air Quality, Section IX, Hazards and Hazardous Materials, and Section XIII, Noise, of this IS/MND, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutants, and hazardous materials. Therefore, the proposed project would result in a ***less-than-significant*** impact.

G. SOURCES

The following documents are referenced information sources used for the purposes of this Initial Study:

1. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* November 2017.
2. California Department of Conservation. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 2021.
3. California Department of Forestry and Fire Protection. *Map of CAL FIRE's Fire Hazard Severity Zones in Local Responsibility Areas – Truckee*. Available at: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed December 2021.
4. California Department of Fish and Wildlife. *BIOS*. Available at: https://apps.wildlife.ca.gov/bios6/. Accessed July 2022.
5. California Department of Toxic Substances Control. *Envirostor Database.* Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed December 2021.
6. California Department of Transportation. *California Scenic Highway Mapping System*. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983. Accessed December 2021.
7. Catrie Levenson, REHS, Nevada County Department of Environmental Health. Personal Communication [email] with Nick Pappani, Vice President, Raney Planning & Management, Inc. September 2, 2022.
8. FEMA. *FEMA Flood Map Service Center*. Available at: https://msc.fema.gov/portal/home. Accessed December 2021.
9. Governor's Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.
10. Jo Paden, REHS, Nevada County Department of Environmental Health. Personal Communication [email] with Nick Pappani, Vice President, Raney Planning & Management, Inc. February 14, 2022.
11. National Park Service. *Yosemite: Threatened Mammals*. Available at: https://www.nps.gov/yose/learn/nature/threatened-mammals.htm. Accessed June 21, 2022.
12. Native American Heritage Commission. *Re: Golden Valley Tahoe School Project, Nevada County.* March 11, 2022.
13. Nevada Division of Environmental Protection. *Lockwood Fact Sheet.* Available at: https://ndep.nv.gov/uploads/land-waste-solid-fac-docs/lockwood-fact-sheet.pdf. Accessed June 2022.
14. North Central Information Center. *Records Search Results for Golden Valley Tahoe School.* January 3, 2022.
15. Northern Sierra Air Quality Management District. *Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects*. August 18, 2009.
16. Saxelby Acoustics LLC. *Environmental Noise Assessment, Golden Valley Tahoe School.* June 17, 2022.
17. The Wolverine Foundation. *Denning.* Available at: http://wolverinefoundation.org/denning. Accessed October 26, 2022.
18. Town of Truckee. *Town of Truckee 2025 General Plan*. Adopted November 16, 2006.
19. Town of Truckee. *Town of Truckee 2025 General Plan EIR.* April 2014.
20. Town of Truckee. *Truckee Trails and Bikeway Master Plan*. September 2015.
21. Truckee Donner Public Utilities District. *Truckee Water System 2020 Urban Water Management Plan*. June 2021.
22. Truckee Tahoe Airport Land Use Commission. *Truckee Tahoe Airport Land Use Compatibility Plan*. October 27, 2016.

23. U.S. Department of Agriculture. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 2021.
24. USFWS. *National Wetlands Inventory*. Available at: https://www.fws.gov/wetlands/data/Mapper.html. Accessed December 2021.
25. Weather Spark. *Average Weather in Truckee California, United States*. Available at: https://weatherspark.com/y/1377/Average-Weather-in-Truckee-California-United-States-Year-Round#:~:text=The%20predominant%20average%20hourly%20wind,of%2056%25%20on%20July%2023.. Accessed February 2022.

APPENDIX A

AIR QUALITY AND GHG MODELING RESULTS

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Golden Valley Tahoe School

Northern Sierra AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	11.50	1000sqft	2.81	11,500.00	0
Other Asphalt Surfaces	23.03	1000sqft	0.53	23,030.00	0
Parking Lot	26.00	Space	0.26	10,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2022
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	374.95	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility company for the proposed project is the Truckee-Donner Public Utility District

Land Use - Land acreage adjusted to represent total disturbance area as noted on site plan.

Construction Phase - Construction phasing based on applicant provided AQ questionnaire.

Grading - Based on applicant provided AQ questionnaire

Energy Mitigation - Based on applicant provided AQ questionnaire.

Water Mitigation - Based on applicant provided AQ questionnaire.

Trips and VMT - Based on applicant provided AQ questionnaire.

Vehicle Trips - VMT adjusted based on VMT analysis prepared by LSC transportation consultants.

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	230.00	35.00
tblConstructionPhase	NumDays	18.00	35.00
tblGrading	MaterialImported	0.00	98.00
tblLandUse	LotAcreage	0.26	2.81
tblLandUse	LotAcreage	0.23	0.26
tblProjectCharacteristics	CH4IntensityFactor	0	0.033
tblProjectCharacteristics	CO2IntensityFactor	0	374.95
tblProjectCharacteristics	N2OIntensityFactor	0	0.004
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblVehicleTrips	CC_TL	7.30	17.48
tblVehicleTrips	CNW_TL	7.30	17.48
tblVehicleTrips	CW_TL	9.50	22.75

2.0 Emissions Summary

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1959	0.4548	0.4467	7.9000e-004	0.0600	0.0225	0.0825	0.0285	0.0211	0.0497	0.0000	69.2249	69.2249	0.0160	5.3000e-004	69.7829
Maximum	**0.1959**	**0.4548**	**0.4467**	**7.9000e-004**	**0.0600**	**0.0225**	**0.0825**	**0.0285**	**0.0211**	**0.0497**	**0.0000**	**69.2249**	**69.2249**	**0.0160**	**5.3000e-004**	**69.7829**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1959	0.4548	0.4467	7.9000e-004	0.0600	0.0225	0.0825	0.0285	0.0211	0.0497	0.0000	69.2248	69.2248	0.0160	5.3000e-004	69.7828
Maximum	**0.1959**	**0.4548**	**0.4467**	**7.9000e-004**	**0.0600**	**0.0225**	**0.0825**	**0.0285**	**0.0211**	**0.0497**	**0.0000**	**69.2248**	**69.2248**	**0.0160**	**5.3000e-004**	**69.7828**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2022	6-30-2022	0.6625	0.6625
		Highest	0.6625	0.6625

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0616	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0800e-003	1.0800e-003	0.0000	0.0000	1.1500e-003
Energy	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	22.2996	22.2996	1.3600e-003	3.0000e-004	22.4244
Mobile	0.2118	0.4339	2.2525	3.6000e-003	0.3117	4.7300e-003	0.3165	0.0835	4.4600e-003	0.0880	0.0000	334.1386	334.1386	0.0246	0.0199	340.6852
Waste						0.0000	0.0000		0.0000	0.0000	3.0347	0.0000	3.0347	0.1794	0.0000	7.5184
Water						0.0000	0.0000		0.0000	0.0000	0.1058	0.8173	0.9231	0.0109	2.7000e-004	1.2756
Total	**0.2743**	**0.4419**	**2.2598**	**3.6500e-003**	**0.3117**	**5.3400e-003**	**0.3171**	**0.0835**	**5.0700e-003**	**0.0886**	**3.1405**	**357.2566**	**360.3971**	**0.2162**	**0.0205**	**371.9047**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0616	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0800e-003	1.0800e-003	0.0000	0.0000	1.1500e-003
Energy	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	21.7475	21.7475	1.3400e-003	3.0000e-004	21.8692
Mobile	0.2118	0.4339	2.2525	3.6000e-003	0.3117	4.7300e-003	0.3165	0.0835	4.4600e-003	0.0880	0.0000	334.1386	334.1386	0.0246	0.0199	340.6852
Waste						0.0000	0.0000		0.0000	0.0000	3.0347	0.0000	3.0347	0.1794	0.0000	7.5184
Water						0.0000	0.0000		0.0000	0.0000	0.1058	0.8173	0.9231	0.0109	2.7000e-004	1.2756
Total	**0.2743**	**0.4416**	**2.2594**	**3.6500e-003**	**0.3117**	**5.3100e-003**	**0.3170**	**0.0835**	**5.0400e-003**	**0.0886**	**3.1405**	**356.7045**	**359.8450**	**0.2162**	**0.0205**	**371.3495**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.01**	**0.09**	**0.01**	**0.00**	**0.00**	**0.56**	**0.01**	**0.00**	**0.59**	**0.03**	**0.00**	**0.15**	**0.15**	**0.01**	**0.00**	**0.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2022	4/4/2022	5	2	
2	Grading	Grading	4/5/2022	4/18/2022	5	10	
3	Paving	Paving	4/19/2022	4/20/2022	5	2	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	4/21/2022	6/8/2022	5	35	
5	Architectural Coating	Architectural Coating	5/5/2022	6/22/2022	5	35	

Acres of Grading (Site Preparation Phase): 3

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,250; Non-Residential Outdoor: 5,750; Striped Parking Area: 2,006 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	10.00	10.80	7.30	7.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	19.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1700e-003	0.0331	0.0197	4.0000e-005		1.6100e-003	1.6100e-003		1.4800e-003	1.4800e-003	0.0000	3.3439	3.3439	1.0800e-003	0.0000	3.3710
Total	**3.1700e-003**	**0.0331**	**0.0197**	**4.0000e-005**	**0.0197**	**1.6100e-003**	**0.0213**	**0.0101**	**1.4800e-003**	**0.0116**	**0.0000**	**3.3439**	**3.3439**	**1.0800e-003**	**0.0000**	**3.3710**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.2000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1226	0.1226	1.0000e-005	0.0000	0.1241
Total	**8.0000e-005**	**6.0000e-005**	**6.2000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1226**	**0.1226**	**1.0000e-005**	**0.0000**	**0.1241**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1700e-003	0.0331	0.0197	4.0000e-005		1.6100e-003	1.6100e-003		1.4800e-003	1.4800e-003	0.0000	3.3439	3.3439	1.0800e-003	0.0000	3.3710
Total	**3.1700e-003**	**0.0331**	**0.0197**	**4.0000e-005**	**0.0197**	**1.6100e-003**	**0.0213**	**0.0101**	**1.4800e-003**	**0.0116**	**0.0000**	**3.3439**	**3.3439**	**1.0800e-003**	**0.0000**	**3.3710**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.2000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1226	0.1226	1.0000e-005	0.0000	0.1241
Total	**8.0000e-005**	**6.0000e-005**	**6.2000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1226**	**0.1226**	**1.0000e-005**	**0.0000**	**0.1241**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1170	0.1170	0.0000	2.0000e-005	0.1226
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.6000e-004	2.5800e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5108	0.5108	2.0000e-005	2.0000e-005	0.5171
Total	**3.4000e-004**	**6.4000e-004**	**2.7100e-003**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.6279**	**0.6279**	**2.0000e-005**	**4.0000e-005**	**0.6397**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0354	0.0000	0.0354	0.0171	0.0000	0.0171	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7400e-003	0.1043	0.0764	1.5000e-004		4.7000e-003	4.7000e-003		4.3300e-003	4.3300e-003	0.0000	13.0274	13.0274	4.2100e-003	0.0000	13.1327
Total	**9.7400e-003**	**0.1043**	**0.0764**	**1.5000e-004**	**0.0354**	**4.7000e-003**	**0.0401**	**0.0171**	**4.3300e-003**	**0.0215**	**0.0000**	**13.0274**	**13.0274**	**4.2100e-003**	**0.0000**	**13.1327**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1170	0.1170	0.0000	2.0000e-005	0.1226
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.6000e-004	2.5800e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5108	0.5108	2.0000e-005	2.0000e-005	0.5171
Total	**3.4000e-004**	**6.4000e-004**	**2.7100e-003**	**1.0000e-005**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.6279**	**0.6279**	**2.0000e-005**	**4.0000e-005**	**0.6397**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8000e-004	9.5200e-003	0.0122	2.0000e-005		4.9000e-004	4.9000e-004		4.5000e-004	4.5000e-004	0.0000	1.6376	1.6376	5.1000e-004	0.0000	1.6505
Paving	1.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0100e-003**	**9.5200e-003**	**0.0122**	**2.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.5000e-004**	**4.5000e-004**	**0.0000**	**1.6376**	**1.6376**	**5.1000e-004**	**0.0000**	**1.6505**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	6.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1362	0.1362	1.0000e-005	1.0000e-005	0.1379
Total	**9.0000e-005**	**7.0000e-005**	**6.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1362**	**0.1362**	**1.0000e-005**	**1.0000e-005**	**0.1379**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8000e-004	9.5200e-003	0.0122	2.0000e-005		4.9000e-004	4.9000e-004		4.5000e-004	4.5000e-004	0.0000	1.6376	1.6376	5.1000e-004	0.0000	1.6505
Paving	1.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0100e-003**	**9.5200e-003**	**0.0122**	**2.0000e-005**		**4.9000e-004**	**4.9000e-004**		**4.5000e-004**	**4.5000e-004**	**0.0000**	**1.6376**	**1.6376**	**5.1000e-004**	**0.0000**	**1.6505**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	6.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1362	0.1362	1.0000e-005	1.0000e-005	0.1379
Total	**9.0000e-005**	**7.0000e-005**	**6.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1362**	**0.1362**	**1.0000e-005**	**1.0000e-005**	**0.1379**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0299	0.2733	0.2864	4.7000e-004		0.0142	0.0142		0.0133	0.0133	0.0000	40.5519	40.5519	9.7200e-003	0.0000	40.7948
Total	**0.0299**	**0.2733**	**0.2864**	**4.7000e-004**		**0.0142**	**0.0142**		**0.0133**	**0.0133**	**0.0000**	**40.5519**	**40.5519**	**9.7200e-003**	**0.0000**	**40.7948**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	7.8900e-003	2.5000e-003	3.0000e-005	8.0000e-004	8.0000e-005	8.8000e-004	2.3000e-004	7.0000e-005	3.1000e-004	0.0000	2.5678	2.5678	2.0000e-005	3.8000e-004	2.6816
Worker	1.4600e-003	1.1400e-003	0.0114	2.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.2646	2.2646	1.0000e-004	9.0000e-005	2.2926
Total	**1.7900e-003**	**9.0300e-003**	**0.0139**	**5.0000e-005**	**3.4100e-003**	**1.0000e-004**	**3.5100e-003**	**9.3000e-004**	**9.0000e-005**	**1.0200e-003**	**0.0000**	**4.8324**	**4.8324**	**1.2000e-004**	**4.7000e-004**	**4.9742**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0299	0.2733	0.2864	4.7000e-004		0.0142	0.0142		0.0133	0.0133	0.0000	40.5519	40.5519	9.7200e-003	0.0000	40.7948
Total	**0.0299**	**0.2733**	**0.2864**	**4.7000e-004**		**0.0142**	**0.0142**		**0.0133**	**0.0133**	**0.0000**	**40.5519**	**40.5519**	**9.7200e-003**	**0.0000**	**40.7948**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	7.8900e-003	2.5000e-003	3.0000e-005	8.0000e-004	8.0000e-005	8.8000e-004	2.3000e-004	7.0000e-005	3.1000e-004	0.0000	2.5678	2.5678	2.0000e-005	3.8000e-004	2.6816
Worker	1.4600e-003	1.1400e-003	0.0114	2.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.2646	2.2646	1.0000e-004	9.0000e-005	2.2926
Total	**1.7900e-003**	**9.0300e-003**	**0.0139**	**5.0000e-005**	**3.4100e-003**	**1.0000e-004**	**3.5100e-003**	**9.3000e-004**	**9.0000e-005**	**1.0200e-003**	**0.0000**	**4.8324**	**4.8324**	**1.2000e-004**	**4.7000e-004**	**4.9742**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5800e-003	0.0247	0.0317	5.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4682	4.4682	2.9000e-004	0.0000	4.4755
Total	**0.1485**	**0.0247**	**0.0317**	**5.0000e-005**		**1.4300e-003**	**1.4300e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**4.4682**	**4.4682**	**2.9000e-004**	**0.0000**	**4.4755**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.4000e-004	2.4100e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4768	0.4768	2.0000e-005	2.0000e-005	0.4827
Total	**3.1000e-004**	**2.4000e-004**	**2.4100e-003**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4768**	**0.4768**	**2.0000e-005**	**2.0000e-005**	**0.4827**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5800e-003	0.0247	0.0317	5.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4682	4.4682	2.9000e-004	0.0000	4.4755
Total	**0.1485**	**0.0247**	**0.0317**	**5.0000e-005**		**1.4300e-003**	**1.4300e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**4.4682**	**4.4682**	**2.9000e-004**	**0.0000**	**4.4755**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.4000e-004	2.4100e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4768	0.4768	2.0000e-005	2.0000e-005	0.4827
Total	**3.1000e-004**	**2.4000e-004**	**2.4100e-003**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**5.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4768**	**0.4768**	**2.0000e-005**	**2.0000e-005**	**0.4827**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2118	0.4339	2.2525	3.6000e-003	0.3117	4.7300e-003	0.3165	0.0835	4.4600e-003	0.0880	0.0000	334.1386	334.1386	0.0246	0.0199	340.6852
Unmitigated	0.2118	0.4339	2.2525	3.6000e-003	0.3117	4.7300e-003	0.3165	0.0835	4.4600e-003	0.0880	0.0000	334.1386	334.1386	0.0246	0.0199	340.6852

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	224.48	0.00	0.00	845,651	845,651
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	224.48	0.00	0.00	845,651	845,651

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	22.75	17.48	17.48	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974
Other Asphalt Surfaces	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.4250	13.4250	1.1800e-003	1.4000e-004	13.4973
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.5668	13.5668	1.1900e-003	1.4000e-004	13.6398
NaturalGas Mitigated	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.3225	8.3225	1.6000e-004	1.5000e-004	8.3719
NaturalGas Unmitigated	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7327	8.7327	1.7000e-004	1.6000e-004	8.7846

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	163645	8.8000e-004	8.0200e-003	6.7400e-003	5.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	8.7327	8.7327	1.7000e-004	1.6000e-004	8.7846
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.8000e-004**	**8.0200e-003**	**6.7400e-003**	**5.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**8.7327**	**8.7327**	**1.7000e-004**	**1.6000e-004**	**8.7846**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	155957	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.3225	8.3225	1.6000e-004	1.5000e-004	8.3719
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**8.4000e-004**	**7.6400e-003**	**6.4200e-003**	**5.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.8000e-004**	**5.8000e-004**	**0.0000**	**8.3225**	**8.3225**	**1.6000e-004**	**1.5000e-004**	**8.3719**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	76130	12.9478	1.1400e-003	1.4000e-004	13.0174
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3640	0.6191	5.0000e-005	1.0000e-005	0.6224
Total		**13.5668**	**1.1900e-003**	**1.5000e-004**	**13.6398**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	75296.3	12.8060	1.1300e-003	1.4000e-004	12.8749
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	3640	0.6191	5.0000e-005	1.0000e-005	0.6224
Total		**13.4250**	**1.1800e-003**	**1.5000e-004**	**13.4973**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0616	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0800e-003	1.0800e-003	0.0000	0.0000	1.1500e-003
Unmitigated	0.0616	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0800e-003	1.0800e-003	0.0000	0.0000	1.1500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0800e-003	1.0800e-003	0.0000	0.0000	1.1500e-003
Total	**0.0616**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0800e-003**	**1.0800e-003**	**0.0000**	**0.0000**	**1.1500e-003**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0471					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0800e-003	1.0800e-003	0.0000	0.0000	1.1500e-003
Total	**0.0616**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0800e-003**	**1.0800e-003**	**0.0000**	**0.0000**	**1.1500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.9231	0.0109	2.7000e-004	1.2756
Unmitigated	0.9231	0.0109	2.7000e-004	1.2756

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.333465 / 0.85748	0.9231	0.0109	2.7000e-004	1.2756
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9231**	**0.0109**	**2.7000e-004**	**1.2756**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	0.333465 / 0.85748	0.9231	0.0109	2.7000e-004	1.2756
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.9231**	**0.0109**	**2.7000e-004**	**1.2756**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.0347	0.1794	0.0000	7.5184
Unmitigated	3.0347	0.1794	0.0000	7.5184

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	14.95	3.0347	0.1794	0.0000	7.5184
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.0347**	**0.1794**	**0.0000**	**7.5184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	14.95	3.0347	0.1794	0.0000	7.5184
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.0347**	**0.1794**	**0.0000**	**7.5184**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Golden Valley Tahoe School

Northern Sierra AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	11.50	1000sqft	2.81	11,500.00	0
Other Asphalt Surfaces	23.03	1000sqft	0.53	23,030.00	0
Parking Lot	26.00	Space	0.26	10,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2022
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	374.95	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility company for the proposed project is the Truckee-Donner Public Utility District

Land Use - Land acreage adjusted to represent total disturbance area as noted on site plan.

Construction Phase - Construction phasing based on applicant provided AQ questionnaire.

Grading - Based on applicant provided AQ questionnaire

Energy Mitigation - Based on applicant provided AQ questionnaire.

Water Mitigation - Based on applicant provided AQ questionnaire.

Trips and VMT - Based on applicant provided AQ questionnaire.

Vehicle Trips - VMT adjusted based on VMT analysis prepared by LSC transportation consultants.

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	230.00	35.00
tblConstructionPhase	NumDays	18.00	35.00
tblGrading	MaterialImported	0.00	98.00
tblLandUse	LotAcreage	0.26	2.81
tblLandUse	LotAcreage	0.23	0.26
tblProjectCharacteristics	CH4IntensityFactor	0	0.033
tblProjectCharacteristics	CO2IntensityFactor	0	374.95
tblProjectCharacteristics	N2OIntensityFactor	0	0.004
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblVehicleTrips	CC_TL	7.30	17.48
tblVehicleTrips	CNW_TL	7.30	17.48
tblVehicleTrips	CW_TL	9.50	22.75

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	10.3182	33.1347	20.3454	0.0395	19.8049	1.6135	21.4184	10.1417	1.4845	11.6261	0.0000	3,829.5346	3,829.5346	1.1976	0.0297	3,860.8142
Maximum	**10.3182**	**33.1347**	**20.3454**	**0.0395**	**19.8049**	**1.6135**	**21.4184**	**10.1417**	**1.4845**	**11.6261**	**0.0000**	**3,829.5346**	**3,829.5346**	**1.1976**	**0.0297**	**3,860.8142**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	10.3182	33.1347	20.3454	0.0395	19.8049	1.6135	21.4184	10.1417	1.4845	11.6261	0.0000	3,829.5346	3,829.5346	1.1976	0.0297	3,860.8142
Maximum	**10.3182**	**33.1347**	**20.3454**	**0.0395**	**19.8049**	**1.6135**	**21.4184**	**10.1417**	**1.4845**	**11.6261**	**0.0000**	**3,829.5346**	**3,829.5346**	**1.1976**	**0.0297**	**3,860.8142**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Energy	4.8400e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003		52.7462	52.7462	1.0100e-003	9.7000e-004	53.0596
Mobile	1.7225	3.0186	16.9866	0.0289	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,955.6364	2,955.6364	0.1939	0.1572	3,007.3203
Total	**2.0652**	**3.0626**	**17.0297**	**0.0292**	**2.5039**	**0.0398**	**2.5437**	**0.6686**	**0.0377**	**0.7062**		**3,008.3958**	**3,008.3958**	**0.1949**	**0.1581**	**3,060.3940**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Energy	4.6100e-003	0.0419	0.0352	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003		50.2683	50.2683	9.6000e-004	9.2000e-004	50.5670
Mobile	1.7225	3.0186	16.9866	0.0289	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,955.6364	2,955.6364	0.1939	0.1572	3,007.3203
Total	**2.0650**	**3.0606**	**17.0280**	**0.0292**	**2.5039**	**0.0396**	**2.5435**	**0.6686**	**0.0375**	**0.7061**		**3,005.9179**	**3,005.9179**	**0.1948**	**0.1581**	**3,057.9014**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.01	0.07	0.01	0.03	0.00	0.40	0.01	0.00	0.42	0.02	0.00	0.08	0.08	0.03	0.03	0.08

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2022	4/4/2022	5	2	
2	Grading	Grading	4/5/2022	4/18/2022	5	10	
3	Paving	Paving	4/19/2022	4/20/2022	5	2	
4	Building Construction	Building Construction	4/21/2022	6/8/2022	5	35	
5	Architectural Coating	Architectural Coating	5/5/2022	6/22/2022	5	35	

Acres of Grading (Site Preparation Phase): 3

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,250; Non-Residential Outdoor: 5,750; Striped Parking Area: 2,006 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	10.00	10.80	7.30	7.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	19.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0856	0.0512	0.6477	1.4100e-003	0.1479	9.6000e-004	0.1488	0.0392	8.9000e-004	0.0401		143.4727	143.4727	5.4400e-003	4.5000e-003	144.9486
Total	**0.0856**	**0.0512**	**0.6477**	**1.4100e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.9000e-004**	**0.0401**		**143.4727**	**143.4727**	**5.4400e-003**	**4.5000e-003**	**144.9486**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0856	0.0512	0.6477	1.4100e-003	0.1479	9.6000e-004	0.1488	0.0392	8.9000e-004	0.0401		143.4727	143.4727	5.4400e-003	4.5000e-003	144.9486
Total	**0.0856**	**0.0512**	**0.6477**	**1.4100e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.9000e-004**	**0.0401**		**143.4727**	**143.4727**	**5.4400e-003**	**4.5000e-003**	**144.9486**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4600e-003	0.0723	0.0249	2.4000e-004	6.1400e-003	5.6000e-004	6.7000e-003	1.6900e-003	5.4000e-004	2.2200e-003		25.7794	25.7794	2.3000e-004	4.0600e-003	26.9947
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0714	0.0426	0.5397	1.1800e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		119.5606	119.5606	4.5300e-003	3.7500e-003	120.7905
Total	**0.0738**	**0.1149**	**0.5646**	**1.4200e-003**	**0.1294**	**1.3600e-003**	**0.1307**	**0.0344**	**1.2800e-003**	**0.0356**		**145.3400**	**145.3400**	**4.7600e-003**	**7.8100e-003**	**147.7852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4600e-003	0.0723	0.0249	2.4000e-004	6.1400e-003	5.6000e-004	6.7000e-003	1.6900e-003	5.4000e-004	2.2200e-003		25.7794	25.7794	2.3000e-004	4.0600e-003	26.9947
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0714	0.0426	0.5397	1.1800e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		119.5606	119.5606	4.5300e-003	3.7500e-003	120.7905
Total	**0.0738**	**0.1149**	**0.5646**	**1.4200e-003**	**0.1294**	**1.3600e-003**	**0.1307**	**0.0344**	**1.2800e-003**	**0.0356**		**145.3400**	**145.3400**	**4.7600e-003**	**7.8100e-003**	**147.7852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	1.0349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0114**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**		**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0951	0.0569	0.7196	1.5700e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		159.4141	159.4141	6.0500e-003	5.0000e-003	161.0540
Total	**0.0951**	**0.0569**	**0.7196**	**1.5700e-003**	**0.1643**	**1.0700e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**159.4141**	**159.4141**	**6.0500e-003**	**5.0000e-003**	**161.0540**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	1.0349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0114**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**	**0.0000**	**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0951	0.0569	0.7196	1.5700e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		159.4141	159.4141	6.0500e-003	5.0000e-003	161.0540
Total	**0.0951**	**0.0569**	**0.7196**	**1.5700e-003**	**0.1643**	**1.0700e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**159.4141**	**159.4141**	**6.0500e-003**	**5.0000e-003**	**161.0540**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0192	0.4313	0.1400	1.5300e-003	0.0474	4.4100e-003	0.0519	0.0137	4.2200e-003	0.0179		161.6761	161.6761	1.4000e-003	0.0239	168.8339
Worker	0.0904	0.0540	0.6836	1.4900e-003	0.1561	1.0200e-003	0.1571	0.0414	9.4000e-004	0.0423		151.4434	151.4434	5.7400e-003	4.7500e-003	153.0013
Total	**0.1096**	**0.4853**	**0.8237**	**3.0200e-003**	**0.2035**	**5.4300e-003**	**0.2090**	**0.0551**	**5.1600e-003**	**0.0602**		**313.1195**	**313.1195**	**7.1400e-003**	**0.0287**	**321.8352**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0192	0.4313	0.1400	1.5300e-003	0.0474	4.4100e-003	0.0519	0.0137	4.2200e-003	0.0179		161.6761	161.6761	1.4000e-003	0.0239	168.8339
Worker	0.0904	0.0540	0.6836	1.4900e-003	0.1561	1.0200e-003	0.1571	0.0414	9.4000e-004	0.0423		151.4434	151.4434	5.7400e-003	4.7500e-003	153.0013
Total	**0.1096**	**0.4853**	**0.8237**	**3.0200e-003**	**0.2035**	**5.4300e-003**	**0.2090**	**0.0551**	**5.1600e-003**	**0.0602**		**313.1195**	**313.1195**	**7.1400e-003**	**0.0287**	**321.8352**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**8.4833**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0190	0.0114	0.1439	3.1000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	2.0000e-004	8.9100e-003		31.8828	31.8828	1.2100e-003	1.0000e-003	32.2108
Total	**0.0190**	**0.0114**	**0.1439**	**3.1000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**2.0000e-004**	**8.9100e-003**		**31.8828**	**31.8828**	**1.2100e-003**	**1.0000e-003**	**32.2108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**8.4833**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0190	0.0114	0.1439	3.1000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	2.0000e-004	8.9100e-003		31.8828	31.8828	1.2100e-003	1.0000e-003	32.2108
Total	**0.0190**	**0.0114**	**0.1439**	**3.1000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**2.0000e-004**	**8.9100e-003**		**31.8828**	**31.8828**	**1.2100e-003**	**1.0000e-003**	**32.2108**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7225	3.0186	16.9866	0.0289	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,955.6364	2,955.6364	0.1939	0.1572	3,007.3203
Unmitigated	1.7225	3.0186	16.9866	0.0289	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,955.6364	2,955.6364	0.1939	0.1572	3,007.3203

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	224.48	0.00	0.00	845,651	845,651
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	224.48	0.00	0.00	845,651	845,651

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	22.75	17.48	17.48	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974
Other Asphalt Surfaces	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974
Parking Lot	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.6100e-003	0.0419	0.0352	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003		50.2683	50.2683	9.6000e-004	9.2000e-004	50.5670
NaturalGas Unmitigated	4.8400e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003		52.7462	52.7462	1.0100e-003	9.7000e-004	53.0596

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	448.342	4.8400e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003		52.7462	52.7462	1.0100e-003	9.7000e-004	53.0596
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.8400e-003**	**0.0440**	**0.0369**	**2.6000e-004**		**3.3400e-003**	**3.3400e-003**		**3.3400e-003**	**3.3400e-003**		**52.7462**	**52.7462**	**1.0100e-003**	**9.7000e-004**	**53.0596**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.42728	4.6100e-003	0.0419	0.0352	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003		50.2683	50.2683	9.6000e-004	9.2000e-004	50.5670
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.6100e-003**	**0.0419**	**0.0352**	**2.5000e-004**		**3.1800e-003**	**3.1800e-003**		**3.1800e-003**	**3.1800e-003**		**50.2683**	**50.2683**	**9.6000e-004**	**9.2000e-004**	**50.5670**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Unmitigated	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Total	**0.3379**	**6.0000e-005**	**6.1900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**3.0000e-005**		**0.0141**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Total	**0.3379**	**6.0000e-005**	**6.1900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**3.0000e-005**		**0.0141**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Golden Valley Tahoe School

Northern Sierra AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	11.50	1000sqft	2.81	11,500.00	0
Other Asphalt Surfaces	23.03	1000sqft	0.53	23,030.00	0
Parking Lot	26.00	Space	0.26	10,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	72
Climate Zone	14			**Operational Year**	2022
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	374.95	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility company for the proposed project is the Truckee-Donner Public Utility District

Land Use - Land acreage adjusted to represent total disturbance area as noted on site plan.

Construction Phase - Construction phasing based on applicant provided AQ questionnaire.

Grading - Based on applicant provided AQ questionnaire

Energy Mitigation - Based on applicant provided AQ questionnaire.

Water Mitigation - Based on applicant provided AQ questionnaire.

Trips and VMT - Based on applicant provided AQ questionnaire.

Vehicle Trips - VMT adjusted based on VMT analysis prepared by LSC transportation consultants.

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	18.00	2.00
tblConstructionPhase	NumDays	230.00	35.00
tblConstructionPhase	NumDays	18.00	35.00
tblGrading	MaterialImported	0.00	98.00
tblLandUse	LotAcreage	0.26	2.81
tblLandUse	LotAcreage	0.23	0.26
tblProjectCharacteristics	CH4IntensityFactor	0	0.033
tblProjectCharacteristics	CO2IntensityFactor	0	374.95
tblProjectCharacteristics	N2OIntensityFactor	0	0.004
tblTripsAndVMT	HaulingTripLength	20.00	7.00
tblVehicleTrips	CC_TL	7.30	17.48
tblVehicleTrips	CNW_TL	7.30	17.48
tblVehicleTrips	CW_TL	9.50	22.75

2.0 Emissions Summary

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	10.3172	33.1511	20.3317	0.0394	19.8049	1.6135	21.4184	10.1417	1.4845	11.6261	0.0000	3,819.4463	3,819.4463	1.1985	0.0309	3,851.0253
Maximum	**10.3172**	**33.1511**	**20.3317**	**0.0394**	**19.8049**	**1.6135**	**21.4184**	**10.1417**	**1.4845**	**11.6261**	**0.0000**	**3,819.4463**	**3,819.4463**	**1.1985**	**0.0309**	**3,851.0253**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	10.3172	33.1511	20.3317	0.0394	19.8049	1.6135	21.4184	10.1417	1.4845	11.6261	0.0000	3,819.4463	3,819.4463	1.1985	0.0309	3,851.0253
Maximum	**10.3172**	**33.1511**	**20.3317**	**0.0394**	**19.8049**	**1.6135**	**21.4184**	**10.1417**	**1.4845**	**11.6261**	**0.0000**	**3,819.4463**	**3,819.4463**	**1.1985**	**0.0309**	**3,851.0253**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Energy	4.8400e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003		52.7462	52.7462	1.0100e-003	9.7000e-004	53.0596
Mobile	1.6551	3.4954	18.2234	0.0275	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,812.5444	2,812.5444	0.2188	0.1752	2,870.2287
Total	**1.9978**	**3.5394**	**18.2665**	**0.0278**	**2.5039**	**0.0398**	**2.5437**	**0.6686**	**0.0377**	**0.7063**		**2,865.3038**	**2,865.3038**	**0.2198**	**0.1762**	**2,923.3025**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Energy	4.6100e-003	0.0419	0.0352	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003		50.2683	50.2683	9.6000e-004	9.2000e-004	50.5670
Mobile	1.6551	3.4954	18.2234	0.0275	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,812.5444	2,812.5444	0.2188	0.1752	2,870.2287
Total	**1.9976**	**3.5373**	**18.2648**	**0.0277**	**2.5039**	**0.0396**	**2.5435**	**0.6686**	**0.0375**	**0.7061**		**2,862.8259**	**2,862.8259**	**0.2197**	**0.1761**	**2,920.8098**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.01	0.06	0.01	0.04	0.00	0.40	0.01	0.00	0.42	0.02	0.00	0.09	0.09	0.02	0.03	0.09

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2022	4/4/2022	5	2	
2	Grading	Grading	4/5/2022	4/18/2022	5	10	
3	Paving	Paving	4/19/2022	4/20/2022	5	2	
4	Building Construction	Building Construction	4/21/2022	6/8/2022	5	35	
5	Architectural Coating	Architectural Coating	5/5/2022	6/22/2022	5	35	

Acres of Grading (Site Preparation Phase): 3

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.79

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 17,250; Non-Residential Outdoor: 5,750; Striped Parking Area: 2,006 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	10.00	10.80	7.30	7.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	19.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0850	0.0675	0.6340	1.3100e-003	0.1479	9.6000e-004	0.1488	0.0392	8.9000e-004	0.0401		133.3844	133.3844	6.3800e-003	5.4200e-003	135.1598
Total	**0.0850**	**0.0675**	**0.6340**	**1.3100e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.9000e-004**	**0.0401**		**133.3844**	**133.3844**	**6.3800e-003**	**5.4200e-003**	**135.1598**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0850	0.0675	0.6340	1.3100e-003	0.1479	9.6000e-004	0.1488	0.0392	8.9000e-004	0.0401		133.3844	133.3844	6.3800e-003	5.4200e-003	135.1598
Total	**0.0850**	**0.0675**	**0.6340**	**1.3100e-003**	**0.1479**	**9.6000e-004**	**0.1488**	**0.0392**	**8.9000e-004**	**0.0401**		**133.3844**	**133.3844**	**6.3800e-003**	**5.4200e-003**	**135.1598**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2800e-003	0.0770	0.0257	2.4000e-004	6.1400e-003	5.6000e-004	6.7100e-003	1.6900e-003	5.4000e-004	2.2300e-003		25.8363	25.8363	2.2000e-004	4.0700e-003	27.0541
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0709	0.0563	0.5283	1.0900e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		111.1537	111.1537	5.3100e-003	4.5200e-003	112.6332
Total	**0.0731**	**0.1333**	**0.5540**	**1.3300e-003**	**0.1294**	**1.3600e-003**	**0.1307**	**0.0344**	**1.2800e-003**	**0.0357**		**136.9900**	**136.9900**	**5.5300e-003**	**8.5900e-003**	**139.6872**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2800e-003	0.0770	0.0257	2.4000e-004	6.1400e-003	5.6000e-004	6.7100e-003	1.6900e-003	5.4000e-004	2.2300e-003		25.8363	25.8363	2.2000e-004	4.0700e-003	27.0541
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0709	0.0563	0.5283	1.0900e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		111.1537	111.1537	5.3100e-003	4.5200e-003	112.6332
Total	**0.0731**	**0.1333**	**0.5540**	**1.3300e-003**	**0.1294**	**1.3600e-003**	**0.1307**	**0.0344**	**1.2800e-003**	**0.0357**		**136.9900**	**136.9900**	**5.5300e-003**	**8.5900e-003**	**139.6872**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504		1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	1.0349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0114**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**		**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0945	0.0750	0.7044	1.4600e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		148.2049	148.2049	7.0800e-003	6.0300e-003	150.1775
Total	**0.0945**	**0.0750**	**0.7044**	**1.4600e-003**	**0.1643**	**1.0700e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**148.2049**	**148.2049**	**7.0800e-003**	**6.0300e-003**	**150.1775**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9765	9.5221	12.1940	0.0189		0.4877	0.4877		0.4504	0.4504	0.0000	1,805.1297	1,805.1297	0.5672		1,819.3091
Paving	1.0349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0114**	**9.5221**	**12.1940**	**0.0189**		**0.4877**	**0.4877**		**0.4504**	**0.4504**	**0.0000**	**1,805.1297**	**1,805.1297**	**0.5672**		**1,819.3091**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0945	0.0750	0.7044	1.4600e-003	0.1643	1.0700e-003	0.1654	0.0436	9.9000e-004	0.0446		148.2049	148.2049	7.0800e-003	6.0300e-003	150.1775
Total	**0.0945**	**0.0750**	**0.7044**	**1.4600e-003**	**0.1643**	**1.0700e-003**	**0.1654**	**0.0436**	**9.9000e-004**	**0.0446**		**148.2049**	**148.2049**	**7.0800e-003**	**6.0300e-003**	**150.1775**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0190	0.4587	0.1457	1.5300e-003	0.0474	4.4300e-003	0.0519	0.0137	4.2400e-003	0.0179		161.8347	161.8347	1.3700e-003	0.0240	169.0122
Worker	0.0898	0.0713	0.6692	1.3800e-003	0.1561	1.0200e-003	0.1571	0.0414	9.4000e-004	0.0423		140.7947	140.7947	6.7300e-003	5.7200e-003	142.6687
Total	**0.1088**	**0.5300**	**0.8149**	**2.9100e-003**	**0.2035**	**5.4500e-003**	**0.2090**	**0.0551**	**5.1800e-003**	**0.0602**		**302.6294**	**302.6294**	**8.1000e-003**	**0.0297**	**311.6809**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0190	0.4587	0.1457	1.5300e-003	0.0474	4.4300e-003	0.0519	0.0137	4.2400e-003	0.0179		161.8347	161.8347	1.3700e-003	0.0240	169.0122
Worker	0.0898	0.0713	0.6692	1.3800e-003	0.1561	1.0200e-003	0.1571	0.0414	9.4000e-004	0.0423		140.7947	140.7947	6.7300e-003	5.7200e-003	142.6687
Total	**0.1088**	**0.5300**	**0.8149**	**2.9100e-003**	**0.2035**	**5.4500e-003**	**0.2090**	**0.0551**	**5.1800e-003**	**0.0602**		**302.6294**	**302.6294**	**8.1000e-003**	**0.0297**	**311.6809**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**8.4833**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0189	0.0150	0.1409	2.9000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	2.0000e-004	8.9100e-003		29.6410	29.6410	1.4200e-003	1.2100e-003	30.0355
Total	**0.0189**	**0.0150**	**0.1409**	**2.9000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**2.0000e-004**	**8.9100e-003**		**29.6410**	**29.6410**	**1.4200e-003**	**1.2100e-003**	**30.0355**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.2788					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**8.4833**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0189	0.0150	0.1409	2.9000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	2.0000e-004	8.9100e-003		29.6410	29.6410	1.4200e-003	1.2100e-003	30.0355
Total	**0.0189**	**0.0150**	**0.1409**	**2.9000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**2.0000e-004**	**8.9100e-003**		**29.6410**	**29.6410**	**1.4200e-003**	**1.2100e-003**	**30.0355**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6551	3.4954	18.2234	0.0275	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,812.5444	2,812.5444	0.2188	0.1752	2,870.2287
Unmitigated	1.6551	3.4954	18.2234	0.0275	2.5039	0.0364	2.5403	0.6686	0.0343	0.7029		2,812.5444	2,812.5444	0.2188	0.1752	2,870.2287

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	224.48	0.00	0.00	845,651	845,651
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	224.48	0.00	0.00	845,651	845,651

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	22.75	17.48	17.48	65.00	30.00	5.00	63	25	12
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974
Other Asphalt Surfaces	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974
Parking Lot	0.383934	0.066570	0.243824	0.166394	0.056716	0.010392	0.008100	0.013374	0.000856	0.000179	0.041061	0.000627	0.007974

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.6100e-003	0.0419	0.0352	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003		50.2683	50.2683	9.6000e-004	9.2000e-004	50.5670
NaturalGas Unmitigated	4.8400e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003		52.7462	52.7462	1.0100e-003	9.7000e-004	53.0596

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	448.342	4.8400e-003	0.0440	0.0369	2.6000e-004		3.3400e-003	3.3400e-003		3.3400e-003	3.3400e-003		52.7462	52.7462	1.0100e-003	9.7000e-004	53.0596
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.8400e-003**	**0.0440**	**0.0369**	**2.6000e-004**		**3.3400e-003**	**3.3400e-003**		**3.3400e-003**	**3.3400e-003**		**52.7462**	**52.7462**	**1.0100e-003**	**9.7000e-004**	**53.0596**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Elementary School	0.42728	4.6100e-003	0.0419	0.0352	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003		50.2683	50.2683	9.6000e-004	9.2000e-004	50.5670
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.6100e-003**	**0.0419**	**0.0352**	**2.5000e-004**		**3.1800e-003**	**3.1800e-003**		**3.1800e-003**	**3.1800e-003**		**50.2683**	**50.2683**	**9.6000e-004**	**9.2000e-004**	**50.5670**

6.0 Area Detail

6.1 Mitigation Measures Area

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Unmitigated	0.3379	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Total	**0.3379**	**6.0000e-005**	**6.1900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**3.0000e-005**		**0.0141**

Golden Valley Tahoe School - Northern Sierra AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0794					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2579					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.1900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0133	0.0133	3.0000e-005		0.0141
Total	**0.3379**	**6.0000e-005**	**6.1900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0133**	**0.0133**	**3.0000e-005**		**0.0141**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Northern Sierra AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	2	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	11	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	3.58000E-003	2.46500E-002	3.17400E-002	5.00000E-005	1.43000E-003	1.43000E-003	0.00000E+000	4.46819E+000	4.46819E+000	2.90000E-004	0.00000E+000	4.47547E+000
Cement and Mortar Mixers	9.00000E-005	5.50000E-004	4.60000E-004	0.00000E+000	2.00000E-005	2.00000E-005	0.00000E+000	6.87400E-002	6.87400E-002	1.00000E-005	0.00000E+000	6.89200E-002
Cranes	5.71000E-003	6.40700E-002	2.89800E-002	9.00000E-005	2.66000E-003	2.45000E-003	0.00000E+000	7.76286E+000	7.76286E+000	2.51000E-003	0.00000E+000	7.82563E+000
Excavators	1.01000E-003	8.88000E-003	1.62800E-002	3.00000E-005	4.30000E-004	4.00000E-004	0.00000E+000	2.26803E+000	2.26803E+000	7.30000E-004	0.00000E+000	2.28637E+000
Forklifts	5.96000E-003	5.53800E-002	6.05700E-002	8.00000E-005	3.67000E-003	3.38000E-003	0.00000E+000	7.05029E+000	7.05029E+000	2.28000E-003	0.00000E+000	7.10730E+000
Generator Sets	5.77000E-003	5.12400E-002	6.43300E-002	1.20000E-004	2.57000E-003	2.57000E-003	0.00000E+000	9.89113E+000	9.89113E+000	4.70000E-004	0.00000E+000	9.90288E+000
Graders	2.07000E-003	2.62900E-002	8.61000E-003	3.00000E-005	8.40000E-004	7.70000E-004	0.00000E+000	2.90879E+000	2.90879E+000	9.40000E-004	0.00000E+000	2.93231E+000
Pavers	2.10000E-004	2.10000E-003	2.88000E-003	0.00000E+000	1.00000E-004	9.00000E-005	0.00000E+000	4.13000E-001	4.13000E-001	1.30000E-004	0.00000E+000	4.16340E-001
Paving Equipment	2.70000E-004	2.61000E-003	3.82000E-003	1.00000E-005	1.30000E-004	1.20000E-004	0.00000E+000	5.36780E-001	5.36780E-001	1.70000E-004	0.00000E+000	5.41120E-001
Rollers	2.50000E-004	2.59000E-003	2.79000E-003	0.00000E+000	1.50000E-004	1.40000E-004	0.00000E+000	3.45780E-001	3.45780E-001	1.10000E-004	0.00000E+000	3.48570E-001
Rubber Tired Dozers	6.70000E-003	7.03500E-002	2.86600E-002	7.00000E-005	3.34000E-003	3.07000E-003	0.00000E+000	6.00219E+000	6.00219E+000	1.94000E-003	0.00000E+000	6.05072E+000
Tractors/Loaders/ Backhoes	1.08600E-002	1.10490E-001	1.47560E-001	2.10000E-004	5.94000E-003	5.47000E-003	0.00000E+000	1.80194E+001	1.80194E+001	5.83000E-003	0.00000E+000	1.81651E+001
Welders	4.84000E-003	2.56000E-002	2.96800E-002	4.00000E-005	1.12000E-003	1.12000E-003	0.00000E+000	3.29386E+000	3.29386E+000	3.90000E-004	0.00000E+000	3.30371E+000

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	3.58000E-003	2.46500E-002	3.17400E-002	5.00000E-005	1.43000E-003	1.43000E-003	0.00000E+000	4.46819E+000	4.46819E+000	2.90000E-004	0.00000E+000	4.47546E+000
Cement and Mortar Mixers	9.00000E-005	5.50000E-004	4.60000E-004	0.00000E+000	2.00000E-005	2.00000E-005	0.00000E+000	6.87400E-002	6.87400E-002	1.00000E-005	0.00000E+000	6.89200E-002
Cranes	5.71000E-003	6.40700E-002	2.89800E-002	9.00000E-005	2.66000E-003	2.45000E-003	0.00000E+000	7.76285E+000	7.76285E+000	2.51000E-003	0.00000E+000	7.82562E+000
Excavators	1.01000E-003	8.88000E-003	1.62800E-002	3.00000E-005	4.30000E-004	4.00000E-004	0.00000E+000	2.26803E+000	2.26803E+000	7.30000E-004	0.00000E+000	2.28637E+000
Forklifts	5.96000E-003	5.53800E-002	6.05700E-002	8.00000E-005	3.67000E-003	3.38000E-003	0.00000E+000	7.05029E+000	7.05029E+000	2.28000E-003	0.00000E+000	7.10729E+000
Generator Sets	5.77000E-003	5.12400E-002	6.43300E-002	1.20000E-004	2.57000E-003	2.57000E-003	0.00000E+000	9.89112E+000	9.89112E+000	4.70000E-004	0.00000E+000	9.90287E+000
Graders	2.07000E-003	2.62900E-002	8.61000E-003	3.00000E-005	8.40000E-004	7.70000E-004	0.00000E+000	2.90879E+000	2.90879E+000	9.40000E-004	0.00000E+000	2.93231E+000
Pavers	2.10000E-004	2.10000E-003	2.88000E-003	0.00000E+000	1.00000E-004	9.00000E-005	0.00000E+000	4.13000E-001	4.13000E-001	1.30000E-004	0.00000E+000	4.16340E-001
Paving Equipment	2.70000E-004	2.61000E-003	3.82000E-003	1.00000E-005	1.30000E-004	1.20000E-004	0.00000E+000	5.36780E-001	5.36780E-001	1.70000E-004	0.00000E+000	5.41120E-001
Rollers	2.50000E-004	2.59000E-003	2.79000E-003	0.00000E+000	1.50000E-004	1.40000E-004	0.00000E+000	3.45780E-001	3.45780E-001	1.10000E-004	0.00000E+000	3.48570E-001
Rubber Tired Dozers	6.70000E-003	7.03500E-002	2.86600E-002	7.00000E-005	3.34000E-003	3.07000E-003	0.00000E+000	6.00218E+000	6.00218E+000	1.94000E-003	0.00000E+000	6.05071E+000
Tractors/Loaders/Backhoes	1.08600E-002	1.10490E-001	1.47560E-001	2.10000E-004	5.94000E-003	5.47000E-003	0.00000E+000	1.80193E+001	1.80193E+001	5.83000E-003	0.00000E+000	1.81650E+001
Welders	4.84000E-003	2.56000E-002	2.96800E-002	4.00000E-005	1.12000E-003	1.12000E-003	0.00000E+000	3.29386E+000	3.29386E+000	3.90000E-004	0.00000E+000	3.30371E+000

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.23440E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.28819E-006	1.28819E-006	0.00000E+000	0.00000E+000	1.27785E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.40700E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.01101E-006	1.01101E-006	0.00000E+000	0.00000E+000	1.00981E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.66606E-006	1.66606E-006	0.00000E+000	0.00000E+000	1.65270E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10992E-006	1.10992E-006	0.00000E+000	0.00000E+000	1.10102E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.04	0.02	0.04	0.02	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.02	0.01	0.02	0.01	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	4.55	4.74	4.75	0.00	4.92	4.92	0.00	4.70	4.70	5.88	6.25	4.70
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.10	0.32		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	Use Low VOC Paint (Parking)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	5.00	

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

No	Install High Efficiency Lighting	0.00	
No	On-site Renewable	0.00	0.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	30.00	25.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Golden Valley Tahoe School

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

APPENDIX B

ENVIRONMENTAL NOISE ASSESSMENT

Environmental Noise Assessment

Golden Valley Tahoe School Expansion

Town of Truckee, California

June 17, 2022

Project #211210

Prepared for:

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INTRODUCTION

The Golden Valley Tahoe School Expansion project is located at 12640 Union Mills Road in the Town of Truckee, California. The project includes the expansion of the capacity of an existing school from approximately 45 students to 240 students. The analysis will evaluate noise generated by the school expansion at existing residential uses to the west and east, off-site increases in traffic noise, and transportation noise on the project site.

Figure 1 shows the project site plan. **Figure 2** shows an aerial photo of the project site.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

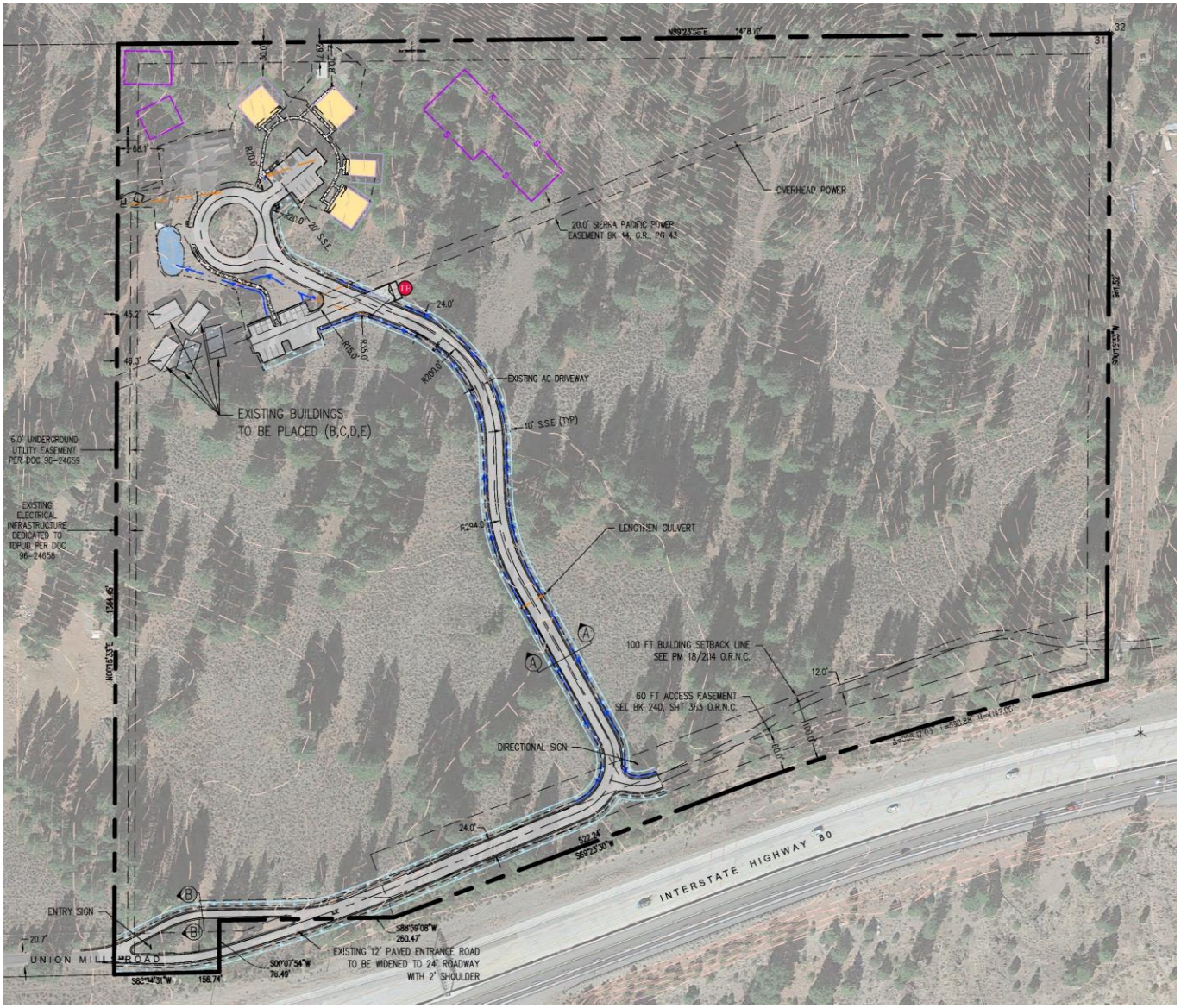
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

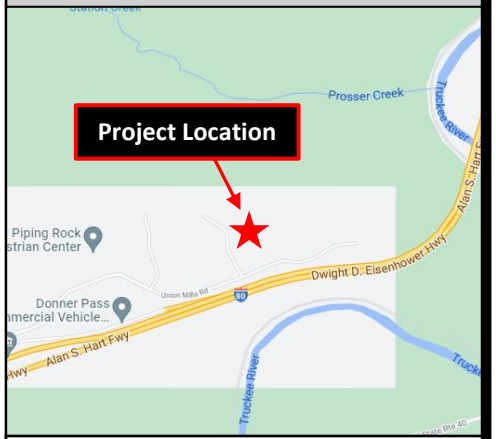
Golden Valley Tahoe School Expansion

Town of Truckee, California

Figure 1

Project Site Plan





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Golden Valley Tahoe School

Town of Truckee, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement - Long Term

0 ft 250 ft 500 ft

Projection: UTM Zone 10 / WGS84 / meters
Rev. Date: 02/18/2022

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The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: *Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September 2013.*

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

EXISTING NOISE RECEPTORS

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include existing single-family residential uses to the west and east of the project site.

EXISTING GENERAL AMBIENT NOISE LEVELS

The existing noise environment in the project area is primarily defined by traffic on Interstate 80. To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous (24-hr.) noise level measurement at two locations on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Date	L_{dn}	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1	Thursday, 1-27-22	56	51	49	62	50	48	63
LT-1	Friday, 1-28-22	55	51	50	64	49	48	60
LT-2	Thursday, 1-27-22	59	56	55	67	52	50	65
LT-2	Friday, 1-28-22	59	57	56	67	52	50	62

Notes:

- *All values shown in dBA*
- *Daytime hours: 7:00 a.m. to 10:00 p.m.*

- *Nighttime Hours: 10:00 p.m. to 7:00 a.m.*
- *Source: Saxelby Acoustics 2022*

EVALUATION OF FUTURE TRANSPORTATION NOISE ON THE PROJECT SITE

Saxelby Acoustics used the SoundPLAN noise model to calculate traffic noise levels at the proposed single-family uses due to traffic on Interstate 80 and the local roadway network. Traffic noise levels include a +1 dBA adjustment for future conditions. **Figure 3** shows the future transportation noise contours on the project site in terms of the day-night average (dBA L_{dn}).

EVALUATION OF PROJECT OPERATIONAL NOISE ON EXISTING SENSITIVE RECEPTORS

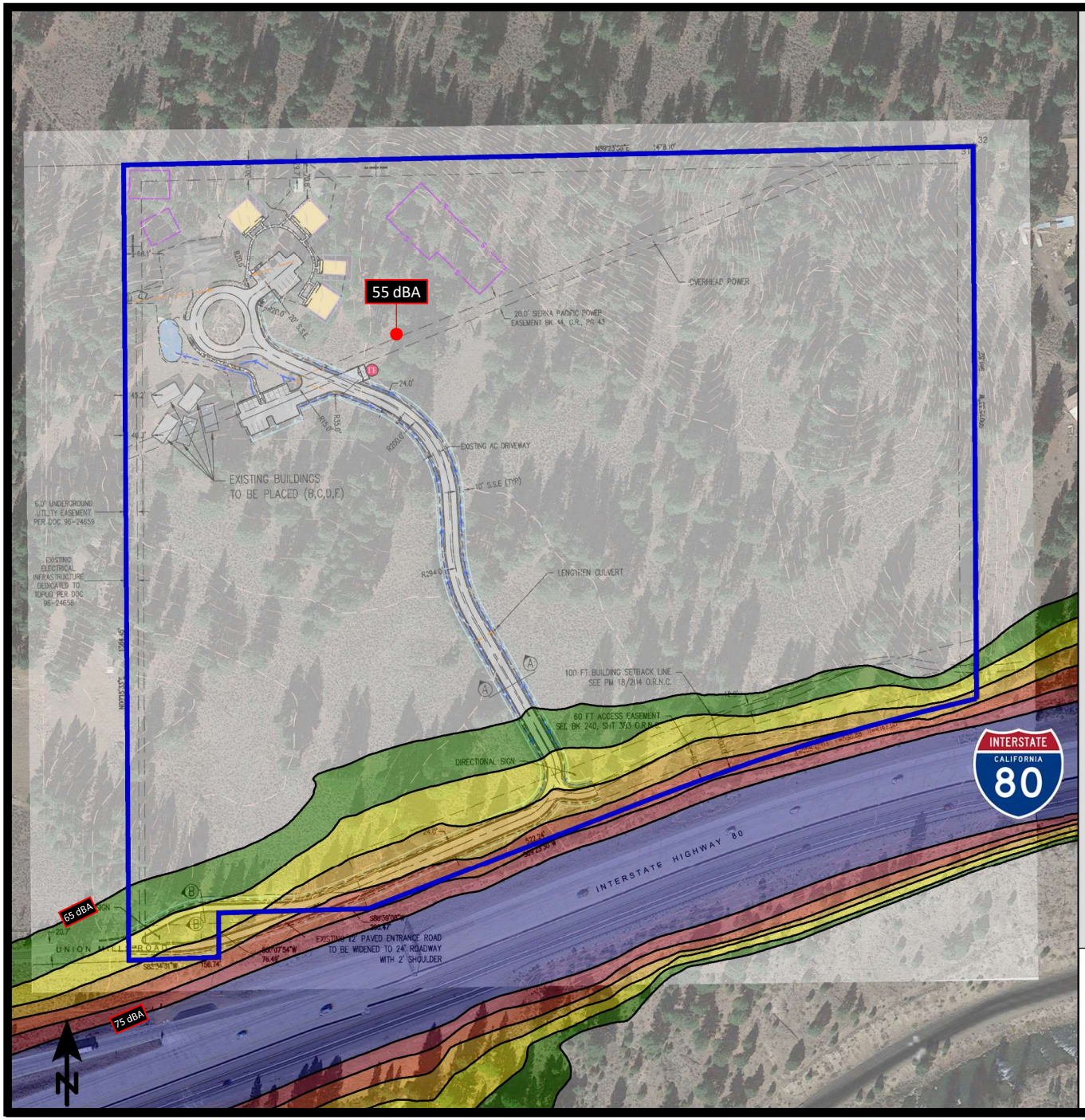
Children playing outdoors and traffic circulation are considered to be the primary noise sources for this project.

The following is a list of assumptions used for the noise modeling. The data used is based upon Saxelby Acoustics data from similar operations. It was conservatively assumed that the playground areas could be active during the same hour that drop-offs or pick-ups occur.

Outdoor Play: Children playing in areas around proposed classrooms at 55 dBA L_{50} / 75 dBA L_{max} at 100 feet. Daytime use only. Saxelby Acoustics data. See **Figure 4** for assumed outdoor play areas.

Traffic Circulation: The project is predicted to generate a new project trip generation of up to 513 peak hour trips during drop-offs and pick-ups. This assumes one auto arriving and departing per each student and one auto arriving or departing for each staff member. Parking lot movement for cars is predicted to generate a sound exposure level (SEL) of 71 dBA SEL at 50 feet. Additionally, it was assumed that several buses or truck deliveries could also occur on the project site during the peak hour at a level of 85 dBA SEL at 50 feet. Nighttime traffic outside of the AM or PM peak hour is not expected to occur. Saxelby Acoustics data.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed school uses, existing and proposed buildings, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation. **Figure 4** shows the project generated noise levels originating from the project at existing sensitive receptors.



Golden Valley Tahoe School Expansion

Town of Truckee, California

Figure 3

Future (2043) Transportation Noise Level Contours (dBA, L_{dn})

Signs and symbols

Project Boundary

Levels in dB(A)

<= 65
65 - 67
67 - 69
69 - 71
71 - 73
73 - 75
> 75

1 : 3000

0 15 30 60 90 120 m

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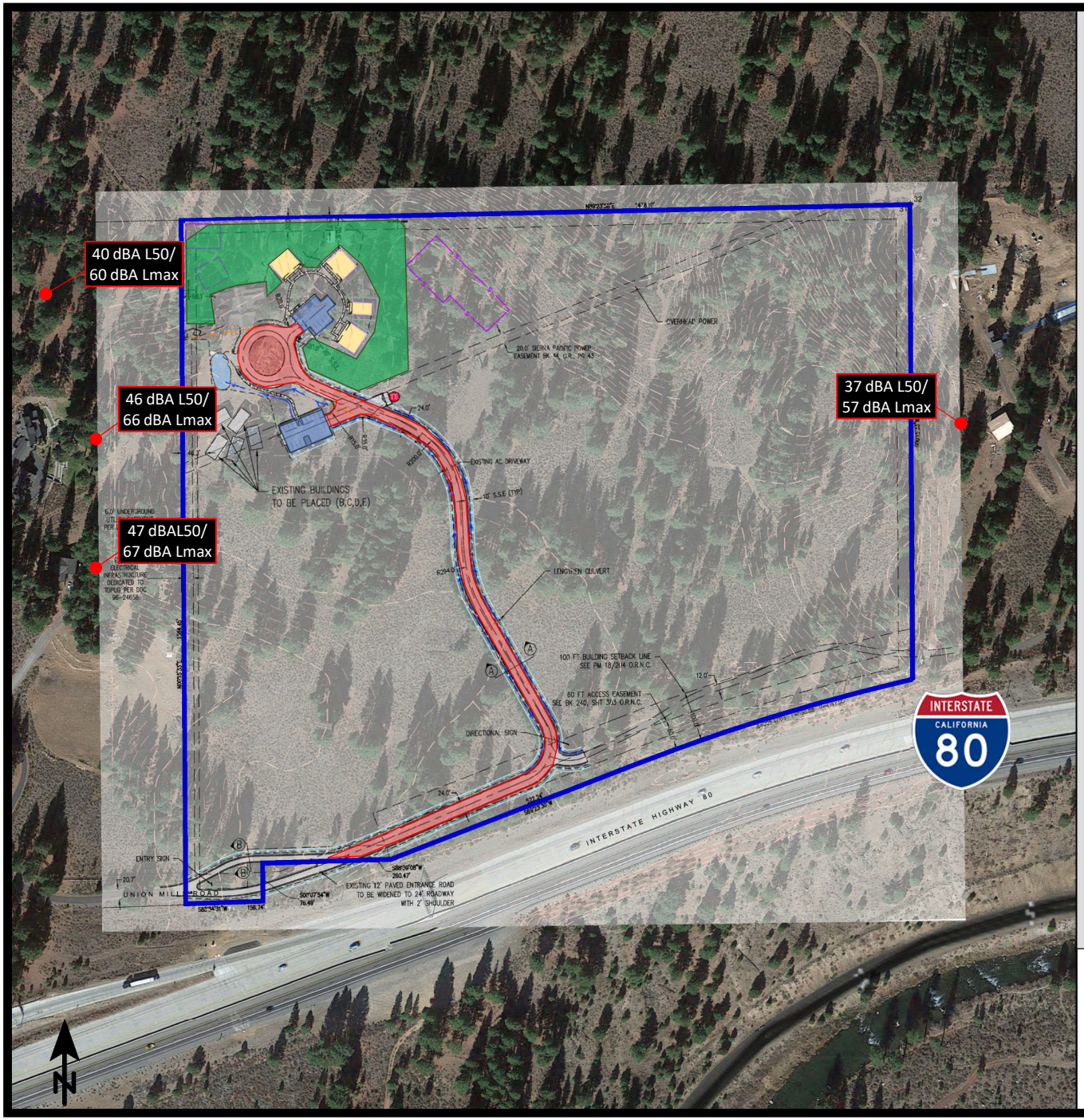

Golden Valley Tahoe School Expansion

Town of Truckee, California

Figure 4

Project-Generated Noise Levels

Signs and symbols

- Project Boundary
- Traffic Circulation
- Parking Lot
- Outdoor Play Area

1 : 3500

0 20 40 80 120 160 m

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CONSTRUCTION NOISE ENVIRONMENT

During the construction of the proposed project, noise from construction activities would temporarily add to the noise environment in the project vicinity. As shown in **Table 3**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 3: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

CONSTRUCTION VIBRATION ENVIRONMENT

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. **Table 4** shows the typical vibration levels produced by construction equipment.

TABLE 4: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: Transit Noise and Vibration Impact Assessment Guidelines. Federal Transit Administration. May 2006.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

LOCAL

Town of Truckee General Plan Noise Element Goals and Policies

The Town of Truckee has established acceptable noise level criteria in the General Plan Noise Element. The relevant standards have been reproduced below:

Goal 1: Minimize community noise exposure to excessive noise by ensuring compatible land uses relative to noise sources.

Policy 1.1: Allow new development only if consistent with the ground transportation noise compatibility guidelines and policies of this Element. Noise measurements used in establishing compatibility shall be measured in dBA CNEL and based on worst case noise levels, either existing or future, with future noise levels to be predicted based on projected 2025 levels.

Policy 1.2: Require new development to mitigate exterior noise to "normally acceptable" levels in outdoor areas where quiet is a benefit such as in the backyards of single-family homes.

Policy 1.3: Enforce the California Noise Insulation Standards for interior noise levels attributable to exterior sources for all proposed new single- and multi-family residences. (*Note: This is an interior noise level of 45 dB Ldn/CNEL*)

Goal 2: Address noise issues through the planning and permitting process.

Policy 2.1: Require mitigation of all significant noise impacts as a condition of project approval.

Policy 2.2: Require preparation of a noise analysis which is to include recommendations for mitigation for all proposed projects which may result in potentially significant noise impacts to nearby noise sensitive land uses.

Policy 2.3: Require preparation of a noise analysis which is to include recommendations for mitigation for all proposed development within noise impacted areas that may be exposed to levels greater than "normally acceptable."

Policy 2.4: Discourage the construction of sound walls and require development projects to evaluate site design techniques, building setbacks, earthen berms, alternative architectural layouts and other means to meet noise reduction requirements.

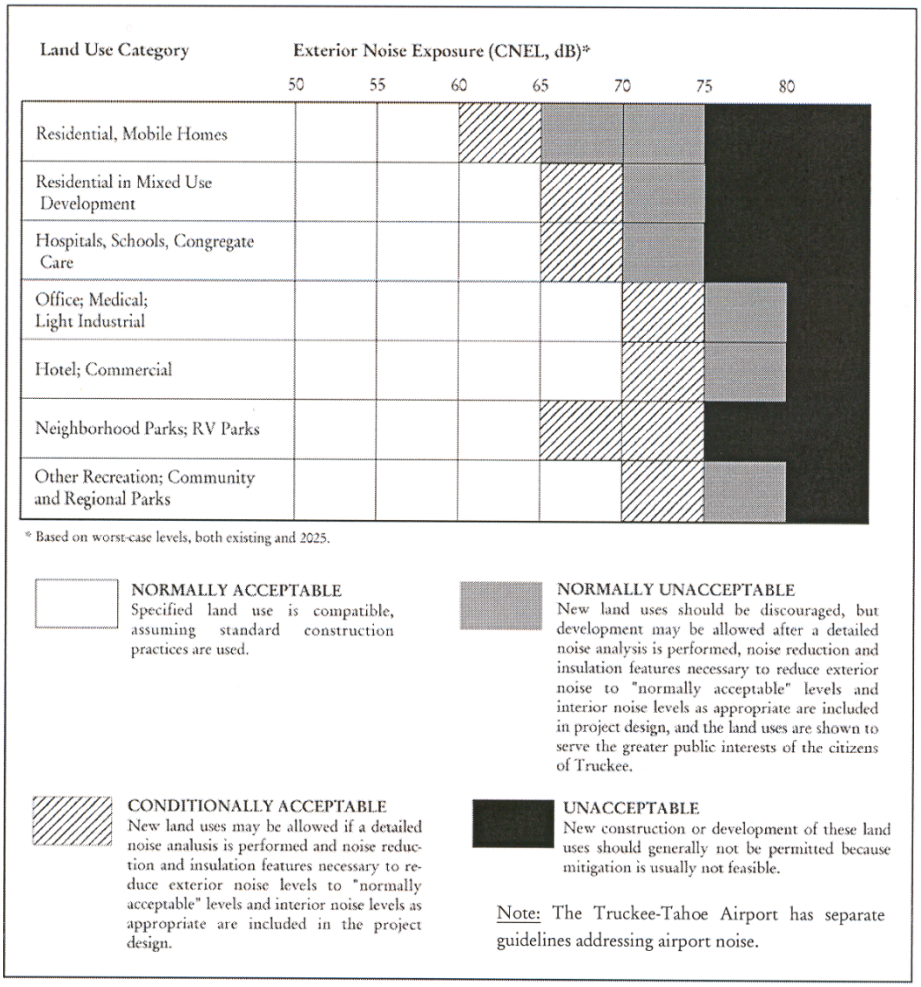
Goal 3: Reduce noise levels from sources such as domestic uses, construction and car stereos, and from mobile sources, including motor vehicle traffic and aircraft operations.

Policy 3.13: Require the following standard construction noise control measures to be included as requirements at construction sites in order to minimize construction noise impacts.

- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Utilize "quiet" air compressors and other stationary noise-generating equipment where appropriate technology exists.
- The project sponsor shall designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint and will require that reasonable measures warranted to correct the problem be implemented. The project sponsor shall also post telephone number for excessive noise complaints in conspicuous locations in the vicinity of the project site. Additionally, the project sponsor shall send a notice to neighbors in the project vicinity with the information on the construction schedule and the telephone number for noise complaints.

The Town of Truckee Noise Element guidelines are provided in **Table 5**.

TABLE 5: TRUCKEE LAND USE COMPATIBILITY STANDARDS



Source: Town of Truckee 2025 General Plan Noise Element

Town of Truckee Development Code

The Town of Truckee Development Code essentially contains the Noise Ordinance referred to in the Town of Truckee Noise Element policies.

Section 18.44.020 of the development code states that noise complaints associated with the types of commercial uses (loading docks, stationary noise sources, etc.) would be directed to the Community Development Department.

Section 18.44.040 states that exterior noise levels, when measured at a noise-sensitive receiving land use, shall not exceed the noise level standards set forth in **Table 6** (Table 3-8 in the Code). In the event that the ambient noise environment exceeds the **Table 6** standards, the applicable standards shall be adjusted to

equal the ambient noise level. In addition, the **Table 6** standards shall be reduced by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

TABLE 6: NOISE STANDARDS BY RECEIVING LAND USE – TOWN OF TRUCKEE DEVELOPMENT CODE

Cumulative Duration of Intrusive Sound	Noise Metric	Daytime (7 am to 10 pm)	Nighttime (10 pm - 7 am)
Hospital, Library, Religious Institution, Residential or School Uses:			
Cumulative period of 30 minutes per hour	L_{50}	55	50
Cumulative period of 15 minutes per hour	L_{25}	60	55
Cumulative period of 5 minutes per hour	L_{08}	65	60
Cumulative period of 1 minute per hour	L_{02}	70	65
Level not to be exceeded for any time during hour	L_{max}	75	70
Commercial Uses:			
Cumulative period of 30 minutes per hour	L_{50}	65	60
Cumulative period of 15 minutes per hour	L_{25}	70	65
Cumulative period of 5 minutes per hour	L_{08}	75	70
Cumulative period of 1 minute per hour	L_{02}	80	75
Level not to be exceeded for any time during hour	L_{max}	85	80

Source : Town of Truckee Development Code.

Notes : Each of the noise limits specified above shall be reduced by 5 dBA for impulsive or simple tone noises or for noises consisting of speech or music. If the existing ambient noise levels exceed that permitted in the first four noise-limit categories, the allowable limit shall be increased to encompass the ambient.

Section 18.44.070 – Exceptions states that the provisions of the chapter do not apply to noise sources associated with non-single family residential construction provided that the activities do not take place before 7 a.m. or after 9 p.m. on any day except Sunday, or before 9 a.m. or after 6 p.m. on Sunday. The provisions of the chapter do not apply to noise sources associated with single family residential construction on a single-family lot.

Summary of Noise Level Criteria

Transportation Noise

Table 5 shows the Town of Truckee Land Use Compatibility Chart. The table indicates that development of schools is "Normally Acceptable" where the ambient noise level is 65 dBA L_{dn} or less. Construction where the ambient noise level exceeds 75 dBA L_{dn} is considered "Unacceptable." Construction may occur where noise levels range from 65 dBA L_{dn} to 75 dBA L_{dn} if noise reduction measures are implemented to ensure exterior levels do not exceed "Normally Acceptable" levels.

Stationary Noise

Table 6 shows the acceptable noise level standards that may be generated by stationary noise sources. A new project may not generate noise levels greater than 55 dBA L_{50} during daytime (7:00 a.m. to 10:00 p.m.) hours and 50 dBA L_{50} during nighttime (10:00 p.m. to 7:00 a.m.) hours at the property line of the adjacent residential uses. Additionally, the Town of Truckee establishes maximum noise level standards of 75 dBA L_{max} and 70 dBA L_{max} during daytime and nighttime hours, respectively.

It should be noted that a 5 dBA penalty shall be applied for impulsive or simple tone noises or for noises consisting of speech or music. Additionally, if the existing ambient noise levels exceed that permitted in the first four noise-limit categories, the allowable limit shall be increased to encompass the ambient.

Criteria for Acceptable Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. **Table 7**, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 7 indicates that the threshold for architectural damage to structures is 0.20 in/sec p.p.v. A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 7: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Transportation Related Earthborne Vibrations. Caltrans. TAV-02-01-R9601. February 20, 2002.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-c]).

Would the project:

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

b. Generate excessive groundborne vibration or groundborne noise levels?

c. For a project 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 proposed project is not located within two miles of a public or private airport, therefore item "c" is not discussed any further in this study.

Noise Level Increase Criteria for Long-Term Project-Related Noise Level Increases

The California Environmental Quality Act (CEQA) guidelines define a significant impact of a project if it "increases substantially the ambient noise levels for adjoining areas." Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project-noise conditions. **Table 8** is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn.

TABLE 8: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

Ambient Noise Level Without Project, L_{dn}	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON).

Based on the **Table 8** data, an increase in the traffic noise level of 5 dB or more would be significant where the pre-project noise levels are less than 60 dB L_{dn}, or 3 dB or more where existing noise levels are between 60 to 65 dB L_{dn}. Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-project traffic noise level exceeds 65 dB L_{dn}. The rationale for the **Table 8** criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

IMPACT 1: WOULD THE PROJECT GENERATE A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES?

Traffic Noise Increases at Off-Site Receptors

The proposed project would generate 1,026 total daily trips, assuming 2 trips per 33 faculty and 4 trips per 240 students. The closest existing noise sensitive receptor located along Union Mills Road is located approximately 250 feet from the centerline of Union Mills Road (approximately 1/3 miles east of Overland Trail). However, Interstate 80 which parallels Union Mills Road is the primary noise source at this sensitive receptor. The existing traffic noise level at this receptor is estimated to be 65.5 dBA L_{dn} due to traffic on Interstate 80. The project-only traffic noise level from vehicles on Union Mills Road would generate a noise level of 42.1 dBA L_{dn}. This is 23.4 dBA less than existing Interstate 80 traffic noise levels and would result in a total increase of less than 0.02 dBA. This is not an audible increase and would be less than the FICON guideline criteria of +1.5 dB L_{dn} where existing noise levels exceed 65 dBA.

See **Appendix C** for traffic noise modeling inputs and results.

Therefore, impacts resulting from increased traffic noise would be considered ***less-than-significant***, and no mitigation is required.

Operational Noise at Existing Sensitive Receptors

As shown on **Figure 4**, the project is predicted to expose nearby residences to daytime noise levels up to 47 dBA L_{50} and 67 dBA L_{max} during daytime (7:00 a.m. to 10:00 p.m.) hours. Nighttime operation of the proposed project is not expected to occur. This would meet the Town of Truckee daytime standard of 50 dBA L_{50} (55 dBA L_{50} minus 5 dBA penalty), for non-transportation noise sources consisting of impulsive noise, simple tone noise, or noise consisting primarily of speech or music. This would also meet the Town's 70 dBA L_{max} (75 dBA L_{max} minus 5 dBA penalty) noise standard for non-transportation noise sources consisting of impulsive noise, simple tone noise, or noise consisting primarily of speech or music.

This is a ***less-than-significant*** impact, and no mitigation is required.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in **Table 6**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Construction activities would also be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours.

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given this noise attenuation rate and assuming no noise shielding from either natural or human-made features (e.g., trees, buildings, fences), outdoor receptors within approximately 1,600 feet of construction sites could experience maximum instantaneous noise levels of greater than 60 dBA when on-site construction-related noise levels exceed approximately 90 dBA at the boundary of the construction site. As previously discussed, nearby noise-sensitive receptors consist predominantly of residential dwellings located near the western and eastern boundaries of the project site.

The Town of Truckee Noise Ordinance places limitations on the acceptable hours of construction. During development of the proposed project, construction activities occurring between 7:00 a.m. and 9:00 p.m. Monday through Saturday and 9:00 a.m. and 6:00 p.m. on Sunday are exempt from the Development Code. Additionally, there are several residential uses approximately 500 feet from the center of the construction area which may be subject to construction noise. As a result, noise-generating construction activities would be considered to have a ***potentially significant*** short-term impact.

Transportation Noise on the Project Site (Non-CEQA Issue)

Compliance with Town standards on new noise-sensitive receptors is not a CEQA consideration. However, this information is provided here so that a determination can be made regarding the ability of the proposed project to meet the requirements of the Town of Truckee for exterior and interior noise levels at new sensitive uses proposed under the project.

As shown on **Figure 3**, the school site is predicted to be exposed to exterior transportation noise levels up to approximately 55 dBA L_{dn}. This would comply with the 65 dBA L_{dn} limit for schools established by the Town of Truckee Land Use Compatibility Table (**Table 5**) with no additional noise control measures.

Mitigation Measure

1(a) The Town shall establish the following as conditions of approval for any permit that results in the use of construction equipment:

- Construction shall be limited to between 7:00 a.m. and 9:00 p.m. Monday through Saturday and 9:00 a.m. and 6:00 p.m. on Sunday.
- Unnecessary idling of internal combustion engines is prohibited.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Utilize "quiet" air compressors and other stationary noise-generating equipment where appropriate technology exists.
- The project sponsor shall designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint and will require that reasonable measures warranted to correct the problem be implemented. The project sponsor shall also post telephone number for excessive noise complaints in conspicuous locations in the vicinity of the project site. Additionally, the project sponsor shall send a notice to neighbors in the project vicinity with the information on the construction schedule and the telephone number for noise complaints.

Timing/Implementation: Implemented prior to approval of grading and/or building permits
Enforcement/Monitoring: Town of Truckee Community Development Department

Implementation of mitigation measures 1(a) would help to reduce construction-generated noise levels. With mitigation, this impact would be considered ***less-than-significant***.

IMPACT 2: WOULD THE PROJECT GENERATE EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS?

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The **Table 7** data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 3: FOR A PROJECT LOCATED WITHIN THE VICINITY OF A PRIVATE AIRSTRIP OR AN AIRPORT LAND USE PLAN OR, WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, WITHIN TWO MILES OF A PUBLIC AIRPORT OR PUBLIC USE AIRPORT, WOULD THE PROJECT EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS?

There are no airports in the project vicinity. Therefore, this impact is not applicable to the proposed project.

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

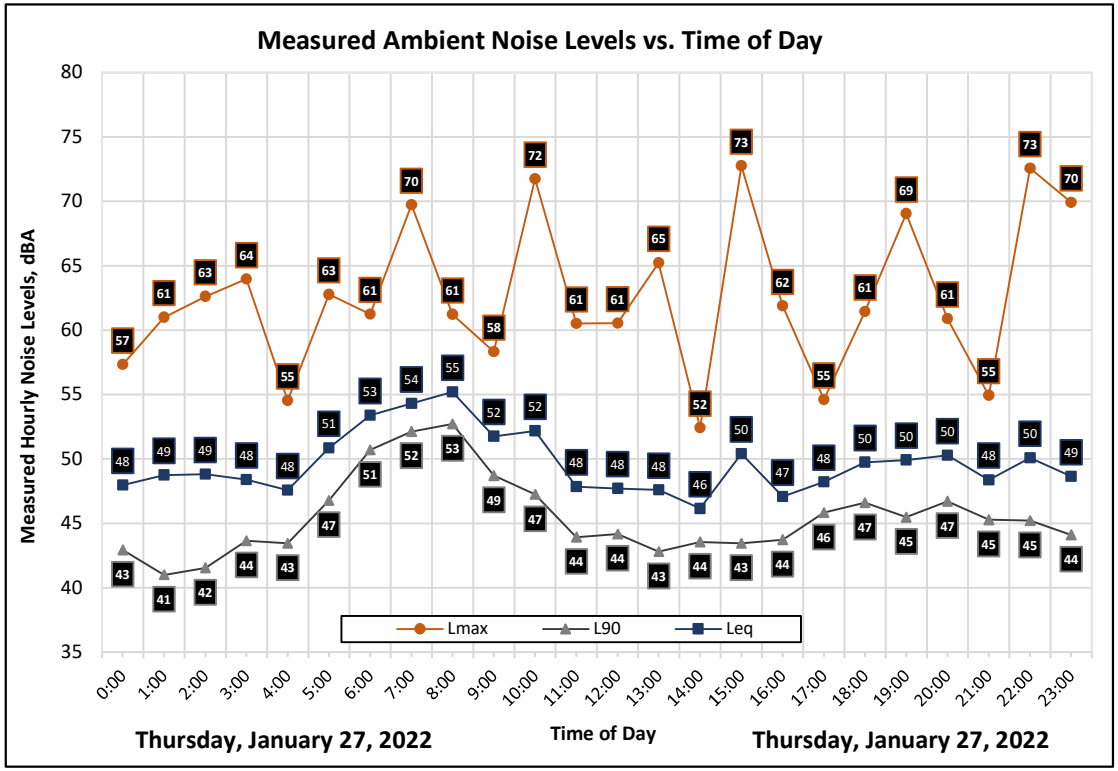
Appendix B: Continuous Ambient Noise Measurement Results

Appendix B1: Continuous Noise Monitoring Results

Site: LT-1 Thursday
Project: Golden Valley Tahoe School Expansion
Meter: LDL 820-1
Location: Northern Project Boundary
Calibrator: CAL200
Coordinates: 39.36570°, -120.12861°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, January 27, 2022	0:00	48	57	47	43
Thursday, January 27, 2022	1:00	49	61	47	41
Thursday, January 27, 2022	2:00	49	63	47	42
Thursday, January 27, 2022	3:00	48	64	47	44
Thursday, January 27, 2022	4:00	48	55	47	43
Thursday, January 27, 2022	5:00	51	63	50	47
Thursday, January 27, 2022	6:00	53	61	53	51
Thursday, January 27, 2022	7:00	54	70	54	52
Thursday, January 27, 2022	8:00	55	61	55	53
Thursday, January 27, 2022	9:00	52	58	51	49
Thursday, January 27, 2022	10:00	52	72	49	47
Thursday, January 27, 2022	11:00	48	61	47	44
Thursday, January 27, 2022	12:00	48	61	47	44
Thursday, January 27, 2022	13:00	48	65	46	43
Thursday, January 27, 2022	14:00	46	52	46	44
Thursday, January 27, 2022	15:00	50	73	46	43
Thursday, January 27, 2022	16:00	47	62	46	44
Thursday, January 27, 2022	17:00	48	55	48	46
Thursday, January 27, 2022	18:00	50	61	49	47
Thursday, January 27, 2022	19:00	50	69	49	45
Thursday, January 27, 2022	20:00	50	61	50	47
Thursday, January 27, 2022	21:00	48	55	48	45
Thursday, January 27, 2022	22:00	50	73	48	45
Thursday, January 27, 2022	23:00	49	70	47	44

Statistics	Leq	Lmax	L50	L90
Day Average	51	62	49	46
Night Average	50	63	48	44
Day Low	46	52	46	43
Day High	55	73	55	53
Night Low	48	55	47	41
Night High	53	73	53	51
Ldn	56	Day %		70
CNEL	56	Night %		30

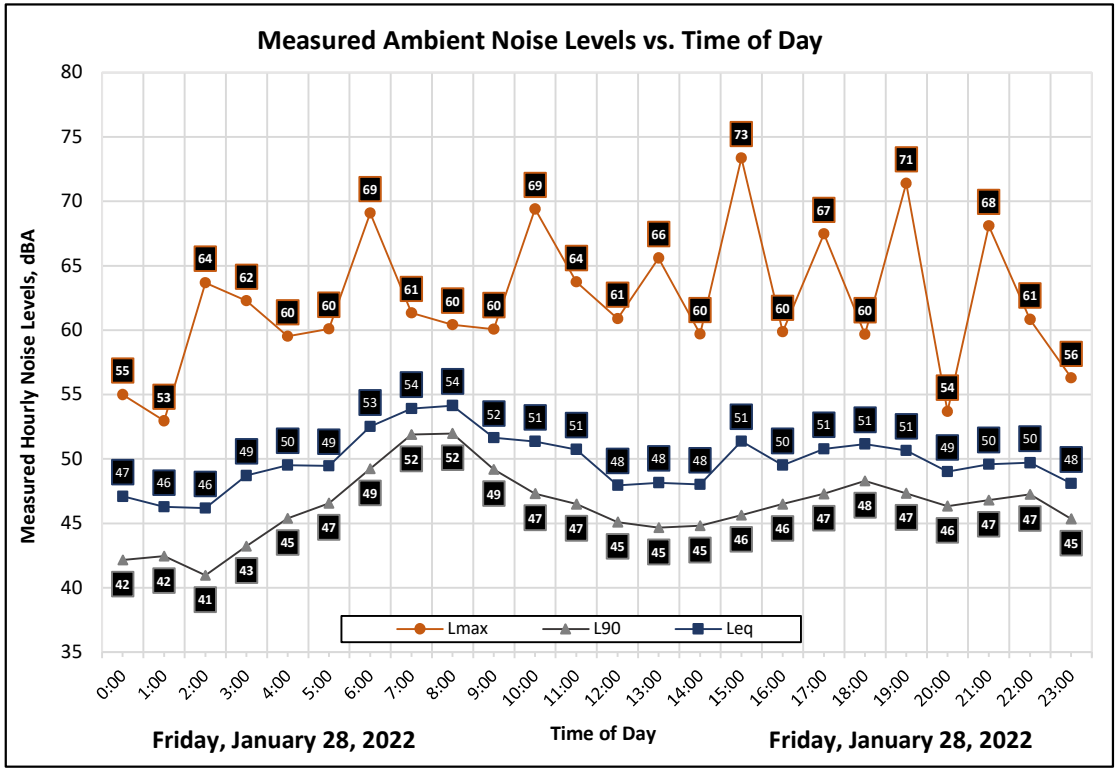


Appendix B2: Continuous Noise Monitoring Results

Site: LT-1 Thursday
Project: Golden Valley Tahoe School Expansion
Meter: LDL 820-1
Location: Northern Project Boundary
Calibrator: CAL200
Coordinates: 39.36570°, -120.12861°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Friday, January 28, 2022	0:00	47	55	46	42
Friday, January 28, 2022	1:00	46	53	46	42
Friday, January 28, 2022	2:00	46	64	45	41
Friday, January 28, 2022	3:00	49	62	47	43
Friday, January 28, 2022	4:00	50	60	49	45
Friday, January 28, 2022	5:00	49	60	49	47
Friday, January 28, 2022	6:00	53	69	52	49
Friday, January 28, 2022	7:00	54	61	54	52
Friday, January 28, 2022	8:00	54	60	54	52
Friday, January 28, 2022	9:00	52	60	51	49
Friday, January 28, 2022	10:00	51	69	50	47
Friday, January 28, 2022	11:00	51	64	50	47
Friday, January 28, 2022	12:00	48	61	47	45
Friday, January 28, 2022	13:00	48	66	47	45
Friday, January 28, 2022	14:00	48	60	47	45
Friday, January 28, 2022	15:00	51	73	48	46
Friday, January 28, 2022	16:00	50	60	49	46
Friday, January 28, 2022	17:00	51	67	50	47
Friday, January 28, 2022	18:00	51	60	50	48
Friday, January 28, 2022	19:00	51	71	49	47
Friday, January 28, 2022	20:00	49	54	49	46
Friday, January 28, 2022	21:00	50	68	49	47
Friday, January 28, 2022	22:00	50	61	49	47
Friday, January 28, 2022	23:00	48	56	48	45

Statistics	Leq	Lmax	L50	L90
Day Average	51	64	50	47
Night Average	49	60	48	45
Day Low	48	54	47	45
Day High	54	73	54	52
Night Low	46	53	45	41
Night High	53	69	52	49
Ldn	55	Day %		75
CNEL	56	Night %		25

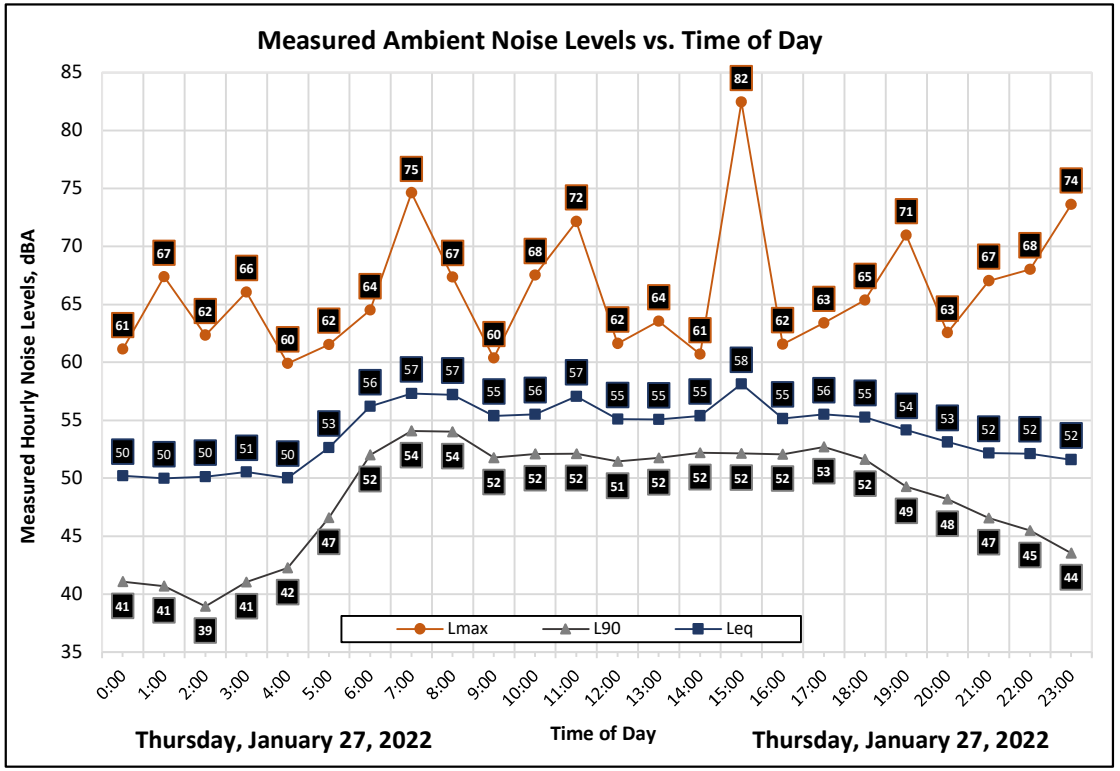


Appendix B3: Continuous Noise Monitoring Results

Site: LT-2 Thursday
Project: Golden Valley Tahoe School Expansion
Location: Southeastern Project Boundary
Coordinates: 39.36443°, -120.12324°
Meter: LDL 820-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, January 27, 2022	0:00	50	61	49	41
Thursday, January 27, 2022	1:00	50	67	48	41
Thursday, January 27, 2022	2:00	50	62	48	39
Thursday, January 27, 2022	3:00	51	66	49	41
Thursday, January 27, 2022	4:00	50	60	49	42
Thursday, January 27, 2022	5:00	53	62	52	47
Thursday, January 27, 2022	6:00	56	64	56	52
Thursday, January 27, 2022	7:00	57	75	57	54
Thursday, January 27, 2022	8:00	57	67	57	54
Thursday, January 27, 2022	9:00	55	60	55	52
Thursday, January 27, 2022	10:00	56	68	55	52
Thursday, January 27, 2022	11:00	57	72	55	52
Thursday, January 27, 2022	12:00	55	62	55	51
Thursday, January 27, 2022	13:00	55	64	55	52
Thursday, January 27, 2022	14:00	55	61	55	52
Thursday, January 27, 2022	15:00	58	82	55	52
Thursday, January 27, 2022	16:00	55	62	55	52
Thursday, January 27, 2022	17:00	56	63	55	53
Thursday, January 27, 2022	18:00	55	65	55	52
Thursday, January 27, 2022	19:00	54	71	53	49
Thursday, January 27, 2022	20:00	53	63	53	48
Thursday, January 27, 2022	21:00	52	67	52	47
Thursday, January 27, 2022	22:00	52	68	51	45
Thursday, January 27, 2022	23:00	52	74	50	44

Statistics	Leq	Lmax	L50	L90
Day Average	56	67	55	51
Night Average	52	65	50	44
Day Low	52	60	52	47
Day High	58	82	57	54
Night Low	50	60	48	39
Night High	56	74	56	52
Ldn	59	Day %		81
CNEL	59	Night %		19

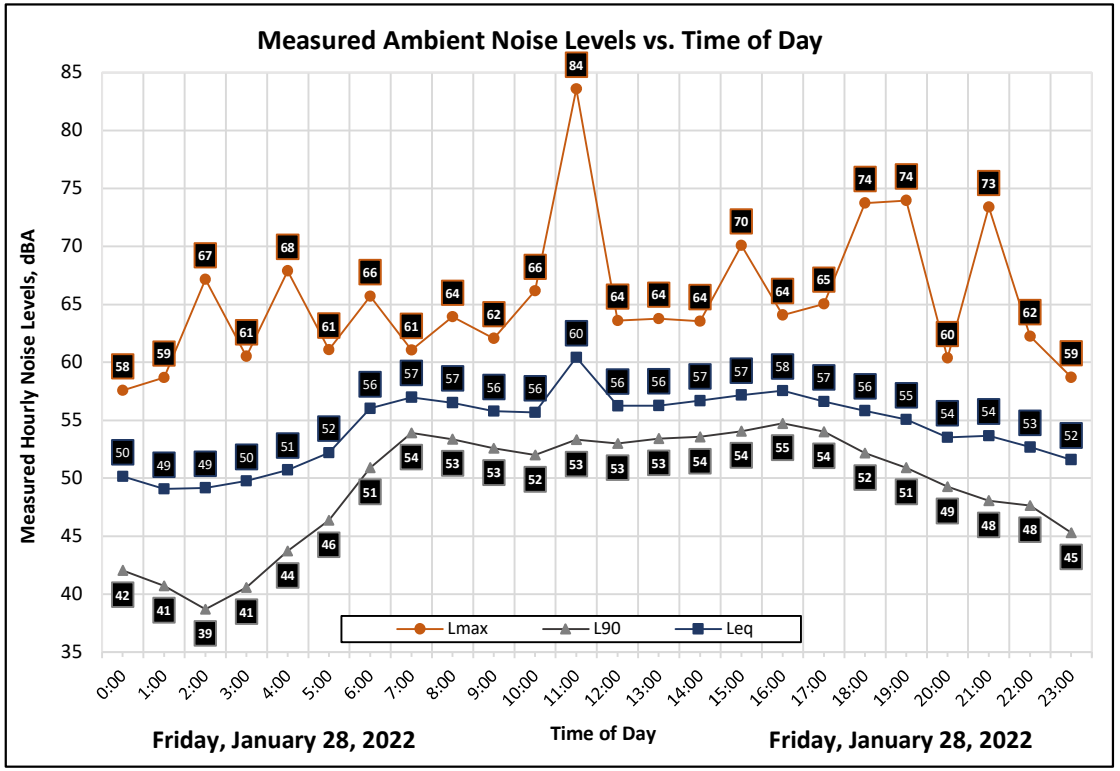


Appendix B4: Continuous Noise Monitoring Results

Site: LT-2 Friday
Project: Golden Valley Tahoe School Expansion
Meter: LDL 820-2
Location: Southeastern Project Boundary
Calibrator: CAL200
Coordinates: 39.36443°, -120.12324°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Friday, January 28, 2022	0:00	50	58	49	42
Friday, January 28, 2022	1:00	49	59	47	41
Friday, January 28, 2022	2:00	49	67	46	39
Friday, January 28, 2022	3:00	50	61	48	41
Friday, January 28, 2022	4:00	51	68	50	44
Friday, January 28, 2022	5:00	52	61	51	46
Friday, January 28, 2022	6:00	56	66	55	51
Friday, January 28, 2022	7:00	57	61	57	54
Friday, January 28, 2022	8:00	57	64	56	53
Friday, January 28, 2022	9:00	56	62	55	53
Friday, January 28, 2022	10:00	56	66	55	52
Friday, January 28, 2022	11:00	60	84	56	53
Friday, January 28, 2022	12:00	56	64	56	53
Friday, January 28, 2022	13:00	56	64	56	53
Friday, January 28, 2022	14:00	57	64	56	54
Friday, January 28, 2022	15:00	57	70	57	54
Friday, January 28, 2022	16:00	58	64	57	55
Friday, January 28, 2022	17:00	57	65	56	54
Friday, January 28, 2022	18:00	56	74	55	52
Friday, January 28, 2022	19:00	55	74	54	51
Friday, January 28, 2022	20:00	54	60	53	49
Friday, January 28, 2022	21:00	54	73	53	48
Friday, January 28, 2022	22:00	53	62	52	48
Friday, January 28, 2022	23:00	52	59	51	45

Statistics	Leq	Lmax	L50	L90
Day Average	57	67	56	53
Night Average	52	62	50	44
Day Low	54	60	53	48
Day High	60	84	57	55
Night Low	49	58	46	39
Night High	56	68	55	51
Ldn	59	Day %		85
CNEL	59	Night %		15



Appendix C: Traffic Noise Calculation Inputs and Results

Appendix C-1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Noise Barrier Calculation: Data Input Sheet

Project #: 211210 Golden Valley Tahoe School
Description: Existing and Existing Plus Project Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Level, dBA	Distance to Noise Contours		
												70 dB	65 dB	60 dB
1	Union Mills Road	Project Traffic - Closest Receptor	1,026	100	0	0.01	0	45	250		42.1	3	7	16
2	Interstate 80	Parallel to Union Mills - Closest Receptor	34,000	81	19	6	15	55	420		65.5	209	451	971
	Total	Existing Plus Project at Cloesest Receptor									65.5			
		Change, dB									0.0198			

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APPENDIX C

VMT ANALYSIS

Kimley»Horn

Memorandum

To: Michael Gross
Truckee Waldorf School

From: Chris Gregerson, P.E., T.E., PTOE, PTP

Re: ***Truckee Waldorf School Expansion – VMT Analysis***
Truckee, California

Date: August 31, 2022

This memorandum documents a Vehicle Miles Traveled (VMT) analysis completed for the proposed Truckee Waldorf School Expansion ("Project") in Truckee, California. The proposed project is an existing charter school anticipated to expand their campus to accommodate up to 240 total students. With the passage of SB 743, Vehicle Miles Travelled (VMT) has become an important indicator for determining if new development will result in a "significant transportation impact" under the California Environmental Quality Act (CEQA). This memorandum summarizes the VMT analysis and resultant findings for the proposed project.

Purpose of Analysis

Passed in 2013, SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change has been made by replacing LOS with Vehicle Miles of Travel (VMT). This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation.

In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and are now in effect. The provisions apply statewide as of July 1, 2020.

To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the Technical Advisory on Evaluating Transportation Impacts in CEQA[1] (December 2018) that provides guidance regarding the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State's emissions goals.

[1] *Technical Advisory on Evaluating Transportation Impacts in CEQA.* Governor's Office of Planning and Research State of California. December 2018.

- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- OPR states that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Generally, retail development including stores smaller than 50,000 square feet might be considered local serving.
- Lead agencies have the discretion to set or apply their own significance thresholds.

In April 2022, the Town of Truckee adopted the Town of Truckee California Environmental Quality Act VMT Thresholds of Significance that was established for use in implementation of SB 743, including the selection of VMT analysis methodology, setting thresholds of significance, and potential mitigation.

The Town of Truckee VMT thresholds of significance state that if the project were to meet one or more of the following criteria, it is considered to have a significant VMT impact:

- The Project is inconsistent with the Truckee General Plan Land Use Forecasts, such that the Project is a different Land Use Type and is anticipated to generate a net increase in VMT from what would have been generated from the Truckee General Plan Land Use Forecasts.
- The Project's daily VMT per unit of development (such as thousand square feet of floor area, lodging or residential units, etc.) is greater than 85% of the town-wide average for the individual Land Use Type. VMT per unit shall be calculated by a qualified professional. The VMT per unit of development for each component of a mixed-use project shall be evaluated independently but combined to assess the thresholds of significance for the overall project.

Methodology and Assumptions

There are no existing criteria in the Town VMT guidelines for the presumption of a less-than-significant impact for VMT generated by a charter school. Therefore, the Project is required to calculate their VMT per unit and compare it to the townwide average. The Project must produce a daily VMT per unit that is less than 85% of the townwide average for the same land use type to have a less-than-significant VMT impact.

Town Average VMT

For this analysis, the VMT per unit is defined as the VMT per charter school student. Kimley-Horn determined the VMT per student for the project and compared it to the average for the Town of Truckee's existing charter schools, consistent with the Town's Transportation Study Guidelines.

The Town's regional average was defined as the average VMT per students who attend the following charter schools:

- Waldorf School (Union Mills Campus)
- Waldorf School (at Sierra College)
- Forest Charter School
- Sierra Expeditionary Learning School (SELS)

Kimley-Horn used anonymized student addresses provided by the project applicant for the Waldorf and Forest Charter schools to locate homes of existing students and faculty to determine the trip length for each student and faculty member to and from the existing schools and proposed project. Kimley-Horn used the Geographical Information System (GIS) functions in the TransCAD software modeling package to determine trip lengths and the average one-way VMT per Student for each school. The home locations

and the school locations were inputs for the multi-path analysis utilizing TransCAD to identify logical paths and estimate trip lengths to calculate VMT.

Neighborhood locations and travel distances for the SELS students were obtained from the *Tahoe Truckee Waldorf School Expansion VMT Analysis* (Dec 2021) completed by LSC Transportation Consultants (LSC memo, also provided as **Attachment D**). Faculty neighborhood locations and travel distances were also pulled from the LSC memo and incorporated into this analysis.

To remain consistent with VMT totals calculated in the LSC memo and per request from the Town, the one-way trip length for a student to travel to their respective charter school was multiplied by a factor of 4 (2 round trips for a parent/caregiver to drop-off/pick-up and child and then return home) while the VMT totals for faculty were multiplied by a factor of 2 (1 round trip for faculty member to travel to and from the school). Thus, the total VMT for a given charter school was calculated as:

$$\sum 4 \times Distance\ from\ Student\ Home\ to\ School + \sum 2 \times Distance\ from\ Faculty\ Home\ to\ School$$

Assumed Existing VMT Reducers

Sibling, staff with children, carpooling, mode split, and bussing data were aggregated for each school where available as this data contributes to an overall reduction in VMT produced by each school. The following sources and assumptions were made and are summarized in **Table 2**:

- For Union Mills and Sierra College campuses, the survey data collected by the school including data on carpooling, carpool size, siblings, and bike trips was used to determine a VMT reduction factor for each campus. A summary is provided as **Attachment A** and the responses are provided as **Attachment B**.
- For the SELS school, reduction factors were pulled directly from the LSC memo. These factors were compounded per methodology used in the LSC memo.
- For the Forest Charter School, an average reduction was calculated for carpooling based on Waldorf and SELS campuses. The sibling reduction was calculated based on data provided by the school that 58 out of the 166 total students.

Project Average VMT

For the Plus Project scenario, it was assumed that the distribution of students currently attending Waldorf's two Truckee campuses would be representative of the 240 future student addresses at the new expanded campus. However, reductions were split between existing students and future students due to the much larger number of future students compared to existing students. Therefore, the following reductions were applied to calculate the average VMT per student for the project scenario and are summarized in **Table 3**:

- 22 percent of existing Waldorf school students have a sibling attending the "other" Waldorf campus. When the Project is built and the Sierra College and Union Mills campuses are combined, this will eliminate the need for parents to drive between campuses (or drive separate vehicles to each campus) to drop off both of their children. The driving distance between campuses was calculated as 6.1 miles and the reduction in VMT that will occur from this added efficiency of combining campuses was calculated by multiplying the total number of existing students, the distance between the schools, the percentage of existing students with siblings attending the other campus, and the two trips that are removed with the expanded campus. This resulted in an overall VMT reduction of 198.6.

- For students who ride their bike to campus and responded to the survey as they do not carpool or ride with their sibling, a reduction was applied as well. Although the survey responses indicate 9 percent of students ride their bike to campus, this reduction was calculated by multiplying the number of existing students and future students by 5-percent, the assumed mode share representing a full year of school, the average distance for bike trips obtained from the survey of 4.9 miles, and the four trips that are replaced by the two biking trips. This was calculated as an existing student VMT reduction of 72.5 and a future student VMT reduction of 162.7.
- Based on the survey results, a carpooling and sibling reduction factor was calculated. It was calculated that a reduction factor of approximately 18-percent should apply to students who carpool, but do not have a sibling at the school. For existing students, it was calculated that approximately 56-percent of students have siblings at the school, but for future students, the average of all charter schools was used to calculate the sibling reduction percentage. The future sibling reduction percentage was calculated to be approximately 46-percent, as shown in **Table 1**. This resulted in an overall existing carpool/sibling reduction factor of 0.41 and a future carpool/sibling reduction factor of 0.38, as shown in **Table 3**.

Table 1 – Future Sibling Reduction

School	Total Students	Duplicate Addresses	Sibling %
Union Mills/Sierra College	79	44	55.7%
Forest Charter	166	58	34.9%
SELS	214	108	50.5%
Total	459	210	45.8%

Analysis Results

Town Average VMT

Table 2 summarizes the average VMT per student for each charter school under existing conditions, as well as the total town average VMT per student. The net VMT per student for the Town of Truckee is 16.5, which is calculated by dividing the total VMT for each charter school by the total number of students. In addition, **Table 2** shows that the Town's threshold, set 15-percent below the townwide average, is 14.0 VMT per student.

Project VMT

Table 3 summarizes the VMT per student for the proposed project. The Waldorf School Expansion is anticipated to produce 18.3 net VMT per student. Without mitigation it is anticipated that the project will have a significant VMT impact as it falls above the Town threshold of 14.0.

Per discussion with the school, new faculty VMT assumes that the fully staffed 240 student campus will have 16 faculty (or 10 additional faculty). Calculations for the reduction factors based on percent siblings, carpooling, and faculty with kids as students is included in **Attachment C**.

Table 2 – Town Average Vehicle Miles Traveled (VMT)

School Name	Student Households	Gross Student VMT	Gross Faculty VMT	Gross VMT / Student	Total Reduction Factor	Net Total VMT	Net VMT / Student
Waldorf School (Union Mills Campus)	42	1,230.3	78.7	31.2	0.41	804.5	19.0
Waldorf School (at Sierra College)	32	823.0	40.2	27.0	0.41	522.7	16.3
Forrest Charter School	85	2,478.2	247.6	32.1	0.22	2180.6	25.7
Sierra Expeditionary Learning School (SELS)	211	1,094.4	465.0	23.0	0.51	2606.1	12.4
						Town Average	16.5
						15% Below Town Average	14.0

Table 3 – Project Vehicle Miles Traveled (VMT)

Metric	Union Mills Expansion (Project)
Existing Student Households[1]	74
Existing Student VMT[2]	2172.8
Existing Faculty VMT	125.7
New Student Households	166
New Student VMT	4874.0
New Faculty VMT[3]	209.4
Gross Total VMT	7381.9
Gross VMT / Student	30.8
Combined Campus Reduction	-198.6
Bike to School Reduction (Existing)	-72.5
Bike to School Reduction (Future)	-162.7
Carpool & Sibling Reduction Factor (Existing)	-0.41
Carpool & Sibling Reduction Factor (Future)	-0.38
Net Total VMT	4052.5
Net VMT / Student	18.3
Mitigation Reduction Required	23.2%
Mitigated VMT / Student	14.0

1. This includes the 42 students from the Union Mills Campus and the 32 students from the Sierra College Campus.
2. Calculated based on the addresses of students from Union Milla and Sierra College traveling to the Union Mills Campus.
3. Assumes 16 total (10 new) faculty

VMT Mitigation

To reduce VMT below the Town significance threshold of 14.0 VMT per student, the Project shall reduce its VMT per student by 23.2-percent. This reduction may be achieved through a combination of VMT reduction strategies including, but not limited to:

- A corresponding reduction in on-campus school days as compared to the Tahoe Truckee Unified School District's annual number of on-campus school days. This reduction may be provided over the course of the school year to account for part of or the entirety of the required mitigation percentage of 23.2-percent. This measure shall be documented by means of submittal of the school's academic calendar to the Town for review and approval.
- School provided bussing/vanpool program that is monitored based on the number of students and origination point of each student who utilizes the program. This measure may require further study by the applicant and review/approval by the Town prior to implementation.
- Other Town programs or measures that become available and demonstrate a 23.2-percent reduction in VMT per student.

Findings

Based on the results of this analysis, the following findings are made:

- Based on the VMT calculation methodology described herein, the Truckee Townwide Average VMT per student for charter schools is 16.5. Therefore, the threshold of significance for new Charter school development is 15-percent below the townwide average, or 14.0 VMT per student.
- The proposed project is anticipated to result an average VMT per student of 18.3. The project would need to reduce VMT per student by 23.2-percent to be below the town threshold.
- The project shall implement VMT reducing mitigation measures to reduce its VMT per student by 23.2-percent to be equal to or less than the threshold of significance through a combination of the VMT Mitigation measures described above.

Attachments:

Attachment A – Waldorf Travel Survey Summary Table
Attachment B – Waldorf Travel Survey Responses
Attachment C – Travel Distances for Students and Faculty by School
Attachment D – LSC Memorandum

Attachment A - Waldorf Travel Survey Summary Table

Waldorf Schools Travel Survey Responses Summary	
Total Student Population (students)	80
Total Survey Responses	53
Survey Responses Representing 2 students	19
Response rate (%)	90%
Average Distance from home to Union Mills (mi)	7.9
Average Distance from work to Union Mills (mi)	7.9
Average Distance from home to Sierra College (mi)	6.6
Average distance from work to Sierra College (mi)	6.5
Yes to "Do you carpool" %	29%
Average carpool size (students/vehicle)	2.6
Yes to Open to future carpooling (%)	93%
Yes to multiple children attending school (%)	54%
Yes to have children attending both campuses (%)	22%
Yes to trip chaining drop-off and pick-up (%)	97%
Average frequency of trip chaining (days/week)	3.7
Average distance from home to chained activity (mi)	8.7
Yes to drive an electric car (%)	10%
Yes to drive an electric car in the next year (%)	38%
Yes to do you ever bike to school (%)	24%
Yes to do you bike to school multiple times per week (%)	9%
Average distance from home to school for regular cyclists (mi)	4.9
Have a sibling and carpool (%)	11%
% Students who carpool (with sibling or otherwise)	72%
Either carpool or have sibling	71%
Carpool, but no sibling	18%

Attachment B - Waldorf Travel Survey Responses

Timestamp	Distance from your home to school Haskatasun (12640 Union Mills Rd). Please use a mapping ap to calculate the driving distance	Distance from work to school at Haskatasun (12640 Union Mills Rd). Please use a mapping ap to calculate the driving distance	Distance from home to school at Sierra College (11001 College Trail) Please use a mapping ap to calculate the driving distance	Distance from work to school at Sierra College (11001 College Trail). Please use a mapping ap to calculate the driving distance.	Do you Carpool (now or pre-COVID)?	If you carpool, how many children are in your carpool?	If you do not carpool (now or pre-COVID), would you be open to carpooling in the future?	Does your family have multiple children at the GVTS?	If you have more than one child, what campus are they at?	Do you go to work, run errands, or take children to activities before or after dropping off your child/picking your child up at school?	If yes, how many days a week do you go to work, run errands or take kids to activities before or after dropping of your child/picking your child up at school?	If yes to errands and activities, what is the average distance from your house to these other locations?	Do you drive an electric car?	Do you plan to drive and electric car in the next 12 months	Do you ever bike to school?	If yes, how often?	Have a sibling and carpool	Either Carpool or have sibling	Carpool but no sibling
2/4/2022 6:20:06	4.2		4	Yes	2.5	Yes	Yes	Both	Yes	5	10	No	Yes	Yes	Once a month	Yes	Yes	No
2/4/2022 6:20:06	4.2		4	Yes	2.5	Yes	Yes	Both	Yes	5	10	No	Yes	Yes	Once a month	Yes	Yes	No
2/4/2022 8:07:20	10.0			No		Yes	Yes	Haskatasun (Union Mills)	Yes	3	12	No	No	No		No	Yes	No
2/4/2022 8:07:20	10.0			No		Yes	Yes	Haskatasun (Union Mills)	Yes	3	12	No	No	No		No	Yes	No
2/4/2022 9:03:10	5.9		1.4	Yes	3	Yes	No		Yes	4	3	Yes	Yes	Yes	Multiple times a week	No	Yes	Yes
2/4/2022 10:42:27	10.0	10	4.1	4.1	No		No	No	Yes	5	45	No	No	No		No	No	No
2/4/2022 10:45:26	22.0	22	11	11	No		Yes	No	Yes	3	2	No	No	No		No	No	No
2/4/2022 10:45:40	4.5	4.5	4	4	No		No	No	Yes	5	22.5	No	Yes	No		No	No	No
2/4/2022 10:54:54	4.5	4.5	4	4	No		No	No	Yes	5	20	No	Yes	No		No	No	No
2/4/2022 10:55:54	6.0	6		3.6	Yes	2.5	No	No	Yes	5		No	Yes	No		No	Yes	Yes
2/4/2022 10:57:00	5.0	5	5	5	No		Yes	Yes	Haskatasun (Union Mills)	Yes	2	5	No	Yes	No		No	Yes	No
2/4/2022 10:57:00	5.0	5	5	5	No		Yes	Yes	Haskatasun (Union Mills)	Yes	2	5	No	Yes	No		No	Yes	No
2/4/2022 11:01:45	4.7	4.7			No		Yes	Yes	Haskatasun (Union Mills)	Yes	2	6	No	No	No		No	Yes	No
2/4/2022 11:01:45	4.7	4.7			No		Yes	Yes	Haskatasun (Union Mills)	Yes	2	6	No	No	No		No	Yes	No
2/4/2022 11:04:54	10.9	30.4	6.9	33.5	No		Yes	No		Yes	5	7.9	No	No	No		No	No	No
2/4/2022 11:06:43	5.0	5	5	5	Yes	2.5	Yes	No		Yes	2	6	No	Yes	Yes	Once a month	No	Yes	Yes
2/4/2022 11:20:46	5.2				No		Yes	No		Yes	2	8	No	Yes	No		No	No	No
2/4/2022 11:25:56	8.0	8	9	9	Yes	2	Yes	No		Yes	3	15	No	Yes	Yes	Once a year	No	Yes	Yes
2/4/2022 11:31:08	15.0	15			Yes	3	Yes	No		Yes	2	10	No	No	No		No	Yes	Yes
2/4/2022 11:32:01	40.0	39.1	43.1	42.2	No		Yes			Yes	1	5	No	No	No		No	No	No
2/4/2022 11:36:31	5.1	5.1	4.4	4.4	No		Yes	Yes	Haskatasun (Union Mills)	Yes	2	2.6	No	No	No		No	Yes	No
2/4/2022 11:36:31	5.1	5.1	4.4	4.4	No		Yes	Yes	Haskatasun (Union Mills)	Yes	2	2.6	No	No	No		No	Yes	No
2/4/2022 11:53:26	17.0	15	12	9.1	No		Yes	No		Yes	5	12	No	Yes	No		No	No	No
2/4/2022 12:26:23	9.6	9.6	8.4	8.4	No		Yes	No		Yes	2	10	No	No	No		No	No	No
2/4/2022 12:41:55	6.0	6	3	3	Yes	2	Yes	No		Yes	3	10	No	No	No		No	Yes	Yes
2/4/2022 14:22:02	6.7	6.7	4.4	4.4	Yes	3.5	Yes	Yes	Both	Yes	5	6	No	No	No		Yes	Yes	No
2/4/2022 14:22:02	6.7	6.7	4.4	4.4	Yes	3.5	Yes	Yes	Both	Yes	5	6	No	No	No		Yes	Yes	No
2/4/2022 15:33:39	15.0	15	18	18	No		Yes	Yes	Haskatasun (Union Mills)	Yes	5	7.5	No	No	No		No	Yes	No
2/4/2022 15:33:39	15.0	15	18	18	No		Yes	Yes	Haskatasun (Union Mills)	Yes	5	7.5	No	No	No		No	Yes	No
2/4/2022 15:43:29	3.9	3.9	3.1	3.1	Yes	2	Yes	No		Yes	5	10	No	Yes	No		No	Yes	Yes
2/4/2022 18:36:41	15.2	13.4			No		Yes	No		Yes	2	10	No	Yes	No		No	No	No
2/4/2022 19:12:14	9.0	7			Yes	3	Yes	No		No			No	Yes	No		No	Yes	Yes
2/4/2022 19:28:45	7.9	30.3			No		Yes	No		Yes	5	15	No	No	No		No	No	No
2/4/2022 22:10:24	9.0	7.5	4.4	8	No		Yes	No		Yes	5	5.8	No	No	No		No	No	No
2/5/2022 9:09:06	4.6	4.8	2	1.8	No		Yes	Yes	Haskatasun (Union Mills)	Yes	5	5	Yes	Yes	Yes	Once a month	No	Yes	No
2/5/2022 9:09:06	4.6	4.8	2	1.8	No		Yes	Yes	Haskatasun (Union Mills)	Yes	5	5	Yes	Yes	Yes	Once a month	No	Yes	No
2/5/2022 11:04:03	5.0	3	4	3	Yes	5	Yes	No		Yes	5	4	No	No	No		No	Yes	Yes
2/5/2022 14:34:07	6.5	6.5	3.9	3.9	No		Yes	Yes		Yes	3	5	No	Yes	Yes	Multiple times a week	No	Yes	No
2/5/2022 14:34:07	6.5	6.5	3.9	3.9	No		Yes	Yes		Yes	3	5	No	Yes	Yes	Multiple times a week	No	Yes	No
2/5/2022 17:31:09	4.8	0			No		Yes	Yes	Haskatasun (Union Mills)	Yes	1	0.2	Yes	Yes	Yes	Multiple times a week	No	Yes	No
2/5/2022 17:31:09	4.8	0			No		Yes	Yes	Haskatasun (Union Mills)	Yes	1	0.2	Yes	Yes	Yes	Multiple times a week	No	Yes	No
2/5/2022 19:32:10	8.3	0	8.5	6	Yes	2	Yes	Yes	Both	Yes	3	6	No	No	No		Yes	Yes	No
2/5/2022 19:32:10	8.3	0	8.5	6	Yes	2	Yes	Yes	Both	Yes	3	6	No	No	No		Yes	Yes	No
2/5/2022 19:52:53	3.5	5			No		Yes	Yes	Haskatasun (Union Mills)	Yes	5	5	No	No	No		No	Yes	No
2/5/2022 19:52:53	3.5	5			No		Yes	Yes	Haskatasun (Union Mills)	Yes	5	5	No	No	No		No	Yes	No
2/5/2022 20:36:06	8.7	8.7			Yes	2	Yes	No		Yes	2	8	No	No	No		No	Yes	Yes
2/5/2022 23:51:44	5.0	5	3	3	No		Yes	No		Yes	3	3	No	Yes	Yes	Once a month	No	No	No
2/6/2022 9:02:20	11.0	11	5.2	5.2	No		Yes	No		Yes	3	5	No	No	No		No	No	No
2/6/2022 16:06:01	8.7	0	6.3	6.2	Yes	2	Yes	No		Yes	2	4.9	No	No	Yes	Multiple times a week	No	Yes	Yes
2/6/2022 16:40:09	14.0	2	17	4	No		Yes	Yes	Sierra College	Yes	4	20	No	No	No		No	Yes	No
2/6/2022 16:40:09	14.0	2	17	4	No		Yes	Yes	Sierra College	Yes	4	20	No	No	No		No	Yes	No
2/6/2022 18:48:16	8.0	8	8	8	Yes	2	Yes	Yes	Both	Yes	3	8	No	No	No		Yes	Yes	No
2/6/2022 18:48:16	8.0	8	8	8	Yes	2	Yes	Yes	Both	Yes	3	8	No	No	No		Yes	Yes	No
2/6/2022 19:12:37	5.6	6.4	2.3	1	No		Yes	No		Yes	5	7	No	Yes	No		No	No	No
2/6/2022 21:13:58	5.5		3.8		No		Yes	Yes	Both	Yes	4	10	No	No	No		No	Yes	No
2/6/2022 21:13:58	5.5		3.8		No		Yes	Yes	Both	Yes	4	10	No	No	No		No	Yes	No
2/7/2022 8:56:53	7.9	14	7.2	9.1	No		Yes	Yes	Both	Yes	4	30	No	No	No		No	Yes	No

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Attachment B - Waldorf Travel Survey Responses

Timestamp	Distance from your home to school Haskatasun (12640 Union Mills Rd). Please use a mapping ap to calculate the driving distance	Distance from work to school at Haskatasun (12640 Union Mills Rd). Please use a mapping ap to calculate the driving distance	Distance from home to school at Sierra College (11001 College Trail) Please use a mapping ap to calculate the driving distance	Distance from work to school at Sierra College (11001 College Trail). Please use a mapping ap to calculate the driving distance.	Do you Carpool (now or pre-COVID)?	If you carpool, how many children are in your carpool?	If you do not carpool (now or pre-COVID), would you be open to carpooling in the future?	Does your family have multiple children at the GVTS?	If you have more than one child, what campus are they at?	Do you go to work, run errands, or take children to activities before or after dropping off your child/picking your child up at school?	If yes, how many days a week do you go to work, run errands or take kids to activities before or after dropping of your child/picking your child up at school?	If yes to errands and activities, what is the average distance from your house to these other locations?	Do you drive an electric car?	Do you plan to drive and electric car in the next 12 months	Do you ever bike to school?	If yes, how often?	Have a sibling and carpool	Either Carpool or have sibling	Carpool but no sibling
2/7/2022 8:56:53	7.9	14	7.2	9.1	No		Yes	Yes	Both	Yes	4	30	No	No	No		No	Yes	No
2/7/2022 9:31:44	9.7				No		Yes	No		Yes	4	8	No	No	No		No	No	No
2/7/2022 10:04:03	5.9	5.9	3.8	3.8	No		Yes	Yes	Both	Yes	4	3.3	No	No	Yes	Once a year	No	Yes	No
2/7/2022 10:04:03	5.9	5.9	3.8	3.8	No		Yes	Yes	Both	Yes	4	3.3	No	No	Yes	Once a year	No	Yes	No
2/7/2022 12:04:30	3.9	3.9	3.6	3.6	No		Yes	No		Yes	5	4	No	Yes	No		No	No	No
2/7/2022 12:19:15	5.7	6.4	4.2	1.1	No		Yes	Yes	Both	Yes	5	3	No	No	No		No	Yes	No
2/7/2022 12:19:15	5.7	6.4	4.2	1.1	No		Yes	Yes	Both	Yes	5	3	No	No	No		No	Yes	No
2/7/2022 13:44:42	5.0	5	6	6	Yes	3	Yes	No		Yes	3	6	No	Yes	Yes	Once a week	No	Yes	Yes
2/7/2022 14:38:14	2.7	2.7	1.9	1.9	No		Yes	Yes	Sierra College	Yes	5	4.9	Yes	Yes	No		No	Yes	No
2/7/2022 14:38:14	2.7	2.7	1.9	1.9	No		Yes	Yes	Sierra College	Yes	5	4.9	Yes	Yes	No		No	Yes	No
2/7/2022 19:51:11	8.4	8.4		9	No		Yes	No		Yes	5	8	No	No	No		No	No	No
2/7/2022 21:05:40	7.5	7.5	1.6	1.6	No		Yes	No		Yes	2	15	No	No	No		No	No	No
2/8/2022 3:15:39	6.3	3.6	6.3	0.7	No		Yes	No		Yes	5	6.5	No	No	No		No	No	No
2/8/2022 8:57:37	5.6	5.6	5.4	5.4	No		Yes	No		Yes	3	5.5	No	No	Yes	Multiple times a week	No	No	No
2/8/2022 10:55:31	5.4	7.1	3.4	6.9	Yes		No	No		No			No	No	No		No	Yes	Yes
# of Responses	72	63	53	54	72	20	72	71	36	72	70	69	72	72	72	17	72	72	72
Average	7.9	7.9	6.6	6.5	-	2.6	-	-	-	-	3.7	8.7	-	-	-	-			
Count Yes	-	-	-	-	21	-	67	38	-	70	-	-	7	27	17	-	8	51	13
Count No	-	-	-	-	51	-	5	33	-	2	-	-	65	45	55	-	64	21	59
Count Both									16										
Within 5 mi	16	19	29	30															

Attachment C - Travel Distances for Students and Faculty by School

School	Union Mills	Sierra College	Forest Charter	New School	Union Mills - Fac	Sierra College - Fac	New School - Fac	Forest Charter - Fac
Number of Address	42	32	85	74	4	2	6	12
Total Vehicke VMT	307.6	205.8	619.5	543.2	39.34385	20.101172	62.827	123.815911
	4.86187	3.9615	1.8	4.86187	25.299061	17.400618	18.301023	22.713037
	4.78510	12.5997	1.2	10.12640	5.196989	2.700554	5.182127	2.505625
	4.65961	3.2347	1.3	6.35222	5.124055		25.299061	2.505625
	6.35222	2.9375	0.5	7.81139	3.723745		5.196989	10.943027
	3.06897	8.5250	8.4	9.42542			5.124055	10.753172
	5.01387	8.0876	10.8	8.98805			3.723745	8.83752
	4.74637	14.4611	2.5	11.98782				12.040249
	25.29906	4.3444	5.7	5.23419				1.863377
	4.40742	2.7006	5.8	5.18213				2.239351
	5.36436	6.4251	2.5	7.31497				15.16604
	2.79278	3.2051	9.2	4.09490				24.712278
	25.28746	3.7592	10.3	4.65961				9.53661
	4.36064	3.1392	2.3	6.25672				
	4.94088	10.5650	5.9	8.09171				
	3.06897	10.4122	11.0	7.93891				
	8.09171	2.7876	2.3	5.90509				
	5.45410	3.7592	9.0	4.65961		Faculty		
	5.19699	2.4763	9.4	5.27891				
	10.04022	12.7327	3.0	10.25938				
	4.36064	5.7258	8.9	9.84099				
	5.19699	17.4006	3.0	18.30102				
	5.19699	2.0383	9.2	6.91223				
	7.58073	2.7671	11.1	5.32052				
	9.63244	13.0269	1.4	13.92731				
	5.68397	3.2051	1.8	4.09490				
	5.18213	7.2188	11.1	4.74637				
	7.31497	1.1892	1.3	6.09399				
	5.32052	2.4018	2.7	3.91400				
	4.78510	10.6333	0.3	8.15998				
	2.79278	9.8112	1.0	14.71596				
	5.44312	9.9655	1.0	7.49219				
	3.01938	3.2051	1.0	4.09490				
	6.25672	11.7574	1.1	11.87928				
	4.47479	2.7006	2.6	5.18213				
	8.98257		2.6	4.86187				
	8.98257		2.6	4.78510				
	7.93463		2.6	4.65961				
	7.93891		2.7	6.35222				
	4.47479		2.3	3.06897				
	25.28746		3.3	5.01387				
	5.77109		7.5	4.74637				
	5.78882		3.8	25.29906				
	8.47776		2.6	4.40742				
	34.39101		2.4	5.36436				
	5.12406		2.1	2.79278				
	3.72375		1.2	25.28746				
			4.1	4.36064				
			4.2	4.94088				
			4.2	3.06897				
			5.1	8.09171				
			6.6	5.45410				
			5.5	5.19699				
			5.3	10.04022				
			9.4	4.36064				
			5.3	5.19699				
			10.6	5.19699				
			5.4	7.58073				
			5.7	9.63244				
			6.0	5.68397				
			6.1	5.18213				
			9.8	7.31497				
			8.7	5.32052				
			8.5	4.78510				
			8.5	2.79278				
			8.8	5.44312				
			9.0	3.01938				
			11.8	6.25672				
			64.0	4.47479				
			7.5	8.98257				
			14.0	8.98257				
			4.1	7.93463				
			3.4	7.93891				
			1.2	4.47479				
			1.2	25.28746				
			17.0	5.77109				
			12.8	5.78882				
			2.4	8.47776				

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Attachment C - Travel Distances for Students and Faculty by School

School	Union Mills	Sierra College	Forest Charter	New School	Union Mills - Fac	Sierra College - Fac	New School - Fac	Forest Charter - Fac
Number of Address	42	32	85	74	4	2	6	12
			36.2	34.39101				
			15.5	5.12406				
			12.4	3.72375				
			12.4					
			12.7					
			31.6					
			12.8					
			14.1					

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Attachment D - LSC Memorandum

TRANSPORTATION PLANNING AND TRAFFIC ENGINEERING CONSULTANTS

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December 13, 2021

Ms. Becky Bucar, PE, Engineering Manager
Town of Truckee
10183 Truckee Airport Road
Truckee, CA 96161

RE: Tahoe Truckee Waldorf School Expansion VMT Analysis

Dear Ms. Bucar:

Per your request, LSC Transportation Consultants, Inc. is pleased to present a Vehicles-Miles of Travel (VMT) analysis for the proposed expansion of the existing Waldorf School at 12640 Union Mills Roadfrom a current enrollment of 44 students to a future capacity of 240 students. This work was conducted consistent with the Town of Truckee's VMT Thresholds of Significance, dated May 12, 2020.

This analysis will focus on a summer day when school is in session. Note that the Truckee TransCAD model is not well designed to analyze VMT impacts of a school expansion as the model represents a summer day when school is not in session.

VMT Screening Criteria

The Town's VMT Thresholds include screening criteria for projects that can be concluded to have a less-than-significant impact. Schools are not mentioned in any of the screening criteria at this time. Therefore, the project is not screened out and a full VMT analysis will berequired.

VMT Threshold of Significance

The Town the VMT Thresholdsdocument states a project has a significant VMT impact if one or more of the following criteria is met:

- The project is inconsistent with the Truckee General Plan land use forecasts;
- The project's daily VMT per unit of development is greater than 85 percent of the town-wide average for the individual land use types.

A review of the Truckee General Plan land use forecasts was conducted to identify if 240 student school capacity is included. The school site is in TAZ 74 in the Truckee TransCAD traffic model. General Plan model land uses were identified for existing (2018) and future (Alt A). The resulting growth in the project's TAZ is 6 SFDU. Note school traffic and/or land uses are in general not included in the TransCAD model as the model is representative of summer conditions when schools are not in session. There are only minimal commercial land uses included for school sites to account for summer staff. The school use is therefore not included in the land use forecasts in the traffic model.

To provide a quantitative basis for establishing the town wide average VMT per student, LSC calculated the VMT per student at a similar school in Truckee. The charter school Sierra Expeditionary Learning School (SELS) was considered to be a good comparison school by LSC and Town staff. LSC contacted SELS principal and obtained transportation data including number trips, home locations, mode to/from school, etc.

Data Analysis

School VMT was calculated based upon enrollment/staffing levels, estimated existing travel modes and trip lengths to staff and student residences. Student and staff data was obtained for the 2020-2021 school year. Carpooling and busing data was obtained from the pre-COVID school year of 2019-2020, so it could reflect typical conditions. This data was then divided by the number of students to determine VMT per student, as shown in Table 1. The level of VMT per student is expected to stay the same when the Waldorf School expanded to its full student capacity.

The 'base VMT' assumes each student is dropped off and picked up each day creating four trips while each staff member is assumed to generate two trips per day. This base VMT is then reduced by four factors: siblings attending the same school, carpooling, busing, and staff with their own kids as students at the school. Non-auto access (including walking and biking to the schools) was investigated and considered to be insignificant at less than one percent. All reductions were calculated from data provided from the schools. The high level of carpooling at the Waldorf School is supported by several programs at the school including a google form that connects families in the same neighborhoods into carpools, monthly schoolwide gatherings where parents get to know each other, and weekly eco-literacy programs for students connecting environmental impacts of actions such as carpooling.

Another type of trip reduction that was considered was pass-by trips. These are trips that are already on the road and pass-by the school to drop off or pick up students. While it is certain this type of trip does occur, it is difficult to quantify them. Some pass-by data was available for the Waldorf School but not at SELS. Additionally, levels of pass-by trips are assumed to be similar at each school or higher at SELS due to its central location.

The resulting VMT per student is shown at the bottom of Table 1. As shown, the total VMT per student (including both auto and bus VMT) at SELS is 11.2 The VMT threshold of significance is calculated as 85 percent of the SELS VMT per student which equates to 9.6 VMT per student. The calculated 19.3 VMT per student for the Waldorf School exceeds the standard and is therefore a significant VMT impact.

Impact Mitigation

Since the project as proposed does not meet the significance criteria, an evaluation of potential VMT reduction measures is necessary. These include the following:

- Staff carpooling incentives – Currently there are three staff of the Waldorf School commuting from out of Truckee (and none in the same area). In the future if more staff commutes from the Reno, North Lake Tahoe, or Sierraville areas, carpool incentives should be considered. However, at present there is no potential for reduction.

- Bus service to/from a more centralized location – The VMT associated with the proposed location (which is not centrally located and thus increases trip lengths) could be mitigated by requiring that students be bused from a central location (such as Downtown). The school would be required to provide this bus service, and no students would be allowed to be dropped off or picked up at the school location[1]. VMT reductions are shown in Table 1 if all students (including carpools) were dropped off and picked up in the Truckee downtown area. This bus service would reduce auto VMT by 1,229 while generating 34 VMT for the bus service, resulting in an overall reduction of 1,194 VMT per school day. Considering this strategy, the VMT per student would be reduced to 13.2, still above the threshold of significance. If buses go into neighborhoods instead of a central location picking kids up closer to their homes, then VMT would be reduced further and the need for carpooling (as described below) would go down. These two mitigation measures of busing and carpooling can be combined in different ways to mitigate VMT.

- Increase in carpooling – In addition to the bus service to/from a centralized location the carpool percentage would need to be increased to reduce VMT. It was determined that a 50 percent carpool rate would reduce the VMT per student below the threshold of significance. Conservatively the percent of staff with children at school was assumed to increase slightly in this scenario. As shown in the bottom right of Table 1, the VMT per student would be reduced to 9.5.

Conclusions

- The Waldorf School is not screened out of VMT analysis.

- The threshold of significance is 9.6 VMT per student based on SELS, a similar charter school in Truckee.

- Currently, the Waldorf School generates 19.6 VMT per student.

[1] With limited exceptions, such as students that are children of staff driving to the site anyway, students with disabilities, or for a health emergency.

- If increase carpooling and mandatory bus service from downtown were implemented as mitigation, the Waldorf School could reduce VMT per student to 9.5 and meet the threshold of significance. Busing and carpooling can be combined in different ways to mitigate VMT. This report shows one option that successfully mitigates VMT.

Please contact our office at (530) 583-4053 if you have any questions or comments pertaining to this analysis.

▲ ▲ ▲

Respectfully Submitted,

by _____
Leslie Suen, PE, Senior Engineer

Encl: Table 1

Table 1 - Vehicle Miles Traveled (VMT) for Proposed Waldorf School

	Number of Staff		Number of students		Distance to school (miles)		Base VMT[1]		Waldorf School Mitigated VMT with Bus Service		Bus Service and Increased Carpooling
	SELS	Waldorf School	SELS	Waldorf School	SELS	Waldorf School	SELS	Waldorf School	Miles	VMT	
Alpine Meadows	1		1	0	13		78	0		0	
Armstrong Tract			0	3	1.6	7.8	0	94	4.6	55	
Boulders			0	2	1.2	6.2	0	50	3	24	
Carnelian Bay		1	0	0		18	0	36	14.8	36	
Donner Creek			8	0	1.3		42	0		0	
Donner Lake	1		5	1	4	9.4	88	38	6.2	25	
Downtown Truckee		1	4	5	1.6	4.8	26	106	1.6	42	
Gateway			11	0	0.6		26	0		0	
Glenshire	12	1	33	19	8.8	8.5	1373	663	5.3	420	
Grays Crossing			3	1	4.2	4.5	50	18	1.3	5	
Kings Beach	1		2	5	15	15	150	300	11.8	236	
Lahontan			0	3		8	0	96	4.8	58	
Loyalton			2	1	40	40	320	160	36.8	147	
Martis Peak Road			2	0	13		104	0		0	
Northstar			1	2	10	16	40	128	12.8	102	
Olympic Heights		1	1	0	5		20	0		0	
Pine Forest			0	3	3.5	4.7	0	56	1.5	18	
Pioneer Trail Area			22	0	2.7		238	0		0	
Ponderosa Golf Course area		2	9	10	3.1	5.3	112	233	2.1	105	
Prosser Lakeview	3		15	3	5	5.6	330	67	2.4	29	
Prosser Lake Heights	4		4	2	4.4	4.8	106	38	1.6	13	
Russel Valley			5	0	14		280	0		0	
Sattley			0	2	30	30	0	240	26.8	214	
Sierra Meadows	7	1	53	17	3.3	6	746	420	2.8	202	
Sierraville		1	0	1	26	26	0	156	22.8	143	
Soda Springs			2	2	12	20	96	160	16.8	134	
Squaw Valley			4	1	11	16	176	64	12.8	51	
Tahoe City			0	1	14	18	0	72	14.8	59	
Tahoe Donner	4		24	12	3.8	10	395	480	6.8	326	
Verdi	1		0	0	24		48	0		0	
Total	**33**	**8**	**211**	**96**			**4795**	**3675**		**2446**	
Per Student							**22.7**	**38.3**		**25.5**	

VMT Reduction for Siblings	22%	26%	26%	26%
VMT Reduction for Carpooling	5%	30%	30%	**50%**
VMT Reduction for Busing	33%	0%	0%	0%
VMT Reduction for Staff with Children at School	9%	1%	3%	3%
Overall Reduction Factor	55%	49%	50%	64%
Auto VMT per Student	10.3	19.6	12.8	9.1
Bus VMT	206		34.4	34.4
Bus VMT per student	0.98		0.36	0.36
Total VMT per student	**11.2**	**19.6**	**13.2**	**9.5**
VMT Threshold of Significance (VMT/student)	**9.6**			

Note 1: Base VMT assumes 4 trips per student and 2 trips per staff

SELS = Sierra Expeditionary Learning School