

NAD 83 CHANNEL ANGLE POINTS

Δ PT	X	Y	Δ PT	X	Y
1-A	8522058.94	1773894.77	46	8611103.07	1772096.82
2-A	8525876.51	1775995.50	47	8612148.35	1771412.18
1	8522251.24	1773544.02	48	8611928.32	1771078.24
2	8526638.33	1775949.19	49	8610989.28	1771713.02
3	8528814.71	1776043.48	50	8609351.08	1771859.43
4	8527523.96	1776423.75	51	8607366.28	1771677.36
5	8532628.85	1779160.81	52	8606234.39	1771743.72
6	8533058.01	1779418.58	53	8605546.71	1772090.55
7	8534097.47	1779658.02	54	8605222.02	1772541.31
8	8538142.48	1781404.93	55	8604935.28	1772457.79
9	8541140.44	1783047.77	56	8604271.82	1772822.80
10	8543746.50	1785148.80	57	8603528.42	1772966.17
11	8546257.51	1786960.74	58	8602633.32	1773215.96
12	8549181.52	1788360.88	59	8599652.22	1773313.41
13	8553384.18	1784554.99	60	8599077.86	1773943.71
14	8558000.55	1784525.57	61	8598135.33	1774014.34
15	8561371.57	1783800.48	62	8596888.12	1774746.95
16	8563022.20	1783817.72	63	8595938.27	1775223.39
17	8566631.80	1783855.42	64	8595391.45	1775902.10
18	8570705.41	1783336.79	65	8594404.78	1777464.31
19	8572444.64	1783158.37	66	8593291.34	1778180.87
20	8574974.06	1782266.38	67	8591480.44	1778412.52
21	8578022.73	1780780.80	68	8591255.17	1778442.21
22	8581155.52	1779254.25	69	8590791.21	1778418.32
23	8583747.56	1778351.30	70	8588528.94	1777967.81
24	8585358.69	1778304.53	71	8585297.54	1777983.71
25	8588482.14	1783158.37	72	8583095.58	1778304.51
26	8590754.42	178766.38	73	8581002.20	1778939.83
27	8591256.10	178845.54	74	8577959.51	1780422.27
28	8591599.01	178800.33	75	8574841.16	1781941.79
29	8593537.77	178844.71	76	8572366.09	178272.55
30	8594989.78	177747.44	77	8570844.56	1782991.71
31	8595729.72	1776115.57	78	8569811.24	1783055.19
32	8596208.21	177521.70	79	8568290.38	1783467.06
33	8598846.81	1775104.81	80	8561352.98	1783450.27
34	8598253.91	1774402.21	81	8555738.17	1784107.49
35	8599256.55	1773901.57	82	8555323.24	1784209.40
36	8599895.13	177308.08	83	8549136.20	1785728.94
37	8600293.83	1773614.79	84	8543900.48	178613.00
38	8603558.93	1773384.99	85	8542983.17	1786330.75
39	8604408.52	1773200.93	86	8541295.27	1786390.31
40	8605166.76	177283.99	87	8538304.13	1781092.05
41	8605493.42	1772571.96	88	8534227.97	1779531.21
42	8605666.48	1772482.32	89	8533218.72	1779102.27
43	8606339.33	1772133.75	90	8532770.08	1778886.24
44	8607329.74	1772075.69	91	8527655.58	1778153.90
45	8609314.54	1772257.76	92	8526956.17	1775778.89
			93	8522395.41	1773280.93

CENTERLINE ANGLE POINTS

Δ PT	X	Y
C1	8522323.35	1773412.49
C2	8526711.37	1775815.85
C3	8526885.44	1775911.19
C4	8527589.77	1776288.83
C5	8532899.46	1779028.53
C6	8533138.36	1779250.42
C7	8534182.72	1779693.62
C8	8538223.29	1781248.49
C9	8541217.85	1783249.04
C10	8543823.49	1784989.77
C11	8546286.60	1785796.87
C12	8549158.86	1786904.81
C13	8553353.71	1784325.19
C14	8555769.38	1784280.03
C15	8561382.27	1783625.37
C16	8562991.28	1783642.39
C17	8566821.42	1783680.31
C18	8570674.99	1783164.25
C19	8572405.37	1782943.96
C20	8574907.61	1782104.08
C21	8577991.12	1780601.54
C22	8581078.86	1779096.94
C23	8583717.07	1778177.91
C24	8585328.12	1778157.11
C25	8588510.54	1778141.94
C26	8590772.82	1778592.35
C27	8591255.63	1778643.88
C28	8591539.73	1778606.44
C29	8593485.01	1778352.69
C30	8594552.75	1777605.88
C31	8595610.59	1778008.94
C32	8598073.24	1775372.55
C33	8598757.47	1774925.89
C34	8598194.62	1774208.28
C35	8598167.21	1773722.84
C36	8599705.87	1773506.74
C37	8600378.58	1773153.38
C38	8603543.88	1773165.58
C39	8603401.18	1773011.77
C40	8605051.02	1772620.90
C41	8605937.77	1772417.41
C42	8608905.37	1772282.44
C43	8608288.86	1771838.73
C44	8607348.01	1771876.53
C45	8609332.80	1772058.59
C46	8611036.18	1771905.32
C47	8613038.33	1771925.21



**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 LOCATION REPRESENT THE POSITION OF THE SINKER ONLY.

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

SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY, NAVD 88.

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

THE PROJECT DEPTH IS 35 FEET.

VERTICAL CONTROL  
SUISUN BAY CHANNEL  
(LINES 00+00 TO 160+00) BENCHMARK "9" (1948), USC&GS DISK, ELEV 14.875 FT MLLW., NAVD 88 DATUM.  
TIDE GAUGE LOCATED AT PORT OF BENICIA DOCK.

(LINES 150+00 TO 500+00 BENCHMARK "5144-P" (1990 RESET 1997), USC&GS DISK, ELEV 11.83 FT MLLW., NAVD 88 DATUM.  
TIDE GAUGE LOCATED AT CONCORD NAVAL WEAPONS STATION TUG DOCK, NOAA STATION.

(LINES 500+00 TO 660+00 BENCHMARK "5144-P" (1990 RESET 1997), USC&GS DISK, ELEV 11.83 FT MLLW., NAVD 88 DATUM.  
TIDE GAUGE LOCATED AT CONCORD NAVAL WEAPONS STATION TUG DOCK, NOAA STATION.

(LINES 660+00 TO 733+45 BENCHMARK "5096-B", USC&GS DISK, ELEV 21.76 FT MLLW., NAVD 88 DATUM.  
TIDE GAUGE LOCATED AT DIABLO SERVICES DOCK.

COMPOSITE SURVEY DATES:  
0+00 TO 59+00 - CONDITION 30 DECEMBER 2008  
59+00 TO 71+00 - POSTDREDGE 8 DECEMBER 2008  
72+00 TO 187+00 - CONDITION 2 JANUARY 2009  
188+00 TO 316+00 - POSTDREDGE 20-21 DECEMBER 2008  
317+00 TO 733+00 - CONDITION 8, 16-17 JANUARY 2009

PRELIMINARY ISSUE  
THIS PLAN REPRESENTS  
ADVANCE INFORMATION ONLY

US Army Corps  
of Engineers  
San Francisco District  
1455 Market Street  
San Francisco, CA 94103

Mark	Description	Date	Appr.

SUBMITTED:	DESIGNED BY:	LAURENCE M. FARRELL LT. COLONEL, C.E., DISTRICT ENGINEER
	CHECKED BY:	
DRAWN BY:	DATE:	2/4/2009
	DRAWING NO.	2 239
APPROVAL RECOMMENDED:	SHEET NO.	1 OF 16
	PREPARED UNDER THE DIRECTION OF	LAURENCE M. FARRELL
APPROVED:	Chief, Technical Support Section	
Chief, Construction Branch		

CALIFORNIA  
CONTRA COSTA COUNTY  
SUISUN BAY CHANNEL  
COMPOSITE CHANNEL SURVEY  
CONDITION SURVEY 2008 &  
5, 20-21, 30 DECEMBER 2008 &  
2, 8, 16-17 JANUARY 2009

Sheet reference number  
C1