INFORMATION HANDOUT

For Contract No. 05-0S2504
At SB-101-13.2/27.1

Identified by
Project ID 050020289

MATERIALS INFORMATION

Aerially Deposited Lead Concentration Data and Sample Location Maps

PRELIMINARY SITE INVESTIGATION REPORT

SANTA BARBARA ROADSIDE SAFETY
SANTA BARBARA COUNTY, CALIFORNIA

PREPARED FOR:
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 5
OFFICE OF ENVIRONMENTAL PLANNING
BRANCH/UNIT 1403
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401

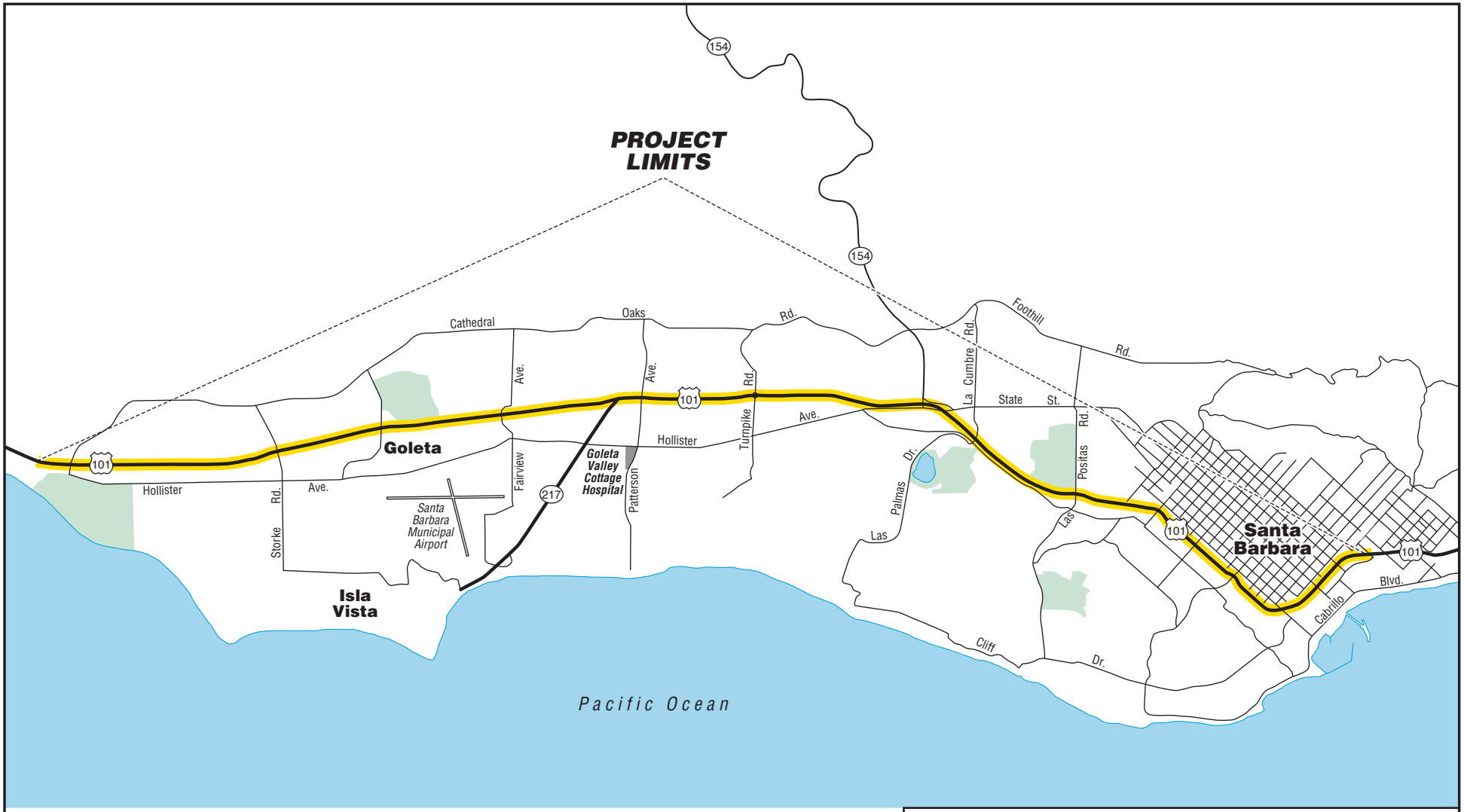
Caltrans

PREPARED BY:
GEOCON CONSULTANTS, INC.
6671 BRISA STREET
LIVERMORE, CA 94550

GEOCON

GEOCON PROJECT NO. S9800-02-29
CALTRANS EA 05-0S2501
CALTRANS PROJECT # 05-0002-0289-1

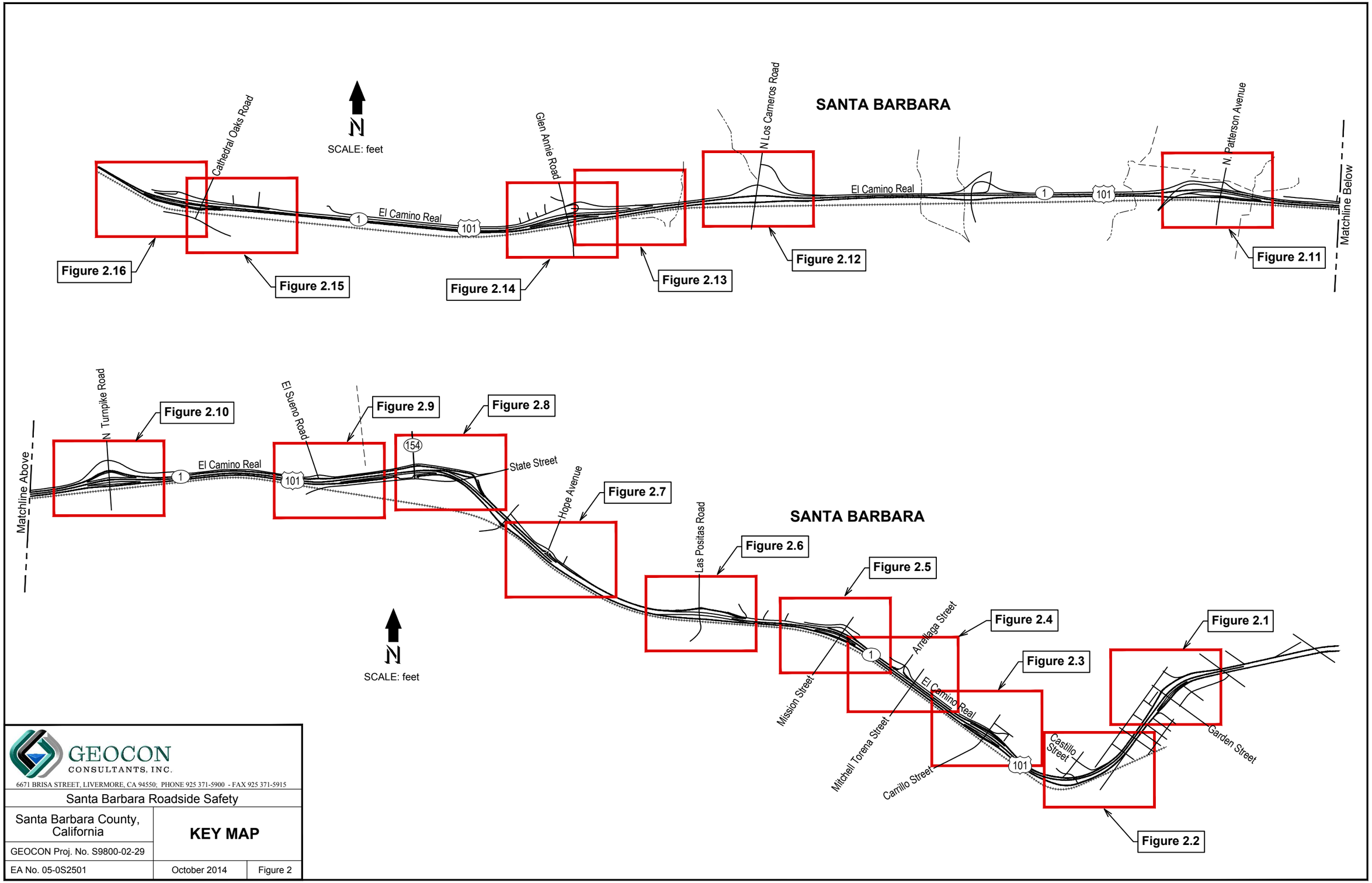
OCTOBER 2014



GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

Highway 101 Post Mile 13.2 to 27.1

Santa Barbara County, California	**VICINITY MAP**	
GEOCON Proj. No. S9800-02-29		
Task Order No. 29	October 2014	Figure 1



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Santa Barbara Roadside Safety

Santa Barbara County, California	**KEY MAP**	
GEOCON Proj. No. S9800-02-29		
EA No. 05-0S2501	October 2014	Figure 2

SITE0914

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Santa Barbara Roadside Safety

Santa Barbara County, California

SITE PLAN

GEOCON Proj. No. S9800-02-29

EA No. 05-0S2501 | October 2014 | Figure 2.1

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EA No. 05-0S2501 | October 2014 | Figure 2.2

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EA No. 05-0S2501 | October 2014 | Figure 2.3

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EA No. 05-0S2501 | October 2014 | Figure 2.4

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Santa Barbara County, California

SITE PLAN

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EA No. 05-0S2501 | October 2014 | Figure 2.5

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SITE PLAN

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EA No. 05-0S2501 | October 2014 | Figure 2.6

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EA No. 05-0S2501

October 2014

Figure 2.7

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Santa Barbara County, California

SITE PLAN

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EA No. 05-0S2501 | October 2014 | Figure 2.8

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Santa Barbara County, California

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EA No. 05-0S2501 | October 2014 | Figure 2.9

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SITE PLAN

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EA No. 05-0S2501

October 2014

Figure 2.10

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EA No. 05-0S2501 | October 2014 | Figure 2.11

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Santa Barbara County, California	**SITE PLAN**	
GEOCON Proj. No. S9800-02-29		
EA No. 05-0S2501	October 2014	Figure 2.13

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Santa Barbara County, California

SITE PLAN

GEOCON Proj. No. S9800-02-29

EA No. 05-0S2501

October 2014

Figure 2.14

SITE0914

LEGEND:
Boring Location

Cathedral Oaks Road

El Camino Real

1

101

L38

On-Ramp

Railroad

Hollister Avenue

Winchester Canyon Road

L37

Off-Ramp

N

0 80 160

SCALE: feet

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EA No. 05-0S2501 | October 2014 | Figure 2.15

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Santa Barbara Roadside Safety

Santa Barbara County, California

SITE PLAN

GEOCON Proj. No. S9800-02-29

EA No. 05-0S2501

October 2014

Figure 2.16

SITE0914

TABLE 1
Boring Coordinates
Roadside Safety Improvements
Santa Barbara County, California

Boring	Northing	Easting	Latitude	Longitude
L1	6,053,254.953	1,979,402.825	34.419756	-119.685897
L2	6,052,607.751	1,979,138.135	34.418998	-119.688028
L3	6,051,665.198	1,978,530.270	34.417285	-119.691119
L4	6,049,973.811	1,976,976.291	34.412937	-119.696639
L5	6,047,237.666	1,977,943.067	34.415466	-119.705764
L6	6,047,047.553	1,977,946.757	34.415467	-119.706395
L7	6,046,422.737	1,978,628.668	34.417312	-119.708505
L8	6,044,589.626	1,980,236.363	34.421643	-119.714673
L9	6,044,535.184	1,980,421.401	34.422149	-119.714864
L10	6,044,408.489	1,980,410.343	34.422112	-119.715283
L11	6,043,183.509	1,981,344.113	34.424620	-119.719398
L12	6,043,293.828	1,981,423.900	34.424845	-119.719036
L13	6,042,596.474	1,981,851.455	34.425987	-119.721373
L14A	6,039,735.820	1,982,380.761	34.427306	-119.730888
L14B	6,039,639.845	1,982,404.298	34.427366	-119.731207
L15	6,038,300.972	1,982,790.148	34.428363	-119.735669
L16	6,034,797.345	1,984,669.878	34.433360	-119.747394
L17	6,032,971.776	1,986,688.346	34.438819	-119.753564
L18	6,032,093.858	1,987,449.442	34.440868	-119.756520
L19	6,031,625.709	1,987,483.726	34.440939	-119.758074
L20A	6,029,040.701	1,987,476.775	34.440796	-119.766646
L20B	6,029,233.103	1,987,479.446	34.440812	-119.766008
L21A	6,028,460.124	1,987,588.964	34.441076	-119.768578
L21B	6,028,362.671	1,987,593.282	34.441083	-119.768901
L22	6,022,877.221	1,988,177.950	34.442423	-119.787127
L23	6,021,630.655	1,988,031.716	34.441960	-119.791252
L24	6,021,567.201	1,988,162.532	34.442316	-119.791470
L25	6,017,539.646	1,987,928.959	34.441477	-119.804812
L26	6,016,872.318	1,988,138.626	34.442020	-119.807038
L27	6,015,869.737	1,987,911.061	34.441345	-119.810349
L28A	6,015,496.522	1,987,982.819	34.441524	-119.811591
L28B	6,015,643.458	1,988,006.549	34.441596	-119.811105
L29	6,003,995.351	1,986,790.084	34.437671	-119.849658
L30	6,003,932.849	1,986,906.972	34.437989	-119.849872
L31	6,002,233.756	1,986,733.233	34.437426	-119.855496
L32	6,001,852.219	1,986,533.852	34.436859	-119.856749
L33	5,999,958.522	1,986,251.537	34.435987	-119.863011
L34A	5,998,258.008	1,985,785.086	34.434618	-119.868621
L34B	5,998,387.681	1,985,803.732	34.434676	-119.868192
L35	5,997,776.195	1,985,844.536	34.434757	-119.870222

TABLE 1
Boring Coordinates
Roadside Safety Improvements
Santa Barbara County, California

Boring	Northing	Easting	Latitude	Longitude
L36	5,996,572.658	1,985,333.795	34.433292	-119.874181
L37	5,988,840.398	1,985,208.205	34.432548	-119.899812
L38	5,987,491.215	1,985,097.634	34.432174	-119.904279
L39	5,985,640.959	1,985,378.244	34.432849	-119.910431
L51	6,043,248.297	1,981,244.722	34.424350	-119.719177
L53	6,022,038.405	1,988,404.178	34.443003	-119.789922

Coordinates estimated
Northings and Eastings shown in NAD, 83, Zone 5

TABLE 2
Summary of Lead Results
Roadside Safety Improvements
Santa Barbara, California

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH	Waste Classification
L1	0 to 0.5	44	---	---	---	7.6	*non-hazardous*
L2	0 to 0.5	31	---	---	---	7.4	*non-hazardous*
L3	0 to 0.5	27	---	---	---	---	*non-hazardous*
L4	0 to 0.5	41	---	---	---	---	*non-hazardous*
L5	0 to 0.5	320	26	<1.0	0.29	7.2	***CA-hazardous***
L6	0 to 0.5	400	21	<1.0	0.30	7.8	***CA-hazardous***
L7	0 to 0.5	330	21	<1.0	0.15	7.6	***CA-hazardous***
L8	0 to 0.5	360	19	<1.0	0.061	7.2	***CA-hazardous***
L9	0 to 0.5	63	2.6	---	---	---	*non-hazardous*
L10	0 to 0.5	480	20	<1.0	<0.10	7.4	***CA-hazardous***
L11	0 to 0.5	180	5.4	<1.0	<0.050	7.5	***CA-hazardous***
L12	0 to 0.5	240	23	<1.0	0.73	8.2	***CA-hazardous***
L13	0 to 0.5	550	28	<1.0	0.47	7.5	***CA-hazardous***
L14A	0 to 0.5	16	---	---	---	---	*non-hazardous*
L14B	0 to 0.5	17	---	---	---	6.6	*non-hazardous*
L15	0 to 0.5	50	1.9	---	---	---	*non-hazardous*
L16	0 to 0.5	60	2.9	---	---	7.4	*non-hazardous*
L17	0 to 0.5	770	51	<1.0	0.18	6.7	***CA-hazardous***
L18	0 to 0.5	440	23	<1.0	0.16	7.1	***CA-hazardous***
L19	0 to 0.5	16	---	---	---	---	*non-hazardous*
L20A	0 to 0.5	450	23	<1.0	0.14	7.4	***CA-hazardous***
L20B	0 to 0.5	140	9.5	<1.0	0.055	7.6	***CA-hazardous***
L21A	0 to 0.5	130	6.7	<1.0	<0.050	7.9	***CA-hazardous***
L21B	0 to 0.5	75	3.0	---	---	7.4	*non-hazardous*
L22	0 to 0.5	25	---	---	---	---	*non-hazardous*
L23	0 to 0.5	47	---	---	---	---	*non-hazardous*
L24	0 to 0.5	43	---	---	---	---	*non-hazardous*
L25	0 to 0.5	40	---	---	---	---	*non-hazardous*

TABLE 2
Summary of Lead Results
Roadside Safety Improvements
Santa Barbara, California

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH	Waste Classification
L26	0 to 0.5	410	19	<1.0	0.11	7.7	***CA-hazardous***
L27	0 to 0.5	34	---	---	---	---	*non-hazardous*
L28A	0 to 0.5	96	6.3/5.7	<1.0	---	7.9	***CA-hazardous***
L28B	0 to 0.5	94	4.9/4.5	---	---	---	*non-hazardous*
L29	0 to 0.5	71	1.2	---	---	---	*non-hazardous*
L30	0 to 0.5	50	1.8	---	---	---	*non-hazardous*
L31	0 to 0.5	130	7.1	<1.0	0.088	8.4	***CA-hazardous***
L32	0 to 0.5	91	4.1	---	---	---	*non-hazardous*
L33	0 to 0.5	18	---	---	---	---	*non-hazardous*
L34A	0 to 0.5	16	---	---	---	7.5	*non-hazardous*
L34B	0 to 0.5	21	---	---	---	---	*non-hazardous*
L35	0 to 0.5	12	---	---	---	---	*non-hazardous*
L36	0 to 0.5	38	---	---	---	---	*non-hazardous*
L37	0 to 0.5	72	3.5	---	---	---	*non-hazardous*
L38	0 to 0.5	12	---	---	---	---	*non-hazardous*
L39	0 to 0.5	80	**5.4**	<1.0	---	8.5	***CA-hazardous***
L51	0 to 0.5	86	3.5	---	---	---	*non-hazardous*
L53	0 to 0.5	29	---	---	---	---	*non-hazardous*
Hazardous Waste Criteria							
TTLC (mg/kg)		1,000	---	---	---		---
STLC (mg/l)		---	5.0	---	---		---
TCLP (mg/l)		---	---	---	5.0		---

Notes:

mg/kg = Milligrams per kilogram
mg/l = Milligrams per liter
TCLP = Toxicity Characteristic Leaching Procedure
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration
WET = Waste Extraction Test using citric acid as the extraction fluid
DI-WET = Waste Extraction Test using deionized water as the extraction fluid
6.3/5.7 = Results of Primary/Secondary analyses performed for confirmation purposes

TABLE 3
Summary of CAM 17 Metals Results
Roadside Safety Improvements
Santa Barbara, California

Sample ID	Sample Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
L1	0 to 0.5	<2.0	4.0	95	<1.0	1.4	51 *<1.0*	4.8	43	44	0.2	1.8	26	<1.0	<1.0	<1.0	27	160
L2	0 to 0.5	<2.0	3.4	77	<1.0	<1.0	17	4.4	32	31	0.12	1.3	17	<1.0	<1.0	<1.0	26	120
L5	0 to 0.5	<2.0	9.8	88	<1.0	<1.0	18	5.1	34	320	<0.10	1.7	18	<1.0	<1.0	<1.0	23	180
L14B	0 to 0.5	<2.0	5.2	100	<1.0	<1.0	25	8.5	16	17	<0.10	<1.0	33	<1.0	<1.0	<1.0	31	58
L16	0 to 0.5	<2.0	4.9	79	<1.0	<1.0	21	5.6	17	60	<0.10	<1.0	22	<1.0	<1.0	<1.0	26	63
L20B	0 to 0.5	<2.0	4.7	100	<1.0	<1.0	26	6.2	18	140	<0.10	<1.0	33	<1.0	<1.0	<1.0	31	77
L21B	0 to 0.5	<2.0	4.7	98	<1.0	<1.0	23	7.0	18	75	<0.10	<1.0	31	<1.0	<1.0	<1.0	29	68
L28A	0 to 0.5	<2.0	7.6	82	<1.0	<1.0	21	5.8	21	96	<0.10	<1.0	22	<1.0	<1.0	<1.0	27	97
L34A	0 to 0.5	<2.0	4.3	75	<1.0	<1.0	19	5.3	12	16	<0.10	1.3	20	<1.0	<1.0	<1.0	25	49
L39	0 to 0.5	<2.0	8.4	85	<1.0	<1.0	25	6.3	16	80	<0.10	1.4	27	<1.0	<1.0	<1.0	33	70
ESLs																		
Residential Land Use		20	0.39	750	4.0	12	1,000	23	230	80	6.7	40	150	10	20	0.78	200	600
Commercial/Industrial Land Use		40	1.6	1,500	8.0	12	2,500	80	230	320	10	40	150	10	40	10	200	600
Construction Worker Exposure		120	10	61,000	180	110	460,000*	49	12,000	320	27	1,500	6,100	1,500	1,500	3.1	1,500	93,000
Hazardous Waste Criteria																		
TTLC (mg/kg)		500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC (mg/l)		15	5.0	100	0.75	1.0	5.0	80	25	5.0	0.2	350	20	1.0	5.0	7.0	24	250
TCLP (mg/l)		---	5.0	100	---	1.0	6.0	---	---	5.0	0.2	---	---	1.0	5.0	---	---	---

Notes:

Results are shown in milligrams per kilogram (mg/kg).

*Value listed is for Chromium III, as there is no construction exposure standard for total chromium.

Values listed in italics are results of WET analysis

< = Analyte was not detected above the laboratory reporting limit.

ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, December 2013.

TTLC = total threshold limit concentration

STLC = soluble threshold limit concentration

TCLP = toxicity characteristic leaching procedure