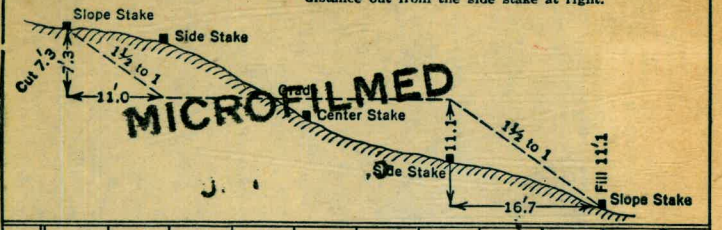
MISSION BAY

47

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30 3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	38.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

KEUFFEL & ESSER CO., N. Y.

F.B. # 47

SUB GRADES

3

108.406 L.3

BOOK Nº 47

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S

Sta	Object	Angle	Mean
	P.I. #2. 15+46.05	(1.) 44° 16' 00"	
P.O.T. 9+24 60	R ⊥	(2.) 88° 32' 30" (?)	
	"B"	Av. 44° 16' 15"	
	9+24 60	(1.) 45° 56' 30"	
℄ Miss. Valley Rd. "B"	R ⊥ ℄ underpass	(2.) 91° 53' 00"	
	"A" ℄ Valley Rd.	Av. 45° 56' 30"	
	9+24 60	(1.) 95° 59' 00"	
"B"	R ⊥	(2.) 191° 59' 00"	
	P.I. #2. 15+46.05	Av. 95° 59' 30"	
	"B"	1. 89° 47'	
"A"	R ⊥	2. 179° 34' 30"	
	9+24 60	Av. 89° 47' 15"	
	"B"	1. 39° 44' 00"	
P.I. #2 15+46.05	R ⊥	2. 79° 28' 00"	
	"A"	Av. 39° 44' 00"	

Sta obj. Angle

12+39.30

P.I. #2 ~~+ 5.3 El.~~

15+46.05 Vertical

Vert ∠ Check for Clearance

5° 33' To Top underface

& Lower face Girder

5.3 + 13.93

5.3

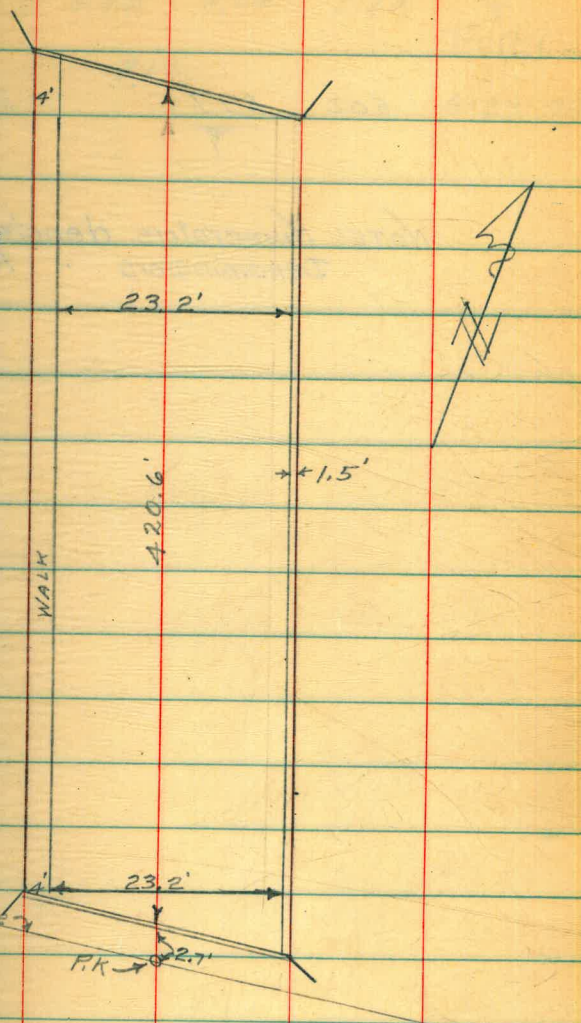
H.I = 18.23

306.75 V

3-6-50

LOCATION MORENA STREET

BRIDGE OVER SAN DIEGO RIVER



VENTURA BLVD.

SUBGRADES

				Lt. Edge	½	℄	½	Rt. Edge	4
42+12.64				2.77 5.40	3.13 5.04	3.25 4.92	3.13 5.04	2.77 5.40	Walker of Party
			Temp. B.M. ℄ Stake			8.17			
5.02	8.17	3.15		42+57.02	P-5				6-29-49

NOTE: Numerators denote Subgrades
Denominators " Rods

4.37
4.03
8.40

Ventura Blvd.
Subgrades

6-29-49

Station						Lt. Edge	1/4	℄	1/4	Rt. Edge
43+77.02						2.46 6.56	2.83 6.19	3.19 5.83	3.47 5.55	3.74 5.28
43+57.02 = B.C.						8.40 .70 2.45 6.57 (3.70)	8.40 3.05 2.80 6.22 (5.35)	8.40 .40 3.15 5.87 (5.00)	8.40 .59 3.34 5.68 (4.81)	8.40 .77 3.52 5.50 (4.63)
	4.99	9.02		4.03	B.M. Cor. MH 36+36			9.02		
43+37.02						8.40 .71 2.46 5.71 (5.69)	8.40 3.00 2.75 5.22 (5.10)	8.40 .37 3.12 5.05 (5.03)	8.40 .42 3.17 5.00 (4.98)	8.40 .47 3.22 4.95 (4.93)
43+17.02						8.40 .75 2.53 5.64 (5.62)	8.40 3.21 2.96 5.21 (5.19)	8.40 .35 3.10 5.07 (5.05)	8.40 .34 3.09 5.08 (5.06)	8.40 .31 3.06 5.11 (5.09)
42+97.02						8.40 .80 2.55 5.62 (5.60)	8.40 3.21 2.96 5.21 (5.19)	8.40 .35 3.10 5.07 (5.05)	8.40 .29 3.04 5.13 (5.11)	8.40 3.11 2.86 5.31 (5.29)
42+85.02 = P.R.C.						2.59 5.58	2.97 5.20	3.11 5.06	3.04 5.13	2.78 5.39
42+77.02						2.61 5.56	2.99 5.18	3.12 5.05	3.03 5.14	8.40 2.99 2.74 5.40 (5.41)
42+57.02						2.64 5.53	3.02 5.15	3.15 5.02	3.03 5.14	8.40 2.93 2.68 5.49 (5.47)
42+37.02						2.70 5.47	3.07 5.10	3.19 4.98	3.07 5.10	2.70 5.47
		8.17 = K P-4						8.17		

Ventura Blvd. Subgrades

6-29-49

						Lt edge	1/4	℄	1/4	Rt. Edge
47+00						326 / 542	363 / 505	400 / 4.68	438 / 430	4.75 / 3.93
46+50						313 / 5.55	351 / 5.17	387 / 4.81	425 / 443	462 / 4.06
46+00						300 / 5.68	338 / 530	375 / 4.93	412 / 4.56	449 / 4.19
45+50						2.87 / 5.81	325 / 543	362 / 506	400 / 4.68	4.37 / 4.31
45+00						275 / 5.93	313 / 5.55	350 / 5.18	388 / 4.80	425 / 4.43
44+50						262 / 6.06	300 / 5.68	337 / 5.31	375 / 4.93	412 / 4.56
44+37.02						2.59 / 6.09	297 / 5.71	334 / 5.34	372 / 496	409 / 4.59
T.P.	4.65	8.68	4.29	4.03	Rim N.E. Cor MH 46+36 [illegible]			868		
44+17.02						254 / 6.48	292 / 6.10	329 / 5.73	366 / 5.36	402 / 500
43+97.02						249 / 6.53	287 / 6.15	324 / 5.78	357 / 5.45	390 / 5.12
		902						902		

Ventura Blvd.
~Subgrades~

6-30-49

	Lt Edge	1/4	℄	1/4	Rt. Edge
50+80.27=EoC	4.23 5.52	4.59 5.18	4.95 4.82	5.13 4.64	5.30 4.47
50+60.27	4.17 5.60	4.54 5.23	4.90 4.87	5.16 4.61	5.43 4.34
50+40.27	4.11 5.66	4.48 5.29	4.85 4.92	5.18 4.59	5.50 4.27
50+20.27	5.06 5.71	4.43 5.34	4.80 4.97	5.16 4.61	5.53 4.24
50+00.27	4.00 5.77	4.38 5.39	4.75 5.02	5.13 4.64	5.50 4.27
49+50	3.90 5.87	4.27 5.50	4.63 5.14	5.00 4.77	5.37 4.40
49+00	3.77 4.71	4.14 4.54	4.50 4.18	4.88 3.80	5.25 3.43
48+50	3.64 5.04	4.01 4.67	4.37 4.31	4.75 3.93	5.12 3.56
48+00	3.51 5.17	3.88 4.80	4.25 4.43	4.62 4.06	4.99 3.69
47+50	3.36 5.32	3.74 4.94	4.12 4.56	4.50 4.18	4.87 3.81

TP 4.82 9.77 3.43 5.25

47+00
33' Rt.

9.77

8.68

8.68

Ventura Blvd.
Subgrades

6-30-49

	Lt Edge	1/4	℄	1/4	Rt Edge
53+00 27	484 / 4.93'	534 / 4.43'	550 / 4.27'	534 / 4.43'	484 / 4.93'
52+60 27	476 / 5.01'	524 / 4.53'	540 / 4.37'	524 / 4.53'	476 / 5.01'
52+20 27	464 / 5.13'	514 / 4.63'	530 / 4.47'	514 / 4.63'	464 / 5.13'
52+00 27	457 / 5.18'	509 / 4.68'	525 / 4.52'	507 / 4.70'	461 / 5.16'
51+80 27	453 / 5.24'	502 / 4.75'	520 / 4.57'	508 / 4.69'	464 / 5.13'
51+60 27	447 / 5.30'	493 / 4.84'	515 / 4.62'	509 / 4.68'	477 / 5.00'
51+40 27	461 / 5.36'	484 / 4.93'	510 / 4.67'	510 / 4.67'	490 / 4.87'
51+20 27	495 / 5.02'	475 / 5.02'	505 / 4.72'	511 / 4.66'	503 / 4.74'
51+00 27	429 / 5.48'	467 / 5.10'	500 / 4.77'	512 / 4.65'	517 / 4.60'
			977		

Ventura Blvd. Subgrades

	Lt. 33'	Lt. 16.5'	℄	Rt. 16.5'	Rt. 33'	6-30-49
53+30	4.91 / 4.86	5.42 / 4.35	5.58 / 4.19	5.42 / 4.35	4.91 / 4.86	
			9.77 π P-8			
Cont. P-10						
54+00	5.04 / 5.11	5.54 / 4.61	5.70 / 4.45	5.54 / 4.61	5.04 / 5.11	
53+80	5.03 / 5.12	5.53 / 4.62	5.67 / 4.46	5.53 / 4.62	5.03 / 5.12	
53+60	5.20 / 5.15	5.42 / 4.66	5.65 / 4.50	5.49 / 4.66	4.99 / 5.16	
			10.15			

T.P.	6.18	10.15	5.83	3.97
	5.77	9.80		4.03 BM on E. Cor NH 46+36Z
Chk BM.			5.77	4.05
T.P.	5.83	9.82	6.26	3.99
T.P.	6.06	10.25	5.06	4.19
	4.96	9.25		4.29

BM on NH N.E. Cor

~ Ventura Blvd. ~

Walker
Johnson
Crawford
6-29-49

Subgrades

W.O. 2202

6-29-49

Station	33'	Lt 16.5' (1/4)	℄	16.5 (1/4)	Rt 33'
55+50	4.72 / 5.43	5.22 / 4.93	5.38 / 4.77	5.22 / 4.93	4.72 / 5.43
55+00	4.84 / 5.31	5.34 / 4.81	5.50 / 4.65	5.34 / 4.81	4.84 / 5.31
54+70	4.92 / 5.23	5.42 / 4.73	5.58 / 4.57	5.42 / 4.73	4.92 / 5.23
54+40	4.99 / 5.16	5.49 / 4.66	5.65 / 4.50	5.49 / 4.66	4.99 / 5.16
54+20	5.03 / 5.12	5.53 / 4.62	5.69 / 4.46 / 10.15	5.53 / 4.62	5.03 / 5.12
Cont. from p-9					
~~54+60~~ (10.15 R from p-9)	5.04 / 5.22	5.54 / 4.72	5.70 / 4.56	5.54 / 4.72	5.04 / 5.22
~~53+80~~	5.03 / 5.26	5.53 / 4.73	5.69 / 4.57	5.53 / 4.73	5.03 / 5.26
53+60	4.99 / 5.27	5.49 / 4.77	5.65 / 4.61	5.49 / 4.77	4.99 / 5.27

T.P. 6.40 10.26 5.22 3.86 10.26

5.05 9.08 ~~4.03~~ BM. NE Cor. MH. 46+36 ±

Ventura Blvd
Subgrades

	Lt		Rt		11
33	16.5		16.5	33	6-30-49
60+00	4.10 / 5.30	4.26 / 5.14	4.10 / 5.30	3.60 / 5.80	
59+50	4.22 / 5.18	4.38 / 5.02	4.22 / 5.18	3.72 / 5.68	
59+00	4.35 / 5.05	4.51 / 4.89	4.35 / 5.05	3.85 / 5.55	
58+50	4.47 / 4.93	4.63 / 4.77	4.47 / 4.93	3.97 / 5.43	
58+00	4.60 / 4.80	4.76 / 4.64	4.60 / 4.80	4.10 / 5.30	
57+50	4.72 / 4.68	4.88 / 4.52	4.72 / 4.68	4.22 / 5.18	
TP	5.52	9.40	6.27	3.88	
57+00	4.85 / 5.30	5.01 / 5.14	4.85 / 5.30	4.35 / 5.80	
56+50	4.97 / 5.18	5.13 / 5.02	4.97 / 5.18	4.47 / 5.68	
56+00	5.10 / 5.05	5.26 / 4.89	5.10 / 5.05	4.60 / 5.55	
		10.15			

6-30-49

Ventura Blvd
Subgrades

						Lt.	℄	Rt.	
				4.29=BM.					
Chk BM			5.13	4.27	N.E. Cor Conc. MH		60+92	53' Lt.	
61+66=BC.					3.18 [illegible]	3.68 5.72	3.84 5.56	3.68 5.72	3.18 6.22
61+50					3.22 6.18	3.72 5.68	3.88 5.52	3.72 5.68	3.22 6.18
61+00					3.35 6.05	3.85 5.55	4.01 5.39	3.85 5.55	3.35 6.05
60+50					3.47 5.93	3.97 5.43	4.13 5.27	3.97 5.43	3.47 5.93

9.40

7-1-79

Ventura Blvd.
Subgrades

	Lt	1/4	℄	1/4	Rt	
6+25	2.39	1.89	1.39	0.89	0.39	
6+00	2.27 4.93	1.77 5.33	1.27 5.83	0.77 6.33	0.27 6.83	
5+82	2.18 4.92	1.68 5.42	1.18 5.92	0.68 6.42	0.18 6.92	
5+62	2.07 5.08	1.53 5.57	1.05 6.05	0.57 6.53	0.08 7.02	
5+42	1.74 4.86	1.30 5.30	0.86 6.24	0.42 6.68	-0.02 7.12	
5+22	1.33 5.17	0.96 5.14	0.60 6.50	0.24 0.57 6.86	-0.12 7.22	5.95 .32 5.63
5+02=BC.	0.81 6.29	0.55 6.55	+0.30 6.80	0.02 OUT	-0.26 OUT	

SET FINISH GRADES FOR CLEAN OUT #9
- 0.66 @ IN S/END BAYSIDE LANE
+ 6.24
H.I. = 5.58

5.58
1.98 @ STA-5+37 (LT. EDGE)
3.60 @ GRADE ROD

7.10

5.58
1.96 @ R.5+37 (1/4 LEFT)
4.12 @ ROD

4.72 7.10 2.38

B.M.
M.H.

Ventura Blvd.
Subgrades

7-1-49

	Lt.	¼	℄	¼	Rt.
8+50	3.52 4.27	3.02 4.77	2.52 5.27	2.02 5.77	1.52 6.27
8+25	3.40	2.90	2.40	1.90	1.40
TP	5.41	7.79	4.72	2.38	7.79
8+00	3.37 3.83	2.77 4.33	2.27 4.83	1.77 5.33	1.27 5.83
7+75	3.14	2.64	2.14	1.64	1.14
7+50	3.02 4.08	2.52 4.58	2.02 5.08	1.52 5.58	1.02 6.08
7+25	2.89	2.39	1.89	1.39	0.89
7+00	2.77 4.33	2.27 4.83	1.77 5.33	1.27 5.83	0.77 6.33
6+75	2.64	2.14	1.64	1.14	0.64
6+50	2.52 4.58	2.02 5.08	1.52 5.58	1.02 6.08	0.52 6.58
	7.10		7.10		

Ventura Blvd. Subgrades

7-1-49

	Lt.	½	℄	½	Rt.
11+00	3.78 4.01	3.28 4.51	2.78 5.01	2.28 5.51	1.78 6.01
10+50	3.91 3.88	3.41 4.38	2.91 4.88	2.41 5.38	1.91 5.88
10+00	4.03 3.76	3.53 4.26	3.03 4.76	2.53 5.26	2.03 5.76
9+88.71	4.06 3.73	3.56 4.23	3.06 4.73	2.56 5.23	2.06 5.73
9+68.71	4.07 3.72	3.57 4.22	3.07 4.72	2.57 5.22	2.07 5.72
9+48.71	4.01 3.78	3.51 4.28	3.01 4.78	2.51 5.28	2.01 5.78
9+25	3.90	3.40	2.90	2.40	1.90
9+00	3.77 4.02	3.27 4.52	2.77 5.02	2.27 5.52	1.77 6.02
8+75	3.65	3.15	2.65	2.15	1.65

7.72

7.79

Ventura Blvd.
Subgrades

7-1-49

					Lt	1/4	℄	1/4	Rt
13+94	13	=	E.G.		2.60 / 4.40	2.27 / 4.73	2.05 / 4.95	1.55 / 5.45	1.05 / 5.95
13+74	13				2.80 / 4.20	2.40 / 4.60	2.10 / 4.90	1.60 / 5.40	1.10 / 5.90
13+54	13				2.98 / 4.02	2.51 / 4.49	2.15 / 4.85	1.65 / 5.35	1.15 / 5.85
13+34	13				3.18 / 3.82	2.61 / 4.39	2.20 / 4.80	1.70 / 5.30	1.20 / 5.80
T.P.		3.75	7.00	4.59	3.25				
13+14	13				3.23 / 3.56	2.75 / 4.04	2.25 / 4.54	1.75 / 5.04	1.25 / 5.54
12+94	13				3.50 / 3.27	2.80 / 3.99	2.30 / 4.49	1.80 / 4.99	1.30 / 5.49
12+50					3.40 / 3.37	2.90 / 3.89	2.40 / 4.39	1.90 / 4.89	1.40 / 5.39
12+00					3.52 / 3.27	3.02 / 3.77	2.52 / 4.27	2.02 / 4.77	1.52 / 5.27
11+50					3.66 / 3.13	3.16 / 3.63	2.66 / 4.13	2.16 / 4.63	1.66 / 5.13
			7.79				7.79		

Ventura Blvd
Subgrades

7-1-49

	Lt.	¼	℄	¼	Rt.
15+94.13	1.09 5.91	1.59 5.41	1.75 5.25	1.59 5.41	1.09 5.91
15+74.13	1.11 5.89	1.56 5.44	1.71 5.29	1.52 5.48	1.07 5.93
15+54.13	1.12 5.88	1.53 5.47	1.70 5.30	1.44 5.56	0.99 6.01
15+34.13	1.22 5.78	1.50 5.50	1.71 5.29	1.38 5.62	0.94 6.06
15+14.13	1.39 5.61	1.47 5.53	1.75 5.25	1.32 5.68	0.89 6.11
14+94.13	1.59 5.41	1.69 5.31	1.80 5.20	1.33 5.67	0.86 6.14
14+74.13	1.72 5.31	1.82 5.18	1.85 5.15	1.35 5.65	0.86 6.14
14+54.13	2.00 5.00	1.95 5.05	1.90 5.10	1.40 5.60	0.90 6.10
14+24.13	2.30 4.70	2.14 4.86	1.98 5.02	1.48 5.52	0.98 6.02
			7.00		

7-1-49

Ventura Blvd. Subgrades

Station					Lt.	1/4	℄	1/4	Rt.
20+50					223 5.55	273 5.05	289 4.89	273 5.05	223 5.55
20+00					210 5.68	260 5.18	276 5.02	260 5.18	210 5.68
19+50					198 5.80	248 5.30	264 5.14	248 5.30	198 5.80
T.P.	593	7.78	513	185			778		
19+00					185 5.13	235 4.63	251 4.47	235 4.63	185 5.13
18+50					173 5.25	223 4.75	239 4.59	223 4.75	173 5.25
18+00					160 5.38	210 4.88	226 4.72	210 4.88	160 5.38
17+50					148 5.50	198 5.00	214 4.84	198 5.00	148 5.50
17+00					135 5.63	185 5.13	201 4.97	185 5.13	135 5.63
16+50					123 5.75	173 5.25	189 5.09	173 5.25	123 5.75
		6.98					6.98		

H.I. adjusted To fit side Stakes better

Ventura Blvd.
Subgrades

	Lt	℄	℄	Rt.	7-1-49
21+88.74 = 48' Rt.					
T.P.		6.64	1.14		
21+88.74	3.58 / 5.20'	3.08 / 4.70'	3.24 / 4.54'	3.08 / 4.70'	2.58 / 5.20'
21+50	2.48 / 5.30'	2.98 / 4.80'	3.14 / 4.64'	2.98 / 4.80'	2.48 / 5.30'
21+00	2.35 / 5.43'	2.85 / 4.93'	3.01 / 4.77'	2.85 / 4.93'	2.35 / 5.43'

778

STA	+	H.I.	−	ELEV
B.M	5.99	7.67		1.68
65+25				
65+00				
64+75				
64+50				
64+25				
P.C.C. 61 63+92				
63+75				
63+50				
P.C.C. 32 63+29				

7-7-49

	Lt	¼	℄	¼	Rt
Sta Con. Base Lamp Post #1573					

7.67

5000
2922
20,68
50
75

1.19
6.18

1.63
6.04

1.77
5.90

1.91
5.76

2.05
5.62

2.23
5.44

~~2.47~~
5.20

2.58
5.05

STA	+	H.I.	=	ELEV
67+36 71				
E.C. 67+29 25				
67+22 21	4.31	6.50		2.19
66+72 97				
66+52 97				
66+32 97				
66+12 97				
65+92 97				
65+75				
65+50				
		7.67	5.48	2.19

LT.	1/4	℄	1/4	RT.
				7-7-99
				7.67
				0.37
				OUT
				NONE
				~~NONE~~
				0.38
				OUT
				0.67
				7.00
				0.78
				6.89
				0.89
				6.78
				1.00
				6.67
				1.11
				6.56
				1.21
				6.46
				1.35
				6.32
		7.67		

STA	+	H.I.	−	ELEV
-		2.67		
70+50				
E.C. 69 69+99				
69+75				
69+50				
69+25				
B.C. 86 68+92				
68+50				
68+00	4.31	6.50		2.19
67+50				

7-7-49

21

LT.	1/4	℄	1/4	RT.	7.67
				1.17 ~~1.04~~	6.50
				~~5.46~~ 5.33	Ch. GR
				0.95	
				5.55	
				0.89	
				5.61	
	5.46 4.58 .88 25 .23			0.84	
				5.66	
				0.78	
				5.72	
	4.58 .25 4.83 .96 .23			.71	
				5.79	
				0.63	
				5.87	
				0.52	
				5.98	
				0.~~41~~	
				OUT	

7-7-19

STA	+	H.I.	−	ELEV	LT	℄	℄	℄	RT.	
TP.		7.67		5.48	2.19	Top W. Curb.				
END Proj 31 71+98									~~1.31~~ ~~5.19~~	MATCH EXISTING PAVING
71+50									1.26 ~~1.22~~ ~~5.28~~ 5.14	CH, GR
71+00									1.27 ~~1.13~~ ~~5.37~~ 5.23	Ch. GR
		6.50								
						6.50				

SUBGRADES

7-7-43

23

STA	+ H.I. −	ELEV	L/T	1/4	℄	1/4	RT.
P.C.C. 63+29 31							2.58 ✓
							5.09
63+00							2.77 ✓
					7.67		4.90
62+66 03							2.93 ✓
							1.74
62+55 19			3.35	3.48	3.62	3.45	2.95 ✓
			4.32	4.13	4.05	4.22 ✓	4.72 ✓
62+25			3.67 ✓	3.50	3.69	3.53	3.03 ✓
				4.17 ✓	3.98 ✓	4.14 ✓	4.64 ✓
62+00			3.53	3.58	3.75	3.59 ✓	3.09 ✓
		7.67	4.58 ✓	4.09 ✓	3.92 ✓	4.08 ✓	4.58 ✓
					7.67		

SUBGRADES FOR NORTH CURVE VENTURA 7.67 BLVD. & MIDWAY INTERSECTION 7-7-72 JA

STA	+	H.I.	-	ELEV	47 ¼	℄ ¼	RT.
					2.62		
+50					5.05		
					2.70		
+25					4.97		
					2.78		
63+00					4.89		
					2.86		
+75					4.81		
					2.93		
+50					4.74		
					3.00		
+25					4.67		
					3.08		
62+00					4.89		
					3.15		
61+75					4.52		
					3.18		
61+66					4.99		
		7.67					

STA	+	H.I.	−	ELEV	7.67 / 7.88 H.I.	1/4	℄	1/4	P.T.
65+75					1.88 ~~1.85~~ ~~6.07~~ 5.52				
65+50					1.96 1.95 5.44				
65+25 B.M.	6.20	7.88		1.68	2.84 2.05 5.36	CUT	10.69 9.01 1.68 5.72 H.I. = 7.40	0.08'/PER/25'	
P.C.C. 54 64+93					2.4 ~~6.55~~ ~~5.74~~ 5.26 → H.I. = 7.40				
+75					2.20 2.40 5.68				
+50					2.28 5.12	5.59 ✓			
+25					2.37 5.30		5.51 ✓		
64+00					2.45 5.22				
63+75		7.67			5.43				

STA	+	H.I.	−	ELEV
B.M.				
64+84.66				
END PROJ 87				
67+53				
+25				
67+00				
+75				
+50				
~~66+33~~ 06				
66+25				
66+00 01 32		7.40		~~7.88~~

H.I. = 7.40

H.I. = 7.40

H.I. = 7.59 { 5.87, 5.96, 6.05 }

RADIUS = 5.40

END PROJ 5.90

H.I. = 7.40

SUBGRADES FOR VENTURA BLVD.
(REVERSE CURVES NORTH OF BRIDGE)

STA	+	H.I.	−	ELEV
23+28 [24]				
22+98 [24]				
22+68 [24]				
22+48 [24]				
22+28 [24]				
22+08 [24]				
21+88 [24]				
B.M.	7.85	9.01		1.16

SUBGRADES

9.01 9.01

LT.	¼	℄	¼	RT.
4.21 / 9.01	2.22 / 6.27	3.59 / 5.42	4.17 / 4.84	4.25 / 4.26
2.21 / 6.90	2.09 / 6.02	3.51 / 5.50	3.82 / 5.19	4.13 / 4.88
2.28 / 6.63	3.17 / 5.87	3.44 / 5.57	3.47 / 5.54	3.51 / 5.50
2.50 / 6.41	3.16 / 5.85	3.39 / 5.62	3.34 / 5.67	3.14 / 5.87
2.58 / 6.33	2.15 / 5.86	3.34 / 5.67	3.22 / 5.79	2.86 / 6.15
2.60 / 7.41	3.11 / 5.90	3.29 / 5.72	3.15 / 5.86	2.68 / 6.33
2.58 / 6.43	3.08 / 5.93	3.24 / 5.77	3.08 / 5.93	2.58 / 6.43
	9.01 / 6.21 / 1.60	2.83 / 2.58		

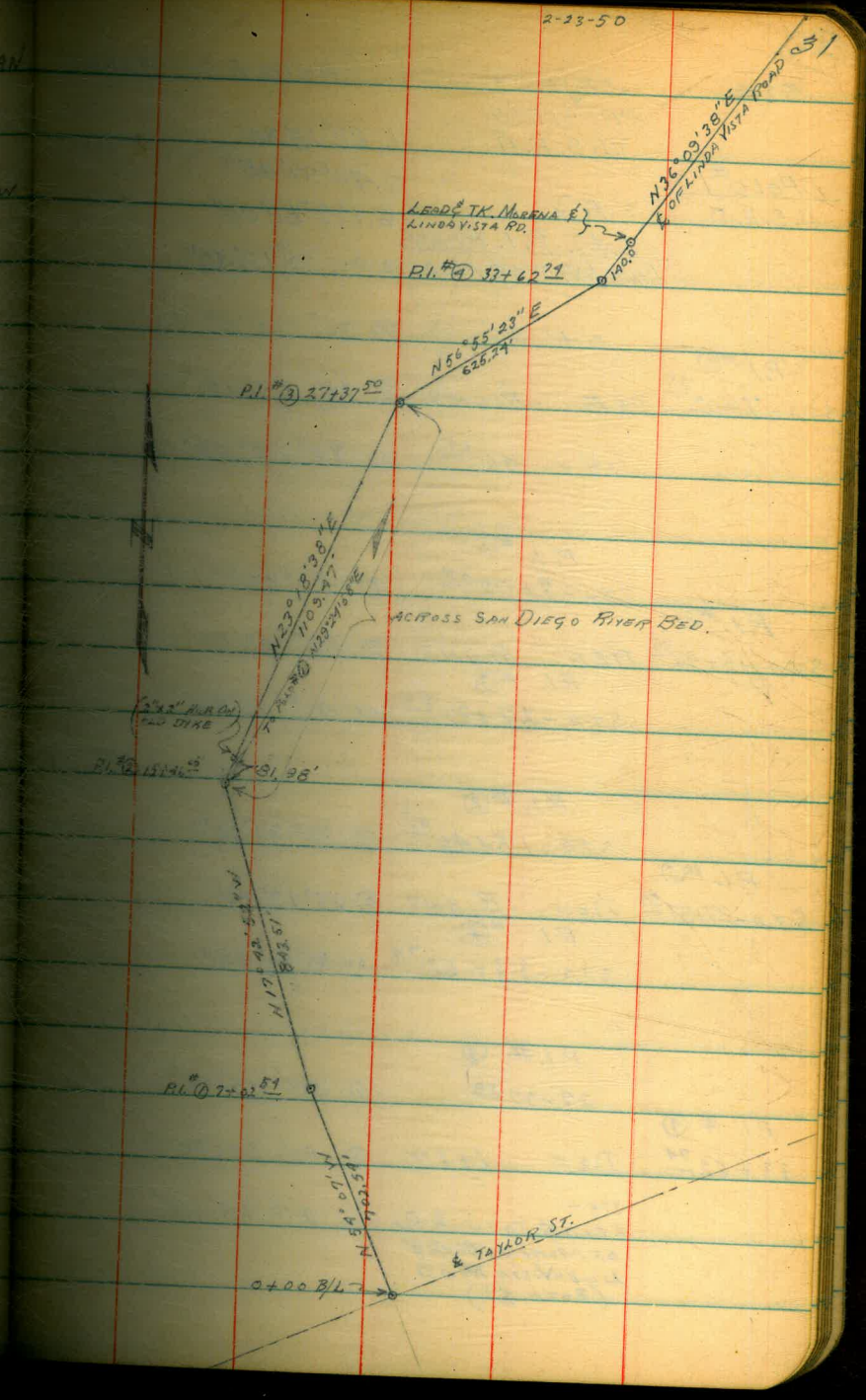
STA	+	H.I.	−	ELEV	LT	½	℄	½	RT.
					9.01		9.01		9.01
25+29 15					3.51	3.62	4.09	4.52	4.71
					3.52	5.39	4.92	4.19	4.30
24+89 15					2.58	3.28	3.99	4.76	5.51
					6.43	5.73	5.02	4.25	3.47
24+69 15					2.41	3.22	3.94	4.87	5.88
					6.90	5.79	5.07	4.14	3.13
24+49 15					2.75	3.03	3.89	4.94	6.06
					7.36	5.98	5.12	4.07 4.07	2.95
24+29 15					2.59	2.71	3.84	4.96	6.09
					7.42	6.30	5.17	4.05	2.92
24+08 79					2.52	2.67	3.79	4.92	5.99
					7.44	6.34	5.22	4.09	3.02
23+88 79					2.59	2.66	3.74	4.83	5.81
					7.42	6.35	5.27	4.18	3.20
23+68 74					2.67	2.68	3.69	4.67	5.53
					7.34	6.33	5.32	4.34	3.48
23+48 79					2.73	2.71	3.64	4.45	5.16
					7.22	6.30	5.37	4.56	3.85

STA	+	H.I.	−	ELEV	LT.	1/4	℄	1/4	RT.
							9.01		
END 64 25+22					4.59 4.93	4.27 4.64	4.17 4.84	3.98 5.03	3.82 5.19
25+61 93					4.31 4.70	4.16 4.85	4.16 4.85	4.13 4.88	4.03 4.98
25+41 93					3.81 5.20	3.96 5.05	4.12 4.89	4.28 4.73	4.45 4.56
		9.01							

2-23-50

STA OBJECT ANGLE MEAN

BASE LINE ALONG PROPOSED RELOCATION OF MORENA BLVD. BRIDGE



STA	OBJECT	ANGLE	BEARING
	PRESIDIO U.S.E.D	1. 22°18'30"	
POLO #1 U.S.E.D	R/ L.&T. P.I. ROADS LINDAVISTA & MORENA AV.	2. 44°37'45" 6. 133°52'00" 22°18'40"	
	0+00	① 36° 12' 0"	
P.I. #① STA-7+02 54	DEF RIGHT	② 72° 24' 15"	
	15+46 05	AV. 36° 12' 08"	
	P.I. #① STA-7+02 51	① 41° 02'	
P.I. #2 STA-15+46 05 P.I.	DEF RIGHT	② 82° 03' 00"	
	P.I. #③ STA-27+37 50	AV 41° 01' 30"	
	P.I. #② STA-15+46 05	① 33° 37' 00"	
P.I. #③ STA-27+37 50	DEF RIGHT	② 67° 13' 30"	
	P.I. #④ STA-33+62 71	AV. 33° 36' 45"	
	P.I. # ③ 27+37 50 1	① 20° 45' 45"	
P.I. # ④ 33+62 71	DEF LEFT	② 41° 31' 30"	
	STA- LEAD & TACK @ P.I. OF MORENA BLVD & LINDAVISTA ROAD (BOTH ℄'S)	AV. 20° 45' 45"	

7+42 02 OFFSET 342°05'

30553
3612
359 60
30553
54.07'
36°12'
N17°55'W

359 60
17 55
342 05

36 12
17 55
18°17'

41.01'
17.55
N 23°17' E

2318 38
3336 45
56°55" 23" E

STATION	OBJECT	ANGLE	MEAN
	P.I. #4		
	33 + 62.24	① 11° 51' 0"	
P.I. MORENA BLVD. & SDA LINDA VISTA			
35+02.74	DEF LT. P.	② 23° 42' 30"	
	POLO #1	AV. 11 51' 15"	
	PRESIDIO		
	U.S.E.D		
POLO #1			
U.S.E.D	R 7	1. 27°25'00"	
	2"x2" HUB	2. 54°50'00"	
	& OLD DIKE	6. 164°29'00"	
		AV. 27°24'50"	
	P.I. L & T		
	MORENA & LINDA VISTA	1. 27°38'45"	
U.S.E.D			
PRESIDIO	R 7	2. 55°17'10"	27°38'30"
	U.S.E.D		
	POLO	6. 165°51'30"	
	2"x2" ON & OLD DYKE		
	150' E. & R.R.	1. 89°26'00"	
U.S.E.D			
PRESIDIO	R 7	2. 178°52'00"	89°26'30"
	U.S.E.D.		
	POLO	6. 536°35'15"	

FROM LEAD & TACK P.I. MORENA & VISTA TO

N 29°18'48" E TO POLO No 1

S 35°29'27" E TO PRESIDIO

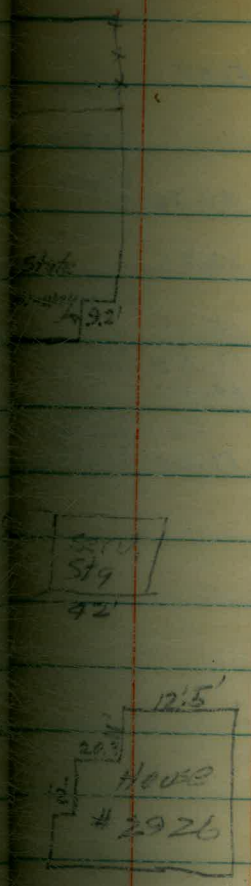
S 38° 20' 50" E TO MARSTON'S

SITUATION SURVEY JUAN ST. TO MORENA BLVD

↑ 1+00 Az = 0° North.

Az To PI #1 = 305° 53'

Sta	Dist	Azim	Object
✓ 1	51	185° 10'	Cor
✓ 2	46	204° 55'	9.2'
✓ 3	70	146° 50'	P.P. 14"
✓ 4	28	88° 00'	To I.P. 12"
✓ 5	37'	81° 40'	SW Cor Set
✓ 6	25	38° 55'	N W Cor.
✓ 7	99	296° 05	
✓ 8	93	359° 55'	S.E. Cor House # 252
✓ 9	67	341° 45'	S.W. Cor
✓ 10	76	337° 50'	Jog
✓ 11	83	336° 00'	N.W. Cor Bldg
✓ 12	75.3	305° 50'	M.H.
✓ 13	92	318° 55'	PP 7"



Contd Pg 36

21.61
4.20
26.31

LEVELS FOR X-SECTIONS OF JUAN ST.

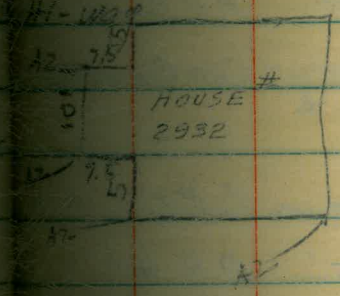
STA	+	H.I.	-	ELEV	
B.M.	4.70	26.31			U.S.C.&G.S. 21.614
T.P. ①	2.86	24.12	5.05	21.26	R.R. SPIKE T.P. Cor. S.
T.P. ②	0.66	19.39	5.39	18.73	R.R. SPIKE T.P. Cor. S.
T.P. ③	4.32	18.47	5.24	14.15	CARR. BLK. EAST OF A. ST.
				13.59	EAST EDGE OF M.H. IN ST.
	4.86	18.45	4.88	44.51	
			4.81	13.64	INSIDE CURB ST. E/CUMBERLAND & JUAN ST. FRONT CURB

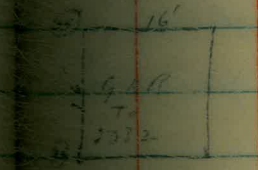
SITUATION SURVEY CONT'D

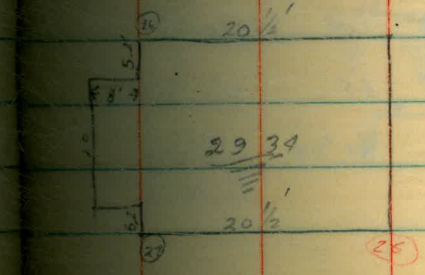
Feb 23, 50.

T @ Sta 2+00 Az To P.I. #1 = 305° 53'

Sta	Dist	Azim	Object
✓ 14	82	27° 25'	SE Cor House # 2928
✓ 15	41	19° 45	SW Cor "
16	53	353° 30	NW Cor "
✓ 17	120	289° 00'	N.W Cor 5th Hi-Way
✓ 18	153	292° 45	Fence Cor
✓ 19	92	346° 10'	SE Cor House # 2932
✓ 20	80	335° 00'	SW Jog
✓ 21	81	328° 40'	SW Cor
✓ 22	91	326° 15'	NW Cor
✓ 23	140	299° 40'	Tel. P.
T @ STA - 3+00		AZIM TO P.I. #1 = 305° 53'	
✓ 24	71'	42° 15'	S/W Cor Gar.
✓ 25	71'	29° 10'	N/W Cor Gar
✓ 26	60'	26° 15'	S/E Cor
✓ 27	40'	21° 37'	S/W Cor
✓ 28	41'	14° 55'	
✓ 29	35'	10° 00'	
✓ 30	40'	357° 05'	







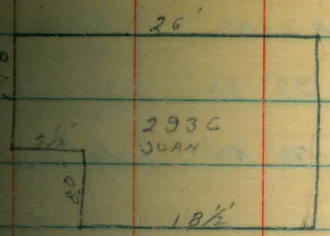
℄ @ 3+00 AZIM To P.I. #① = 305° 53'

STA	DIST	AZIM	REMARKS
✓ 31	50'	356° 00'	S/W Cor
✓ 32	55'	349° 40'	Jog
✓ 33	50½'	343° 37'	S/W Cor
✓ 34	57'	338° 30'	
✓ 35	63	282° 25'	P.P. Transit
✓ 36	60'	270° 33'	Cor Chain Link Fence (State HS) (Check Shot)

SEWER MAN HOLE @ STA - 3+79.6 ℄

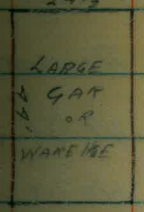
℄ @ STA - 4+00 AZIM To P.I. #

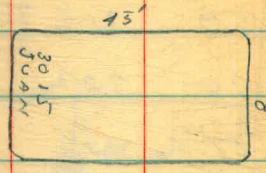
✓ 37	17'	222° 25'	P.P. ½"
✓ 38	43'	241° 40'	S/W Cor
✓ 39	35'	247° 30	S/E Cor
✓ 40	70'	280° 15'	N/E Cor
✓ 41	65'	29° 10'	S/E Cor
✓ 42	40'	24° 55'	S/W Cor
✓ 43	50'	358° 55'	N/W Cor

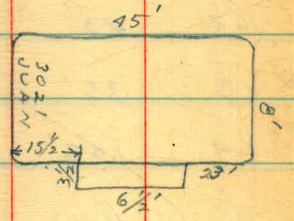


'X' @ STA 5+00 AZIM To P.I. = 305° 53'

STA	DIST	AZIM.	REMARKS
✓ 44	52'	93° 30'	S/W Cor
✓ 45	28'	35° 40'	N/W Cor
✓ 46	27'	27° 45'	Tel. Pole (5")
✓ 47	39'	213° 20'	S/E Cor
✓ 48	40'	225° 35'	N/E Cor
✓ 49	83'	239° 20'	S/E Cor
✓ 50	45'	262° 10'	S/E Cor
✓ 51	52'	268° 30	N/E Cor
✓ 52	51'	288° 10'	P.P.& Tel.
53	27'	356° 45'	PEPPER TREE (2' DIA)
54	43'	338° 20'	PEPPER TREE (1½' DIA)
✓ 55	99	339° 45	N/END WOVEN W FENCE FARM



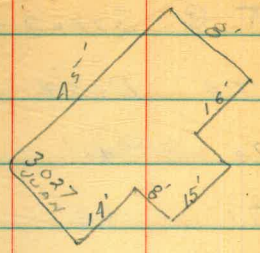


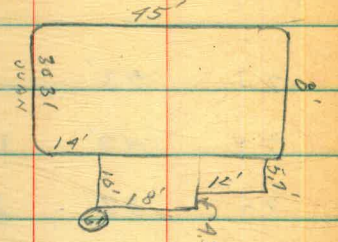


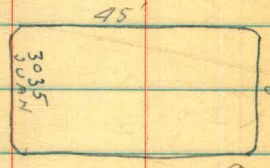
OR OFFICE GAR. (OR WAREHSE)

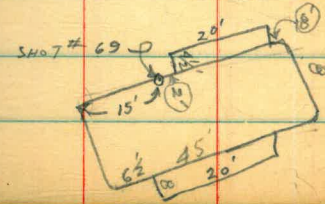
℄ @ 6+00 AZIM TO P.I. = 305° 53'

STA	DIST	AZIM	REMARKS
✓ 56	39'	177° 10'	S/E Cor
✓ 57	39½'	189° 30'	N/E Cor
	V = CO 30'		
✓ 58	82'	189° 00'	N/W Cor
✓ 59	31½'	211° 30'	S/E Cor
✓ 60	32½'	221° 20'	N/E Cor
✓ 61	47½'	235° 10'	OUT SIDE Vo. 7
			S/END FENCE W/WOVEN WIRE
✓ 62	40'	86° 20'	
✓ 63	35'	348° 55'	TEL POLE (61)
✓ 64	103'	320° 40'	N/END FENCE
✓ 65	81½'	236° 55'	S/W Cor
✓ 66	43'	258° 25'	S/E Cor
✓ 67	49'	265° 15'	N/E Cor
✓ 68	~~86~~ 87'	285° 17'	S/E Cor
✓ 69	86'	275° 50'	ALIGNMT. SHOT (SEE SKETCH)









℄ @ STA 7+42 AZIM TO PK #2 = 342°05

STA	DIST	AZIM	REMARKS
✓ 70	41'	202° 25'	P.P. (12"
✓ 71	56'	219° 35'	RR TELEGRAPH POLE PRIMARY H.T.
✓ 72	77	30° 10'	POWER POLE
✓ 73	73'	10° 15'	S/E Co. Fence
✓ 74	49'	356° 55'	S/W Cor Fence
✓ 75	87'	331° 20'	N/W Cor Fence
✓ 76	94'	26° 30'	POINT ON FENCE (CHAINLINK)
✓ 77	16'	315° 25	S/W Cor Fence
✓ 78	91'	302° 30'	N/W Cor Fence
~~79~~	~~99'~~	? ?	POINT ON FENCE S/SIDE STATE ST.

⊼ @ STA-10+00 AZIM To P.I. # (7) = 342° 05'

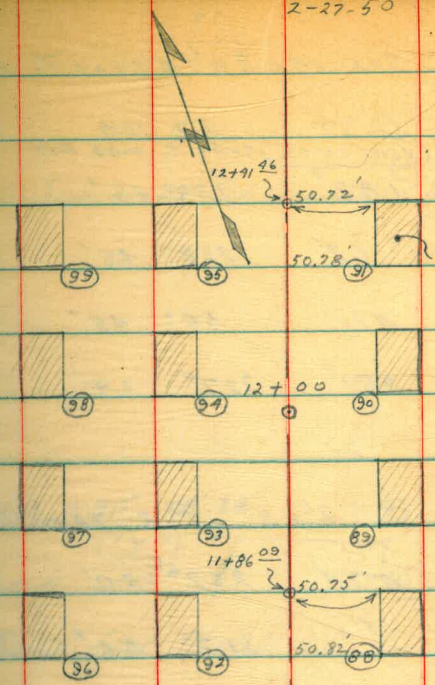
STA	DIST	AZIM		REMARKS
✓ 80	147'	180°	45'	R.R. TELG. POLE (10")
✓ 81	137 ~~239'~~	186°	45'	S/E COR R.R. TOOL SHED
✓ 82	124'	189°	25	N/E COR "
✓ 83	133'	196°	25'	N/W COR "
✓ 84	49'	274°	25'	R.R. TELG. POLE POINT ON FENCE AROUND R.R. PROP.
✓ 85	117½'	121°	35'	INCLUDING [illegible] 400 ON GAINES ST.
✓ 86	158' (9° 12' VERT) (CORRECT TO HORZ. DIST. BEFORE USING)	325°	15'	TELG. POLE
✓ 87	209' 203.6'	006°	45'	S/ EAST END [illegible] STRUCTURE)

T @	12+00	AZIM TO P.I. #2 = 342° 05'	
STA	DIST	AZIM	REMARKS
88	30.2	105° 05'	S/W COR
89	25.4	66° 55'	"
90	32.5'	33° 30'	"
91	46.0'	15° 37'	"
92	32.8'	212° 17'	S/E COR
93	25.4'	248° 03'	"
94	30.2'	280° 09'	"
95	43.0'	306° 05	"
96	85.9'	229° 30	S/E COR
97	80.0	243° 45'	"
98	79.9'	258° 30'	"
99	84.5	272° 50'	"
T @	13+00	AZIM TO P.I. #2 = 342° 05'	
100	25'	19° 45'	
101	63'	41° 35'	
102	89'	10° 30'	
103	109'	358° 25'	
104	48'	234° 00'	R.R. TELG POLE

SIZES

4.5' x 3.0'
4.9' x 3.0'
4.9' x 3.0'
4.5' x 3.0'
4.8' x 3.0'
4.0' x 3.0'
4.0' x 3.0'
4.8' x 3.0'
5.0' x 3.0'
4.3' x 3.0'
4.4' x 3.0'
4.3' x 3.0'

2-27-50



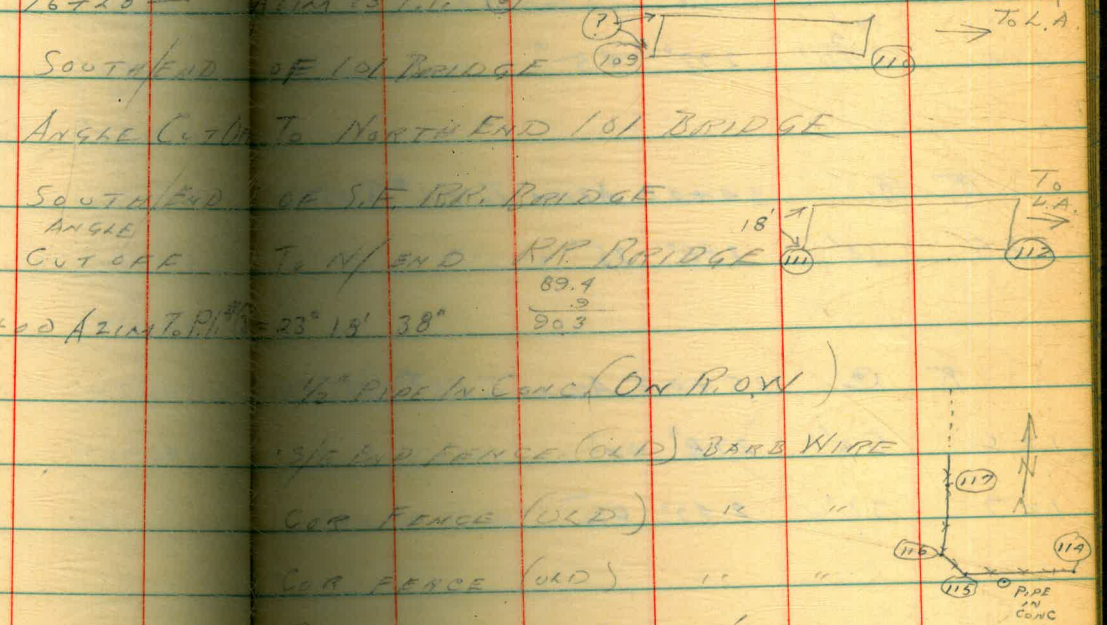
PLAN OF OVERPASS
NO SCALE

OUTLINE OF SCRAP WIRE CABLE

2C.5
.9
27.4

△ @ STA-14+00 AZIMUTH TO P.I.#(1) = 342° 05'

STA	DIST (VERT 10° 55')	AZIM CORR. TO HORIZ. DIST.	REMARKS
105	182'	133° 15'	EAST EDGE OF CONC. STRUCTURE OF OVERPASS @ N/COR
106	62'	268° 45'	TELG. POLE
107	411'	54° 45'	
108	251'	327° 04'	
△	@ 2"x2" HUB STA-16+28.03		AZIM TO P.I.#(3) = 23° 18' 38"
109	424'	262° 20'	SOUTH END OF (O) BRIDGE
110	?	312° 06'	ANGLE CUTOFF TO NORTH END (O) BRIDGE
111	147'	274° 50	SOUTH END OF S.E. RR. BRIDGE
112	?	325° 02'	ANGLE CUTOFF TO N/END RR BRIDGE
	△ @ STA-20+00 AZIM TO P.I.#(3) = 23° 18' 38"		89.4 − .9 = 90.3
113	90.3	123° 20'	½" PIPE IN CONC (ON R.O.W.)
114	144'	121° 45'	S/E END FENCE (OLD) BARB WIRE
115	51'	121° 45'	COR FENCE (OLD) " "
116	43'	100° 15'	COR FENCE (OLD) " "
117	164'	44° 20'	POINT ON FENCE FOR ALIGNMT.



℄ @ 22+23 AZIM = 23° 18' 38"

118	68'	102°	20'
119	75'	89°	25'
120	96'	95°	25'

℄ @ STA - 23+00 AZIM To P.I. # ③ 23° 18' 38"

121	103'	115°	55'
122	76'	116°	20'
123	52'	92°	15'
124	161 9 170'	297°	45'

℄ @ 24+00 AZIM To P.I. # ③ 23° 18' 38"

125	32'	288°	35'

℄ @ 25+00 AZIM To P.I. # ③ 23° 18' 38"

126	56'	278°	00'
127	31'	242°	05"

GATE POST AT FENCE OPENING

COR POST AT GATE

JOG IN FENCE

PT ON FENCE

COR IN FENCE

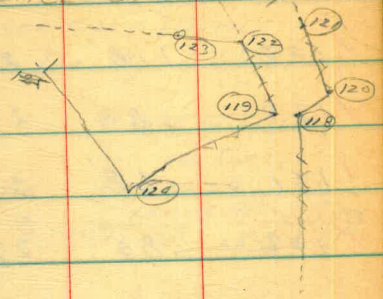
PT ON FENCE

FENCE COR.

COR FENCE

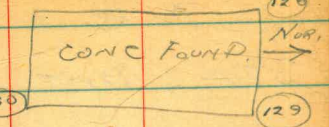
END FENCE

FENCE COR

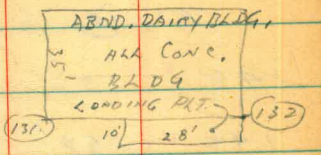


T @ 27+00 AZIM. TO P.I. #3 = 23° 18' 38"

STA	DIST	AZIM	REMARKS
128	~~290~~ 190 (K)	283° 40'	
129	118'	268° 45'	
130	188'	245° 15'	
131	68'	295° 40'	?
132	80'	3 238° 55'	
T @ STA 29+00 AZIM TO P.I. #4 56°55'			
133	151'	261° 45'	
134	170'	264° 55'	
135	80.5 81.4'	282° 35'	
136	78'	3 223° 45'	
137	64'	303° 00'	
138	70'	229° 5'	
139	134'	343° 00'	
140	33'	8° 20'	
141	13' ~~8~~	25° 20'	
142	28'	47° 30'	
143	36'	80° 05'	
144	22'	131° 10'	
145	79'	122° 35'	



N/W Cor Conc } ABND. FOUNDATION OF (SILVER GATE DAIRY) OLD DAIRY BLDG.
N/E Cor Conc }
S/E Cor Conc



S/E Cor " " "

LARGE TREE (12" IN SAME AZIM ANOTHER TREE)

" " (EUCALYPTUS)

S/W Cor CORRG. MTL. BLDG

S/E Cor " " "

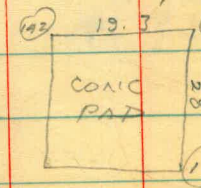
LARGE TREE

" "

S/E Cor. CORRG MTL. BLDG.

CLUSTER OF VERY LARGE TREES

LARGE TREE



N/E Cor CONC PAD

S/E " " "

S/W Cor CONC. PAD

POWER POLE SECONDARY

⊼ @ STA - 29+00 AZIM P.I. #④ 56°55'23"

STA	DIST	AZIM		
✓ 146	76'	90°	25'	LARGE TREE (EUCALYPTUS)
✓ 147	69'	84°	50'	" " "

56 55 23
20 45 45
36°09'38"

⊼ @ STA - 33+00 AZIM To P.I. #4 = 56°55'23"

STA	DIST	AZIM		
148 ✓	156'	239°	50'	POWER POLE SEC. (12")
149 ✓	56'	54°	15'	" " " " (12")
150	143'	71°	15'	VEND SIGN BOARD (ADV.)
151	141'	59°	20'	VEND " "
152 ✓	159'	51°	30'	POWER POLE
153	146'	27°	40'	VEND SIGN (ADV.)
154	~~184~~ 204	16°	25	VEND " "
155 ✓	188	35°	22'	CITY CONC MON (R.E. 498)
156 ✓	28.9'	30°	45'	CITY REDWOOD HUB & CU. DISC.

~~159~~ ⊼ @ 34+84.09 36° 09'38" AZIM TO LINE TK. =

STA	DIST	AZIM		
157	31'	204°	50'	GATE VALVE
158	10.8'	139°	55'	M.H. (WATER DEP.)
159	53'	343°	40'	M.HOLE GAS & ELECT.

SITUATION SURVEY ALONG CAMINO DEL RIO ROAD

March 6, 1950

T. Stamper
C. Barragan
A. Sperry
H. Brown

Sta	+	H.I	−	Elev.	
11+00				13.20	2X2 Hub on Baseline
	5.32	18.52			
T.B.M.			chained -34.09	52.61	on Sly Edge of Conc. ℄ ℄ of Main Traverse
	4.48	H.I. 57.09			

0+00
℄ @ PI "A" = 0+00 of Camio Survey

Az = 162°17' to Sta 9+44.06

Sta	Dist	Azim	Rod	
1	0	0° 00'	4.71	S 2.38
2	27	34 2° 17'	4.99	52.1 N Gutter
3	56	44° 05'	5.88	51.2 " "
4	47	66° 50	6.06	N Center Profile
5	47	71° 40'	6.10	50.9 S. " "
6	54	99° 15'	6.36	50.73 S. Gutter Paving
7	88	87° 40'	7.36	S.E. End Bridge & Gutter
8	85	71° 12'	7.15	S. Center Profile Grade
9	84.5	68° 20'	7.10	N. " " "
10	~~90~~	52° 12'	6.86	N. Gutter
11	136	58° 57'	8.56	" "

SITUATION SURVEY CONTD

H.I. = 57.09

Sta	Dist	Azim	Rod	
12	131	69° 30'	8.73	
13	132	71° 18'	8.84	48.25
14	134	82° 02'	9.18	47.91
15	177	79° 48'	11.06	
16	176	71° 45'	10.70	
17	176	70° 20'	10.63	
18	179	62° 20'	10.49	
19	225	64° 45'	12.68	
20	220	71° 08'	12.90	
21	221	72° 12'	12.94	
22	219	78° 42'	13.15	43.94
			12.45	44.64
TP @ 278.85		Back 252° 30'		
Pt B''	278'±	72° 30' forward		
	1.36	H.I. 46.00		
23	31	196° 23'	4.60	41.40
24	16	248° 30'	4.32	
25	16	263° 38'	4.22	
26	31	314° 50'	4.00	
27	39	33° 35'	6.73	

March 6, 1950

N. Profile Grade

S. " "

S. Gutter "

" " "

S. Prof. Grade

N. " "

N. Gutter

" "

N. Profile Grade

S. " "

S. Gutter

Top South Curb.

& Center Dividing Island 4' Wide

S. Gutter

S. Profile Grade

N. " "

N. Gutter

" "

SITUATION SURVEY CONTD

March 6, 1950

Sta	Dist	Azim	Rod	Elev
		H.I = 46.08		
28	28	72° 50'	6.91	
29	28	81° 30'	6.91	
30	39	120° 45'	7.22	38.78
31	77	97° 52'	9.84	
32	72	79° 10'	9.50	
33	72	75° 50'	9.48	
34	77	56° 58'	9.42	
35	121	64° 50'	12.05	
36	118	76° 45'	12.02	
37	118	78° 55'	12.03	
38	120	90° 35'	12.35	33.65
TP.			12.45	33.55
"C" 4+68.85	190	77° 55' 30"	forward B.T.	
	2.07	H.I = 35.62		
39	37	212° 40'	4.28	31.34
40	26	253° 30'	3.98	
41	26	263° 05'	3.95	
41	38	303° 45'	4.09	

N. Profile Grade
S. " "
S. Gutter
" "
S. Profile Grade
N. " "
N. Gutter
" "
N Profile
S. "
S. Gutter
T & P S. Curb.
2X2' ℄ Center Island
S. Gutter
S. Profile Grade
N. " "
N. Gutter

March 6, 1950

Situation Survey Cont'd

Stg	Dist	Azim H.I.= 35.62	Rod	Elev.	
42	33	23° 10'	6.28		N. Gutter
43	19	72° 00'	6.08		N. Profile
44	19	85° 05'	6.08		S. "
45	33	132° 50'	6.38	29.24	S. Gutter
46	69	101° 25'	8.31		" "
47	63	80° 25'	8.00		S. Profile
48	64	76° 25'	8.00		N. "
49	59	55° 15'	8.28		N. Gutter
50	111	64° 18'	9.90		" "
51	107	77° 10'	9.70		N. Profile
52	107	79° 25'	9.68		S. "
53	111	92° 10'	10.00	25.62	S. Gutter
54	155	88° 20'	11.50		" "
55	152	79° 10'	11.17		S. Profile
56	153	77° 30'	11.25		N. Profile
57	136	68° 20'	11.48		N. Gutter
58	196	70° 20'	12.65		" " End Curb
59	193	77° 45	12.40		N. Profile

March 6, 1950

2

Sta	Dist	Azim	Rod	Elev
		H.I. = 35.62		
60	194	78° 55'	12.40	
61	196	86° 15'	12.65	22.97
TP.			12.02	23.60
8+35.47 D	366.62	N 78° 18' 00" E (forward)		
10+43.47 Dist E	208	140° 17'		
TP.	5.17	H.I. 21.11	Mar. 7, 50 15.94	
	Cont'd. from F.B. # 48			
At "E"		216° 11'		
1	53	" "	5.2	15.9
2	110	" "	5.4	15.7
3	164	" "	5.4	15.7
4	216	" "	5.6	15.5
5	272	" "	5.5	15.5
6	325	" "	5.8	15.2
7	380	" "	6.1	15.0
14+23.47 P.O.T.	380	" "		
TP.			5.41	15.7
	+435	H.I. = 20.05		

S. Rafile

S. Gutter End Curb Along Camino Del Rio

Top S. Curb at East End

Set 2"x2" in Center Island

2"x4" Hub S. Line Rosecrans Along Resection

"D" to "E" Line (See F.B. # 48)

"E" To "F" Along ℄ Rosecrans St.

10+43.47
3+80
14+23.47

Inst Pt

SITUATION SURVEY CONTD

March 7, 1950

Sta	Dist	Azim	Rod	Elev.	
		H.I. 20.05			
⊼ @ 14+23.47		216° 11'			
	55	" "	5.45	14.6	
P.I. "F" 15+78.47	155	36	5.73	14.3	Top M/H. ℄ ℄ Sunset ℄ Rosecrans St's.
TP.			5.62	14.43	
	4.89	H.I. = 19.32			
15+78.47 ⊼ @ "F"		306° 11'			℄ Sunset St ℄ To Pt "G"
	50	" "	5.0	14.3	
	101	" "	4.9	14.4	
	150	" "	5.2	14.1	
	202	" "	5.0	14.3	
	251	" "	4.8	14.5	
	302	" "	4.9	14.4	
	350	" "	4.5	14.8	
	396	" "	4.7	14.6	
	448	" "	4.3	15.0	
P.I. "G" 20+78.47	500	306° 11'			To Pt "G" EX 2 ℄ Sunset St.
TP			4.71	14.61	
	5.39	20.00			

SITUATION SURVEY CONTD

Sta	Dist	Azim	Rod	Elev
		H.I. = 20.00		
"G"				
℄@20+78.47	188	237° 27'30"		
	47	" "	4.9	15.1
	100	" "	4.7	15.3
	150	" "	5.3	14.7
	188	" "	5.9	14.1
TBM			6.79	13.2
22+66.47 Line "B"				
℄@10+00		342° 19'		
		H.I. = 25.25		
T.P.	+1.65			23.60
"D"				
℄@8+35.47		268° 18'		
		274° 57'		
	0	" "	4.7	20.6
	6		4.7	20.5
	6	" "	5.4	19.8
	89	" "	4.28	21.9
	116	" "	4.10	21.1
	155	" "	6.0	19.2
	200	" "	9.0	16.2
	256	" "	10.0	15.2
	310	" "	10.6	14.6

237 18
1 80 78
57 268.18

Sta 10+00 Baseline "A"

20+78.47
1+88
22+66.47

2"x2" Hub Sta 11+00 El 13.20
P.I. #2
Top S. Curb at E. End (See pg 51)
To Pt. "C"
15+00 "A" Line

N. Edge Pavement
N. Edge Shldr
Pt on Slope
Toe Slope

March 7, 1950

P.T.

SITUATION SURVEY CONTD

Sta	Dist	Azim	Rod	Elev	
"C" Line		H.I. = 25.25			
11+45.47 P.O.T.	310	247° 57'			
T.P.			9.96	15.29	
Line "C"					
℄ @ 11+45.47		274° 57'			Sta 15+00 "A" Line
	4.36	H.I. = 19.65			
	56	274° 57'	5.3	14.3	
	106	" "	5.4	14.2	
	158	" "	5.7	14.0	
	210	" "	5.3	14.3	
	264	" "	5.6	14.0	
	320	" "	5.4	14.2	
	390	" "	5.2	14.4	
	504	" "	~~6~~ 5.5	13.4	
15+00	586	" "	5.4	14.2	To 15+00 "A" Line
T.P.	+450	18 .65	5.50	14.15 (13.93)	
T.P. P.I #2			4.73	13.92	"A" Line
"A" Line 15+00	T.P.		4.41	14.24	Sta 15+00 "A" Line
"A" Line ℄ @ 15+00		162° 22'			To P.I. #1 "A" Line

PX

May 12, 1950 J. Stamper
C. Barragan
E. Watson

Fair-Warm

SITUATION SURVEY CONT'D

PROFILE ALONG SLY EDGE

PAVEMENT CAMINO DEL RIO

℄ @ Sta 9+00 Forward Azim.

Sta	+	H. I.	−	Elev.
T.B.M.	1.11	24.71		23.60
8+50			5.20	19.51
9+00			5.48	19.23
+50			5.61	19.10
TP 10+00	7.59	26.86	5.44	19.27
+50			7.19	19.67
11+00			6.58	20.28
+50			5.72	21.14
12+00			4.80	22.06
+50			3.90	22.96
13+00			2.98	23.88
+50			2.11	24.75
TP. 14+00	7.92	33.54	1.24	25.62
+50			7.00	26.54
15+00			6.20	27.34

May 12, 1950

SITUATION SURVEY CONTD

Sta	+	H.I	−	Elev.	
		33.54			
15+50			5.65	27.89	
16+00			5.36	28.18	Intersection of Camino Del Rio & Morena Blvd
+50			5.18	28.36	
17+00			5.08	28.46	
+50			5.05	28.49	
18+00			5.02	28.52	
+50			5.14	28.40	
19+00			5.42	28.12	
+50			5.70	27.84	
TP.			6.61	26.93	
	1.34	28.27			
TP.			5.51	22.76	Top Post S. Side Rd 2nd Post From End
	1.52	24.28			Opposite Sta. 11+15
TBM			0.70	23.58	23.6

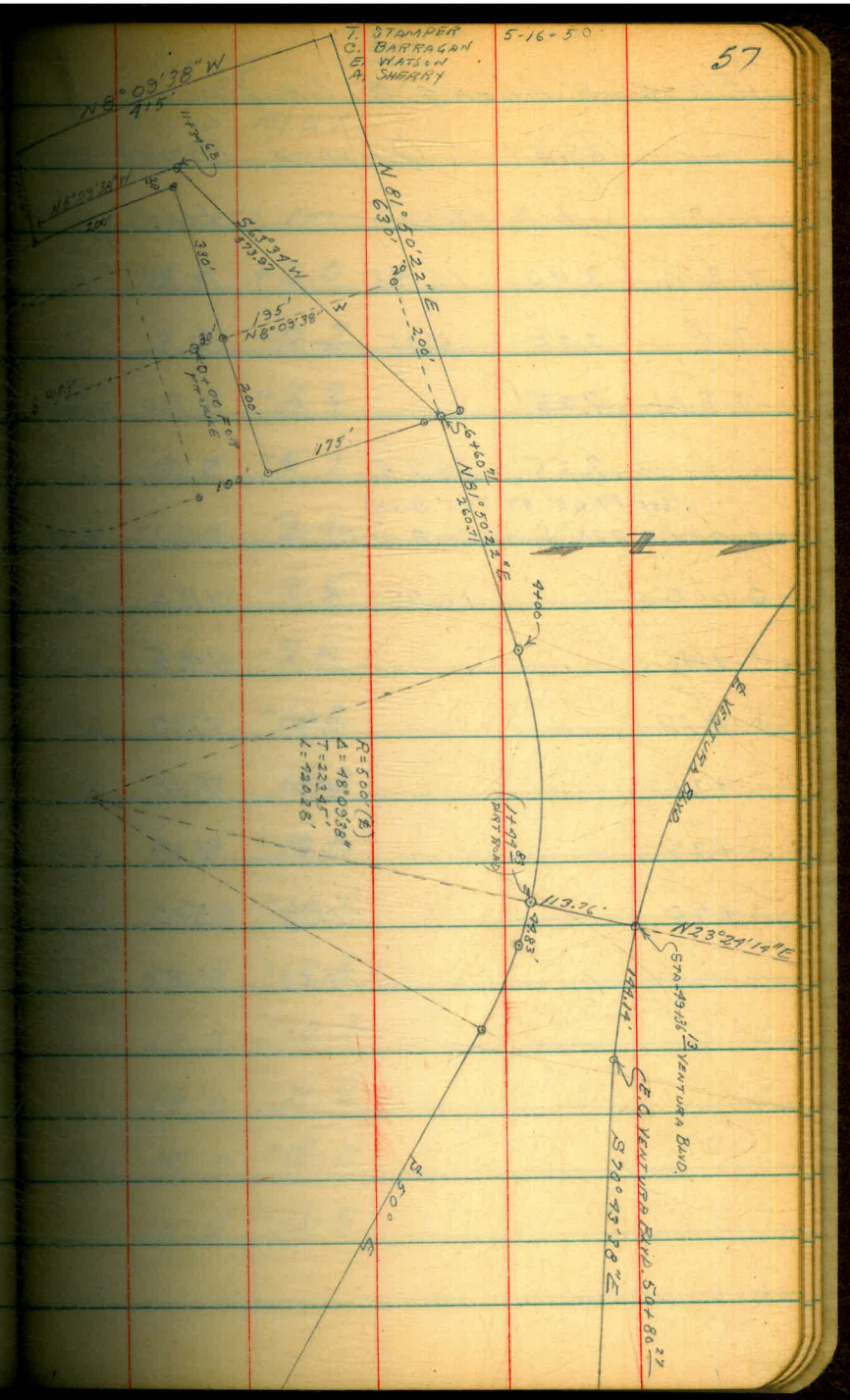
Location Of Dirt Road To Quivera Basin

STA-49+36.13 Ventura

℄ @ STA-1+49.83 — Angle Left 90° 00' 00"

On Tangent

STA	DEF Angle	Chord
1+00	2° 34' 07"	49.83'
2+00	3° 09' 40"	55.17'
+50	6° 01' 30"	50.0'
3+00	8° 53' 30"	50.0'
+50	11° 45' 20"	50.0'
4+00	14° 37' 12"	50.0'



PROFILE ALONG ℄ OF PROPOSED PIER (QUIVERA BASIN)

STA	+	H.I.	−	ELEV	
T.B.M	3.40	16.45		13.05	S/E C[illegible] CENTER [illegible] BLVD STA 46+30±
T.P	3.35	15.35	4.45	12.00	TEMP T[illegible]
T.B.M	~~7.25~~		5.85	9.50	SET 2 [illegible] 10' E/OF [illegible] TO PIER
	7.25	16.75		9.50	

=(SEE PAGE 57 THIS BOOK)

0+00 = PT 225' SOUTH OF ℄ OF ROAD PRODUCED WEST THRU P.I. [illegible]

STA	+	H.I.	−	ELEV	
0+00		16.75	5.1	11.6	
+14			6.2	10.5	
+27			7.7	9.0	
+31			8.7	8.0	
+33			9.5	7.2	
+50			11.7	5.0	
			13.23	3.52	@ 11:[illegible] EL OF WATER

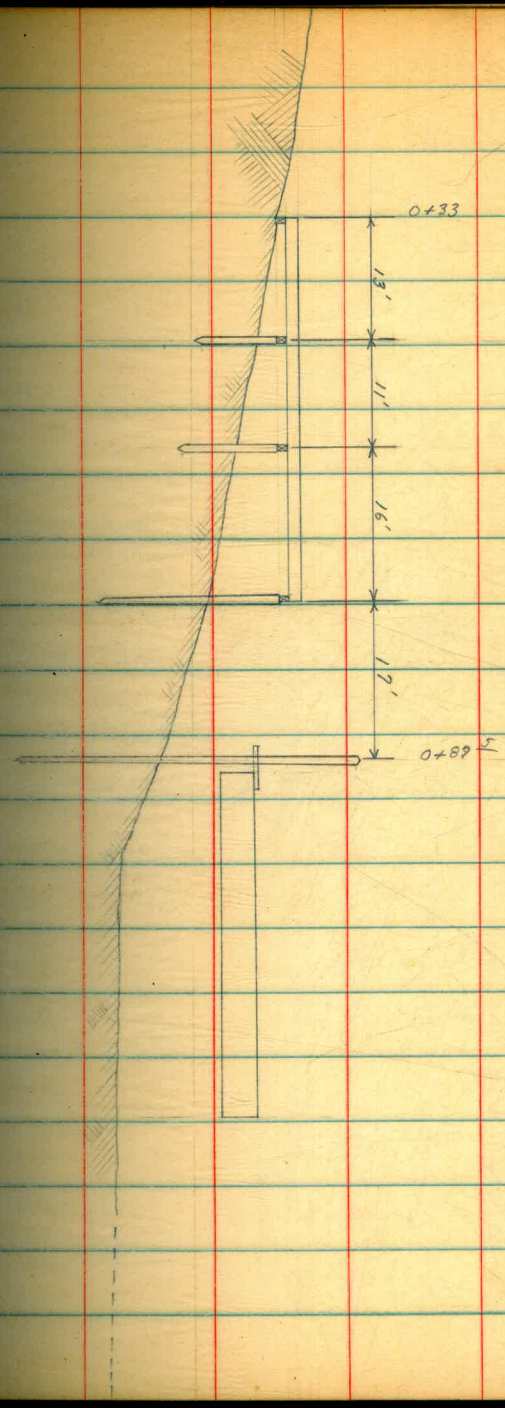
T. STAMPER
C. BARRAGAN
E. WATSON
5-17-50

0+00 = 0+50

0+00 = STA 0+50 FROM LAST PAGE

Dist ~~0+00~~	SOUND ~~Dist~~	ELEV
+10	1~~3~~.5	+2.0
+20	3.7	−0.2
+30	5.7	−2.2
+40	9.2	−5.7
+50	12.9	−9.4
+60	13.0	−9.5
+70	13.3	−9.8
+80	13.7	−10.2
+90	13.7	−10.2
1+00	13.8	−10.3
(3.5)	14.0	−10.5
	13.8	−10.3
	13.7	−10.2
	15.0	−11.5
+50	15.5	−12.0
	15.0	−11.5
+60		

PROPOSED PIER LOCATION QUIVERA



STAMPER
BARRAGAN
SHENKIN

5-24-50

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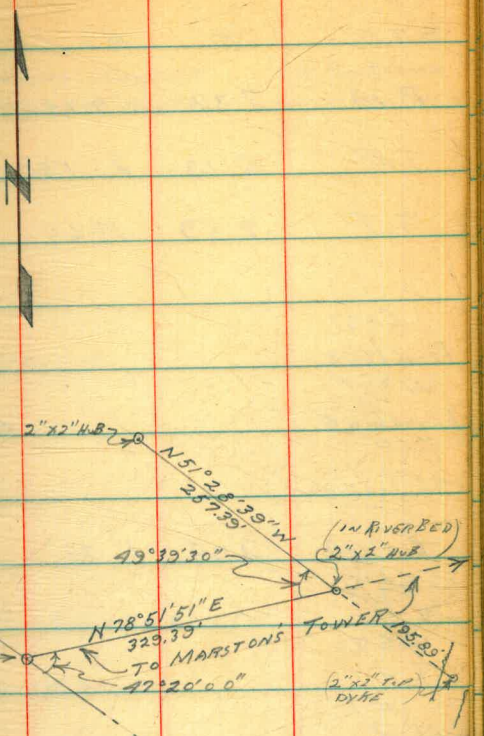
Location Of Control Points For Topo Of Area East Of Intersection Of Midway, West Point Loma & Frontier St.

Station	Object	Angle
Lead & Tack Midway Drive Sta - 2+13.21	Lead & Tack Ollie & Midway	① 47° 20' 00"
	Def. Left	②
	Point (A)	Av. 47° 20' 00"
	Lead & Tack & Midway Drive Sta - 2+13.21	① 49° 39' 30"
Point (A)	Angle Right.	②.
	Point (B)	Av. 49° 39' 30"



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WATSON
SHERRY

5-25-50

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LEVELS FOR TOPO OF AREA EAST OF MIDWAY DRIVE & WEST POINT LOMA BLVD INTERSECTION

STA	+	H.I.	−	ELEV
B.M.	7.37	19.14		11.77
T.P.	6.13	21.19	4.08	15.06
T.P.	2.59	17.65		15.06
EAST FLOWLINE			11.7	5.95
WEST FLOWLINE			12.22	5.43
TOP 48" CONC CUL			9.50	8.15
T.B.M.	1.95	16.72		11.77
SET T.P.			1.85	14.87
SET T.P.			6.56	10.12
SET T.P.			0.08	16.64
T.B.M.	10.59	20.71		10.12
T.P.	5.89	20,84	5.76	14.95
			6.35	14.49

1/2" BRASS PLUG ON TRIPLE HEADWALL CULVERT ON WEST SIDE OF MIDWAY APPROX. 200' NORTH OF INTERSECTION WITH W. POINT LOMA

TBM P.T.?

48" CONC PIPE CUL. E/SIDE

WEST END OF BOX CUT

EAST END CUT

2.5' HUB POINT "B" ASTOR LUMBER

2.5' HUB POINT "A" MIDDLE

2.5' HUB POINT "C" TOP DYKE

2.5' HUB POINT "A"

(SEE COR M.H. (ELEC) BETWEEN FRONTAGE & GIANT DYKE)

WHERE DYKE END AGAINST ST.

11.77
9.75
16.72
4.85
11.87

16.72
6.56
10.12

1.51 (R)

29.5 (D)

10.12
10.59

20.71

BOUNDARY.

SURVEY OF LOTS 15 TO 22 / WONDERLAND BEACH

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C. BARRAGAN
A. SHERRY

5-30-50

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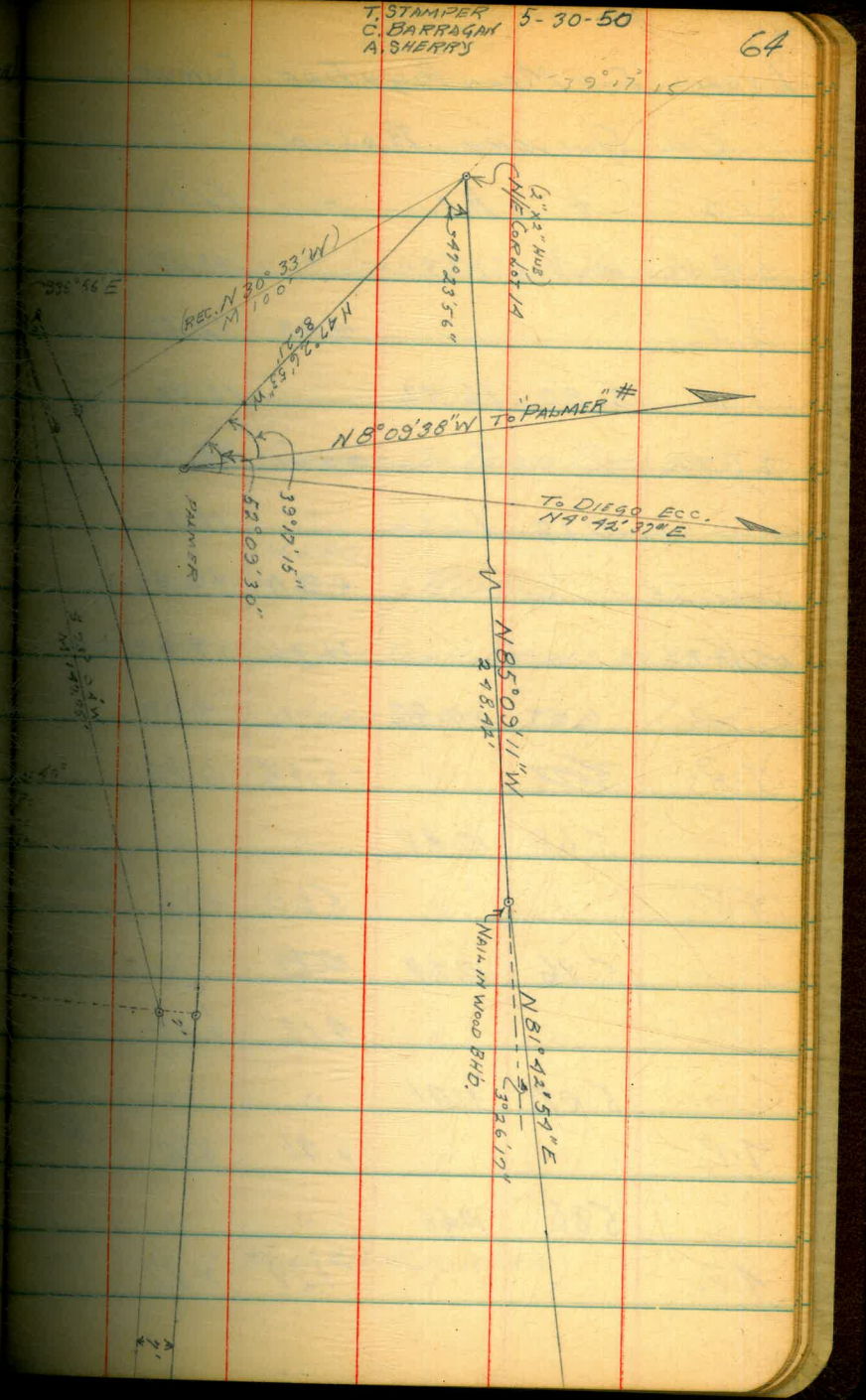


C. BARRAGAN
A. SHEARY
N. CANTER 7-26-50

LEVELS FOR MEAN HIGH TIDE SURVEY OF QUIVERA BASIN

STA	+	H.I.	−	ELEV
T.B.M.	4.45	17.50		13.05
T.P.			4.88	12.62
"	3.80	16.42		12.62
T.B.M.			+0.01	16.43
"	0.13	16.56		16.43
CHECK T.P.			5.90	10.66
M.H.T.L.			11.76	4.80
T.P.	5.73	10.53		4.80
T.P.	~~5.73~~		-5.73	4.80
	5.68	10.48		
T.P.			5.60	4.88
	5.86	10.74	~~10.74~~	
T.P.			4.12	6.62
	5.09	11.71		
T.P.			6.91	480
	5.86	10.66		
T.P.			-1.79	8.87

S/E CURB MAN HOLE @ STA. 16+36 ⁶ VENTURA BLVD.

TEMP. T.P.

(THIRD BOLT NORTH)
W. CURBING S/W CORNER OF TEMP. BRIDGE

" " " " "

½" IRON PIPE (U.S.E.D.) (NO TACK) (RIM)

SET NAIL (2"x2") (10') W/OF TEMP. BRIDGE ON M.H.T.L.

T.P. ON MEAN HIGH TIDE LINE

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

T.P. 2"x2" @ E/END BASIN (QUIVERA)

C. BARRAGAN
A. SHERRY
W. CARTIER
7-26-50

LEVELS FOR MEAN HIGH TIDE LINE

Sta	+	H.I.	−	Elev.	
	6.83	15.70			
T.P.			3.24	12.46	
	5.69	18.15			
			5.13	13.02	ELEV = 13.05

T.P. ON MEAN HIGH TIDE LINE

" " " " " "

" " " " " "

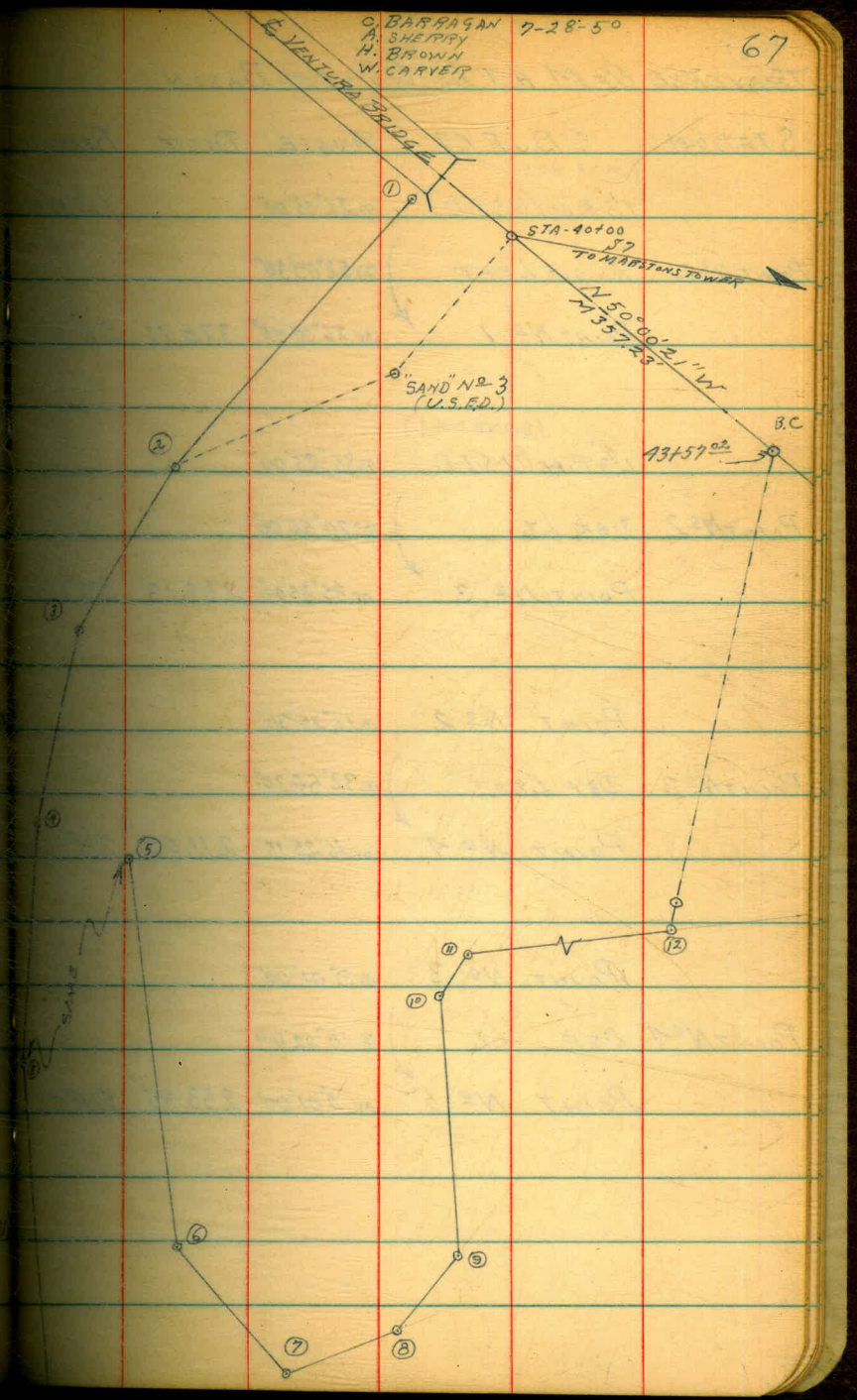
S/E COR MAN HOLE ℄ STA-46+36 ℄ VENTURA BLVD.

TRAVERSE OF MEAN HIGH TIDE LINE

QUIVERA BASIN PROJ-?

NOTE - POINTS ARE 2" X 2" HUBS SET AT +4.80 ELEVATION

STA	OBJECT	ANGLE	DIST	BEARING
	MARSTON'S TOWER	∅ 29°43'00"		S 79°11'32" E.
(VENTURA BLVD) STA-40+00	ANGLE RIGHT	∅ 59°26'30"		
	B.C. STA-43+57.02	AV. 29°43'15"	357.02'	S 50°06'21" E
	(VENTURA BLVD.) B.C. STA-43+57.02	∅ 90°29'00"		
(VENTURA BLVD) STA-40+00	ANGLE RIGHT	∅ 180°57'45"		
	1½" PIPE & TACK (U.S.E.D.)	AV. 90°28'52"	191.37'	S 10°28'21"
	MARSTON'S TOWER	∅ 59°09'30"		
1½" PIPE (U.S.E.D.)	ANG. LEFT	∅ 118°19'00"		
	STA-40+00 VENTURA	AV. 59°09'30"	253.95'	
	(VENTURA BLVD.) STA-40+00	∅ 27°10'00"		
1½" PIPE	DEF. RIGHT	∅ 59°20'00"		
	POINT Nº2 MI. HT.	AV. 27°10'00"	253.95'	S 67°30'?



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H. BROWN
W. CARVER

7-28-50

TRAVERSE OF M.H.T.L. QUIVERA BASIN

STATION	OBJECT	ANGLE	DIST	BEARING
	(SAND Nº 3) 1½" PIPE (U.S.E.D)	⊙ 26°05'00"		S 67°38'31" W
POINT Nº 2	ANGLE LEFT	② 52°09'30"		
	POINT Nº 1	AV. 26°09'45"	378.75'	S 41°28'46" W
	(SAND Nº 3) 1½" PIPE (U.S.E.D)	⊙ 35°25'00"		
POINT Nº 2	DEF. LT.	② 70°50'00"		
	POINT Nº 3	AV. 35°25'00"	209.13'	S 32°03'31" W
	POINT Nº 2	⊙ 16°25'30"		
POINT Nº 3	DEF. LEFT	② 32°50'30"		
	POINT Nº 4	AV. 16°25'15"	211.05'	S 15°38'16" W
	POINT Nº 3	⊙ 9°01'00"		
POINT Nº 4	DEF LT.	② 18°02'00"		
	POINT Nº 5	AV. 9°01'00"	253.85'	S 06°37'16" W

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7-28-50

STATION	OBJECT		ANGLE	DIST	BEARING
	POINT	Nº 4	⊙15°00'00"		S06°12'16"W
POINT Nº 5	DEF	LT.	⊙29°59'15"		
	POINT	Nº 6	AV 14°59'52"	413.16'	S08°12'38"
	POINT	Nº 5	⊙35°31'00"		
POINT Nº 6	DEF	LT.	⊙71°02'00"		
	POINT	Nº 7	AV. 35°31'00"	179.95'	S27°02'17"E
	POINT	Nº 6	⊙69°54'30"		
POINT Nº 7	DEF	LT.	⊙139°49'00"		
	POINT	Nº 8	AV 69°54'30"	123.24'	N82°21'47"E
	POINT	Nº 7	⊙30°38'30"		
POINT Nº 8	DEF.	LT.	⊙61°16'30"		
	POINT	Nº 9	AV 30°38'15"	101.33'	N52°05'32"E
	POINT	Nº 8	⊙12°16'00"		
POINT Nº 9	DEF	LT	⊙85°32'00"		
	POINT	Nº 10	AV. 72°16'00"	274.62'	N89°22'51"E

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W. CARVER
7-31-50

114
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STATION	OBJECT	ANGLE	DIST	BEARING
	POINT Nº 9	D 37°04'00"		
POINT Nº 10	DEF RIGHT	② 79°08'00"		
	POINT Nº 11	AV. 37°04'00"	52.98	N ~~46°30'56"~~ 30°01'43" E
	POINT Nº 10	D 51°06'00"		
POINT Nº 11	DEF RIGHT	② 102°11'30"		
	POINT Nº 12	AV. 51°05'45"	415.03'	S ~~41°07'45"~~ 41°07'45" E
	POINT Nº 11	① 104°37'		
POINT Nº 12	(ANGLE) RIGHT	② 209°54'30"		
(STA-43+57.02)	B.C. VENTURA BLVD.	AV. 104°37'15"	669.78	N ~~75°24'45"~~ 6°04'45" E
	POINT Nº 12	① 123°54'30"		
(STA-43+57.02) B.C.	(ANGLE) RIGHT	② 247°49'00"		
	STA-40+00 VENTURA	AV. 123°54'30"	(M) 357.23' REC.	N 50°00'41" W → 50°00'21" 0°00'26"

STATION OBJECT

PX

Soundings Of Quivera Basin

0 - 50

0+00 = STA - 0-50			Sound South	
Dist	Sound		Dist	Sound
0+00	?		2+00	
+55	0.0	+4.8		
(4.8) (1:25 P.M.)				
+60	1.4	+3.4		
70	5.0	-0.2		
+80	7.1	-2.3	+50	
+90	8.9	-4.0		
1+00	10.5	-5.7		
+10	11.2	-6.4		
+20	11.0	-6.2		
+30	11.0	-6.2		
+40	11.0	-6.2		
+50	10.3	-5.5		
+60	11.0	-6.2		
+70	10.8	-6.0		
+80	11.2	-6.4		
1+90	10.5	-5.7		

PX

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W. CARVER

8-1-50

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Dist.	Sound	
2+00	10.3	-5.5
+10	9.1	-4.3
+20	11.8	-7.0
+30	8.5	-3.7
+40	9.6	-4.8
+50	7.9	-3.1
+60	6.8	-2.0
+70	6.1	-1.3
+80	6.0	-1.2
+90	5.0	-0.2
3+00	5.0	-0.2
+10	5.1	-0.3
+20	5.2	-0.4
+30	5.0	-0.2
+40	5.0	-0.2
+50	5.0	-0.2
+50		
(4.8)		

PX

STA - 0+00

0+00 = STA - 0+00 PX

Dist	Sound		Sound South Dist	Sound
0+00	?			
+32	0.0	+4.7		
(1:55) 40	2.0	+2.7		
(4.7) +50	3.5	+1.2		
+60	7.0	-2.3		
+70	9.5	-4.8		
+80	12.5	-7.8		
+90	13.2	-8.5		
1+00	13.3	-8.6		
+10	13.5	-8.8		
+20	13.8	-9.1		
+30	14.0	-9.3		
+40	14.4	-9.7		
+50	14.5	-9.8		
+60	14.6	-9.9		
+70	14.6	-9.9		
+80	14.7	-10.0		
+90	14.8	-11.1		

PX

STA - 0+00

Dist	Sound	
2+00	14.6	-9.9
+10	14.0	-9.3
+20	14.2	-9.5
+30	14.4	-9.7
+40	14.3	-9.6
+50	14.0	-9.3
+60	12.2	-7.5
+70	5.0	-0.3
+80	5.0	-0.3
+90	5.2	-0.5
3+00	5.0	-0.3
+10	5.1	-0.4
+20	4.5	+0.2
+30	5.0	-0.3
+40	5.0	-0.3
+50	5.1	-0.4
+60	5.0	-0.3
(4.7) +70 (12:00)	6.1	-1.4

PX

Sta 1+00

0+00 = Sta. 1+00 on B/L

Sound South

Dist.	Sound		Dist.	Sound	
0+00	?		2+00	13.1	-8.5
2:05 (4.6) +28	0.0	+4.6	+10	13.1	-8.5
2:10 +40	3.0	+1.6	+20	13.7	-9.1
+50	5.1	-0.5	+30	13.0	-8.4
+60	7.6	-3.0	+40	13.0	-8.4
+70	13.0	-8.4	+50	13.9	-9.3
+80	15.1	-10.5	+60	13.8	-9.2
+90	15.5	-10.9	+70	14.0	-9.4
1+00	15.0	-10.4	+80	15.7	-11.1
+10	15.0	-10.4	+90	16.2	-11.6
+20	14.7	-10.1	3+00	16.5	-11.9
+30	13.6	-9.0	+10	15.1	-10.5
+40	13.8	-9.2	+20	16.6	-12.0
+50	14.0	-9.4	+30	16.1	-11.5
+60	13.9	-9.3	+40	15.0	-10.4
+70	13.9	-9.3	+50	15.5	-10.9
+80	13.9	-9.3	+60	15.8	-11.2
+90	13.1	-8.5	+70	15.0	-10.4

PX

STA -1+00

DIST	SOUND	
+80	14.6	-10.0
+90	16.1	-11.5
4+00	16.1	-11.5
+10	15.7	-11.1
+20	15.5	-10.9
+30	15.2	-10.6
+40	15.0	-10.4
+50	14.1	-9.5
+60	13.0	-8.4
+70	13.1	-8.5
+80	13.5	-8.9
(4.6) +90	13.8	-9.2
5+00	12.0	-7.4
+10	5.0	-0.4
(2.1)		

PX

Sta. 2+00

0+00 = Sta. 1+00 on B/L Sound South

Dist.	Sound		Dist.	Sound	
0+00 (2'25)	?		2+00	15.0	-10.7
+27	0+10	+4.3	+10	15.8	-11.5
(4.3) +10	4.8	-0.5	+20	15.1	-10.8
+50	7.0	-2.7	+30	15.0	-10.7
+60	10.3	-6.0	+40	15.0	-10.7
+70	12.0	-7.7	+50	14.9	-10.6
+80	14.8	-10.5	+60	14.5	-10.2
+90	14.2	-9.9	+70	14.4	-10.1
1+00	14.6	-10.3	+80	14.5	-10.2
+10	14.0	-9.7	+90	14.8	-10.5
+20	15.0	-10.7	3+00	14.8	-10.5
+30	15.0	-10.7	+10	14.3	-10.0
+40	14.5	-10.2	+20	14.0	-9.7
+50	14.0	-9.7	+30	14.4	-10.1
+60	14.6	-9.7	+40	14.7	-10.4
+70	14.0	-9.7	+50	14.5	-10.2
+80	14.7	-10.4	+60	14.0	-9.7
+90	15.1	-10.8	+70	13.7	-9.4

PX

Sta - 2+00

75

D

Dist	Sound	
3+80	13.9	-9.6
+90	13.8	-9.5
4+00	13.4	-9.1
+10	13.6	-9.3
+20	14.0	-9.7
+30	15.2	-10.9
+40	15.3	-11.0
+50	15.0	-10.7
+60	15.0	-10.7
+70	14.8	-10.5
+80	14.0	-9.7
+90	15.0	-10.7
5+00	16.0	-11.7
+10	16.2	-11.9

1:32

PX Sta 3+00

0+00 = Sta 3+00 on 3/L Sound South

Dist.	Sound		Dist	Sound	
0+00	?		+10	13.0	-8.9
2:40					
177	0.0	+4.1	+20	13.7	-9.6
+30	1.5	+2.6	+30	15.3	-11.2
+40	3.0	+1.1	+40	15.0	-10.9
+50	4.9	-0.8	+50	15.1	-11.0
+60	10.5	-6.4	+60	15.1	-11.0
+70	15.8	-11.7	+70	15.0	-10.9
+80	17.8	-13.7	+80	14.7	-10.6
+90	16.8	-12.7	+90	14.0	-9.9
1+00	16.1	-12.0	3+00	13.9	-9.8
+10	14.7	-10.1	+10	13.8	-9.7
+20	16.0	-11.9	+20	14.0	-9.9
+30	15.1	-11.0	+30	14.3	-10.2
2:50 4.1					
+40	16.0	-11.9	+40	14.4	-10.3
+50	15.4	-11.3	+50	15.5	-11.4
			+60	15.7	-11.6
+60	14.8	-10.7	+70	14.8	-10.7
+70	15.2	-11.1	+80	14.5	-10.4
+80	15.7	-11.6		13.7	-9.6
+90	15.8	-11.7	+90	14.0	-9.9
2+00	13.9	-9.8	4+00		

PX Sta 4+00

0+00 = Sta 4+00 on 8/L Sound South

Dist.	Sound		Dist	Sound	
0+00	?		+10	14.2	-10.2
2:5					
+28	0.0	+4.0	+20	13.8	-9.8
+30	1.5	+2.5	+30	13.9	-9.9
+40	3.5	+0.5	+40	14.8	-10.8
+50	7.0	-3.0	+50	14.0	-10.0
+60	11.7	-7.7	+60	14.0	-10.0
+70	12.0	-8.0	+70	14.8	-10.8
+80	12.6	-8.6	+80	14.9	-10.9
+90	13.1	-9.1	+90	14.0	-10.0
1+00	13.0	-9.0	3+00	13.9	-9.9
+10	14.2	-10.2	+10	14.1	-10.1
2:0 4.0					
+20	14.4	-10.4	+20	14.2	-10.2
+30	15.0	-11.0	+30	13.7	-9.7
+40	15.9	-11.9	+40	14.0	-10.0
+50	14.0	-10.0	+50	14.2	-10.2
+60	14.4	-10.4	+60	14.1	-10.1
+70	15.1	-11.1	+70	14.0	-10.0
+80	14.3	-10.3	+80	13.5	-9.5
+90	15.2	-11.2	+90	12.6	-8.6
2+00	14.0	-10.0	4+00	12.7	-8.7

PX

Sta. 5+00

Section taken at 45° to B/L

0+00 - Sta. 5+00 on B/L

Sound South/EAST

Dist.	Sound		Dist.	Sound	
0+00	(3.9)		2+40	15.0	-11.1
+75	0.0	+3.9	+50	16.1	-12.2
(5:07) +80	1.7	+2.2	+60	14.5	-10.6
+90	4.0	-0.1	+70	14.2	-10.3
1+00	7.9	-4.0	+80	13.7	-9.8
+10	11.2 / 7.7	-7.3	+90	14.9	-11.0
+20	13.2	-9.3	3+00	14.9	-11.0
+30	13.0	(5:11) -9.1	+10	13.9	-10.0
+40	13.6	-9.7			
+50	14.1	-10.2			
+60	14.2	-10.3			
+70	14.8	-10.9			
+80	14.2	-10.3			
(7:50) +90	15.1	-11.2			
2+00	14.0	-10.1			
+10	14.0	-10.1			
+20	14.8	-10.9			
+30	13.7	-9.8			

PX ← Sta. 6+00 & Sta. 7+00 →

0+00 = Sta. 6+00 on B/L Sound EAST

Dist.	Sound		Dist.	Sound	
0+00	(3.7)		0+00 (3:25)	?	
+50 (3:15)	0.0	+3.7	+55	0.0	+3.7
+60	3.9	-0.2	+60	1.5	+2.2
+70	8.5	-4.8	+70	5.0	-1.3
+80	13.0	-9.3	+80	9.8	-6.1
+90	13.1	-9.4	+90	13.3	-9.6
1+00	13.2	-9.5	1+00	13.9	-10.2
+10	13.6	-9.7	+10	14.2	-10.5
+20	13.9	-10.2	+20	13.6	-9.9
+30	14.0	-10.3	+30	14.3	-10.6
+40	14.2	-10.5	+40	14.5	-10.8
+50	14.6	-10.9	+50	14.2	-10.5
+60	14.8	-11.1	+60	14.0	-10.3
+70	14.8	-11.1	+70	14.0	-10.3
+80	14.8	-11.1	+80	13.5	-9.8
+90	14.9	-11.2	+90	13.4	-9.7
2+00	16.2	-11.5	2+00 (3:30)	13.5	-9.8
(3:20)					

PX Sta. 8+00 — Aug 1. 1950

0+00 = Sta. 8+00 on B/L — Sound — East

Dist	Sound		Dist.	Sound	
0+00	(3.6)		+20	14.0	-10.4
+47					
+50	0.0	+3.6	+30	14.0	-10.4
(3:35)					
+60	4.0	+0.4	+40	13.9	-10.3
+70	7.9	-4.3	+50	14.1	-10.5
+80	11.8	-8.2	+60	13.9	-10.3
				13.6	-10.0
+90	14.1	-10.5	+70	13.2	-9.6
			+80		
1+00	14.0	-10.4	+90	13.2	-9.6
		(3:37)			
+10	14.0	-10.4	2+00	13.6	-10.0

Sta. 8+00

0+00 = Sta. 8+00 on B/L. Sound at 45° to B/L (Sound South East)

Dist.	Sound		Dist.	Sound	
0+00	?		1+30	12.5	-9.1
(3:42)	(3.4)				
+60	0.0	+3.4	+40	12.0	-8.6
+70	3.0	+0.4	+50	12.2	-8.8
+80	7.7	-4.3	+60	12.3	-8.9
+90	12.1	-8.7	+70	12.7	-9.3
1+00	13.4	-10.0	+80	12.0	-8.6
				12.0	-8.6
+10	13.0	-9.6	+90	12.1	-8.7
				12.6	-9.1
+20	12.6	-9.2	2+00	13.0	-9.6
				13.0	-9.6

(2:50)

PX Sta. 8+00 — Aug 2. 1950 A.M.

0+00 = Sta. 8+00 on B/L — Sound — South

Dist	Sound		Dist	Sound	
0+00	?		1+70	12.0	-9.1
+83	0.0	+2.9	+80	12.0	-9.1
(2.9)					
+90	2.1	+0.8	+90	12.0	-9.1
1+00	3.7	-0.8	3+00	12.0	-9.1
+10	5.0	-2.1	+10	12.0	-9.1
+20	6.5	-3.6	+20	12.0	-9.1
+30	11.2	-8.3	+30	12.8	-9.1
+40	13.1	-10.2	+40	11.8	-8.9
+50	13.7	-10.8	+50	11.8	-8.9
+60	11.8	-8.9	+60	13.3	-10.4
+70	12.1	-9.2	+70	13.7	-10.8
+80	11.8	-8.9	+80	14.1	-11.8
+90	12.9	-9.0	+90	14.5	-11.6
2+00	13.2	-9.3	4+00	11.9	-9.0
+10	11.7	-8.8	+10	7.0	-4.1
+20	11.3	-8.4	+20	2.5	+0.4
+30	13.0	-10.1			
+40	13.2	-10.3	(9:56)		
+50	12.6	-9.7	(2.9)		
+60	12.0	-9.1			

1139
901
238 city.

102

54 30'
109

11 51
23 42 30

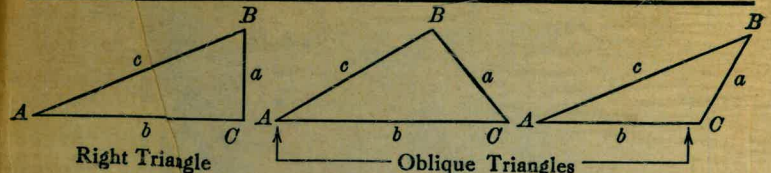
123° 54' 30" } 11 51 15
247° 49' 00" } BE. To (12)
A E BE.

59° 09' 30" } 10.74
118 18' 30" } ANGLES To 40+00
59 09 15" } A E "SAND"

60 11
59 09
1° 02'

5.72

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

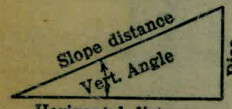
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a\sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c\sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90° - A, b = a \cot A, c = \frac{a}{\sin A}$.
A, b	B, a, c	$B = 90° - A, a = b \tan A, c = \frac{b}{\cos A}$.
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A$,

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180° - C, \tan \frac{1}{2}(A - B) = \frac{(a-b)\tan \frac{1}{2}(A+B)}{a+b}$, $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a+b+c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{bc}}$, $\sin \frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{ac}}, C = 180° - (A+B)$
a, b, c	Area	$s = \frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10′. From Table, Page IX. cos 5° 10′ = .9959. Horizontal distance = 319.4 × .9959 = 318.09 ft. Horizontal distance also = Slope distance minus slope distance times (1—cosine of vertical angle) With the same figures as in the preceding example, the following result is obtained. Cosine 5° 10′ = .9959. 1—.9959 = .0041. 319.4 × .0041 = 1.31. 319.4—1.31 = 318.09 ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance $= 302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.