Appendix I
Transportation

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memorandum

date	October 4, 2019
to	Jamie Schmidt, Under Canvas
cc	
from	Luke Evans, ESA; Shadde Rosenblum, ESA
subject	Trip Generation for Yosemite Under Canvas EIR

The purpose of this memorandum is to revise the trip generation rates used in the preparation of the Under Canvas Yosemite Initial Study/Mitigated Negative Declaration (IS/MND), which was published in February 2019.

Trip Generation Rates in IS/MND

At the time the transportation analysis was conducted for the IS/MND, site-specific trip generation rates were not available. The Institute of Trip Engineers (ITE) Trip Generation Manual, which would normally be consulted to determine appropriate trip generation rates, does not have trip generation data/rates that fit with the unique characteristics of the Under Canvas product. For this reason, the trip generation characteristics for Yosemite Under Canvas were provided by Under Canvas based on their experience at similar existing (i.e., operational) camp sites. Under Canvas estimated that peak period traffic generated by the proposed Yosemite site would occur between 7:30 and 10:30am and 5:00 and 10:00pm. During these periods, Under Canvas estimated that there could be up to 25 vehicles per hour leaving in the morning and up to 25 vehicles per hour arriving in the evening.

Development of Site Specific Trip Generation Rates

In the summer of 2019, ESA was contracted by Under Canvas to develop site specific trip generations for Under Canvas camp sites. The reason for this effort was to provide more precise and legally-defensible trip generation rates to be used in the environmental documentation for future Under Canvas sites, of which several are currently planned in California. This effort is documented in a memorandum titled, *Trip Generation for Under Canvas*, which was finalized on September 24, 2019 and is provided as Attachment A to this memorandum.

Site-specific trip generations rates were calculated using traffic data collected at Under Canvas Grand Canyon, which is considered by Under Canvas to be representative of a typical camp site with on-site characteristics that are consistent with characteristics at planned future camp sites. The results of the analysis indicated that each occupied tent generates approximately 2.6 daily one-way vehicle trips, and less than one trip per hour for the peak

hour of generator, and the weekday AM and PM peak hours. Further detail regarding the methodology and findings are provided in Attachment A.

Application of Site Specific Trip Generation Rates to Yosemite Site

An Environmental Impact Report (EIR) is currently being prepared for the Yosemite site. The transportation analysis for the EIR will carry over the analysis conducted in the IS/MND, but the analysis will be updated/expanded to address public comments received on the IS/MND and to reflect any new data/project information. The trip generation estimates for the EIR will be revised based on the site-specific trip generation rates developed in the summer of 2019.

The Yosemite site is proposed to accommodate 99 tent sites. Using the daily trip generation rate of 2.6 daily one-way vehicle trips per occupied unit, the Yosemite site would generate approximately 257 vehicle trips per day at full occupancy. During the peak hour (i.e., maximum number of hourly vehicles entering/exiting the site), which would vary depending on the day of the week, up to 45 vehicles (13 inbound, 32 outbound) could be generated by Yosemite site. For the EIR, these site-specific trip generation numbers will be used, replacing the estimated trip generation numbers be used in the IS/MND.

For a Traffic Study to be required, the project must generate more than 500 vehicle trips per day or 50 vehicle trips at peak times (Tuolumne County, 2013).[1] Based on the site specific trip generation described above for the Yosemite site operating at full occupancy, similar to the IS/MND, a traffic study is not required as part of the EIR.[2] As such, similar to the IS/MND, the discussion of potential transportation and traffic impacts provided in the EIR will be largely qualitative.

[1] *Tuolumne County General Plan and Regional Transportation Plan Evaluation and Analysis* (July 2013).

[2] As stated in the *Caltrans Guide for the Preparation of Traffic Impact Studies* (December 2002), the Caltrans threshold for a facility operating at LOS C or D, such as SR 120, is 50-100 peak hour trips.

ATTACHMENT A:
SITE-SPECIFIC TRIP GENERATION
MEMORANDUM

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memorandum

date	September 24, 2019
to	Jamie Schmidt; Under Canvas
cc	
from	Shadde Rosenblum, Luke Evans; ESA
subject	Trip Generation for Under Canvas

This memorandum documents the development of use-specific trip generation rates for Under Canvas. This evaluation was conducted because the Institute of Trip Engineers (ITE) Trip Generation Manual does not have trip generation data/rates that fit with the unique characteristics of the Under Canvas product, and the hybrid rates (i.e., hotel/campsite) developed as part of previous planning efforts may misrepresent the trip generation potential of Under Canvas.

One existing Under Canvas site was selected to evaluate existing trip generation activity during summer peak activity: Under Canvas Grand Canyon, located at 979 Airpark Lane, Williams, AZ 86046. Under Canvas Grand Canyon has a total of 70 tent sites and provides onsite dining, daily housekeeping, and other camp amenities (e.g., lobby, yoga deck, volleyball court). On average, approximately 25 to 30 staff, including administration, maintenance, and housekeeping, are onsite daily Consecutive three-day traffic counts (i.e., 72-hour) were conducted on Friday, August 23 through Sunday, August 25. The driveway location for pneumatic tube count placement was selected to ensure the isolation of vehicle trips associated solely with Under Canvas, so as not to capture vehicle trips associated with other nearby uses. The raw traffic counts are provided in Attachment A to this memorandum.

Once the traffic counts were processed and summarized by the traffic vendors, ESA was able to establish traffic volumes for the peak hour of activity (i.e., peak hour of generator), meaning the one-hour period of the day when the total of vehicles entering and exiting each site was highest, as well as daily traffic volumes. Since some traffic analyses require an analysis of weekday peak hour conditions, the Friday AM and PM peak hour volumes, which would occur sometime between 7:00 am and 9:00 am and between 4:00 pm and 6:00 pm, respectively, were also extracted from the data. Using the total number of occupied tents for the selected data collection dates, which was obtained from Under Canvas management, trip rates per occupied unit were calculated for each of the analyzed time periods. Finally, average trip generation rates were developed for each site for the entire 3-day period taking into account the number of occupied rooms and traffic volumes for each day. This information is shown below in Table 1.

Table 1: Grand Canyon Vehicle Volumes and Calculated Trip Rates

GRAND CANYON											
Vehicle Volumes											
		PEAK HOUR OF GENERATOR*			FRIDAY AM PEAK HOUR			FRIDAY PM PEAK HOUR			OCCUPIED
	DAILY	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	ROOMS
FRI 8/23	129	4	18	22	4	13	17	5	3	8	34
SAT 8/24	108	7	11	18	N/A	N/A	N/A	N/A	N/A	N/A	51
SUN 8/25	80	5	10	15	N/A	N/A	N/A	N/A	N/A	N/A	37
Trip Rates (per occupied unit)											
		PEAK HOUR OF GENERATOR*			FRIDAY AM PEAK HOUR			FRIDAY PM PEAK HOUR			
	DAILY	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	
FRI 8/16	3.79	0.12	0.53	0.65	0.12	0.38	0.50	0.15	0.09	0.24	
SAT 8/17	2.12	0.14	0.22	0.35	N/A	N/A	N/A	N/A	N/A	N/A	
SUN 8/18	2.16	0.14	0.27	0.41	N/A	N/A	N/A	N/A	N/A	N/A	
WEIGHTED AVERAGE	2.60	0.13	0.32	0.45	N/A	N/A	N/A	N/A	N/A	N/A	
*Friday 9:15AM - 10:15AM; Saturday 2:45PM-3:45PM; Sunday 9:45AM-10:45AM											

The results indicate that each occupied unit generates approximately 2.6 daily one-way vehicle trips, and less than one trip per hour for the peak hour of generator, and the weekday AM and PM peak hours.

ATTACHMENT A: TRAFFIC DATA

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Friday, August 23, 2019 **City:** Williams **Project#** 19-1408-001

Location : Under Canvas Grand Canyon Driveway

DAY 1

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			0		1		
00:15			0		0			12:15			0		0		
00:30			0		0			12:30			1		0		
00:45			0	0	0	0		12:45			1	2	0	1	3
01:00			0		0			13:00			1		2		
01:15			0		0			13:15			1		0		
01:30			0		0			13:30			0		0		
01:45			0	0	0	0		13:45			2	4	0	2	6
02:00			0		0			14:00			0		2		
02:15			0		0			14:15			2		2		
02:30			0		0			14:30			3		1		
02:45			0	0	0	0		14:45			1	6	1	6	12
03:00			0		0			15:00			3		1		
03:15			0		0			15:15			2		0		
03:30			0		0			15:30			3		3		
03:45			0	0	0	0		15:45			3	11	0	4	15
04:00			0		0			16:00			1		0		
04:15			0		0			16:15			1		2		
04:30			0		0			16:30			1		1		
04:45			0	0	0	0		16:45			2	5	0	3	8
05:00			0		0			17:00			0		1		
05:15			0		1			17:15			1		0		
05:30			1		0			17:30			0		0		
05:45			0	1	0	1	2	17:45			1	2	1	2	4
06:00			0		0			18:00			2		0		
06:15			2		0			18:15			3		0		
06:30			0		3			18:30			1		0		
06:45			0	2	0	3	5	18:45			0	6	0	0	6
07:00			0		1			19:00			1		0		
07:15			1		0			19:15			1		0		
07:30			0		0			19:30			0		0		
07:45			2	3	0	1	4	19:45			0	2	0	0	2
08:00			1		3			20:00			0		0		
08:15			1		2			20:15			1		0		
08:30			1		4			20:30			0		0		
08:45			1	4	4	13	17	20:45			0	1	0	0	1
09:00			0		2			21:00			0		0		
09:15			1		7			21:15			0		0		
09:30			0		6			21:30			0		0		
09:45			1	2	2	17	19	21:45			1	1	0	0	1
10:00			2		3			22:00			0		0		
10:15			1		2			22:15			0		0		
10:30			1		2			22:30			0		1		
10:45			1	5	0	7	12	22:45			0	0	0	1	1
11:00			2		2			23:00			0		1		
11:15			2		1			23:15			0		0		
11:30			2		0			23:30			0		0		
11:45			1	7	0	3	10	23:45			0	0	0	1	1
Total Vol.				24		45	**69**					40		20	**60**

GPS Coordinates: 35.652085, -112.156675

Daily Totals

NB	SB	EB	WB	Combined
		64	65	**129**

	AM			PM		
Split %	34.8%	65.2%	**53.5%**	66.7%	33.3%	**46.5%**
Peak Hour	10:45	08:45	**09:15**	15:00	14:00	**15:00**
Volume	7	19	**22**	11	6	**15**
P.H.F.	0.88	0.68	**0.69**	0.92	0.75	**0.63**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Saturday, August 24, 2019 **City:** Williams **Project#** 19-1408-001

Location : Under Canvas Grand Canyon Driveway

DAY 2

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			0		0		
00:15			0		0			12:15			0		1		
00:30			0		0			12:30			1		1		
00:45			0	0	0	0		12:45			0	1	0	2	3
01:00			0		0			13:00			0		0		
01:15			0		0			13:15			2		0		
01:30			0		0			13:30			2		0		
01:45			0	0	0	0		13:45			5	9	0	0	9
02:00			0		0			14:00			2		2		
02:15			0		0			14:15			0		0		
02:30			0		0			14:30			1		2		
02:45			0	0	0	0		14:45			0	3	6	10	13
03:00			0		0			15:00			4		1		
03:15			0		0			15:15			1		2		
03:30			0		0			15:30			2		2		
03:45			0	0	0	0		15:45			3	10	2	7	17
04:00			0		0			16:00			2		2		
04:15			0		0			16:15			1		3		
04:30			0		0			16:30			1		1		
04:45			0	0	0	0		16:45			2	6	1	7	13
05:00			0		0			17:00			0		0		
05:15			0		0			17:15			1		1		
05:30			0		0			17:30			0		0		
05:45			0	0	0	0		17:45			1	2	2	3	5
06:00			0		0			18:00			2		3		
06:15			0		0			18:15			3		0		
06:30			0		1			18:30			2		0		
06:45			0	0	0	1	1	18:45			0	7	0	3	10
07:00			0		0			19:00			0		0		
07:15			0		0			19:15			2		0		
07:30			0		0			19:30			0		0		
07:45			2	2	0	0	2	19:45			0	2	0	0	2
08:00			0		2			20:00			2		0		
08:15			0		2			20:15			0		0		
08:30			0		2			20:30			3		0		
08:45			1	1	1	7	8	20:45			2	7	0	0	7
09:00			0		2			21:00			2		0		
09:15			0		1			21:15			0		1		
09:30			0		0			21:30			0		0		
09:45			0	0	3	6	6	21:45			0	2	0	1	3
10:00			0		2			22:00			0		0		
10:15			0		0			22:15			0		0		
10:30			1		3			22:30			0		0		
10:45			0	1	0	5	6	22:45			0	0	0	0	
11:00			2		0			23:00			0		0		
11:15			0		0			23:15			0		0		
11:30			0		0			23:30			0		0		
11:45			0	2	1	1	3	23:45			0	0	0	0	
Total Vol.				6		20	**26**					49		33	**82**

GPS Coordinates: 35.652085, -112.156675

Daily Totals

NB	SB	EB	WB	Combined
		55	53	**108**

	AM			PM		
Split %	23.1%	76.9%	**24.1%**	59.8%	40.2%	**75.9%**
Peak Hour	10:15	09:45	**09:45**	13:15	14:30	**14:45**
Volume	3	8	**9**	11	11	**18**
P.H.F.	0.38	0.67	**0.56**	0.55	0.46	**0.75**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 25, 2019 **City:** Williams **Project#** 19-1408-001

Location : Under Canvas Grand Canyon Driveway

DAY 3

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			0		0		
00:15			0		0			12:15			0		0		
00:30			0		0			12:30			0		1		
00:45			0	0	0	0		12:45			1	1	0	1	2
01:00			0		0			13:00			1		1		
01:15			0		0			13:15			0		0		
01:30			0		0			13:30			0		0		
01:45			0	0	0	0		13:45			1	2	0	1	3
02:00			0		0			14:00			0		0		
02:15			0		0			14:15			1		0		
02:30			0		0			14:30			1		1		
02:45			0	0	0	0		14:45			2	4	1	2	6
03:00			0		0			15:00			0		0		
03:15			0		0			15:15			0		0		
03:30			0		0			15:30			0		1		
03:45			0	0	0	0		15:45			2	2	0	1	3
04:00			0		0			16:00			1		1		
04:15			0		0			16:15			0		0		
04:30			0		0			16:30			1		1		
04:45			0	0	0	0		16:45			1	3	0	2	5
05:00			0		0			17:00			2		0		
05:15			0		0			17:15			0		1		
05:30			0		0			17:30			1		1		
05:45			0	0	0	0		17:45			0	3	0	2	5
06:00			2		0			18:00			0		2		
06:15			0		0			18:15			1		1		
06:30			0		0			18:30			0		0		
06:45			0	2	0	0	2	18:45			0	1	0	3	4
07:00			1		0			19:00			2		0		
07:15			0		0			19:15			1		0		
07:30			0		0			19:30			0		0		
07:45			1	2	0	0	2	19:45			1	4	0	0	4
08:00			0		1			20:00			0		0		
08:15			1		2			20:15			1		0		
08:30			1		1			20:30			0		0		
08:45			0	2	4	8	10	20:45			0	1	0	0	1
09:00			0		2			21:00			0		0		
09:15			2		2			21:15			0		0		
09:30			1		1			21:30			0		1		
09:45			1	4	3	8	12	21:45			0	0	0	1	1
10:00			1		1			22:00			0		0		
10:15			2		3			22:15			0		0		
10:30			1		3			22:30			0		0		
10:45			0	4	2	9	13	22:45			0	0	0	0	
11:00			1		1			23:00			0		0		
11:15			2		0			23:15			0		0		
11:30			0		1			23:30			0		0		
11:45			1	4	1	3	7	23:45			0	0	0	0	
Total Vol.				18		28	**46**					21		13	**34**

GPS Coordinates: 35.652085, -112.156675

Daily Totals

NB	SB	EB	WB	Combined
		39	41	**80**

	AM			PM		
Split %	39.1%	60.9%	**57.5%**	61.8%	38.2%	**42.5%**
Peak Hour	09:15	09:45	**09:45**	14:00	17:15	**14:00**
Volume	5	10	**15**	4	4	**6**
P.H.F.	0.63	0.83	**0.75**	0.50	0.50	**0.50**

Memorandum

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

To: Luke Evans
Senior Managing Associate
ESA | Environmental Science Associates
(909) 809-0508

From: Mario Tambellini, PE, TE

Date: April 15, 2020

Subject: **DRAFT Yosemite Under Canvas VMT Analysis**

INTRODUCTION

This memorandum has been prepared to present the results of a vehicle miles traveled (VMT) analysis performed for the Yosemite Under Canvas Project (Project). This memorandum presents VMT data to be used in the Project environmental impact report (EIR).

PROJECT DESCRIPTION

The Project site is located adjacent to State Route 120 (SR 120) in the vicinity of Hardin Flat, east of the community of Groveland and west of Yosemite National Park, in Tuolumne County (County), California. The Project proposes to construct a transient tent (no fixed structures) camp for guests to stay from spring through early fall as weather allows. The Project will provide guests with canvas tents, beds, bathroom facilities, meals, and community fire pits. Potable water and sanitary sewer would be provided by on-site public systems owned by Under Canvas. A total of 99 tents are proposed for the Project, along with an office/guest check-in tent, commercial kitchen, communal bathrooms, and a number of support tents.

The Project site is comprised of two parcels, located within unincorporated Tuolumne County, totaling approximately 80.1 acres. The western parcel is zoned Commercial Recreation (C-K), and the eastern parcel is zoned Commercial Recreation (C-K) and Open Space-1 (O-1). Over half of the Project site would remain undeveloped as currently proposed. The site currently consists of undeveloped land previously used for forestry and logging. Adjacent land uses include scattered private residences, recreation facilities, and open space. Figures showing the Project location and site plan are included as Attachment A (ESA, March 2020).

Internal circulation would be provided by a main internal access road (Under Canvas Way) and internal cart paths and footpaths. There is existing access to the property by way of Hardin Flat Road via SR 120. A secondary point of access would be provided for emergency purposes on the northwest side of the site via an existing unimproved roadway that connects to Forest Service Road 1S09. Onsite roadways would not be paved, but would be topped with gravel where needed.

Bus stops for the Yosemite Area Regional Transportation System (YARTS) are proposed on each side of Hardin Flat Road at the entrance to the Yosemite Under Canvas facility, approximately 800 feet south of the Hardin Flat Road/SR 120 intersection. The YARTS operates between May and September and generally offers three round trips a day into Yosemite National Park. The proposed bus stops would provide Project guests with the option to access Yosemite National Park and other regional destinations via transit.

The operational season for the site would generally be from mid-March to mid-October, depending on weather conditions. The average occupancy is estimated to be approximately 2.5 guests per tent. Guests are

generally anticipated to arrive for the night, then leave the site in the morning to pursue recreational and sightseeing opportunities in the area, and then return later in the day. Between 20 and 30 staff members would be employed by the Project during the operation season, with 10 to 15 personnel working on the site at any given time. Employees would largely be drawn from the local community, though some could be recruited from elsewhere. If they desire, employees without housing in the local community would be housed in rental units facilitated by Under Canvas.

PROJECT TRIP GENERATION

A Project trip generation was prepared for the EIR by Environmental Sciences Associates (ESA). ESA developed custom trip generation rates for the Project site using traffic data collected at an existing Under Canvas site, Under Canvas Grand Canyon, that was considered to have characteristics representative of the Project. The custom trip generation rates utilized "occupied tents" as the independent variable. The results of the custom trip generation rate study indicated that each occupied tent would generate approximately 2.6 daily one-way vehicle trips, and less than one trip per hour for the peak hour of the generator and the weekday AM and PM peak hours. Since this memorandum is focused on VMT generated by the Project, only the daily trip generation was considered. Based on the custom trip generation rates from the EIR, the Project is estimated to generate approximately 257 daily trips under full occupancy conditions. Project daily trip generation under full occupancy conditions is summarized in **Table 1**. Additional details on the custom trip generation rates can be found in the *Trip Generation for Yosemite Under Canvas EIR* technical memorandum (ESA, October 4, 2019).

As stated in the Project description, the Project would be operational from approximately mid-March to mid-October, or approximately seven months out of the year. Therefore, the trip generation under full occupancy conditions discussed above is likely a good representation of the Project operations during the summer season, when the Project is likely to be at or near capacity, but is not a good representation of the Project operations under annual average conditions.

The VMT analysis for the Project was performed using the Tuolumne County Regional Travel Demand Model (RTDM), consistent with County policy. All scenarios in the Tuolumne County RTDM represent annual average weekday conditions. Therefore, an annual average trip generation for the Project was estimated in order to stay consistent with the RTDM. The annual average trip generation rates and estimates for the Project were developed by multiplying the full occupancy values by "7/12", to account for the fact that the Project is only operational seven months out of the year. This memorandum also assumed the Project would generally experience approximately 85% occupancy while operational, based on average campsite occupancy data contained in the Yosemite Valley Plan Supplemental EIR (National Park Service, April 2000), when estimating the annual average trip generation rates. Therefore, the full occupancy trip generation rates were further reduced by 15% to account for the assumed average campsite occupancy. Project daily trip generation under annual average conditions is summarized in Table 1.

Table 1. Yosemite Under Canvas Trip Generation – Daily Conditions

Scenario	Land Use	Rate	Quantity	Daily Vehicle Trips
Full Occupancy	Under Canvas Campground	2.6 trips per occupied site[1]	99 occupied sites	257
Annual Average	Under Canvas Campground	1.29 trips per camp site[2]	99 camp sites	128

Notes: 1. Based on data from the Trip Generation for Yosemite Under Canvas EIR technical memorandum (ESA, October 4, 2019). 2. Annual Average Trip Generation Rage = Full Occupancy Trip Generation Rate x 7/12 x 85%. Where "7/12" is the seasonal operations factor and "85%" is the site occupancy factor.

VMT ANALYSIS – NET CHANGE IN VMT

Project VMT within and outside Tuolumne County was analyzed using the standard VMT analysis procedures currently being developed for Tuolumne County as part of the Tuolumne County SB 743 VMT Study. VMT analysis was performed for annual average weekday daily conditions. The tools and data used to analyze VMT are summarized below.

It is Tuolumne County policy, and generally good practice, to evaluate a campground type of project using a travel demand model. The latest version of the Tuolumne County RTDM, which was recently updated as part of the Tuolumne County SB 743 VMT Study, was used to analyze VMT generated by the Project. The RTDM has scenario years of 2015, 2030, and 2040, and models a typical weekday under annual average conditions. The year 2015 RTDM scenario was considered to be a reasonable approximation of baseline conditions for the Project. The following scenarios were analyzed using the RTDM:

- Baseline Year 2020 Without Project (using the 2015 RTDM scenario)
- Baseline Year 2020 With Project (using the 2015 RTDM scenario)
- 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. RTDM outputs from the "Without Project" conditions model runs were then post-processed, using standard County procedures, to estimate total VMT generated by County land uses (including out of County travel) under "Without Project" conditions. Note that the post-processing procedures utilize year 2018 AirSage trip data, obtained as part of the Tuolumne County SB 743 VMT Study, and California Statewide Travel Demand Model data to estimate out of County travel.

The "With Project" conditions RTDM scenarios were prepared by adding a new Project TAZ into the RTDM at the southwest corner of Hardin Flat Road and SR 120 "T" intersection, with a centroid connector providing access to Hardin Flat Road. Land use quantities for the Project were input into the RTDM demographics file under the new Project TAZ. The RTDM "campground/cabin" land use category was used to represent the Project. Project land use quantities input into the model were adjusted so that the RTDM would generate approximately the same number of trips as estimated in Table 1 for annual average conditions. The "With Project" RTDM scenarios were run and outputs were extracted and post-processed. Total VMT generated by County land uses (including out of County travel) under "With Project" conditions were estimated. Note that the RTDM generally assumed that some of the Project trips would not be new to the County, and instead would be rerouted from other similar land uses.

Net change in Countywide VMT due to the Project was calculated under Baseline and Cumulative conditions by finding the difference of the "Without Project" and "With Project" total VMT generated by County land uses. Unreduced VMT estimated for all scenarios is shown in Table 2. Detailed VMT data is included as Attachment B.

Table 2. Initial Annual Average VMT Summary

Initial 2020 Without Project Total VMT Generated by County Land Uses	3,374,574
Initial 2020 With Project Total VMT Generated by County Land Uses	3,376,646
Initial 2020 Net Change in Total VMT Generated by County Land Uses	+2,072
Initial 2040 Without Project Total VMT Generated by County Land Uses	3,806,308
Initial 2040 With Project Total VMT Generated by County Land Uses	3,808,386
Initial 2040 Net Change in Total VMT Generated by County Land Uses	+2,078
Notes: *All data is estimated from the Tuolumne County Regional Travel Demand Model and standard Tuolumne County post-processing methodologies.*	

TRANSIT REDUCTION AND FINAL VMT

As stated in the Project description, YARTS bus stops are proposed on each side of Hardin Flat Road near the entrance to the Yosemite Under Canvas facility. Generally, it can be assumed that some Project guests would use the proposed bus stops to travel to Yosemite National Park, resulting in less overall vehicle trips and a reduction in Project VMT.

Latest YARTS bus ridership data was obtained from the County. The Sonora to Yosemite Valley YARTS route currently operates daily between approximately mid-May and the end of September each year. The route generally runs from the Black Oak Hotel Resort to the Yosemite Valley Visitor Center, where riders can connect to free Yosemite Valley shuttles. The route generally runs along Tuolumne Road, SR 108, SR 120, and Big Oak Flat Road. The route currently has 11 total stops on the way to Yosemite Valley, including the Black Oak Hotel Resort, 9 of which are located outside Yosemite National Park. The 11 stops are as follows:

- Black Oak Hotel Resort
- Sonora Best Western
- Inns of California Downtown Sonora
- Rocca Park Jamestown Main Street
- Mary Laveroni Park
- Yosemite Pines RV Park
- Buck Meadows Restaurant
- Yosemite Lake Campgrounds
- Rush Creek Lodge
- Big Oak Flat-Park Entrance Gate
- Crane Flat Gas Station

The Sonora to Yosemite Valley YARTS route generally has three outgoing trips each morning and three return trips each afternoon, with one hour headways, from the end of May to the end of August. The route generally has only one outgoing and return trip each day in May and September.

According to YARTs bus ridership data from the County, the Sonora to Yosemite Valley route provided 16,358 total rides in 2019 and was operational for 136 total days. Based on these numbers, the Sonora to Yosemite Valley YARTS route provided an average of 120 rides per day. Since there are currently 9 stops outside Yosemite National Park on the route, it can be estimated that each stop had approximately 13.3 YARTS trips per day on average. Therefore, it can be assumed that the proposed YARTS stops at the Project site would serve, on average, 13.3 total trips to/from Yosemite Valley each day.

The proposed Project entrance would be located approximately 30.5 miles away from the Yosemite Valley Visitor Center by car. Therefore, it can be estimated that the proposed YARTS bus stops would result in a daily VMT reduction of approximately 406 vehicle-miles per day while operational. Since the YARTS bus service is only operational 136 days out of the year, or approximately 37.3 percent of the time, the proposed YARTS bus stops would result in an annual average VMT reduction of approximately 151 vehicle-miles per day. VMT transit reductions and a summary of final VMT is shown in Table 3.

Table 3. Final Annual Average VMT Summary

Initial 2020 Net Change in Total VMT Generated by County Land Uses	+2,072
Initial 2040 Net Change in Total VMT Generated by County Land Uses	+2,078
Total Estimated Reduction in VMT due to YARTS	-151
Final 2020 Net Change in Total VMT Generated by County Land Uses	+1,921
Final 2040 Net Change in Total VMT Generated by County Land Uses	+1,927
Notes: *All data is estimated from the Tuolumne County Regional Travel Demand Model, standard Tuolumne County post-processing methodologies, and YARTS ridership data from Tuolumne County.*	

ALTERNATIVE VMT METHODOLOGY

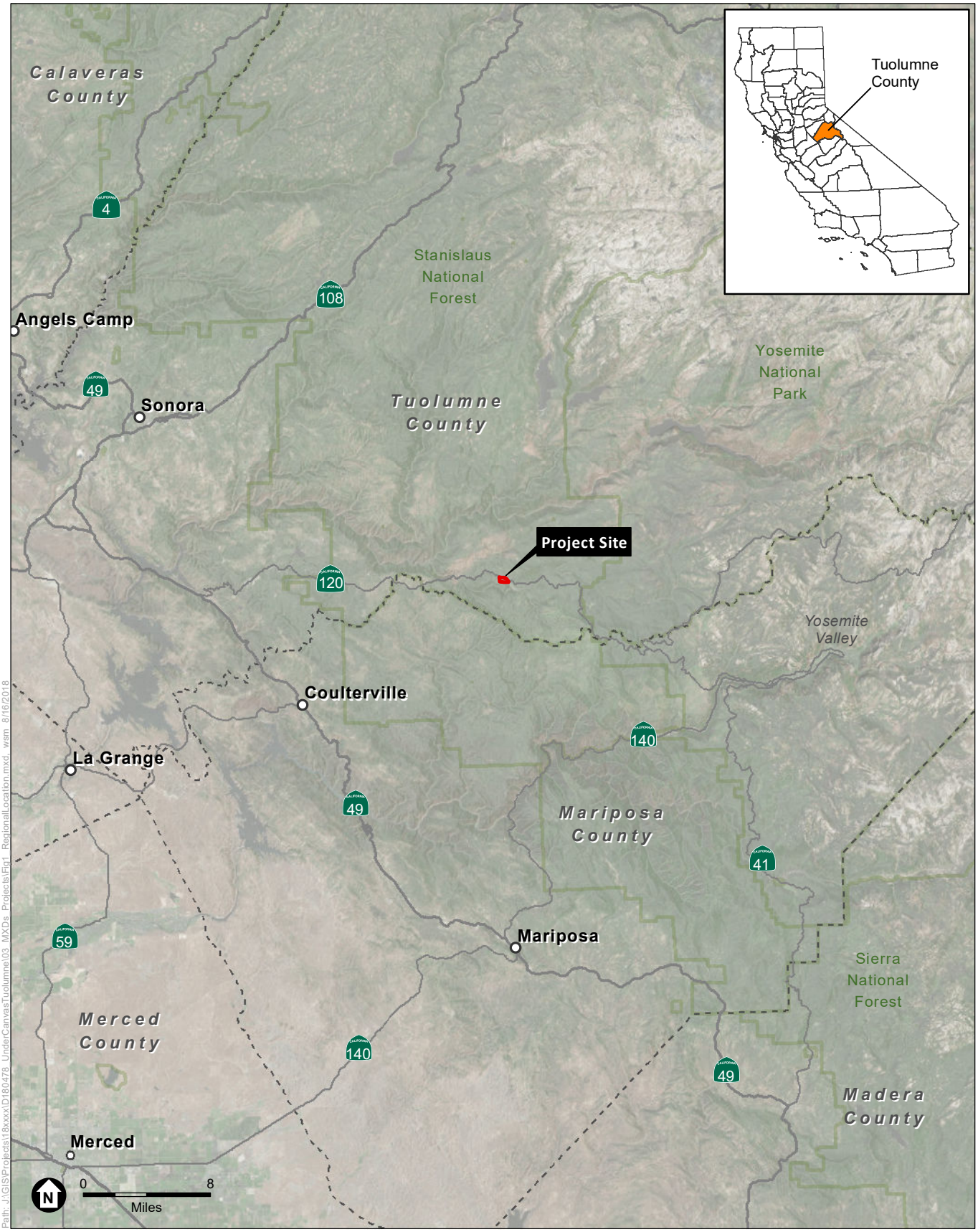
An alternative methodology for evaluating Project VMT was also considered. This alternative methodology is only provided for informational purposes at this time. If it were ever decided to proceed with the alternative methodology, a more detailed analysis and documentation of assumptions for the methodology would have to be prepared at that time. Tuolumne County would need to review and agree to use of the alternative methodology before it could be used for VMT analysis of the Project.

The alternative VMT methodology is based on a general assumption that recreational trips in Tuolumne County are not solely driven by new land uses, and are largely dependent on annual growth in visitation to Yosemite National Park. Visitor growth to Yosemite has generally increased over time regardless of other factors. Therefore, many recreational trips to the County may occur whether or not a new campground is constructed, and so the focus should be on providing more VMT conscious options for visitors. Another factor to consider is that there is currently a lack of lodging options along SR 120 west of Yosemite National park, and constructing new facilities in this area could potentially get current visitors to stay closer to the park, reducing VMT in the region.

As part of the currently underway Tuolumne County SB 743 VMT Study, the County was divided into nine (9) subareas based on proximity and travel characteristics. The nine (9) subareas are shown in Attachment C. The Project is located in the East County subarea. The proposed alternative methodology is to estimate the existing average total campground VMT per campsite in the East County subarea of Tuolumne County, and to set the new campground VMT threshold at 15 percent below the existing subarea average. The intent of this threshold would be to encourage new campgrounds in the region that would help lower VMT per visitor over time.

The existing average total campground VMT per campsite in the East County subarea was estimated using the Tuolumne County RTDM, and was found to be approximately 48.4 VMT per site. The Project total campground VMT per campsite was estimated using the Tuolumne County RTDM assuming RTDM trip generation rates for consistency with RTDM VMT estimates for existing similar land uses. The Project total campground VMT per campsite was reduced to account for the proposed YARTS stops. The reduced Project total campground VMT per campsite was estimated to be approximately 38.2 VMT per site. Therefore, the Project total campground VMT per campsite would be more than 15 percent below the existing subarea average.

ATTACHMENT A
Project Location and Site Plan



SOURCE: Esri, 2015; ESA, 2018

Yosemite Under Canvas Project

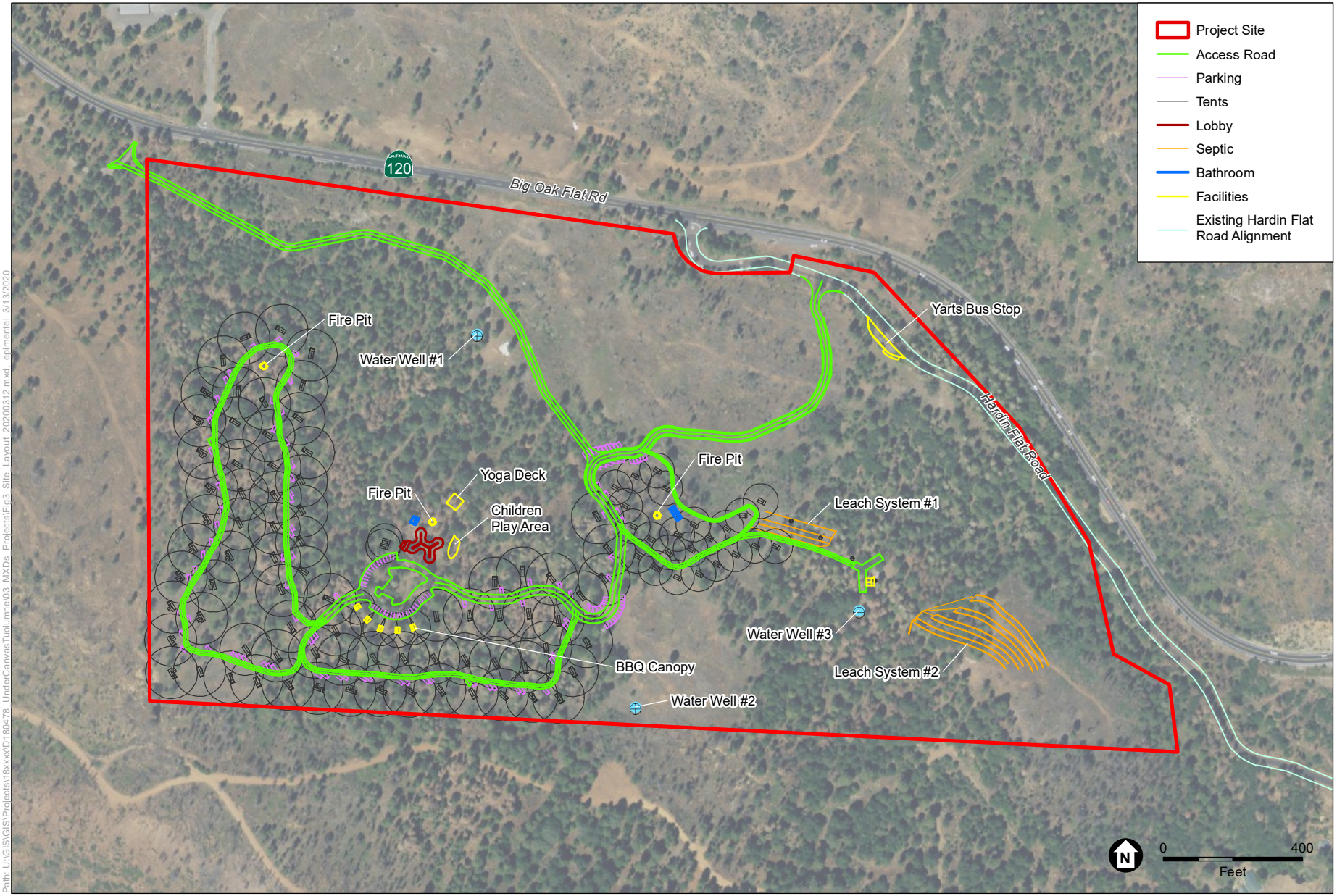
Figure 2-1
Regional Location

Path: J:\GIS\Projects\18xxxx\D180478_UnderCanvasTuolumne\03_MXDs_Projects\Fig2_ProjectSite1.mxd wsm 8/31/2018

SOURCE: USDA, 2016; ESA, 2018

Yosemite Under Canvas Project

Figure 2-2
Project Site



SOURCE: USDA, 2016; ESA, 2020

Yosemite Under Canvas Project

Figure 3

Project Site Plan

ATTACHMENT B
Detailed VMT Data

Attachment B
Yosemite Under Canvas VMT Data Summary

Initial Annual Average VMT Generated by County Land Uses (from Tuolumne County RTDM and post-processing)

Scenario	VMT (County Land Uses)	RTDM Project Trip Gen	EIR Project Trip Gen	Trip Gen % Difference
2020 Without Project	3,374,574			
2020 With Project	3,376,646	128	128	0.0%
2020 Delta	+2,072			
2040 Without Project	3,806,308			
2040 With Project	3,808,386	129	128	0.8%
2040 Delta	+2,078			

Final Annual Average Project VMT with Transit Reduction

Existing Average YARTS Riders per Stop:	13.3 riders
Average Distance between Project and Yosemite Valley Visitor Center:	30.5 miles
VMT Reduction per Day for a YARTS Bus Stop:	406 vehicle-miles
YARTS Day of Operation per Year:	136 days
Annual Average VMT Reduction for a YARTS Bus Stop:	151 vehicle-miles
Final Annual Average Year 2020 Project Daily VMT:	**1,921 vehicle-miles**
Final Annual Average Year 2040 Project Daily VMT:	**1,927 vehilce-miles**

Project Trip Length Summary (from Tuolumne County RTDM and post-processing)

Scenario	Avg. In-County Length (miles)	Avg. Out-of-County Length (miles)	Avg. Total Length
2020 With Project	19.8	96.3	34.9
2040 With Project	19.9	98.4	35.4

Notes:

VMT = Vehicle Miles Traveled, RTDM = Tuolumne County Regional Travel Demand Model, Avg. = Average

ATTACHMENT C
Tuolumne County Subareas

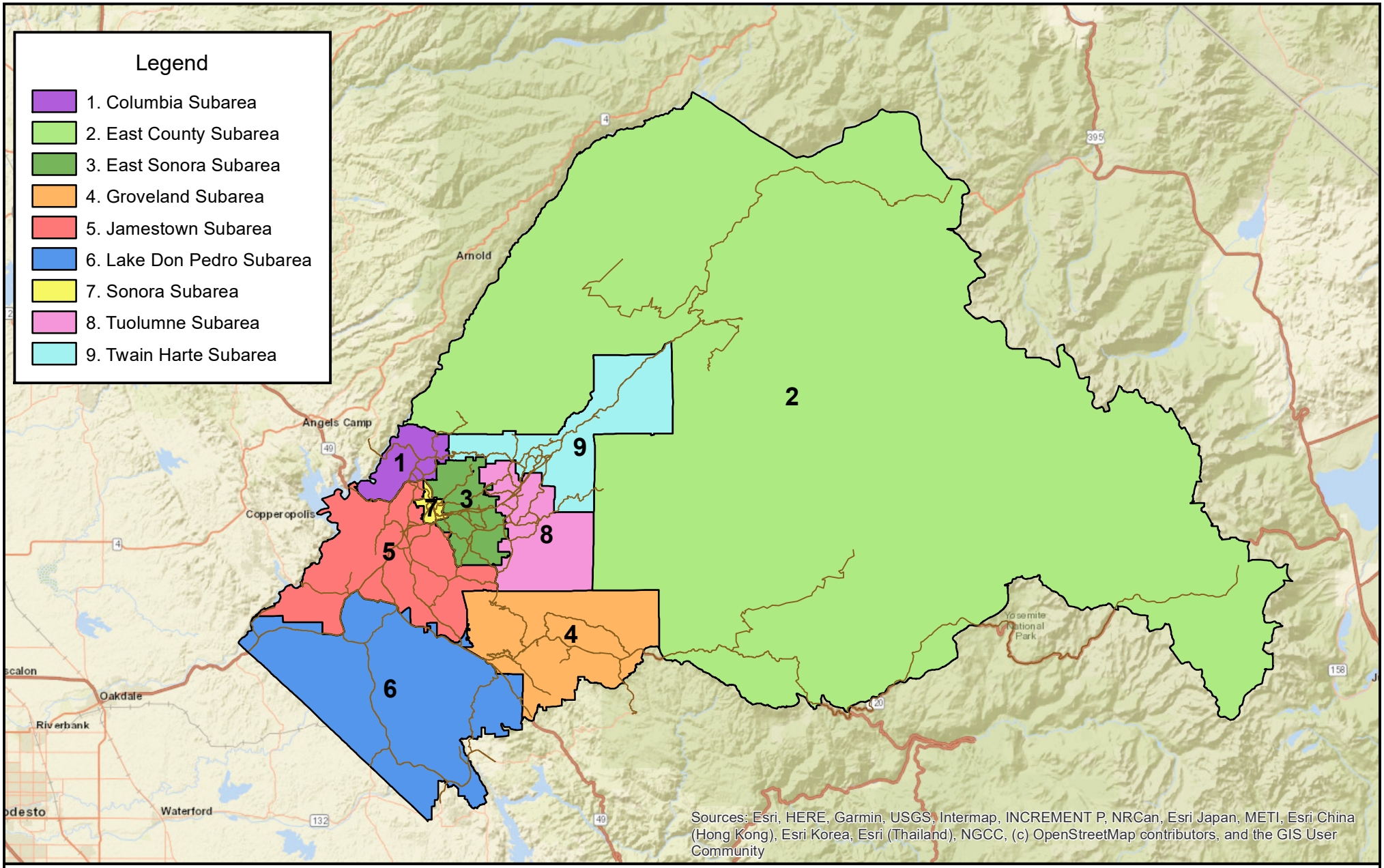


FIGURE 1

TUOLUMNE COUNTY VMT SUBAREAS

SB 743 STUDY PHASE 2

TUOLUMNE COUNTY, CA

MARCH 2020

0 2.5 5 10

Miles

NORTH

WOOD RODGERS

J:\Jobs\8341_Tuolumne_County\016_SB_743_VMT_Study_Phase_1\GIS\Tasks\Tuolumne_County_VMT_Subareas_Figure_1.mxd 3/2/2020 6:35:42 PM mtambellini