

W
555

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Slopes of Roadway.

MICROFILMED

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1½ see inside of back cover.

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Made in U. S. A.

Index

Pacific Beach PL. Profile

0+00 to 387+06

1-76

Cross Sec. Causeway Emb.

77-78

Ground water Elev along Causeway

79-80

PACIFIC BEACH P.L.

B.M.	3.65	44.21	40.56	
IP	0.20	31.42	12.99	31.22
0+00		10.9	20.5	
0+00 Top of 24" C.I.P.		14.42	17.00	
0+12		12.5	18.9	
1+00		11.8	19.6	
IP	6.91	29.01	9.32	22.10
2+00		7.9	21.1	
3+00		6.3	22.7	
+48		5.9	23.1	
+50		4.7	24.3	
4+00		6.0	23.0	
750		4.5	24.5	

12/18/40

H.I.
Sofia
Brooks
Hockyson

B.P. - S.E. Cor. Kettner and Upas

Set B.M. Nail in power pole 110' E. of 0+00

Reductions checked
by W.H. 1/3/41

29.01

5+00 4.0 25.0

+50 4.5 24.5

6+00 3.9 25.1

7+00 2.3 26.7

TP 4.10 32.25 0.86 28.15

B.M. 3.75 28.50

7+56¹⁹ 4.2 28.05

8+00 4.9 27.35

9+00 5.7 26.55

10+00 5.4 26.85

TP 7.57 34.33 5.49 26.76

11+00 7.2 27.1

+67 5.5 28.8

Set B.M. Nail in hub, 1' from Bldg. cor. N.E. Cor. Calif. and Walnut.

34.33

12+00		6.8	27.5
+50		5.9	28.4
13+00		6.5	27.8
14+00		7.1	27.2
TP	1.25	28.41	7.17
14+30			
Top of 16" Culvert 4		1.6	26.8
15+00		2.4	26.0
+50		3.3	25.1
+67		6.1	22.3
15+77-142 ft			
Rim S. M. H. Case		6.56	21.85
15+93.2			
Top rail		5.96	22.45
16+00		6.8	21.6

Set B.M. Nail in power pole - 36' 47" Sta 13+9.0

16+13	28.41		
Top rail		6.35	22.06
16+32		7.0	21.4
+ 71		4.1	24.3
17+00		4.9	23.5
TP	4.56	27.38	5.59
			22.82
+ 50		4.0	23.4
18		4.7	22.7
+ 50		5.0	22.4
19		5.2	22.2
+ 19 Edge Pave.		5.3	22.1
19+30-29' RT			
El. line 36" Conc. Storm Dr.		11.7	15.7
19+30-47' LT			
El. line C. S. D.		12.9	14.5

27.38

19459 5.3 22.1

+88 5.5 ~~22.9~~ 21.9+98⁶ Edge Pav. 5.3 22.1

20400 5.3 22.1

+50 5.0 22.4

21 5.0 22.4

+50 5.5 21.9

22 6.4 21.0

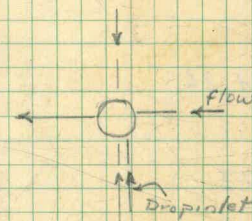
+50 6.8 20.6

23 7.3 20.1

IP 0.13 20.76 7.35 20.03

Set B.M. Nail in hub 5'lt 23+13

23+42.2	20.16	
Top rail	0.00	20.16
23+50	0.4	19.8
23+63.5	0.00	20.16
Top rail	0.00	20.16
23+37-10' RT		
Road S.M.H.	0.1	20.1
El. line sewer	11.3	8.8-8.9
El. line drop inlet Sew.	5.8	14.36
24+00	1.3	18.86
+50	4.0	16.16
+73	7.0	13.16
+77	9.3	10.86
24+86-25' LT		
Floor Cons. St. Drain	10.8	9.36
+89	10.5	9.66
25	6.3	13.86



20.16

25+10	8.1	12.06	
+50	7.7	12.46	
26	7.3	12.86	In drain ditch
+50	7.7	12.46	" " "
+86	5.6	14.56	
27	5.8	14.36	
+50	3.6	16.56	
28	5.7	14.46	In drain ditch
+09° L	5.7	14.46	" " "
+21	2.8	17.36	
+233 Top rail	2.22	17.94	
+296 Top rail	2.25	17.91	

20.16

8

28+32

2.9 17.26

25+

+44³⁵ L

4.5 15.66

+5

29

4.6 15.56

26

+50

5.0 15.16

+

30

5.2 14.96

+8

+50

5.5 14.66

27

B.M.

2.54

17.98

4.72 15.44

Set B.M. Nail in power pole 12' Lt Sta 30+69.

+5

4.59 13.39

Ld Jack in Man. 7' off S.W. Cor. Kurtz & Koell El. 13.35

28

31

3.6 14.38

+112.152 RT

Rim S.M.H.

3.70 15.28

+

+50

4.9 13.08

T.P.

+2

32

5.0 12.98

T.P.

17.98

32+50

6.1

11.88

33

6.7

11.28

+50

6.7

11.28

34

6.9

11.08

+50

6.9

11.08

35

7.2

10.78

+50

7.5

10.48

36

7.5

10.48

+50

8.6

9.38

37

8.9

9.08

2

17.98

37+50

8.6

9.38

38

8.1

9.88

+06

9.3

8.68

+41³⁵ P.O.T.

8.1

9.88

+61

7.5

10.48

B.M.

0.75

10.70

8.03

9.95 ✓

39+00

0.3

10.40

+50

2.1

8.60

40

3.9

6.80

+50

5.4

5.30

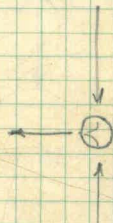
Set B.M. Nailing power pole 27' N + Sta. 38+46

	10.70		
41		6.6	4.10
+50		7.4	3.30
42		8.1	2.60
+50		8.4	2.30
+535 15' Rt			
Rim Sew. M.H.		7.25	3.45 ✓
+535 15' Rt			
El. line Sew. M.H.		11.15	-0.45 ✓
43		8.8	1.90
+50		9.1	1.60
44		9.1	1.60
B.M.		8.46	2.24 ✓
	5.66	7.90 ✓	
45		6.2	1.70

12/19/40 11

Soper
Brooks
Hodgeson11.15
10.70
45

(Fl. line = 3.9 below rim)

A
E

Set B.M. Nail in power pole 12' 64 43 + 93

7.90

46 6.0 1.90

+35 - 15' RT

Rim Sew. M.H.

-35' - 15' RT

FL line S.M.H.

5.2 2.70

7.45 0.45

47 6.1 1.80

48 5.9 2.00

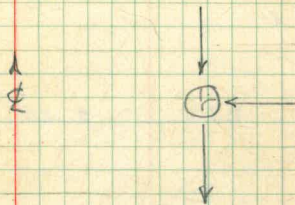
+34 - 15' RT

Rim S.M.H.

4.6 3.30

49 5.5 2.40

12



0

49+97-57 21 7.90

Al. line 30" Vit. Tile St. Drain 8.2 -0.3 ✓

50400 5.5 2.40

504624 L 4.5 3.40

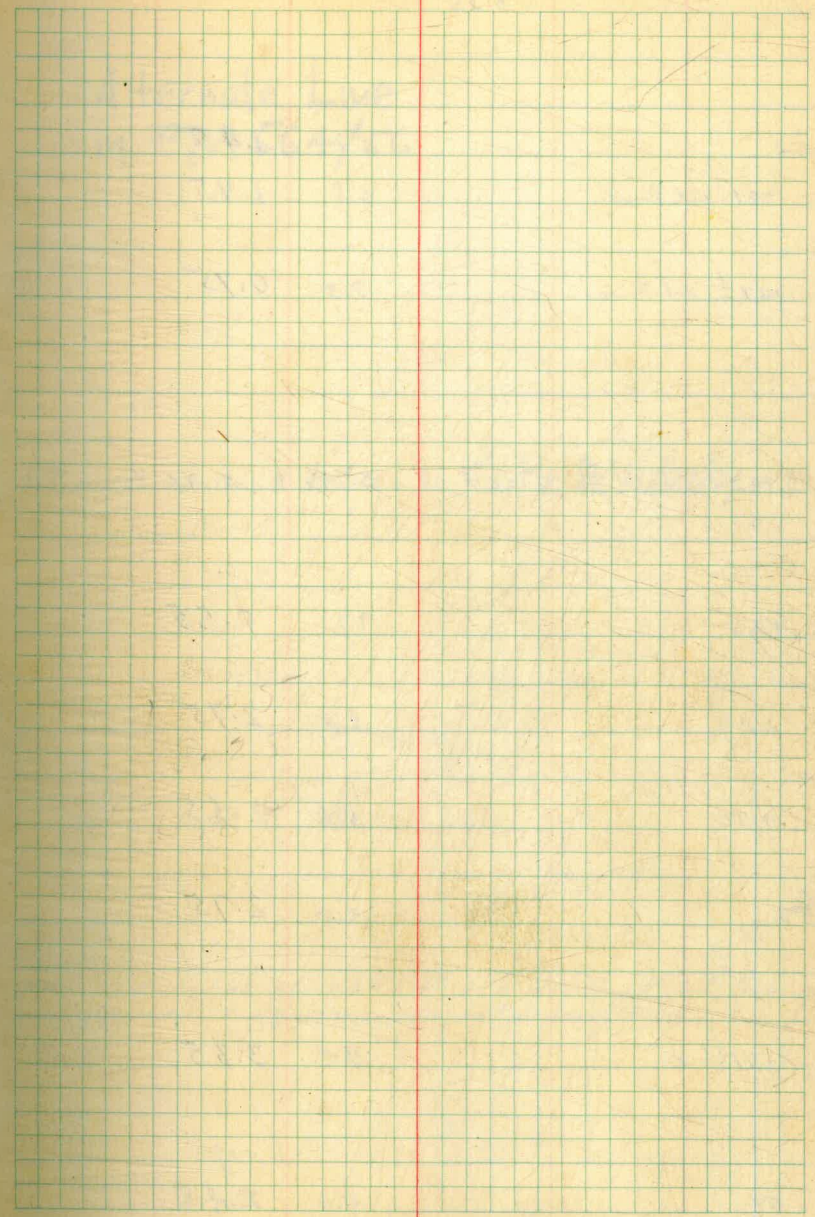
TP 4.62 8.25 ✓ 4.27 3.63 ✓

50470 6.1 2.15

To + from F. Best # 585
Bot. of Tel. Co. Conc. Chamber. 13.05 -4.80 ✓

51 6.3 1.95

+69° L 6.5 1.75



8.25

52	6.8	1.45
+01 Ed. Pave.	6.8	1.45
+29 ⁵ Ed. Pave.	7.5	0.75
B.M.	5.79	2.76 ✓
+35	7.7	0.55
+39	5.5	2.75
+50	5.6	2.65
53	5.5	2.75
+41 ⁵⁷ c.	4.9	3.35
54	5.8	2.45

14

Alternate Line in FB# 564/56

B.P. in Conc. Wall - 9' BT 52 + 30 Kurtz & Witherby -

Note: excavated at Sta. 53 + 24⁵, to a depth of 6³, looking for existing drain pipe, but did not find.

or Elev. = 3⁴

8.25

54+89

8.1 0.15

55

5.9 2.35

TP

3.00

5.23

6.02

2.23

+50

3.4

1.83

56

5.8

-0.57

+50

4.9

0.33

+58

6.3

-1.07

57

7.0

-1.77

+50

8.0

-2.77

58

7.3

-2.07

+16

6.9

-1.67

5.23

58+26 4.7 0.53

+50 7.8 -2.57

59 8.9 -3.67

+50 5.5 -0.27

+50 -5'2"

A line 15" Conc. Drain.

8.9 -3.7 ✓

+63 5.8 -0.57

+77 ⁴⁶ B.C. 2.9 2.33

TP 5.14 6.68 3.69 1.54 ✓

60+00 4.6 2.08

+17 4.7 1.98

+32 2.1 4.58

+40 4.2 2.48

+46
Top of rail 3.43 3.25

6.68

60+54.2
Top of rail

3.57 3.11

+74²³ E.C.

4.4 2.28

61

4.9 1.78

+14

4.9 1.78

+27

7.0 -0.32

62

7.9 -1.22

+50

7.5 -0.82

63

7.9 -1.22

B.M.

3.95 2.75

+50

7.1 -0.42

64

7.6 -0.92

.396

17

R.R. Spike in power pole 20' at 62+20. Hwy. B.M. - Elev. 2.72

6.68

64+50 7.2 -0.52

65 7.1 -0.42

+50 7.9 -1.22

66 7.3 -0.62

IP 3.02 4.06 5.64 1.04

+50 3.5 0.56

67 3.0 1.06

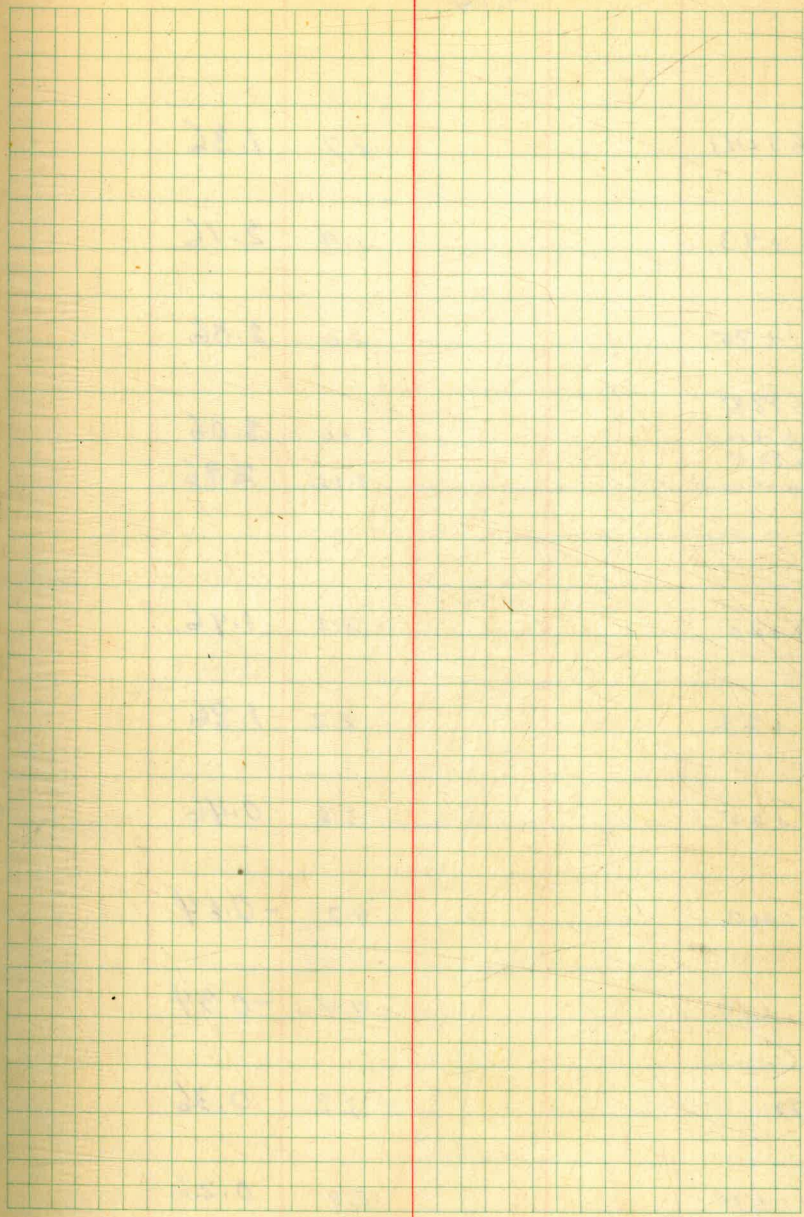
+50 3.4 0.66

68 2.4 1.66

+52 8' 2.8 1.26

+80 2.4 1.66

69+08 Pacific Hwy. 2.0 2.06



4.06

69+41 2.7 1.36

+43 1.9 2.16

+75 2.0 2.06

+77.45
Top of rail 1.00 3.06+82.45
Top of rail 1.10 2.96

70+00 2.1 1.96

+22 2.2 1.86

+25 3.6 0.46

71+00 4.7 -0.64

+50 4.4 -0.34

72 3.7 0.36

+50 3.8 0.26

19

14.06

73			3.8	0.26
+ 50			4.3	-0.24
74			4.9	-0.84
+ 50			5.0	-0.94
TP	5.53	4.77 ✓	4.82	-0.76 ✓
75			6.1	-1.33
+ 50			5.8	-1.03
76			5.7	-0.93
+ 65			5.8	-1.03
+ 71			3.7	1.07
B.M.			3.38	1.39 ✓
178 ²⁶ Top of curb			3.66	1.11
+ 178 ²⁶ Gutter			4.26	0.51
76+84 ²⁶ L			4.1	0.67

20

Set B.M. on Prop. Cur. Pipe, 32' LT 76+67

4.77

77+00 x 4.1 0.67 -3.50

78 4.4 0.37 -3.87

79 4.8 -0.03 -4.25

80 5.1 -0.33 -4.62

+40 x -0.5 -4.8

+96 x -0.7 -6.8

81 x 5.5 -0.8 -5.00

+10 x -0.8 -6.8

IP 5.00 4.60 5.17 -0.40

81+60 x -0.8 -5.00

81+23-12' RT

Fl. line 12" Corr. I. Culverts

7.7 -3.1 ✓

Fl. line Culvert tocht.

7.3 -2.70

82 5.4 -0.80 -4.96

83 5.2 -0.60 -4.91

84 5.1 -0.50 -4.87

12/20/40

Super
Brook, feet
Hochgeson

21

4.2

4.2

4.2

4.3

4.3

4.2

6.1

6.0

4.2

81+08

110'



4.2

4.3

4.4

		460			
85			5.0	-0.40	-4.83
86			4.9	-0.30	-4.78
87			4.8	-0.20	-4.74
88			4.7	-0.10	-4.70
B.M.	4.74	5.18	4.16	+0.44	✓
89			5.1	0.08	-4.65
90			5.1	0.08	-4.61
91			5.0	0.18	-4.56
92			4.9	0.22	-4.52
93			4.8	0.38	-4.48
94			4.7	0.48	-4.43
95			4.6	0.58	-4.39
96			4.5	0.68	-4.35

4.4
4.5
4.5
4.6
Set B.M. on curbing sta, 88+60
4.7
4.7
4.7
4.7
4.9
4.9
5.0
5.0

5.18

97 4.6 0.58 -4.30

IP 4.30 5.28 ✓ 4.20 +0.98 ✓

98 4.7 0.58 -4.26

99 4.8 0.48 -4.22

100 4.9 0.38 -4.17

101 5.0 0.28 -4.13

102 5.1 0.18 -4.09

103 5.2 0.08 -4.04

B.N. 4.84 5.32 ✓ 4.80 0.48 ✓

104 X 5.1 0.2 ✓ -4.00

4.79 0.53 ✓

105 + 00¹⁶ B.C. 5.1 0.2 ✓ -3.90

4.9

4.8

4.7

4.5

4.3

4.3

4.1

Brass Tack in curb (Prop. line) Sta 103 + 19.61
S.E. Cor. Ingraham + Rosecrans

4.2

B.P. in curb S.W. Cor. Ingraham + Rosecrans Rec. El. 0.56

4.1

5.32

105+50 5.1 0.2 ✓ - 3.85

4.1

106 5.0 0.3 ✓ - 3.80

4.1

+50 5.0 0.3 ✓ - 3.75

4.1

107 5.0 0.3 ✓ - 3.70

4.0

+50 4.9 0.4 ✓ - 3.65

4.0

108 4.9 0.42 - 3.60

4.0

+50 4.8 0.52 - 3.55

4.0

109 4.8 0.52 - 3.50

4.0

+50 4.7 0.62 - 3.45

4.0
~~4.1~~

110 4.7 0.62 - 3.40

4.0

+50 4.6 0.72 - 3.35

4.1

111 4.6 0.72 - 3.30

4.0

39.80
 111+ E.C. 5.32 4.6 0.7 ✓ -3.26

4.0

TP 4.22 6.25 3.29 2.03 ✓

112 5.4 0.85 -3.28

4.0

113 5.3 0.95 -3.10

4.0

114 5.2 1.05 -3.00

4.0

115 5.0 1.25 -2.90

4.1

116 4.9 1.35 -2.80

4.1

117 4.8 1.45 -2.70

4.1

118 4.7 1.55 -2.60

4.1

119 4.6 1.65 -2.50

4.1

B.M. 5.17 7.32 ✓ 4.10 2.15 ✓

Set B.M. Point on curbing Sta. 119+45

120 5.6 1.72 -2.40

4.1

7.32

Grade Cut

121 5.5 1.82 -2.30 4.1

+28⁸³ B.C. 5.4 1.92 -2.27 4.2

+50 5.4 1.92 -2.25 4.2

122 5.3 2.02 -2.20 4.2

+50 5.3 2.02 -2.15 4.1

123 5.3 2.02 -2.10 4.1

+50 5.3 2.02 -2.05 4.1

124 x 5.3 2.02 -2.00 4.0

+50 5.2 2.12 -1.72 3.8

125 x 5.1 2.22 -1.25 3.5

+42⁶¹ E.C. 5.1 2.22 -1.48 3.7

126 x 5.0 2.32 -1.80 4.1

		7.32			
127			5.1	2.2	-1.90
128			5.3	2.0	-2.00
TP	4.74	7.26 7.21	(4.80) 4.85	2.52 2.47	
129			5.3	1.96	-2.10
130			5.4	1.86	-2.20
131			5.4	1.86	-2.30
132			5.5	1.76	-2.40
133			5.6	1.66	-2.50
134			5.8	1.46	-2.60
135			5.9	1.36	-2.70
B.M.	4.39	6.13 6.08	5.52	1.74 1.69	
136			4.9	1.23	-2.80
137			5.0	1.13	-2.90

4.1
4.0
see check levels page 45
4.1
4.1
4.1
4.2
4.2
4.1
4.1
Bross tack in curb (Prop. line) Sta 135+27
4.0
4.0

6.13
6.08

138 5.0 1.13 - 3.00 4.1

139 5.1 1.03 - 3.10 4.1

140 5.3 0.83 - 3.20 4.0

141 5.4 0.73 - 3.30 4.0

142 5.5 0.63 - 3.40 4.0

143 5.6 0.53 - 3.50 4.0

TP 466 5.42 5.17 0.96 0.91

144 5.2 0.42 - 3.60 4.0

145 5.3 0.32 - 3.70 4.0

146 X 5.4 0.22 - 3.80 4.0

147 X 4.8 0.82 - 3.31 4.1

148 3.1 2.52 - 1.3 3.8

	5.62 5.57				
R	6.62	11.51 11.46	0.73	4.89 4.84	
149+01 Z' ←			7.0	4.51	+0.7
+50			5.7	5.81	1.7
150 X			4.7	6.81	2.7
+50			5.4	6.11	2.33
151			5.8	5.71	1.97
151			5.8	5.71	1.74
+50 X				5.5	+1.60
152			6.7	4.81	1.60
152+82.5 RT					
Top of Hd. wall			8.75	2.76	
152+83.5 RT					
Fl. line culvert			14.60	-3.09	
152+82.5 LT					
Top of Hd. wall			8.75	2.76	
152+83.5 LT					
Fl. line culvert			15.00	-3.49	
B.M.			8.72	2.79 2.74	



Triple Box Concrete Culverts

B.P. is West side Hd. wall of Culvert. Rea Elev. 2.997

Check Levels back over line to Sta. 62+20

11.46

17	5.58	6.49	10.55	0.91
	4.11	6.58	4.02	2.47
	3.76	5.07	5.27	1.31
			4.60	0.47
	5.03	5.51	5.07	0.48
	3.32	3.76	4.53	0.44
				-0.77
	6.17	5.41 6.41		-0.76
			2.69	2.72
B.M.	3.92	6.77 6.72		2.79 2.74
153	x		2.9	3.87 +1.60
150	x			3.6 -0.30
154			3.6	3.17 -0.60
155			4.1	2.67 -1.20
156			4.7	2.07 -1.80
157	x		5.2	1.57 -2.40
158			5.6	1.17 -2.60

ck on brass tack (S.F. Carr, Ingraham & Rosecrans) Rec. El. 0.48

Rec -0.76

ck on spike in pen. pole 20' Lt 62+20 Elev. 2.73

12/21/40

Super
Brucks
Hodgeson

B.P. in Westerly Culvert Hd. wall Sta 152+82

2.3

3.9

3.8^v

3.9^v

3.9^v

4.0^v

3.8^v

159			5.5	1.27	-2.80	4.1
160	x		5.5	1.27	-3.00	4.3
161			5.5	1.27	-3.02	4.3
162			5.4	1.37	-3.05	4.4
163			5.5	1.27	-3.07	4.3
TP	4.24	6.16 ✓ 6.11	4.85	1.92 ✓ 1.87		
164			5.0	1.16	-3.09	4.2
165			5.3	0.86	-3.11	4.0
166			5.5	0.66	-3.14	3.8
167			5.5	0.66	-3.16	3.8
168			5.4	0.76	-3.18	3.9
169			5.1	1.06	-3.20	4.3

6.16
6.11

170			5.1	1.06	-3.23	4.3
171			4.9	1.26	-3.25	4.5
172			4.7	1.46	-3.28	4.8
173	X		4.6	1.56	-3.30	4.9
B.M.	4.24	6.33 6.28	4.07	2.09 2.04		
174			5.1	1.23	-3.25	4.5
175			5.1	1.23	-3.20	4.4
176			5.2	1.13	-3.15	4.3
177			5.4	0.93	-3.10	4.0
178			5.2	1.13	-3.05	4.1
179			5.1	1.23	-3.00	4.2
180			5.2	1.13	-2.95	4.1
181			5.1	1.23	-2.90	4.1

Set B.M. Paint on curb Sta. 173 - Opposite N. Curb Rd. Pittsburg St.

6.33
6.28

182		5.0	1.33	-2.85
183		4.9	1.43	-2.80
TP	4.49	6.51 6.46	4.31	2.02 1.97
184		5.1	1.41	-2.75
185		5.2	1.31	-2.70
186		5.3	1.21	-2.65
187		5.4	1.11	-2.60
188		5.4	1.11	-2.55
189		5.4	1.11	-2.50
190		5.2	1.31	-2.45
191		5.0	1.51	-2.40
192		4.9	1.61	-2.35

4.2
4.2
4.1
4.0
3.9
3.7
3.7
3.6
3.8
3.9
4.0

6.51
6.46

192, 173⁵ B.C. 4.8 1.71 -2.31

193 X 4.8 1.71 -2.30

B.M. 5.04 7.16
7.11 4.39 2.12
2.07

150 5.7 1.46 -2.35

194 5.6 1.56 -2.40

150 5.7 1.46 -2.45

195 5.7 1.46 -2.50

150 5.8 1.36 -2.55

196 5.9 1.26 -2.60

150 6.0 1.16 -2.65

197 6.1 1.06 -2.70

150 6.2 0.96 -2.75

34

4.0

4.0

Set B.M. Pointon curb Sta 193+00

3.8

3.9'

3.9'

4.0'

3.9'

3.9'

3.8'

3.8'

3.7'

7.16
7.11

198		6.1	1.06	- 2.80
+50		6.2	0.96	- 2.85
199		6.3	0.86	- 2.90
+50		6.3	0.86	- 2.95
200		6.4	0.76	- 3.00
+50		6.5	0.66	- 3.05
201		6.4	0.76	- 3.10
TP	5.78	6.97 ✓ 6.92	5.97	1.19 ✓ 1.14
+50		6.2	0.77	- 3.15
202		6.1	0.87	- 3.20
+50		6.0	0.97	- 3.25
203		5.9	1.07	- 3.30
+50		5.9	1.07	- 3.35

30

3.8 ✓
3.9 ✓

3.8 ✓

3.8 ✓

3.8 ✓

3.8 ✓

3.7 ✓

3.8 ✓

3.9 ✓

4.1 ✓

4.2 ✓

4.4 ✓

4.4 ✓

6.97
6.92

204	x		5.9	1.07	-3.40
+50			5.8	1.17	-3.37
205			5.7	1.27	-3.35
+50			5.7	1.27	-3.32
206			5.6	1.37	-3.30
+50			5.6	1.37	-3.27
207			5.5	1.47	-3.25
+50			5.5	1.47	-3.23
+84.27	E.C.		5.5	1.47	-3.21
208			5.5	1.47	-3.20
209			5.5	1.47	-3.16
B.M.	4.56	6.40 6.35	5.13	1.84 1.79	

36
Cut

4.5'

4.5'

4.6'

4.6'

4.7'

4.7'

4.7'

4.7'

4.7'

4.7'

4.7'

Set B.M. Point on curb Sta 208+98

6.40
6.35

210 5.1 1.30 - 3.11

4.4'

211 5.2 1.20 - 3.06

4.3'

212 5.2 1.20 - 3.02

4.2'

213 5.3 1.10 - 2.97

4.1'

214 5.2 1.20 - 2.92

4.1'

215 5.1 1.30 - 2.88

4.2'

216 5.0 1.40 - 2.83

4.2'

217 4.9 1.50 - 2.78

4.3'

218 4.9 1.50 - 2.73

4.2'

219 4.8 1.60 - 2.69

4.3'

TP

4.61

6.86

6.81

4.15

2.25

2.20

220

5.0

1.86

- 2.64

4.5'

		6.86 6.81		
221			5.2	1.66 - 2.59
222			5.3	1.56 - 2.54
+50			5.3	1.56 - 2.52
+88 ^c				1.6 - 2.51
223	x		5.4	1.46 - 2.50
+13 ^c				1.5 - 2.36
+25			5.5	1.36
+38 ^c				1.6 - 2.11
+50			5.2	1.66 - 2.00
+63 ^{EX}				1.8 - 1.67 - 1.7
+88 ^c				2.6 - 1.67 - 0.7
224			3.7	3.16 - 0.80 - 0.3
+13 ^c				1.00 + 0.2
B.M.			3.7	+0.04
221 + 22	x		5.22	1.64
224 + 33 ^{6c}	x Abut.			4.0 + 0.6
				4.7 + 1.27
				4.93 + 1.07
		18.47		6.55
	11.92	18.42	0.31	6.50
224 + 68 ^c	Abut.		11.44	7.03
225 + 03 ^c	"		9.35	9.12
+38 ^c	"		7.21	11.26

				4.3
				4.1
				4.1
				4.0
				3.9
				3.7
				3.7
				3.5 3.5
				3.7 3.3
				4.2 4.0 3.5
				3.7 3.5
				B.P. in S. end of Easterly wing wall of bridge approach.
				3.4
				3.4
				Note: Elev. on both bridges are 6' out from face of curbing
				Elev. at curb - approx. one tenth lower.

18.47
18.42

225+73⁶ Abut. 5.13 13.34

226+08⁶ " 3.02 15.45

+43⁶ " 0.92 17.55

IP 10.62 $\frac{28.47}{28.42}$ 0.62 $\frac{17.85}{17.80}$

+78⁶ Abut 8.83 19.64

227+13⁶ " 6.73 21.74

+48⁶ " 5.47 23.00

227+83⁶⁰ " 4.67 23.80

228+35⁹⁰ " 4.62 23.85

+70⁹⁰ " 5.30 23.17

229+05⁹ " 6.70 21.77

+40⁹ " 8.84 19.63

28.47
28.42

229+75 ²	Abut.		10.93	17.54	
230+11 ^e	"		13.02	15.45	
IP	0.70	16.53 16.48	12.64	15.83 15.78	
+46°	Abut.		3.21	13.32	
+81°	"		5.28	11.25	
231+16°	"		7.41	9.12	
+51°	"		9.57	6.96	
231+86 ⁴⁰	"		11.64	4.89	+1.5
232	x		12.5	4.03	+0.7
+06 ⁴	-			3.7	+0.36 10.02
IP	2.56	6.96 6.91	12.13	4.40 4.35	
B.M.			5.34	1.62	
232+25			4.2	2.76	
+31 ⁴				2.4	-1.0

40

~~4.03~~

3.3

~~3.7~~ 3.3

B.P. in N. End of Easterly wing wall of bridge approach.

3.4

6.96
6.91

232 +50 x	5.0	1.96	-2.0
+56 ⁴		1.6	-2.0
+75	5.4	1.56	-2.25
+81 ⁴		1.4	-2.3
233 x	5.7	1.26	-2.5
+86 ⁴		1.4	-2.5
+31 ⁴		1.4	-2.5
+50		1.4	-2.5
234	5.4	1.56	-2.6
235	5.3	1.66	-2.7
236	5.3	1.66	-2.8
237	5.2	1.76	-2.9
238 x	5.1	1.86	-3.0
239	5.0	1.96	-2.9
240	5.0	1.96	-2.8
B.M.	4.54	2.42	-2.37
4.16		6.58	6.53
241	4.7	1.88	-2.7

8.35

12/24/40 41
Soper
Brooks
Hudgeson

Cut

-4.0
3.6
3.8
3.7
3.8
3.9
3.9
2.9
4.2
4.4
4.5
4.7
4.9
4.9
4.8
4.6

Set B.M. Point on curb Sta. 240+00

6.58
~~6.53~~

242		4.8	1.78	-2.6	4.4
243		4.9	1.68	-2.5	4.2
244		5.0	1.58	-2.4	4.0
245		5.1	1.48	-2.3	3.8
246		5.0	1.48	-2.2	3.7
247		4.8	1.78	-2.1	3.9
248		4.7	1.88	-2.0	3.9
249		4.6	1.98	-1.9	3.9
250		4.4	2.18	-1.8	4.0
TP	5.03	7.66 ✓ 7.61	3.95	2.63 ✓ 2.58	
251		5.3	2.36	-1.7	4.1
252		5.3	2.36	-1.6	4.0

7.66
7.61

253		5.2	2.46	-1.5
+20			2.5	-1.5
+50			2.6	-1.4
+75			2.6	-1.4
254	X	5.0	2.66	-1.4
+25			3.0	-0.7
B.M.		5.14	2.52	
+47				-0.1
254+50		4.3	3.36	0.0
254+66 ⁹⁵	Abut.	3.90	3.76	+0.45
+75				+0.7
255+01 ²⁵	"	1.72	5.94	
IP	18.59	19.61	7.02	
		19.56	6.97	
+31 ²⁵	Abut.	11.59	8.02	
+71 ²⁵	"	9.41	10.20	
256+06 ²⁵	"	7.33	12.28	
+11 ²⁵	"	5.23	14.38	
+76 ²⁵	"	3.13	16.48	
257+11 ²⁵	"	1.00	18.61	

43

4.0

4.0

4.0

4.0

4.1

3.7

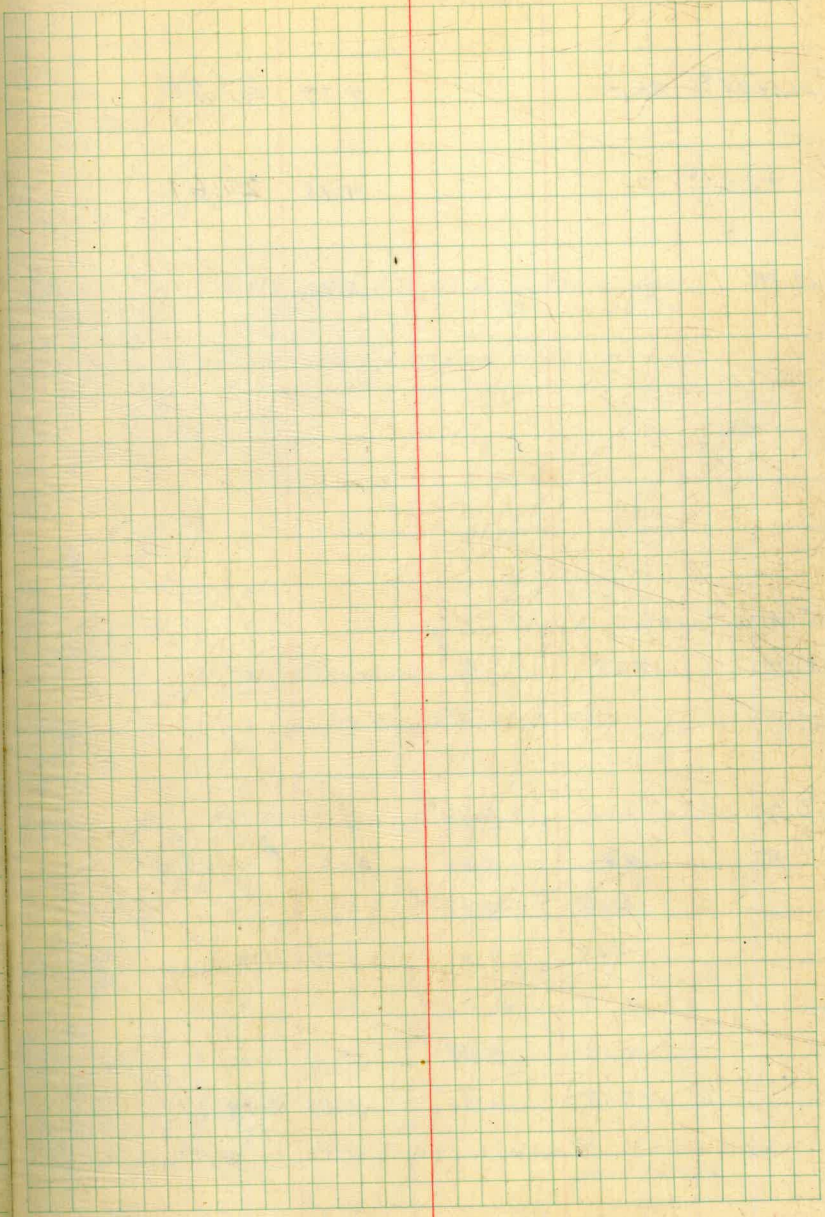
3.7

B.P. in So. end of Easterly wing wall of bridge approach

3.4

3.3

		19.61			
		19.56			
TR	13.03	32.09	0.55	19.06	
		22.04		19.01	
257+46 ⁷⁵	Flut		11.40	20.69	
+81 ⁷⁵	"		9.29	22.80	
258+16 ⁷⁵	"		7.19	24.90	
+51 ⁷⁵	"		5.16	26.93	
+86 ⁷⁵	"		3.71	28.38	
259+06					23.1
259+21 ⁷⁵	"		3.00	29.09	
+74 ¹⁵	"		2.97	29.12	
260+09 ¹⁵	"		3.22	28.87	
+44 ⁰⁵	"		3.42	28.61	
+79 ⁰⁰	"		3.74	28.35	
261+14 ⁰⁰	"		4.05	28.04	



32.09
~~32.04~~

261+48⁹⁵ Abut. 4.29 27.80

+83⁴⁵ " 4.48 27.61

B.M. 3.92 28.17 ✓
28.12

Check levels.

B.M. 4.68 5.16 ✓ 0.48
4.63 0.53 ✓

B.M. 4.68 5.16 ✓ 0.48

IP 4.21 6.24 ✓ 3.13 2.03 ✓

5.09 7.25 ✓ 4.08 2.16 ✓

4.49 7.01 ✓ 4.73 2.52 ✓

4.49 6.23 ✓ 5.27 1.74 ✓

4.52 5.78 ✓ 5.27 0.96 ✓

5.43 10.32 ✓ 0.59 4.89 ✓

7.53 2.79 ✓

32.71 2.79
30.60 0.98
2.31 ✓ 2.31 ✓

3060

B.P. in curbing. Crown Point Dr. at N. end of bridge
Rec. El. 28.34

Note: Curbing has settled 0.07 from bridge curbing.

Bridle Rosecrans & Ingraham

B.P. " " " Rec. El. 0.56

2.03

2.15

(2.47) X IP at Sta. 128

1.69

0.91

4.84

2.74 - B.P. in culv. Hd wall - Ingraham & W. Point Loma Blvd.
Sta 152+82

	+S	H.I.	-S	Elav.	Grade
	5.29	33.46		28.17	
262+00 X			5.9	27.56	23.9
+30 X				27.6	23.0
+ 88.5 L			5.7	27.76	23.0 23.9
79.9					
263			5.6	27.86	23.0 23.9
+50				28.1	22.9
264			5.0	28.46	22.9 23.8
+50				28.9	22.9
+73 ²⁰ L			4.5	28.96	22.9 23.8
265			4.7	28.76	22.8 23.8
+50					22.8
266			5.6	27.86	22.8 23.8
267 X			6.7	26.76	22.7
+59 ³⁸ L			7.2	26.26	22.2
TR	2.34	29.23	6.57	26.89	
268			3.2	26.03	21.9

cut

D.P. in curb - Crown Point Dr. at end of bridge

3.7
4.6
4.8
3.9
4.9
4.0
5.2
5.6
4.7
6.0
6.1
5.2
6.0
5.0
5.1
4.5
4.1
4.1
4.1
4.1

29.23

			<u>Grade</u>
268+60 24.2 RT	10.3	18.93	
269	3.6	25.63	21.4
270	4.2	25.03	20.9
271	4.7	24.53	20.1
+28 ⁰⁰ B.C.	4.9	24.33	20.3
+50	4.9	24.33	20.2
+75	5.1	24.13	20.1
272	5.2	24.03	19.9
+25	5.3	23.93	19.8
+53 ²⁴	5.5	23.73	19.7
273	5.7	23.53	19.45
+50	6.1	23.13	19.2

Cut
 Full line 18" Conc. Culvert

9.2
4.1
4.1
4.0
4.1
4.0
4.1
4.1
4.0
4.1
3.9

29.23

				<u>Grade</u>
274		6.5	22.73	19.0
B.M.	2.87	26.17	5.93	23.30
274+31 ⁸⁵		3.3	22.87	18.8
+ 52		3.7	22.47	18.7
+66 ⁶⁵		3.3	22.87	18.6
+ 82		4.0	22.17	18.0
275+00		3.6	22.59	18.5
+02 ³		3.6	22.57	
+50		4.1	22.07	18.2
276		4.2	21.97	18.0
+50		4.5	21.67	17.7
277		4.8	21.37	17.5

48

Cut

3.7

Set B.M. Point on curb by F. Hyd. S.E. Cor. Buena Vista
and La Cruz Dr.4.1
Edge Conc. Pavc.

3.8

4.3

3.6

4.1

Edge Conc. Pavc.

3.9

4.0

4.0

3.9

		26.17		Grade
277+50			5.0	21.17
				17.2
278			5.3	20.87
				17.0
+50			5.6	20.57
				16.5
+65 ² BC			5.6	20.57
				16.3
279			5.7	20.47
				16.0
+12±				
+50			5.1	21.07
				17.0
280			4.0	22.17
				18.0
+50			3.0	23.17
				18.8
+61 ¹⁵ E.C.			2.8	23.37
				19.0
281			2.2	23.97
				19.0
+50			1.4	24.77
				20.4
B.M.	8.09	33.59 ✓	0.67	25.50 ✓

Cut
4.0
3.9
4.1
4.3
4.5
Storm drain xing
4.1
4.2
4.4
4.4
4.4
Set B.M. Point on curb return - S.E. Cor. Buena Vista + La Mancha

			<u>Grade</u>
282	8.2	25.39	21.2
+4.50	7.6	25.99	22.0
283	7.3	26.29	22.4
+35.90 B.C.	7.1	26.49	22.7
+4.0	6.9	26.69	22.8
284	6.5	27.09	23.25
+5.0	6.1	27.49	23.7
285	5.7	27.89	24.1
+06.60 F.C.	5.6	27.99	
+5.0	5.3	28.29	24.5
286	4.8	28.79	24.9

Cut

1.2
1.0
3.9
3.8
3.9
3.8
3.8
3.8
3.8
3.9

				Grade	
286+50		4.3	29.29	25.3	
287		3.8	29.79	25.7	
+50		3.4	30.19	26.2	
288		3.0	30.59	26.6	
+50		2.6	30.99	27.0	
+59 ^e		2.3	31.29		
+65 ⁰⁰ 6		2.3	31.29	27.1	
B.M.	5.97	38.71	0.85	32.74	
288+91		6.9	31.81	27.3	
289		6.3	32.41	27.4	
+50		4.6	34.11	29.1	
+88 ⁺		3.7	35.01	30.4	

Cut	
4.0	15.92
4.1	15.92
4.0	15.92
4.0	15.92
4.0	15.92
4.2	15.92
4.5	
5.0	
5.0	
4.6	

Edge Conc. Pavc.

12/27/40
Super
Brakes
Hodgeson

Set B.M. Point on curb return S.E. Cor. Burns Vista & Moorland Dr.

4.6
Edge Conc. Pavc.

38.71

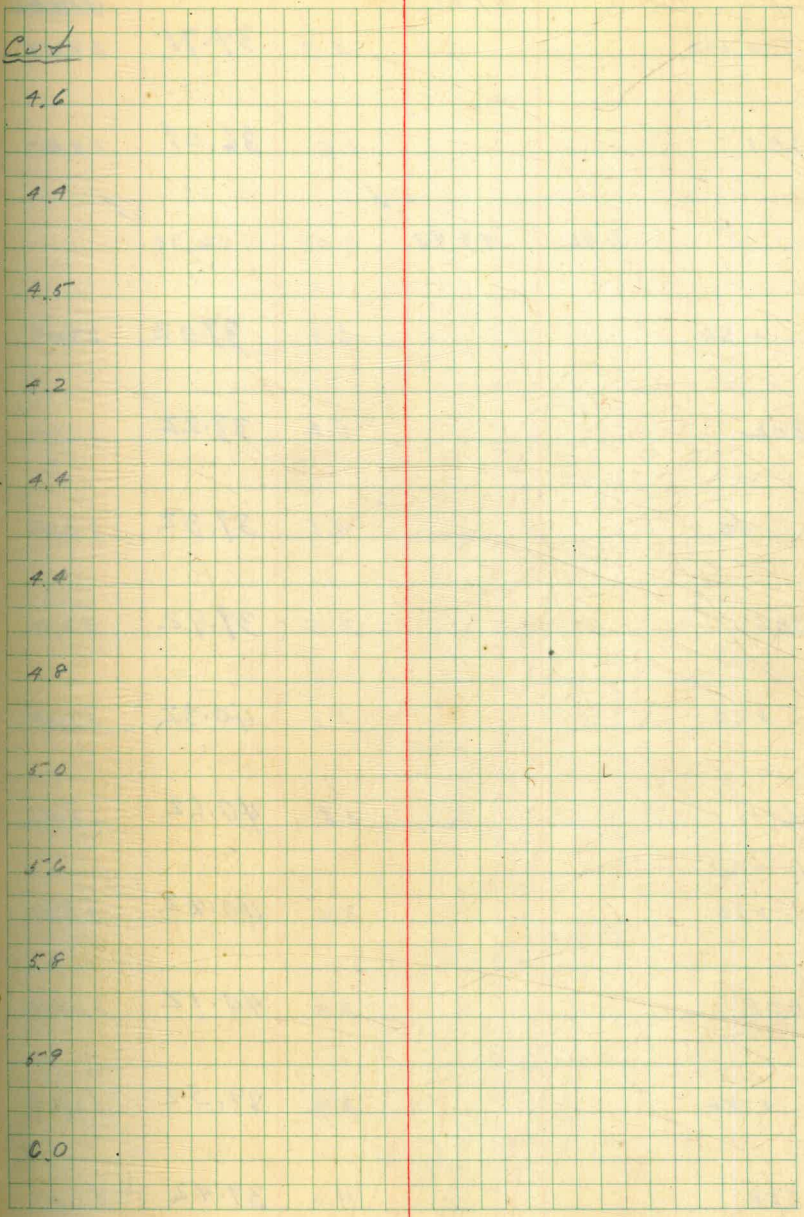
			Grade	
290		4.0	34.71	30.8
+06 ⁹³ L		3.9	34.81	30.7
+50		4.4	34.31	30.4
291		4.2	34.51	30.0
+15		3.9	34.81	29.5
+50		6.1	32.61	28.3
292		7.8	30.91	26.7
+50		8.9	29.81	25.0
293		9.7	29.01	24.7
+50		10.0	28.71	24.3
294		10.3	28.41	24.0
TP	8.16	37.01	9.86	28.85 ✓

52

Grade	Cut
3.7	15.75
4.1	15.75
3.9	15.75
4.5	15.75
5.3	15.75
4.3	15.75
4.2	15.00
4.8	15.00
4.3	10.50
4.4	15.50
4.4	15.50
4.4	15.50
4.4	15.50

37.01

			<u>Grade</u>	<u>Cut</u>
294+50	8.3	28.71	24.1	4.6
295	8.4	28.61	24.2	4.4
+50	8.3	28.71	24.2	4.5
296	8.5	28.51	24.3	4.2
+50	8.2	28.81	24.4	4.4
297	7.7	29.31	24.9	4.4
+50	6.8	30.21	25.4	4.8
298	6.1	30.91	25.9	5.0
+50	5.0	32.01	26.4	5.6
299	4.3	32.71	26.9	5.8
+50	3.7	33.31	27.4	5.9
300	3.1	33.91	27.9	6.0



		37.01		Grade	Cut	
300 +50			2.3	34.71	28.45	6.3
301			1.0	36.01	29.0	7.0
IT	6.46	43.42	0.05	36.96		
+50			6.4	37.02	29.5	7.5
302			5.2	38.22	30.0	8.2
+50			4.1	39.32	30.5	8.8
303			3.5	39.92	31.0	8.9
+50			3.1	40.32	31.5	8.8
304			2.8	40.62	32.0	8.6
+50			3.0	40.42	32.25	8.2
305			3.3	40.12	32.5	7.6
+50			3.9	39.52	32.75	6.8
306			4.0	39.42	33.0	7.1

7.1 6.4

43.42

			<u>Grade</u>	<u>Cut</u>	
306+50		46	38.82	33.25	5.6
307		49	38.52	33.5	5.0
+50		48	38.62	33.75	4.9
308		5.0	38.42	34.0	4.4
+50		5.0	38.42	34.25	4.2
309		5.2	38.22	34.5	3.7
+50		4.4	39.02	34.75	4.3
310		2.9	40.52	35.0	5.5
+50		1.5	41.92	36.5	5.4
311		0.4	43.02	36.5	6.5
TP	12.84	56.15	0.11	43.31	
+50		12.1	44.05	37.0	6.5

56.15

312 11.3 44.85

+50 10.5 45.65

313 10.0 46.15

+50 9.0 47.15

314 7.4 48.75

+50 5.2 50.95

315 3.4 52.75

+50 2.0 54.15

316 1.3 54.85

316+0283 1.3 54.85

+50 1.7 54.45

56.15

317

2.5

53.65

B.M.

2.32

53.83

+50

3.9

52.25

+ 78° 5' L

4.2

51.95

318

4.9

51.25

+50

8.1

48.05

319

10.0

46.15

TP

6.16

52.53

9.78

46.37

+50

7.7

44.83

320

8.7

43.83

57
Set B.M. Nail in power pole 35' Lt 216 + 89 - N.W. Cor. Heikes
and Pacific Beach Blvd.

52.53

320+27

9.1 43.43 |

+50

8.9 43.63

321 *

7.8 44.73

+50

7.6 44.93

322

7.0 45.53

+50

6.4 46.13

323

5.6 46.93

+50

4.6 47.93

+72

75.24

12.6 39.93

+72

37.14

13.1 39.43

324

3.9 48.63

58

Fl. line 18" Wood Stave Culvert

52.53

324+50

2.9 49.63

325

1.7 50.83

+50

0.9 51.63

TP

8.65

61.12

0.06

52.47

326

8.4 52.72

+50

7.2 53.92

327

6.2 54.92

+50

5.4 55.72

328

4.9 56.22

+50

4.0 57.12

329

3.9 57.22

61.12

329.50 4.3 56.82

330 5.3 55.82

+50 6.9 54.22

B.M. 6.21 54.91

+80 7.6 53.52

+84 * 53.9

331 6.9 54.22

+50 7.0 54.12

332 5.4 55.72

+50 3.4 57.72

333 1.9 59.22

60

Set B.M. Nail in power S.W. Cor. Haines & Grand Ave.

check on B.P.-N.E. Cor. Ingraham & Grand Rec. Elev = 55.85

B.M.	54.91	
+	6.51	
M.I.	61.42	
-	5.61	
	55.81	B.P. - Elev. 55.85

61.12

333+50

0.7

60.42

TP

10.35

71.36

0.11

61.01

334

9.6

61.76

+25

8.3

63.06

+50

8.6

62.76

335

8.1

63.26

+50

7.1

64.26

336

6.2

65.16

+50

5.3

66.06

337

4.4

66.96

+50

4.4

66.96

337+96

3.9

67.46

Edge Price.

71.36

338

3.9 67.46

+36

2.6 68.76

+50

2.7 68.66

+75?

2.8 68.56

B.M.

6.72

75.58

2.50

68.86

339

6.8 68.78

+50

6.4 69.18

340

6.1 69.48

+50

5.3 70.28

341

5.1 70.48

62

Edge of Pavc.

75.58

341+50

4.6 70.98

342

4.1 71.48

+50

4.1 71.48

343

3.7 71.88

+50

3.4 72.18

+60 - 16' LT
Rim Sew. M.H.
+60 - 16' LT
Fl. line sewer

3.2 72.38

13.7 61.88

344

3.2 72.38

IT

9.38

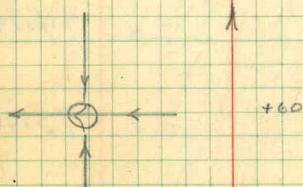
81.76

3.20

72.38

+50

9.2 72.56



81.76

345 8.5 73.26

+16 8.3 73.46

+20 8.8 72.96

+50 8.5 73.26

346 7.8 73.96

+50 7.0 74.76

347 6.7 75.06

+50 6.4 75.36

348 6.0 75.76

+50 5.6 76.16

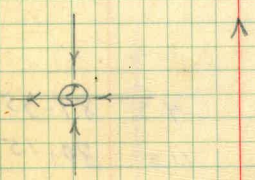
+75⁸ 5.8 75.96

Edge Conc. Pave.

81.76

348+959		5.6	76.16
349		5.3	76.46
+02		3.6	78.16
+50		3.3	78.46
350		2.7	79.06
+50		1.7	80.06
+61-15' Lt		2.0	79.76
Rim Sew. M.H.		9.0	72.76
+61-15' Lt			
Fl. line 30w			
351		1.2	80.56
+50		0.3	81.46
TP	10.07	91.65	0.18
			81.58

Edge Conc. Pave.



91.65

352 7.2 82.45

+30. 8.7 82.95

+50 7.6 84.05

353 7.1 84.55

+50 6.1 85.55

354 4.9 86.75

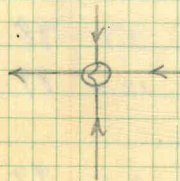
+11-16.74
Rim Sew. M.H. 4.3 87.35

+11-16.74
Fl. line Sew. 11.5 80.15

+25 4.0 87.65

+50 3.8 87.85

355 1.9 89.75



91.65

TP

10.94

102.29 ✓

0.30

91.35 ✓

355+50

11.0

91.29

356

9.0

93.29

+50

7.2

95.09

357

5.6

96.69

+50

3.9

98.39

+61-15LT

Rim Sew. M.H

3.7

98.59

+61-15LT

Fl. line Sew.

12.4

89.89

358

2.5

99.79

+50

0.9

101.39

TP

11.31

112.99 ✓

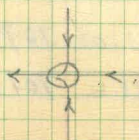
0.61

101.58 ✓

359

10.1

102.89



112.99

359.50 8.6 104.39

+65 8.5 104.49

+67 7.7 105.29

360 6.7 106.29

+50 4.8 108.19

361 2.5 110.49

+10 - 154
Rim Sew. M.H. 3.0 109.99+10 - 154
El. line Sew. 11.6 101.39

+50 0.8 112.19

TP 8.04 120.42 ✓ 0.61 112.38 ✓

362 6.5 113.92

+06⁹ B.C. 5.8 114.62 ✓+46²⁵ 4.9 115.5 ✓

B.M. 1.45 118.97 ✓



Edge Conc. Pav.

Set B.M. Top of F. Hyd. S. E. Cor. Haines & Beryl

B.M.	7.98	126.95	112.97
362+84 - 19 ⁵ LF Rim Sew. M.H.		10.5	116.45 ⁵
Fl. line sewer		16.9	110.85 ⁵ (c. 4 deep)
+			
362+86 ²⁴ F.C.		10.9	116.85 ¹
363		10.7	116.25 ³
+ 30 gutter		10.2	116.75 ⁸
+ 30 curb		9.5	117.45 ⁵
+ 16 ⁶³		8.8	118.15 ²
364		7.5	119.45 ⁵
+ 45 - 10 ⁵ LF Rim Sew. M.H.		7.1	119.85 ⁹
+ 45 - 10 ⁵ LF Fl. line Sew.		14.0	112.95 ¹¹³⁰
+ 50		6.2	120.75 ⁸



	126.95			
365		5.0	121.95 ^{122.0}	
450		3.8	123.15 ²	
70 ¹ & conc. walk		3.3	123.65 ⁷	
Fl. line of box culv. 50 x 0 ⁵ (inside dimes)		4.4	122.55 ⁶	
365 + 74 ⁶⁵ L.		3.1	123.85 ⁹	
TP	12.32	136.70 ✓	2.57	124.38 ✓
366		12.0	124.70	
+ 77 - 4 ^{RT}				
Rim Sew M. H		7.1	129.60	
77 - 4 Fl line sewer		13.9	122.80 (68 deep)	
367		5.5	131.20	
367 + 65 ²³ L.		1.5	135.20	



136.70

+74⁵ - 18²⁴

Fl. line 24" Cont. pipeculv.

6.0 130.70

367+79⁸⁸ B.C.

1.6 135.10

368 (contwalk)

1.5 135.20

+25 " "

1.3 135.40

+50

0.8 135.90

TR

12.70

149.72 ✓

0.68 136.02 ✓

369

11.1 137.62

370

6.9 141.82

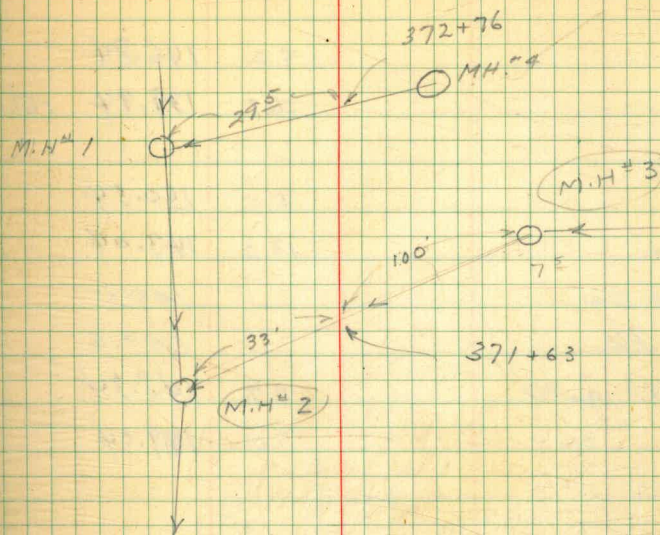
+75⁵⁰ 1.

3.6 145.12

371

2.2 146.52

	148.72		
371+03 ² curb	2.3	146.42	
" gutter	2.9	145.82	
+ 40	1.8	146.92	
+ 60	1.5	147.22	
+ 77	1.8	146.92	
372	2.1	146.62	
+ 88	2.1	146.62	
+ 25	1.7	147.02	
+ 25-9.7R.		147.0	
+ 63.5-16R		146.9	
TP	7.55	156.04	0.23
B.M.	5.46	150.58	
M.H. #1 Rim (see sketch on opposite page)	8.4	147.64	
Fl. line	15.1	140.94	



Top of gate stem - 3.1 to bot. of pipe
 " " " " for fire hydr. - 2.8 to bot. of pipe

Set B.M. Top F. Hyd. N.E. Cor. Loring & Foothill Blvd

		156.04		
M.H.#2				
Rim		9.2	146.84	
Fl. line		16.1	139.94	(6.9 deep)
M.H.#3				
Rim		5.5	150.54	
Fl. line		13.0	143.04	7.5 deep
M.H.#4 Rim			148.5	
" Fl.			141.6	
372+98 ² gutter		7.7	148.34	
" curb		7.0	149.04	
373+1364 B.C.		6.5	149.54	
+8262 F.C.		3.8	152.24	
374		3.0	153.04	
TP	13.07	169.05	0.06	155.98
375		12.3	156.75	
+50		10.3	157.75	

169.05

376			8.4	160.65
+50			5.9	163.15
377			3.9	165.15
+50			1.0	168.05
TP	13.03	181.94	0.14	168.91
378			11.3	70.6
+50			8.8	73.1
379			6.3	75.6
B.M.			2.46	179.48
+50 ³⁸			4.5	77.4
+62			4.2	77.7
TP	13.89	194.75	0.08	181.86
+68			11.3	83.4
+81			9.9	84.8
380			5.8	88.95
TP	13.01	207.67	0.09	194.66
+25			12.8	194.87
+41			10.6	197.07
+75			4.4	203.27

B.M. Top of E. Hyd. Plug - Turmaline Foothill - El. 179.47

207.67				
381			5.8	201.87
+60			7.5	200.17
382			5.0	202.67
+25			3.1	204.57
TP	13.84	220.42	0.09	207.58 ✓
+60			8.8	210.62
TP	12.79	233.14	0.07	220.35 ✓
+91			3.4	229.74
383			3.4	229.74
+32			5.1	228.04
+47.3			4.5	228.64
+62			3.5	229.64
+68			2.0	231.14
B.M.	12.86	244.94	1.06	232.08 ✓
+73			10.6	234.34
+78			3.6	241.34
+88			0.6	244.34
TP	12.66	257.33	0.27	244.67 ✓
384			9.9	247.43
+30			0.4	256.93
TP	12.60	269.77	0.16	257.17 ✓
+60			6.4	263.37
+75			1.5	268.27
TP	9.73	279.18	0.32	269.45 ✓
+85			8.6	270.58

curb line

Same elev. as conc. pave - 1' Rt.

curb line

Set B. M. Top F. Hyd. Windsor Dr. & Tourmaline

279.18

385 5.8 273.38

ck. 5.8 273.38

+35 4.7 274.48

+61⁰⁰ < 7.5 271.68

+93⁷⁰ < 5.6 273.58

city crew excavating beyond 385+93⁷⁰ for 16" line

B.M. 10.27 268.91 ✓

Hill Jan. 17, 1941

B.M. 12.08 280.99 268.91

285+61 9.3 271.69

+77 8.6 272.39

+93 7.0 273.99

386+08 5.5 275.49

+26.8 4.61 276.38

+32.8 4.00 276.99

TP 12.88 292.94 0.93 280.06

TP 4.82 297.60 0.16 292.78

387+06.7 0.66 296.94

+14 3.05 294.55

+34 12.31 285.29

+37 14.40 283.20

B.M. 0.65 296.95

check on sta 2+00 - Pacific Beach Pipe line.

Set B.M. on R.P. Hub 40' Rt of old 2x2 hub sta 389+99.29

Hub

on original Ground
Top of End of 16" Pipe

Top of Pipe

Top of Conc. wall of Reservoir

Top of 16" Inlet Pipe

Floor of Reservoir

Flow Line of outlet

Cross on Conc. Wall by Gate

Cross-section of Causeway Embankment.

El. Sta 164200	5.6	6.8	1.2
43' Lt		4.8	+2.0
51' Lt		6.8	0.0
70' Lt		7.2	-0.4
11' Rt		4.9	+1.9
17' Rt		7.4	-0.6
37' Rt		7.7	-0.9

El. 175400	5.4	6.6	1.2
46' Lt		5.0	1.6
54' Lt		8.9	-2.3
74' Lt		9.2	-2.6
11' Rt		5.0	+1.6
18' Rt		8.0	-1.4
21' Rt		9.2	-2.6
40' Rt		9.2	-2.6

1/13/41

Hill.
Doper
Brooks
Kudgersen

79

Salt marsh (See Page 79 for Depth of water along Causeway)

Salt marsh

" "

Salt marsh

" "

High water line (approximate)

Salt marsh

" "

El. 213+00	4.0	5.1	1.1
45' LT			3.1 +2.0
53' LT			6.7 -1.6
60' LT			9.4 -4.3
83' LT			9.4 -4.3
90' LT			12.1 -7.0
14' RT			3.4 +1.7
21' RT			6.4 -1.3
29' RT			9.4 -4.3
50' RT			9.9 -4.8

El. 245+00	3.6	5.1	1.5
43' LT			3.5 +1.6
49' LT			6.4 -1.3
61' LT			9.7 -4.6
120' LT			12.1 -7.0
16' RT			2.9 +2.2
22' RT			6.7 -1.6
29' RT			9.5 -4.4
53' RT			11.9 -6.8

(See Page 79 for depth of
water along Causeway)

High water line (approximate)

Salt marsh

Mission Bay water level - 1/13/41 at 3.53 P.M.

High water line (approx.)

Salt marsh

High water line (approx.)

Mission Bay water level 1/13/41 at 3.37 P.M.

High water line (approx.)

Water level 1/13/41 at 3.40 P.M.

1/28/41
Hill

Depth to water along Causeway
Sta # Loc. (Depth to Water) Tide Time
(Below Berm)

Berm 213+00	7.2	+1.0±	3:30 P.M.
Berm 213+00	6.2	+6.0	11:00 A.M.
Berm 164+00	6.4	+1.0±	4:00 P.M.
Berm 164+00	6.4	+6.0	11:00 A.M.

Loc. W. mains, Gas Mains etc on Harms

Sta # Loc.	4.0	47.0	43.0
910+51		5.1	41.9
+73 +77		4.5	42.5
219+00 60th	1.8	48.2	46.9
318+50		1.5	46.7
322+58		2.0	46.2
320 #	4.6	57.3	52.7
325+72		5.2	52.1
322 #	3.1	52.8	53.7
320+25		3.3	55.5
331+02		4.5	54.3
331+30		4.6	53.2
331+60		4.7	53.1
335+50 #	8.2	72.5	64.3
335+25		8.1	64.4
335+22			" 1.5

79

Date 1/28/41

" 1/29/41

" 1/28/41

" 1/29/41

(See page 78)

+1.7	+1.7
7.2	6.2
-5.5	-4.5

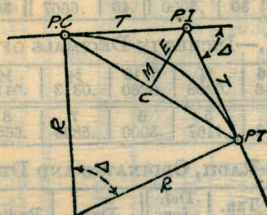
+1.9	
6.4	
-4.5	-4.5

80

785+58			8.1	64.4	1" 905 2.1 d.
786+64			6.7	65.8	6" 905 2.2 deep
786+70			6.0	66.5	nothing/100 905
787+47			5.6	66.9	2.7 deep
789+34			3.5	69.0	1" 905 2.2 deep
789+67			2.3	69.2	3/4" W. 0.9 D.
791+00 C. offset	4.9	76.2		71.3	
791+88			5.1	70.8	could not find
797+69			3.9	72.3	1" 905 2.1 D.
798+50 C. offset	7.2	98.7		91.5	
798+75			6.6	92.1	1" W D=20
799	6.0	109.2	x	103.2	
798+77			6.5	102.7	1" W 0.7 D.
799+20			3.7	105.5	nothing W
799+72			4.1	105.1	1" W D. 10
799+00 offset	4.8	62.0		57.2	
799+11			4.7	57.3	3/4" 905 D. 2.5
799+27			4.8	57.2	1" 905 20"

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



CURVE FORMULAS

- Radius= $R = \frac{50}{\sin \frac{D}{2}}$ (1) Degree of Curve= D and $\sin \frac{D}{2} = \frac{50}{R}$ (2)
- Tangent= $T = R \tan \frac{\Delta}{2}$ (3) Length of Curve= $L = 100 \frac{\Delta}{D}$ (4)
- Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$ (5) $= R \text{vers} \frac{\Delta}{2}$ (6)
- External= $E = T \tan \frac{\Delta}{4}$ (7) $= R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)
- Long Chord= $C = 2 R \sin \frac{\Delta}{2}$ (10) $\Delta = \text{Central Angle}$

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.—Sta. 161+60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $\div 8 \frac{1}{2} = 414.49$ ft. From Table V correction = .36 or $T = 414.85$ ft. P. C. = Sta. P. I. - $T = 157 + 45.50$. Also from (4) $L = 746.00$ and P. T. = Sta. P. C. + $L = 164 + 91.50$.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = $158 - \text{Sta. P. C.} = 54.50$, hence offset = $7.27 \frac{54.50}{100} = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $\frac{54.50^2}{2 \times 688.26} = 2.16$ ft.

Deflections.—Deflection angle = $\frac{1}{2} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For c ft. = (in minutes) $.3 \times C \times D^\circ$ or = defl. for 1 ft. from Table III $\times C$. For Sta. 158 of above curve = $.3 \times 54.5 \times 8 \frac{1}{2} = 136.2'$ or $2^\circ 16.2'$, or $= 2.50 \times 54.5 = 136.2'$ from Table III. For Sta. 159 deflection angle = $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8 \frac{1}{2} = 91.27$ and from Table V correction = .10 or $E = 91.37$ ft. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $\div 42 = 5.5$ or $D = 5^\circ 30'$.

2018
1994
9012
2000

3333
1.5 / 500 333
45 1668
50 333
999

3.4
12
4
34
40

02.9
3
54

DISTANCES FROM CENTER OF ROADWAY FOR
CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) * 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

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