

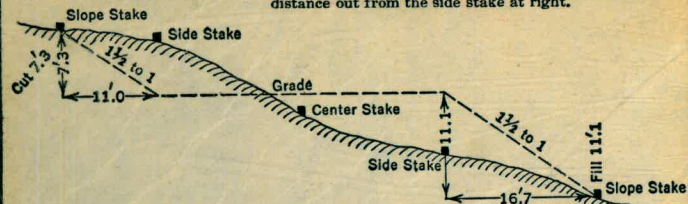
MISSION BAY

57

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1 1/2 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	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
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	33.8	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.

BOOK 57

MICROFILMED

JAN 7 1965

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The report in this book is
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X-SECTIONS OF LAND SOUTH OF
BAYVIEW TERRACE

PX

120+00

7-20-50
Proj 65031

C. BARRAGAN
A. SHELDON
W. CARVER

7-20-50

(2)

PX

STA	+	H.I.	-	ELEV	Sta	+	H.I.	-	Elev
T.P.	4.62	11.02		7.40	T.P. 122+00 SEE BOOK 3, 3+10		11.02	5.1	5.9
0+00					S 3+60			4.9	6.1
N 0+50			4.9	6.1	S 4+15			5.3	5.7
N 1+05			4.9	6.1	S 4+20			5.7	5.3
N 1+65			4.7	6.3	S 5+20			5.8	5.2
N 2+10			4.5	6.5	S 5+75			6.1	4.9
N 2+65			4.4	6.6	S 6+20			6.2	4.8
N 3+15			3.9	7.1	S 6+75			6.3	4.7
N 3+70			3.5	7.5	S 7+25			6.4	4.6
N 4+20			3.6	7.4	S 7+70			6.9	4.1
N 4+75			3.3	7.7					Water L
N 5+25			3.4	7.6					
N 6.85			1.7	9.3					
0+00			5.0	6.0					
S 0+50			5.1	5.9					
S 1+00			5.3	5.7					
S 1+50			5.2	5.8					
S 2+05			5.3	5.7					
S 2+60			5.8	5.2					

House

PX

0+00 = 168+00 3/4

STA-121+00 W

STA	T	H.I.	ELEV	Sta. Hgt
T.P.	4.85	12.3 12.25	7.40	12.3 12.25 12.25 12.25 N 1+60
S-7+85			7.2 5.1	WATER N 2+15
S-7+35			6.6 5.7	N 2+70
S-6+90			6.1 5.8	N 3+35
S-6+40			6.1 5.8	N 3+85
S-5+85			6.3 6.0	N 4+35
S-5+35			6.0 6.3	N 4+85
S-4+80			5.6 6.7	T.P.
S-4+25			5.3 7.0	
S-3+70			5.4 6.9	
S-3+15			5.4 6.9	
S-2+70			5.6 6.7	
S-2+20			5.6 6.7	
S-1+60			5.5 6.8	
S 1710			5.4 6.9	
S 0+55			5.3 7.0	
0+00			5.0 7.3	
N 0+50			4.7 7.6	
N 1+06'			4.7 7.6	

Sta 121+00

PX ③

T	H.I.	Elev
	12.3 12.25	4.3 8.0
		4.1 8.2
		4.0 8.3
		3.6 8.7
		3.9 8.4
		3.8 8.5
		2.6 9.7
		4.79 7.46

122+00 W
168+00 N
T.P. Hgt

7-20-50

7-20-50

④

PX Sta 122+00				Sta 123+00				
0+00 - N 168+00 B1	Sta	12.5	Elev	0+00 - 168+00 B2	Sta	H1	Elev	
SET T, 12	5.00	12.46	7.46	122+00 168+00 TP Hub	T, B, M	5.30	12.76	Hub Sta 122+00
S-0+5		5.2	7.3		S-0+170		7.9	4.9 water
S-1+00		5.4	7.1		S-8+20		7.3	5.5
S-1+50		5.6	6.9		S-7+70		6.9	5.9
S-2+00		5.5	7.0		S-7+15		6.8	6.0
S-2+60		5.7	6.8		S-6+75		6.4	6.4
S-3+10		5.8	6.7		S-6+25		6.1	6.7
S-3+60		5.8	6.7		S-5+70		6.2	6.6
S-4+15		5.8	6.7		S-5+15		6.4	6.4
S-4+70		5.7	6.8		S-4+65		6.4	6.4
S-5+20		5.8	6.7		S-4+15		6.3	6.5
S-5+75		5.9	6.6		S-3+65		6.1	6.7
S-6+35		6.4	6.1		S-3+10		5.8	7.0
S-6+85		6.4	6.1		S-2+55		5.6	7.2
S-7+40		6.5	6.0		S-2+00		5.5	7.3
S-7+90		6.8	5.7		S-1+45		4.8	8.0
S-8+20		7.6	4.9	Water	S-0+90		5.1	7.7

PX

CROSS SECTIONS OF TOP-
SOILED AREA & AREA AS TO BE
TOP SOILED DE ANZA POINT

Sta. N 153+00

5-21-51

③

T. Stampler
E. Watson
A. Sherry
R. Shorey

NOTE See Baseline Layout in
F.B.M.B. No. 63, Pages 1-5

Weather

T.B.M.

12.59

Top 2x2
N151+00
See FB 63

Cloudy-Cool

5.29 17.88

E 49.5

3.30 14.58

W. Profile

E 7.5

4.35 13.53

W. Sbl. Dr.

0

5.1 12.8

W 7

5.7 12.2

W 18

6.5 11.4

W 20

7.0 10.9

W 112

8.2 9.7

W 162

8.5 9.4

W 254

9.1 8.8

W 353

9.0 8.9

W 390

10.0 7.9

W 395

11.6 6.3

T.P.

3.57 14.31

Center Island Pac. Hi-Way Sta. 185+00 W. Edge

8 on W. Curb. in No's 185

PX

CROSS SECTIONS CONTD

5-21-51

⑥

Sta. 154+00 N

T.B.M		14.31
	3.39	17.70
E. 42	3.47	14.23
E. 9	4.36	13.34
0	5.3	12.4
W 418	11.2	6.5
W 390	10.1	7.6
W 340	9.1	8.6
W 264	9.3	8.4
W 165	9.6	8.1
W 104	8.7	9.0
W 15	6.6	11.1
W 11	5.4	12.3
W 4	5.6	12.1

See Pg. 5 Hi-way Sta. 185

W. Profile

Top W. Shoulder

PX

CROSS SECTIONS CONTD.

5-22-51

⑦

Sta. N. 155+00

Sta	+	H.I.	-	Elev.
T.B.M.				14.31
	2.97	17.28		
E 45			3.37	13.91
E 13			4.18	13.10
0			5.2	12.1
W 5			5.2	12.1
W 15			5.8	11.5
W 19			6.8	10.5
W 85			8.3	9.0
W 181			9.5	7.8
W 257			9.0	8.3
W 325			8.2	9.1
W 350			9.6	7.7
W 385			9.8	7.5
W 418			12.3	5.0
T.P.			3.36	13.92

See Page No 5

W Profile

W Shldr.

Hi-Way Sta 187+00 Top Nail & Center (Island)

CROSS SECTIONS CONTD.

5-22-51

⑧

Px

Sta. N. 156+00

Sta.	+	H.I.	-	Elev.
T.B.M.				13.92
	2.99	16.91		
E 47			3.24	13.67
E 18			4.08	12.83
0			5.4	11.5
W 405			12.0	4.9
W 372			9.3	7.6
W 337			9.0	7.9
W 315			8.2	8.7
W 225			9.0	7.9
W 190			8.5	8.4
W 150			8.9	8.0
W 75			7.5	9.4
W 11			6.3	10.6
W 6			5.3	11.6

See Pg# 7 Hi-Way Sta. 187+00

W. Profile

W. Sh/dr.

PX

CROSS SECTIONS CONTD.

5-22-51

9

Sta. N. 157+00

Sta	T	H.I	-	Elev.
T.B.M.				13.92
		17.0		
	3.06	16.98		
E 48			3.53	13.45
E 16			4.45	12.53
E 2			5.4	11.6
W 0			5.2	11.8
W 7			5.6	11.4
W 11			6.9	10.1
W 91			8.1	8.9
W 41			8.8	8.2
W 190			8.8	8.2
W 285			8.1	8.9
W 350			11.7	5.3
W 390				
W 0				

See Pg. #7. Hi-way Sta. 187+00

W. Profile

W. Shldr

T.R.

3.69 13.29

Top Nail Center Island Hi-way Sta. 189+00

PX

CROSS SECTIONS CONT'D.

5-22-51

Sta. N. 158+00

Sta.	+	H.I.	-	Elev.
------	---	------	---	-------

T.B.M.				13.29
--------	--	--	--	-------

See Pg. #9 Hi-Way Sta. 189+00

3.36 16.65

E 49			3.52	13.13
------	--	--	------	-------

W Profile

E 16			4.49	12.16
------	--	--	------	-------

W Shldr.

0			5.5	11.1
---	--	--	-----	------

W 384			11.7	5.0
-------	--	--	------	-----

W 345			8.0	8.6
-------	--	--	-----	-----

W 259			8.3	8.3
-------	--	--	-----	-----

W 215			8.7	8.0
-------	--	--	-----	-----

W 177			8.3	8.3
-------	--	--	-----	-----

W 100			8.4	8.2
-------	--	--	-----	-----

W 10			6.2	10.4
------	--	--	-----	------

W 12			5.6	11.0
------	--	--	-----	------

W 2			5.0	11.6
-----	--	--	-----	------

W

DX

CROSS SECTIONS CONTD.

5-22-51

Sta. N. 159+00

NOTE This Sec. is through Area Where 18"

Drain Was Installed & is Very Irregular

See pg #10 Hi-Way Sta. 189+00

	Sta.	+	H.I.	-	Elev.
T. T.B.M.					13.29
			3.31	16.60	

E	E 50			3.72	12.88
E	E 17			4.70	11.90
	0			5.5	11.1
W	W 1			5.2	11.4
W	W 26			5.5	11.1
W	W 30			6.3	10.3
W	W 63			5.8	10.8
W	W 110			6.6	10.0
W	W 165			9.1	7.5
W	W 190			8.6	8.0
W	W 232			6.9	9.7
W	W 270			9.2	7.4
W	W 286			8.8	7.8
	W 294			7.4	9.2
	W 348			8.2	8.4
	W 375			11.8	4.8

W. Profile

W. Shldr.

CROSS SECTIONS CONT'D

5-22-51

(12)

PX.

Sta. N. 160+00

	Sta.	+ H.L.	-	Elev.
Z	T.B.M.			13.29
		2.89	16.18	
E	E 50		3.59	12.59
E	E 17		4.49	11.69
	0		5.6	10.6
W	W 385		12.4	3.8
W	W 344		10.0	6.2
W	W 339		8.4	7.8
W	W 291		7.9	8.3
W	W 236		8.1	8.1
W	W 190		8.1	8.1
W	W 145		8.4	7.8
W	W 102		8.2	8.0
W	W 55		6.8	9.4
W	W 21		4.9	11.3
	W 5		4.7	11.5
	W 3		5.5	10.7
	T.P.		3.75	12.43

See Pg. 10 Hi-way Sta. 189+00

W. Profile

W. Shldr.

Top Nail & Center Island Hi-way Sta. 193+00

CROSS SECTIONS CONTD.

5-22-51

(13)

PX

Sta. N. 161+00

Sta. + H.I. - Elev.

T.B.M. 12.43

See Pg. 12. Hi-way Sta. 193+00

3.47 15.90

E F 48 3.52 12.38

W. Profile

E F 14 4.46 11.44

W Shldr.

0 5.3 10.6

W 12 5.9 10.0

W 69 7.1 8.8

W 115 7.8 8.1

W 165 7.8 8.1

W 213 7.8 8.1

W 265 7.2 8.7

W 310 7.3 8.6

W 373 12.0 3.9

W

CROSS SECTIONS CONT'D.

5-22-51

(14)

PX

Sta. N. 162+00

NOTE: This Sta. Should be used for
Zero End Area for Sly Areas

Sta.	+	H.I.	-	Elev.
T.B.M.				12.43
	3.45	15.88		
E E 44			3.78	12.10
E E 8			4.90	10.98
0			5.4	10.5
W 350			11.8	4.1
W 320			8.2	7.7
W 295			5.3	10.6
W 265			5.8	10.1
W 232			7.2	8.7
W 214			7.1	8.8
W 208			6.5	9.4
W 160			6.3	9.6
W 110			6.4	9.5
W 63			6.2	9.7
W 30			6.2	9.7
W 29			6.7	9.2
W 17			6.1	9.8
W 10			5.5	10.4

See Pg. 12 Hi-way Sta. 193+00

W. Profile

W. Shldr.

Top of Top soil

Nat. Gr.

Nat. Gr.

T. Soil Area

" "

" "

" "

" "

Nat Gr.

" "

CROSS SECTIONS CONT'D.

5-22-51

(15)

Px

Sta. N. 163+00

Sta.	+	H.I.	-	Elev.
T.B.M.				12.43
	3.45	15.88		
E 49			3.98	11.90
E 18			5.06	10.82
0			5.6	10.3
W 51			6.2	9.7
W 100			6.1	9.8
W 150			6.3	9.6
W 198			5.9	10.0
W 248			6.0	9.9
W 290			8.5	7.4
W 315			8.5	7.4
W 335			12.3	3.6

See Pg. 12 Hi-Way Sta. 193+00

W. Profile

W. Sldy.

TP.

3.71 12.17

Top Rail & Center Island Hi-way Sta 196+00

CROSS SECTIONS CONTD.

5-22-51

(16)

Px

Sta. N. 164+00

Sta.	+	H.I.	-	Elev.
T.B.M.				12.17
	4.74	16.91		

see Pg. 15 Hi-Way Sta 196+00

L E	E 50		5.07	11.84
L E	E 14		6.07	10.84
	0		5.6	11.3
V	W 310		13.5	3.4
V	W 270		9.6	7.3
V	W 243		6.9	10.0
V	W 195		6.2	10.7
V	W 150		6.3	10.6
V	W 100		6.3	10.6
V	W 50		5.9	11.0
	W 20		5.1	11.8

W. Profile

W. Shldr.

5-22-51

PX CROSS SECTIONS CONTD.

Sta. N 165+00

Sta.	+	H.I.	-	Elev.
T.B.M.				12.17
	3.56	15.73		
E 46			3.79	11.94
E 9			4.80	10.93
0			5.1	10.6
W 50			5.9	9.8
W 99			5.6	10.1
W 150			5.6	10.1
W 220			5.5	10.2
W 255			9.4	6.3
W 290			12.4	3.3
T.P.			2.84	12.89

See Pg. 15 Hi-way Sta. 196+00

W. Profile

W. Shldr.

Top Nail & Center Island Hi-way Sta 199+00

PX

CROSS SECTIONS CONTD.

5-22-51

Sta N. 166+00

Sta.	+	H.I.	-	Elev.
T.B.M.				12.89
	3.17	16.06		

See Pg 17, Hi-Way Sta. 199+00

E 47			3.85	12.21
E 10			4.87	11.19
0			5.3	10.8
W 265			12.7	3.4
W 221			9.4	6.7
W 197			6.5	9.6
W 150			5.9	10.2
W 105			6.2	9.9
W 5B			5.7	10.4
W 11			5.3	10.8

W. Profile

W. Shldr.

PX

CROSS SECTIONS CONT'D

5-22-51

(19)

Sta. N. 167+00

Sta.	+	H. I.	-	Elev.
T.B.M.				12.89
	3.41	16.30		

See Pg. 17 Hi-Way Sta. 199+00

E 55			3.78	12.52
E 17			4.62	11.68
o			5.4	10.9
W 42			6.3	10.0
W 87			6.3	10.0
W 130			6.0	10.3
W 165			6.6	9.7
W 202			9.1	7.2
W 250			13.1	3.2

W. Profile

W. Shldr.

PX

CROSS SECTIONS CONT'D

5-22-51

(20)

Sta. N 168+00

Sta + H.I. - Elev.

T.B.M. 12.89

3.86 16.75

E 58 4.00 12.75

E 19 4.78 11.97

0 5.4 11.3

W 315 13.6 3.1

W 270 11.8 5.0

W 235 10.3 6.4

W 226 9.4 7.3

W 192 6.6 10.1

W 150 6.7 10.0

W 105 6.1 10.6

W 52 6.2 10.5

W 22 6.3 10.4

T.P. 3.21 13.54

See Pg. 17 Hi-way Sta. 199+00

W Profile

W Shldr.

Top Nail & Center Island Hi-way Sta. 202+00

CROSS SECTIONS CONT'D.

5-22-51

(21)

PX Sta. W. 73+00

Sta. + H.I. - Elev.

T.B.M. 3.28 16.82 13.54

See Pg. 20 Hi-way Sta. 202+00

E 57 3.93 12.89

W. Profile

E 17 4.68 12.14

W. Shldr.

0 5.4 11.4

W 45 6.0 10.8

W 90 6.4 10.4

W 140 6.4 10.4

W 189 6.3 10.5

W 235 7.0 9.8

CROSS SECTIONS CONTD.

5-23-51

(22)

Px

Sta W 74+00

Sta. + H.I. - Elev.

T.B.M. 13.54

4.11 17.65

E 51 4.32 13.33

E 9 5.06 12.59

0 5.4 12.2

W 150 6.2 11.4

W 190 6.5 11.1

W 43 6.0 11.6

10.2 7.4

See Pg #20 Hi-Way Sta. 202+00

W. Profile

W. Shldr.

Highest Tide Line

CROSS SECTIONS CONTD

5-23-51

(23)

PX

Sta. W. 75+00

Sta. + H.I. - Elev.

T.B.M. 13.54

See Pg. #20 Hi-way Sta 202+00

4.16 17.70

N. 70 3.76 13.94

S. Profile

N. 24 4.62 13.08

S. Sbl/Dr.

0 5.4 12.3

S 50 5.9 11.8

S 100 6.4 11.3

S 152 6.6 11.1

S 203 7.0 10.7

S 251 7.6 10.1

S 258 7.6 10.1

S 270 9.7 8.0

S 271 11.2 6.5

T.P. 3.10 14.60

Top Nail & Center Island Hi-way Sta. 206+00

5-23-51

CROSS SECTIONS CONT'D.

PX

Sta. W 76+00

Sta.	+	H.I.	-	Elev.
TBM.				14.60
	3.29	17.89		
N. 74			3.55	14.34
N 29			4.31	13.58
N 17			5.6	12.3
0			5.5	12.4
5350			12.7	5.2
5 338			10.3	7.6
5 283			6.4	11.5
5 235			6.5	11.4
5 185			6.8	11.1
5 134			6.7	11.2
5 83			6.2	11.7
5 36			5.8	12.1

See Pg. 23 Hi-way Sta. 206+00

5. Profile

5. Shldr.

CROSS SECTIONS CONTD.

5-23-51

(25)

PX

Sta. W 77+00

Sta.	+	H.I.	-	Elev.
T.B.M.				14.60
	3.48	18.08		
N. 77			3.40	14.68
N. 31			4.40	13.68
N 17			5.5	12.6
0			5.5	12.6
S 47			5.8	12.3
S 98			6.3	11.8
S 150			6.3	11.8
S 203			6.5	11.6
S 255			6.8	11.3
S 308			6.8	11.3
S 357			6.5	11.6
S 418			10.5	7.6
S 430			12.8	5.3
B.M.			6.04	12.04

- See Pg. # 23 Hi-way Sta 206+00

S. Profile

S. Shldr.

6'x6" Conc. Man. Near State Man.

CROSS SECTIONS CONT'D.

5-23-51

(26)

PX

Sta. W 78+00

Sta. + H.I. - Elev

BM. 12.00

6'x6" Conc. Mon. City B.M. Near Mon. "State"

5.27 17.27

N 78 2.25 15.02

S. Profile

N 34 3.15 14.12

S. Shldr.

N 21 3.8 13.5

0 5.4 11.9

S 46 5.2 12.1

NOTE: Sta. W. 78+00 should be the last
Sta. that Road Profile grade is
considered

S 90 5.0 12.3

S 128 5.2 12.1

S 178 5.3 12.0

S 228 5.0 12.3

S 275 5.5 11.8

S 326 6.0 11.3

S 375 5.9 11.4

S 424 5.9 11.4

S 470 6.0 11.3

S 483 6.5 10.8

S 510 8.9 8.4

S 530 11.5 5.8

PX

CROSS SECTIONS CONTD

5-23-51

Sta. W. 79+00

Sta.	+	H.I.	-	Elev.
B.M.				12.00
	4.85	16.85		
N 39			3.8	13.0
0			5.4	11.4
5 23			5.4	11.4
5 24			4.6	12.2
5 72			4.6	12.2
5 110			4.9	12.0
5 116			6.0	10.8
5 168			5.8	11.0
5 210			6.0	10.8
5 263			6.3	10.5
5 268			5.5	11.3
5 322			5.5	11.3
5 370			5.6	11.2
5 425			5.9	11.0
5 475			5.8	11.0
5 524			5.2	11.6

6x6" Conc. Mon. City B.M. Near State

Nat. Gr.

Topsoil Topping

" "

" "

Nat. Gr.

"

"

"

Topsoil Topping

" "

" "

" "

CROSS SECTIONS CONTD

5-23-51

(28)

Sta W. 79+00 Contd

Sta	+	H.I.	-	Elev
		16.85		
5543			5.2	11.6
5585			8.2	8.6
5612			10.9	6.0

CROSS SECTIONS CONT'D.

5-23-51

(29)

Px.

Sta. W80+00

Sta	+	H.I	-	Elev
B.M.				12.00
	4.28	16.28		
5 648			10.0	6.3
5 602			6.0	10.3
5 575			5.1	11.2
5 526			5.1	11.2
5 483			5.6	10.7
5 425			6.1	10.2
5 416			6.7	9.6
5 372			6.8	9.5
5 326			5.8	10.5
5 285			5.7	10.6
5 242			6.2	10.1
5 190			6.2	10.1
5 138			6.3	10.0
5 62			6.2	10.1
5 58			5.5	10.8
5 30			5.2	11.1
5 10			5.3	11.0
N 16			5.4	10.9
			4.2	12.1

6'x6" Conc. Man Near Man. State

Topsoil Topping

Nat Gv.

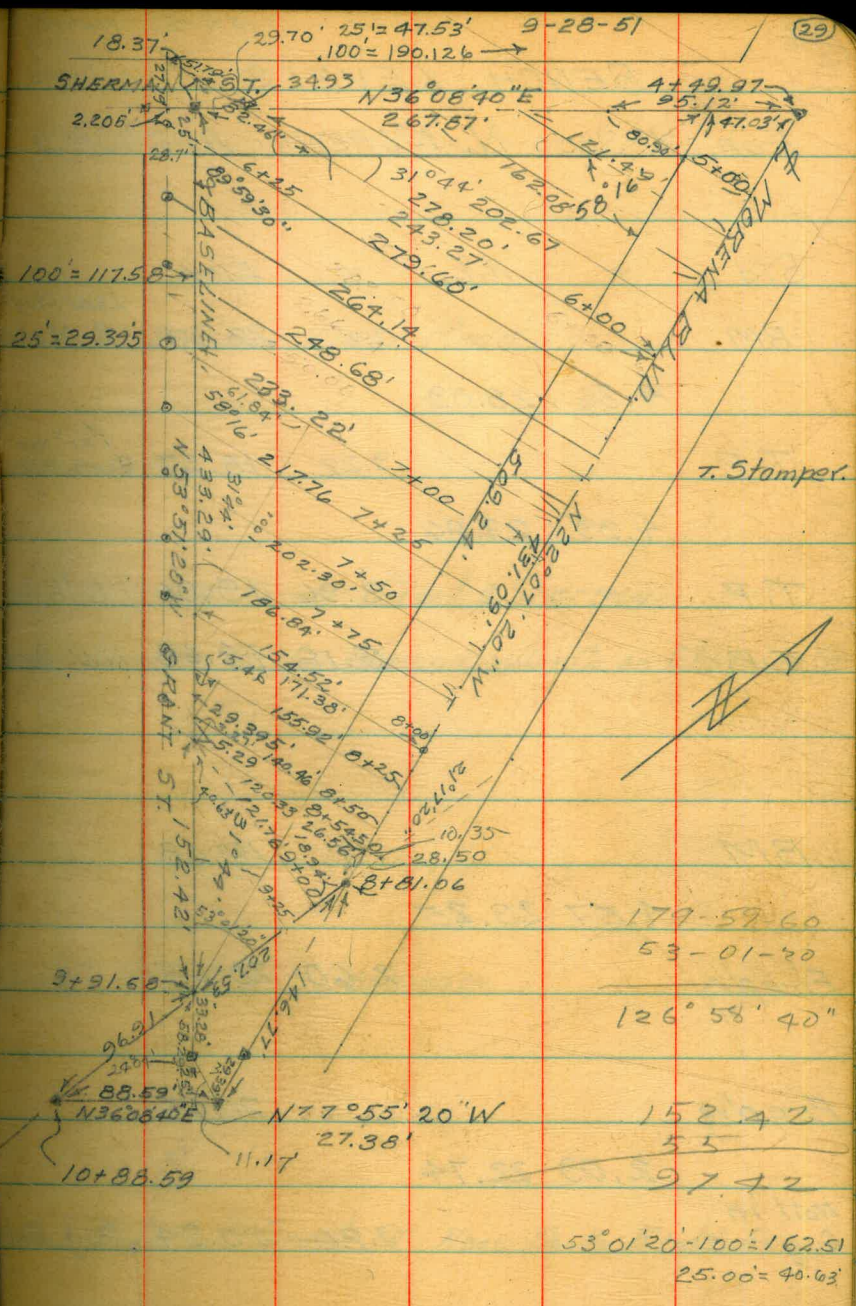
Nat Gv

Topsoil Topping

BASELINE LAYOUT FOR
 CROSS SECTIONS OF N. APPR.
 FILL MORENA BLVD. PROJ. 22051

PX

216.76
 61.84
 278.20



El. 23.23 BM

(314.96)

BENCH LEVELS

FOR X-SEC'S N. MORENA APPROACH

Sta	+	H.I.	-	Elev.	
BM				23.23	Lead Plug @ Merano North @ Linda Vista Road.
	4.86	28.09			
T.P.			9.22	18.87	1" x 1" ^{not} hole South Side Sherman
	4.99	23.86			
T.P.			3.96	19.90	Lath on pole SW Corner Grant @ Sherman
T.P.			5.18	18.68	N.W. Corner of Lower Step Beacon Lumber Co on Sherman St
B.M.				18.68	
	4.57	23.25			
Fireplug			2.60	20.65	S.W. Corner Grant @ Sherman
Fireplug				20.65	
	2.09	22.74			
Nail in Guy Pole			1.80	20.94	Guy Pole East Side of Grant St Near South End

10-1-51 Watson
Sherry
Sherry

PROFILE ON SHERMAN ST.

(31)

0+00 Profile = Sta 4+49.97 Morena Blvd

Profile run S.W. towards Grant St ^{see} Page 29

Sta + H.I - Elev.

18.87

4.99 23.86

0+00 0.28 23.58

@ Sherman
& Morena

0+09 ⁸⁰ 0.56 23.30

edge of
Paving

0+47.03 3.15 20.71

0+95.12 4.60 19.26

1+42 ⁶⁵ 6.10 17.76

1+90 ¹⁸ 6.75 17.11

2+37 ⁷¹ 6.47 17.39

2+85 ²⁴ 6.27 17.59

3+14 ²⁰ 6.31 17.55

1
6

CROSS SECTIONS

10-1-51 Watson
Sherry
Storey

Fill Area N. of Morena Bridge

PX

PX

Sta 5+00

80.90 from Morena B/L

0+00 = & Sherman St.

Sta	+	H.I	-	Elev.
BM				18.87
	5.83		24.70	
0+00		5.5		19.2
W 0+10		5.7		19.0
W 0+13		5.6		19.1
W 0+19		7.9		16.8
W 0+60		8.3		16.4
W 1+10		7.1		17.6

See Page
30

(32)

X-sec's Cont'd

PX

Sta 5+25

PX

121.49' from Morena B/L

0+00 = & Sherman Street

Sta	+	H.I	-	Elev
BM				18.87
	4.52		23.39	
0+00		5.6		17.8
E 0+41		4.5		18.9
E 0+50		3.9		19.5
E 0+55		6.8		16.6
W 0+10		6.0		17.4
W 0+44		6.3		17.1
W 0+60		6.5		16.9
W 0+91		6.4		17.0
W 1+10		6.7		16.7

See Page
30

10-1-51

X-sec's Cont'd

PX

Sta 5+50

162.08' from Morena B/L

0+00 = ϕ Sherman St.

Sta	+	H.I.	-	Elev.
BM				18.68

Step
See Page 30

4.05 22.73

0+00

5.6 17.1

E 0+46

4.5 18.2

E 0+53

4.9 17.8

E 0+96

6.7 16.0

W 0+41

5.8 16.9

W 0+57

6.2 16.5

W 0+91

6.1 16.6

PX

Sta 5+75

202.67 from Morena B/L

0+00 = ϕ Sherman St.

Sta	+	H.I.	-	Elev.	Step
BM				18.68	see page 30

4.34 23.02

0+00

5.6 17.4

E 0+41

5.1 17.9

E 0+50

4.6 18.4

E 0+55

5.5 17.5

E 1+00

6.5 16.5

W 0+14

6.0 17.0

W 0+23

6.4 16.6

W 0+41

6.3 16.7

W 0+50

6.2 16.8

W 1+00

5.9 17.1

(33)

10-1-51

X-sec's Cont'd

Sta 6+00

243.27 from Morena B/L

0+00 = ϕ -SHERMAN ST PX.

Sta	+	H.I.	-	Elev.
BM				19.90
	3.35	³ 23.25		
0+00		5.6		17.7
E0+41		5.1		18.2
E0+52 ⁵		4.7		18.6 Bldg
W0+11		5.7		17.6
W0+17		5.7		17.6
W0+50		6.1		17.2
W0+87		5.5		17.8
W1+00		5.7		17.6

See Page
30

10-1-51

(34)

Sta 6+25

0+00 = ϕ GRANT ST.

PX

Sta	+	H.I.	-	Elev
BM				20.65
	2.71	⁴ 23.36		
0+00		5.6		17.8
E0+38		5.2		18.2
E0+43 ⁸		4.8		18.6 Fence
E0+49		6.2		17.2
E0+61		6.3		17.1 Bldg
W0+21		5.4		18.0
W0+50		5.7		17.7
W1+00		5.4		18.0

Fireplug
See Page 30

X-sec's Cont'd

10-2-51 Watson
Sherry
Shorey

Sta 6+50

0+00 = E Grant St.

Sta 6+75

10-2-51

(35)

Sta + H.I. - Elev

0+00 = E Grant St.

Fire Plug
See Page 30

BM

20.65

Sta. + H.I. - Elev.

1.98 22.63

BM

20.65

Fire Plug
See page 30

0+00

5.5 17.1

PX

2.51 23.16

E 0+12

5.7 16.9

0+00

5.6 17.6

P.H.

E 0+16^E

5.1 17.5

Fence

E 0+11^E

5.9 17.3

E 0+28

5.4 17.2

Bldg.

E 0+16

5.7 17.5

Fence

E 0+28^E

6.0 17.2

Bldg.

W 0+15

5.6 17.0

W 0+25

5.2 17.4

W 0+08

5.3 17.9

W 0+46

5.1 17.5

W 0+12

4.0 19.2

W 0+50

5.0 17.6

W 0+20

4.8 18.4

W 0+60

4.1 18.5

W 0+50

4.7 18.5

W 0+68

4.1 18.5

Corner
Bldg.

W 0+71

4.4 18.8

W 0+75

3.6 19.0

W 0+74

4.8 18.4

W 1+00

3.8 18.8

W 1+00

5.0 18.2

1
6

10-2-51

Sta 7+00

0+00 = E Grant St.

Sta	+ H.I.	-	Elev	PX Fireplug Page 30
B.M.	1.97	22.62	20.65	
0+00		5.5	17.1	
E 0+12		5.7	16.9	
E 0+16 ^S		5.0	17.6	Fence
E 0+30		5.5	17.1	
E 0+67		5.6	17.0	
E 0+95		5.6	17.0	
E 1+17		5.8	16.8	
W 0+22		6.0	16.6	
W 0+42		5.3	17.3	
W 0+50		5.3	17.3	Rm. Chem. Quonset Typ. Bldg.
W 0+68 ^S		4.4	18.2	
W 0+68 ^S		4.20	18.42	Floor-Level Rm. Chem. Quonset Bldg.

(36)

Sta 7+25

0+00 = E Grant St.

Sta	+ H.I.	-	Elev.	PX
B.M.	2.09	22.74	20.65	
0+00		5.6	17.1	
E 0+13		5.9	16.8	
E 0+18		5.4	17.3	Bldg.
W 0+06		5.3	17.4	
W 0+27		5.3	17.4	
W 0+50		6.0	16.7	
W 0+55		5.4	17.3	
W 0+77		4.7	18.0	
W 0+93		4.4	18.3	
W 0+97		4.4	18.3	Quonset Bldg.

10-2-51

Sta 7+50 ✓

0+00 = Grant St

PX

Sta	+	H.I.	-	Elev.	
BM				20.94	Guy Pole Page 30

1.78 22.72

0+00 5.6 17.1

E0+12 5.9 16.8

E0+18 5.3 17.4 Bldg.

W0+20 5.3 17.4

W0+50 5.5 17.2

W0+60 6.2 16.5

W0+75 5.3 17.4

W1+00 5.0 17.7

(37)

Sta 7+75 ✓

0+00 = Grant St

PX

Sta	+	H.I.	-	Elev.	
BM				20.94	Guy Pole Page 30

1.66 22.60

0+00 5.7 16.9

E0+13 5.8 16.8

E0+18 5.5 17.1

W0+24 4.9 17.7

W0+50 5.5 17.1

W0+73 5.3 17.3

W0+88 5.8 16.8

W1+00 5.4 17.2

10-2-51

Sta 8+00

0+00 = E Grant St

PX

Sta	+	H.I.	-	Elev.	Guy Pole Page 30
BM				20.94	
	1.78	22.72			
0+00		5.6		17.1	
E0+13		5.7		17.0	
E0+18		5.0		17.7	Bldg.
W0+39		5.2		17.5	
W0+50		5.6		17.1	
W0+95		5.2		17.5	
W1+00		5.3		17.4	

(38)

Sta 8+25

0+00 = E Grant St.

PX

Sta	+	H.I.	-	Elev.	Guy Pole Page 30
BM				20.94	
	2.20	23.14			
0+00		5.5		17.6	
E0+13		6.0		17.1	
E0+18		5.5		17.6	Bldg.
W0+14		5.8		17.3	
W0+50		5.5		17.6	
W1+00		5.7		17.4	

10-2-51

Sta 8+50

0+00 = E Grant St.

PX

Sta	+	H.I.	-	Elev.	
BM				20.94	Guy Pole Page 30
	2.27	23.21			

0+00 5.5 17.7

E 0+13 5.8 17.4

E 0+18 5.7 17.5 Bldg.

W 0+50 5.3 17.9

W 1+00 5.6 17.6

W

W

10-2-51

(33)

Sta 8+54.50

0+00 = E Grant St.

Sta	+	H.I.	-	Elev	
BM				20.94	Guy Pole Page 30
	2.21	23.15			

0+00 5.5 17.7

E 0+13 5.8 17.4

E 0+18 5.6 17.6 Bldg.

W 0+50 5.1 18.1

W 1+00 5.5 17.7

3.91 19.24
Floor level
Cabinet Shop

8106

75

6.06

CROSS SECTIONS OF N.

APPROACH FILL AREA

MORENA BLVD BRIDGE PX

Oct 8, 1951

(40)

T. Stampal

A. Sherry

R. Shorey

STA + H.I. - Elev

Sta + H.I. - Elev.

29.74

B.M. 6.51 29.74 23.23

L. Plug P.
Morena
Vista

STA 13+75 @ RT Ls

PX.

E PROFILE @ STA 14+00

0

4.2 25.5

0

4.6 25.1

W 41

3.9 25.8

5.14

5.2 24.5

W 56

12.8 16.9

5.21

9.3 19.8

E 47

4.6 25.1

STA 14+00 @ RT Ls

PX

E 57

10.1 19.6

E 25

5.1 24.6

E 82

9.6 20.1

E 32

3.2 26.5

E 92

13.9 15.8

E 44

9.2 20.5

STA 13+50 @ RT Ls

E 78

9.0 20.7

E 84

11.1 18.6

PX

E 95

16.8 12.9

E 56

8.9 20.8

W 31

5.1 24.6

E 47

4.4 25.3

W 42

4.0 25.7

0

4.1 25.6

W 55

11.3 18.4

W 43

4.7 25.0

W 58

13.4 16.3

W

CROSS SECTIONS CONTD

10-8-51

(41)

STA + H.I - Elev
29.74

STA 13+25 @ RT L5 PX

0	4.6	25.1
W 38	5.4	24.3
W 88	11.4	18.3
E 45	5.9	23.8
E 85	9.6	20.1
STA 13+00 @ RT L5		
E 82	10.4	19.3 PX
E 61	8.8	20.9
E 52	7.4	22.3
E 46	4.8	24.9
0	4.8	24.9
W 34	4.9	24.8
W 48	11.5	18.2

STA + H.I - Elev

STA 12+75 @ RT L5

29.74

W 47	12.2	17.5 PX
W 33	5.0	24.7
0	5.0	24.7
E 47	4.8	24.9
E 53	7.5	22.2
E 56	7.8	21.9
E 62	11.5	18.2

STA 12+50

E 64	11.5	18.2 PX
E 55	7.1	22.6
E 52	6.8	22.9
E 47	4.3	25.4
0	5.2	24.5
W 32	5.3	24.4
W 45	12.0	17.7

CROSS SECTIONS CONTD

(42)

STA + H.I. - Elev

STA + H.I. - ELEV

29.74

BM.

23.23

P.I. L.V. 4

Morena Bluff

STA 12+25 @ RT LS PX

4.94 28.17

W 44 12.4 17.3

STA 11+75 @ RT LS PX

W 32 5.9 23.8

0 4.6 23.6

0 5.5 24.2

E 61 3.9 24.2

E 50 4.4 25.3

E 71 9.4 16.8

E 65 11.5 18.2

W 34 5.0 23.2

STA 12+00 @ RT LS PX

W 45 10.5 17.7

E 66 11.3 18.4

STA 11+50 @ RT LS PX

E 54 4.7 25.0

W 49 9.9 18.3

0 5.8 23.9

W 35 4.9 23.3

W 32 6.1 23.6

0 5.1 23.1

W 42 12.3 17.4

E 68 4.8 23.4

E 75 8.8 19.4

CROSS SECTIONS CONTD

10-9-51

(43)

Sta + H.I. - Elev

Sta + H.I. - Elev

28.17

28.17

STA 11+23 @ RT LS

PX

STA 10+50 @ RT LS

E 73 5.8 22.4 R/SB

W 47

10.6 17.6

PX

E 68 5.1 23.1

W 36

5.2 23.0

0 5.2 23.0

0

5.1 23.1

W 37 5.2 23.0

E 48

4.9 23.3

W 49 9.7 18.5

STA 10+25 @ RT LS

STA 11+00 @ RT LS

PX

E 38

4.8 23.4

PX

W 46 10.3 17.9

0

5.0 23.2

W 37 5.4 22.8

W 38

5.2 23.0

0 5.2 23.0

W 50

10.9 17.3

E 06 5.0 23.2

STA 10+00 @ RT LS

STA 10+75 @ RT LS

W 51

10.6 17.6

PX

E 58 4.6 23.6 PX

W 40

5.2 23.0

0 5.3 22.9

0

5.0 23.2

W 37 5.2 23.0

E 28

5.0 23.2

W 47 11.2 17.0

10-9-51
CROSS SECTIONS CONTD

10-10-51 (44)

Sta	T	H.1	-	Elev
		28.17		
STA 9+75 @ RT LS PT				
E 19		4.7		23.5
0		5.2		23.0
W 43		5.5		22.7
W 54		11.4		16.8
STA 9+50 @ RT LS PT				
W 57		11.2		17.0
W 46		5.7		22.5
0		5.2		23.0
E 8		5.1		23.1
STA 9+25 @ RT LS PT				
0		5.2		23.0
W 49		6.0		22.2
W 58		11.2		17.0
STA 9+00 @ RT LS PT				
W 10		5.2		23.0
W 52		5.1		23.1
W 62		11.5		16.7

STA	T	H.1	-	Elev
B.M.	4.67	27.90		23.23
Sta. 8+75 0+00 = 15' W of Morena				
0		4.7		23.2 PX
W 4		5.2		22.7
W 11		4.9		23.0
W 39		4.8		23.1
W 51		11.3		16.6
Sta 8+60 0+00 = 15' W of Morena				
W 50		11.2		16.7 PX
W 37		5.1		22.8
0		4.7		23.2
M.H. Sta 8+50 0+00 = 15' W of Morena				
0		5.1		22.8 PX
W 2		4.9		23.0
W 37		5.0		22.9
W 48		11.4		16.5

L. Plug P.I.
L.V. & Morena Bl.

CROSS SECTIONS CONTD

10-10-51

(45)

Sta + Hill - Elev.

Sta + Hill - ELEV.

27.90

27.90

Sta 8+25 0+00 = 15' w of Morena

Sta 7+25 0+00 = 15' w of Morena

W 48 11.5 16.4 Px

W 49 11.2 16.7 Px

W 35 5.1 22.8

W 37 5.2 22.7

0 4.6 23.3

0 5.2 22.7

Sta 8+00 0+00 = 15' w of Morena

Sta 7+00 0+00 = 15' w of Morena

0 4.9 23.0 Px

0 5.2 22.7 Px

W 35 5.0 22.9

W 38 5.0 22.9

W 49 11.7 16.2

W 48 11.0 16.9

Sta 7+75 0+00 = 15' w of Morena

Sta 6+75 0+00 = 15' w of Morena

W 47 11.4 16.3 Px

W 51 11.3 16.6 Px

W 36 5.1 22.8

W 38 5.0 22.9

0 5.1 22.8

0 4.9 23.0

Sta 7+50 0+00 = 15' w of Morena

Sta 6+50 0+00 = 15' w of Morena

0 5.3 22.6 Px

0 4.9 23.0 Px

W 36 5.2 22.7

W 38 5.1 22.8

W 49 11.3 16.6

W 50 11.8 16.1

CROSS SECTIONS CONTO

Sta	+	H.I.	-	Elev.
		27.90		

Sta 6+25 0+00=13' w of Morena

W 51		11.3	16.6	Px
W 37		5.1	22.8	
0		4.8	23.1	

Sta 6+00 0+00=13' w of Morena

0		4.9	23.0	Px
W 37		5.4	22.5	
W 30		12.0	15.9	

Sta 5+75 0+00=15' w of Morena

W 51		11.9	16.0	Px
W 39		5.7	22.2	
0		4.7	23.2	

Sta 5+30 0+00=15' w of Morena

0		4.8	23.1	Px
W 38		5.5	22.4	
W 50		11.3	16.6	

10-10-51

(46)

Sta	+	H.I.	-	Elev.
		27.90		

Sta 5+25 0+00=15' w of Morena

W 51		11.4	16.5	Px
W 40		6.1	21.8	
W 17		6.0	21.9	
0		5.4	22.5	

Sta 5+00 0+00=15' w of Morena

0		5.5	22.4	Px
W 21		7.4	20.5	
W 50		8.5	19.4	

TP		4.67	23.23	
----	--	------	-------	--

CHECK LEVELS PIERTOPS

10-16-51

(47)

MORENA BLVD BRIDGE PROJ #65300

T. Stampler
 X E. Watson
 † A. Sherry
 † R. Shorey

STA	+	H.I.	-	ELEV.	L. Plug
B.M.				33.30	End Pier

4.610 37.91

B.M. 5.43 32.48

Side Shot N.E. End Pier N° 10 L. Plug

T.P.					
B.M.				31.61	31.62 L. Plug N.E. End Pier N° 8

4.625 36.235

B.M. 5.410 30.825 30.82

Side Shot L. Plug N.E. End Pier N° 6

B.M. 5.020 31.215

Side Shot L. Plug N.E. End Pier N° 7

T.P.					
B.M.				30.005	<u>30.01</u> L. Plug N.E. End Pier N° 4

4.630 34.635

B.M. 5.475 29.160

Side Shot L. Plug N.E. End Pier N° 2

B.M. 5.955 28.680 28.69

L. Plug N.E. End Pier N° 1

3.125 31.51

W. End L. Iron B. Wall N. Abut.

2.885 31.75

L. Iron " " "

3.285 31.35

E. End L. Iron " " "

PEG CHECK ON LEVEL N^o

6397

200' BALANCED INTERVAL

B.S.	ROD
↳	5.60
F.S.	4.16
DIFF.	1.44 [✓]
S. Shot	5.73
L. Shot	4.29
DIFF.	1.44 [✓]

10-16-51

(48)

T. Stamper
E. Watson
A. Sherry
R. Shorey

CHECK WINGWALLS N. ABUT

10-30-51

(49)

MORENA BLVD BRIDGE

STA + H.I. - ELEV. L. Plug

B.M. 28.69 End Ref

5.99 34.68

3.38 31.30

Top WingWall East Side High Point

7.63 27.05

" " " " Low End

3.19 31.49

" " West Side High Point

8.96 25.72

" " " " Low End

GIRDER SEAT ELEVATIONS

11-30-51

(50)

MORENA BLVD. BRIDGE S. ABUTMENT

T. Stamper
E. Watson
A. Shorey

STA. + H.L. - ELEV. L. Plug E.

B.M. 32.82 End Bench

5.885 38.705

EAST

5.845³ 32.865.765⁵ 32.945.695⁸ 33.015.595⁸ 33.115.595⁸ 33.115.695⁸ 33.015.765⁵ 32.94

WEST.

5.845³ 32.86

Expansion Plate

West

1.335 37.370

E

1.000 37.705

East

1.340 37.365

S. ABUT. WING WALLS

B.M.

21.04

Bolt N. 5/8"
94. Post N. 5/8"
Comino @ B.
Stoerely, N.
Rd. E.

11.81 32.85

1.35 31.50 W.W. Wall

1.35 31.50 E. " "

TOP OF GIRDER ELEV'S.

1-9-52

(51)

MORENA BLVD BRIDGE

THEORETICAL

T. Stamper

E. Watson

A. Sherry

STA	+	H.I.	-	ELEV.	ELEV.
B.M.				28.69	END PIER
	8.03	36.720			
EAST A					
14+21.41			5.793	30.927	30.99
B			5.69	31.03	31.04
14+22.42					
C			5.582	31.138	31.16
14+23.44					
D			5.47	31.25	31.246
14+24.45					
E			5.455	31.265	31.262
14+25.55					
F			5.486	31.234	31.197
14+26.56					
G			5.57	31.15	31.13
14+27.58					
WEST H			5.618	31.102	31.065
14+28.59					
EAST A			4.910	31.810	31.732
14+66.41					
B			4.810	31.910	31.832
14+67.41					
C			4.727	31.993	31.947
14+68.44					
D			4.580	32.140	32.027
14+69.45					
E			4.582	32.138	32.032
14+70.55					
F			4.656	32.064	31.992
14+71.56					
G			4.700	32.020	31.907
14+72.58					
WEST H			4.763	31.957	31.836
14+73.59					

NOTE: 5/16" Plates are 3/4" x 18" x 6' ±

Cover Plates are 1/2" x 16" x 9'-0"

A-B-D-E-G-H - Flange Thickness = 0.09

C-F - " " = 0.10

TOP OF GIRDER ELEVATIONS CONTD.

1-9-52

52

STA	+	H.I.	-	ELEV.	THEORETICAL ELEV.
		36.720			
EAST					
A			4.711	32.009	32.002
14+86.41					
B			4.625	32.095	32.10
14+87.42					
C			4.550	32.170	32.21
14+88.44					
D			4.442	32.278	32.287
14+89.45					
E			4.422	32.298	32.302
14+90.55					
F			4.493	32.227	32.244
14+91.56					
G			4.570	32.150	32.155
14+92.58					
WEST					
14+93.59			4.640	32.080	32.080
EAST					
A			4.430	32.290	32.202
15+06.41					
B			4.345	32.375	32.295
15+07.42					
C			4.282	32.438	32.403
15+08.44					
D			4.190	32.530	32.476
15+09.45					
E			4.146	32.574	32.484
15+10.55					
F			4.260	32.460	32.426
15+11.56					
G			4.340	32.380	32.334
15+12.58					
WEST					
H			4.415	32.305	32.257
15+13.59					

OLD MORENA BRIDGE

(53)

CHECK CONT'D.

NOTE: For location of sketch

See F. B. N^o 65 Pg. 62

STA.	VERT	HORIZ	DATE	VEHICLE TYPE	REMARKS
6	.007	.003	1-31-52	TRUCK	Loaded with paper
6	.007	.003	"	BUS	empty
6	.005	.002	"	BUS	"
6	.013	.005	"	Transit Mix TRK	Loaded - empty Bus in other Lane
6	.005	.003	"	Transit Mix	empty - in other Lane
6	.007	.003	"	BUS	empty
6	.007	.003	"	TRK	5 yd. Loaded with P.C.
6	.004	.001	"	BUS	Half Full in other Lane
6	.007	.003	"	BUS	empty
6	.017	.005	"	Semi TRK + TRK	Loaded Bridge Girders 4 Girders = $21\frac{1}{2}$ Tons + TRK.
6	.007	.003	"	5yd TRK	Loaded with Topsoil
6	.005	.002	"	TRK	Loaded cedar shingles
6	.007	.002	"	5yd TRK	Loaded with Topsoil
6	.008	.003	"	BUS	Half Full
6	.008	.003	"	BUS	"
6	.003	.003	"	"	Loaded in other Lane
6					

OLD MORENA
BRIDGE CHECK Cont'd

(54)

Sta	Vert.	Horiz.	Date	Vehicle TYPE	Remarks
8	.010	.004	1-31-52	TRK	Loaded with acetylene bottles - Linde Air Co. Truck
8	.001	.003	"	TRK	Heracles oil Co TRK in other lane
8	.001	.003	"	5yd TRK	Loaded Top soil
8	.005	.002	"	Bus	empty
8	.004	.002	"	Transit Mix	empty in other lane
8	.007	.003	"	Transit Mix	Loaded
8	.006	.003	"	BUS	empty
8	.005	.002	"	5yd TRK	Loaded Top soil
8	.006	.003	"	Bus	empty
8	.003	.003	"	Bus	empty in other lane
8	.003	.002	"	Bus	empty in other lane
8	.005	.003	"	Transit Mix	empty in other lane
8	.004	.002	"	2 Buses	very close together
8	.010	.004	"	semi TRK & trl	Loaded with trenching machine

2-6-52

TOPOF GIRDER ELEVATIONS

(55)

MORENA BLVD BRIDGE

STA	+	H.I.	-	ELEV.	Px
B.M.	8,790	38.800		30.01	Sec Page 78 Pier #4
1st spl. Pier 2 A					Minus sp. p.
15+47.41			6.305	32.495	32.485
# Pier 2 A +67.41			6.200	32.600	32.560
A +87.41			6.103	32.697	32.637
A 16+28.41			5.916	32.884	32.824
# Pier 3 A +48.41			5.840	32.960	—
# Pier 4 A 17+29.41			5.430	33.370	—
B 15+48.42			6.205	32.595	32.535
B +68.42			6.120	32.680	32.640
B +88.42			6.013	32.787	32.727
B 16+29.42			5.811	32.989	32.929
# Pier 3 B +49.42			5.763	33.037	—
# Pier 4 B 17+10.42			5.360	33.440	—
"C" 15+49.44			6.125	32.675	32.615
C 15+69.44			6.020	32.780	32.740
C 15+89.44			5.903	32.897	32.836

39.133
5.78
33.353

39.133

MORENA BRIDGE

2-6-52

TOP OF GIRDER ELEVATIONS Cont'd

(56)

STA.	+	H.L.	-	ELEV.
		38.800		
C				
16+30	44	5.718	33.082	33.022
& Pier 3				
16+50	44	5.662	33.138	-
& Pier 4				
17+31	44	5.230	33.570	-
"D"				
15+50	45	6.025	32.775	32.715
D				
& Pier 2				
15+70	45	5.933	32.867	32.827
D				
15+90	45	5.840	32.960	32.900
D				
16+31	45	5.650	33.150	33.090
D				
& Pier 3				
16+51	45	5.572	33.228	-
D				
& Pier 4				
17+32	45	5.180	33.620	-
"E"				
15+51	55	5.995	32.805	32.745
E				
& Pier 2				
15+71	55	5.910	32.890	32.850
E				
15+91	55	5.828	32.972	32.912
E				
16+32	55	5.645	33.155	33.095
E				
& Pier 3				
16+52	55	5.575	33.225	-
E				
& Pier 4				
17+33	55	5.155	33.645	-
"F"				
15+52	56	6.043	32.757	32.697
F				
& Pier 2				
15+72	56	5.980	32.820	32.780

TOP OF GIRDER ELEVATIONS Cont'd

(57)

STA	+	H.I.	-	ELEV.
		38,800		PI
F.				
115+92	⁵⁶		5.905	32.895 32.835
F				
116+33	⁵⁶		5.701	33.099 33.039
F				
& Pier 3	⁵⁶		5.645	33.155 —
116+53	⁵⁶			
F				
& Pier 4	⁵⁶		5.210	33.590 —
117+34	⁵⁶			
"G"				
115+53	⁵⁸		6.162	32.638 32.578
G				
& Pier 2	⁵⁸		6.075	32.725 32.685
115+73	⁵⁸			
G				
115+93	⁵⁸		6.000	32.800 32.740
G				
116+34	⁵⁸		5.804	32.996 32.936
G				
& Pier 3	⁵⁸		5.742	33.058 —
116+54	⁵⁸			
G				
& Pier 4	⁵⁸		5.330	33.470 —
117+35	⁵⁸			
"H"				
115+54	⁵⁹		6.230	32.570 32.51
H				
& Pier 2	⁵⁹		6.155	32.645 32.605
115+74	⁵⁹			
H				
115+94	⁵⁹		6.080	32.720 32.660
H				
116+35	⁵⁹		5.870	32.930 32.870
H				
& Pier 3	⁵⁹		5.805	32.995 —
116+55	⁵⁹			
H				
& Pier 4	⁵⁹		5.403	33.397 —
117+36	⁵⁹			

MORENA BRIDGE 2-6-52

TOP OF GIRDER ELEVATION Cont'd

58

STA	+	H.L.	-	Elev	L. Plug E
BM	8.780	38.790		30.01	Pier #4
Girder "A"					
16+58.41					Px
N. end of Sus Span			5.795	32.995	
② 2' South of 16+58.41 N. end Sus Span			5.793	32.997	
③ 16+78.74 First Dia. S. of Pier 3			5.710	33.080	
④ 16+99.08 2nd Dia S. of Pier 3			5.605	33.185	
N end of Exp Dam					
⑤ 17+19.41			5.052	33.738	
S. end of Exp Dam					
⑥ 17+19.41			5.032	33.758	
⑦ 3 Dia S of Pier #3	17+19.41		5.480	33.310	
1st Cover Pl S. Pier 4					
⑧ 17+49.41			5.265	33.525	33.465
2nd Dia S. of Pier 4					
⑨ 17+69.91			5.232	33.558	
Cov. Pl. 3 rd Dia S. of Pier 4					
⑩ 17+90.41			5.080	33.710	33.650
⑪ 18+10.41			4.995	33.795	33.755

2-6-52

(59)

Sta	+	H.I.	-	Elev
Girder "B"		38.790		30.01
				PI
16+59.42			5.735	33.055
+59.42			5.740	33.050
+75.75			5.600	33.190
17+00.09			5.510	33.280
+20.42			4.902	33.888
+20.42			4.895	33.895
+20.42			5.405	33.385
+50.42			5.210	33.580 33.52
+70.92			5.170	33.620
+91.42			5.030	33.760 33.70
18+11.42			4.910	33.880 33.84

2-6-52

(60)

Sta	+	H.L.	-	Elev.	
Girder "C"		38.790		30.01	
16+60.44	①		5.600	33.190	
+60.44	②		5.582	33.208	
+80.77	③		5.505	33.285	
17+01.11	④		5.385	33.405	
+21.44	⑤		4.810	33.980	
+21.44	⑥		4.805	33.985	
+21.44	⑦		5.265	33.525	
+51.44	⑧		5.110	33.680	33.62
+71.94	⑨		5.070	33.720	
+92.44	⑩		4.913	33.877	33.817
18+12.44	⑪		4.800	33.990	33.95

2-6-52

(61)

Sta	+	H.L.	-	Elev.
Girder "D"		38.790		30.01 96
16+61.45				
1			5.525	33.265
+61.95				
2			5.520	33.270
+81.78				
3			5.415	33.375
17+02.12				
4			5.308	33.482
+22.45				
5			4.723	34.067
+22.45				
6			4.748	34.042
+22.45				
7			5.214	33.576
+52.45				
8			5.055	33.735 33.675
+72.95				
9			5.000	33.790
+93.45				
10			4.843	33.947 33.887
18+13.45				
11			4.720	34.070 34.030

2-6-52

(62)

Sta	+	Ht.	-	Elev
Girder "E"		38.790		30.01
16+62.55				
1			5.514	33.276 PK
+62.55				
2			5.515	33.275
+82.88				
3			5.410	33.380
17+03.22				
4			5.302	33.488
+23.55				
5			4.702	34.088
+23.55				
6			4.708	34.082
+23.55				
7			5.184	33.606
+53.55				
8			5.060	33.730 33.67
+74.05				
9			5.000	33.790
+94.55				
10			4.850	33.940 33.88
18+14.55				
EAcr5			4.730	34.060 34.02
11				

2-6-52

(63)

Sta	+	H.I.	-	Elev
Girder "F"		38.790		30.01
				P.
16+63.56				
1		5.590		33.200
+63.56				
2		5.577		33.213
+83.89				
3		5.452		33.338
17+04.23				
4		5.350		33.440
+24.56				
5		4.751		34.039
+24.56				
6		4.773		34.017
+24.56				
7		5.225		33.565
+54.56				
8		5.108		33.682 33.621
+75.06				
9		5.060		33.730
+95.56				
10		4.905		33.885 33.825
18+15.56				
11		4.770		34.020 33.98

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64

Sta	+	H.I.	-	Elev
Binder "G"		38.790		30.01
				PX
16+64.58			5.695	33.095
- 1				
+64.58			5.680	33.110
- 2				
+84.91			5.548	33.242
- 3				
17+05.25			5.438	33.352
- 4				
+25.58			4.880	33.910
- 5				
+25.58			4.891	33.899
- 6				
+25.58			5.370	33.420
- 7				
+55.58			5.220	33.570 33.51
- 8				
+76.08			5.175	33.615
- 9				
+96.58			5.000	33.790 33.73
- 10				
18+16.58			4.880	33.910 33.87
- 11				

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65

Sta	+	H.I.	-	Elev.	
Girder "H"		38.790		30.01	P ₁
16+65.59					
- 1			5.753	33.037	
+65.59					
- 2			5.738	33.052	
+85.92					
- 3			5.638	33.152	
17+06.26					
- 4			5.537	33.253	
+26.59					
- 5			5.015	33.775	
+26.59					
- 6			5.008	33.782	
+26.59					
- 7			5.460	33.330	
+56.59					
- 8			5.223	33.567	33.507
+77.09					
- 9			5.210	33.580	
+97.59					
- 10			5.080	33.710	33.650
18+17.59					
- P ₁ 5			4.950	33.840	33.80

CHECK ON HANGER EXPANSION

2-15-52

66

JOINT NEW MORENA BRIDGE

STA	+	H.I.	-	ELEV.	GRADE
B.M.	6.017	36.027		30.01	L. PUGHEN See Pg. 76 PLAN 24
					PK
"A" N. Side			+03		
+17+19.41			2.273	33.754	
"A" S. Side					
+19.41			2.272	33.755	
"B" N. Side					
+20.42			2.130	33.897	
"B" S. Side					
+20.42			2.133	33.894	
"C" N. Side					
+21.44			2.034	33.993	
"C" S. Side					
+21.44			2.025	34.002	
"D" N. Side					
+22.45			1.960	34.067	
"D" S. Side					
+22.45			1.952	34.075	
"E" N. Side					
+23.55			1.935	34.002	
"E" S. Side					
+23.55			1.942	34.085	
"F" N. Side					
+24.56			2.002	34.025	
"F" S. Side					
+24.56			2.002	34.025	
"G" N. Side					
+25.58			2.125	33.902	
"G" S. Side					
+25.58			2.115	33.917	
"H" N. Side			+03		
+26.59			2.250	33.777	
"H" S. Side					
+26.59			2.246	33.781	

19+66

CHECK ON HANGER EXPANSION

2-15-52

(67)

JOINT NEW MORENA BRIDGE

T. Stamper

E. Watson

A. Sherry

R. Shorey

STA	+	H.I.	-	ELEV.	
B.M.	6.038	37.253		31.215	
"A" N. Side					No 3/8 Plate
19+66			2.265	34.988	
"A" S. Side					
+66			2.260	34.993	
"B" N. Side					
+66			2.137	33.116	
"B" S. Side					
+66			2.127	35.126	
"C" N. Side					
+66			2.062	35.191	
"C" S. Side					
+66			2.055	35.198	
"D" N. Side					
+66			1.979	35.279	
"D" S. Side					
+66			1.970	35.283	
"E" N. Side					
+66			1.978	35.275	
"E" S. Side					
+66			1.965	35.288	
"F" N. Side					
+66			2.070	35.183	
"F" S. Side					
+66			2.061	35.192	
"G" N. Side					
+66			2.153	35.100	
"G" S. Side					
+66			2.155	35.098	
"H" N. Side					No Plate
+66			2.282	34.971	
"H" S. Side					
+66			2.267	34.986	"

CHECK ON HANGER EXPANSION

(68)

JOINT NEW MORENA BRIDGE

STA + H.L. - ELEV.

B.M.

"A" N. Side

22+0.9

"A" S. Side

+0.9

"B" N. Side

+0.9

"B" S. Side

+0.9

"C" N. Side

+0.9

"C" S. Side

+0.9

"D" N. Side

+0.9

"D" S. Side

+0.9

"E" N. Side

+0.9

"E" S. Side

+0.9

"F" N. Side

+0.9

"F" S. Side

+0.9

G. N. Side

+0.9

"G" S. Side

+0.9

"H" N. Side

+0.9

"H" S. Side

+0.9

MORENA BLVD BRIDGE

69

TOP OF GIRDER ELEVATIONS

STA	+	H. I.	-	ELEV.	L. Plug NE.
B.M.	6.422	37.242		30.82	End Pier 6

GIRDER "A"

Pl.					
18+30.41			3.350	33.892	33.892
- Pl.					
+71.41			3.130	34.112	34.052
± Pier 6					
+91.41			3.079	34.163	
± Seat			N. 3.022	34.220	
19+01.41			S. 3.015	34.227	
± Pier 7					
+76			2.658	34.584	
Pl.					
+96			2.510	34.732	34.672
Pl.					
20+37			2.295	34.947	34.887
± Pier 8					
Pl. +57			2.203	35.039	34.999
Pl.					
+77			2.115	35.127	35.067
Pl.					
21+18			1.910	35.332	35.272
± Pier 9					
+38			1.840	35.402	
± Seat			N. 1.785	35.457	
+48			S. 1.780	35.462	

GIRDER "B"

Pl.					
18+31.42			3.230	34.012	33.952
Pl.					
+72.42			3.065	34.177	34.117
± Pier 6					
+92.42			2.993	34.249	

TOP OF GIRDER ELEV'S CONTD.

(70)

STA	+	H. I.	-	ELEV.
		37.242		
± Seat			N 2.920	34.322
19+02.42			S 2.905	34.337
± Pier 7				
+76			2.575	34.667
PI.				
+96			2.393	34.849
PI.				34.789
20+37			2.190	35.052
± Pier 8				34.992
PI +57			2.120	35.122
				35.082
PI. +77			2.005	35.237
				35.177
PI.				
21+10			1.750	35.492
± Pier 9				35.432
+38			1.760	35.482
± Seat			N. 1.730	35.512
+48			S. 1.740	35.502

GIRDER "C"

PI.	6.432	37.252	30.82	X HIT
18+32.44			3.150	34.102
				34.042
PI.				
+73.44			2.980	34.272
				34.212
± Pier 6				
+93.44			2.898	34.354
± Seat			N. 2.840	34.412
19+03.44			S. 2.835	34.417
± Pier 7				
+76			2.480	34.772
PI.				
+96			2.324	34.928
				34.868
PI.				
20+37			2.092	35.160
				35.100
PI				
± Pier 8			2.022	35.230
+57				35.190

TOP OF GIRDER ELEVATIONS CONTD.

(21)

STA	+	H.I.	-	ELEV.
		37.242		
GIRDER "C"				
		1.92		
PI.		1.922	35.320	35.260
20+77				
PI.		1.720	35.522	35.462
21+18				
± Pier 9		1.665	35.577	
+38				
± Seat		N 1.620	35.622	
+48		S 1.614	35.628	
GIRDER "D"				
		37.252		
PI		3.045	34.207	34.147
18+33.45				
+74.45		2.885	34.367	34.307
± Pier 6				
+94.45		2.820	34.432	
± Seat		2.770	34.482	
19+04.45		2.760	34.492	
± Pier 7				
+76		2.400	34.852	
PI.		2.273	34.979	34.919
+96				
PI.		2.020	35.232	35.172
20+37				
± Pier 8		1.950	35.302	35.262
PI +57				
PI.		1.860	35.392	35.332
+77				
PI		1.650	35.602	35.542
21+18				
± Pier 9		1.588	35.664	
+38				
± Seat		N 1.540	35.712	
+48		S 1.540	35.712	

TOP OF GIRDER ELEV'S CONTD.

(72)

STA + H. I. - ELEV.

37.252

GIRDER "E"

PI			
18+34.55	3.050	34.202	34.142
PI			
+75.55	2.895	34.357	34.297
± Pier 6			
+95.55	2.810	34.442	
± Seat	2.740	34.512	
19+05.55	2.738	34.514	
± Pier 7			
+76	2.400	34.852	
PI			
+96	2.280	34.972	34.912
PI			
20+37	2.047	35.205	35.145
± Pier 8			
PI +57	1.953	35.299	35.259
PI			
+77	1.855	35.397	35.337
PI			
21+18	1.670	35.582	35.522
± Pier 9			
+38	1.585	35.667	
± Seat	1.520	35.732	
+48	51.525	35.727	✓

GIRDER "F"

PI			
18+35.56	3.075	34.177	34.117
PI			
+76.56	2.947	34.305	34.245
± Pier 6			
+96.56	2.868	34.384	
± Seat	2.824	34.428	
19+06.56	52.830	34.422	

TOP OF GIRDER ELEV'S. CONTD.

STA + H.I. - ELEV.

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(73)

STA	+	H.I.	-	ELEV.
				37.252
GIRDER "F" CONTD.				
± Pier 7				
19+76		2.474		34.778
PI				
+96		2.340		34.912 34.852
PI				
20+37		2.080		35.172 35.112
± Pier 8				
PI +57		2.020		35.232 35.192
PI				
+77		1.922		35.330 35.270
PI				
21+18		1.715		35.537 35.477
± Pier 9				
+38		1.660		35.592
± Seat		1.610		35.642
+48		51.606		35.652
GIRDER "G"				
PI				
18+36.58		3.190		34.062 34.002
PI				
+77.58		3.008		34.244 34.184
± Pier 6				
+97.58		2.978		34.274
± Seat		2.930		34.322
19+07.58		2.930		34.322
± Pier 7				
+76		2.582		34.670
PI				
+96		2.413		34.839 34.779
PI				
20+37		2.183		35.069 35.009
± Pier 5				
+57		2.130		35.122 35.082

GIRDER "G" CONTD.

PI				
20+77		2.010		35.242 35.182
PI				
21+18		1.815		35.437 35.377
± Pier 9				
+38		1.760		35.492
± Seat		N.1.700		35.552
+48		S.1.703		35.649
GIRDER "H"				
PI				
18+37.59		3.305		33.947 33.887
PI				
+78.59		3.088		34.164 34.104
± Pier 6				
+98.59		3.060		34.192
± Seat		N.3.026		34.226
19+08.59		S.3.018		34.234
± Pier 7				
+76		2.658		34.594
PI				
+96		2.492		34.760 34.700
PI				
20+37		2.282		34.970 34.910
± Pier 8				
PI +57		2.210		35.042 35.002
PI				
+77		2.130		35.122 35.062
PI				
21+18		1.945		35.307 35.247
± Pier 9				
+38		1.840		35.412
± Seat		N.1.780		35.472
+48		S.1.780		35.472

TOP OF GIRDER ELEV'S CONTD.

5TA + H. I. - ELEV.
 B.M. 32.480

6.320 38.800

GIRDER "A"

± Pier 10
 22+19 2.995 35.805
 Pl.
 +39 2.828 35.972 35.912
 +80
 ± Pier 11
 23+00 2.540 36.260 36.220
 Pl
 +20 2.470 36.330 36.270
 Pl
 +61 2.245 36.555 36.495
 ± Pier 12
 +81 2.180 36.820
 Pl
 24+01 2.035 36.765 36.705
 ± B.S. Abut.
 +45.39 1.860 36.940

GIRDER "B"

± Pier 10
 22+19 2.912 35.888
 Pl
 +39 2.790 35.010 35.950
 Pl
 +80 2.558 35.242 35.182
 ± Pier 11
 23+00 2.468 35.332 35.292
 Pl
 +20 2.380 35.420 35.360
 Pl
 +61 2.145 35.655 35.595

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(74)

5TA + H. I. - ELEV.

38.800

GIRDER "B" CONTD.

± Pier 12
 23+81 2.105 36.695
 Pl.
 24+01 1.972 36.828 36.768
 ± B.S. Abut.
 +45.56 1.770 37.030

GIRDER "C"

± Pier 10
 22+19 2.815 35.985
 Pl
 +39 2.703 36.097 36.037
 Pl
 +80 2.503 36.297 36.237
 ± Pier 11
 23+00 2.372 36.428 36.388
 Pl
 +20 2.242 36.558 36.498
 Pl
 +61 2.040 36.760 36.700
 ± Pier 12
 +81 2.005 36.795
 Pl
 24+01 1.850 36.950 36.890
 ± B.S. Abut.
 +45.74 1.680 37.120

TOP OF GIRDER ELEV'S CONTD				STA	+	H.I.	-	ELEV.	(75)
STA	+	H.I.	-	ELEV.					
		38.800						38.800	
		GIRDER "D"						GIRDER "E" CONTD	
					PI.				
					24+01		1.745	37.055	36.995
± Pier 10					± B.S. Abut.				
22+19		2.743		36.057	+46.09		1.615	37.185	
PI									
+39		2.595		36.205	36.145				
PI									
+80		2.404		36.396	36.336	± Pier 10	2.805	35.995	
± Pier 11						22+19			
23+00		2.305		36.495	36.455	PI			
PI						+39	2.650	36.150	36.090
+20		2.205		36.595	36.535	PI			
PI						+80	2.474	36.326	36.266
+61		1.880		36.820	36.760	± Pier 11			
± Pier 12						23+00	2.375	36.425	36.385
+81		1.930		36.870		PI			
PI.						+20	2.255	36.545	36.485
24+01		1.780		37.020	36.960	PI			
± B.S. Abut						+61	2.070	36.730	36.670
+45.91		1.595		37.205		± Pier 12			
						+81	2.005	36.795	
		GIRDER "E"							
± Pier 10						24+01	1.830	36.970	36.910
22+19		2.734		36.066		± B.S. Abut			
PI						+46.26	1.680	37.120	
+39		2.566		36.234	36.174				
PI									
+80		2.390		36.410	36.350				
± Pier 11									
23+00		2.300		36.500	36.460				
PI									
+20		2.200		36.600	36.540				
PI									
+61		2.003		36.797	36.737				
± Pier 12									
+81		1.920		36.880					

TOP OF GIRDER ELEV'S CONTD

STA	+	H.I.	-	ELEV.
		38.800		
		GIRDER "G"		
± Pier 10			2.920	35.880
22+19				
PI			2.760	36.040
+39				35.980
PI			2.570	36.230
+80				36.170
± Pier 11			2.480	36.320
23+00				36.280
PI			2.365	36.435
+20				36.375
PI			2.130	36.670
+61				36.610
± Pier 12			2.100	36.700
+81				
PI			1.960	36.840
24+01				36.780
± B.S. Abut			1.790	37.010
+4644				

2

STA	+	H.I.	-	ELEV.	(76)
		2.15-52			
		38.800			
		GIRDER "H"			
± Pier 10			2.995	35.805	
22+19					
PI			2.830	35.970	35.910
+39					
PI			2.618	36.182	36.122
+80					
± Pier 11			2.543	36.257	36.217
23+00					
PI			2.464	36.336	36.276
+20					
PI			2.270	36.580	36.520
+61					
± Pier 12			2.186	36.614	
+81					
PI			2.050	36.750	36.690
24+01					
± B.S. Abut			1.860	36.940	
+46.61					

(77)

BENCHES

(78)

MORENA BLVD BRIDGE

BENCH	ELEV
Pier #1 - Lead Plug - NE End	28.69
Pier #2 " " " "	29.16
Pier #3 " " " "	29.60
Pier #4 " " " "	30.01
Pier #5 " " " "	30.365
Pier #6 " " " "	30.82
Pier #7 " " " "	31.215
Pier #8 " " " "	31.62
Pier #9 " " " "	32.04
Pier #10 " " " "	32.48
Pier #11 " " " "	32.82
Pier #12 " " " "	33.30

267.87	95.12
47.03	47.53
<hr/>	<hr/>
314.90	142.65
29.70	47.53
<hr/>	<hr/>
285.20	190.18
	47.53
	<hr/>
	237.71
	47.53
	<hr/>
	285.24

314.90	95.12
285.24	190.126
29.66	<hr/>
	285.246

47.03
47.62
<hr/>
2.41

95.12
47.62
<hr/>
50.50



$$ec = \frac{c}{a}$$

$$\frac{b^2}{a^2}$$

$$1 - \frac{a^2}{c^2}$$

$$\frac{c}{A}$$

$$\frac{\sin C}{\sin A}$$

$$\frac{(A+B)}{b}$$

-(A+B)

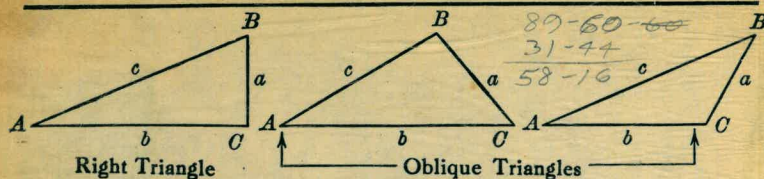
ed by the
 e=319.4ft.
 os 5° 10'=
 ft.
 nus slope
 With the
 ae follow-
 959=.0041.
 slope dist-
 ise=14 ft.,
 02.28 ft.
 IN U. S. A.

30.01
88.73
79

23.25
4.82
18.43

+49.50
+29.52
21
+75
+50
+23
20
+75
+50
+25
19
+70
+50
+30
18
+75.13 POC
17+50

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	Formulas
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	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

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

REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ 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. $\cosine 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ 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.