Table 1. Coastal Encinitas Rainfall Depths

	6-hour	24-hour
2-year	1.2 inches	1.8 inches
5-year	1.6 inches	2.5 inches
10-year	1.8 inches	3.0 inches
50-year	2.3 inches	3.8 inches
100-year	2.5 inches	4.0 inches

Watershed Boundaries

The watershed areas were delineated from digital topography flown in July 2001, provided by the City of Encinitas. Watershed delineations were field verified to improve accuracy. The total watershed area tributary to the Leucadia area storm drain system is approximately 0.49 square miles for the 10-year storm and 0.87 square miles for the 100-year storm. Most of the 10-year watershed area is located west of the railroad tracks. With the exception of the Line A connection to the storm drain system that collects storm runoff from east of the railroad tracks, it is assumed that runoff does not make it west of the tracks. The 100-year watershed extends east of the railroad tracks, but does not include several sumps located west of Interstate 5.

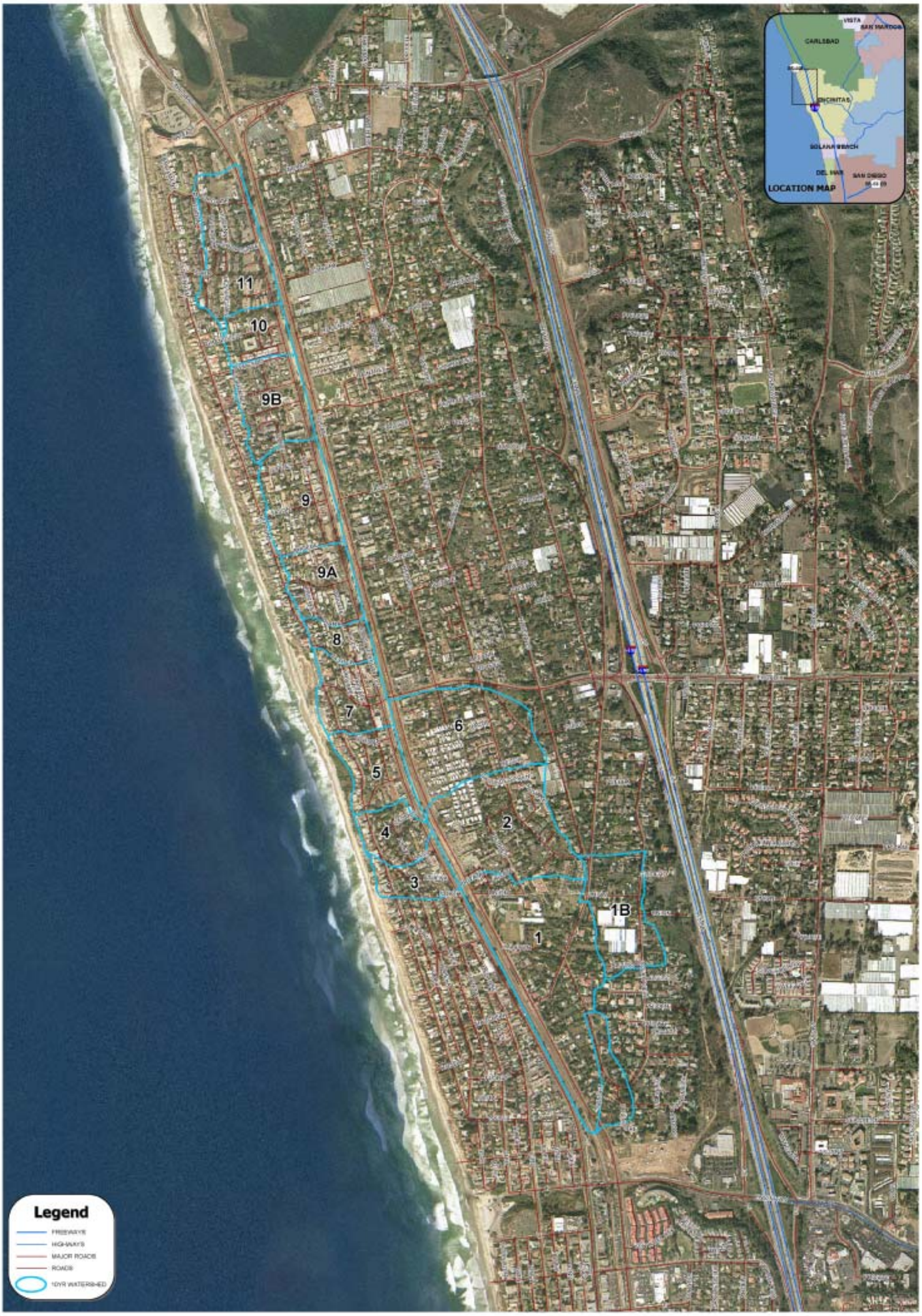
Exhibits 1 and 2 on pages 5 and 6 show the 10-year and 100-year watershed maps, respectively.

Curve Number

The composite curve number (CN) for each basin is based the soil type, land use coverage, and precipitation zone number. The CN calculations for each basin and associated support data are included in Appendix A.

Soil Type

The soil type information was obtained from the San Diego Association of Governments (SANDAG) in Geographic Information System (GIS) format. The soil type is based on the United States Department of Agricultural Soil Survey for San Diego County, and consists mainly of Type A soil. Exhibit 3 on page 7 shows the Soil Survey map.



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NO SCALE

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Exhibit 1:
EXISTING 10-YEAR WATERSHED MAP FOR LEUCADIA

THIS PROJECT LOCATED WITHIN THE CITY OF ENCINITAS

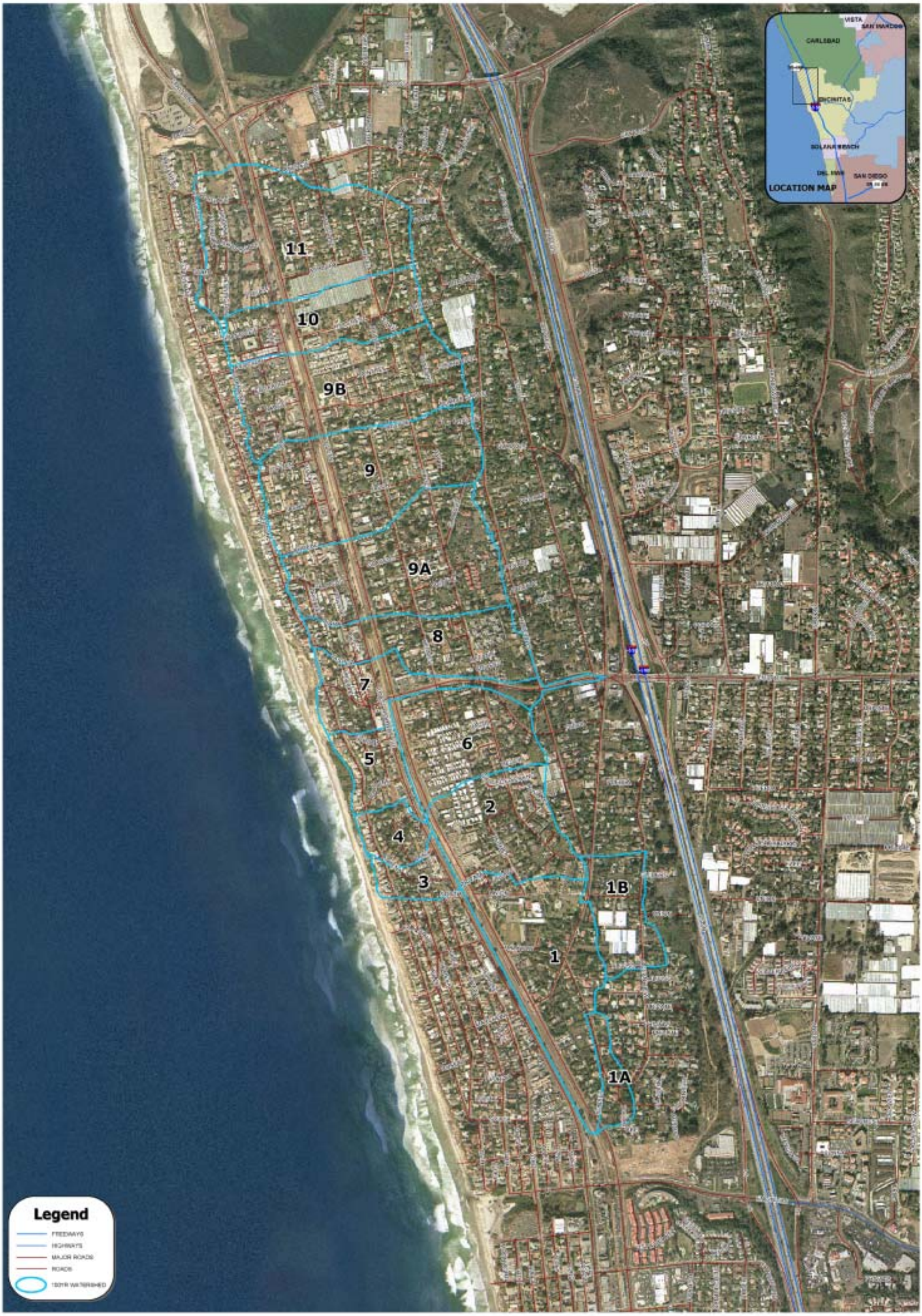

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Exhibit 2:
EXISTING 100-YEAR WATERSHED MAP FOR LEUCADIA

THIS PROJECT LOCATED WITHIN THE CITY OF ENCINITAS

NO SCALE

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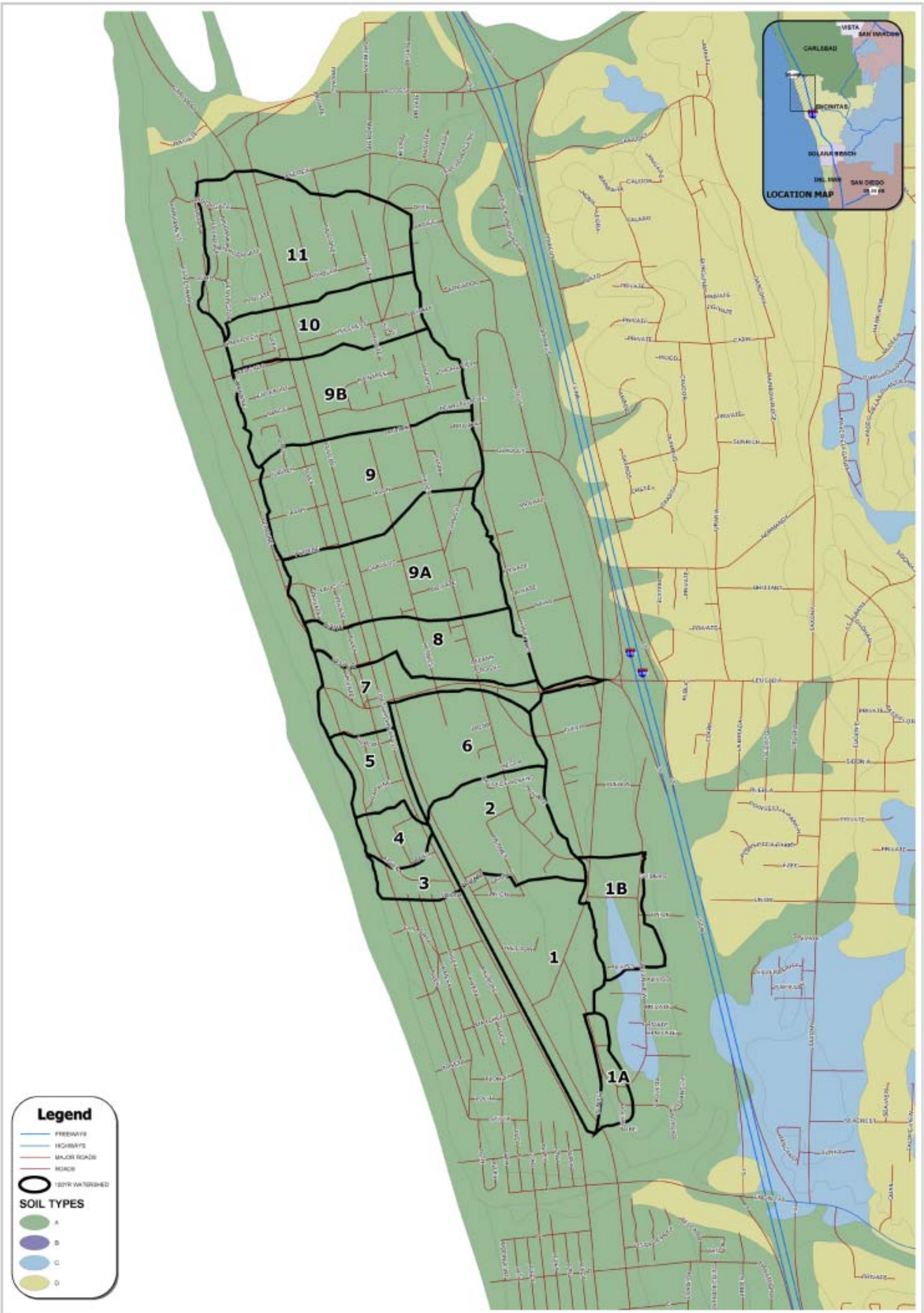

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Exhibit 3:
EXISTING 100-YEAR WATERSHED AND SOIL MAP FOR LEUCADIA

THIS PROJECT LOCATED WITHIN THE CITY OF ENCINITAS

NO SCALE

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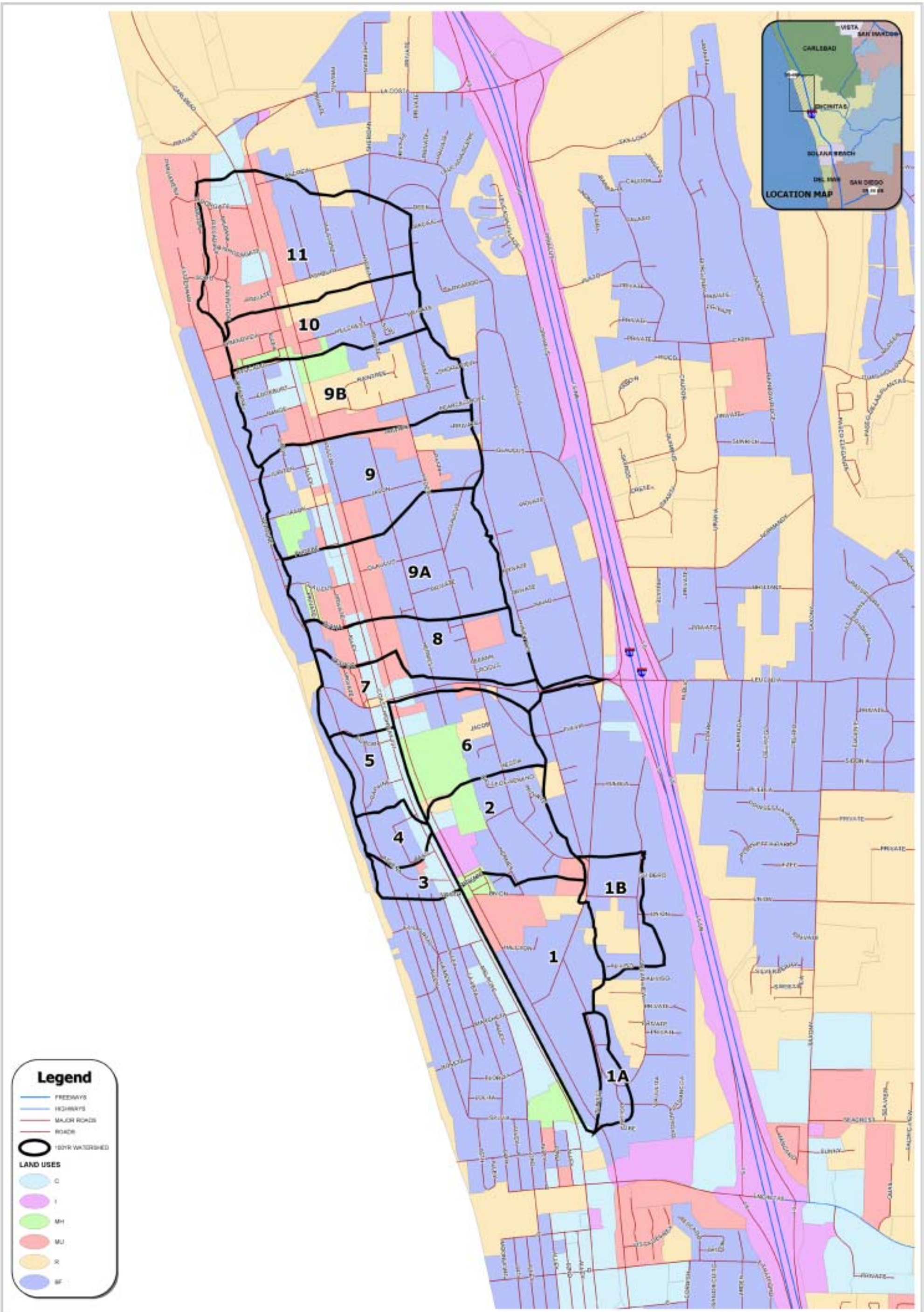

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Exhibit 4:
EXISTING 100-YEAR WATERSHED AND COUNTY OF SAN DIEGO LAND USE MAP FOR LEUCADIA

THIS PROJECT LOCATED WITHIN THE CITY OF ENCINITAS

NO SCALE

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Existing Drainage Condition – Hydraulic Results

Table 3 shows the existing 10-year and 100-year water surface elevations from the HEC-RAS analysis. Please refer to the HEC-RAS work map located in Map Pocket 1 for the locations of the cross-sections. Exhibits 5 and 6 on pages 22 and 23 show the 10-year and 100-year floodplain and watershed maps, respectively.

Table 3. Existing 10-year and 100-year Floodplain Elevations

REFERENCE CROSS-STREETS	HEC-RAS REACH	HEC-RAS CROSS-SECTION	10-YEAR WSEL (ft)	100-YEAR WSEL (ft)
ANDREW AVE	Combine	30	46.3	47.1
MOORGATE RD	Combine	35	49.7	50.6
BISHOPGATE RD	Combine	40	53.7	54.7
	Combine	45	54.0	55.4
	Combine	50	53.9	55.4
GRANDVIEW ST	Combine	55	54.1	55.5
AVOCADO ST	Combine	60	54.1	55.5
RANGE ST	Combine	65	54.2	55.5
	Combine	70	54.4	55.5
JUPITER ST	Combine	75	54.6	55.6
JASON ST	Combine	80	54.6	55.6
PHOEBE ST	Combine	85	54.6	55.6
	Combine	90	54.6	55.6
GLAUCUS ST	Combine	95	54.6	55.6
DIANA ST	Combine	100	55.3	55.8
	Combine	105	55.3	56.0
	Combine	110	55.3	56.1
JASPER ST	Combine	115	55.3	56.1
	Combine	120	55.3	56.1
	Combine	125	55.3	56.1
	Combine	130	55.3	56.1
	Combine	135	55.3	56.1
LEUCADIA BLVD.	Combine	140	55.3	56.1
	101	145	55.3	56.1
EUROPA ST	101	150	55.3	56.1
	101	160	55.3	56.1
	101	165	56.0	56.1
DAPHNE ST	101	170	58.6	58.7
	101	175	59.2	59.3
	101	180	59.5	59.6
	101	185	59.5	59.7
	101	190	59.5	59.7
CADMUS ST	101	195	59.5	59.7
	101	205	59.5	59.7
	101	210	59.5	59.7
	101	215	59.5	59.7
BASIL ST	101	220	59.5	59.7
	101	225.1	59.5	59.7

REFERENCE CROSS-STREETS	HEC-RAS REACH	HEC-RAS CROSS-SECTION	10-YEAR WSEL (ft)	100-YEAR WSEL (ft)
	101	225.2	59.5	59.7
	101	225.3	59.5	59.7
ATHENA ST	101	230	60.1	60.2
	Vulcan	150	63.4	64.2
	Vulcan	165	63.9	65.0
	Vulcan	175	66.1	66.5
	Vulcan	195	66.3	67.0
	Vulcan	215	66.8	67.3
	Vulcan	220	66.9	67.5
	Vulcan	225	66.9	67.5
	Vulcan	230	66.9	67.5
	Vulcan	235	66.9	67.5
UNION ST	Vulcan	240	66.9	67.5
	Vulcan	245	66.9	67.5
	Vulcan	2100.26	66.9	67.5
	Vulcan	2200.25	66.9	67.5
EL PORTAL ST	Vulcan	2300.24	66.9	67.5
	Vulcan	2400.23	66.9	67.5
HALCYON RD	Vulcan	2500.22	66.9	67.5
	Vulcan	2600.21	66.9	67.5
	Vulcan	2700.2	68.0	68.9
	Vulcan	2800.19	69.4	70.4
	Vulcan	2900.18	69.9	71.1
	Vulcan	3000.17	70.4	71.6
	Vulcan	3100.16	70.9	72.1
	Vulcan	3200.15	71.3	72.6
ORPHEUS AVE	Vulcan	3300.14	72.2	73.1

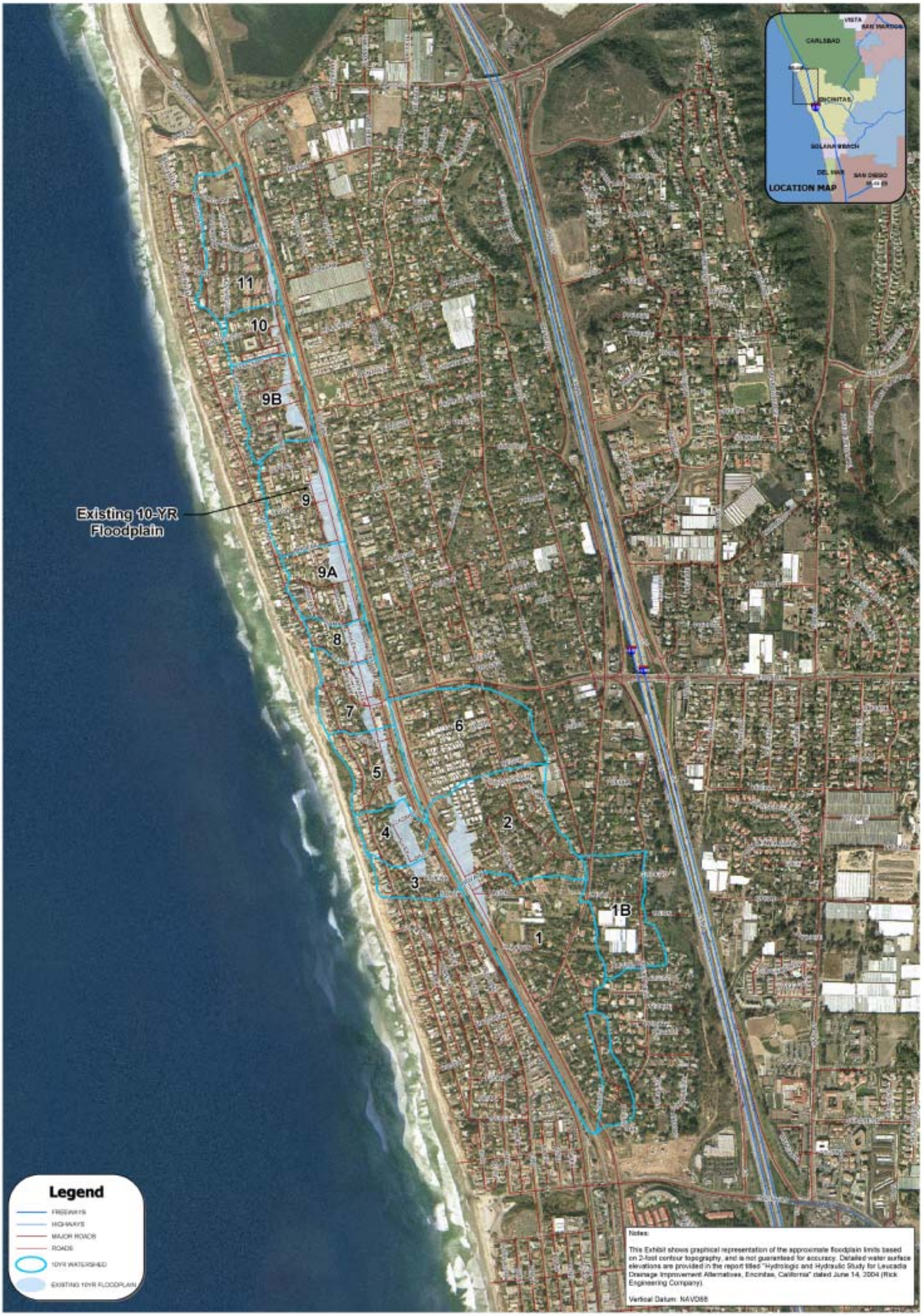

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Exhibit 5:
EXISTING 10-YEAR FLOODPLAIN AND WATERSHED MAP FOR LEUCADIA

NO SCALE

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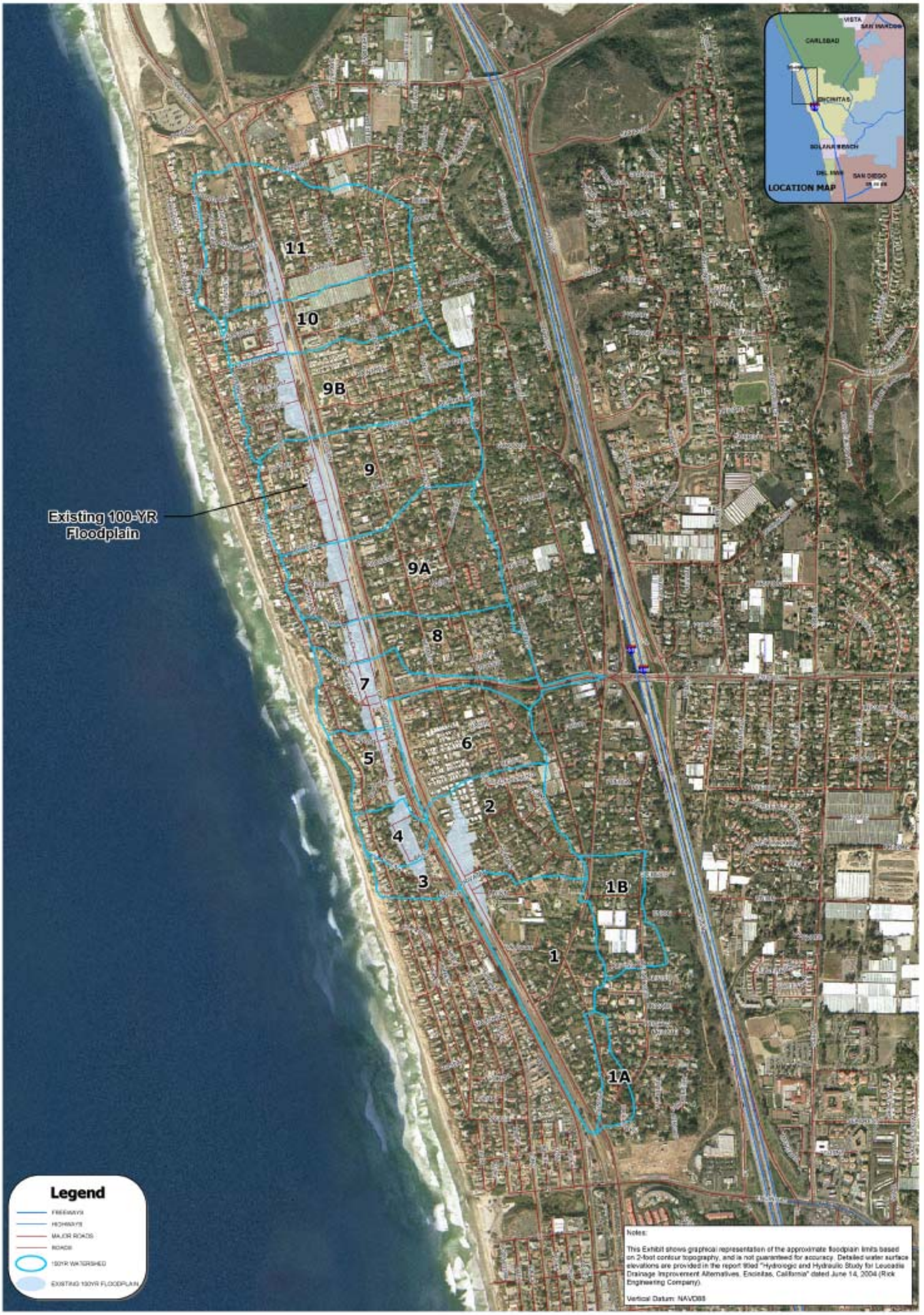

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Exhibit 6:
EXISTING 100-YEAR FLOODPLAIN AND WATERSHED MAP FOR LEUCADIA

THIS PROJECT LOCATED WITHIN THE CITY OF ENCINITAS

NO SCALE

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HEC-RAS Workmap
Highway 101
Encinitas, California

Sheet 1 of 4

GRAPHIC SCALE 1"= 100'

100 50 0 100 200 300

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100 50 0 100 200 300

GRAPHIC SCALE 1"= 100'

HEC-RAS Workmap
Highway 101
Encinitas, California

Sheet 2 of 4

HEC-RAS Workmap
Highway 101
Encinitas, California

Sheet 3 of 4

GRAPHIC SCALE 1" = 100'

100 50 0 100 200 300

June 14, 2004

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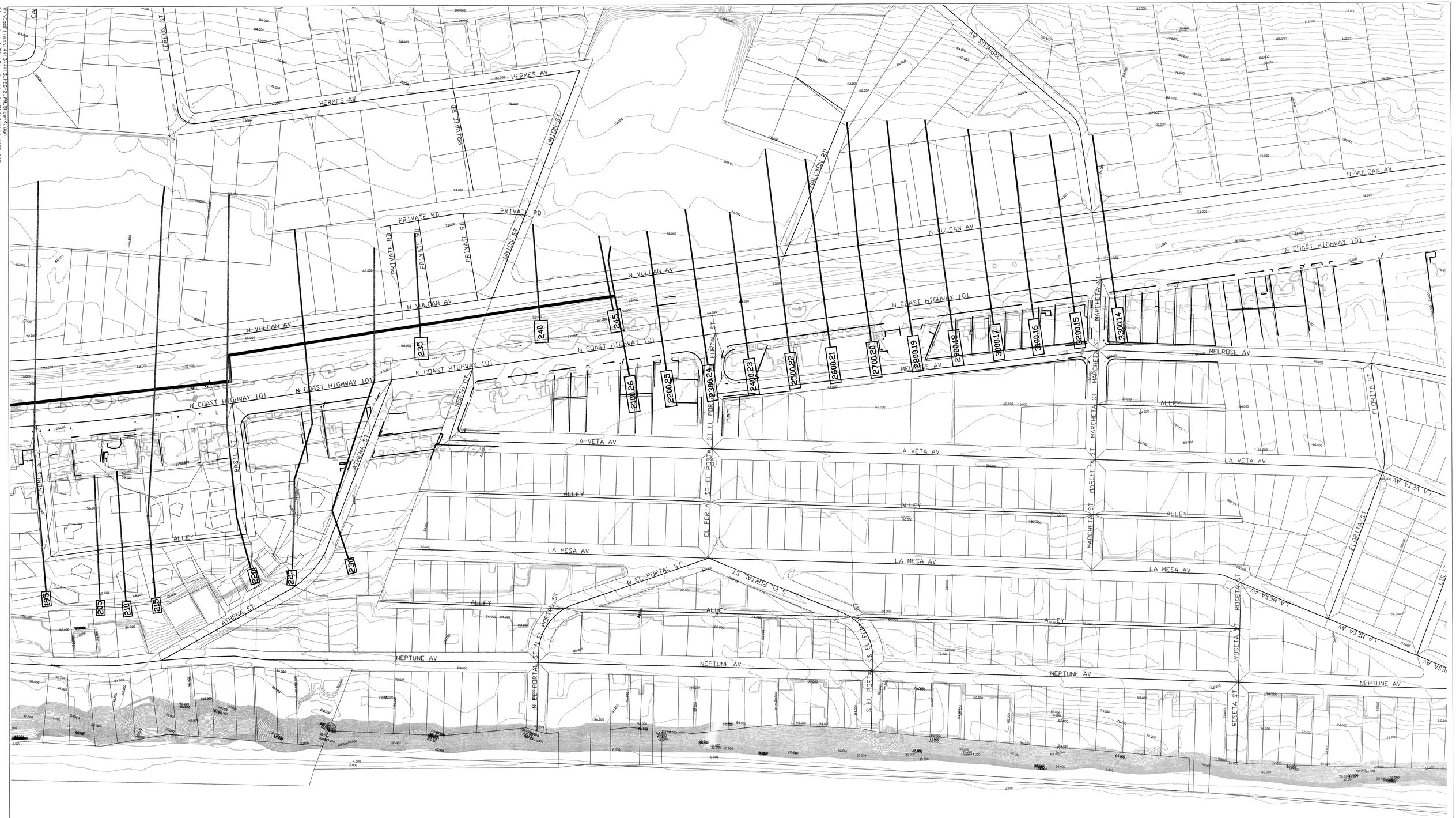

HEC-RAS Workmap
Highway 101
Encinitas, California

Sheet 4 of 4

GRAPHIC SCALE 1"= 100'

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