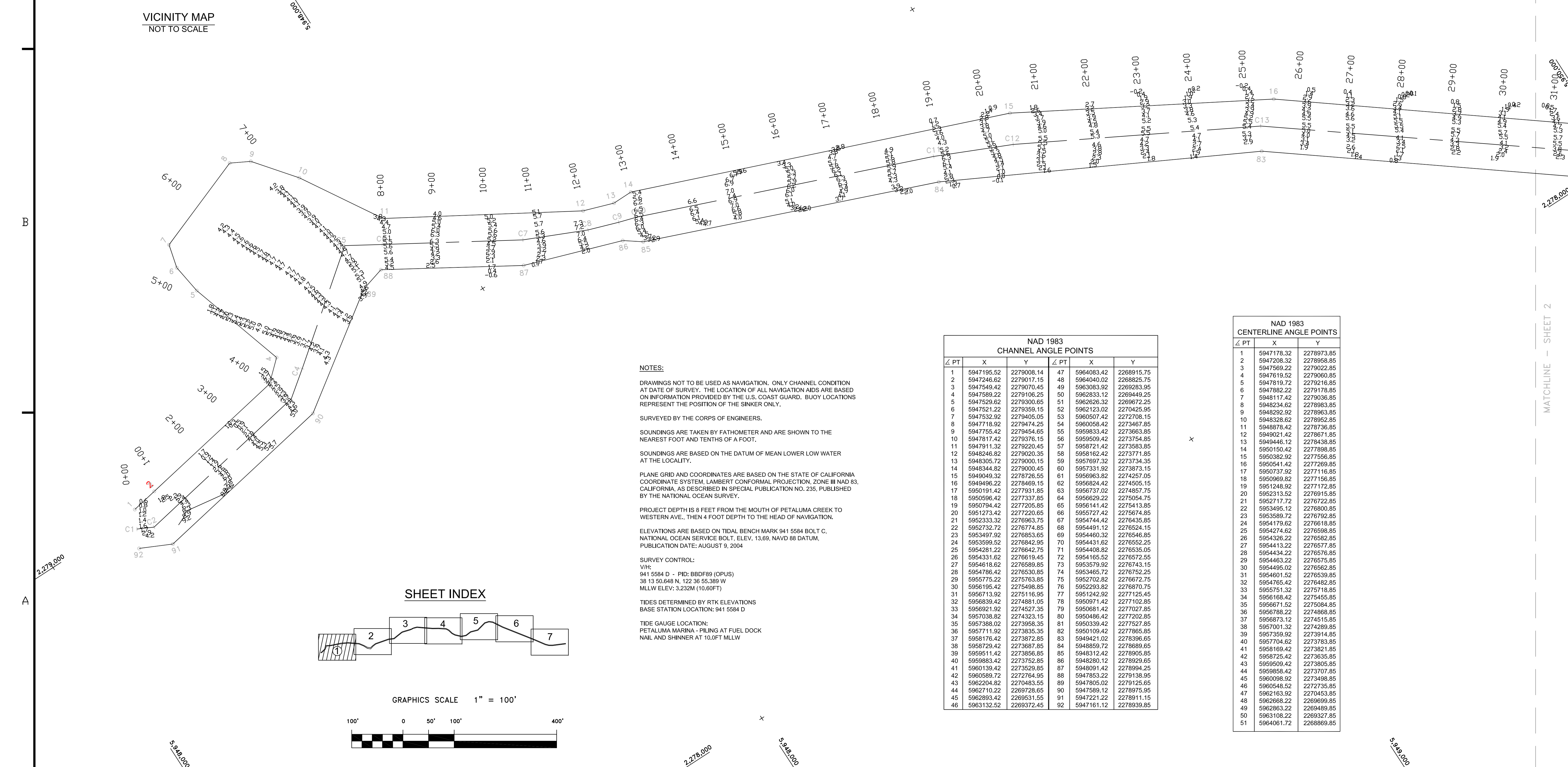


VICINITY MAP
NOT TO SCALE



PRELIMINARY ISSUE
THIS PLAN ISSUED FOR
ADVANCE INFORMATION ONLY

NOTES:

DRAWINGS NOT TO BE USED AS NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY. THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY.

SURVEYED BY THE CORPS OF ENGINEERS.

SOUNDINGS ARE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST FOOT AND TENTHS OF A FOOT.

SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

PLANE GRID AND COORDINATES ARE BASED ON THE STATE OF CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION, ZONE III NAD 83, CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

PROJECT DEPTH IS 8 FEET FROM THE MOUTH OF PETALUMA CREEK TO WESTERN AVE., THEN 4 FOOT DEPTH TO THE HEAD OF NAVIGATION.

ELEVATIONS ARE BASED ON TIDAL BENCH MARK 941 5584 BOLT C, NATIONAL OCEAN SERVICE BOLT, ELEV. 13.69, NAVD 88 DATUM, PUBLICATION DATE: AUGUST 9, 2004

SURVEY CONTROL:

VIIH:
941 5584 D - PID; BBD89 (OPUS)
38 13 50.848 N, 122 36 55.389 W
MLLW ELEV: 3.232M (10.60FT)

TIDES DETERMINED BY RTK ELEVATIONS
BASE STATION LOCATION: 941 5584 D

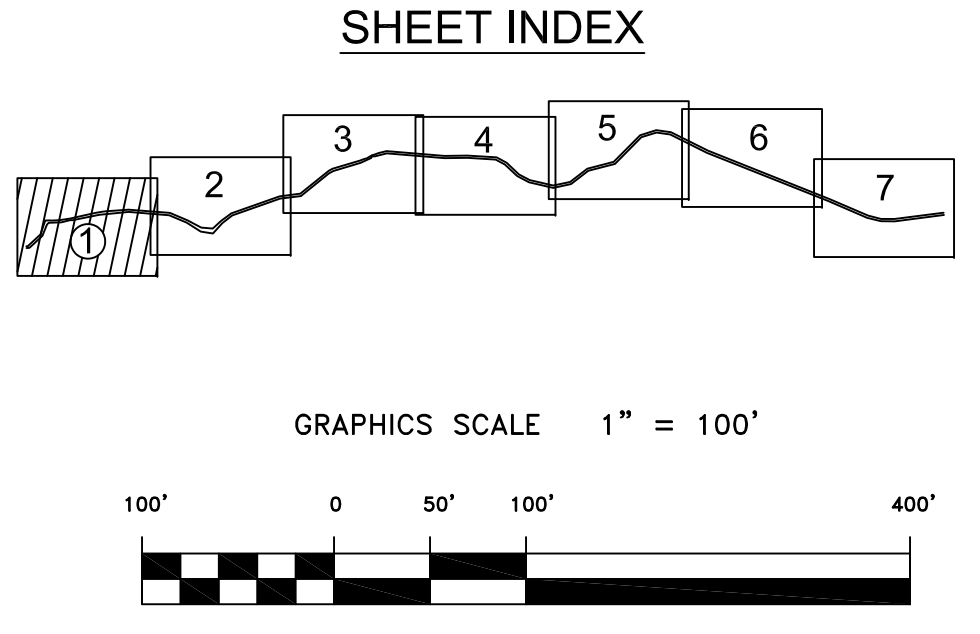
TIDE GAUGE LOCATION:
PETALUMA MARINA - PILING AT FUEL DOCK
NAIL AND SHINNER AT 10.0FT MLLW

**NAD 1983
CHANNEL ANGLE POINTS**

Δ PT	X	Y	Δ PT	X	Y
1	5947195.52	2279008.14	47	5964083.42	2268915.75
2	5947246.62	2279017.15	48	5964040.02	2268825.75
3	5947549.42	2279070.45	49	5963083.92	2269283.95
4	5947589.22	2279106.25	50	5962833.12	2269449.25
5	5947528.62	2279300.65	51	5962626.32	2269672.25
6	5947521.22	2279359.15	52	5962123.02	2270425.95
7	5947532.92	2279405.05	53	5960507.42	2272708.15
8	5947718.92	2279474.25	54	5960058.42	2273467.85
9	5947755.42	2279454.65	55	5959833.42	2273663.85
10	5947817.42	2279376.15	56	5959509.42	2273754.85
11	5947911.32	2279220.45	57	5958721.42	2273583.85
12	5948246.82	2279020.35	58	5958162.42	2273771.85
13	5948305.72	2279000.15	59	5957697.32	2273734.35
14	5948344.82	2279000.45	60	5957331.92	2273873.15
15	5949049.32	2278726.55	61	5956963.82	2274257.05
16	5949496.22	2278469.15	62	5956624.42	2274505.15
17	5950191.42	2277931.85	63	5956737.02	2274857.75
18	5950596.42	2277337.85	64	5956629.22	2275054.75
19	5950794.42	2277205.85	65	5956141.42	2275413.85
20	5951273.42	2277220.65	66	5955727.42	2275674.85
21	5952333.32	2276963.75	67	5954744.42	2276435.85
22	5952732.72	2276774.85	68	595491.12	2276524.15
23	5953497.92	2276853.65	69	5954460.32	2276546.85
24	5953599.52	2276842.95	70	5954431.62	2276552.25
25	5954281.22	2276642.75	71	5954408.82	2276535.05
26	5954331.62	2276619.45	72	5954165.52	2276572.55
27	5954618.62	2276589.85	73	5953579.92	2276743.15
28	5954786.42	2276530.85	74	5953485.72	2276752.25
29	5955775.22	2275763.85	75	5952702.82	2276672.75
30	5956195.42	2275498.85	76	5952293.82	2276870.75
31	5956713.92	2275116.95	77	5951242.92	2277125.45
32	5956839.42	2274881.05	78	5950971.42	2277102.85
33	5956921.92	2274527.35	79	5950681.42	2277027.85
34	5957036.82	2274233.15	80	5950495.42	2277202.85
35	5957388.02	2273958.35	81	5950339.42	2277527.85
36	5957711.92	2273835.35	82	5950109.42	2277865.85
37	5958176.42	2273872.85	83	5949421.02	2278396.65
38	5958729.42	2273687.85	84	5948859.72	2278689.65
39	5959511.42	2273656.85	85	5948312.42	2278905.85
40	5959883.42	2273752.85	86	5948280.12	2278929.65
41	5960138.42	2273529.85	87	5948091.42	2278994.25
42	5960589.72	2272764.95	88	5947853.22	2279138.95
43	5962204.82	2270483.55	89	5947805.02	2279125.65
44	5962710.22	2269728.65	90	5947589.12	2278975.95
45	5962893.42	2269531.55	91	5947221.22	2278911.15
46	5963132.52	2269372.45	92	5947161.12	2278939.85

**NAD 1983
CENTERLINE ANGLE POINTS**

Δ PT	X	Y
1	5947178.32	2278973.85
2	5947208.32	2278958.85
3	5947569.22	2279022.85
4	5947619.52	2279060.85
5	5947819.72	2279216.85
6	5948282.22	2279178.85
7	5948117.42	2279036.85
8	5948234.62	2278983.85
9	5948292.92	2278963.85
10	5948328.62	2278952.85
11	5948878.42	2278736.85
12	5949021.42	2278671.85
13	5949446.12	2278438.85
14	5950150.42	2277898.85
15	5950382.92	2277556.85
16	5950541.42	2277269.85
17	5950737.92	2277116.85
18	5950969.82	2277156.85
19	5951248.92	2277172.85
20	5952313.52	2276915.85
21	5952717.72	2276722.85
22	5953495.12	2276800.85
23	5953589.72	2276792.85
24	5954179.62	2276618.85
25	5954274.62	2276598.85
26	5954326.22	2276582.85
27	5954413.22	2276577.85
28	5954434.22	2276576.95
29	5954463.22	2276575.85
30	5954495.02	2276562.85
31	5954601.52	2276539.85
32	5954765.42	2276482.85
33	5955751.32	2275718.85
34	5956168.42	2275455.85
35	5956671.52	2275084.85
36	5956788.22	2274868.85
37	5956873.12	2274515.85
38	5957001.32	2274289.85
39	5957359.92	2273914.85
40	5957704.62	2273783.85
41	5958169.42	2273821.85
42	5958725.42	2273635.85
43	5959509.42	2273805.85
44	5959858.42	2273707.85
45	5960098.92	2273498.85
46	5960548.52	2272735.85
47	5962163.92	2270453.85
48	5962668.22	2269699.85
49	5962863.22	2269489.85
50	5963108.22	2269327.85
51	5964061.72	2268869.85



Mark	Description	Date	Appr.

SUBMITTED BY:	PDT	DRAWN BY:	PDI
	Hiers Survey Team Leader	10/12/2013	1 OF 7
DESIGNED BY:	PDI	CHECKED BY:	PDI
DATE:	10/12/2013	SHEET NO.:	52
APPROVAL RECOMMENDED:	CHIEF, Hydro Survey Section	DATE:	10/12/2013
APPROVED:	CHIEF, Construction Branch	PREPARED UNDER THE DIRECTION OF:	JOHN K. BAKER
			LT. COLONEL, C.E., DISTRICT ENGINEER

CALIFORNIA
PETALUMA RIVER
CONDITION SURVEY
4-5 OCTOBER 2013

Sheet reference number
C1