

A P P E N D I X P

V E H I C L E M I L E S T R A V E L E D

.....

Memorandum



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

To: Mr. Darin Grossi
Tuolumne County Transportation Council
975 Morning Star Drive, Suite A
Sonora, CA 95370

From: Mario Tambellini, PE, TE
Wood Rodgers, Inc.

Date: November 4, 2020

Subject: Terra Vi Lodge VMT Analysis

INTRODUCTION

This memorandum has been prepared to present the results of a vehicle miles traveled (VMT) analysis performed for the Terra Vi Lodge project (Project). This memorandum presents VMT data to be used in the Terra Vi Lodge environmental impact report (EIR) traffic study.

PROJECT DESCRIPTION

The Project site is located at the northeast corner of the intersection of Sawmill Mountain Road and State Highway 120 (SR 120) in Tuolumne County, California. The Project proposes to construct a master planned lodging development that includes a 2,800 square foot public market, multi-purpose lodge, 100 guestrooms, 7 cabins with an additional 26 guestrooms, and 5 employee housing units. The Project would gain access to the local roadway network via multiple driveway connections to Sawmill Mountain Road. The Project would develop approximately 18% of the 64-acre Manly Family property. The current Project application and description is included as Attachment A.

PROJECT TRIP GENERATION

The Project trip generation prepared by KD Anderson & Associates, Inc. (KD Anderson) for the EIR traffic study was obtained in order to maintain consistency between the VMT analysis and other Project traffic analyses. The EIR traffic study and trip generation focus on peak Saturday conditions. KD Anderson used *Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition* (ITE, September 2017) trip generation rates to prepare the Project trip generation and accounted for internal and pass-by trips. The Project trip generation is summarized in Table 1. As shown in Table 1, the Project is projected to generate approximately 1,127 net new daily trips during a peak Saturday. A detailed Project trip generation from KD Anderson is included as Attachment B.

The Project peak Saturday trip generation obtained from the EIR traffic study was converted to typical weekday trip generation so that it could be used to verify trip generation rates in the Tuolumne County Regional Travel Demand Model (RTDM). A “typical weekday vs. peak Saturday” factor was developed by obtaining traffic counts for SR 120 near the Project area from the Caltrans PeMS online database. Average daily traffic (ADT) on SR 120 during an average Saturday in June/July 2018 was compared against ADT on SR 120 during a typical weekday in May 2018. A summary of the PeMS traffic counts used to develop the factor are included as Attachment C. The typical weekday Project trip generation is shown in Table 2. As shown in Table 2, the Project is projected to generate approximately 586 net new daily trips during a typical weekday.

Table 1. Terra Vi Lodge Trip Generation – Peak Saturday

Code	Description	Unit	Saturday			
			Daily	Peak Hour of Generator		
				In	Out	Total
310	Lodge	100 rooms	819	40	32	72
	Cabins	26 units	213	10	9	19
	Subtotal		1,032	50	41	91
	Less effect of Employee Housing	(2%)	40	2	2	4
	Less internal to Market	(24%)	252	11	11	22
	<i>Net External Trips</i>		<i>740</i>	<i>37</i>	<i>28</i>	<i>65</i>
210	Individual Employee Housing	20 residents	50	3	3	6
	Less on-site commute match		40	2	2	4
	Less internal to Market	(14%)	5	1	0	1
	<i>Net External Trips</i>		<i>5</i>	<i>0</i>	<i>1</i>	<i>1</i>
851	Market	2.8 ksf ¹	1,237	46	44	90
	Less internal to Lodging		252	11	11	22
	Less internal to Employee		5	0	1	1
	<i>Net External</i>		<i>980</i>	<i>35</i>	<i>32</i>	<i>67</i>
	Pass-by Trips	61%	598	21	20	41
	<i>Net New External</i>		<i>382</i>	<i>14</i>	<i>12</i>	<i>26</i>
	Total Gross Trips		2,309	99	88	187
	Total External Trips		1,725	72	61	133
	Total Pass-by Trips		598	21	20	41
	Total Net New Trips		1,127	51	41	92
<i>Source: data from Traffic Impact Study for the Terra Vi Resort Project (prepared by KD Anderson, received 12/10/2019)</i> <i>Notes: 1. ksf = 1,000 square feet gross floor area</i>						

Table 2. Terra Vi Lodge Trip Generation – Annual Average Typical Weekday

Scenario	Land Use	Unit	Net External Daily Trips
Peak Saturday	Lodge and Cabins	126 Rooms	740
	Employee Housing	20 Residents	5
	Market	2.8 KSF	382
	Total:		1,127
Typical Weekday vs. Peak Saturday Factor ¹ :			0.52
Typical Weekday	Lodge and Cabins	126 Rooms	385
	Employee Housing	20 Residents	3
	Market	2.8 KSF	199
	Total:		586
Notes: 1. Derived from Caltrans PeMS traffic counts.			

As shown in Table 2, the proposed 126 lodge and cabin rooms are estimated to generate approximately 385 annual average typical weekday daily trips. Dividing the 385 daily trips by the 126 rooms results in an annual average daily trip rate of approximately 3.1 trips per room for the Lodge and Cabins land use. The RTDM uses a trip generation rate of approximately 3.2 trips per room for motel/hotel land use types (which is generally representative of the Project lodge and cabins type) located in rural areas of the County, which is where the Project is located. Therefore, it is assumed that the motel/hotel trip generation rates contained in the RTDM would provide a reasonable estimate of Project generated traffic under annual average typical weekday conditions.

PROJECT VMT ANALYSIS

Project VMT was analyzed both within and outside Tuolumne County. All VMT analysis was performed for annual average typical weekday daily conditions. Project VMT was estimated in terms of both VMT per room and net change in VMT in the affected area.

The latest version of the Tuolumne County RTDM and corresponding out-of-county VMT post processing tools, which were recently updated/developed as part of the Tuolumne County SB 743 VMT Study, were used to analyze VMT generated by the Project. Out-of-County VMT post-processing tools utilize a combination of AirSage and California Statewide Travel Demand Model (CSTDM) origin destination trip data to provide a reasonable estimate of out-of-county trip lengths, including tourist travel to and from Yosemite National Park. The RTDM has scenario years of 2015, 2030, and 2040 and models an annual average typical weekday. The following scenarios were analyzed using the RTDM:

- Baseline Year 2015 Without Project
- Baseline Year 2015 With Project
- Cumulative Year 2040 Without Project
- Cumulative Year 2040 With Project

Data for the “Without Project” conditions was prepared by running the RTDM year 2015 and 2040 scenarios with no modifications. The “With Project” conditions RTDM scenarios were prepared by adding two new Project TAZs into the RTDM at the northeast corner of Sawmill Mountain Road and SR 120, with centroid connectors providing access on Sawmill Mountain Road. Land use quantities for the Project were input into the RTDM demographics files under the new Project TAZs. The lodge and cabin land uses were put into one of the new Project TAZs, and the employee housing and market land uses were put into the other. Project land uses were input into two separate TAZs so the VMT from the different land use types could be more easily isolated. The RTDM multi-family housing, minor commercial, and motel land use categories were used to represent the Project. The “With Project” RTDM scenarios were run and output data was extracted.

EFFICIENCY-BASED VMT METRIC

Each different type of land use within the Project was evaluated separately when analyzing efficiency-based VMT, consistent with recommended methodologies contained in the *Governor's Office of Planning and Research Technical Advisory* (OPR Technical Advisory) (December 2018). An efficiency-based VMT metric, VMT per room, was estimated for the lodge and cabin portion of the Project using data from the Baseline Year 2015 With Project RTDM run. Project VMT per room was estimated by dividing total lodge and cabin Project VMT from the RTDM by the 126 total Project rooms. The Project is estimated to generate approximately 119.8 VMT per room, as shown in Table 3.

Table 3. Project VMT – Efficiency-Based VMT Metric

Annual Average Typical Weekday VMT per Room	
Estimated Project Hotel VMT per Room	119.8 VMT/room
<i>Notes: All data calculated with the Tuolumne County Regional Travel Demand Model and post-processing tools.</i>	

The OPR Technical Advisory and the *Tuolumne County SB 743 VMT Thresholds Memorandum* (Tuolumne County VMT Thresholds Memo) (Wood Rodgers, November 4, 2020) both provide recommendations that certain types of land use projects may be screened out from a detailed VMT analysis. The employee housing portion of the Project was screened out because it is projected to generate less than 110 new external daily trips, consistent with recommendations in both the OPR Technical Advisory and the Tuolumne County VMT Thresholds Memo. The Project market was screened out from a detailed VMT analysis because the majority of trips to and from the market are projected to be either pass-by or internal trips and the market would essentially function as a local serving retail project as it would serve hotel guests and people already travelling on SR 120. In other words, it would only serve people already in the area, potentially providing them a new closer option, and would not draw many, if any, dedicated trips from other areas. Screening out the market as local serving retail is consistent with recommendations in both the OPR Technical Advisory and the Tuolumne County VMT Thresholds Memo.

NET CHANGE IN AFFECTED AREA VMT METRIC

All land use types included in the Project were accounted for when analyzing the net change in affected area VMT due to the Project. Total VMT generated by Tuolumne County land uses was calculated for each of the four scenarios analyzed in this memorandum using RTDM data and post-processing methodologies and tools. Net change in affected area VMT due to the Project was then calculated for 2015 and 2040 by subtracting the “Without Project Total VMT Generated by Tuolumne County Land Uses” from the “With Project Total VMT Generated by Tuolumne County Land Uses”. The Project is estimated to result in a net increase in affected area VMT of 7,424 in 2015 and 8,055 in 2040, as shown in Table 4.

Table 4. Project VMT – Net Change in Affected Area VMT Metric

Annual Average Typical Weekday Total VMT	
2015 Without Project Total VMT Generated By County Land Uses	3,375,777
2015 With Project Total VMT Generated by County Land Uses	3,383,201
2015 Net Change in VMT Generated by County Land Uses	+7,424
2040 Without Project Total VMT Generated by County Land Uses	3,802,466
2040 With Project Total VMT Generated by County Land Uses	3,810,521
2040 Net Change in VMT Generated by County Land Uses	+8,055
<i>Notes: All data calculated with the Tuolumne County Regional Travel Demand Model and post-processing tools.</i>	

Using the VMT data from Table 3 and Table 4, as well as the total number of Project hotel rooms, we can estimate Total Project VMT and the portion of Project VMT that is estimated to be rerouted from existing land uses, as shown in Table 5. The portion of Project VMT estimated to be rerouted from existing land uses represents visitors who would've stayed at other hotels in the County if the Project was not operational.

Table 5. Project VMT – New vs. Rerouted VMT

Baseline Annual Average Typical Weekday Total VMT	
Total Project Hotel VMT	15,095
Portion of Project Hotel VMT that is New to the Affected Area	7,424
Portion of Project Hotel VMT that has Been Rerouted from Existing land Uses	7,671
<i>Notes: All data calculated with the Tuolumne County Regional Travel Demand Model and post-processing tools.</i>	

VMT THRESHOLD AND IMPACTS

Tuolumne County adopted initial recommended countywide VMT thresholds, outlined in the version of the Tuolumne County VMT Thresholds Memo dated May 27, 2020, on August 4, 2020. Since August 2020, the Tuolumne County VMT Thresholds Memo has been updated to the version dated November 4, 2020. The updated Tuolumne County VMT Thresholds Memo contains revised hotel thresholds and VMT methodologies that better account for all travel and trip lengths between Yosemite National Park and hotel type land uses. The County will likely adopt the revised thresholds contained in the Tuolumne County VMT Thresholds Memo dated November 4, 2020 in the near future. Therefore, the revised thresholds in the Tuolumne County VMT Thresholds Memo dated November 4, 2020 were considered appropriate for use in this memorandum. Use of the hotel thresholds from the May 27, 2020 or November 4, 2020 Tuolumne County VMT Thresholds Memos would not change the outcome of the significance findings for Project VMT impacts.

The VMT thresholds outlined in the latest Tuolumne County VMT Thresholds Memo are consistent with the *California Environmental Quality Act Guidelines* (CEQA Guidelines). The hotel thresholds in the Tuolumne County VMT Thresholds Memo considered that the number of visitors to Yosemite National Park, and other similar attractions in the area likely to draw Project guests to the region, may generally increase over time regardless of other factors, and those new visitors will be looking for places to stay. If visitors to the region are provided with new places to stay that generate less VMT than existing hotels, the VMT per visitor of the region could potentially be lowered over time. Additionally, hotels in different areas of the County serve different purposes and visitors, which results in very different travel patterns. The differences in characteristics of hotels in different areas of the County should be acknowledged. Therefore, consistent with recommendations and findings in the Tuolumne County VMT Thresholds Memo, a reasonable VMT threshold for this Project is considered to be:

“less than or equal to the East County subarea baseline hotel VMT per room”

County VMT subareas were developed as part of the Tuolumne County VMT Thresholds Memo and are shown in Attachment D. The East County subarea was used as that is the subarea the Project is located in. Existing average hotel VMT per room in the East County Subarea was calculated as part of the Tuolumne County VMT Thresholds Memo using the same version of the RTDM and same methodologies used to estimate Project VMT in this memorandum. Table 6 shows the VMT threshold and how Project VMT per room compares against it. Refer to the Tuolumne County VMT Thresholds Memo for more details on this threshold.

Table 6. Project VMT – Efficiency-Based VMT Metric

Annual Average Typical Weekday VMT per Room	
Project Hotel VMT per Room	119.8 VMT/room
Existing Average Hotel VMT per Room in the East County Subarea (Threshold)	140.2 VMT / room
Percent Difference	-14.6%
<i>Notes: All data calculated with the Tuolumne County Regional Travel Demand Model and post-processing tools.</i>	

As shown in Table 6, the Project VMT per room is projected to be approximately 14.6% below the threshold. The Project is projected to be below the threshold because of its proximity to SR 120, proximity to tourist destinations, and the internal trip match provided by the employee housing and on-site market. Since the Project VMT is below the threshold, and an efficiency-based threshold was used, Project VMT impacts are projected to be “less than significant” under Existing plus Project and Cumulative (i.e. long term future) plus Project conditions, consistent with methodologies in the OPR Technical Advisory.

ATTACHMENT A

Project Description



ATTACHMENT A

COMMUNITY DEVELOPMENT DEPARTMENT

Quincy Yaley, AICP
Director

Land Use and Natural Resources – Housing and Community Programs – Environmental Health – Building and Safety – Code Compliance

48 Yaney Avenue, Sonora
Mailing: 2 S. Green Street
Sonora, CA 95370
(209) 533-5633
(209) 533-5616 (Fax)
(209) 533-5909 (Fax – EHD)
www.tuolumnecounty.ca.gov

Date: October 7, 2019
To: Interested Stakeholder
From: Tuolumne County Community Development Department
RE: Hardin Flat LLC/Hansji Corporation Site Development Permit SDP18-003
Assessor's Parcel Numbers: 068-120-060 and 068-120-061

OCT " 9 2019

The Community Resources Agency thanks you for your participation in the land development process in Tuolumne County. We value your comments and look forward to your continued participation in our planning process. This process provides information on your requirements and concerns to the applicant early in the review process. Involvement on your part can eliminate or minimize problems that could arise later.

We have received a revised application from Hardin Flat LLC/Hansji Corporation for Site Development Permit SDP18-003 to allow the development of Terra Vi Lodge, a master planned lodging development. Please see the attached information or visit <https://www.tuolumnecounty.ca.gov/1158/Terra-Vi-Lodge-Yosemite>.

The project site is located at the northeast corner of the intersection of Sawmill Mountain Road and State Highway 120. The property is located on both sides of Sawmill Mountain Road, in a portion of Section 26, Township 1 South, Range 18 East. Supervisorial District 4.

If your agency wishes to provide comments on the updated project, please complete the following and return no later than **October 31, 2019**. This will assist the County in the processing of the application.

Staff Contact: Quincy Yaley, Director, Community Development Department
(209) 533-5633
qyaley@co.tuolumne.ca.us

AGENCY: _____

COMMENTS: _____

PROJECT OWNER

HANSJI CORP.
631 W. KATELLA AVE.
ANAHEIM, CA 92802
(714) 399-0152
INFO@HANSJI.COM

ARCHITECT

AVRP SKYPORT STUDIOS
703 15TH ST. SUITE 100
SAN DIEGO, CA 92101
PH: 615-704-2700

LANDSCAPE

SMITH + SMITH
1501 NORTH POINT ST.
SAN FRANCISCO, CA 94123
BILL SMITH: BILL@SMITH2.COM
PH: 415-543-0332

JASON SMITH: JSAON@SMITH2.COM
PH: 415-543-0332

TRAFFIC ENGINEERING

KD ANDERSON & ASSOCIATES, INC.
3853 TAYLOR RD. SUITE G
LOOMIS, CA 95650
PH: 916-660-1555

KEN ANDERSON: KANDERSON@KANDERSON.COM

CIVIL ENGINEERING

LAND & STRUCTURE
105 S. STEWART ST.
SONOMA, CA 95070
PH: 209-789-9220

ZAC GARMAN: ZAC@LANDSTRUC.COM

REUBEN CHIRNSIDE: REUBEN@LANDSTRUC.COM

PH: 209-743-3370

RICHARD JAMES: RICH@LANDSTRUC.COM

PH: 209-789-8777

ENVIRONMENTAL HEALTH

DON MYERS, REHS
REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
14801 TWIST RD.
JAMESTOWN, CA 95327
209-743-9483

REGULATORY DESCRIPTION

THIS APPLICATION NAMED "TERRA VI LODGE YOSEMITE LODGE" WHICH IS BEING SUBMITTED TO THE COMMUNITY RESOURCES AGENCY, HAS FOLLOWED THE CRITERIA AS OUTLINED IN THE "SITE DEVELOPMENT PERMITS INSTRUCTION TO FOR APPLICANTS."

IN ADDITION, UNDER THE TUOLUMNE COUNTY ORDINANCE CODE CHAPTER 17.31, THE PROJECT RESIDES IN THE C-K DISTRICT AND HAS THE DESIGNATION ALLOWING "HOTELS AND MOTELS." AS INDICATED IN THIS CHAPTER, THE PURPOSE OF THE COMMERCIAL RECREATIONAL (C-K) DISTRICT IS TO ENCOURAGE WELL-PLANNED AND INTEGRATED RESORT AND VACATION-ORIENTED COMMERCIAL COMPLEXES IN WHICH THE DEVELOPER MAY INCORPORATE INNOVATIVE DESIGN TECHNIQUES."

THE TERRA VI LODGE HAS ALSO ADDRESSED ORDINANCE: 17.31.010, TITLE 15 FIRE SAFETY STANDARDS AS IT PERTAINS TO THIS PROJECT.

TERRA VI LODGE

YOSEMITE LODGE

11262 SAWMILL MT. ROAD

GROVELAND, CA 95321



PROJECT INFORMATION

APN: 009-120-60-00, 068-120-61-00
LOT SIZE: 1,219.8195.5 SF. (28 ACRES),
1,566,507.3 SF. (36 ACRES)
TOTAL: 2,786,326.8 SF. (64 ACRES)

ZONE: C-K, O
OCCUPANCIES: R-2, S-2, B
CONSTRUCTIONS TYPES: TYPE I
STORIES: 3
CEILING HEIGHT: VARIES
FIRE SPRINKLER: YES
ELECTRICAL: GRID
GAS: TANK
SEWER: SEPTIC

HEIGHT LIMIT: 50'
BASE F.A.R.: 0.5
FRONT SETBACK: 15'
SIDE SETBACK: 6'
REAR SETBACK: 15'

PROPOSED: (100 GUEST ROOMS, 28 CABIN ROOMS, MARKET & EVENT SPACE, EMPLOYEE HOUSING - 5 UNITS)

TOTAL PROPOSED: 104,107 SQ. FT. (FAR 0.04)

PARKING
HOTEL: 100 SPACES
CABINS: 28 SPACES
MARKET (2,800 Sq. Ft.): 16 SPACES
EMPLOYEE: 30 SPACES
EMPLOYEE HOUSING: 40 SPACES
OVERFLOW: 74 SPACES
TOTAL PARKING: 288 SPACES

NOT FOR CONSTRUCTION
Yosemite
Yosemite, CA 95321

PROJECT NAME: TERRA VI LODGE YOSEMITE

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

DATE: 05.10.20

PROJECT NO.: 11262

APPROVAL: SUBMITTAL 2

avrp
 SKYPORT
 701 14th Street, Suite 200
 San Francisco, CA 94103
 P 415.774.2890
 F 415.774.2891
 www.avrp.com



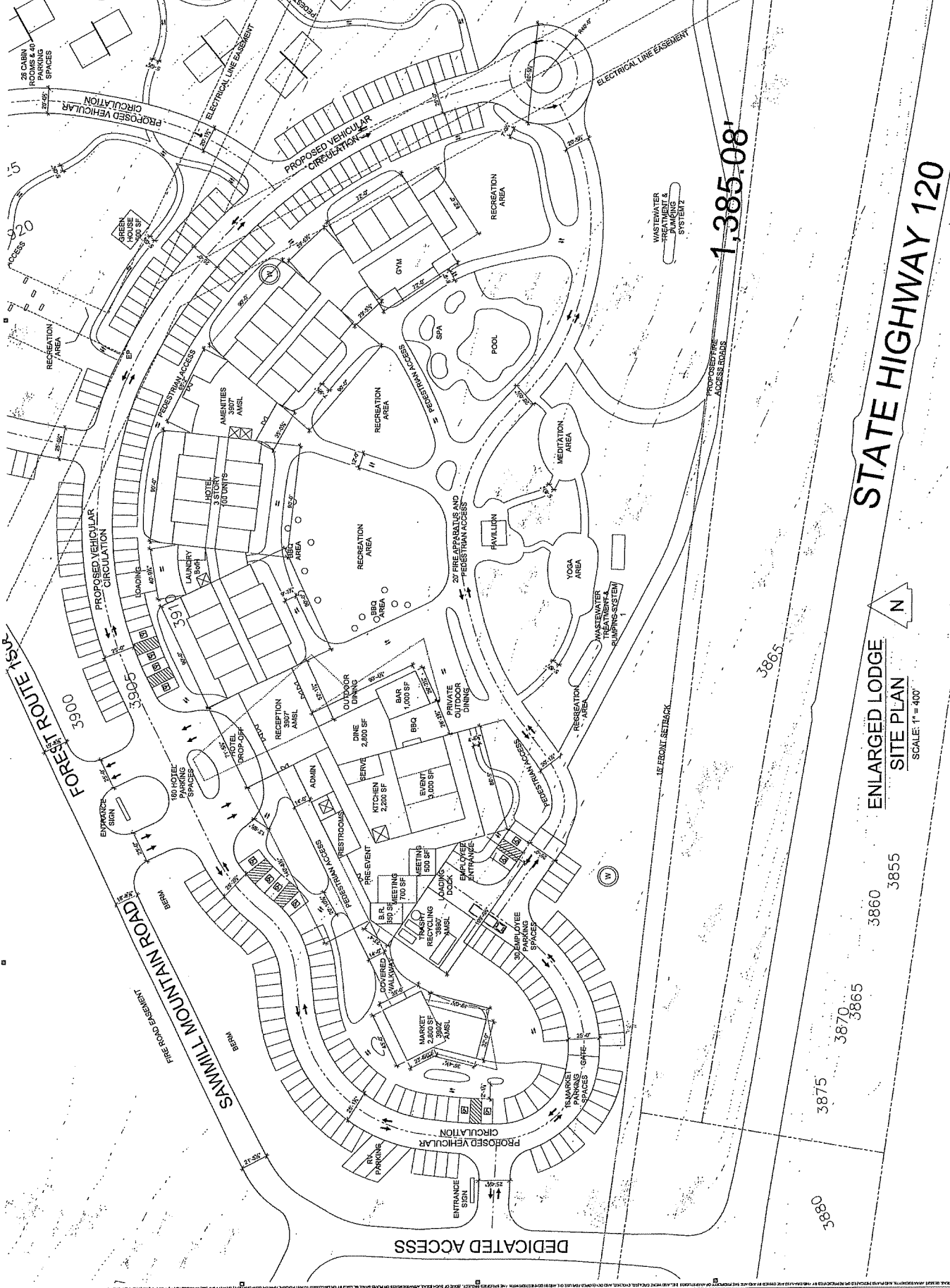
Terra Vi Lodge
 NOT FOR CONSTRUCTION
 Yosemite
 Yosemite, CA 95321

REVISIONS:
 DATE: 11/11/11
 DESCRIPTION: SUBMITTAL 2

PROJECT NO.: 1001
 DRAWING NO.: T0.04
 SHEET NO.: 1001
 ENLARGED LODGE
 SITE PLAN

SHEET NUMBER:

T0.04



STATE HIGHWAY 120

**ENLARGED LODGE
 SITE PLAN**

SCALE: 1" = 400'



3860 3855

3870 3865

3880

THIS SITE PLAN IS A PRELIMINARY DESIGN AND SHOULD NOT BE USED FOR CONSTRUCTION OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. THE ARCHITECT ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS SITE PLAN. THE ARCHITECT'S RESPONSIBILITY IS LIMITED TO THE DESIGN OF THE BUILDING AND ITS ACCESSORIES. THE ARCHITECT DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHERS. THE ARCHITECT'S DESIGN IS BASED ON THE INFORMATION PROVIDED BY THE CLIENT. THE ARCHITECT DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHERS. THE ARCHITECT'S DESIGN IS BASED ON THE INFORMATION PROVIDED BY THE CLIENT. THE ARCHITECT DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHERS.

CONSULTANT:



NOT FOR CONSTRUCTION
Yosemite
Terra Vi Lodge
Yosemite, CA 95321

REVISIONS
DESCRIPTION: 1.1.10
SUBMITTAL 2
DATE: 08.14

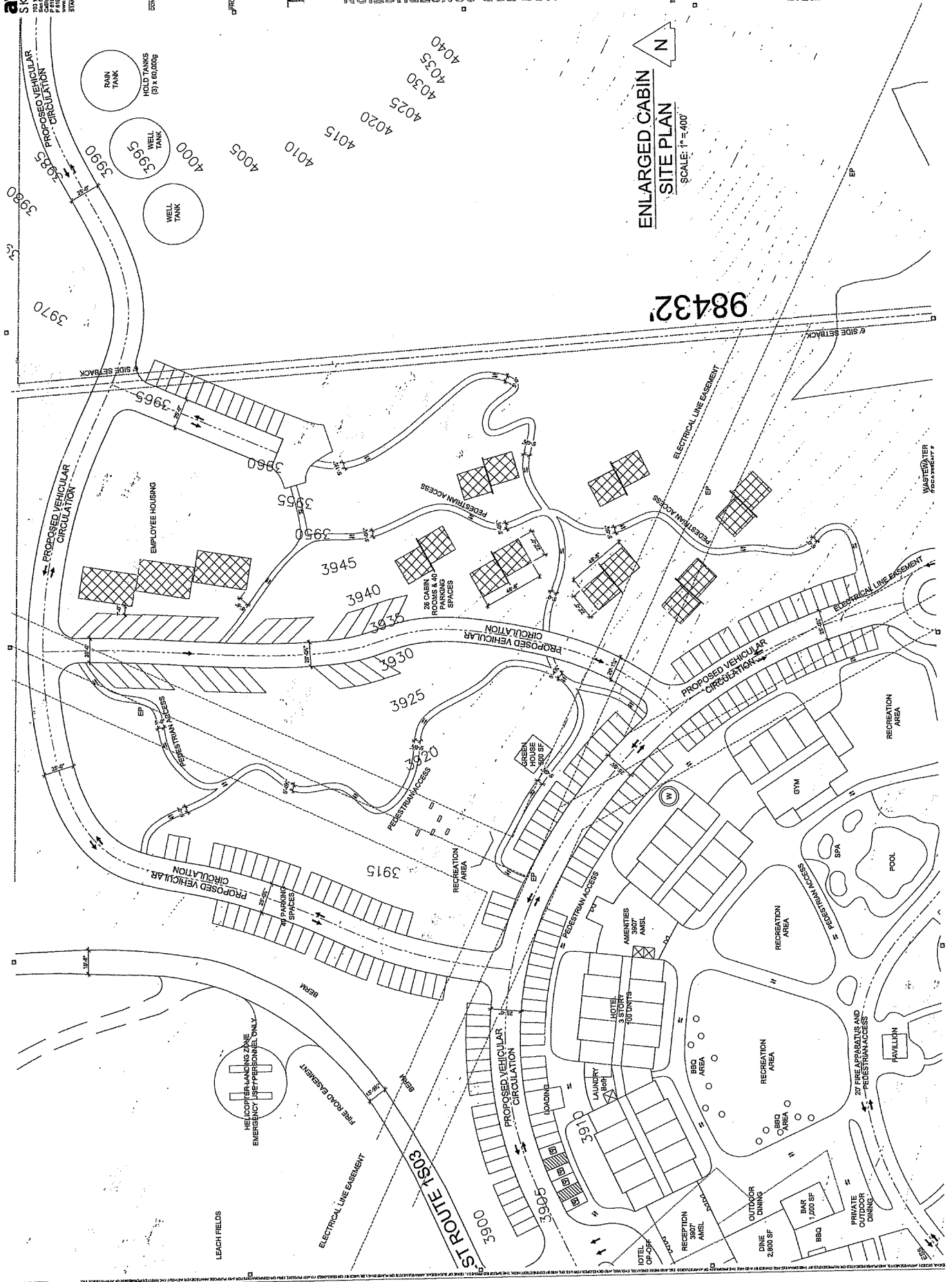
PROJECT NO.
AWARD NO.
CONTRACT NO.
SHEET NO.

ENLARGED CABIN
SITE PLAN

SHEET NUMBER

T0.05

ENLARGED CABIN
SITE PLAN
SCALE: 1" = 400'





PROJECT SUMMARY

Revised September 25, 2019

The following information is a summary of our preliminary master planning, design, engineering and operation strategies.

Project Description

Terra Vi Lodge Yosemite is a master planned lodging development designed to address the increased demands for eco-sensitive resorts and local recreation tourism. Our team has designed an extraordinary mountain resort on the 64-acre Manly Family property that was severely damaged in the 2013 Rim Forest Fire. This restoration effort will not only repair and preserve a responsible use of this property, but also brings an enormous capital investment to the area, creating sustainable jobs, local commerce, and supporting a greater public awareness for outdoor recreation and nature enjoyment.

The project is comprised of various single, two- and three-story elements beginning at the Northwest entrance of Sawmill Mountain Road and continuing Northeast as it unfolds and curves back towards SR120. This design creates a maximum set-back for vertical structure transition, and then pulls the higher elements back away from the adjacent neighboring properties, in an effort to mitigate both public and private viewshed concerns. These elements will include a public market, general lodge with multi-purpose, indoor and outdoor areas, 100 guestrooms, 7 cabins providing 26 guestrooms and 5 employee housing units. The development utilizes approximately 18% of the total site and preserves the remaining developable areas and designated open space.

The Terra Vi Lodge Yosemite development submittal conforms to the current zoning requirements (C-K, O) as defined by the County of Tuolumne, as well as the applicable design guidelines of the County of Tuolumne and various State of California agencies.

Architecture & Engineering

As part of the gateway to Yosemite National Park, Terra Vi Lodge Yosemite will be a mountain retreat celebrating the dramatic views, scenic beauty and exceptional all-season recreation opportunities of the Sierra Nevada. The Project will invoke a connection to nature and foster a stewardship of the natural and cultural environment.

The proposed Lodge is set within a mixed-conifer forest dominated by ponderosa pines, white firs, and black oaks. The site was heavily impacted by the 2013 Rim Fire which destroyed most of the site's mature trees with a few surviving pine groves remaining within an open mountain meadow. The western portion is an exposed rugged area with little existing shade, while a mixed-conifer forest persists on the slopes of the eastern side, leading into the Open Space and neighboring National Forest.

Terra Vi Lodge will be a one-of-a-kind place where individuals, families and groups can have an unmatched experience in one of nature's most beautiful settings. The indoor – outdoor relationship is encouraged throughout the resort. The public spaces which include lobbies, dining, event and special amenity areas are designed to have open connections to nature both visually and physically.

The architecture is a blend of modern and rustic themes, but also reminiscent of the great lodges found in and around our national parks such as Yosemite. The design integrates natural elements such as open beamed ceilings and rock walls that warm the dramatic spaces.

Sensitive to our surrounding neighbors and public views from SR120, the architectural massing builds from the initial 1-story public market to the 2-story public area and ultimately to the 3-story lodging accommodations. This arrangement helps to minimize the footprint and impact of the buildings on the site.

A cluster of cabins is sited beyond the main resort facility and slowly terraces up the native hillside, minimizing grading and preserving the existing mature trees. These cabins are connected by a series of walking paths to the resort amenities.

The service areas are strategically located behind the main buildings and a full story below the public areas to improve the public view.

Parking is designed to be convenient but planned in such a way so not to dominate the site. This is accomplished by avoiding large expanses of asphalt and incorporating gently curving roads that follow the natural topography of the site. These are in turn screened and broken up with berms and landscape elements.

There will be a variety of unit types for the guest's selection, and a host of areas planned for both indoor and outdoor activities, including nature trails, swimming pools, multifunction rooms and indoor - outdoor dining.

A market will be provided for both guests and the general public.

Fire prevention and defensible space have remained the most important design consideration for this project. Increased building separation, low building heights, high performance fire extinguishing and alarm systems, surplus water storage, complete perimeter fire-fighting accessibility and a community emergency helicopter landing zone have been included in this master-planned lodging complex. This serves to immediately address a property generated incident, but moreover, to defend against the more likely wildland fire event.

Alterations are proposed to be made to Highway 120 at the Sawmill Flat intersection to meet Caltrans requirements for sight distance, left turn lane and right turn pocket. Widening the highway to provide for the left turn lane, right turn pocket and associated tapers will be achieved by adding width to the North side of the highway to minimize the grading impact on existing terrain and minimize tree removal.

Of the 64 acres +/- that make up the site, the area that will be mass graded for the buildings, roads and parking is approximately 11.5 acres (18%). The cut and fill quantities are balanced on this project, avoiding the need for import or export of soil. Retaining walls have been proposed throughout the site to reduce the impact of cut and fill slopes, reduce tree removal and minimize the grading footprint of the project.

A water system will be developed from 4 on-site wells that are in place. The wells as constructed exceed the anticipated water requirements for the development, using State provided guidelines and forecasted drought models. Well-water will be treated and stored in appropriately sized tanks. The water system will be registered with the State of California and managed as a Transient Public Water System.

Fire suppression systems and site hydrants for the buildings will be provided using a combination of reclaimed, treated greywater and potable water storage. The quantity of water storage and pressure of water supply will be designed in accordance with Tuolumne County and NFPA requirements. Water conveyance pipes will be routed under proposed roads to minimize impacts to native ground.

A wastewater system has been developed to serve the development with a 100% redundancy area being preserved. The system will conform to both the State of California and County of Tuolumne County regulations and policies. System reliability has been one of the foremost considerations of the project which will be addressed using sound and proven design principals with special efforts to minimize any adverse impact to the environment. System reliability will be enhanced by additional redundant mechanical system components. The food service wastewater treatment system will include a technologically advanced treatment system and be continuously monitored. Water conservation efforts will be enhanced using single-use plate and utensils, as well as utilizing off-site laundry services. Waste and water detention materials will be separated into black and greywater segments and treated on site. The black water will be disposed of through an approved leach field system. The greywater is proposed to

be treated, stored and re-used for toilets, fire suppression storage and landscape irrigation uses. Surplus greywater would be disposed of in the leach field system.

Electricity will be provided by PG&E and augmented by solar systems located on the roof of the hotel. The existing power lines that run through the area of development would be rerouted and placed underground. Transformers would be located at appropriate places based on future PG&E design requirements. Phone and data service would also be installed underground within the area of improvement.

Propane tanks would be installed in the vicinity of the workshop and Caltrans sand storage building. This location is out of sight and a safe distance from any buildings and property lines. The storage volumes would be based on demand and refueling frequencies but is estimated to include multiple tanks in an area of approximately 30' x 30'. Propane would be piped underground to the various buildings on site.

The preliminary storm water management plan demonstrates that, due to the topography of the surrounding area, there is very little storm water that runs on to this site. The areas of the site that drain towards the South converge at a 24" culvert that passes under the highway. While the increase in impervious surfaces on site will increase storm water runoff, it will be the intention of the drainage design to detain storm water on site during storm events and meter the outflow in order not to exceed the capacity of the existing culvert under the highway. Roof drainage and landscape area drains will direct storm water underground to detention areas. Sheet flow from roads and parking areas will be captured in surface drainage swales which will also be directed to detention areas. Drainage swales and detention areas will be landscaped to incorporate them into the built environment in appropriate ways.

Great care has been taken in the design of this site to preserve as many existing mature trees as possible. As a result of this effort there are only 6 trees impacted on the hotel site, and 4 trees impacted by the maintenance area.

The development includes a landing zone for emergency response helicopters for this site as well as the surrounding community. The proposed location is easily accessible from SR120 and Sawmill Mountain Rd and has an approach and departure that is clear of trees, buildings and overhead wires.

A maintenance area has been located adjacent to the existing Caltrans sand storage building and will utilize the existing paved access. Utilizing this existing encroachment on Sawmill Mountain Road allows the maintenance area to be removed from the guest area thereby reducing additional grading of native terrain and the need of additional structures or paving.

Construction & Lodging Operations

The project will develop and initiate several conservation programs designed to minimize the environmental impacts and conserve precious resources of the site and surrounding areas:

The project will incorporate a LEED equivalent building program which will include Green building materials such as energy efficient windows, skylights, doors, insulation, roofing, lighting, plumbing, heating and cooling equipment, creating a comprehensive energy-efficient building infrastructure and envelope. The mechanical infrastructure will include low-flow plumbing fixtures, high efficiency equipment and SMART systems monitoring and controls.

Electricity will be supplemented with the use of solar collection, battery storage and energy saving lighting controls for all interior and exterior applications, including a dark-sky sensitive site lighting program.

The Lodge will operate a comprehensive fire-life-safety program, including non-combustible exterior finishes, high performance fire suppression and alarm systems, excess fire tank capacity, staff and guest fire prevention and preparedness, and a helicopter landing zone for emergency services. Additionally, the kitchen cooking areas will have quick-response fire extinguishing equipment and enhanced fire separation area components. There will be no cooking allowed within any of the guestrooms.

The project will include a centered program to collect rain, surface and graywater retention, treatment and reuse for toilets, irrigation and fire suppression systems, thereby substantially reducing the overall daily demand from the Public Water System.

The project will include a state-of-the-art sewage pretreatment plant that will include sludge and aerobic biofilm reactors.

Recycled material paving systems will be incorporated for all exterior walking paths and recreation areas.

The property will utilize a number of conservation programs to enhance recycling and reduced services for housekeeping and laundry. Additionally, all housekeeping and laundry consumables shall be bio-sensitive.

The food and beverage program will be limited to lodging guests and incorporate several conservation programs such as single-use flatware and utensils, food waste composting and bio-sensitive cleaning consumables.

The project will incorporate a YART stop to encourage public transportation of our guests to the Yosemite National Park and surrounding areas.

Lastly, the Lodge will stimulate several public and economic benefits, including job creation and substantial TOT/Bed Tax Revenues. The Lodge will incorporate employment training programs, cross-training, career growth opportunities.

Conversely, we understand the additional impact a resort of this nature will have on the already stressed emergency services system. While we have planned infrastructure and preparedness programs to mitigate services and supplement first responder resources, we understand the challenges and look forward to the conversation and actions necessary to address the impact as a vested partner of this community.

ATTACHMENT B
Project Trip Generation

ATTACHMENT B

PROJECT CHARACTERISTICS

The proposed project will create a lodge with 100 guest rooms and 26 rooms in guest cabins. The project will employ up to 33 persons but will provide employee housing capable of lodging 22 persons, including on-site accommodations for the manager and assistant manager. The project will also include a 2,800 sf market that will cater primarily to hotel guests and employees but will also be available to the general public traveling on SR 120.

The project is further described herein in terms of the amount of traffic it may generate and the routes that traffic will use, and proposed circulation system improvements included with the project are also described.

The travel characteristics of the project have been identified for use in evaluating the relative impacts of the project. Project characteristics are characterized in terms of:

- Trip Generation – the amount of traffic accompanying the project on a daily and peak hour basis
- Trip Distribution – the destinations for project trips on a local and regional basis
- Trip Assignment – the routes that will be used between the site and identified destination based on available alternatives

Trip Generation

Trip Generation Rates. The amount of new traffic associated with development projects is typically forecast using information developed from recognized national sources. The Institute of Transportation Engineers (ITE) publication *Trip Generation, 10th Edition* is a source recognized by Caltrans and other local agencies such as Tuolumne County, and potential trip generation rates for the project drawn from that publication are presented in Table 6.

As shown the trip generation associated with individual aspects of the project has been considered, and applicable rates have been used. As the impact analysis focusses on peak Saturday conditions along SR 120, Saturday trip generation rates were desirable. However, because some uses lack Saturday data, weekday data has been used where needed to complete the data base.

Lodging. While the Manual includes trip generation rates for Resort Hotels (Code 330), no data is available for Saturdays. Alternatively, Saturday data is available for regular hotels (310), although the comparable weekday data reveals that Resort Hotels generate fewer trips. To provide a “worst case” analysis the higher rates for regular Hotels were used, and these rates were also applied to the cottages.

ATTACHMENT B

TABLE 6 PROJECT TRIP GENERATION RATES													
Code	Description	Unit	Weekday							Saturday			
			Daily	PM Peak Hour of Adjacent Street			PM Peak Hour of Generator			Daily	Peak Hour of Generator		
				In	Out	Total	In	Out	Total		In	Out	Total
Rates Relating to Lodge													
310	Hotel	room	8.36	51%	49%	0.60	58%	42%	0.61	8.19	56%	44%	0.72
330	Resort Hotel	room	-	43%	57%	0.41	50%	50%	0.50	-	-	-	-
Rates Relating to Employee Housing													
210	Single Family Housing	resident	2.65	66%	34%	0.26	66%	34%	0.28	2.48	54%	46%	0.27
		dwelling	9.44	63%	37%	0.99	64%	36%	1.00	9.54	54%	46%	0.93
220	Multifamily Housing – low rise	resident	1.42	-	-	0.13	63%	37%	0.32	-	-	-	-
Rates Relating to Market													
814	Variety Store	ksf	63.47	52%	48%	6.84	50%	50%	7.42	(63.47)	52%	48%	(7.42)
850	Supermarket	ksf	106.78	51%	48%	9.24	52%	48%	7.60	177.62	51%	49%	10.34
851	Convenience Store without Gasoline Sales	ksf	762.28	51%	49%	49.11	51%	49%	53.51	1084.17	50%	50%	79.12
	Average of available sources									441.75	51%	49%	32.29
Rates Used for Analysis													

ATTACHMENT B

Employee Housing. From the standpoint of land use category, the employee units are most like multi-family dwellings. Because the employee residence will be occupied by multiple employees, trip generation based on the number of residents has been used for those units that are expected to be occupied by individual employees. However, no Saturday information is available on a “per resident” basis. “Per resident” Saturday data is available for Single Family Homes, although the rates for this use are somewhat higher than those for multi-family units. “Per resident” Saturday data for single family homes was used to provide a “worst case” analysis.

Market. The market will offer a limited inventory that is primarily directed to the lodge’s guests and employees, and ITE rates for hotels note the presence of some retail offerings in the overall trip generation rates of that use. While the market is somewhat separated from the lodge building, because the lodge lacks a full service restaurant, the market’s offerings may be more closely linked to the food service needs of guest (i.e, prepared sandwiches and snacks) rather than the broader range of products offered at a more typical rural market catering to the general public.

ITE rates that are available for a variety of retail uses were considered, and their ITE descriptions are noted below.

- **Code 814 Variety Store** A variety store is a retail store that sells a broad range of inexpensive items often at a single price. These stores are typically referred to as “dollar stores.” Items sold at these stores typically include kitchen supplies, cleaning products, home office supplies, food products, household goods, decorations, and toys. These stores are sometimes stand-alone sites, but they may also be located in small strip shopping centers.
-
- **Code 850 Supermarket.** A supermarket is a free-standing retail store selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items. Supermarkets may also contain the following products and services: ATMs, automobile supplies, bakeries, books and magazines, dry cleaning, floral arrangements, greeting cards, limited-service banks, photo centers, pharmacies, and video rental areas. Some facilities may be open 24 hours a day.
-
- **Code 851 Convenience Store.** The convenience markets in this classification are open between 15 and 24 hours per day. These markets sell convenience foods, newspapers, magazines, and often beer and wine; they do not have gasoline pumps.

The averages of the rates for these three uses have been employed.

Internal Trips. Interaction between the uses on-site will keep some potential trips “on-site” and reduce the number of external trips.

Lodging – Employee Housing. The standard trip generation rates for Hotels accounts for and includes typical employee travel. By providing on-site housing a share of the trips associated with the Lodge and cabins will be eliminated. As indicated in Table 7, we have assumed that 20 of the 33 employees will take advantage of the on-site housing, or 20 employees. On a daily basis these employees would have generated 40 daily trips if each drove

ATTACHMENT B

alone. We assumed that 10% of this activity might occur in the Saturday peak hour (i.e., 4 trips). This reduction would apply to both Lodging estimate and to the employee on-site housing estimate.

TABLE 7 TRIP GENERATION ESTIMATE (12/5/2019)						
Code	Description	Unit	Saturday			
			Daily	Peak Hour of Generator		
				In	Out	Total
310	Lodge	100 rooms	819	40	32	72
	Cabins	26 units	213	10	9	19
	Subtotal		1,032	50	41	91
	Less effect of Employee Housing	(2%)	40	2	2	4
	Less internal to Market	(24%)	252	11	11	22
	Net External Trips		740	37	28	65
210	Individual Employee Housing	20 residents	50	3	3	6
	Less on-site commute match		40	2	2	4
	Less internal to Market	(14%)	5	1	0	1
	Net External Trips		5	0	1	1
851	Market	2.8 ksf	1,237	46	44	90
	Less internal to Lodging		252	11	11	22
	Less internal to Employee Residential		5	0	1	1
	Net External		980	35	32	67
	Pass-by Trips	61%	598	21	20	41
	Net Primary External		382	14	12	26
	Total Gross Trips		2,309	99	88	187
	Total External Trips		1,725	72	61	133
	Total Pass-by Trips		598	21	20	41
	Total Net New Trips		1,127	51	41	92

Lodging / Employees – Market Interaction. It is likely that guests and employees will visit the market for convenience items, souvenirs, etc. We assumed that each guest room and cabin room will create one visit each day (i.e., 2 trips per unit) and that each employee residing on site will visit the market once a week. On Saturday, the market’s internal trips associated with the lodging and employees total 257 daily and 23 peak hour trips, and this discount would also be applied to the Lodging and Employee trip estimates.

Under those assumptions an overall total of 594 daily trips would be “internal” or 25% of the

ATTACHMENT B

project's gross trip generation total.

Market Pass-By Trips. Traffic engineers have found that a share of trips attracted to retail uses is typically drawn from the stream of traffic already passing the site. These “pass-by” trips represented customers who stop at a retail store as part of a trip made for another purpose. In this case a pass-by trip will occur when Yosemite visitors stop at the market on their way to and from the national park. ITE data is available in the Trip Generation Handbook, 3rd Edition, to identify the range of typical “pass-by” rates for various uses. The average pass-by rate for convenience stores is 61%. While it is likely that the actual pass-by rate of the market could be higher due to the absence of other retail opportunities in the area along SR 120 between the national park and Groveland, this rate has been employed to produce a “worst case” assessment.

The reasonableness of the pass-by trip assumptions is linked to the background traffic volumes on SR 120. As indicated in the setting, SR 120 carries about 700 vph by the site on the Saturday peak hour. The inbound pass-by trips drawn to the market (i.e., 21 inbound trips) represent about 3% of the existing hourly volume. This share seems reasonable given the absence of other convenience retail uses in the area between Yosemite Valley and Groveland.

Resulting Trip Generation Estimates. As shown in Table 7, on a peak Saturday the project will result in 598 pass-by trips. A total of 1,127 “new” trips are added to the study area circulation system. During the peak hour 41 pass-by trips and 92 “new” trips are expected.

ATTACHMENT C

Caltrans PeMS Traffic Counts

**Attachment C
Caltrans PeMS Traffic Counts**

SR 120 PeMS Counts - Postmile 24.661 East of Lower Priest Grade Road

Spring Weekdays 2018:

<u>Eastbound</u>				
Day	Flow (Veh/Day)	# Lane Points	% Observed	
5/1/2018 0:00	848	288	99.30	
5/2/2018 0:00	951	288	100.00	
5/3/2018 0:00	1,145	288	100.00	
5/8/2018 0:00	1,213	288	100.00	
5/9/2018 0:00	1,087	288	100.00	
5/10/2018 0:00	1,290	288	99.70	
5/15/2018 0:00	1,099	288	99.30	
5/16/2018 0:00	1,135	288	99.70	
Average:	1,096			

<u>Westbound</u>				
Day	Flow (Veh/Day)	# Lane Points	% Observed	
5/1/2018 0:00	940	288	99.30	
5/2/2018 0:00	1,039	288	100.00	
5/3/2018 0:00	1,126	288	100.00	
5/8/2018 0:00	1,442	288	99.70	
5/9/2018 0:00	1,257	288	100.00	
5/10/2018 0:00	1,364	288	99.70	
5/15/2018 0:00	1,249	288	99.30	
5/16/2018 0:00	1,244	288	99.70	
Average:	1,208			

Average SR 120 Typical Weekday ADT in 2018:

Summer Saturdays 2018:

<u>Eastbound</u>				
Day	Flow (Veh/Day)	# Lane Points	% Observed	
6/16/2018 0:00	2097	288	100.00	
6/23/2018 0:00	2055	288	100.00	
6/30/2018 0:00	2348	288	100.00	
7/7/2018 0:00	2306	288	100.00	
7/14/2018 0:00	2338	288	100.00	
7/21/2018 0:00	1863	288	100.00	
Average:	2,168			

<u>Westbound</u>				
Day	Flow (Veh/Day)	# Lane Points	% Observed	
6/16/2018 0:00	2085	288	100.00	
6/23/2018 0:00	2091	288	100.00	
6/30/2018 0:00	2132	288	100.00	
7/7/2018 0:00	2526	288	100.00	
7/14/2018 0:00	2633	288	100.00	
7/21/2018 0:00	2054	288	100.00	
Average:	2,254			

Average SR 120 Peak Saturday ADT in 2018:

Typical Weekday vs. Peak Saturday Ratio:

ATTACHMENT D
Tuolumne County VMT Subareas

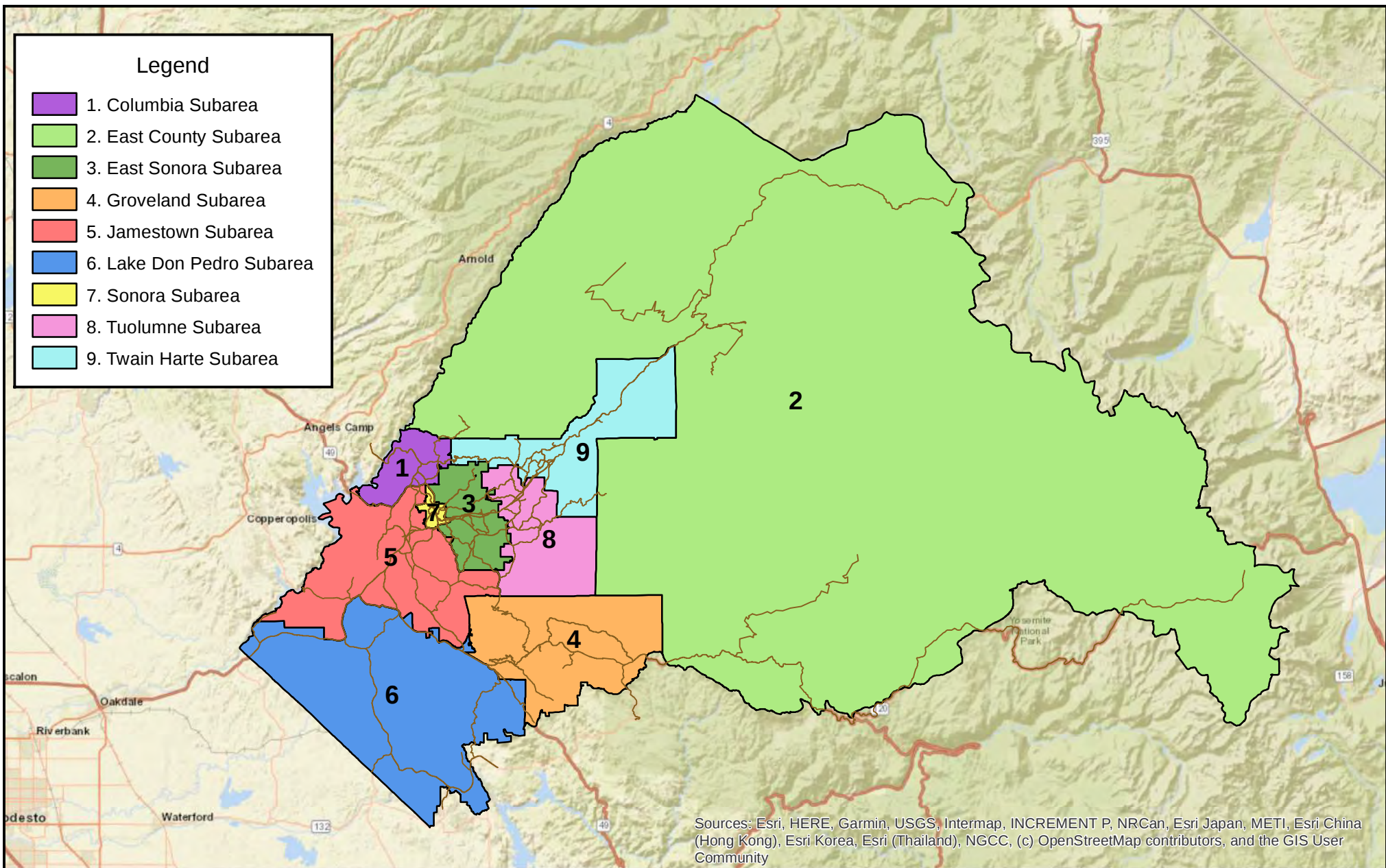


FIGURE 1
TUOLUMNE COUNTY VMT SUBAREAS
 SB 743 STUDY PHASE 2
 TUOLUMNE COUNTY, CA
 MAY 2020

0 2.5 5 10
 Miles

