LAKE TAHOE COMMUNITY COLLEGE FACILITIES MASTER PLAN AND TIMBER CONVERSION PERMIT

Draft CEQA Initial Study/Mitigated Negative Declaration and TRPA Initial Environmental Checklist



Lake Tahoe Community College

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1.0 INTRODUCTION

1.1 INITIAL STUDY / INITIAL ENVIRONMENTAL CHECKLIST SCOPE

This Initial Study/Initial Environmental Checklist (IS/IEC) has been prepared to address the potential environmental effects of the Lake Tahoe Community College (LTCC) Facilities Master Plan (FMP) located in the City of South Lake Tahoe, California. An Initial Study (IS) is a preliminary environmental analysis that is used by the California Environmental Quality Act (CEQA) lead agency as a basis for determining whether an EIR, a Mitigated Negative Declaration, or a Negative Declaration is required for a project under CEQA guidelines. An Initial Environmental Checklist (IEC) is a preliminary environmental analysis that is used for determining whether an EIS, a Mitigated Finding of No Significant Effect, or a Finding of No Significant Effect is required for a project under Tahoe Regional Planning Agency (TRPA) Rules of Procedure.

The IS/IEC contains a project description, description of environmental setting, identification and explanation of environmental effects, discussion of mitigation for potentially significant environmental effects, and the names of persons who prepared the study. This IS/IEC evaluates the LTCC FMP and provides additional analysis of those components of the FMP currently proposed for development. LTCC has prepared the FMP to plan for campus growth over the next 10 to 15 years. Completion and certification of the Facilities Master Plan environmental documentation will allow the College Board to adopt a Negative Declaration of environmental impact for the Facilities Master Plan and streamline CEQA and TRPA environmental review of future FMP project implementation.

The IS has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970, Cal. Pub. Res. Code §21000 et seq. The LTCC is the CEQA lead agency for this project. The IEC has been prepared pursuant to the requirements of Article VI of the TRPA Rules of Procedures and Chapter 3 of TRPA's Code of Ordinances. TRPA serves as lead agency pursuant to its own regulations.

1.2 BACKGROUND

LTCC was voted into existence on March 5, 1974 and started with 1,400 students and 16 faculty its first year where it operated from a converted motel. The 164-acre (now 147-acre) wooded campus was acquired in 1979 and first occupied in 1988 with the construction and operation of a 50,000 square foot facility, including the Main Building, pathways, parking, and amphitheater area, per the 1981 Master Plan. With a growing student population, the campus expanded and currently includes classrooms, administrative offices, student services, full-service library, theatre and performing arts building, fitness education center, a commercial-grade culinary arts kitchen, art gallery, child development center, demonstration garden, and other facilities. LTCC serves approximately 5,000 to 5,500 students annually with 40 full-time faculty.

The 1981 Master Plan has led development at the Campus beyond its planning period and vision. With a need for a new Master Plan, the Facilities Planning Committee, later Facilities Council (FC) was formed in the fall of 2011 to guide development of the Facilities Master Plan. Utilizing the Educational Master Plan, the Strategic Plan, the 2020 Vision and consultation with and input from stakeholders and the Board of Trustees, the FC identified ten capital facility projects based on the operational and educational needs of the college that forms the FMP, which serves as a roadmap for the maintenance and expansion of LTCC.

Elements of the proposed FMP have been environmentally reviewed and implemented separately, and have been constructed or are currently under construction. These FMP projects include: the Lisa Maloff University Center, Mechanical Building, North Parking Lot Improvements, and some existing building

modernization improvements (all operational since 2019); and the Early Learning Center (under construction).

1.3 **PROJECT LOCATION**

The approximately 147-acre LTCC campus is within the south shore of the Lake Tahoe Basin of the Sierra Nevada Mountains, mostly. in the city limits of South Lake Tahoe, California. The Project area is bound by U.S. Highway 50 (US 50) and existing commercial development to the north, Al Tahoe Blvd. to the east, STPUD facilities and Martin Avenue/Black Bart Avenue to the south, and Trout Creek to the west. Access to the Project area is via Al Tahoe Blvd., from either US 50 from the north or Pioneer Trail from the south. Chapter 2 contains a detailed description of the location, characteristics, and figures illustrating LTCC and the FMP.

1.4 PROJECT OBJECTIVES/PURPOSE AND NEED

The LTCC FMP is a vision for the future development of the campus. It ensures that the physical environment, both built and natural, serves the needs of the College community, enables the institution to realize its goals, provides an effective place to work and study, and welcomes its neighbors and partners. The FMP allows the College to plan its growth so physical improvements support the strategic vision. The objectives of the FMP are: Student Access; Student Learning, Success, Equity, and Achievement; Community Engagement; College Sustainability; Robust technology infrastructure and support that proactively reflects the needs of students, faculty, and staff; Maintenance of healthy, vibrant and resilient spaces and systems; and Achievement of model sustainability and efficiency goals through new construction and renovation. These objectives are achieved by correcting hazards; enhancing classroom environments with effective and efficient building operations; reducing energy and maintenance costs; developing appropriate maintenance cycles; implementing sustainable practices and green technology; maximizing space utilization through integrated space management; utilizing facilities as efficiently as practical; planning for multi-use facilities as much as practical; and developing partnerships with other outside agencies.

The LTCC expects to see steady, moderate overall enrollment growth in the coming years. While growth will require some new facilities for new programs, the bulk of resources will be focused on raising the efficiency of and maintaining existing assets in the short term. Although the campus is in good shape aesthetically, the infrastructure is in need of upgrade and replacement to meet the ever-increasing demands for efficiency and sustainability.

1.5 PERMITS AND APPROVALS

This document must be certified by the LTCC (CEQA lead agency) and the Tahoe Regional Planning Agency as part of their permitting review. The Project must be consistent with the codes, regulations and policies that include, but are not limited to the following list.

Tahoe Regional Planning Agency

- Tahoe Regional Planning Compact (PL 96-551 94 Statute 3233); and
- Regional Plan for the Lake Tahoe Basin;
 - Goals and Policies;
 - Code of Ordinances (Code);
 - Rules of Procedure;
 - o Environmental Thresholds Carrying Capacities;

- Plan Area Statements, Community Plans, and Area Plans;
- Bi-State 208 Water Quality Plan;
- Regional Transportation Plan; and
- Environmental Improvement Program.

Federal

- Endangered Species Act United States Fish and Wildlife Service;
- Clean Water Act Environmental Protection Agency; and
- National Historic Preservation Act.

State of California

- Division of the State Architect;
- Water Quality Control Plan for the Lahontan Region (Basin Plan);
- California Endangered Species Act (CESA);
- CAL FIRE Timber Harvest Plan Requirements;
- State Vehicle Emissions Controls; and
- State Historic Preservation Act.

El Dorado County

- Health Department Regulations; and
- Air Quality Management District Regulations.

Permits

- Division of the State Architect permit;
- CALFIRE timber conversion permit;
- California Regional Water Quality Control Board-Lahontan Region, NPDES permit;
- Occupational Safety and Health Administration (OSHA);
- California Occupational Safety and Health Administration (Cal-OSHA);
- TRPA Public Service Permit.

1.6 DOCUMENT ORGANIZATION

This IS/IEC includes the standard content for environmental documents under CEQA and TRPA Code of Ordinances and Rules of Procedures. An EIR/EIS was determined to be unnecessary, as there are not potentially significant environmental effects associated with the implementation of proposed FMP that cannot be mitigated. This IS/IEC is a full disclosure document, describing the FMP and their environmental effects in sufficient detail to aid decision-making.

Chapter 1 includes a description of the IS/IEC process and scope, project background and objectives, the general location of the Project and surrounding land uses, and a list of permits and approvals.

Chapter 2 contains a detailed project location and characteristics description, and a description of the FMP components, including the proposed near-term priorities and phasing, and regulatory compliance measures to be implemented as FMP components are proposed for development.

Chapter 3 contains environmental settings, a detailed analysis of the environmental effects and necessary mitigation measures if applicable.

2.0 DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVES

Lake Tahoe Community College (LTCC) has prepared the Facilities Master Plan (FMP) to plan for campus growth over the next 10 to 15 years. Completion and certification of the Facilities Master Plan environmental documentation will allow the College Board to streamline environmental review of future FMP project implementation.

The LTCC FMP is intended to create a roadmap for caretaking of LTCC facilities rather than a major expansion of the campus. The Project includes capital facility projects based on the operational/educational needs of the College as defined in the Educational Master Plan, draft Facilities Master Plan, the Strategic Plan, and the 2020 Vision, as well as other projects associated with the capital facility projects and other improvements or actions in regard to the LTCC campus. The projects range from new facilities including onsite residential housing, to remodeling of facilities, parking and signage, and trails.

2.1 PROJECT AREA LOCATION AND CHARACTERISTICS

The approximately 147-acre LTCC campus and FMP area (Project area), is within the south shore of the Lake Tahoe Basin of the Sierra Nevada Mountains, in the city limits of South Lake Tahoe, California. The Project area is bound by U.S. Highway 50 (US 50) and existing commercial development to the north, Al Tahoe Blvd. to the east, STPUD facilities and Martin Avenue/Black Bart Avenue to the south, and Trout Creek to the west. Access to the Project area is via Al Tahoe Blvd., from either US 50 from the north or Pioneer Trail from the south. The Project area includes seven (7) contiguous parcels of varying sizes (025-041-10, 025-010-34, 025-010-54, 031-011-02, 025-061-40, 025-061-12, and 025-041-08). Figure 2-1 provides a map of the Project location and existing land use designations in the TRPA Plan Area Statements (PAS) in the Project area. Table 2-1 summarizes the TRPA Plan Area Statements, plan designations, and planning statements in the Project area, as well as City of South Lake Tahoe Zoning. Table 2-2 details the Project area parcels, parcel area and TRPA and City of South Lake Tahoe Zoning. Parcel boundaries are detailed in Figures 2-2 and 2-3.

Historically, the LTCC has shown growth in the full-time equivalent student counts. Although there was a purposeful decline for the 2012-13 fiscal year due to state budget uncertainties, the full time equivalent student count has steadily grown over the last two decades from approximately 1,000 in the early 1990s to an average of approximately 1,700 in the early 2010s, although in recent years, enrollment has declined. Total enrollment is projected to continually grow over the next decade; however, on-campus populations may somewhat decline or remain unchanged.

The existing 2020 LTCC campus is comprised of fourteen existing campus buildings (including 6 portables that will eventually be removed) and an early learning center building that is under construction, clustered on 22 acres, covering approximately 120,900 assignable square feet (ASF) and 179,300 outside gross square feet (OGSF). These buildings provide the space for the support of instruction at a community college: laboratories, classroom lectures, meetings, staff support, library, student services, bookstore, child development center and student center. Since 1988, when the College opened at its current location, it has added to its space inventory to meet the ever-increasing and changing needs of the District. Three other buildings including the USDA Forest Service Lake Tahoe Basin Management Unit Regional Office, a South Tahoe PUD well/pump house and Tahoe Regional Planning Agency air quality monitoring station are located within the Project Area. Figures 2-2 and 2-3 document the existing facilities.

Beyond the classrooms and labs, the 147-acre wooded campus features a 192-seat black box theater, extensive art labs, and a demonstration garden. The 24,947-square foot Physical Education Center houses a gymnasium, dance studio, and a fitness education center. The 11,167-square foot Student Center includes a café, Associated Student Council ASC offices, and a professional-grade teaching kitchen for the culinary arts program. In 2005, the College opened a new 27,000-square foot library and adjoining art gallery. The library is equipped with study rooms for student use to further promote a collaborative learning environment. In 2019, the College opened the 6,860 square foot Lisa Maloff University Center to provide students with access to four-year college degree programs offered by LTCC partners. Table 2-3 shows the ASF and OGSF of the existing campus buildings.

Five parking areas currently serve the needs of the campus, totaling 429 parking spaces. The Main building parking lot has 330 parking stalls, the University Center parking lot has 22 parking stalls, the Demonstration Garden Parking lot has 51 parking stalls, the Child Development Center parking lot has 19 stalls, and there are 7 short term parking stalls along the main entrance road near the Mobility Hub (e.g., bus stop).

The main campus building area is located at an elevation of approximately 6,274 feet above sea level, within a forested urban area. Trout Creek and its associated meadow are located immediately to the west. The campus consists of gently sloping forested plateau with a break in slope to the Trout Creek flood plain west of the developed campus. Trout Creek flows from south to north toward US 50. Slopes generally run from the southeast to northwest and range from gentle to moderate. The developed portion of the campus is outside the Trout Creek floodplain. The area is characterized by Lodgepole and Jeffrey pine in the lower forest and forest plateau areas and Stream Environment Zone near Trout Creek.

Existing land coverage within the 183-acre (7,987,800 square feet) Project area is approximately 790,490 square feet, of which approximate 81,900 square feet is associated with the USFS LTBMU building and parking area. Total allowable coverage is 1,257,942 square feet. Figure 2-3 documents the existing TRPA land capability boundaries within the Project area.

Table 2-1

TRPA PAS	Plan Designation	Planning Statements	South Lake Tahoe Zoning
098 – Bijou/Al Tahoe Community Plan	Land Use Classification: Commercial/ Public Service Management Strategy: Redirection Special Designation: Preliminary Community Plan Area TDR Receiving Area for 1. Existing Development 2. Residential Bonus Units Scenic Restoration Area Multi-Residential Incentive Program	The area should be developed to provide regional commercial, recreational and public services for the South Shore.	Commercial
100 – Truckee Marsh	Land Use Classification: Conservation Management Strategy: Maximum Regulation Special Designation: None	This area should be managed primarily for its natural values including those management practices which contribute to the quality of fish and wildlife habitats, support dispersed recreation, and maintain the nutrient catchment capacity of the SEZ.	Conservation

Note: None of the FMP facilities are located or proposed in PAS 100 (Trout Creek area) but areas adjacent to the Creek and stream zone may be used for academic purposes.

Table 2-2

Assessor Parcer Numbers and Existing Zoning					
Parcel Owner	APN	City and TRPA Zoning	Plan Area Number	Area (acres)	
LTCC & CTC	025-041-10	Commercial and Conservation	PAS 098 and 100	111.29	
LTCC & CTC	025-010-34	Commercial and Conservation	PAS 098 and 100	29.56	
LTCC & CTC	025-010-54	Conservation	PAS 100	6.43	
LTCC&CTC	031-011-02	Conservation	PAS 100	12.00	
LTCC	025-041-08	Commercial	PAS 098	1.00	
LTCC	025-061-12	Commercial	PAS 098	4.16	
LTCC	025-061-40	Conservation	PAS 100	20.76	
Total				185.20	

Assessor Parcel Numbers and Existing Zoning

Notes: Parcel 025-041-20 (16.59 acres), zoned Commercial and Recreation on PAS 098 and 101 includes part of the LTCC sports field improvement area; however, this parcel is not part of the LTCC FMP Project Area. Portions of parcels 025-041-10, 025-010-34, 025-010-54, and 031-011-02 totaling 38.28 acres are owned by the CTC, leaving 146.92 acres under LTCC ownership. This area is zoned Conservation within PAS 100 (Truckee Marsh), includes the Trout Creek meadow and is not part of the LTCC FMP Project Area, but is available for use by the LTCC for academic purposes.

Table 2-3

Existing Campus Buildings

Building	Assignable Square Feet	Outside Gross Square Feet
Lake Tahoe College Main Building	35,555	61,780
Duke Theatre/Fine Arts Wing	16,295	24,482
Student Center/Culinary Arts	7,017	11,167
Physical Education	18,758	24,947
Learning Resource Center	18,766	27,000
G-Buildings (Portables)	7,513	9,003
South Mechanical Building	926	1008
M&O Storage Containers	2,177	2,560
Lisa Maloff University Center	6,860	6,896
Child Development Center	3,060	4,690
Tahoe Parents Nursery School	1,700	1,920
Early Learning Center	2,227	3,825
Total*	120,854	179,278

Source: LTCC 2020

* Includes the Early Learning Center (ELC) which will be completed in 2021 and excludes the offsite Tahoe Parents Nursery School which will be replaced by the ELC in 2021.



Figure 2-1. Project Area Location and TRPA Plan Area Statements



Figure 2-2. Existing Facility Locations and Parcel Boundaries



Figure 2-3. Parcel Boundaries and Land Capability Boundaries

2.2 **PROJECT OBJECTIVES**

The LTCC FMP is a vision for the future development of the campus. It ensures that the physical environment, both built and natural, serves the needs of the College community, enables the institution to realize its goals, provides an effective place to work and study, and welcomes its neighbors and partners. The FMP allows the College to plan its growth so physical improvements support the strategic vision. The objectives of the FMP are: Student Access; Student Learning, Success, Equity, and Achievement; Community Engagement; College Sustainability; Robust technology infrastructure and support that proactively reflects the needs of students, faculty, and staff; Maintenance of healthy, vibrant and resilient spaces and systems; and Achievement of model sustainability and efficiency goals through new construction and renovation. These objectives are achieved by correcting hazards; enhancing classroom environments with effective and efficient building operations; reducing energy and maintenance costs; developing appropriate maintenance cycles; implementing sustainable practices and green technology; maximizing space utilization through integrated space management; utilizing facilities as efficiently as practical; planning for multi-use facilities as much as practical; and developing partnerships with other outside agencies.

The LTCC expects to see steady, moderate overall enrollment growth in the coming years. While growth will require some new facilities for new programs, the bulk of resources will be focused on raising the efficiency of and maintaining existing assets in the short term. Although the campus is in good shape aesthetically, the infrastructure is in need of upgrade and replacement to meet the ever-increasing demands for efficiency and sustainability.

2.3 PROPOSED PROJECT

The LTCC FMP includes three expansion projects, a relocation/replacement project, and one remodel project that are undergoing review by the California Division of State Architect office and considered near term priorities. These projects include:

- 1. Remodel for Efficiency (RFE) and Science Modernization (project consists of interior renovation/walkway and access reconfiguration and is underway and estimated to be complete by June 2023)
- 2. Tahoe Basin Public Safety Training Center (building 11) This proposed 12,225 SF two-story building made of CMU block with cementitious wood grain board siding will be a teaching facility that will include flexible space with operable walls that will allow both classroom instruction and demonstration space. It will replace program space currently located in the portable classrooms on the north side of the main campus complex. The existing portable buildings will be removed following construction of building 11. It also includes the paved "tarmac" area (100,000 sf) shown to the north of Building 12. See Figure 2-4.
- 3. Equipment Storage Facility (building 12) These two-buildings totaling 20,960 SF will provide storage for public safety classes, such as Fire Academy, EMS, and storage for maintenance equipment for college use. It will be two metal frame clear span style fabric covered buildings and includes improvements to the north-south bike trail connector from the Greenway to the main campus parking lot. It also includes the paved "yard" area (42,364 sf) shown encircling Buildings 12a and 12b. Safety training equipment includes a training tower (Building 12c) that would be located northwest of the storage buildings on the paved tarmac.
- 4. P.E. Expansion (building 13) Consists of two modular buildings (2,400 sf total) that will provide flex space (but no locker room facilities) adjacent to the existing physical education center.

5. LTCC Offices (building 16) – Provide a 1,200 square foot structure to replace office space currently provided in the main building complex that may be lost through the remodel for efficiency project.

Other FMP projects, which currently do not qualify for state capital outlay funding, must be locally funded and/or funded through other funding sources, such as grants and partnerships and include:

- 6. Future Building Site (building 14) Replace program space currently provided in the portable buildings and provide space for potential LTCC program expansion in a two-story general purpose building.
- 7. Residential Student Living (buildings 15A and 15B) Provide on campus dorm/hall style housing for students in a two-story 16,000 square foot complex. Since dorms or multiple-person dwelling units are not allowed within the Town Center District of the Bijou/Al Tahoe Community Plan, an amendment to the Community Plan list of allowable uses would be needed prior to proposing development of this use.
- 8. Mixed Residential Living (building 17) Provide on campus mixed residential apartments for students, faculty, staff, or non-LTCC residents in a two-story 63,000 square foot apartment complex. The residential development would also provide up to 5,000 square feet of restaurant and/or food and beverage retail space to support the residents and LTCC on-campus population. Although Figure 2-4 shows a conceptual design with limited parking, the actual structures and parking would follow a more conventional arrangement with parking immediately adjacent to the buildings and with more parking spaces than depicted in the conceptual layout.

Other proposed LTCC FMP projects related to the development of the capital projects referenced above include the following:

- 9. South Parking Lot (parking adjacent to Residential Student Living buildings 15A and 15B)
- 10. Monument Sign on U.S. 50
- 11. Fire Access Roadway (implemented with the RFE improvements)
- 12. Emergency Access Roadway to Meadow Crest Drive (implemented with Building 11)
- 13. Trail Improvements

The projects included in the FMP fulfill LTCC's stated objectives of matching physical improvements to educational needs and are described in more detail in Table 2-3. Figure 2-4 shows the location of existing and proposed facilities. Figure 2-5 shows the detailed layout of the proposed Tahoe Basin Public Safety Training Center, Equipment Storage Facility and P.E. Expansion.

The Project also proposes an amendment to the Bijou/Al Tahoe Community Plan to allow for the Residential Student Living Facility. The Bijou/Al Tahoe Community Plan is currently designated as a TDR receiving area for existing development and residential bonus units (20 or 25 bonus units), and is designated as a multi-residential incentive program area. Prior to LTCC permitting for the Residential Student Living Facility on the LTCC campus, the Bijou/Al Tahoe Community Plan must be amended to include Multiperson Residential as a Special Use within District 4. Alternatively, if the City initiates an Area Plan for the College Project Area, the Multi-Person Residential use shall be proposed for inclusion in the Area Plan for study and adoption. The Project proposes to amend the Bijou/Al Tahoe Community Plan Permissible Uses Matrix (page 11-9) as follows (**underlined**), limiting the addition of Multi-person Residential to the LTCC in District 4, and requiring design review:

BIJOU / AL TAHOE COMMUNITY PLAN PERMISSIBLE USES MATRIX

KEY:

- 1 Bijou District
- 2 Harrison District
- 3 Lucky/Payless District
- 4 Town Center (includes College campus)

Land Use Categories	Districts				Maximum
	1 2 3 4			Units/Acre	
I. Residential					
Multi-person dwelling	s			<u>S 1/6</u>	25 Pers/Acre

Footnotes:

S=Special Use Permit Required

1. Requires Design Review

6. College Special Area

In addition, the Residential Bonus Units section of Chapter II, Section B (Bijou/Al Tahoe Community Plan Area Statement) is proposed to be amended as follows:

<u>RESIDENTIAL BONUS UNITS:</u> Pursuant to Chapter 35 (TRPA Code) the maximum number of residential bonus units which may be permitted for this Community Plan Area is 20 95 units. <u>Residential bonus units assigned to the Bijou/AI Tahoe Community</u> Plan Area may be used for deed-restricted affordable student housing on the LTCC property. Residential bonus units used for affordable student housing on the LTCC property do not require residential allocations.

Table 2-4 outlines the existing, proposed, and allowable land coverage on the LTCC campus. Existing plus FMP proposed land coverage totals 1,228,700 square feet. The FMP proposals would result in approximately 438,200 square feet of new land coverage.

A majority of the Projects shown in the FMP should be considered conceptual and only intended to convey general location and purpose. For example, the Mixed Residential Living would have a more traditional layout of parking interspersed with the actual residential buildings and would include more parking spaces than shown in Figure 2-4. Project programs will develop in detail as funding becomes available and through the planning process set in place by the College and California Community College Chancellors Office. Detailed plans for the Tahoe Basin Public Safety Training Center, Equipment Storage Facility and P.E. Expansion (Figure 2-5) have been developed for analysis at a project level based on funding availability. The detailed plans will allow for permitting and eventual construction following certification of FMP environmental documentation.

Table 2-4

Land Coverage

	LCD 1b	APN 025-04	41-010	LCD 4	APN 025-04	1-010	LCD 7 APN 025-041-010			
Total LTCC Area (SF)	Total Area (SF)	Allowable Coverage (SF)		Total Area (SF)	Allowable Coverage (SF)		Total Area (SF)	Allowable Coverage (SF)		Total Allowed Coverage
7987798	3614050	36140		903217	180643		3470528	1041159		1257942
Facility	Existing Coverage	Proposed Coverage	Net Change	Existing Coverage	Proposed Coverage	Net Change	Existing Coverage	Proposed Coverage	Net Change	Total Coverage
Building	0	0	0	6808	6808	0	184534	310404	126030	317372
Parking	0	0	0	30866	30866	0	236143	538973	312180	579189
Road	0	0	0	14130	14130	0	125748	125748	0	139878
Sidewalk	0	0	0	5428	5428	0	57160	57160	0	62588
Bike Path	0	0	0	1025	1025	0	44014	44014	0	45039
Dirt Path	6388	6388	0	27547	27547	0	26428	26428	0	60363
Gravel Path	0	0	0	317	317	0	6762	6762	0	7079
Conc. Pad/Sculptures/Pavers	0	0	0	79	79	0	3559	3559	0	3638
Ac Pad/Walk	0	0	0	0	0	0	7285	7285	0	7285
Loading Dock	0	0	0	0	0	0	2424	2424	0	2424
Deck/Bridge/Stairs	0	0	0	74	74	0	1339	1339	0	1413
Portable Storage	0	0	0	0	0	0	951	951	0	951
Playground	0	0	0	0	0	0	1220	1220	0	1220
Lights/Utilities/Boxes	0	0	0	0	0	0	261	261	0	261
Pervious Pavers	0	0	0	0	0	0	0	0	0	0
Banked Coverage	0	0	0	0	0	0	0	0	0	0
TOTAL	6388	6388	0	86274	86274	0	697828	1126528	438210	1228700







Figure 2-5. Near-Term FMP Projects

2.3.1 Near Term FMP Projects

Tahoe Basin Public Safety Training Center (Building 11)

The Tahoe Basin Public Safety Training Center would be located south of the main parking lot, west of the existing Physical Education building (gym) and soccer field in a two-story structure. The building footprint would occupy 6,466 square feet; however, there would be 9,420 assignable square feet and 12,225 overall gross square feet. This teaching facility will include flexible space with operable walls that will allow both classroom instruction and demonstration space where students will receive hands on training in an emergency response control center and space for physical training. The design would include adaptable storage space for required program mobile furniture, fire equipment, medical equipment, search and rescue equipment, information technology and geographic information systems (GIS). The Public Safety Training Center would include six labs (8,386 SF), one lab service room (150 SF), five offices (707 SF), one meeting room (207 SF) and storage (120 SF).

As illustrated in Figure 2-6, the structure features a main entryway facing the main parking lot and includes two exterior stairwells on either side of the building. The exterior features a variety of materials and colors that match other structures on campus. The steel structure features vertical fiber cement siding in 'Rust', horizontal fiber cement siding in 'Sage', split face concrete masonry eight-inch blocks in basalite colors matching District standards, and stone veneer entryway features. Covered exterior walkways surround the structure and a metal railing is proposed along the second-floor exterior hallway. Windows would be installed on all sides of the building, including lofted windows at the north elevation to allow for added natural light. Exterior doors would include window panels and the structure's windows would consist of one-inch insulating glass in aluminum storefront window systems. The first floor elevation would be at fourteen feet and the peak roof elevation would measure 37.5 feet. Solar panels would be located on the metal roof. Due to the solar paneling and architectural feature to capture natural light, the roof has a pitch of 1:6 on the southern portion and a pitch of 6:20.5 on the northern portion as depicted in Figure 2-6.

The proposed Public Safety Training Center would also include outdoor space for access to the site and building for required training for fire science, wildland fire, criminal justice, emergency medical services, and search and rescue. In addition, a new access road, driving pad, parking areas, a 0.25 mile decomposed granite track, and related site development and general utility services would be included with this facility. The outdoor space includes a "tarmac" which is a specifically designed driving pad or extrication pad to allow access to the training props, fire vehicles, and various training apparatus for cleaning and training for all types of fire and rescue scenarios. The proposed driving pads are designed to allow for proper water drainage with environmentally approved containment systems. A total of 100,000 square feet of paved area is proposed for the Public Safety Training Center. This includes approximately 14 new parking spaces located immediately west of the new building.

This location is ideal for the public safety programs to use the adjoining soccer field and gym as part of the program's physical training requirements, and will allow for the integration and expansion of the existing college program. The existing Tahoe Basin Public Safety Training program currently uses several on-campus and off-campus sites. The majority of the program classes are held in portable buildings brought to the Lake Tahoe campus in 1996 as temporary classroom space. The Public Safety program also uses space in the student center, classrooms and the soccer field. Off campus, Public Safety Training takes place at the local airport and other sites including travel to other counties for specialized training. Once the proposed training center is completed, the College will remove four portable buildings (4,831 SF). On average, the Public Safety Training Center would be used by 25 to 30 persons daily, who currently use other facilities on and off-campus for training.



Figure 2-6. Public Safety Training Center

Along with the Public Safety Training Center, an access road from the main campus to the southern property boundary at the Greenway Shared Use Trail would be constructed and gated at the southern boundary. This road would also serve as an emergency access between the campus and Meadow Crest Drive by way of the STPUD property.

Equipment Storage Facility (Building 12)

The Equipment Storage Facility, as illustrated in Figure 2-7, would consist of two utilitarian structures to store maintenance equipment, and provide storage for equipment associated for the public safety classes (Fire Academy and EMS classes) in Building 11. The clear-span structures, totaling 20,960 square feet, would be open to allow for various sized equipment and storage areas. The metal frame buildings would measure 67 feet by 180 feet (Building 12a – 12,000 SF) and 67 feet by 120 feet (Building 12b – 8,000 SF) with a large roll-up access door on each of the north and south gabled sides of the buildings. The peak roof elevation of the structures would be 23 feet, 2 inches, with a roof pitch of 4:12. The metal frame would be covered in a high durability fabric in the same sage green color found on other buildings on campus, which is a brown-green shade, with areas of white to capture natural lighting and ventilation. The 12.5 oz. polyethylene rip-stop fabric is engineered to withstand high winds, heavy snow, and other inclement weather and naturally keeps the interior cooler in the summer and warmer in the winter. The portions of the fabric cover in white allow for natural light to filter through, reducing electrical lighting demand. Exterior security lighting would be installed around the structure and portions of the yard for visibility.

These buildings would serve as storage buildings for campus maintenance equipment and vehicles and equipment used for the Safety Training program. Small quantities of paints, automotive lubricants and oils would be stored within the buildings. A 4-foot by 6-foot storage area would contain these fluids. No onsite fueling or fuel storage is proposed on the LTCC campus. No offices, restrooms, or other non-storage space would be located within the facility.

A 42,364 square-foot paved "yard" area would extend around the structures. This area would be used for campus operations and maintenance storage and mobilization activities. Approximately 41 parking spaces would be located immediately east of Building 12, between the tarmac area and maintenance yard areas. Some sand storage may occur within the outdoor storage yard area. Loose sand material would be contained within barrier blocks or a similar containment structure; however, there are no plans to store other types of materials outside. The facility would be fenced to maintain public safety and security.

A three story training tower (Building 12c) would be located north of the Equipment Storage Buildings within the Safety Training tarmac area. This 26-foot-tall piece of training equipment would be premanufactured and assembled on the paved area to be used for firefighting and safety training exercises.

A north-south biketrail connector between the main campus parking lot and the Greenway multi-use trail would be located immediately east of the gated roadway extension from the main campus parking lot to the southern property boundary.

P.E. Expansion (Building 13)

The P.E. Expansion Building consists of two separate buildings (Buildings 13a and 13b) totaling 2,400 square feet (Figure 2-8). Located immediately south of the Physical Education building, these one-story, flat roof structures would have a maximum height of 10 feet, with two windows each on the north and south sides of the buildings, and two doors each on the north sides. These modular buildings would provide flexible space that could be used to support physical education programs and associated meeting space. This flexible space would be similar to a classroom space and would not include locker room facilities or amenities. Access to the buildings includes 820 square feet of pavement on the north side of the structures

extending from the existing access walkway south of the Physical Education building. Total coverage associated with the P.E. Expansion would be 3,220 square feet.

Each modular building would have a capacity of 30 persons and would be used by students and staff. Varying volumes of students and staff would use the buildings on a daily basis. These students and staff currently occupy the aging modular classrooms located at the north end of the main campus that would be removed following construction of the P.E. Expansion building. Therefore, no significant increase in total

LTCC Offices (Building 16)

A LTCC office building is proposed within the Equipment Storage Yard area as depicted in Figure 2-9. This modular one-story flat roof structure would mimic the propose P.E. Expansion Buildings and would have a height of 10 feet with two windows each on the north and south side of the building and two doors on the north side. The 1,200 square-foot LTCC office would house the facilities and campus management operations, in coordination with and close proximity to. the Equipment Storage facility. This building would centralize facilities management in one location on campus following the development of the Equipment Storage Yard and occupying no additional footprint beyond the paved yard.

Figure 2-7. Equipment Storage Facility



Figure 2-8. P.E. Expansion Building





Figure 2-9. LTCC Offices Building



Table 2-5

Project Components – Proposed Project (Alternative 1)

	Component	Location	Description	Footprint (sf)	Capacity
1.	Remodel for Efficiency and Science Modernization	Main Building – Art and Technology laboratories and some faculty offices	Upgrades to existing facilities to meet modern standards and address capacity load ratio issues and position LTCC to apply for future funding from the state. Remodel and modernize 18,070 ASF and is comprised of 10,398 ASF of laboratory space, 6,302 ASF of office space and 1,370 ASF of other space. This is completely within existing interior spaces and requires no building footprint or roofline changes. Improvements will result in instructional spaces that met current accessibility requirements, as well as current laboratory design guidelines. It will also reconfigure College services and offices into a centralized space. Modernization will require upgrades to water, fire, sewer, technology, and storm drain facilities.	No new building area	
2.	Tahoe Basin Public Safety Training Center [Building 11]	New facility south of main campus buildings and parking lot	Construction of new instructional center, training area, equipment tarmac, access road, and parking area to support fire science and wilderness education. The facility would serve as a joint public safety facility in South Lake Tahoe. The Center will include indoor and outdoor learning spaces (classrooms, training towers, simulation areas) and meeting areas for the search and rescue and emergency response, fire science, fire officer, and criminal justice programs, as well as the continuing education of emergency service professionals. Once the proposed training center is completed, the College will remove four portable buildings (4,831 SF) currently used for this program.	6,470 (Training Center) 100,000 (paved areas and parking lot) 106,470 (Total) [Additionally, 4,831 sf of old portable classrooms removed]	14 parking spaces 25-30 persons (currently occupying other spaces on and off campus)
3.	Equipment Storage Facility [Buildings 12a, 12b, and 12c]	New facility south of main campus buildings and parking lot near STPUD lot line	New facility consisting of two buildings constructed to provide storage for campus maintenance equipment and public safety equipment for the public safety classes (Fire Academy and EMS classes) in Building 11. The two clear-span metal frame, fabric covered structures feature roll up doors on the north and south sides to access large and medium sized equipment. A paved area surrounding the structures would serve as a maintenance vehicle parking, equipment access, and mobilization area. The Building	20,960 (Storage Facility Buildings) 42,360 (Pavement) 63,320 (Total)	N/A

	Component	Location	Description	Footprint (sf)	Capacity
			11 "tarmac" would be adjacent to the north side of the structures. Equipment for the Safety Training Center includes a three-story tower structure (Building 12c) constructed adjacent to the two storage buildings on the paved tarmac area to be used for safety training exercises.		
4.	P.E. Expansion [Building 13]	New facility south of Physical Education Center	New facility construction to provide a large flexible space to support educational programs as well as community events on campus. Some existing programs will move from existing temporary modular units to this building, with the temporary units subsequently removed. The facility will support athletic programs on campus.	2,400 (modular buildings) 820 (walkways) 3,220 (Total)	30 persons
5.	Future Building Site [Building 14]	Location of existing portable classrooms just west of Fine Arts building	Future two story building for future educational programming	16,000 (building) 1,000 (walkways) 17,000 (Total)	Replaces existing capacity in portables
6.	Residential Student Living [Buildings 15A and 15B]	New facility south of the Culinary Arts building	This two-story structure will provide affordable student housing on campus. The building would provide approximately 100 beds in 33 units for students with amenities to support full student living on campus. All units are 2 bed/1 bath, totaling 66 bedrooms of which half are single occupancy and the other half are double occupancy.	16,000 (buildings) 30,000 (parking) 46,000 (Total) Equates to approximately 32,125 gsf for the two story complex	100 persons
7.	LTCC Offices [Building 16]	New facility immediately south of proposed Equipment Storage Facility	Future building site to replace office space currently provided in the main building complex that may be lost through remodel for efficiency.	1,200 (building)	Relocates existing capacity
8.	Mixed Residential Living [Buildings 17]	North of main campus buildings and south of LTBMU offices	 Future housing site for up to 120 total units broken out as follows, and up to 5,000 square feet of ground floor retail space: 20 units 1 bed affordable housing 28 units 1 bed achievable/workforce housing 29 units 2 bed affordable housing 	63,000 (buildings) 138,000 (parking and walkways) 201,000 (Total) Equates to approximately	384 persons at double occupancy

Component	Location	Description	Footprint (sf)	Capacity
		• 43 units 2 bed achievable/workforce housing	126,000 gsf for the two story complex	
9. South Parking Lot	South of the Library and east of the proposed Residential Student Living	The new south parking lot will provide parking for the Residential Student Living building as well as Public Safety Building near the Physical Education Center. This lot will include accessible parking and electric vehicle charging stations. The parking area will be illuminated by night sky compliant LED light fixtures.	30,000 (coverage included above with building 15)	89 parking stalls (4 accessible stalls, 1 van accessible stall)
10. Monument Sign on U.S. 50	Al Tahoe entrances and US 50 near Trout Creek	One new monument sign is proposed to replace two existing signs along Al Tahoe Blvd. and another monument sign is proposed along U.S. 50 (Lake Tahoe Blvd. where the LTCC property fronts the highway east of Trout Creek. The signs will identify the College and may incorporate a digital display board to inform the community of local community events on campus and other important information.		N/A
11. Fire Access Roadway	West of main campus buildings	The fire access roadway will provide required access for the local fire department to the west side of the main campus buildings. The roadway will connect the existing fire lane terminating on the north to the existing fire lane on the south that serves the Student Center/Dining Hall and Library. Dimensions of this road would be approximately 750 feet in length by 20 feet in width.	15,000 (implemented with the RFE project)	N/A
12. Emergency Access Roadway to Meadow Crest Drive	South of main campus, adjacent to STPUD facilities with connection to Meadow Crest Drive	The approximately 12,800 square foot emergency access roadway will provide the College an option for emergency access should the College Drive roadway to Al Tahoe Blvd. become unusable. The Emergency Access road will run south from the main parking lot along the west side of the gymnasium following the STPUD utility easement and tie to Meadow Crest Drive at the south end of the campus. Removable bollards or a gate will be used to limit the roadway to a secondary means of emergency access.	Included in the pavement total for the Safety Training Center.	N/A
13. Trail Improvements	Through center of campus and connection to Greenway Shared-	Bike trail realignments are planned on campus to provide more direct access to facilities. The Main Parking Lot and proposed South Parking Lots will further connect the trails on the north side of the campus to the south side of the campus as well as	Included in the pavement total for the Safety Training Center and Fire Access Roadway	N/A

Component	Location	Description	Footprint (sf)	Capacity
	Use Trail at southern campus boundary	connect to the Greenway Shared-Use Trail. This includes use of the Emergency Access Road and trail realignments occurring through other FMP facility improvements, many of which have already been completed. The remaining improvements are the emergency access road from the Public Safety Training Center to Meadow Crest Drive and a realignment near the University Center.		
		Approximately 1,000 linear feet of trails would be decommissioned. The existing double track trail west of campus would be decommissioned and replaced by the Fire Access Road. Some of the unpaved single-track trails, shown in brown on the FMP map, particularly near Trout Creek would also be decommissioned and improved with water quality best management practices.		

Source: LTCC, 2020

2.3.2 Master Plan Phasing

LTCC anticipates a ten (10) to fifteen (15) year time frame for the build out of the FMP. Recently completed FMP projects included renovation of the soccer field and development of the city fields, as well as the main parking lot replacement occurred in 2016. The University Center and Early Learning Center were analyzed separately under CEQA and constructed between 2017 and 2021 (Early Learning Center completion date). The three projects described above in Section 2.5.1 are anticipated to be the first FMP projects implemented following certification of this overall FMP environmental documentation, and are anticipated to be completed by 2025. Between 2025 and 2035, it is anticipated that the remaining FMP projects will be considered for funding and implementation as demand warrants.

2.4 REGULATORY COMPLIANCE MEASURES

Regulatory compliance measures are included in the description of the Project to minimize potentially significant environmental impacts. Regulatory compliance measures include measures such as installation of BMPs for Lahontan and the TRPA, agency permit requirements, and air quality protection measures and are considered part of the Facilities Master Plan Project under TRPA and CEQA processes because compliance is required to construct and operate the Project. The environmental documentation identifies additional mitigation measures when compliance with codified regulation is determined to be inadequate to eliminate potential environmental impacts. Where necessary, resource impact analyses identify the required compliance measures as linked to a potential impact with a clear description of why and how the compliance measure will reduce the impact to a less than significant level. Regulatory compliance measures of the Project are discussed in the sub-sections below.

2.4.1 Implement BMPs to Reduce Air Pollutant Emissions

Construction is subject to El Dorado County Air Quality Management District (EDCAQMD) Rules, and the Project Applicant shall complete a Construction Emission/Dust Control Plan and other BMPs to comply with EDCAQMD Rules. The Project Applicant shall not break ground prior to receiving EDCAQMD approval of the Construction Emission/Dust Control Plan. The Dust Control Plan must address the minimum Administrative Requirements found in EDCAQMD Rule 223, Fugitive Dust. The purpose of Rule 223 is to reduce the amount of particulate matter entrained and discharged into the air by requiring actions to prevent, reduce, or minimize fugitive dust emissions. The specifics of an approved Fugitive Dust Control Plan will be based on the final of the alternative selected. Such plans normally include use of stabilizers for fugitive dust control and washing of truck wheels and undercarriages to reduce trackout onto area streets to avoid re-entrainment of roadway dust. These measures typically reduce fugitive dust emissions by up to 50%. Upon approval by the Air Pollution Control Officer, the fugitive dust control actions specified in the plan will be implemented as specified.

2.4.2 TRPA Traffic and Air Quality Mitigation Program Fees

The Project Applicant shall pay the appropriate air quality mitigation fee in accordance with Chapter 65.2— Traffic and Air Quality Mitigation Program of the TRPA Code of Ordinances. The TRPA adopted this program as a means of generating the revenue necessary to address air quality impacts associated with Vehicle Miles Traveled (VMT). By contributing to the Mitigation Program, the Project reduces air quality emissions generated by increased traffic related to Project operation. Specific regional and local VMT reduction strategies covered by the fee include, but are not limited to:

• Transit facility construction;

- Transportation systems management measures, including, but not limited to, bicycle facilities, pedestrian facilities, and use of alternative fuels in fleet vehicles; or
- Transfer and retirement of offsite development rights.

For larger FMP projects, a traffic control plan may be developed as required by TRPA and the City of South Lake Tahoe and implemented during construction to reduce construction-related effects on roadways and circulation patterns within the construction corridor. The traffic control plan will include, but not be limited to, the following:

- Coordination with affected jurisdictions regarding construction hours and lane closures;
- Emergency service consultation and implementation of an emergency access plan;
- Implementation of TRPA guidelines for construction-related road closures;
- Lane closure and truck hauling limits during peak commute hours to the extent possible;
- Provision of alternate bicycle and pedestrian routes;
- Provision of alternate parking;
- Location of truck haul routes;
- Traffic control devices;
- Construction signage and road closure notification in the vicinity of the construction corridor;
- Monitoring of in-place traffic control methods and devices for revision implementation;
- Driveway access maintenance;
- Business notification and coordination; and,
- Onsite circulation and staging areas.

2.4.3 Time of Day Construction Restrictions

This compliance measure restricts construction activities to between the hours of 8:00 AM and 6:30 PM to minimize noise impacts to sensitive receptors. Construction is exempt from TRPA's Code of Ordinances Noise Limitations (Chapter 68) if the activities occur between the hours 8:00 AM and 10:00 PM and is not injurious or disturbing to the health, safety, and general welfare of persons or property in the neighborhood (§22.7.5). TRPA Code of Ordinances §68.9 exempts construction noise between 8:00 AM and 6:30 PM. Construction activities before or after the time restriction may occur, but must be consistent with CNEL limits imposed for the applicable TRPA Plan Area and City noise ordinance. The Project area is located in TRPA Plan Areas 098, 100, and 101. The noise thresholds for these Plan Areas are 60 dB CNEL, 50 dB CNEL and 55 dB CNEL, respectively.

2.4.4 Construction Equipment Muffling

This compliance measure requires shrouding or shielding of impact tools and muffling or shielding intake and exhaust ports on construction equipment.

2.4.5 Emergency Vehicle Access During Construction

The Project Applicant shall coordinate with the City of South Lake Tahoe Police Department, City of South Lake Tahoe Fire and Rescue (CSLTFR), Lake Valley Fire Protection District (LVFPD), utility companies, businesses, and residents within the construction corridor prior to and during construction activities to ensure affected parties are informed of the construction schedule and to develop actions to maintain access and service in the Project area.

Law Enforcement and Fire Protection

An accurate schedule outlining the location of construction, types of activities, and the location of anticipated traffic delays or hazards will be provided to the Police Department, CSLTFR, and LVFPD on a weekly basis. A point of contact within the construction team will be established for emergency actions within or near construction. Traffic control measures to be used near construction will be reviewed and approved by the Police Department, CSLTFR, and LVFPD.

Residents and Businesses

Neighborhood residents will be notified so that they can prepare for delays or plan routes to avoid heavy traffic. Construction signage will be placed along the roadways during each phase of construction notifying the public of potential delays and hazards.

2.4.6 Utility Relocation and Construction Avoidance

Coordination will occur with utility providers prior to construction regarding the exact location of each underground utility line known to occur on the site. Utility service providers include the South Tahoe Public Utilities District (STPUD), Liberty Energy, Southwest Gas Corporation, and AT&T. Underground and overhead lines will be shown on project construction specifications within the civil engineering plans.

Construction contractors will contact Underground Service Alert (USA 811/1-800-227-2600) to ensure buried lines are properly marked and located. Utility companies will be provided with an accurate schedule noting when construction occurs near their facilities. Utility facilities will be identified on construction specifications. If grading or excavation is needed in these areas, the Project engineer will work with the utility companies to identify depth to conduit, pipeline, or other facility.

LTCC shall prepare an action plan should infrastructure be damaged during construction. The action plan will identify points of contact for the contractor and the utility companies and measures, specific to each utility, to be taken to rectify damage. If service is interrupted due to damage, construction will cease in the vicinity of the incident, and work will begin immediately to repair the damage at the contractor's expense. If damage occurs to infrastructure that does not affect service levels, the infrastructure will be repaired following construction.

2.4.7 Infrastructure Fees

LTCC will be responsible for construction of new infrastructure connections to the existing water and sewer system. STPUD has established connection fees consisting of connection and permit fees, as well as administrative and capacity fees. These fees provide for the system improvements necessary to accommodate additional development in the STPUD service area. The Project will be required to pay these fees as each component utilizing water and sewer service is developed. Likewise, LTCC would be responsible for fees associated with new energy and telecommunications connections and service.

2.4.8 Impact Fees and Design Approval

Prior to issuing Building Permits for the Project, the City of South Lake Tahoe requires payment of appropriate fair share development impact fees. In addition, the CSLTFR shall review and approve, fire protection systems in buildings, fire flows to hydrants, and emergency vehicle access routes in the Project area. TRPA also collects application and mitigation fees, as needed, based on the type and extent of the project.

The TRPA, CSLTFR, and CAL FIRE shall review building designs, building materials, landscaping, and vegetation clearance for compliance with TRPA Code of Ordinances, and current building codes.

2.4.9 TRPA Erosion and Sediment Control Plan

LTCC will prepare a site-specific Erosion and Sediment Control Plan to further define and map temporary BMPs for the control of erosion and runoff from ground disturbing activities. BMPs will be installed in accordance with TRPA Code of Ordinances §22.7.3, §33.5, and §60.4 and are considered part of the Project. An Erosion and Sediment Control Plan is required by TRPA and the City for project permitting. TRPA's BMP requirements are outlined in the Handbook of Best Management Practices (TRPA 1988) and for the City of South Lake Tahoe, BMPs must be in accordance with Chapter 7.20 of the City Code.

2.4.10 Stormwater Pollution Prevention Plan

Ground disturbance within the Project area will exceed one acre and is subject to the construction stormwater quality permit requirements of the NPDES program. LTCC must obtain this permit from Lahontan and provide evidence of a state-issued WDID number or filing of a Notice of Intent (NOI) and fees prior to start of construction.

A SWPPP is required under Board Order No. R6T-2005-007 (General Permit No. CAG616002) for discharges of stormwater runoff associated with construction activity involving land disturbance in the Lake Tahoe hydrologic unit. The SWPPP will be designed to address the following objectives:

- 1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
- 2. Where not otherwise required to be under a Lahontan permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;
- 3. Site BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the Best Available Technology Economically Achievable (BAT)/Best Conventional Pollutant Control Technology (BCT) standard;
- 4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and
- 5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.
- 6. To demonstrate compliance with requirements of the NPDES permit, the Qualified SWPPP Developer will include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.
- 7. The discharger will make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

2.4.11 Minimize Offsite Light and Glare

The Project Design plans shall comply with TRPA Design Guidelines and Code Chapter 36 and Bijou/Al Tahoe Community Plan standards, and City of South Lake Tahoe Lighting Standards to minimize night lighting and glare onto adjacent parcels. Specifically, final designs shall be consistent with TRPA Code

§36.6 (Building Design Standards) and §36.8 (Exterior Lighting Standards), the Bijou/Al Tahoe Community Plan Standards and Guidelines (§32-62.7) in regard to lighting, and the City Lighting Standards.

2.4.12 Tree Removal and Replacement

Tree removal shall follow the Timber Harvest Plan to be approved by CalFire as well as Chapters 33.6 and 61 of the TRPA Code of Ordinances. For each tree removed, two trees will be planted on campus to retain vegetation and provide screening and landscaping around campus structures. The replacement trees would not necessarily be the same size or type and their location and type will be in response to landscaping and screening needs.

2.4.13 Environmental Review and Approval

The LTCC Facilities Master Plan environmental documentation is prepared for the environmental review process and will lead to rejection or approval of the FMP by the College Board. Conformance with TRPA Regional Plan requirements including Code of Ordinances, Plan Area Statements, and Design Standards will result. Public meetings and findings will occur under the environmental review process. For TRPA and LTCC, a public review process will be followed for each subsequent FMP project with conditions and findings prepared prior to project approval.

2.4.14 Snow and Ice Management Plan

LTCC implements a snow and ice management plan that consists of snow removal, temporary snow storage, long-term snow storage, and heated walkways to maintain pedestrian safety. Snow management includes roadway snow removal along College Drive, the Main parking lot, along the fire access road west of the Main Campus Building, and the other internal access roads and parking areas. Snow from roadway clearing is temporarily stored around campus in small areas near the Child Development Center and University Center parking lots, along the fire access road, around the G-lot parking area, along the roundabout near the Main Building, and between the Main parking lot and soccer fields. Snow stored in these interim storage areas is eventually moved to a longer-term storage area between the P.E. Building and the Greenway Trail. Snow storage areas are located in vegetated areas to allow the snowmelt to slowly absorb into the ground. While snow is typically plowed from roadways or blown from most walkways, some walkways are heated to prevent snow accumulation and ice from forming. Heated walkways are located at the Early Learning Center and Child Development Center, around the University Center walkways connecting to the Fine Arts and Main Buildings, within the Main Parking Lot, and connecting from the Main Parking Lot to the Library and P.E. buildings.

3.0 ENVIRONMENTAL CHECKLIST AND IMPACT ANALYSIS

- 1. Project title: LTCC Facilities Master Plan Project
- 2. Lead agency name and address:

The Lake Tahoe Community College is the California Environmental Quality Act (CEQA) lead agency responsible for preparing an Initial Study/Negative Declaration (IS/ND) and the Tahoe Regional Planning Agency (TRPA) will serve as the lead agency for the Initial Environmental Checklist (IEC) under the Tahoe Regional Planning Compact.

LTCC One College Drive South Lake Tahoe, California 96150

Tahoe Regional Planning Agency P.O. Box 5310 Stateline, Nevada 89449

3. Contact person(s) and phone number(s):

LTCC: Al Frangione, (916) 300-7440, afrangione@ltcc.edu

4. Project location:

The LTCC is located within the City of South Lake Tahoe, along Al Tahoe Boulevard between US 50 and Pioneer Trail as shown on Figure 1.

5. Project sponsor's name and address:

Lake Tahoe Community College 1 College Drive South Lake Tahoe, California 96150

- 6. General Plan designation: Special District 4.
- 7. Zoning: Commercial/Public Service
- 8. Description of project: Refer to Chapter 2 of this document.
- 9. Surrounding land uses and setting: Refer to Chapters 1 and 2 of this document.
- 10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

The project requires the LTCC Board of Trustees and TRPA approval. City of South Lake Tahoe and TRPA land development and construction permits and approvals would be needed. Lahontan Regional

Water Quality Control Board (Lahontan) National Pollutant Discharge Elimination System (NPDES) and Clean Water Act §401 water quality certification permits.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.

California Native American tribes were contacted during the previous FMP review effort in 2016 and again in 2021 for this FMP review process. The Washoe Tribe of Nevada and California is traditionally and culturally affiliated with the project area. On July 6, 2016, the Washoe Tribe of Nevada and California submitted a consultation response letter indicating a known resource was identified near Trout Creek and requesting to review and comment on documentation pertaining to resources and project actions. On February 10, 2021, LTCC initiated consultation with the Washoe Tribe of Nevada and California in regard to the current FMP Project, a potential resource on the campus for which the tribe may be able to provide additional information, and in regard to collaborating on future interpretive efforts for the known resource at Trout Creek, which is outside the FMP footprint. LTCC is interested in continuing consultation with the Washoe Tribe of Nevada and California to appropriately address resources in accordance with the tribe's requests, and is awaiting response from the tribe.

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

If environmental factors are checked below, there would be at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. As discussed in the IS/IEC checklist, there are no potentially significant impacts associated with the amendment. Applicable mitigation measures for general and cumulative impacts associated with the RPU are incorporated into the project approval.

Aesthetics	Agriculture/Forest Resources	Air Quality
Biological Resources	Cultural Resources	Energy
Geology Resources	Greenhouse Gas Emissions	Hazards/Hazardous Materials
Hydrology/Water Quality	Land Use/Planning	Mineral Resources
Noise	Population/Housing	Public Services
Recreation	Transportation/Traffic	Tribal Cultural Resources
Utilities/Service Systems	Wildfire	Mandatory Findings of Significance
	None None	None with Mitigation Incorporated
3.2 CEQA ENVIROMENTAL 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 project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

Name, Title Lake Tahoe Community College Date

3.3 TRPA ENVIRONMENTAL DETERMINATION (TO BE COMPLETED BY TRPA)

On the basis of this TRPA Initial Environmental Checklist:

a.	The proposed project could not have a significant effect on the environment and a finding of no significant effect shall be prepared in accordance with TRPA's Rules of Procedures		Yes	\boxtimes	No
b.	The proposed project could have a significant effect on the environment, but due to the listed mitigation measures which have been added to the project, could have no significant effect on the environment and a mitigated finding of no significant effect shall be prepared in accordance with TRPA's Rules of Procedures.		Yes		No
c.	The proposed project may have a significant effect on the environment and an environmental impact statement shall be prepared in accordance with this chapter and TRPA's Rules of Procedures.		Yes		No
Sig	gnature of Evaluator	Date		_	

Title of Evaluator

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

The following environmental analysis has been prepared using the CEQA Guidelines Appendix G: Environmental Checklist Form to complete an Initial Study (IS). This checklist also includes analysis of environmental impacts required in the TRPA Initial Environmental Checklist (IEC) found at: http://www.trpa.org/wp-content/uploads/Initial_Environmental_Checklist.pdf.

3.4.1 CEQA

CEQA requires a brief explanation for answers to the Appendix G: Environmental Checklist except "No Impact" responses that are adequately supported by noted information sources (see Table 3-1). Answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Ta	Table 3-1: CEQA Defined Levels of Impact Significance							
Impact Severity	Definition							
No Impact	A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).							
Less than Significant Impact	"Less than Significant Impact" applies where the Project's impact creates no significant impacts based on the criterion or criteria that sets the level of impact to a resource and require no mitigation to avoid or reduce impacts.							
Less than Significant Impact after Mitigation	"Less than Significant Impact after Mitigation" applies where the incorporation of mitigation measures has reduced an effect from potentially "Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.							
Significant Impact	"Significant Impact" is appropriate if there is substantial evidence that an effect is potentially significant, as based on the criterion or criteria that sets the level of impact to a resource. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.							
Source: CEQA Appendix	G Environmental Checklist Form 2018							

3.4.2 TRPA

Article VI of the TRPA Rules of Procedures presents the rules governing the preparation and processing of environmental documents pursuant to Article VII of the Compact and Chapter 3 of the Revised TRPA Code of Ordinances.

TRPA uses an IEC, in conjunction with other available information, to determine whether an EIS will be prepared for a project or other matter. This could include preparation of an Environmental Assessment, in accordance with Section 3.4 of the TRPA revised Code, when TRPA determines that an IEC will not provide sufficient information to make the necessary findings for a project.

The IEC includes a series of questions categorized by and pertaining to resources regulated by TRPA. Each checklist item requires a checked response of "Yes," "No," "No, with Mitigation," or "Data Insufficient." A checked response of "Data Insufficient" or a determination that a project may have a significant effect on the environment (Section 3.3.2 of the TRPA Code) indicates that additional environmental review in the

form of an Environmental Assessment (EA) or Environmental Impact Statement (EIS) would be required. The IEC form indicates that all "Yes" and "No, with Mitigation" responses require written explanations. This IEC provides supporting narrative for all responses. Where a checked response may not be intuitive or easily understood by the reader, that response has been marked with an asterisk (*) and a brief clarifying statement supporting the rationale for the checked response is included. Based on an initial review of the Project, TRPA and LTCC staff determined that an IEC would provide sufficient information regarding the Project to make one of the findings below. As set forth in Code Subsection 3.3.1, based on the information submitted in the IEC, and other information known to TRPA, TRPA shall make one of the following findings and take the identified action:

- 1. The proposed project could not have a significant effect on the environment and a finding of no significant effect shall be prepared in accordance with TRPA's Rules of Procedure.
- 2. The proposed project could have a significant effect on the environment, but due to the listed mitigation measures which have been added to the project, could have no significant effect on the environment and a mitigated finding of no significant effect shall be prepared in accordance with TRPA's Rules of Procedure.
- 3. The proposed project may have a significant effect on the environment and an environmental impact statement shall be prepared in accordance with this Chapter and TRPA's Rules of Procedure.

When completed, TRPA reviews the IEC to determine the adequacy and objectivity of the responses. When appropriate, TRPA consults informally with federal, state, or local agencies with jurisdiction over the project or with special expertise on applicable environmental impacts.

3.4.3 Aesthetics (CEQA), Scenic Resources/Community Design and Light and Glare (TRPA)

This section presents the analyses for potential impacts to aesthetics, scenic resources/community design and light and glare. Table 3-2 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

LTCC is characterized with a mix of natural landscapes, a demonstration garden, educational facilities and support facilities such as sports fields, and other urban development. The surrounding area includes Bijou Community Park, STPUD facilities, government offices, and commercial uses intermixed with the natural landscape.

Views of the LTCC property from US 50 are of Trout Creek Meadow and no LTCC buildings are visible from US 50. The area around US 50 and the Al Tahoe Blvd. intersection is primarily characterized as commercial, with restaurants, retail stores, a bank, and other commercial uses, including freestanding signage along the road. Since the campus is located centrally along Al Tahoe Boulevard, the campus is not visible from Pioneer Trail or U.S. 50.

The western portion of the LTCC property is characterized as undeveloped natural meadow. This area around Trout Creek contains no structures or development other than narrow dirt trails. A residential development is located west of the meadow. Views of the LTCC property from the residential development do not include the developed campus and consist of Trout Creek Meadow, trees, and distant peaks.

Areas south of the campus are a mixture of residential and public service, with forested pockets of no development along Trout Creek, where trees and SEZ comprise the primary view. Views toward the LTCC property from the STPUD facilities and Greenway Trail location reveal some LTCC facilities, such as the sports field and Physical Education Center. The Library and Main Building are somewhat visible in the distance but mostly screened by the existing trees.

Portions of the campus are visible from Al Tahoe Boulevard and the bike trail as well as from nearby portions of Bijou Community Park. The area along Al Tahoe Boulevard is not densely developed, and the LTCC buildings are substantially setback within the property, so the roadside view consists mostly of natural vegetation and topography mixed with commercial, institutional, office, and recreation uses, often set back from the roadway, with both natural and urban landscaping.

The developed LTCC property is not located within a scenic roadway, shoreline, or recreation area, but does include a scenic bikeway located along Al Tahoe Boulevard. The portion of the LTCC property along US 50 is within Scenic Roadway Unit 35: Al Tahoe, which is an area in non-attainment. While improvements to man-made features and road structure have occurred, the 2015 Threshold Evaluation indicates an overall threshold composite rating of 8.5, which has not improved enough to reach attainment.

Views of the campus from Al Tahoe Blvd. are primarily screened by the trees located on the College property between the developed area and the roadway; however, glimpses of the campus buildings and parked cars can be seen through the trees. The PE building and portions of the main campus buildings are visible from the Community Ball Fields and the area around the Greenway Shared-Use Trail alignment to the south of campus. The LTCC campus is not visible from US 50 and views from US 50 toward the campus consist of trees and Trout Creek meadow. Views from Meadow Crest Drive and the STPUD facilities includes campus facilities with interspersed trees in the foreground.

The proposed near-term components that have not already been evaluated in a previous IS/IEC include the Tahoe Basin Public Safety Training Center, the Equipment Storage Facility, the LTCC Office Building, and the P.E. Expansion Building. The Safety Training Center, LTCC Office Building, and Equipment Storage Facility site would be located immediately west of the Physical Education building at the south end of the campus. This area is at the south end of the cluster of campus buildings, setback from College Drive approximately 600 feet and approximately 1,500 feet from Al Tahoe Boulevard. The P.E Expansion Building would be located immediately south and adjacent to the Physical Education Center, between the existing STPUD pump/wellhouse and South Mechanical Building. The sites are flat with scattered trees and little vegetation. The Greenway Trail is south of the facilities. There are no rock outcroppings or historic buildings in the project area.

Longer-term future components of the FMP include replacement of the existing portable classrooms on the north side of the main campus area with a permanent classroom building, Residential Student Living dorms immediately south of the existing Student Center/Dining Hall, and Mixed-use Residential Living at the north end of the campus, near the campus entrance and south of the U.S. Forest Service offices. With the exception of the Mixed-use Residential Living component, the other long-term components would be located either on the southwest portion of the campus amongst the existing main campus area or would replace existing temporary structures. The Mixed-use Residential Living building would be the nearest structure on the campus to Al Tahoe Boulevard and the associated bike trail along the roadway at approximately 500 feet west of the road and Al Tahoe bike path, and immediately adjacent to the on campus LTCC bike path that parallels College Drive.

The City of South Lake Tahoe General Plan (2011) establishes goals and policies for scenic resources in the Natural and Cultural Resources Element, and for design in the Land Use and Community Character Element. The City's 2016 Design Guidelines were established to "provide a visual tool to help guide project applicants on how to meet the required design standards in a manner that meets the desired aesthetic of the community," and are to be used as aid to enhance the visual quality and experience in the community by directing future development. The Guidelines address site design and layout, grading, drainage, parking, bicycle parking, visual screening, pedestrian circulation, plazas, building articulation and design, roofs, building height, green building, landscape design, exterior lighting design, and signage.

Located in the Bijou/Al Tahoe Community Plan District 4, Height standards for LTCC may exceed the Height Standards in the TRPA Code of Ordinances based on project setback, visibility, or other design criteria and subject to TRPA review and approval. Land coverage standards follow the TRPA Code of Ordinances limits. Setback standards generally follow the City Design Manual; however, development on the LTCC property shall have a minimum setback of 50 feet from Al Tahoe Blvd. Site design generally follows the City Design Manual, but also requires the natural forest setting remain preserved by designing projects that maintain the maximum number of trees, shrubs, boulders etc. on the site and design landscaping to blend with the native surroundings. The site design standards also require sidewalks to connect all buildings within a project area. Architectural treatments require buildings be designed with interest, incorporating architectural features that blend with surrounding buildings, use wood siding and real stone.

Table 3-2: Aesthetics, Scenic Resources/Community Design and Light and Glare							
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact			
3.4.3-1. Have a substantial adverse effect on a scenic vista? (CEQA Ia)			X				
3.4.3-2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway? (CEQA Ib)			X				
3.4.3-3. Substantially degrade the existing visual character or quality of the site and its surroundings? (CEQA Ic)			X				
3.4.3-4. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? (CEQA Id)			X				
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No			
3.4.3-5. Be visible from any state or federal highway, Pioneer Trail or from Lake Tahoe? (TRPA item 18a)				Х			
3.4.3-6. Be visible from any public recreation area or TRPA designated bicycle trail? (TRPA item 18b)				X			
3.4.3-7. Block or modify an existing view of Lake Tahoe or other scenic vista seen from a public road or other public area? (TRPA item 18c)				Х			
3.4.3-8. Be inconsistent with the height and design standards required by the applicable ordinance or Community Plan? (TRPA item 18d)		X					
3.4.3-9. Be inconsistent with the TRPA Scenic Quality Improvement Program (SQIP) or Design Review Guidelines? (TRPA item 18e)				Х			
3.4.3-10. Include new or modified sources of exterior lighting? (TRPA item 7a)				X			

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TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.3-11. Create new illumination which is more substantial than other lighting, if any, within the surrounding area? (TRPA item 7b)				Х
3.4.3-12. Cause light from exterior sources to be cast off-site or onto public lands? (TRPA item 7c)				Х
3.4.3-13. Create new sources of glare through the siting of the improvements or through the use of reflective materials? (TRPA item 7d)				Х

3.4.3-1. Would the Project have a substantial adverse effect on a scenic vista? (CEQA Ia)

As shown in Figure 3.4.3-1, the existing facilities are not highly visible from Al Tahoe Blvd. and are not visible from US 50. Views along US 50 would be the same with the exception of a monument sign located near the U.S. Bank building and transit stop. Since the sign is located within Scenic Roadway Unit 35 Al Tahoe, an assessment of the sign's impact at this location is important. No other LTCC structures would be visible from US 50. Roadway Unit 35 has a threshold composite rating of 8.5, which is not in attainment, although several improvements to the roadway structure and existing buildings have resulted in improvements in the past ten years. As discussed in Chapter 2, the monument sign will identify the College and may incorporate a digital display to communicate local community events, campus events, and other information deemed important. No design of the sign has been proposed; however, the sign will be required to comply with the requirements of both the TRPA Code of Ordinances and the City Code. There are many existing signs near the proposed sign location along U.S. 50 and the addition of a sign would not substantially alter views within the area due to the existing commercial uses at that location; however, the Project proposes a sign that may include a digital display to communicate upcoming events at the LTCC and none of the existing signs in the immediate vicinity include digital displays. While digital displays are permissible on public grounds under the City's Code, the integration of the digital display within the monument sign may not improve the scenic quality along US 50. TRPA Code of Ordinances Chapter 38 addresses sign standards, and allows internally illuminated signs. Like the City, freestanding sign height may reach up to 12 feet and additional height may be granted if the height is incorporated into a monument base.

The bike trail along Al Tahoe Blvd. is a TRPA designated Scenic Bikeway Segment. Therefore, views from the bikeway segment along Al Tahoe Blvd. must be considered to determine whether additional development on the LTCC property would create adverse impacts to standards. Foreground views would not be affected from any roadway, except for the new signage, as the nearest proposed FMP buildings, the Mixed Residential Living buildings, would be located over 400 feet from the roadway and bike trail. Existing conifer forest is expected to obscure views of the developed campus area, but structures are partially visible through the conifer forest from Al Tahoe Blvd. Middleground views would remain relatively the same with views of large stands of trees and buildings in the background intermixed within a forested setting. More buildings would be visible, particularly the Mixed Residential Living buildings, lending to a more developed visual quality and somewhat detracting from the forested setting, but the general view and scenic character would remain unchanged. Proposed buildings with the highest potential for visibility are the Mixed Residential Living Building along One College Drive and, to a much lesser degree, the Equipment Storage Facility, LTCC Offices, and P.E. Expansion Building as viewed from the

Greenway Shared-Use Trail at the southern end of the campus where views of the existing P.E. facilities are plentiful. Figure 3.4.3-2 illustrates the layout of the near-term facilities near the Greenway Shared-Use Trail. Views of the three-story training tower would be obscured by the storage buildings to the south and the the Safety Training Facility north. to https://caltransit.org/cta/assets/File/GHG%20Quantification%20Methodology.pdfThe proposed Mixed Residential Living Building would be setback over 400 feet from the roadway and located farther from the road than the existing USFS building. However, the buildings would be visible from Al Tahoe Blvd. and would increase the urbanized character along the roadway. The other proposed FMP improvements would not be visibly evident from Al Tahoe Boulevard.

Figure 3.4.3-1. Views of the LTCC Property from Adjacent Roadways and Public Areas



alignment from STPUD property.

View towards LTCC campus across Trout Creek from Martin Ave near the Greenway Trail crossing.





View of LTCC campus towards Trout Creek Meadow from US 50.

View towards LTCC and proposed monument sign location from US 50 near Edgewood Circle.







The Mixed Residential Living Building would be somewhat visible from Al Tahoe Blvd. and have the potential to alter views from Al Tahoe Blvd. From the Greenway Shared-use Trail, the Equipment Storage Facility, P.E. Expansion Building, Public Safety Training Center, Residential Student Living facility, and the south parking lot and emergency access road would be visible. However, as shown in Figure 3.4.3-1, the existing P.E. building and LTCC facilities are already visible, as are the existing STPUD facilities and roadway pavement along Meadow Crest Drive. The addition of the proposed FMP structures would contribute to additional urbanization of the area, but would be consistent with existing views of campus structures.

The trail improvements throughout the campus would not result in a substantial visual change. The trails are existing features, and the addition of pavement or other coverage of the trail would not cause a significant visual change as the trail is at grade and approximately 10 trees would be removed for trail improvements along the fire access road.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.



Figure 3.4.3-2. Conceptual View of Near-Term Facilities

3.4.3-2. Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (CEQA Ib)

No rock outcroppings or historic buildings would be affected by the FMP projects and no substantial changes would be visible from U.S. 50, except for a monument sign addition adjacent to the existing commercial center at the intersection of U.S. 50 and Al Tahoe Boulevard, discussed further in Question 3.4.3-3.

Approximately 199 trees would be removed during construction of the FMP. These trees are located in the footprint of the proposed improvements as depicted in the preliminary site layout (Figure 2-4). Most of the affected area would be at the southern end of the campus between the Physical Education Buildings and the Main Campus building where the Public Safety Training Center, Equipment Storage Facility, P.E. Expansion Building, Residential Student Living, South Parking Lot, Emergency Access Roadway to Meadow Crest Drive, fire access road, and LTCC offices at the Equipment Storage Facility would be located. The Mixed Residential Living Facility along College Drive near the LTBMU office would also result in tree removal. Tree removal by FMP facility is estimated to include:

- Fire Access Road and Trail Improvements 10 trees
- Public Safety Training Center 37 trees
- Equipment Storage Facility 26 trees
- P.E. Expansion Building 11 trees
- Residential Student Living Building 30 trees
- Mixed Residential Living Building 85 trees

Other development may include future classroom buildings where the existing portable classrooms are located by the Fine Arts Building, which would result in no additional tree removal. Some of the area bike trails throughout the campus would be improved to allow for better connectivity across campus and to the Greenway Shared-Use Trail. Bike trail improvements may include realignment, paving for emergency vehicle access, erosion control and water quality BMPs, and other improvements depending on the trail needs. Trees located outside of the development footprints would be retained. Fallen trees would be used for trail and landscape improvements. Retained trees would continue to provide landscaping and would screen views of the campus structures when viewed from College Drive and Al Tahoe Boulevard.

Tree removal that would occur on campus is addressed by the state of California TCP/THP. Within the approximately 14 acre area covered by the TCP/THP, including each proposed FMP development area, up to 30 percent of existing trees could be removed for future campus expansion. However, these areas would be clustered adjacent to existing campus buildings, with the exception of the potential development area along College Drive. In all cases, large swaths of trees would be retained onsite, creating a vegetated border encircling the developed campus as well as each development area. Therefore, the overall scenic quality would be retained, and the majority of trees retained on the campus. With the TCP/THP addressing approximately 14 of the 120 acre campus area, the removal of the trees within three distinct locations on campus that are surrounded by trees to be retained, would not substantially damage scenic resources.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.3-3. Would the Project substantially degrade the existing visual character or quality of the site and its surroundings? (CEQA Ic)

Impacts to the visual character of the campus are discussed in Question 3.4.3-1. The visual character of the site is a mixture of native vegetation, including mature trees, and existing campus facilities. Existing campus facilities include one and two-story buildings and associated walkways, paths, parking areas, and driveways.

The addition of the Mixed Residential Living Building would be somewhat visible from Al Tahoe Blvd. and have the potential to alter views from Al Tahoe Blvd. From the Greenway Shared-use Trail, the Equipment Storage Facility, LTCC Offices, P.E. Expansion Building, Public Safety Training Center, Residential Student Living facility, and the south parking lot and emergency access road would be visible. However, as shown in Figure 3.4.3-1, the existing P.E. building and LTCC facilities are already visible, as are the existing STPUD facilities and pavement along Meadow Crest Drive. The addition of the proposed FMP structures would contribute to additional urbanization of the area, but would be consistent with existing views of campus structures.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.3-4. Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? (CEQA Id)

Although a list of building materials is not defined for all of the proposed buildings and improvements on the LTCC campus, implementation of the FMP will comply with the lighting standards in the Bijou/Al Tahoe Community Plan, City of South Lake Tahoe and TRPA. The Project and alternatives integrate a regulatory compliance measure to ensure lighting conformance (see Chapter 2, Section 2.4.11 Minimize Offsite Light and Glare) and reduction of offsite light pollution and glare. In compliance with the TRPA Design Guidelines and the Community Plan, non-reflective roofing materials will be used, and window glazing is required to avoid daytime glare. Landscaping trees and architectural elements such as overhangs will reduce the overall visual presence, reflectivity, and glare caused by windows. The Public Safety Training Center includes a variety of overhangs to reduce window glare, particularly windows designed to capture natural lighting. Each of the buildings would be painted to eliminate glare caused by metal building elements. The Equipment Storage Facility buildings would have fabric exteriors in dark sage green with some areas of white to improve natural lighting within the structure. Although the white fabric could be reflective, the fabric covering will be designed to reduce reflectivity and avoid glare to the greatest extent possible.

Windows can be reflective, and the FMP Project could result in a higher intensity of reflection, although most visibility would be limited to within the LTCC campus. To avoid or minimize reflection, the use of setbacks, landscaping, overhangs, window glazing, low-reflectivity paint, and other architectural details would reduce reflectivity. Designs for each structure have not been developed; however, it is assumed these or similar architectural features would be used because they must comply with TRPA Code and design guidelines and City standards. The near-term projects that have been preliminarily designed (Public Safety Training Center, P.E. Expansion Building, LTCC Offices, and Equipment Storage Facility) demonstrate such features. Although the Equipment Storage Facility is a utilitarian metal-frame structure, the use of dark-colored exterior fabric, non-reflective white exterior fabric, dark sage paint on the roll-up doors, and non-reflective glazing will reduce potential glare, despite the lack of overhangs as is proposed for the other structures. The P.E. Expansion Buildings and LTCC Offices are small in size, with a limited number of windows, but would include overhangs. Also, the placement of the P.E. Expansion Buildings adjacent to

the larger, existing Physical Education Building would reduce building visibility and potential to cause visible glare or light spillage.

Lighting fixtures can add glare and affect nighttime views in the Project area. Existing lighting in the Project area includes lighting fixtures within the parking areas and walkways, soccer fields, and around the exterior of buildings. The amount of lighting on campus will increase with the development of new buildings and parking areas. Lighting will be located on structures for safety and will be located at building entrance and exit locations, along the internal streets and walkways, and within parking lots. The increased number of structures will increase the amount of light emitted within the Project area. The FMP indicates that site improvements would include changes for existing and new parking lot, roadway, and pathway lighting, including the use of energy efficient lamps that are night-sky compliant. Because the types of fixtures and materials used, as well as their placement, must comply with TRPA Code and design guidelines and Community Plan and City standards, this impact is considered to be less than significant.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.3-5. Would the Project be visible from any state or federal highway, Pioneer Trail or from Lake Tahoe? (TRPA 18a)

LTCC is located along Al Tahoe Boulevard between Pioneer Trail and U.S 50 and the north end of the campus is adjacent to U.S. 50. However, the campus is not visible from or adjacent to Pioneer Trail, and, although the LTCC campus parcels extend to U.S. 50, the campus structures are not visible from U.S. 50 due to the intervening vegetation and significant setback of campus structures from U.S. 50. The campus is not located in the vicinity of the Lake Tahoe shoreline and is not visible from Lake Tahoe.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.3-6. Would the Project be visible from any public recreation area or TRPA designated bicycle trail? (TRPA 18b)

As discussed above in Question 3.4.3-1 (CEQA Checklist 1a), the campus is visible from the bike trail along Al Tahoe Blvd., the Greenway Shared-use Trail at the south end of the campus and Trout Creek to the west of the campus. The existing P.E. building and LTCC facilities are already visible from the Greenway Shared Use Trail, as are the existing STPUD facilities and roadway pavement along Meadow Crest Drive. The addition of the proposed structures would contribute to a more urban view from the trail, but would not adversely affect the existing character of the south campus. Likewise, views from Trout Creek already include the existing campus buildings. The addition of campus structures, as viewed through intervening vegetation, would not significantly change the character of the existing views. Likewise views from the bike trail along Al Tahoe Blvd. would remain essentially the same. The Mixed Residential Living Building would be visible through the trees from the bike trail, but existing views currently include the LTBMU offices and to a lesser degree main campus facilities obscured by trees; therefore, the change in the view would not conflict with scenic thresholds.

Environmental Analysis: Yes/No Impact.

Required Mitigation: None.

3.4.3-7. Would the Project block or modify an existing view of Lake Tahoe or other scenic vista seen from a public road or other public area? (TRPA 18c)

Lake Tahoe is not visible from the campus and the FMP projects would not modify any lake views. As discussed in Questions 3.4.3-1 an 3.4.3-2, although FMP facilities would be intermittently visible from the Greenway Shared-use Trail, Trout Creek, and Al Tahoe Blvd. through the existing large trees to be retained, views of the campus from these areas already include views of existing campus facilities. The addition of new facilities clustered amongst existing facilities would not result in a significant change to the views of the campus from these public locations and the overall character of educational buildings interspersed with mature trees would be retained. As such, the new structures would not block scenic vistas.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.3-8. Would the Project be inconsistent with the height and design standards required by the applicable ordinance or Community Plan? (TRPA 18d)

Although specific lighting and signage materials, dimensions, and locations are not currently identified, it is assumed that the FMP Project will comply with City standards and guidelines as necessary to obtain approvals and permits prior to construction. It is assumed that the new structures will be consistent with standards related to lighting and signs. The proposed signs would be freestanding "monument" or "low profile" type signs that may incorporate a digital display to communicate local community and campus events or other information deemed important. All structures would be setback beyond 50 feet from Al Tahoe Boulevard

Signage

The FMP Project proposes three freestanding monument signs that may include a digital display board to communicate upcoming community and campus events. The signs along Al Tahoe Blvd. would essentially relocate and upgrade the existing two signs along Al Tahoe Blvd to more appropriate locations. The sign at College Drive near the USFS building would be relocated to the north side of College Drive in a location more clearly visible to traffic. The sign at East College Drive would be relocated away from Al Tahoe Blvd. at the intersection of College Drive and East College Drive. This sign would provide information to those entering from the south entrance. The sign at US 50 would be located just south of the existing commercial development near the Al Tahoe Blvd./US 50 intersection. Although no LTCC signage exists at this location, the new monument sign would be located away from Trout Creek Meadow onto the northernmost portion of the LTCC property and near existing commercial uses/signage, shown on one of the photos included in Figure 3.4.3-1.

The City sign standards prohibit computer controlled variable message electronic signs except if it serves as city gateway signage or publicly owned community event signage. Since the sign would display community event information on the public college campus, and would be located on LTCC property, the proposed signage may qualify for the exemption. Freestanding signs may reach heights of 10 to 12 feet, depending on the setback from the property line. TRPA Code of Ordinances Chapter 38 addresses sign standards, and allows internally illuminated signs. Like the City, freestanding sign height may reach up to 12 feet and additional height may be granted if the height is incorporated into a monument base. Since proposed signage has not yet been designed, future signage would need to demonstrate compliance with TRPA and City sign standards.

Lighting

The City Code Lighting Standards indicate that lighting may be used for outdoor illumination as long as the lighting is directed downward, bulbs are not visible at elevation, no light spray occurs and cutoff shields or other similar devices are used to control light, and the maximum height of exterior architectural building or landscape lighting is 26 feet. Freestanding pole lights my not exceed 20 feet. While no lighting designs have been prepared to date, it is expected that the proposed lighting will conform to City and TRPA requirements as this will be required during design review. TRPA exterior lighting standards (TRPA Code of Ordinances Section 36.8) are similar to the City's and indicate exterior lighting shall be utilized for illumination and directed downward and should conform to the height standards. The Project integrates a regulatory compliance measure to ensure lighting conformance (see Chapter 2, Section 2.4.11 Minimize Offsite Light and Glare) and reduction of offsite light pollution and glare.

Height

The Bijou/Al Tahoe Community Plan Standards allow additional height beyond the limits established in TRPA Code of Ordinances Chapter 37, with review and approval, based on project setback, visibility or other design criteria. Not all of the proposed structures have been designed to establish all building heights; however, the preliminary designs have been established for the Public Safety Training Center (37.5 ft), Equipment Storage Facility (23.17 ft), LTCC Offices (10 ft.), and the P.E. Expansion Buildings (10 ft.), as well as the three-story training tower (26 feet). Although subject to ground elevation measurement and roof pitch, the maximum height allowance under the TRPA Code of Ordinances, Chapter 37 – Height Standards is 26 feet. While the LTCC Offices and P.E. Expansion Building (10 feet), Equipment Storage Facility buildings 12a and 12 b (23.17 feet), and the Building 12c training tower (26 feet) meet this limit, the Public Safety Training Center (37.5 feet) would require an additional height allowance. It is assumed that other structures proposed by the Master Plan will have no more than two-stories and will conform with the established height limits, or meet findings required to obtain additional height.

Since LTCC is part of the public community college system, the maximum building height may be increased by up to 14 feet, not to exceed 56 feet, if not visible from Lake Tahoe or a designated scenic highway corridor or designated Class I or II bikeway listed in the Lake Tahoe Scenic Resource Evaluation if Section 37.7 findings 1, 3, 4, 7, 8 and 10 can be made (TRPA Code of Ordinances Section 37.5.2.E). However, since some LTCC buildings are visible from Al Tahoe Boulevard Bikeway, this is not applicable for all structures proposed under the FMP, specifically the Mixed Residential Living Building. The near-term facilities (P.E. Expansion building, LTCC Offices, Public Safety Training Center, and Equipment Storage Facility) are not visible from the Al Tahoe Boulevard Bikeway. Although they are visible from the Greenway Shared Use Trail, this bikeway is not currently listed as a regulated scenic bikeway.

The Project's ability to meet TRPA Code of Ordinances, Section 37.7 findings 1, 3, 4, 7, 8 and 10 are discussed below:

37.7.1. Finding 1

When viewed from major arterials, scenic turnouts, public recreation areas, or the waters of Lake Tahoe, from a distance of 300 feet, the additional height will not cause a building to extend above the forest canopy, when present, or a ridgeline. For height greater than that set forth in Table 37.4.1-1 for a 5:12 roof pitch, the additional height shall not increase the visual magnitude beyond that permitted for structures in the shoreland as set forth in subsection 66.3.7, Additional Visual Magnitude, or Appendix H, Visual Assessment Tool, of the Design Review Guidelines.

The campus is not visible from the lake or scenic turnouts. Roof peak elevations would not exceed tree canopy heights and would not affect ridgeline views.

37.7.3. Finding 3

With respect to that portion of the building that is permitted the additional height, the building has been designed to minimize interference with existing views within the area to the extent practicable.

The Public Safety Training Center would be located immediately west of the existing Physical Education building at the south end of the developed campus. The building will be visible from within the campus, and to a lesser degree from the Greenway Shared-Use Trail. Existing trees retained onsite will shield each building to some extent; however, the structures will be visible from offsite locations. Views within the campus include other existing LTCC facilities and the addition of these two structures would not change the general character of the site. Views of the campus from the Greenway Shared-Use Trail include campus structures and large stands of trees. Adding these facilities would reduce the abundance of trees and increase views of a developed campus. The portion of the building permitted the additional height would be the prow of the Public Safety Training Center to allow for additional natural light to filter into the building. This is a small portion of the structure and not the bulk of the structure, so that views are not focused on the added height. The setback created by the yard and tarmac area, as well as fencing proposed around the yard and tarmac, and the development of the LTCC Offices and Equipment Storage buildings would reduce views of this structure. The added height strictly accounts for the upper portion of the roof avoiding significant interference with existing views.

37.7.4. Finding 4

The function of the structure requires a greater maximum height than otherwise provided for in this chapter.

The Public Safety Training Center would measure 37.5 feet in height. This two-story structure provides for classroom space on two levels, and includes an articulated roofline to allow for natural lighting and solar panel use. The additional height is needed to allow for natural lighting capture on a two-story structure and is similar to other recently constructed buildings on the campus (e.g., University Center and Early Learning Center). The building would be located between existing campus structures on the south side of the developed campus.

37.7.7. Finding 7

The additional building height is the minimum necessary to feasibly implement the project and there are no feasible alternatives requiring less additional height.

For the Public Safety Training Center, the additional height is the minimum necessary to feasibly capture natural lighting and provide for efficient use of solar roof panels.

37.7.8. Finding 8

The maximum building height at any corner of two exterior walls of the building is not greater than 90 percent of the maximum building height. The maximum height at the corner of two exterior walls is the difference between the point of lowest natural ground elevation along an exterior wall of the building, and point at which the corner of the same exterior wall meets the roof. This standard shall not apply to an architectural feature described as a prow. The height of an exterior corner on the Public Safety Training Center is approximately 25 feet, which is less than 70 percent of the maximum height. This does not include the prow, which is where the additional height would occur to capture natural lighting.

With the Proposed buildings set back more than 400 feet from Al Tahoe Blvd. their visibility is diminished and would be no greater than the visibility of existing structures in the area. The existing U.S. Forest Service building at the north end of the property is located closer to Al Tahoe Blvd. than any of the Master Plan proposed structures, and as shown in Figure 3.4.3-1, the structures are well interspersed within the background and do not dominate views of the area. However, increased visibility of proposed campus structures will contribute to a change in overall visual contrast as viewed from the Al Tahoe bike trail corridor.

Color and Design

The near-term facilities that have been designed include the LTCC Offices, P.E. Expansion Building, Public Safety Training Center, and Equipment Storage Facility. The P.E. Expansion Building includes two low-profile modular structures painted the same color as the existing Main Campus Building. The design follows other campus buildings. Although it would be a nearly flat-roof structure, the buildings would be well screened between the existing Physical Education Center, the STPUD well, existing trees and the mechanical building. The LTCC Offices would be the same type, size and design as the P.E. Expansion Building.

The Public Safety Training Center is designed as a two-story classroom structure with an articulated roofline for solar panels and to provide a prow that captures natural light. Architectural features would include stone veneer columns, concrete block in basalite color 111 and 113, horizontal fiber cement siding in a sage color, and vertical fiber cement siding in a rust color. The colors are standard district colors for building exteriors and can be found throughout the campus on the existing structures. A railing and exterior walkway is located around the second story. The structure has multiple rooflines and façade articulations to disrupt massing.

The Equipment Storage Facility would be a large clear-span, fabric-covered metal-frame structure with rollup doors of different sizes on each gable end (north and south elevations) to accommodate campus maintenance and safety training equipment. The 4:12 roof pitch is necessary due to the unique shape and utility of the structure. The structure would be surrounded by asphalt pads on each side to create a maintenance yard on the south side and a safety training tarmac on the north side. A fence would be constructed around the entire facility, yard and tarmac. The north and south elevations would include the access doors and these portions of the structure would be a sage green shade used on existing campus buildings. The east/west elevations would be narrower and partially the sage green shade with the center portion of the fabric in white for natural light capture. Although white exteriors are generally to be avoided, this coloration will allow for the large structure to utilize natural lighting and reduce dependency on electrical lighting. The setback created by the yard and tarmac as well as the fencing placed around the facility reduce visibility and glare created by the lighter sections of the building facing the east and west sides, and the fabric would serve to absorb light to reduce glare.

Snow storage is proposed in multiple locations on campus. Snow from roadway clearing is temporarily stored around campus in small areas near the Child Development Center and University Center parking lots, along the fire access road, around the G-lot parking area, along the roundabout near the Main Building, and between the Main parking lot and soccer fields. Snow stored in these interim storage areas is eventually moved to a longer-term storage area between the P.E. Building and the Greenway Trail.

Tree Removal

In addition to lighting, signage and height standards, and visual resource goals and policies, tree removal policies should also be considered in relation to visual impacts and policy compliance. Tree removal can alter the character of a site and increase views of structures. Due to the acreage of tree removal proposed, CalFire requires the issuance of a Timber Conversion Permit and preparation of a Timber Harvest Plan. The permit and plan have been prepared and submitted, and application for permit extension and updates to the Timber Harvest would occur as needed through the duration of FMP implementation. As discussed above, up to 30 percent of the existing trees within the FMP development footprint (approximately 14 acres) could be removed if all the FMP projects are implemented. Tree removal and replacement are project components discussed in Regulatory Compliance Measure 2.4.12. For each tree removed, two trees will be replanted on campus, although not necessarily of the same kind and size, and strategically placed to screen campus facilities.

TRPA Code Section 61.1.4(B) allows the removal of trees larger than 30 inches dbh within non-SEZ urban lands if there is no reasonable alternative, including modification of design or reduction in parking area. Section 61.1.4(C) can also be applied, which states a private landowner may follow Section 61.1.4(A) or one of the listed planning processes to achieve or maintain late seral/old growth thresholds, goals, and policies. The development area is not within a TRPA Conservation or Recreation land use classification, therefore the removal of any native live, dead or dying trees 30 inches dbh or larger would not result in any impact. The existing Jeffrey Pine forest that exists on the LTCC property is second growth in nature and is not considered an old grown ecosystem.

Environmental Analysis: No, with Mitigation.

Required Mitigation:

SCENIC-1a. TRPA and City of South Lake Tahoe Design Guidelines Compliance

Buildings, lighting, and signage shall comply with the design standards, and color requirements, to blend the structures into the existing background. New structures developed under FMP implementation shall comply with TRPA Design Guidelines and City of South Lake Tahoe Design Guidelines for building materials and colors. Signage shall be uniform and in accordance with TRPA and City guidelines as well as Community Plan guidelines. Internal and external lighting fixtures shall have the minimum necessary intensity and shall be in accordance with TRPA Code of Ordinances and City lighting standards. External lighting shall face downward and shall be mounted at a height appropriate for its purpose to avoid light pollution. Exterior lighting shall be shielded, and landscaping shall be placed so that light is not reflected offsite or into the night sky. Reflective materials shall be avoided. The Residential Student Living Building and Mixed Residential Living Buildings (Buildings 15 and 17) shall be designed to comply with TRPA height limits and shall, in particular, be designed to blend with the surrounding trees using appropriate colors and materials. Design details shall be presented to the TRPA and City for review and approval.

SCENIC-1b. Landscape Screening

LTCC shall provide additional landscape screening to shield views of the structures nearest Al Tahoe Blvd. Large pines and other vegetation shall be planted east of the Mixed Residential Living building (Building 17) to reduce the visual presence of the structures. The trees shall be placed to reduce views from various angles and approaches from Al Tahoe Blvd. A landscape screening plan shall be prepared and submitted to the TRPA and City of South Lake Tahoe for approval prior to construction.

3.4.3-9. Would the Project be inconsistent with the TRPA Scenic Quality Improvement Program (SQIP) or Design Review Guidelines? (TRPA 18e)

See discussion and analysis for Question 3.4.3-1 and 3.4.3-8. The Al Tahoe bike path is considered a scenic resource area, however Al Tahoe Boulevard or the other public areas from which the campus is visible, are

not. Development within the campus would not affect the SQIP. As discussed above, future projects would be required to comply with Design Guidelines and provide screening from offsite views.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.3-10. Would the Project include new or modified sources of exterior lighting? (TRPA 7a)

See discussion and analysis for Question 3.4.3-4, which concludes no significant impact with compliance with TRPA and City lighting standards and LTCC's commitment to minimizing offsite light and glare as discussed in Regulatory Compliance Measure 2.4.11.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.3-11. Would the Project create new illumination, which is more substantial than other lighting, if any, within the surrounding area? (TRPA 7b)

See discussion and analysis for Question 3.4.3-4, which concludes no significant impact

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.3-12. Would the Project cause light from exterior sources to be cast off-site or onto public lands? (TRPA 7c)

See discussion and analysis for Question 3.4.3-4, which concludes no significant impact.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.3-13 Would the Project create new sources of glare through the siting of the improvements or through the use of reflective materials? (TRPA 7d)

See discussion and analysis for Question 3.4.3-4, which concludes no significant impact.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.4 Agriculture and Forestry Resources

This section presents the analyses for potential impacts to agriculture and forestry resources. Some TRPA checklist items concern impacts to vegetation, which are addressed in Section 3.4.6, Biological Resources. Table 3-3 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

There are 1.4 million acres of timberland in El Dorado County. Although located in a Town Center and zoned Commercial/Public Services by the City of South Lake Tahoe, the LTCC campus is located in an area categorized by El Dorado County as Forest Resource-160 acres. The County also categorizes the area south of the campus as Forest Resource-160 acres. The City of South Lake Tahoe land classifications adjacent to the campus include commercial to the north and south, recreation to the east, and conservation to the west. Since this is an active community college campus, there are no active timber production activities on the site and the property is not managed for timber operations.

The site is not categorized as Prime or Unique Farmland or Farmland of Statewide Importance, and no agricultural activities occur on the campus. There are no campus lands under a Williamson Act contract.

In 2020 LTCC applied for a Timber Conversion Permit (TCP) and submitted a Timber Harvest Plan (THP) to CalFire to allow for future tree removal on campus as part of the Facilities Master Plan. The TCP/THP was approved for the Early Learning Center project and LTCC must submit a 2021 application for the remaining improvements proposed in the FMP. The TCP application for the FMP Project was submitted in early 2021 to amend the THP to include the remaining FMP conversion areas. This environmental analysis will be used to support the CalFire TCP and THP approval process.

Table 3-3: Agriculture and Forestry Resources							
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact			
3.4.4-1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the CA Resources Agency, to a non-agricultural use? (CEQA IIa)				X			
3.4.4-2. Conflict with existing zoning for agricultural use, or a Williamson Act contract? (CEQA IIb)				X			
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact			
3.4.4-3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220(g), timberland (as defined by Public Resource Code section 4526) or timberland zoned Timberland			Х				

Production (as defined by Government Code section 51104(g))? (CEQA IIc)			
3.4.4-4. Result in the loss of forest land or conversion of forest land to non-forest use? (CEQA IId)		X	
3.4.4-5. 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? (CEQA IIe)		X	

3.4.4-1. Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use? (CEQA IIa)

The LTCC is partially developed and is not located in an area identified as 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, and therefore poses no impact to such lands.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.4-2. Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract? (CEQA IIb)

No conflicts with zoning for agricultural use or a Williamson Act contract would occur because no contracts exist within the project area.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.4-3. Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code section 12220(g), timberland (as defined by Public Resource Code section 4526) or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (CEQA IIc)

Public Resources Code section 12220(g) defines forest land as, "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Since this area is already partially developed, such canopy coverage does not exist in the project area. The area is not currently identified as a commercial timber harvest zone. The amendment conflicts with no zoning of and causes no rezoning of forest land, timberland or timberland zoned Timberland Production.

A TCP application is being submitted to CalFire for the conversion of forested area on approximately 14 acres out of 120 acres of campus for the FMP. As such, the TCP/THP will allow LTCC to convert approximately 12 percent of campus lands and less than 0.001 percent of timberland in El Dorado County. Approximately 199 trees would be removed within the proposed conversion areas, primarily clustered near existing campus facilities. Trees that would be removed under the TCP/THP would be hand felled and ground skidded, or carried to a central loading site for removal. Trees and associated slash would be reused elsewhere on campus or locally disposed by the qualified local tree removal company conducting the tree removal activities. The removed trees would be located within building or access roadway/parking footprints. Trees outside these footprints would be retained within gathering areas, landscaping areas and along new walkways.

The proposed use of the land is for the expansion of the existing LTCC facilities to accommodate new programs and student housing and is not for a new type of land use. Although the project would convert land that the State identifies as timberland, the site has long been identified as a public service educational site by local authorities and the project would include the required permit necessary to convert the land owned by LTCC for campus facilities.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.4-4. Would the Project result in the loss of forest land or conversion of forest land to non-forest use? (CEQA IId)

The loss of substantial forest land defined above for Question 3.4.4-3, or conversion of forest land to nonforest use creates a significant impact if appropriate permits are not obtained. Since the LTCC TCP/THP is being processed for the FMP, no significant impact would result following compliance with CalFire regulations. It should also be noted that although the land is characterized by the state as timberland, no forestry operations occur on the LTCC campus. Only trees within the campus facilities footprint would be removed. Most trees on campus would be retained. As noted in Question 3.4.4-3, forest land within the LTCC property would be used for expansion of campus facilities and the required permit is included as a component of the project.

Environmental Analysis: No Impact

Required Mitigation: None.

3.4.4-5. Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? (CEQA IIe)

See discussions and analyses for Questions 3.4.4-2, -3, and -4 which conclude no significant impacts to farmland or forest land would occur. The LTCC is an existing, operating campus in South Lake Tahoe. Beyond the LTCC property, the area is developed with urban commercial and public service uses immediately to the north, a residential neighborhood immediately west, a community park immediately east and the South Tahoe Public Utility District facilities and a residential neighborhood to the south. The LTCC property is currently surrounded by development. The expansion of campus facilities adjacent to existing campus facilities on the LTCC property would not result in the conversion of other forest land in the surrounding community. The surrounding area already consists of urban development and continued use of the LTCC property for additional educational facilities would not pressure surrounding timberland in the greater area to convert to non-timber uses, particularly when future campus facilities may include

student housing and there are existing commercial uses in the area. There is no farmland in the community that could be converted to non-agricultural use.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.5 Air Quality

This section presents the analyses for potential impacts to air quality. Table 3-5 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The United States Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), respirable particulate matter (with aerodynamic diameter less than or equal to a nominal 10 micrometers, PM₁₀), fine particulate matter (with aerodynamic diameter less than or equal to a nominal 2.5 micrometers, PM_{2.5}), and airborne lead. The NAAQS are of two types: primary and secondary. Primary standards are designed to protect human health, including the health of "sensitive" populations, such as asthmatics, children, and the elderly, with an adequate margin of safety. Secondary standards are designed to protect public welfare, including protection against decreased visibility and harm to animals, crops, vegetation, and buildings. The EPA can designate areas with air pollution concentrations above these standards as "nonattainment areas" subject to planning and pollution control requirements.

The California Air Resources Board (CARB) established California ambient air quality standards (CAAQS) for ozone, CO, NO₂, SO₂, sulfates, PM₁₀, PM_{2.5}, airborne lead, hydrogen sulfide, and vinyl chloride at levels designed to protect the most sensitive members of the population, particularly children, the elderly, and people who suffer from lung or heart diseases.

LTCC is located within the El Dorado County Air Quality Management District (EDCAQMD). The Region is designated non-attainment for PM_{10} , as presented in Table 3-4. A significant cumulative impact results if the Project causes a considerable increase in PM_{10} .

Table 3-4: Federal and State Attainment Status for the Lake Tahoe Air Basin								
Pollutant	CA Status	Federal Status						
1-Hour Ozone	Attainment							
8-Hour Ozone	Attainment	Attainment/Unclassified						
PM10	Attainment/Unclassified							
PM _{2.5}	Not Applicable	Attainment/Unclassified						
СО	Attainment	Attainment/Unclassified						
NO ₂	Attainment	Attainment/Unclassified						
SO ₂	Attainment	Attainment/Unclassified						
All Others Attainment (Sulfates/Lead)/Unclassified (Hydrogen Sulfide and Visibility Reducing Particles)								
Source: CARB 2019 (https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations)and US EPA 2020 (https://www.epa.gov/green-book).								

EDCAQMD established a project-level average daily pollutant emission significance threshold of 82 lbs/day for NOx or ROG emitted by any combination of equipment. Construction emissions of PM10 or CO should not violate ambient air quality standards. Heavy-duty Diesel-fueled mobile pieces of equipment are the dominant sources of criteria pollutant emissions generated by construction. For operation of a proposed project, the same project-level average daily significance threshold of 82 lbs/day was set by the District for NOx or ROG emissions from all sources. The District considers CO, PM10 and SO2 emissions from operation of a land development project to be less than significant if the NOx and ROG emissions from the project are less than the same 82 lbs/day limit.

Table 3-5: Air Quality							
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact			
5.4.5-1. Conflict with or obstruct implementation of the applicable air quality plan? (CEQA IIIa)				Х			
5.4.5-2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standards? (CEQA IIIb)			Х				
5.4.5-3. Expose sensitive receptors to substantial pollutant concentrations? (CEQA IIIc)			Х				
5.4.5-4. Result in other emissions, such as objectionable odors, adversely affecting a substantial number of people? (CEQA IIId)			Х				
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No			
5.4.5-5. Substantial air pollutant emissions? (TRPA 2a)				X			
5.4.5-6. Deterioration of ambient (existing) air quality? (TRPA 2b)				X			
5.4.5-7. Creation of objectionable odors? (TRPA 2c)				X			

3.4.5-1. Would the Project conflict with or obstruct implementation of the applicable air quality plan? (CEQA IIIa)

The proposed FMP would not alter, revise, conflict or obstruct the regulations pertaining to air quality and proposes no changes to air quality policies. Development of the FMP increases the range of LTCC services

on campus, as opposed to off-campus classrooms and services, thereby reducing the need to travel away from campus or for additional off-site trips. Since the facilities would be located on campus, no significant increase in vehicle trips would occur, particularly with the presence of transit service and various bike paths serving the campus. As shown in the Transportation Analysis, the only FMP component that has the potential to create vehicle trips is the Mixed Residential Living Facility, potentially resulting in an additional 789 new trips. All other FMP components result in a reduction of approximately 150 trips from the current condition. Although an increase in trips may occur with full build-out of the FMP, development of housing and commercial services within an urban area and in proximity to transit reduces sprawl and allows for balanced growth. Although new facilities are proposed, many are replacement facilities that increase efficiency and reduce emissions. Operational emissions from new facilities would not exceed emissions thresholds as demonstrated in the air emissions modeling for the near-term facilities (Appendix A). The LTCC is within one-quarter mile of transit, commercial and public service uses, indicating that new facilities would generate shorter trip lengths and lower vehicle-miles traveled needed to meet the air quality goals of the Regional Plan and City's General Plan. Removal of trees under the TCP/THP would not obstruct implementation of area air quality plans as tree removal would occur gradually as each FMP component is constructed.

The Lake Tahoe Region is in attainment or designated as unclassified for all National Ambient Air Quality Standards (NAAQS) and is designated a nonattainment/transitional area for ozone and nonattainment for the PM10 California ambient air quality standards (CAAQS). The construction emissions threshold for particulate matter is 82 lbs/day.

Short-Term Construction Emissions

Although the campus is relatively flat, development of the FMP components would involve demolition, grading and some degree of construction activity and construction emissions. Construction emissions are described as short-term or temporary in duration. Reactive Organic Gases (ROG), Carbon Monoxide (CO) and Nitrogen Oxides (NOx) (ozone precursors) emissions are primarily associated with gas and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM10 and PM2.5) are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage or disturbance area, and vehicle travel by construction vehicles on- and off-site.

Construction may result in the temporary generation of ozone precursor and fugitive dust emissions from site preparation; off-road equipment, material import/export, worker commute exhaust emissions; paving; and other miscellaneous activities. Typical construction equipment includes dozers, graders, excavators, loaders, and trucks. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities. Grading and excavation would occur onsite, which would be balanced as fill. Due to the construction phasing over time as each FMP component is developed over ten to 15 years, emissions associated with construction would not exceed EDCAQMD significance thresholds. Air emissions would be minimized during construction as staging would occur in paved or compacted areas, the entrance to construction areas would be stabilized with aggregate rock, construction equipment speeds would be limited to 5 miles per hour, exposed and stockpiled soils would be covered to prohibit wind or water erosion, grading would be minimized and balanced onsite, and disturbed soils outside the structural footprint would be reseeded with native species to stabilize soils.

In accordance with local requirements, construction idling time would be limited to 5 minutes and construction equipment engine doors would be closed while operating to reduce emissions output. No burning of debris is proposed, and demolished walkways and pathways would be recycled and reused.

Long-Term Operational Emissions

Air emissions modeling was conducted for the near-term FMP projects – such as the P.E. Expansion Building, Equipment Storage Facility, Public Safety Training Center, fire access road and emergency access road (Appendix A). The LTCC Offices were not included as those operations are an existing use in other locations on campus. As shown in the model, annual emissions would not exceed the 82 lbs/day threshold. Since the near term facilities replace existing temporary classrooms that would be removed (P.E. Expansion Building), or relocate offsite operations onto campus (Public Safety Training Center), or provide centralized storage and operation space for existing uses and equipment either on or off campus (Equipment Storage Facility), the majority of operational emissions associated with the new facilities would be shifted from other locations, rather than created as new emissions. Energy efficiency of the new facilities would improve with the potential to reduce air emissions associated with energy consumption. Therefore, there would be no significant increase in area air emissions. The area is also served by pedestrian, bicycle, and transit services, and vehicle trips are expected to decline as new on campus facilities replace the existing offcampus facilities to which students had to make additional trips. An increase in daily vehicle trips over 100 trips would not occur until the Mixed Residential Living Facility is developed, which would provide commercial services and non-student housing. As shown in the Transportation Analysis (Appendix B), VMT per capita associated with the Mixed Residential Living Facility (19.24 miles) was less than the regional per capita threshold (20.05 miles) and therefore, no significant impact would result.

All projects in the area are required to pay air TRPA quality mitigation fees for new vehicle trips. TRPA collects air quality mitigation fees as part of their permitting process to contribute the project's fair share cost towards the construction or operation of transportation projects that reduce air quality emissions.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.5-2. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standards (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (CEQA IIIb)

The Region is designated non-attainment/transitional for ozone and non-attainment for PM_{10} , as presented in Table 3-5. A significant cumulative impact results if the Project causes a considerable increase in PM_{10} and Ozone.

In the project area, these pollutants relate to automobile use and potential impacts measured with VMT calculations and wood burning fireplaces and stoves. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. With respect to ozone precursors and PM₁₀, consistent with the Regional Plan, future FMP projects could generate long-term operational emissions, including mobile emissions.

Based on the results of the emissions modeling conducted in support of the TRPA Regional Plan (RTP) Update EIS, RTP EIR/EIS, and 2017 RTP IS/IEC, emissions of ozone precursors in the Region would be expected to decrease substantially by 2035. This can be explained by the fact that vehicle emissions standards would be improved substantially over the next 15 years, and limited development could occur within the Tahoe Region. Additional population growth and associated increases in operational ozone precursor emissions in the Region would be more than offset by more stringent vehicle emissions standards, fuel economy standards, and truck and bus emission rules, over the planning period (TRPA 2012a, page 3.4-33 and TMPO 2012, page 3.4-331, TMPO 2017, page 3-17).

The General Plan requires that all feasible EDCAQMD measures to reduce operational emissions be incorporated into project design and projects need to demonstrate compliance with TRPA's air quality mitigation program. Compliance with these requirements, as well as regional efforts by TRPA and the EDCAQMD to replace woodstoves with air quality compliant heating fixtures, would be expected to continue the existing trend of decreasing PM emissions in the Region.

The FMP does not propose to include or use wood-burning stoves or fireplaces. PM₁₀ emissions would be minimized during construction as staging would occur in paved or compacted areas, the entrance to construction areas would be stabilized with aggregate rock, construction equipment speeds would be limited to 5 miles per hour, exposed and stockpiled soils would be covered to prohibit wind or water erosion, grading would be minimized and balanced onsite, and disturbed soils outside the structural footprint would be reseeded with native species to stabilize soils. The increase in emissions of PM associated with the project would be below the project-level increment considered significant (82 lb/day). Air quality modeling using CalEEMod (2016.3.2) indicates PM₁₀ emissions to be 2.56 lb/day and PM 2.5 emissions to be 1.48 lb/day during construction, which would be substantially below the threshold. Operational PM emissions would be even less. Hand felling of trees associated with the TCP/THP would also be below the threshold and would result in no significant emissions. Since the project includes construction practices to reduce emissions, and includes decommissioning of some dirt trails, the FMP would not contribute to a significant cumulative impact. Likewise, the Public Safety Training Center and other FMP components would shift offsite classes or uses back to the LTCC campus, resulting in reductions in travel volumes, VMT, and energy use; therefore, operation would contribute no significant increase in ozone or PM₁₀ emissions.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.5-3. Would the Project expose sensitive receptors to substantial pollutant concentrations? (CEQA IIIc)

Typical sensitive receptors include residences, hospitals, and schools. The FMP addresses facility development within a school campus and includes future development of housing in two locations on campus. Existing campus facilities do not emit substantial pollutant concentrations. Pollutant concentration in the area around the campus are attributed to vehicle emissions on area roadways and operations at the STPUD wastewater treatment plant at Meadow Crest Drive; however, the emissions associated with area roads and the STPUD plant do not emit pollutant concentrations at hazardous levels. Proposed FMP uses would not result in a substantial increase in pollutant concentrations that would create a hazard. Please refer to the analysis for Question 3.4.5-1, above.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.5-4. Would the Project result in other emissions, such as objectionable odors, adversely affecting a substantial number of people? (CEQA IIId)

The occurrence and severity of odor effects depend on the nature, frequency, and intensity of the odor source, wind speed and direction, and the presence of sensitive receptors. Offensive odors rarely cause physical harm, but odors can be unpleasant and generate citizen complaints to regulatory agencies and local governments. Typical sensitive receptors include residences, hospitals, and schools. There are no hospitals located within the LTCC campus; however, the LTCC is a school and the FMP proposes housing units within the campus in two separate areas.

In the short-term, odor impacts occur from the use of diesel engines and asphalt concrete paving during construction. These odors are both temporary and localized, affecting only the area immediately adjacent to the active construction area. Diesel exhaust emissions and asphalt concrete paving odors dissipate rapidly away from the source and cease upon completion of construction activities and would be addressed by the Chapter 65 (Air Quality/Transportation) of the TRPA Code of Ordinances idling restrictions. Implementation of the FMP does not result in substantial direct or indirect exposure of sensitive receptors to offensive odors as a result of construction activities.

The FMP does not propose new uses on campus that would generate objectionable odors. The Equipment Storage Facility would include machinery, equipment, and materials already used and stored at other locations throughout the campus. The emergency response equipment associated with the Public Safety. Training Center would not generate objectionable odors. As a general matter, the types of land use development that pose potential odor problems include wastewater treatment plants, refineries, landfills, composting facilities and transfer stations. Although no such uses are proposed to be located on the LTCC campus, the South Tahoe Public Utility District (STPUD) wastewater treatment plant is located immediately adjacent to the campus.

The STPUD wastewater treatment plant is adjacent to the southern boundary of the LTCC campus. There are no standard environmental regulations for objectionable odors associated with the wastewater treatment facility, however EPA guidelines suggest a buffer zone around wastewater treatment plants is highly desirable primarily for odor control, but also for safety and security. EPA Bulletin AQ2/86 recommends a minimum 400-meter buffer for wastewater treatment facilities. The STPUD plant is located just over 200 meters from the existing P.E. Building and would be about 335 meters from the Public Safety Training Center and over 450 meters from the Residential Student Living Building, outside the 400-meter buffer zone. The nearest treatment facilities and equipment at the SPTUD plant are capped, which mitigates the reduced buffer area and allows for uses safely within the 400-meter buffer.

The water treatment facility also incorporates the use of chlorine gas in the water treatment process, where a chlorine gas release could have the potential to impact the LTCC campus. The STPUD operates the water treatment facility under strict Federal, State and Local laws and regulations that ensure in the event of a chlorine gas release there would be no potential to cause harm to public health, safety and welfare beyond the confines of the water treatment facility. Compliance with Federal and State hazardous materials laws and regulations minimizes the risk to the public presented by these potential hazards. Statutes, such as the Accidental Release Prevention and Hazardous Waste Control Laws, regulate the storage and use of "acutely hazardous materials" and are intended to protect the public from materials that produce toxic clouds after fires, explosions or other accidents. Since 1996 this law has provided consistency with the Federal Emergency Preparedness and Community Right-to-Know and Clean Air Acts, allowing local oversight of both the State and Federal programs. California's Accidental Release Prevention Program addresses both federally regulated substances and a number of additional chemicals identified by the State. The El Dorado County Environmental Management Department provides permits, approvals and monitoring relating to hazardous materials use and storage.

In addition, an EDR Report, dated July 26, 2016, searched regulatory databases, and did not find other potential sources of hazardous materials or waste that would pose a health hazard for students, faculty, or construction workers in the Project area. In the event that previously unknown lead-based paint, asbestos, contaminated soils, or buried hazardous waste is encountered during construction activities, the contractor is required to notify appropriate regulatory agencies and implement appropriate actions to comply with regulatory agency standards to avoid hazardous waste releases and worker exposure and provide for cleanup measures. In reference to ACM, an accredited inspector in accordance with EPA and Cal-OSHA standards under Clean Air Act §112 must remove ACMs and lead. Agency notification and compliance with

applicable construction and workplace safety standards is considered sufficient to maintain potential impacts to a less than significant level, and no additional mitigation is required.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.5-5. Would the Project result in substantial air pollutant emissions? (TRPA 2a)

See analysis for Questions 3.4.5-1 and 3.4.5-2.

The proposed FMP would not alter or revise the regulations pertaining to air quality. Consistent with existing conditions, future projects under the FMP would be subject to subsequent environmental review and permitting, and would be required to comply with Chapter 65 of the TRPA Code. Chapter 65 includes provisions that apply to direct sources of air pollution in the Tahoe region, including certain motor vehicles registered in the region, combustion heaters installed in the region, open burning, stationary sources of air pollution, and idling combustion engines. Because future development projects are required to implement air quality attainment measures established by the TRPA and EDCAQMD, implementation of the FMP would not be anticipated to lead to nonattainment of emissions standards. Development of the proposed FMP facilities would not result in construction or operational air emissions that exceed the 82 lbs/day threshold.

Environmental Analysis: No Impact

Required Mitigation: None.

3.4.5-6. Would the Project result in deterioration of ambient (existing) air quality? (TRPA 2b)

See analyses for Questions 3.4.5-1 and 3.4.5-2, which conclude a less than significant impact and Question 3.4.5-5, which concludes no impact to ambient air quality.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.5-7. Would the Project result in creation of objectionable odors? (TRPA 2c)

See discussion and analysis for Question 3.4.5-4, which addresses the creation of objectionable odors and concludes a less than significant odor impact to short-term and long-term effects to sensitive receptors.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6 Biological Resources (Stream Environment Zones, Wetlands, Wildlife and Vegetation)

This section presents the analyses for potential impacts to biological resources, including impacts to SEZs, wetlands, wildlife and vegetation. Table 3-6 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting:

LTCC is located in South Lake Tahoe, California. The Project area is located in section 2 of Township 12 North, Range 18 East. Elevation range of the Project area ranges between 6260 to 6280 feet above mean sea level (msl).

The LTCC property is characterized by an early to mid-successional forest stand consisting primarily of Jeffrey Pine Forest. This forest association occurs on well-drained, high elevation sites between 6,000 and 8,000 feet above mean se level (Holland 1986). The dominant tree species is Jeffrey pine (*Pinus jeffreyi*). The understory is sparse and consists of small sapling trees, shrubs, and herbs. The species on the site include lodge pole pine (*Pinus contorta*), antelope bitterbrush (*Purshia tridentata*), sagebrush (*Artemisia tridentata*), and mules ears (*Wyethia mollis*). Very few snags are present within the Project area. Canopy closure is characterized as fairly open ranging from 10-50%, and very little down woody debris is present. The Project area was thinned prior to the development of the LTCC campus in 1985.

Trout Creek is the only stream habitat that is adjacent or in close proximity to the Project area. Trout Creek lies to the west of the Project area from the Martin Avenue Bridge and flows to the north to under the bridge at US 50. Stream Environment Zone (SEZ) habitats exist along the margins of Trout Creek that flows south to north along the western boundary of the Project area. Vegetation communities associated with SEZs in the Project area include montane riparian, aspen, and wet meadow. Characteristic species in the montane riparian association include mountain alder (*Alnus tenuifolia*), willow (*Salix spp.*), and mountain maple (*Acer glabrum*). Montane riparian vegetation occurs in discontinuous patches along the edges of Trout Creek in the Project area. Wet meadows consist of a layer of herbaceous plants that occur where water is at or near the surface most of the growing season and are present in patches along Trout Creek.

The project area also contains small patches of sagebrush and montane chaparral associations. The sagebrush vegetation community is dominated by Basin sagebrush (*Artemisia tridentata*), but may also include components of the montane chaparral association. Characteristic species in the montane chaparral association include mountain whitethorn (*Ceanothus cordulatus*), chinquapin (*Castanopsis sempervirens*), and huckleberry oak (*Quercus vaccinifolia*). Characteristic understory species found within various communities in the project area include: greenleaf manzanita (*Arctostaphylos patula*), beardtongue (*Penstemon sp.*), currant (*Ribes sp.*), mule ears (*Wyethia sp.*), mountain whitethorn (*Ceanothus cordulatus*), serviceberry (*Amelanchier sp.*), huckleberry oak (*Quercus vaccinifolia*), California lilac (*Ceanothus velutinus*), young white fir (*Abies concolor*), willow (Salix sp.), quaking aspen (*Populus tremuloides*), corn lily (*Veratrum sp.*), and bracken fern (*Pteridium aquilinum*).

Wildlife use of the Project area differs greatly as there are a number of different habitats within the LTCC property, including the Trout Creek area directly west of the main campus. Use has been documented through numerous conversations with local biologists and review of reports prepared for and adjacent to the Project area. Habitats include riparian, upland forest, meadow, urban with various levels of disturbance and human presence. The Project area provides habitat for numerous small mammals, including goldenmantled ground squirrel (*Spermophilus lateralis*), Belding's ground squirrel (*Spermophilus beldingi*), Douglas' squirrel (*Tamiasciurus douglasii*), several species of chipmunk (*Tamias spp.*), and a variety of

smaller rodents. Porcupine (*Erethizon dorsatum*), American marten (*Martes Americana*) and long-tailed weasel (*Mustela frenata*) are also common.

Larger mammals known to occur in the vicinity of the Project area include coyote (*Canis latrans*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*), black bear (*Ursus americanus*), and mule deer (*Odocoileus hemionus*). Mule deer are regularly observed in the vicinity of the Project area. These deer are part of the Carson River Deer Herd that occupies the eastern slope of the Sierra Nevada in Alpine and El Dorado counties in California and Douglas County in Nevada. The Project area is within the western end of the herd's range (NDOW 1975).

A wide variety of resident and migratory bird species nest and forage on or in the vicinity of the LTCC Project area. Clark's nutcrackers (*Nucifraga columbiana*) and Steller's jays (*Cyanocitta stelleri*) can be found year-round throughout the Project area and surrounding forested lands. Mountain chickadee (*Parus gambeli*), evening grosbeak (*Coccothraustes vespertinus*), and white-breasted nuthatch (*Sitta carolinensis*) may also be found year-round, while other species such as western tanager (*Piranga ludoviciana*) and western wood pewee (*Contopus sordidulus*) are summer residents only. A variety of woodpeckers, including northern flicker (*Colaptes auratus*) and hairy woodpecker (*Picoides villosus*), are commonly observed in association with forested habitats in the Project area. Typical raptors include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), and turkey vulture (*Cathartes aura*).

Reptiles are represented within the Project area by species such as the western fence lizard (*Sceloporus occidentalis*), northern alligator lizard (*Gerrhonotus coeruleus*), rubber boa (*Charina bottae*), and western terrestrial garter snake (*Thamnophis elegans*). Amphibians include western toad (*Bufo boreas*) and Pacific chorus frog (*Pseudacris regilla*).

A number of fish are present within Trout Creek. Both native species and introduced species have been observed. Native species include Piute sculpin (*Cottus beldingi*), and speckled dace (*Rhinichthys osculus*). Non-native species that were introduced in the past by governmental agencies in order to provide sport-fishing opportunities. Introduced species include brook trout (*Salvelinus fontinalis*), brown trout (*Salmon trutta*), and rainbow trout (*Oncorynchus mykiss*) (LTBMU 2010).

Tables 3-7 and 3-8 present a list of special-status species with potential to occur in the Project area or vicinity. The tables provides the current state, federal, or other agency status; a description of the habitat utilized by each of these species; and an evaluation of the potential for each species to occur in the Project area.

Special-Status Species that May Occur in the Project Area or Vicinity

	Status				Likelihood of
Species	Federal	State	TRPA	Habitat Description	Occurrence Within Project Area
			Fi	sh	
Lahontan cutthroat trout Oncorhynchus (=Salmo) clarki henshawi	FT MI	ST	S	Historically occurred in all accessible cold waters of the Lahonton Basin in a wide variety of water temps and conditions. Cannot tolerate presence of other salmonids. Gravel riffles in streams required for breeding.	Moderate to Low; LCT have been stocked in Lake Tahoe and Trout Creek offers no barrier to upstream movement. Project area does not include development in SEZ or Trout Creek area.
			Inse	ects	
Western Bumblebee Bombus occidentalis		CE		Requires suitable nesting sites for the colony, nectar and pollen from floral resources available throughout the duration of the colony period (spring through fall), and suitable overwintering sites for the queens. Nests occur primarily in underground cavities such as old squirrel or other animal nests and in open west-southwest slopes bordered by trees.	Moderate to Low; suitable habitat includes the riparian area surrounding Trout Creek that support a variety of flowering plants. Project area does not include activity in SEZ or Trout Creek area.
	1	1	Amph	ibians	1
Sierra Nevada yellow-legged frog Rana sierrae	FE FSS	ST		Inhabits ponds, lakes, and streams associated with montane riparian, lodgepole pine, subalpine conifer, and wet meadow communities.	Moderate to Low; montane riparian and wet meadow communities within the margins of Trout Creek

Special-Status Species that May Occur in the Project Area or Vicinity

	Species Federal State TRPA				Likelihood of
Species			TRPA	Habitat Description	Occurrence Within Project Area
					may provide suitable habitat. Project area does not include development in SEZ or Trout Creek area.
			Bi	rds	
Bald eagle Haliaeetus leucocephalus	FSS BCC	SE CFP	SI	Breeds and roosts in remote coniferous forests in close proximity to a river, stream, lake, reservoir, marsh, or other wetland area.	Low; nearest sighting is 1.5 mile from Project area.
Golden eagle Aquila chrysaetos	BCC			Rolling foothills, mountain areas, grasslands, savannas, deserts, and early successional stages of forests and shrub communities. Cliffs and large trees are utilized for nesting.	None; no suitable habitat present within the Project area.
Bank swallow Riparia riparia		ST		Inhabits riparian and other lowland habitats. Requires vertical banks or cliffs with fine textured, sandy soils near streams.	Low; nearest sighting is over 1.7 miles from the Project area.
Rufous hummingbird Selasphorus rufus	FSC BCC			A common migrant and uncommon summer resident of California; many post-breeders migrate south through the Cascade Range and Sierra Nevada. Found in a variety of environments that provide nectar-producing flowers; including montane riparian, high mountain meadows, valley foothill hardwood-conifer, and various chaparral communities.	Low; suitable nesting habitat is not present within the Project area
Olive-sided Flycatcher Contopus cooperi	BCC			Inhabits coniferous forests with tall standing dead trees, typically spruce, fir, balsam, pine or mixed	Low; potentially suitable habitat is

Special-Status Species that May Occur in the Project Area or Vicinity

	Species Federal State TRPA			Likelihood of	
Species			TRPA	Habitat Description	Occurrence Within Project Area
				woodlands near edges and clearings, wooded streams, swamps, bogs, edges of lakes, or rivers.	present within the Project area.
Willow flycatcher Empidonax traillii	FSS BCC	SE		Typically breeds in willow-dominated riparian vegetation along perennial streams in moist meadows or spring-fed or boggy areas.	Moderate to Low; potentially suitable habitat is present along Trout Creek. Project area does not include development in SEZ or Trout Creek area.
Williamson's sapsucker Sphyrapicus thyroideus	BCC			Prefers higher conifer forests, burns; also in aspen groves near conifers.	High; potentially suitable habitat is present within the Project area.
Cassin's finch Carpodacus cassinii	BCC			Found in high mountain conifers, often in the scrubby forest near the treeline at very high elevations.	High; potentially suitable habitat is present within the Project area.
			Mam	mals	
California wolverine Gulo gulo luteus	FSS	ST CFP		Occurs in a variety of environments, including subalpine conifer, alpine dwarf-shrub, barren, mixed conifer, and lodgepole pine forests at or near timberline. Typically associated with areas of low human disturbance.	Low; potentially suitable habitat is present within the Project area.
North American wolverine Gulo gulo luscus	FPT			Found in very remote areas of northern North America and high elevation areas of the Sierra Nevada. Typically associated with areas of low human disturbance.	Low; potentially suitable habitat is present within the Project area.

Special-Status Species that May Occur in the Project Area or Vicinity

	Status				Likelihood of
Species	Federal	State	TRPA	Habitat Description	Occurrence Within Project Area
West Coast fisher Pekania pennanti	FSS	ST CSC		Occurs in intermediate to large tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs, and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Low; potentially suitable habitat is not present within the Project area.
Gray wolf Canis lupus	FE	SE		Occurs in diverse habitats including forests, grasslands, deserts, and tundra. Habitat requirements include the presence of adequate water and prey populations.	Very Low; not known to occur in the Lake Tahoe Region and not included on Federal or State protected species lists for the Lake Tahoe Region.

Source: CDFW, USFWS 2020

Federal Status:

- FE Listed as endangered under the Federal Endangered Species Act
- FT Listed as threatened under the Federal Endangered Species Act
- FPT Proposed threatened
- FSC Species of concern as identified by the U.S. Fish and Wildlife Service
- D Delisted in accordance with the Federal Endangered Species Act
- FSS USDA Forest Service sensitive species
- MI LTBMU Management Indicator species

State Status:

- SE Listed as endangered under the California Endangered Species Act
- ST Listed as threatened under the California Endangered Species Act
- SCE Candidate endangered
- CSC Species of concern as identified by the California Department of Fish and Wildlife
- CFP Listed as fully protected by the California Fish and Game Code

TRPA Status:

SI Species of Special Interest to the Tahoe Regional Planning Agency
	Status						Likelihood of
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
Galena Creek (=Carson Range) rock cress Boechera rigidissima var. demota	FSS		1B	SI	Broadleaved upland forest, upper montane coniferous forest on rocky substrates. Known in CA from only two occurrences near Martis Peak, and in NV from eleven occurrences in the Carson Range. Elevational range 2,255-2,560m.	August	Low; not previously observed on site, potentially suitable habitat is not present on site.
Bolander's bruchia Bruchia bolanderi	FSS		4		Lower montane coniferous forest, meadows, and seeps, and upper montane coniferous forest. Grows on damp clay soils along streambanks, meadows, fens, and springs. Disturbance adapted with an ephemeral nature. Elevational range 1,610-3,340m.	Not applicable	Low; not previously observed on site, potentially suitable habitat is not present on site.
Blandow's bog moss Helodium blandowii	FSS		2B		Meadows and seeps and subalpine coniferous forest. Moss grows on damp soil, especially under willows among leaf litter. Elevational range 1,490-3,050m.	Not applicable	Low; not previously observed on site, potentially suitable habitat is not present on site.
Three-ranked hump moss Meesia triquetra			4		Bogs and fens, meadows and seeps, upper montane coniferous forest, and subalpine coniferous forest. Grows on mesic soil. Elevational range 1,300-2,955m.	July	Low; not previously observed on site, potentially suitable habitat is not present on site.
Broad-nerved hump moss Meesia uliginosa	FSS		2B		Bogs and fens, meadows and seeps, upper montane coniferous forest, and	October	Low; not previously observed on site,

	Status					Likelihood of	
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
					subalpine coniferous forest. Grows on damp soil, often found on the edge of fens or raised above the fen on hummocks or shrub bases. Elevational range 1,095-2,805m.		potentially suitable habitat is not present on site.
Western waterfan lichen Peltigera gowardii	FSS		4		Found in riparian forest on rocks in cold water creeks with little or no sediment or disturbance, often associated with rich bryophyte flora. Elevational range 1,065-2,375m	Not applicable	Low; not previously observed on site, potentially suitable habitat is not present on site.
Upswept moonwort Botyrchium ascendens	FSS		2B		Grassy fields and coniferous woods near springs and creeks of montane coniferous forest. Elevational range 1,500-2,060m.	Not applicable	Low; not previously observed on site, potentially suitable habitat is not present on in development area.
Scalloped moonwort Botyrchium crenulatum	FSS		2B		Saturated soils in margins of small streams or near springs and creeks of montane coniferous forest. Elevational range 1,500-2,060m.	Not applicable	Low; not previously observed on site, potentially suitable habitat is not present on in development area.
Mingan moonwort Botyrchium minganense	FSC		2		The habitat of B. minganense varies widely from dense forest to open meadow and from summer-dry meadows to permanently saturated fens and seeps. When in meadows, plants may stand in open sun or under dense herbaceous cover. The	Not applicable	Low; not previously observed on site, potentially suitable habitat is not present on in development area.

	Status					Likelihood of	
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
					species is often found in association with old (>10 year) disturbances such as logging roads and road shoulders. B. minganense may be less closely associated with calcareous soils than most moonworts. 4,773–6,750 ft. (1455-2055 m)		
Alpine dusty maidens Chaenactis douglasii var. alpina			2		Alpine boulder and rock fields of granite. Elevational range 3,000-4,000m.	July- September	None; suitable habitat not present within Project area.
Starved daisy Erigeron miser	FSS		1B		Upper montane coniferous forest on rocky, granitic outcrops. Elevational range 1,550-2,775m	June- October	None; suitable habitat not present within Project area.
Subalpine cryptantha Cryptantha crymophila			1B		Volcanic rocky sites in subalpine coniferous forest. Elevational range 2,600-3,200m.	July- August	None; suitable habitat not present within Project area.
Tahoe draba Draba asterophora var. asterophora	FSS		1B	SI	Alpine boulder and rock fields in crevices, and open talus slopes of decomposed granite in subalpine coniferous forest. Elevational range 2,500-3,505m.	July- August	None; suitable habitat not present within Project area.
Cup Lake draba Draba asterophora var. macrocarpa	FSS		1B	SI	Alpine boulder and rock fields in shade of granitic rocks in subalpine coniferous forest. Elevational range 2,500-2,815m.	July- August	None; suitable habitat not present within Project area.

	Status					Likelihood of	
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
Marsh skullcap Scutellaria galericulata			2B		Marshes and swamps, lower montane coniferous forest, meadows and seeps. Found in swamps and wet areas. Elevational range 0-1,950m	June- September	None; suitable habitat not present within Project area.
Cream-flowered bladderwort Utricularia ochroleuca			2B		Meadows, seeps, marshes and swamps on mesic sites, including lake margins. Elevational range 1,310-2,350m.	June-July	None; suitable habitat not present within Project area.
Marsh willowherb Epilobium palustre			2B		Bogs, fens and meadows of montane coniferous forest. Elevational range 2,200m.	July- August	None; suitable habitat not present within Project area.
Subalpine fireweed Epilobium howellii			4		Meadows and seeps, and subalpine coniferous forests in mesic environments. Known from only four occurrences in Fresno, Mono, and Sierra counties. Elevational range 2,000-2,700m.	July- August	Low; potentially suitable habitat is present on site along Trout Creek. No documented occurrences in the Lake Tahoe Region.
Jack's wild buckwheat Eriogonum luteolum var. saltuarium	FSS		1B		Upper montane coniferous forest and Great Basin scrub on sandy and granitic substrates. Elevational range 1,885-2,225m.	July- September	None; suitable habitat not present within Project area.
Carson Valley monkeyflower Erythranthe carsonensis			1B		Granitic openings in Great Basin scrub. Elevation 1,480m.	April-June	None; suitable habitat not present within Project area.

	Status					Likelihood of	
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
Fell-fields claytonia Claytonia megarhiza			2B		In crevices between rocks, rocky or gravelly soil in alpine boulder and rock fields, and subalpine coniferous forest. Elevational range 2,560- 3,505m.	July- September	None; suitable habitat not present within Project area.
Long-petaled lewisia Lewisia longipetala	FSS		1B	SI	Alpine boulder and rock fields in subalpine coniferous forest. Elevational range 2,500-2,925m.	June- August	None; suitable habitat not present within Project area.
Golden violet Viola purpurea ssp. aurea			2B		Great Basin scrub and pinyon-juniper woodland on dry sandy slopes. Elevational range 1,000-2,500m.	April-June	None; suitable habitat not present within Project area.
Austin's astragalus Astragalus austiniae			1B		On rocky terrain in alpine boulder and rock field, and subalpine coniferous forest. Elevational range 2,440-2,965m.	July- September	None; suitable habitat not present within Project area.
Stebbins' phacelia Phacelia stebbinsii	FSS		1B		Lower montane coniferous forest, cismontane woodland, meadows and seeps. Found among rocks and rubble on metamorphic rock benches. Elevational range 605-2,320m.	May-July	None; suitable habitat not present within Project area.
Davy's sedge Carex davyi			18		Subalpine coniferous forest, and upper montane coniferous forest. Elevational range 1,605-3,230m.	May- August	Low; not previously observed on site, potentially suitable habitat is not present on site.

	Status				Likelihood of		
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
Porcupine sedge Carex hystericina			2B		Marshes and swamps, wet places such as stream edges. Elevational range 225-2,400m.	May-June	None; suitable habitat not present within Project area.
Mud sedge Carex limosa			2В		Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, and upper montane coniferous forest. Found in floating bogs and soggy meadows and edges of lakes. Elevational range 1,370-2,790m.	June- August	None; suitable habitat not present within Project area.
Tahoe yellow cress Rorippa subumbellata	FSS	SE	1B	SI	Lower montane coniferous forest, meadows and seeps / decomposed granitic beaches. Known in CA from fewer than ten extant occurrence around Lake Tahoe. Elevational range 1,895-1,900m.	May- September	None; suitable habitat not present within Project area.
Tulare rockcress Boechera tularensis	FSS		1B		Rocky slopes in subalpine coniferous forest and montane coniferous forest. Elevational range 1,825-3,355m.	June-July	None; suitable habitat not present within Project area.
Watershield Brasenia schreberi			2B		Freshwater marshes and swamps. Elevational range 1-2,180m.	June- September	None; suitable habitat not present within Project area.
Water bulrush Scirpus subterminalis			2B		Bogs, fens, marshes, swamps and lake margins of montane coniferous forest. Elevational range 750- 2,250m.	July- August	None; suitable habitat not present within Project area.

Special-Status Plants that May Occur in the Project Area or Vicinity

		Sta	tus				Likelihood of
Species	Federal	State	CNPS	TRPA	Habitat Description	Bloom Period	Occurrence Within Project Area
American manna grass Glyceria grandis			2B		Bogs and fens, meadows and seeps, marshes and swamps. Found in wet meadows ditches, streams and ponds, in valleys, and lower mountain elevations. Elevational range 600- 2,045m.	June- August	None; suitable habitat not present within Project area.
Slender leaved pondweed Stuckenia filiformis ssp. alpina			2B		Shallow, clear water of lakes and drainage channels, marshes and swamps. Elevational range 5-2,325m.	May-July	None; suitable habitat not present within Project area.
Robbins' pondweed Potamogeton robbinsii			2B		Deep water, lakes, marshes and swamps. Elevational range 1,525- 3,495m	June- August	None; suitable habitat not present within Project area.

Source: CDFW, CNPS, USFWS 2020

Federal status:

FSC Species of concern as identified by the U.S. Fish and Wildlife Service

FSS USDA, Forest Service sensitive species

State Status:

SE Listed as endangered under the California Endangered Species Act

California Native Plant Society Listing Categories (CNPS 2001):

- 1B Plant species that are rare, threatened, or endangered in California and elsewhere
- 2 Plant species that are rare, threatened, or endangered in California, but are more common elsewhere

TRPA Status:

SI Species of Special Interest to the Tahoe Regional Planning Agency

Table 3-6: Biological Resources								
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact				
3.4.6-1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (CEQA IVa)			X					
3.4.6-2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (CEQA IVb)			Х					
3.4.6-3. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (CEQA IVc)				Х				
3.4.6-4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (CEQA IVd)			X					
3.4.6-5. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance? (CEQA IVe)				X				

CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.6-6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (CEQA IVf)				X
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.6-7. Removal of native vegetation in excess of the area utilized for the actual development permitted by the land capability/IPES system? (TRPA 4a)				Х
3.4.6-8. Removal of riparian vegetation or other vegetation associated with critical wildlife habitat, either through direct removal or indirect lowering of the groundwater table? (TRPA 4b)				X
3.4.6-9. Introduction of new vegetation that will require excessive fertilizer or water, or will provide a barrier to the normal replenishment of existing species? (TRPA 4c)				Х
3.4.6-10. Change in the diversity or distribution of species, or number of any species of plants (including trees, shrubs, grass, crops, micro flora and aquatic plants)? (TRPA 4d)				X
3.4.6-11. Reduction of the numbers of any unique, rare or endangered species of plants? (TRPA 4e)				X
3.4.6-12. Removal of streambank and/or backshore vegetation, including woody vegetation such as willows? (TRPA 4f)				X
3.4.6-13. Removal of any native live, dead or dying trees 30 inches or greater in diameter at breast height (dbh) within TRPA's Conservation or Recreation land use classifications? (TRPA 4g)				X

TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.6-14. A change in the natural functioning of an old growth ecosystem? (TRPA 4h)				X
3.4.6-15. Change in the diversity or distribution of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects, mammals, amphibians or microfauna)? (TRPA 5a)				X
3.4.6-16. Reduction of the number of any unique, rare or endangered species of animals? (TRPA 5b)				X
3.4.6-17. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals? (TRPA 5c)				х
3.4.6-18. Deterioration of existing fish or wildlife habitat quantity or quality? (TRPA 5d)				X

3.4.6-1. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (CEQA IVa)

The LTCC campus was surveyed for sensitive plant species during the summer of 2015. No endangered, threatened or CNPS List 1b, 2 or 3 or TRPA listed plant species were observed (HBA 2015). The FMP project area and the areas addressed by the TCP do not contain suitable habitat for the species listed in Table 3-7 and 3-8 above. Disturbed areas outside the footprint of the new facilities would be revegetated with a native seed mix as described in the Project description. The Project area does not contain any suitable habitat for sensitive species; therefore, this impact is considered less than significant.

Suitable habitat for Sierra Nevada yellow-legged frog (SNYLF) (USFWS endangered and CDFW threatened) has been identified in the vicinity of Trout Creek that lies to the west of the Project area. The FMP and associated tree removal (TCP) would not result in any modifications to the creek channel or result in any changes to the existing creek channel habitat. The closest known occurrence of this species is in Hell Hole and Desolation Wilderness, seven and eight miles away respectively. This species is not known to occur in, or in close proximity to the Project area. No impacts to this species would occur.

Lahontan cutthroat trout (LCT) is the only threatened species (USFWS and CDFW) that has the potential to occur in Trout Creek. In 2010, USFS, Lake Tahoe Basin Management Unit performed a comprehensive survey of Trout Creek. No LCT were observed in the creek at that time. These fish are obligate stream spawners and may be present in Trout Creek as there are no barriers that would prevent them from moving upstream. No impact to LCT would occur as no disturbance to Trout Creek or the riparian area surrounding Trout Creek is proposed. Best management practices will be implemented during construction activities in

order to protect water quality and prevent construction runoff from reaching the waters of the Trout Creek. This may include fencing the construction area, coir logs located along the construction perimeter, and other best management practices.

Western bumble bee may utilize the riparian area surrounding Trout Creek for foraging due to the presence of flowering plants, but suitable foraging habitat is less present on the LTCC campus. The low-level of flowering vegetation removal required for the FMP is not likely to result in the loss of individual bees and will not result in a significant loss of flowering plants that could offer potential nectar sources to this species.

There are no recent records of wolverine sightings from the project area, the vicinity of the project area or the Lake Tahoe Basin. Therefore, no impacts to this species would be anticipated. Additionally, the project area includes no potentially suitable habitat.

Future LTCC projects within the affected TCP area would be subject to project-level environmental review and permitting at which time they would be required to demonstrate compliance with all federal, state, and local regulations pertaining to the protection of animal species. Implementation of the proposed FMP and TCP would not result in the reduction in the number of any unique, rare, or endangered species of animals, including waterfowl. While the FMP and TCP/THP allow for additional development on the LTCC campus, they do not propose new development that threaten protection of listed species or their habitat, and do not affect policies that protect biological resources.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.6-2. Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (CEQA IVb)

The U.S. Fish and Wildlife Service's IPaC database identifies no riparian habitat, no wetlands, and no critical habitat in the FMP Project development area. Riparian habitat is located west of the Project area along Trout Creek; however, no direct or indirect disturbance to this area is proposed. Runoff generated by the new FMP structures and pavement would be managed onsite through a series of basins and landscape receiving areas. The FMP area does not include TRPA land capability district 1b (SEZs). The project would not alter or revise the regulations pertaining to existing fish or wildlife habitat quantity or quality or pertaining to resource protection measures. Future development projects under the FMP would be subject to subsequent project-level environmental review and permitting at which time they would be required to demonstrate compliance with all federal, state, and TRPA regulations pertaining to the protection of riparian areas.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.6-3. Would the Project have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (CEQA IVc)

There are no federally protected wetlands within the LTCC FMP development area or the TCP/THP conversion area.

Environmental Analysis: No Impact.

Required Mitigation: None

3.4.6-4. Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (CEQA IVd)

No known migration or travel corridors are located within the Project area. Riparian corridors are known to be travel ways for many wildlife species. No removal of riparian areas is proposed in conjunction with the project, therefore no impacts to these travel corridors are expected to occur.

The FMP facilities and improvements would result in the removal of approximately 199 trees within the project area over the 15 to 20 year lifespan of the FMP. This estimate includes approximately 10 trees associated with the fire road west of the main campus buildings, 37 trees associated with the Public Safety Training Center, 26 trees associated with the Equipment Storage Area, 11 trees associated with the P.E. Expansion Building, 30 trees associated with the Residential Student Living Buildings, and 85 trees associated with the Mixed Residential Living Buildings. Many of the trees in the forested areas contain structural anomalies such as dead leaders, rotten portions of boles and deformities due to mistletoe or other infectious growths. These characteristics are attractive to many bird species. In addition, older trees often contain deadwood that is suitable for excavation by cavity nesters. Tree removal and construction activities associated with construction of the new buildings/structures associated with expansion may result in direct removal of active nests and may result in disturbance or abandonment of nesting, roosting, or breeding sites in adjacent habitat. To ensure protection of potential nesting birds within conversion areas, mitigation measures are required to reduce the potential impact to less than significant.

Environmental Analysis: Less than Significant Impact with Mitigation.

Required Mitigation: BIO-1. Bird Nest Site Protection Program

The Program shall include surveys, consultation, and protective actions. Pre-construction surveys, occurring during the nesting season immediately prior to initial project construction (e.g., excavation, grading and tree removal), shall be conducted to identify any active nest sites within the Project area. Specifically, prior to initial construction activities (tree removal and excavation for construction), a qualified biological monitor shall visit the construction area to evaluate whether any nesting birds are occupying trees or whether any wildlife den/nursery sites are located within the Project disturbance area. If nest sites are identified, the biological monitor will have the authority to stop or reschedule construction activities near occupied trees or nursery sites if continued work could have negative impact on nesting birds or their young. If construction activities must be stopped, the monitor shall consult with TRPA and/or CDFW staff within 24 hours from the discovery to determine appropriate actions to restart construction while reducing impacts to identified bird nests.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.6-5. Would the Project conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance? (CEQA IVe)

The LTCC campus is located in the Bijou/Al Tahoe Community Plan. The land use classification for the Bijou/Al Tahoe Community Plan is Commercial/Public Service. The Project area is not within a TRPA

Conservation or Recreation land use classification, therefore the removal of any native live, dead or dying trees 30 inches dbh or larger would not result in any impact. The Project does not include the removal of native vegetation in excess of the area to be developed. The existing Jeffrey Pine forest that exists on the LTCC property is second growth in nature and is not considered an old grown ecosystem. There are an estimated 730 trees within the LTCC conversion area addressed by the TCP/THP, or approximately 49 trees per acre. An estimated 199 trees would be removed. Since the LTCC campus is not a Conservation or Recreation area, tree removal is permissible. No significant impact will occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-6. Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (CEQA IVf)

The proposed FMP does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because no such plans exist for the project area.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-7. Would the Project result in removal of native vegetation in excess of the area utilized for the actual development permitted by the land capability/IPES system? (TRPA 4a)

The FMP does not propose to remove native vegetation outside of the proposed facility or improvement construction footprint. As shown in Table 2-4, total coverage on the LTCC property with implementation of the FMP facilities would not exceed allowable coverage. The FMP area is partially developed with native vegetation on the undeveloped portions of the parcels. Construction of each FMP facility would be phased over time as the need for the facility arises. Near-term facilities or improvements include the P.E. Expansion Building, LTCC Offices, Public Safety Training Center, and Equipment Storage Facility which includes the emergency access road to Meadow Crest Drive, and the fire access improvements. Other ongoing improvements include remodeling for efficiency; however, those actions do not result in coverage or vegetation and coverage until the need to provide those facilities arises. Consistent with existing conditions, vegetation surrounding the construction site of FMP project facilities would be required to comply with Section 33.6, Vegetation Protection During Construction, of the TRPA Code of Ordinances. Protective requirements include installation of temporary construction fencing, standards for tree removal and tree protection, standards for soil and vegetation protection, and revegetation of disturbed areas, such as the Project's Regulatory Compliance Measures 2.4.9 and 2.4.12.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-8. Would the Project result in removal of riparian vegetation other vegetation associated with critical wildlife habitat, either through direct removal or indirect lowering of the groundwater table? (TRPA 4b)

The proposed FMP would not alter or revise the regulations pertaining to vegetation removal and groundwater management. Water supply within the area is primarily obtained from groundwater sources through the South Tahoe Public Utility District. Consistent with existing conditions, any project under the FMP would be required to meet TRPA requirements for water supply. TRPA regulations prohibit the approval of any development requiring water unless there is adequate water supply within an existing water right (Section 32.4.1 of the TRPA Code). Additionally, Section 33.3.6 (Excavation Limitations) of the TRPA Code of Ordinances prohibits excavation that intercepts or interferes with groundwater except under specific circumstances and with prior approval by TRPA (Section 33.3.6.A.2). For these reasons, consistent with existing conditions, projects approved under the FMP would not directly or indirectly lower the groundwater table.

Further, vegetation removal would be required to comply with existing TRPA, federal, and state regulations, permitting requirements, and environmental review procedures that protect habitat that supports riparian vegetation and critical wildlife. Specifically, wildlife habitat are protected by Sections 61.1.6 (Management Standards for Tree Removal), and Chapter 62 (Wildlife Resources) of the TRPA Code of Ordinances. There are no riparian areas or critical habitat within the FMP area. For these reasons, development associated with the FMP is not expected to result in the removal of riparian or other vegetation associated with critical wildlife habitat.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-9. Would the Project result in introduction of new vegetation that will require excessive fertilizer or water, or will provide a barrier to the normal replenishment of existing species? (TRPA 4c)

Consistent with existing conditions, implementation of projects associated with the FMP would be required to comply with the TRPA Code provisions (e.g., Section 61.4, Revegetation) and Goals and Policies that prohibit the release of non-native species in the Tahoe Region. Generally, native species require less fertilizer and water than non-native species, and LTCC typically retains native vegetation and supplements that vegetation in landscape areas with native or drought tolerant plants. Non-landscaped disturbed areas are hydroseeded with a native seed mix following construction disturbance.

Provisions for fertilizer management and preparation of fertilizer management plans that address the type, quantity, and frequency of use of fertilizers are included in Section 60.1.8 of the TRPA Code. Projects under the FMP would be required to develop a landscape plan in association with approval of the additional buildings and structures that are proposed. All landscape plans, planting plans and restoration plans will comply with TRPA Code of Ordinances, Section 30.6.7 Landscaping Standards and 61.4 Revegetation. As the proposed plans will be developed in accordance with the TRPA Code of Ordinances sections outlined above, the project will not introduce new vegetation that will require excess fertilizer or water, nor will it provide a barrier to the normal replenishment of existing plant species.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-10. Would the Project result in change in the diversity or distribution of species, or number of any species of plants (including trees, shrubs, grass, crops, micro flora and aquatic plants)? (TRPA 4d)

See discussion and analyses in Questions 3.4.6-1 through 3.4.6-9. Approximately 199 trees would be removed to construct all of the facilities and improvements under the FMP that have not yet been implemented. While an increase in coverage and a decrease in vegetation would occur, the change would not change the overall diversity or distribution of species.

The California Natural Diversity Database (CNDDB) identifies two sensitive natural communities within the USGS 7.5 min Quad Map search area that were queried. Grass Lake and Osgood Swamp were both identified by CNDDB as sphagnum bogs. The Project will not result in any impacts to either the Grass Lake or Osgood Swamp sphagnum bogs as the sensitive communities are 7 and 9.5 miles away respectively from the LTCC project area.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-11. Would the Project result in reduction of the numbers of any unique, rare or endangered species of plants? (TRPA 4e)

See discussion and analysis for Question 3.4.6-1 above. No unique, rare, or endangered species of plants are known to occur within the FMP project area.

The proposed development area for the FMP project was surveyed for sensitive plant species during the summer of 2015. No endangered, threatened or CNPS List 1b, 2 or 3 or TRPA listed plant species were observed (HBA 2015). The proposed development area does not contain suitable habitat for the species listed in Table 3-8 above. A few invasive species were observed during the survey: bull thistle, cheat grass, and dandelion. The potential for the spread of invasive species during project construction increases with disturbance and expansion of LTCC facilities. While the spread of invasive species may result due to project development, the Project area does not contain any suitable habitat for sensitive species; therefore, no significant impact would occur.

Environmental Analysis: No Impact.

Required Mitigation: None

3.4.6-12. Would the Project result in removal of streambank and/or backshore vegetation, including woody vegetation such as willows? (TRPA 4f)

The proposed FMP would not result in development of the area near Trout Creek and would not alter streambank or backshore vegetation. See discussion and analysis for Question 3.4.6-8 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-13. Would the Project result in removal of any native live, dead or dying trees 30 inches or greater in diameter at breast height (dbh) within TRPA's Conservation or Recreation land use classifications? (TRPA 4g)

The LTCC campus area is not within TRPA's Conservation or Recreation land use classifications. Tree removal for the FMP facilities on campus will be addressed through a TCP/THP. The near-term facilities

proposed under the FMP, the fire access roadway and P.E. Expansion, Public Safety Training Center, and Equipment Storage Facility, which. Encompasses the LTCC Offices, would result in the removal of approximately 84 trees. The Residential Student Living and Mixed Residential Living buildings would require removal of an additional 115 trees. These future FMP projects would be subject to project-level environmental review based on more detailed design once those facility designs are prepared. While some of these trees may be 30 inches or greater in dbh, since the campus is not within a Conservation or Recreation land use classification, no significant impact would occur.

Environmental Analysis: No Impact.

Required Mitigation: None

3.4.6-14. Would the Project result in a change in the natural functioning of an old growth ecosystem? (TRPA 4h)

See discussion and analysis for Question 3.4.6-13 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-15. Would the Project result in change in the diversity or distribution of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects, mammals, amphibians or microfauna)? (TRPA 5a)

The proposed FMP would not alter the regulations pertaining to the protection of animal species. The resource management provisions contained in Chapters 60 through 68 of the TRPA Code are still applicable.

As discussed above in Questions 3.4.6-1 through -5, the near-term FMP projects would not be located in the vicinity of Trout Creek and would not affect the diversity or distribution of species or numbers of species. The protection of nesting raptor and migratory bird species under mitigation measure BIO-1 would also ensure the diversity and distribution of species and individuals is maintained.

Any subsequent FMP implementation projects would be subject to project-level permitting. Consistent with existing conditions, LTCC would be required to demonstrate that any proposals would occur consistent with TRPA Code provisions related to resource management, including specifically the provisions of Chapters 62 and 63 that address protection of wildlife and fish resources, respectively. For these reasons, adoption of the FMP would not result in the change in the diversity or distribution of species, or numbers of any species or animals.

Environmental Analysis: No, with Mitigation.

Required Mitigation: BIO-1. Bird Nest Site Protection Program

3.4.6-16. Would the Project result in reduction of the number of any unique, rare or endangered species of animals? (TRPA 5b)

See discussion and analyses for Question 3.4.6-1. The proposed FMP would not alter or revise the regulations pertaining to unique rare or endangered species of animals and the natural resource provisions

of Chapters 61 and 62 of the TRPA Code remain applicable. No unique, rare, or endangered species would be affected by implementation of the FMP.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.6-17. Would the Project result in introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals? (TRPA 5c)

See discussion and analysis for Question 3.4.6-4 above.

Environmental Analysis: No, with Mitigation.

Required Mitigation: BIO-1. Bird Nest Site Protection Program

3.4.6-18. Would the Project result in deterioration of existing fish or wildlife habitat quantity or quality? (TRPA 5d)

The proposed FMP would not alter or revise the regulations pertaining to existing fish or wildlife habitat quantity or quality. Near-term FMP facilities would not be located in existing fish habitat or wildlife habitat around Trout Creek. Near-term facilities would be located adjacent to existing campus facilities such as the library, main parking lot, and Physical Education Center where noise and disturbance are present. While some tree removal would occur, loss of those trees is addressed by this document and in the environmental documentation for the TCP/THP prepared in early 2020.

Consistent with existing conditions, future projects implemented under the FMP could affect wildlife depending on the type, timing, and specific nature of proposed actions. However, any such projects would be subject to subsequent project-level environmental review and permitting at which time they would be required to demonstrate compliance with all federal, state, and TRPA regulations pertaining to the protection of fish and wildlife contained in Chapters 62 (Wildlife Resources) and 63 (Fish Resources) of the TRPA Code. Project-level planning and environmental analysis would identify potentially significant effects, minimize or avoid those impacts through the design process, and require mitigation for any significant effects as a condition of project approval. Therefore, implementation of the future FMP facilities would not result in the deterioration of existing fish or wildlife habitat quantity.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.7 Cultural Resources (CEQA) and Archaeological/Historical (TRPA)

This section presents the analyses for potential impacts to cultural, archaeological and historical resources, discussing the Project impacts on cultural resources related to the disturbance of archaeological, historical, architectural, and Native American/traditional heritage resources. The section also addresses disturbance of unknown archaeological resources, as well as paleontological resources (fossils). Table 3-9 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting:

Cultural Resource studies were conducted in 2015 through 2017 for the LTCC Facilities Master Plan, including tribal consultation with the Washoe Tribe under California AB 52. The Cultural Resource Study identified four resource sites on campus: CA-ELD-527 (bedrock mortar milling station), CA-ELD-529 (lithic material and tools), and CA-ELD-1379H (narrow gauge, Lake Valley RR bed) and P-09-04560 (ellipsoid depressions). The Washoe Tribe also identified the bedrock mortar cultural resource near Trout Creek in their July 6, 2016 letter. No new sites were identified during onsite surveys of the campus property.

CA-ELD-527: This primary feature of this large prehistoric site is a large granitic outcrop with over 40 mortar cups and 11 milling slicks. There are also other indications of prehistoric occupation and use. The location has been subjected to episodes of unauthorized artifact collecting as reported in the 1982 site record. The site location is near existing compacted dirt bicycle and pedestrian trails. Modern glass and graffiti are also visible at times. The location of CA-ELD-527 within the Trout Creek drainage provides a view of Trout Creek drainage and meadows, as well as a view of Lake Tahoe. Interpretation opportunities and protection measures should be discussed with the Washoe Tribe of Nevada and California to preserve the cultural resources at this location.

CA-ELD-529: Primarily consisting of lithic tool debitage and flakes, CA-ELD-529 is located near CA-ELD-527 within the Trout Creek drainage area. The perennial creek and abundant resources were an obvious attraction prehistorically and historically. The entire drainage system appears to have been used prehistorically for food gathering and preparation.

CA-ELD-1379H [FS 05-19-90, P-9-1917]: This site is the roadbed of the G.W. Chubback/Lake Valley Railroad. The portion of this RR grade near LTCC campus runs in a north/south direction from approximately the middle of the STPUD Sewage Treatment plant north toward the college campus beneath the soccer field an up through College Drive into Bijou Community Park. The railroad grade varies from a cut through the landscape to a raised grade embankment or berm. Upon entering the campus, it is near and at natural ground level. The ties and rails have been removed from the railroad grade. The grade is virtually indistinct within the LTCC campus boundaries. About 0.3 miles (or 75%) of this segment have been lightly impacted, but the grade and morphology remain intact. About 0.1 miles (or 25%) have been heavily impacted or obliterated by new road construction (Lindstrom 1998:222). The Lake Valley Railroad was determined ineligible for the National Register through a Section 106 process in 1998. Railroad integrity has not been maintained as the rails and other features have been salvaged, reused and removed.

P-09-04560: A fourth site is recorded as two indistinctive oval-shaped depressions that appear to be the direct cause of human activity. It consists of two ellipsoid features recorded in 1990 by Hershel Davis. The two ellipsoids are described as "two ellipsoid areas where the surface bunch grass grows more densely and much shorter than the grasses surrounding them. They are very flat which suggests a human effect of levelling as compared to the surrounding terrain." One artifact consisting of brown jasper was also near the two ellipsoids. The depressions lie south of the main campus, and may be an example of possible prehistoric living or domestic features within and near the Trout Creek drainage.

One feature is located within the proposed LTCC FMP development area - P-09-04560 is located in the vicinity of the Public Safety Training Center and Equipment Storage Facility south of the main campus. CA-ELD-1379H [FS 05-19-90, P-9-1917] is located outside of the FMP project area in the vicinity of the existing sports fields. Interpretive signage for this resource is located along the Greenway Trail describing the berm feature and providing a history of the Lake Valley Railroad. CA-ELD-527 and -529 are located in the vicinity of Trout Creek west of the main campus, outside the FMP project area.

Table 3-9: C	Table 3-9: Cultural Resources and Archaeological/Historical							
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact				
3.4.7-1. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (CEQA Va)		X						
3.4.7-2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (CEQA Vb)		X						
3.4.7-3. Disturb any human remains, including those interred outside of formal cemeteries? (CEQA Vc)		Х						
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No				
3.4.7-4. Will the proposal result in an alteration of or adverse physical or aesthetic effect to a significant archaeological or historical site, structure, object or building? (TRPA 20a)		Х						
3.4.7-5. Is the proposed project located on a property with any known cultural, historical, and/or archaeological resources, including resources on TRPA or other regulatory official maps or records? (TRPA 20b)		X						
3.4.7-6. Is the property associated with any historically significant events and/or sites or persons? (TRPA 20c)				X				

3.4.7-1. Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (CEQA Va)

As discussed above in the Environmental Setting, previously recorded resources within the LTCC property include site CA-ELD-527 (bedrock mortar milling station), CA-ELD-529 (lithic material and tools), CA-ELD-1379H/P-9-1917 (narrow gauge, Lake Valley RR bed), and P-09-04560 (ellipsoid depressions). Both CA-ELD-527 and CA-ELD-529 are located in areas near Trout Creek and are outside the FMP project area, while CA-ELD-1379H/P-9-1917 is located at the east end of campus through the sports fields and College Drive entry driveway; therefore, there would be no change to or adverse effect on these resources.

Little is known about the two ellipsoid features other than the description provided in the setting. These two ellipsoidal features are mapped and recorded within the area of the Public Safety Training Center or the Equipment Storage Area. The site sketch map includes navigational points and descriptions of features that are not permanent, and do not depict the site location accurately enough to determine the exact location of these two ellipsoid features as recorded in 1990. There is no additional data regarding these two ellipsoidal features. Due to the vague information surrounding the ellipsoids, LTCC contacted the Washoe Tribe of Nevada and California on February 10, 2021 to determine if the tribe could provide any additional information on this feature or its location. The Washoe Tribe did not identify this feature in their consultation response in July 2016. The ellipsoids are not described as containing trees, however, it is unknown if trees to be removed are adjacent to the feature or have since established themselves since the feature was first recorded in 1990. Since LTCC is currently in the process of consulting with the Washoe Tribe on this feature and no determination has been made as to its exact location or significance, Mitigation Measure CULTURAL-1 is proposed to address this potential impact.

Environmental Analysis: Less than Significant Impact with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

Prior to construction of the Public Safety Training Center or Equipment Storage Facility or associated tree removal, LTCC shall consult with the Washoe Tribe of Nevada and California to establish whether the features of site P-09-04560 (ellipsoid depressions) are still present, where exactly they are located, and what features of the site may warrant additional study and recordation. Consultation with the Washoe Tribe will be completed to determine if the features are significant by meeting one of the four criteria established in the National Register of Historic Places or the California Register of Historical Resources, or if the features are considered Tribal Cultural Resources to the Washoe Tribe.

If the site is determined to be significant, efforts to mitigate impacts to the site will be undertaken. These efforts may include incorporating the site features within open areas in parking lots or near building footprints, or redesigning the project to avoid the features.

If the site features are determined not to be significant through consultation with the Washoe Tribe, then any physical disturbance to the features will be considered as having no effect to historical properties, and no further action is required.

3.4.7-2. Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (CEQA Vb)

See discussion and analysis for Question 3.4.7-1 above. Generally, the FMP Project does not propose development or physical change within areas of known cultural resource sites or that would otherwise affect or restrict religious or sacred uses within the Project area. Hand felling of trees within the TCP/THP area would not occur within areas of known resources. However, P-09-04560 is located southwest of the P.E. Building in an area where future campus development and tree removal could occur in relation to the Equipment Storage Facility, yard, and tarmac. The exact location of this feature and its significance has not been verified. Since little is known about this feature, it may or may not be eligible for protection and further investigation will occur before campus development occurs in that area. This includes consultation with the Washoe Tribe of Nevada and California regarding its significance and field verification of its exact location. Mitigation Measure CULTURAL-1 outlines the process and identifies actions to protect the feature, should it have cultural significance and be determined within the footprint of proposed a proposed FMP facility.

Environmental Analysis: Less than Significant Impact with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.7-3. Would the Project disturb any human remains, including those interred outside of formal cemeteries? (CEQA Vc)

Due to the relatively flat cross slopes on campus, most FMP structures would not require excavation in excess of five feet. Trail and roadway or drive aisle improvements and monument signage would require very little grading or excavation. Future Building Site (Building 14) would be located within an area previously disturbed and LTCC offices (Building 16) would be constructed within the yard area of the Equipment Storage Area, which would be previously disturbed at the time that facility is constructed. Based on size and design, the P.E. Expansion, LTCC Offices, and Equipment Storage Buildings would result in excavation of less than five feet. The Public Safety Training Center would result in an unknown excavation depth, but likely not greater than five feet. With most FMP facilities and improvements resulting in construction excavation of five feet in depth or less, the potential to uncover human remains is low. Likewise, hand felling of trees under the TCP/THP is associated with little to no potential to uncover human remains; however not all FMP facilities have been designed to determine the required excavation depth for construction and Mitigation Measure Cultural-2 is proposed should an inadvertent discovery occur.

Section 7050.5(b) of the California Health and Safety Code and Section 5097.98 of the State Public Resources Code specify protocol when human remains are discovered. If human remains are discovered, the Codes require work to cease within the immediate area and notification of the County Coroner. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed. The City's General Plan Policy NCR-4.5 requires notification of the City if human remains are discovered during ground disturbing activities.

Environmental Analysis: Less than Significant Impact with Mitigation.

Required Mitigation: CULTURAL-2. Identify and Protect Undiscovered Archaeological Resources or Human Remains

If previously undiscovered archaeological resources are discovered during construction or any subsequent activity, ground disturbing activity will cease in the vicinity of the discovery until the TRPA Cultural Resources staff (or their qualified consultant) assesses it for eligibility to the NRHP, compliance with TRPA Code Section 29, and/or (in the event of a prehistoric or ethnographic find) for Native American (Washoe) values. This assessment will occur in consultation with the California SHPO, TRPA, and the Washoe Tribe of Nevada and California, as appropriate. Cessation of applicable construction activity will continue until proper treatment can be determined and implemented by the responsible agencies. Collected archaeological materials will be curated at a facility selected by the designated agency or the lead federal agency. The cost of curation of any collected archaeological materials will be the responsibility of the LTCC.

If human remains are discovered during construction, the LTCC shall comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code, Sec. 5097). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or the nearby area reasonably suspected to overlie adjacent human remains until:

• The El Dorado County coroner has been informed and has determined that no investigation of the cause of death is required, and

If the human remains are of Native American origin, the Washoe Tribe of Nevada and California shall be notified immediately, and no further activity shall occur until:

- The descendants from the deceased Native Americans have made a recommendation to the landowners, or the person responsible for the excavation work regarding the treatment or disposal of human remains and any associated grave goods, with appropriate dignity, as provided in Pub. Res. Code, Sec. 5097.98, or
- The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.

To assure that potential undiscovered resources are identified during site grading, a qualified archaeologist shall be on-site during initial ground disturbing construction excavation and grading operations.

3.4.7-4. Will the Project result in an alteration of or adverse physical or aesthetic effect to a significant archaeological or historical site, structure, object or building? (TRPA 20a)

See discussions and analyses discussions for Questions 3.4.7-1 through 3.4.7-2 above.

Environmental Analysis: No, with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.7-5. Is the Project located on a property with any known cultural, historical, and/or archaeological resources, including resources on TRPA or other regulatory official maps or records? (TRPA 20b)

See discussion in Questions 3.4.7-1 and 3.4.7-2 above regarding the mapped resources.

Environmental Analysis: No, with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.7-6. Is the Project associated with any historically significant events and/or sites or persons? (TRPA 20c)

See discussions and analyses discussions for Questions 3.4.7-1 through 3.4.7-5 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.8 Energy (CEQA/TRPA)

This section presents the analyses for potential impacts to energy. Table 3-10 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting:

The LTCC campus is currently served by Southwest Gas (natural gas) and Liberty Utilities (electricity). Natural Gas is used to power the campus boilers and facility water heaters including those needed for the culinary program and locker rooms. Southwest Gas completed a flow study of the existing system in the LTCC service area in 2016, which identified limited capacity from the 2-inch main line serving LTCC. In

2017, Southwest Gas upgraded the 1,186 feet of gas mainline in College Drive from 2-inch to 4-inch. The new 4-inch line connects to the larger natural gas main lines in Al Tahoe Blvd. and runs along College Drive to the roundabout at the Main Building. Extensions of the new main line run between the theater and University Center and down the driveway between the theater and the CDC. The existing Southwest Gas lines are located beneath roadway pavement, walkways, and landscaping.

Electricity is used for various campus facilities from interior and exterior lighting, appliances, building mechanical systems, computer labs, offices, and various other outlets, including new electric vehicle charging stations. LTCC developed a mobility hub on campus in which electrical infrastructure was improved between the mobility hub and Al Tahoe Boulevard.

Table 3-10: Energy								
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact				
3.4.8-1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (CEQA VIa)				х				
3.4.8-2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (CEQA VIb)				X				
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No				
3.4.8-3. Use of substantial amounts of fuel or energy? (TRPA 15a)				Х				
3.4.8-4. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy? (TRPA 15b)				X				

3.4.8-1. Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (CEQA VIa)

The FMP includes replacement of aging facilities the LTCC campus and remodeling of facilities to improve efficiency. Replacement of an aging structure, with a higher efficiency structure, designed to capture natural light, would improve energy efficiency. Wasteful energy consumption would not occur as a result of FMP facility operations as they are designed to take advantage of natural lighting, use high efficiency fixtures, and in some cases, such as the Public Safety Training Center, include solar roofing systems to generate clean energy. With new facilities some increase in energy quantity occurs; however, the associated

improvements do not result in wasteful, inefficient, or unnecessary consumption. Likewise fuels and electricity would be used during construction of the FMP facilities; however, equipment would not be left idling or plugged in when not in active use. Construction would not require quantities of energy resources beyond those of typical school facility construction and a substantial depletion or wasteful use of energy resources during construction or operation would not occur.

Hand felling of trees under the TCP/THP would not result in significant impacts related to wasteful or inefficient consumption of energy resources. While equipment used to remove the trees would require fuels and energy to operate, excessive or wasteful quantities of energy is not proposed. Tree removal would be limited to those trees within building footprints and trees would be retained outside improvement footprints to maintain the existing natural landscape. Future projects proposed within the TCP/THP areas would be required to conduct additional environmental analysis once designs have been prepared and the facilities proposed to determine if their use and construction would cause a significant energy impact.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.8-2. Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (CEQA VIb)

The City of South Lake Tahoe has committed to a goal of 100 percent renewable energy by 2032 and is working with the local electricity provider to reach that goal and invest in greater renewable energy sources. Businesses within the city, including LTCC are eligible for free solar assessments. The proposed FMP would not conflict with or obstruct these renewable energy goals. In addition, the Public Safety Training Center is designed to capture natural light and includes solar panels to further reduce energy demand. Solar panels are not included for the small P.E. Expansion Buildings or LTCC Offices due to size and location, or the Equipment Storage Facility; however, the residential components, which have not yet been designed, have the potential to include solar panels. The City Code includes requirements for water conservation devices in new or replacement facilities and requires energy efficient outdoor lighting, which conserves energy consumption. By removing some of the old campus buildings and replacing them with newer facilities, the FMP Project improves operational energy efficiency. Retirement of old structures has the potential to improve energy efficiency through the utilization of new, energy efficient materials, fixtures, and design, as evidenced by the Public Safety Training Center, with efficient lighting and solar panels. The City has also adopted the California Energy Code within the City's building regulations.

Campus buildings are designed to take advantage of natural heating, cooling, and lighting, and selective tree removal under the TCP would not cause a significant impact to LTCC's ability to achieve energy efficiency. Future projects proposed under the FMP would be required to conduct additional environmental analysis once designs have been prepared and the facilities proposed.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.8-3. Would the Project use substantial amounts of fuel or energy? (TRPA 15a)

Consumption of fuel for the off-road equipment used in construction of the FMP facilities would be temporary. Operation of the Project facilities will require no use of diesel fuel because energy would be provided by electricity and natural gas. Operation of vehicles and equipment associated with campus maintenance, operations, and the Safety Training Program already occur and a significant increase in consumption would not occur. Potential use of diesel fuel in vehicles driven by students, staff and visitors to the college is unknown, but because the VMT for most FMP facilities would not increase, it is expected that use of diesel fuel in these vehicles would also not increase. Increased VMT is associated with the Mixed Residential Living Facility; however, the development of affordable and workforce housing in this area with access to transit, may result in a decrease in vehicle-reliance or travel distance. Substantial fuel consumption would not occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.8-4. Will the Project substantially increase the demand upon existing sources of energy, or require the development of new sources of energy? (TRPA 15b)

See discussion in Question 3.4.8-3 above. The available capacity exceeds the demand generated at buildout; therefore, demand created by FMP implementation would not exceed available capacity, or require the development of new sources of energy. Energy improvements have occurred on campus, such as the Mobility Hub and Remodel for Efficiency Projects, and LTCC is actively making improvements to reduce energy and water consumption. Sufficient electric and natural gas service and infrastructure are located on campus to serve new facilities, and the demand from the new facilities is not of a quantity that would result in the need for new energy sources.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9 Geology and Soils (CEQA) and Land (TRPA)

This section presents the analyses for potential impacts to geology, soils and land. Table 3-11 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting:

The most significant geologic hazards associated with the Project area are from seismic activity and the associated effects. These hazards include surface fault rupture, ground shaking, liquefaction, subsidence, landslides, and seiche potential. The nearest Alquist-Priolo Earthquake Fault Zone is located 6.6 miles to the east and there are no known faults within the Project area; therefore, damage to structures in the Project area from fault rupture is unlikely (CA Geological Survey). According to the California Building Code (CBC), the amendment area is located in Seismic Zone D, a region of relatively high seismicity, and has the potential to experience strong ground shaking from earthquakes. As such, all structures must be designed to meet the regulations and standards associated with Zone D hazards as set forth in the CBC. The Project area is relatively level therefore landslides are not likely to occur. The Project area is 1.4 miles inland from the lake shore and 60 feet higher in elevation; impact from a seiche is unlikely. Older, well-consolidated, well-graded soils and the lack of shallow groundwater make failure from liquefaction unlikely, but under the right hydrologic conditions, this unit might be susceptible to liquefaction during seismic events.

The only soil mapped in the Project area is the Christopher-Gefo complex, 0-5% slopes (Soil Web Survey, NRCS). This soil consists of loamy coarse sand and gravelly loamy coarse sand. The complex occurs on hillslopes and outwash terraces and the parent material is outwash derived from granodiorite. The depth to both a restrictive feature and water table is more than 80 inches. The soil is somewhat excessively drained and has a very low surface runoff potential. Flooding and ponding do not occur in this soil type.

A geotechnical investigation completed in the Project area in 2015 included four borings each 16.5 feet deep (BSK 2015). The borings did not indicate the presence of groundwater. The water level hydrograph from the California Department of Water Resources for well 389238N1199681W001 indicates that between 2011 and 2016, the depth to groundwater ranged between 17.32 ft. up to 29.8 ft. below the ground surface. Historic groundwater elevation data was not available from DWR.

Another geotechnical investigation specifically for the Early Learning Center, located at the north end of campus, was conducted in 2019. According to the geotechnical report, the Early Learning Center site is underlain by layers of silty sand and poorly graded sand, with low potential for hydrocompaction, very low potential for liquefaction, and negligible potential for lateral spread. The investigation found groundwater at a depth of 30 feet below ground surface, and the Early Learning Center was not located in a fault rupture hazard zone or seismic hazard zone, with the nearest fault located seven miles southeast of the site (BSK 2019). It is likely that similar conditions are present elsewhere on campus.

Existing and proposed land coverage is provided in Section 2 – Project Description. The LTCC campus is within land capability districts 1b, 4, and 7. Proposed coverage is only within land capability district 7.

Table 3-11: Geology and Soils and Land				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
 3.4.9-1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides? (CEQA VIIa) 			X	
3.4.9-2. Result in substantial soil erosion or the loss of topsoil? (CEQA VIIb)			X	

CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.9-3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (CEQA VIIc)			Х	
3.4.9-4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (CEQA VIId)			Х	
3.4.9-5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? (CEQA VIIe)				X
3.4.9-6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (CEQA VIIf)				X
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.9-7. Compaction or covering of the soil beyond the limits allowed in the land capability or Individual Parcel Evaluation System (IPES)? (TRPA 1a)				X
3.4.9-8. A change in the topography or ground surface relief features of site inconsistent with the natural surrounding conditions? (TRPA 1b)				Х
3.4.9-9. Unstable soil conditions during or after completion of the proposal? (TRPA 1c)				X
3.4.9-10. Changes in the undisturbed soil or native geologic substructures or grading in excess of 5 feet? (TRPA 1d)				X

TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.9-11. The continuation of or increase in wind or water erosion of soils, either on or off the site? (TRPA 1e)				X
3.4.9-12. Changes in deposition or erosion of beach sand, or changes in siltation, deposition or erosion, including natural littoral processes, which may modify the channel of a river or stream or the bed of a lake? (TRPA 1f)				X
3.4.9-13. Exposure of people or property to geologic hazards such as earthquakes, landslides, backshore erosion, avalanches, mud slides, ground failure, or similar hazards? (TRPA 1g)				Х

3.4.9-1. Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

3.4.9-1.i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? (CEQA VIIa).

3.4.9-1.ii) Strong seismic ground shaking?

3.4.9-1.iii) Seismic-related ground failure, including liquefaction?

3.4.9-1.iv) Landslides?

LTCC is located within the Sierra Nevada-Great Basin seismic belt. Based on the Division of Mines and Geology Special Publication 42 and the Index to Official Maps of Earthquake Fault Zones (Hart and Bryant 1997), the LTCC campus is not located in the Alquist-Priolo Earthquake Fault Zone. The closest Alquist-Priolo Earthquake Fault Zone is the Genoa fault located southeast of the area and outside the Tahoe Basin.

Development of the FMP would not expose people or structures to adverse geological hazards because the LTCC campus is not located within an Alquist-Priolo fault zone, nor are any active or inactive faults identified at the site (CA Geological Survey, 2005) and therefore risks associated with fault rupture are considered low. Older, well-consolidated, well-graded soils and the lack of shallow groundwater make failure from liquefaction unlikely. Zones of Required Investigation referred to as "Seismic Hazard Zones" in CCR Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements. There are no mapped areas that have Seismic Hazard Zones in the Project area (BSK 2015). The topography of the LTCC campus property is flat to very-gently sloping; these conditions are not conducive to landslides. Any vertical construction would be designed and built per current California Building Code standards, and since this is a school facility, per Division of the State

Architect (DSA) standards. Use of a new FMP structures and retirement of the existing aging facilities, would be beneficial.

According to the California Building Code (CBC), the LTCC is located in Seismic Zone D, a region of relatively high seismicity, and has the potential to experience strong ground shaking from earthquakes. As such, all structures must be designed to meet the regulations and standards associated with Zone D hazards as set forth in the CBC. Compliance with these existing regulations ensures that all new or redeveloped structures would be capable of withstanding anticipated ground shaking in the Region and would not create significant public safety risks or property damage in the event of an earthquake.

The native soils in the Lake Tahoe Basin and LTCC area are considered well-consolidated and are not prone to collapse. The local soils are not considered corrosive or expansive and therefore corrosion impacts to concrete structures would not be expected to occur to newly constructed buildings. Frost heave is most common in silty soils and clays (Zhang 2013). The soil in the Project area is loamy coarse sand and gravelly loamy coarse sand making it less susceptible to movement from frost heave. Standard foundation materials would be used, and engineered fill would be used during construction under structures, including asphalt and concrete paving as required by California Building Code standards.

As discussed in the environmental setting and project description, the site is relatively flat (approximately 3% slope) and therefore structures developed under the FMP would not be subject to landslides.

Development of future LTCC FMP facilities, would require additional environmental review once those facilities are designed and proposed. Adherence to existing regulations would ensure impacts would be less than significant. All structures associated with implementation of the FMP would be designed and constructed in accordance with design requirements of the California Building Code for Seismic Zone D which would minimize risks associated with seismic ground shaking and seismic related ground failure. The risk of fault rupture and ground shaking is a less than significant impact.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.9-2. Would the Project result in substantial soil erosion or the loss of topsoil? (CEQA VIIb)

The Project area is relatively flat; therefore, substantial grading or significant change in topography would not occur. LTCC facilities are designed to balance cut (excavation) and fill volumes as much as possible, and any excess material would be balanced onsite. The FMP facilities are primarily surficial construction that would not penetrate deeper soils or groundwater. For the near-term projects that have been designed, excavation would not exceed five feet or intercept groundwater, which is located far deeper than five feet on campus; therefore, new facilities would not interfere or intercept the seasonal-high groundwater level. The FMP facilities not yet designed would need to be evaluated during the permitting process once designed to determine if the design includes large cuts or potential groundwater interference, the appropriate documentation would be required to be submitted and evaluated prior to issuance of a grading permit. Since the proposed facilities are located on flat ground away from slopes, excavations in excess of five feet are unlikely unless new buildings were to include underground parking, which is not currently proposed.

Construction of the FMP facilities will include grading and erosion control measures in areas of new construction and removed facilities to be retired or replaced. Graded areas or areas where coverage removal occurs would either be covered with the proposed structures or associated walkways, paths, or paving, or reseeded with a native seed mix to prevent erosion and maintain the natural landscape. Stockpiled materials in the construction staging areas would be covered and secured when not in use. Entrances to the

construction areas on campus typically include rock lined entryways to ensure construction vehicles do not cause soils to erode or track out.

Under the TCP/THP, trees would be hand-felled and removed from the campus. Tree removal would only occur in conjunction with a planned campus facility and would be selective to the facility footprint. Future development of facilities associated with the TCP/THP areas would require additional environmental review based on the proposed facility design and features. Once those facilities are designed and proposed, the environmental review for those specific facilities would address erosion impacts specific to those designs and proposals.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.9-3. Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (CEQA VIIc)

See discussions and analyses for Questions 3.4.9-1.i through 3.4.9-1.iv above. No significant soil instability or hazard associated with unstable soils would occur.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.9-4. Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (CEQA VIId)

According to the Swelling Clays Map of The Coterminous United States, the Tahoe Basin Region falls within an area that is underlain with little to no clays with swelling potential (USGS 1989). However, soil units mapped within the Tahoe Basin Region contain soils with low to high shrink/well potential (NRCS 2007). The native soils in the Lake Tahoe Basin and LTCC area are considered well-consolidated and are not prone to collapse. Frost heave is most common in silty soils and clays (Zhang 2013). The soil in the Project area is loamy coarse sand and gravelly loamy coarse sand making it less susceptible to movement from frost heave. The local soils are not considered corrosive or expansive and therefore corrosion impacts to concrete structures would not occur to newly constructed buildings. Standard foundation materials would be used for any new buildings and engineered fill would be used during construction under structures, including asphalt and concrete paving as required by California Building Code standards

Tree removal under the TCP/THP would not affect or be affected by soils or cause a risk to life and property in relation to soils. Adherence to existing regulations would ensure impacts would be less than significant.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.9-5. Would the Project 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? (CEQA VIIe)

The Porter-Cologne Water Quality Act requires all sewage and wastewater to be disposed of outside the Lake Tahoe Basin. Therefore, use of septic tanks or alternative wastewater disposal are prohibited in the Lake Tahoe Region and are not proposed. The FMP facilities would connect to the existing sewer line serving the campus

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-6. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (CEQA VIIf)

There is no potential that unknown paleontological resources may be located in the area and would be uncovered by development of the Safety Training Center, Equipment Storage Facility, LTCC Offices, P.E. Expansion Building or the future FMP facilities. Paleontological remains are found in sedimentary rock formations. El Dorado County's geology is predominantly igneous (volcanic) in nature, and the type of sedimentary deposits where such remains might be present, are virtually nonexistent (GP DEIR, page 5.13-1). As stated in the 2013 IS/IEC for the TCAP and the City's General Plan EIR, "A search of the University of California Museum of Paleontology collections database identified 22 paleontological resource finds in El Dorado County; however, none were identified in the City of South Lake Tahoe" (CSLT 2011 and CSLT 2013). To ensure the protection of paleontological resources that may be discovered during construction, the City adopted General Plan Policy NCR-4.4 that requires a paleontological resource evaluation be prepared and measures to mitigate impacts to paleontological resources be identified when fossils are discovered during ground-disturbing activities (CSLT 2011b, page NCR-7).

Federal and state regulations and TRPA Code (Chapter 67, Historic Resource Protection) also address protection of paleontological resources and provide processes to avoid or mitigate impacts to identified and discovered resources. Future development of campus facilities under the FMP would be required to comply with these requirements during project specific review and construction activity. Therefore, construction of the FMP facilities would not alter or adversely affect paleontological resources.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-7. Would the Project result in compaction or covering of the soil beyond the limits allowed in the land capability or Individual Parcel Evaluation System (IPES)? (TRPA 1a)

A map of the land capability districts on campus is provided in Chapter 2, Figure 2-3. The FMP proposes new facilities that would result in additional land coverage on the LTCC campus, specifically within land capability district 7. Table 2-4 in the project description shows existing land coverage on the campus, allowed land coverage, and proposed land coverage within each land capability district (1b, 4, and 7). All new land coverage is proposed within land capability district 7. Total existing land coverage on the LTCC campus is 790,490 square feet, while total allowed land coverage is 1,257,942. Existing land coverage in land capability districts 1b and 4 is below the allowed land coverage limit; therefore, with no additional coverage in land capability district 7 is 697,828 square feet, while the allowed land coverage total is 1,041,159 square feet. The FMP proposes an additional 438,210 square feet of building and

parking/pavement land coverage, totaling 1,228,700 square feet of land coverage at FMP buildout. Although total proposed land coverage in land capability district 7 may exceed allowable land coverage limits by approximately 95,000, square feet, the total proposed land coverage on the LTCC campus (1,228,700 square feet) would be below the total land coverage limit of 1,257,942 when including land coverage allowable within land capability districts 1b and 4.

Coverage for future FMP projects, such as the Student Living Facility or Mixed Residential Living Facility, have been estimated and included in the proposed land coverage calculations; however, since those facilities have not been designed, development of the structures and parking would be subject to permitting and LTCC would be required to demonstrate that proposed compaction and land coverage would be within the limits allowed in Chapters 30 and 53 of the Code. Since the land coverage estimates for FMP facilities not yet designed are considered conservative, and since there is additional land coverage allowed, development of those facilities would not exceed the land coverage limits.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-8. Will the Project result in a change in the topography or ground surface relief features of site inconsistent with the natural surrounding conditions? (TRPA 1b)

The Project area is relatively flat; therefore, substantial grading or significant change in topography would not occur. A majority of the Project is surficial construction that would not penetrate deeper soils or groundwater. Piles may be used in isolated areas for building construction. Excavation would not interfere or intercept the seasonal-high groundwater level, which was detected at depths beyond the proposed construction depths. Excavation beyond five feet in depth are not proposed to occur, however, should deeper excavation depths be needed for future FMP facilities (including stormwater treatment facilities), excavation shall not interfere with or intercept groundwater except for circumstances defined in TRPA Code of Ordinances Subsection 33.3.6.A. Subsection 33.3.6.B. of the TRPA Code of Ordinances lists the required findings for TRPA to approve excavations in excess of 5 feet or where a reasonable possibility of interference or interception of a water table. As Master Plan components are proposed for construction and should the component designs indicate a need for excavation in excess of five feet, the appropriate reports, including a soils hydrologic report, tree protection plan, and material disposal plan, would be prepared and submitted to the TRPA for approval as required by the permitting process in compliance with the required findings in TRPA.

All local, state, and federal regulations regarding groundwater interception would be followed if groundwater is encountered. Proposed grading depths for the Project are expected to be minimal and therefore no significant changes to topography are anticipated. Water quality BMPs would be designed and implemented as described in Regulatory Compliance Measure 2.4.10 (See Chapter 2 Project Description). An approved SWPPP would be implemented during construction to reduce run-off and erosion from the project site. After completion of construction, all disturbed areas would be stabilized and re-vegetated to reduce run-off or erosion per Regulatory Compliance Measure 2.4.9. Topsoil and native forest duff would be stripped and stockpiled for re-use in the Project area's restoration and re-vegetation as required by a final landscape plan.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-9. Will the Project result in unstable soil conditions during or after completion of the proposal? (TRPA 1c)

See discussions and analyses for Questions 3.4.9-1.i through 3.4.9-1.iv above. No significant soil instability or hazard associated with unstable soils would occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-10. Will the Project result in changes in the undisturbed soil or native geologic substructures or grading in excess of 5 feet? (TRPA 1d)

See discussion and analysis for Question 3.4.9-2 and 3.4.9-8 above. The LTCC campus is relatively flat and no FMP structures are proposed on slopes. The near-term facilities would not result in excavation in excess of five feet. The longer term FMP facilities not yet designed are unlikely to result in excavation in excess of five feet, but since they have not been designed, their ultimate excavation depth remains unknown. However, all projects would be required to comply with the provisions of Chapter 30 (Land Coverage) of the TRPA Code of Ordinances and Chapter 7.20 of the City Code regarding permanent disturbance and Section 33.3.6 of the TRPA Code regarding protection of subsurface groundwater. During the permitting process, LTCC would submit the required documentation and plans to the satisfaction of the TRPA prior to issuance of permits allowing for the excavation activity.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-11. Will the Project result in the continuation of or increase in wind or water erosion of soils, either on or off the site? (TRPA 1e)

See discussion and analysis for Question 3.4.9-8 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-12. Will the Project result in changes in deposition or erosion of beach sand, or changes in siltation, deposition or erosion, including natural littoral processes, which may modify the channel of a river or stream or the bed of a lake? (TRPA 1f)

The LTCC campus FMP area is not within a beach or lake, and does not affect the riparian area west of the main campus.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.9-13. Will the Project result in exposure of people or property to geologic hazards such as earthquakes, landslides, backshore erosion, avalanches, mudslides, ground failure, or similar hazards? (TRPA 1g)

See discussions and analyses for Questions 3.4.9-1.i through 3.4.9-1.iv above. No significant soil instability or hazard associated with unstable soils would occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.10 Greenhouse Gas Emissions (CEQA) and Air Quality (TRPA)

This section presents the analyses for potential impacts to greenhouse gas (GHG) emissions. Table 3-12 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting:

GHGs are a set of compounds in the atmosphere that absorb more of the outgoing long-wave radiation from the surface of the earth than incoming short-wave solar radiation. Therefore, GHGs in the atmosphere affect the global energy balance of the atmosphere-ocean-land system, and thereby affect climate. California regulated GHGs are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Other GHGs, such as water vapor, are not regulated at all.

Table 3-12: Greenhouse Gas Emissions and Air Quality				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.10-1. Greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (CEQA VIIIa)			Х	
3.4.10-2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (CEQA VIIIb)			х	
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.10-3. Alteration of air movement, moisture or temperature, or any change in				X

climate, either locally or regionally? (TRPA 2d)		
3.4.10-4. Increased use of diesel fuel? (TRPA 2e)		X

3.4.10-1. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (CEQA VIIIa)

The FMP would result in the development of new on-campus facilities, some of which replace the use of existing off-campus facilities and some of which are associated with replacement of existing facilities on campus. The use of new facilities has the potential for improved energy efficiency within facility fixtures and design, including high-efficiency fixtures, and in the case of the Public Safety Training Center, solar panels; however, greenhouse gases (GHG) associated with use of the new facilities would result in an overall increase in operational emissions levels due to the expansion of on-campus facilities. It should be noted that emissions form vehicle trips would not increase as the new facilities would reduce the need to travel off-site for classes. Since the LTCC campus is served by bike trails and transit service, and since the new facilities serve LTCC students and staff, the FMP facilities would encourage use of alternative modes of transportation or pedestrian access from other LTCC facilities, potentially reducing, although to a minor degree, traffic emissions.

To determine the extent of GHG emissions, CalEEMod (Version 2016.3.2) air emissions modeling was used for the near-term FMP facilities which have some degree of design completed. These facilities include the fire access and emergency access roads, the P.E. Expansion Building, Public Safety Training Center, Equipment Storage Facility and the associated parking areas, yard, and tarmac, as well as new boiler systems for snowmelt beneath pedestrian accessways and for heating. The LTCC Offices were excluded as they are existing uses relocated to a new structure. Based on the modeling conducted and documented in Appendix A, the total annual GHG emissions from construction activities and operations would be less than the quantitative threshold selected from Sacramento Metropolitan Air Quality Management District (SMAQMD) standards. Total MTCO2e emissions over a three year construction period would result in approximately 893 MTCO2e, with a maximum annual construction output of 307 MTCO2e during the second full year of construction in 2023. When combined with all other construction phases and amortized over the life of the project (conservatively assigned at 25 years), total annual construction emissions (35.72 MTCO2e) would not exceed applicable thresholds of 1,100 MTCO2e (2020 target) or 660 MTCO2e (2030 target).

CalEEMod modeling shown in Appendix A indicates operation of the Project is anticipated to generate 625.5 MTCO2e annually on average, prior to implementing efficiency features that are integrated into the project design such as high-efficiency fixtures, non-motorized connectivity improvements, and solar panels. The process boilers for snowmelt (safety) and heating are the largest contributing factors to operational GHG emissions. However, even prior to factoring in efficiency improvements, the Project's annual MTCO2e generation will not exceed the 660 MTCO2e 2030 target.

Selective tree removal under the TCP/THP has the potential to increase emissions through the loss of trees that can sequester carbon emissions. In relation to the FMP, this accounts for the loss of approximately 84 trees in the near term for the fire access road, PE Expansion Building, Public Safety Training Center, and Equipment Storage Facility and LTCC Offices, which is not a significant number of trees in relation to carbon sequestration quantities. Future tree removal on campus under the FMP and TCP/THP would correlate to specific development projects on campus, specifically the Residential Student Living and Mixed Residential Living facilities. Those projects, which are not planned or designed at this time, would

be required to be analyzed for environmental impacts specific to the use and design of the development at the time LTCC proposes the new facilities. Although the Residential Student Living facility would not result in new vehicle trips based on the occupancy by LTCC students, the Mixed Residential Living facility could generate additional vehicle trips and would have a greater quantity of operational GHG emissions. The Residential Student Living Facility would replace existing off-campus housing, thereby reducing total vehicle trips and also improve energy efficiency. It can be expected that these facilities would not include hearths or wood burning stoves and would be equipped with high-efficiency fixtures to reduce energy demands. It is estimated that 115 additional trees would be removed for those structures, most of which would be associated with the Mixed Residential Living facility.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.10-2. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (CEQA VIIIb)

An increase in greenhouse gas emissions would be considered significant if the project would obstruct implementation of any applicable plan, policy, or regulation (e.g., TRPA RTP/SCS, TRPA RPU, City General Plan) of an agency adopted for the purpose of reducing GHG emissions. The project would be considered to have a significant impact if it would be inconsistent with GHG reduction measures recommended by the TRPA 2017 RTP/SCS and RPU, or the City's General Plan. In addition, the proposed project would be considered to have a significant impact from global climate change if it would result in the exposure of residents to hazards associated with climate change.

It is important to note that estimated increases in mobile-source GHG emissions attributable to future development are based on net changes in VMT that are region-wide (i.e., within the entire Lake Tahoe Air Basin) and are not limited to VMT within the project boundaries. It is typically not possible to determine the extent to which proposed project-generated GHGs would contribute to global climate change or the physical effects often associated with global climate change (e.g., loss of snowpack and clarity changes to Lake Tahoe) because of the negligible amount of GHGs attributed to the proposed project compared to the overall Tahoe Region.

The City's General Plan contains policies and specific, enforceable requirements or restrictions and performance standards applicable to the area that reduce VMT and air quality emissions such as construction and operational-related GHG emissions. These policies promote the use of alternative fuels, alternative transportation, energy conservation, strategies to reduce travel demand, and promotion of sustainable development. The General Plan also contains sustainability policies including measures such as energy conservation, sustainable development, and green building, as well as actions to reduce VMT and mobile-source GHG emissions. In addition, Section 65.1.8.A. (Air Quality/Transportation, Idling Restrictions) of the TRPA Code of Ordinances limits construction vehicle idling time to 5 minutes in California (previous restriction was 30 minutes), which would be implemented as a construction measure.

Modeling of the near-term FMP projects reveals that GHG emissions levels would be within the threshold limits prior to accounting for proposed mitigating improvements such as solar power generation, connectivity improvements and fixture efficiencies, as discussed in Question 3.4.10-1. Future FMP projects (Residential Student Living and Mixed Residential Living Facilities) would contribute additional GHG emissions, but have not been modeled as these facilities have not yet been designed and a timeframe for construction of these facilities has not been established. Although the Residential Student Living units would not result in new vehicle trips as they would replace offsite student housing and locate students on campus to eliminate home to campus trips, the Mixed Residential Living Facility would have the potential
to increase vehicle trips and VMT as these units and commercial uses would not be limited to serving LTCC students. However, locating housing in this area, where there are transit and non-motorized access options to the larger community, results in improved mobility and would support the local goals and policies related to GHG.

Because implementation of the Regional Plan, General Plan, and existing GHG policies would not change with development of the FMP facilities or implementation on the TCP/THP, the Project is not expected to make a measurable increase in GHG emissions. Thus, this impact is considered less than significant.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.10-3. Would the Project result in alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally? (TRPA 2d)

See discussions and analyses for Question 3.4.10-1 above which concludes the Project would not result in GHG emissions levels that exceed the 2030 target of 660 MTCO2e, even prior to factoring in the GHG reducing elements of the project such as connectivity improvements, fixture efficiencies, and solar power generation.

Environmental Analysis: No (new) Impact.

Required Mitigation: None.

3.4.10-4. Would the Project result in increased use of diesel fuel? (TRPA 2e)

Construction associated with implementation of the FMP would require the use of diesel fuel for the operation of construction equipment. From an air quality perspective, one of the primary concerns related to diesel fuel consumption is the resultant exposure of sensitive receptors to emissions of toxic air contaminants (TACs) that can occur during both the construction and operational phases of a project. Based on the projects proposed under the FMP, the FMP would not include the construction or operation of any major sources of TAC emissions such as power-generating plants or other heavy industrial uses.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.11 Hazards and Hazardous Materials (CEQA) and Risk of Upset and Human Health (TRPA)

This section presents the analyses for potential impacts to hazards and hazardous materials and risk of upset and human health. Table 3-13 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The LTCC campus is approximately 1.25 miles from the southeastern shore of Lake Tahoe. The property was originally used as grazing land in the late 1800's prior to being developed into a college campus in

1988. The elevation of the property is approximately 6,270 feet above mean sea level. The LTCC campus is located between Trout Creek and Al Tahoe Boulevard and between U.S. 50 and Pioneer Trail. Nearby land uses include the South Tahoe Public Utility District (STPUD) facilities immediately south of the campus, Bijou Community Park to the east, a residential neighborhood to the west, and commercial and government uses to the north, including LTUSD and the South Lake Tahoe Police Department. Commercial uses include restaurants, gas stations, retail stores, and offices.

The LTCC campus currently includes classrooms, administrative offices, student services, a full-service library, a theatre and performing arts building, fitness education center, a commercial-grade culinary arts kitchen, art gallery, child development center, demonstration garden, and other facilities including activity fields, parking, and maintenance buildings. A commercial disposal company removes trash from the property that is contained in large dumpsters. The habitable structures on the LTCC campus are served with electricity, natural gas for heating, municipal water, and municipal sewer connections.

Existing environmental conditions were analyzed for the Facilities Master Plan using a records search report provided by EDR and a site reconnaissance. EDR reports provide the data some environmental professionals use to conduct Phase I Environmental Site Assessments (ESA's). No prior Phase I ESA's have been conducted on the LTCC property. An EDR report was provided for the LTCC campus property in July 2016. The data provided in the report and the site reconnaissance were used to assess the presence or likely presence of recognized environmental conditions, which are hazardous substances or petroleum products in, on or at the property due to any release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The EDR report did not identify current recognized environmental conditions on the LTCC campus property. Furthermore, a site reconnaissance conducted in August 2016 did not reveal concentrations of hazardous waste posing a threat to human health safety or welfare.

A review of Envirostor and Geotracker (2020) databases reveal no hazardous cleanup sites on the LTCC campus. There are a number of historic sites surrounding the campus that have been cleaned and the cases closed, primarily underground storage tanks at the STPUD facilities, the LTUSD property related to the school bus depot, at the South Lake Tahoe Police Department, at the STPUD pump station north of the campus, at a number of auto shops and gas stations along U.S. 50. There are also two sites in the area along U.S. 50 that are under evaluation by the Regional Water Quality Control Board: Yellow Cab Company and Tahoe Auto Recyclers. These are historic sites that are evaluated because oils and other potential contaminants are stored onsite, but they are not necessarily cleanup sites.

The LTCC is mapped in a LRA within a "Very High Fire Hazard Severity Zone" (CalFire). The LTCC is mapped by CalFire within a LRA with the South Lake Tahoe Fire Department providing fire protection services to the campus. The LTCC is also protected by the Tahoe Basin Multi Agency Coordination Group (MAC) where other fire protection districts in the area can assist in situations where additional resources are required for an emergency, including the El Dorado County Fire Protection District, and Lake Valley Fire Protection District. Both Cal Fire and/or USFS would provide Fire Protection Services in the event of a wildfire near the LTCC campus.

Table 3-13: Hazards and Hazardous Materials and Risk of Upset and Human Health				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.11-1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (CEQA IXa)			Х	
3.4.11-2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (CEQA IXb)			Х	
3.4.11-3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school? (CEQA IXc)			Х	
3.4.11-4. 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? (CEQA IXd)				X
3.4.11-5. 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? (CEQA IXe)				X
3.4.11-6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (CEQA VIIIf)				X
3.4.11-7. Expose people or structures, either directly or indirectly to a significant risk of			X	

loss, injury or death involving wildland fires? (CEQA IXg)				
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.11-8. Involve a risk of an explosion or the release of hazardous substances including, but not limited to, oil, pesticides, chemicals, or radiation in the event of an accident or upset conditions? (TRPA 10a)				X
3.4.11-9. Involve possible interference with an emergency evacuation plan? (TRPA 10b)				Х
3.4.11-10. Creation of any health hazard or potential health hazard (excluding mental health)? (TRPA 17a)				X
3.4.11-11. Exposure of people to potential health hazards? (TRPA 17b)				X

3.4.11-1. Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (CEQA IXa)

Hazardous materials would not be routinely transported, used, or disposed outside of the existing maintenance routines currently operating on campus. The Equipment Storage Facility would be used to store materials used to operate campus maintenance machinery and equipment, including oils, fuels, and lubricants. These materials would be stored within the facility in appropriately marked areas and containers. These materials are currently used on campus and the addition of the Equipment Storage Facility would not increase the frequency of use or alter materials handling procedures.

Construction of the structure and associated walkways, sidewalks, and parking, as well as the removal and relocation of portions of existing walkways, sidewalks, and bike path would involve the use of oils, fuels, and lubricants to operate construction machinery and tools. When not in use, machinery and tools would be located within the staging area located immediately adjacent to the construction area. The College's Spill Containment Plan (LTCC Hazardous Materials Business Plan, Section 10-Spill Response and Clean Up Procedures) would be followed and implemented during construction to avoid and respond to accidental exposure/spill and construction materials would be stored in accordance with federal, state, and local standards and policies.

Tree removal would not involve the routine transport, use or disposal of hazardous materials. Trees would be hand felled and removed from the campus for local processing or reused on campus in landscaped areas and as natural fencing. As with any construction activity, the use of motorized machinery requires fuels and oils for operation. The College's Spill Containment Plan would also be implemented in relation to tree removal and campus operations to ensure materials are properly handled and stored.

No hazardous materials would be stored in the proposed classrooms, residential structures, or unenclosed campus facilities.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.11-2. Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (CEQA IXb)

Please refer to Question 3.4.11-1 above. Temporary construction activities would require the use of machinery and equipment that use fuels or oil. The FMP does not propose to increase the use of common hazardous materials used to operate campus maintenance equipment and machinery or to maintain campus facilities such as small quantities of paints or cleansers. These materials would be stored in the Equipment Storage Facility, located away from other campus buildings and secured within the new structure's indoor storage areas. The addition of the Public Safety Training Center's equipment within the Equipment Storage Area would improve campus response to an accidental spill. The College's Spill Containment Plan would continue to be implemented to ensure accidental spills are immediately contained and treated in accordance with federal, state, and local standards and policies.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.11-3. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (CEQA IXc)

The project is located within school property and South Tahoe Middle School is located one mile northeast of the LTCC campus. No hazardous emissions would occur. The use, storage, and transport of hazardous materials are required to be in compliance with local, state, and federal regulations during project construction. Oils, lubricants and other commonly used hazardous materials are already used for campus maintenance equipment and machinery, and the FMP results in no change to their use other than improved storage in a new Equipment Storage Facility. The Equipment Storage Facility would be located at the opposite end of campus from the Child Development Center and Early Learning Center, improving storage safety. This is a less than significant impact.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.11-4. Would the Project 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? (CEQA IXd)

No hazardous waste facilities or contaminated sites are identified within the project area (EnviroStor and GeoTracker, 2020).

Environmental Analysis: No Impact.

3.4.11-5. 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? (CEQA IXe)

The LTCC campus is located approximately 1.5 miles northeast of the Lake Tahoe Airport. The 2019 Airport Land Use Compatibility Plan (ALUCP) indicates the campus is not located in the noise impact area contour (ALUCP Figure 4-1) but a portion of the main campus area on the southwest side of the developed campus is located within Airport Safety Zone 6 – Traffic Pattern Zone (ALUCP Figure 4-4). This area is generally west of the existing Physical Education Building and includes the main campus building, and would include the Public Safety Training Center, Equipment Storage Facility, and Residential Student Living Buildings. All land uses are compatible in Zone 6 and there are no use limitations identified in the ALUCP, although new uses are to be reviewed to ensure the land uses do not pose safety risks to airport operations. Development and use of the two-story Public Safety Training Center, which does not currently include the development of towers or use of reflective materials would not cause safety hazards. However, should training towers or other tall features that exceed height limits be proposed in the future, the new facilities would need to be reviewed by the Airport Land Use Commission to ensure compatibility. Hand felling of trees under the TCP/THP within Zone 6 also would not result in any safety hazard as this action involves selective felling and removal of trees.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.11-6. Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (CEQA IXf)

Under the California Division of State Architect permit LTCC evacuation route improvements associated with the Facilities Master Plan included installation of an electronic gate to replace an existing locked gate at the South Tahoe Public Utility District property and development of the emergency access roadway between Meadow Crest Drive and the LTCC main parking lot. Although U.S. 50 and Pioneer Trail are area evacuation routes, this project would not affect those roadways and does not affect College Drive, the primary evacuation route for the LTCC. A fire access roadway is also proposed west of the main campus buildings to improve emergency access.

Project activities could interfere with an adopted emergency response plan or emergency evacuation plan if activities involved the complete or partial closure of roadways, interfered with identified evacuation routes, otherwise restricted access for emergency response vehicles, or restricted access to critical facilities such as hospitals or fire stations. Project activities would occur wholly on LTCC property. These activities will not close any roadways, affect identified evacuation routes, or restrict access for emergency vehicles. There would be a less than significant impact on emergency response and evacuation plans from the LTCC campus.

The project would not alter or revise the existing regulations or amend the City's Local Emergency Operations Plan or Emergency Management Plan. These actions would not impair the implementation of or physically interfere with the City Natural Hazard Management Plan or Emergency Management Plan and therefore results in no impact.

Environmental Analysis: No Impact.

3.4.11-7. Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (CEQA IXg)

The location of the LTCC creates inherent risk of exposure of people and structures to wildfires since the LTCC is located in a LRA mapped by CalFire within in a Very High Fire Hazard Severity Zone. With the inherent danger of wildfire, the LTCC will include standard permit conditions required by the California Division of State Architect. The California Division of State Architect has reviewed and approved of a Fire Suppression and Management Plan for the Project area, including building materials and designs, fire protection systems in buildings, landscaping, fire flows to hydrants, emergency vehicle access routes and turnarounds, and vegetation treatments in the Project area to ensure compliance with the most recent CBC Chapter 7, PRC §4290-§4291, and other applicable state and local codes.

Development of the Public Safety Training Center and Equipment Storage Facility on the campus would enhance wildland fire response on the campus as equipment and materials used for wildland fire fighting could be located on the LTCC campus during instruction periods. Although the FMP includes new residential uses at the Residential Student Living and Mixed Residential Living facilities, these structures would be located within the developed campus area, adjacent to roadways and areas of fire-fighting access. No significant impact would occur.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.11-8. Will the Project involve a risk of an explosion or the release of hazardous substances including, but not limited to, oil, pesticides, chemicals, or radiation in the event of an accident or upset conditions? (TRPA 10a)

See discussion and analysis for Question 3.4.11-1 above. Although hazardous substances may be onsite for the purposes of operating machinery and equipment for construction and campus maintenance, the College's Spill Containment Plan would continue to be implemented to ensure a public safety hazard does not occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.11-9. Will the Project involve possible interference with an emergency evacuation plan? (TRPA 10b)

See discussion and analysis for Question 3.4.11-6 above that concludes that implementation of the proposed FMP and development of the Public Safety Training Center or Equipment Storage Facility will not impact existing emergency evacuation plans.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.11-10. Will the Project result in creation of any health hazard or potential health hazard (excluding mental health)? (TRPA 17a)

See discussions and analyses for Questions 3.4.11-1 through 3.4.11-4 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.11-11. Will the Project result in exposure of people to potential health hazards? (TRPA 17b)

See discussions and analyses for Questions 3.4.11-1 through 3.4.11-4 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12 Hydrology and Water Quality

This section presents the analyses for potential impacts to hydrology and water quality. Table 3-14 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The Project area is located in South Lake Tahoe, California, on the southern portion of the Lake Tahoe Basin in El Dorado County. LTCC is approximately one mile south of Highway 50 adjacent to Al Tahoe Boulevard. The project lies within Township 12 North and Range 18 East of the Mt. Diablo Meridian. Elevation of the Project area is approximately 6,270 feet above mean sea level (msl). The LTCC campus is within the 26,368-acre Trout Creek watershed. Trout Creek is located west of the developed campus on land managed by the CTC. Historically, Trout Creek has been a tributary that flowed into the Upper Truckee River in the Truckee Marsh area on the southern end of Lake Tahoe. The Tahoe Keys development channeled the Upper Truckee River transforming the area into the current landscape.

The Project area is contained within the Tahoe Valley South Groundwater Sub-Basin (TVGB), which is one of the three sub-basins comprising the greater North Lahontan Basin. The TVGB is located within the larger structural feature referred to as the Lake Tahoe Basin. The TVGB occupies a roughly triangular area and is bound on the southwest and southeast by the Sierra Nevada, on the north by the southern shore of Lake Tahoe, and to the northeast by the California-Nevada state line. The southern boundary extends about 3 miles south of the town of Meyers and forms the triangular apex. Elevations within the TVGB range from 6,225 feet at lake level to about 6,500 feet in the south (California Department of Water Resources 2004). STPUD supplies water to the area solely through groundwater. Generally, the groundwater quality of the area is excellent, with a few remediation locations around the Tahoe Y.

Groundwater recharge in the Project area is primarily from infiltration of precipitation into faults and fractures in bedrock, soils and decomposed granite overlaying much of the bedrock, and unconsolidated basin-fill deposits. Except where the land surface is impermeable or where the groundwater table coincides with land surface, groundwater is recharged over the extent of the flow path (Thodal 1997). No sub-basins in the Northern Lahontan Hydrologic Study Area are identified as subject to critical conditions of overdraft according to the 2017 STPUD Tahoe Valley South Basin Annual Water Report, which is based on California Department of Water Resources and Desert Institute data (STPUD 2017). The report indicates changes in groundwater storage in the Tahoe Valley South Sub-Basin have been minimal. California's Water Update also found no evidence of overdraft, and no overdrafts are expected in the Study Area, even in drought years.

The 2019 geotechnical investigation conducted for the ELC project identified groundwater at an elevation of 30 feet below ground surface. While the groundwater elevation fluctuates seasonally and annually depending on the seasonal precipitation levels, previous geotechnical investigations on the campus have found groundwater elevations to be at depths greater than the grading elevations of campus facilities.

Table 3-14: Hydrology and Water Quality					
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact	
3.4.12-1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? (CEQA Xa)			Х		
3.4.12-2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (CEQA Xb)			Х		
3.4.12-3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would i) Result in substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) Impede or redirect flood flows? (CEQA Xc)			X		
3.4.12-4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (CEQA Xd)			x		

CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.12-5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (CEQA Xe)				Х
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.12-6. Changes in currents, or the course or direction of water movements? (TRPA 3a)				Х
3.4.12-7. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff so that a 20 yr. 1 hr. storm runoff (approximately 1 inch per hour) cannot be contained on the site? (TRPA 3b)				X
3.4.12-8. Alterations to the course or flow of 100-year flood waters? (TRPA 3c)				X
3.4.12-9. Change in the amount of surface water in any water body? (TRPA 3d)				Х
3.4.12-10. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity? (TRPA 3e)				X
3.4.12-11. Alteration of the direction or rate of flow of ground water? (TRPA 3f)				Х
3.4.12-12. Change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations? (TRPA 3g)				X
3.4.12-13. Substantial reduction in the amount of water otherwise available for public water supplies? (TRPA 3h)				X

TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.12-14. Exposure of people or property to water related hazards such as flooding and/or wave action from 100-year storm occurrence or seiches? (TRPA 3i)				X
3.4.12-15. The potential discharge of contaminants to the groundwater or any alteration of groundwater quality? (TRPA 3j)				X
3.4.12-16. Is the Project located within 600 feet of a drinking water source? (TRPA 3k)				Х

3.4.12-1. Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? (CEQA Xa)

The FMP does not propose to discharge contaminating waste into area waterways or soils. No FMP facilities are proposed within Land Capability District 1b (stream environment zone). As discussed in the project description, the FMP buildings and improvements are located outside of the Trout Creek area, and adjacent to the existing built campus. The campus is a relatively flat area, and each new facility is designed to capture and treat surface runoff from new impervious surfaces such as buildings, walkways and paths, and associated parking lot and roadway or drive aisles. New campus facilities associated with increased coverage include treatment facilities such as underground vaults, infiltration galleries, sediment basins, landscape bioretention areas, drop inlets, and other water capture and treatment devices. Stormwater facilities are designed to contain a 20-year, one-hour storm event. The LTCC snow and ice management plan (Regulatory Compliance Measure 2.4.14) allows for snowmelt to filter into the vegetated ground in various locations on campus.

Accelerated erosion potential and surface water quality impacts are present during construction phasing and occur when protective vegetative cover is removed, and soils are disturbed. Site disturbance during construction could pose temporary impacts to surface water quality and beneficial uses of Project area receiving waters through increased pollutant concentrations in stormwater runoff. If not addressed by the Project, potentially significant impacts to surface water quality could occur from construction runoff, increased post construction runoff due to increased impervious area, atmospheric deposition (fugitive dust and particulate emissions), or accidental spills. A number of compliance measures, which are required by codified regulations or law, and standard engineering features and permanent BMPs are incorporated into the Project to avoid, reduce, and minimize potential impacts to surface water quality and beneficial uses.

Development and infrastructure improvements within the project area are required to meet the discharge standards of the Lahontan Regional Water Control Board. Projects that would create more than one acre of disturbance are required to prepare a Storm Water Pollution Prevention Plan (SWPPP). The FMP projects would be constructed at various times throughout the duration of the FMP, or phased as need arises. Since all existing state and local protections for surface water would remain in place and would not be altered by the project, and water quality BMPs such as coir logs and stormwater runoff management would be implemented during and construction and operation of the facilities, the FMP would not result in adverse discharges to surface waters or alteration of surface water quality.

Short and long-term impacts to surface water quality from construction of the new facilities and the increases in impervious area would be reduced and minimized through compliance with State, El Dorado County, and TRPA regulations and permit requirements, which require the implementation of effective, reasonable, and appropriate measures to protect water quality and beneficial uses. Runoff would be contained on-site through application of temporary BMPs during construction activities and disturbed soils would be revegetated and stabilized in compliance with construction permits.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-2. Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (CEQA Xb)

Some of the proposed FMP facilities include campus restrooms, water spigots, and residential kitchen, laundry, and bathroom facilities that would require the use of groundwater; however, each facility must be reviewed by STPUD to determine if adequate water supplies exist and a "Will Serve" letter would be required before service connection could occur at the new FMP facilities. South Tahoe Public Utility District implements the Tahoe Valley South Basin Groundwater Management Plan, which includes the entire STPUD service area in which the LTCC campus is located. The project does not propose to change groundwater management and does not propose new uses that would affect the groundwater management plan. Although coverage would increase, the majority of the campus area would remain uncovered and would allow for continued groundwater recharge. In addition, onsite runoff management would include the development of basins and landscaped areas to catch runoff, allowing for runoff to be absorbed into the ground.

The LTCC campus is not located within a source water protection zone and would connect to existing water utility lines currently serving LTCC. A STPUD groundwater monitoring well (well number 02504112W11) is located on the south end of the College campus property, near the P.E. Expansion Building. While the construction site is not located within a well protection zone, TRPA Code Chapter 60.3 (Source Water Protection) lists "schools" as possible contaminating activities. Therefore, the source water protection maps were reviewed to confirm proposed school facilities would not be located within the protection zone of a well.

The 2015 Geotechnical Engineering Investigation Report prepared by BSK Associates for the LTCC Facilities Master Plan found no groundwater interception for the soil borings conducted onsite (no groundwater was encountered above 16 feet below ground surface elevation). Proposed excavation and grading is unlikely to exceed 4 feet in depth given the excavation depths of other campus structures. Excavation for the near-term facilities would not exceed this limit. Excavated earthwork would be balanced onsite.

A majority of the Project proposes surficial construction that would not penetrate deeper soils or groundwater; however, it is unknown if deeper excavation is proposed for those facilities not yet designed. Excavation would not interfere or intercept the seasonal-high groundwater level, except for circumstances defined in TRPA Code of Ordinances Subsection 33.3.6.A. TRPA Code of Ordinances Subsection 33.3.6.A. Is exceptions for TRPA to approve excavations in excess of five feet or where there is a reasonable possibility of interference or interception of a water table. Subsection 33.3.6.A.2.a. states an exception may be approved by the TRPA if the excavation is required by the International Building Code or local building code for minimum depth below natural for above ground structures, and Subsection 33.3.6.A.2.e. states that TRPA may approve the excavation if it is a necessary measure for the protection

or improvement of water quality. Subsection 33.3.6.B lists three required findings for excavation in excess of five feet:

- 1. A soils/hydrologic report prepared by a qualified professional, which proposed content and methodology has been reviewed and approved in advance by TRPA, demonstrates that no interference or interception of groundwater will occur as a result of the excavation;
- 2. The excavation is designed such that no damage occurs to mature trees, except where tree removal is allowed pursuant to subsection 33.6.5: Tree Removal, including root systems and hydrologic conditions of the soil. To ensure the protection of vegetation necessary for screening, a special vegetation protection report shall be prepared by a qualified professional identifying measures necessary to ensure damage will not occur as a result of the excavation; and
- 3. Excavated material is disposed of pursuant to subsection 33.3.4: Disposal of Materials, and the project area's natural topography is maintained pursuant to subparagraph 36.5.1.A. If groundwater interception or interference will occur as demonstrated by a soils/hydrologic report prepared by a qualified professional, then the excavation can be made as an exception pursuant to subparagraph 33.3.6.A.2, provided measures are included in the project to maintain groundwater flows to avoid adverse impacts to SEZ vegetation and to prevent any groundwater or subsurface water flow from leaving the project area as surface flow.

As components are proposed for construction and should the component designs indicate a need for excavation in excess of five feet, the appropriate reports, including a soils hydrologic report, tree protection plan, and material disposal plan, would be prepared and submitted to the TRPA for approval as required by the permitting process.

All local, state, and federal regulations regarding groundwater interception would be followed if groundwater is encountered. Proposed grading depths are expected to be minimal and therefore no significant changes to topography are anticipated. Water quality BMPs would be designed and implemented, and an approved SWPPP would be implemented during construction to reduce run-off from the project site. After completion of construction, all disturbed areas would be stabilized and re-vegetated to maintain infiltration. Topsoil and native forest duff would be stripped, stockpiled, and reused for restoration and revegetation of the construction area as required by a final landscape plan. No significant impact to groundwater quantity would occur.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-3. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would (CEQA Xc):

3.4.12-3.i) Result in substantial erosion or siltation on- or off-site?

As discussed in Question 3.4.12-1, the FMP would result in grading and coverage changes; however, each new facility would include BMPs during construction and operation to address erosion and siltation. Based on the design of the new facility, the new facilities may include drainage basins and stormwater systems to collect and manage runoff resulting from new, impervious coverage during a 20-year, one-hour storm event. Features may include rock-lined outfall to reduce the potential for erosion or collection systems, and disturbed areas would be reseeded with a native seed mix or landscaped to prevent erosion or improper flows that would result in unwanted channels or siltation onsite.

In areas of tree removal under the TCP/THP, trees would not be removed until a planned development is proposed, designed, analyzed and approved. Since trees would be removed as a component of the construction activity proposed for the area, construction best management practices would be in place until the structures to be located where trees are removed are fully constructed. The affected areas would be covered with mulch to prevent erosion. Future, long-term FMP development projects and associated tree removal would be analyzed in subsequent environmental documentation specific to those future projects and appropriate design, best management practices, and mitigation measures, if needed, would be applied.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-3.ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As described in the project description and in Question 3.4.12-1, the FMP project would increase impervious surface land coverage by 438,210 square feet, such that additional stormwater treatment features would be included for each new facility to capture and manage stormwater onsite. Table 2-4 shows this additional land coverage within LCD 7 is within the total allowed coverage for the LTCC campus. With the inclusion of stormwater management features, the runoff from the FMP facilities and associated walkways and parking would be managed within the improvement area and would not contribute to on- or off-site flooding. The paved areas surrounding the Equipment Storage Facility includes environmentally approved water collection and containment to address stormwater runoff as well as runoff created during fire-fighting and emergency response training exercises and equipment maintenance. With runoff required to be managed onsite, offsite runoff would not occur or cause flooding.

Tree removal under the TCP/THP would occur over a period time as new campus facilities are planned, designed, and proposed. No tree removal would occur outside of a planned development project and the selective removal of trees across the campus would not increase surface runoff to cause flooding as water would be able to infiltrate the ground and natural landscape until new development coverage occurred. Each future project would be analyzed for environmental impacts as they are designed and proposed and would include best management practices and possibly mitigation measures if needed.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-3.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?

As discussed in Question 3.4.12-1 above and in the project description, the FMP includes BMPs and requires stormwater management improvements to manage a 20-year, one-hour storm event. The potential runoff volume from each new impervious surfaces would be calculated based on the detailed design and the proposed capacity of the stormwater basins and landscape surface treatment area engineered to provide adequate treatment capacity onsite. This includes capture and containment of waters generated by emergency response fire-fighting training exercises and equipment maintenance activities. No significant impacts associated with polluted runoff would occur with implementation of these regulatory compliance measures, including implementation of the SWPPP and BMPs. The LTCC snow and ice management plan (Regulatory Compliance Measure 2.4.14) allows for snowmelt to slowly filter into the vegetated ground in various locations on campus. No significant runoff is associated with tree removal activities under the

TCP/THP. Future development of the FMP facilities would be required to complete subsequent environmental analysis and documentation prior to approval.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-3.iv) Impede or redirect flood flows?

The LTCC FMP project area is not located within the FEMA-mapped flood hazard area and improvements are not proposed within or near the Trout Creek channel.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-4. Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (CEQA Xd)

Based on studies by Ichinose et al. (2000), a potential exists for tsunami and seiche-related waves between 10 and 30 feet in height to occur along the shore of Lake Tahoe, potentially threatening low-lying lakeside communities. The LTCC campus is 1.4 miles inland from the lake shore and 60 feet higher in elevation and is therefore outside of a seiche or tsunami zone. The campus is also elevated from nearby Trout Creek and would not experience hazard from the creek during a seismic event. The Project area is also outside of the 100-year floodplain and would therefore not alter the course or flow of 100-year floodwaters or expose people or structures to water related hazards, resulting in a less than significant impact.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-5. Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (CEQA Xe)

As discussed in Questions 3.4.12-1 and 3.4.12-2 above, the project would include onsite runoff management and is not located within a groundwater well protection area. Operation of the FMP facilities would not obstruct implementation of a water quality control plan or sustainable groundwater management plan. The FMP project incorporates measures to maintain water quality and control runoff as required by local, state, and federal regulations, thereby implementing water quality control. The quantity of groundwater consumed by the FMP facilities would not interfere with a sustainable groundwater plan as adequate capacity has been demonstrated and documented by STPUD and each FMP project would need to secure approval and supply from STPUD prior to construction of the service infrastructure. Most FMP operations would not involve potentially contaminating activities that could affect surface or groundwater. Use of oils or solvents to operate campus equipment or machinery may occur at the Equipment Storage Facility; however, use of these materials already occurs on campus for site maintenance. With stormwater collection from campus parking areas and asphalt work areas that includes filtration and collection devices, the impact of such materials entering the groundwater is reduced.

Chapter 7.15 of the City Code regulates urban runoff and stormwater quality. The TRPA Lake Tahoe Water Quality Management Plan (208 Plan) and City of South Lake Tahoe Pollutant Load Reduction Plan would continue to apply to the area and the project proposes no changes to or conflicts with this plan.

Areas under the TCP/THP in which future development of the LTCC campus may occur would be required to meet the discharge standards of the Lahontan Regional Water Control Board. Projects that would create more than one acre of disturbance are required to prepare a Storm Water Pollution Prevention Plan (SWPPP).

South Tahoe Public Utility District implements the Tahoe Valley South Basin Groundwater Management Plan, which includes the entire STPUD service area in which the LTCC campus is located. The project does not propose to change groundwater management and do not propose new uses that would affect the groundwater management plan.

Since all existing state and local protections for surface water and groundwater would remain in place, and water quality BMPs (in accordance with Chapter 60 of the TRPA Code) would be implemented, the project would not result in adverse discharges to surface or groundwaters or alteration of surface or groundwater quality, and would not conflict with or obstruct implementation of plans protecting surface water and groundwater resources.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.12-6. Will the Project result in changes in currents, or the course or direction of water movements? (TRPA 3a)

The FMP projects are not located within a waterway and do not propose to reroute flows to change the course or direction of water movements.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-7. Will the Project result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff so that a 20 yr. 1 hr. storm runoff (approximately 1 inch per hour) cannot be contained on the site? (TRPA 3b)

See discussions and analyses for Questions 3.4.12-1 and 3.4.12-3.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-8. Will the Project result in alterations to the course or flow of 100-year floodwaters? (TRPA 3c)

The LTCC FMP project area is not within the 100-year floodplain, as discussed under Question 3.4.12-3 above.

Environmental Analysis: No Impact.

3.4.12-9. Will the Project result in change in the amount of surface water in any water body? (TRPA 3d)

See discussions and analyses for Questions 3.4.12-1 and 3.4.12-3. There are no water bodies within the developed portion of the LTCC campus. No extraction of surface water is proposed. Surface water and water rights in California are managed by the California State Water Resources Control Board. Projects that require additional water supply affecting the amount of surface water in Lake Tahoe or another water body would be required to comply with Chapters 32 (Basic Services) and 60 (Water Quality) of the TRPA Code of Ordinances, which address the provision of basic services to projects and the protection of source water. Prior to construction, each new FMP facility requiring water service would be required to obtain a "Will Serve" letter from STPUD indicating that there is adequate capacity to serve the new facility and that the infrastructure to the facility is sufficiently designed.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-10. Will the Project result in discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity? (TRPA 3e)

See discussions and analyses for Question 3.4.12-1 above. There are no surface waters within areas potentially developed under the FMP and no surface waters in the Public Safety Training Center area. Chapter 60 (Water Quality) of the TRPA Code of Ordinances includes standards for discharge limits to surface and ground waters and Chapter 7.15 of the City Code regulates urban runoff and stormwater quality. Projects are required to meet the discharge standards of the Lahontan Regional Water Quality Control Board and applicable stormwater discharge permits. All projects that would create more than one acre of disturbance are required to prepare a Storm Water Pollution Prevention Plan (SWPPP) in compliance with the City's Stormwater Management Plan. As discussed in Chapter 2, Regulatory Compliance Measures are included to address runoff and water quality. Therefore, BMPs and a SWPPP would be implemented as part of the FMP project implementation.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-11. Will the Project result in alteration of the direction or rate of flow of ground water? (TRPA 3f)

See discussions and analyses for Question 3.4.12-2.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-12. Will the Project result in change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations? (TRPA 3g)

See discussions and analyses for Questions 3.4.12-9 through 3.4.12-11 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-13. Will the Project result in substantial reduction in the amount of water otherwise available for public water supplies? (TRPA 3h)

See discussion and analysis in Question 3.4.12-9 above and analyses in Questions 3.4.21-1 and 3.4.21-2 below which conclude that potential impact of development on the availability of public water supplies would not have an impact.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-14. Will the Project result in exposure of people or property to water related hazards such as flooding and/or wave action from 100-year storm occurrence or seiches? (TRPA 3i)

See discussions and analyses for Questions 3.4.12-3, 3.4.12-4, and 3.4.12-8 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-15. Will the Project result in potential discharge of contaminants to the groundwater or any alteration of groundwater quality? (TRPA 3j)

See discussions and analyses for Questions 3.4.12-9 through 3.4.12-11 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.12-16. Is the Project located within 600 feet of a drinking water source? (TRPA 3k)

The LTCC is not located within 600 feet of drinking water sources and is outside the mapped source water protection zones for existing wells. (TRPA, 2000).

Environmental Analysis: No Impact.

3.4.13 Land Use and Planning

This section presents the analyses for potential impacts to land use and planning. Table 3-15 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The LTCC property is within the Bijou/Al Tahoe Community Plan Area (Plan Area Statement 98) and the Truckee Marsh Plan Area Statement (PAS 100). A portion of the sports fields are located within Bijou Meadow (PAS 101); however, no project components are planned in this area. The developed portion of the campus is entirely within the Bijou/Al Tahoe Community Plan and the portion within PAS 100 remains primarily undeveloped with the exception of trails. The area addressed by the FMP project is entirely within the Bijou/Al Tahoe boundaries.

TRPA and the City of South Lake Tahoe have adopted the Bijou/Al Tahoe Community Plan (PAS 98) that specifies permissible land uses within the Project area. The Land Use Classification in the Bijou/Al Tahoe Community Plan area is Commercial/Public Services, with a Management Strategy of Redirection. LTCC is located within District 4 - Town Center District. Permissible uses in District 4 include employee housing (S), multi-family dwelling (A), residential care (A), eating and drinking facilities (A), food and beverage retail sales (A), privately owned assembly (S), special event area (A), business support services (A), professional offices (A), schools - business/vocation (A), cemeteries (S), churches (A), collection stations (S), cultural facilities (A), daycare centers (A), government offices (A), local assembly and entertainment (S), local post office (S), local public health and safety facilities (A), public owned assembly and entertainment (A), public utility centers (S), regional public health and safety facilities (S), schools college, kindergarten through secondary and preschool (A), social service organizations (A), pipelines and power transmission (S), transit stations and terminals (S), transportation routes (S), transmission and receiving (S), threshold-related research facilities (S), beach recreation (A), boat launching facilities (A), cross country ski courses (A), day use areas (A), developed campgrounds (A), golf courses (S), group facilities (S), outdoor recreation (S), recreation centers (A), visitor information centers (A), and a majority of the resource management uses.

The Bijou/Al Tahoe Community Plan area is diverse and includes public services, retail oriented businesses and recreation areas. Surrounding land uses include the Bijou Community Park, South Tahoe Public Utility District facilities, Trout Creek (conservation area), retail centers, government offices such as the U.S. Forest Service, South Lake Tahoe Police Department, and U.S. Post Office, and residential neighborhoods.

The City of South Lake Tahoe General Plan (2011) Land Use Diagram classified the area as "Special District" Policy LU-2.5 Bijou/Al Tahoe Community Plan Area states, "The City shall encourage the creation of a viable residential neighborhood with appropriate neighborhood amenities and compatible high quality family-oriented recreation and public facilities including government offices." Priorities for this area as identified in the General Plan include expanding the role of the Bijou/Al Tahoe Community Plan area as an economic center at the LTCC and developing new social centers in the LTCC area.

The Project area is presently used year-round as a community college facility including accessory food and beverage and other services. A Facilities Master Plan was developed for the LTCC campus that addresses future onsite development including modernization and renovation of existing facilities, campus circulation and accessibility improvements, and new or expanded facilities to serve LTCC programs and students. In 2018, a land exchange occurred between the California Tahoe Conservancy, LTCC, and the City of South Lake Tahoe in which shared use of the sport fields was established, the Conservancy undertook ownership and management of the Trout Creek area that was formerly owned and managed by LTCC, and LTCC

acquired land south of the campus in exchange. The U.S. Forest Service leases approximately 12.25 acres from LTCC and their developed land coverage is included toward the total land coverage calculations for LTCC, which is provided in Table 2-4.

Table 3-15: Land Use and Planning					
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact	
3.4.13-1. Physically divide an established community? (CEQA XIa)				Х	
3.4.13-2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (CEQA XIb)			Х		
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No	
3.4.13-3. Include uses which are not listed as permissible uses in the applicable Plan Area Statement, adopted Community Plan, or Master Plan? (TRPA 8a)				X	
3.4.13-4. Expand or intensify an existing non-conforming use? (TRPA 8b)				X	

3.4.13-1. Would the Project physically divide an established community? (CEQA XIa)

Development of new on-campus facilities that support the educational opportunities and programs at LTCC, or that support staff and students would not physically divide the campus. The facilities proposed would be located adjacent to existing structures, primarily at the south end of the campus between the existing student center/dining hall and library and the Physical Education Center. Pathways for pedestrians and bicycles, and roadway extensions from existing parking areas would link the new facilities to the existing campus. Replacement of portable structures with permanent structures also would not physically divide the campus as old buildings would simply be replaced. Development of the mixed-use residential living facility near the entrance at the north end of the campus would serve the greater community and not just LTCC students and staff. This use is proposed to be located along the existing College Drive roadway in the FMP, housing up to 384 people. The location of this community-wide facility would not physically divide the campus and would serve to bridge campus services with the greater community.

No new roads are proposed that would divide the campus. Improvement of the fire access roadway at the south end of the campus would improve connectivity and site safety without dividing the campus. Since it

would also link to the Greenway Trail, this roadway improvement would help to link non-motorized access at the Greenway Trail to campus facilities.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.13-2. Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (CEQA XIb)

The FMP includes proposed land uses that serve LTCC operations or educational opportunities; however, there is one proposed land use that is not currently allowed in the Bijou/Al Tahoe Community Plan for District 4. The Tahoe Basin Public Safety Training Center, Equipment Storage Facility, P.E. Expansion, portable classroom replacement, and LTCC offices are school-college facilities. The multi-family units in the Mixed-use Residential Living facilities near the LTCC entrance are allowed, as are some commercial uses proposed for the first floor, dependent on the type of commercial uses to be proposed. At this time, it is assumed the commercial land uses would be restaurant or food and beverage retail supporting both the adjacent community and campus populations. The Residential Student Living facility is considered a dormitory residence, which is not an allowed residential use in District 4. Therefore, amendment to the Bijou/Al Tahoe Community Plan is necessary to allow the "multi-person residential" dormitory use proposed by the FMP.

The following table (Table 3-16) addresses each proposed use in regard to land use compatibility within Bijou/Al Tahoe Community Plan District 4 (Town Center District):

Use or Action	Compatibility Analysis
Remodel for Efficiency and Science Modernization Phase I (Building 1)	Allowed. This action does not result in a new use, but revised use of existing college school facilities.
Early Learning Center Expansion (Building 10)	Allowed. Both college and preschool facilities are allowed, as well as daycare centers.
Tahoe Basin Public Safety Training Center (Building 11))	Allowed. Education facilities are allowed land uses.
Equipment Storage Facility (Building 12)	Allowed. This action would result in a new storage facility for existing campus maintenance operations and for the Public Safety Training Center.
P.E. Expansion Building (Building 13)	Allowed. Provides classroom and college operations facility.
Future Building Site (Building 14)	Allowed. This action would replace the temporary classrooms on campus with a new two-story classroom structure.
Residential Student Living (Buildings 15 A/B)	Not permissible. The Community Plan allows for multi-family, but not multi-person residential units. An amendment to the Bijou/Al Tahoe Community Plan is required

FMP Land Use Compatibility Analysis

Use or Action	Compatibility Analysis
LTCC Offices (Building 16)	Allowed. This action would not result in a new use, but relocation of an existing use to a new on-campus structure.
Mixed Residential Living (Building 17)	Allowed. Multi-family residential is an allowed use, as are some types of retail commercial, such as food and beverage sales and establishments.
South Parking Lot	Special Use. Parking is an accessory facility for the campus, and expansion or new parking lots would not conflict with allowed uses.
Monument Sign on US 50	Special Use. Signage is allowed if it conforms to the Community Plan Design Standards and Guidelines and TRPA Code of Ordinances requirements.
Fire Access Roadway	Special Use. Transportation routes are allowed as special uses.
Emergency Access Roadway to Meadow Crest Drive	Special Use. Transportation routes are allowed as special uses.
Trail Improvements	Allowed. Existing trails on campus would be improved as emergency vehicle access roads or would be decommissioned. No new trails are proposed.

The FMP proposes multi-person residential dwellings, which is not allowed within District 4 of the Community Plan. The 100-bed dormitory proposed in the FMP falls under the TPRA definition of a multi-person dwelling (unrelated persons), rather than a multi-family dwelling (related persons living together). Although multi-person dwellings are allowed in District 1 (Bijou District), they are not allowed in District 4. Therefore, the Project includes an amendment to the Community Plan to achieve land use consistency.

Bijou/Al Tahoe Community Plan Amendment

The Bijou/Al Tahoe Community Plan is currently designated as a TDR receiving area for existing development and residential bonus units (20 or 25 bonus units), and is designated as a multi-residential incentive program area. Prior to TRPA permit submittal for the Residential Student Living Facility on the LTCC campus, the Bijou/Al Tahoe Community Plan shall be amended to include Multi-person Residential as a Special Use within District 4. Alternatively, if the City initiates an Area Plan for the College Project Area, the Multi-Person Residential use shall be included in the Area Plan for study and adoption. The Bijou/Al Tahoe Community Plan Permissible Uses Matrix (page 11-9) would be amended as follows (**underlined**), limiting the addition of Multi-person Residential to the LTCC in District 4, and requiring design review.

BIJOU / AL TAHOE COMMUNITY PLAN PERMISSIBLE USES MATRIX

KEY:

1 – Bijou District

2 – Harrison District

3 – Lucky/Payless District

4 – Town Center (includes College campus)

Land Use Categories	Districts				Maximum
	1	2	3	4	Units/Acre
I. Residential					
Multi-person dwelling	s			<u>S 1/6</u>	25 Pers/Acre

Footnotes:

S=Special Use Permit Required

1. Requires Design Review

6. College Special Area

In a related change, the Residential Bonus Units section of Chapter II, Section B (Bijou/Al Tahoe Community Plan Area Statement) shall be amended as follows:

<u>RESIDENTIAL BONUS UNITS:</u> Pursuant to Chapter 35 (TRPA Code) the maximum number of residential bonus units which may be permitted for this Community Plan Area is 20 <u>95</u> units. <u>Residential bonus units assigned to the Bijou/AI Tahoe</u> <u>Community Plan Area may be used for deed-restricted affordable student</u> <u>housing on the LTCC property. Residential bonus units used for affordable</u> <u>student housing on the LTCC property do not require residential allocations.</u>

Amendment of a Plan Area Statement permissible use must be done by ordinance and findings are required prior to adoption of the amendment. The amended Community Plan would need to be adopted by both the TRPA and City of South Lake Tahoe.

Implementation of the amendment would maintain consistency with the Community Plan. In general, the amendment must be substantially consistent with the plan area designation criteria 11.6.2 and 11.6.3. Since multi-person is similar to multi-family dwellings and both multi-family and college facilities are allowed uses within the mixed-use area, the addition of multi-person dwellings as a special use limited to the LTCC campus would not conflict with the existing permissible land uses or the overall type of use of the area. Mixed-use area are designated as such to concentrate higher intensity uses for public convenience and enhanced sustainability. Dormitory (multi-person) residential units would be appropriate on campus as they would provide housing for the specific student population utilizing the college facilities, in a transit oriented area close to urban resources. Required findings under TRPA Code of Ordinances Chapters 4 and 11 (Finding A) can be made to support the amendment, as: the use is consistent with the plan area designation criteria, the Regional Plan, Code, and other goals and policies; would not exceed environmental threshold carrying capacities as onsite housing would reduce emissions and pollutants; and maintains air and water quality standards as water quality BMPs would be required and onsite housing would benefit air quality by reducing vehicle trips and VMT.

Chapter 21

The TRPA Code of Ordinances requires the following findings (Section 21.2.2.A, B, and C) be made to allow Special Uses. The components that would be special uses include: Parking lots, monument sign, and emergency and fire access/roads.

Finding: The project to which the use pertains is of such a nature, scale, density, intensity, and type to be an appropriate use for the parcel on which and surrounding area in which it will be located.

Rationale: Parking lots are sized to accommodate the anticipated enrollment and facility capacity on campus. Likewise, monument signs would be similar to those existing. The emergency access and fire roads are also sized in accordance with fire protection access requirements. None of these facilities would be too large for the site or located in a way that would negatively affect the surrounding area.

Finding: The project to which the use pertains will not be injurious or disturbing to the health, safety, enjoyment of property, or general welfare of persons or property in the neighborhood, or general welfare of the region, and the applicant has taken reasonable steps to protect against any such injury and to protect the land, water, and air resources of both the applicant's property and that of surrounding property owners.

Rationale: Additional facilities of the same type or nature would not be injurious or disturbing to the neighborhood or surrounding community. As discussed in this IS/IEC, no significant and unavoidable land, water or air quality impacts would occur.

Finding: The project to which the use pertains will not change the character of the neighborhood, or detrimentally affect or alter the purpose of the applicable planning area statement, community plan, and specific or master plan, as the case may be.

Rationale: Each of the special use components are either similar to existing facilities on campus, or they are accessory uses that promote campus operations and safety. The expansion of such uses would not detrimentally affect or alter the purpose of the Community Plan or the FMP. Many of the components support and implement policies in the City of South Lake Tahoe General Plan such as the Public Safety Training Center, Residential Student Living, pedestrian trails, etc. These components support current and anticipated college programs, students, and campus needs, and are appropriate for the campus property.

Density

The land use matrix in the Bijou/Al Tahoe Community Plan does not establish density limits for public service facilities, which includes college facilities, linear public facilities such as the fire and emergency access roads, or the types of recreation associated with the campus. TRPA Code of Ordinances Section 31.2.1.D indicates the density of public service uses is determined by the site development standards in the in the Site Development division (Chapters 30-39 of the Code); however, no density limit is established.

The residential density allowed in the Community Plan is 25 persons per acre or 15 units per acre. Since the LTCC occupies over 144 acres, and is proposing 100 beds (100 students) within 33 units, and 120 units within the Mixed Residential Living (155 units total) adequate acreage (10 acres) exists to accommodate this density. Therefore, no potential impact in regard to density would occur.

Setback

The Community Plan requires development on the LTCC property to have a minimum setback of 50 feet from Al Tahoe Blvd. The FMP facilities proposed are located over 50 feet from Al Tahoe Blvd.

Land Coverage

Table 2-4 documents existing and proposed land coverage for the Proposed Project as well as the allowable coverage limits. The majority of new land coverage under the FMP would be located in land capability district 7, which allows up to 30% coverage. A small amount of existing land coverage occurs in land capability districts 4 and 1b, which allows up to 20% an 1% coverage, respectively. No new land coverage

within land capability districts 4 or 1b is proposed, though future improvements to existing walking trails may be proposed for water quality purposes.

The Bijou/Al Tahoe Community Plan is a receiving area for transfer of development rights TDR and states that project in the Community Plan are eligible for the transfer coverage program pursuant to TRPA Code of Ordinances 30.4. Projects are also eligible for residential bonus units and land capability 4-7 parcels from which development is transferred need not be permanently retired. Also, excess coverage fees may be waived with appropriate findings.

The new campus facilities must be approved by the Division of the State Architect as they are educational facilities, and the new facilities would comply with current safety standards. The FMP facilities are located outside of SEZ areas on high capability land. The diversification of educational opportunities on campus, with the expansion of the P.E. facilities, development of the Public Safety Training Center and Equipment Storage Facility, and on-campus housing would reduce the need for students to travel off-campus for classes or housing, thereby reducing vehicle travel and associated noise and air emissions. Providing mixed-use residential onsite may also provide housing for LTCC staff, and low-income employees commuting to South Lake Tahoe due to a lack of affordable options in the area. This would further reduce vehicle travel and the associated noise and emissions impacts from vehicle travel. Furthermore, mixed-use commercial businesses may further support students and the community and reduce trips off-campus or improve drive-by trips for goods and services. Development of the FMP would not result in significant environmental impacts and would not conflict with land use policies adopted to avoid or mitigate environmental effects. Project designs are compatible with the campus and do not pose a physical change that would induce an impact or conflict with City or campus policies.

Use of the LTCC campus for facilities that serve campus programs and students would not result in a significant impact unless the use was not allowed use in the Bijou/Al Tahoe Community Plan. No development is proposed within the mapped SEZ or other areas surrounding Trout Creek.

Environmental Analysis: Less than Significant Impact with completed Community Plan Amendment.

Required Mitigation: None

3.4.13-3. Will the Project include uses which are not listed as permissible uses in the applicable Plan Area Statement, adopted Community Plan, or Master Plan? (TRPA 8a)

As discussed in Question 3.4.13-2, the proposed Residential Student Living facility is a dormitory residence, which is not currently an allowed residential use in District 4. Therefore, amendment to the Bijou/Al Tahoe Community Plan is necessary to allow the multi-person dormitory use proposed by the FMP. No other changes to the land use matrix in the adopted Bijou/Al Tahoe Community Plan are proposed by the amendment and no significant impact related to operation of the Residential Student Living facilities is identified.

Environmental Analysis: No Impact with completed Community Plan Amendment.

Required Mitigation: None.

3.4.13-4. Will the Project expand or intensify an existing non-conforming use? (TRPA 8b)

None of the existing uses on campus are non-conforming. Therefore, implementation of the FMP will not intensify an existing non-conforming use. Furthermore, if non-conforming uses were within the campus, they would be prohibited from expanding by provision of TRPA Code of Ordinances Section 21.2.3 and City Code Chapter 6.55; however, there are currently no non-conforming uses. Amendment of the Bijou/Al

Tahoe Community Plan to allow dormitories on the campus would address the creation of new non-conforming uses.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.14 Mineral Resources (CEQA) and Natural Resources (TRPA)

This section presents the analyses for potential impacts to mineral resources and natural resources. Table 3-17 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

Mineral resources are aggregate resources, which consist of sand, gravel and crushed rock. The State Mining and Geology Board classifies mineral deposits through maps and reports at: <u>http://www.conservation.ca.gov/cgs/minerals/mlc/Pages/Index.aspx</u>. The map and accompanying text provides general information about the current availability of California's permitted aggregate resources. There are currently no important mineral resources identified on the LTCC property.

Table 3-17: Mineral Resources and Natural Resources					
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact	
3.4.14-1. 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? (CEQA XIIa)				X	
3.4.14-2. 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? (CEQA XIIb)				Х	
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No	
3.4.14-3. A substantial increase in the rate of use of any natural resources? (TRPA 9a)				х	
3.4.14-4. Substantial depletion of any non-renewable natural resource? (TRPA 9b)				X	

3.4.14-1. Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (CEQA XIIa)

There are no mapped mineral resources within the City of South Lake Tahoe, including the LTCC property, nor does any applicable plan identify any sites within the project area as an important mineral recovery site.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.14-2. Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (CEQA XIIb)

See discussion and analysis for Question 3.4.14-1 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.14-3. Will the Project result in a substantial increase in the rate of use of any natural resources? (TRPA 9a)

The use of natural resources, such as construction wood or metals, or gasoline would occur incrementally as FMP facilities are developed. The RPU EIS (TRPA 2012a, page 5-3) acknowledged the potential increase in the use of natural resources resulting from increased development and redevelopment within the Tahoe Region. Although development of new facilities or removal of old facilities would require the use of natural resources for construction equipment operation, the FMP does not propose uses that consume large quantities of resources on a daily basis. The FMP includes facility modernization and efficiency improvements which would reduce the rate at which current structures consume resources and new facilities would be designed for energy and water efficiency. By providing on-campus housing and more on-campus training/classroom facilities, student and staff reliance on vehicle transportation necessary to travel from home to school/work or from LTCC to an off-site training facility decreases. Also, improvements to the trail systems on campus would improve non-motorized travel and access in the area. Therefore, although the FMP proposes new facilities that would consume natural resources during construction and operation, no uses that consume substantial volumes of natural resources or substantially increase the rate of use are proposed, and FMP improvements would help to offset long-term natural resource consumption.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.14-4. Will the Project result in a substantial depletion of any non-renewable natural resource? (TRPA 9b)

See discussion and analysis for Question 3.4.14-4 above.

Environmental Analysis: No Impact.

3.4.15 Noise

This section presents the analyses for potential impacts related to noise. Table 3-18 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

An environmental noise consultant (j.c. brennan & associates, Inc.) conducted continuous hourly ambient noise level measurements for a period of 48-hours at two locations on Friday and Saturday June 12th and 13th, 2015. Noise monitoring locations were on the LTCC site. Site 1 was located east of the proposed ELC, approximately midway between the CDC parking lot and College Drive, and Site 2 was located northwest of the ELC area in the vicinity of the LTBMU offices. Equipment use for the measurements included Larson Davis Laboratories Model 820 precision integrating Type 1 sound level meters. The measured CNEL ranged from 48.3 dBA to 49.8 dBA. Daytime averages ranged from 45 to 46 L_{eq}, evening averages ranged from 41 to 42 L_{eq}. Maximum sound levels (L_{max}) ranged from 59 to 62 dBA in the daytime, 52 to 62 dBA in the evening, and 50 to 52 dBA at night.

Roadway noise was also measured in 2015. At that time, roadway noise along Al Tahoe Blvd. ranged from 59 to 61 dBA measured at a distance of 75 feet from the roadway. The distance at which roadway noise levels reached 55 dBA ranged from 175 to 141 feet; therefore, all of the campus buildings are located beyond the 55 dBA noise contour of the roadway.

LTCC is located within the Bijou/Al Tahoe Community Plan District 4 which establishes a Community Noise Equivalent Level (CNEL) standard of 60 dBA CNEL. LTCC is located just outside the noise contours for the airport as provided in Figure 4-1 of the 2019 Airport Land Use Compatibility Plan.

Table 3-18: Noise					
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact	
3.4.15-1. 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 other applicable local, state, or federal standards? (CEQA XIIIa)			X		
3.4.15-2. Generation of excessive groundborne vibration or groundborne noise levels? (CEQA XIIIb)			Х		
3.4.15-3. 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,				Х	

would the Project expose people residing or working in the project area to excessive noise levels? (CEQA XIIIc)				
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.15-4. Increases in existing Community Noise Equivalency Levels (CNEL) beyond those permitted in the applicable Plan Area Statement, Community Plan or Master Plan? (TRPA 6a)				X
3.4.15-5. Exposure of people to severe noise levels? (TRPA 6b)				Х
3.4.15-6. Single event noise levels greater than those set forth in the TRPA Noise Environmental Threshold? (TRPA 6c)				Х
3.4.15-7. The placement of residential or tourist accommodation uses in areas where the existing CNEL exceeds 60 dBA or is otherwise incompatible? (TRPA 6d)				Х
3.4.15-8. The placement of uses that would generate an incompatible noise level in close proximity to existing residential or tourist accommodation uses? (TRPA 6e)				Х
3.4.15-9. Exposure of existing structures to levels of ground vibration that could result in structural damage? (TRPA 6f)				X

3.4.15-1. 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 other applicable local, state, or federal standards? (CEQA XIIIa)

Operation of the indoor facilities, such as the P.E. Expansion Building, Residential Student Living, permanent replacement classrooms, LTCC offices, or Mixed Residential Living facilities would not result in a significant permanent increase in ambient noise levels in excess of the noise limits established for District 4 of the Community Plan. Although noise would be produced by students, staff, and residents using the facilities, significant increases in the ambient noise level are not expected. With student housing on-campus, vehicle noise is not expected to increase, and overall noise levels would be well within the CNEL limits.

While a number of classes would be held indoors, it can be expected that outdoor activity will occur in relation to the Public Safety Training Center and Equipment Storage Facility. The Equipment Storage Facility includes a tarmac and yard in which emergency vehicles and equipment use may occur. Likewise, the Tahoe Basin Public Safety Training Center would serve as a joint public safety facility in South Lake Tahoe. The Center would include indoor and outdoor learning spaces (classrooms, training towers, simulation areas) and meeting areas for the search and rescue and emergency response, fire science, fire

officer, and criminal justice programs, as well as the continuing education of emergency personnel. Noise generated at these facilities would be expected to be intermittently loud, just as would be expected at area fire stations.

To evaluate the noise impacts of the Public Safety Training Center previous noise level measurements which were conducted by j.c. brennan & associates staff for the Washoe County Regional Public Safety Training Complex were used. Noise level data were collected for an Emergency Vehicle Operations Course (EVOC) and a Fire Training facility. Based upon the noise measurement data, the CNEL due to 8-hours of EVOC operations was 47 dBA at a distance of 125-feet. The Washoe County Fire Training facility included a fire truck obstacle course, fire truck back-up drills and water pumping drills. The worst-case hourly noise levels ranged 75 dBA Leq at a distance of 50-feet. Based upon a distance of approximately 1,500 feet to the off-site nearest residences, the CNEL due to these operations are less than 50 dBA and the hourly Leq would be approximately 45 dBA. These operations would comply with the local Community Plan noise level standards and the City of South Lake Tahoe criteria (j.c. brennan & associates, 2016).

Located at the south end of the campus, near STPUD operations, the noise generated by the Public Safety Training Center and Equipment Storage Facility, would not adversely impact existing residences or campus classroom operations. The dormitory facilities proposed in the long-term under the FMP would be setback approximately 250 feet from the tarmac based on the preliminary configuration of the dormitory buildings in the FMP. This is of sufficient distance to avoid significant noise impacts to dorm residents. The Safety Training Center would not operate overnight, although associated emergency equipment would be available and used at any time an emergency event occurs. Noises associated with public safety would be considered exempt under the TRPA Noise Ordinance.

No significant increase in roadway noise would occur as trips to the campus for most FMP facilities would not increase. Some increase would occur in relation to new trips associated with the Mixed Residential Living Facility, however, the increase would not result in a significant decibel change. The traffic on Al Tahoe Boulevard would not change substantially compared to existing conditions. A noticeable increase in traffic noise (e.g., 3 dB) requires a doubling of traffic in the measurement area and the potential increase in vehicle trips would be a very small percentage of the existing baseline as concluded in the Transportation Study (Appendix B); therefore, no noticeable increase in traffic-related noise would occur. Changes in noise levels in relation to the shift in traffic patterns would be imperceptible.

Construction of the FMP facilities and selective tree removal under the TCP/THP would temporarily increase noise levels during active construction or tree removal activities. However, construction activities would be limited to between the hours of 8 a.m. and 6:30 p.m. and the noise standards established in the City noise ordinance, TRPA Regional Plan, and Community Plan would not be applicable. Increased noise levels would be temporary and equipment idling is required to be minimized. Construction activities include site preparation (e.g., demolition, clearing, excavation, grading), foundation work, paving, building construction, utility installation, finishing, and cleanup. These activities typically involve the use of noise-generating equipment such as excavators, dozers, graders, dump trucks, generators, backhoes, compactors, and loaders. Noise levels associated with these types of equipment are typically between 70 and 85 dBA Lmax at 50 feet. The construction of new buildings would typically be more than 50 to 100 feet from nearest campus building, but construction of the associated walkways and paths would be, at times, adjacent to the existing facilities, specifically the removal of aging buildings near the Fine Arts Center and the construction of the P.E. Expansion Buildings. Exterior construction would occur in the summer when campus use is less.

Under the FMP, construction of the proposed FMP facilities would occur over the next 15 to 20 years and spread over time so that compounded construction noise is not generated. As discussed in the project description, regulatory compliance measures would be implemented during construction to limit the amount

of noise generated by construction activities. These regulatory compliance measures include time of day construction restrictions, equipment muffling, and coordination with emergency service providers.

Development of future FMP campus facilities that are not currently proposed would be analyzed for noise impacts through subsequent environmental documentation specific to those facilities once they are proposed, designed, and the future operations identified.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.15-2. Would the Project generate excessive groundborne vibration or groundborne noise levels? (CEQA XIIIb)

The City of South Lake Tahoe and TRPA do not establish standards for evaluating construction vibration levels. 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. Vibration criteria developed by Caltrans indicate that the threshold for damage to structures ranges from 2 to 6 in/sec. One-half this minimum threshold or 1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur it notes as 0.1 in/sec p.p.v.

No blasting is proposed, and facility construction would occur with the use of standard construction equipment, such as dozers, excavators and concrete saws. Use of this equipment would be limited to the construction period for each FMP building. The vibration produced by such equipment would not be significant to cause structural damage or unsafe conditions.

During construction, noise levels may exceed City standards between 8:00 a.m. and 6:30 p.m. As discussed under Question 3.4.15-1, construction activities typically involve the use of noise-generating equipment such as excavators, dozers, graders, dump trucks, generators, backhoes, compactors, and loaders. Excessive groundborne noise levels associated with these types of equipment would not be generated and would not affect existing LTCC or adjacent off-campus facilities.

The TRPA Standard Conditions of Approval for Grading Projects (TRPA Permit Attachment Q) include new construction provisions that call for the location of construction staging areas as far as feasible from sensitive air pollution receptors, closure of engine doors during operation except for engine maintenance, and location of stationary equipment (e.g. generators or pumps) as far as feasible from noise-sensitive receptors. The staging area for the Public Safety Training Center, Equipment Storage Facility, and P.E. Expansion building would be located in the vicinity of those structures at the south end of the campus, potentially using a portion of the Main parking lot or land immediately adjacent to the proposed building footprints. These staging areas would be as far away from the existing classrooms as feasible.

Environmental Analysis: Less than Significant Impact.

3.4.15-3. 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? (CEQA XIIIc)

The LTCC is located outside the City's Airport Land Use Compatibility Plan noise contour, but a portion of the campus is within Safety Zone 6. Safety Zone 6 encompasses the Main Building and generally the areas west and immediately south. The Public Safety Training Center and Equipment Storage Facility, as well as the LTCC offices, Residential Student Living dorms, and replacement of the portable classrooms would lie within Safety Zone 6. The P.E. Expansion and Mixed-Use Residential Living would be located outside of Zone 6. For reference, Zone 6 encompasses a number of residential neighborhoods in the area. There are no use restrictions in Zone 6, however, proposed uses and activities should be reviewed to ensure no hazards or overflight air risks occur. The LTCC campus is located outside of the regulatory restricted area and therefore would not expose people to excessive noise levels.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.15-4. Would the Project result in increases in existing Community Noise Equivalency Levels (CNEL) beyond those permitted in the applicable Plan Area Statement, Community Plan or Master Plan? (TRPA 6a)

See the response to Question 3.4.15-1, above. No operational increases would exceed noise thresholds and construction noise would be limited to the acceptable construction hours, with equipment muffling and noise reduction actions as described in the Project's Regulatory Compliance Measures in Sections 2.4.3 and 2.4.4.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.15-5. Would the Project result in exposure of people to severe noise levels? (TRPA 6b)

See the response to Question 3.4.15-1, above. No land use changes under the FMP would result in exposing persons to severe noise above existing conditions.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.15-6. Will the Project result in single event noise levels greater than those set forth in the TRPA Noise Environmental Threshold? (TRPA 6c)

Single-event noise standards are set forth in Section 68.3.1 of the TRPA Code of Ordinances for aircraft, watercraft, motor vehicles, motorcycles, off-road vehicles, and over-snow vehicles. The FMP proposes uses that either already exist on campus and are relocated into new facilities, such as LTCC offices, classrooms, and equipment storage areas, or are new, but would not result in significant noise, such as the Residential Student Living and Mixed Residential Living facilities. The Public Safety Training Center and tarmac, with equipment stored in the Equipment Storage Facility, may use machinery or vehicles that produce loud noises, such as sirens or other warning devices. As discussed in Question 3.4.15-1, the noise levels generated by safety and emergency response outdoor training activities would not exceed thresholds as

measured at the nearest sensitive receptor and would not exceed thresholds as measured from the LTCC campus perimeter.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.15-7. Will the Project result in the placement of residential or tourist accommodation uses in areas where the existing CNEL exceeds 60 dBA or is otherwise incompatible? (TRPA 6d)

The FMP does not propose tourist accommodation uses, but proposes residential uses at the Residential Student Living and the Mixed Residential Living buildings, located at the south end of the main campus and near College Drive, respectively. CNEL measurements on campus were taken at two locations in 2015. These locations were near the proposed Mixed Residential Living Building and near the Early Learning Center. At that time, the CNEL on campus at these two locations was between 48.3 and 49.8 dBA (j.c. brennan & associates, 2015). Therefore, the FMP would not be located residential uses in an area with an existing CNEL exceeding 60 dBA. Furthermore, such uses would be appropriate for a college campus. Significant increases in CNEL would not occur as the on-campus population and activity level is expected to remain relatively the same.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.15-8. Will the Project result in the placement of uses that would generate an incompatible noise level in close proximity to existing residential or tourist accommodation uses? (TRPA 6e)

See the response to Question 3.4.15-1, above. There are no tourist accommodation uses in the vicinity, and noise levels at the nearest off-site residence would be below the noise threshold. No incompatible noise levels would be generated by LTCC campus operations.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.15-9. Will the Project expose existing structures to levels of ground vibration that could result in structural damage? (TRPA 6f)

See the response to Question 3.4.15-2, above.

Environmental Analysis: No Impact.

3.4.16 Population and Housing

This section presents the analyses for potential impacts to population and housing. Table 3-19 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

As of 2019, the population in the City of South Lake Tahoe was estimated to be 22,197 persons by the U.S. Census, which is approximately the same as the population in 2010 (21,410), and approximately the same as the population was in 1990 (21,941), despite population increases to over 23,800 in 2001. In general, the population of the area has remained nearly the same over the last 30 years.

LTCC employs approximately 35 to 40 full-time faculty employees and 70 full-time equivalent non-faculty staff for a total of approximately 110 full time equivalent staff (LTCC Annual Budget: 2015/16 Fiscal Year).

LTCC currently serves an average of approximately 4,500 to 5,000 students annually (2018/2019 Enrollment Profile), consisting of approximately 1,700 full-time equivalent students, including off-campus and distance learning students. The current average on-campus student population is approximately 840 students, including students taking non-credit or work experience courses and summer-only courses. Since 1990, LTCC general enrollment of full-time equivalent students has remained relatively level with growth in some years and less enrollment in others, with steady decline occurring in recent years after many years of continuous growth. Approximately 36 percent of the student population is between the ages of 18 and 24; however, 20 percent of the students are age 50 and above, indicating that use of the campus extends beyond young adults. Greater than 20 percent of the full-time equivalent students (approximately 350 students) are in Distance Education, and approximately 90 students are non-local residents, including approximately 30 international students. The campus does not currently provide onsite living units such as dormitories or multi-unit apartments (LTCC Annual Budget: 2015/16 Fiscal Year and LTCC Annual Budget: 2016/17 Fiscal Year).

As of 2014, the U.S. Census Bureau estimates a total of 16,337 housing units within the City of South Lake Tahoe of which 53% were occupied and the remaining 7,752 units were vacant. Rental vacancy rates were estimated to be approximately 15 percent. Approximately 69 percent of rental units, had rents at or above \$750 per month and approximately 57 percent of renters spent more than 30 percent of their income on rental costs. The median gross rent between 2014 and 2018 was \$962. No housing is currently provided on the LTCC property. Residential neighborhoods are located in the vicinity of LTCC, immediately west of the LTCC property and to the southeast along Al Tahoe Blvd.

Table 3-19: Population and Housing						
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact		
3.4.16-1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (CEQA XIVa)			Х			
3.4.16-2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (CEQA XIVb)			Х			
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No		
3.4.16-3. Alter the location, distribution, density, or growth rate of the human population planned for the Region? (TRPA 11a)				X		
3.4.16-4. Include or result in the temporary or permanent displacement of residents? (TRPA 11b)				X		
3.4.16-5. Affect existing housing, or create a demand for additional housing? To determine if the proposal will affect existing housing or create a demand for additional housing, please answer the following questions: (1) Will the proposal decrease the amount of housing in the Tahoe Region? (2) Will the proposal decrease the amount of housing in the Tahoe Region historically or currently being rented at rates affordable by lower and very-low-income households? (TRPA 12a)				X		
3.4.16-6. Will the proposal result in the loss of housing for lower-income and very-low-income households? (TRPA 12b)				X		

3.4.16-1. Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (CEQA XIVa)

The FMP includes the extension of roads and infrastructure within the campus to serve or access new oncampus learning facilities, such as the Public Safety Training Center, and also includes future development of housing on the campus, including Residential Student Living buildings and a Mixed-Residential Living building. The extension of roads would be limited to fire and emergency access roads or extensions of drive aisles from the parking lot to the new facilities. Except for the emergency access road, these roads would not connect to the off-campus roadway network. The emergency access road would connect to Meadow Crest Drive, however, it would be gated and used only during emergencies. Likewise, extension of utility infrastructure to the new facilities would not occur through existing infrastructure lines serving the campus. No infrastructure improvements are proposed that would result in increased capacity.

The Residential Student Living Buildings would consist of two, two-story structures located south of the Culinary Arts Building that would provide dorm-style housing for LTCC students. The Residential Student Living housing would provide approximately 100 beds within 33 separate units in two separate structures. All units would be two bed, one bath units, totaling 66 bedrooms of which half are single occupancy and the other half are double occupancy. These units would all be affordable units serving LTCC students, specifically, and would serve an existing student population housed off-campus. The provision of student housing on campus would not increase enrollment or cause unplanned population growth.

The Mixed-Residential Living housing structure would consist of two-story apartment buildings that could provide housing for 384 residents at double occupancy. Up to 120 total units would be provided in which: 20 units would be one-bedroom affordable housing units; 28 units would be one-bedroom achievable/workforce housing; 29 units would be two-bedroom affordable housing units; and 43 units would be two-bedroom achievable/workforce housing. These units would not be limited to LTCC students and would be available to the public for rent, at affordable or achievable/workforce rates. There is an existing demand for lower and moderate income housing in South Lake Tahoe. The addition of this facility would serve an existing underserved population. Therefore, the FMP would contribute to an increase in the number of affordable units available in South Lake Tahoe, particularly on the LTCC campus, but would not induce substantial population growth since there is demonstrated demand for more housing in South Lake Tahoe. The impact is less than significant.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.16-2. Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (CEQA XIVb)

Currently, there is no housing on the LTCC property, and no housing removal is proposed under the FMP. While the FMP housing facilities would result in an increase in population on campus, the development of these units would address an existing need for affordable housing within the area and would serve students, and South Lake Tahoe residents in need of more affordable options, some of whom may be LTCC employees. The only structures proposed for removal under the FMP are the existing portable classrooms north of the Main Building, which would be replaced with permanent structures. Since these portable classrooms are not housing units, no reduction in the number of housing units would occur.

Environmental Analysis: No Impact.
Required Mitigation: None.

3.4.16-3. Will the Project alter the location, distribution, density, or growth rate of the human population planned for the Region? (TRPA 11a)

See discussion and analysis for Question 3.4.16-1 above.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.16-4. Will the Project include or result in the temporary or permanent displacement of residents? (TRPA 11b)

See discussion and analysis for Question 3.4.16-2 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.16-5. Will the Project affect existing housing, or create a demand for additional housing?

(1) Will the proposal decrease the amount of housing in the Tahoe Region? (2) Will the proposal decrease the amount of housing in the Tahoe Region historically or currently being rented at rates affordable by lower and very-low-income households? (TRPA 12a)

- (1) As stated in Question 3.4.16-1, the FMP includes future development of housing on the campus, including Residential Student Living buildings and a Mixed-Residential Living building.
- (2) No existing housing units would be removed as a result of FMP implementation. As discussed above, the provision of new housing on campus for both students and South Lake Tahoe residents, would improve the number of housing units in the Tahoe Region and would serve a student and workforce population typically in need of housing at affordable rates.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.16-6. Will the Project result in the loss of housing for lower-income and very-low-income households? (TRPA 12b)

See discussion and analysis for Question 3.4.16-5 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.17 Public Services

This section presents the analyses for potential impacts to public services. Table 3-20 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

Fire protection is primarily provided by the City of South Lake Tahoe Fire Rescue, although a small portion of the southern Project area is within the service boundary of the Lake Valley Fire Protection District. South Lake Tahoe Fire Rescue provides emergency medical service and fire protection service to approximately 22,000 residents in a 16.6 mile area. The department currently operates three staffed fire stations including Fire Station One (at Ski Run Blvd and Pioneer Trail) Fire Station Two (2951 Lake Tahoe Blvd), and Fire Station Three (2101 Lake Tahoe Blvd). A training center at 1195 Rufus Allen Blvd is also maintained by the fire department. Listed equipment includes a ladder truck and two engine companies staffed 24/7. Two reserve engines, two type III brush engines, a light duty rescue squad, an air trailer, and a marine unit are all available for cross staffing when needed. Three battalion vehicles are staffed by the three Battalion Chiefs and a vehicle is also assigned to the Fire Chief. Currently the fire department operates a daily schedule of 9 suppression personnel plus a Battalion Chief for a total of 10 on duty as minimum daily staffing. The department has the capability to ladder buildings at a maximum height of 107 feet from the ladder truck. Ground ladders have a maximum reach of just over 30 feet. As of late fall 2020 the ladder truck is staffed every day with a minimum of three personnel. Fire Prevention duties are shared between the fire department and the building department. One full time fire inspector is now assigned to the fire department and handles daily prevention/inspection duties. Total staffing for the department is 34 line personnel, 4 chief officers (Fire Chief and 3 Battalion Chiefs), one fire inspector and one administrative assistant to the Fire Chief (Drennan, 2021).

Lake Valley Fire Protection District serves the southernmost portion of the Project area near Black Bart Ave. and Meadow Crest Drive. There are 28 personnel with the District and the District operates a Joint Powers Authority with the City of South Lake Tahoe. The District covers 86 square miles and runs approximately 1,400 calls a year. The District operates out of Station 7 (2211 Keetak Street), Station 6 (1286 Golden Bear Trail), and Volunteer Station 5 (1009 Boulder Mountain Ct.). (http://www.lakevalleyfire.org, Accessed April 13, 2020).

The City of South Lake Tahoe provides primary law enforcement services to the Project area, including 911 services, crisis negotiation, detectives, gang enforcement, K-9, SWAT and other field and administrative operations. The Police Department has a jurisdictional area of 13 square miles, including portions of the lake. The Police Department is located at 1352 Johnson Blvd., and is across Al Tahoe Blvd. from the northern portion of the LTCC campus. It should be noted that the El Dorado County Sheriff's Office is located adjacent to the Police Department at 1360 Johnson Boulevard. Jail facilities managed by the El Dorado County Sheriff's Department are located at 1051 Al Tahoe Boulevard. The jail is a Type II facility and may house both pre-sentenced and post-sentenced male and female defendants. The jail has a capacity of 158 beds.

The California Highway Patrol (CHP) Valley Division, which consists of the greater Sacramento area and the Sierra Nevada foothills to the west, is responsible for all traffic related incidents and assists the El Dorado County Sheriff's Department when necessary. The CHP area office is located at 2063 Hopi Avenue in Meyers. The Valley Division oversees four major highways and miles of county roads in the Region including US Highway 50 and SR 89.

On-campus daily security is operated by LTCC, which also currently includes swing and graveyard shifts. LTCC contracts private security officers to patrol the campus during hours of closure, seven nights a week, according to the LTCC 2019 Annual Security Report. This service is funded by the College and is not associated with City of South Lake Tahoe Police operations. The 2019 Annual Security Report indicated two petty larceny/theft events occurred on campus between 2017 and 2019, and no other crimes occurred in that period. In the past five years, the number of incidents ranged from zero (2014, 2017, and 2018) to 2 (2016 and 2019) per year between 2014 and 2019 for a total of five incidents in five years. Most incidents (2) were classified as petty theft followed burglary (2), and one case of aggravated assault (1). One arrest was made in the assault with a deadly weapon against an employee case in 2016 and one arrest was made in regard to petty larceny/theft in 2019.

The Project area is served by the Lake Tahoe Unified School District, which operates the South Tahoe High School, South Tahoe Middle School, Tahoe Valley Elementary School, Sierra House Elementary School, Lake Tahoe Environmental Science Magnet School, Bijou Community School, Independent Learning Academy, Mt. Tallac Continuation High School, and the recently opened Elevated Digital Learning Academy, which is an online learning school option serving grades K-8. The District also operates the Al Tahoe Learning Center site, formerly the Al Tahoe Elementary School, and this center is occupied by various educational agencies such as the Boys & Girls Club and workspace for the Elevated Digital Learning Academy, with additional available space for school learning facilities if the demand arises. South Tahoe Middle School is located near LTCC at Al Tahoe Blvd. Sierra House Elementary is located south of the LTCC. In 1996, District enrollment was nearly 6,000 students; however, enrollment has steadily declined over the past decades, to a total enrollment of roughly 3,800 students in 2019 (see Table 3-21) with enrollment in the elementary schools declining by approximately 200 students since 2015 and enrollment in the middle and high school increasing by approximately 200 students since 2015 (2019-20 School Accountability Report Cards). As of the 2020-2021 school year, enrollment further dropped to 3,742 students, which includes the 252 students enrolled at the Elevated Digital Learning Academy. Currently, there is adequate capacity for an additional 800 to 835 students at District campuses because the District operates the same number of campuses as they did in 2005 when enrollment was 4,325 students (Chandler, LTUSD, 2021).

Table 3-21

School	Grades	Enrollment 2019		
Bijou Community School	K-5	563		
Sierra House Elementary	K-5	467		
LTESMS	K-5	376		
Tahoe Valley Elementary School	K-5	401		
South Tahoe Middle School	6-8	918		
South Tahoe High School	9-12	1,082		
Total		3,800		
Total	Total 3,800 Source: Lake Taboe Unified School District 2019			

Tahoe Area K-12 2019 School Enrollment

The LTCC Library is located near the existing parking lot and main building and operates Monday through Friday from 8 a.m. to 7 p.m. (4 p.m. on Friday). LTCC students have access to an online library account. The 27,000 square-foot library offers various types of media, digital archives, research and writing tools, podcasts, computing and printing services, meeting rooms, and other services, and has an adjoining art gallery.

The South Lake Tahoe Library is located at 1000 Rufus Allen Blvd. in South Lake Tahoe and operates Tuesdays through Saturdays. The library offers books of various types, e-books, various types of media, meeting room, and access to computer, printing, and copying services.

The U.S. Post Office is located adjacent to the northern portion of the LTCC property at 1046 Al Tahoe Blvd. The U.S. Forest Service Office is located on the LTCC property, near the entrance on College Drive.

Table 3-20: Public Services				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.17-1. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities? (CEQA XVa)			X	
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
Will the proposal have an unplanned any of the following areas?	d effect upon, or res	sult in a need for ne	ew or altered governm	nental services in
3.4.17-2. Fire protection? (TRPA 14a)				X
3.4.17-3. Police protection? (TRPA 14b)				Х
3.4.17-4. Schools? (TRPA 14c)				Х
3.4.17-5. Parks or other recreational facilities? (TRPA 14d)				X
3.4.17-6. Maintenance of public facilities, including roads? (TRPA 14e)				X
3.4.17-7. Other governmental services? (TRPA 14f)				X

3.4.17-1. 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: Fire protection? Police protection? Schools? Parks? Other public facilities? (CEQA XVa)

LTCC contracts private security officers to patrol the campus during hours of closure, seven nights a week, and has a very low incidence of crime. This service is funded by the College and is not associated with City of South Lake Tahoe Police operations. Increased patrols by the security service alleviates new demand on City Police. The new on-campus facilities at LTCC would increase the potential demand for law enforcement service, however, due to low crime rates on campus and since the ELC relocates existing operations from the community, such as the Public Safety Training Center and Residential Student Living, increase in demand for law enforcement services and proximity of services to the campus indicate that a significant increase in demand is unlikely to occur. Funding generated by the new campus facilities would support continued operation of law enforcement services and the demand for service would not result in a need for additional or expanded law enforcement facilities. LTCC communicates with South Lake Tahoe Police regarding proposed campus improvements and the FMP would not interfere with police protection operations such that new facilities would need to be constructed or their ability to meet service ratios.

The development of additional structures on campus would not significantly increase the demand for fire protection services because the facilities would be equipped with structural fire safety sprinklers and include improvements to the fire department connection systems to ensure that the facilities have adequate fire protection. The structures are required to be designed to meet current California State Fire Code requirements and must be approved by the Division of the State Architect as school facilities. In addition, design would be reviewed by South Lake Tahoe Fire Rescue prior to release of building permits to ensure the appropriate code measures are followed and adequate protection is included within the buildings, including extinguisher locations, sprinkler systems, alarm systems, and other designs. The FMP would not interfere with fire protection operations such that new facilities would need to be constructed or their ability to meet service ratios. The addition of the Public Safety Training Center and Equipment Storage Facility would result in an increase in on-campus fire protection equipment, further reducing demand on South Lake Tahoe Fire Rescue resources.

The LTCC FMP included a new emergency evacuation route under the California Division of State Architect permit with installation of an electronic gate to replace the existing locked gate from the adjacent STPUD property at Meadow Crest Drive. The proposed fire access road west of the main campus buildings would also improve fire-fighting accessibility on campus and would be beneficial. Any fire access roadways or use of the Greenway Trail would be required to meet the minimum Lake Tahoe Fire Protection District Standards for fire access roadways during both Project construction and implementation. Implementation of permit conditions included in the permit issued by the California Division of State Architect, such as a Fire Suppression and Management Plan for the Project area that addresses building materials and designs, fire protection systems in buildings, landscaping, fire flows to hydrants, emergency vehicle access routes and turnarounds, and vegetation treatments in the Project area to ensure compliance with the most recent CBC Chapter 7, PRC §4290-§4291, and other applicable state and local codes ensures that the Project will meet existing levels of fire protection service and compliance with existing state and local fire protection standards for any development associated with the LTCC.

The Lake Tahoe Unified School District (LTUSD) serves a 10.1 square mile area that includes the LTCC area and the entire City of South Lake Tahoe. LTUSD operates eight physical schools and one online school, and has had to close schools in the past due to declining enrollment. Given the current facilities and stagnant enrollment, LTUSD is not experiencing any capacity issues and does not expect any such issue to

occur in the future as there is an existing residual capacity for 800 additional students at the physical campuses. Implementation of the FMP facilities on campus would not have a large effect on school enrollment in grades K through 12. Approximately 36% of the LTCC campus-based students are age 24 or younger, and nearly 20% are above age 50; and much of the school population consists of local residents, with 62% of on-campus students originating in El Dorado County, and another 4% in Douglas County, NV. A number of students originate from other California counties outside the Tahoe Basin; however, the percent of out of area students who may also have school age children relocating to the area is very low. The Mixed Residential Living Facility is the only FMP facility that would have the potential to impact area schools as it is the only facility that would provide housing for families and serve populations outside LTCC. At 72 two-bedroom units, the Mixed Residential Living Facility would not result in a significant impact to LTUSD's 800 student residual school capacity or ability to serve additional students. With local school enrollment declines over the past several decades, additional capacity for children whose parents live within the Mixed Residential Living Facility would not exceed capacity or strain resources.

Expansion of facilities provides for additional educational capacity and services provided by the community college system. One of the purposes of the project is to integrate and align the LTCC objectives with those of the Lake Tahoe Unified School District. Since the Lake Tahoe Unified School District and LTCC partner to jointly utilize facilities and provide higher educational opportunities, expansion of facilities and programs at LTCC would have a beneficial impact.

See the analysis in Question 3.4.17-1, for parks and recreation impacts. With existing on campus library service and recreation uses, and the P.E. Expansion Building, the FMP will not significantly affect City Library or Recreation services. Government offices and services would not be significantly affected by the operation of the FMP facilities. No increase in demand for those services would occur.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.17-2. Will the Project have an unplanned effect upon, or result in a need for new or altered governmental services: fire protection? (TRPA 14a)

See discussion and analysis for Question 3.4.17-1 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.17-3. Will the Project have an unplanned effect upon, or result in a need for new or altered governmental services: police protection? (TRPA 14b)

See discussion and analysis for Question 3.4.17-1 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.17-4. Will the Project have an unplanned effect upon, or result in a need for new or altered governmental services: schools? (TRPA 14c)

See discussion and analysis for Question 3.4.17-1 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.17-5. Will the Project have an unplanned effect upon, or result in a need for new or altered governmental services: parks or other recreational facilities? (TRPA 14d)

As discussed in Section 3.4.18 in regard to recreation, the FMP includes improvements to recreational facilities and would not have an unplanned impact on parks or other recreational facilities. The FMP includes expansion of the Physical Education facilities with a new structure that would provide a large flexible space to support physical educational programs and community events on campus. The facility would support athletic programs on campus and some existing programs utilizing the existing temporary modular units would be able to use this new structure. A playground facility was previously approved for the Early Learning Center on campus.

Although the FMP includes the development of on-campus housing that would be able to house up to 484 people, it is anticipated that this housing would serve an existing student and working population in the area with inadequate access to affordable housing. The existing on-campus recreational facilities, the proposed Physical Education Expansion building, and the existing recreational facilities at the adjacent Bijou Community Park and elsewhere in the City of South Lake Tahoe and Lake Tahoe Region would remain sufficient to serve this population and would not increase demand such that new facilities would be necessary. No significant impact would occur.

The increased use of existing parks or other recreational facilities as a result of implementing the FMP is not expected to result in a substantial physical deterioration of recreation facilities to occur or be accelerated, and demand created by FMP development could be easily met. In addition, recreation demand would be considered at a project-level during subsequent environmental review and permitting of individual proposed campus residential projects under the FMP.

Environmental Analysis: No Impact

Required Mitigation: None.

3.4.17-6. Will the Project have an unplanned effect upon, or result in a need for new or altered governmental services in maintenance of public facilities, including roads? (TRPA 14e)

The FMP would not alter or revise policies and practices pertaining to public facility and roadway maintenance outside of LTCC campus operations. The City's existing policies in the Public/Quasi-Public Facilities and Services Element regarding public facility and road maintenance remain in effect (Goal PQP-1.1, Policy PQP-1.5, and Policy PQP-1.8). By locating these facilities on campus, off-campus roadway maintenance would not experience higher levels of use or require additional maintenance. The LTCC campus provides its own maintenance and operational services for its students and an increase in other government services would not result. LTCC FMP projects would be required to pay all appropriate fees associated with development and would be subject to permitting by the City and/or TRPA.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.17-7. Will the Project have an unplanned effect upon, or result in a need for new or altered governmental services in other governmental services? (TRPA 14f)

There are no other known governmental services that would be directly affected by the amendment.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.18 Recreation

This section presents the analyses for potential impacts to recreation. Table 3-22 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The LTCC campus is located north of the Greenway shared-use trail and the Community Play Consortium Fields, east of the Trout Creek Environmental Study Area managed by the CTC, and west of Bijou Community Park. LTCC District and the City of South Lake Tahoe established the Community Play Consortium, which is a Joint Power Authority that maintains, improves, and jointly administers real property and recreational facilities available to the Lake Tahoe public. According to the South Lake Tahoe Parks, Trails, and Recreation Master Plan, the City of South Lake Tahoe and El Dorado County provide approximately 180 acres of park land in the area. The City manages developed parks such as Bijou Park and the Community Play Fields near the LTCC campus, bike trails, natural areas, school athletic fields, and other areas such as landscaped areas and retention basins. The natural setting of the campus provides both developed and undeveloped recreational opportunities. The theatre and performing arts building provide a social center for the community. The 192-seat black box Duke Theatre is used for plays, musicals, and musical/choir performances, and has a capacity of 269 seats when additional seating is added. A Physical Education Center is located on campus, as well as a large multi-use (soccer) sports field that is shared by the LTCC and the City of South Lake Tahoe within the Joint Powers Authority. The 24,947 square foot Physical Education Center includes a gymnasium, dance studio, and fitness education center. Recently the soccer field has been renovated with new turf, accessible pathways and bleachers, followed by construction of two new turf multi-purpose fields. LTCC also provides areas for other types of recreation, such as various types of trails, a demonstration garden, and other passive recreation. The demonstration garden includes an amphitheater, the Ledbetter Terrace, which can be used for special events for up to 150 people, and many gardening symposiums and workshops are offered to the community at the LTCC garden. Bike trails on site can be used as cross-country ski trails in the winter and interpretive trails provide access to areas of cultural or biological interest.

The South Lake Tahoe Area is a major recreation destination, with a variety of opportunities including alpine and Nordic skiing, water sports, hiking, beaches, camping, mountain biking, and many other types of recreation. In addition to the ski facilities and recreation at Heavenly Mountain Resort, the City provides developed recreation for both residents and visitors at Bijou Community Park, Bonanza Park and Regan Beach. Bonanza Park is a one-acre neighborhood park with a grassy area, children's play area, basketball half court, and picnic tables. Bijou Community Park is located across from the LTCC campus on Al Tahoe Boulevard, and includes a skate park, bike park, basketball court, a dog park, volleyball courts, disc golf course, historic railroad exhibit, picnic facilities, and an open meadow. The Bijou Municipal Golf Course is adjacent to Bijou Community Park. A recreation and Swim Complex is located within the City, offering

various classes and facilities open to the public. Also located along Al Tahoe Boulevard near LTCC, the South Tahoe Middle School provides the community with baseball/softball diamonds, a track and multipurpose sports field, a gymnasium and other sports courts. Other recreational facilities in South Lake Tahoe include an ice arena, Lakeview Commons at El Dorado Beach, and the City's Campground by the Lake on Rufus Allen Blvd. In addition to developed recreational areas, there are numerous biking, hiking, and walking trails, as well as public open space areas for dispersed recreation.

Table 3-22: Recreation				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.18-1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (CEQA XVIa)			Х	
3.4.18-2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (CEQA XVIa)			X	
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.18-3. Create additional demand for recreation facilities? (TRPA 19a)				Х
3.4.18-4. Create additional recreation capacity? TRPA 19b)				X
3.4.18-5. Have the potential to create conflicts between recreation uses, either existing or proposed? (TRPA 19c)				X
3.4.18-6. Result in a decrease or loss of public access to any lake, waterway, or public lands? (TRPA 19d)				X

3.4.18-1. 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? (CEQA XVIa)

The FMP includes expansion of the Physical Education facilities with a new structure that would provide a large flexible space to support physical educational programs and community events on campus. The

facility would support athletic programs on campus and some existing programs utilizing the existing temporary modular units would be able to use this new structure.

Development and operation of the 2021 ELC facility included the development of associated outdoor play areas and playground facilities; therefore, the ELC meets the demand for recreational facilities associated with ELC operations. It can be expected that the current demand level would result with operation of the ELC, particularly since the ELC includes its own recreation facilities.

Although the FMP includes the development of on-campus housing that would be able to house up to 484 people, it is anticipated that this housing would serve an existing student and working population in the area with inadequate access to affordable housing. The existing on-campus recreational facilities, the proposed Physical Education Expansion building, and the existing recreational facilities at the adjacent Bijou Community Park and elsewhere in the City of South Lake Tahoe and Lake Tahoe Region would remain sufficient to serve this population and would not increase demand such that new facilities would be necessary. No significant impact would occur.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.18-2. Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (CEQA XVIb)

The LTCC campus currently includes play fields, bicycle and pedestrian trails, access to Trout Creek, and outdoor children's play areas associated with the children's Early Learning Center preschool. The FMP does not propose to expand publicly accessible recreational uses. While trail improvements are proposed, these improvements would make the double-track trail west of the campus into a multi-use road to allow for fire-fighting access, while other created dirt trails would be decommissioned to reduce erosion and vegetation disturbance, resulting in an environmentally beneficial impact. Many of the campus recreational facilities would not be available to the general public and would not result in environmental impacts associated with increased use by the community outside of LTCC or subject to the Persons At One Time (PAOT) system of recreation allocations administered by TRPA.

The Physical Education Expansion Building, proposed immediately south of the existing Physical Education Center, would result in a new facility to provide a large flexible space to support educational programs as well as community events on campus. Some existing programs will move from existing temporary modular units to this building, with the temporary units subsequently removed. The facility will support athletic programs on campus. This new building would occupy a 3,200 square-foot footprint and would result in the removal of 11 trees, grading, and construction of the new building. Since this building would be located immediately adjacent to other campus buildings, the area has been somewhat disturbed in the past and is within an area of recreational and utility activity and noise. Although the historic railroad line was in the general vicinity, the Physical Education Expansion Building is not within the railroad alignment. Therefore, no significant adverse effect on the environment would occur

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.18-3. Will the Project create additional demand for recreation facilities? (TRPA 19a)

As discussed in Question 3.4.18-1, the existing campus facilities and the proposed Physical Education Expansion building provide adequate recreation facilities on the campus to serve the demand, including the demand from the proposed FMP on-campus housing in the Residential Student Living (100 students) and Mixed Residential buildings (384 residents).

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.18-4. Will the Project create additional recreation capacity? (TRPA 19b)

The FMP includes expansion of the Physical Education facilities with a new structure that would provide a large flexible space to support physical educational programs and community events on campus. The facility would support athletic programs on campus and some existing programs utilizing the existing temporary modular units would be able to use this new structure.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.18-5. Will the Project have the potential to create conflicts between recreation uses, either existing or proposed? (TRPA 19c)

The FMP would have the potential to reduce conflicts by. providing additional space through the Physical Education Expansion Building for recreational and community activities, thereby avoiding conflicts. Construction may result in temporary limitations on trails or paths if they are located within the vicinity of the construction or staging area; however, this would be temporary, and the areas affected would be fenced until the construction activity is complete. There would be no permanent conflict created. Although the proposed residential units would increase the population in the area, the presence of a variety of different types of recreation facilities and opportunities on-campus and at the adjacent Bijou Community Park would provide sufficient recreational space.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.18-6. Will the Project result in a decrease or loss of public access to any lake, waterway, or public lands? (TRPA 19d)

Implementation of the FMP improves access to Trout Creek and public lands through trail improvements. Realignment of bike trails are planned on campus to provide more direct access to facilities. The Main Parking Lot and fire access road further connect the trails on the north side of the campus to the south side of the campus as well as connect to the Greenway Shared-Use Trail. Although approximately 1,000 linear feet of informal trails would be decommissioned and portions of the double track trail on t eh west side of campus would become the paved fire access road, shown on the FMP map near Trout Creek, and improved for multiple users. Any trails to remain unpaved, would be improved with water quality best management practices. This would be a beneficial impact.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.19 Transportation (CEQA) and Traffic and Circulation (TRPA)

This section presents the analyses for potential impacts to transportation, traffic and circulation. Table 3-23 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level. A technical memorandum regarding transportation impacts of the FMP is attached (Appendix B).

Environmental Setting

The LTCC campus is accessed through U.S. 50 to the north, Pioneer Trail to the south, Al Tahoe Boulevard to the east, and through College Drive/College Way that directly access the campus. US Highway 50 (US 50) is an east-west highway that passes through South Lake Tahoe and connects Sacramento, California to Carson City, Nevada and points beyond. Within the study area, US 50 generally runs northeast-southwest. Throughout the majority of South Lake Tahoe, US 50 is a four-lane roadway with a two-way left-turn lane. The segment of US 50 from the South Y to Stateline is also referred to as Lake Tahoe Boulevard, and is classified by the City of South Lake Tahoe as an arterial roadway. The speed limit on US 50 near the Project area is 40 miles per hour (mph). Pioneer Trail is a two-lane arterial roadway in South Lake Tahoe that provides an alternative route to US 50 between South Lake Tahoe and Meyers. The posted speed limit on Pioneer Trail varies from 30 to 45 mph. Al Tahoe Boulevard is a two-lane arterial roadway for the majority of its route and widens to four lanes at the north end between Johnson Boulevard and US Highway 50. Al Tahoe Boulevard varies from 25 to 40 mph. College Avenue/College Way is a two-lane roadway that intersects Al Tahoe Boulevard in two locations (at Johnson Boulevard and the Bijou Park Entrance) and provides direct access to LTCC. The posted speed limit on College Avenue/College Way is 25 mph.

Alternative modes of transportation also serve the campus. The Greenway Shared-use Trail is located at the south end of the campus and connects to on-campus driveways and bike paths to allow bicycle traffic to further navigate into the campus. Another bike path connects the campus to the north from the existing bike path along Al Tahoe Boulevard at the north College Drive intersection, with a southerly connection to the Al Tahoe bike path at the south College Drive intersection. The campus is also served by Tahoe Transportation District transit routes 55 and 50 with an improved transit facility (including a charging station for electric buses) at the main campus building and a second transit stop on College Drive near the LTBMU office driveway.

Traffic studies were conducted in 2015 for the LTCC campus. The study found that area roadways operated at an acceptable LOS with P.M. peak movements operating worse than A.M. peak movements, but still within the LOS operating limits established in applicable transportation plans and policies. Likewise, traffic queuing analysis revealed no incidents of queue lengths exceeding storage capacity at area intersection during the A.M. peak period, but some incidents of excess queues at U.S. 50 and at Pioneer Trail intersections during the P.M. peak period.

The traffic study for the FMP is attached as Appendix B.

Table 3-23: Transportation, Traffic and Circulation				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.19-1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (CEQA XVIIa)			Х	
3.4.19-2. Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? (CEQA XVIIb)			X	
3.4.19-3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (CEQA XVIIc)			X	
3.4.19-4. Result in inadequate emergency access? (CEQA XVIId)			X	
TRPA Initial Environmental Checklist Item	Yes,	No, With Mitigation	Data Insufficient	No
3.4.19-5. Generation of 100 or more new Daily Vehicle Trip Ends (DVTE)? (TRPA 13a)				X
3.4.19-6. Changes to existing parking facilities, or demand for new parking? (TRPA 13b)				Х
3.4.19-7. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? (TRPA 13c)				X
3.4.19-8. Alterations to present patterns of circulation or movement of people and/or goods? (TRPA 13d)				X
3.4.19-9. Alterations to waterborne, rail or air traffic? (TRPA 13e)				X
3.4.19-10. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? (TRPA 13f)				X

3.4.19-1. Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (CEQA XVIIa)

Since the campus would continue to provide a variety of accessibility options, development of the FMP would not conflict with a program, plan, or ordinance regarding circulation. The FMP Project includes bike trail improvements, installation of a fire access road west of the Main Campus buildings, installation of drive aisles to the new FMP buildings at the south end of campus, and extension of a gated emergency access road from the Main Parking Lot to Meadow Crest Drive, a portion of which also serves as access to the Equipment Storage Facility. The FMP would also extend pedestrian pathways to the new facilities for accessibility. None of these improvements would be located off campus or affect the public streets, transit, or bicycle/pedestrian systems in the area. Pedestrian, bicycle, and vehicular access would be retained and modified to allow for and/or serve the new structures. Bike trail realignments would allow for improved connection to the Greenway Shared-Use Trail and on-campus circulation routes.

In 2019, phase 1 of the Mobility Hub project on campus was completed. The alternative transportation center and bus shelter provide charging stations for the Tahoe Transportation District's new electric buses as well as additional bike, scooter, and skateboard storage facilities. Additionally, a new bus spur road was built to separate bus traffic from other vehicles. With completion of the. Mobility Hub no additional transit improvements are necessary, and demand is not expected to increase.

In addition, some of the FMP facilities replace existing facilities serving the campus. Therefore, trips associated with the existing portable classroom facility near the Fine Arts building would be retired and classes would be relocated to the Public Safety Training Center and P.E. Expansion Buildings. Likewise, off-campus trips associated with the Public Safety Training program would be relocated to the LTCC campus.

A Transportation Analysis was prepared to evaluate impacts (Appendix B). Trip generation rates for the project were developed using existing traffic count data collected during the spring quarter of 2015 (June 9-11, 2015) and full-time equivalent student (FTES) enrollment during that same time period. The full-time equivalent student enrollment number only includes students who go to the campus for instruction. The number of students enrolled in programs/classes that require them to come to the campus has been declining and is expected to continue to decline, but for purposes of the analysis it assumed that enrollment would remain constant at 940 FTES. 100 of those students will be living on campus at the FMP-proposed Residential Student Living Facility and will have different trip generation characteristics and rates than the remaining 840 students who do not live on campus. Trip generation for the Mixed Residential Living facility was calculated using ITE trip-generation rates. Trip generation is shown in Table 3-24:

Table 3-24

Land Llas/Trin Constants	Sine	Trips				
Land Use/Trip Generator	Size	Daily	AM	AM In/Out	РМ	PM In/Out
Full-Time Equivalent Students	840 FTES	2,369	160	118/42	252	134/118
On Campus Student Housing	100 beds	216	6	1/5	15	11/4
Total Project Trips		2,585	166	119/47	267	145/122
Existing Campus Trip Generation (based on existing count data)		-2,735	-178	-131/-47	-284	-151/-132
Net New Trips to Campus		-150	-12	-12/0	-17	-6/-10
Apartment	120 units	878	55	13/42	67	42/25
Retail	5K SF	189	5	3/2	19	9/10
Internal Capture		-36	-2	-1/-1	-6	-4/-2
External Walk, Bike, Transit		-32	-2	0/-2	-2	-1/-1
Pass-By for Retail		-60	-2	-1/-1	-6	-3/-3
Total Reductions		-128	-5	-2/-4	-14	-8/-6
Net New Trips		939	55	14/40	72	43/29
Net New Trips Generated by Pr	oject	789	42	3/40	56	37/19

Project Trip Generation

Source: Fehr & Peers 2020

Notes: FTES = Full-time equivalent student

Under existing plus project conditions, the campus supportive uses of the project will not generate any new trips. The Mixed Residential Living Building is the only portion of the project that will generate new trips. Located north of the main campus off College Drive, the trips associated with the Residential Student Living Building were distributed to the surrounding roadway network as follows:

- 20 percent will travel to/from LTCC campus via Johnson Blvd
- 60 percent will travel to/from Lake Tahoe Boulevard (US 50)
- 20 percent will travel to/from Pioneer Trail

The Bijou/Al Tahoe Community Plan, City General Plan, City Code, TRPA Linking Tahoe Regional Transportation Plan, TRPA Regional Plan, and TRPA Code of Ordinances contain traffic goals, policies, implementation measures, and mitigation requirements applicable to the project area. Performance levels are established through level of service (LOS) criteria, which is set at LOS C for rural recreation roads, and D on rural and urban developed roads and signalized intersections, and may be LOS E during peak hours in urban hours of less than four hours per day (TRPA Regional Plan Transportation Element Policy 4.6). Likewise, the standard in General Plan Policy TC-1.2 and Community Plan Transportation Element Policy 8.A is LOS D on all major, with up to 4 hours of LOS E acceptable during peak periods. Other policies seek to increase multi-modal and non-motorized travel, although there is no performance threshold for these policies. The Community Plan Transportation Element also addresses traffic flow improvements.

Under existing plus project conditions, all study intersections operate at acceptable LOS B or better during the AM and PM peak hours except for US 50/Al Tahoe Boulevard in the PM peak period, which still operates at LOS F as it does during existing conditions. There is no change in LOS for any of the study intersections from existing conditions to existing plus project conditions. Therefore, the FMP would not conflict with these policies.

There is one location during the AM peak hour where the 95th percentile queue exceeds the existing storage capacity by 1 vehicle (northbound Al Tahoe Blvd/Pioneer Trail). There are three locations during the PM peak hour where the 95th percentile queue exceed the existing storage capacity by 1-3 vehicles (northbound Al Tahoe Blvd/Pioneer Trail, eastbound Al Tahoe Blvd/ Johnson Blvd-College Avenue, and southbound U.S. 50/Al Tahoe Blvd.). The average queue lengths do not exceed existing storage capacity during the AM or PM peak hours.

For longer-term projects, not proposed in the near-term, future project-specific analysis may include traffic studies if determined to be necessary for the future use that is proposed, as well as any appropriate mitigation measures, as needed.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.19-2. Would the Project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? (CEQA XVIIb)

The proposed amendments would not alter, revise or conflict with an applicable congestion management program including but not limited to, level of service standards and travel demand measures, or other standards established by the congestion management agency for designated roads or highways.

TRPA is the designated Regional Transportation Planning Agency in the Lake Tahoe Region and has established Level of Service (LOS) standards for roadways and intersections and Vehicle Miles of Travel (VMT) standards. TRPA and TMPO administer regional programs to reduce Vehicle Miles Travelled (VMT) and achieve regional VMT standards in the Tahoe Basin. The effect of daily trip generation is important as it relates to region-wide VMT. VMT is dependent on the origin and destination of persons traveling to and from uses within the study area boundary and the net increase in region-wide trips after accounting for transferred development. VMT is a measure of automobile travel within the transportation system, and an indicator of the degree of integration between the transportation system and planned uses (i.e., a lower VMT indicates greater beneficial integration of transportation systems and land uses to reduce personal vehicle travel). VMT is also a proxy for regional traffic congestion, as well as for air quality. TRPA adopted a VMT Threshold Standard of 2,067,600 VMT for air quality purposes, which represents a 10 percent reduction from the 1981 VMT level. The most recent estimate of annual VMT provided by TRPA is 1,937,070 (Linking Tahoe: Regional Transportation Plan, 2017).

VMT for the proposed changes for the college uses will decrease since online/remote learning enrollment is increasing and on-site housing will be provided. Therefore, the VMT analysis for the FMP Project focuses on the new Mixed Residential Living portion of the Project. In terms of VMT, a significant impact occurs if the Project's home-based VMT/Capita is greater than 85% of the Tahoe Basin region home-based VMT/Capita. Since the residential regional average VMT/Capita is 23.59, the threshold is 20.05 VMT/Capita (15% below the region average). Project trip generation lengths were developed based on California Household Travel Survey data, and the following lengths were obtained from the data aggregated based on the geographic location of the FMP project:

- Multi-Family Home-based Work: 7.3 miles per trip
- Multi-Family Home-based Other: 7.05 miles per trip

Based on these lengths and trip generation data modeled for the Project, home-based VMT/Capita for the Project was found to be 19.24 miles, which is less than the home-based VMT/Capita threshold of the Tahoe Region (20.05 miles), resulting in a less than significant impact.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.19-3. Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (CEQA XVIIc)

The Project does not propose to reconfigure the existing vehicle travel lanes on the campus and therefore does not increase hazards. The fire access road would not be used for regular campus circulation and the emergency access road to Meadow Crest Drive would be an extension from existing drive aisles at the Main Parking Lot, and as an emergency access road, would only be used in emergencies, with the exception of the. portion dually used to access the Equipment Storage Facility and Public Safety Training Center tarmac area. Although the Safety Training Center would include large equipment housed in the Equipment Storage Facility, this equipment would not be used for training outside the tarmac area and would not cause a conflict with other campus circulation, pedestrians, or bicycle uses. No new off-campus intersections are proposed an there would be no significant increase in traffic.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.19-4. Would the Project result in inadequate emergency access? (CEQA XVIId)

The Project proposes new access drive aisles to the new facilities in the southern portion of the campus, a fire access road west of the Main Campus buildings, and a gated emergency access road connecting the Main Parking Lot to Meadow Crest Drive. This gated emergency access would not allow for regular campus circulation, except the northernmost portion of the roadway would serve as access to the Equipment. Storage Facility. The FMP would beneficially affect the LTCC emergency evacuation plan as it results in improved access to and from Meadow Crest Drive during emergency events to more efficiently provide access on campus for firefighting and improves evacuation off campus by providing an additional circulation point to area roadways.

Development of the new FMP facilities is not anticipated to significantly increase the on-campus population so that evacuation from campus, through the existing evacuation routes, would be exacerbated or unable to facilitate evacuation activity. No road closures are proposed for tree removal or FMP facility construction.

Under the California Division of State Architect permit LTCC evacuation route improvements associated with the Facilities Master Plan included installation of an electronic gate to replace an existing locked gate at the South Lake Tahoe Public Utility District property. Although U.S. 50 and Pioneer Trail are area evacuation routes, this project would not affect those roadways and does not affect College Drive, the primary evacuation route for the LTCC.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.19-5. Will the Project result in generation of 100 or more new Daily Vehicle Trip Ends (DVTE)? (TRPA 13a)

As shown in Table 3-24 above regarding project trip generation, a reduction in trips would occur as a result of the new near-term facilities (P.E. Expansion Building, Public Safety Training Center, and Equipment Storage Facility) and the Residential Student Living Building as the student population on campus would not increase with the new facilities, which relocate activities or student living space on campus, or replace existing buildings and facilities. Traffic modeling indicates a decrease of 150 daily trips as a result of the new LTCC facilities and the recent reductions in total student count compared to baseline levels.

However, the Mixed Residential Living Facility has the potential to increase trips as it is not limited to LTCC student services or campus operations, but provides community retail and living space, and is not limited to the LTCC population. The 120 apartment units would generate 878 daily trips, while the retail space would generate an additional 216 daily trips. Some of these trips would include pass-by trips for the retail use, internal capture for those using LTCC facilities, and external walk, bike, and transit trips for a reduction of 129 trips. This leaves 789 net new trips associated with the Mixed Residential Living Building.

In the near-term the DVTE rates generated by most FMP projects would result in no significant increase or impact; however, if the Mixed Residential Living Facility is developed, LTCC would need to pay a mitigation fee. TRPA requires new DVTE to be mitigated with the payment of an air quality mitigation fee. Pursuant to existing TRPA Code Section 65.2.4.D, it is estimated that the college would pay an air quality mitigation fee of \$229,571.96 to mitigate new net DVTE, assuming 120 residential units and 5,000 square feet of retail area are developed as follows. These calculations would be revised at the time of a project proposal for the Mixed Residential Living Facility.

- Residential: \$325.84 per DVTE at 694 DVTE = \$226,132.96
- Commercial: \$36.20/DVTE at 95 DVTE = \$3,439.00

Environmental Analysis: Yes/No Impact.

Required Mitigation: None.

3.4.19-6. Will the Project result in changes to existing parking facilities, or demand for new parking? (TRPA 13b)

The FMP includes the addition of new parking near the proposed FMP facilities. New parking would be located at the Residential Student Living Facility (89 spaces) in a new South Parking Lot, and at the Public Safety Training Center and Equipment Storage Area (41 spaces), totaling 130 new spaces within the main campus area. Additional parking would be located at the Mixed Residential Living Building near College Drive. Although the conceptual designs show a single lot associated with the Mixed Residential Living use, with 36 spaces, the actual design would likely include approximately 136 parking spaces in a layout typical to mixed-use residential with parking adjacent to the structures rather than in a single, separate parking lot. Detailed parking plans will be developed as future FMP facilities are taken through the design process with the State Architects office.

As discussed in the Transportation Analysis, the proposed 130 parking spaces within the main campus area are sufficient to support on-campus needs, particularly with increasing trends for remote learning. Since some of the FMP classroom facilities replace aging facilities on campus, removal of aging facilities offsets potential increases in capacity. The Residential Student Living Facility would serve students otherwise

traveling to campus. The additional proposed parking is adequate and would not result in insufficient parking or force parking outside the campus property.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.19-7. Will the Project result in substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? (TRPA 13c)

See discussions and analyses for Questions 3.4.19-3, 3.4.19-5, 3.4.19-6, 3.4.19-8, 3.4.19-9 and 3.4.19-10.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.19-8. Will the Project result in alterations to present patterns of circulation or movement of people and/or goods? (TRPA 13d)

Implementation of the FMP would not include changes to existing external access and circulation elements of the Project area (i.e. access to Al Tahoe Boulevard). Within the Project site, a new access drive to the proposed Public Safety Training Center and Equipment Storage Facility would be constructed, connecting to Meadow Crest Drive for gated emergency access, and new parking lots would be constructed to support additional buildings on campus. These access points would be designed according to City of South Lake Tahoe standards. Parking areas would be designed with adequate circulation. The Project would not create a significant impact at the study intersections, and therefore would not impact patterns of circulation or movement of people and/or goods.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.19-9. Will the Project result in alterations to waterborne, rail or air traffic? (TRPA 13e)

No alterations to waterborne, rail or air traffic are proposed.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.19-10. Will the Project result in increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? (TRPA 13f)

See Questions 3.4.19-1, 3.4.19-3, and 3.4.19-4. The FMP would not alter existing roadway alignments, other than extension of the driveway to the Equipment Storage Facility. Implementation of the Project would not include changes to existing external access and circulation elements of the Project area (i.e. access to Al Tahoe Boulevard). Within the Project site, new parking lots would be constructed to support additional buildings on campus, a fire access roadway is proposed west of the main campus buildings, an emergency access to Meadow Crest Drive east of the Public Safety Training Center and Equipment Storage Facility, and bike trail realignment improvements throughout the campus. These access points and parking lots would be designed according to City of South Lake Tahoe standards. New bicycle and pedestrian facilities would be constructed to provide more direct access to facilities, and would be designed according

to City of South Lake Tahoe standards. The Project would not create any hazards that would impact motor vehicles, bicyclists, or pedestrians.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.20 Tribal Cultural Resources (CEQA) and Archaeological/Historical (TRPA)

This section presents the analyses for potential impacts to tribal cultural, archaeological and historical resources, discussing the Project impacts on tribal cultural resources related to the disturbance of archaeological, historical, and Native American/traditional heritage resources. Table 3-25 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

Area tribes were contacted pursuant to AB 52 to determine if cultural resources were present on the LTCC campus. In compliance with AB 52, letters were sent to the Native American Heritage Commission, and the Washoe Tribe of Nevada and California on June 1, 2016 with information regarding the LTCC FMP and requesting additional information regarding the FMP Project area. The Washoe Tribe provided a written response on July 6, 2016, and identified a bedrock mortar cultural resource site near Trout Creek. The letter also requested to review cultural resources documentation for the Project and offer comments (Cruz, 2016).

On February 10, 2021, LTCC initiated additional consultation with the Washoe Tribe of Nevada and California via a letter and mapping attachments in regard to the current FMP Project, a potential resource on the campus for which the tribe may be able to provide additional information, and in regard to collaborating on potential interpretive efforts for a known resource near Trout Creek, outside the proposed FMP footprint.

Table 3-25: Tribal Cultural Resources and Archaeological/Historical				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
Has a California Native American T section 21080.3.1(b)? Yes: X N	ribe requested cons	sultation in accorda	nce with Public Reso	urces Code
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:				
3.4.20-1. 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)? (CEQA XVIIIa)		Х		
3.4.20-2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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. (CEQA XVIIIb)		X		
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.20-3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values? (TRPA 20d)		X		
3.4.20-4. Will the proposal restrict historic or pre-historic religious or sacred uses within the potential impact area? (TRPA 20e)		X		

3.4.20-1. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? (CEQA XVIIIa)?

The proposed FMP does not alter regulations pertaining to cultural resources. A potentially significant Washoe cultural site may be located within the area near the Public Safety Training Center and Equipment Storage Facility. Known as site P09-4560, this site consists of two ellipsoid features that may have been used by the Washoe Tribe. However, little is known of the site and the record of the site contains little detail. Therefore, LTCC has contacted the Washoe Tribe of Nevada and California regarding this feature to determine whether the tribe has any knowledge of or information on the feature's presence or significance. A ground search for the feature needs to be conducted to verify its location and to analyze whether the feature is indeed a cultural resource, a natural ground relief or a culturally insignificant created ground relief.

A letter was sent to the Washoe Tribe of Nevada and California on February 10, 2021 and to date, no response has been received from the tribe; however, LTCC has committed to continuing the consultation process and working with the tribe on addressing culturally significant features within the campus.

Prior to the current analysis of the FMP, the Washoe Tribe provided a written response to a previous consultation on July 6, 2016, and identified a bedrock mortar cultural resource site near Trout Creek. The letter also requested to review cultural resources documentation for the Project and offer comments (Cruz, 2016). The FMP does not propose any development along Trout Creek where the bedrock mortar is located, and these areas are now managed by the CTC through a recent land exchange with the College.

Environmental Analysis: Less Than Significant Impact with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.20-2. Would the Project cause a substantial adverse change in the significance of a tribal cultural 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. (CEQA XVIIIb)

See discussion and analysis for Question 3.4.20-1 above. The FMP project areas are located outside the bedrock mortar site and most likely located outside of potential resource areas and would not affect the significance or use of the tribal cultural resources; however, one feature may potentially be located in the vicinity of the Safety Training Center and Equipment Storage Facility. Therefore, additional consultation with the Washoe Tribe is required to determine the precise location of the feature and whether the feature holds significance to the tribe. If the feature is significant and within the disturbance area of proposed FMP facilities, further mitigating action would be implemented as outlined in Mitigation Measure Cultural-1.

Environmental Analysis: Less Than Significant Impact with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.20-3. Does the Project have the potential to cause a physical change which would affect unique ethnic cultural values? (TRPA 20d)

See discussions and analyses for Questions 3.4.20-1 and 3.4.20-2 above.

Environmental Analysis: No, with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.20-4. Will the Project restrict historic or pre-historic religious or sacred uses within the potential impact area? (TRPA 20e)

See discussion and analysis for Questions 3.4.20-1, 3.4.20-2, and 3.4.20-3 above.

Environmental Analysis: No, with Mitigation.

Required Mitigation: CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.21 Utilities and Service Systems (CEQA) and Utilities (TRPA)

This section presents the analysis for potential impacts to utilities and service systems. Table 3-26 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The South Tahoe Public Utility District (STPUD) provides water service to the LTCC. Serving over 14,000 residential and commercial water connection sites within its 27,000-acre service area, STPUD operates 14 active supply wells and two standby wells and distributes water through 320 miles of potable water pipe. Relying solely on groundwater wells, the current demand is 5,240 acre-feet per year (AFY) and the total maximum allocation for STPUD is 9,528 AFY. Current volume of pumped groundwater is approximately 5,240 AFY. STPUD operates 23 storage tanks with an operational storage capacity of 9 million gallons, and 16 booster pump stations with a pumping capacity of 7.019 gallons per minute, according to the STPUD 2010 and 2015 Urban Water Management Plans (UWMP) (STPUD 2011, STPUD 2016). In addition, LTCC partners with STPUD to educate the public in garden and landscape water conservation at the campus demonstration garden. (http://www.stpud.us, Accessed May 18, 2016), and promotes both residential and commercial water conservation.

According to the 2015 UWMP, water deliveries in 2015 totaled 5,241 AFY, which was a decrease from 5,920 AFY in 2010, and deliveries are projected to increase to 6,019 AFY by 2020, and 6,373 AFY in 2035 due to fluctuations in population, improvements in conservation, and changes in the plumbing code. STPUD has no plans to sell water to other agencies in the future. Water supplies are expected to remain at 9,528 acre-feet per year into the future (2035). In a letter dated October 16, 2019, STPUD provided water flow estimates taken between the fire hydrant between College Drive and Al Tahoe Blvd, north of the proposed ELC, and the hydrant at the south end of campus, and found an estimated static water pressure range between 61 to 100 psi at the proposed ELC connection point. LTCC is identified by STPUD to be a parcel with sufficient hydrant access. There is an existing hydrant located adjacent to the CDC parking lot.

The STPUD utility easement runs through the eastern portion of the campus from Meadow Crest Drive, through the parking lot, north to Al Tahoe Blvd, running immediately east of the proposed ELC. Within this easement is a 12-inch water main that serves the LTCC. A six-inch gravity main currently provides sewer connection to LTCC (John Thiel, May 20, 2016). Within the easement, there is a 16-inch and a 12-inch sanitary sewer force main immediately east of the proposed ELC.

STPUD also provides wastewater service to the LTCC campus and operates a treatment plan on Meadow Crest Drive adjacent to the southern portion of the LTCC campus. The STPUD sewer collection system consists of 330 miles of sewer lines, 42 lift stations, and 17,000 connections. Sewage is transported to the treatment plant near the Project area, which has an average flow of 4.5 million gallons per day and capacity of 7.7 million gallons per day. Approximately 1.8 billion gallons are treated annually. Treated wastewater is exported to Alpine County. (http://www.stpud.us, Accessed May 18, 2016).

Solid waste service is provided by South Tahoe Refuse and Recycling, which serves residential and commercial customers in South Lake Tahoe. South Tahoe Refuse operates a recycling buyback center, a transfer station and materials recovery facility, resource recovery facility, and household hazardous waste facility. The Materials Recovery Facility sorts larger recyclables, while the Resource Recovery Facility recycles wood and green waste. In addition, South Tahoe Refuse has established the Blue Bag recycling program at homes and area schools. Over 100,000 tons of waste is collected annually from businesses and residences. Approximately 63% of wastes are currently recycled by South Tahoe Refuse, with the remainder sent to the landfill on a daily basis. (http://www.southtahoerefuse.com, accessed May 18, 2016) Solid waste is disposed of at the Lockwood Regional Landfill in Sparks, Nevada. This landfill has a total capacity of approximately 302 million cubic yards as a result of recent expansion, currently contains 32.8 million cubic yards of waste and is not expected to reach capacity for over 100 years, with implementation of approved expansions (NDEP, 2013 and Washoe County, 2016).

The City of South Lake Tahoe Public Works Department currently operates stormwater drainage facilities on the LTCC campus and surrounding roadways. Curb and gutter are located on both sides of Al Tahoe Blvd. along the campus frontage. Curb and gutter are also located along both sides of College Drive and the internal roadway circulation system on campus totaling over 11,960 linear feet. A 62 linear foot dirtrock flowline channel, 18-inch drainage pipe, and a 40-inch by 24-inch concrete box drainage inlet exist along Al Tahoe Blvd. near the Community Ballfields. Near the intersection of Al Tahoe Blvd. and College Drive/Johnson Road there is an 87 linear foot dirt-rock flowline channel and 15-inch diameter drainpipe on the campus. Heading south on College Drive, there is a small drainpipe and two concrete drain inlets each measuring 40-inches by 24-inches by 24-inches leading to a 2-foot by 6-foot rock channel stormwater outfall. Near this facility within the area between College Drive and Al Tahoe Blvd. there is an 858 square foot swale, and 18-inch diameter drainpipe leading to two 78 linear-foot dirt-rock flowline channels. (City of South Lake Tahoe Public Works, 2016)

Communications services are provided by AT&T and cable/ internet services by Charter Spectrum. Communications infrastructure is located underground and serves each LTCC facility based on type and use of the facility.

Table 3-26: Utilities and Service Systems				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.21-1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? (CEQA XIXa)			X	
3.4.21-2. Have sufficient water supplies available to serve the and reasonably foreseeable future development during normal, dry, and multiple dry years? (CEQA XIXb)			Х	
3.4.21-3. Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments? (CEQA XIXc)			Х	
3.4.21-4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (CEQA XIXd)			Х	
3.4.21-5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (CEQA XIXe)			Х	
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
Except for planned improvements, will the proposal result in a need for new systems, or substantial alterations to the following utilities:				

TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.21-6. Power or natural gas? (TRPA 16a)				Х
3.4.21-7. Communication systems? (TRPA 16b)				Х
3.4.21-8. Utilize additional water which amount will exceed the maximum permitted capacity of the service provider? (TRPA 16c)				х
3.4.21-9. Utilize additional sewage treatment capacity which amount will exceed the maximum permitted capacity of the sewage treatment provider? (TRPA 16d)				X
3.4.21-10. Storm water drainage? (TRPA 16e)				X
3.4.21-11. Solid waste and disposal? (TRPA 16f)				Х

3.4.21-1. Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? (CEQA XIXa)

Water. Implementation of the FMP would require additional water facilities in the form of restrooms, drinking fountains, classroom fixtures, landscape irrigation, and fire protection. The number and size of water fixtures within or around these buildings will depend on the design and capacity of each of these components. While landscaping water demand would be minimal through the use of native and drought tolerant vegetation, the Residential Student Living Facility would consume water on a level similar to a moderately sized hotel or approximately 40 gallons per day per person (4,000 gpd total for 100 students) using American Water Works Association and Metcalf and Eddy estimates for consumption. A recent study of two dorms at U.C. Davis found students used about 20 gallons per day per student with current water-efficient fixtures (Akana et. al., 2013), which would equate to a demand increase of 2,000 gpd. The Mixed Residential Living would increase demand as multifamily units also consume water. On average, multifamily units consume 65 gpd per bedroom within the unit. The FMP includes 48 one-bedroom units and 72 two bedroom units, for a total of 192 bedrooms associated with a total water consumption of 12,480 gpd.

The overall on-campus student population is anticipated to stay the same over time due to an increase in distance education, offsite instruction (instruction at local agency facilities), dual enrollment (located at the high school), incarcerated student program, and other satellite learning programs. Therefore, the on-campus student population is anticipated to stay approximately the same as the current population. While the Residential Student Living Facility and Mixed Residential Living Facility would result in a slight increase in water demand, the other proposed LTCC facilities would not result in a substantial change in consumption as the number of students would remain relatively the same. The increase in staff would also be small and would not create a substantial demand, thereby maintaining current demand levels. The Public Safety Training Center would also consume water; however, this new facility would replace existing temporary classrooms to be removed on the campus and would relocate the existing training that occurs at

the South Lake Tahoe Airport and other area training sites to the LTCC campus. Therefore, water and wastewater consumption and production would shift, but not significantly increase. Likewise, the P.E. Expansion Building replaces existing temporary spaces on campus to be removed, and does not include lockers, thereby adding no new water demand. The Equipment Storage Facility includes no restrooms or significant water consuming features and would not affect demand. Additionally, as discussed above, the current supply is sufficient to meet the increased demand from the Residential Student Living Facility.

While there is adequate supply volume, each FMP component requiring additional water service would need to address delivery and new connection at the time the component is planned for development to ensure the capacity volume from the existing 12-inch water main serving the campus is sufficiently and that connections are properly made to STPUD requirements. STPUD provided written comments on the Notice of Preparation (NOP) on May 20, 2016. Their comment letter indicated a 12-inch water main crosses the campus as shown on the mapping provided in the NOP and that new connections would need to be installed per STPUD requirements and with payment of connection fees. STPUD's comments did not indicate that the FMPs water demand would exceed service standards or that service could not be provided. Since a Will Serve letter is required prior to construction per TRPA Code Section 32.4, development of each Master Plan component would not occur until capacity and connection capability are demonstrated, and this impact would be less than significant.

Wastewater Treatment. The existing average wastewater flow rate is little more than half of the total export capacity (STPUD, 2013):

Table 3-27: Average Flow Rates and Total Capacity						
Export DistrictAverage Flow (mgd)Total Capacity (mgd)Average Remainin Capacity (mgd)						
South Tahoe Public Utility District	4.0	7.7	3.7			
Source: STPUD 2020 (https://stpud.us/about/district-facilities/)						

As discussed under impacts to the water system, the on-campus student population is expected to stay the same as the current population through build-out of the FMP due to an increase in off-campus/satellite learning. The on-campus population, including that of staff, would be no greater than the current population and the amount of wastewater produced on the campus would be relatively the same. Development of the Residential Student Living facility is expected to be utilized by approximately 100 students annually between 2021 and 2030. 100 persons in a dormitory are anticipated to generate 4,000 gpd (40 gpd/person) (Metcalf & Eddy). While this generation rate is greater than that for just school facilities (25 gpd/person), the on-campus population is not expected to exceed current levels and the additional wastewater generated would not be substantial. The Mixed Residential Living units would generate over 12,000 gpd (65 gpd/bedroom). Because the permitted growth in the Regional Plan would result in very low levels of growth, development under the FMP would not double wastewater flow rates, thus, it is reasonable to assume that sufficient capacity would be available to accommodate increased levels of new demand under the FMP. Restrooms are not proposed for the P.E. Expansion Building or the Equipment Storage Facility, and the LTCC Offices are an existing use relocated to a new campus building, resulting in little to no increase in wastewater production as these facilities relocate activities or storage in aging facilities on campus to new facilities and result in no significant population increase to generate additional wastewater on campus. The Public Safety Training Center would include some restroom facilities; however, no significant increase in campus population is expected to result in a significant increase in wastewater generation. Each new facility will connect to the wastewater system serving the campus.

Furthermore, each project would be required to comply with Section 32.5 (Waste Water Treatment Service) of the TRPA Code of Ordinances, which requires that all projects be served by facilities that provide treatment and export of wastewater from the Tahoe Region. Section 50.5.1(C.4) of the TRPA Code of Ordinances prohibits distribution of allocations to jurisdictions with insufficient wastewater capacity to support residential development, such as the Student Living facility or Mixed Residential Living facility.

Like the water supply, there is adequate treatment capacity; however, the transmission capacity of the 6inch sewer main serving the site may limit future growth onsite without additional capacity, depending on the FMP components and the timing of development. STPUD provided written comments on the Notice of Preparation (NOP) on May 20, 2016. Their comment letter indicated capacity is limited by the existing LTCC sewer connection, which includes the 6-inch gravity main and that development of FMP components requiring new sewer connections should consider capacity during design and permitting. New connections would need to be installed per STPUD requirements and with payment of appropriate fees. Since development of each Master Plan component would not occur until capacity and connection capability are demonstrated, this impact would be less than significant.

Solid Waste. South Tahoe Refuse (STR) collects solid waste for disposal or recycling. STR's main facility, which consists of a transfer station, materials recovery facility, and the Tahoe Basin Container Service, has a total permitted capacity of 370 tons per day, but currently receives 200 to 250 tons per day. The remaining capacity of 120 to 170 tons per day is sufficient to serve the anticipated growth under the FMP. Any additional staffing or equipment required to increase service to the area would be funded through the additional service rates that would be collected by STR for additional onsite service at LTCC. Solid waste would be disposed of at the Lockwood Regional Landfill in Sparks, Nevada. This landfill has a total capacity of approximately 43 million tons and is expected to reach capacity by the year 2025. However, multiple large-scale expansions to the facility are expected before this capacity is reached. Given the substantial existing capacity of 22 million tons, and planned expansion that would allow for a total capacity of 204 million tons at the Lockwood Regional Landfill, waste disposal needs for development under the FMP could be adequately served in the future. Both the STR main facility and the Lockwood Regional Landfill have sufficient capacity to manage the anticipated growth. Therefore, this impact is considered to be less than significant.

Energy (Gas and Electricity). While any new construction would require electric and natural gas service, the LTCC campus is currently served by existing electric and gas infrastructure. New or modified connections would be subject to the requirements and fees of the applicable utility providers and would be installed below ground typically within paved drive aisles or walkways associated with. The proposed use. The utility companies project that based on their forecasting and recent growth trends, the available capacity would far exceed the demand generated at build-out of the Regional Plan (TRPA 2012a, page 3.13-20). Natural Gas service was recently improved in 2017 with the abandonment of the 2-inch main lane that was replaced by a new 4-inch main line on the TLCC campus from Al Tahoe along College Way to the Main Building and around the Theater. Liberty Energy is currently improving the electrical system serving the campus with a new line from the main in Al Tahoe Boulevard to the new mobility hub.

Stormwater. State, El Dorado County, and TRPA regulations and permit requirements require the implementation of effective, reasonable, and appropriate measures to address storm water. New facilities are required to show how stormwater will be captured and dispersed during the permitting process; therefore, the Master Plan Project components will need to depict site hydrology and demonstrate runoff treatment, including a service agreement from STPUD. New campus facilities would be required to map drainage and demonstrate adequate stormwater capture and infrastructure through site design prior to obtaining permits, however the Facilities Master Plan has not yet identified new onsite storm drain facilities.

Stormwater generated on campus is addressed through onsite collection and conveyance. LTCC projects typically include drainage basins associated with each new facility to collect onsite runoff with adequate capacity for 20-year events based on the proposed coverage per project. As each FMP project is developed, the plans for each facility would include drainage features at the new facilities to avoid runoff to other areas of campus or offsite. These basins and conveyance systems are based on the actual proposed coverage and layout of the buildings and associated walkways, driveways, parking areas, or other covered surfaces serving the facility. Since LTCC addresses runoff onsite through these onsite drainage facilities, no increased demand on the City stormwater system would occur.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.21-2. Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? (CEQA XIXb)

See the analysis for Question 3.4.21.1. STPUD has adequate water supplies to serve the FMP, which would construct connecting infrastructure, water meters, and improvements to ensure adequate fire suppression service. In addition, water used at the existing temporary classrooms and water used at off-site safety training facilities would no longer be consumed at those locations, making the overall increase in water consumption quantity at the Public Safety Training Center, P.E. Expansion Building, LTCC Offices, and Equipment Storage Facility less than significant. The Residential Student Living and Mixed Residential Living Facilities would increase water consumption. And those facilities will need to demonstrate that sufficient water supplies are available when site plans are drafted. It is reasonable to assume that sufficient capacity would be available to accommodate the FMP.

LTCC is required to demonstrate the availability of adequate water quantity and quality for both domestic consumption and fire protection prior to project approval. This is demonstrated at a project-level through the acquisition of a Will Serve Letter from the applicable water purveyor and is required per the State Architect. For the recently approved Early Learning Center (ELC) project, STPUD indicated there was adequate water volume and pressure for both domestic and fire sprinkler systems to serve the ELC from existing infrastructure with no need for infrastructure expansion (Peters Engineering, 2020).

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.21-3. Would the Project 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? (CEQA XIXc)

See the analysis for Question 3.4.21.1. STPUD has adequate residual capacity to serve additional development in the area. The near-term FMP projects result in little generation of additional wastewater as the Equipment Storage Facility and P.E. Expansion modular buildings will not include restrooms, and the office is an existing use relocated to a new building. The Public Safety Training Center will include a few bathroom facilities, but the new facility merely relocates classes held elsewhere on campus and off-campus to the new facility, thereby moving where wastewater is generated, but not resulting in any significant increase in generated wastewater quantities. The longer term FMP projects, such as the Student Living Buildings and Mixed Residential Living facilities would increase wastewater quantities generated on campus; however, since those facilities would not be built for some time, and capacity changes may occur

in the interim, those FMP projects will need to assess impacts to the available STPUD capacity when they are proposed for construction.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.21-4. Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (CEQA XIXd)

South Tahoe Refuse (STR) is under contract with the City to collect solid waste from area households and businesses as well as to process and transfer all solid waste for disposal or recycling. STR's main facility, which consists of a transfer station and materials recovery facility located at the transfer station, has a total permitted capacity of 370 tons per day, but currently receives approximately 275 tons per day. The remaining capacity of 95 tons per day is sufficient to serve the near-term P.E. Expansion Building, Equipment Storage Facility, LTCC Offices, and Public Safety Training Center as little increase in solid waste is anticipate from these uses that either replace existing, temporary classroom space or aging campus facilities, or relocate existing off-site training activities to the campus. The residential facilities have potential to generate new quantities of solid waste and those projects would be required to secure capacity with STR when they are designed and proposed for development approval. In addition, removal of old facilities and construction of these new facilities is not expected to generate solid waste that would not be recycled either onsite or through concrete, asphalt, or other building material recycling systems. Grading would be balanced onsite as well.

Selective tree removal would not generate excess solid waste. Felled trees would be removed from the site for reuse and debris would be reused for mulch and landscaping. Therefore, the tree removal associated with the proposed FMP facilities would not produce solid waste.

Both the STR main facility and the Lockwood Regional Landfill have sufficient capacity to manage additional growth. Therefore, this impact is considered to be less than significant.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.21-5. Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (CEQA XIXe)

The Lockwood Regional Landfill receives solid waste generated within the City and has sufficient capacity to serve the needs as discussed in 3.4.21-4 above. Existing resource recovery operations provide recycling of various materials, including green waste and construction material, which further reduces the quantity of waste sent to the landfill pursuant to state law. New FMP facilities would include recycling services to reduce total solid waste entering the landfill. Since the near-term FMP facilities would relocate existing activities or operations from aging facilities on campus or from existing facilities off-campus to the proposed new buildings, a significant increase in solid waste generation would not occur as operations would simply shift from one location to another without a substantial increase in capacity. The residential facilities have potential to generate new quantities of solid waste and those projects would be required to secure capacity with STR when they are designed and proposed for development approval. Selective tree removal under the TCP/THP would also comply with management and reduction statutes and regulations. The downed woody material would be repurposed and reused as mulch or other wood products and would

not be sent to a landfill. Thus, the project complies with federal, state, and local statutes and regulations related to solid waste.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.21-6. Except for planned improvements, will the Project result in a need for new systems, or substantial alterations to power or natural gas? (TRPA 16a)

See Question 3.4.21-1 above that concludes that the available capacity would exceed the demand generated at build-out of the TRPA Regional Plan; therefore, demand created by implementation of the FMP would not result in a need for new or altered power or natural gas systems.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.21-7. Except for planned improvements, will the Project result in a need for new systems, or substantial alterations to communication systems? (TRPA 16b)

Communication systems are not listed as a required basic service by TRPA Code of Ordinances; however, the City Code requires any communication wires to be installed underground (Chapter 6.15 SLTCC). Any development permitted through the FMP would be located within existing service areas for communication systems providers, and each project would be responsible for any elected connection or subscription to communication systems within the region.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.21-8. Except for planned improvements, will the Project result in a need for new systems, or substantial alterations to utilize additional water which amount will exceed the maximum permitted capacity of the service provider? (TRPA 16c)

See Questions 3.4.21-1 and 3.4.21-2 above that conclude additional capacity exists in the Tahoe Region and therefore a need for new systems, or substantial alterations to utilize additional water would not occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.21-9. Except for planned improvements, will the Project result in a need for new systems, or substantial alterations to utilize additional sewage treatment capacity which amount will exceed the maximum permitted capacity of the sewage treatment provider? (TRPA 16d)

See Questions 3.4.21-1 and 3.4.21-3 above, which conclude additional sewage capacity exists in the Tahoe Region and therefore a need for new systems, or substantial alterations to utilize additional treatment capacity would not occur.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.21-10. Except for planned improvements, will the Project result in a need for new systems, or substantial alterations to storm water drainage? (TRPA 16e)

See discussion and analysis for Question 3.4.21-1 above.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.21-11. Except for planned improvements, will the Project result in a need for new systems, or substantial alterations to solid waste and disposal? (TRPA 16f)

Implementation of the proposed FMP may result in development that could slightly increase the Region's overall solid waste generation due to the presence of new residential facilities and the residential structures; however, development of near-term projects such as the Public Safety Training Center, Equipment Storage Facility, LTCC Offices, and P.E. Expansion buildings essentially relocated existing on and off-campus uses to new facilities on campus, and result in the removal of old, temporary buildings. Solid waste generation under the TRPA Regional Plan is anticipated to increase to 115,200 tons per year with some portion of that attributable to the LTCC. Given the substantial existing capacity of 22 million tons, and planned expansion that would allow for a total capacity of 204 million tons at the Lockwood Regional Landfill, waste disposal needs for development under the FMP could be adequately served in the future.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.22 Wildfire (CEQA)

This section presents the analysis for potential impacts related to wildfire. Table 3-28 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Environmental Setting

The project area is located entirely within the very high fire hazard severity zone as mapped by CAL FIRE in 2008 (https://osfm.fire.ca.gov/media/5788/south_lake_tahoe.pdf). U.S. 50 and Pioneer Trail, located on each end of Al Tahoe Blvd., are primary evacuation routes for the South Lake Tahoe area.

Table 3-28: Wildfire				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
Is the Project located in or near state Yes: X No:	responsibility area	s or lands classified	d as high fire hazard se	everity zones?
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
3.4.22-1. Substantially impair an adopted emergency response plan or emergency evacuation plan? (CEQA XXa)				х
3.4.22-2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (CEQA XXb)			Х	
3.4.22-3. Require the installation 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? (CEQA XXc)				Х
3.4.22-4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (CEQA XXd)				X

3.4.22-1. Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan? (CEQA XXa)

The FMP proposes new facilities on campus primarily south of the Student Center/Dining Hall and Library and west of the Physical Education Building; however, portable classroom replacement north of the Main Building, development of mixed-residential units near the entry at College Drive and various pathway improvements throughout the campus are also proposed. The existing drive aisles would be improved or expanded to reach the facilities where needed and an emergency access road and emergency access road to Meadow Crest Drive are also proposed. Additional parking would be provided at the Residential Student Living area, the Mixed-Residential Living area, and at the Equipment Storage Facility, but is designed to not interfere with and would maintain the existing drive-aisle dimensions. Although portions of the parking areas and pathways could be closed during construction of new facilities in the vicinity, this closure would not affect existing emergency evacuation routes, and overall emergency access would improve. The FMP promotes the LTCC emergency evacuation plan as it results in the development of new emergency access roadways and connections for evacuation, despite a potential population increase related to the student and mixed-use residential developments.

LTCC evacuation route improvements planned under the Facilities Master Plan include installation of a proposed electronic gate to replace an existing locked gate at the south end of the campus at the border with the South Lake Tahoe Public Utility District property. The addition of an electronic gate at this location would improve future evacuation procedures in the event of an emergency. Although U.S. 50 and Pioneer Trail are area evacuation routes, this project would not affect those roadways and does not affect College Drive, the primary evacuation route for the LTCC.

Fire extinguishers are onsite during construction and operation. and the FMP facilities would be equipped with a building fire sprinkler service.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.22-2. Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (CEQA XXb)

As discussed above, the FMP would not increase wildfire risk. The FMP classroom facilities must be reviewed and approved by the Division of the State Architect, including a Fire and Life Safety Site Conditions Submittal. Removal of trees would reduce wildfire potential in the area and would increase spacing between trees to slow wildfire spread. Increased onsite coverage would not exacerbate wildfire risk. The FMP structures would be equipped with sprinklers per State Architect requirements. The LTCC campus is relatively flat and does not pose an increased risk of wildfire spread as a result of substantial slope or difficult terrain. With access from College Drive as well as from the south at the STPUD gate, the campus is easily accessed and does not present an increased risk. Under the FMP, a fire access roadway and emergency access roadway to Meadow Crest Drive would be developed, which would help protect the campus against wildfire events and would improve emergency access and evacuation.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.22-3. Would the Project require the installation 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? (CEQA XXc)

The LTCC campus is currently partially developed and includes roadway infrastructure, bike paths, walkways, dirt paths, utility lines, fire hydrants, and other infrastructure. The FMP project includes development of a fire access roadway west of the main campus buildings and a gated emergency access roadway from the main parking lot to Meadow Crest Drive. This would improve emergency access and evacuation. The FMP also includes improved connection to the Greenway Trail and realignment improvements to on-campus trails and paths. New utility connections would link to existing lines in the

area, and structures would include fire protection sprinkler systems. New overhead power lines are not proposed, but the new structures would connect to underground lines serving the campus. Fire breaks or utility mains are not proposed. With selective tree removal proposed for future campus development, the fire risk would not be exacerbated.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.22-4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (CEQA XXd)

See discussion and analysis for Questions 3.4.9-1, 3.4.9-8, 3.4.9-11, 3.4.9-13, and 3.4.12-3 above. As discussed above, the LTCC campus is relatively flat. Downstream flooding or landslides following a fire would not occur. The FMP would not affect wildfire risk.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.23 Mandatory Findings of Significance

This section presents the analyses for mandatory findings of significance. Table 3-29 identifies the applicable impacts, anticipated level of impact, and whether mitigation measures are required to reduce impacts to a less than significant level.

Table 3-29: Mandatory Findings of Significance				
CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.23-1. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory? (CEQA XXIa)		X		

CEQA Environmental Checklist Item	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
3.4.23-2. 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)? (CEQA XXIb)		Х		
3.4.23-3. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (CEQA XXIc)			Х	
TRPA Initial Environmental Checklist Item	Yes	No, With Mitigation	Data Insufficient	No
3.4.23-4. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California or Nevada history or prehistory? (TRPA 21a)		X		
3.4.23-5. Does the Project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short- term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.) (TRPA 21b)				X
3.4.23-6. Does the Project have impacts which are individually limited, but cumulatively		X		
considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environmental is significant?) (TRPA 21c)				
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3.4.23-7. Does the Project have environmental impacts which will cause substantial adverse effects on human being, either directly or indirectly? (TRPA 21d)		Х		

3.4.23-1. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory? (CEQA XXIa)

Fish and Aquatic Habitat

The FMP results in no changes to Trout Creek or drainage to Trout Creek or its surrounding riparian area and no impact would occur.

Rare, Threatened, or Endangered Species and Communities

There are no rare, threatened, or endangered species or communities within the FMP areas of the LTCC campus. Species that use the riparian area and Trout Creek corridor would not be affected by the project as no changes to those habitats are proposed. Implementation of Mitigation Measure BIO-1 ensures the protection of bird species that may be present in the area.

Cultural, Historical, and Archeological Resources

Portions of the historic Lake Valley Railroad alignment cut through the campus, but would not be affected by the proposed FMP facilities. Interpretive signage of this feature is currently located along the Greenway. Shared-Use Trail south of the campus. A potential feature may be located in the vicinity of the Equipment Storage Facility; however, the exact location, extent, and significance of the feature has not been determined. LTCC is in the process of working with the Washoe Tribe of Nevada and California to determine the listed resource's location and significance. If the listed resource is found to hold cultural significance and is within the area of the Equipment Storage Facility, or associated yard and tarmac, implementation of Mitigation Measure CULTURAL-1 ensures protection of the resource. CULTURAL-2 ensure protection of undiscovered archaeological resources or human remains that may be discovered during construction.

Environmental Analysis: Less than Significant Impact with Mitigation Measures.

Required Mitigation: **BIO-1. Bird Nest Site Protection Program**, CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California, and

CULTURAL-2. Identify and Protect Undiscovered Archaeological Resources or Human Remains

3.4.23-2. 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)? (CEQA XXIb)

LTCC proposes a Facilities Master Plan which included new campus facilities and expanded programs. Facilities considered in the Master Plan include student housing, expansion of physical education facilities, on-campus public safety training facilities, and improved accessibility and use efficiency. Other probable future projects in the south shore vicinity include redevelopment project, numerous affordable housing projects, the US 50 South Shore Community Revitalization Project (e.g., Loop Road), and Tahoe Douglas Visitor's Authority Tahoe South Events Center Project. The recently approved TCAP amendment increases potential density for multi-family housing as part of a future redevelopment of existing tourist land uses. Construction of the Loop Road project would reduce available housing supply and as such, the Tahoe Transportation District has partnered with developers implement affordable housing development projects in the vicinity of the proposed Loop Road corridor. Construction of the South Tahoe Events Center would create new entertainment opportunities for residents, and visitors to the south shore but would not include any residential development.

Air Quality/GHG Emissions

As discussed in Questions 3.3.8-3 and 3.3.6-1, the construction and operation of near-term FMP projects would not, result in significant increases in operational air quality and GHG emissions. The City General Plan EIR identified significant GHG emissions impacts and the City adopted mitigation measures to address this issue, which remain in effect. The project would not interfere with implementation of these measures, GHG reduction targets, or GHG emissions reduction strategies. By relocating classroom/training facilities and student housing on campus from their current off-campus locations, mobile emissions would decrease, although mobile emissions savings would be consumed once the Mixed Residential Living Facility is constructed as new commercial and non-campus residential trips would be generated. Since the new facilities would replace or modernize facilities or equipment, significant GHG increases would not occur and the FMP is not anticipated to contribute considerably to global climate change. The impact is less than significant.

Traffic

As discussed in the analysis, the FMP facilities reduce traffic and trips between the campus and off-site residences or training facilities. While the Mixed Residential Living Facility would contribute new trips and would increase traffic on some area roads or intersections, no significant impact would occur based on traffic modeling. Tree removal under the TCP/THP would result in few trips over a span of many years as new LTCC facilities are proposed. Felled trees would remain on campus and reused, reducing potential off-haul trips.

Water Quality

The new facilities would include best management practices and manage stormwater runoff onsite so that no contribution to a cumulative water quality impact occurs. No activity is proposed within area waterways to result in a cumulative change to water flows or flooding. Campus infiltration facilities are designed to accommodate the volume of runoff generated by a 20-year 1-hour storm are required for approval of all projects within the area. Therefore, new development is not expected to cumulatively create or contribute

additional runoff that would exceed the capacity of existing or planned stormwater drainage system. Tree removal under the TCP/THP would not affect water quality.

Cultural Resources

Known cultural resources on the campus are located outside the FMP facility footprints; however, one potential resource may be located within the vicinity of the Equipment Storage Facility. Little information is available as to the location, extent, or significance of the listed feature and Mitigation Measure CULTRAL-1 is proposed to ensure the feature, if located within the FMP footprint and determined to be a verified feature, is protected. Therefore, the FMP would not contribute to a cumulative impact. No resources would be affected by tree removal under the TCP/THP as trees are not located within the potentially affected feature. Because federal and state regulations, the TRPA Code of Ordinances, and City General Plan policies address protection of these resources and provide processes to avoid or minimize impacts to historic and archaeological resources, and any new campus development would be required to comply with federal and state regulations, TRPA Code of Ordinances and the City General Plan policies during project specific review, the project would not contribute to an adverse cumulative effect on archeological or historical resources.

Noise

The FMP proposes additional classroom, campus maintenance, residential, and mixed residential/ commercial uses on an existing school campus. No substantial increase in ambient noise levels would result to contribute to a cumulative impact as most uses are indoors and not associated with significant noise generation. The Public Safety Training Center may result in outdoor learning, particularly in association with public safety equipment. While some noise would be generated from this use, a cumulatively considerable increase in noise levels would not be generated by the proposed FMP. Likewise, noise resulting from tree removal would be temporary and would not contribute to a cumulative ambient noise level increase.

Geologic Hazards

The LTCC campus is relatively flat on soils that are not prone to instability, and is outside the seismic hazard zones. Since LTCC facilities are school facilities, they are subject to additional review by the Division of the State Architect and undergo thorough safety evaluation prior to permitting. Tree removal under the TCP/THP results in no cumulative increase to geologic safety risk.

Scenic Resources

As discussed in the analysis, the FMP facilities result in no significant impact to scenic resources with appropriate screening. Visibility of school facilities within the LTCC campus is expected and the proposed near-term FMP facilities would include the architectural style and materials used elsewhere on campus. Due to the setback of school facilities from area roadways, most of the new facilities would not be highly visible from area roadways and would be screened through existing vegetation. The Mixed Residential Living Facility has the potential to be viewed from Pioneer Trail, due to its proximity to College Drive. Mitigation. Measures SCENIC-1a and SCENIC-1b would ensure that new structures not yet designed comply with local design guidelines and screening requirements. Tree removal under the TCP/THP would increase structural visibility, however, only selective tree removal would occur to maintain the overall benefits of the existing tree canopy.

Recreation

The LTCC provides onsite recreation facilities to serve LTCC students and contributes to no increase in demand for recreation services or facilities. Tree removal under the TCP/THP also results in no increase in demand for recreation.

Public Services and Utilities

Utility providers have recently improved systems to serve the LTCC campus. Development of the FMP facilities and improvements would not affect public services as the facilities would not be constructed until LTCC received will-serve letters from the service providers and utility improvement plans approved by the service providers. New FMP facilities are designed for energy efficiency and in some cases replace existing aging, less-efficient facilities. In other cases, the FMP facilities relocate off-campus housing and training areas on campus; therefore, these new facilities would simply shift demand location within the same community. Tree removal under the TCP/THP would not affect public services or utilities.

Environmental Analysis: Less than Significant Impact with Mitigation Measures.

Required Mitigation: SCENIC-1a. TRPA and City of South Lake Tahoe Design Guidelines Compliance, SCENIC-1b. Landscape Screening, and CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California

3.4.23-3. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (CEQA XIXc)

The area is urbanized and already partially developed and the potential for new impacts is low. The Project does not propose uses that pose adverse health impacts. By providing expanded or improved campus facilities, the project provides an educational benefit to the community and improves services to LTCC students. Therefore, implementation of the FMP would not create a substantial direct or indirect adverse effect on human beings.

Environmental Analysis: Less than Significant Impact.

Required Mitigation: None.

3.4.23-4. Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California or Nevada history or prehistory? (TRPA 21a)

See analysis in Question 3.4.23-1 that concludes implementation of the proposed FMP would not degrade the quality of the environment, reduce habitat of a fish population, threaten or eliminate a plant or animal community or eliminate important examples of a major period of California or Nevada history or prehistory.

Environmental Analysis: No Impact with Mitigation.

Required Mitigation: **BIO-1. Bird Nest Site Protection Program, and CULTURAL-1. Consultation with the Washoe Tribe of Nevada and California.**

3.4.23-5. Does the Project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (TRPA 21b)

The FMP Project is a longer-range plan that looks at the needs of LTCC students and programs to plan for improvements and provide necessary facilities. In planning for long-range needs, the FMP achieves long-term environmental goals, including decommissioning unnecessary trails, remodeling existing facilities, replacing aging facilities, relocating learning facilities onto the campus to improve class accessibility and reduce off-campus vehicle trips, and providing for residential units that serve students and other members of the community in a centralized location adjacent to transit, bikeways, and commercial centers. These facilities achieve long-term traffic and air quality goals, as well as both long-and short-term goals related to water quality and resource protection. Although an increase in coverage and tree removal occurs, the FMP facilities result in long-term sustainable growth. While short-term impacts could occur during construction activities, these facilities and improvements have the potential to achieve long-term goals, such as trip reductions and increased affordable student housing units.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.4.23-6. Does the Project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant?) (TRPA 21c)

The FMP has been analyzed as a complete action, even though some of the proposed facilities may not be constructed for many years. Because the facilities would be developed over a 15 to 20 year timeframe, impacts associated with construction would be spread across many years, resulting in no cumulatively considerable impact. Each facility is designed to be energy efficient, and in many instances, the proposed facilities replace existing facilities or off-campus facilities, thereby resulting in no cumulatively considerable change.

The Project has the potential to result in some cumulatively considerable change in relation to visual change from increased on-campus development, overall tree loss, and an increase in greenhouse gas emissions if additional facilities and their associated mechanical equipment are constructed and operated. As discussed in the Aesthetics analysis, the project would result in new building development and the removal of approximately 199 trees. While the proposed near-term facilities meet height requirements and propose designs similar to existing campus structures, the presence of additional buildings, particularly the Mixed Residential Living Facility would result in increased building visibility. Implementation of Mitigation Measures SCENIC-1a and -1b would avoid a cumulatively considerable impact as increased screening would shield views and maintain the existing landscape.

Although the near-term facilities were analyzed for greenhouse gas impacts as they are designed and can be accurately modeled, the longer-term facilities, specifically the Residential Student Living and Mixed Residential Living Facilities were not included in those models. They were not included because the actual sizing of the units and their amenities have not been considered and those factors cannot be input into the model with accuracy. Although the near-term facilities exhibit no significant greenhouse gas emissions impact, the cumulative impact of full implementation of the FMP would contribute to additional greenhouse gas emissions. Over time, it can be expected that energy efficiency across all sectors (mobile, stationary, utilities) would also improve, with new facilities operating more efficiently than older facilities. Although new structures would produce some greenhouse gas emissions, the improved efficiency and the provision of needed residential uses within an urbanized areas served by transit, would help to balance the growth and would also comply with local goals and sustainable growth policies.

Environmental Analysis: No Impact with Mitigation

Required Mitigation: SCENIC-1a. TRPA and City of South Lake Tahoe Design Guidelines Compliance, and SCENIC-1b. Landscape Screening.

3.4.23-7. Does the Project have environmental impacts which will cause substantial adverse effects on human being, either directly or indirectly? (TRPA 21d)

See discussion and analysis for Question 3.4.23-3 above that concludes that future projects permitted through the FMP would require project-level environmental review and would be required to comply with all applicable TRPA, federal, state, and City regulations, including protections for human health and safety. The projects currently proposed under the FMP would not cause adverse impacts to human beings either directly or indirectly. Therefore, implementation of the proposed FMP would not create a substantial direct or indirect adverse effect on human beings.

Environmental Analysis: No Impact.

Required Mitigation: None.

3.5 CERTIFICATION [TRPA ONLY]

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Tahoe Regional Planning Agency

Date

3.6 REFERENCES

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APPENDIX A – CALEEMOD EMISSION MODELING

Lake Tahoe Community College FMP Facilities

El Dorado-Lake Tahoe County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	8.80	1000sqft	0.20	8,800.00	0
Unrefrigerated Warehouse-No Rail	20.00	1000sqft	0.46	20,000.00	0
Other Asphalt Surfaces	149.00	1000sqft	3.42	149,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	14			Operational Year	2025
Utility Company	User Defined				
CO2 Intensity (Ib/MWhr)	714	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility is Liberty Utility and these intensity factors are based on their data

Land Use - Parking includes drive aisles, the fire access and emergency road, yard, and tarmac, as well as parking spaces.

Construction Phase - Buildings and paving would be phased over the next 5 years through each FMP project.

Grading - Cut/Fill to be balanced onsite.

Demolition - Old portables at the north end of campus to be removed

Vehicle Trips - The warehouse represents the Equipment Storage Facility in which trips would be made within the campus. No additional trips to the campus are

anticipated as the facilities would replace existing buildings to be removed, or would replace offsite training areas, thereby eliminating trips to those sites. No increase in student population would occur and generally trips are expected to decrease as online/distance learning opportunities increase.

Landscape Equipment - 67 snow days>.1" per year taken from Current Results - Weather and Science Facts South Lake Tahoe Snowfall Totals and Snowstorm Averages based on NOAAs 1981-2010 Normals

Energy Use -

Water And Wastewater - The warehouse is a storage facility and won't use water, but water is conservatively included for the safety training equipment

Operational Off-Road Equipment - No new off road equipment. Existing equipment located elsewhere will be relocated to the warehouse (Equipment Storage Facility)

Stationary Sources - Process Boilers - Boilers include snowmelt boilers and heating boilers. Snowmelt boilers operate 24/7 between November 26-March 31, in which they operate at full capacity for 2 days, and then run at 25-33% capacity. Building heating boilers run Monday through Friday during operating hours from November to March 31 at about 25-33% capacity.

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	8.00	40.00
tblConstructionPhase	NumDays	18.00	40.00

tblConstructionPhase	NumDays	5.00	30.00
tblConstructionPhase	PhaseEndDate	6/22/2023	7/19/2024
tblConstructionPhase	PhaseEndDate	5/3/2023	3/15/2024
tblConstructionPhase	PhaseEndDate	6/15/2022	9/2/2022
tblConstructionPhase	PhaseEndDate	5/29/2023	6/25/2024
tblConstructionPhase	PhaseEndDate	6/3/2022	7/8/2022
tblConstructionPhase	PhaseStartDate	5/30/2023	6/26/2024
tblConstructionPhase	PhaseStartDate	6/16/2022	5/1/2023
tblConstructionPhase	PhaseStartDate	6/4/2022	7/9/2022
tblConstructionPhase	PhaseStartDate	5/4/2023	5/1/2024
tblLandscapeEquipment	NumberSnowDays	0	67
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	714
tblProjectCharacteristics	N2OIntensityFactor	0	0.006
tblStationaryBoilersUse	AnnualHeatInput	0.00	926.40
tblStationaryBoilersUse	AnnualHeatInput	0.00	324.24
tblStationaryBoilersUse	AnnualHeatInput	0.00	307.70
tblStationaryBoilersUse	AnnualHeatInput	0.00	2,316.00
tblStationaryBoilersUse	BoilerRatingValue	0.00	1.00
tblStationaryBoilersUse	BoilerRatingValue	0.00	0.35
tblStationaryBoilersUse	BoilerRatingValue	0.00	0.94
tblStationaryBoilersUse	BoilerRatingValue	0.00	2.50
tblStationaryBoilersUse	DailyHeatInput	0.00	7.20
tblStationaryBoilersUse	DailyHeatInput	0.00	2.52
tblStationaryBoilersUse	DailyHeatInput	0.00	2.48
tblStationaryBoilersUse	DailyHeatInput	0.00	18.00
tblStationaryBoilersUse	NumberOfEquipment	0.00	2.00

CalEEMod Version: CalEEMod.2016.3.2

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Lake Tahoe Community College FMP Facilities - El Dorado-Lake Tahoe County, Annual

tblStationaryBoilersUse	NumberOfEquipment	0.00	3.00
tblStationaryBoilersUse	NumberOfEquipment	0.00	2.00
tblStationaryBoilersUse	NumberOfEquipment	0.00	3.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

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					ton	is/yr							МТ	'/yr		
2022	0.1162	1.1770	0.8281	1.6200e- 003	0.4115	0.0555	0.4670	0.2184	0.0512	0.2696	0.0000	142.2043	142.2043	0.0428	0.0000	143.2734
2023	0.1717	1.4987	1.6702	3.4700e- 003	0.0682	0.0621	0.1302	0.0185	0.0584	0.0769	0.0000	306.6526	306.6526	0.0502	0.0000	307.9079
2024	0.4620	0.6201	0.7905	1.5300e- 003	0.0256	0.0257	0.0513	6.9400e- 003	0.0241	0.0310	0.0000	134.1069	134.1069	0.0261	0.0000	134.7604
Maximum	0.4620	1.4987	1.6702	3.4700e- 003	0.4115	0.0621	0.4670	0.2184	0.0584	0.2696	0.0000	306.6526	306.6526	0.0502	0.0000	307.9079

Mitigated Construction

	ROG	NOx	со	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					ton	is/yr							МТ	'/yr		
2022	0.1162	1.1770	0.8281	1.6200e- 003	0.1884	0.0555	0.2439	0.0992	0.0512	0.1503	0.0000	142.2041	142.2041	0.0428	0.0000	143.2733
2023	0.1717	1.4987	1.6702	3.4700e- 003	0.0682	0.0621	0.1302	0.0185	0.0584	0.0769	0.0000	306.6524	306.6524	0.0502	0.0000	307.9076
2024	0.4620	0.6201	0.7905	1.5300e- 003	0.0256	0.0257	0.0513	6.9400e- 003	0.0241	0.0310	0.0000	134.1068	134.1068	0.0261	0.0000	134.7603
Maximum	0.4620	1.4987	1.6702	3.4700e- 003	0.1884	0.0621	0.2439	0.0992	0.0584	0.1503	0.0000	306.6524	306.6524	0.0502	0.0000	307.9076

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	ROG	NOx	со	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	44.14	0.00	34.39	48.90	0.00	31.59	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-2-2022	8-1-2022	1.0107	1.0107
2	8-2-2022	11-1-2022	0.2618	0.2618
4	2-2-2023	5-1-2023	0.0068	0.0068
5	5-2-2023	8-1-2023	0.6259	0.6259
6	8-2-2023	11-1-2023	0.6269	0.6269
7	11-2-2023	2-1-2024	0.6156	0.6156
8	2-2-2024	5-1-2024	0.2795	0.2795
9	5-2-2024	8-1-2024	0.5665	0.5665
		Highest	1.0107	1.0107

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					ton	is/yr							MT	'/yr		
Area	0.1609	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 003
Energy	1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	38.9232	38.9232	1.3600e- 003	4.3000e- 004	39.0849
Mobile	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
Stationary	0.0280	0.0795	0.4991	3.0600e- 003		0.0387	0.0387		0.0387	0.0387	0.0000	554.4018	554.4018	0.0106	0.0000	554.6675
Waste						0.0000	0.0000		0.0000	0.0000	6.1385	0.0000	6.1385	0.3628	0.0000	15.2077
Water						0.0000	0.0000		0.0000	0.0000	1.6042	9.6267	11.2309	0.1652	3.9700e- 003	16.5434
Total	0.1899	0.0889	0.5092	3.1200e- 003	0.0000	0.0394	0.0394	0.0000	0.0394	0.0394	7.7427	602.9560	610.6987	0.5399	4.4000e- 003	625.5081

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	co	С	SO2	Fugiti PM1	/e Ex) F	khaust PM10	PM10 Total	Fugit PM2	tive Exh 2.5 PN	aust //2.5	PM2.5 Tota	l Bio- C	02 N	Bio- CO2	Total	I CO2	CH4	N	20	CO2e
Category							tons/yr											MT/	yr			
Area	0.1609	2.0000 005	e- 2.240 00	00e- 3	0.0000		1.0	0000e- 005	1.0000e- 005		1.00 0	000e- 05	1.0000e- 005	0.00	00 4	.3600e- 003	4.36 0	600e- 03	1.0000e- 005	0.0	000	4.6400e- 003
Energy	1.0300e- 003	9.3700e 003	e- 7.870 00	00e- 3	6.0000e- 005		7.1	1000e- 004	7.1000e- 004		7.1(0	000e- 04	7.1000e- 004	0.00	00 3	80.1406	30.1	1406	1.0100e- 003	3.50 0(00e-)4	30.2714
Mobile	0.0000	0.0000	0.00	000	0.0000	0.000	0 0.	.0000	0.0000	0.00	00 0.0	0000	0.0000	0.00	00	0.0000	0.0	000	0.0000	0.0	000	0.0000
Stationary	0.0280	0.0795	5 0.49	991	3.0600e- 003		0.	.0387	0.0387		0.0)387	0.0387	0.00	00 5	54.4018	554.	4018	0.0106	0.0	000	554.6675
Waste							0.	.0000	0.0000		0.0	0000	0.0000	4.91	08	0.0000	4.9	108	0.2902	0.0	000	12.1662
Water							0.	.0000	0.0000		0.0	0000	0.0000	1.28	34	7.8544	9.1	378	0.1321	3.18 0(00e-)3	13.3884
Total	0.1899	0.0889	9 0.50	92	3.1200e- 003	0.000	0 0.	.0394	0.0394	0.00	00 0.0)394	0.0394	6.19	42 5	92.4011	598.	5953	0.4340	3.53 0	00e-)3	610.4980
	ROG		NOx	C	D S	02	Fugitive PM10	e Exha PN	aust PN 110 To	110 otal	Fugitive PM2.5	Exh PN	aust PM 12.5 To	2.5 Ital	Bio- CO	2 NBio	·CO2	Total C	CO2 C	H4	N2	CO2e
Percent Reduction	0.00		0.00	0.0	0 0.	00	0.00	0.4	00 0	.00	0.00	0.	.00 0.	00	20.00	1.7	75	1.98	3 19	.62	19.7	2.40

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2.3 Vegetation

Vegetation



3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	5/2/2022	5/27/2022	5	20	
2	Site Preparation	Site Preparation	5/28/2022	7/8/2022	5	30	
3	Grading	Grading	7/9/2022	9/2/2022	5	40	
4	Building Construction	Building Construction	5/1/2023	3/15/2024	5	230	
5	Paving	Paving	5/1/2024	6/25/2024	5	40	
6	Architectural Coating	Architectural Coating	6/26/2024	7/19/2024	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20

Acres of Paving: 3.42

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 43,200; Non-Residential Outdoor: 14,400; Striped Parking Area: 8,940 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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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
Demolition	6	15.00	0.00	32.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
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	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	75.00	29.00	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	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 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					ton	s/yr							MT	/yr		
Fugitive Dust					3.5000e- 003	0.0000	3.5000e- 003	5.3000e- 004	0.0000	5.3000e- 004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e- 004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e- 003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e- 004	3.5000e- 003	0.0124	0.0159	5.3000e- 004	0.0116	0.0121	0.0000	33.9902	33.9902	9.5500e- 003	0.0000	34.2289

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	СО	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					ton	s/yr							MT	/yr		
Hauling	1.3000e- 004	4.6800e- 003	1.4100e- 003	1.0000e- 005	2.7000e- 004	2.0000e- 005	2.8000e- 004	7.0000e- 005	2.0000e- 005	9.0000e- 005	0.0000	1.2165	1.2165	1.0000e- 005	0.0000	1.2168
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	6.6000e- 004	3.7000e- 004	4.1200e- 003	1.0000e- 005	1.1800e- 003	1.0000e- 005	1.1900e- 003	3.1000e- 004	1.0000e- 005	3.2000e- 004	0.0000	0.9852	0.9852	3.0000e- 005	0.0000	0.9859
Total	7.9000e- 004	5.0500e- 003	5.5300e- 003	2.0000e- 005	1.4500e- 003	3.0000e- 005	1.4700e- 003	3.8000e- 004	3.0000e- 005	4.1000e- 004	0.0000	2.2017	2.2017	4.0000e- 005	0.0000	2.2027

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					ton	s/yr							MT	'/yr		
Fugitive Dust					1.5700e- 003	0.0000	1.5700e- 003	2.4000e- 004	0.0000	2.4000e- 004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e- 004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e- 003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e- 004	1.5700e- 003	0.0124	0.0140	2.4000e- 004	0.0116	0.0118	0.0000	33.9902	33.9902	9.5500e- 003	0.0000	34.2289

3.2 Demolition - 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					ton	s/yr							MT	'/yr		
Hauling	1.3000e- 004	4.6800e- 003	1.4100e- 003	1.0000e- 005	2.7000e- 004	2.0000e- 005	2.8000e- 004	7.0000e- 005	2.0000e- 005	9.0000e- 005	0.0000	1.2165	1.2165	1.0000e- 005	0.0000	1.2168
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	6.6000e- 004	3.7000e- 004	4.1200e- 003	1.0000e- 005	1.1800e- 003	1.0000e- 005	1.1900e- 003	3.1000e- 004	1.0000e- 005	3.2000e- 004	0.0000	0.9852	0.9852	3.0000e- 005	0.0000	0.9859
Total	7.9000e- 004	5.0500e- 003	5.5300e- 003	2.0000e- 005	1.4500e- 003	3.0000e- 005	1.4700e- 003	3.8000e- 004	3.0000e- 005	4.1000e- 004	0.0000	2.2017	2.2017	4.0000e- 005	0.0000	2.2027

3.3 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					ton	s/yr							MT	'/yr		-
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e- 004		0.0242	0.0242		0.0223	0.0223	0.0000	50.1591	50.1591	0.0162	0.0000	50.5647
Total	0.0476	0.4963	0.2955	5.7000e- 004	0.2710	0.0242	0.2952	0.1490	0.0223	0.1712	0.0000	50.1591	50.1591	0.0162	0.0000	50.5647

3.3 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					ton	s/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	1.1900e- 003	6.7000e- 004	7.4200e- 003	2.0000e- 005	2.1300e- 003	2.0000e- 005	2.1400e- 003	5.7000e- 004	1.0000e- 005	5.8000e- 004	0.0000	1.7734	1.7734	5.0000e- 005	0.0000	1.7746
Total	1.1900e- 003	6.7000e- 004	7.4200e- 003	2.0000e- 005	2.1300e- 003	2.0000e- 005	2.1400e- 003	5.7000e- 004	1.0000e- 005	5.8000e- 004	0.0000	1.7734	1.7734	5.0000e- 005	0.0000	1.7746

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					ton	s/yr							MT	⁻/yr		
Fugitive Dust					0.1220	0.0000	0.1220	0.0670	0.0000	0.0670	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0476	0.4963	0.2955	5.7000e- 004		0.0242	0.0242		0.0223	0.0223	0.0000	50.1590	50.1590	0.0162	0.0000	50.5646
Total	0.0476	0.4963	0.2955	5.7000e- 004	0.1220	0.0242	0.1461	0.0670	0.0223	0.0893	0.0000	50.1590	50.1590	0.0162	0.0000	50.5646

3.3 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					ton	s/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	1.1900e- 003	6.7000e- 004	7.4200e- 003	2.0000e- 005	2.1300e- 003	2.0000e- 005	2.1400e- 003	5.7000e- 004	1.0000e- 005	5.8000e- 004	0.0000	1.7734	1.7734	5.0000e- 005	0.0000	1.7746
Total	1.1900e- 003	6.7000e- 004	7.4200e- 003	2.0000e- 005	2.1300e- 003	2.0000e- 005	2.1400e- 003	5.7000e- 004	1.0000e- 005	5.8000e- 004	0.0000	1.7734	1.7734	5.0000e- 005	0.0000	1.7746

3.4 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					ton	is/yr				-			MT	'/yr		-
Fugitive Dust					0.1311	0.0000	0.1311	0.0674	0.0000	0.0674	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.4171	0.3055	5.9000e- 004		0.0188	0.0188		0.0173	0.0173	0.0000	52.1095	52.1095	0.0169	0.0000	52.5309
Total	0.0390	0.4171	0.3055	5.9000e- 004	0.1311	0.0188	0.1499	0.0674	0.0173	0.0847	0.0000	52.1095	52.1095	0.0169	0.0000	52.5309

3.4 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					ton	s/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	1.3300e- 003	7.5000e- 004	8.2400e- 003	2.0000e- 005	2.3600e- 003	2.0000e- 005	2.3800e- 003	6.3000e- 004	2.0000e- 005	6.4000e- 004	0.0000	1.9704	1.9704	5.0000e- 005	0.0000	1.9718
Total	1.3300e- 003	7.5000e- 004	8.2400e- 003	2.0000e- 005	2.3600e- 003	2.0000e- 005	2.3800e- 003	6.3000e- 004	2.0000e- 005	6.4000e- 004	0.0000	1.9704	1.9704	5.0000e- 005	0.0000	1.9718

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					ton	s/yr							MT	'/yr		
Fugitive Dust					0.0590	0.0000	0.0590	0.0303	0.0000	0.0303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.4171	0.3055	5.9000e- 004		0.0188	0.0188		0.0173	0.0173	0.0000	52.1095	52.1095	0.0169	0.0000	52.5308
Total	0.0390	0.4171	0.3055	5.9000e- 004	0.0590	0.0188	0.0778	0.0303	0.0173	0.0476	0.0000	52.1095	52.1095	0.0169	0.0000	52.5308

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	СО	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					ton	is/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	1.3300e- 003	7.5000e- 004	8.2400e- 003	2.0000e- 005	2.3600e- 003	2.0000e- 005	2.3800e- 003	6.3000e- 004	2.0000e- 005	6.4000e- 004	0.0000	1.9704	1.9704	5.0000e- 005	0.0000	1.9718
Total	1.3300e- 003	7.5000e- 004	8.2400e- 003	2.0000e- 005	2.3600e- 003	2.0000e- 005	2.3800e- 003	6.3000e- 004	2.0000e- 005	6.4000e- 004	0.0000	1.9704	1.9704	5.0000e- 005	0.0000	1.9718

3.5 Building Construction - 2023

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					ton	.s/yr							MT	'/yr		
Off-Road	0.1376	1.2587	1.4214	2.3600e- 003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8292	202.8292	0.0483	0.0000	204.0354
Total	0.1376	1.2587	1.4214	2.3600e- 003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8292	202.8292	0.0483	0.0000	204.0354

3.5 Building Construction - 2023

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					ton	s/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	6.7300e- 003	0.2252	0.0840	6.6000e- 004	0.0165	4.8000e- 004	0.0170	4.7600e- 003	4.6000e- 004	5.2200e- 003	0.0000	62.3183	62.3183	9.0000e- 004	0.0000	62.3409
Worker	0.0274	0.0148	0.1648	4.6000e- 004	0.0517	3.7000e- 004	0.0520	0.0138	3.4000e- 004	0.0141	0.0000	41.5051	41.5051	1.0600e- 003	0.0000	41.5315
Total	0.0341	0.2400	0.2488	1.1200e- 003	0.0682	8.5000e- 004	0.0690	0.0185	8.0000e- 004	0.0193	0.0000	103.8234	103.8234	1.9600e- 003	0.0000	103.8724

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					ton	s/yr							MT	/yr		
Off-Road	0.1376	1.2587	1.4214	2.3600e- 003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8289	202.8289	0.0483	0.0000	204.0352
Total	0.1376	1.2587	1.4214	2.3600e- 003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8289	202.8289	0.0483	0.0000	204.0352

3.5 Building Construction - 2023

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					ton	is/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	6.7300e- 003	0.2252	0.0840	6.6000e- 004	0.0165	4.8000e- 004	0.0170	4.7600e- 003	4.6000e- 004	5.2200e- 003	0.0000	62.3183	62.3183	9.0000e- 004	0.0000	62.3409
Worker	0.0274	0.0148	0.1648	4.6000e- 004	0.0517	3.7000e- 004	0.0520	0.0138	3.4000e- 004	0.0141	0.0000	41.5051	41.5051	1.0600e- 003	0.0000	41.5315
Total	0.0341	0.2400	0.2488	1.1200e- 003	0.0682	8.5000e- 004	0.0690	0.0185	8.0000e- 004	0.0193	0.0000	103.8234	103.8234	1.9600e- 003	0.0000	103.8724

3.5 Building Construction - 2024

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					ton	is/yr							MT	'/yr		
Off-Road	0.0405	0.3697	0.4446	7.4000e- 004		0.0169	0.0169		0.0159	0.0159	0.0000	63.7585	63.7585	0.0151	0.0000	64.1354
Total	0.0405	0.3697	0.4446	7.4000e- 004		0.0169	0.0169		0.0159	0.0159	0.0000	63.7585	63.7585	0.0151	0.0000	64.1354

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	со	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					ton	.s/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	2.0200e- 003	0.0687	0.0251	2.1000e- 004	5.1800e- 003	1.4000e- 004	5.3200e- 003	1.5000e- 003	1.3000e- 004	1.6300e- 003	0.0000	19.4905	19.4905	2.7000e- 004	0.0000	19.4971
Worker	8.1300e- 003	4.1900e- 003	0.0477	1.4000e- 004	0.0162	1.1000e- 004	0.0164	4.3200e- 003	1.0000e- 004	4.4200e- 003	0.0000	12.5452	12.5452	3.0000e- 004	0.0000	12.5527
Total	0.0102	0.0729	0.0728	3.5000e- 004	0.0214	2.5000e- 004	0.0217	5.8200e- 003	2.3000e- 004	6.0500e- 003	0.0000	32.0357	32.0357	5.7000e- 004	0.0000	32.0498

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					ton	is/yr							MT	'/yr		
Off-Road	0.0405	0.3697	0.4446	7.4000e- 004		0.0169	0.0169		0.0159	0.0159	0.0000	63.7584	63.7584	0.0151	0.0000	64.1354
Total	0.0405	0.3697	0.4446	7.4000e- 004		0.0169	0.0169		0.0159	0.0159	0.0000	63.7584	63.7584	0.0151	0.0000	64.1354

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	со	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					ton	.s/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	2.0200e- 003	0.0687	0.0251	2.1000e- 004	5.1800e- 003	1.4000e- 004	5.3200e- 003	1.5000e- 003	1.3000e- 004	1.6300e- 003	0.0000	19.4905	19.4905	2.7000e- 004	0.0000	19.4971
Worker	8.1300e- 003	4.1900e- 003	0.0477	1.4000e- 004	0.0162	1.1000e- 004	0.0164	4.3200e- 003	1.0000e- 004	4.4200e- 003	0.0000	12.5452	12.5452	3.0000e- 004	0.0000	12.5527
Total	0.0102	0.0729	0.0728	3.5000e- 004	0.0214	2.5000e- 004	0.0217	5.8200e- 003	2.3000e- 004	6.0500e- 003	0.0000	32.0357	32.0357	5.7000e- 004	0.0000	32.0498

3.6 Paving - 2024

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					ton	s/yr							MT	'/yr		
Off-Road	0.0176	0.1655	0.2444	3.8000e- 004		7.9700e- 003	7.9700e- 003		7.3700e- 003	7.3700e- 003	0.0000	32.7606	32.7606	0.0103	0.0000	33.0180
Paving	4.4800e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0221	0.1655	0.2444	3.8000e- 004		7.9700e- 003	7.9700e- 003		7.3700e- 003	7.3700e- 003	0.0000	32.7606	32.7606	0.0103	0.0000	33.0180

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3.6 Paving - 2024 Unmitigated Construction Off-Site

ROG NOx CO SO2 Fugitive PM10 Exhaust PM10 PM10 Fugitive PM2.5 Exhaust PM2.5 Total Bio- CO2 NBio- CO2 Total CO2 CH4 N20 CO2e Total PM2.5 MT/yr Category tons/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 1.5800e-8.1000e-004 9.2600e-3.0000e-3.1500e-2.0000e-005 3.1700e-003 8.4000e-004 2.0000e-8.6000e-0.0000 2.4330 2.4330 6.0000e-0.0000 2.4345 005 003 003 005 003 005 004 1.5800e-9.2600e 3.1700e-8.4000e-8.6000e 0.0000 2.4330 2.4330 6.0000e-2.4345 Total 8.1000e-3.0000e 3.1500e 2.0000e-2.0000e-0.0000 003 004 003 005 003 005 003 004 005 004 005

Mitigated Construction On-Site

	ROG	NOx	СО	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		-			ton	is/yr							MT	⁻/yr		-
Off-Road	0.0176	0.1655	0.2444	3.8000e- 004		7.9700e- 003	7.9700e- 003		7.3700e- 003	7.3700e- 003	0.0000	32.7606	32.7606	0.0103	0.0000	33.0179
Paving	4.4800e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0221	0.1655	0.2444	3.8000e- 004		7.9700e- 003	7.9700e- 003		7.3700e- 003	7.3700e- 003	0.0000	32.7606	32.7606	0.0103	0.0000	33.0179

3.6 Paving - 2024 Mitigated Construction Off-Site

	ROG	NOx	со	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					ton	s/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	1.5800e- 003	8.1000e- 004	9.2600e- 003	3.0000e- 005	3.1500e- 003	2.0000e- 005	3.1700e- 003	8.4000e- 004	2.0000e- 005	8.6000e- 004	0.0000	2.4330	2.4330	6.0000e- 005	0.0000	2.4345
Total	1.5800e- 003	8.1000e- 004	9.2600e- 003	3.0000e- 005	3.1500e- 003	2.0000e- 005	3.1700e- 003	8.4000e- 004	2.0000e- 005	8.6000e- 004	0.0000	2.4330	2.4330	6.0000e- 005	0.0000	2.4345

3.7 Architectural Coating - 2024

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					ton	s/yr							MT	⁻/yr		
Archit. Coating	0.3855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e- 003	0.0110	0.0163	3.0000e- 005		5.5000e- 004	5.5000e- 004		5.5000e- 004	5.5000e- 004	0.0000	2.2979	2.2979	1.3000e- 004	0.0000	2.3012
Total	0.3872	0.0110	0.0163	3.0000e- 005		5.5000e- 004	5.5000e- 004		5.5000e- 004	5.5000e- 004	0.0000	2.2979	2.2979	1.3000e- 004	0.0000	2.3012

3.7 Architectural Coating - 2024

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	5.3000e- 004	2.7000e- 004	3.1200e- 003	1.0000e- 005	1.0600e- 003	1.0000e- 005	1.0700e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.8211	0.8211	2.0000e- 005	0.0000	0.8216				
Total	5.3000e- 004	2.7000e- 004	3.1200e- 003	1.0000e- 005	1.0600e- 003	1.0000e- 005	1.0700e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.8211	0.8211	2.0000e- 005	0.0000	0.8216				

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					ton	is/yr							MT	⁻/yr		
Archit. Coating	0.3855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e- 003	0.0110	0.0163	3.0000e- 005		5.5000e- 004	5.5000e- 004		5.5000e- 004	5.5000e- 004	0.0000	2.2979	2.2979	1.3000e- 004	0.0000	2.3012
Total	0.3872	0.0110	0.0163	3.0000e- 005		5.5000e- 004	5.5000e- 004		5.5000e- 004	5.5000e- 004	0.0000	2.2979	2.2979	1.3000e- 004	0.0000	2.3012

3.7 Architectural Coating - 2024

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	5.3000e- 004	2.7000e- 004	3.1200e- 003	1.0000e- 005	1.0600e- 003	1.0000e- 005	1.0700e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.8211	0.8211	2.0000e- 005	0.0000	0.8216				
Total	5.3000e- 004	2.7000e- 004	3.1200e- 003	1.0000e- 005	1.0600e- 003	1.0000e- 005	1.0700e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.8211	0.8211	2.0000e- 005	0.0000	0.8216				

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network
	ROG	NOx	СО	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					ton	s/yr							MT	'/yr		
Mitigated	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
Unmitigated	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

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.548420	0.035778	0.224960	0.125817	0.023380	0.005183	0.017399	0.009541	0.001620	0.001043	0.004971	0.000775	0.001113
Other Asphalt Surfaces	0.548420	0.035778	0.224960	0.125817	0.023380	0.005183	0.017399	0.009541	0.001620	0.001043	0.004971	0.000775	0.001113
Unrefrigerated Warehouse-No Rail	0.548420	0.035778	0.224960	0.125817	0.023380	0.005183	0.017399	0.009541	0.001620	0.001043	0.004971	0.000775	0.001113

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	со	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					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.9455	19.9455	8.1000e- 004	1.7000e- 004	20.0157
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.7281	28.7281	1.1700e- 003	2.4000e- 004	28.8292
NaturalGas Mitigated	1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	10.1951	10.1951	2.0000e- 004	1.9000e- 004	10.2556
NaturalGas Unmitigated	1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	10.1951	10.1951	2.0000e- 004	1.9000e- 004	10.2556

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	СО	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					ton	is/yr							MT	'/yr		
Junior College (2Yr)	191048	1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	10.1951	10.1951	2.0000e- 004	1.9000e- 004	10.2556
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
Unrefrigerated Warehouse-No Rail	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		1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	10.1951	10.1951	2.0000e- 004	1.9000e- 004	10.2556

Mitigated

	NaturalGa s Use	ROG	NOx	со	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					ton	is/yr							ΜT	7/yr		
Junior College (2Yr)	191048	1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	10.1951	10.1951	2.0000e- 004	1.9000e- 004	10.2556
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
Unrefrigerated Warehouse-No Rail	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		1.0300e- 003	9.3700e- 003	7.8700e- 003	6.0000e- 005		7.1000e- 004	7.1000e- 004		7.1000e- 004	7.1000e- 004	0.0000	10.1951	10.1951	2.0000e- 004	1.9000e- 004	10.2556

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5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

Electricity Use Total CO2 CH4 N20 CO2e Land Use kWh/yr MT/yr Junior College (2Yr) 28.7281 2.4000e-28.8292 88704 1.1700e-003 004 Other Asphalt Surfaces 0 0.0000 0.0000 0.0000 0.0000 Unrefrigerated Warehouse-No Rail 0 0.0000 0.0000 0.0000 0.0000 Total 28.7281 1.1700e-003 2.4000e-004 28.8292

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		MT	/yr	
Junior College (2Yr)	61585.9	19.9455	8.1000e- 004	1.7000e- 004	20.0157
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		19.9455	8.1000e- 004	1.7000e- 004	20.0157

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

- Use Low VOC Paint Residential Exterior
- Use Low VOC Paint Non-Residential Interior
- Use Low VOC Paint Non-Residential Exterior
- No Hearths Installed

	ROG	NOx	со	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					ton	s/yr							MT	/yr		
Mitigated	0.1609	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 003
Unmitigated	0.1609	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 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					ton	s/yr							МТ	'/yr		
Architectural Coating	0.0386					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e- 004	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 003
Total	0.1609	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 003

Mitigated

	ROG	NOx	СО	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					ton	is/yr		-					МТ	'/yr		
Architectural Coating	0.0386					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e- 004	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 003
Total	0.1609	2.0000e- 005	2.2400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3600e- 003	4.3600e- 003	1.0000e- 005	0.0000	4.6400e- 003

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category		Π	ī/yr	
Mitigated	9.1378	0.1321	3.1800e- 003	13.3884
Unmitigated	11.2309	0.1652	3.9700e- 003	16.5434

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7.2 Water by Land Use

Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr				
Junior College (2Yr)	0.431631 / 0.675116	1.6586	0.0141	3.4000e- 004	2.1145	
Other Asphalt Surfaces	0/0	0.0000	0.0000	0.0000	0.0000	
Unrefrigerated Warehouse-No Rail	4.625/0	9.5723	0.1510	3.6300e- 003	14.4289	
Total		11.2309	0.1652	3.9700e- 003	16.5434	

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e		
Land Use	Mgal	MT/yr					
Junior College (2Yr)	0.345305 / 0.675116	1.4799	0.0113	2.8000e- 004	1.8452		
Other Asphalt Surfaces	0/0	0.0000	0.0000	0.0000	0.0000		
Unrefrigerated Warehouse-No Rail	3.7/0	7.6578	0.1208	2.9000e- 003	11.5431		
Total		9.1378	0.1321	3.1800e- 003	13.3884		

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e				
	MT/yr							
Mitigated	4.9108	0.2902	0.0000	12.1662				
Unmitigated	6.1385	0.3628	0.0000	15.2077				

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e	
Land Use	tons	MT/yr				
Junior College (2Yr)	11.44	2.3222	0.1372	0.0000	5.7532	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	
Unrefrigerated Warehouse-No Rail	18.8	3.8162	0.2255	0.0000	9.4546	
Total		6.1385	0.3628	0.0000	15.2077	

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e		
Land Use	tons	MT/yr					
Junior College (2Yr)	9.152	1.8578	0.1098	0.0000	4.6026		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		
Unrefrigerated 15.04 Warehouse-No Rail		3.0530	0.1804	0.0000	7.5636		
Total		4.9108	0.2902	0.0000	12.1662		

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
Boiler	2	7.2	926.4	1	CNG
Boiler	3	2.52	324.24	0.35	CNG
Boiler	2	2.48	307.7	0.94	CNG
Boiler	3	18	2316	2.5	CNG

User Defined Equipment

Equipment Type Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	Type tons/yr								MT	'/yr						
Boiler - CNG (0 - 2 MMBTU)	9.2800e- 003	0.0413	0.1653	1.0100e- 003		0.0128	0.0128		0.0128	0.0128	0.0000	183.6237	183.6237	3.5200e- 003	0.0000	183.7117
Boiler - CNG (2 - 5 MMBTU)	0.0187	0.0382	0.3338	2.0400e- 003		0.0259	0.0259		0.0259	0.0259	0.0000	370.7781	370.7781	7.1100e- 003	0.0000	370.9557
Total	0.0280	0.0795	0.4991	3.0500e- 003		0.0387	0.0387		0.0387	0.0387	0.0000	554.4018	554.4018	0.0106	0.0000	554.6675

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category		М	IT	
Unmitigated	_ 1,110.0000	0.0000	0.0000	1,110.0000

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11.1 Vegetation Land Change

Vegetation Type

Total		- 1,110.0000	0.0000	0.0000	- 1,110.0000		
Trees	165 / 155	- 1,110.0000	0.0000	0.0000	- 1,110.0000		
	Acres	MT					
	Initial/Fina I	Total CO2	CH4	N2O	CO2e		

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
			Μ	п	
Pine	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

APPENDIX B – TECHNICAL TRAFFIC MEMORANDUM

Fehr / Peers

Memorandum

Date: January 28, 2021

To: Rob Brueck, Hague Brueck Associates, LLC

From: Katy Cole and Ashley Hong, Fehr & Peers

Subject: Lake Tahoe Community College Facilities Master Plan: Transportation and Parking Analysis

SD20-0365

Introduction

The Lake Tahoe Community College (LTCC) is located in South Lake Tahoe, California. The campus is accessed by Al Tahoe Boulevard which intersects US Highway 50 (Lake Tahoe Boulevard) and Pioneer Trail. The Facilities Master Plan Project (Project) will consist of new on-campus student housing, new/updated instructional buildings, and 120 unit apartment complex. The new on-campus student housing will replace off-site housing that accommodates up to 30 students.

This report describes transportation and parking on the LTCC Campus as a result of implementing the Project and is organized as follows:

- Project Description: Description of the Facilities Master Plan as it relates to the transportation analysis
- Existing Conditions: Description of the existing transportation facilities and transportation operations in the vicinity of the LTCC Campus.
- Project Transportation Conditions: Describes the trip generation and parking conditions for the project.
- Existing Plus Project Intersection Operations: Describes the effect that the project has on intersection operations at the study intersections.
- Vehicle Miles Traveled (VMT) Analysis: Describes project VMT as it relates to new metrics required for CEQA transportation analysis (per Senate Bill 743).

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Project Description

The LTCC Facilities Master Plan includes remodel, facility upgrade, and residential projects. Figure 1 shows the overall Facilities Master Plan.

The following describes how the various components of the Facilities Master Plan are evaluated from a transportation perspective:

Facilities Evaluated based on Campus Enrollment Projections

The following facilities are remodels or upgrades to the general campus. The effect that these facilities have on transportation is based on campus enrollment (presented as full-time student equivalents) that would physically come to campus.

- Tahoe Basin Public Safety Training Center (building 11) The facility would include flexible space with operable walls that will allow both classroom instruction and demonstration space. It will replace program space currently located in the portable classrooms on the north side of the main campus complex. The existing portable buildings will be removed following construction of building 11. It also includes the paved "tarmac" area shown to the north of Building 12.
- Equipment Storage Facility (building 12) This storage facility of 20,000 SF will provide storage for public safety classes, such as Fire Academy, EMS, and storage for maintenance equipment for college use. Implementation of this building includes improvements to the north-south bike trail connector from the Greenway to the main campus parking lot. It also includes the paved "yard" area shown to the south of Building 12.
- P.E. Expansion (building 13) Consists of two modular buildings (2,400 sf total) that will provide flex space (but no locker room facilities) adjacent to the existing physical education center. These building would transfer uses from existing temporary classrooms; therefore, they are not intended to increase capacity.
- Future Building Site (building 14) Replace program space currently provided in the portable buildings and provide space for potential LTCC program expansion in a two-story general purpose building.
- LTCC Offices (building 16) Provide a 2,000 square foot structure to replace office space currently provided in the main building complex that may be lost through other remodel projects.

Residential Facilities Evaluated Based on Residential Capacity

The following facilities are evaluated from a transportation perspective based on the number of residents or units they will provide:

- Residential Student Living (buildings 15A and 15B) Provide on campus dorm/hall style housing for students in a two-story complex with beds for up to 100 students.
- Mixed Residential Living (buildings 17) Provide on campus mixed residential apartments for students, faculty, staff, or non-LTCC residents in an 120 unit apartment complex. The residential development would consist of 20 one-bedroom affordable units, 29 two-bedroom affordable units, 28 one bedroom achievable/workforce housing units, and 43 two bedroom achievable/workforce housing units. The residential development would also provide up to 5,000 square feet of retail space to support the residents and LTCC on campus population.

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Existing Conditions

Roadway Setting

Figure 7-1 shows the roadway network that provides access to the Project area. The major roadways included in the analyses are described as follows:

US Highway 50 (US 50) is an east-west highway that passes through South Lake Tahoe and connects Sacramento, California to Carson City, Nevada and points beyond. Within in the study area, US 50 generally runs northeast-southwest. Throughout the majority of South Lake Tahoe, US 50 is a four-lane roadway with a two-way left-turn lane. The segment of US 50 from the South Y to Stateline is also referred to as Lake Tahoe Boulevard, and is classified by the City of South Lake Tahoe as an arterial roadway. The speed limit on US 50 near the Project area is 40 miles per hour (mph).

Pioneer Trail is a two-lane arterial roadway in South Lake Tahoe that provides an alternative route to US 50 between South Lake Tahoe and Meyers. The posted speed limit on Pioneer Trail varies from 30 to 45 mph.

Al Tahoe Boulevard is a two-lane arterial roadway for the majority of its route and widens to four lanes at the north end between Johnson Boulevard and US Highway 50. Al Tahoe Boulevard intersects US 50 at its north end and Pioneer Trail at its south end. The posted speed limit on Lake Parkway varies from 25 to 40 mph.

College Avenue/College Way is a two-lane roadway that intersects Al Tahoe Boulevard in two locations (at Johnson Boulevard and the Bijou Park Entrance) and provides direct access to LTCC. The posted speed limit on College Avenue/College Way is 25 mph.

Existing Ground Transit Facilities

The Tahoe Transportation District (TTD) provides transit service to, from, and around South Lake Tahoe. Tahoe Transportation District Transit service operates two fixed routes (50 and 55) throughout South Lake Tahoe, as well as Lake and Valley Express service between South Lake Tahoe, Carson City, Minden, and Gardnerville on two fixed routes (19x and 22). Routes 50 and 55 serve LTCC.

Tahoe Transportation District Transit route 55 provides service between the Kingsbury Transit Center, the Stateline Transit Center and South Y Transit Center. Route 55 primarily uses alternative roadways to US 50 (Lake Tahoe Boulevard) including Pioneer Trail, Johnson Boulevard, and Al Tahoe Boulevard. Daily service is provided between the Kingsbury Transit Center and the South Y Transit Lake Tahoe Community College Facilities Master Plan: Transportation and Parking Analysis January 28, 2021 Page 6 of 28

Center from 6:00 AM to 6:50 PM with one hour headways. Route 50 provides service between Stateline Transit Center and South Y Transit Center primarily using US 50. Daily service is provided between Stateline Transit Center and South Y Transit Center from 6:30 AM to 8:30 PM with 20-40 minute headways. Route 50 only provides service to LTCC on the eastbound route towards Stateline Transit Center.

Existing transit routes in South Lake Tahoe are shown on Figure 2.

In 2019, phase 1 of the Mobility Hub project on campus was completed. The alternative transportation center and bus shelter provide charging stations for the Tahoe Transportation District's new electric buses as well as additional bike, scooter, and skateboard storage facilities. Additionally, a new bus spur road was built to separate bus traffic from other vehicles.

Figure 2 Existing Ground Transit Facilities and Routes (as of March 2019)



Source: www.tahoetransportation.org

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Existing Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities exist around much of the Lake Tahoe perimeter. In South Lake Tahoe near the Project, bike lanes exist on Pioneer Trail, Johnson Boulevard, and US 50 (Lake Tahoe Boulevard). There is also a multi-use path that runs along Al Tahoe Boulevard between Johnson Boulevard and Pioneer Trail, and runs through the LTCC campus.

There are some pedestrian amenities near the Project, including asphalt sidewalks along the south side and parts of the north side of Al Tahoe Boulevard between US 50 and Johnson Boulevard, and a multi-use path along the south side of Al Tahoe Boulevard from Johnson Boulevard to Pioneer Trail. There are marked crosswalks at four of the five study intersections.

Existing bicycle facilities in South Lake Tahoe are shown on Figure 3.

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Source: South Lake Tahoe General Plan Update, Figure TC-3

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Existing Parking Facilities

Five parking areas currently serve the needs of the campus, totaling 429 parking spaces, as shown on Figure 4. The Main building parking lot has 330 parking stalls (Lot 3), the University Center parking lot has 22 parking stalls (Lot 2), the Demonstration Garden Parking lot has 51 parking stalls (Lot 1), the Child Development Center parking lot has 19 stalls (Lot 1A), and there are 7 short term parking stalls along the main entrance road near the Mobility Hub (e.g., bus stop) (Lot 2A).



Figure 4 Existing LTCC Parking Lot Locations

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Existing Traffic Volumes

Five intersections were analyzed as part of this project and are shown in Figure 5.

Intersection Turning Movement Volumes

Intersection turning movement counts, including bicycle and pedestrian counts, were collected at the study intersections on June 10, 2015 during the weekday AM (7:00 AM to 9:00 AM) and PM (4:00 PM – 6:00 PM) peak traffic periods. Counts were collected during the spring quarter, not during the first two weeks of the quarter, Memorial Day week, or finals week. shows the intersection configurations and turning movement counts for the study intersections.

Roadway Segment Volumes

Three-day directional daily traffic volumes were collected from Tuesday, June 9, 2015 to Thursday, June 11, 2015. Counts were collected at three locations on College Way to establish the existing trip generation of LTCC.

Table 1 Existing Intersection Turning Movement Counts - Weekday AM and PMPeak Hours

Intersection	Turnir	ng Move	ment V	olume								
intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM Peak Hou	r								-			
1. US 50/Al Tahoe Blvd	4	776	240	68	778	2	1	4	6	193	1	63
2. US 50/ Johnson Blvd	15	-	63	-	-	-	-	811	19	78	691	-
3. Al Tahoe Boulevard/ Johnson Blvd-College Ave	15	5	4	24	24	89	74	105	47	15	181	68
4. Al Tahoe Blvd/College Way-Bijou Park Entrance	11	0	11	0	0	1	6	103	25	34	244	1
5. Al Tahoe Blvd/Pioneer Trail	142	263	-	-	219	91	58	-	77	-	-	-
PM Peak Hou	r											
1. US 50/Al Tahoe Blvd	3	1124	215	96	1107	1	7	5	5	307	2	143
2. US 50/ Johnson Blvd	25	-	134	-	-	-	-	1115	38	148	1129	-
3. Al Tahoe Boulevard/ Johnson Blvd-College Ave	40	20	8	102	19	140	143	207	42	2	187	52
4. Al Tahoe Blvd/College Way-Bijou Park Entrance	40	0	55	2	1	6	15	268	21	50	211	8
5. Al Tahoe Blvd/Pioneer Trail	126	258	-	-	275	98	125	-	191	-	-	-

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Figure 5: Study Area



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Figure 6: Existing Peak Hour Traffic Volumes and Lane Configurations

Figure 6 Peak Hour Traffic Volumes and Lane Configurations Existing Conditions

Historic Traffic Volumes

Annual average daily traffic (AADT) volumes on US 50 (Lake Tahoe Boulevard) near the Project were obtained from the Caltrans Traffic Data Branch website. AADT volume data was available for three locations near the Project from 2009 to 2018 (the most recent ten year period) and is displayed in Table 2. As shown in the table, traffic volumes near the Upper Truckee River Bridge remained consistent from 2009 to 2013, and then dropped approximately 17 percent between 2013 and 2014. Traffic volumes again increased approximately 27% between 2014 and 2018. Traffic volumes near Rufus Allen Boulevard dropped approximately 6% percent during the 10 year period. Traffic volumes near Ski Run Boulevard have remained fairly consistent until 2015 when volumes started to rise, presenting an approximate 8% increase in traffic volumes overall during the 10 year period.

Segment	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-Year Growth
US 50 north of Upper Truckee River Bridge	33,000	33,000	33,000	33,000	33,000	27,500	33.000	34,000	34,000	35,000	6.1%
US 50 north Rufus Allen Blvd	31,000	30,000	30,500	30,500	30,500	28,000	29,200	30,000	30,000	29,000	-6.3%
US 50 north of Ski Run Blvd	31,500	31,500	31,500	31,500	31,500	31,500	32,000	33,000	33,000	34,000	7.9%

Table 2 Historic Average Daily Traffic Volumes – US 50 (Lake Tahoe Boulevard)

Sources: Caltrans Traffic Data Branch, 2020

Existing Traffic Conditions

Intersection Operations

Level of service is a qualitative measure of traffic operating conditions, whereby a letter grade, from A to F is assigned, based on quantitative measurements of delay per vehicle. These grades represent the perception of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions, and LOS F represents severe delay under stop-and-go conditions. LOS for the study intersections were analyzed using the Highway Capacity Manual (HCM) 6th Edition. Lake Tahoe Community College Facilities Master Plan: Transportation and Parking Analysis January 28, 2021 Page 15 of 28

Signalized Intersections

The method from Chapter 19 of the HCM 6th Edition bases signalized intersection operations on the average control delay experienced by motorists traveling through it. Control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. This method uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the average control delay. Table 3 summarizes the relationship between average delay per vehicle and LOS for signalized intersections according to the HCM 6th Edition methodology.

Unsignalized Intersections

Traffic conditions at the unsignalized study intersections (stop sign and yield sign-controlled intersections) were evaluated using the method from Chapters 20 and 21 of the HCM 6th Edition. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each stop-controlled approach that must yield the right-of-way. The average delay for the overall intersection is reported for all way stop controlled intersections. The average delay for the overall intersection and the worst movement is reported for side street stop controlled intersections. Table 3 summarizes the relationship between delay and LOS for unsignalized intersections. The delay ranges for unsignalized intersections are lower than for signalized intersections as drivers expect less delay at unsignalized intersections.

LOS De	escription	Signalized Intersections (Avg. Control Delay)	Unsignalized Intersections (Avg. Control Delay)
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	0 to ≤ 10.0 sec/veh	0 to ≤ 10.0 sec/veh
В	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	>10.0 to ≤ 20.0 sec/veh	>10.0 to ≤ 15.0 sec/veh
с	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	>20.0 to ≤ 35.0 sec/veh	>15.0 to ≤ 25.0 sec/veh
D	Represents high-density, but stable flow.	>35.0 to ≤ 55.0 sec/veh	>25.0 to ≤ 35.0 sec/veh
E	Represents operating conditions at or near the capacity level.	>55.0 to ≤ 80.0 sec/veh	>35.0 to ≤ 50.0 sec/veh
F	Represents forced or breakdown flow.	>80.0 sec/veh	>50.0 sec/veh

Table 3 Intersection LOS Criteria

Source: Highway Capacity Manual 2010

The study intersections were analyzed during the AM and PM peak hours. Existing traffic volume data was collected in 2016 when LTCC was in session (not during the first two weeks of the quarter, holidays, or finals week). The counts taken in 2016 were grown by 7% percent per year for four

years to reflect the maximum growth in the area from 2016 to 2020. These counts reflect non-COVID-19 conditions. The peak hour factors (PHF) for each intersection based on the traffic count data were used in the analysis. A default heavy vehicle percentage of two percent was also used for each intersection. Table 4 presents the LOS results for the study intersections under existing conditions. Table 5 shows the queue lengths for the major movements of the study intersections under existing conditions.

Under existing conditions, all study intersections operate at acceptable LOS B or better during the AM and PM peak hours except for US 50/Al Tahoe Boulevard which operates at LOS F during the PM peak period.

	Control	AM Peak		PM Peak		
Intersection	Type ¹	Delay ²	LOS	Delay ²	LOS	
1. US 50/Al Tahoe Boulevard	Signal	15	В	>80	F	
2. US 50/Johnson Boulevard	SSSC	2 (36)	A (E)	6 (>80)	A (F)	
3. Al Tahoe Boulevard/Johnson Boulevard-College Avenue	Signal	12	В	13	В	
4. Al Tahoe Boulevard/College Way-Bijou Park Entrance	SSSC	1 (14)	A (B)	3 (20)	A (C)	
5. Al Tahoe Boulevard/Pioneer Trail	Signal	11	В	12	В	

Table 4 LOS Results – Existing Conditions

Source: Fehr & Peers 2016

Notes: ¹ SSSC = Side Street Stop Control

² Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the overall intersection (worst movement) for side street stop controlled intersections.

Queue lengths reported in Table 5 have been rounded to the nearest 25 feet (based on the average length of a vehicle including space between vehicles). As shown in the table, there are two locations during the AM peak hour where the 95th percentile queue exceed the existing storage capacity by 1 vehicle. There are three locations during the PM peak hour where the 95th percentile queue exceed the existing storage capacity by 1-3 vehicles. The average queue lengths do not exceed existing storage capacity during the AM or PM peak hours. See Appendix A for detailed Synchro reports.

			AM Peak		PM Peak		
Intersection	Approach- Movement ¹	Storage Length (feet) ²	Avg. Queue Length ³ (feet)	95 th Percentile Length ³ (feet)	Avg. Queue Length ³ (feet)	95 th Percentile Length ³ (feet)	
	WB-L	200	100	175	175	225	
	WB-R	375	25	25	25	25	
Rivd	NB-L	100	25	25	25	25	
bivu	NB-R	325	25	50	25	100	
	SB-L	125	75	125	100	150	
	WB-L	150	NR	25	NR	100	
2. US 50/Johnson	NB-R	100	NR	25	NR	100	
ыла	EB-R	175	NR	25	100 NR NR NR 25	25	
3. Al Tahoe Blvd/	WB-L	100	25	25	25	25	
Johnson Blvd-	EB-L	100	25	100	50	175	
College Avenue	SB-R	100	25	25	25	50	
4 Al Tabaa Dhud/	WB-L	100	NR	25	NR	25	
4. Al Tanoe Bivd/	WB-R	125	NR	25	NR	25	
College Way-bijou Dark Entrança	EB-L	50	NR	25	NR	25	
	EB-R	100	NR	25	25 NR 25 25 NR 25 25 NR 25 25 NR 25 25 NR 25	25	
	EB-R	100	25	25	25	50	
5. Al Tanoe Bivd/	NB-L	100	50	125	50	125	
	SB-R	100	25	50	25	50	

Table 5 Queue Lengths – Existing Conditions

Source: Fehr & Peers 2020

Notes: ¹ EB = eastbound, WB = westbound, NB = northbound, SB = southbound; L = left, T = through, R = right

² Storage length is measured as the length of the turn pocket, or the distance to the nearest upstream intersection.
³ An average vehicle length of 25 feet is assumed; therefore, queue lengths are rounded to the nearest 25 feet.
Bold indicates queues that exceed storage lengths.

⁴ NR=Not Reported

Project Transportation Conditions

Trip Generation

Trip Generation for Campus Supportive Facilities

Typically, trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation Manual are used to develop trip generation estimates for proposed land uses. ITE trip generation rates were used for the proposed apartment and ground floor retail uses. This Project also presents unique scenario, since it is an expansion of an existing use. Therefore, the ITE trip generation rates for a Community/Junior College are based on a limited number of studies and the sites surveyed had an average of 10,300 to 13,500 students (significantly larger than the LTCC campus). The ITE trip generation rates are also based on the overall number of students and do not provide a basis for determining the number of students who take online courses or participate in programs that do not require them to physically come to the campus. Therefore, the ITE rates do not present the best available data. Since data from the existing LTCC is available, that data was used to develop trip generation rates for the proposed expansion.

Trip generation rates for the project were developed using existing traffic count data collected during the spring quarter of 2015 (June 9-11, 2015) and full-time equivalent student (FTES) enrollment during that same time period. The full-time equivalent student enrollment number only includes students who go to the campus for instruction. This number does not include students taking online courses, etc. Table 6 shows the traffic count data and student enrollment used to develop the trip generation rates.

Traffic Volume Data		Trip Generation Rates ¹	In/Out Percentage
2014/2015 Actual FTES	971 ²		
Total Daily Traffic Volume	2,735	2.82 trips/student	
AM Peak Hour Total Traffic Volume	178	0.19 trips/student	
AM Peak Hour "In" Traffic Volume	131	0.14 trips/student	74%
AM Peak Hour "Out" Traffic Volume	47	0.05 trips/student	26%
PM Peak Hour Total Traffic Volume	284	0.30 trips/student	
PM Peak Hour "In" Traffic Volume	151	0.16 trips/student	53%
PM Peak Hour "Out" Traffic Volume	133	0.14 trips/student	47%

Table 6 Trip Generation Rates

Source: LTCC and Fehr & Peers 2016

Notes: FTES = Full-time equivalent student

¹ Trip generation rates were developed by dividing the traffic volume by the FTES.

² The full-time equivalent student enrollment number only includes students who go to the campus for instruction. This number does not include students taking online courses, etc.

Historical and projected student enrollment provided by LTCC was used to develop trip generation estimates for the proposed project. The number of students enrolled in programs/classes that require them to come to the campus has been declining, as seen in Table 7 and is expected to continue to decline. In order to present a conservative analysis, it was assumed that enrollment would remain constant at 940 FTE students (rather than assuming a continued decline in FTES).

Trip generation for apartment and retail were calculated using ITE trip generation rates. Reductions were applied to account for internal capture, external walk, bike, transit, and retail pass-by trips.

Table 8 shows the projected trip generation under existing plus project conditions. The overall number of full-time equivalent students will remain at 940, however 100 of those students will be living on campus and will have different trip generation characteristics and rates than the remaining 840 students who do not live on campus.

Table 7 Historic FTES Enrollment by Year

	FY11-12	FY12-13	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19
Total FTES Enrollment	1,419	1,159	1,129	971	857	758	690	724

Source: LTCC and Fehr & Peers, 2020

ITE does not have trip generation rates for student housing; however, Fehr & Peers has conducted numerous studies for university and college projects that included a student housing component. The following trip generation rates were used in studies conducted for UC Santa Barbara, San Jose State University, Stanford University, Cal Poly Pomona, and California State University Long Beach:

- Daily 2.16 trips per bed
- AM 0.06 trips per bed (17% In / 83% Out)
- PM 0.15 trips per bed (73% In / 27% Out)

Table 8 Project Trip Generation

		Trips							
Land Use/Trip Generator	Size	Daily	АМ	AM In/Out	РМ	PM In/Out			
Full-Time Equivalent Students	840 FTES	2,369	160	118/42	252	134/118			
Student Housing (On Campus)	100 beds	216	6	1/5	15	11/4			
Total Project Trips		2,585	166	119/47	267	145/122			

		Trips							
Land Use/Trip Generator	Size	Daily	АМ	AM In/Out	РМ	PM In/Out			
Existing Campus Trip Generation (based on existing count data)	-2,735	-178	-131/-47	-284	-151/-132				
Net New Trips to Campus	-150	-12 -12/0		-17	-6/-10				
Apartment	120 units	878	55	13/42	67	42/25			
Retail	5K SF	189	5	3/2	19	9/10			
Internal Capture		-36	-2	-1/-1	-6	-4/-2			
External Walk, Bike, Transit		-32	-2	0/-2	-2	-1/-1			
Pass-By for Retail		-60	-2	-1/-1	-6	-3/-3			
Total Reductions	-128	-5	-2/-4	-14	-8/-6				
Net New Trips	939	55	14/40	72	43/29				
Net New Trips Generated by	Project	789	42	3/40	56	37/19			

Table 8 Project Trip Generation

Source: Fehr & Peers 2020

Notes: FTES = Full-time equivalent student

Trip Distribution

Under existing plus project conditions, the campus supportive uses of the project will not generate any new trips. The residential apartments/retail are the only portion of the project that will generate new trips. The residential apartments will be located north of the main campus off College Drive. The trips were distributed to the surrounding roadway network as follows:

- 20 percent will travel to/from LTCC campus via Johnson Blvd
- 60 percent will travel to/from Lake Tahoe Boulevard (US 50)
- 20 percent will travel to/from Pioneer Trail

Figure 7 shows the trip distribution for the residential apartments/retail component of the project.

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Figure 7: Trip Distribution



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Parking Analysis

The LTCC Master Site Plan includes 130 new parking spaces for campus uses with additional parking for the Mixed Residential Living.

Campus Uses Parking Analysis

The additional 130 spaces for on-campus uses is sufficient to support on-campus needs given the increasing trend for off-campus learning.

Apartment/Retail Parking Analysis

The specific number of parking spaces for the mixed-use residential building will be determined during the design process of the project.

The project includes up to 120 units and 5,000 square feet of retail uses. Using the ITE Parking Generation (4th Edition), the average parking demand for apartments (ITE Parking Generation Low/Mid Rise Suburban Apartment land use category) that have an average of approximately 1.5 bedrooms per unit is 1.13 parking spaces per unit. Therefore, the parking demand is 136 spaces. The retail uses can share the parking spaces with the apartment uses (assuming that not all parking spaces are assigned to specific apartment units). The ITE Paring Generation (4th Edition) estimated weekday maximum parking demand for the retail use is 15-18 parking spaces (based on the "convenience store/retail" land use category in ITE Parking Generation).
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Existing Plus Project Intersection Operations

The LOS analysis results for the study intersections under existing plus project conditions are presented in Table 9. Table 10 shows the queue lengths for the major movements of the study intersections under existing conditions.

Under existing plus project conditions, all study intersections operate at acceptable LOS B or better during the AM and PM peak hours except for US 50/Al Tahoe Boulevard in the PM peak period, which still operates at LOS F as it does during existing conditions. There is no change in LOS for any of the study intersections from existing conditions to existing plus project conditions.

Figure 8 illustrates the Project volumes.

	Intersection	Control Type ¹	Peak	Existing 20 Conditions	16	Existing Plus	Project
			Hour	Delay ²	LOS	Delay	LOS
1		Cianal	AM	15	В	15	В
I	US 50/AI Tanoe Boulevard	Signai	PM	>80	F	>80	F
2		SSS 6	AM	2 (36)	A (E)	2 (36)	A (E)
Ζ	US 50/Johnson Boulevard	555C	PM	6 (>80)	A (F)	6 (>80)	A (F)
2	Al Tahoe Boulevard/Johnson	Cianal	AM	12	В	12	В
3	Boulevard-College Avenue	Signai	PM	13	В	13	В
,	Al Tahoe Boulevard/College	6666	AM	1 (14)	A (B)	1 (14)	A (B)
4	Way-Bijou Park Entrance	555C	PM	3 (20)	A (C)	3 (20)	A (C)
-	Al Tahoe Boulevard/Pioneer	Cinnal	AM	11	В	11	В
5	Trail	Signal	PM	12	В	12	В

Table 9 LOS Results – Existing Conditions and Existing Plus Project

Source: Fehr & Peers 2020

Notes: ¹ SSSC = Side Street Stop Control

² Delay is reported in seconds per vehicle for the overall intersection for signalized intersections, and for the overall intersection (worst movement) for side street stop controlled intersections.

Queue lengths reported in Table 10 have been rounded to the nearest 25 feet (based on the average length of a vehicle including space between vehicles). As shown in the table, there is one location during the AM peak hour where the 95th percentile queue exceeds the existing storage capacity by 1 vehicle. There are three locations during the PM peak hour where the 95th percentile queue exceed the existing storage capacity by 1-3 vehicles. The average queue lengths do not exceed existing storage capacity during the AM or PM peak hours. See Appendix A for detailed Synchro reports.

			AM Peak		PM Peak	
Intersection	Approach- Movement ¹	Storage Length (feet) ²	Avg. Queue Length ³ (feet)	95 th Percentile Length ³ (feet)	Avg. Queue Length ³ (feet)	95 th Percentile Length ³ (feet)
	WB-L	200	100	175	175	225
	WB-R	375	25	25	25	25
Rud	NB-L	100	25	25	25	25
bivu	NB-R	325	25	50	25	100
	SB-L	125	50	125	100	175
	WB-L	150	NR	25	NR	125
2. US 50/Jonnson	NB-R	100	NR	25	NR	100
DIVU	EB-R	175	NR	25	NR	25
3. Al Tahoe Blvd/	WB-L	100	25	25	25	25
Johnson Blvd-	EB-L	100	25	100	50	175
College Avenue	SB-R	100	25	25	25	50
	WB-L	100	NR	25	NR	25
4. Al Tanoe Bivd/	WB-R	125	NR	25	NR	25
College Way-bijou	EB-L	50	NR	25	NR	25
Fark Entrance	EB-R	100	NR	25	NR	25
	EB-R	100	25	25	25	50
5. Al Tanoe Bivd/	NB-L	100	50	125	50	125
	SB-R	100	25	50	25	50

Table 10 Queue Lengths – Existing Conditions

Source: Fehr & Peers 2020

Notes: ¹ EB = eastbound, WB = westbound, NB = northbound, SB = southbound; L = left, T = through, R = right

² Storage length is measured as the length of the turn pocket, or the distance to the nearest upstream intersection.
 ³ An average vehicle length of 25 feet is assumed; therefore, queue lengths are rounded to the nearest 25 feet.
 Bold indicates queues that exceed storage lengths.

⁴ NR=Not Reported

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Figure 8 Existing Plus Project Peak Hour Traffic Volumes and Lane Configurations

Figure 8

Peak Hour Traffic Volumes and Lane Configurations Existing Plus Project Conditions Lake Tahoe Community College Facilities Master Plan: Transportation and Parking Analysis January 28, 2021 Page 27 of 28

Vehicles Miles Traveled (VMT) Analysis

VMT for the proposed changes for the college uses will decrease since online enrollment is increasing and on-site housing will be provided. Therefore, this VMT analysis focuses on the new mixed residential portion of the Project.

VMT is a measure of network use or efficiency. It can be calculated by multiplying all vehicle trips generated by their associated trip lengths or by multiplying traffic volumes on roadway links by the associated trip distance of each link. For this project, the California Household Travel Survey (CHTS) data was used to determine home-based VMT/Capita. Home-Based VMT is the sum of the distances for all trips per weekday originating from or destined for a residential land use.

The CHTS is distributed by Caltrans to gather data needed to update the statewide database of household travel behavior. This database is used to model and forecast travel throughout the State. The last CHTS started in 2010 and ended in 2013. CHTS data provides residential trip length by trip purpose. This data can be used to calculate VMT. The residential VMT is divided by the residential population to determine home-based VMT/Capita.

Fehr & Peers utilized CHTS records for only the Lake Tahoe Basin in California and estimated the Project's average trip length using CHTS records for a geographic area covering roughly a 5-mile radius around the Project site.

The CHTS data was used to calculate the Project's home-based VMT/Capita and El Dorado County's and Placer County's (Tahoe Basin) home-based VMT/Capita. The Project's home-based VMT/Capita is compared to the Tahoe Basin region home-based VMT/Capita as a baseline. A potentially significant impact is identified if the Project's home-based VMT/Capita is greater than 85% of the Tahoe Basin region home-based VMT/Capita.

Additional assumptions include:

- People Per Household: 2.60 residents per household based on the national average from US Census data
- Trip Purpose Ratios: National Cooperative Highway Research Program (NCHRP) Report 716. The following trip purpose ratios were applied to the residential trip generation to estimate total home-based trip by purpose:
 - Home-based Work: 25% of residential trips
 - Home-based Other: 75% of residential trips

- Average Trip Lengths by Trip Purpose for the Project Site: California Household Travel Survey (CHTS) Data, 2012. The following trip lengths were obtained from the data aggregated based on the geographic location of the project:
 - Regional Trip Length
 - Multi-Family Home-based Work: 6.11 miles per trip
 - Multi-Family Home-based Other: 6.96 miles per trip
 - Project Trip Length
 - Multi-Family Home-based Work: 7.3 miles per trip
 - Multi-Family Home-based Other: 7.05 miles per trip

The resulting residential automobile home-based VMT/Capita baseline and significance threshold for the Tahoe Basin (El Dorado and Placer counties) by residential land use type are shown in Table 11

Table 11 Residential Daily Home-Based Automobile VMT Per Capita ThresholdValues

Tahoe	e Basin Region Home-Based VMT/	Capita
Residential Land Use Type	Region Average	Threshold (15% below region average)
All Households	23.59	20.05

Source: Fehr & Peers, 2020

Project Residential Automobile Home-based Trips Per Capita

The Project's existing average trip lengths were assumed to be equivalent to trip lengths associated with the residential uses adjacent to and in the immediate vicinity of the project. The census tracts considered as part of the "Buffered Area Near the Project Site" are shown in Figure 1.

Based on Average Trip Lengths by Trip Purpose for the Project Site: California Household Travel Survey (CHTS) Data, 2012, the following trip lengths were obtained from the data aggregated based on the geographic location of the project:

- o Multi-Family Home-based Work: 7.3 miles per trip
- Multi-Family Home-based Other: 7.05 miles per trip

Using Project trip generation data described above, Home based VMT/Capita for the Project was found to be 19.24 miles, which is less than the home-based VMT/Capita threshold of the Tahoe Region (20.05 miles), resulting in a less than significant impact. Detailed calculations of VMT for the Tahoe Basin and the Project site are provided in Appendix B.

APPENDIX A SYNCHRO RESULTS

EXISTING CONDITIONS AM

HCM 6th Signalized Intersection Summary 1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd

Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations Image: Configuration in the configuratingrequare in the configuratin the configuratin the con
Lane Configurations Image: Configuration in the image: Configuration
Traffic Volume (veh/h) 5 8 10 255 5 85 8 1020 316 91 1022 6 Future Volume (veh/h) 5 8 10 255 5 85 8 1020 316 91 1022 6 Initial Q (Qb), veh 0
Future Volume (veh/h) 5 8 10 255 5 85 8 1020 316 91 1022 6 Initial Q (Qb), veh 0
Initial Q (Qb), veh 0
Ped-Bike Adj(A_pbT) 1.00 0.98 1.00 0.99 1.00 0.98 1.00 0.98 Parking Bus, Adj 1.00 <
Parking Bus, Adj 1.00
Work Zone On Approach No No No No Adj Sat Flow, veh/h/ln 1870 <
Adj Sat Flow, veh/h/ln 1870 1870 1870 1870 1870 1870 1870 1870
Adi Flow Rate veh/h 6 10 12 315 0 104 10 1244 385 111 1246 7
Peak Hour Factor 0.82 0.82 0.82 0.82 0.82 0.82 0.82 0.82
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Cap, veh/h 18 30 36 508 0 403 36 1471 645 201 1918 11
Arrive On Green 0.05 0.05 0.05 0.14 0.00 0.14 0.02 0.41 0.41 0.11 0.53 0.53
Sat Flow, veh/h 365 608 730 3563 0 1575 1781 3554 1559 1781 3623 20
Grp Volume(v) veh/h 28 0 0 315 0 104 10 1244 385 111 611 642
Grp Sat Flow(s) veh/h/ln 1703 0 0 1781 0 1575 1781 1777 1559 1781 1777 1866
Q Serve(a, s) s 0.9 0.0 0.0 50 0.0 0.0 0.3 18.9 11.5 3.5 14.7 14.7
Cycle Q Clear(q, c) = 0.9 0.0 0.0 50 0.0 0.0 0.0 0.3 18.9 11.5 3.5 14.7 14.7
Prop In Lane 0.21 0.43 1.00 1.00 1.00 1.00 1.00 0.01
Lane Grp Cap(c) veh/h 85 0 0 508 0 403 36 1471 645 201 941 988
V/C Ratio(X) 0.33 0.00 0.00 0.62 0.00 0.26 0.27 0.85 0.60 0.55 0.65 0.65
Avail Cap(c, a) veh/h 399 0 0 1789 0 969 507 3569 1566 596 1784 1874
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Lipstream Filter/I) 1.00 0.00 0.00 1.00 1.00 1.00 1.00 1.0
Uniform Delay (d) s/veb 27.4 0.0 0.0 24.1 0.0 17.7 28.8 15.8 13.6 25.1 10.1 10.1
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Approach Delay, which 20 2 2 2 2 2 0 1504
Approach LOS 22.9 15.9 11.0
Approach LOS C C B B
Timer - Assigned Phs 1 2 4 5 6 8
Phs Duration (G+Y+Rc), s 11.6 29.6 6.5 4.7 36.5 12.0
Change Period (Y+Rc), s 4.9 * 4.9 3.5 3.5 4.9 3.5
Max Green Setting (Gmax), s 20.0 * 60 14.0 17.0 60.0 30.0
Max Q Clear Time (g_c+11), s 5.5 20.9 2.9 2.3 16.7 7.0
Green Ext Time (p_c), s 0.0 3.6 0.0 0.0 2.6 0.3
Intersection Summary
HCM 6th Ctrl Delay 15.1
HCM 6th LOS B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

LTCC Facilities Master Plan

Queues <u>1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd</u>

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	8	10	255	5	85	8	1020	316	91	1022	6
Future Volume (vph)	5	8	10	255	5	85	8	1020	316	91	1022	6
Confl. Peds. (#/hr)	3					3	2		3	3		2
Confl. Bikes (#/hr)			1						4			3
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)				49%								
Lane Group Flow (vph)	0	28	0	159	158	104	10	1244	385	111	1253	0
Act Effct Green (s)		9.1		14.7	14.7	26.1	9.1	40.9	40.9	11.3	54.7	
Actuated g/C Ratio		0.11		0.17	0.17	0.30	0.11	0.48	0.48	0.13	0.64	
v/c Ratio		0.15		0.55	0.55	0.19	0.05	0.74	0.41	0.48	0.56	
Control Delay		37.4		45.4	45.2	4.9	50.6	22.8	4.0	50.4	12.5	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		37.4		45.4	45.2	4.9	50.6	22.8	4.0	50.4	12.5	
LOS		D		D	D	А	D	С	А	D	В	
Approach Delay		37.4			35.3			18.6			15.6	
Approach LOS		D			D			В			В	
Queue Length 50th (ft)		9		90	89	0	5	287	7	61	194	
Queue Length 95th (ft)		40		174	172	24	24	456	44	135	398	
Internal Link Dist (ft)		509			2061			1987			2329	
Turn Bay Length (ft)				205		370	90		315	125		
Base Capacity (vph)		327		662	665	652	395	2627	1247	465	2744	
Starvation Cap Reductn		0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	0	0	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.09		0.24	0.24	0.16	0.03	0.47	0.31	0.24	0.46	
Intersection Summary												
Cycle Length: 139.4												
Actuated Cycle Length: 86.1												
Control Type: Actuated-Uncoo	rdinated											
Maximum v/c Ratio: 0.74												
Intersection Signal Delay: 19.6	5			In	tersectior	n LOS: B						
Intersection Capacity Utilizatio	n 60.7%			IC	U Level o	of Service	В					
Analysis Period (min) 15												

Intersection

Int Delay, s/veh	1.7						
Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	- 11	1		24	^	۲.	1
Traffic Vol, veh/h	1065	27	5	104	908	23	85
Future Vol, veh/h	1065	27	5	104	908	23	85
Conflicting Peds, #/hr	0	4	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	175	-	160	-	0	105
Veh in Median Storage	e, # 0	-	-	-	0	1	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	1210	31	6	118	1032	26	97

Major/Minor	Major1	Ν	/lajor2		Ν	/linor1		
Conflicting Flow All	0	0	1210	1245	0	1978	609	
Stage 1	-	-	-	-	-	1214	-	
Stage 2	-	-	-	-	-	764	-	
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94	
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-	
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-	
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32	
Pot Cap-1 Maneuver	-	-	243	555	-	54	438	
Stage 1	-	-	-	-	-	244	-	
Stage 2	-	-	-	-	-	420	-	
Platoon blocked, %	-	-			-			
Mov Cap-1 Maneuve	r -	-	510	510	-	41	436	
Mov Cap-2 Maneuve	r -	-	-	-	-	144	-	
Stage 1	-	-	-	-	-	243	-	
Stage 2	-	-	-	-	-	318	-	
Approach	EB		WB			NB		

Approach	EB	WB	NB		
HCM Control Delay, s	0	1.5	19.8		
HCM LOS			С		

Minor Lane/Major Mvmt	NBLn11	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	144	436	-	-	510	-
HCM Lane V/C Ratio	0.182	0.222	-	-	0.243	-
HCM Control Delay (s)	35.5	15.6	-	-	14.3	-
HCM Lane LOS	E	С	-	-	В	-
HCM 95th %tile Q(veh)	0.6	0.8	-	-	0.9	-

HCM 6th Signalized Intersection Summary 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲.	•	1	۲	el el			\$			با	1
Traffic Volume (veh/h)	100	140	47	15	239	91	15	5	4	33	24	119
Future Volume (veh/h)	100	140	47	15	239	91	15	5	4	33	24	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	169	57	18	288	110	18	6	5	40	29	143
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	448	370	314	378	145	327	104	54	329	193	345
Arrive On Green	0.12	0.24	0.24	0.18	0.30	0.30	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	1870	1545	1781	1280	489	709	477	247	736	887	1582
Grp Volume(v), veh/h	120	169	57	18	0	398	29	0	0	69	0	143
Grp Sat Flow(s),veh/h/ln	1781	1870	1545	1781	0	1769	1433	0	0	1623	0	1582
Q Serve(g_s), s	2.2	2.6	1.0	0.3	0.0	6.9	0.0	0.0	0.0	0.0	0.0	2.6
Cycle Q Clear(g_c), s	2.2	2.6	1.0	0.3	0.0	6.9	0.4	0.0	0.0	1.0	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.28	0.62		0.17	0.58		1.00
Lane Grp Cap(c), veh/h	214	448	370	314	0	523	485	0	0	522	0	345
V/C Ratio(X)	0.56	0.38	0.15	0.06	0.00	0.76	0.06	0.00	0.00	0.13	0.00	0.42
Avail Cap(c_a), veh/h	1317	2212	1827	1053	0	2092	1395	0	0	1430	0	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	10.8	10.2	11.6	0.0	10.8	10.5	0.0	0.0	10.7	0.0	11.4
Incr Delay (d2), s/veh	0.9	0.2	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	0.8	0.9	0.3	0.1	0.0	1.9	0.1	0.0	0.0	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.9	11.0	10.2	11.6	0.0	11.7	10.5	0.0	0.0	10.8	0.0	11.7
LnGrp LOS	В	В	В	В	А	В	В	А	А	В	А	В
Approach Vol, veh/h		346			416			29			212	
Approach Delay, s/veh		12.2			11.7			10.5			11.4	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	14.9		11.4	9.5	13.0		11.4				
Change Period (Y+Rc), s	3.5	4.9		4.0	3.5	4.9		4.0				
Max Green Setting (Gmax), s	25.0	40.0		30.0	20.0	40.0		27.0				
Max Q Clear Time (g_c+l1), s	4.2	8.9		2.4	2.3	4.6		4.6				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.4		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			11.8									
HCM 6th LOS			В									

Queues 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	100	140	47	15	239	91	15	5	4	33	24	119
Future Volume (vph)	100	140	47	15	239	91	15	5	4	33	24	119
Confl. Peds. (#/hr)			1	1			1					1
Confl. Bikes (#/hr)			2			1			1			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	169	57	18	398	0	0	29	0	0	69	143
Act Effct Green (s)	9.7	23.6	23.6	8.4	16.1			13.2			13.2	13.2
Actuated g/C Ratio	0.23	0.55	0.55	0.20	0.38			0.31			0.31	0.31
v/c Ratio	0.30	0.16	0.06	0.05	0.58			0.06			0.15	0.25
Control Delay	23.2	8.2	3.6	25.7	18.0			14.9			17.0	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Delay	23.2	8.2	3.6	25.7	18.0			14.9			17.0	5.2
LOS	С	А	А	С	В			В			В	A
Approach Delay		12.6			18.4			14.9			9.0	
Approach LOS		В			В			В			А	
Queue Length 50th (ft)	24	14	0	4	71			4			13	0
Queue Length 95th (ft)	95	82	17	26	223			23			48	29
Internal Link Dist (ft)		2061			1371			422			2118	
Turn Bay Length (ft)	105			100								100
Base Capacity (vph)	1132	1700	1414	976	1570			1081			1110	1166
Starvation Cap Reductn	0	0	0	0	0			0			0	0
Spillback Cap Reductn	0	0	0	0	0			0			0	0
Storage Cap Reductn	0	0	0	0	0			0			0	0
Reduced v/c Ratio	0.11	0.10	0.04	0.02	0.25			0.03			0.06	0.12
Intersection Summary												
Cycle Length: 107.4												
Actuated Cycle Length: 42.6	5											
Control Type: Actuated-Unc	oordinated											
Maximum v/c Ratio: 0.58												
Intersection Signal Delay: 14	4.3			In	tersectior	n LOS: B						
Intersection Capacity Utilizat	tion 43.5%			IC	ULevelo	of Service	Α					

Analysis Period (min) 15

1.2

Intersection

Int Delay, s/veh

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<u>۲</u>	•	1	- ሽ	↑	1		4			4	
Traffic Vol, veh/h	10	137	25	34	323	5	11	0	11	0	0	5
Future Vol, veh/h	10	137	25	34	323	5	11	0	11	0	0	5
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	90	90	-	125	-	-	-	-	-	-
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	190	35	47	449	7	15	0	15	0	0	7

Major/Minor	Major1		M	ajor2		l	Minor1		l	Minor2			
Conflicting Flow All	458	0	0	225	0	0	768	770	190	788	798	451	
Stage 1	-	-	-	-	-	-	218	218	-	545	545	-	
Stage 2	-	-	-	-	-	-	550	552	-	243	253	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	- 2	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	1103	-	-	1344	-	-	319	331	852	309	319	608	
Stage 1	-	-	-	-	-	-	784	723	-	523	519	-	
Stage 2	-	-	-	-	-	-	519	515	-	761	698	-	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	1101	-	-	1344	-	-	304	315	852	292	303	607	
Mov Cap-2 Maneuver	-	-	-	-	-	-	304	315	-	292	303	-	
Stage 1	-	-	-	-	-	-	774	714	-	515	500	-	
Stage 2	-	-	-	-	-	-	495	496	-	738	689	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	0.5	0.7	13.6	11	
HCM LOS			В	В	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1	
Capacity (veh/h)	448	1101	-	-	1344	-	-	607	
HCM Lane V/C Ratio	0.068	0.013	-	-	0.035	-	-	0.011	
HCM Control Delay (s)	13.6	8.3	-	-	7.8	-	-	11	
HCM Lane LOS	В	А	-	-	А	-	-	В	
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0	

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	ሻ	1	5	•	•	1
Traffic Volume (veh/h)	79	103	188	347	289	121
Future Volume (veh/h)	79	103	188	347	289	121
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	124	227	418	348	146
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	345	307	288	1013	464	392
Arrive On Green	0.19	0.19	0.16	0.54	0.25	0.25
Sat Flow, veh/h	1781	1585	1781	1870	1870	1582
Grp Volume(v). veh/h	95	124	227	418	348	146
Grp Sat Flow(s).veh/h/ln	1781	1585	1781	1870	1870	1582
Q Serve(a_s), s	1.7	2.5	4.5	4.9	6.4	2.8
Cycle Q Clear(a c), s	1.7	2.5	4.5	4.9	6.4	2.8
Prop In Lane	1.00	1.00	1.00		••••	1.00
Lane Grp Cap(c), veh/h	345	307	288	1013	464	392
V/C Ratio(X)	0.28	0.40	0.79	0.41	0.75	0.37
Avail Cap(c, a) veh/h	1444	1285	1203	2274	2274	1923
HCM Platoon Ratio	1 00	1 00	1 00	1 00	1 00	1 00
Unstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d) s/veh	12 7	13.1	14 9	5.0	12.9	11 5
Incr Delay (d2) s/veh	0.2	03	1.5	0.0	0.9	0.2
Initial O Delay(d3) s/veh	0.2	0.0	0.0	0.1	0.0	0.2
%ile BackOfO(50%) veh/lp	0.0	0.0	1.6	0.0	2.0	0.0
June DackOra(30%), Veri/III	0.0 h	0.0	1.0	0.9	2.0	0.7
InGro Delay(d) shoch	12.0	12 /	16.9	51	12.0	11 7
LIGIP Delay(u),S/Vell	12.9 D	13.4 D	10.0 D	0.1 ^	13.0 D	П./ В
Approach Val. ush/h	D 010	D	D	A 645	D	D
Approach Vol, ven/n	219			645	494	
Approach Delay, s/veh	13.2			9.2	13.2	
Approach LOS	В			A	В	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		25.0		12.1	10.9	14.1
Change Period (Y+Rc), s		4.9		4.9	4.9	4.9
Max Green Setting (Gmax) s		45.0		30.0	25.0	45.0
Max Q Clear Time (g c+l1) s		6.9		4.5	6.5	8.4
Green Ext Time (n_c) s		0.8		0.1	0.1	0.7
Interpection Currents		2.5		•••	•••	•
Intersection Summary			41.0			
HCM 6th Ctrl Delay			11.3			
HCM 6th LOS			В			

Queues 5: Pioneer Trail & Al Tahoe Blvd

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	79	103	188	347	289	121
Future Volume (vph)	79	103	188	347	289	121
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	124	227	418	348	146
Act Effct Green (s)	8.7	8.7	10.6	29.7	14.0	14.0
Actuated g/C Ratio	0.18	0.18	0.22	0.61	0.29	0.29
v/c Ratio	0.30	0.32	0.59	0.37	0.65	0.28
Control Delay	23.6	8.2	25.1	5.4	21.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	8.2	25.1	5.4	21.7	7.0
LOS	С	А	С	А	С	А
Approach Delay	14.9			12.4	17.4	
Approach LOS	В			В	В	
Queue Length 50th (ft)	22	0	54	44	80	7
Queue Length 95th (ft)	68	33	127	79	162	37
Internal Link Dist (ft)	4524			1363	1956	
Turn Bay Length (ft)		100	100			100
Base Capacity (vph)	1137	1061	947	1863	1685	1410
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.12	0.24	0.22	0.21	0.10
Intersection Summary						
Cycle Length: 114.7						
Actuated Cycle Length: 48.6	5					
Control Type: Actuated-Unco	oordinated					
Maximum v/c Ratio: 0.65						
Intersection Signal Delay: 14	4.6			In	tersectior	LOS: B
Intersection Capacity Utilizat	tion 44.7%			IC	U Level o	of Service /
Analysis Period (min) 15						

EXISTING CONDITIONS PM

HCM 6th Signalized Intersection Summary 1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		5	स	1	5	44	1	5	≜ 15	
Traffic Volume (veh/h)	11	9	9	405	6	190	7	1476	285	128	1452	5
Future Volume (veh/h)	11	9	9	405	6	190	7	1476	285	128	1452	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	10	10	450	0	209	8	1622	313	141	1596	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	25	25	531	0	728	28	1215	531	554	2361	7
Arrive On Green	0.05	0.05	0.05	0.15	0.00	0.15	0.02	0.34	0.34	0.31	0.65	0.65
Sat Flow, veh/h	651	542	542	3563	0	1579	1781	3554	1552	1781	3633	11
Grp Volume(v), veh/h	32	0	0	450	0	209	8	1622	313	141	780	821
Grp Sat Flow(s).veh/h/ln	1735	0	0	1781	0	1579	1781	1777	1552	1781	1777	1868
Q Serve(q s), s	2.0	0.0	0.0	13.5	0.0	0.0	0.5	37.6	18.3	6.5	30.2	30.2
Cycle Q Clear(q c), s	2.0	0.0	0.0	13.5	0.0	0.0	0.5	37.6	18.3	6.5	30.2	30.2
Prop In Lane	0.37		0.31	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	79	0	0	531	0	728	28	1215	531	554	1155	1214
V/C Ratio(X)	0.41	0.00	0.00	0.85	0.00	0.29	0.28	1.34	0.59	0.25	0.68	0.68
Avail Cap(c a), veh/h	158	0	0	939	0	909	194	1215	531	554	1155	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.80	0.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	0.0	0.0	45.6	0.0	18.5	53.5	36.2	29.8	28.4	12.0	12.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	1.2	0.0	0.1	2.0	156.6	4.8	0.1	3.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	0.9	0.0	0.0	6.1	0.0	3.3	0.2	41.9	7.3	2.7	11.3	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	0.0	0.0	46.8	0.0	18.5	55.5	192.8	34.6	28.4	15.2	15.1
LnGrp LOS	D	А	А	D	А	В	Е	F	С	С	В	В
Approach Vol. veh/h		32			659			1943			1742	
Approach Delay, s/veh		52.3			37.8			166.7			16.2	
Approach LOS		D			D			F			В	
Timer - Assigned Phs	1	2		4	5	6		8				
Phy Duration (G+V+Rc) s	30.1	12.5		85	52	76.4		10.0				
Change Period (V+Rc), s	10	*/0		3.5	3.5	10.4		3.5				
Max Green Setting (Gmax) s	18.0	* 38		10.0	12.0	43.6		20.0				
Max O Clear Time $(q, c+11)$ s	8.5	30 6		10.0	2.5	32.0		15.5				
Green Ext Time (n, c) s	0.0	0.0		4.0	2.5	32.2		0.5				
	0.0	0.0		0.0	0.0	J.Z		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			86.6									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

LTCC Facilities Master Plan

Queues 1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	11	9	9	405	6	190	7	1476	285	128	1452	5
Future Volume (vph)	11	9	9	405	6	190	7	1476	285	128	1452	5
Confl. Peds. (#/hr)	2					2	4					4
Confl. Bikes (#/hr)									8			2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)				49%								
Lane Group Flow (vph)	0	32	0	227	225	209	8	1622	313	141	1601	0
Act Effct Green (s)		8.0		19.1	19.1	37.1	8.0	54.1	54.1	18.0	73.3	
Actuated g/C Ratio		0.07		0.17	0.17	0.34	0.07	0.49	0.49	0.16	0.67	
v/c Ratio		0.24		0.78	0.77	0.31	0.06	0.93	0.35	0.49	0.68	
Control Delay		41.1		60.7	59.8	3.1	48.7	39.3	6.7	48.3	16.8	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		41.1		60.7	59.8	3.1	48.7	39.3	6.7	48.3	16.8	
LOS		D		Е	E	А	D	D	А	D	В	
Approach Delay		41.1			42.2			34.1			19.3	
Approach LOS		D			D			С			В	
Queue Length 50th (ft)		15		164	162	0	5	~593	25	92	345	
Queue Length 95th (ft)		46		226	224	32	22	#902	99	156	#761	
Internal Link Dist (ft)		509			2061			1987			2329	
Turn Bay Length (ft)				205		370	90		315	125		
Base Capacity (vph)		168		443	445	668	193	1741	891	289	2358	
Starvation Cap Reductn		0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	0	0	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.19		0.51	0.51	0.31	0.04	0.93	0.35	0.49	0.68	
Intersection Summary												
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 0 (0%), Referenced to	phase 2:1	NBT and	6:SBT, S	tart of Gro	een							
Control Type: Actuated-Coord	inated											
Maximum v/c Ratio: 0.93												
Intersection Signal Delay: 29.5	5			In	tersectior	LOS: C						
Intersection Capacity Utilizatio	n 77.1%			IC	U Level o	of Service	D					
Analysis Period (min) 15												
~ Volume exceeds capacity,	queue is	theoretic	ally infini	te.								
Queue shown is maximum	after two	cycles.										
# 95th percentile volume exc	eeds cap	bacity, qu	eue may	be longer	ſ.							
Queue shown is maximum	after two	cycles.										

Intersection

Int Delay, s/veh

Int Delay, s/veh	5.5						
Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	- 11	1		24	^	ľ	1
Traffic Vol, veh/h	1464	52	5	196	1482	35	178
Future Vol, veh/h	1464	52	5	196	1482	35	178
Conflicting Peds, #/hr	0	11	0	11	0	0	5
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	175	-	160	-	0	105
Veh in Median Storage	,# 0	-	-	-	0	1	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	1591	57	5	213	1611	38	193

Major/Minor	Major1	1	Major2		ľ	Minor1				
Conflicting Flow All	0	0	1591	1659	0	2844	812			
Stage 1	-	-	-	-	-	1602	-			
Stage 2	-	-	-	-	-	1242	-			
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-			
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	138	384	-	~ 14	322			
Stage 1	-	-	-	-	-	151	-			
Stage 2	-	-	-	-	-	236	-			
Platoon blocked, %	-	-			-					
Mov Cap-1 Maneuver	-	-	336	336	-	~ 5	317			
Mov Cap-2 Maneuver	-	-	-	-	-	51	-			
Stage 1	-	-	-	-	-	149	-			
Stage 2	-	-	-	-	-	83	-			
Approach	EB		WB			NB				
HCM Control Delay, s	0		4			57.2				
HCM LOS						F				
						·				
Miner Lene (Meier Mu				ГРТ						
	nt			EBI	EBR	VVBL	WBI			
Capacity (veh/h)		51	317	-	-	336	-			
HCM Lane V/C Ratio	,	0.746	0.61	-	-	0.65	-			
HCM Control Delay (s	5)	182.6	32.6	-	-	33.5	-			
HCM Lane LOS	,	F	D	-	-	D	-			
HCM 95th %tile Q(ver	1)	3.1	3.8	-	-	4.3	-			
Notes										
~: Volume exceeds ca	apacity	\$: De	elay exc	eeds 30)0s	+: Com	putation N	lot Defined	*: All major volume in platoon	

HCM 6th Signalized Intersection Summary 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ľ	•	1	<u> </u>	¢Î,			\$			र्स	1
Traffic Volume (veh/h)	190	273	42	2	249	70	40	20	8	136	19	186
Future Volume (veh/h)	190	273	42	2	249	70	40	20	8	136	19	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	310	48	2	283	80	45	23	9	155	22	211
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	489	413	288	374	106	278	124	33	498	59	380
Arrive On Green	0.15	0.26	0.26	0.16	0.27	0.27	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	1870	1579	1781	1393	394	513	514	136	1302	244	1569
Grp Volume(v), veh/h	216	310	48	2	0	363	77	0	0	177	0	211
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	0	1786	1163	0	0	1546	0	1569
Q Serve(g_s), s	4.3	5.4	0.9	0.0	0.0	6.9	0.1	0.0	0.0	0.0	0.0	4.4
Cycle Q Clear(g_c), s	4.3	5.4	0.9	0.0	0.0	6.9	3.2	0.0	0.0	3.1	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.22	0.58		0.12	0.88		1.00
Lane Grp Cap(c), veh/h	275	489	413	288	0	480	435	0	0	557	0	380
V/C Ratio(X)	0.79	0.63	0.12	0.01	0.00	0.76	0.18	0.00	0.00	0.32	0.00	0.56
Avail Cap(c_a), veh/h	1203	2021	1706	962	0	1930	1197	0	0	1245	0	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	12.1	10.4	13.0	0.0	12.4	11.1	0.0	0.0	11.8	0.0	12.3
Incr Delay (d2), s/veh	1.9	0.5	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	1.6	1.9	0.2	0.0	0.0	2.1	0.4	0.0	0.0	0.9	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	12.6	10.5	13.0	0.0	13.3	11.2	0.0	0.0	11.9	0.0	12.8
LnGrp LOS	В	В	В	В	А	В	В	Α	А	В	Α	В
Approach Vol, veh/h		574			365			77			388	
Approach Delay, s/veh		14.1			13.3			11.2			12.4	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	14.8		13.0	9.5	14.6		13.0				
Change Period (Y+Rc), s	3.5	4.9		4.0	3.5	4.9		4.0				
Max Green Setting (Gmax), s	25.0	40.0		30.0	20.0	40.0		27.0				
Max Q Clear Time (g_c+I1), s	6.3	8.9		5.2	2.0	7.4		6.4				
Green Ext Time (p_c), s	0.1	0.7		0.2	0.0	0.7		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			В									

Queues 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	190	273	42	2	249	70	40	20	8	136	19	186
Future Volume (vph)	190	273	42	2	249	70	40	20	8	136	19	186
Confl. Peds. (#/hr)	1		2	2		1			5	5		
Confl. Bikes (#/hr)						3						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	310	48	2	363	0	0	77	0	0	177	211
Act Effct Green (s)	11.4	30.0	30.0	6.7	15.8			13.5			13.5	13.5
Actuated g/C Ratio	0.21	0.55	0.55	0.12	0.29			0.25			0.25	0.25
v/c Ratio	0.58	0.30	0.06	0.01	0.68			0.22			0.51	0.38
Control Delay	29.5	9.3	3.6	32.5	25.4			19.3			25.8	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Delay	29.5	9.3	3.6	32.5	25.4			19.3			25.8	5.8
LOS	С	А	А	С	С			В			С	A
Approach Delay		16.4			25.4			19.3			15.0	
Approach LOS		В			С			В			В	
Queue Length 50th (ft)	56	37	0	1	85			17			45	0
Queue Length 95th (ft)	174	160	17	8	249			60			132	44
Internal Link Dist (ft)		2061			1371			422			2118	
Turn Bay Length (ft)	105			100								100
Base Capacity (vph)	903	1556	1297	722	1406			873			853	1051
Starvation Cap Reductn	0	0	0	0	0			0			0	0
Spillback Cap Reductn	0	0	0	0	0			0			0	0
Storage Cap Reductn	0	0	0	0	0			0			0	0
Reduced v/c Ratio	0.24	0.20	0.04	0.00	0.26			0.09			0.21	0.20
Intersection Summary												
Cycle Length: 107.4												
Actuated Cycle Length: 54.5	5											
Control Type: Actuated-Unc	oordinated											
Maximum v/c Ratio: 0.68												
Intersection Signal Delay: 18	3.5			In	tersectior	n LOS: B						
Intersection Capacity Utilizat	tion 51.2%			IC	U Level of	of Service	А					
Analysis Period (min) 15												

3.2

Intersection

Int Delay, s/veh

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	<u>٦</u>	↑	1	٦.	↑	1		4			4	
Traffic Vol, veh/h	23	354	21	50	278	12	40	0	55	3	1	10
Future Vol, veh/h	23	354	21	50	278	12	40	0	55	3	1	10
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	90	90	-	125	-	-	-	-	-	-
Veh in Median Storage,	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	427	25	60	335	14	48	0	66	4	1	12

Major/Minor	Major1		Major	2		Minor1			Minor2			
Conflicting Flow All	351	0	0 45	2 0	0	952	954	427	986	965	337	
Stage 1	-	-	-		-	483	483	-	457	457	-	
Stage 2	-	-	-		-	469	471	-	529	508	-	
Critical Hdwy	4.12	-	- 4.1	2 -	-	7.12	6.52	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-		-	6.12	5.52	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-		-	6.12	5.52	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	- 2.21	8 -	-	3.518	4.018	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	1208	-	- 110	9 -	-	239	259	628	227	255	705	
Stage 1	-	-	-		-	565	553	-	583	568	-	
Stage 2	-	-	-		-	575	560	-	533	539	-	
Platoon blocked, %		-	-	-	-							
Mov Cap-1 Maneuver	1206	-	- 110	9 -	-	220	239	628	191	235	704	
Mov Cap-2 Maneuver	-	-	-		-	220	239	-	191	235	-	
Stage 1	-	-	-		-	552	540	-	568	536	-	
Stage 2	-	-	-		-	533	529	-	466	527	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	0.5	1.2	20	14.2	
HCM LOS			С	В	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S	SBLn1		
Capacity (veh/h)	353	1206	-	-	1109	-	-	410		ļ
HCM Lane V/C Ratio	0.324	0.023	-	-	0.054	-	-	0.041		
HCM Control Delay (s)	20	8.1	-	-	8.4	-	-	14.2		
HCM Lane LOS	С	Α	-	-	А	-	-	В		
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0.2	-	-	0.1		

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	5	1	5	†	†	1
Traffic Volume (veh/h)	166	253	167	341	363	130
Future Volume (veh/h)	166	253	167	341	363	130
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	175	266	176	359	382	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	382	340	238	983	490	406
Arrive On Green	0.21	0.21	0.13	0.53	0.26	0.26
Sat Flow, veh/h	1781	1585	1781	1870	1870	1551
Grp Volume(v), veh/h	175	266	176	359	382	137
Grp Sat Flow(s) veh/h/ln	1781	1585	1781	1870	1870	1551
Q Serve(a, s), s	32	6.0	3.6	43	7 1	27
Cycle Q Clear(q, c) s	3.2	6.0	3.6	4.3	71	27
Prop In Lane	1 00	1 00	1 00	т.0	1.1	1 00
Lane Grn Can(c) veh/h	382	340	238	983	490	406
V/C Ratio(X)	0.46	0.78	0 74	0.37	0.78	0.34
Avail Can(c, a) veh/h	1416	1260	1180	2231	2231	1850
HCM Platoon Ratio	1 00	1 00	1 00	1 00	1 00	1 00
I Instream Filter/I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d) shuch	12.00	1/ 0	1.00	5.2	12.00	11.00
Incr Delay (d2) s/ven	12.9	14.0	1.7	0.0	10	0.0
Initial O Delay (u_2), S/VeII	0.5	0.0	0.0	0.1	1.0	0.2
Wile PeekOfO(50%) veh/m	0.0	0.0	0.0	0.0	0.0	0.0
Mile BackUIQ(50%), Ven/In	I.U h	0.1	1.3	0.9	2.2	0.7
Unsig. Wovement Delay, s/ve	12.0	155	17 4	<i>د</i> م	14.0	14 5
Lingrp Delay(d),s/ven	13.2	15.5	17.4	5.3	14.0	11.5
	B	В	В	A	B	В
Approach Vol, veh/h	441			535	519	
Approach Delay, s/veh	14.6			9.3	13.3	
Approach LOS	В			А	В	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		24.7		13.0	10.0	14.8
Change Period (Y+Rc), s		4.9		4.9	4.9	4.9
Max Green Setting (Gmax) s		45.0		30.0	25.0	45.0
Max Q Clear Time (q. c+11)	;	6.3		8.0	5.6	91
Green Ext Time (p c). s		0.7		0.2	0.1	0.7
Intersection Summary						
			10.0			
			12.Z			
			В			

Queues 5: Pioneer Trail & Al Tahoe Blvd

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	
Traffic Volume (vph)	166	253	167	341	363	130	
Future Volume (vph)	166	253	167	341	363	130	
Confl. Bikes (#/hr)						1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	175	266	176	359	382	137	
Act Effct Green (s)	10.5	10.5	9.7	30.2	15.3	15.3	
Actuated g/C Ratio	0.21	0.21	0.19	0.59	0.30	0.30	
v/c Ratio	0.48	0.50	0.52	0.33	0.69	0.26	
Control Delay	25.3	7.1	26.7	6.1	23.5	7.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	25.3	7.1	26.7	6.1	23.5	7.8	
LOS	С	А	С	А	С	А	
Approach Delay	14.3			12.9	19.3		
Approach LOS	В			В	В		
Queue Length 50th (ft)	44	0	44	41	91	9	
Queue Length 95th (ft)	123	55	124	100	218	48	
Internal Link Dist (ft)	4524			1363	1956		
Turn Bay Length (ft)		100	100			100	
Base Capacity (vph)	1098	1083	915	1863	1627	1365	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.16	0.25	0.19	0.19	0.23	0.10	
Intersection Summary							
Cycle Length: 114.7							
Actuated Cycle Length: 51							
Control Type: Actuated-Unco	ordinated						
Maximum v/c Ratio: 0.69							
Intersection Signal Delay: 15.	6			In	tersection	LOS: B	
Intersection Capacity Utilization	on 49.8%			IC	U Level o	of Service A	А
Analysis Period (min) 15							

PROJECT CONDITIONS AM

HCM 6th Signalized Intersection Summary 1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd

Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR Lane Configurations Image: Configuration in the image: Co
Lane Configurations Image: Configuration of the image: Configuration
Traffic Volume (veh/h) 5 8 10 271 5 93 8 1020 316 92 1022 6 Future Volume (veh/h) 5 8 10 271 5 93 8 1020 316 92 1022 6 Initial Q (Qb), veh 0
Future Volume (veh/h) 5 8 10 271 5 93 8 1020 316 92 1022 6 Initial Q (Qb), veh 0
Initial Q (Qb), veh 0 <th0< th=""> <th0< th=""></th0<></th0<>
Ped-Bike Adj(A_pbT) 1.00 0.98 1.00 0.99 1.00 0.98 1.00 0.98 Darking Pure Adji 1.00
Derling Due Adi 100 100 100 100 100 100 100 100 100 10
Parking Bus, Adj 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Work Zone On Approach No No No No
Adj Sat Flow, veh/h/ln 1870 1870 1870 1870 1870 1870 1870 1870
Adj Flow Rate, veh/h 6 10 12 334 0 113 10 1244 385 112 1246 7
Peak Hour Factor 0.82 0.82 0.82 0.82 0.82 0.82 0.82 0.82
Percent Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Cap, veh/h 18 30 36 508 0 404 36 1470 645 201 1919 11
Arrive On Green 0.05 0.05 0.05 0.14 0.00 0.14 0.02 0.41 0.41 0.11 0.53 0.53
Sat Flow, veh/h 365 608 730 3563 0 1575 1781 3554 1559 1781 3623 20
Grp Volume(v), veh/h 28 0 0 334 0 113 10 1244 385 112 611 642
Grp Sat Flow(s),veh/h/ln 1703 0 0 1781 0 1575 1781 1777 1559 1781 1777 1866
Q Serve(g_s), s 0.9 0.0 0.0 5.3 0.0 0.0 0.3 18.9 11.5 3.6 14.7 14.7
Cycle Q Clear(g_c), s 0.9 0.0 0.0 5.3 0.0 0.0 0.3 18.9 11.5 3.6 14.7 14.7
Prop In Lane 0.21 0.43 1.00 1.00 1.00 1.00 0.01
Lane Grp Cap(c), veh/h 85 0 0 508 0 404 36 1470 645 201 941 988
V/C Ratio(X) 0.33 0.00 0.00 0.66 0.00 0.28 0.27 0.85 0.60 0.56 0.65 0.65
Avail Cap(c_a), veh/h 399 0 0 1787 0 969 506 3566 1565 596 1783 1873
HCM Platoon Ratio 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Upstream Filter(I) 1.00 0.00 0.00 1.00 0.00 1.00 1.00 1.0
Uniform Delay (d), s/veh 27.4 0.0 0.0 24.3 0.0 17.8 28.8 15.8 13.6 25.1 10.1 10.1
Incr Delay (d2), s/veh 0.8 0.0 0.0 0.5 0.0 0.1 1.5 0.5 0.3 0.9 0.3 0.3
Initial Q Delay(d3),s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
%ile BackOfQ(50%),veh/ln 0.4 0.0 0.0 2.2 0.0 1.2 0.1 6.2 3.3 1.4 4.2 4.5
Unsig. Movement Delay, s/veh
LnGrp Delay(d),s/veh 28.3 0.0 0.0 24.8 0.0 18.0 30.3 16.3 14.0 26.0 10.4 10.4
LnGrp LOS C A A C A B C B B C B B
Approach Vol, veh/h 28 447 1639 1365
Approach Delay, s/veh 28.3 23.1 15.9 11.6
Approach LOS C C B B
Timer - Assigned Phs 1 2 4 5 6 8
Phs Duration (G+Y+Rc), s 11.7 29.6 6.5 4.7 36.6 12.0
Change Period (Y+Rc), s 4.9 * 4.9 3.5 3.5 4.9 3.5
Max Green Setting (Gmax), s 20.0 * 60 14.0 17.0 60.0 30.0
Max Q Clear Time (g_c+I1), s 5.6 20.9 2.9 2.3 16.7 7.3
Green Ext Time (p_c), s 0.0 3.6 0.0 0.0 2.6 0.3
Intersection Summary
HCM 6th Ctrl Delay 15.2
HCM 6th LOS B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

LTCC Facilities Master Plan

Queues 1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	5	8	10	271	5	93	8	1020	316	92	1022	6
Future Volume (vph)	5	8	10	271	5	93	8	1020	316	92	1022	6
Confl. Peds. (#/hr)	3					3	2		3	3		2
Confl. Bikes (#/hr)			1						4			3
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)				49%								
Lane Group Flow (vph)	0	28	0	168	168	113	10	1244	385	112	1253	0
Act Effct Green (s)		9.1		15.1	15.1	26.5	9.1	41.3	41.3	11.3	55.1	
Actuated g/C Ratio		0.10		0.17	0.17	0.30	0.10	0.48	0.48	0.13	0.63	
v/c Ratio		0.15		0.57	0.57	0.20	0.05	0.74	0.41	0.49	0.56	
Control Delay		37.7		46.1	45.9	4.8	51.0	23.0	4.0	51.1	12.7	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		37.7		46.1	45.9	4.8	51.0	23.0	4.0	51.1	12.7	
LOS		D		D	D	А	D	С	А	D	В	
Approach Delay		37.7			35.6			18.7			15.8	
Approach LOS		D			D			В			В	
Queue Length 50th (ft)		9		96	96	0	5	293	7	62	199	
Queue Length 95th (ft)		40		183	183	25	24	456	44	136	398	
Internal Link Dist (ft)		509			2061			1987			2329	
Turn Bay Length (ft)				205		370	90		315	125		
Base Capacity (vph)		324		656	659	660	391	2615	1243	460	2736	
Starvation Cap Reductn		0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	0	0	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.09		0.26	0.25	0.17	0.03	0.48	0.31	0.24	0.46	
Intersection Summary												
Cycle Length: 139.4												
Actuated Cycle Length: 86.9												
Control Type: Actuated-Uncoo	rdinated											
Maximum v/c Ratio: 0.74												
Intersection Signal Delay: 19.9				In	tersectior	n LOS: B						
Intersection Capacity Utilization	n 61.1%			IC	U Level o	of Service	В					
Analysis Period (min) 15												

Intersection

Int Delay, s/veh	1.7						
Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	- 11	1		24	^	۲.	1
Traffic Vol, veh/h	1065	27	5	104	908	23	91
Future Vol, veh/h	1065	27	5	104	908	23	91
Conflicting Peds, #/hr	0	4	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	175	-	160	-	0	105
Veh in Median Storage	e, # 0	-	-	-	0	1	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	1210	31	6	118	1032	26	103

Major/Minor	Major1	ľ	/lajor2		Ν	/linor1		
Conflicting Flow All	0	0	1210	1245	0	1978	609	
Stage 1	-	-	-	-	-	1214	-	
Stage 2	-	-	-	-	-	764	-	
Critical Hdwy	-	-	6.44	4.14	-	6.84	6.94	
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-	
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-	
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32	
Pot Cap-1 Maneuver	-	-	243	555	-	54	438	
Stage 1	-	-	-	-	-	244	-	
Stage 2	-	-	-	-	-	420	-	
Platoon blocked, %	-	-			-			
Mov Cap-1 Maneuver	• -	-	509	509	-	41	436	
Mov Cap-2 Maneuver	• -	-	-	-	-	144	-	
Stage 1	-	-	-	-	-	243	-	
Stage 2	-	-	-	-	-	318	-	
Approach	FR		W/R			NR		
HCM Control Doloy			1.5			10.0		
HOM LOS	5 0		1.0			19.0		
						U		

Minor Lane/Major Mvmt	NBLn11	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	144	436	-	-	509	-
HCM Lane V/C Ratio	0.182	0.237	-	-	0.243	-
HCM Control Delay (s)	35.5	15.8	-	-	14.3	-
HCM Lane LOS	E	С	-	-	В	-
HCM 95th %tile Q(veh)	0.6	0.9	-	-	0.9	-

HCM 6th Signalized Intersection Summary 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲.	†	1	۲	ef 👘			\$			र्स	1
Traffic Volume (veh/h)	100	139	49	15	239	91	39	13	13	33	25	119
Future Volume (veh/h)	100	139	49	15	239	91	39	13	13	33	25	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	167	59	18	288	110	47	16	16	40	30	143
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	443	366	311	374	143	320	107	66	328	201	356
Arrive On Green	0.12	0.24	0.24	0.17	0.29	0.29	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	1870	1545	1781	1280	489	674	475	292	720	891	1582
Grp Volume(v), veh/h	120	167	59	18	0	398	79	0	0	70	0	143
Grp Sat Flow(s),veh/h/ln	1781	1870	1545	1781	0	1769	1441	0	0	1611	0	1582
Q Serve(g_s), s	2.2	2.6	1.0	0.3	0.0	7.0	0.0	0.0	0.0	0.0	0.0	2.6
Cycle Q Clear(g_c), s	2.2	2.6	1.0	0.3	0.0	7.0	1.2	0.0	0.0	1.0	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.28	0.59		0.20	0.57		1.00
Lane Grp Cap(c), veh/h	213	443	366	311	0	517	493	0	0	529	0	356
V/C Ratio(X)	0.56	0.38	0.16	0.06	0.00	0.77	0.16	0.00	0.00	0.13	0.00	0.40
Avail Cap(c_a), veh/h	1304	2190	1809	1043	0	2071	1386	0	0	1405	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	10.9	10.3	11.8	0.0	11.0	10.7	0.0	0.0	10.6	0.0	11.3
Incr Delay (d2), s/veh	0.9	0.2	0.1	0.0	0.0	0.9	0.1	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	0.3	0.1	0.0	2.0	0.4	0.0	0.0	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	11.1	10.4	11.8	0.0	12.0	10.8	0.0	0.0	10.7	0.0	11.5
LnGrp LOS	В	В	В	В	A	В	В	A	A	В	A	<u> </u>
Approach Vol, veh/h		346			416			79			213	
Approach Delay, s/veh		12.4			12.0			10.8			11.3	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	14.9		11.7	9.5	13.0		11.7				
Change Period (Y+Rc), s	3.5	4.9		4.0	3.5	4.9		4.0				
Max Green Setting (Gmax), s	25.0	40.0		30.0	20.0	40.0		27.0				
Max Q Clear Time (g_c+l1), s	4.2	9.0		3.2	2.3	4.6		4.6				
Green Ext Time (p_c), s	0.0	0.8		0.2	0.0	0.4		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			В									

Queues 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Traffic Volume (vph)	100	139	49	15	239	91	39	13	13	33	25	119		
Future Volume (vph)	100	139	49	15	239	91	39	13	13	33	25	119		
Confl. Peds. (#/hr)			1	1			1					1		
Confl. Bikes (#/hr)			2			1			1					
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	120	167	59	18	398	0	0	79	0	0	70	143		
Act Effct Green (s)	9.7	23.6	23.6	8.4	16.1			13.2			13.2	13.2		
Actuated g/C Ratio	0.23	0.55	0.55	0.20	0.38			0.31			0.31	0.31		
v/c Ratio	0.30	0.16	0.07	0.05	0.58			0.18			0.15	0.25		
Control Delay	23.2	8.1	3.5	25.7	18.0			15.4			17.1	5.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0		
Total Delay	23.2	8.1	3.5	25.7	18.0			15.4			17.1	5.2		
LOS	С	А	А	С	В			В			В	A		
Approach Delay		12.6			18.4			15.4			9.1			
Approach LOS		В			В			В			А			
Queue Length 50th (ft)	24	14	0	4	71			13			13	0		
Queue Length 95th (ft)	95	82	17	26	223			49			48	29		
Internal Link Dist (ft)		2061			1371			422			2118			
Turn Bay Length (ft)	105			100								100		
Base Capacity (vph)	1132	1700	1414	976	1570			1035			1078	1166		
Starvation Cap Reductn	0	0	0	0	0			0			0	0		
Spillback Cap Reductn	0	0	0	0	0			0			0	0		
Storage Cap Reductn	0	0	0	0	0			0			0	0		
Reduced v/c Ratio	0.11	0.10	0.04	0.02	0.25			0.08			0.06	0.12		
Intersection Summary														
Cycle Length: 107.4														
Actuated Cycle Length: 42.6	;													
Control Type: Actuated-Unc	oordinated													
Maximum v/c Ratio: 0.58														
Intersection Signal Delay: 14	1.4			Intersection LOS: B										
Intersection Capacity Utilizat	tion 44.7%			IC	ICU Level of Service A									

Analysis Period (min) 15

1.2

Intersection

Int Delay, s/veh

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	•	1	<u>ک</u>	•	1		\$			\$	
Traffic Vol, veh/h	10	145	25	34	323	5	11	0	11	0	0	5
Future Vol, veh/h	10	145	25	34	323	5	11	0	11	0	0	5
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	90	90	-	125	-	-	-	-	-	-
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	201	35	47	449	7	15	0	15	0	0	7

Major/Minor	Major1	Major2			Minor1				l	Minor2			
Conflicting Flow All	458	0	0	236	0	0	779	781	201	799	809	451	
Stage 1	-	-	-	-	-	-	229	229	-	545	545	-	
Stage 2	-	-	-	-	-	-	550	552	-	254	264	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	- 2	.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	1103	-	- '	1331	-	-	313	326	840	304	314	608	
Stage 1	-	-	-	-	-	-	774	715	-	523	519	-	
Stage 2	-	-	-	-	-	-	519	515	-	750	690	-	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	1101	-	- '	1331	-	-	298	310	840	287	299	607	
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	310	-	287	299	-	
Stage 1	-	-	-	-	-	-	764	706	-	515	500	-	
Stage 2	-	-	-	-	-	-	495	496	-	727	681	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	0.5	0.7	13.8	11	
HCM LOS			В	В	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR \$	SBLn1
Capacity (veh/h)	440	1101	-	-	1331	-	-	607
HCM Lane V/C Ratio	0.069	0.013	-	-	0.035	-	-	0.011
HCM Control Delay (s)	13.8	8.3	-	-	7.8	-	-	11
HCM Lane LOS	В	А	-	-	А	-	-	В
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	٦.	1	5	•	•	1
Traffic Volume (veh/h)	83	107	188	347	289	121
Future Volume (veh/h)	83	107	188	347	289	121
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adi	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	129	227	418	348	146
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh. %	2	2	2	2	2	2
Cap. veh/h	348	309	288	1012	463	392
Arrive On Green	0.20	0.20	0.16	0.54	0.25	0.25
Sat Flow, veh/h	1781	1585	1781	1870	1870	1582
Grn Volume(v) veh/h	100	120	207	<u></u>	3/18	1/6
Grn Sat Flow(s) veh/h/ln	1781	1585	1781	1870	1870	1582
O[Serve(a, s), s]	1 8	2.6	1.01	10/0	61	2 8
Q or $V \in (Y_s)$, s Cycle O Clear(a, a), a	1.0 1.Q	2.0	4.5	4.9 / 0	6.4	2.0 2.0
Dyble & Clear(y_C), S	1.0	2.0	4.0	4.9	0.4	2.0 1.00
Prop In Lane	1.00	1.00	1.00	1010	460	1.00
Lane Grp Cap(c), ven/n	348	309	288	1012	463	392
	0.29	0.42	0.79	0.41	0.75	0.37
Avail Cap(c_a), veh/h	1439	1280	1199	2266	2266	1916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	13.1	15.0	5.0	12.9	11.6
Incr Delay (d2), s/veh	0.2	0.3	1.8	0.1	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	0.5	0.0	1.6	0.9	2.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	13.4	16.8	5.1	13.8	11.8
LnGrp LOS	В	В	В	А	В	В
Approach Vol, veh/h	229			645	494	
Approach Delay, s/veh	13.2			9.2	13.2	
Approach LOS	В			А	В	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		25.0		12.1	10.9	14.1
Change Period (Y+Rc), s		4.9		4.9	4.9	4.9
Max Green Setting (Gmax), s		45.0		30.0	25.0	45.0
Max Q Clear Time (g. c+11), s		6.9		4.6	6.5	8.4
Green Ext Time (p_c), s		0.8		0.1	0.1	0.7
Intersection Summary						
HCM 6th Ctrl Delav			11.4			
HCM 6th LOS			В			

Queues 5: Pioneer Trail & Al Tahoe Blvd

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	83	107	188	347	289	121
Future Volume (vph)	83	107	188	347	289	121
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	129	227	418	348	146
Act Effct Green (s)	8.8	8.8	10.6	29.8	14.1	14.1
Actuated g/C Ratio	0.18	0.18	0.22	0.61	0.29	0.29
v/c Ratio	0.31	0.33	0.59	0.37	0.65	0.28
Control Delay	23.7	8.1	25.3	5.5	21.9	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	8.1	25.3	5.5	21.9	7.1
LOS	С	А	С	А	С	А
Approach Delay	14.9			12.4	17.5	
Approach LOS	В			В	В	
Queue Length 50th (ft)	24	0	54	44	80	7
Queue Length 95th (ft)	71	34	127	81	164	38
Internal Link Dist (ft)	4524			1363	1956	
Turn Bay Length (ft)		100	100			100
Base Capacity (vph)	1134	1060	944	1863	1680	1406
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.12	0.24	0.22	0.21	0.10
Intersection Summary						
Cycle Length: 114.7						
Actuated Cycle Length: 48.8						
Control Type: Actuated-Unco	ordinated					
Maximum v/c Ratio: 0.65						
Intersection Signal Delay: 14.	.7			In	tersection	LOS: B
Intersection Capacity Utilizati	on 44.7%			IC	U Level o	of Service
Analysis Period (min) 15						

PROJECT CONDITIONS PM

HCM 6th Signalized Intersection Summary 1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4		۲.	र्स	1	٦	^	1	٦	At≱	
Traffic Volume (veh/h)	11	9	9	413	6	193	7	1476	300	135	1452	5
Future Volume (veh/h)	11	9	9	413	6	193	7	1476	300	135	1452	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	10	10	459	0	212	8	1622	330	148	1596	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	25	25	540	0	728	28	1215	531	550	2352	7
Arrive On Green	0.05	0.05	0.05	0.15	0.00	0.15	0.02	0.34	0.34	0.31	0.65	0.65
Sat Flow, veh/h	651	542	542	3563	0	1579	1781	3554	1552	1781	3633	11
Grp Volume(v), veh/h	32	0	0	459	0	212	8	1622	330	148	780	821
Grp Sat Flow(s),veh/h/ln	1735	0	0	1781	0	1579	1781	1777	1552	1781	1777	1868
Q Serve(g_s), s	2.0	0.0	0.0	13.8	0.0	0.0	0.5	37.6	19.5	6.9	30.4	30.4
Cycle Q Clear(g_c), s	2.0	0.0	0.0	13.8	0.0	0.0	0.5	37.6	19.5	6.9	30.4	30.4
Prop In Lane	0.37		0.31	1.00		1.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	79	0	0	540	0	728	28	1215	531	550	1150	1209
V/C Ratio(X)	0.41	0.00	0.00	0.85	0.00	0.29	0.28	1.34	0.62	0.27	0.68	0.68
Avail Cap(c_a), veh/h	158	0	0	939	0	905	194	1215	531	550	1150	1209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.80	0.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	0.0	0.0	45.5	0.0	18.5	53.5	36.2	30.3	28.7	12.2	12.2
Incr Delay (d2), s/veh	1.2	0.0	0.0	1.2	0.0	0.1	2.0	156.6	5.4	0.1	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	6.2	0.0	3.4	0.2	41.9	7.8	2.9	11.4	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	0.0	0.0	46.6	0.0	18.6	55.5	192.8	35.7	28.8	15.4	15.3
LnGrp LOS	D	A	A	D	A	В	E	F	D	С	В	B
Approach Vol, veh/h		32			671			1960			1749	
Approach Delay, s/veh		52.3			37.8			165.8			16.5	
Approach LOS		D			D			F			В	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.8	42.5		8.5	5.2	76.1		20.2				
Change Period (Y+Rc), s	4.9	* 4.9		3.5	3.5	4.9		3.5				
Max Green Setting (Gmax), s	18.0	* 38		10.0	12.0	43.6		29.0				
Max Q Clear Time (g_c+I1), s	8.9	39.6		4.0	2.5	32.4		15.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.1		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			86.3									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

LTCC Facilities Master Plan
Queues <u>1: Lake Tahoe Blvd (US 50) & Al Tahoe Blvd</u>

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	11	9	9	413	6	193	7	1476	300	135	1452	5
Future Volume (vph)	11	9	9	413	6	193	7	1476	300	135	1452	5
Confl. Peds. (#/hr)	2					2	4					4
Confl. Bikes (#/hr)									8			2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)				49%								
Lane Group Flow (vph)	0	32	0	232	229	212	8	1622	330	148	1601	0
Act Effct Green (s)		8.0		19.3	19.3	37.3	8.0	53.9	53.9	18.0	73.1	
Actuated g/C Ratio		0.07		0.18	0.18	0.34	0.07	0.49	0.49	0.16	0.66	
v/c Ratio		0.24		0.79	0.77	0.32	0.06	0.94	0.37	0.51	0.68	
Control Delay		41.1		61.1	59.8	3.2	48.7	40.0	6.8	49.0	17.0	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		41.1		61.1	59.8	3.2	48.7	40.0	6.8	49.0	17.0	
LOS		D		E	Е	А	D	D	А	D	В	
Approach Delay		41.1			42.4			34.5			19.7	
Approach LOS		D			D			С			В	
Queue Length 50th (ft)		15		167	165	1	5	~607	27	96	349	
Queue Length 95th (ft)		46		231	228	32	22	#902	105	163	#761	
Internal Link Dist (ft)		509			2061			1987			2329	
Turn Bay Length (ft)				205		370	90		315	125		
Base Capacity (vph)		168		443	445	671	193	1733	895	289	2351	
Starvation Cap Reductn		0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	0	0	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.19		0.52	0.51	0.32	0.04	0.94	0.37	0.51	0.68	
Intersection Summary												
Cycle Length: 110												
Actuated Cycle Length: 110												
Offset: 0 (0%), Referenced to	phase 2:I	NBT and	6:SBT, S	tart of Gr	een							
Control Type: Actuated-Coord	linated											
Maximum v/c Ratio: 0.94												
Intersection Signal Delay: 29.9	9			In	tersectior	n LOS: C						
Intersection Capacity Utilization	on 77.7%			IC	U Level o	of Service	D					
Analysis Period (min) 15												
~ Volume exceeds capacity,	, queue is	theoretic	ally infini	te.								
Queue shown is maximum	after two	cycles.										
# 95th percentile volume exe	ceeds cap	bacity, qu	eue may	be longe	r.							
Queue shown is maximum	after two	cycles.										

Intersection

Int Delay, s/veh	6						
Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations	- 11	1		24	^	۲.	1
Traffic Vol, veh/h	1464	52	5	202	1488	35	181
Future Vol, veh/h	1464	52	5	202	1488	35	181
Conflicting Peds, #/hr	0	11	0	11	0	0	5
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	175	-	160	-	0	105
Veh in Median Storage	e, # 0	-	-	-	0	1	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	1591	57	5	220	1617	38	197

Maior/Minor	Maior1		Maior2			Minor1						
Conflicting Flow All	0	0	1591	1659	0	2861	812					
Stage 1	-	-	-	-	-	1602	-					
Stage 2	-	-	-	-	-	1259	-					
Critical Hdwv	-	-	6.44	4.14	-	6.84	6.94					
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-					
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-					
Follow-up Hdwy	-	-	2.52	2.22	-	3.52	3.32					
Pot Cap-1 Maneuver	-	-	138	384	-	~ 13	322					
Stage 1	-	-	-	-	-	151	-					
Stage 2	-	-	-	-	-	231	-					
Platoon blocked, %	-	-			-							
Mov Cap-1 Maneuver	· -	-	336	336	-	~ 4	317					
Mov Cap-2 Maneuver	• -	-	-	-	-	48	-					
Stage 1	-	-	-	-	-	149	-					
Stage 2	-	-	-	-	-	76	-					
Approach	EB		WB			NB						
HCM Control Delay	0		4.3			60.9						
HCM LOS			1.0			F						
Minor Lane/Major Mvr	mt	NBLn1	NBLn2	EBT	EBR	WBL	WBT					
Capacity (veh/h)		48	317	-	-	336	-					
HCM Lane V/C Ratio		0.793	0.621	-	-	0.67	-					
HCM Control Delay (s	6)	203.4	33.3	-	-	35	-					
HCM Lane LOS		F	D	-	-	D	-					
HCM 95th %tile Q(vel	n)	3.2	3.9	-	-	4.6	-					
Notes												
~: Volume exceeds ca	apacity	\$: D	elay exc	eeds 3	00s	+: Com	putation	Not Defined	*: All maid	or volume in I	olatoon	
	. /											

HCM 6th Signalized Intersection Summary 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲.	†	1	۲.	ţ,			4			ર્સ	1
Traffic Volume (veh/h)	190	271	66	10	248	70	52	24	14	136	27	186
Future Volume (veh/h)	190	271	66	10	248	70	52	24	14	136	27	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	308	75	11	282	80	59	27	16	155	31	211
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	488	412	288	373	106	272	113	43	480	80	380
Arrive On Green	0.15	0.26	0.26	0.16	0.27	0.27	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	1870	1579	1781	1391	395	491	468	178	1242	332	1569
Grp Volume(v), veh/h	216	308	75	11	0	362	102	0	0	186	0	211
Grp Sat Flow(s),veh/h/ln	1781	1870	1579	1781	0	1786	1137	0	0	1574	0	1569
Q Serve(g_s), s	4.3	5.4	1.4	0.2	0.0	6.9	0.5	0.0	0.0	0.0	0.0	4.4
Cycle Q Clear(g_c), s	4.3	5.4	1.4	0.2	0.0	6.9	3.7	0.0	0.0	3.2	0.0	4.4
Prop In Lane	1.00		1.00	1.00		0.22	0.58		0.16	0.83		1.00
Lane Grp Cap(c), veh/h	275	488	412	288	0	479	429	0	0	560	0	380
V/C Ratio(X)	0.79	0.63	0.18	0.04	0.00	0.76	0.24	0.00	0.00	0.33	0.00	0.55
Avail Cap(c_a), veh/h	1203	2021	1706	962	0	1930	1183	0	0	1250	0	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	12.1	10.6	13.1	0.0	12.4	11.5	0.0	0.0	11.8	0.0	12.3
Incr Delay (d2), s/veh	1.9	0.5	0.1	0.0	0.0	0.9	0.1	0.0	0.0	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/In	1.6	1.9	0.4	0.1	0.0	2.1	0.6	0.0	0.0	1.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	12.6	10.7	13.1	0.0	13.4	11.6	0.0	0.0	12.0	0.0	12.7
LnGrp LOS	В	В	В	В	Α	В	В	Α	Α	В	Α	<u> </u>
Approach Vol, veh/h		599			373			102			397	
Approach Delay, s/veh		13.9			13.3			11.6			12.4	
Approach LOS		В			В			В			В	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	14.8		13.0	9.5	14.6		13.0				
Change Period (Y+Rc), s	3.5	4.9		4.0	3.5	4.9		4.0				
Max Green Setting (Gmax), s	25.0	40.0		30.0	20.0	40.0		27.0				
Max Q Clear Time (g_c+l1), s	6.3	8.9		5.7	2.2	7.4		6.4				
Green Ext Time (p_c), s	0.1	0.7		0.2	0.0	0.7		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			13.2									
HCM 6th LOS			В									

Queues 3: College Way/Johnson Blvd & Al Tahoe Blvd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph)	190	271	66	10	248	70	52	24	14	136	27	186
Future Volume (vph)	190	271	66	10	248	70	52	24	14	136	27	186
Confl. Peds. (#/hr)	1		2	2		1			5	5		
Confl. Bikes (#/hr)						3						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	308	75	11	362	0	0	102	0	0	186	211
Act Effct Green (s)	11.5	30.1	30.1	6.7	15.9			13.9			13.9	13.9
Actuated g/C Ratio	0.21	0.55	0.55	0.12	0.29			0.25			0.25	0.25
v/c Ratio	0.59	0.30	0.09	0.05	0.69			0.29			0.53	0.38
Control Delay	29.9	9.4	3.2	32.1	25.7			20.0			26.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0			0.0	0.0
Total Delay	29.9	9.4	3.2	32.1	25.7			20.0			26.3	5.7
LOS	С	А	А	С	С			С			С	A
Approach Delay		16.0			25.9			20.0			15.4	
Approach LOS		В			С			С			В	
Queue Length 50th (ft)	57	38	0	3	88			22			48	0
Queue Length 95th (ft)	174	158	21	22	249			75			139	44
Internal Link Dist (ft)		2061			1371			422			2118	
Turn Bay Length (ft)	105			100								100
Base Capacity (vph)	892	1543	1290	714	1390			840			836	1041
Starvation Cap Reductn	0	0	0	0	0			0			0	0
Spillback Cap Reductn	0	0	0	0	0			0			0	0
Storage Cap Reductn	0	0	0	0	0			0			0	0
Reduced v/c Ratio	0.24	0.20	0.06	0.02	0.26			0.12			0.22	0.20
Intersection Summary												
Cycle Length: 107.4												
Actuated Cycle Length: 55.1												
Control Type: Actuated-Unc	oordinated											
Maximum v/c Ratio: 0.69												
Intersection Signal Delay: 18	3.6			In	tersectior	n LOS: B						
Intersection Capacity Utilizat	tion 52.2%			IC	U Level o	of Service	А					

Analysis Period (min) 15

3.2

Intersection

Int Delay, s/veh

Movement	EDI	EDT	EDD				NDI	NDT	NDD	CDI	CDT	CDD
Movement	EDL	EDI	EDK	VVDL	VVDI	VVDR	INDL	INDI	NDK	SDL	SDI	SDK
Lane Configurations	ኘ	- †	1	ግ	- †	- T		- 4 >			- 4 >	
Traffic Vol, veh/h	23	358	21	50	285	12	40	0	55	3	1	10
Future Vol, veh/h	23	358	21	50	285	12	40	0	55	3	1	10
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	90	90	-	125	-	-	-	-	-	-
Veh in Median Storage,	# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	431	25	60	343	14	48	0	66	4	1	12

Major/Minor	Major1		N	lajor2			Minor1			Minor2			
Conflicting Flow All	359	0	0	456	0	0	964	966	431	998	977	345	
Stage 1	-	-	-	-	-	-	487	487	-	465	465	-	
Stage 2	-	-	-	-	-	-	477	479	-	533	512	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	- 3	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	1200	-	-	1105	-	-	235	255	624	223	251	698	
Stage 1	-	-	-	-	-	-	562	550	-	578	563	-	
Stage 2	-	-	-	-	-	-	569	555	-	531	536	-	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	1198	-	-	1105	-	-	217	235	624	187	231	697	
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	235	-	187	231	-	
Stage 1	-	-	-	-	-	-	549	537	-	564	531	-	
Stage 2	-	-	-	-	-	-	528	524	-	464	524	-	

Approach	EB	WB	NB	SB	
HCM Control Delay, s	0.5	1.2	20.3	14.3	
HCM LOS			С	В	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR \$	SBLn1
Capacity (veh/h)	349	1198	-	-	1105	-	-	403
HCM Lane V/C Ratio	0.328	0.023	-	-	0.055	-	-	0.042
HCM Control Delay (s)	20.3	8.1	-	-	8.4	-	-	14.3
HCM Lane LOS	С	А	-	-	А	-	-	В
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0.2	-	-	0.1

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Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	5	1	5	†	†	1
Traffic Volume (veh/h)	168	255	170	341	363	134
Future Volume (veh/h)	168	255	170	341	363	134
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	268	179	359	382	141
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2
Cap. veh/h	384	342	239	983	489	406
Arrive On Green	0.22	0.22	0.13	0.53	0.26	0.26
Sat Flow, veh/h	1781	1585	1781	1870	1870	1551
Grn Volume(v) veh/h	177	268	179	350	382	141
Grn Sat Flow(s) veh/h/ln	1781	1585	1781	1870	1870	1551
$O \operatorname{Serve}(a, s) \in \mathbb{R}$	22	6.0	37	1010	7 2	2.8
$Cycle \cap Clear(a, c) \in Cycle \cap Clear(a, c)$	3.5 3.3	6.0	3.7	- 1 .5 ∕I 3	7.2	2.0
Pron ln l ane	1 00	1 00	1 00	4.5	1.2	1.00
Lane Grn Can(a) yeh/h	28/	3/2	220	083	180	100
V/C Patio(X)	0.46	0.78	0.75	903	409	400
V/C Rall $O(\Lambda)$	0.40	1256	0.75	0.07	0.70	1042
HCM Platean Patia	1411	1200	1 00	1 00	1 00	1 040
	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	12.0	1.00
Uniform Delay (d), s/ven	12.9	14.0	15.8	5.3	13.0	11.4
incr Delay (d2), s/veh	0.3	1.5	1.8	0.1	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.2	1.3	0.9	2.3	0.7
Unsig. Movement Delay, s/ve	h		4			
LnGrp Delay(d),s/veh	13.2	15.5	17.5	5.4	14.0	11.5
LnGrp LOS	В	В	В	A	В	В
Approach Vol, veh/h	445			538	523	
Approach Delay, s/veh	14.6			9.4	13.3	
Approach LOS	В			А	В	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		24.8		13.1	10.0	14.8
Change Period (Y+Rc) s		4 9		4.9	4.9	4 9
Max Green Setting (Gmax)		45.0		30.0	25.0	45.0
Max O Clear Time (a. c+11)	2	-0.0 6 3		8.0	57	40.0 Q 2
Green Ext Time (n, c) s)	0.5		0.0	0.1	9.Z
		0.7		0.2	0.1	0.7
Intersection Summary						
HCM 6th Ctrl Delay			12.3			
HCM 6th LOS			В			

Queues 5: Pioneer Trail & Al Tahoe Blvd

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	168	255	170	341	363	134
Future Volume (vph)	168	255	170	341	363	134
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	177	268	179	359	382	141
Act Effct Green (s)	10.6	10.6	9.9	30.4	15.3	15.3
Actuated g/C Ratio	0.21	0.21	0.19	0.59	0.30	0.30
v/c Ratio	0.49	0.50	0.53	0.33	0.69	0.27
Control Delay	25.5	7.1	26.9	6.1	23.6	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	7.1	26.9	6.1	23.6	7.9
LOS	С	Α	С	А	С	А
Approach Delay	14.5			13.0	19.4	
Approach LOS	В			В	В	
Queue Length 50th (ft)	45	0	45	41	92	9
Queue Length 95th (ft)	125	55	127	100	220	49
Internal Link Dist (ft)	4524			1363	1956	
Turn Bay Length (ft)		100	100			100
Base Capacity (vph)	1093	1080	911	1863	1620	1360
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.25	0.20	0.19	0.24	0.10
Intersection Summary						
Cycle Length: 114.7						
Actuated Cycle Length: 51.3	}					
Control Type: Actuated-Unc	oordinated					
Maximum v/c Ratio: 0.69						
Intersection Signal Delay: 15	5.6			In	tersectior	LOS: B
Intersection Capacity Utilization	tion 50.1%			IC	U Level o	of Service A
Analysis Period (min) 15						

APPENDIX B VMT CALCULATIONS

	CHTS DATA														
TAHOE BASIN ALL RESIDENTIAL 1	TYPES THRESHOLD)													
A	В	С	D	E	F	Н	I	К	L	М	Ν	0	Р	Q	R
RESIDENTIAL LAND USE	NUMBER OF HOUSEHOLDS (HH)	POPULATION PER HOUSEHOLD (HH)	TOTAL VEHICLE TRIP RATE PER HH	HOUSEH RATES BY	OLD TRIP PURPOSE			VEHIC LENGTH B	LE TRIP Y PURPOSE		P PURPOSE	HOME- BASED	TOTAL POPULATION	HOME-BASED VMT/CAPITA	HOME-BASED VMT/CAPITA THRESHOLD
				HBM	нво	HBW	нво	HBW	нво	HBW	нво	VIVII			
										(H*K)	(I*L)	(M+N)		(O/P)	(Q*.85)
Data Sources: ITE Trip Generatio	n Rates, NCHRP 7	16 Trip Purpose	Splits, Numb	er of HH fro	om US cens	us data, CH	TS Trip Leng	gths for the	e Tahoe Basi	n					
Single Family Household*	17563	2.6	9.44	2.36	7.08	41449	124346								
Multi-Family Household	3473	2.6	7.32	1.83	5.49	6356	19067								
All Residential Types	21036	2.6				47804	143413	6.11	6.96	292,084	998,153	1,290,237	54,694	23.59	20.05

2.6 based on national average from US Census Data

PROJECT ANALYSIS - RESIDEN	ITIAL					CHTS	DATA							
A	В	С	D	E	F	Ν	0	Р	Q	R	S	Т	U	
RESIDENTIAL LAND USE	NUMBER OF HOUSEHOLDS (HH)	POPULATION PER HOUSEHOLD (HH)	TOTAL TRIP Generation	TOTAL VEH by PU	ICILE TRIPS RPOSE	VEHICI LENGTH BY	LE TRIP (PURPOSE	VMT B PURI	BY TRIP POSE	HOME- BASED	TOTAL POPULATION	HOME-BASED VMT/CAPITA	THRESHOLD: TAHOE REGION HOME-BASED VMT/CAPITA	
				HBW	нво	HBW	нво	HBW	нво	VMT			THRESHOLD	
								(E*N)	(F*O)	(P+Q)	(B*C)	(R/S)		
Data Sources: ITE Trip Genera	ation Rates, NCHRP 716 Trip	Purpose Splits, Num	ber of HH fron	n US census	data, CHTS	Trip Length	s for the Ta	hoe Basin						
Single Family Household														
Multi-Family Household	120	2.60	844.00	211.00	633.00									
All Households						7.30	7.05	1,540	4,463	6,003	312	19.24	20.05	Less than significant impac