Appendix A

CCWD Service Letter

Callayomi County Water District

21282 Stewart St • P.O. Box 623 • Middletown, CA 95461
Phone: (707) 987-2180 • Fax: (707) 987-0779 • www.callayomiwater.com

Re: Middletown Rancheria

Subject: Letter of Intent to Serve

The Callayomi County Water District granted Middletown Rancheria a total of 45 water service hookups to be installed on the Middletown Rancheria Property **(014-005-08)** per the agreement executed on February 13, 2020.

The Middletown Rancheria has acquired three (3) new properties **(Parcel # 014-160-09 & Parcel # 014-005-64 & Parcel # 014-005-340)** adjacent to the current Middletown Rancheria property and wishes to relocate water service hookups from the current property (014-005-08) to the newly acquired properties (014-160-09 & 014-005-64 & 014-005-340). Callayomi County Water District authorizes the Middletown Rancheria to relocate any number of the 45 approved water service hookups to **Parcel # 014-160-09 & Parcel # 014-005-64 & Parcel # 014-005-340** at the Middletown Rancheria's expense, after the parcels are annexed into the District, and any other requirements by the District are met.

X Todd Fiora

Date: 1/5/22

Todd Fiora, General Manager
Callayomi County Water District

Appendix B
LACOSAN Service Letter

COUNTY OF LAKE
SPECIAL DISTRICTS ADMINISTRATION
230 Main Street
Lakeport, California 95453
Telephone (707) 263-0119
Fax (707)263-3836

Scott Harter
Special Districts Administrator

Kim Cole
Tribal Administrator
Middletown Rancheria
PO BOX 1035
Middletown, CA 95461

September 1, 2021

Conditional Will Serve Letter
APN: 014-005-340 – 22433 South State Highway 29, Middletown, CA.
Middletown Rancheria 45-50 Unit Housing Project

Dear Mrs. Cole,

Assessor's Parcel Number 014-005-340 is within the Lake County Sanitation District, Assessment District 2-2 Middletown Sewer service area. The proposed on-site collection system will be owned, operated and maintained by Middletown Rancheria. The District will not be responsible for the construction or maintenance of the private property sewer, the District's responsibility ends at the street. It should also be noted that the determination of adequate gravity flow is the responsibility of the property owner.

The sewage collection system is anticipated to connect to the existing collection system on Assessor's Parcel Number 014-005-080 and once it leaves Assessor's Parcel Number 014-005-080, it is then owned, operated and maintained by LACOSAN to the treatment facility.

Capacity Expansion Fees are required to be paid prior to the issuance of the building permit. The fee increases by the Consumer Price Index at the beginning of each calendar year. The fees are currently $7,568.31 per single family dwelling equivalent.

Provided that capacity is still available at the time of application, all fees paid and permits signed (if applicable) LACOSAN will provide the proposed addresses with sewer service.

Connections to LACOSAN will be made in accordance with the rules, regulations, policies, procedures and ordinances in effect at the time application is made.

Should you have any questions or require further information, I can be reached at (707) 263-0119.

Sincerely,

Scott Harter
Administrator

Appendix C
Air Quality Modeling Files

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Middletown Rancheria Martin-Scott FTT

Lake County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	50.00	Dwelling Unit	20.40	90,000.00	143
User Defined Recreational	21.00	User Defined Unit	2.80	4,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	67
Climate Zone	1			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Water And Wastewater - Detailed project assumptions.

Solid Waste - Project Assumptions

Sequestration -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	0.00	4,500.00
tblLandUse	LotAcreage	16.23	20.40
tblLandUse	LotAcreage	0.00	2.80

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblSequestration	NumberOfNewTrees	0.00	68.00
tblSolidWaste	SolidWasteGenerationRate	0.00	5.00
tblWater	IndoorWaterUseRate	0.00	766,500.00
tblWater	OutdoorWaterUseRate	0.00	500,000.00

2.0 Emissions Summary

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2535	2.2810	2.4673	4.6300e-003	0.2834	0.0999	0.3833	0.1209	0.0932	0.2142	0.0000	403.5166	403.5166	0.1006	2.4600e-003	406.7644
2025	1.6008	1.2131	1.6253	2.8300e-003	0.0185	0.0506	0.0692	5.0100e-003	0.0476	0.0526	0.0000	245.9723	245.9723	0.0544	2.0100e-003	247.9290
Maximum	**1.6008**	**2.2810**	**2.4673**	**4.6300e-003**	**0.2834**	**0.0999**	**0.3833**	**0.1209**	**0.0932**	**0.2142**	**0.0000**	**403.5166**	**403.5166**	**0.1006**	**2.4600e-003**	**406.7644**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2535	2.2810	2.4673	4.6300e-003	0.2834	0.0999	0.3833	0.1209	0.0932	0.2142	0.0000	403.5162	403.5162	0.1006	2.4600e-003	406.7639
2025	1.6008	1.2131	1.6253	2.8300e-003	0.0185	0.0506	0.0692	5.0100e-003	0.0476	0.0526	0.0000	245.9720	245.9720	0.0544	2.0100e-003	247.9287
Maximum	**1.6008**	**2.2810**	**2.4673**	**4.6300e-003**	**0.2834**	**0.0999**	**0.3833**	**0.1209**	**0.0932**	**0.2142**	**0.0000**	**403.5162**	**403.5162**	**0.1006**	**2.4600e-003**	**406.7639**

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2024**	**3-31-2024**	1.0043	1.0043
2	**4-1-2024**	**6-30-2024**	0.5029	0.5029
3	**7-1-2024**	**9-30-2024**	0.5084	0.5084
4	**10-1-2024**	**12-31-2024**	0.5095	0.5095
5	**1-1-2025**	**3-31-2025**	0.4629	0.4629
6	**4-1-2025**	**6-30-2025**	0.4670	0.4670
7	**7-1-2025**	**9-30-2025**	0.6147	0.6147
		Highest	1.0043	1.0043

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.6636	0.0656	4.2440	7.0400e-003		0.5450	0.5450		0.5450	0.5450	51.6479	22.2672	73.9151	0.0483	4.0600e-003	76.3318
Energy	3.0000e-003	0.0256	0.0109	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	66.4992	66.4992	6.5200e-003	1.2700e-003	67.0396
Mobile	0.4254	0.5933	3.4728	5.3200e-003	0.4932	6.2900e-003	0.4995	0.1321	5.9100e-003	0.1381	0.0000	490.2669	490.2669	0.0409	0.0293	500.0124
Waste						0.0000	0.0000		0.0000	0.0000	11.4649	0.0000	11.4649	0.6776	0.0000	28.4039
Water						0.0000	0.0000		0.0000	0.0000	1.2767	2.8417	4.1184	0.1316	3.1500e-003	8.3474
Total	**4.0920**	**0.6845**	**7.7276**	**0.0125**	**0.4932**	**0.5534**	**1.0466**	**0.1321**	**0.5530**	**0.6852**	**64.3895**	**581.8750**	**646.2645**	**0.9048**	**0.0378**	**680.1350**

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.6636	0.0656	4.2440	7.0400e-003		0.5450	0.5450		0.5450	0.5450	51.6479	22.2672	73.9151	0.0483	4.0600e-003	76.3318
Energy	3.0000e-003	0.0256	0.0109	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	66.4992	66.4992	6.5200e-003	1.2700e-003	67.0396
Mobile	0.4254	0.5933	3.4728	5.3200e-003	0.4932	6.2900e-003	0.4995	0.1321	5.9100e-003	0.1381	0.0000	490.2669	490.2669	0.0409	0.0293	500.0124
Waste						0.0000	0.0000		0.0000	0.0000	11.4649	0.0000	11.4649	0.6776	0.0000	28.4039
Water						0.0000	0.0000		0.0000	0.0000	1.2767	2.8417	4.1184	0.1316	3.1500e-003	8.3474
Total	**4.0920**	**0.6845**	**7.7276**	**0.0125**	**0.4932**	**0.5534**	**1.0466**	**0.1321**	**0.5530**	**0.6852**	**64.3895**	**581.8750**	**646.2645**	**0.9048**	**0.0378**	**680.1350**

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	48.1440
Total	**48.1440**

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	1/1/2024	1/26/2024	5	20	
2	Site Preparation	Site Preparation	1/27/2024	2/9/2024	5	10	
3	Grading	Grading	2/10/2024	3/29/2024	5	35	
4	Building Construction	Building Construction	3/30/2024	8/29/2025	5	370	
5	Paving	Paving	8/30/2025	9/26/2025	5	20	
6	Architectural Coating	Architectural Coating	9/27/2025	10/24/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 105

Acres of Paving: 0

Residential Indoor: 182,250; Residential Outdoor: 60,750; Non-Residential Indoor: 6,750; Non-Residential Outdoor: 2,250; Striped Parking Area: 0 (Architectural Coating – sqft)

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	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	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	9	20.00	6.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	tons/yr										MT/yr					
Off-Road	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9961**	**33.9961**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	9.0000e-004	5.4000e-004	5.3900e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9809	0.9809	5.0000e-005	4.0000e-005	0.9938
Total	**9.0000e-004**	**5.4000e-004**	**5.3900e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9809**	**0.9809**	**5.0000e-005**	**4.0000e-005**	**0.9938**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9960**	**33.9960**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	9.0000e-004	5.4000e-004	5.3900e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9809	0.9809	5.0000e-005	4.0000e-005	0.9938
Total	**9.0000e-004**	**5.4000e-004**	**5.3900e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9809**	**0.9809**	**5.0000e-005**	**4.0000e-005**	**0.9938**

3.3 Site Preparation - 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	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6600e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 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	5.4000e-004	3.2000e-004	3.2400e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5886	0.5886	3.0000e-005	2.0000e-005	0.5963
Total	**5.4000e-004**	**3.2000e-004**	**3.2400e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.1000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5886**	**0.5886**	**3.0000e-005**	**2.0000e-005**	**0.5963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6500e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 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	5.4000e-004	3.2000e-004	3.2400e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5886	0.5886	3.0000e-005	2.0000e-005	0.5963
Total	**5.4000e-004**	**3.2000e-004**	**3.2400e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.1000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5886**	**0.5886**	**3.0000e-005**	**2.0000e-005**	**0.5963**

3.4 Grading - 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	tons/yr										MT/yr					
Fugitive Dust					0.1611	0.0000	0.1611	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0563	0.5666	0.4852	1.0900e-003		0.0234	0.0234		0.0215	0.0215	0.0000	95.4092	95.4092	0.0309	0.0000	96.1806
Total	**0.0563**	**0.5666**	**0.4852**	**1.0900e-003**	**0.1611**	**0.0234**	**0.1844**	**0.0639**	**0.0215**	**0.0854**	**0.0000**	**95.4092**	**95.4092**	**0.0309**	**0.0000**	**96.1806**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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	2.1000e-003	1.2500e-003	0.0126	2.0000e-005	2.7600e-003	2.0000e-005	2.7800e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2889	2.2889	1.1000e-004	9.0000e-005	2.3188
Total	**2.1000e-003**	**1.2500e-003**	**0.0126**	**2.0000e-005**	**2.7600e-003**	**2.0000e-005**	**2.7800e-003**	**7.3000e-004**	**2.0000e-005**	**7.5000e-004**	**0.0000**	**2.2889**	**2.2889**	**1.1000e-004**	**9.0000e-005**	**2.3188**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1611	0.0000	0.1611	0.0639	0.0000	0.0639	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0563	0.5666	0.4852	1.0900e-003		0.0234	0.0234		0.0215	0.0215	0.0000	95.4091	95.4091	0.0309	0.0000	96.1805
Total	**0.0563**	**0.5666**	**0.4852**	**1.0900e-003**	**0.1611**	**0.0234**	**0.1844**	**0.0639**	**0.0215**	**0.0854**	**0.0000**	**95.4091**	**95.4091**	**0.0309**	**0.0000**	**96.1805**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 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	2.1000e-003	1.2500e-003	0.0126	2.0000e-005	2.7600e-003	2.0000e-005	2.7800e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2889	2.2889	1.1000e-004	9.0000e-005	2.3188
Total	**2.1000e-003**	**1.2500e-003**	**0.0126**	**2.0000e-005**	**2.7600e-003**	**2.0000e-005**	**2.7800e-003**	**7.3000e-004**	**2.0000e-005**	**7.5000e-004**	**0.0000**	**2.2889**	**2.2889**	**1.1000e-004**	**9.0000e-005**	**2.3188**

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	tons/yr										MT/yr					
Off-Road	0.1450	1.3242	1.5924	2.6500e-003		0.0604	0.0604		0.0568	0.0568	0.0000	228.3714	228.3714	0.0540	0.0000	229.7215
Total	**0.1450**	**1.3242**	**1.5924**	**2.6500e-003**		**0.0604**	**0.0604**		**0.0568**	**0.0568**	**0.0000**	**228.3714**	**228.3714**	**0.0540**	**0.0000**	**229.7215**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 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	1.1000e-003	0.0363	8.8600e-003	1.3000e-004	3.8700e-003	2.1000e-004	4.0800e-003	1.1200e-003	2.0000e-004	1.3200e-003	0.0000	12.2703	12.2703	5.0000e-005	1.7900e-003	12.8043
Worker	0.0118	7.0500e-003	0.0708	1.4000e-004	0.0155	1.1000e-004	0.0156	4.1300e-003	1.0000e-004	4.2300e-003	0.0000	12.8829	12.8829	6.1000e-004	5.1000e-004	13.0515
Total	**0.0129**	**0.0434**	**0.0797**	**2.7000e-004**	**0.0194**	**3.2000e-004**	**0.0197**	**5.2500e-003**	**3.0000e-004**	**5.5500e-003**	**0.0000**	**25.1532**	**25.1532**	**6.6000e-004**	**2.3000e-003**	**25.8558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1450	1.3242	1.5924	2.6500e-003		0.0604	0.0604		0.0568	0.0568	0.0000	228.3711	228.3711	0.0540	0.0000	229.7212
Total	**0.1450**	**1.3242**	**1.5924**	**2.6500e-003**		**0.0604**	**0.0604**		**0.0568**	**0.0568**	**0.0000**	**228.3711**	**228.3711**	**0.0540**	**0.0000**	**229.7212**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 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	1.1000e-003	0.0363	8.8600e-003	1.3000e-004	3.8700e-003	2.1000e-004	4.0800e-003	1.1200e-003	2.0000e-004	1.3200e-003	0.0000	12.2703	12.2703	5.0000e-005	1.7900e-003	12.8043
Worker	0.0118	7.0500e-003	0.0708	1.4000e-004	0.0155	1.1000e-004	0.0156	4.1300e-003	1.0000e-004	4.2300e-003	0.0000	12.8829	12.8829	6.1000e-004	5.1000e-004	13.0515
Total	**0.0129**	**0.0434**	**0.0797**	**2.7000e-004**	**0.0194**	**3.2000e-004**	**0.0197**	**5.2500e-003**	**3.0000e-004**	**5.5500e-003**	**0.0000**	**25.1532**	**25.1532**	**6.6000e-004**	**2.3000e-003**	**25.8558**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1183	1.0786	1.3913	2.3300e-003		0.0456	0.0456		0.0429	0.0429	0.0000	200.6103	200.6103	0.0472	0.0000	201.7893
Total	**0.1183**	**1.0786**	**1.3913**	**2.3300e-003**		**0.0456**	**0.0456**		**0.0429**	**0.0429**	**0.0000**	**200.6103**	**200.6103**	**0.0472**	**0.0000**	**201.7893**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	9.1000e-004	0.0311	7.4600e-003	1.1000e-004	3.3900e-003	1.8000e-004	3.5700e-003	9.8000e-004	1.7000e-004	1.1500e-003	0.0000	10.6347	10.6347	4.0000e-005	1.5500e-003	11.0968
Worker	9.6200e-003	5.4800e-003	0.0565	1.2000e-004	0.0136	9.0000e-005	0.0137	3.6300e-003	8.0000e-005	3.7100e-003	0.0000	10.9520	10.9520	4.8000e-004	4.1000e-004	11.0874
Total	**0.0105**	**0.0366**	**0.0639**	**2.3000e-004**	**0.0170**	**2.7000e-004**	**0.0173**	**4.6100e-003**	**2.5000e-004**	**4.8600e-003**	**0.0000**	**21.5866**	**21.5866**	**5.2000e-004**	**1.9600e-003**	**22.1842**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1183	1.0786	1.3913	2.3300e-003		0.0456	0.0456		0.0429	0.0429	0.0000	200.6101	200.6101	0.0472	0.0000	201.7890
Total	**0.1183**	**1.0786**	**1.3913**	**2.3300e-003**		**0.0456**	**0.0456**		**0.0429**	**0.0429**	**0.0000**	**200.6101**	**200.6101**	**0.0472**	**0.0000**	**201.7890**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	9.1000e-004	0.0311	7.4600e-003	1.1000e-004	3.3900e-003	1.8000e-004	3.5700e-003	9.8000e-004	1.7000e-004	1.1500e-003	0.0000	10.6347	10.6347	4.0000e-005	1.5500e-003	11.0968
Worker	9.6200e-003	5.4800e-003	0.0565	1.2000e-004	0.0136	9.0000e-005	0.0137	3.6300e-003	8.0000e-005	3.7100e-003	0.0000	10.9520	10.9520	4.8000e-004	4.1000e-004	11.0874
Total	**0.0105**	**0.0366**	**0.0639**	**2.3000e-004**	**0.0170**	**2.7000e-004**	**0.0173**	**4.6100e-003**	**2.5000e-004**	**4.8600e-003**	**0.0000**	**21.5866**	**21.5866**	**5.2000e-004**	**1.9600e-003**	**22.1842**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	4.7000e-004	4.9000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9496	0.9496	4.0000e-005	4.0000e-005	0.9613
Total	**8.3000e-004**	**4.7000e-004**	**4.9000e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9496**	**0.9496**	**4.0000e-005**	**4.0000e-005**	**0.9613**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	4.7000e-004	4.9000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9496	0.9496	4.0000e-005	4.0000e-005	0.9613
Total	**8.3000e-004**	**4.7000e-004**	**4.9000e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9496**	**0.9496**	**4.0000e-005**	**4.0000e-005**	**0.9613**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4600					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.4617**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025

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	2.2000e-004	1.3000e-004	1.3100e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2532	0.2532	1.0000e-005	1.0000e-005	0.2564
Total	**2.2000e-004**	**1.3000e-004**	**1.3100e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2532**	**0.2532**	**1.0000e-005**	**1.0000e-005**	**0.2564**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4600					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**1.4617**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025

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	2.2000e-004	1.3000e-004	1.3100e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2532	0.2532	1.0000e-005	1.0000e-005	0.2564
Total	**2.2000e-004**	**1.3000e-004**	**1.3100e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2532**	**0.2532**	**1.0000e-005**	**1.0000e-005**	**0.2564**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Middletown Rancheria Martin-Scott FTT - Lake County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4254	0.5933	3.4728	5.3200e-003	0.4932	6.2900e-003	0.4995	0.1321	5.9100e-003	0.1381	0.0000	490.2669	490.2669	0.0409	0.0293	500.0124
Unmitigated	0.4254	0.5933	3.4728	5.3200e-003	0.4932	6.2900e-003	0.4995	0.1321	5.9100e-003	0.1381	0.0000	490.2669	490.2669	0.0409	0.0293	500.0124

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	472.00	477.00	427.50	1,334,830	1,334,830
User Defined Recreational	0.00	0.00	0.00		
Total	472.00	477.00	427.50	1,334,830	1,334,830

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	42.30	19.60	38.10	86	11	3
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.464659	0.064863	0.191817	0.155973	0.051760	0.009603	0.008536	0.006240	0.000416	0.000000	0.037661	0.001217	0.007255
User Defined Recreational	0.464659	0.064863	0.191817	0.155973	0.051760	0.009603	0.008536	0.006240	0.000416	0.000000	0.037661	0.001217	0.007255

5.0 Energy Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36.8079	36.8079	5.9500e-003	7.2000e-004	37.1719
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	36.8079	36.8079	5.9500e-003	7.2000e-004	37.1719
NaturalGas Mitigated	3.0000e-003	0.0256	0.0109	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	29.6913	29.6913	5.7000e-004	5.4000e-004	29.8677
NaturalGas Unmitigated	3.0000e-003	0.0256	0.0109	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	29.6913	29.6913	5.7000e-004	5.4000e-004	29.8677

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	556393	3.0000e-003	0.0256	0.0109	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	29.6913	29.6913	5.7000e-004	5.4000e-004	29.8677
User Defined Recreational	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		**3.0000e-003**	**0.0256**	**0.0109**	**1.6000e-004**		**2.0700e-003**	**2.0700e-003**		**2.0700e-003**	**2.0700e-003**	**0.0000**	**29.6913**	**29.6913**	**5.7000e-004**	**5.4000e-004**	**29.8677**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	556393	3.0000e-003	0.0256	0.0109	1.6000e-004		2.0700e-003	2.0700e-003		2.0700e-003	2.0700e-003	0.0000	29.6913	29.6913	5.7000e-004	5.4000e-004	29.8677
User Defined Recreational	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		**3.0000e-003**	**0.0256**	**0.0109**	**1.6000e-004**		**2.0700e-003**	**2.0700e-003**		**2.0700e-003**	**2.0700e-003**	**0.0000**	**29.6913**	**29.6913**	**5.7000e-004**	**5.4000e-004**	**29.8677**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	397821	36.8079	5.9500e-003	7.2000e-004	37.1719
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**36.8079**	**5.9500e-003**	**7.2000e-004**	**37.1719**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	397821	36.8079	5.9500e-003	7.2000e-004	37.1719
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**36.8079**	**5.9500e-003**	**7.2000e-004**	**37.1719**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.6636	0.0656	4.2440	7.0400e-003		0.5450	0.5450		0.5450	0.5450	51.6479	22.2672	73.9151	0.0483	4.0600e-003	76.3318
Unmitigated	3.6636	0.0656	4.2440	7.0400e-003		0.5450	0.5450		0.5450	0.5450	51.6479	22.2672	73.9151	0.0483	4.0600e-003	76.3318

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3691					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1373	0.0613	3.8727	7.0200e-003		0.5430	0.5430		0.5430	0.5430	51.6479	21.6604	73.3083	0.0477	4.0600e-003	75.7104
Landscaping	0.0112	4.2800e-003	0.3713	2.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	0.6068	0.6068	5.8000e-004	0.0000	0.6214
Total	**3.6636**	**0.0656**	**4.2440**	**7.0400e-003**		**0.5450**	**0.5450**		**0.5450**	**0.5450**	**51.6479**	**22.2672**	**73.9151**	**0.0482**	**4.0600e-003**	**76.3318**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3691					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.1373	0.0613	3.8727	7.0200e-003		0.5430	0.5430		0.5430	0.5430	51.6479	21.6604	73.3083	0.0477	4.0600e-003	75.7104
Landscaping	0.0112	4.2800e-003	0.3713	2.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	0.6068	0.6068	5.8000e-004	0.0000	0.6214
Total	**3.6636**	**0.0656**	**4.2440**	**7.0400e-003**		**0.5450**	**0.5450**		**0.5450**	**0.5450**	**51.6479**	**22.2672**	**73.9151**	**0.0482**	**4.0600e-003**	**76.3318**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1184	0.1316	3.1500e-003	8.3474
Unmitigated	4.1184	0.1316	3.1500e-003	8.3474

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.2577 / 2.05377	3.3296	0.1065	2.5500e-003	6.7530
User Defined Recreational	0.7665 / 0.5	0.7888	0.0251	6.0000e-004	1.5944
Total		**4.1184**	**0.1316**	**3.1500e-003**	**8.3474**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.2577 / 2.05377	3.3296	0.1065	2.5500e-003	6.7530
User Defined Recreational	0.7665 / 0.5	0.7888	0.0251	6.0000e-004	1.5944
Total		**4.1184**	**0.1316**	**3.1500e-003**	**8.3474**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.4649	0.6776	0.0000	28.4039
Unmitigated	11.4649	0.6776	0.0000	28.4039

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	51.48	10.4500	0.6176	0.0000	25.8894
User Defined Recreational	5	1.0150	0.0600	0.0000	2.5145
Total		**11.4649**	**0.6776**	**0.0000**	**28.4039**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	51.48	10.4500	0.6176	0.0000	25.8894
User Defined Recreational	5	1.0150	0.0600	0.0000	2.5145
Total		**11.4649**	**0.6776**	**0.0000**	**28.4039**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	48.1440	0.0000	0.0000	48.1440

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	68	48.1440	0.0000	0.0000	48.1440
Total		**48.1440**	**0.0000**	**0.0000**	**48.1440**

Appendix D
Biological Assessment

BIOLOGICAL ASSESSMENT
FOR THE SCOTT PROPERTY (22033 SOUTH STATE HIGHWAY 29) AND THE MARTIN RANCH PROPERTY (22433 HIGHWAY 29), MIDDLETOWN, CALIFORNIA

Prepared July-November 2021
Updated May 2023

Prepared for:

Middletown Rancheria Tribe of Pomo Indians of California

Prepared by:

Natural Investigations Company
3104 O Street #221, Sacramento, CA 95816

TABLE OF CONTENTS

1. INTRODUCTION

1.1. PURPOSE AND SCOPE OF ASSESSMENT

In support of the environmental review process, Natural Investigations Co. has prepared this assessment to provide information on biological resources within the Action Area. This assessment identifies the biological resources within the Action Area, the regulatory environment affecting such resources, any potential Project-related impacts upon these resources, and identifies mitigation measures to reduce these impacts.

The purpose of this biological assessment is to provide technical information and to review the proposed project in sufficient detail to determine to what extent the proposed project may affect threatened, endangered, or proposed species. The biological assessment is prepared in accordance with legal requirements found in Section 7 (a)(2) of the Endangered Species Act (16 U.S. C 1536(c)). The purpose of a biological assessment is to evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action.

The specific scope of services performed for this Biological Assessment consisted of the following tasks:

- Compile all readily-available historical biological resource information about the Action Area;
- Spatially query state and federal databases for any historic occurrences of listed species or critical habitats within the Action Area and vicinity;
- Perform field surveys of the Action Area, including photographic documentation;
- Inventory all flora and fauna observed during the field surveys;
- Characterize and map the habitat types present within the Action Area, including any potentially-jurisdictional water resources;
- protocol botanical surveys
- Evaluate the likelihood for the occurrence of any listed species;
- Assess the potential for the Project to adversely impact any sensitive biological resources;
- Recommend mitigation measures designed to avoid or minimize Project-related impacts; and
- Prepare and submit a report summarizing all of the above tasks.

The scope of services does not include other services that are not described in this Section, such as focused surveys or protocol-level surveys for listed species.

1.2. DESCRIPTION OF THE PROPOSED ACTION AND THE ACTION AREA

The proposed project involves 3 parcels in Middletown, California (see Exhibits):

- the “Scott Property, located at 22033 South State Highway 29, Assessor Parcel Number (APN) 014-160-09, 8.39 acres, and APN 014-160-05, 0.46 acres.
- the “Martin Property, located at 22433 Highway 29, APN 014-005-34, 52.65 acres.

The proposed action is the transfer of the title of the 3 parcels from fee simple to federal trust, which will transform the parcels into tribal land of the Middletown Rancheria Tribe of Pomo Indians of California (Tribe).

The Tribe has the following future development plans for the Scott Property:

- a parking lot, asphalt paved, with 135 spaces for overflow parking for the casino, and
- an RV park, 21 spaces, with a community area for picnics and child play

The remaining western third of the property will not be redeveloped, but remain in rural residential land use.

Surface runoff from the proposed roadways would be directed through biofiltration swales (bioswales) to offset the added impervious area. The bioswales, planted with native grasses, would treat 100% of the runoff. Bioswales are specifically designed to remove fine sediment and pollution in water runoff. They are most commonly constructed as vegetated trapezoidal channels which receive and convey storm water flows while providing compliance with water quality and flow criteria. Pollutants are removed by a filtration process involving vegetation, the uptake by plant biomass, sedimentation, adsorption to soil particles, and infiltration through the soil. The bioswales would augment the existing drainage ditches and tie into existing wetland swales to help maintain the current hydrology of the site.

For purposes of this biological assessment, we assumed that the Action Area of the Scott Property was the entire parcel.

The Tribe has the following future development plans for the Martin Property:

- The proposed project is the construction of 45 residences to be built on the grasslands and an abandoned vineyard in the eastern portion of the Property. A network of new residential streets will provide access to these new homes. In addition, the Project will include up to 5 cabins to be set within existing forested habitat in the western portion of the property. Access to these cabins will be via a new driveway to a parking lot which will also be placed within existing forested habitat. Hiking trails would be created along through forest to the ponds.

For purposes of this biological assessment, the Martin Property Project Area was defined as the 22-acre area where development is proposed, including the residences, cabins, and roads. The entire 52.65-acre property was defined as the Martin Property Action Area. The Action Area is defined to identify biological resources adjacent to the Project Area, and is the area subject to potential indirect effects from Project implementation.

1.3. Listed Species and Critical Habitat

1.3.1. Critical Habitats

There are no critical habitats within, or adjacent to, the Action Area. The nearest critical habitat is 4 miles to the southeast of the Action Area for Northern Spotted Owl (*Strix occidentalis caurina*).

1.3.2. USFWS Species List

A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Exhibits). This list is generated using a regional and/or watershed approach and does not necessarily indicate that the Action Area provides suitable habitat. The following listed species should be considered in the impact assessment:

- Northern Spotted Owl *Strix occidentalis caurina*
- Green Sea Turtle *Chelonia mydas*
- California Red-legged Frog *Rana draytonii*
- Delta Smelt *Hypomesus transpacificus*
- California Freshwater Shrimp *Syncaris pacifica*
- Burke's Goldfields *Lasthenia burkei*
- Kenwood Marsh Checker-mallow *Sidalcea oregana* ssp*. valida*
- Sebastopol Meadowfoam *Limnanthes vinculans*

Migratory birds should also be considered. Under the Migratory Bird Treaty Act of 1918 (16 USC §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbances must be reduced or eliminated during the nesting cycle.

1.3.1. Historical Occurrences of Listed Species

The CNDDB and CNPS databases were queried and any reported occurrences of listed species were plotted in relation to the Action Area boundary using GIS software (see Exhibits). No federally-listed species occurrences are reported within the Action Area. The CNDDB has mapped occurrences of prairie falcon (*Falco mexicanus*) in 1979 and American peregrine falcon (*Falco peregrinus anatum*) from 2001 in the vicinity of the Action Area. However, these occurrences are an artifact of the mapping process at CNDDB. The specific locations have been obscured by the CNDDB in order to protect these species. Suitable cliff nesting habitat for these species is not found within the Action Area.

1.4. Consultation to Date

Informal consultation will be initiated with USFWS by the U.S. Bureau of Indian Affairs, who must consult with USFWS before approval of the fee-to-trust transfer.

2. ENVIRONMENTAL SETTING

The Action Area is located within the Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Action Area and vicinity is in Climate Zone 14 “Northern California’s Inland Areas with Some Ocean Influence“, with maritime air moderating temperatures that would otherwise be hotter in summer and colder in the winter (Sunset, 2021). The Action Area is located in the Census-Dedicated Place of Middletown, in an area zoned for agricultural and rural residential uses. The topography of the Action Area is that of the gently sloping toe of the eastern slope of the Mayacamas Mountains as it transitions to the Collayomi Valley. The elevation ranges from approximately 1,150 feet to 1,385 feet above mean sea level. Drainage runs east, and eventually flows into St. Helena Creek.

On the Scott Property, there are several rural residences on the western-southwestern portion of the property. An overflow parking area for the Twin Pines Casino is present on the eastern portion of the Scott Property. The remainder of the Scott Property is open space. The parcels surrounding the Scott Property are used for a mixture of agricultural, residential, and commercial purposes. To the north are rural residences and pastureland, and to the south is Twin Pines Casino. Pastureland and open space are west of the Scott Property, while Highway 29 and vineyards are present to the east.

The eastern portion of the Martin Property (approximately 8 acres) is used for residential space and pastureland for horses. There are 16 acres of vineyards in the middle of the Martin Property which have been abandoned for several years and are no longer actively cultivated. Improvements consist of two single-story homes, storage sheds, and a horse stable. The western half of the Martin Property is 27 acres of primarily undeveloped, forested open space. Three spring-fed ponds are present in this area and may have historically been used to irrigate the vineyards. A small creek connects the southern and northern ponds. Dense vegetation and areas of steep terrain surround the ponds. Footpaths are present around the vineyards and to each pond. An additional pond is present between the pastureland and vineyards along the northern portion of the Martin Property. There is one groundwater well near the eastern Property boundary, northeast of the residence. Maps provided by the Middletown Rancheria Tribe of Pomo Indians staff indicate there are three additional wells on the Martin Property, which are not in use and may have been abandoned due to inadequate yield. Wastewater is disposed of via two septic systems near each residence. The Martin Property is bounded by Highway 29 to the east, the Middletown Rancheria and Twin Pines Casino to the north, and agriculture and rural residences to the east and south.

According to the NRCS SoilWeb, five soil units have been mapped within the Action Area (see Exhibits): 144 - Jafa loam, 2 to 5 percent slopes; 145 - Jafa loam, 5 to 15 percent slopes; 186 - Neuns-Sanhedrin-Deadwood complex, 30 to 50 percent slopes; 202 - Sanhedrin-Kekawaka-Speaker complex, 30 to 50

percent slopes; and 256 - Water. Soil map unit 144 - Jafa loam, 2 to 5 percent slopes includes hydric components (NRCS 2017b). None of the NRCS-mapped soil units within the Action Area are serpentinite-derived, although serpentinite outcrops were observed during the ECORP (2018) field visit and soil units with serpentinite parent material are mapped within approximately 0.5 mile. The western edge of the Martin Property may have serpentine soils, and corresponds roughly to the gray pine community boundary. The Martin Property Project Area is not known to have serpentine soils.

3. RESULTS OF FIELD SURVEYS

Scott Property:

- Consulting biologist Kristen Ahrens, MS, conducted a wildlife and botanical survey on May 31, 2021. No federally-listed species were detected.

Martin Property

- During the March 14, 2017, wildlife survey and botanical field survey by ECORP (2018), biologists detected no federally-listed species.

- A northern spotted owl survey was performed in 2018 by Tanner Environmental Services. During the May 3, 2018, bird survey by Tanner (2018), no northern spotted owls were detected.

- Biologists from ECORP Consulting performed protocol botanical field surveys on May 2 and 3, 2018, and again in July 2018. No federally-listed species were detected.

- Consulting biologist Tim Nosal, MS. conducted a wildlife survey and botanical field survey on October 25, 2021. No federally-listed species were detected.

3.1. TERRESTRIAL VEGETATION COMMUNITIES

All plants detected during the numerous field surveys of the Action Area are listed in the Appendices.

On the Scott Property, the following vegetation communities occur (see Exhibits):

Disturbed/Developed. These areas consist of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species lacking a consistent community structure. This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human activities. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

Annual Grassland: The annual grassland habitat is comprised largely of non-native annual grasses and native herbs with some native perennial grasses also important. This vegetation has been heavily grazed. Plants common in this habitat type include slender wild oat (*Avena barbata*), California horkelia (*Horkelia californica*), ripgut brome (*Bromus diandrus*) and English plantain (*Plantago lanceolata*). This vegetation can be classified as the Holland Type "Non-native Grassland" or as "44.150.02 *Avena barbata* Wild Oats Grasslands" (CDFW 2021e).

Mixed Oak – Conifer Woodland. Portions of the Scott Property are characterized by a tree canopy dominated by oaks—California black oak (*Quercus douglasii*) and blue oak (*Quercus douglasii*)— with occasional gray pine (*Pinus sabiniana*), Douglas fir (*Pseudotsuga menziesii*), and ponderosa pine (*Pinus ponderosa*). This vegetation can be classified as a mixture of the Holland Types "71.010.26 *Quercus kelloggii – Pinus ponderosa* (California Black Oak Forest)", "87.400.04 Ponderosa pine – Douglas Fir Forest", and "87.130.00 *Pinus sabiniana* Foothill Pine Woodland" (CDFW 2021e).

The Martin Property contains the following terrestrial vegetation communities (see Exhibits):

Disturbed/Developed. These areas consist of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species lacking a consistent community structure. This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human activities. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

Vineyard: These areas of converted natural habitat are in agricultural production as vineyard. The understory in vineyards usually consist of bare soil (controlled by tillage and/or herbicides) or a cover crop of herbaceous plants. Some species of birds and mammals have adapted to the vineyard habitats. However, many have become "agricultural pests". Similar to the ruderal/developed habitat type, the disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

Blackberry scrub: A large patch of blackberry brambles is found along the margin of the easternmost pond. Vegetation within this lacustrine habitat consists of a monoculture of Himalayan blackberry (*Rubus armeniacus*). This vegetation can be classified as the Holland Type "Great Valley Riparian Scrub" or as "63.906.01 Rubus armeniacus – Himalayan Blackberry Riparian Scrub" (CDFW 2021e).

Annual Grassland: The annual grassland habitat is comprised largely of non-native annual grasses and native herbs with some native perennial grasses also important. This vegetation has been heavily grazed. Plants common in this habitat type include slender wild oat (*Avena barbata*), California horkelia (*Horkelia californica*), ripgut brome (*Bromus diandrus*) and English plantain (*Plantago lanceolata*). This vegetation can be classified as the Holland Type "Non-native Grassland" or as "44.150.02 *Avena barbata* Wild Oats Grasslands" (CDFW 2021e).

Black oak forest. Portions of the Martin Property are characterized by a tree canopy dominated by oak. The black oak forest consists of closed canopy of California black oak (*Quercus douglasii*) with occasional Douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), madrone (*Arbutus menziesii*), French broom (*Genista monspeliensis*), common manzanita (*Arctostaphylos manzanita* ssp. m*anzanita*) and toyon (*Heteromeles arbutifolia*). Recognition of understory plants within the oak forest was difficult because this vegetation layer was masticated during the summer. This vegetation can be classified as the Holland Type "Black Oak Forest" or as "71.010.26 *Quercus kelloggii – Pinus ponderosa* (California Black Oak Forest)" (CDFW 2021e).

Gray pine woodland. Found along the hills and slopes in the western portion of the Martin Property is habitat dominated by gray pine. The pine woodland consists of an open canopy of gray pine (*Pinus sabiniana*) and occasional blue oak (*Quercus douglasii*) with an understory of toyon, whiteleaf manzanita (*Arctostaphylos viscida*) and poison oak (*Toxicodendron diversilobum*). This vegetation can be classified as the Holland Type "Non-Serpentine Gray Pine Woodland" or as "87.130.00 *Pinus sabiniana* Foothill Pine Woodland (CDFW 2021e).

Ponderosa pine forest: Conifer-dominated forest habitat is found throughout the western half of the Martin Property. This forest habitat consists of a dense canopy of ponderosa pine, Douglas fir, California black oak, madrone, common manzanita and French broom. As with the black oak forest, the understory of the ponderosa pine forest has been masticated. The pine forest can be classified as the Holland Type "Coast Range Ponderosa Pine Forest" or as "87.400.04 Ponderosa pine – Douglas Fir Forest (CDFW 2021e).

Willow scrub/Riparian: Riparian (or lacustrine) habitat can be found along the margin of one of the ponds. The riparian vegetation consists of a narrow canopy of red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), valley oak (*Quercus lobata*) and Himalayan blackberry. The riparian forest can be classified as the Holland Type "Great Valley Mixed Riparian Forest" or as "61.205.02 Salix laevigata/Salix lasiolepis Red Willow Riparian Woodland and Forest (CDFW 2021e).

Freshwater Marsh: Two areas of freshwater marsh are mapped in the eastern half of the Martin Property. The freshwater marsh vegetation is found within the annual grassland habitat, and has been heavily grazed to the point where species identification was not possible. This vegetation can be classified as the Holland Type "Coastal and Valley Freshwater Marsh."

3.2. WILDLIFE HABITAT TYPES

The following animals were detected within the Scott Property during the field surveys:

moths and butterflies (Lepidoptera); northwestern fence lizard (*Sceloporus occidentalis occidentalis*); Botta's pocket gopher (*Thomomys bottae*); coyote scat (*Canis latrans*); California scrub jay (*Aphelocoma californica*); mourning dove (*Zenaida macroura*); turkey vulture (*Cathartes aura*); sparrow (Emberizidae); and other common songbirds.

Wildlife habitat types were classified using CDFW's Wildlife Habitat Relationship System. The Scott Property contains the following wildlife habitat types: Blue Oak Woodland; Valley Oak Woodland; Annual Grassland; Pasture; Urban; and Barren.

The following animals were detected within the Martin Property during the field surveys:

Sierran treefrog (*Pseudacris sierra*); Botta's pocket gopher (*Thomomys bottae*); cattle (*Bos taurus*); Columbian black-tailed deer (*Odocoileus hemionus columbianus*); coyote (*Canis latrans*); dog (*Canis lupis familiaris*); western gray squirrel (*Sciurus griseus*); acorn woodpecker (*Melanerpes formicivorus*); American goldfinch (*Spinus tristis*); black phoebe (*Sayornis nigricans*); California quail (*Callipepla californica*); California scrub jay (*Aphelocoma californica*); California towhee (*Melozone crissalis*); common raven (*Corvus corax*); dark-eyed junco (*Junco hyemalis*); northern flicker (*Colaptes auratus*); Nuttall's woodpecker (*Picoides nuttallii*); red-shouldered hawk (*Buteo lineatus*); red-winged blackbird (*Agelaius phoeniceus*); sparrow (Emberizidae); Stellar's jay (*Cyanocitta stelleri*); turkey vulture (*Cathartes aura*); western bluebird (*Sialia mexicanus*); white-breasted nuthatch (*Sitta carolinensis*); wild turkey (*Meleagris gallopavo*); yellow-billed magpie (*Pica nuttalli*); yellow-rumped warbler (*Setophaga coronata*); and other common songbirds.

The Martin Property contains the following wildlife habitat types: Urban; Barren; Vineyard; Annual Grassland; Blue Oak – Foothill Pine; Montane Hardwood; Ponderosa Pine; Valley Foothill Riparian; Fresh Emergent Wetland; Riverine; and Lacustrine.

3.3. JURISDICTIONAL WATERS / AQUATIC HABITATS

The USFWS National Wetland Inventory (NWI) digital maps of the Action Area were also consulted. Regional mapped wetland features are shown in the Exhibits, where illustrative. The USFWS National Wetland Inventory reported no water features within the Scott Property (see Exhibits). The USFWS National Wetland Inventory reported 3 water features on Martin Property (see Exhibits): 1 Riverine feature and 2 Freshwater Ponds. None of these water features are within the Martin Property Project Area.

A preliminary wetland assessment for the presence of potentially-jurisdictional water resources within the Action Area was conducted by ECORP (2017) and by Natural Investigations (2021).

Scott Property

The assessment determined that the Scott Property does not contain any channels or wetlands. In a few areas, surface drainage collects in upland swales, but these drainage features contain upland vegetation and lack any Ordinary High Water Mark (OHWM) indicators, such as racked vegetation, bank erosion, or bedrock exposure.

Martin Property

The assessment determined that the Martin Property contains the following water resources (see Exhibits):

- 5 unnamed ephemeral channels
- 4 freshwater ponds and lacustrine/riparian scrub wetland
- 3 areas that may contain wetlands (freshwater marshes)

There are no vernal pools or other isolated wetlands in the Action Area.

Ephemeral drainages are linear features that exhibit a bed and bank and an OHWM. These features typically convey runoff for short periods of time during and immediately following rain events and are not influenced by groundwater sources at any time during the year. Ephemeral drainages occur within the western portions of the Martin Property. These features are primarily unvegetated and consist of gravel and cobble beds with incised banks.

Ponds are depressional areas that are permanently or semi-permanently inundated and support areas of open water during the growing season. Ponds exhibit an OHWM but may or may not support hydrophytic vegetation and hydric soils. A modified groundwater spring forms two ponds in the northeastern portion of the Martin Property which are connected by surface water at peak inundation. The smaller of these two features is dominated by a floating canopy of water lily (*Nymphaea* sp.). The larger of these two ponds functions as a stock pond for horses, and is primarily unvegetated. Vegetated portions of this pond are dominated by water starwort, pennyroyal (*Mentha pulegium*), common spikerush (*Eleocharis macrostachya*), and iris leaved rush (*Juncus xiphioides*).

Three additional ponds occur in the western portion of the Martin Property as impoundments of the ephemeral channels. These ponds are primarily unvegetated due to their steep sides, depth, and seasonally fluctuating water levels. Vegetated portions of these ponds are dominated by red willow, broad leaf cattail (*Typha latifolia*), water starwort, and bog rush. Lacustrine wetland habitat can be found along the margin of one of the ponds. The vegetation consists of a narrow canopy of red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), valley oak (*Quercus lobata*) and Himalayan blackberry. A large patch of blackberry brambles is found along the margin of the easternmost pond. Vegetation within this lacustrine habitat consists of a monoculture of Himalayan blackberry (*Rubus armeniacus*).

Within the eastern half of the Martin Property, there are two areas that may have wetlands (freshwater marsh) are mapped. The freshwater marsh vegetation is found within the annual grassland habitat, and has been heavily grazed to the point where species identification was not possible.

Ditches are linear features that are constructed to convey storm water and/or irrigation water. Ditches occur within the Martin Property east and south of the vineyard. These ditches are primarily unvegetated due to scour caused by flowing water. One additional ditch occurs in the northern-central portion of the Martin Property. This feature is a concrete-lined portion of the creek channel which flows out of a pond. These linear features are not necessarily jurisdictional under the Clean Water Act.

4. SPECIES ACCOUNTS

4.1. Burke's Goldfields

This species is an annual herb that occurs in vernal pools and mesic areas within meadows and seeps. This species blooms from April to June and is known to occur at elevations ranging from 49 to 1,969 feet above MSL (CNPS 2017). This species is endemic to California, and its current known range consists of Lake, Mendocino, Napa, and Sonoma counties (CNPS 2017). The Scott Property does not contain suitable habitat. The seasonal wetlands and seasonal wetland swales in the eastern portion of the Martin Property represent suitable habitat for Burke's goldfields.

4.2. Kenwood Marsh Checker-mallow

The CNDDB (2021) describes the habitat as, "*marshes and swamps…edges of freshwater marshes…elevations from 115 to 150 m*." The Scott Property Action Area does not contain any vernal pools or any wetland or swamp or marsh habitat at all. On the Martin Property, seasonal wetlands are present, but no marshes or swamps. The Martin Property (at 360 m and higher) is way above the elevation limits of Kenwood Marsh Checker-mallow. Similarly, the lowest elevation of the Scott Property (352 m) is outside of the elevation range of this species. There is no potential for Kenwood Marsh Checker-mallow to occur in the Action Areas.

4.3. Sebastopol Meadowfoam

This species is an annual herb that occurs in vernally mesic areas within meadows and seeps, valley and foothill grassland, and vernal pools (CNPS 2021). This species blooms from April to May and is known to occur at elevations ranging from 49 to 1,009 feet above MSL (CNPS 2021). This species is endemic to California, and its current known range is limited to Sonoma County, and its distribution is uncertain in Napa County (CNPS 2021). The Scott Property Action Area does not contain any vernal pools or any wetland or meadow or marsh habitat at all. The grasslands and wetlands within the Martin Property represent suitable habitat for Sebastopol meadowfoam, but ideal habitat is not present.

4.4. Green Sea Turtle

The Action Area does not contain any marine habitat or any watercourses at all. There is no potential for this species to occur in the Action Area and the species does not need to be analyzed further in this assessment.

4.5. Northern Spotted Owl

USFWS describes the owl's habitat as "*Northern spotted owls mostly occur in coniferous forest….They use ponderosa pine/Douglas-fir forests in the eastern Cascade Ranges of Washington and in Douglas-fir/evergreen hardwood forests in northwestern California…Spotted owls occur in closed-canopy, uneven-aged, late-successional and old-growth forests*." The Scott Property Action Area does not have coniferous forest or any real forest resources at all. Northern spotted owl (*Strix occidentalis caurina*) has potential to forage in the Martin Property, but not roost/nest. A protocol habitat and impact assessment for this species (Tanner, 2018) concluded that suitable nesting-roosting habitat is not present within or immediately adjacent to the Martin Property. Tanner (2018) made the following conclusions:

> "*We believe that the proposed [Martin Property] Project is not likely to adversely affect NSO through direct impacts of disturbance or harassment (take) or through habitat degradation. We believe that construction for the Project will not result in a conversion of the potential NSO Foraging habitat in the Project area to Unsuitable habitat. Based on the 2.25 mile distance of the Project from the known NSO activity center, we do not believe that Protocol level surveys are necessary for this project*." (p. 10 Tanner Environmental Services 2018)

4.6. California Red-legged Frog

The Action Area is located within the historic range of the California red-legged frog. According to the CNDDB (2021), the nearest reported occurrence of the frog is 34 miles away from the Action Area to the southwest in Sebastopol. The California red-legged frog has not, unfortunately, been expanding its range, and is not currently occupying the watershed that the Action Area is within (St. Helena Creek). Suitable aquatic habitat (perennial channels and ponds) is not present on the Scott Property. The ponds within the Martin Property are occupied by predatory fish and bullfrogs and therefore represent low-quality habitat for the California red-legged frog. The California red-legged frog has low potential to occur within the Martin Property (ECORP 2017). Therefore, there is no real potential for this species to occur in the Action Area and the species does not need to be analyzed further in this assessment.

4.7. Delta Smelt

The Action Area cannot sustain fishery resources because it lacks streams. Potential indirect impacts to downstream fisheries will be mitigated by water resource protection measures, discussed later in this assessment. Thus, Delta Smelt (*Hypomesus transpacificus*) will not be assessed further.

4.8. California Freshwater Shrimp

The CNDDB (2021) reports the nearest occurrence as, "*Napa River from vic. Hwy 29 bridge upstream to Greenwood Ave, & in Garnett Ck to 140 m above Greenwood Ave, Calistoga. Garnett Creek pop. discovered In 1990, all other detections from Napa River*." The CNDDB (2021) describes the habitat as, "*endemic to Marin, Napa, & Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate; shallow pools away from main streamflow."* The Action Area lacks streams; 1,300 feet away is St. Helena Creek (a perennial channel), which contains suitable habitat. Potential indirect impacts to downstream fisheries will be mitigated by water resource protection measures, discussed later in this assessment. There is no potential for this species to occur in the Action Area and the species does not need to be analyzed further in this assessment.

4.9. Migratory Birds

The Action Area contains suitable nesting habitat for various bird species because of the presence of trees and poles.

5. EFFECTS

This section analyzes potential Project-related impacts upon the known biological resources within the Action Area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level. The Project's architectural design was overlaid upon the mapped habitats and water resources to assist in the analysis of Project-related impacts (see Exhibits).

On the Scott Property, construction of the overflow parking lot and RV park will require the removal of disturbed natural habitat: 2.5 acres of annual grassland/lawn and 0.2 acres of oak woodland. There will be no direct impacts to water resources, as the property has no wetlands or channels. The vegetated swale will be avoided with a 25-foot vegetated buffer. On the Martin Property, the Project Areas are located in annual grassland, ponderosa pine forest, and vineyard habitat, which will be impacted by project implementation.

5.1. Potential Adverse Effects Upon Critical Habitat

There is no federally-designated critical habitat for any listed species within, or adjacent to, the Action Area. The nearest critical habitat is at least 4 miles away. Implementation of the Proposed Action will have No Effect on federally-designated critical habitat.

5.2. Potential Adverse Effects Upon Listed Species

5.2.2. Direct Effects

No listed species were detected in the Action Area during the field surveys. Diversity databases do not report any federally-listed species in the Action Area or immediate vicinity.

Burke's Goldfields, Kenwood Marsh Checker-mallow, and Sebastopol Meadowfoam require wetland or mesic habitats such as vernal pools, swamp or marsh, or wet meadow habitat. The Scott Property does not contain suitable habitat for Burke's Goldfields, Kenwood Marsh Checker-mallow, and Sebastopol Meadowfoam. On the Martin Property, the seasonal wetlands and seasonal wetland swales in the eastern portion of the Martin Property represent suitable habitat for Burke's goldfields. Kenwood Marsh Checker-mallow is restricted to lower elevations (maximum of 150 m), so this species cannot occur on the Scott Property or the Martin Property. The grasslands and wetlands within the Martin Property represent suitable habitat for Sebastopol meadowfoam, but ideal habitat is not present. Because suitable habitat is present on the Martin Property, protocol botanical surveys were conducted in both the early and late botanical blooming periods. A brief botanical survey was also conducted on the Scott Property. The botanical surveys did not detect Burke's Goldfields, Kenwood Marsh Checker-mallow, or Sebastopol Meadowfoam, or any other listed plant species. Therefore, implementation of the Proposed Action (fee-to-trust transfer and subsequent development) will have No Effect upon listed plant species.

The Action Area has too much human activity to provide much refuge for animals: the Action Area has residences, landscape maintenance, parking lots, roads, and is adjacent to a busy transportation corridor and commercial center. In the unlikely event that a listed species enters the Action Area, pre-construction surveys have been prescribed. The Action Area does not have suitable nesting habitat for Northern Spotted Owl, although there is suitable nesting habitat for raptors and other migratory birds, discussed later in this assessment. A pre-construction nesting bird survey will ensure that listed species, such as Northern Spotted Owl, are not present in work areas. Implementation of the Proposed Action will have No Effect on Northern Spotted Owl.

The Action Area lacks fishery resources. The nearest water resources that do provide fishery habitat are distant: St. Helena Creek is 1,300 feet away to the east and Hoodoo Creek (an intermittent channel 900

feet away to the north. Potential indirect impacts to downstream fisheries will be mitigated by water resource protection measures, discussed later in this assessment. Thus, implementation of the Proposed Action will have No Effect on Delta Smelt or California Freshwater Shrimp. Although the ponds constitute suitable habitat for California Red-legged Frog, this species is not present and significant barriers to colonization exist, such as the presence of predators and a dispersal distance of at least 34 miles. Furthermore, the ponds will be avoided with a development buffer. Because listed species that occur in the region could potentially migrate into the Project Areas between the time that the last field survey was completed and the start of construction, a pre-construction survey for listed species will be performed. Thus, implementation of the Proposed Action will have No Effect on California Red-legged Frog.

5.2.3. Indirect Effects

One of the potential indirect effects is the destruction or removal of aquatic habitat for development. On the Scott Property, there are no wetlands or channels. The vegetated swale will be avoided with a 25-foot vegetated buffer. The Martin Property contains channels, wetlands, and ponds, but the housing development was designed to avoid all of the channels, ponds, and the areas of potential wetlands, and vegetative buffers will be maintained. Project implementation will not impact any of the ponds, channels, or wetlands.

Potential indirect impacts to water resources could occur during construction: surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. This is a potentially significant impact for projects that disturb at least 1 acre of ground. However, on tribal trust lands, the Tribe must enroll in the USEPA's 2017 Construction General Permit (Permit Number CAR10I00 "Indian Country within the State of California"). On non-federal lands, the landowner must enroll under the State Water Quality Control Board's Construction General Permit prior to the initiation of construction. In conjunction with enrollment under either of these permit programs, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to water quality to a less-than-significant level.

5.3. Potential Adverse Effects Upon Migratory Birds

Trees, shrubs, and poles within the Action Area may provide suitable nesting and perching habitat for migratory birds. No nests were observed during the field surveys. Nevertheless, if construction activities are conducted during the nesting season, nesting birds could be directly impacted by removal of trees, and indirectly impacted by noise, vibration, and other construction-related disturbance. Mitigation measures were identified to reduce potential impacts to migratory birds, and nesting birds in general, to a less than significant level.

5.4. Avoidance, Mimization, and Mitigation Measures

The following measures will be implemented:

- To protect water quality and aquatic habitats, an erosion and sediment control plan will be implemented before construction commences. If the project disturbs at least 1 acre of soil, the Tribe must enroll in the USEPA's Construction General Permit, and implement of a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan. These measures will minimize the potential for erosion, sedimentation, or accidental release of hazardous materials.

- Because listed species that occur in the region could potentially migrate into the Project Areas between the time that the last field survey was completed and the start of construction, a pre-construction survey for listed species should be performed by a qualified biologist to ensure that listed species are not present. If any listed species are detected, construction should be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) should be consulted and project impacts and mitigation reassessed.

- If construction activities will occur during the nesting season (usually March to September), pre-construction surveys for the presence of migratory birds or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, the appropriate wildlife agency should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

- Before construction activities commence, a qualified biologist will stake the boundaries of any channel, pond, or potential wetland area that is adjacent to proposed development areas. The construction contractor shall erect exclusion fencing around these water resources to ensure that no construction equipment or personnel enter the channels or wetlands.

6. CONCLUSION AND SUGGESTED DETERMINATION

Consulting biologists conducted wildlife and botanical surveys during a period from 2017 to 2022. No listed species were detected. Diversity databases were queried and there are no listed species occurrences on, or adjacent to, the Action Area. There is no federally-designated critical habitat for any listed species within, or adjacent to, the Action Area. The nearest critical habitat is at least 4 miles away. The Action Area does not contain suitable habitat for any listed species. The exception is 3 listed plant species. On the Martin Property, the wetlands and grassland in the eastern portion of the Martin Property represent suitable habitat for Burke's goldfields, Kenwood Marsh Checker-mallow, and Sebastopol meadowfoam. Because suitable habitat is present on the Martin Property, protocol botanical surveys were conducted in both the early and late botanical periods. A brief botanical survey was also conducted on the Scott Property. The botanical surveys did not detect Burke's Goldfields, Kenwood Marsh Checker-mallow, or Sebastopol Meadowfoam, or any other listed plant species. Therefore, implementation of the Proposed Action (fee-to-trust transfer and subsequent development) will have No Effect upon Burke's Goldfields, Kenwood Marsh Checker-mallow, or Sebastopol Meadowfoam.

The Action Area does not contain any marine or estuarine habitat. Implementation of the Proposed Action will have No Effect on Green Sea Turtle.

The Action Area has too much human activity to provide much refuge for animals: the Action Area has residences, landscape maintenance, parking lots, roads, and is adjacent to a busy transportation corridor and commercial center. In the unlikely event that a listed species enters the Action Area, pre-construction surveys have been prescribed. The Action Area does not have suitable nesting habitat for Northern Spotted Owl, although there is suitable nesting habitat for raptors and other migratory birds, discussed later in this assessment. A pre-construction nesting bird survey will ensure that listed species, such as Northern Spotted Owl, are not present in work areas. Implementation of the Proposed Action will have No Effect on Northern Spotted Owl.

The Action Area lacks fishery resources. The nearest water resources that do provide fishery habitat are distant: St. Helena Creek is 1,300 feet away to the east and Hoodoo Creek (an intermittent channel 900 feet away to the north. Water resources in the Action Area were avoided in the design of the proposed development features. Potential indirect impacts to downstream fisheries will be mitigated by water resource protection measures. Thus, implementation of the Proposed Action will have No Effect on Delta Smelt or California Freshwater Shrimp. Although the ponds constitute suitable habitat for California Red-legged Frog, this species is not present and significant barriers to colonization exist, such as the presence of predators and a dispersal distance of at least 34 miles. Furthermore, the ponds will be avoided with a development buffer. Because listed species that occur in the region could potentially migrate into the Project Areas between the time that the last field survey was completed and the start of construction, a pre-construction survey for listed species will be performed. Thus, implementation of the Proposed Action will have No Effect on California Red-legged Frog.

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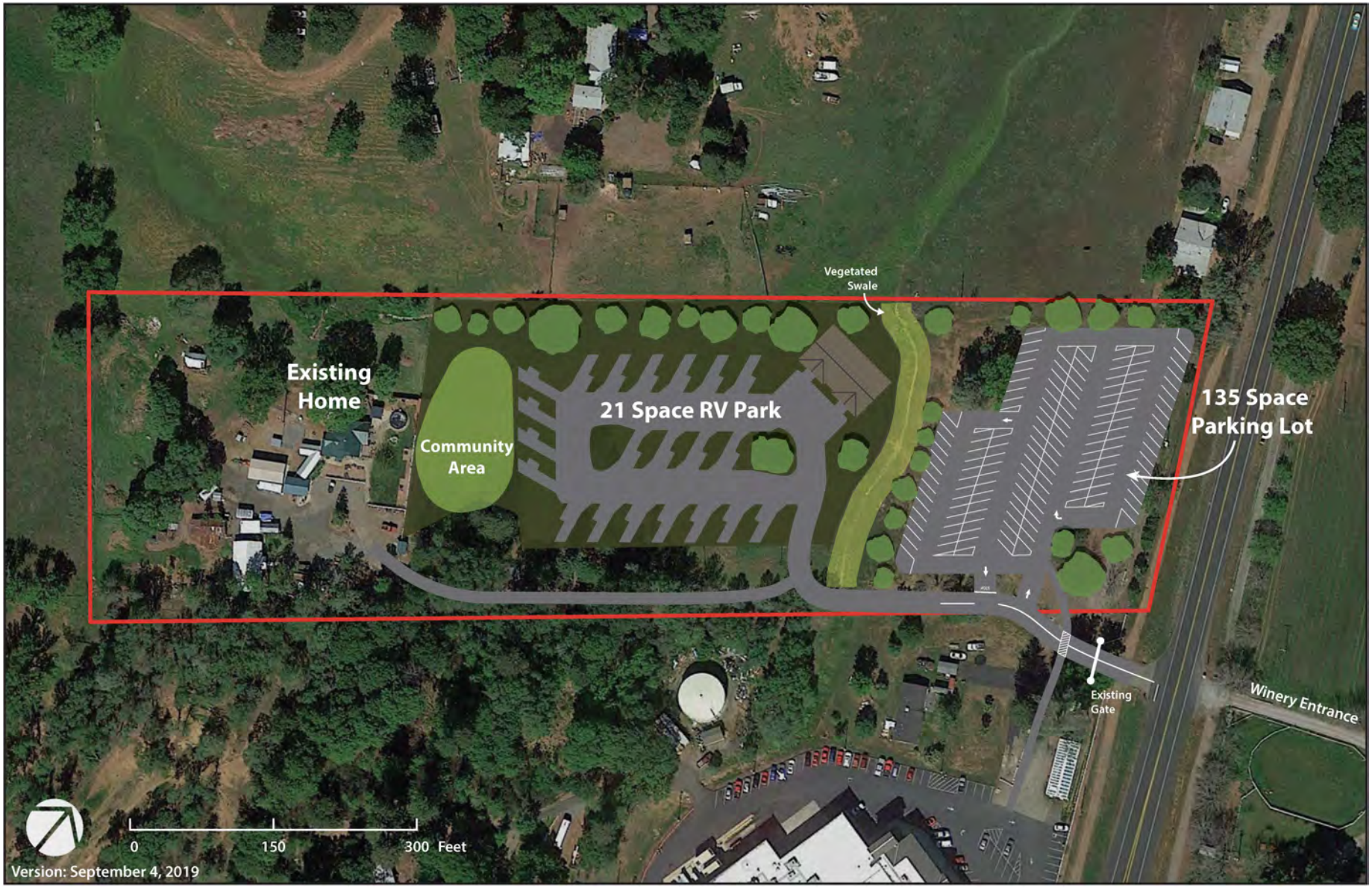
8. QUALIFICATIONS OF AUTHORS

G.O. GRAENING, Ph.D.
G. O. Graening holds a Ph.D. in Biological Sciences and a Master of Science in Biological Engineering, and is a certified arborist (International Society of Arboriculture) and certified professional in storm water quality (EnviroCert Int'l). Dr. Graening has 22 years of experience in environmental assessment and research, including the performance of numerous wetland delineations and aquatic restoration projects. Dr. Graening also serves as an adjunct professor of biology at California State University Sacramento and is an active researcher in the area of conservation biology and groundwater ecology.

Tim Nosal
Timothy R. Nosal holds a B.S. and M.S. in Biological Sciences. Mr. Nosal has statewide experience performing sensitive plant and animal surveys in addition to terrestrial vegetation investigations. Mr. Nosal has over 25 years of experience in environmental assessment and teaching with employers that include California Department of Fish and Wildlife, State Water Resources Control Board, American River College, MTI College, and Pacific Municipal Consultants.

9. EXHIBITS FOR SCOTT PROPERTY



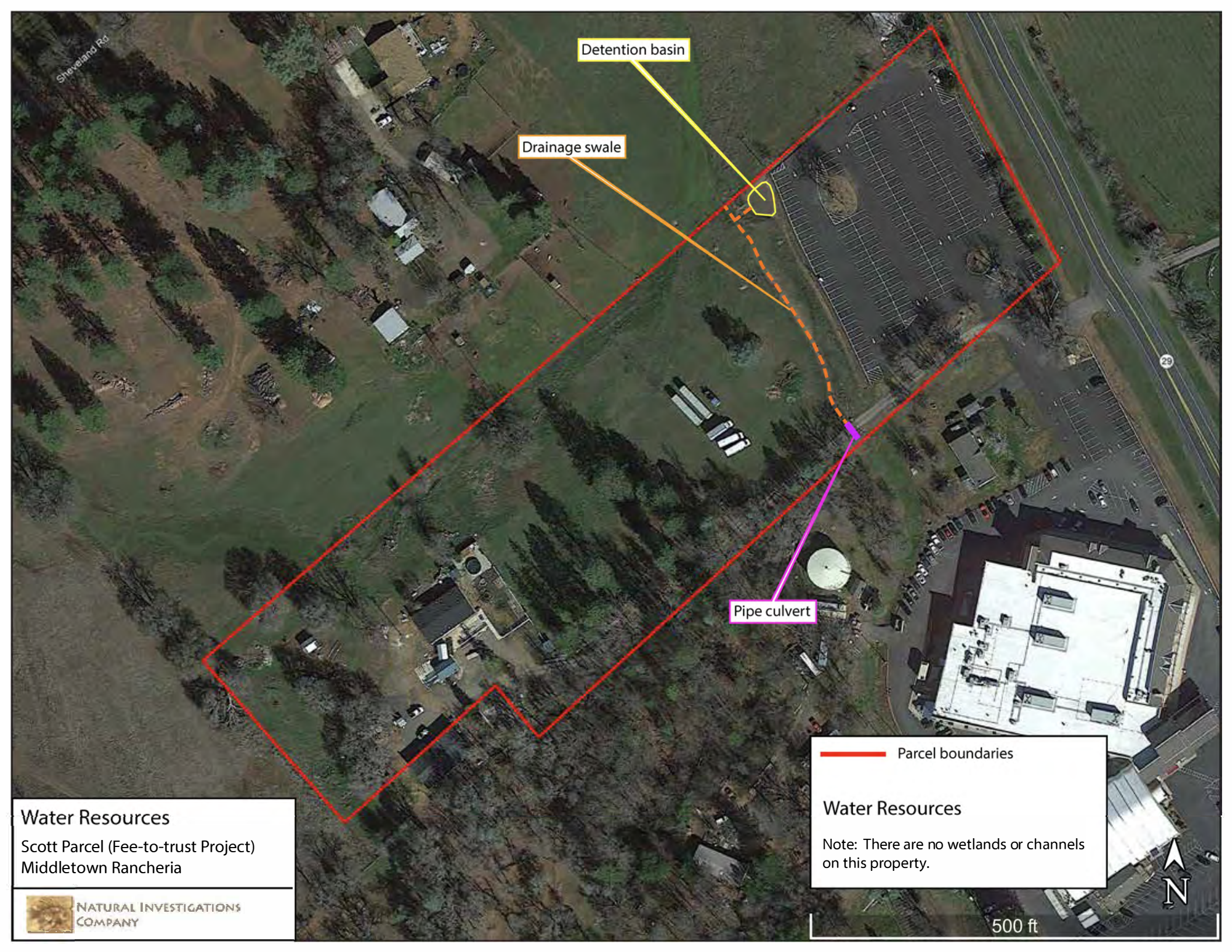
Scott Site Plan

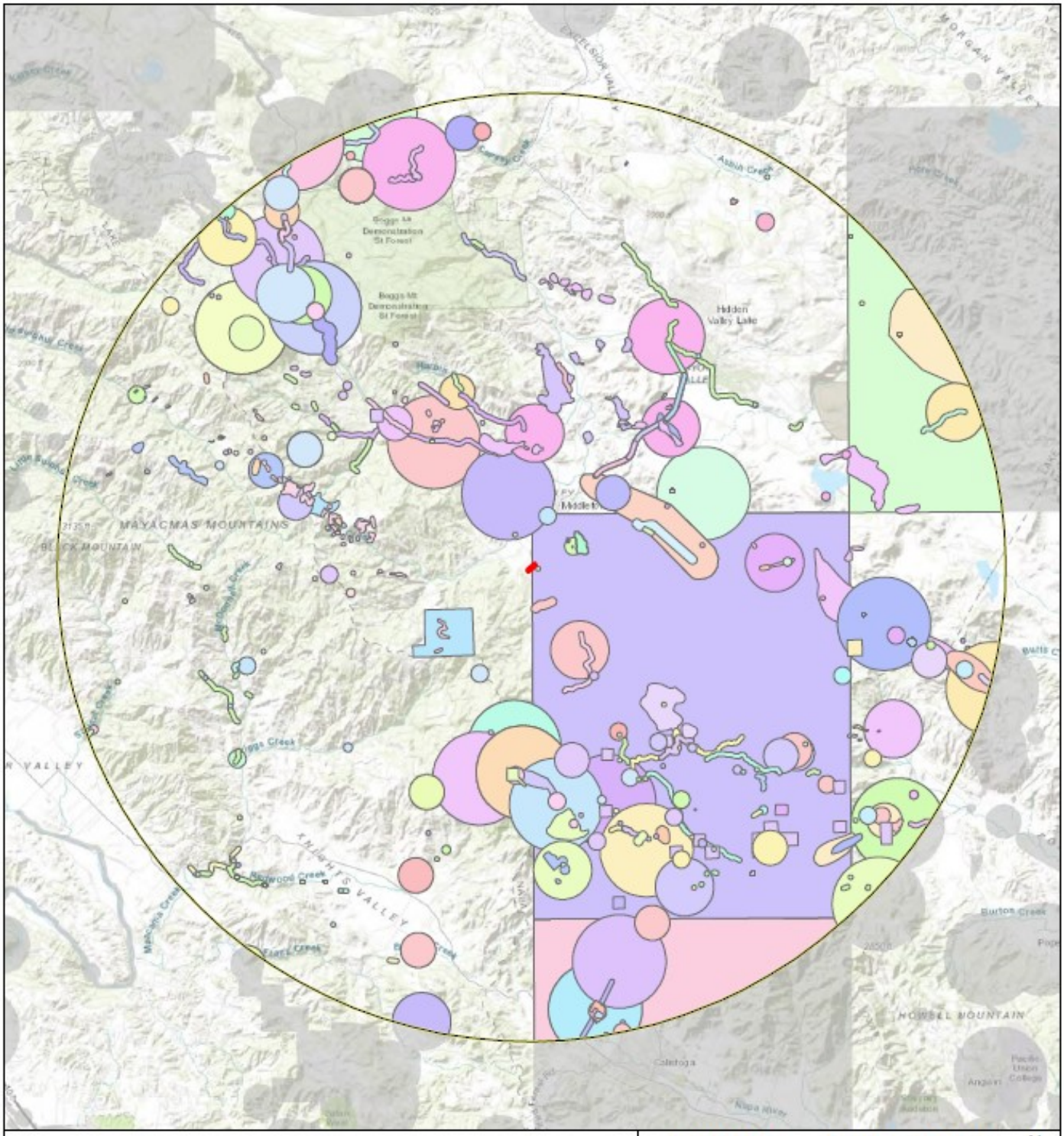
RV Park & Overflow Parking

Habitat Types

Scott Parcel (Fee-to-trust Project)
Middletown Rancheria

Natural Investigations Company


Detention basin
Drainage swale
Pipe culvert
Shevelland Rd
29
Parcel boundaries
Water Resources
Note: There are no wetlands or channels on this property.
N
500 ft
Water Resources
Scott Parcel (Fee-to-trust Project)
Middletown Rancheria
Natural Investigations Company



Parcel Location 10 Mile Buffer

1:190,000 1 inch = 3 miles

0 3 6 Miles

N

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist inshowing features discussed in an attached document. Natural Investigations Company can not guarantee the accuracy and content of electronic files.The master file is stored by Natural Investigations Company and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.Data Sources: California Department of Fish and Wildlife. 2020. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California.
(updated monthly by subscription service)

Special-Status Species Occurrences Map

22033 South State Hwy 29

Mount Saint Helena 1997 Quadrangle:Township 10N, Range 7W,Unsectioned Collayomi
Detert Reservoir 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi

NATURAL INVESTIGATIONS CO.
www.NaturalInvestigations.com

Parcel Location

Wetlands and Channels

0 150 300 Meters

0 600 1,200 Feet

1:7,500

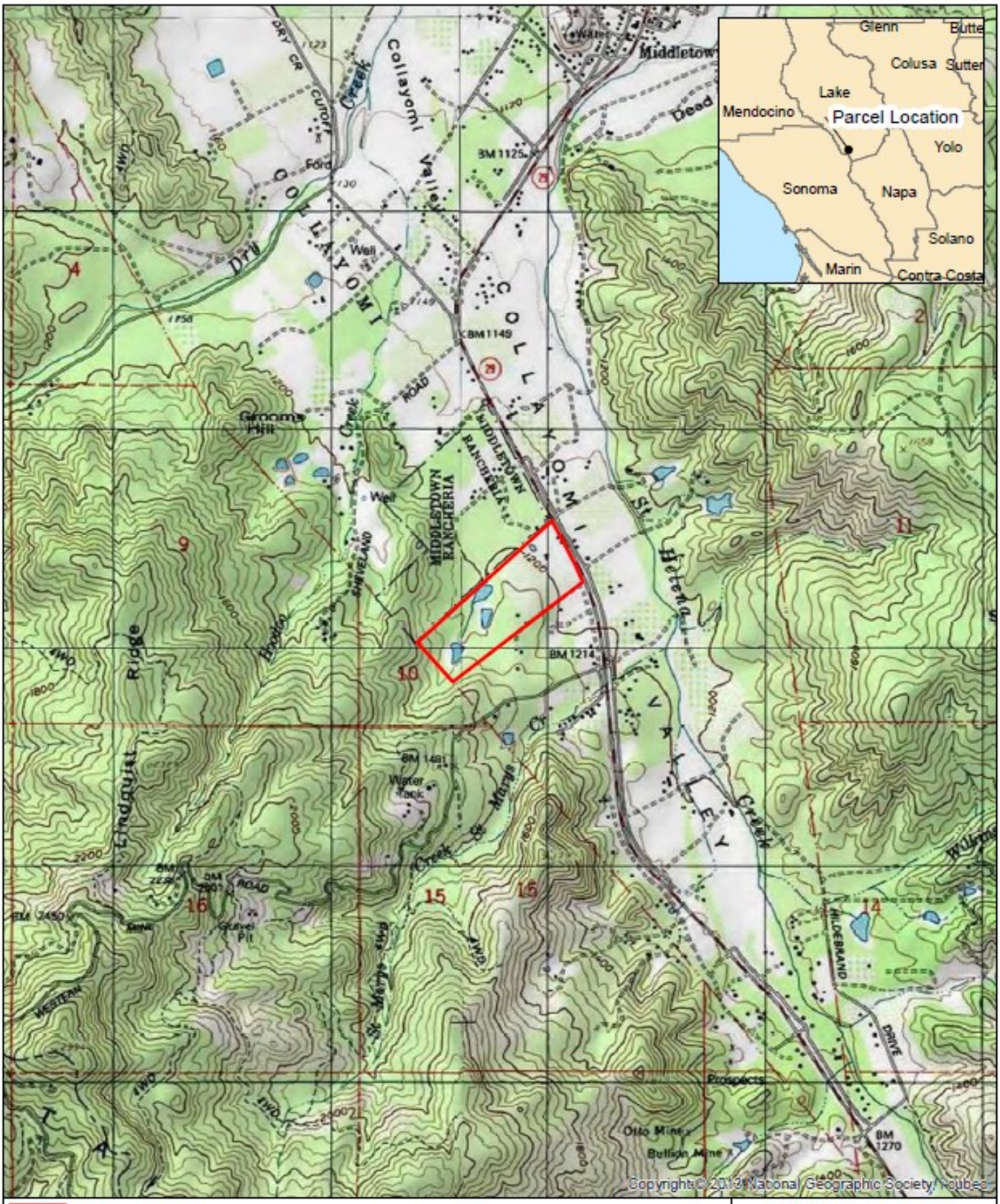
22033 South State Hwy 29
National Wetlands Inventory
Features Map

NATURAL INVESTIGATIONS COMPANY

Map Date 3/17/2020

Mount Saint Helena 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi
Detert Reservoir 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi

10. EXHIBITS FOR MARTIN PROPERTY



Project Location

0 250 500 Meters

0 1,250 2,500 Feet

1:24,000

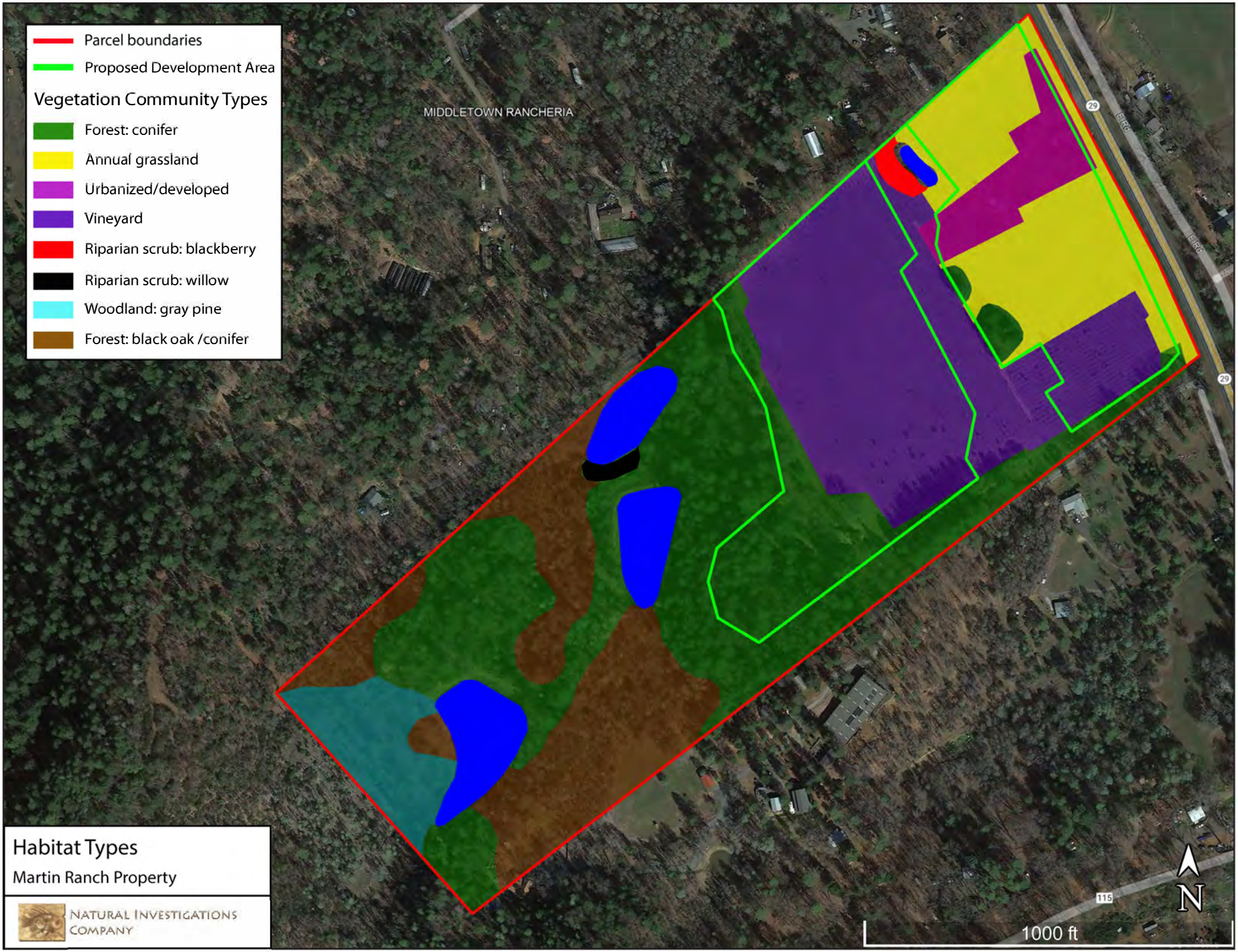
22433 Highway 29
Parcel Location Map

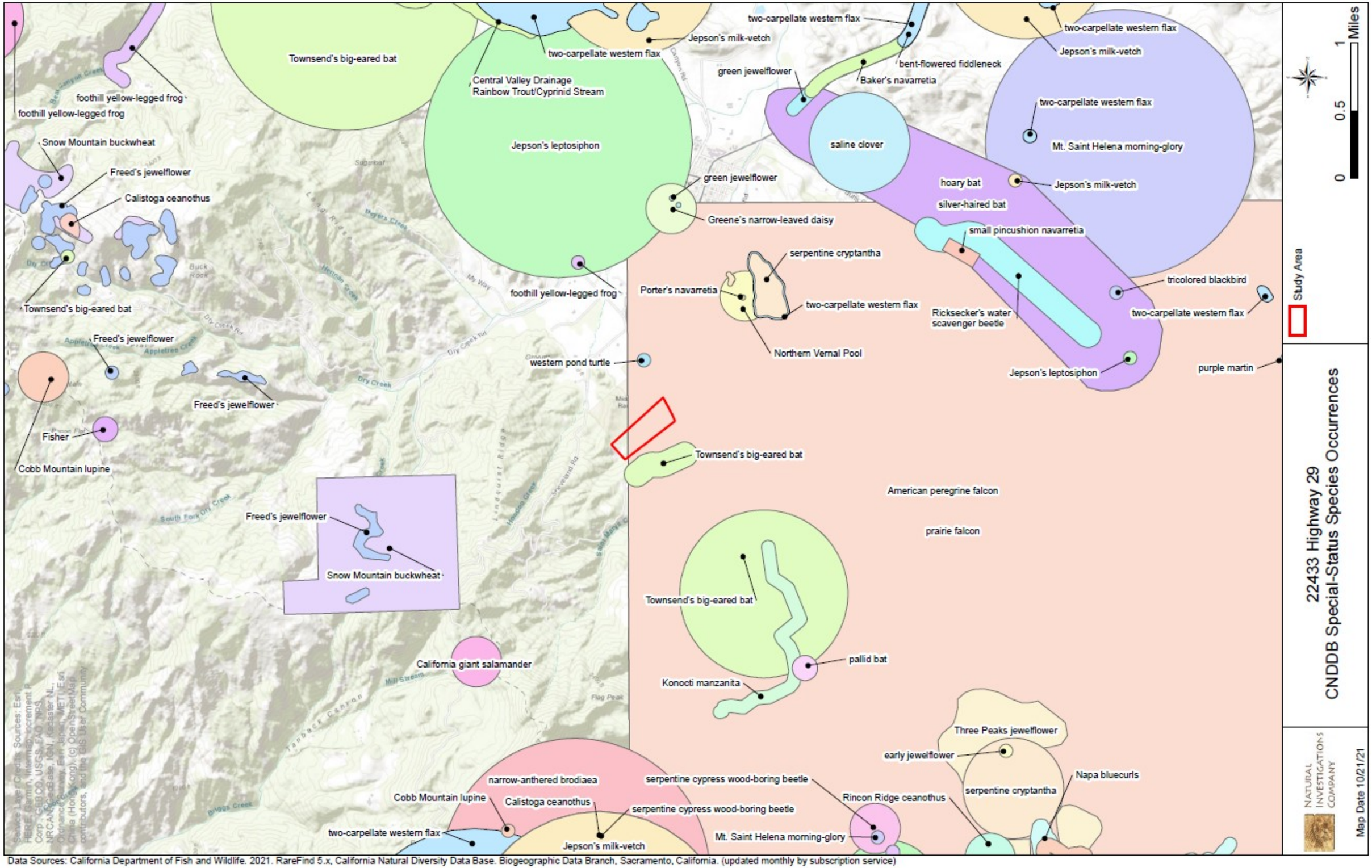
NATURAL INVESTIGATIONS COMPANY

Map Date 10/18/2021

Mount Saint Helena 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi
Detert Reservoir 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi

Martin Ranch - Proposed Site Plan


Parcel boundaries
Proposed Development Area
Vegetation Community Types
Forest: conifer
Annual grassland
Urbanized/developed
Vineyard
Riparian scrub: blackberry
Riparian scrub: willow
Woodland: gray pine
Forest: black oak /conifer
MIDDLETOWN RANCHERIA
29
Eiro
115
N
1000 ft
Habitat Types
Martin Ranch Property
Natural Investigations Company



Data Sources: California Department of Fish and Wildlife. 2021. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California. (updated monthly by subscription service)

Project Location

0 50 100 Meters

0 250 500 Feet

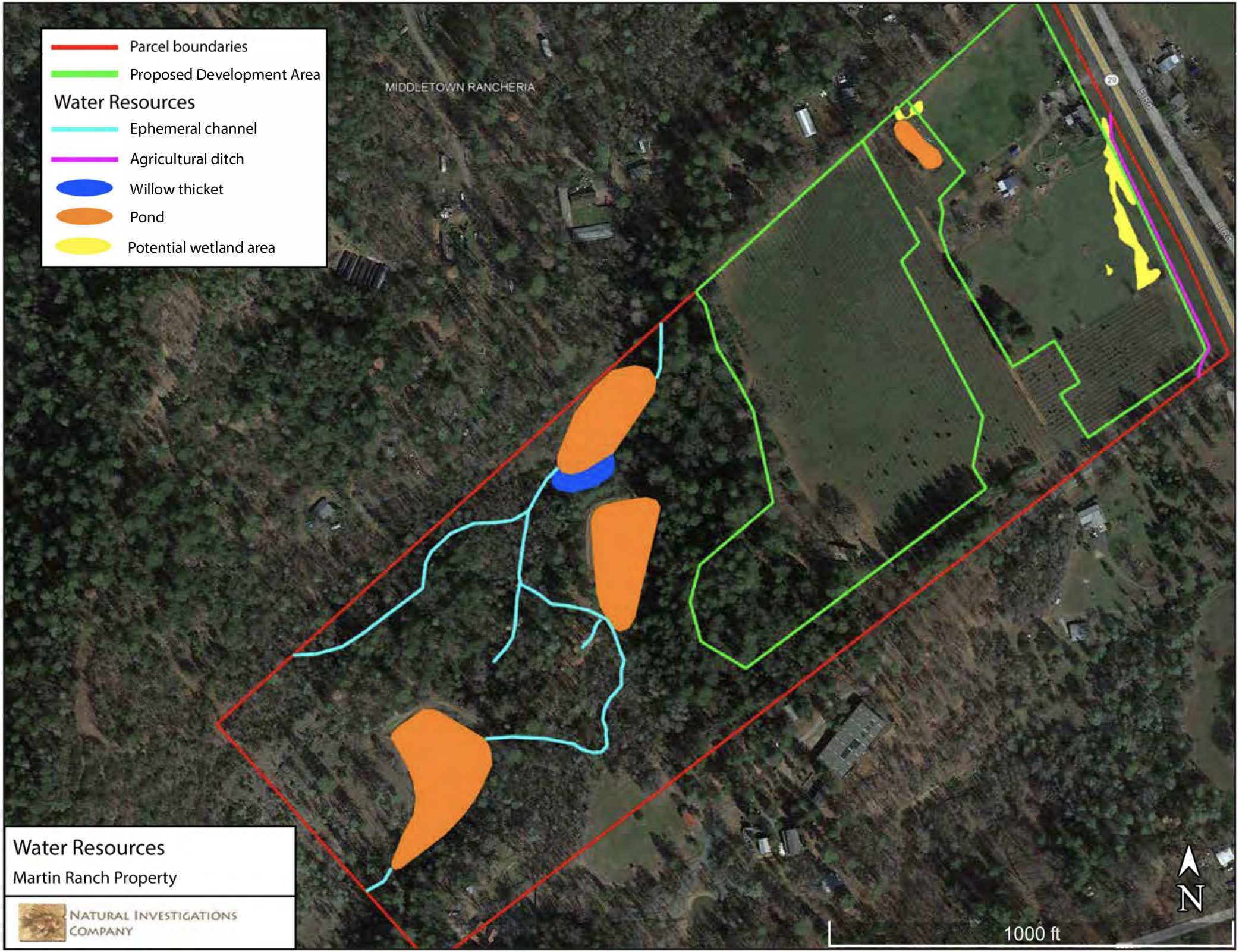
1:5,000

22433 Highway 29
USDA Soils Map

NATURAL INVESTIGATIONS COMPANY

Map Date 10/18/2021

Mount Saint Helena 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi
Detert Reservoir 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi


Parcel boundaries
Proposed Development Area
Water Resources
Ephemeral channel
Agricultural ditch
Willow thicket
Pond
Potential wetland area
MIDDLETOWN RANCHERIA
Water Resources
Martin Ranch Property
Natural Investigations Company
N
1000 ft

Project Location

Wetlands and Channels

0 50 100 Meters

0 250 500 Feet

1:5,000

22433 Highway 29
National Wetlands Inventory
Features Map

NATURAL INVESTIGATIONS COMPANY

Map Date 10/18/2021

Mount Saint Helena 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi
Detert Reservoir 1997 Quadrangle:Township 10N, Range 7W, Unsectioned Collayomi

APPENDICES

Available on Request

Appendix E
Traffic Impact Analysis

TRAFFIC IMPACT ANALYSIS

FOR

MARTIN RANCH AND SCOTT PROPERTY, MIDDLETOWN RANCHERIA

Lake County, CA

Prepared For:

ORIGIN ENVIRONMENTAL PLANNING
363 Point Rd
Hancock, ME 04640

Prepared By:

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June 8, 2021

5016-02

TRAFFIC IMPACT ANALYSIS FOR
MARTIN RANCH AND SCOTT PROPERTY, MIDDLETOWN RANCHERIA

Lake County, CA

TABLE OF CONTENTS

June 8, 2021

KDA

TRAFFIC IMPACT ANALYSIS FOR
MARTIN RANCH AND SCOTT PROPERTY, MIDDLETOWN RANCHERIA
Lake County, California

EXECUTIVE SUMMARY

- **Project Description.** This study evaluates the traffic impacts associated with developing two projects in Middletown Rancheria. The first site, known as Martin Ranch, will consist of two existing single-family residences, 45 new single-family residential units and five new vacation cabins. Martin Ranch is located on the west side of State Route 29 (SR 29) south of Rancheria Road. The second project, known as the Scott property, is located on the north side of the existing Twin Pine Casino and Hotel (casino/hotel). This project will consist of a new 21 space Recreational Vehicle (RV) park.

  Three access options for Martin Ranch were analyzed:

  - Access Option 1 - provides access via two existing roadways, Rancheria Road and Western Mine Road Exd.

  - Access Option 2 - utilizes Western Mine Road Exd and creates a new intersection at the existing private driveway along the project's SR 29 frontage.

  - Access Option 3 - utilizes Rancheria Road and the existing private driveway along the project's SR 29 frontage.

  A fourth scenario was considered for the Martin Ranch property, with a reduced density of 26 new single-family units constructed. This alternative would use Access Option 1.

  Access to the RV park is proposed via Rancheria Road and through the existing hotel/casino parking lot.

  Trip generation for the projects were calculated using the rates published in the *Trip Generation Manual* (Institute of Transportation Engineers, 9th Edition, 2012 and 10th Edition, 2017). Applicable rates are found in land use (LU) categories 210 (Single-family Residential) and 416 (Camping and RV Park).

  The ITE 9th Edition was used for LU 210 as the rates generated more traffic, thereby providing a more conservative approach for the analysis. The 10th Edition was used for LU 416 as additional data was available within the 10th Edition. The Martin Ranch project is expected to generate approximately 46 trips during the a.m. peak hour and 58 trips during the p.m. peak hour. Under the reduced density alternative, the project would generate 29 a.m. peak hour trips and 33 p.m. peak hour trips. The Scott property RV Park is expected to generate 6 a.m. peak hour trips and 8 p.m. peak hour trips.

- **Existing Setting**. SR 29 is a major arterial route serving Lake County providing access to Napa County to the south and connecting Middletown with the communities around Clear Lake to the north. In the area of the project SR 29 is a conventional two lane highway.

  Traffic counts were originally conducted in November 2017 and included counts from 6:00 a.m. to 7:00 p.m. The outbreak of the Covid-19 pandemic reduced traffic volumes throughout California roadways as places of employment, schools, social and recreational gatherings, sports events, restaurants, and many other types of activities were substantially reduced or prohibited. The use of new traffic volume count data collected during the pandemic could result in volumes that are unrepresentatively low. Based on Annual Average Daily Traffic (AADT) information provided on the Caltrans Traffic Census website (https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes) traffic volumes along SR 29 in the project vicinity are consistent with previous count data. A new 12-position gas station was constructed in 2020 at the casino/hotel, and the projected traffic, based on ITE *Trip Generation* Land Use 944, was manually added to the network.

  Peak hour traffic operations were evaluated at the existing Western Mine Road and Rancheria Road intersections at SR 29. Under existing conditions both intersections operate with the minor approaches at LOS D or better. The current Levels of Service satisfy the Caltrans Transportation Concept Report (TCR) LOS E maximum threshold.

  A traffic signal warrant analysis was conducted for the SR 29 / Rancheria Road intersection as this intersection experiences the highest traffic volumes. The warrant analysis indicated that warrants 1, 2 and 3 are currently met. In addition, there have been four crashes due to the failure of traffic along Rancheria Road to stop. Signalization of the SR 29 / Rancheria Road intersection would result in LOS B conditions. If the intersection is not signalized, it is recommended that stop signs along Rancheria Road and E Road be retrofitted with embedded LED's in the sign faces to enhance driver awareness of the traffic control devices.

- **Project Traffic Impacts on Existing Traffic Conditions – Access Option #1.** The project will add traffic to the area roadway system. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

- **Project Traffic Impacts on Existing Traffic Conditions – Access Option #2.** The project will construct a new intersection on SR 29 along the project frontage and add traffic to the area roadway system. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

- **Project Traffic Impacts on Existing Traffic Conditions – Access Option #3.** The project will construct a new intersection on SR 29 along the project frontage and add traffic to the area roadway system. The SR 29 / Rancheria Road intersection will meet several traffic signal

warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

- **Project Traffic Impacts on Existing Traffic Conditions – Reduced Density with Access Option #1.** The project will add traffic to the area roadway system. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

- **Cumulative Conditions.** Based on growth patterns developed by Caltrans District 1 20-year traffic growth on SR 29 is projected to be 145% from 2014 conditions. The Cumulative conditions were calculated from Year 2019, twenty years from Existing conditions, and based on traffic data prior to the Covid-19 pandemic. No funded roadway improvements are identified at the study intersections although the SR 29 South Corridor Engineered Feasibility Study prepared in 2014 by Omni Means for Caltrans District 1 and the Lake County/City Area Planning Council identified the following improvements in the project study area:

  - Installation of a traffic signal or roundabout at the SR 29 / Rancheria Road intersection.

  The following corridor enhancements were also identified:

  - Installation of colorized shoulders, optical speed bars and a gateway monument at the Rancheria Road intersection to help reduce speeds and provide a sense of entry into the Middletown Community.

  - Installation of a Class 1 bikeway and equestrian trail north from Rancheria Road to Middletown; the pathway could also be used by pedestrians.

  The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection in both a.m. and p.m. peak hours. This is below the acceptable LOS E threshold. The SR 29 / Western Mine Road intersection will continue to operate at acceptable levels of service. The SR 29 / Rancheria Road intersection will meet Parts A and B of the peak hour warrant. The intersection is identified in the SR 29 South Corridor Engineered Feasibility Study to operate at LOS F in the future with a suggested improvement of either a traffic signal or a roundabout. Under either alternative, the intersection will operate at LOS C.

- **Cumulative plus Project Conditions, Access Option #1.** The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C.

- **Cumulative plus Project Conditions, Access Option #2.** The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach

to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C.

- **Cumulative plus Project Conditions, Access Option #3.** The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C.

- **Cumulative plus Reduced Density Project Conditions, Access Option #1.** The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C.

INTRODUCTION

Study Purpose and Objectives

This study evaluates the traffic impacts associated with developing two projects in Middletown Rancheria. The first site, known as Martin Ranch, will consist of two existing single-family residences, 45 new single-family residential units and five new vacation cabins. Martin Ranch is located on the west side of State Route 29 (SR 29) south of Rancheria Road. The second project, known as Scott property, is located on the north side of the existing Twin Pine Casino and Hotel (casino/hotel). This project will consist of a new 21 space Recreational Vehicle (RV) park. Both sites are shown in Figure 1.

The Martin Ranch site plan is shown in Figure 2A. The project proposes two access points along SR 29. Three alternative site access options were analyzed and are depicted in Figure 2B. The first option uses the existing Western Mine Road and Rancheria Road intersections along SR 29 to access the property. The other two options consider upgrading the existing driveway located along SR 29 into a public road intersection. One option would use this new intersection and Western Mine Road to access the property via Western Mine Road Exd. A second option would use the new intersection and Rancheria Road to access the property. A reduced development alternative is also being considered. This alternative would construct 26 new homes totaling 28 homes on the property along with a vineyard and is shown in Figure 2C. Under this alternative, access would be provided via the Rancheria Road and Western Mine Road intersections.

A possible Scott property layout is shown in Figure 2D. Access to the RV park is proposed via Rancheria Road and through the existing hotel/casino parking lot.

The purpose of this study is to analyze the impacts of both sites in the local area and to determine the feasibility of developing access to the Martin Ranch site. This study addresses the following scenarios, and considers conditions occurring during the a.m. and p.m. peak hour periods:

1. Existing traffic conditions in Year 2021;
2. Existing Plus Martin / Scott property with Access Option # 1;
3. Existing Plus Martin / Scott property with Access Option # 2;
4. Existing Plus Martin / Scott property with Access Option # 3;
5. Existing Plus Reduced Martin Ranch Plus Scott property with Access Option # 1;
6. Future Cumulative (Year 2030) conditions without project;
7. Future Cumulative (Year 2030) Plus Martin / Scott property with Access Option # 1;
8. Future Cumulative (Year 2030) Plus Martin / Scott property with Access Option # 2;
9. Future Cumulative (Year 2030) Plus Martin / Scott property with Access Option # 3; and
10. Future Cumulative (Year 2030) Plus Reduced Martin Ranch Plus Scott property with Access Option # 1.

The objectives of this study are:

- To identify which existing and / or proposed access intersections will operate within accepted Level of Service thresholds.

- To evaluate the adequacy of access to both sites, with specific consideration of the need to provide intersection controls to the study intersections.

- To evaluate the adequacy of design features for the intersections including intersection control type as noted above, projected queue lengths and turn lane requirements including length of turn lanes, taper and transitions required for conventional intersections and conceptual roundabout information including the size of a roundabout based on design speed and queue requirements and truck or RV turning constraints.

- To evaluate long term impacts within the context of long term traffic conditions assuming development under the Lake County General Plan and regional traffic growth.

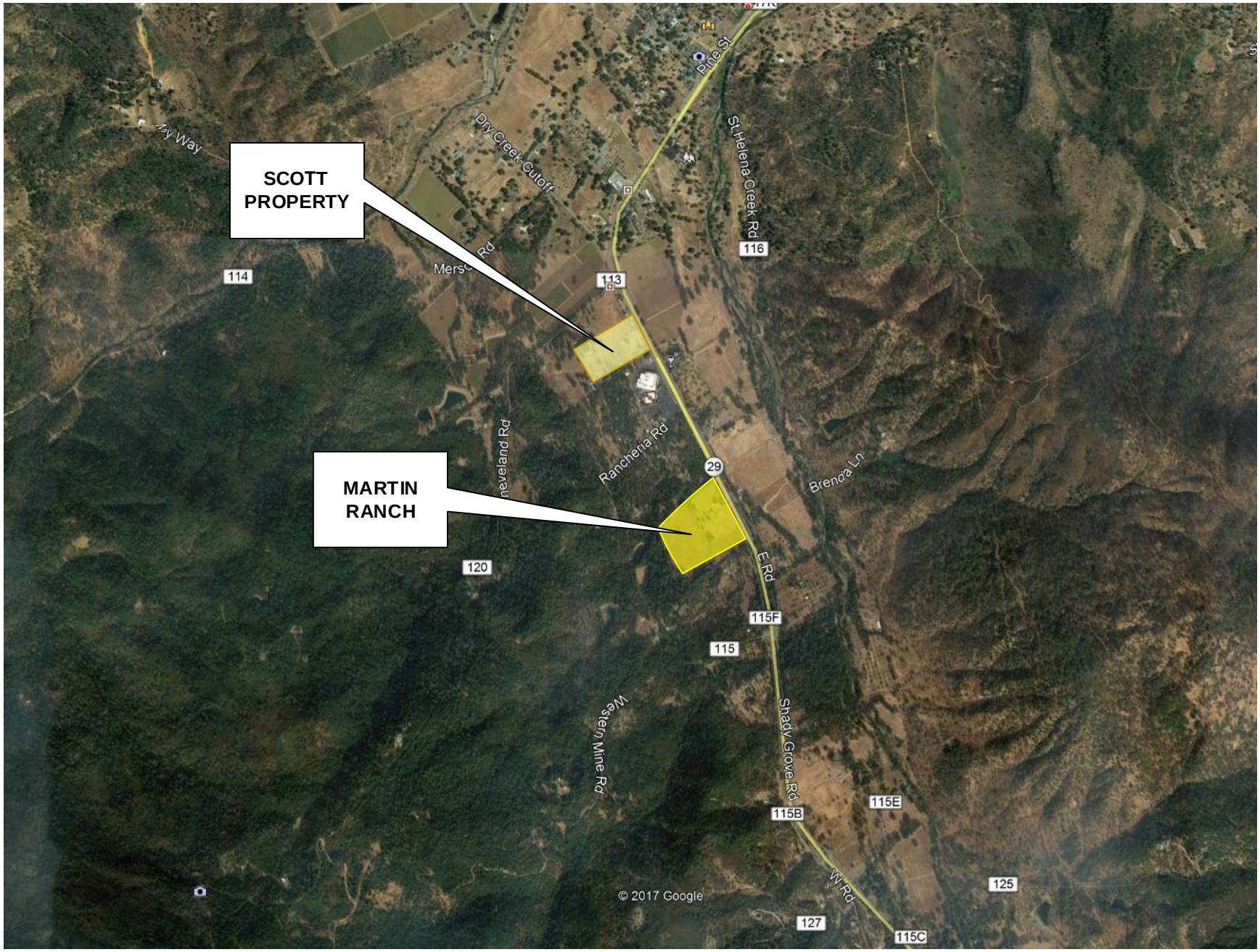
Project Descriptions

Martin Ranch: The Martin Ranch project is a residential development that is located south, and adjacent to the Middletown Rancheria in southern Lake County. The proposed project would construct 45 new homes and five cabins. The existing two homes on the site will remain, creating a total of 52 homes. Three access options are proposed for the project.

Access Option #1 provides access via two existing roadways, Rancheria Road and Western Mine Road Exd. Access Option #2 would utilize Western Mine Road Exd and create a new intersection at the existing private driveway along the project's SR 29 frontage. Access Option #3 would utilize Rancheria Road and the existing private driveway along the project's SR 29 frontage. Western Mine Road Exd intersects Western Mine Road ¼ mile to the south; Western Mine Road is a four-way intersection at SR 29 while Rancheria Road is a four- way intersection and provides access from SR 29 to the casino/hotel and the Middletown Rancheria.

A reduced density alternative was also considered for the project site. The reduced density alternative would keep the existing two homes on the site and construct 26 new homes, providing 28 total homes on the site. Access Option #1, using the Rancheria Road and Western Mine Road intersections was analyzed as part of this alternative.

Scott property: Scott property consists of about 6 acres of land north of the casino/hotel on the north side of the Middletown Rancheria. The proposed project will provide 21 Recreational Vehicle camp sites in a dedicated RV park setting. Access to the site would be from Rancheria Road and through the casino/hotel site.



VICINITY MAP

KD Anderson & Associates, Inc.
Transportation Engineers

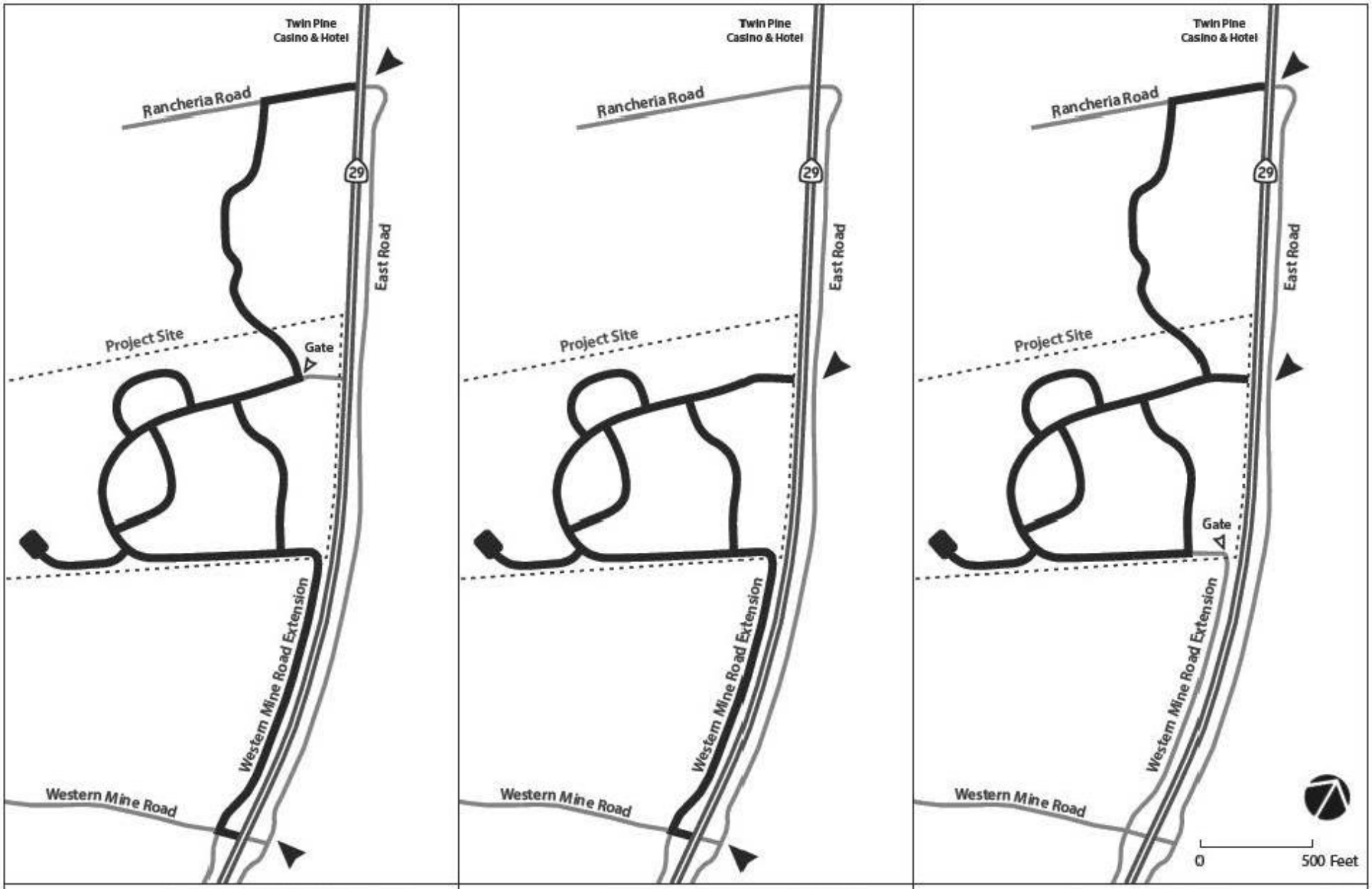
5016-02 RA 6/8/2021

figure 1

EDS — *Middletown Rancheria - Martin Ranch FTT Project*

Figure 1
Martin Ranch Site Plan

SITE PLAN



Option 1 Access at Rancheria Road and Western Mine Road Extension

Option 2 Access at Project Driveway and Western Mine Road Extension

Option 3 Access at Project Driveway and Rancheria Road

ACCESSS OPTIONS - MARTIN RANCH

KD Anderson & Associates, Inc.
Transportation Engineers

2961-03 RA 4/16/2019

figure 2b

REDUCED DENSITY ALTERNATIVE

KD Anderson & Associates, Inc.
Transportation Engineers

5016-02 RA 6/8/2021

figure 2c

FEE-TO-TRUST PROJECT - SCOTT SITE PLAN

MIDDLETOWN RANCHERIA

Tribal Properties | Building Footprints | Major Routes

Middletown Rancheria of Pomo Indians of California

0 250 500

US Feet

04/27/2021

SCOTT PROPERTY RV PARK

KD Anderson & Associates, Inc.
Transportation Engineers

5016-02 RA 6/8/2021

figure 2d

EXISTING SETTING

Study Area Streets

This study addresses traffic conditions on State Route 29 (SR 29) within Lake County in the vicinity of the proposed project within a study area identified in consultation with Caltrans District 1 staff. Regional access to the project site in Middletown is provided by SR 29. The text that follows describes the existing facility.

Functionally, study area streets are classified as Arterials, Collectors or Local Streets. The applicable designation is presented in the State Route 29 Transportation Concept Report (TCR), Lake County Regional Transportation Plan and Lake County General Plan Circulation Element.

State Route 29. SR 29 begins at the Napa/Lake County line and continues north through the community of Middletown to the community of Lower Lake and then proceeds north-west through the community of Kelseyville and the City of Lakeport to its terminus on SR 29 in Lower Lake. The southern portion of SR 29 is classified a Rural Minor Arterial road. In the area of the proposed Martin Ranch SR 29 is a two-lane conventional highway with two 12' travel lanes and paved shoulders.

The California Department of Transportation (Caltrans) regularly monitors the volume of traffic on state highways. The most recent Caltrans traffic counts (2019) indicates that SR 29 carries an *Annual Average Daily Traffic (AADT)* volume of 9,100 vehicles per day (vpd) south of Rancheria Road and 9,900 vpd north of Rancheria Road.

According to data from Caltrans' Census Program, trucks comprise 3% of the daily traffic volume on the portion of SR 29 near the project. The portion of SR 29 between the Napa County line and SR 175 in Middletown is a 65' California Legal Advisory Route. The posted speed limit on SR 29 is 55 mph in the area of the proposed Martin Ranch site.

Bicycle and Pedestrian Facilities

There are no sidewalks or bike lanes along the roadway in the vicinity of the project SR 29. The existing paved shoulder along SR 29 along the project frontage ranges between 4' and 6'.

Public Transit

Lake Transit provides bus routes, regional flex route service and local dial-a-ride services within Lake County. One Lake Transit bus route utilizes SR 29 in the area of the project. Bus Route 3 which originates in the City of Clearlake uses SR 29 from Lower Lake and travels into Calistoga and Deer Park in Napa County; this route includes a stop at the casino/hotel. Service is provided Monday through Saturday with four trips per day in each direction; however, under current Covid-19 conditions, two trips per day have been suspended.

Study Area Intersections

The limits of this analysis were identified in consultation with Caltrans District 1 during preparation of previous versions of the project, in 2017 and 2019. Based on the proposed access requirements this study focuses on the SR 29 / Rancheria Road intersection, the SR 29 / Western Mine Road intersection and a project access intersection at the existing driveway to Martin Ranch.

Traffic counts were originally conducted in November 2017 and included counts from 6:00 a.m. to 7:00 p.m. The outbreak of the Covid-19 pandemic reduced traffic volumes throughout California roadways as places of employment, schools, social and recreational gatherings, sports events, restaurants, and many other types of activities were substantially reduced or prohibited. The use of new traffic volume count data collected during the pandemic could result in volumes that are unrepresentatively low. Based on Annual Average Daily Traffic (AADT) information provided on the Caltrans Traffic Census website (https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes) traffic volumes along SR 29 in the project vicinity are consistent with previous count data. A new 12-position gas station was constructed in 2020 at the casino/hotel, and the projected traffic, based on ITE *Trip Generation* Land Use 944, was manually added to the network. The gas station generates 123 a.m. peak hour trips and 168 p.m. peak hour trips. After accounting for pass-by trips the gas station generates 49 new a.m. peak hour trips and 93 new p.m. peak hour trips.

SR 29 / Western Mine Road. Western Mine Road (County Road 115) is a local roadway that provides access to SR 29 for various properties along the west side of the highway. The road becomes Ida Clayton Road at the Sonoma County line and connects to SR 128. The roadway near SR 29 is paved and about 16' wide. Western Mine Road Exd is located about 100' from the SR 29 intersection. Western Mine Road Exd parallels SR 29 and extends north to the south side of the Martin Ranch property. Shady Grove Road is opposite Western Mine Road and provides access to SR 29 for properties east of the highway.

SR 29 / Rancheria Road. Rancheria Road is a local roadway that provides access to the Twin Pine Casino and Hotel and the Middletown Rancheria. The road is about 24' wide without paved shoulders between SR 29 and the casino/hotel driveways, after which it narrows to about 18'. East Road is opposite Rancheria Road and provides access to SR 29 for properties east of the highway. Both approaches to the intersection are single lane while the northbound SR 29 approach includes a 325' left turn lane and the southbound approach includes 300' left and right turn lanes.

Level of Service Analysis Methodology / Thresholds of Significance

Methodology. The *Highway Capacity Manual, 6th Edition* was used to provide a basis for describing the quality of existing traffic operating conditions and for evaluating the significance of project traffic impacts based on operating Level of Service. Level of Service (LOS) measures the *quality* of traffic flow and is represented by letter designations from "A" to "F", with a grade of "A" referring to the best conditions, and "F" representing the worst conditions. Table 1 presents typical Level of Service characteristics.

TABLE 1 LEVEL OF SERVICE DEFINITIONS			
Level of Service	**Signalized Intersection**	**Unsignalized Intersection**	**Roadway (Daily)**
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 60.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 60.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: Highway Capacity Manual, 6th Edition, Transportation Research Board (TRB).			

Level of Significance. Caltrans employs various minimum Level of Service standards for its facilities depending on the type of facility and the characteristics of the location. Caltrans general minimum standard of LOS C is noted in Caltrans' Traffic Study Guidelines, but exceptions to that standard are documented in various planning and policy documents. The *2013 SR 29 Transportation Concept Report (TCR)* identifies LOS E as the Concept Level of Service for SR 29 in the Middletown area.

The conditions described using Levels of Service vary for different types of intersections. Where traffic signals or all-way stops are installed, the Level of Service is based on the length of delays experienced by motorists stopped at the intersection, and overall average Level of Service is considered. At unsignalized intersections controlled by side street stop signs, individual Levels of Service can be determined for all motorists who must yield the right of way.

Existing Traffic Operating Conditions

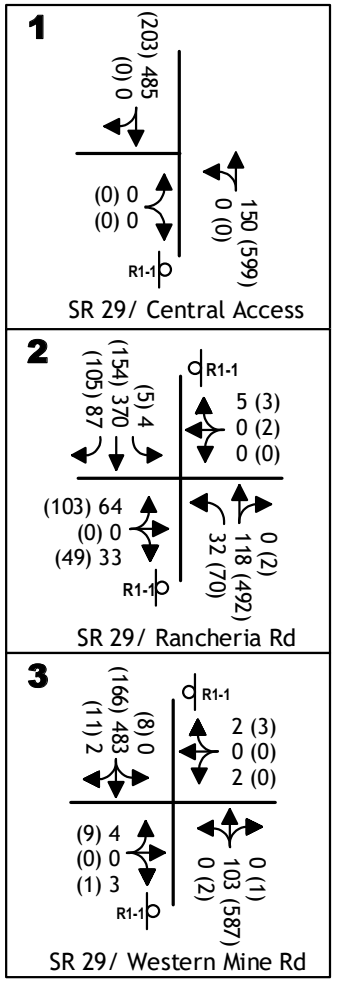
Traffic Volumes. As previously identified, turning movement counts were conducted at the study intersections between 6:00 a.m. and 7:00 p.m. and included the a.m. peak hour (7:00 to 9:00 a.m.) and p.m. peak hour (4:00 to 6:00 p.m.).

Figure 3 identifies the current intersection lane configuration used for the Level of Service analysis, as well as the results of the peak hour turning movement counts.

Intersection Levels of Service. Table 2 summarizes current Levels of Service at the study area intersections during the highest volume hour within each analysis period. The current Levels of Service are LOS D conditions in the p.m. peak hour at the SR 29 / Rancheria Road intersection and LOS C conditions in the p.m. peak hour at the SR 29 / Western Mine Road intersection. The SR 29 / Rancheria Road intersection exceeds the County's LOS C goal but is within the TCR goal of LOS E.

TABLE 2
EXISTING INTERSECTION LEVELS OF SERVICE

Location	Control	AM Peak Hour		PM Peak Hour	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
2. SR 29 / Rancheria Road	EB / WB				
NB Left	Stop	A	8.5	A	8.0
SB Left		A	7.5	A	8.5
EB		C	15.3	D	26.1
WB		A	8.9	C	15.3
3. SR 29 / Western Mine Road	EB / WB				
NB Left	Stop	---	---	A	7.6
SB Left		---	---	A	8.8
EB		B	13.2	C	17.6
WB		B	11.6	B	12.6



EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 3

Traffic Signal Warrants. A traffic warrant analysis was conducted for the SR 29 / Rancheria Road intersection considering all applicable warrants. Of the nine traffic signal warrants six were studied, Warrants 1-3, and 6-8. Warrants 4 and 5 were not studied as fewer than 10 pedestrians were noted at the intersection. Warrant 6 was reviewed but not considered as the nearest signal is in Middletown, about 1½ miles away. Warrant 9 was not considered as a railroad grade crossing does not exist at the intersection. Below is a summary of the traffic signal warrants with worksheets presented in the Appendix. The warrant analysis considered the highest hours of the highest minor road approach. As noted in the CA MUTCD the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Warrant No. 1 – EIGHT HOUR VEHICULAR VOLUME (MET – YES)
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A (MET - YES). Two-way traffic conditions are met along SR 29 and Rancheria Road for the highest eight hours. The Minimum Vehicle Volumes will be met. The condition will also be satisfied for the 80% condition.

Condition B (MET – NO [Met for 80% condition]). The two-way traffic conditions along SR 29 are reached for seven of the highest eight hours; the condition requires volumes be met for at least eight hours a day. The approach volumes along Rancheria Road are reached for these eight hours under 100% conditions. The volumes for both facilities are met under the 80% condition.

Combination of Conditions A & B (MET - NO). The volume requirements at this intersection will be met under both Conditions, although an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has not been attempted.

Warrant No. 2 – FOUR HOUR VEHICULAR VOLUME (MET – YES)

All the four plotted points of the four highest hours are above the MUTCD four-hour vehicular volume curve.

Warrant No. 3 – PEAK HOUR (MET – YES)
(Part A or Part B must be satisfied)

Part A (MET - NO). The total delay experienced by traffic on the stop-controlled approach, Sub-part 1, does not equal four vehicle hours of delay; however, Sub-parts 2 and 3 are met.

Part B (MET - YES). The plotted point for vehicles per hour on both major approaches and highest minor approach during the peak hour volume are above the MUTCD peak hour curve; the peak hour volume warrant is satisfied.

Warrant No. 4 – PEDESTRIAN VOLUME (MET – NO)
(Parts 1 and 2 Must Be Satisfied)

No pedestrian volumes were noted at this intersection.

Warrant No. 5 – SCHOOL CROSSING (MET – N/A)
(Parts 1 and 2 Must Be Satisfied)

This warrant is not applicable.

Warrant No. 6 – COORDINATED SIGNAL SYSTEM (MET – NO)
(All Parts Must Be Satisfied)

This warrant is related to coordinated signal systems. The closest signalized intersection is about 1½ miles away in Middletown; however, the adjacent signal control will not collectively provide a progressive operation due to the distance to the study intersection. This intersection does not meet the Coordinated Signal System warrant.

Warrant No. 7 – CRASH EXPERIENCE WARRANT (MET – NO)
(All Parts Must Be Satisfied)

A review of crash data between January 1, 2018 and December 31, 2020 was reviewed to determine whether the intersection met the crash experience warrant. Crash data was obtained from the CHP I-SWITRS website (https://iswitrs.chp.ca.gov/). In 2018 three crashes occurred at the intersection. The primary collision factor (PCF) for two crashes was failure of the minor street traffic to stop and then yield the right-of-way; the third crash was DUI related. In 2019, one crash occurred at the intersection. The PCF for this crash was failure of the motorist to yield the right-of-way prior to entering the intersection. In 2020, two crashes occurred at the intersection. Both crashes were a result of failure of the motorist to stop and yield the right-of-way.

The crash warrant notes that the number of crashes in a 12-month period susceptible to correction by a traffic signal must be 5 or more. In none of the previous three-year periods, nor in a combination of multiple years equaling a 12-month period, did 5 or more crashes occur at the intersection. While the warrant is strictly not met it is apparent that some motorists may not be recognizing the stop control along the minor roadways.

Warrant No. 8 – ROADWAY NETWORK (MET – NO)
(All Parts Must Be Satisfied)

SR 29 serves as a Principal Roadway for traffic between Napa and the Clear Lake area. In order to meet this warrant both routes must meet any of the major route characteristics. Rancheria Road does not meet any; therefore, this warrant is not met.

Warrant No. 9 – INTERSECTION NEAR A GRADE CROSSING (MET – N/A)

This warrant is not applicable.

Of the six applicable traffic signal warrants studied, three of the warrants are met. While the Crash Experience Warrant is not met in a 12-month period, there have been five crashes within less than a three-year period. It is recommended that stop signs along the minor roadways be retrofitted with embedded LED's in the sign faces to enhance driver awareness of the traffic control signs should the intersection not be signalized.

PROJECT CHARACTERISTICS

The relative impacts of developing the Martin Ranch project and Scott Property and the adequacy of site access is dependent on the physical characteristics of the adjoining street system, as well as the amount of traffic generated by the proposed project. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

I. Trip Generation, the number of new trips generated by the project, and
II. Trip Distribution and Assignment, the specific routes that the new traffic takes.

Trip Generation

The development of this project will generate traffic to and from the project site. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

- Trip Generation, the number of new trips generated by the project, and
- Trip Distribution and Assignment, the specific routes that the new traffic takes.

Trip generation is determined by identifying the type and size of land use being developed. Recognized sources of trip generation data may then be used to calculate the total number of trip ends that the project creates.

The trip generation for the projects were calculated using trip generation rates published in the *Trip Generation Manual* (Institute of Transportation Engineers, 9th Edition, 2012 and 10th Edition, 2017). Applicable rates are found in land use (LU) categories 210 (Single-family Residential) and 416 (Camping and RV Park) and are shown in Table 3. The ITE 9th Edition was used for LU 210 as the rates generate more traffic, thereby providing a more conservative approach for the analysis. The 10th Edition was used for LU 416.

The fitted curve equation was used instead of the average rate for the Martin Ranch site while the average rates were used for the Scott Property. Under full buildout of Martin Ranch the total daily trips yield a total of 575 new daily trips; there are no daily rates available for RV parks. 52 total trips are projected in the a.m. peak hour while 67 trips are projected to be generated during the p.m. peak hour for both projects. Under the reduced density alternative, the projected daily trip generation is expected to be 326 daily trips for Martin Ranch while 36 a.m. trips and 42 p.m. trips will be generated for both properties during the peak hours.

TABLE 3
TRIP GENERATION RATES

Land Use / Source	Unit	Size	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Full Buildout Project – Martin Ranch									
Single-family Residential (LU 210) – Martin Ranch	Units	52	11.07†	25%	75%	0.89‡	63%	37%	1.12◊
Scott Property									
Camping & RV Park (LU 416)	Occupied Campsites	21	N/A	36%	64%	2.20	65%	35%	2.78
Single-family Residential Full Buildout – Martin Ranch			**575**	12	35	**46**	37	22	**58**
Camping & RV Park			*	2	4	**6**	5	3	**8**
Total Trips			**575**	14	39	**52**	42	24	**67**
Reduced Density Alternative									
Single-family Residential (LU 210) – Martin Ranch	Unit	28	11.63†	25%	75%	1.05‡	63%	37%	1.19◊
Single-family Res. Reduced Density – Martin Ranch			**326**	7	22	**29**	21	12	**33**
Camping & RV Park			*	2	4	**6**	5	3	**8**
Total Trips			**326**	10	26	**36**	26	15	**42**

Source: ITE *Trip Generation – 9th Edition*
† Ln (T) =0.92 Ln(X) + 2.72
‡ T = (0.70*X) + 9.74
◊ Ln (T) =0.90 Ln(X) + 0.51
N/A – not available
* daily rates not available
Numbers may not equal due to rounding

Trip Distribution

The distribution of project traffic was determined based existing traffic conditions and knowledge of the demographic distribution of residences in the south Lake County area as well as travel destinations in the Lake County area. It is projected that the majority of the new housing trips attracted to the Martin Ranch site will arrive from the north with a lesser share arriving from the south. The RV site is projected to have a similar equal distribution along SR 29 under existing conditions and a more even directional distribution in the future. The projected trip distribution is shown in Table 4.

TABLE 4 PROJECT TRIP DISTRIBUTION			
Direction	**Route**	**LU 210 Percentage of Trips**	**LU 416 Percentage of Trips**
North	SR 29	67% / 67%	50% / 40%
South	SR 29	33% / 33%	50% / 60%
	Total	100% / 100%	100% / 100%

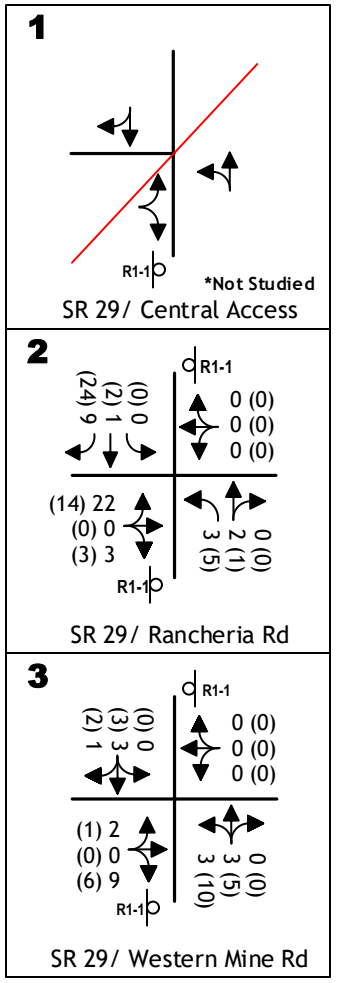
AM / PM

Trip Assignment

Martin Ranch: Project trips were assigned to the adjacent streets based on the three access options and the reduced density alternative. Full development of the project includes access options utilizing the existing Western Mine Road and Rancheria Road intersections. Access Option #1 uses both existing intersections while Access Options #2 and #3 use one of these intersections combined with a new intersection along the SR 29 project frontage. The reduced density alternative uses Access Option #1.

Scott Property: Project trips were assigned to SR 29 through the Rancheria Road intersection. Traffic will proceed through the casino/hotel parking lot to the north side of the site to enter the RV park.

Figure 4 presents the peak hour traffic volume forecasts with project access via Western Mine Road and Rancheria Road. Figure 5 presents the project traffic volume forecasts with access at Western Mine Road and the Martin Ranch driveway; Rancheria Road will provide access for the RV park. Figure 6 presents the traffic volume forecast with access at Rancheria Road and the Martin Ranch driveway. Figure 7, the reduced density alternative, presents the peak hour volume forecasts with project access via Western Mine Road and Rancheria Road.



PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 1 – RANCHERIA RD AND WESTERN MINE RD

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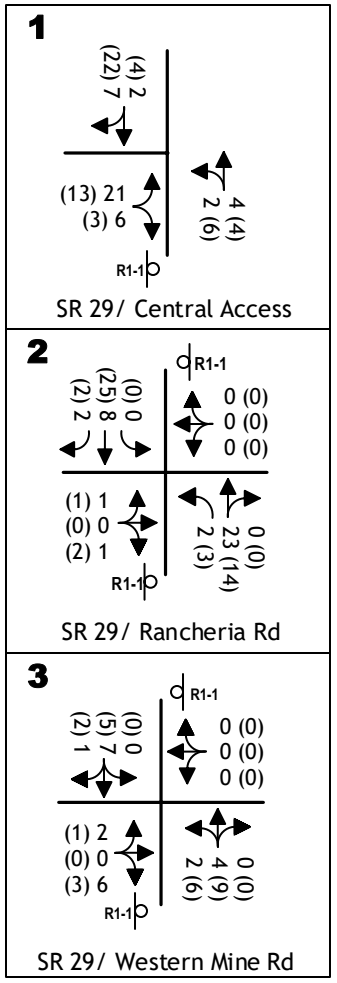
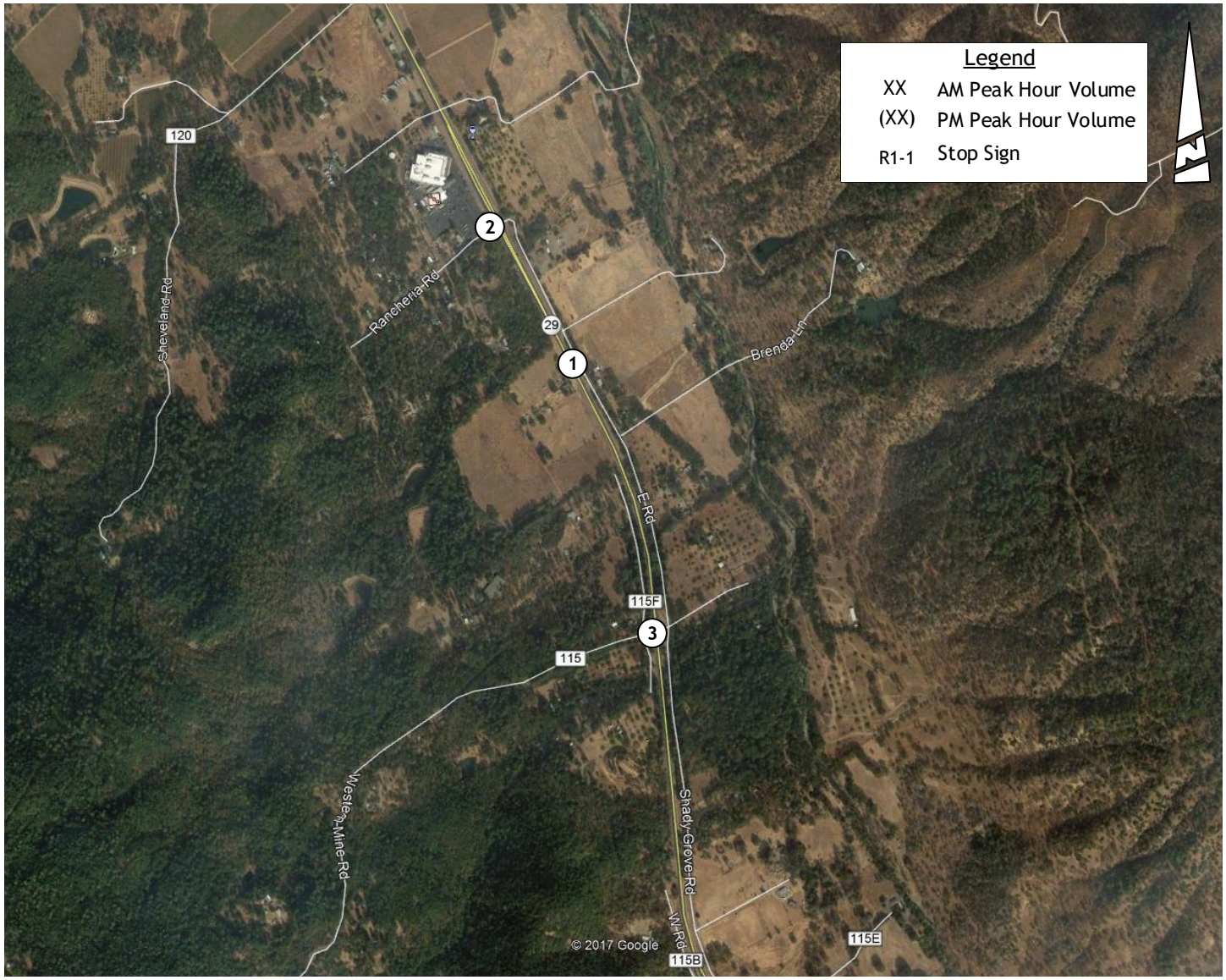
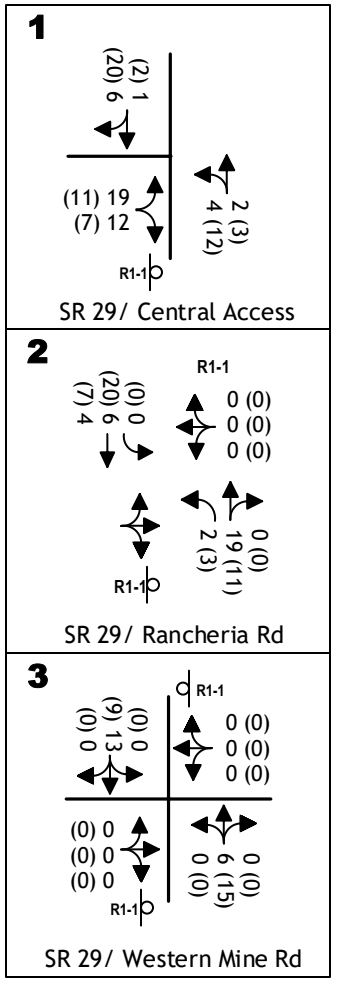
figure 4

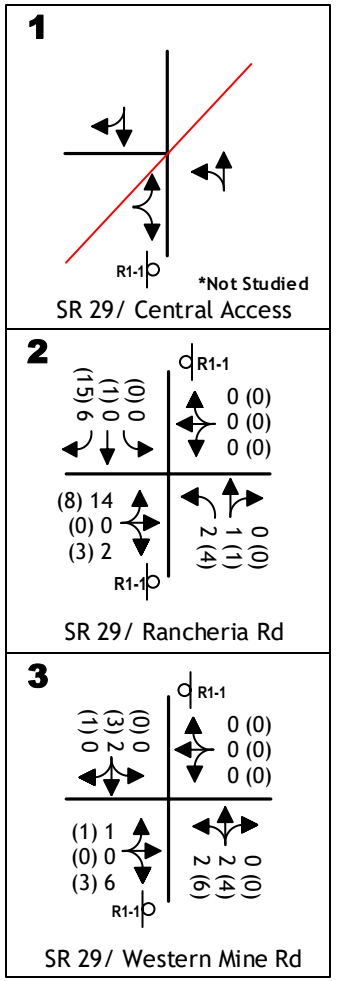


PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 2 – CENTRAL ACCESS AND WESTERN MINE RD





PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 3 – RANCHERIA RD AND CENTRAL ACCESS



PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS
REDUCED DENSITY ALTERNATIVE WITH ACCESS OPTION 1

PROJECT IMPACTS

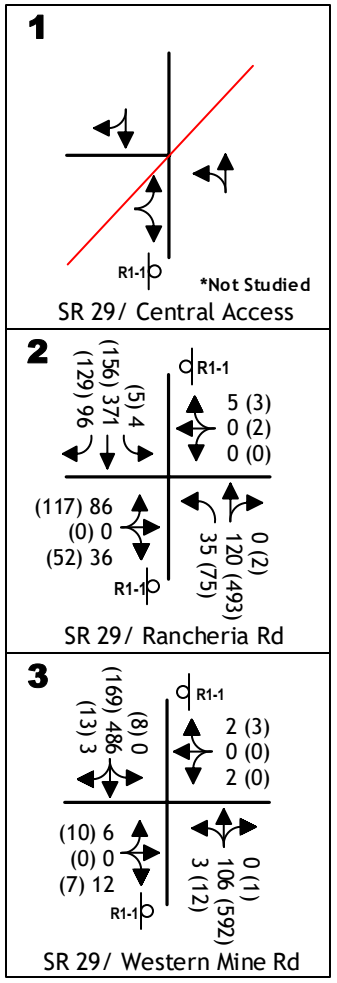
Existing Plus Project Traffic Conditions

Martin Ranch Access Option #1 – Western Mine Road and Rancheria Road Access: The impacts of operating the proposed projects with access to Martin Ranch via the Western Mine Road and Rancheria Road intersections have been identified by superimposing project trips onto the existing background condition. Figure 8 presents the "Existing Plus Project" traffic volumes at each intersection under Access Option #1. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 5 compares Existing and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists entering SR 29 from either intersection will experience delays that are characteristic of up to LOS C conditions in the a.m. peak hour while the eastbound Rancheria Road approach to SR 29 will experience LOS D conditions in the p.m. peak hour; the remaining intersections and approaches will experience LOS C or better conditions.

TABLE 5
EXISTING PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
ACCESS OPTION #1 – WESTERN MINE ROAD AND RANCHERIA ROAD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Existing		Ex Plus Project (Opt #1 – Western Mine Rd & Rancheria Rd Access)		Existing		Ex Plus Project (Opt #1 – Western Mine Rd & Rancheria Rd Access)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
2. SR 29 / Rancheria Road									
NB left		A	8.5	A	8.5	A	8.0	A	8.1
SB left		A	7.5	A	7.5	A	8.5	A	8.5
EB	EB/WB	C	15.3	C	16.7	D	26.1	D	30.7
WB	Stop	A	8.9	A	8.9	C	15.3	C	15.7
3. SR 29 / Western Mine Rd									
NB left		---	---	A	8.5	A	7.6	A	7.6
SB left		---	---	---	---	A	8.8	A	8.9
EB	EB/WB	B	13.2	B	12.9	C	17.6	C	15.4
WB	Stop	B	11.6	B	11.9	B	12.6	B	12.7



EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 1 RANCHERIA RD AND WESTERN MINE RD

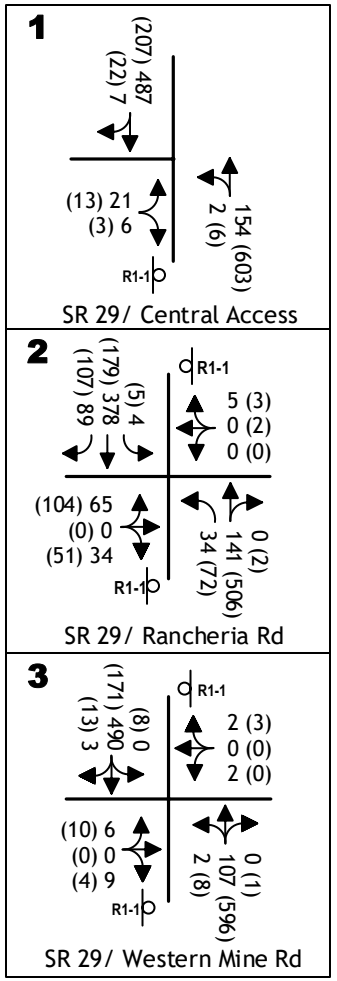
Martin Ranch Access Option #2 – Western Mine Road Access: The impacts of operating the proposed projects have been identified by superimposing project trips onto the existing background condition. Figure 9 presents the "Existing Plus Project" traffic volumes with primary access to Martin Ranch at the driveway along the SR 29 project frontage and a second access at the SR 29 / Western Mine Road intersection; RV Park access will be via Rancheria Road.

Resulting intersection Levels of Service were calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 6 compares Existing and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists entering SR 29 from any of the intersections will experience delays that are characteristic of up to LOS C conditions in the a.m. peak hour while the eastbound Rancheria Road approach to SR 29 will experience LOS D conditions in the p.m. peak hour; the remaining intersections and approaches will experience LOS C or better conditions.

TABLE 6
EXISTING PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
ACCESS OPTION #2 – WESTERN MINE ROAD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Existing		Ex Plus Project (Opt #2 – Western Mine Rd Access)		Existing		Ex Plus Project (Opt #2 – Western Mine Rd Access)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
1. SR 29 / Central Access	EB Stop								
NB left		---	---	A	8.5	---	---	A	7.7
EB		---	---	B	14.1	---	---	C	16.0
2. SR 29 / Rancheria Road	EB/WB Stop								
NB left		A	8.5	A	8.5	A	8.0	A	8.1
SB left		A	7.5	A	7.5	A	8.5	A	8.6
EB		C	15.3	C	16.0	D	26.1	D	29.5
WB		A	8.9	A	9.1	C	15.3	C	15.9
3. SR 29 / Western Mine Rd	EB/WB Stop								
NB left		---	---	A	8.5	A	7.6	A	7.6
SB left		---	---	---	---	A	8.8	A	8.9
EB		B	13.2	B	13.1	C	17.6	C	16.6
WB		B	11.6	B	11.9	B	12.6	B	12.7



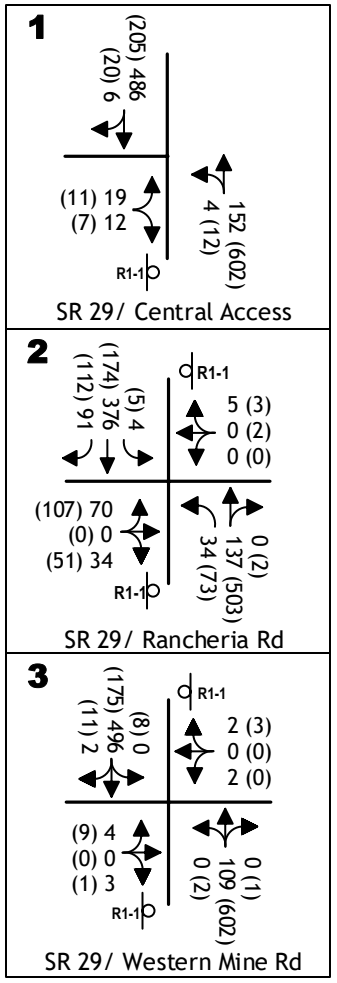
EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 2 – CENTRAL ACCESS AND WESTERN MINE RD

Martin Ranch Access Option #3 – Rancheria Road: The impacts of operating the proposed projects have been identified by superimposing project trips onto the existing background condition. Figure 10 presents the "Existing Plus Project" traffic volumes under Access Option #3 and provides access to Martin Ranch via Rancheria Road and a second access at the driveway along the SR 29 project frontage. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 7 compares Existing and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists entering SR 29 from any of the intersections will experience delays that are characteristic of up to LOS C conditions in the a.m. peak hour while the eastbound Rancheria Road approach to SR 29 will experience LOS D conditions in the p.m. peak hour; the remaining intersections and approaches will experience LOS C or better conditions.

TABLE 7
EXISTING PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
ACCESS OPTION #3 – RANCHERIA ROAD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Existing		Ex Plus Project (Opt #3 – Rancheria Rd Access)		Existing		Ex Plus Project (Opt #3 – Rancheria Rd Access)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
1. SR 29 / Central Access	EB Stop								
NB left		---	---	A	8.5	---	---	A	7.8
EB		---	---	B	13.7	---	---	B	14.6
2 SR 29 / Rancheria Road	EB/WB Stop								
NB left		A	8.5	A	8.5	A	8.0	A	8.1
SB left		A	7.5	A	7.5	A	8.5	A	8.5
EB		C	15.3	C	16.3	D	26.1	D	30.0
WB		A	8.9	A	9.0	C	15.3	C	15.8
3. SR 29 / Western Mine Rd	EB/WB Stop								
NB left		---	---	---	---	A	7.6	A	7.6
SB left		---	---	---	---	A	8.8	A	8.9
EB		B	13.2	B	13.5	C	17.6	C	18.1
WB		B	11.6	B	11.8	B	12.6	B	12.8



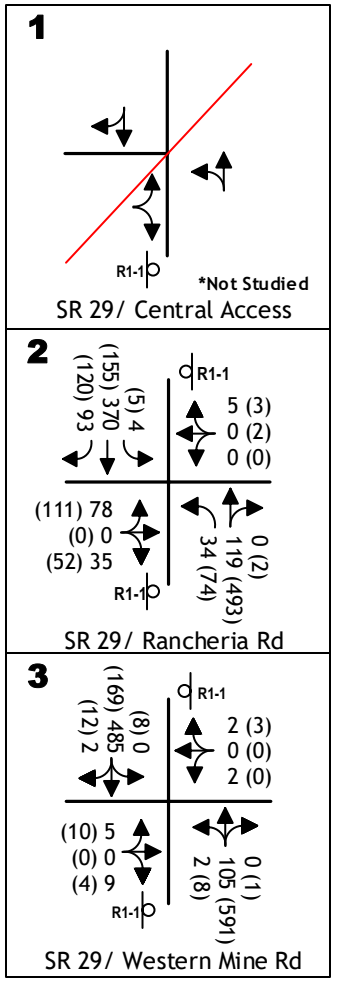
EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 3 – CENTRAL ACCESS AND RANCHERIA RD

Reduced Density Alternative - Western Mine Road and Rancheria Road Access: The impacts of operating the proposed project under the reduced density alternative with access to Martin Ranch via the Western Mine Road and Rancheria Road intersections have been identified by superimposing project trips onto the existing background condition. Figure 11 presents the "Existing Plus Project" traffic volumes at each intersection. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 8 compares Existing and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists entering SR 29 from either intersection will experience delays that are characteristic of up to LOS C conditions in the a.m. peak hour while the eastbound Rancheria Road approach to SR 29 will experience LOS D conditions in the p.m. peak hour; the remaining intersections and approaches will experience LOS C or better conditions.

TABLE 8
EXISTING PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
REDUCED DENSITY ALTERNATIVE –WESTERN MINE RD AND RANCHERIA RD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Existing		Ex Plus Project (Reduced Density)		Existing		Ex Plus Project (Reduced Density)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
2. SR 29 / Rancheria Road									
NB left	EB/WB Stop	A	8.5	A	8.5	A	8.0	A	8.0
SB left		A	7.5	A	7.5	A	8.5	A	8.5
EB		C	15.3	C	16.2	D	26.1	D	28.6
WB		A	8.9	A	8.9	C	15.3	C	15.5
3. SR 29 / Western Mine Rd									
NB left	EB/WB Stop	---	---	A	8.5	A	7.6	A	7.6
SB left		---	---	---	---	A	8.8	A	8.9
EB		B	13.2	B	12.8	C	17.6	C	16.4
WB		B	11.6	B	11.8	B	12.6	B	12.7



EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
REDUCED DENSITY ALTERNATIVE WITH ACCESS OPTION 1

Traffic Signal Warrants - SR 29 / Rancheria Road. Traffic signal warrants were considered with addition of the project traffic under Access Option #1, Rancheria Road and Western Mine Road access. This access option will assign the highest project volumes onto Rancheria Road.

Warrant No. 1 – EIGHT HOUR VEHICULAR VOLUME (MET – YES)
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A (MET – YES). Two-way traffic conditions are met along SR 29 and Rancheria Road for the highest eight hours. The Minimum Vehicle Volumes will be met. The condition will also be satisfied for the 80% condition.

Condition B (MET – NO [Met for 80% condition]). The two-way traffic conditions along SR 29 are reached for seven of the highest eight hours; the condition requires volumes be met for at least eight hours a day. The approach volumes along Rancheria Road are reached for these eight hours under 100% conditions. The volumes for both facilities are met under the 80% condition.

Combination of Conditions A & B (MET - NO). The volume requirements at this intersection will be met under both Conditions, although an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has not been attempted.

Warrant No. 2 – FOUR HOUR VEHICULAR VOLUME (MET – YES)

All the plotted points of the four highest hours fall above the MUTCD four-hour vehicular volume curve.

Warrant No. 3 – PEAK HOUR (MET – YES)
(Part A or Part B must be satisfied)

Part A (MET - NO). The peak hour delay warrant will be satisfied under sub-parts 2 and 3, but not sub-part 1.

Part B (MET - YES). The plotted point for vehicles per hour on both major approaches and highest minor approach during the peak hour volume are above the MUTCD peak hour curve; the peak hour volume warrant is satisfied.

Warrant No. 4 – PEDESTRIAN VOLUME (MET – NO)
(Parts 1 and 2 Must Be Satisfied)

No pedestrian volumes were noted at this intersection. The addition of this project will not add pedestrian traffic sufficient to meet the pedestrian volume warrant.

Warrant No. 5 – SCHOOL CROSSING (MET – N/A)
(Parts 1 and 2 Must Be Satisfied)

This warrant is not applicable.

Warrant No. 6 – COORDINATED SIGNAL SYSTEM (MET – NO)
(All Parts Must Be Satisfied)

This warrant is related to coordinated signal systems. The closest signalized intersection is about 1½ miles away in Middletown; however, the adjacent signal control will not collectively provide a progressive operation due to the distance to the study intersection. This intersection does not meet the Coordinated Signal System warrant.

Warrant No. 7 – CRASH EXPERIENCE WARRANT (MET – NO)
(All Parts Must Be Satisfied)

Based on the 2018 through 2020 crash history and the added project traffic, it is not expected that five crashes would occur within a twelve-month period as a result of this project.

Warrant No. 8 – ROADWAY NETWORK (MET – NO)
(All Parts Must Be Satisfied)

SR 29 serves as a Principal Roadway for traffic between Napa and the Clear Lake area. In order to meet this warrant both routes must meet any of the major route characteristics. Rancheria Road will not be a Principal Roadway; therefore, this warrant is not met.

Warrant No. 9 – INTERSECTION NEAR A GRADE CROSSING (MET – N/A)

This warrant was not applicable.

Left Turn Channelization. Left turn channelization along SR 29 exists at the Rancheria Road intersection. Left turn channelization at the Western Mine Road or the proposed SR 29 frontage access was considered. The American Association of State Transportation and Highway Officials (AASHTO) has identified guidelines for the installation of left-turn lanes in their publication *A Policy on Geometric Design of Highways and Streets (Green Book)*. Their most recent guidelines (2018) provide suggested left-turn treatment guidelines based on results from benefit-cost evaluations. The two intersections were reviewed against the AASHTO graphs for rural road conditions to determine whether "a left-turn lane may be desirable, not necessarily where a left turn lane is definitely needed."

The tables for rural roadways were reviewed for three and four-leg intersections. The SR 29 / Western Mine Road intersection currently meets the guidelines where a left turn lane may be desirable. Under project conditions the Western Mine Road intersection and the Martin Ranch driveway intersection will meet these guidelines.

Internal Access. An *AutoTurn* assessment was prepared to determine the feasibility of motor home traffic accessing the Scott Property from Rancheria Road. *AutoTurn* software implements procedures described in the American Association of State and Highway Transportation Officials (AASHTO) document *A Policy on Geometric Design of Highways and Streets*, and the Caltrans *Highway Design Manual*. The program is a CADD based program that simulates turning

maneuvers for highway vehicles. The program is used to define vehicle tire tracking and sweep paths in order to design roadway features to meet minimum design vehicle constraints.

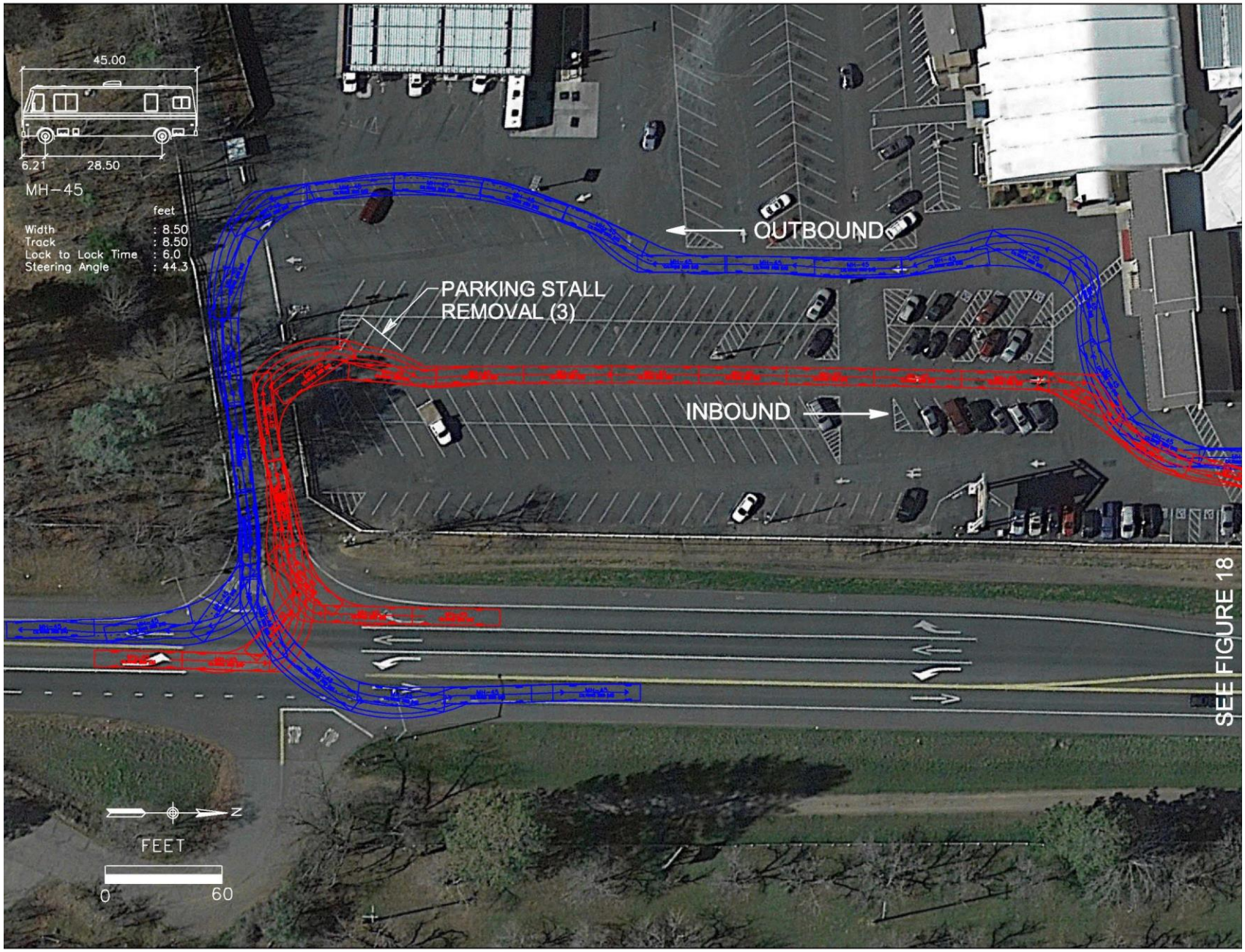
Overflow parking located on the north side of the casino / hotel, adjacent to the Scott Property, is currently accessed along the east side of the casino / hotel property. Motorhome traffic is intended to use the same access. Figures 17 and 18 illustrate the paths taken to reach the overflow parking area, from which the Scott Property will be accessible.

Figure 12 shows motorhomes completing turns, both inbound and outbound, at the SR 29 / Rancheria Road intersection. All turns can be made within the existing pavement. Inbound traffic will use the first driveway to enter the casino / hotel parking lot and travel north to the hotel entrance. Motorists will then turn right and head along the east side of the hotel to the "backside" of the site. A choke point is present between SR 29 and the hotel shown in Figure 13. Once past the choke point inbound motorhomes will make consecutive left and right turns to reach the overflow parking lot. Outbound motorhomes will exit the overflow parking area and veer to the left, so they have a direct line of sight past the choke point. Once past, the motorhomes will proceed along the hotel perimeter, and turn south to the northerly driveway.

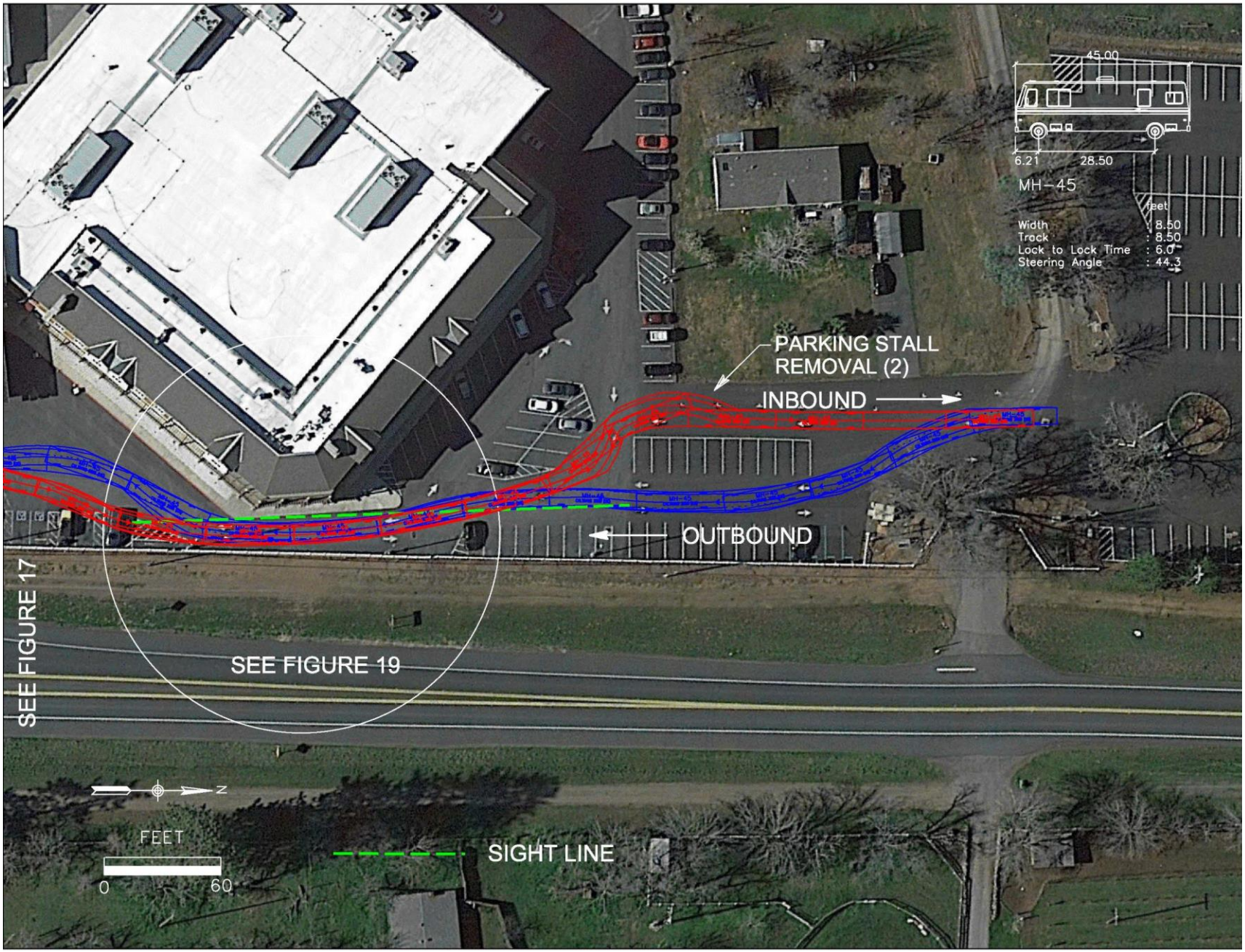
To allow motorhome traffic, changes in the traffic flow will be needed. The following recommendations are made and are illustrated in Figure 14:

- remove 3 parking stalls upon entering the casino / hotel parking lot;
- install northbound and southbound stop markings prior to entering the choke point;
- remove 3 parking stalls on the south side of the choke point to allow clear lines of sight between stopped motorhomes north and south of the choke point;
- modify the directionality of the parking aisles on the north side of the casino / hotel to allow southbound motorhomes a direct line of sight to the northbound stop location;
- remove 2 parking stalls on the north side of the casino / hotel.

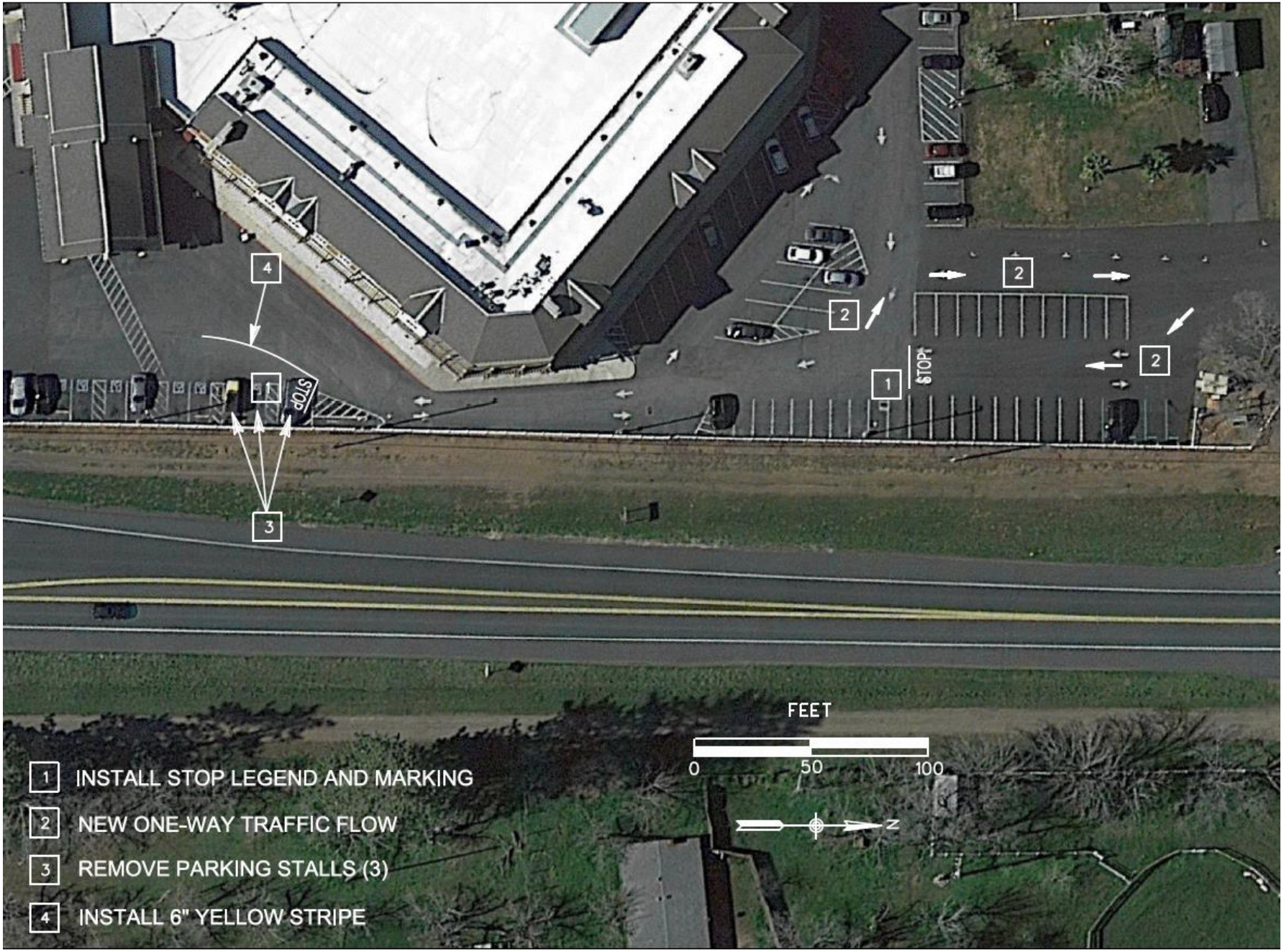
This alignment minimizes the removal of parking spaces; however, alternatives are available that would require additional restriping and could result in a loss of additional parking.



AUTOTURN (MOTORHOME) – SOUTH SIDE



AUTOTURN (MOTORHOME) – NORTH SIDE



AUTOTURN (MOTORHOME) – CHOKE POINT DETAIL

CUMULATIVE IMPACTS

Since 1984, Caltrans District 1 has projected growth factors based on a straight-line determinant method. The most recent growth factors were compiled in 2014 and Caltrans has identified a straight-line growth factor of 1.45 along SR 29. The 2014 SR 29 South Corridor Engineered Feasibility Study prepared by Omni Means for Caltrans District 1 identified a growth factor of 1.41 at the SR 29 / Rancheria Road intersection. The Omni Means study used the Lake County Area-wide Micro-simulation Model (LAMM) and resulted in predicted future volume increases of 8% northbound and 97% southbound. However, based on direction from Caltrans District 1 *(e-mail from David Carstensen February 7, 2018)* Caltrans noted that traffic volumes along SR 29 should be distributed evenly in both directions. No additional documents were identified although the Lake County Regional Transportation Plan is currently being updated.

To develop forecasts of future year peak hour intersection turning movement traffic volumes the following methodology was used: Based on roadway growth of 145% over 20 years the directional traffic was calculated using the District 1 straight line methodology. Development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance". To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic volumes was conducted using methods described in the Transportation Research Board's (TRB's) National Cooperative Highway Research Program (NCHRP) Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design*. The NCHRP 255 method (Furness Factoring) applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes.

The Middletown Rancheria intends to add a 6,000 square foot convenience store to the existing 12-position gas station. Trip generation characteristics of a Super Convenience Store (C-store), Land Use 960, were compared to the existing gas station trip generation characteristics (LU 944), with the higher generating land use traffic added to traffic conditions along SR 29 and Rancheria Road. Pass-by trips were included in the overall traffic patterns. The C-store is projected to generate 499 a.m. peak hour trips and 416 p.m. peak hour trips. After accounting for pass-by trips the C-store is projected to generate 180 new a.m. peak hour trips and 174 new p.m. peak hour trips; this is higher than the 12-position gas station. Figure 15 identifies Cumulative traffic volumes based on the Caltrans growth factor, Furness Factoring and the C-store traffic.

Long Term Improvements. The extent of potential improvements to SR 29 in the study area was determined from review of the State Route 29 Transportation Concept Report (TCR) and the SR 29 South Corridor Engineered Feasibility Study. The TCR notes that capacity increasing improvements in the project vicinity are not necessary to maintain the concept LOS through 2035.

The SR 29 South Corridor Engineered Feasibility Study identified the following improvements in the project study area:

- Installation of a traffic signal or roundabout at the SR 29 / Rancheria Road intersection.

The following corridor enhancements were also identified:

- Installation of colorized shoulders, optical speed bars and a gateway monument at the Rancheria Road intersection to help reduce speeds and provide a sense of entry into the Middletown Community.

- Installation of a Class 1 bikeway and equestrian trail north from Rancheria Road to Middletown; the pathway could also be used by pedestrians.

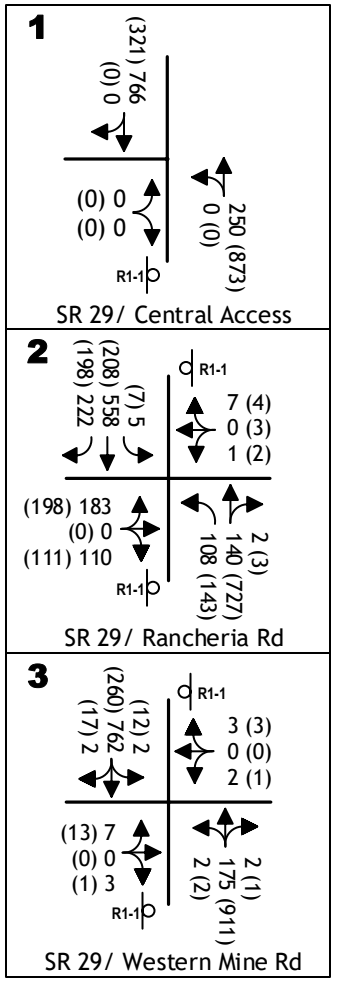
None of the projects are funded.

Cumulative Intersection Levels of Service. Table 9 identifies Cumulative year intersection Levels of Service without the proposed project. With background traffic increasing, the Level of Service for motorists entering SR 29 from the eastbound Rancheria Road approach will decline to LOS F in the a.m. and p.m. peak hours. This would exceed the LOS E TCR goal. The Western Mine Road intersection is projected to maintain acceptable levels of service in both a.m. and p.m. peak hours, at LOS D or better.

TABLE 9
CUMULATIVE PEAK HOUR LEVELS OF SERVICE

Location	Control	AM Peak Hour		PM Peak Hour	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
2. SR 29 / Rancheria Road	EB / WB				
NB Left	Stop	B	10.4	A	8.7
SB Left		A	7.5	A	9.4
EB		**F**	**193.0**	**F**	**574.3**
WB		B	12.7	D	34.7
3. SR 29 / Western Mine Road	EB / WB				
NB Left	Stop	A	9.5	A	7.9
SB Left		A	7.6	B	10.3
EB		C	20.6	D	34.1
WB		B	14.6	C	21.2

Bold indicates level of service threshold exceeded



CUMULATIVE TRAFFIC VOLUMES AND LANE CONFIGURATIONS

Cumulative Plus Project Traffic Conditions

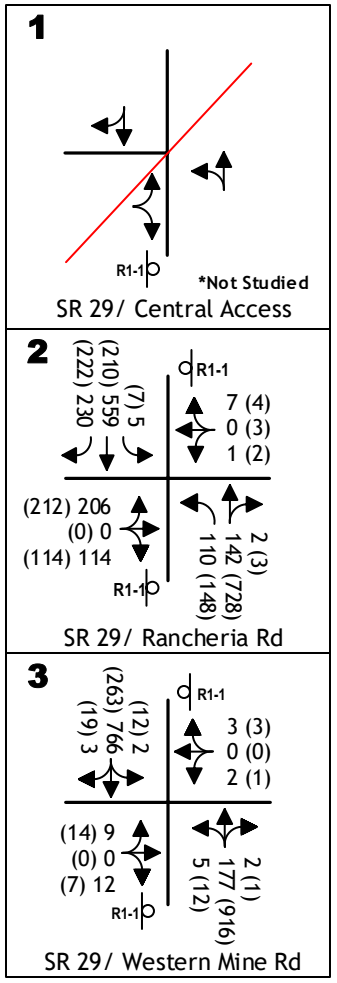
Access Option #1 – Western Mine Road and Rancheria Road Access: The impacts of operating the proposed projects with access to Martin Ranch via the Western Mine Road and Rancheria Road intersections have been identified by superimposing project trips onto the cumulative background condition. Access for the Scott Property RV Park will be from Rancheria Road. Figure 16 presents the "Cumulative Plus Project" traffic volumes at each intersection under Access Option #1 with access at Rancheria Road and Western Mine Road. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 10 compares Cumulative and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections under Access Option #1. Motorists entering SR 29 from the eastbound approach at Rancheria Road will continue to experience LOS F delays in both the a.m. and p.m. peak hours. This exceeds the LOS E TCR threshold. The Western Mine Road intersection will operate at LOS D or better in both a.m. and p.m. peak hours.

TABLE 10
CUMULATIVE PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
ACCESS OPTION #1 – WESTERN MINE ROAD AND RANCHERIA ROAD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Cumulative		Cum Plus Project (Opt #1 – Western Mine Rd & Rancheria Rd Access)		Cumulative		Cum Plus Project (Opt #1 – Western Mine Rd & Rancheria Rd Access)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
2. SR 29 / Rancheria Road									
NB left	EB/WB Stop	B	10.4	B	10.4	A	8.7	A	8.7
SB left		A	7.5	A	7.5	A	9.4	A	9.4
EB		**F**	**193.0**	**F**	**257.2**	**F**	**574.3**	**F**	**666.7**
WB		B	12.7	B	12.9	D	34.7	E	36.5
3. SR 29 / Western Mine Rd									
NB left	EB/WB Stop	A	9.5	A	9.5	A	7.9	A	7.9
SB left		A	7.6	A	7.6	B	10.3	B	10.3
EB		C	20.6	C	19.3	D	34.1	D	29.6
WB		B	14.6	C	15.0	C	21.2	C	21.9

Bold indicates level of service threshold exceeded



CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 1 – RANCHERIA RD AND WESTERN MINE RD

Access Option #2 – Western Mine Road Access: The impacts of the proposed projects under Access Option #2, Western Mine Road and a new access location along the SR 29 project frontage for Martin Ranch, have been identified by superimposing project trips onto the cumulative background condition. Figure 17 presents the "Cumulative Plus Project" traffic volumes with access for Martin Ranch along the project frontage and a second access at the SR 29 / Western Mine Road intersection. Access for the Scott Property will be via Rancheria Road. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 11 compares Cumulative and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists along the eastbound Rancheria Road approach to SR 29 will continue to experience LOS F delays in the a.m. and p.m. peak hours. This exceeds the LOS E TCR threshold. The remaining intersections will operate at LOS D or better in both a.m. and p.m. peak hours.

TABLE 11
CUMULATIVE PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
ACCESS OPTION #2 – WESTERN MINE ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Cumulative		Cum Plus Project (Opt #2 – Western Mine Rd Access)		Cumulative		Cum Plus Project (Opt #2 – Western Mine Rd Access)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
1. SR 29 / Central Access	EB Stop								
NB left		---	---	A	9.6	---	---	A	8.1
EB		---	---	C	21.4	---	---	D	25.1
2. SR 29 / Rancheria Road	EB/WB Stop								
NB left		B	10.4	A	10.4	A	8.7	A	8.9
SB left		A	7.5	A	7.6	A	9.4	A	9.4
EB		**F**	**193.0**	**F**	**225.5**	**F**	**574.3**	**F**	**665.5**
WB		B	12.7	B	13.1	D	34.7	E	37.1
3. SR 29 / Western Mine Rd	EB/WB Stop								
NB left		A	9.5	A	9.6	A	7.9	A	7.9
SB left		A	7.6	A	7.6	B	10.3	B	10.3
EB		C	20.6	C	19.8	D	34.1	D	32.2
WB		B	14.6	C	15.0	C	21.2	C	21.8

Bold indicates level of service threshold exceeded

CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 2 – CENTRAL ACCESS AND WESTERN MINE RD

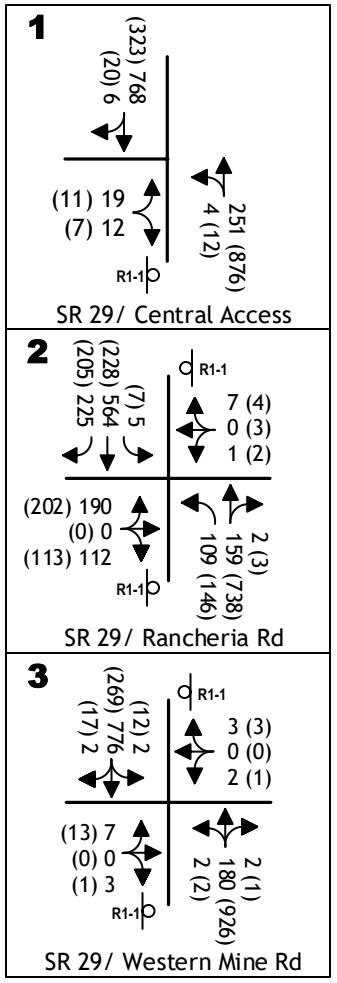
Access Option #3 – Rancheria Road: The impacts of the proposed projects under Access Option #3, Rancheria Road and a new access along the SR 29 project frontage for Martin Ranch, have been identified by superimposing project trips onto the cumulative background condition. Access for the Scott Property will be via Rancheria Road. Figure 18 presents the "Cumulative Plus Project" traffic volumes under this access option. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 12 compares Cumulative and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists along the eastbound Rancheria Road approach to SR 29 will continue to experience LOS F delays in the a.m. and p.m. peak hours. This exceeds the LOS E TCR threshold. The remaining intersections will operate at LOS E or better in both a.m. and p.m. peak hours.

TABLE 12
CUMULATIVE PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
ACCESS OPTION #3 – RANCHERIA ROAD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Cumulative		Cum Plus Project (Opt #3 – Rancheria Rd Access)		Cumulative		Cum Plus Project (Opt #3 – Rancheria Rd Access)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
1. SR 29 / Central Access	EB Stop								
NB left		---	---	A	9.6	---	---	A	8.1
EB		---	---	C	20.5	---	---	C	21.9
2 SR 29 / Rancheria Road	EB/WB Stop								
NB left		B	10.4	B	10.4	A	8.7	A	8.9
SB left		A	7.5	A	7.6	A	9.4	A	9.4
EB		**F**	**193.0**	**F**	**232.0**	**F**	**574.3**	**F**	**660.5**
WB		B	12.7	B	13.1	D	34.7	D	37.1
3. SR 29 / Western Mine Rd	EB/WB Stop								
NB left		A	9.5	A	9.6	A	7.9	A	7.9
SB left		A	7.6	A	7.6	B	10.3	B	10.3
EB		C	20.6	C	21.1	D	34.1	E	35.3
WB		B	14.6	B	14.8	C	21.2	C	21.7

Bold indicates level of service threshold exceeded



CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
ACCESS OPTION 3 – CENTRAL ACCESS AND RANCHERIA RD

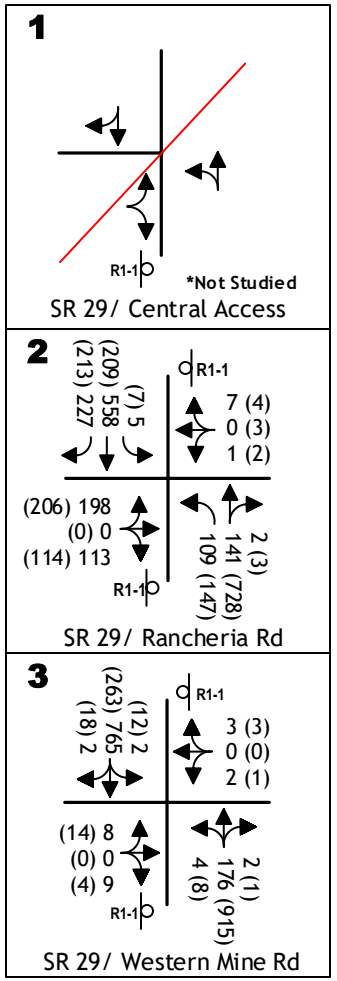
REDUCED DENSITY ALTERNATIVE (Option #4) - Western Mine Road and Rancheria Road Access: The impacts of operating the proposed project under the reduced density option with access to Martin Ranch via the Western Mine Road and Rancheria Road intersections have been identified by superimposing project trips onto the cumulative background condition. Access for the Scott Property RV Park will be from Rancheria Road. Figure 19 presents the "Cumulative Plus Project" traffic volumes at each intersection. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts.

Intersection Levels of Service. Table 13 compares Cumulative and Plus Project peak hour Levels of Service and average delay per vehicle at the access intersections. Motorists entering SR 29 from the eastbound approach at Rancheria Road will continue to experience LOS F delays in both the a.m. and p.m. peak hours. This exceeds the LOS E TCR threshold. The Western Mine Road intersection will operate at LOS D or better in both a.m. and p.m. peak hours.

TABLE 13
CUMULATIVE PLUS PROJECT PEAK HOUR LEVELS OF SERVICE
REDUCED DENSITY OPTION –WESTERN MINE RD AND RANCHERIA RD ACCESS

Location	Control	AM Peak Hour				PM Peak Hour			
		Cumulative		Cum Plus Project (Reduced Density)		Cumulative		Cum Plus Project (Reduced Density)	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
2. SR 29 / Rancheria Road									
NB left	EB/WB Stop	B	10.4	B	10.4	A	8.7	A	8.8
SB left		A	7.5	A	7.5	A	9.4	A	9.4
EB		**F**	**193.0**	**F**	**230.9**	**F**	**574.3**	**F**	**627.2**
WB		B	12.7	B	12.8	D	34.7	E	36.0
3. SR 29 / Western Mine Rd									
NB left	EB/WB Stop	A	9.5	A	9.5	A	7.9	A	7.9
SB left		A	7.6	A	7.6	B	10.3	B	10.3
EB		C	20.6	C	19.3	D	34.1	D	32.0
WB		B	14.6	B	14.8	C	21.2	C	21.6

Bold indicates level of service threshold exceeded



CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS
REDUCED DENSITY ALTERNATIVE WITH ACCESS OPTION 1

Cumulative Conditions Traffic Signal Warrant - SR 29 / Rancheria Road. For the Cumulative conditions a traffic signal warrant analysis was conducted for only the peak hours; the Western Mine Road and possible new frontage access intersection will not have volumes along the minor road that meet minimum volume requirements. At the Rancheria Road intersection, Parts A and B of the peak hour warrant will be met.

Cumulative plus Project Conditions Traffic Signal Warrant - SR 29 / Rancheria Road. Similar to the Existing plus Project analysis the Cumulative plus Project conditions were considered under the worst-case scenario under Option #1, with project access via the Western Mine Road and Rancheria Road intersections. The SR 29 / Rancheria Road intersection will meet both Part A and Part B of the peak hour warrant. A review of Option #2 with driveway access was also reviewed. The Western Mine Road and frontage access intersection locations will not have volumes along the minor road that meet minimum volume requirements.

FINDINGS / RECOMMENDATIONS/IMPROVEMENTS

The preceding analysis has identified project impacts that may occur without improvements. The text that follows identifies a strategy of improvements for the proposed project. Recommendations are identified for facilities that have deficiencies in the roadway network without the project. If the project causes an impact, improvements are identified for the facility.

Existing Conditions

Both intersections operate within acceptable Caltrans LOS thresholds for the SR 29 roadway as identified in the Transportation Concept Report. The intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. An analysis of crash history over the last three-year period between January 1, 2018 and December 31, 2020 noted several crashes occurring at the SR 29 / Rancheria Road intersection. The primary collision factor for most of the crashes was due to the failure of the motorist along Rancheria Road to yield the right-of-way prior to entering the intersection. The crash warrant notes that the number of crashes in a 12-month period susceptible to correction by a traffic signal must be 5 or more. In none of the previous three-year periods, nor in a combination of multiple years equaling a 12-month period, did five or more crashes occur at the intersection. While the warrant is strictly not met it is apparent that some motorists may not be recognize the stop control along the minor roadways.

Signalization of the SR 29 / Rancheria Road intersection would result in LOS B conditions. If the intersection is not signalized, it is recommended that stop signs along Rancheria Road and E Road be retrofitted with embedded LED's in the sign faces to enhance driver awareness of the traffic control devices.

Existing Plus Project Conditions, Access Option #1 - Mitigations

All intersections operate within acceptable Caltrans LOS thresholds for the SR 29 roadway as identified in the Transportation Concept Report. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

Existing Plus Project Conditions, Access Option #2 - Mitigations

All intersections operate within acceptable Caltrans LOS thresholds for the SR 29 roadway as identified in the Transportation Concept Report. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

Existing Plus Project Conditions, Access Option #3 - Mitigations

All intersections operate within acceptable Caltrans LOS thresholds for the SR 29 roadway as identified in the Transportation Concept Report. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

Existing Plus Project Conditions, Reduced Density Alternative with Access Option #1 - Mitigations

All intersections operate within acceptable Caltrans LOS thresholds for the SR 29 roadway as identified in the Transportation Concept Report. The SR 29 / Rancheria Road intersection will meet several traffic signal warrants including the Eight Hour, the Four Hour and the Peak Hour warrants. Signalization of the intersection will result in LOS B conditions in both a.m. and p.m. peak hours.

Cumulative Conditions - Recommendations

The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection in both a.m. and p.m. peak hours. This is below the acceptable LOS E threshold. The SR 29 / Western Mine Road intersection will continue to operate at acceptable levels of service. The SR 29 / Rancheria Road intersection will meet Parts A and B of the peak hour warrant. The intersection is identified in the SR 29 South Corridor Engineered Feasibility Study to operate at LOS F in the future with a suggested improvement of either a traffic signal or a roundabout. Under either alternative, the intersection will operate at LOS C. Further discussion of these alternatives can be found in the Appendix.

Cumulative plus Project Conditions, Access Option #1 - Mitigations

The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C. Further discussion of each alternative can be found in the Appendix.

Cumulative plus Project Conditions, Access Option #2 - Mitigations

The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C. Further discussion of each alternative can be found in the Appendix.

Cumulative plus Project Conditions, Access Option #3 - Mitigations

The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C. Further discussion of each alternative can be found in the Appendix.

Cumulative plus Reduced Density Project Conditions, Access Option #1 - Mitigations

The SR 29 / Rancheria Road intersection will decline to a LOS F condition along the eastbound Rancheria Road approach to SR 29 intersection. This is below the acceptable LOS E threshold. Under either traffic signal or roundabout alternative improvement, the intersection will operate at LOS C. Further discussion of each alternative can be found in the Appendix.

REFERENCES

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APPENDIX

(Available on Request)

ICE SCREENING ASSESSMENT

The SR 29 / Rancheria Road intersection is projected to operate at LOS F in the Cumulative scenario with and without the proposed project. The ICE Screening Assessment is the first step in evaluating access solutions for intersections operating below accepted thresholds.

PLANNING LEVEL ANALYSIS

Three operational control alternatives were considered to improve the intersection to allow operations above the TCR threshold. An all-way stop, signalization and a single lane roundabout were considered. Table 1 below presents the level of service for the unsignalized intersection under mitigated conditions for each control based on HCS methodologies. HCS 6th Edition was used to determine level of service for all-way stop and signalized control while SIDRA was used to determine the projected LOS under roundabout control. The p.m. peak hour was evaluated based on the Level of Service analysis indicated LOS F conditions in that time period. The analysis considers the Cumulative plus Project scenario with Access Option #1.

Installation of an all way stop control would result in a LOS F condition for the intersection while a signal or roundabout would result in LOS C conditions. Based on these results an all-way stop was removed from further screening consideration.

TABLE 1
CONTROL ALTERNATIVE OVERVIEW

	Stop Control	Signalized Control	Roundabout Control
	PM	PM	PM
SR 29 / Rancheria Road	145.6 / F	23.9 / C	15.9 / C

ADDITIONAL CONSIDERATIONS

Geometric Considerations

Traffic Signal – The existing lane geometry will allow operation of a traffic signal within the acceptable LOS E threshold. As the intersection is in a rural area south of Middletown curb and sidewalk is not present. Installation of a traffic signal can be accomplished; however, barriers to signal equipment, such as curbing, would need to be installed as a part of the project to protect equipment. Additionally, the signal system will need to be developed considering installation of the multi-use pathway and equestrian trail parallel to the roadway.

Roundabout – A single lane "high speed" roundabout based on the posted 55 mph speed on SR 29 was reviewed. Roundabouts located on rural roads require different design considerations due to the high-speed approaches. Drivers need to be aware of the roundabout in a rural condition and this must be designed to allow the motorist to decelerate to the appropriate entry speed. The conditions along SR 29 include a cross section without curbs and with about 8-foot shoulders in the intersection area and 4- foot shoulders outside of the intersection area. The

lack of curbs permits the high speeds posted along the roadway. Approaching motorists will need to reduce their speed and a possible treatment includes a series of reverse curves with smaller radii through each successive curve until the design entry speed is reached. The installation of this roundabout may also include installation of a curb along the outside edge of pavement and a curbed median on the inside to narrow the approach roadway to indicate to drivers they are approaching a controlled intersection, requiring slower speeds.

A conceptual layout is shown in Figure A-1, consisting of a 160-foot inscribed diameter with a 16-foot circulatory lane and 9-foot truck apron. This will allow STAA and California Legal trucks to continue to travel along SR 29. A Cal-Legal truck was the assumed design vehicle on Rancheria Road while a motor home plus boat was assumed along the east side of the roundabout. E Road is shown to be realigned to and a new 90° tee intersection would be created east of the roundabout to access E Road. This conceptual layout provides for speeds entering the roundabout of about 25 mph. As noted in NCHRP 672, *Roundabouts, An Informational Guide*, if the difference in approach and entry speeds is greater than 12 mph it may be desirable to introduce geometric or cross-sectional features to reduce the speed of approaching traffic prior to the entry curvature. It is expected that the SR 29 approaches would have a series of reverse curves to slow down approaching vehicles to appropriate entry speeds.

Right-of-Way – Based on the conceptual plan shown in Figure A-1 it is expected that a traffic signal could be installed with limited, if any right-of-way acquisition. The roundabout would require acquisition of right-of-way as the inscribed diameter extends into the Twin Pine Casino parking lot. This is likely to also extend along SR 29 depending on the right-of-way needs relative to the reverse curve approaches identified under 'Geometric Considerations'.

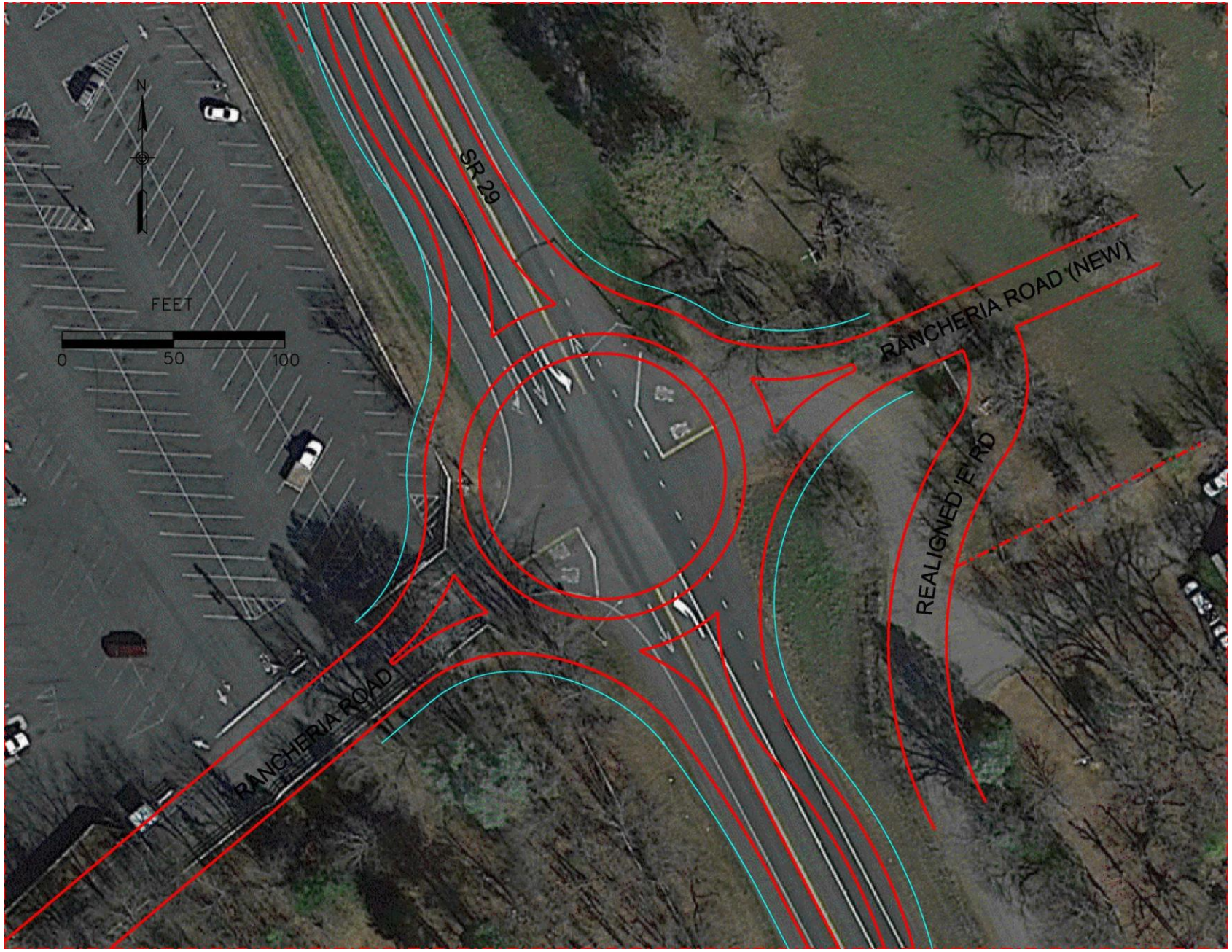
Modal Accessibility – A Class 1 bikeway with equestrian facility is planned along SR 29 north of Rancheria Road to Pine Street in Middletown. The facility will include a 10-foot off-roadway trail for bicyclists and pedestrians with a separate, but parallel equestrian trail. Accessibility to the trail at the SR 29 intersection can be facilitated by either signalization or installation of a roundabout at the intersection.

Conclusions

Under Cumulative traffic conditions the SR 29 / Rancheria Road intersections will operate at an unacceptable level of service with its current control. The following Levels of Service can be anticipated considering the three intersection alternatives:

- All-Way Stop Control – The intersection will operate with an unacceptable LOS F during the AM and PM peak hour.
- Traffic Signal – The intersection would operate with a LOS C during the PM peak hour.
- Single Lane Roundabout – The intersection would operate at LOS C during the PM peak hour.

From a feasibility standpoint, all-way stop control would be inadequate as LOS F conditions would be maintained while a traffic signal or roundabout will both provide LOS B conditions during the PM peak hour.



PRELIMINARY ROUNDABOUT LAYOUT (SR 29 AT RANCHERIA RD)

KD Anderson & Associates, Inc.
Transportation Engineers

5016-02 RA 6/8/2021

figure A-1

Appendix F
Farmland Conversion Form

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request December 2, 2021	
Name of Project Middletown Rancheria-Martin/Scott FTT		Federal Agency Involved Bureau of Indian Affairs	
Proposed Land Use Residential, RV Park, Open Space		County and State Lake County, California	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS 12/20/2021	Person Completing Form: Luis Alvarez
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES [x] NO [ ]	Acres Irrigated 13,906	Average Farm Size 218 ac
Major Crop(s) Winegrapes, Pears and Walnuts	Farmable Land In Govt. Jurisdiction Acres: 119,95% 14.1	Amount of Farmland As Defined in FPPA Acres: 42,33% 5.0	
Name of Land Evaluation System Used CA Revised Storie Index	Name of State or Local Site Assessment System None	Date Land Evaluation Returned by NRCS 12/21/2021	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	23.2			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	23.2			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	9.40			
B. Total Acres Statewide Important or Local Important Farmland	0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.0222			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	0.99			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	91			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	91	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	0	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	91	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES [ ] NO [ ]

Reason For Selection:

Name of Federal agency representative completing this form:	Date:

(See Instructions on reverse side) **Form AD-1006 (03-02)**

Appendix G
Phase I ESAs

PHASE I ENVIRONMENTAL SITE ASSESSMENT OF THE MARTIN RANCH, 22433 HIGHWAY 29, MIDDLETOWN, CALIFORNIA

June 11, 2021

Prepared for:

The Middletown Rancheria Tribe of Pomo Indians of California

Prepared by:

G. O. Graening, PhD, MSE and Kristen Ahrens, M.S.

Natural Investigations Co.
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3104 O Street, #221, Sacramento, CA 95816

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SUMMARY

This report presents the findings of a Phase I Environmental Site Assessment (ESA) for the property at 22433 Highway 29, Middletown, California, Assessor Parcel Number (APN) 014-005-34. Natural Investigations Company has performed this Phase I ESA in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E1527-13 and in accordance with the prevailing standard of care for completing such assessments in California at this time. Exceptions to, or deletions from, this practice are described in Sections 1.3 and 8.3 of this report.

The subject property, 52.65 acres in size, consists of approximately 8 acres of residential area and pastureland for horses. There are 16 acres of vineyards on the Property. The remainder of the Property is open space and ponds. The following buildings and structures are located on the subject property: two single story homes, storage sheds, and a horse stable.

No environmental liens or value reductions were found in association with the Property. No indication of heavy industrial uses was detected from title review. The Property was not listed in any of the environmental databases queried. County (CUPA) records for the Property were regarding the on-site septic system; there were no records regarding hazardous materials, violations, or releases. CUPA records and reports available on Geo Tracker were reviewed for the following case, 1,800 feet north of the Property:

> Nella Oil Company, Middletown Spill Site, Highway 29
> Approximately 1,800 feet north of the Property, a SLIC case was initiated in 2005 following an accident on Highway 29 resulting in an overturned tanker; the tanker released 3,300 gallons of gasoline. Emergency response recovered approximately 750 gallons at the time of the incident, and subsequent soil excavation was performed. Groundwater monitoring wells were installed between 2006 and 2007 along Highway 29, with one well located on a property easterly adjacent to the highway spill site; no wells were installed on any properties directly adjacent to the Property. The groundwater plume was identified as shrinking in a quarterly monitoring report due to natural attenuation and the case was closed in March 2014. Given the case closure, the groundwater flow direction, and monitoring reports showing a localized plume restricted to an area several hundred feet north of the Property, the Nella Oil Company spill site does not appear to be a recognized environmental concern.

A review of physical setting sources and historical use information (topographic maps, aerial photography, fire insurance maps, city directories, and building permits) did not detect any indications of possible recognized environmental conditions on the Property. A site reconnaissance was first performed on March 31, 2017, a second site visit was conducted and March 19, 2019, and most recently, a site reconnaissance took place on May 31, 2021; no indications of possible recognized environmental conditions were noted on the Property.

On April 17, 2017, a hazardous materials questionnaire was completed by Justin Lond, the EPA director for the Middletown Rancheria of Pomo Indians; he had no knowledge of any recognized environmental conditions associated with the Property. On March 31, 2017, a hazardous materials questionnaire was completed by Julie Willis, a tenant of the Property for the past sixteen years; she had no knowledge of any recognized environmental conditions associated with the Property. On March 31, 2017, Natural Investigations associate Kristen Ahrens conducted an interview of Julie Willis: no indications of possible recognized environmental conditions were uncovered. A follow-up questionnaire sent to the tribe in May 2021 produced no new information.

There were a few minor data failures with the physical setting and historical information sources. However, a combination of other data sources was available such that no significant data gap existed, and the historical research objectives were achieved. There were no data gaps that significantly affected our ability to identify recognized environmental conditions associated with the Property. Except for the limitations and exceptions discussed in Sections 1.3 and 8.3, this Phase I ESA complies with the ASTM Practice E1527-13. No additional services beyond the scope of the ASTM Practice E1527-13 were conducted as part of this assessment.

The following de minimis conditions were found in connection with the Property pursuant to the ASTM Practice E1527-13:

- Usage of household quantities of hazardous materials, poor housekeeping practices, and the improper disposal of rubbish
- The possible presence of residual pesticides and/or heavy metals in soils, especially in pesticide handling areas of farm operations. Historical agricultural enterprises may have existed on the Property dating back to at least the 1940's, and may have stored, handled, and applied pesticides on the pastures, and later, on the vineyards. Pesticide (and/or heavy metal) residues may persist in soils of the Property. However, this assessment found no specific indication of soil or water contaminated with pesticides and it is assumed that any residual pesticides exist at concentrations that do not require regulatory action or remediation.

It is Natural Investigations Company's opinion that there are no historical or current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E1527-13. Records review, database searches, or interviews failed to identify any environmental conditions in connection with the Property. Therefore, no further site investigation is recommended.

This summary should only be read in conjunction with the full text of the report. The scope of work, significant assumptions, limitations, and exceptions should be understood prior to reading the site-specific information, findings, opinions, and conclusions. Except for any limitations and exceptions discussed in Section 1.3, this Phase I ESA complies with the ASTM Practice E1527-13. No additional services beyond the scope of the ASTM Practice E1527-13 were conducted as part of this assessment.

1. INTRODUCTION

1.1. PURPOSE

ASTM Practice E1527-13 defines the purpose of the Phase I ESA as quoted:

> "*The purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)(42 U.S.C. §9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the 'landowner liability protections,' or 'LLPs'): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 USC § 9601(35)(B)*." (page 1, ASTM 2013).

In 2002, the Small Business Liability Relief and Brownfields Revitalization Act was passed, and it directed the United States Environmental Protection Agency (USEPA) to promulgate a rule defining due diligence for compliance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This rule, which is generally referred to as All Appropriate Inquiry, was adopted in 2005. ASTM Practice E1527-13 complies with the USEPA requirements for All Appropriate Inquiry, and in some cases, is more stringent than All Appropriate Inquiry.

1.2. GOALS AND DETAILED SCOPE OF SERVICES

ASTM Practice E1527-13 describes the goals and general scope of services in the following excerpts:

> "*In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of a property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment*. De minimis *conditions are not recognized environmental conditions*." (page 1, ASTM 2013).

> "*The scope of this practice includes research and reporting requirements that support the user's ability to qualify for the LLPs. As such, sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice must be provided in the written report*." (page 2, ASTM 2013).

The general scope of services of a Phase I ESA has four components: records review; site reconnaissance; interviews; and report (page 12, ASTM 2013). The scope of services was limited to a qualitative evaluation of environmental conditions of the Property. The detailed scope of services performed for this Phase I ESA consists of the following tasks:

- Records Review.
  - Summarize physical setting (e.g. soils, geology, hydrogeology, surface water)
  - Historical USGS topographic map and aerial photograph sequence analyses
  - Spatial query of SWRCB's GeoTracker database and DTSC's EnviroStor database
  - Query of federal, state, and private environmental databases
  - Review and summary of title research, as necessary
  - Building permit review, as necessary
  - Environmental case file reviews at County CUPA offices, as necessary
  - Summary of any previous environmental reports, where available
- Site Reconnaissance
  - Visual inspection of the Property

  - Photographic documentation
- Interviews
  - Interview current and historical property owners and occupants, or have them fill out a standard environmental questionnaire, where possible
  - As needed, contact and interview neighbors, or regulatory agencies via form letter, phone conversations, and/or personal interviews
  - Documentation of all correspondence
- Report Preparation
  - Provide all supporting documentation, to state the findings of the records reviews, site reconnaissance, and interviews, to give an official opinion of the impact upon the Property of known or suspect environmental conditions, and to state conclusions and provide a report signed by a Qualified Professional.

The scope of services does not include other services that are not described in this report. Section 1.3 details significant assumptions, limitations, and exceptions to the performance of this Phase I ESA.

1.3. LIMITING CONDITIONS, DEVIATIONS, EXCEPTIONS, SIGNIFICANT ASSUMPTIONS, AND SPECIAL TERMS AND CONDITIONS

ASTM Practice E1527-13 cites many assumptions, limitations, and exceptions in the performance of a Phase I ESA. Some of the most important are quoted in the following excerpts:

> "*This practice does not address whether requirements in addition to all appropriate inquiries have been met in order to qualify for the LLPs (for example, the duties specified in 42 U.S.C. § 9607(b)(3)(a) and (b)*." (page 1, ASTM 2013).
>
> "*This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Users are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance*." (page 1, ASTM 2013).
>
> "*Uncertainty Not Eliminated—No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost*." (page 10, ASTM 2013).
>
> "*Not exhaustive—Appropriate inquiry does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information*." (page 10, ASTM 2013).
>
> "*Level of Inquiry is Variable—Not every property will warrant the same level of assessment. Consistent with good commercial or customary practice, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry*" (page 10, ASTM 2013).
>
> "*This practice does not include any testing or sampling of materials (for example, soil, water, air, building materials*." (page 13, ASTM 2013).
>
> "*There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside of the scope of this practice (the non-scope considerations). As*

noted by the legal analysis in Appendix X1 of this practice, some substances may be present on the property in quantities and under conditions that may lead to contamination of the property or of nearby properties but are not included in CERCLA's definition of hazardous substances (42 U.S.C. § 9601(14)) or do not otherwise present potential CERCLA liability. In any case, they are beyond the scope of this practice." (pages 22-23, ASTM 2013).

"*Whether or not a user elects to inquire into non-scope considerations in connection with this practice or any other environmental site assessment, no assessment of such non-scope considerations is required for appropriate inquiry as defined by this practice.*" (page 23, ASTM 2013).

"*There may be standards of protocols for assessment of potential hazards and conditions associated with non-scope conditions developed by governmental entities, professional organizations, or other private entities.*" (page 23, ASTM 2013).

"*Following are several non-scope considerations that persons may want to assess in connection with commercial real estate...No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive: asbestos-containing materials; biological agents; cultural and historical resources; ecological resources; endangered species; health and safety; indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment; industrial hygiene; lead-based paint; lead in drinking water; mold; radon; regulatory compliance; and wetlands.*" (page 23, ASTM 2013).

Natural Investigations Company, Inc. made the following assumptions in the preparation of this Phase I ESA:

- Groundwater Flow Direction – we interpreted and inferred the direction of the shallow groundwater movement based on the information we obtained and our experience. Actual groundwater flow may be locally influenced by many factors beyond the scope of this assessment. Subsurface investigation and modeling would be necessary to determine site-specific groundwater flow direction.
- Regulatory Agency Information – we considered all information provided by EDR, GeoTracker, EnviroStor, and CUPA records regarding regulatory status of facilities to be complete, accurate, and current.
- When provided with a current title report prepared by a reputable title company, we assumed that a separate chain-of-title research effort was redundant to identify any environmental liens or previous landowners with names indicative of industrial uses.
- Interviews – we considered all information provided through interviews to be complete, unbiased, and provided in good faith.

Natural Investigations Company, Inc., as an independent and impartial contractor, has completed this Phase I ESA in accordance with ASTM Practice E1527-13 and in accordance with the prevailing standard of care for completing such assessments in California at this time. Natural Investigations Company shall not be subject to any express or implied warranties whatsoever. Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems and will not eliminate all risk. This report is a qualitative assessment. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the User understand and better manage risks associated with the Property. No warranty, either expressed or implied, is made. Land use, site conditions, and other factors will change over time. This report should not be relied upon after 180 days from the date of issuance, unless additional services are performed as defined in ASTM Practice E1527-13, Section 4.6.

The property owner is solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment, or disposal of, any hazardous substance or petroleum product occurring on the Property, either before, during, or after Natural Investigation Company's services. Natural Investigation Company assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury which results from pre-existing materials being encountered or being present on the Property, or from the discovery of such hazardous substances or petroleum products.

This report and other instruments or service are prepared and made available for the sole use of the User and their agents. The contents may not be used or relied upon by any other persons without the express written consent and authorization of the User.

There are no special terms or contractual conditions for this assessment. There were no limiting conditions or deviations from the ASTM Practice E1527-13 in the preparation of this Phase I ESA. There were no client/User-imposed constraints on the preparation of this Phase I ESA.

Any data gaps are listed in Section 8.3.

1.4. INFORMATION RELIANCE

ASTM Practice E1527-13 defines information reliance as:

> "*An environmental professional is not required to verify independently the information provided but may rely on information provided unless he or she has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained in the Phase I Environmental Site Assessment or otherwise actually known to the environmental professional.*" (page 13, ASTM 2013).

This report is for the sole benefit and exclusive use of the User in accordance with the contract under which these services have been provided. It is possible that information exists beyond the scope of this assessment. Additional information, which was not found or available to Natural Investigations Company at the time of report preparation, may result in a modification of the conclusions and recommendations presented herein. Any reliance on this report by third parties shall be at their own risk.

2. SITE DESCRIPTION

2.1. LOCATION AND LEGAL DESCRIPTION

The subject property ("Property") of this Phase I ESA is the parcel with address of 22433 Highway 29 (APN 014-005-34), and is bounded by Highway 29 to the east, the Middletown Rancheria and Twin Pines Casino to the north, and agriculture and rural residences to the east and south, in the Census Designated Place of Middletown, Lake County, California (Figure 2.1.1). The Property consists of one parcel with an area of approximately 52.65 acres, and is currently used as rural residential with pasture and vineyard. The Lake County Assessor's office assigns this parcel land use code AZ-SC-WW with the following descriptions: Agricultural Preserve District, Scenic Combining District, and Waterway Combining District.

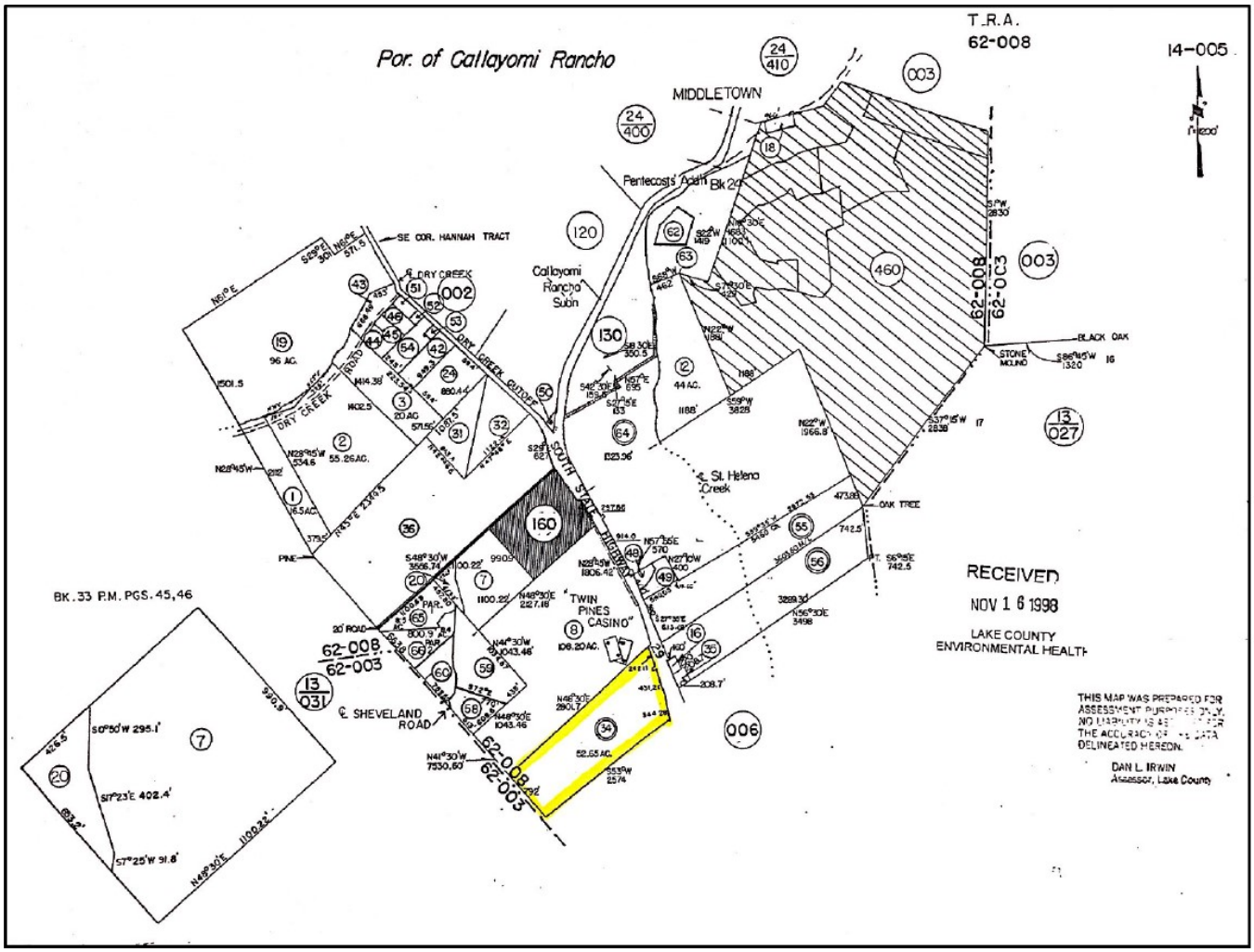

Figure 2.1.1. Assessor's Parcel Map, with subject property outlined in yellow.

2.2. SITE AND VICINITY GENERAL CHARACTERISTICS

The Property is a rural residence surrounded by agricultural land and open space. It is located in the Census-Dedicated Place of Middletown, in an area zoned for agricultural and rural residential uses. Fallow vineyards exist on the Property and surrounding parcels consist of rural residences with land uses including agriculture and animal husbandry, as well as a casino and Indian reservation.

2.3. CURRENT USE OF THE PROPERTY AND IMPROVEMENTS

A portion of the Property (approximately 8.1 acres) is used for residential space and pastureland for horses. There are 16 acres of vineyards on the Property which have been abandoned for several years and are no longer actively cultivated (Figure 2.3.1). Improvements consist of two single-story homes, storage sheds, and a horse stable. One home is located on the southwestern corner of the vineyard area and the second home and associated outbuildings are located centrally along the eastern Property boundary. The southwesterly half of the Property is 27 acres of primarily undeveloped, open space. Three spring-fed ponds are present in this area and may have historically been used to irrigate the vineyards. A small creek connects the southern and northern ponds. Dense vegetation and areas of steep terrain surround the ponds. Footpaths are present around the vineyards and to each pond. An additional pond is present between the pastureland and vineyards along the northern portion of the Property.

There is one groundwater well near the eastern Property boundary, northeast of the residence. Maps provided by the Middletown Rancheria Tribe of Pomo Indians staff indicate there are three additional wells on the Property, which are not in use and may have been abandoned due to inadequate yield. Wastewater is disposed of via two septic systems near each residence.

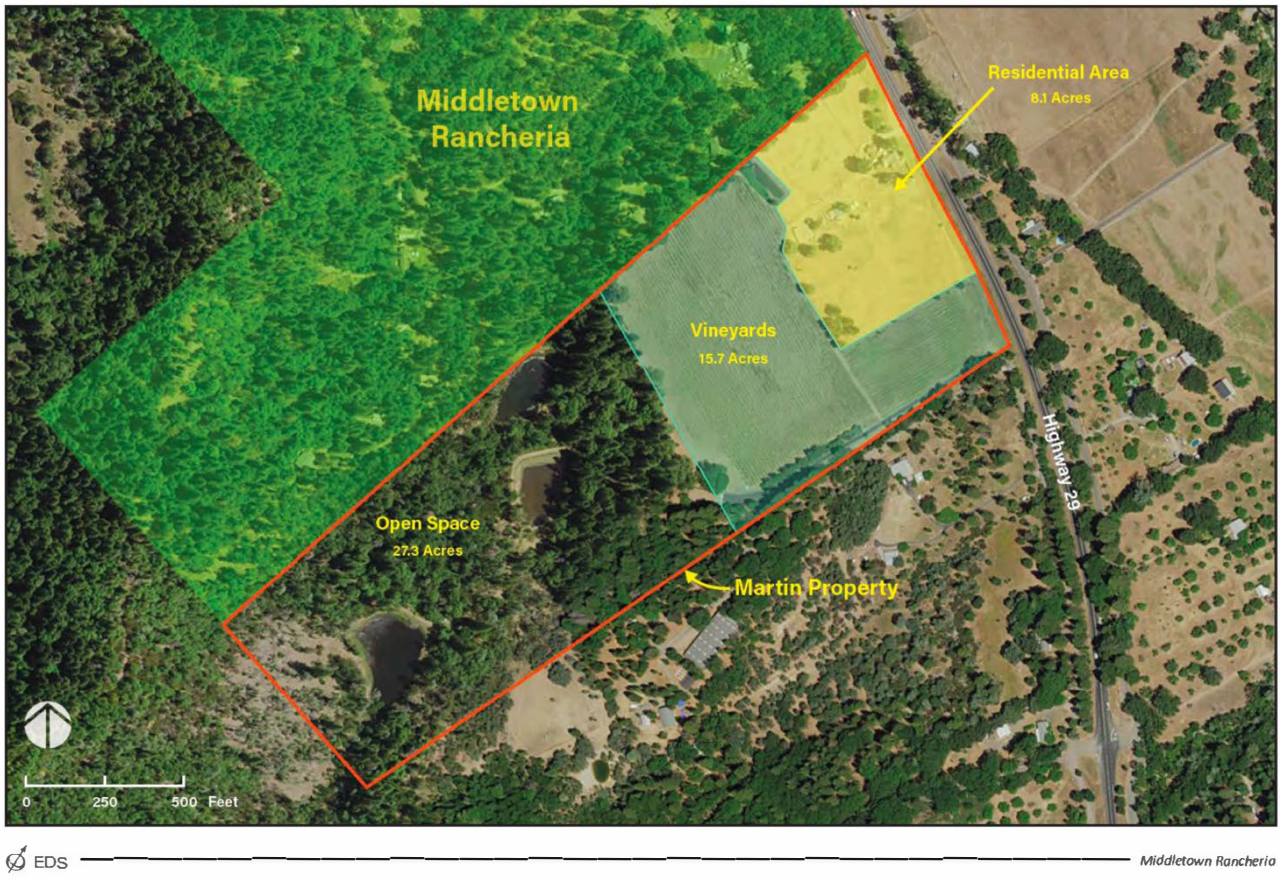

Figure 2.3.1. Aerial view of Property (outlined in red) depicting land uses.

Figure 2.3.2. Oblique aerial photo, view looking west, of subject property and surrounding properties (Google Maps).

2.4. CURRENT USES OF ADJOINING PROPERTIES

The parcels surrounding the Property are used for a mixture of agricultural, residential, and commercial purposes. To the north of the Property is a 110-acre parcel, the Middletown Rancheria, which includes several residential homes, mobile office trailer buildings, and the Twin Pines Casino and Hotel. Easterly and southerly adjacent to the Property are rural residences and agricultural land. To the west of the Property is undeveloped land.

3. USER-PROVIDED INFORMATION

The "User" is defined as the party seeking to use ASTM Practice E1527-13 to complete an environmental site assessment of the Property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice outlined in Section 6 of ASTM Practice E1527-13.

In the case of this assessment, the User is the User is the Middletown Rancheria Tribe of Pomo Indians of California and their environmental consultant—Origin Environmental Planning.

3.1. USER'S RESPONSIBILITIES

User's responsibilities are defined by the ASTM E1527-13 standard, and include the following, as quoted:

> "*Any environmental liens and AULs known to the user should be reported to the environmental professional conducting a Phase I Environmental Site Assessment. Unless added by a change in the scope of work to be performed by the environmental professional, this practice does not impose on the environmental professional the responsibility to undertake a review of recorded land title records and judicial records for environmental liens and AULs. The user should either (1) engage a title company, real estate attorney, or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental*

liens and AULs currently recorded against or relating to the property, or (2) negotiate such an engagement of a title company, real estate attorney, or title professional as an addition to the scope of work of the environmental professional." (page 12, ASTM 2013)

"*Specialized Knowledge or Experience of the User—Users must take into account their specialized knowledge to identify conditions indicative of releases or threatened releases. If the user has any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property, the user should communicate any information based on such specialized knowledge or experience to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance.*" (page 12, ASTM 2013)

"*Actual Knowledge of the User—If the user has actual knowledge of any environmental lien or AULs encumbering the property or in connection with the property, the user should communicate such information to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance.*" (page 12, ASTM 2013)

"*Reason for Significantly Lower Purchase Price—In a transaction involving the purchase of a parcel of commercial real estate, the user shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The user should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property was not contaminated, and make a written record of such explanation. Among the factors to consider will be the information that becomes known to the user pursuant to the Phase I Environmental Site Assessment. This practice does not require that a real estate appraisal be obtained in order to ascertain fair market value of the property. The user should inform the environmental professional if the user believes that the purchase price of the property is lower than the fair market value due to contamination. The user is not required to disclose the purchase price to the environmental professional.*" (page 12, ASTM 2013)

"*Commonly Known or Reasonably Ascertainable Information—Commonly known or reasonably ascertainable information within the local community about the property must be taken into account by the user. If the user is aware of any commonly known or reasonably ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, the user should communicate such information to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance. The user must gather such information to the extent necessary to identify conditions indicative of releases or threatened releases of hazardous substances or petroleum products.*" (page 12, ASTM 2013)

"*Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I Environmental Site Assessment performed or, if the user does not identify the purpose of the Phase I Environmental Site Assessment, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report.*" (page 12, ASTM 2013).

In order to exert an LLP, the User must satisfy a number of statutory requirements that are generally referred to as Continuing Obligations, which are outside the Scope of Services of the Phase I ESA. Examples of Continuing Obligations include providing legally required notices stopping continuing releases and complying with land use restrictions. Failure to comply with these and other statutory post-acquisition requirements will jeopardize liability protection. It is the responsibility of the User to comply with the Continuing Obligations requirements of ASTM Practice E1527-13 and All Appropriate Inquiry.

3.2. REQUESTED DOCUMENTS AND INFORMATION

The following documents and information were requested of User and the landowners:

- Title reports
- Previous environmental site assessments or environmental compliance audit reports
- Environmental permits or hazardous waste generator notices/reports
- Registrations for aboveground or underground storage tanks
- Location of septic systems, oil wells, monitoring wells, or water wells

- Registrations for underground injection systems
- Material Safety Data Sheets; Community Right to Know Plans or Safety, Preparedness and prevention Plans; Spill Protection, Countermeasures and Control Plans
- Hazardous Material Business Plans
- Geotechnical studies or hydrological studies
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property
- Risk assessments
- Recorded Activity Use Limitations
- Proceedings regarding hazardous substances and petroleum products including any pending, threatened or past: litigation; administrative proceedings; or notices from any governmental entity regarding possible violations of environmental laws or other possible liability related to hazardous substances or petroleum products.

The following documents specific to the Property were provided in response to Natural Investigations' information request: map of domestic well locations, site maps, and documents pertaining to the Nella Oil Company SLIC case to the north of the Property.

3.3. TITLE RECORDS

No title reports were provided to Natural Investigations Co. EDR was commissioned to search for title liens and to build chain of title (see Appendix 14.1). EDR's Chain of Title Report identifies the current owner as the Middletown Rancheria of Pomo Indians of California. The Property was transferred to the current owner on 10/16/15 from James Stephen Martin and Margaret Celli Martin as part of the James and Margaret Martin Family Trust. No indication of heavy industrial uses was detected from title review.

3.4. ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

An environmental lien is a charge, security, or encumbrance upon the title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon the property. No environmental liens or activity and use limitations were made aware to Natural Investigations Company. No evidence of environmental liens was identified during the interview process, title review, or records review. EDR was commissioned to search for title liens. EDR's Environmental LienSearch Report detected no liens (see Appendix 14.1).

3.5. SPECIALIZED KNOWLEDGE OR ACTUAL KNOWLEDGE

No specialized knowledge or actual knowledge that is material to recognized environmental conditions in connection with the property was provided by the User to Natural Investigations Company.

3.6. VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No valuation reductions for environmental issues were made aware to Natural Investigations Company. No valuation reductions were identified during the interview process or by the title review.

3.7. OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The owner of the Property is designated as the Middletown Rancheria of Pomo Indians of California. The property is operated as residential homes and pastureland.

3.8. REASON FOR PERFORMING PHASE I ESA

Natural Investigations Company performed this Phase I ESA at the request of Josh Ferris (Origin Environmental Planning), for use in the environmental assessment/compliance process pertaining to

transfer of the land into federal trust. Origin Environmental Planning is an environmental consultant for the Middletown Rancheria of Pomo Indians of California. This is an update to a previous Phase I ESA conducted by Natural Investigations Co. on March 25, 2019.

4. RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the property.

4.1. STANDARD ENVIRONMENTAL RECORD SOURCES

As part of this assessment, Natural Investigations Company retained the services of Environmental Data Resources, Incorporated (EDR), which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories. EDR's Phase I ESA standard package - "Radius Map with GeoCheck" was ordered and performed on June 1, 2021. In this report, EDR presents the results of searches of all reasonably ascertainable environmental databases (federal, state, local, and private) for records of potential environmental impacts of the Property and vicinity. EDR performed these database searches within the prescribed radii of ASTM Practice E1527-13. The databases queried by EDR included the following:

> Federal ASTM Standard and Supplemental – National Priority List (NPL); proposed NPL; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); CERCLIS No Further Remedial Action Planned; Corrective Action Report; Resource Conservation and Recovery Act (RCRA) Information; RCRA Large Quantity Generator; Emergency Response Notification System; Superfund Consent Decrees; Records of Decision; NPL Deletions, Hazardous Materials Information Reporting System; Material Licensing Tracking System; Mines Master Index File; Federal Superfund Liens; PCB Activity Database System; Department of Defense Sites; Indian Reservations; Uranium Mill Tailings Sites; Engineering Controls Sites List; Open Dump Inventory; Formerly Used Defense Sites; RCRA Administrative Action Tracking System; Toxic Chemical Release Inventory System; Toxic Substances Control Act (TSCA); Section 7 Tracking Systems; Federal Insecticide, Fungicide, and Rodenticide Act / TSCA; US Brownfields; US Institutional Control Sites; Voluntary Clean-up Program Properties; State ASTM Standard and Supplemental – Proposition 65 Records; Toxic Pits Cleanup Act Sites; Bond Expenditure Plan; List of Underground Storage Tank (UST) Facilities; Voluntary Cleanup Program Facilities; Leaking UST on Indian Land; UST on Indian Land; Waste Discharge System; Deed Restriction Listing; Properties Needing Further Evaluation; No Further Action Determination; Well Investigation Program Case List; Emissions Inventory Data; School Property Evaluation Program; Former Manufactured Gas Sites.

The complete EDR Radius Map report is provided in Appendix 14.2. Results are summarized in EDR's overview map (Figure 4.1.1) and detail map (Figure 4.1.2); numbered elements in EDR's maps correspond to numbered cases in EDR's report. The Property was not listed in any of the databases queried by EDR. Numerous properties in the vicinity of the Property are listed on various databases, as summarized in EDR's Executive Summary. The closest and most pertinent cases are listed below and include the presence of permitted UST's and the Nella Oil Company SLIC case, the latter which is discussed in Section 4.2.2.1.

MAPPED SITES SUMMARY

Target Property Address:
22433 S STATE HIGHWAY 29
MIDDLETOWN, CA 95461

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	UNCLE BUDDY'S PUMPS	22223 SOUTH HIGHWAY	RCRA-VSQG	Lower	1038, 0.197, North
2	NELLA OIL COMPANY	HIGHWAY 29	CPS-SLIC, CERS	Lower	1820, 0.345, North

It should be noted that the computerized geocoding technology used in the database search is based on available census data and is only accurate to ±300 feet. The EDR report indicates that poor or inadequate address information was provided for various properties that are potentially located in the vicinity of the Property; therefore, these sites could not be readily mapped by EDR. Because the location of these sites with respect to the Property could not be determined, the evaluation of the unmappable sites is limited in terms of determining the potential impact on the Property. Although the list of the unmappable sites was reviewed for adjacent or nearby properties observed during the site reconnaissance, locating each of the unmapped sites identified by EDR is not considered practicable.

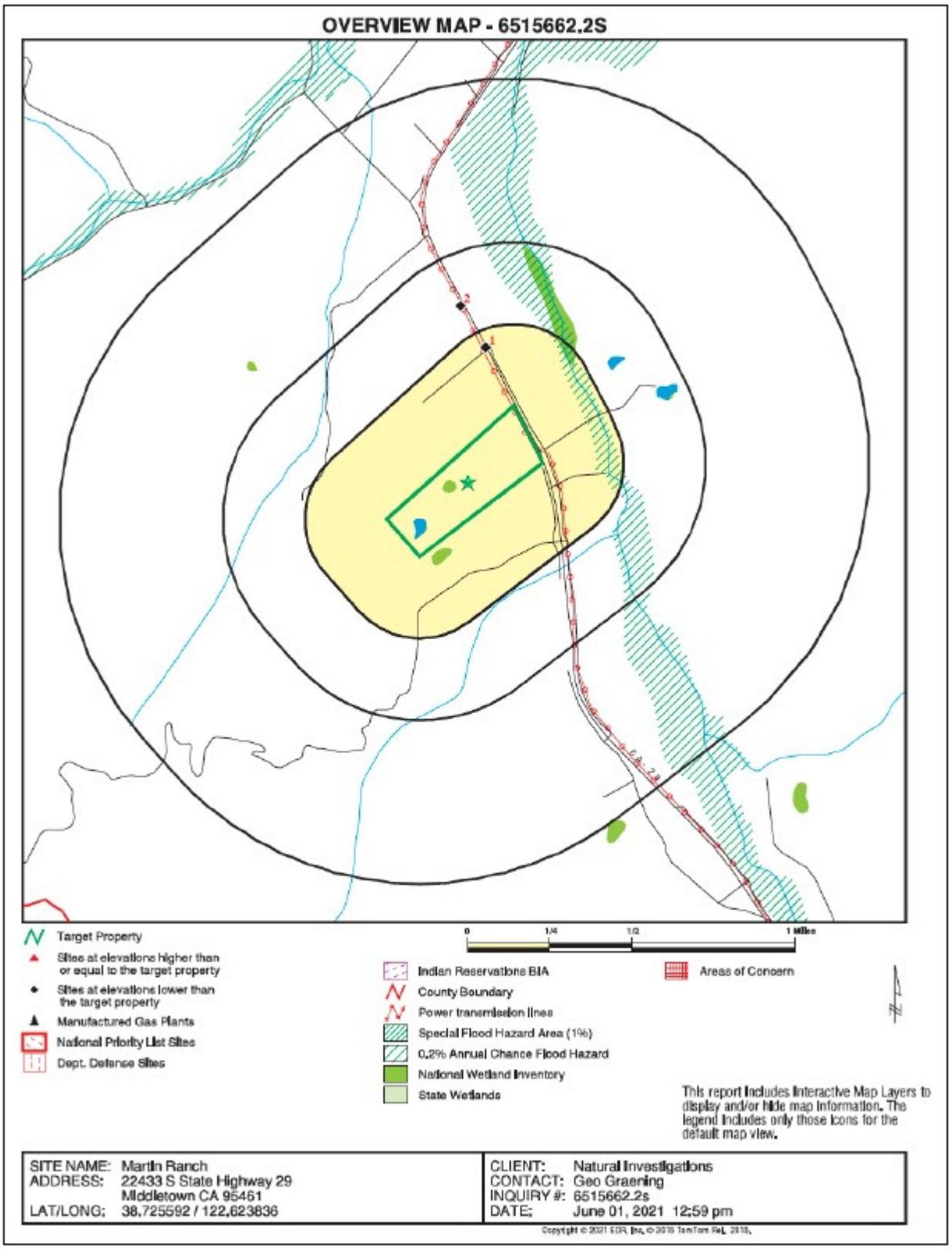

Figure 4.1.1. Overview map from EDR's Radius Map report

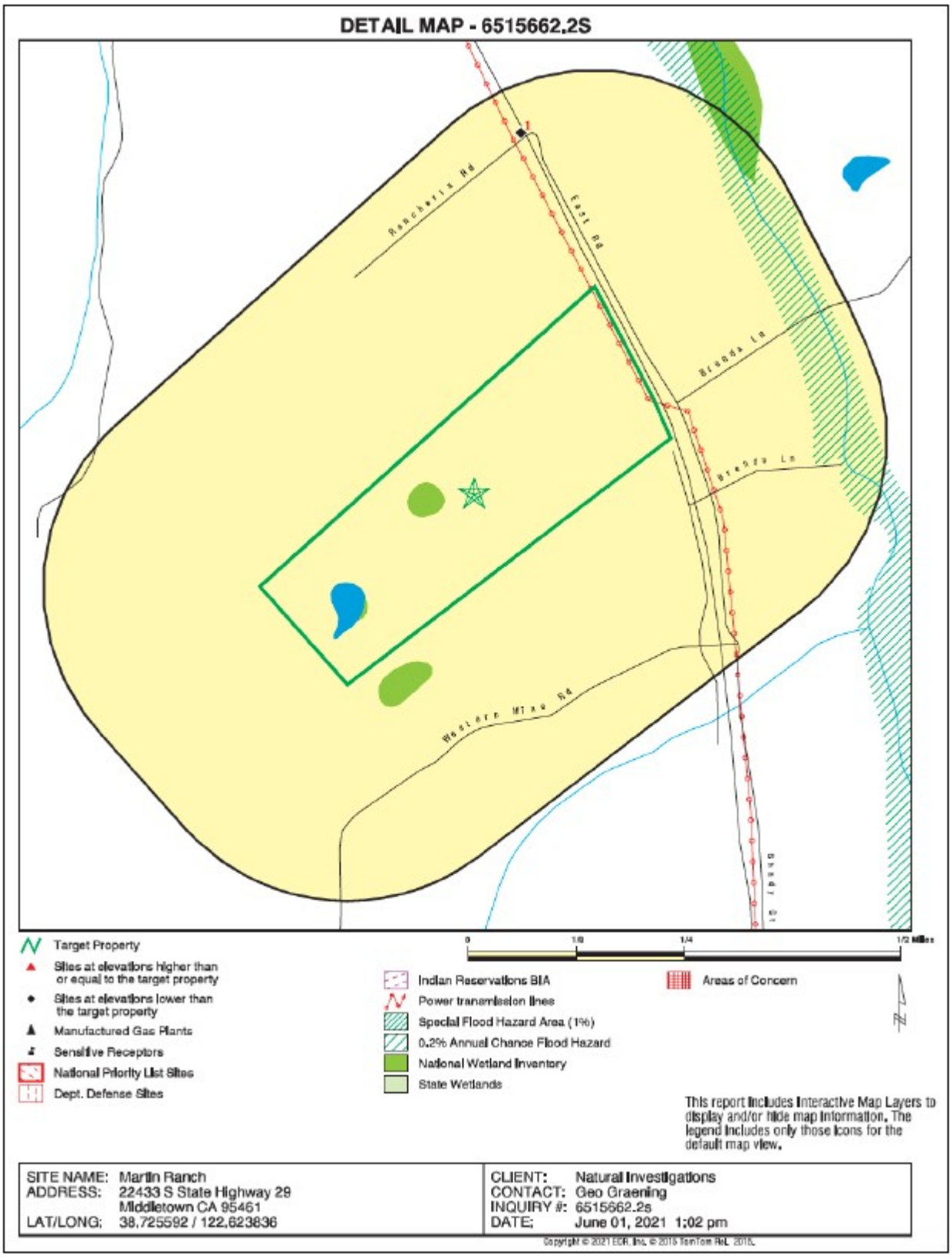

Figure 4.1.2. Detail map from EDR's Radius Map report

4.2. ADDITIONAL ENVIRONMENTAL RECORD SOURCES

4.2.1.State of California Department of Toxic Substances Control Records

4.2.1.1. EnviroStor Database

EnviroStor is an online search and Geographic Information System tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. Public Access to EnviroStor is accessible via the DTSC Web Page located at: http://www.envirostor.dtsc.ca.gov/public/. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. You can obtain information that includes site name, site type, status, address, any restricted use (recorded deed restrictions), past use(s) that caused contamination, potential contaminants of concern, potential environmental media affected, site history, planned and completed activities. The EnviroStor database also contains current and historical information relating to Permitted and Corrective Action facilities. The EnviroStor database includes current and historical information on the following permit-related documents: facility permits; permit renewal applications; permit modifications to an existing permit; closure of hazardous waste management units (HWMUs) or entire facilities; facility corrective action (investigation and/or cleanup); and/or post-closure permits or other required post-closure activities.

The EnviroStor database was queried on June 1, 2021. The following screen capture (Figure 4.2.1) summarizes the results of the query. Pertinent documentation is provided in Appendix 14.2. No reported cases were found on the Property. No new information was retrieved beyond that already found from EDR's report, and the case closest to the Property (Nella Oil Company) is described in Section 4.2.2.1.

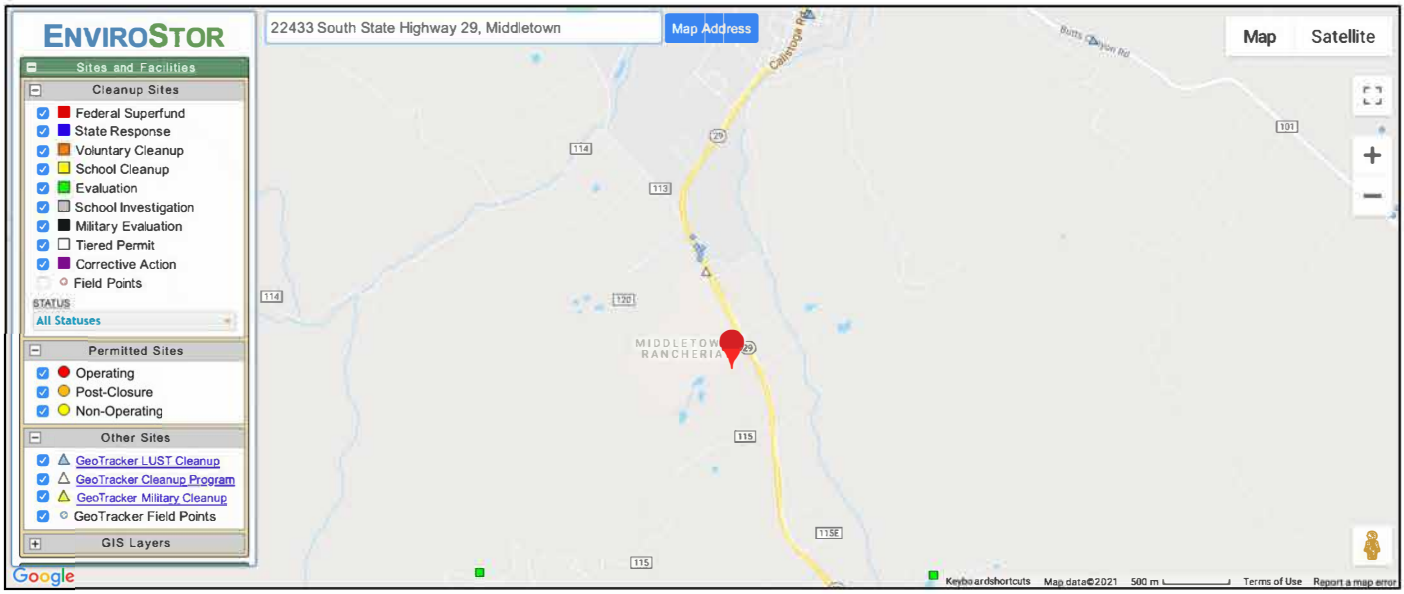

Figure 4.2.1. Screen capture of EnviroStor database query.

4.2.2.California State Water Resources Control Board / Regional Board Records

4.2.2.1. GeoTracker Database

GeoTracker is a geographic information system (GIS) maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at the Internet address (URL) = http://geotracker.waterboards.ca.gov/. GeoTracker is the interface to the Geographic Environmental Information Management System (GEIMS), a data warehouse which tracks regulatory data about

underground fuel tanks, fuel pipelines, and public drinking water supplies. GeoTracker and GEIMS were developed pursuant to a mandate by the California State Legislature (AB 592, SB 1189) to investigate the feasibility of establishing a statewide GIS for leaking underground fuel tank (LUFT) sites. GEIMS can store extensive data related to LUFT sites, or any other contaminant release. In addition, GEIMS is used to store and display information from various agencies including water quality information, water use information, and infrastructure data needed to assess both water supplies and contaminant sites. For the SWRCB's groundwater quality assessment goal, GEIMS has been populated with LUFT, public drinking water wells, and fuel pipelines for California. Site information from the Spills, Leaks, Investigations, and Cleanups (SLIC) Program is also included in GeoTracker.

The GeoTracker database was queried for environmental data pertaining to the Property on June 1, 2021; results of the query are summarized in the following screen capture (Figure 4.2.2). Pertinent documentation is provided in Appendix 14.2. Using both spatial queries and text-based searches of bounding street addressees in GeoTracker, no reported cases were found on the Property.
The closest case in the vicinity of the Property is discussed further:

- Nella Oil Company, Middletown Spill Site, Highway 29
  Approximately 1,800 feet north of the Property, a SLIC case was initiated in 2005 following an accident on Highway 29 resulting in an overturned tanker; the tanker released 3,300 gallons of gasoline into the ditch on the side of Highway 29. Emergency response recovered approximately 750 gallons at the time of the incident, and subsequent soil excavation and removal was performed. Groundwater monitoring wells were installed between 2006 and 2007 along Highway 29, with one well located on a property easterly adjacent to the highway spill site; no wells were installed on any properties directly adjacent to the Property. In a quarterly monitoring report, the groundwater plume was identified as shrinking due to natural attenuation and the case was closed in March 2014.

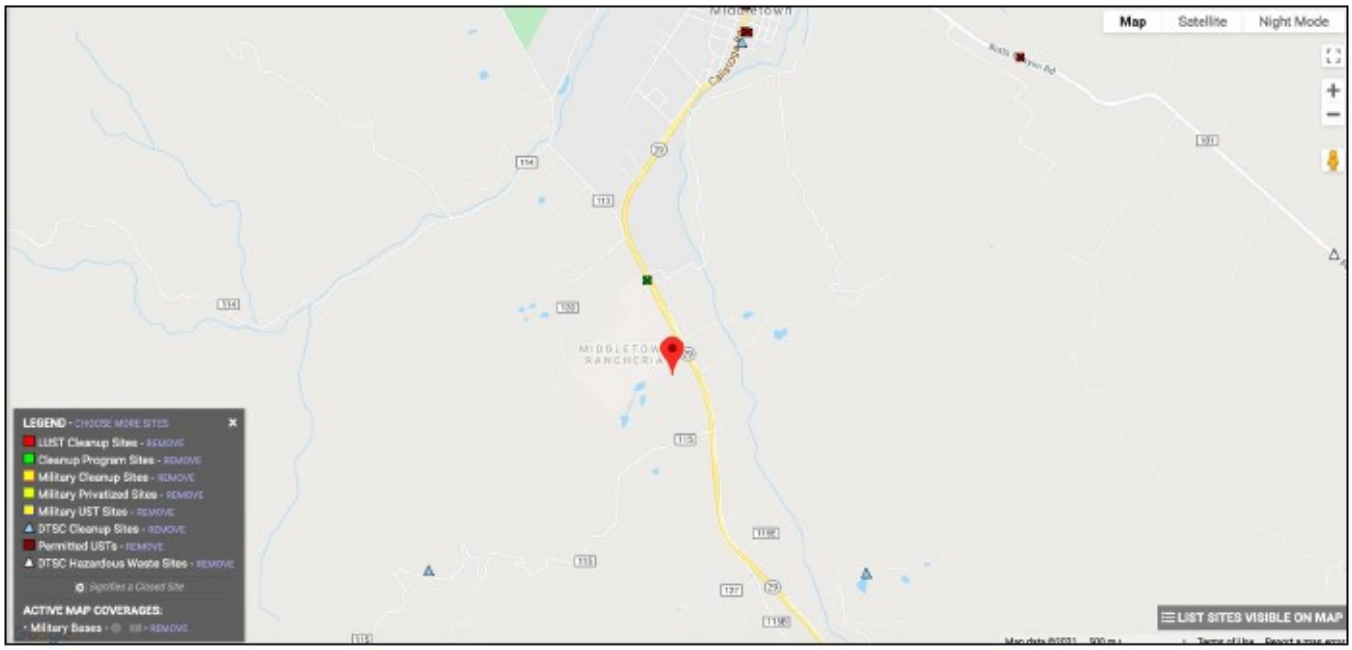

Figure 4.2.2. Spatial results of GeoTracker query

4.2.3.CalEPA / County / CUPA Records Search

The Unified Program (http://www.calepa.ca.gov/CUPA/) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Cal/EPA and other state agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPAs). For Lake County, Lake County Environmental Health is the CUPA.

The California Environmental Reporting System (CERS) (http://cers.calepa.ca.gov/) is a statewide web-based system to support CUPAs and Participating Agencies in electronically collecting and reporting various hazardous materials-related data as mandated by the California Health and Safety Code and new 2008 legislation (AB 2286). Under oversight by Cal/EPA, CUPAs implement Unified Program mandates that streamline and provide consistent regulatory activities. All businesses must now submit Unified Program-related information to CERS. Alternatively, some CUPAs have developed local web portals that businesses may use to meet this requirement. All hazardous materials business plans, chemical inventories, site maps, underground and aboveground tank data, and hazardous waste related data must be reported electronically.

Natural Investigations Co. associate Kristen Ahrens first reviewed case files and hazardous material inspection reports at the Lake County Environmental Health office on March 31, 2017 (see Appendix 14.2 for pertinent copies of the case file documentation). The only records for the Property were regarding the on-site sewage treatment system; no violations or releases were noted. Files for the northerly adjacent, Nella Oil Company SLIC case were also reviewed; no additional, pertinent information was identified beyond that previously described (Section 4.2.2.1).

Kristen Ahrens spoke with the hazardous materials specialist, Craig Wetherbee, on March 26, 2019, who verified there were no additional documents relevant to the Property since the time of the last file review. On June 1, 2021, Kristen Ahrens emailed Lake County Environmental Health requesting any new case files associated with the Property since 2018. On June 4, 2021, Tina Rubin, an Environmental Health Aide, stated that there were no new files associated with the property (see Appendix 14.2). No active cases were identified on the Property or adjacent properties.

4.2.4.Oil, Gas, and Geothermal Wells

A review of oil, gas, and geothermal resources maps was conducted online to identify oil, gas, and geothermal wells located on the Property or on the surrounding properties. Oil, gas, and geothermal resources maps were reviewed from California Department of Conservation, Division of Oil, Gas, and Geothermal Resources Well Finder (http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx). The online mapping system shows the location of new, active producer, active injector, dual, and plugged.

Based on the review of the DOGGR Well Finder database and EDR's Radius Map Report (Appendix 14.2), there are no oil or gas wells on the Property or within 1 mile of the Property (Figure 4.3.1). There are two plugged and abandoned geothermal wells located within 1 mile of the Property; the closest geothermal well is approximately 900 feet north of the Property, and the second well is approximately 5,000 feet to the east.

4.3. PHYSICAL SETTING SOURCES

4.3.1.Geology, Soils, Topography, and Hydrology

The Property is located on the United States Geologic Survey (USGS) 7.5-degree minute (1:24,000) topographic maps “Detert Reservoir” and “Mount Saint Helena” (see historical topographic map series in Appendix 14.3). The Property ranges between 1,180 and 1,380 feet above mean sea level. The topography of the Property is varied, with some areas of steep terrain on the western, undeveloped portion of the Property; there is a general slope to the east. Soil on the Property consists of moderately well to well

drained “Jafa” soil series, according to EDR's Physical Setting Report. The geologic formation that underlies the Property is eugeosynclinal deposits of the Mesozoic Era.

The Property is located approximately 1,100 feet westerly of Saint Helena Creek. Contour lines from the USGS topographic map indicate that surface water flows east in the site vicinity. The area is largely undeveloped with considerable pervious surfaces. Generally, regional ground water flow direction is thought to be to the north-northwest, according to groundwater monitoring reports from 2013 accessed from GeoTracker for the northerly, Nella Oil Company tanker spill site (Section 4.2.2.1). There are no stormwater drains present on the Property.

The Property is not located within the floodplain of Saint Helena Creek, and the Property does not lie within a 100-year flood plain, as defined by the Federal Emergency Management Agency Flood Insurance Rate Maps, according to the EDR report (Figure 4.3.1). Public groundwater wells and public water supplies identified in EDR’s query of readily-available databases are not within ½ mile from the Property. There is a private groundwater well currently in use on the Property. No hydrogeologic data was readily available.

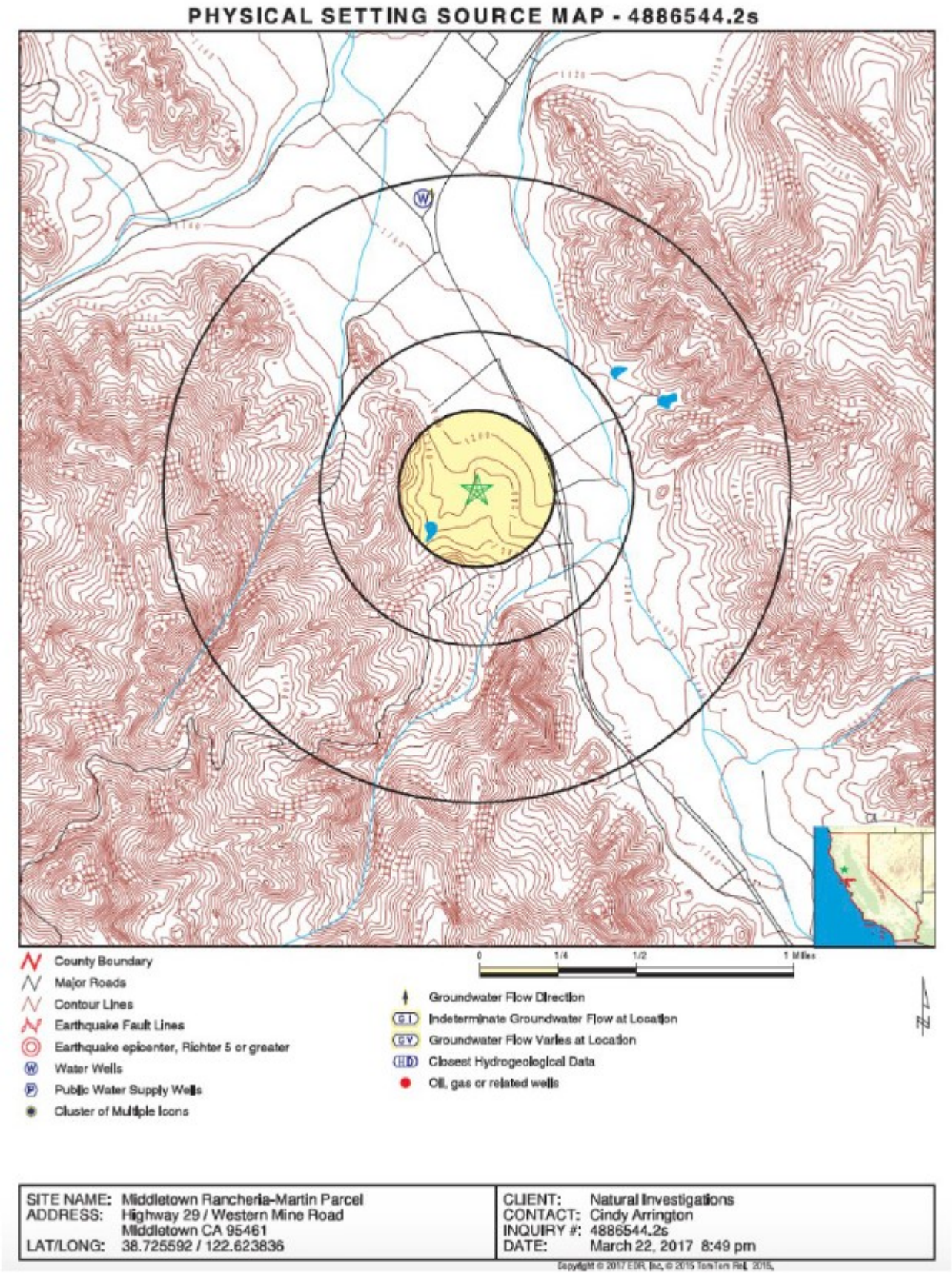

Figure 4.3.1. Physical Setting map from 2017 EDR Report

4.4. HISTORICAL USE INFORMATION ON THE PROPERTY

The objective of consulting historical sources is to develop a history of the previous uses of the property and surrounding area, in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the property.

4.4.1.Topographic Map Analysis

Historical and current topographic maps of the Property were analyzed to determine any of the following: topography and inferred surface water and ground water flow direction; current and historical land use; and current and historical structures, utilities, and roads. All available USGS topographic quadrangle maps were obtained through EDR, including the 7.5 degree-minute quadrangle series and the 15 degree-minute quadrangle series (see Appendix 14.3 for the map excerpts).

It is possible that between two and four structures may have existed on the Property in the oldest topographic maps, dated 1943 and 1945, however the Property boundary is not easily ascertainable. Highway 29 is visible on both of the 1940s maps. The 1954 map shows evidence of two structure along the eastern boundary of the Property adjacent to Highway 29, where the home and storage shed currently exist; the northerly adjacent, Middletown Rancheria is also present. The structures on the Property are also evident on the 1959, 1980, 1993 and 1997 maps. The three westerly ponds are recorded on the 1980 map and all subsequent maps. The smaller pond on the northeastern area of the Property is recorded on the 1993 map and all subsequent maps. An additional, L-shaped building west of the two structures, as well as a fourth structure further west, are apparent on the 1993 and 1997 maps (Figure 4.4.1). No visual clues as to any possible recognized environmental conditions were found.

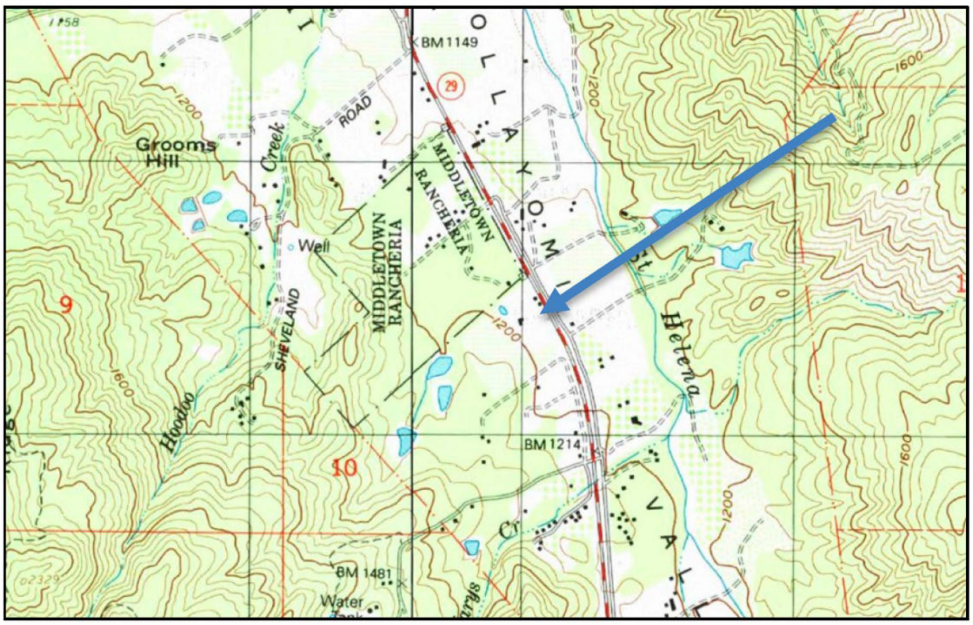

Figure 4.4.1. Excerpt of the USGS "Detert Reservoir" 7.5-minute quadrangle dated 1997, with subject property area denoted by arrow.

4.4.2.Aerial Photography Analysis

Historical aerial photographs of the Property were analyzed to determine the any of the following: current and historical land use; any current and historical structures, utilities, and roads; and any current or historical drum storage, above ground tanks, garbage dumps or landfills, or pits, ponds, or lagoons. A chronology of historical aerial photographs was obtained through EDR (see Appendix 14.3 for the photograph scans). The resolution of these maps was so coarse that only general land uses could be inferred. This constitutes a minor data failure.

Aerial photography does document the development of the Property and surrounding parcels. The 1942 aerial photograph and all subsequent photographs show evidence of farming or pastureland on the Property in the area where it currently exists today. The northeasterly pond is present in the 1956 photograph. Structures may be present on the Property in the 1970 photograph, centrally located within the pastureland area; two of the westerly ponds are also evident. The 1982 photograph shows all four ponds on the Property, and structures in similar locations and configurations in which they exist today. The vineyards on the easterly portion of the Property appear present in the 1982 photo; the resolution of the photographs makes the exact timing of their cultivation uncertain. The northerly adjacent Twin Pines Casino is evident in the 2005 photograph. No visual clues as to any possible recognized environmental conditions were found.

4.4.3.Fire Insurance (Sanborn Company) Maps

Fire insurance maps are historical city and building layout maps produced for private fire insurance companies (primarily by the former Sanborn Company). These historical city maps can indicate the presence of structures on, or uses of, properties at specified dates. EDR purchased the Sanborn Company, and provides any available fire insurance maps for the target address. EDR's Sanborn report indicated that there was no coverage of the Property by Sanborn maps, which is a minor data failure.

4.4.4.Building Permits

EDR queried the Middletown City building permit database (Appendix 14.3). EDR performed their Building Permit Report, but returned the conclusion of "data gap" as building permits were not available (Appendix 14.3).

4.4.5.City Directories

City directories have been published for cities and towns across the US since the 1700s. Originally a list of residents, the city directory developed into a tool for locating individuals and businesses in a particular urban or suburban area. Current directories are generally divided into three sections: a business index, a list of resident names and addresses, and a street index. With each address, the directory lists the name of the resident or, if a business is operated from this address, the name and type of business. While city directory coverage is comprehensive for large cities, it may be incomplete or unavailable for small towns and unincorporated, rural areas.

The target addresses was Highway 29 and Western Mine Road, Middletown, California. EDR found some listings in historical City Directories (Appendix 14.3). The Cole Information Services Directory Company indicates only one listing for the Property address of 22433 Highway 29: John B. Liscomb, 1992. None of the listings for surrounding properties give any evidence of industrial use or manufacturing. Surrounding property listings from 1992 until 2013 are primarily residential, with some commercial listings including the following categories: wineries, Twin Pines Casino, a veterinary hospital, and sporting goods stores. City directories review did not detect any indications of possible recognized environmental conditions.

4.5. HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Sanborn Maps, building permits, city directories, and topographic maps provided historical use information on adjoining properties, which were discussed in the preceding sections. Other historical use information on adjoining properties is summarized in other sections of this report.

5. SITE RECONNAISSANCE

The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property.

5.1. METHODOLOGY AND LIMITING CONDITIONS

The site visit is limited to visual and/or physical observation of the exterior and interior of the Property and its improvements, the past and current uses of the Property and adjoining properties, and the condition of the Property. The site visit evaluated the Property and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site visit did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, indoor air quality, or structural defects, or other non-scope items.

On May 31, 2021, Kristen Ahrens (Natural Investigations Company) performed a site reconnaissance of the Property. All accessible portions of the Property were observed by a pedestrian survey; adjoining properties were observed by a combination of pedestrian survey and windshield (automobile) survey. Photographic documentation accompanies the following summary of the site visit (Appendix 14.4). A previous site reconnaissance was conducted by Kristen Ahrens on March 31, 2017, as well as March 19, 2019.

5.2. EXTERIOR OBSERVATIONS

The following text discusses focus areas of the site reconnaissance. Poor housekeeping practices were noted on the Property at the time of the 2017 site reconnaissance, such as the presence of used oil containers not properly covered from rain. These are *de minimis* conditions.

5.2.1.Stained Soil / Distressed Vegetation / Odors

No stained soil, distressed vegetation, or unusual odors was noted during the site reconnaissance.

5.2.2.Roads

Roads surrounding the Property are all paved with asphalt or concrete, and show no suspicious staining other than *de minimis* quantities associated with parking stalls from parked automobiles that apparently leak engine fluids.

5.2.3.Wells / Potable Water Supply

A private groundwater well is located on the Property near Highway 29, northeast of the residence. Maps were provided of the Property which identify three additional wells; however, these wells were not identified during the site reconnaissance and only the well observed is in use.

5.2.4.Sewage Disposal System

Sewage for the residences is transported and treated via an on-site septic system.

5.2.5.Storage Tanks, Containers, or Drums

The following storage tanks / drum storage were noted on the Subject Property during the site reconnaissance: storage tanks relating to the septic system and agricultural irrigation. At the time of the 2017 site reconnaissance, a few 55-gallon drums of unknown contents were also observed. No evidence of a release of these materials was observed during site reconnaissance. Based on the lack of evidence of a release which could potentially impact the subsurface, Natural Investigations Co. does not consider the potential hazardous materials stored/used onsite to represent a recognized environmental condition. No

storage tanks or drum storage was noted on adjoining properties during the site reconnaissance. It is beyond the scope of this assessment to open any container.

5.2.6.Hazardous Substances and Petroleum Products

The following hazardous substances or petroleum product usage or storage was noted on the Subject Property during the site reconnaissance: propane tanks providing heat the residences, small quantities of motor oil, household cleaners, and paint products. The area around the vacant home on the southwestern Property showed evidence of poor housekeeping practices at the time of the 2017 site visit. This included piles of rubbish and an open container of paint and several other open, unlabeled containers of liquids.

No evidence of a release of these materials was observed during site reconnaissance. Based on the lack of evidence of a release which could potentially impact the subsurface and because of the small volumes of the containers, Natural Investigations Co. does not consider the hazardous materials stored/used onsite to represent a recognized environmental condition in connection with the subject property, but these are a de minimis concern.

5.2.7.Electrical or Mechanical Equipment Likely to Contain Fluids

Polychlorinated biphenyls, or PCBs, were commonly used historically in electrical equipment such as transformers, fluorescent lamp ballasts, and capacitors. According to United States EPA regulation 40 CFR, Part 761, there are three categories for classifying such equipment: <50 ppm of PCBs is considered “Non-PCB”; between 50 and 500 ppm is considered “PCB-Contaminated”; and >500 ppm is considered “PCB-Containing”. Pursuant to 15 U.S.C. 2605(e)(2)(A), the manufacture, process, or distribution in commerce or use of any polychlorinated biphenyl in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

No PCB-containing equipment (electric or hydraulic) was observed during the site reconnaissance. Pole-mounted transformers were observed in the vicinity, but appear to be modern and non-leaking. Overhead electrical service is provided by PG&E.

5.2.8.Pits / Ponds / Lagoons

No pits or lagoons were observed during the site reconnaissance. Four spring-fed ponds are located on the Property. Three of the ponds are present in the mostly undeveloped, southwesterly area of the Property and may have historically been used to irrigate the vineyards. A small creek connects the southern and northern ponds. Dense vegetation and areas of steep terrain surround the ponds. A fourth, smaller pond is located along the northern border of the Property, easterly of the vineyards. No evidence of discharges to the ponds were observed during the reconnaissance.

5.2.9.Storm Water / Pools of Liquid

The Property does not generate or discharge into a municipal stormwater sewer system. Roadside ditches are located in various areas.

5.2.10. Solid Waste

Municipal solid waste and recyclables generated on the Property and adjoining properties are collected in cans and hauled by South Lake Refuse.

5.3. INTERIOR OBSERVATIONS

At the time of the 2021 site reconnaissance, no interior observation of the residences were made; however, interior residential observation is beyond the scope of this assessment and does not constitute a limitation or data gap and is not necessary.

Natural Investigations Co. associate Kristen Ahrens was granted access to all interior spaces of the subject property at the time of the 2017 site reconnaissance, including residences. Small quantities of household cleaners, motor oil, and paints were observed in the homes and storage sheds. It is beyond the scope of this assessment to look behind walls or under the building or in the attic. No potential environmental concerns were detected during the interior walk-through.

5.4. LIMITATIONS

The western portion (27 acres) of the Property is undeveloped. Foot paths to the three western ponds allowed for pedestrian survey of portions of the undeveloped area; however, inability to penetrate thick vegetation prevented an exhaustive survey. There were no other limitations on the ability of the environmental professional to perform the site reconnaissance.

6. INTERVIEWS

ASTM Practice E1527-13 states that the objective of interviews is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property (ASTM 2013). The following text summarizes interviews performed and questionnaires answered.

6.1. INTERVIEW WITH OWNERS / SITE MANAGERS / OCCUPANTS

6.1.1.Interviews with Owners / Site Managers / Occupants

On March 31, 2017, Natural Investigations associate Kristen Ahrens conducted an interview of the current property tenant, Julie Willis. The interview lasted for approximately fifteen minutes and was conducted on the Property at the time of the site reconnaissance. Ms. Willis indicated that she and her family have been tenants on the Property for the past sixteen years. She has been a lifelong resident of the community and her family was aware of previous operations on the Property. According to Ms. Willis, the Property had operated as a chicken farm from the 1930s to 1950s and pastureland for horses in the 1960s. She stated that the vineyards on the Property had been abandoned approximately ten years ago. Ms. Willis stated that the private well on the Property is approximately 30 feet deep and is tested regularly; no contaminants have been identified. Ms. Willis had no knowledge of recognized environmental conditions associated with the Property.

6.1.2.Landowner Questionnaire of Hazards / Hazardous Substances

On April 17, 2017, questionnaire entitled “Landowner Questionnaire of Hazards / Hazardous Substances” was completed by Justin Lond, the EPA director for the Middletown Rancheria of Pomo Indians. He had no knowledge of any recognized environmental conditions associated with the Property. This hazardous materials questionnaire was also completed by the Property tenant in 2017, Julie Willis, on March 31, 2017 (see Appendix 14.5). All of the questions were answered with a “no” except for a “yes” response regarding the on-site private well, and two questions which were unknown to Ms. Willis. This indicates that the respondents had no knowledge of recognized environmental conditions associated with the Property. A follow-up questionnaire was e-mailed to the Tribe on May 28, 2021. This produced no new information.

7. FINDINGS

The Subject Property is located in a rural setting that has no known industrial history but has an extensive agricultural history (vineyard and pasture), which may have included the use of pesticides. There is evidence of current usage of household quantities of hazardous materials, and the presence of some rubbish.

7.1. RATIONALE FOR DETERMINATION OF SIGNIFICANT FINDINGS

Offsite properties identified in the vicinity of the Property were evaluated to determine if they are likely to have adversely affected the Property. The criteria used to evaluate whether an offsite property pose potential environmental concerns to the Property include:

- Distance from the Property: Offsite properties within one-quarter mile of the Property were evaluated. The one-quarter-mile radius was used because it is unlikely a hazardous material released to the subsurface will migrate laterally within the soil for a significant distance, although in some cases, a hazardous material can migrate in groundwater in a generally downgradient direction for distances greater than one-quarter mile.
- Expected depth and direction of groundwater and surface water flow: The identification of a site as potentially upgradient or downgradient is based on the expected direction of groundwater flow determined by site-specific measurement, where available, or inferred from the regional topography.
- The presence of documented contaminant releases at the identified sites.
- The media that the documented contaminant releases affected (i.e., soil and/or groundwater). For the evaluation of potential environmental contamination in the Property, offsite properties with releases to soil only are assumed to pose no significant impact on the Property, as the contaminants are unlikely to migrate towards the Property.

Based on the review and evaluation of information available in the environmental databases and regulatory agency files, no adverse environmental effect is expected for vicinity sites that have some or all the following conditions:

- the identified vicinity sites are in assumed down-gradient or cross-gradient locations
- the identified vicinity sites have obtained case closure
- the identified vicinity sites were contained at the ground surface, or releases to the subsurface affected soil only, in which case the contaminants are unlikely to migrate towards the Property in groundwater.
- offsite properties located further than one-quarter mile from the Property are not expected to adversely affect the Property conditions, as it is unlikely a hazardous material released to the subsurface will migrate laterally within the soil for a significant distance, although a hazardous material can migrate in groundwater in a generally downgradient direction.

7.2. VAPOR ENCROACHMENT SCREENING

ASTM Practice E1527-13 requires subsurface vapor migration to be evaluated as a possible contaminant pathway in the identification of a recognized environmental condition. However, ASTM Practice E1527-13 does not require any risk analysis to building occupants of vapor intrusion or the performance of a vapor encroachment screening. The USEPA defines vapor intrusion as "*the migration of volatile chemicals from the subsurface into overlying buildings. Volatile chemicals in buried wastes and/or contaminated groundwater can emit vapors that may migrate through subsurface soils and into indoor air spaces of overlying buildings in ways similar to that of radon gas seeping into homes*." (USEPA 2010, page 4). Volatile chemicals include volatile and semivolatile organic compounds as well as some inorganic substances such as hydrogen sulfide and radon (although radon is an out-of-scope item in this assessment).

The USEPA recommends evaluating vapor intrusion under certain circumstances:

> "*The draft guidance is suggested for use at RCRA Corrective Action, CERCLA (National Priorities List and Superfund Alternative Sites), and Brownfields sites, but is not recommended for use at Subtitle I Underground Storage Tank (UST) sites at this time. The draft guidance recommends certain conservative assumptions that may not be appropriate at a majority of the current 145,000 petroleum releases from USTs. As such, the draft guidance is unlikely to provide an appropriate mechanism for screening the vapor pathway at UST sites. We recommend that State and Regional UST corrective action programs continue to use a risk based decision making approach as described in OSWER Directive 9610.17: Use of Risk-Based Decision Making in UST Corrective Action Program to address this pathway. A majority of State programs are successfully implementing this directive at their UST cleanups and use the recommended approaches where appropriate, to prioritize and remediate their sites, including risk associated with vapor migration to indoor air in a manner that is protective of human health and the environment*." (USEPA 2010, page 2)

USEPA (2010) guidance describes Tier 1 – Primary Screening as having the following components: a) if chemicals of sufficient volatility and toxicity are present or reasonably suspected to be present; b) if inhabited buildings are located (or will be constructed under future development scenarios above or in close proximity to subsurface contamination; and c) if current conditions warrant immediate action. ASTM also provides guidance in the E2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions. A vapor encroachment assessment was not deemed necessary at this time.

It should be noted that Leaking Underground Storage Tank and DTSC EnviroStor sites closed by the RWQCB or local agencies prior to April 1, 2008, would not necessarily have been closed based on a risk assessment that considered volatile organic compounds and the vapor intrusion pathway. Assembly Bill 422, which now requires such a risk assessment, did not take effect until January 1, 2008.

7.3. *DE MINIMIS* ENVIRONMENTAL CONDITIONS

De minimis environmental conditions are conditions that are not believed to present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (ASTM 2013).

No minimal, or *de minimis*, environmental condition(s) exists pursuant to the ASTM Practice E1527-13 except for:

- usage of household quantities of hazardous materials, poor housekeeping practices, and the improper disposal of rubbish
- the possible presence of residual pesticides in soils, especially in pesticide handling areas of farm operations. Historical agricultural enterprises have probably stored, handled, and applied pesticides on the vineyards and pastures. Pesticide residues may persist in soils of the Property. However, this assessment found no specific indication of soil or water contaminated with pesticides. Natural attenuation may reduce such residual pesticides to undetectable levels. Residual pesticides from historical pesticide usage may also be diluted or buried during earth-moving (grading and building) if the Property were to be developed.

7.4. HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

ASTM Practice E1527-13 defines a historical recognized condition as:

> "*...an environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently. The final decision rests with the environmental professional and will be*

> *influenced by the current impact of the historical recognized environmental condition on the property. If a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a no further action letter or equivalent), this condition shall be considered an historical recognized environmental condition*." (p. 5, ASTM 2013)

No historical recognized environmental conditions were found in connection with the Property pursuant to the ASTM Practice E1527-13.

7.5. KNOWN OR SUSPECT RECOGNIZED ENVIRONMENTAL CONDITIONS

No recognized environmental conditions were found in connection with the Property pursuant to the ASTM Practice E1527-13.

8. OPINION AND RECOMMENDATION

8.1. IMPACT OF ENVIRONMENTAL CONDITIONS ON PROPERTY

It is the Environmental Professional's opinion that there are no current recognized environmental conditions, in connection with the Property pursuant to the ASTM Practice E1527-13. Records review, site reconnaissance, and interviews failed to identify any current environmental conditions in connection with the Property.

8.2. ADDITIONAL INVESTIGATION

It is the Environmental Professional's opinion that there are no historical or current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E1527-13. Records review, database searches, or interviews failed to identify any environmental conditions in connection with the Property. Therefore, no further site investigation is recommended.

8.3. DATA GAPS OR DELETIONS

ASTM Practice E1527-13 defines data failure as the failure to achieve the historical research objectives even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. ASTM Practice E1527-13 defines a data gap as a lack, of or inability to obtain, information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.). The available historical USGS quadrangle maps and aerial photography were too coarse in resolution to discern all specific land uses or structures on the Property or adjacent properties. These constitute data failures. Another data failure was no coverage by Sanborn Maps. However, a combination of other historical data sources was available such that no significant data gap existed, and the historical research objectives were achieved. There were no deletions from the ASTM Practice E1527-13.

9. CONCLUSIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 of the property at 22433 Highway 29, Middletown, California, APN 014-005-34. Any exceptions to, or deletions from, this practice are described in Sections 1.3 and 8.3 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with Property.

10. ADDITIONAL SERVICES

No additional services beyond the scope of the ASTM Practice E1527-13 were conducted as part of this assessment.

There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside the scope of this practice. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive: asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents, and mold.

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. Natural Investigations Company offers a range of investigative and consulting services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the User understand and better manage risks associated with their property. Since such detailed services involve greater expense and time, we ask that our clients participate in the identification of the level of service that will provide them with what they consider to be an acceptable level of risk. Please contact the signatory of this report if you would like to discuss the issue of risk further. Land use, site conditions, and other factors will change over time. This report should not be relied upon after 180 days from the date of issuance, unless additional services are performed as defined in Section 4.6 of ASTM E1527-13.

11. REFERENCES

American Society for Testing and Materials. 2010. Standard Guide for Vapor Encroachment Screening On Property Involved In Real Estate Transactions. Designation E2600-10. West Conshohocken, Pennsylvania. 33 pp.

American Society for Testing and Materials. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E 1527-13. West Conshohocken, Pennsylvania. 47 pp.

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Department of Toxic Substances Control. 2019. EnviroStor Database Website. Available on the Internet at: http://www.envirostor.dtsc.ca.gov/public/.

State Water Resources Control Board. 2019. GeoTracker Database Website. Available on the Internet at: http://geotracker.swrcb.ca.gov/.

USEPA. 2002. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). EPA530-D-02-004. Office of Solid Waste and Emergency Response. 178 pp. Available on the Internet at: http://www.epa.gov/epawaste/hazard/correctiveaction/eis/vapor.htm.

USEPA. 2019. Envirofacts Data Warehouse Multisystem Query Website. Available on the Internet at: http://www.epa.gov/enviro/html/multisystem.html.

USEPA. 2019. The Enforcement and Compliance History Online (ECHO) database maintained by the USEPA. Available on the Internet at: http://echo.epa.gov/?redirect=echo.

12. SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

As required by 40 CFR 312.21(d), this report shall include the following statements of the environmental professional responsible for conducting the Phase I ESA and preparation of the report (page 22, ASTM 2013):

> *I declare that, to the best of my professional knowledge, I meet the definition of 'Environmental Professional' as defined in §312.10 of 40 CFR.*
>
> *I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.*

G. O. Graening, PhD, MSE
Environmental Assessor

13. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Dr. Gary O. Graening was certified by California Department of Toxic Substances Control as a Registered Environmental Assessor I (registration # 08060,) from 2005 to 2012, after which DTSC retired the certification program. Dr. Graening holds a PhD in Biological Sciences and a Master of Science in Engineering. Dr. Graening has over 16 years of experience in environmental research and site assessment, including preparation of program-level Phase I ESAs, limited Phase II investigations, as well as environmental impact assessments for National Environmental Policy Act compliance and California Environmental Quality Act compliance. Dr. Graening has completed the 40-hour OSHA Hazardous Waste Operations and Emergency Response certification (with 8-hour annual refresher courses). Dr. Graening's full résumé, and the Company's statement of qualifications, is available on the Internet at the Company's website: www.naturalinvestigations.com.

14. APPENDICES

Available on Request

PHASE I ENVIRONMENTAL SITE ASSESSMENT
OF THE SCOTT PROPERTY AT
22033 SOUTH STATE HIGHWAY 29, MIDDLETOWN, CALIFORNIA

August 7, 2021

Prepared for:

The Middletown Rancheria Tribe of Pomo Indians of California

Prepared by:

G. O. Graening, PhD, MSE and Kristen Ahrens, M.S.

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SUMMARY

This report presents the findings of a Phase I Environmental Site Assessment (ESA) for the property at 22033 South State Highway 29, Middletown, California, Assessor Parcel Number (APN) 014-160-09 and 014-160-05 (Property). Natural Investigations Company, Inc., has performed this Phase I ESA in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E1527-13 and in accordance with the prevailing standard of care for completing such assessments in California at this time. Exceptions to, or deletions from, this practice are described in Sections 1.3 and 8.3 of this report.

The Property consists of rural residences on the western portion of the parcel and an overflow parking area for the Twin Pines Casino on the eastern area of the parcel. The remainder of the Property is open space.

No environmental liens or value reductions were found in association with the Property. No indication of heavy industrial uses was detected from title review. The Property was not listed in any of the environmental databases queried, except for an NPDES permit, which is probably associated with wastewater or the off-site disposal of small quantities of hazardous materials. County (CUPA) records revealed no case files associated with the Property; the only documents available were related to domestic wells.

A review of physical setting sources and historical use information (topographic maps, aerial photography, fire insurance maps, city directories, and building permits) did not detect any indications of possible recognized environmental conditions on the Property. A site reconnaissance was performed on May 31, 2021; no indications of possible recognized environmental conditions were noted on the Property.

Information about past owners, operations or occupants was not reasonably ascertainable and constitutes a data gap. There were a few minor data failures with the physical setting and historical information sources. However, a combination of other data sources was available such that no significant data gap existed, and the historical research objectives were achieved. There were no data gaps that significantly affected our ability to identify recognized environmental conditions associated with the Property.

Except for the limitations and exceptions discussed in Sections 1.3 and 8.3, this Phase I ESA complies with the ASTM Practice E1527-13. No additional services beyond the scope of the ASTM Practice E1527-13 were conducted as part of this assessment.

One minimal, or *de minimis*, environmental condition(s) exists pursuant to the ASTM Practice E1527-13:

- *de minimis* quantities of petroleum product staining on paved surfaces associated with parking stalls from parked automobiles that apparently dripped engine fluids.

One historical recognized environmental condition was found in connection with the Property pursuant to the ASTM Practice E1527-13:

- groundwater was contaminated with gasoline and its additives (e.g. benzene) on the eastern portion of the Property from the Nella Oil Company tanker spill in 2005. Remediation of the spill was implemented and the contaminant plume reduced enough to close the case. Water quality sampling of monitoring wells on the Property indicated that chemicals of concern were at, or below, detection limits.

It is the Environmental Professional's opinion that there are no current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E1527-13. Records review, database searches, or interviews failed to identify any current environmental conditions in connection with the Property. Therefore, no further site investigation is recommended.

The exception would be if groundwater under the property is to be pumped and used. Because historical contamination from the Nella Oil Spill SLIC case contaminated groundwater under the Property, and even though the spill was remediated, Natural Investigations Co. does not recommend the use of groundwater under the Property before testing. A Phase II Environmental Site Assessment should be performed before use of groundwater under the Property.

This summary should only be read in conjunction with the full text of the report. The scope of work, significant assumptions, limitations, and exceptions should be understood prior to reading the site-specific information, findings, opinions, and conclusions. Except for any limitations and exceptions discussed in Section 1.3, this Phase I ESA complies with the ASTM Practice E1527-13. No additional services beyond the scope of the ASTM Practice E1527-13 were conducted as part of this assessment.

1. INTRODUCTION

1.1. PURPOSE

ASTM Practice E1527-13 defines the purpose of the Phase I ESA as quoted:

> "*The purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)(42 U.S.C. §9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the 'landowner liability protections,' or 'LLPs'): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 USC § 9601(35)(B)*." (page 1, ASTM 2013).

In 2002, the Small Business Liability Relief and Brownfields Revitalization Act was passed, and it directed the United States Environmental Protection Agency (USEPA) to promulgate a rule defining due diligence for compliance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This rule, which is generally referred to as All Appropriate Inquiry, was adopted in 2005. ASTM Practice E1527-13 complies with the USEPA requirements for All Appropriate Inquiry, and in some cases, is more stringent than All Appropriate Inquiry.

1.2. GOALS AND DETAILED SCOPE OF SERVICES

ASTM Practice E1527-13 describes the goals and general scope of services in the following excerpts:

> "*In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of a property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.* De minimis *conditions are not recognized environmental conditions*." (page 1, ASTM 2013).

> "*The scope of this practice includes research and reporting requirements that support the user's ability to qualify for the LLPs. As such, sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice must be provided in the written report*." (page 2, ASTM 2013).

The general scope of services of a Phase I ESA has four components: records review; site reconnaissance; interviews; and report (page 12, ASTM 2013). The scope of services was limited to a qualitative evaluation of environmental conditions of the Property. The detailed scope of services performed for this Phase I ESA consists of the following tasks:

- Records Review.
  - Summarize physical setting (e.g. soils, geology, hydrogeology, surface water)
  - Historical USGS topographic map and aerial photograph sequence analyses
  - Spatial query of SWRCB's GeoTracker database and DTSC's EnviroStor database
  - Query of federal, state, and private environmental databases
  - Review and summary of title research, as necessary
  - Building permit review, as necessary
  - Environmental case file reviews at County / CUPA offices, as necessary
  - Summary of any previous environmental reports, where available
- Site Reconnaissance
  - Visual inspection of the Property

  - Photographic documentation
- Interviews
  - Interview current and historical property owners and occupants, or have them fill out a standard environmental questionnaire, where possible
  - As needed, contact and interview neighbors, or regulatory agencies via form letter, phone conversations, and/or personal interviews
  - Documentation of all correspondence
- Report Preparation
  - Provide all supporting documentation, to state the findings of the records reviews, site reconnaissance, and interviews, to give an official opinion of the impact upon the Property of known or suspect environmental conditions, and to state conclusions and provide a report signed by a Qualified Professional.

The scope of services does not include other services that are not described in this report. Section 1.3 details significant assumptions, limitations, and exceptions to the performance of this Phase I ESA.

1.3. LIMITING CONDITIONS, DEVIATIONS, EXCEPTIONS, SIGNIFICANT ASSUMPTIONS, AND SPECIAL TERMS AND CONDITIONS

ASTM Practice E1527-13 cites many assumptions, limitations, and exceptions in the performance of a Phase I ESA. Some of the most important are quoted in the following excerpts:

> "*This practice does not address whether requirements in addition to all appropriate inquiries have been met in order to qualify for the LLPs (for example, the duties specified in 42 U.S.C. § 9607(b)(3)(a) and (b)*." (page 1, ASTM 2013).
>
> "*This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Users are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance*." (page 1, ASTM 2013).
>
> "*Uncertainty Not Eliminated—No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost*." (page 10, ASTM 2013).
>
> "*Not exhaustive—Appropriate inquiry does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information*." (page 10, ASTM 2013).
>
> "*Level of Inquiry is Variable—Not every property will warrant the same level of assessment. Consistent with good commercial or customary practice, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry*" (page 10, ASTM 2013).
>
> "*This practice does not include any testing or sampling of materials (for example, soil, water, air, building materials*." (page 13, ASTM 2013).
>
> "*There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside of the scope of this practice (the non-scope considerations). As*

noted by the legal analysis in Appendix X1 of this practice, some substances may be present on the property in quantities and under conditions that may lead to contamination of the property or of nearby properties but are not included in CERCLA's definition of hazardous substances (42 U.S.C. § 9601(14)) or do not otherwise present potential CERCLA liability. In any case, they are beyond the scope of this practice." (pages 22-23, ASTM 2013).

"*Whether or not a user elects to inquire into non-scope considerations in connection with this practice or any other environmental site assessment, no assessment of such non-scope considerations is required for appropriate inquiry as defined by this practice*." (page 23, ASTM 2013).

"*There may be standards of protocols for assessment of potential hazards and conditions associated with non-scope conditions developed by governmental entities, professional organizations, or other private entities*." (page 23, ASTM 2013).

"*Following are several non-scope considerations that persons may want to assess in connection with commercial real estate...No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive: asbestos-containing materials; biological agents; cultural and historical resources; ecological resources; endangered species; health and safety; indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment; industrial hygiene; lead-based paint; lead in drinking water; mold; radon; regulatory compliance; and wetlands*." (page 23, ASTM 2013).

Natural Investigations Company, Inc. made the following assumptions in the preparation of this Phase I ESA:

- Groundwater Flow Direction – we interpreted and inferred the direction of the shallow groundwater movement based on the information we obtained and our experience. Actual groundwater flow may be locally influenced by many factors beyond the scope of this assessment. Subsurface investigation and modeling would be necessary to determine site-specific groundwater flow direction.
- Regulatory Agency Information – we considered all information provided by EDR, GeoTracker, EnviroStor, and CUPA records regarding regulatory status of facilities to be complete, accurate, and current.
- When provided with a current title report prepared by a reputable title company, we assumed that a separate chain-of-title research effort was redundant to identify any environmental liens or previous landowners with names indicative of industrial uses.
- Interviews – we considered all information provided through interviews to be complete, unbiased, and provided in good faith.

Natural Investigations Company, Inc., as an independent and impartial contractor, has completed this Phase I ESA in accordance with ASTM Practice E1527-13 and in accordance with the prevailing standard of care for completing such assessments in California at this time. Natural Investigations Company shall not be subject to any express or implied warranties whatsoever. Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems and will not eliminate all risk. This report is a qualitative assessment. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the User understand and better manage risks associated with the Property. No warranty, either expressed or implied, is made. Land use, site conditions, and other factors will change over time. This report should not be relied upon after 180 days from the date of issuance, unless additional services are performed as defined in ASTM Practice E1527-13, Section 4.6.

The property owner is solely responsible for notifying all governmental agencies, and the public at large, of the existence, release, treatment, or disposal of, any hazardous substance or petroleum product occurring on the Property, either before, during, or after Natural Investigation Company's services. Natural Investigation Company assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury which results from pre-existing materials being encountered or being present on the Property, or from the discovery of such hazardous substances or petroleum products.

This report and other instruments or service are prepared and made available for the sole use of the User and their agents. The contents may not be used or relied upon by any other persons without the express written consent and authorization of the User.

There are no special terms or contractual conditions for this assessment. There were no limiting conditions or deviations from the ASTM Practice E1527-13 in the preparation of this Phase I ESA. There were no client/User-imposed constraints on the preparation of this Phase I ESA.

Any data gaps are listed in Section 8.3.

1.4. INFORMATION RELIANCE

ASTM Practice E1527-13 defines information reliance as:

> "*An environmental professional is not required to verify independently the information provided but may rely on information provided unless he or she has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained in the Phase I Environmental Site Assessment or otherwise actually known to the environmental professional*." (page 13, ASTM 2013).

This report is for the sole benefit and exclusive use of the User in accordance with the contract under which these services have been provided. It is possible that information exists beyond the scope of this assessment. Additional information, which was not found or available to Natural Investigations Company at the time of report preparation, may result in a modification of the conclusions and recommendations presented herein. Any reliance on this report by third parties shall be at their own risk.

2. SITE DESCRIPTION

2.1. LOCATION AND LEGAL DESCRIPTION

The subject property ("Property") of this Phase I ESA is two parcels with address of 22033 South State Highway 29: APN 014-160-09, 8.39 acres and APN 014-160-05, 0.46 acres. The Property is bounded by Highway 29 and vineyards to the east and Twin Pines Casino to the south in the Census Designated Place of Middletown, Lake County, California (Figure 2.1.1). The Property consists of one parcel with an area of approximately 8.39 acres, and is used for rural residences and overflow parking for Twin Pines Casino. The Lake County Assessor's office assigns this parcel land use code RR-SC with the description of rural residential district-scenic combining district.

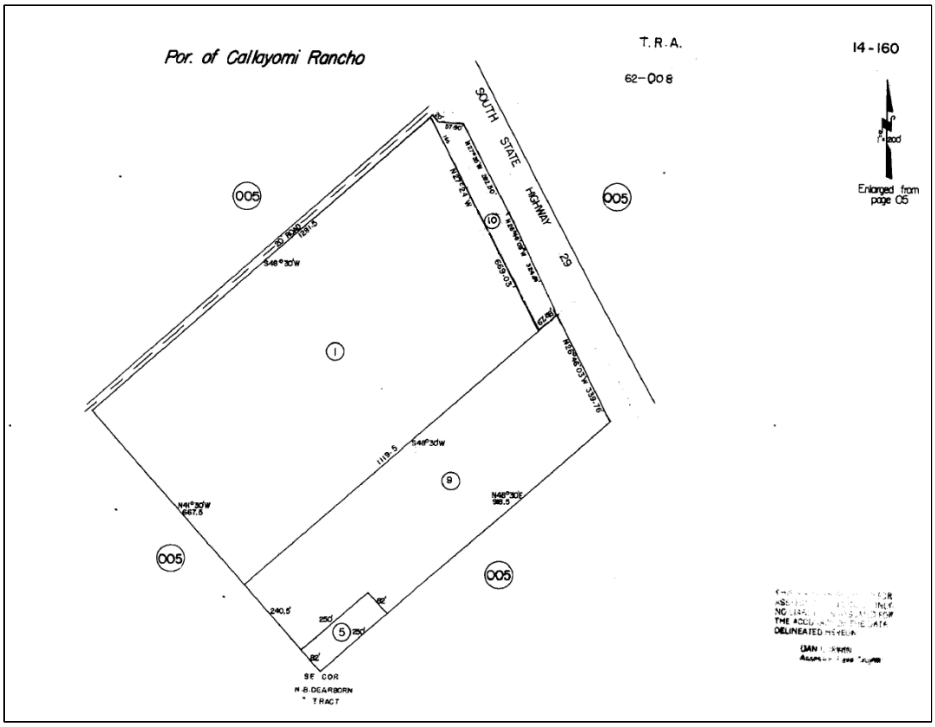

Figure 2.1.1. Assessor's Parcel Map, with subject property outlined in red.

2.2. SITE AND VICINITY GENERAL CHARACTERISTICS

The Property is located in the Census Designated Place of Middletown in an area zoned for agricultural, rural residential, and commercial purposes.

2.3. CURRENT USE OF THE PROPERTY AND IMPROVEMENTS

There are several rural residences on the western-southwestern portion of the Property. An overflow parking area for the Twin Pines Casino is present on the eastern portion of the Property. The remainder of the Property is open space.

Figure 2.3.1. Oblique aerial photo, view looking west of subject property and surrounding properties (Google Maps).

2.4. CURRENT USES OF ADJOINING PROPERTIES

The parcels surrounding the Property are used for a mixture of agricultural, residential, and commercial purposes. To the north are rural residences and pastureland, and to the south is Twin Pines Casino. Pastureland and open space are west of the Property, while Highway 29 and vineyards are present to the east.

3. USER-PROVIDED INFORMATION

The "User" is defined as the party seeking to use ASTM Practice E1527-13 to complete an environmental site assessment of the Property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice outlined in Section 6 of ASTM Practice E1527-13.

In the case of this assessment, the User is the Middletown Rancheria Tribe of Pomo Indians of California and the U.S. Bureau of Indian Affairs.

3.1. USER'S RESPONSIBILITIES

User's responsibilities are defined by the ASTM E1527-13 standard, and include the following, as quoted:

> "*Any environmental liens and AULs known to the user should be reported to the environmental professional conducting a Phase I Environmental Site Assessment. Unless added by a change in the scope of work to be performed by the environmental professional, this practice does not impose on the environmental professional the responsibility to undertake a review of recorded land title records and judicial records for environmental liens and AULs. The user should either (1) engage a title company, real estate attorney, or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens and AULs currently recorded against or relating to the property, or (2) negotiate such an engagement of a title company, real estate attorney, or title professional as an addition to the scope of work of the environmental professional*." (page 12, ASTM 2013)
>
> "*Specialized Knowledge or Experience of the User—Users must take into account their specialized knowledge to identify conditions indicative of releases or threatened releases. If the user has any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property, the user should communicate any information based on such specialized knowledge or experience to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance*." (page 12, ASTM 2013)
>
> "*Actual Knowledge of the User—If the user has actual knowledge of any environmental lien or AULs encumbering the property or in connection with the property, the user should communicate such information to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance*." (page 12, ASTM 2013)
>
> "*Reason for Significantly Lower Purchase Price—In a transaction involving the purchase of a parcel of commercial real estate, the user shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The user should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property was not contaminated, and make a written record of such explanation. Among the factors to consider will be the information that becomes known to the user pursuant to the Phase I Environmental Site Assessment. This practice does not require that a real estate appraisal be obtained in order to ascertain fair market value of the property. The user should inform the environmental professional if the user believes that the purchase price of the property is lower than the fair market value due to contamination. The user is not required to disclose the purchase price to the environmental professional*." (page 12, ASTM 2013)
>
> "*Commonly Known or Reasonably Ascertainable Information—Commonly known or reasonably ascertainable information within the local community about the property must be taken into account by the user. If the user is aware of any commonly known or reasonably ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, the user should communicate such information to the environmental professional. The user should do so before the environmental professional conducts the site reconnaissance. The user must gather such information to the extent necessary to identify conditions indicative of releases or threatened releases of hazardous substances or petroleum products*." (page 12, ASTM 2013)

> "*Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I Environmental Site Assessment performed or, if the user does not identify the purpose of the Phase I Environmental Site Assessment, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report*." (page 12, ASTM 2013).

In order to exert an LLP, the User must satisfy a number of statutory requirements that are generally referred to as Continuing Obligations, which are outside the Scope of Services of the Phase I ESA. Examples of Continuing Obligations include providing legally required notices stopping continuing releases and complying with land use restrictions. Failure to comply with these and other statutory post-acquisition requirements will jeopardize liability protection. It is the responsibility of the User to comply with the Continuing Obligations requirements of ASTM Practice E1527-13 and All Appropriate Inquiry.

3.2. REQUESTED DOCUMENTS AND INFORMATION

The following documents and information were requested of User and the landowners:

- Title reports
- Previous environmental site assessments or environmental compliance audit reports
- Environmental permits or hazardous waste generator notices/reports
- Registrations for aboveground or underground storage tanks
- Location of septic systems, oil wells, monitoring wells, or water wells
- Registrations for underground injection systems
- Material Safety Data Sheets; Community Right to Know Plans or Safety, Preparedness and prevention Plans; Spill Protection, Countermeasures and Control Plans
- Hazardous Material Business Plans
- Geotechnical studies or hydrological studies
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property
- Risk assessments
- Recorded Activity Use Limitations
- Proceedings regarding hazardous substances and petroleum products including any pending, threatened or past: litigation; administrative proceedings; or notices from any governmental entity regarding possible violations of environmental laws or other possible liability related to hazardous substances or petroleum products.

No documents specific to the Property were provided in response to Natural Investigations' information request.

3.3. TITLE RECORDS

No title reports were provided to Natural Investigations Co. EDR was commissioned to search for title liens and to build chain of title (see Appendix 14.1). One grant deed was available, which listed the owner as the Middletown Rancheria of Pomo Indians of California; the title was transferred from David G. and Emily Scott in April 2019. EDR's Environmental LienSearch Report detected no liens (see Appendix 14.1). No indication of heavy industrial uses was detected from title review. No environmental liens were identified from this title review, but the search was not exhaustive.

3.4. ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

An environmental lien is a charge, security, or encumbrance upon the title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon the property. No environmental liens or activity and use limitations were made aware to Natural Investigations Company. No evidence of environmental liens was identified during the interview process, title review, or records review. EDR was

commissioned to search for title liens. EDR's Environmental LienSearch Report detected no liens (see Appendix 14.1).

3.5. SPECIALIZED KNOWLEDGE OR ACTUAL KNOWLEDGE

No specialized knowledge or actual knowledge that is material to recognized environmental conditions in connection with the property was provided by the User to Natural Investigations Company.

3.6. VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

No valuation reductions for environmental issues were made aware to Natural Investigations Company. No valuation reductions were identified during the interview process or by the title review.

3.7. OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The owner of the Property is the Middletown Rancheria Tribe of Pomo Indians of California. The property is operated as rural residences and a parking area associated with the southerly adjacent Twin Pines Casino.

3.8. REASON FOR PERFORMING PHASE I ESA

Natural Investigations Company performed this Phase I ESA at the request of Josh Ferris (Origin Environmental Planning, Inc.), for use in the environmental regulation/compliance process for fee-to-trust transfer of the Property. Origin Environmental Planning, Inc. is the environmental consultant for the Middletown Rancheria of Pomo Indians of California.

4. RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the property.

4.1. STANDARD ENVIRONMENTAL RECORD SOURCES

As part of this assessment, Natural Investigations Company retained the services of Environmental Data Resources, Incorporated (EDR), which queries and maintains comprehensive environmental databases and historical information, including proprietary databases, aerial photography, topographic maps, Sanborn Maps, and city directories. EDR's Phase I ESA standard package - "Radius Map with GeoCheck" was ordered and performed on June 1, 2021. In this report, EDR presents the results of searches of all reasonably ascertainable environmental databases (federal, state, local, and private) for records of potential environmental impacts of the Property and vicinity. EDR performed these database searches within the prescribed radii of ASTM Practice E1527-13. The databases queried by EDR included the following:

> Federal ASTM Standard and Supplemental – National Priority List (NPL); proposed NPL; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); CERCLIS No Further Remedial Action Planned; Corrective Action Report; Resource Conservation and Recovery Act (RCRA) Information; RCRA Large Quantity Generator; Emergency Response Notification System; Superfund Consent Decrees; Records of Decision; NPL Deletions, Hazardous Materials Information Reporting System; Material Licensing Tracking System; Mines Master Index File; Federal Superfund Liens; PCB Activity Database System; Department of Defense Sites; Indian Reservations; Uranium Mill Tailings Sites; Engineering Controls Sites List; Open Dump Inventory; Formerly Used Defense Sites; RCRA Administrative Action Tracking System; Toxic Chemical Release Inventory System; Toxic Substances Control Act (TSCA); Section 7 Tracking Systems; Federal Insecticide, Fungicide, and Rodenticide Act / TSCA; US Brownfields; US Institutional Control Sites; Voluntary Clean-up Program Properties; State ASTM Standard and Supplemental – Proposition 65 Records; Toxic Pits Cleanup Act Sites; Bond Expenditure Plan; List of Underground Storage Tank (UST) Facilities; Voluntary Cleanup Program Facilities; Leaking UST on Indian Land; UST on Indian Land; Waste Discharge System; Deed Restriction Listing; Properties Needing Further Evaluation; No Further Action Determination; Well Investigation Program Case List; Emissions Inventory Data; School Property Evaluation Program; Former Manufactured Gas Sites.

The complete EDR Radius Map report is provided in Appendix 14.2. Results are summarized in EDR's overview map (Figure 4.1.1) and detail map (Figure 4.1.2); numbered elements in EDR's maps correspond to numbered cases in EDR's report. The Property was listed in one of the databases queried by EDR: the National Pollutant Discharge Elimination System (NPDES). This may be related to municipal waste water or stormwater or disposal of minor amounts of hazardous chemicals. Some properties in the vicinity of the Property are also listed on various databases, as summarized in EDR's Executive Summary. The case closest to the Property (Nella Oil Company) is detailed further in Section 4.2.2.1. The other mapped sites (presented below) document the current or historical presence of underground storage tanks within a mile of the Property.

MAPPED SITES SUMMARY

Target Property Address:
22033 SOUTH STATE HIGHWAY 29
MIDDLETOWN, CA 95461

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	TWIN PINES CASINO PA	22033 STATE HWY 29	NPDES		TP
2	NELLA OIL COMPANY	HIGHWAY 29	CPS-SLIC, CERS	Higher	221, 0.042, East
3	UNCLE BUDDY'S PUMPS	22223 SOUTH HIGHWAY	RCRA-VSQG	Higher	989, 0.187, ESE

It should be noted that the computerized geocoding technology used in the database search is based on available census data and is only accurate to ±300 feet. The EDR report indicates that poor or inadequate address information was provided for various properties that are potentially located in the vicinity of the Property; therefore, these sites could not be readily mapped by EDR. Because the location of these sites with respect to the Property could not be determined, the evaluation of the unmappable sites is limited in terms of determining the potential impact on the Property. Although the list of the unmappable sites was reviewed for adjacent or nearby properties observed during the site reconnaissance, locating each of the unmapped sites identified by EDR is not considered practicable.

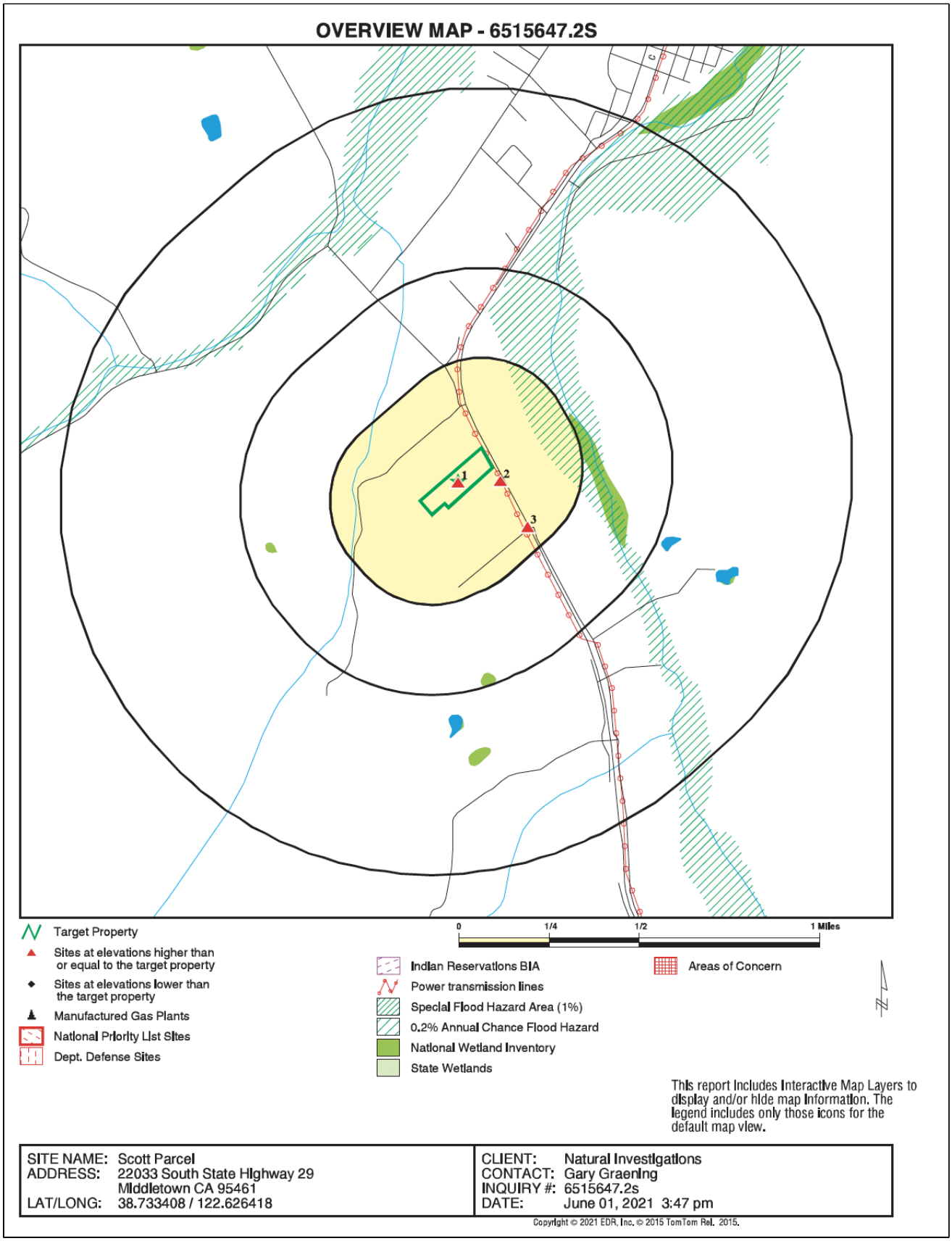

Figure 4.1.1. Overview map from EDR's Radius Map report

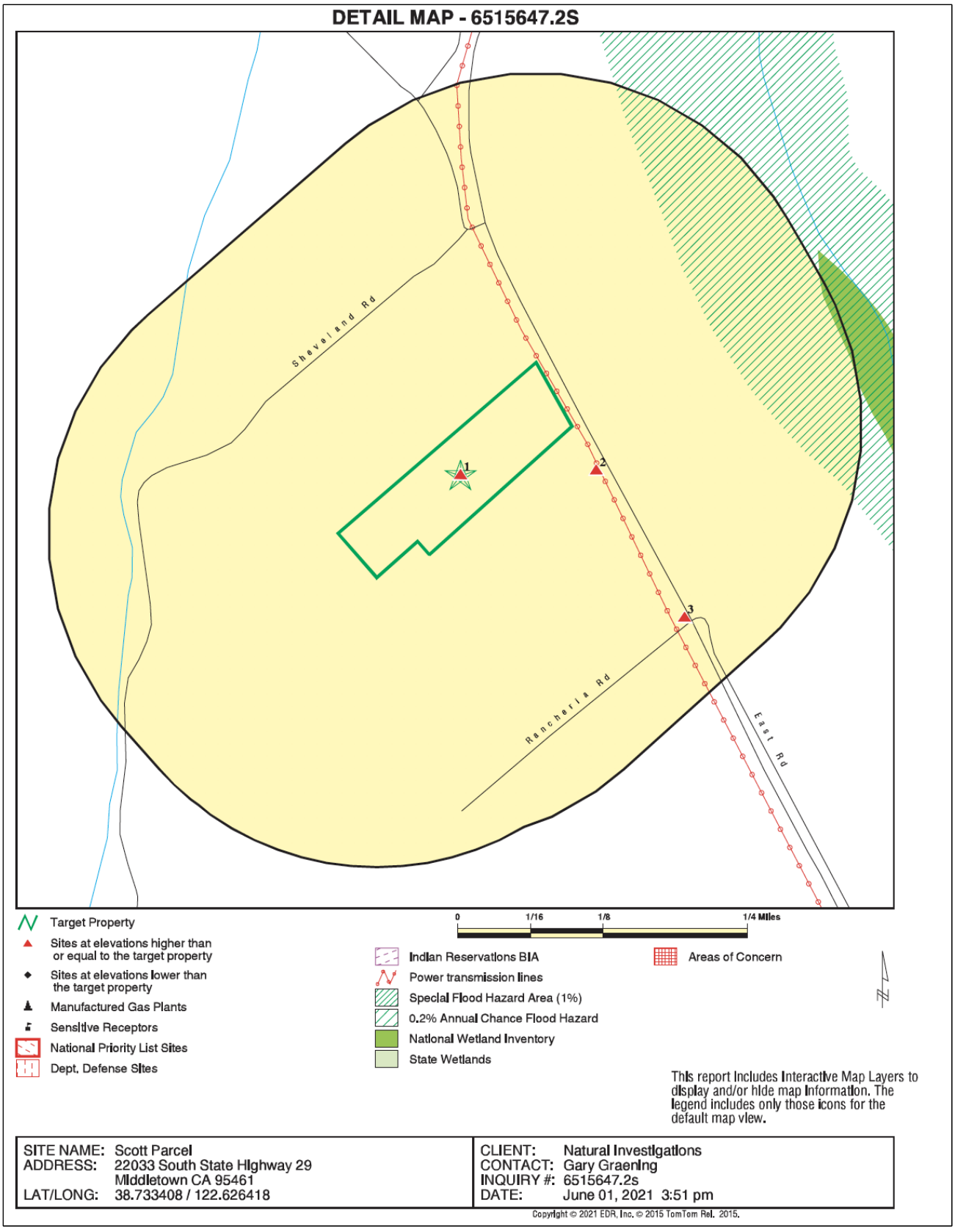

Figure 4.1.2. Detail map from EDR's Radius Map report

4.2. ADDITIONAL ENVIRONMENTAL RECORD SOURCES

4.2.1.State of California Department of Toxic Substances Control Records

4.2.1.1. EnviroStor Database

EnviroStor is an online search and Geographic Information System tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. Public Access to EnviroStor is accessible via the DTSC Web Page located at: http://www.envirostor.dtsc.ca.gov/public/. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. You can obtain information that includes site name, site type, status, address, any restricted use (recorded deed restrictions), past use(s) that caused contamination, potential contaminants of concern, potential environmental media affected, site history, planned and completed activities. The EnviroStor database also contains current and historical information relating to Permitted and Corrective Action facilities. The EnviroStor database includes current and historical information on the following permit-related documents: facility permits; permit renewal applications; permit modifications to an existing permit; closure of hazardous waste management units (HWMUs) or entire facilities; facility corrective action (investigation and/or cleanup); and/or post-closure permits or other required post-closure activities.

The EnviroStor database was queried on June 1, 2021. The following screen capture (Figure 4.2.1) summarizes the results of the query. Pertinent documentation is provided in Appendix 14.2. One reported case was found associated with the Property—the Nella Oil Company spill site—which is described in Section 4.2.2.1. No other cases were found on the Property or adjacent parcels.

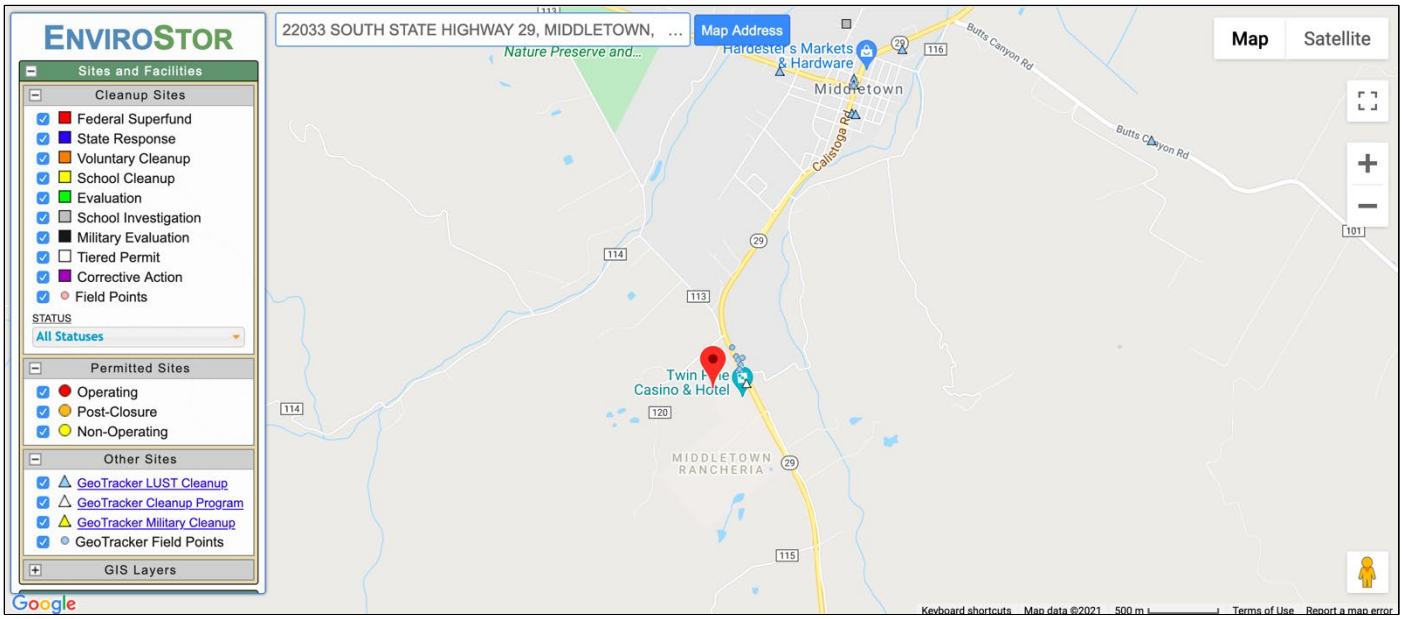

Figure 4.2.1. Screen capture of EnviroStor database query.

4.2.2.California State Water Resources Control Board / Regional Board Records

4.2.2.1. GeoTracker Database

GeoTracker is a geographic information system (GIS) maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at the Internet address (URL) = http://geotracker.waterboards.ca.gov/. GeoTracker is the interface to the Geographic Environmental Information Management System (GEIMS), a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. GeoTracker and GEIMS were developed pursuant to a mandate by the California State Legislature (AB 592, SB 1189) to investigate the feasibility of establishing a statewide GIS for leaking underground fuel tank (LUFT) sites. GEIMS can store extensive data related to LUFT sites, or any other contaminant release. In addition, GEIMS is used to store and display information from various agencies including water quality information, water use information, and infrastructure data needed to assess both water supplies and contaminant sites. For the SWRCB's groundwater quality assessment goal, GEIMS has been populated with LUFT, public drinking water wells, and fuel pipelines for California. Site information from the Spills, Leaks, Investigations, and Cleanups (SLIC) Program is also included in GeoTracker.

The GeoTracker database was queried for environmental data pertaining to the Property on June 1, 2021; results of the query are summarized in the following screen capture (Figure 4.2.2). Pertinent documentation is provided in Appendix 14.2. Using both spatial queries and text-based searches of bounding street addressees in GeoTracker, one reported cases was found associated with the Property, the Nella Oil Company SLIC site described in further detail below.

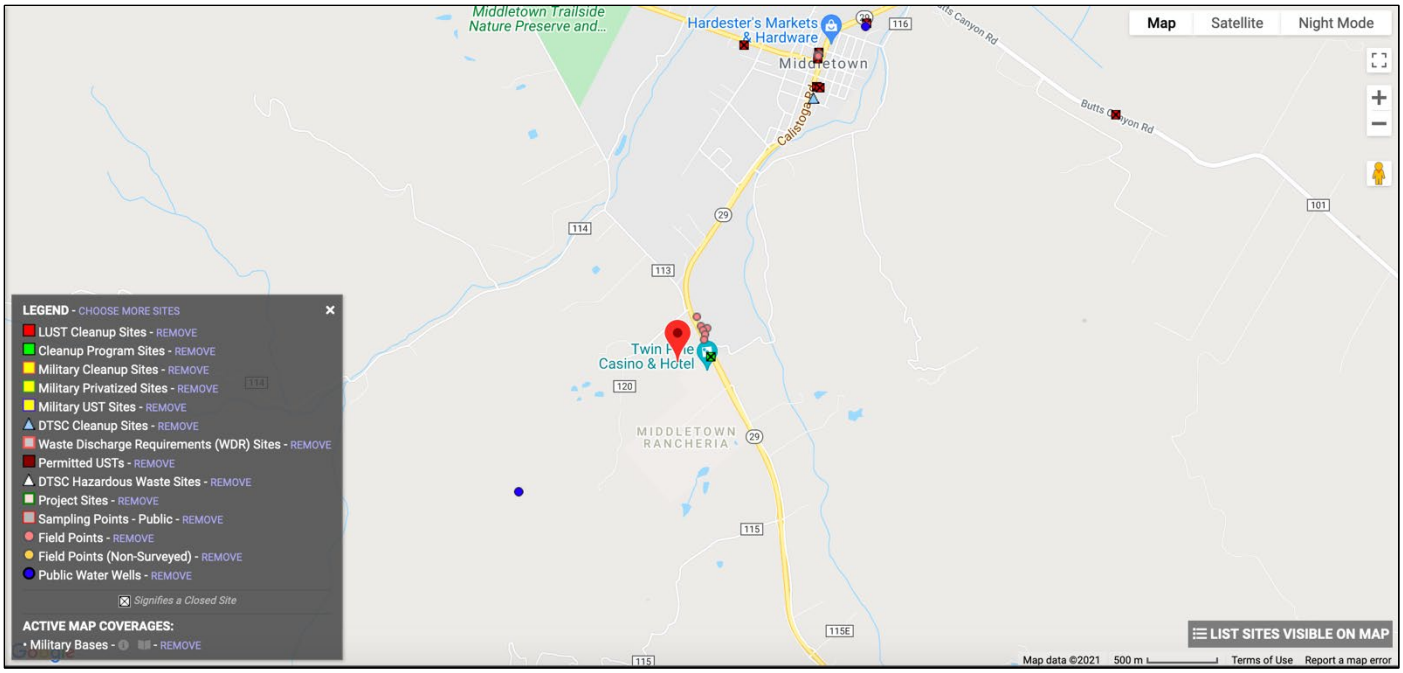

Figure 4.2.2. Spatial results of GeoTracker query

Nella Oil Company Tanker Spill Incident

Along Highway 29, directly adjacent to the Property, a SLIC case was initiated in 2005 following an accident resulting in an overturned tanker that released 3,300 gallons of gasoline. Emergency response recovered approximately 750 gallons at the time of the incident, and subsequent soil excavation was performed. Groundwater monitoring wells were installed between 2006 and 2007 along Highway 29, including one along the eastern Property boundary (MW-5). Taber (2013) reported that the groundwater plume was shrinking due to natural attenuation and the case was closed in March 2014. Taber (2013) estimated that it would take 11 years to achieve the taste and odor thresholds for groundwater contaminated with gasoline (100 ug/L TPH-G). The target date is 2024. The center of the plume, however, is east of Highway 29. The final groundwater monitoring report indicated that groundwater under the Property was remediated to a point at, or near, detection limits. However, the groundwater under the eastern portion of the Property may still be contaminated with gasoline due to the spill. Therefore, the Nella Oil Company Tanker Spill Incident is considered a historical Recognized Environmental Condition. This incident does not represent a current Recognized Environmental Condition.

The following are excerpts from:

- Taber. 2013. Middletown Spill Site First 2013 Semi-Annual Monitoring Report and No Further Action Request State Highway 29, Middletown, California Taber Project No. 2011-0179. 144 pp.

> At this location, east of Hwy 29, the Callayomi Water District serves all residences south of Middletown to 22223 Hwy 29, the Twin Pines Casino (see Appendix A, Section 3 enumerated paragraph 3, December 2010 NFAR). The spill occurred within Caltrans right of way west of Hwy 29, diminishing the prospects a future well installation immediately adjacent to a state route that is likely to expand. Additionally, the groundwater plume intercepted by monitoring well MW-3 is located in 30 feet of fine-grained silts and clays that would not be a good candidate for a productive water supply well. A water supply well is unlikely to be constructed on Caltrans right of way and any potential well in the area is likely to be located outside the limits of the current groundwater plume, would be drilled between 100 and 300 feet deep and have a sanitary seal to 50 feet, similar to other wells east of Hwy 29 (see Appendix A, Section 3 enumerated paragraph 3 and Table 5, December 2010 NFAR). Given the limited extent of the groundwater plume, its steady attenuation, the plume proximity to Hwy 29, and the protective construction of a potential well, it is reasonable to assert that future water supplies are not threatened, in keeping with the intent of the low-threat closure policy.

Spill and Emergency Response

On July 9, 2005 approximately 3300 gallons of gasoline were spilled within the Caltrans right of way two miles south of Middletown on State Route 29 (Hwy 29). Emergency cleanup was conducted between July 9 and July 14, 2005. Approximately 750 gallons of gasoline were recovered. The spill extended in the borrow pit approximately 127 feet to the north and approximately 65 feet to the south. Approximately 200 cubic yards of impacted soil were excavated to a depth of 5 feet below ground surface (bgs). The excavated area measured approximately 270 feet long and four feet wide. Based on analytical results, approximately 35 gallons of gasoline were recovered during excavation activities. Soil samples analyses indicated impacts from Total Petroleum Hydrocarbons as gasoline (TPH-G), benzene, ethyl benzene, toluene, and xylenes (Collectively BTEXT). No methyl tertiary butyl ether (MtBE), fuel stabilizers or other oxygenates were detected above laboratory reporting limits in the soil samples taken during excavation.

Groundwater Monitoring

In April 2006 monitoring wells MW-1 and MW-2 were installed. Monitoring well MW-1 was located near the center of the excavated area. In monitoring well MW-1, concentrations of TPH-G and BTEX attenuated to below laboratory detection limits within 26 months. Monitoring well MW-2 was

CONCLUSIONS AND RECOMMENDATIONS

Concentrations of TPH-G in monitoring well MW-3 groundwater samples continue to decline, and the concentration of benzene has declined to below laboratory reporting limits. While concentrations at the site vary in response to the groundwater elevation, the local concentration maxima across comparable groundwater elevations indicate decreasing TPH-G concentrations in groundwater in the vicinity of monitoring well MW-3.

This petroleum-only release at the site occurred in the summer of 2005. The resulting groundwater plume stabilized within two years, rapidly attenuating in coarser textured soils. The remainder of impacted groundwater is located within fine-textured soils with low hydraulic conductivity.

The smear zone near monitoring well MW-3 is between approximately 10 and 18 feet bgs. Active remediation of TPH-G near monitoring well MW-3 is likely to yield poor results due to fine-textured silts and high-plasticity clays. Ultimately, the best remedial strategy near monitoring well MW-3 is natural attenuation.

The CVRQWB requested calculations for the time frame for groundwater to meet the taste and odor threshold WQO of 100 µg/l TPH-G. Taber Consultants estimates the time to reach the WQO of 100 µg/l TPH-G is approximately 11 years near monitoring well MW-3. This estimate is based on the complete record of concentrations in groundwater samples from MW-3, however the time to reach WQO is likely less because the average concentration of TPH-G is lower than the maximum concentrations reported in the monitoring wells.

In contrast to a typical UST release, where releases occurred over unknown time periods and leaked unknown quantities, the impacts of this single release are well known, defined and documented. The concentrations within the petroleum-only plume show a clear declining trend, the areal extent of the plume is small, there are no downgradient receptors and the location is unsuitable for a groundwater well within the vertical and lateral extent of the plume. Based on the State Water Resource Control Board's Low-Threat Underground Storage Tank Case Closure Policy, if this site had been a UST site it would be a likely candidate for closure. Numerous UST sites have been closed statewide in response to the reformed regulatory policy, many of which had been monitored for tens of years with no constructive effect. Applying the science and low-threat closure criteria of the policy is appropriate for this site.

Based on the documentation presented herein, in conjunction with the data presented in the December 2010 NFAR included in Appendix A, Taber Consultants recommends No Further Action Required status for this site.

Regarding the monitoring well (MW-5) on the eastern boundary of the Property, Taber Consultants outlined the following:

> As shown in Table 4, COC concentrations in MW-4, MW-5, and MW-6 have always been below or near laboratory detection limits. As shown on the concentration trend plots provided on Figures 6a and 6b, COC concentrations in MW-1 and MW-2 have generally declined over time. Specifically, COC concentrations in MW-1 have been below or near detection limits since September 2007. And no COCs were detected in MW-2 during the most recent monitoring event, completed in August 2010. TPH G, benzene and ethylbenzene levels in MW-3 are above applicable water quality goals. However, as shown in the trend plots, COC concentrations in MW-3 are declining with time.

> Impacts to groundwater appear to be limited to the immediate vicinity of well MW-3. Petroleum hydrocarbons remaining in site groundwater do not pose a viable threat to human health via contact with the groundwater exposure pathway because water supply wells located in the site vicinity are not threatened by the impacted plume as evidenced by below laboratory detection limits concentrations in MW-4 and MW-5. Inhalation of vapor phase COCs in indoor air does not represent a complete exposure pathway because no buildings are located in the vicinity of the impacted plume. In addition, exposure to COCs potentially present in outdoor air does not represent a pathway of concern due to the absence of human receptors such as workers or residents in the immediate vicinity of the spill site.

4.2.3.CalEPA / County / CUPA Records Search

The Unified Program (http://www.calepa.ca.gov/CUPA/) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Cal/EPA and other state agencies set the standards for their programs while local governments implement the standards—these local implementing agencies are called Certified Unified Program Agencies (CUPAs). For Lake County, Lake County Environmental Health is the CUPA.

The California Environmental Reporting System (CERS) (http://cers.calepa.ca.gov/) is a statewide web-based system to support CUPAs and Participating Agencies in electronically collecting and reporting various hazardous materials-related data as mandated by the California Health and Safety Code and new 2008 legislation (AB 2286). Under oversight by Cal/EPA, CUPAs implement Unified Program mandates that streamline and provide consistent regulatory activities. All businesses must now submit Unified Program-related information to CERS. Alternatively, some CUPAs have developed local web portals that businesses may use to meet this requirement. All hazardous materials business plans, chemical inventories, site maps, underground and aboveground tank data, and hazardous waste related data must be reported electronically.

Natural Investigations Co. associate Kristen Ahrens reviewed case files for the Nella Oil Company SLIC case at the Lake County Environmental Health office on March 31, 2017; no additional, pertinent

information was identified beyond that previously described (Section 4.2.2.1). On June 1, 2021, Kristen Ahrens emailed Lake County Environmental Health to request records related to the Property. On June 4, 2021, Tina Rubin, an Environmental Health Aide, confirmed the only documents related to the Property were regarding domestic wells. No active cases were identified on the Property or adjacent properties.

4.2.4.Oil, Gas, and Geothermal Wells

A review of oil, gas, and geothermal resources maps was conducted online to identify oil, gas, and geothermal wells located on the Property or on the surrounding properties. Oil, gas, and geothermal resources maps were reviewed from California Department of Conservation, Division of Oil, Gas, and Geothermal Resources Well Finder (http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx). The online mapping system shows the location of new, active producer, active injector, dual, and plugged.

Based on the review of the DOGGR Well Finder database and EDR's Radius Map Report (Appendix 14.2), there are no oil or gas wells on the Property or within one mile of the Property (Figure 4.3.1). There are two plugged and abandoned geothermal wells located within 1 mile of the Property; the closest geothermal well is approximately 1,600 feet south of the Property, and the second well is approximately one mile to the east.

4.3. PHYSICAL SETTING SOURCES

4.3.1.Geology, Soils, Topography, and Hydrology

The Property is located on the United States Geologic Survey (USGS) 7.5-degree minute (1:24,000) topographic map “Detert Reservoir” (see historical topographic map series in Appendix 14.3). The Property is approximately 1,165 feet above mean sea level, on average. The topography of the Property is relatively flat with a general slope to the east-northeast.

The surficial geology of the Property consists of well drained “Jafa” soil series, according to EDR's Physical Setting Report. The geologic formation that underlies the Property is eugeosynclinal deposits of the Mesozoic Era.

The Property is located in the Cache Creek watershed, and Saint Helena Creek is several hundred feet to the east. Contour lines from the USGS topographic map indicate that surface water flows northeast in the site vicinity. The area is largely undeveloped with considerable pervious surfaces. Generally, regional ground water flow direction is thought to be to the north-northwest, according to groundwater monitoring reports from 2013 accessed from GeoTracker for the Nella Oil Company tanker spill site (Section 4.2.2.1). No stormwater drainage was noted on the Property.

The Property is not located within the floodplain of Saint Helena Creek, and the Property does not lie within a 100-year flood plain, as defined by the Federal Emergency Management Agency Flood Insurance Rate Maps, according to the EDR report (Figure 4.3.1). Public and private groundwater wells and public water supplies identified in EDR’s query of readily-available databases are within ½ mile from the Property. No hydrogeologic data was readily available.

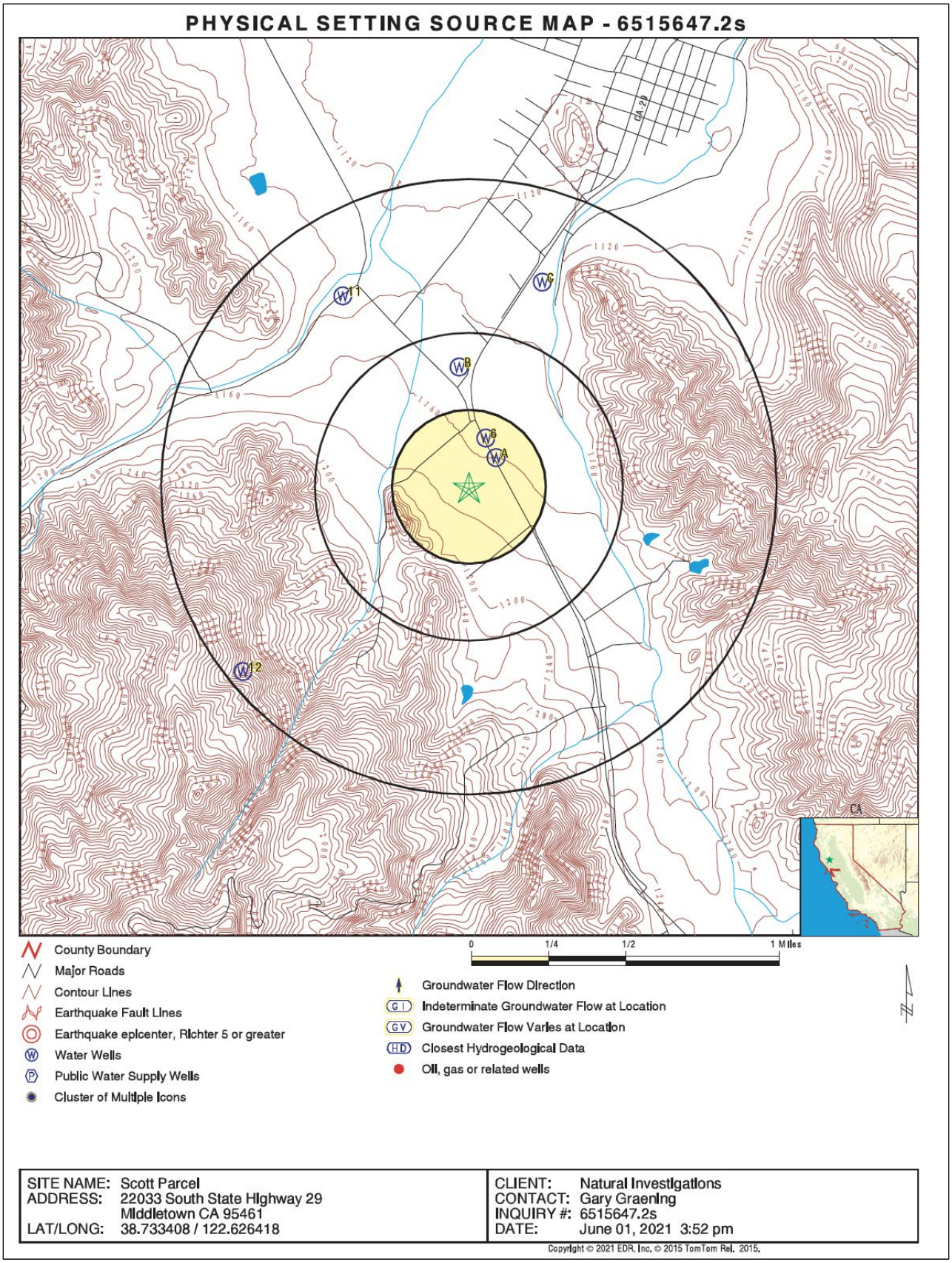

Figure 4.3.1. Physical Setting map from EDR Report

4.4. HISTORICAL USE INFORMATION ON THE PROPERTY

The objective of consulting historical sources is to develop a history of the previous uses of the property and surrounding area, in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the property.

4.4.1.Topographic Map Analysis

Historical and current topographic maps of the Property were analyzed to determine any of the following: topography and inferred surface water and ground water flow direction; current and historical land use; and current and historical structures, utilities, and roads. All available USGS topographic quadrangle maps were obtained through EDR, including the 7.5 degree-minute quadrangle series and the 15 degree-minute quadrangle series (see Appendix 14.3 for the map excerpts). The resolution of these maps was so coarse that only general land uses could be inferred. This constitutes a data failure. No visual clues as to any possible recognized environmental conditions were found.

4.4.2.Aerial Photography Analysis

Historical aerial photographs of the Property were analyzed to determine the any of the following: current and historical land use; any current and historical structures, utilities, and roads; and any current or historical drum storage, above ground tanks, garbage dumps or landfills, or pits, ponds, or lagoons. A chronology of historical aerial photographs was obtained through EDR (see Appendix 14.3 for the photograph scans). The resolution of these maps was so coarse that only general land uses could be inferred. This constitutes a minor data failure. No visual clues as to any possible recognized environmental conditions were found.

4.4.3.Fire Insurance (Sanborn Company) Maps

Fire insurance maps are historical city and building layout maps produced for private fire insurance companies (primarily by the former Sanborn Company). These historical city maps can indicate the presence of structures on, or uses of, properties at specified dates. EDR purchased the Sanborn Company, and provides any available fire insurance maps for the target address. EDR's Sanborn report indicated that there was no coverage of the Property by Sanborn maps, which is a minor data failure.

4.4.4.Building Permits

EDR performed their Building Permit Report, but returned the conclusion of "data gap" as building permits were not available (Appendix 14.3).

4.4.5.City Directories

City directories have been published for cities and towns across the US since the 1700s. Originally a list of residents, the city directory developed into a tool for locating individuals and businesses in a particular urban or suburban area. Current directories are generally divided into three sections: a business index, a list of resident names and addresses, and a street index. With each address, the directory lists the name of the resident or, if a business is operated from this address, the name and type of business. While city directory coverage is comprehensive for large cities, it may be incomplete or unavailable for small towns and unincorporated, rural areas.

The target address was 22033 South State Highway 29, Middletown, California. EDR found some listings in historical City Directories (Appendix 14.3). The EDR Digital Archive lists David Scott as the resident/owner of the Property from 1992 until 2014 at the Property addresses. None of the listings give any evidence of industrial use or manufacturing. Surrounding property listings from 1992 until 2014 are primarily residential, with some agricultural and commercial listings. City directories review did not detect any indications of possible recognized environmental conditions.

4.5. HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

Sanborn Maps, building permits, city directories, and topographic maps provided historical use information on adjoining properties, which were discussed in the preceding sections. Other historical use information on adjoining properties is summarized in other sections of this report.

5. SITE RECONNAISSANCE

The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property.

5.1. METHODOLOGY AND LIMITING CONDITIONS

The site visit is limited to visual and/or physical observation of the exterior and interior of the Property and its improvements, the past and current uses of the Property and adjoining properties, and the condition of the Property. The site visit evaluated the Property and adjoining properties for potential hazardous materials/waste and petroleum product use, storage, disposal, or accidental release, including the following: presence of tank and drum storage; mechanical or electrical equipment likely to contain liquids; evidence of soil or pavement staining or stressed vegetation; ponds, pits, lagoons, or sumps; suspicious odors; fill and depressions; or any other condition indicative of potential contamination. The site visit did not evaluate the presence of asbestos-containing materials, radon, lead-based paint, mold, indoor air quality, or structural defects, or other non-scope items.

On May 31, 2021, Kristen Ahrens, M.S. (Natural Investigations Company) performed a site reconnaissance of the Property. All accessible portions of the Property were observed by a pedestrian survey; adjoining properties were observed by a combination of pedestrian survey and windshield (automobile) survey. Photographic documentation accompanies the following summary of the site visit (Appendix 14.4).

5.2. EXTERIOR OBSERVATIONS

The following text discusses focus areas of the site reconnaissance.

5.2.1.Stained Soil / Distressed Vegetation / Odors

No stained soil, distressed vegetation, or unusual odors was noted during the site reconnaissance.

5.2.2.Roads

Roads surrounding the Property are all graveled or paved with asphalt or concrete, and show no suspicious staining other than *de minimis* quantities associated with parking stalls from parked automobiles that apparently leak engine fluids. Roads and driveways on the Property are primarily gravel with some areas of concrete; no suspicious staining was noted.

5.2.3.Wells / Potable Water Supply

Private, groundwater wells have historically been used on the Property and may still be present, though not in use, on some areas on the Property. A well destruction permit was issued for the Property in January 2020 and a domestic well was abandoned and filled. Potable water is now supplied by Lake County municipal water supply. A water main is located near the southeastern corner of the Property .

5.2.4.Sewage Disposal System

Sewage is either transported and treated by the City municipal sewage treatment system or disposed in an on-site septic system.

5.2.5.Storage Tanks, Containers, or Drums

The following storage tanks / drum storage were noted on the Property during the site reconnaissance: propane tanks associated with heating for the residences. No evidence of a release of these materials was observed during site reconnaissance. Based on the lack of evidence of a release which could potentially impact the subsurface, Natural Investigations Co. does not consider the hazardous materials stored/used onsite to represent a recognized environmental condition in connection with the subject property. It is beyond the scope of this assessment to open any container.

5.2.6.Hazardous Substances and Petroleum Products

No hazardous substances or petroleum product usage or storage was noted on the Property during the site reconnaissance. The nearest commercial uses sighted were the gas station at the Twin Pines Casino which is south of the Property.

5.2.7.Electrical or Mechanical Equipment Likely to Contain Fluids

Polychlorinated biphenyls, or PCBs, were commonly used historically in electrical equipment such as transformers, fluorescent lamp ballasts, and capacitors. According to United States EPA regulation 40 CFR, Part 761, there are three categories for classifying such equipment: <50 ppm of PCBs is considered “Non-PCB”; between 50 and 500 ppm is considered “PCB-Contaminated”; and >500 ppm is considered “PCB-Containing”. Pursuant to 15 U.S.C. 2605(e)(2)(A), the manufacture, process, or distribution in commerce or use of any polychlorinated biphenyl in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

No PCB-containing equipment (electric or hydraulic) was observed during the site reconnaissance. Pole-mounted transformers were observed in the vicinity, but appear to be modern and non-leaking. Overhead electrical service is provided by PG&E.

5.2.8.Pits / Ponds / Lagoons

No pits, ponds, or lagoons were observed during the site reconnaissance.

5.2.9.Storm Water / Pools of Liquid

No storm water inlets were observed on the Property.

5.2.10. Solid Waste

Municipal solid waste and recyclables generated on the Property and adjoining properties are collected in cans and hauled by South Lake Refuse.

5.3. INTERIOR OBSERVATIONS

No interior observations were made because the only structures on the Property are residential; interior residential observation is beyond the scope of this assessment and does not constitute a limitation or data gap.

5.4. LIMITATIONS

There were no limitations on the ability of the environmental professional to perform the site reconnaissance.

6. INTERVIEWS

ASTM Practice E1527-13 states that the objective of interviews is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property (ASTM 2013). The following text summarizes interviews performed and questionnaires answered.

6.1. INTERVIEW WITH OWNERS / SITE MANAGERS / OCCUPANTS

The questionnaire entitled "Landowner Questionnaire of Hazards / Hazardous Substances" was e-mailed to the Tribe in May 2021. No response was received. Information about past owners, operations or occupants was not reasonably ascertainable and constitutes a data gap.

6.2. INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

Correspondence with the CUPA is documented in Section 4.2.3. Building permit review is documented in Section 4.4.4.

7. FINDINGS

The Property is located in a rural setting that has no industrial history, but has some agricultural history. The Property appears to have been used for rural residences and pastureland for several decades.

7.1. RATIONALE FOR DETERMINATION OF SIGNIFICANT FINDINGS

Offsite properties identified in the vicinity of the Property were evaluated to determine if they are likely to have adversely affected the Property. The criteria used to evaluate whether an offsite property pose potential environmental concerns to the Property include:

- Distance from the Property: Offsite properties within one-quarter mile of the Property were evaluated. The one-quarter-mile radius was used because it is unlikely a hazardous material released to the subsurface will migrate laterally within the soil for a significant distance, although in some cases, a hazardous material can migrate in groundwater in a generally downgradient direction for distances greater than one-quarter mile.
- Expected depth and direction of groundwater and surface water flow: The identification of a site as potentially upgradient or downgradient is based on the expected direction of groundwater flow determined by site-specific measurement, where available, or inferred from the regional topography.
- The presence of documented contaminant releases at the identified sites.
- The media that the documented contaminant releases affected (i.e., soil and/or groundwater). For the evaluation of potential environmental contamination in the Property, offsite properties with releases to soil only are assumed to pose no significant impact on the Property, as the contaminants are unlikely to migrate towards the Property.

Based on the review and evaluation of information available in the environmental databases and regulatory agency files, no adverse environmental effect is expected for vicinity sites that have some or all the following conditions:

- the identified vicinity sites are in assumed down-gradient or cross-gradient locations
- the identified vicinity sites have obtained case closure
- the identified vicinity sites were contained at the ground surface, or releases to the subsurface affected soil only, in which case the contaminants are unlikely to migrate towards the Property in groundwater.
- offsite properties located further than one-quarter mile from the Property are not expected to adversely affect the Property conditions, as it is unlikely a hazardous material released to the subsurface will migrate laterally within the soil for a significant distance, although a hazardous material can migrate in groundwater in a generally downgradient direction.

7.2. VAPOR ENCROACHMENT SCREENING

ASTM Practice E1527-13 requires subsurface vapor migration to be evaluated as a possible contaminant pathway in the identification of a recognized environmental condition. However, ASTM Practice E1527-13 does not require any risk analysis to building occupants of vapor intrusion or the performance of a vapor encroachment screening. The USEPA defines vapor intrusion as "*the migration of volatile chemicals from the subsurface into overlying buildings. Volatile chemicals in buried wastes and/or contaminated groundwater can emit vapors that may migrate through subsurface soils and into indoor air spaces of overlying buildings in ways similar to that of radon gas seeping into homes*." (USEPA 2010, page 4). Volatile chemicals include volatile and semivolatile organic compounds as well as some inorganic substances such as hydrogen sulfide and radon (although radon is an out-of-scope item in this assessment).

The USEPA recommends evaluating vapor intrusion under certain circumstances:

> "*The draft guidance is suggested for use at RCRA Corrective Action, CERCLA (National Priorities List and Superfund Alternative Sites), and Brownfields sites, but is not recommended for use at Subtitle I Underground Storage Tank (UST) sites at this time. The draft guidance recommends certain conservative assumptions that may not be appropriate at a majority of the current 145,000 petroleum releases from USTs. As such, the draft guidance is unlikely to provide an appropriate mechanism for screening the vapor pathway at UST sites. We recommend that State and Regional UST corrective action programs continue to use a risk based decision making approach as described in OSWER Directive 9610.17: Use of Risk-Based Decision Making in UST Corrective Action Program to address this pathway. A majority of State programs are successfully implementing this directive at their UST cleanups and use the recommended approaches where appropriate, to prioritize and remediate their sites, including risk associated with vapor migration to indoor air in a manner that is protective of human health and the environment*." (USEPA 2010, page 2)

USEPA (2010) guidance describes Tier 1 – Primary Screening as having the following components: a) if chemicals of sufficient volatility and toxicity are present or reasonably suspected to be present; b) if inhabited buildings are located (or will be constructed under future development scenarios above or in close proximity to subsurface contamination; and c) if current conditions warrant immediate action. ASTM also provides guidance in the E2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions. A vapor encroachment assessment was not deemed necessary at this time.

It should be noted that Leaking Underground Storage Tank and DTSC EnviroStor sites closed by the RWQCB or local agencies prior to April 1, 2008, would not necessarily have been closed based on a risk assessment that considered volatile organic compounds and the vapor intrusion pathway. Assembly Bill 422, which now requires such a risk assessment, did not take effect until January 1, 2008.

7.3. *DE MINIMIS* ENVIRONMENTAL CONDITIONS

De minimis environmental conditions are conditions that are not believed to present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (ASTM 2013).

One minimal, or *de minimis*, environmental condition(s) exists pursuant to the ASTM Practice E1527-13:

- de minimis quantities of petroleum product staining on paved surfaces associated with parking stalls from parked automobiles that apparently dripped engine fluids.

7.4. HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

ASTM Practice E1527-13 defines a historical recognized condition as:

> "...*an environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently. The final decision rests with the environmental professional and will be influenced by the current impact of the historical recognized environmental condition on the property. If a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a no further action letter or equivalent), this condition shall be considered an historical recognized environmental condition*." (p. 5, ASTM 2013)

One historical recognized environmental condition was found in connection with the Property pursuant to the ASTM Practice E1527-13:

- groundwater was contaminated with gasoline and its additives (e.g. benzene) on the eastern portion of the Property from the Nella Oil Company tanker spill in 2005. Remediation of the spill was implemented and the contaminant plume reduced enough to close the case. Water quality sampling of monitoring wells on the Property indicated that chemicals of concern were at, or below, detection limits.

7.5. KNOWN OR SUSPECT RECOGNIZED ENVIRONMENTAL CONDITIONS

No recognized environmental conditions were found in connection with the Property pursuant to the ASTM Practice E1527-13.

8. OPINION AND RECOMMENDATION

8.1. IMPACT OF ENVIRONMENTAL CONDITIONS ON PROPERTY

It is the Environmental Professional's opinion that there are no current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E1527-13. Records review, site reconnaissance, and interviews failed to identify any current environmental conditions in connection with the Property.

8.2. ADDITIONAL INVESTIGATION

It is the Environmental Professional's opinion that there is one historical recognized environmental condition but no current recognized environmental conditions in connection with the Property pursuant to the ASTM Practice E1527-13. Records review, database searches, or interviews failed to identify any current recognized environmental conditions in connection with the Property. Therefore, no further site investigation is recommended.

The exception would be if groundwater under the property is to be pumped and used. Because historical contamination from the Nella Oil Spill SLIC case contaminated groundwater under the Property, and even though the spill was remediated, Natural Investigations Co. does not recommend the use of groundwater under the Property before testing. A Phase II Environmental Site Assessment should be performed before use of groundwater under the Property.

8.3. DATA GAPS OR DELETIONS

ASTM Practice E1527-13 defines data failure as the failure to achieve the historical research objectives even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. ASTM Practice E1527-13 defines a data gap as a lack, of or inability to obtain, information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.). The available historical USGS quadrangle maps and aerial photography were too coarse in resolution to discern all specific land uses or structures on the Property or adjacent properties. These constitute data failures. Another data failure was no coverage by Sanborn Maps. However, a combination of other historical data sources was available such that no significant data gap existed, and the historical research objectives were achieved. There were no deletions from the ASTM Practice E1527-13.

9. CONCLUSIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 of the Scott Property at 22033 South State Highway 29, Middletown, California (APN 014-160-09 and 014-160-05). Any exceptions to, or deletions from, this practice are described in Sections 1.3 and 8.3 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with Property.

One recommendation was made: performance of a Phase II Environmental Site Assessment before use of groundwater under the Property.

10. ADDITIONAL SERVICES

No additional services beyond the scope of the ASTM Practice E1527-13 were conducted as part of this assessment.

There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside the scope of this practice. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive: asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents, and mold.

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. Natural Investigations Company offers a range of investigative and consulting services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the User understand and better manage risks associated with their property. Since such detailed services involve greater expense and time, we ask that our clients participate in the identification of the level of service that will provide them with what they consider to be an acceptable level of risk. Please contact the signatory of this report if you would like to discuss the issue of risk further. Land use, site conditions, and other factors will change over time. This report should not be relied upon after 180 days from the date of issuance, unless additional services are performed as defined in Section 4.6 of ASTM E1527-13.

11. REFERENCES

American Society for Testing and Materials. 2010. Standard Guide for Vapor Encroachment Screening On Property Involved In Real Estate Transactions. Designation E2600-10. West Conshohocken, Pennsylvania. 33 pp.

American Society for Testing and Materials. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Designation E 1527-13. West Conshohocken, Pennsylvania. 47 pp.

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Department of Toxic Substances Control. 2019. EnviroStor Database Website. Available on the Internet at: http://www.envirostor.dtsc.ca.gov/public/.

State Water Resources Control Board. 2019. GeoTracker Database Website. Available on the Internet at: http://geotracker.swrcb.ca.gov/.

USEPA. 2002. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). EPA530-D-02-004. Office of Solid Waste and Emergency Response. 178 pp. Available on the Internet at: http://www.epa.gov/epawaste/hazard/correctiveaction/eis/vapor.htm.

USEPA. 2019. Envirofacts Data Warehouse Multisystem Query Website. Available on the Internet at: http://www.epa.gov/enviro/html/multisystem.html.

USEPA. 2019. The Enforcement and Compliance History Online (ECHO) database maintained by the USEPA. Available on the Internet at: http://echo.epa.gov/?redirect=echo.

12. SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

As required by 40 CFR 312.21(d), this report shall include the following statements of the environmental professional responsible for conducting the Phase I ESA and preparation of the report (page 22, ASTM 2013):

> *I declare that, to the best of my professional knowledge, I meet the definition of 'Environmental Professional' as defined in §312.10 of 40 CFR*.
>
> *I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312*.

G. O. Graening, PhD, MSE
Environmental Assessor

13. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Dr. Gary O. Graening was certified by California Department of Toxic Substances Control as a Registered Environmental Assessor I (registration # 08060,) from 2005 to 2012, after which DTSC retired the certification program. Dr. Graening holds a PhD in Biological Sciences and a Master of Science in Engineering. Dr. Graening has over 20 years of experience in environmental research and site assessment, including preparation of program-level Phase I ESAs, limited Phase II investigations, as well as environmental impact assessments for National Environmental Policy Act compliance and California Environmental Quality Act compliance. Dr. Graening has completed the 40-hour OSHA Hazardous Waste Operations and Emergency Response certification (with 8-hour annual refresher courses). Dr. Graening's full résumé, and the Company's statement of qualifications, is available on the Internet at the Company's website: www.naturalinvestigations.com.

14. APPENDICES

Available on Request