

1669

THE
BIBLE

EXPLAINED

BY
J. W. BAKER

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 Single Track Embankment.

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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1669

CITY ENGINEER'S OFFICE

This Field Book is manufactured of a High Grade 50% Rag Paper having a WATER RESISTING SURFACE, and is sewed with Bing Special Enamel Waterproof thread.

Made in U. S. A.

C

F

10
11
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35
36
37
38
39
40

E
to be
of road
examp
30.6

La Dorna Dr. (Extended) 27-

Pipe Line Montezuma Person & Llagos # 78

Alignment Montezuma Road C-Line
(Mission Valley Road Est.)

15+85.05 P.O.T

12+67.81	FC	6° 06'	17.25
+50		5° 46.25'	28.87
12+0		4° 50.80'	
+75		4° 22.04'	
+50		3° 55.34'	
+12		3° 13.22'	
11+0		2° 59.90'	
+50	POC	2° 04.45'	
10+0		1° 09'	
+50		0° 12.56'	
9+18.42 = E			
9+37.77	BCR		

R = 6 = 1100'
L = 4 31939'

A 12.12'
HLR 1550
T 165.65
L 230.04
D 11089

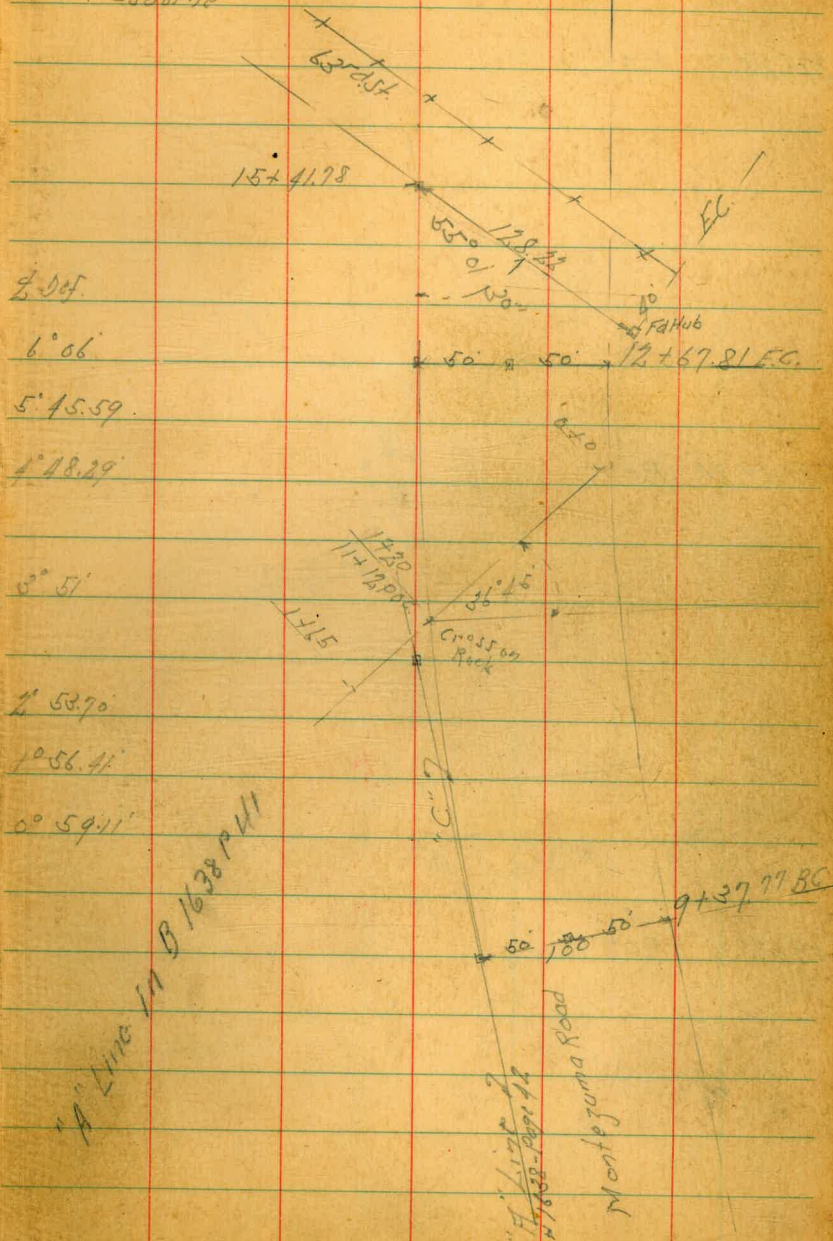
N.L. Sta. →

July 6-1944

S15507
811N
056000

Indexed
C.S. 15

1



Montezuma Road "C" Line

23

27+25.00 P.O.T

22+39.86 P.O.T

19+38.96 P.O.T

2

N. Montezuma Road "C"

23+06.26
Hail Board

1.54
1.83

7.26

19+30.98

76
236

149.58

904/4

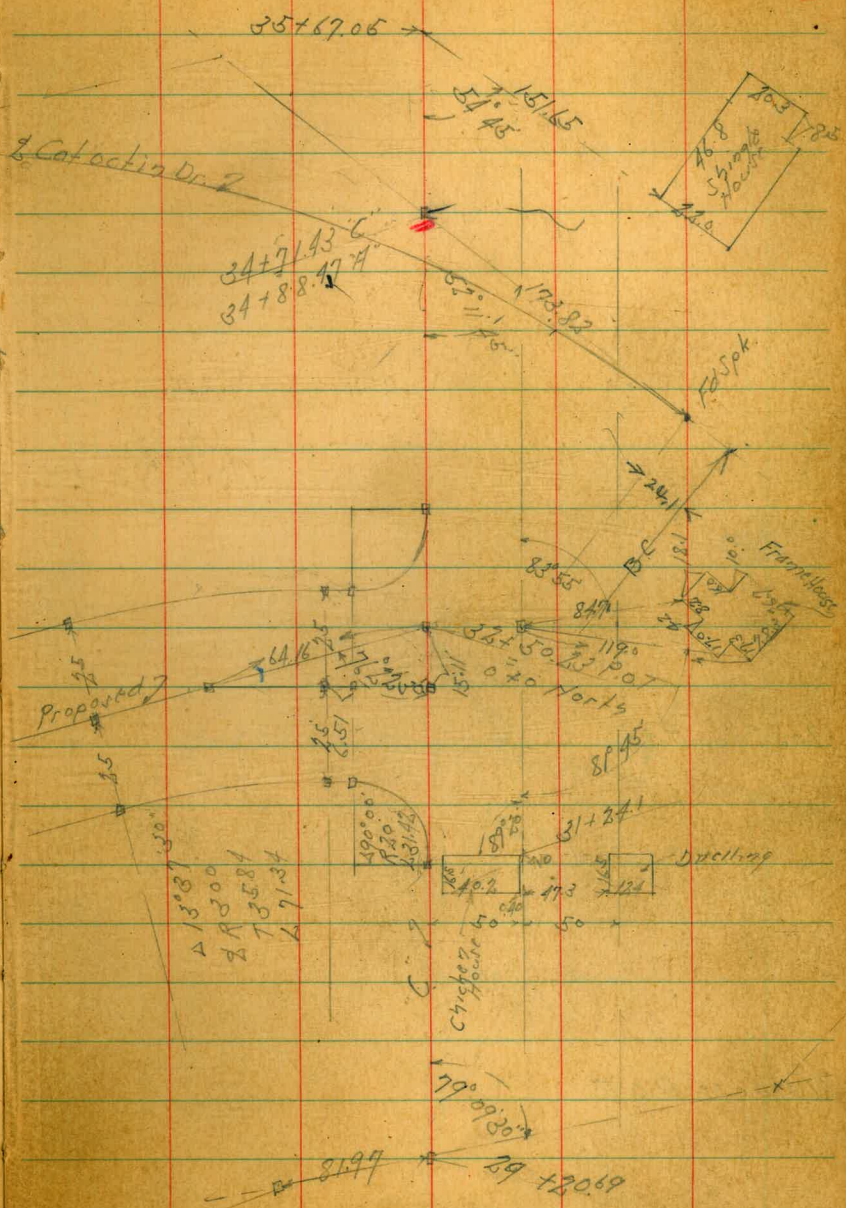
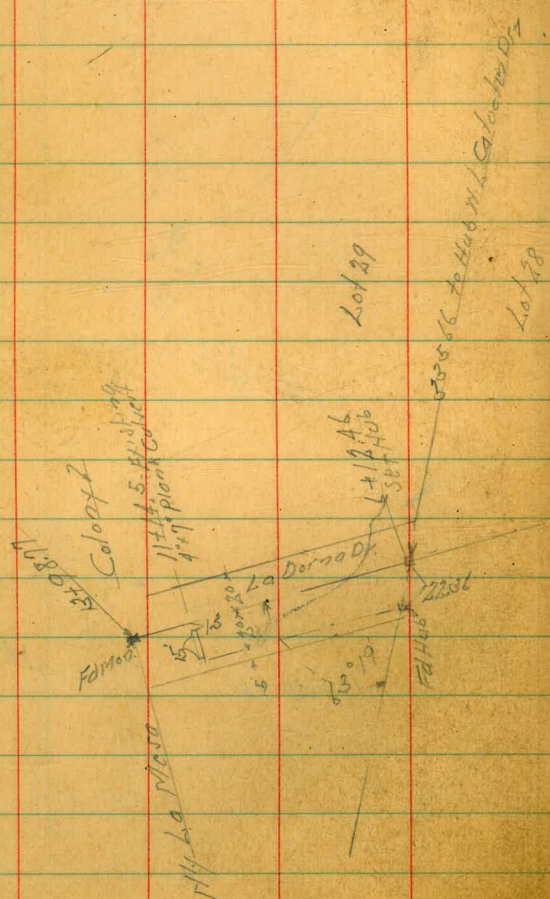
24.29

Montezuma Road "G"

34+71.43 P.O.T. = 34+88.47 "A"

32+20.50 P.O.T.

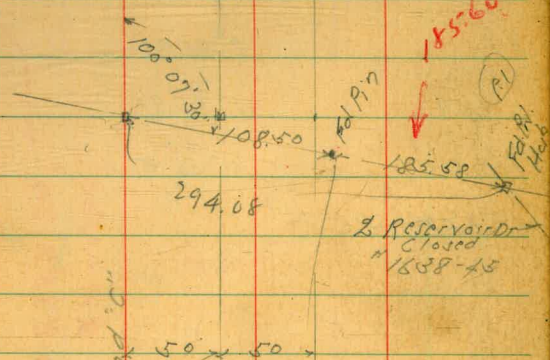
29+25.00 P.O.T.



39+82.71 P.O.T

36+40.00 P.O.T

39+82.71



1638
45

18560

2 Reservoir Dr
Closed
1638-45

128.00
57.15
55.60

Montezuma Road C

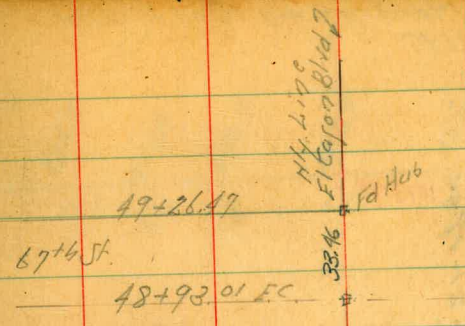
48+93.01 F.C.	6° 43.75'	14.94
+50	5° 52.75'	2 51.72
48+0	4° 53.48'	
+50	3° 54.2'	
47+0	2° 54.93'	
+50	1° 55.66'	
46+0	0° 56.39'	

A 13° 27' 30"
 NLR 1450
 T 171.07
 L 340.57
 D 1.1854

4R = 1500'
 L = 4352.34'

15+5292 BC Lt.
 41.77

15+02.80



Cross Section Monteguma Road & Line
9+37.77 to 99+26.17

Station	9+50	9+75	10+00	10+25	10+50
Line	4637	47218	47799	48218	48799
Reduced & Plotted Paper Profile	7-21-1944	8-5-44	10+10864	10+13283	10+15703
Line	9+75	9+8445	9+8445	9+8445	9+8445
North	9+37.77	B.C. Pt. = 9+48±2			
B.M.	0.94	160.80	459.86		

57 ft W N
12+32.63
H.L. line
1653-59

429.8	435.8	442.9	449.2	453.9	456.1	458.6	458.4
31.0 100	25.0 75	17.9 50	11.6 25	6.9	2.7 25	2.2 50	2.4 50
430.8	437.9	444.3	449.3	454.1	455.6	458.5	458.2
30.0 100	22.9 75	16.4 50	11.5 25	6.7	5.7 25	5.0 50	4.1 50
432.0	438.1	444.3	450.3	453.4	455.8	456.9	457.3
28.8 100	22.7 75	16.4 50	10.4 20	7.4	6.0 25	5.9 50	5.4 50
432.5	441.5	449.1	450.7	452.0	455.6	457.2	458.4
28.5 100	19.3 25	17.7 50	10.1 15	8.8	6.2 25	5.9 50	5.1 50
432.8	440.2	442.0	446.3	450.5	455.4	456.6	457.2
28.0 100	20.1 25	18.8 50	14.5 25	10.3	5.1 25	4.6 50	3.6 50
				160.80			

Soly 13.44
5.500
81.00
0.8600

6

11+50

11+53⁸⁰

25/9

11+25

11+29⁶¹

11+19

11+17⁰³

Prop Culvert on Skew Very little Drainage From S

11+0

11+05⁴¹

10+75

10+81²²

160.80

451.2

449.2

445.8

442.6

442.8

444.1

448.9

454.2

455.6

96

116

150

182

180

167

119

66

57

444.1

440.7

438.6

438.3

441.3

447.2

453.4

456.7

457.1

167

201

222

225

195

67

71

71

71

71

71

71

71

71

430.2

432.6

436.1

439.6

441.6

444.8

448.7

450.5

206

282

247

212

192

160

121

106

106

106

106

106

435.1

433.6

436.6

443.5

451.4

455.2

457.9

456.9

257

272

242

172

96

56

56

56

56

56

56

56

56

428.2

434.5

439.6

447.5

453.7

456.3

456.4

457.3

236

263

212

183

71

45

45

45

45

45

45

45

45

160.80

+67.81 FC ~~576~~ 12+67.81

+50 ~~457.75~~ 12+50.52

TP 3.79 462.66 0.94 459.86 ^{0.05/45}_{75 21} 12+25

+25 ~~457.75~~ 12+26.38

12+0 ~~457.75~~ 12+0.3

11+75 ~~457.75~~ 11+78

460.80

△

△

PA

8

457.6 460.3 458.6 458.1 458.2 457.6 457.5 458.6
58 32 497 55 54 60 8 50
80 75 50.074.5 75 75 75 75 75

458.2 458.0 458.4 458.3 457.5 457.4 457.5
54 56 52 43 61 61 61
70 50 75 75 75 75 75

105.65

459.9 457.9 458.7 457.1 459.0 456.9 454.9 456.1
99 79 21 67 68 63 59 47
75 50 75 75 75 75 75 100

457.1 457.1 457.3 456.4 455.4 453.6 453.1 457.0
87 87 75 41 54 77 77 88
70 50 75 75 75 50 75 100

454.9 455.2 453.8 450.9 449.6 449.5 450.0 457.2
59 46 70 99 112 113 108 84
85 70 50 75 75 75 50 100

460.80

Montezuma Road C line

+50

+25

47 ft. 0/2 = Anchor Pole

14+0

+50

13+0

468.65

Lt.

Z

Rt.

455.3

456.5

457.9

456.4

456.9

457.4

457.4

8.0
70

7.1
50

5.7
25

7.2
25

5.7
25

5.0
50

5.0
50

457.0

455.6

456.0

456.4

459.1

457.7

459.4

6.6
70

8.0
50

7.6
25

7.5
25

4.5
25

5.5
50

4.5
70

457.0

457.5

457.3

456.9

457.7

457.3

459.0

6.6
70

6.1
50

6.0
25

6.7
25

5.0
25

6.0
50

7.0
70

456.9

458.4

458.4

457.5

458.9

459.0

459.4

6.7
70

5.2
50

5.2
25

6.1
25

4.7
25

4.6
50

4.8
70

457.8

458.1

459.5

458.7

458.3

459.0

457.8

6.8
70

5.4
50

4.1
25

4.9
25

5.3
25

4.8
50

5.8
70

468.65

750

1670

TP

619

162.47

7.37

456.28

07 Hub
1518.05
Mark 3 line

750

1570

1475

163.65

457.4	457.3	457.2	457.5	457.4	457.7	457.7
5/60	5/60	5/60	5/60	5/60	5/60	5/60

457.2	456.8	456.8	456.8	457.4	457.7	457.7
5/60	5/60	5/60	5/60	5/60	5/60	5/60

162.47

455.1	454.6	457.0	456.7	457.2	457.2	457.5
8/70	9/50	6/25	6/25	6/25	6/50	6/70

456.0	456.2	455.9	456.8	457.5	457.2	457.2
7/70	7/50	7/25	6/25	6/25	6/50	6/70

457.2	457.2	457.8	459.2	457.3	457.5	458.7
6/70	6/50	5/25	7/25	6/25	6/50	6/70

163.65

19+0

457.35

+50

457.35

18+0

457.35

+50

457.35

17+0

457.35

462.47

61

462.47

7

81

11

457.3

5.3
60

457.3

5.3
60

457.3

5.3
60

457.7

5.8
60

457.7

5.8
60

457.8

5.8
60

457.8

5.8
60

457.2

5.3
60

457.3

5.3
60

457.4

5.4
60

457.4

5.4
60

457.7

5.8
60

458.4

5.8
60

458.5

5.8
60

457.0

5.5
60

457.0

5.5
60

457.7

5.8
60

457.7

5.8
60

458.2

5.8
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458.5

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60

458.6

5.8
60

457.3

5.3
60

457.3

5.3
60

457.5

5.5
60

458.0

5.5
60

458.1

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60

458.4

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60

458.4

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457.5

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457.5

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457.6

5.6
60

457.9

5.6
60

457.9

5.6
60

458.2

5.6
60

458.2

5.6
60

462.47

Montezuma Road "C"

North Line
Stations

750

197.39

2150

197.35

750

197.35

2040

197.39

TP

2.09

459.59

4.97

457.50

on Hub
19+28.96
North line

19+50

197.35

462.47

57. ^{459.6}

2

PK

12

452.7

$\frac{6.9}{60}$

452.8

$\frac{6.8}{50}$

453.2

$\frac{6.9}{25}$

453.4

$\frac{6.2}{25}$

453.4

$\frac{6.3}{25}$

453.7

$\frac{5.9}{50}$

453.7

$\frac{5.9}{50}$

454.3

$\frac{5.3}{60}$

454.3

$\frac{5.3}{50}$

454.6

$\frac{5.0}{25}$

454.9

$\frac{4.7}{25}$

454.8

$\frac{4.8}{25}$

455.0

$\frac{4.6}{50}$

455.1

$\frac{4.5}{50}$

455.5

$\frac{4.1}{60}$

455.3

$\frac{4.0}{50}$

455.5

$\frac{4.1}{25}$

455.9

$\frac{3.7}{25}$

455.9

$\frac{3.7}{25}$

456.2

$\frac{3.7}{50}$

456.5

$\frac{3.7}{50}$

456.4

$\frac{3.2}{60}$

456.4

$\frac{3.2}{50}$

456.6

$\frac{3.0}{25}$

456.6

$\frac{3.0}{25}$

456.8

$\frac{3.2}{25}$

456.8

$\frac{3.2}{50}$

456.8

$\frac{3.2}{50}$

459.59

457.3

$\frac{5.2}{60}$

457.3

$\frac{5.2}{50}$

457.3

$\frac{5.2}{25}$

457.5

$\frac{5.0}{25}$

457.5

$\frac{5.0}{25}$

457.7

$\frac{4.8}{50}$

457.6

$\frac{4.7}{50}$

462.47

+75

448.1	447.2	440.7	435.7	438.9	441.1	448.1	448.6
$\frac{74}{80}$	$\frac{70}{70}$	$\frac{108}{50}$	$\frac{158}{35}$	12.6	$\frac{74}{35}$	$\frac{54}{50}$	$\frac{39}{50}$

+50

450.0	449.4	447.1	440.0	438.9	438.3	438.6	439.3	439.1	440.6
$\frac{15}{90}$	$\frac{21}{60}$	$\frac{44}{50}$	$\frac{115}{35}$	$\frac{12.6}{25}$	13.2	$\frac{12.9}{25}$	$\frac{12.2}{50}$	$\frac{12.4}{80}$	$\frac{10.9}{75}$

TP 2.13 45145 10.27 44932 ^{09 Hub} ₂₂₊₃₉₈₆ _{Northside}

451.45

451.1	450.9	449.5	443.6	444.2	444.1	444.6	446.9
$\frac{8.5}{85}$	$\frac{87}{50}$	$\frac{101}{35}$	$\frac{160}{30}$	15.4	$\frac{15.5}{35}$	$\frac{15.0}{50}$	$\frac{13.7}{75}$

+25

451.0

452.0	451.5	450.9	448.3	446.2	450.0	450.0	450.6	450.7
$\frac{76}{85}$	$\frac{81}{30}$	$\frac{87}{37}$	$\frac{143}{25}$	$\frac{124}{15}$	9.6	$\frac{96}{35}$	$\frac{90}{50}$	$\frac{80}{50}$

+11

452.3	451.7	450.5	450.8	450.8	451.4	451.7
$\frac{72}{80}$	$\frac{79}{60}$	$\frac{81}{35}$	2.8	$\frac{88}{25}$	$\frac{82}{50}$	$\frac{79}{50}$

22+0

459.59

459.59

July 14-94

14

24710

4332	4371	4464	4481	4493	4504	4519	4524
222 100	193 80	100 50	83 25	71	60 25	45 50	10 80

780

4321	4332	4399	4466	4486	4514	4523	4528
272 100	222 80	165 50	98 25	78	50 25	39 50	56 80

750

4354	4332	4344	4380	4457	4490	4518	4530	4533
210 100	222 80	220 25	184 50	107 25	74	16 25	41 50	41 80

730

4457	4349	4341	4354	4423	4474	4513	4529	4534
107 130	215 80	223 25	210 50	141 25	90	51 25	35 50	32 80

TP

7.21 456.43 2.23 449.22

456.43

2370

4422	4413	4384	4361	4347	4355	4444	4502	4515	4515
93 100	107 85	181 60	154 50	168 70	160 25	71 80	14 25	0.0 50	0.0 50

451.45

151.45

4515

7.50

4502

6.5
80

4502

6.5
50

4502

6.5
25

4508

5.6

4515

7.0
25

4525

6.5
0

4529

6.5
0

26.10

448.8

7.6
80

449.2

7.2
50

449.6

6.8
25

4509

5.5

4521

7.0
25

4531

6.5
50

4533

6.5
80

7.50

4470

9.4
80

4480

8.1
50

4497

6.7
25

4513

5.1

4524

7.0
25

4528

6.6
50

4529

6.5
80

25.10

4453

11.4
70

4474

9.0
50

4499

6.5
25

4514

5.0

4520

7.4
25

4526

6.8
50

4529

6.5
80

29.50

4425

13.0
25

4463

10.1
50

4492

7.2
25

4502

6.2

4509

5.5
25

4516

7.8
50

4518

7.6
80

456.43

456.43

29+0

+50

TP 3.18 448.15 11.46 444.97

28+0

+50

27+0

45643

446.4

41

445.3

2

PI

433.0

435.5

437.2

438.6

439.6

441.0

441.5

15.2
100

13.7
50

11.0
25

9.6
25

8.6
25

7.2
50

6.7
50

438.1

439.7

441.5

442.8

443.7

445.5

446.0

10.1
20

8.5
50

6.7
25

5.4
25

4.5
25

2.7
50

2.2
50

448.15

443.4

443.9

445.3

446.5

447.4

448.3

446.7

13.0
50

12.5
50

11.1
25

9.9
25

8.0
25

8.1
50

7.7
50

447.1

447.8

449.3

450.0

450.7

451.5

451.8

9.3
50

8.6
50

7.1
25

6.1
25

5.7
25

4.9
50

4.6
50

449.9

450.2

450.5

451.2

451.7

452.4

452.5

6.5
50

6.2
50

5.9
25

5.2
25

4.7
25

4.0
50

3.9
50

456.43

21+0

TP 7.19 454.18 1.16 446.99

+50

36+0

448.2

+50

29+25

448.15

47

454.2

48

49

448.6

448.6

448.9

448.9

448.6

448.7

448.6

56
50

56
50

55
25

55
25

56
25

55
50

56
50

454.18

446.3

445.9

445.7

445.9

445.3

445.5

445.9

19
25

23
50

24
25

23
25

28
25

27
50

24
70

441.3

441.0

440.7

441.0

441.5

442.1

442.6

69
80

72
50

75
25

72
25

67
25

61
50

56
25

434.8

435.6

436.3

436.7

437.3

439.1

439.4

124
100

126
50

119
25

115
25

109
25

91
50

88
25

433.5

434.8

435.6

437.1

437.9

438.9

440.1

146
100

134
50

126
25

111
25

103
25

93
50

81
25

448.15

Montezuma Road "C"

+50

3370

+50

+20.50

596

448.22

on Hub North Line

3270

31750

454.18

Lt.

4542

Rt.

18

449.9

450.0

449.9

450.1

450.3

450.9

450.9

1/2
60

1/2
50

1/2
25

1/2

1/2
25

1/2
50

1/2
50

448.8

449.0

449.1

449.5

450.0

450.3

450.7

5/8
60

5/8
50

5/8
25

1/2

1/2
25

5/8
50

5/8
50

448.1

448.3

448.9

449.3

450.3

450.7

351.1

6/8

5/8
50

5/8
25

1/2

1/2
25

5/8
50

5/8
50

448.1

448.5

449.8

450.2

450.6

451.0

451.0

6/8

5/8
50

1/2
25

1/2

1/2
25

5/8
50

5/8
50

448.8

449.1

449.7

450.1

450.0

449.9

449.9

5/8
60

5/8
50

1/2
25

1/2

1/2
25

5/8
50

5/8
50

454.18

BM

5.35

449.23

09 012 HUS
36418.93
0126121
1638-49

3610

4574.2

+50

3510

TP

302

454.58

2.62

451.56

+50

+06

2.5 Pt of 2 = Power Pole

4574.2

3410

454.18

4511.3

LT

4511.1

450.8

450.3

450.1

RT

450.0

449.9

22
60

24
60

28
25

26
60

25
25

26
60

27
60

451.7

451.4

451.3

451.1

450.7

450.5

450.5

29
60

28
60

25
25

25
60

29
25

21
60

21
60

451.7

451.7

451.3

450.9

350.7

451.1

451.1

29
60

29
60

25
25

27
60

29
25

25
60

25
60

454.58

451.8

451.8

451.8

451.6

451.7

451.6

451.7

451.7

24
60

24
60

24
25

24
25

25
60

26
25

25
60

25
60

451.1

451.0

451.2

451.3

451.7

452.1

451.9

451.7

21
60

21
60

20
25

29
60

25
25

21
60

23
60

25
60

454.18

24 = 11/10
31 = 11/10
23 = 11/10

TP 0.36 417.86 12.67 417.50

3870

TP 0.70 430.17 12.97 429.47

750

442.4

3770

TP 0.44 442.44 12.58 442.00

36795

454.6

36745

RM

454.58

4.89

00/46
3674072

4215

57

421.1

430.2

419.8

4

419.6

PA

418.7

418.7

419.8

87
75

91
50

104
75

106

115
75

115
50

104
75

430.17

4310

429.2

428.9

428.5

428.4

428.4

428.4

114
75

132
50

136
75

138

140
75

140
50

140
75

440.4

439.4

439.1

438.1

437.8

438.3

437.9

20
75

50
50

50
75

43

46
75

41
50

45
75

442.44

444.4

443.9

443.1

442.8

442.0

441.7

442.0

103
75

107
50

115
75

118

121
75

129
50

126
75

449.7

449.6

449.0

447.7

447.0

447.4

447.4

19
75

50
50

56
75

69

76
75

72
50

78
50

454.58

+50

408.6

+25

TP

2.23

408.61

11.48

406.58

3940

+75

417.9

38+50

417.86

395.1	396.0	397.0	397.1	397.1	398.2	399.8	401.4	402.2
$\frac{13.5}{25}$	$\frac{13.6}{100}$	$\frac{11.6}{50}$	$\frac{11.5}{25}$	$\frac{11.5}{25}$	$\frac{10.4}{25}$	$\frac{8.8}{50}$	$\frac{7.2}{25}$	$\frac{6.4}{25}$

399.1	398.3	398.9	399.6	400.3	400.3	400.1	400.0	401.3
$\frac{9.5}{25}$	$\frac{10.3}{50}$	$\frac{9.7}{25}$	$\frac{9.0}{25}$	$\frac{8.5}{25}$	$\frac{8.5}{50}$	$\frac{8.5}{25}$	$\frac{8.6}{100}$	$\frac{7.5}{25}$

408.61

404.1	403.8	402.2	401.2	401.5	401.7	402.6
$\frac{13.8}{25}$	$\frac{14.1}{50}$	$\frac{15.7}{25}$	$\frac{16.7}{25}$	$\frac{16.4}{25}$	$\frac{16.7}{50}$	$\frac{15.2}{25}$

409.3	408.7	408.9	407.3	404.5	403.4	403.5
$\frac{3.6}{100}$	$\frac{9.2}{50}$	$\frac{9.0}{25}$	$\frac{10.6}{25}$	$\frac{12.4}{25}$	$\frac{14.5}{50}$	$\frac{14.4}{100}$

414.7	413.7	412.4	411.6	411.1	408.1	409.1
$\frac{3.2}{100}$	$\frac{1.2}{50}$	$\frac{5.5}{25}$	$\frac{6.5}{25}$	$\frac{6.8}{25}$	$\frac{9.8}{50}$	$\frac{8.0}{100}$

417.86

TP 12.91 443.02 0.71 430.11

4140

430.8

TP 10.82 430.82 0.63 420.00

+50

420.6

+25

TP 12.70 420.63 0.68 407.93

4040

396.3

10.20 398.41

on H46
39+82.7/
Hartshorn

39+75

40861

421.0	421.0	421.5	421.7	422.4	422.3	422.1
9.8 75	9.8 50	9.3 25	9.1	8.4 25	8.5 50	8.7 75

430.82

413.3	415.1	415.2	414.8	415.3	416.4	415.2	415.4
7.2 100	5.4 80	5.4 50	6.8 25	5.3	4.2 25	5.4 50	5.2 75

405.1	407.8	410.0	412.2	412.8	413.2	412.8	413.1
15.5 100	12.8 80	10.6 50	8.4 25	7.8	7.4 25	7.8 50	7.5 80

420.63

397.7	398.3	402.7	405.9	407.2	409.0	410.6	409.8
10.9 100	10.5 80	5.9 50	2.7 25	1.4	1.0 25	1.0 50	1.2 100

396.0	397.0	398.8	399.6	400.7	401.6	404.8	405.3	406.2	406.4
12.6 25	1.6 100	2.8 50	2.0 25	1.9	1.0 25	2.8 50	2.3 75	2.4 100	2.2 125

40861

150

TP 3.89 156.23 1.15 452.34

42+0

457.0

150

TP 10.99 152.49 0.52 442.50

42+0

443.0

414.50

143.02

41

452.1

41/50

452.1

41/50

452.1

41/55

456.28

452.2

40/25

452.4

38/25

452.6

36/50

452.7

35/50

452.1

19/55

452.1

19/50

452.3

17/25

451.8

22/25

451.6

24/25

451.6

24/50

451.7

23/50

450.0

10/55

449.8

11/50

449.5

15/25

449.0

50/50

448.7

52/25

448.1

57/50

448.0

60/50

453.49

441.6

11/25

441.7

15/50

441.7

13/25

441.3

17/25

441.0

20/25

440.5

25/50

440.4

26/25

439.5

13.5/25

430.0

130/50

430.4

136/25

431.1

139/25

430.4

136/25

430.3

137/50

430.4

136/25

448.02

46+0 46+01.64
STATIONING

2

452.42 0.0 21

45+0

450

38 ft of 2 = Power Pole

44+0

456.23

24

449.5

67
60

449.5

67
60

451.2

67
60

451.1

67
60

451.9

67
60

449.8

67
60

449.9

67
60

451.2

67
60

451.7

67
60

452.0

67
60

450.1

67
60

450.9

67
60

451.7

67
60

452.0

67
60

452.1

67
60

450.7

67
60

451.2

67
60

452.0

67
60

452.5

67
60

452.5

67
60

452.1

67
60

451.8

67
60

452.6

67
60

453.1

67
60

452.8

67
60

452.7

67
60

451.8

67
60

452.8

67
60

453.4

67
60

452.8

67
60

452.6

67
60

451.8

67
60

452.9

67
60

453.4

67
60

452.9

67
60

456.23

450 48160.22

4580

4870 48108.50

450 4756.78

50 ft of 2 - Power Pole

TP 1.85 157.97 311 152.12

4770 4705.06

46450 4653.34

2

456.23

452.9
50

452.9
50

452.9
50

453.4
46

453.87
410
8.1
HCB
E/Cajon

453.20
477
8.1 = Gutter

453.90
487
8.5 m Pav

453.94
402
1.50 on Pav

452.7
50

452.7
50

452.8
50

452.6
51

453.1
49
3.5

452.64
533
5.5
Pay 1st
Dist

453.29
458
0.9 Pav

452.7
50

452.3
57
3.0

452.0
60
2.5

452.0
60

452.2
50
2.5

452.6
51
5.0

452.59
539
3.6 = HCB
E/Cajon

451.95
60
3.6 = Gutter

450.6
50

450.5
57
5.0

451.4
48
2.5

451.4
48

451.4
48
2.5

451.5
47
3.0

449.9
65
5.0

449.8
64
5.0

450.2
60
2.5

450.9
53
3.3

451.4
48
2.5

451.6
46
5.0

451.6
46
5.0

456.23

49438.17

49+26.47 - F L 67 1/2 St

49428.17

49+16.47 - F C 6 67 1/2 St

B.M

4.20

453.97

S.H.B.P.
FIC 0100767
452.90

49404.71

48+19.01 - F C

459.97

L

L1

L

P1

453.9

454.56

454.07

454.10

454.54

454.62

453.60

11
503.31
2.503.90
3.76
2.60
Her3.87
25

3.43

3.35
254.37
50

453.5

453.66

453.00

453.86

454.40

454.55

453.83

45

50

1.31
1.48
Wick1.97
1.80
Guller
Pan4.11
25

2.57

2.42
254.14
50

452.85

453.36

453.96

454.35

453.97

512
504.61
25

4.01

2.69
254.00
50
Pan

459.97

Cross Section La Dorna Drive And
La Dorna Drive Extension to Montezuma Road
Sketch Pages

(New Sections in FB 1865
47
CB Walker 10-18-50)

+50

210

Plotted

+50

140

0+50

0+0 = N. to Montezuma Road C"

BM 2.08 150.30 448.22

Hpb
53+20.50
6-1-71
Page 18

indexed
as K.

L-X

8

R-E

Soll 17-44
S. 11505
81111
8077

27

437.1	440.0	442.9	444.0	444.2	445.3	
132 75	132 50	132 25	132 50	132 20	132 50	
441.8	440.4	442.5	444.3	445.8	446.4	446.6
85 100	99 75	78 50	60 25	45	39 20	50 50
						447.4
444.4	443.7	444.7	446.2	447.1	448.0	448.4
59 100	66 30	56 25	41	38 20	36 50	19 100
446.4	445.8	445.9	446.3	447.2	449.2	449.4
39 100	45 50	44 25	40	31 20	21 50	09 100
447.9	446.9	447.0	447.0	447.5	448.5	449.5
24 100	58 50	55 25	55	28 20	18 50	28 100
			450.30			

570

750

710

750

870

150.00

Lx

Lx

Px

439.7

442.0

444.9

445.7

447.5

10
50

8.5
50

5.9
50

1.6
50

2.0
50

435.0

438.2

441.7

443.8

446.0

15.3
50

12.1
50

8.6
50

6.5
50

1.5
50

433.5

435.7

439.0

441.9

444.2

16.8
50

14.6
50

11.5
50

8.4
50

5.1
50

433.8

436.2

438.3

440.9

443.5

16.5
50

14.1
50

12.0
50

9.4
50

5.8
50

436.0

436.8

439.7

441.8

443.7

14.6
50

13.5
50

10.6
50

8.5
50

6.6
50

150.00

640

+73

213 Lt - 2x5 1/2 2.5 Hedge

+72

217 Lt - 1/2 by Parry Pole

+65

= 1/2 10' Core Drive on Lt.

+60

+50

TP

9.08

453.45

593

444.87

5720

450.30

L

R

R

445.1

84
10

445.5

80
75

445.9

76
79

446.9

66

448.1

57
20

449.3

49
30

449.8

87
30

445.22

8.2
18.8

445.35

8.0
20

1/6

443.5

100
17

444.0

95
75

444.1

94
21

445.20

825
200

445.9

76

447.1

67
20

448.7

48
50

153.45

444.33

597
20

1/6

450.30

750

710

+50

+22

+18

6+12.46

6+05

6+04

24' Lt = 16" Pepper Tree

213 Lt = 2 + 11/4 25' Ho

6.39

07H06

5 1/4 8" Cobble Walk on Rt.

452.45

Lt

Z

447.6

448.5

448.6

448.1

449.0

449.5

449.2

450.0

450.8

59
40

55
20

59
22

54
20

45

40
14

3.53
1507 Wall

55
20

27
40

446.5

448.3

448.3

447.7

448.8

449.5

449.78

450.0

451.3

70
50

55
20

55
20

58
20

47

40
15

3.61
1507 Wall

35
20

28
50

446.0

447.1

448.3

448.5

449.09

449.2

450.5

75
50

64
20

56

49

4.36
15207 Wall

40
50

50

446.08

7.37
1195
1505 Wall

448.53

4.94
15208 Cobble
Wall

452.45

+13

+07

+03

208 Lt of Z - Sly Porter Patz

870

+85

+763

13875

Lt

Z

Rt

448.42

5.03
20.1 = 11/18
Cobb

448.40

5.05
20.1 = 11/18
Cobb

449.75

3.90
19.8 = Sly Conc
Cobb

448.5

5.0
40 = 1 1/4 Hour

448.5

5.0
25

448.40

5.05
20.3 = 6

448.2

5.3
20.3 = 90 Hr

449.0

4.5

449.3

4.2
20

449.6

3.9
25

449.89

3.56
15 = 11/18
Cobb

448.46

1.99
20.3 = Sly Conc
Cobb

458.75

+48 20.5 Lt = 1/2 12" Palm Tree

+40

+24 20.4 Lt = 1/2 15" Palm

+19

TP 3.14 451.56 5.03 448.42

+404 19.3 Pt: Sly Rice Fence

910

+93 21.3 Lt of 1/2 = Sly Porter Pale

+90

+50

8+23

453.15

Lt

S

Pt

447.47

4.09
19.5
19.5
60.1
20.12

447.59

5.97
19.6
19.6
17.3
60.1
451.56

447.4

447.7

447.8

448.4

448.6

449.2

449.7

51
40

58
25

57
26

51

49
15

46
20

50
30

449.42

4.07
19.7
19.7
Hyd

448.5

448.5

448.0

448.7

448.9

449.51

449.6

450.3

50
40

50
25

55
20

48

46
14.7
64

39
14.7
56

39
20

50
30

448.28

5.17
19.3
19.3
Hyd
60.1
451.56

453.15

1140

+75

+50

TP

+03

1040

+83

9450

6.18 448.67 9.07 442.49

1988 ft of $\frac{1}{2}$ " = Nly Wire Fence

11 ft of $\frac{1}{2}$ " = $\frac{1}{2}$ " 12" Elec Fenc

451.56

L

L

PL

429.1

196
50

434.2

145
25

441.4

70
15

440.6

8.1

440.5

82

442.5

63
20

444.9

68
20

4333

154
50

4374

110
25

4414

70
15

4409

78

4409

70

4434

50
20

4457

30
50

4366

121
30

4397

90
25

4415

72
15

4423

64

4446

11
20

4465

32
20

448.67

4416

100
50

4448

68
25

4454

62
20

4462

54
20

4468

88

4471

45
20

4472

11
20

4465

51
20

4471

45
25

4470

26
20

4476

40

4475

41

4480

36
20

4482

51
20

451.56

+50

TP 9.21 456.93 0.95 447.72

12+0

+50

+25

11+14.5

44867

St.

Z

H

447.3

448.0

448.7

448.7

448.9

96
4089
75

82

82
2080
55

456.93

443.3

444.0

444.5

445.0

445.6

446.4

54
4047
2542
15

37

51
2030
55

435.8

437.5

440.8

440.9

441.4

442.0

443.1

129
50112
2579
15

78

73
1467
2056
55

429.9

433.2

440.9

440.6

440.5

441.7

444.0

188
60155
2578
14

81

82
770
2047
50

436.85

439.95

9.82

8.72

1/2 outlet
1/2 inlet1/2 inlet
1/2 outlet

44867

La Dorada Orno

BM

3.38 448.18

on Hub
33+20.50°C
448.22

TP

8.01 451.56 8.08 448.55

TP

2.56 451.63 2.42 449.07

TP

7.47 451.49 12.91 444.02

+98.77 - N.L. La Mesa Colony

BM

2.65 454.28

on Mon
13+98.77

+50

12.0

456.93

41.

8

41

35

453.3

453.6

454.0

453.9

454.0

3.6
40

3.1
25

2.9

3.0
20

2.9
25

453.1

452.8

452.9

453.2

453.4

3.8
40

4.1
25

4.0

3.7
20

3.5
25

451.1

451.2

451.3

451.4

451.4

3.8
40

3.7
25

3.6

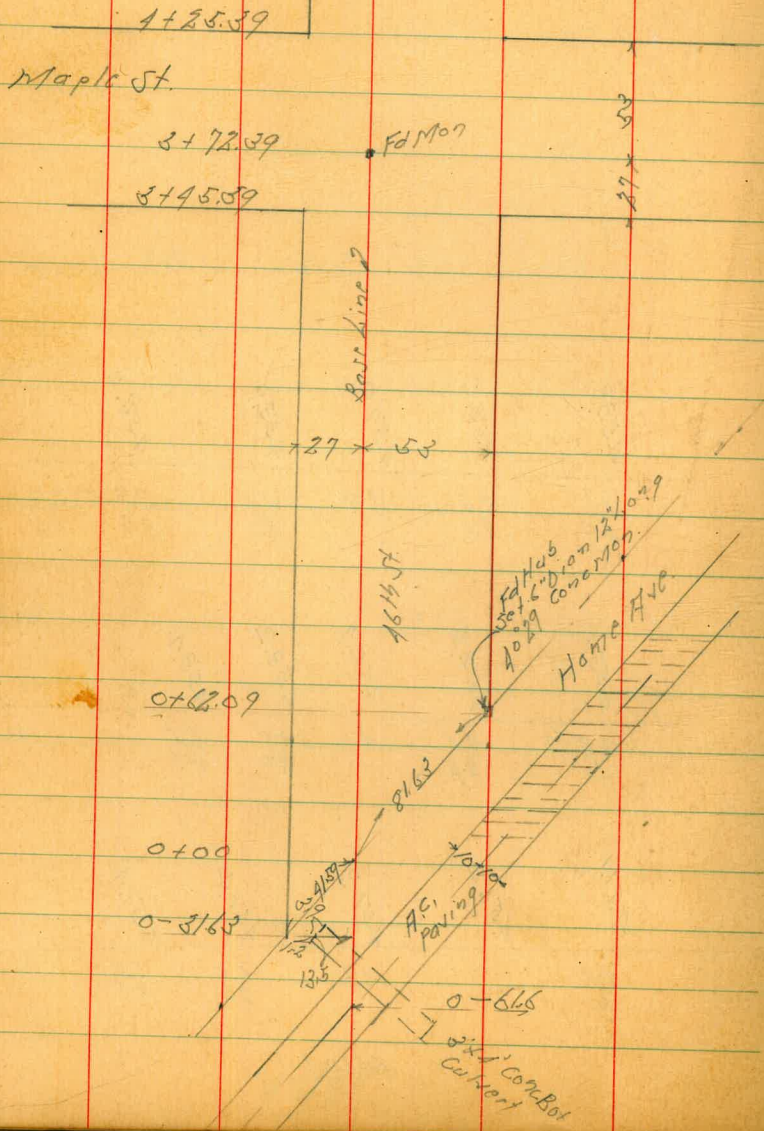
3.5
20

3.5
25

456.93

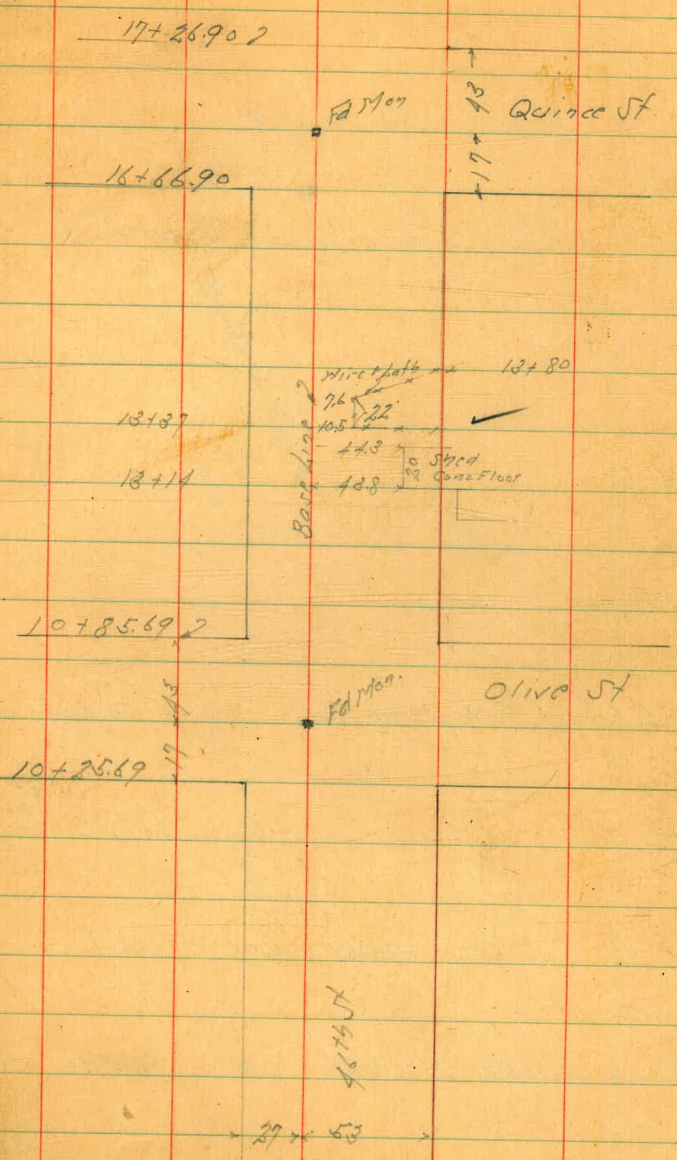
Cross Section 46 1/2 St.
Home Ave to Quince St
Levels Next Page

Indexed
CRK.



May 15. 45
S. 5507
Bliss
Asbornt
8099

36



TP 12.70 185.80 0.41 173.10

0+0 = N. 1/4 of Line of Home A/c

Profile 6-14-45

0-31.63

0-61.6 = 1/2 Par Home A/c Taken on line of paving

BM 4.21 169.30
 B.P. NE Cor
 Box Culv.
 Home A/c
 + 4.87

TP 10.40 173.51 0.77 163.11

TP 9.52 163.88 0.91 154.36

BM 7.22 155.27 148.05
 B.P. Ely Cor
 Box Culvert
 Home A/c
 + Fairmount

171.2
 +1.8
 40
 170.2
 +0.8
 27
 169.4
 169.4
 170.8
 +0.9
 13
 170.5
 +0.6
 39
 170.1
 170.1
 170.1
 171.20
 171.87

1695 1674 1657 1694
 -08 -29 -46 -09
 40 27 135 135
 1687 1667 1693
 -1.56 -0.88 3.58
 100 50 50
 170.1
 -0.2
 12
 170.1
 171.20
 171.87

173.51

Note: - Rt + Lt are rods + Above - Below
 Base Line

Lt.

Δ8

Rt.

1845
 $\frac{2229}{-198}$
 997

1909
 $\frac{2161}{-128}$
 2033

2097
 7.7

209.2
 $+6.0$
 13

214.2
 $+11.0$
 30

210.1
 $+6.8$
 38

210.3
 $+6.6$
 53

211.6
 $+7.9$
 57

32 = NY Rd
 23P

1791
 $\frac{2177}{-194}$
 983

1890
 $\frac{2080}{-95}$
 1985

1985
 12.9

2016
 $+3.1$
 13

203.2
 $+4.7$
 28

200.9
 $+3.4$
 35

2024
 $+3.9$
 53

202.0
 $+4.5$
 58

32 = NY Rd
 23P

211.39

1767
 $\frac{1942}{-157}$
 785

1826
 -4.8
 27

1924
 6.3

192.9
 $+0.5$
 13

192.1
 -0.3
 32 = NY Rd

192.4
 -0.2
 53

194.5
 $+2.1$
 57

198.69

1724
 -9.0
 50 = Bellport Mass

1762
 -4.8
 27

1810
 7.8

184.7
 $+3.7$
 13

183.4
 $+2.4$
 22 = NY Rd

182.6
 $+1.6$
 52 = FH Road

182.6
 $+1.6$
 58

1242
 $+0.3$
 40

1233
 -0.6
 27

1769
 11.9

1241
 $+0.2$
 13.55

126.7
 $+2.8$
 17

126.3
 $+2.6$
 21 = NY Rd

126.1
 $+2.5$
 15 = FH Road

123.5
 -0.4
 70

185.80

+50

2+0

TP 1290 211.39 0.20 198.49

+50

TP 1294 198.69 0.05 185.75

140

0+62.09 : Opp. H W Home Ave on Rt.

185.80

+50

+25.39 - N L Maple

+89.39 = Z Maple

BM

7.44

216.72

13 Mon
Maple + 4615

TP

12.77

224.16

0.00

211.39

+45.39 = S L Maple

240

211.39

✓ 172.2 -31.2 85	✓ 180.1 -28.3 81	✓ 205.3 -13.1 27	218.4 5.8	✓ 222.1 +8.7 13	✓ 235.9 +16.9 23	✓ 238.1 +19.7 42	✓ 238.4 +20.0 53	✓ 238.7 +20.0 58
---------------------------	---------------------------	---------------------------	--------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------

✓ 184.4 -33.8 97	✓ 158.7 -29.5 82	✓ 203.5 -14.7 27	218.2 6.0	✓ 226.5 +8.3 13	✓ 236.5 +18.2 31	✓ 236.2 +18.5 43	✓ 237.2 +19.0 53	✓ 237.2 +19.0 60
---------------------------	---------------------------	---------------------------	--------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------

+22.0
63-Top Cut
4-1/4 Road
60-El Road

✓ 186.0 -34.5 152	✓ 181.5 -39.0 114	✓ 183.9 -36.6 80	220.5 6.7	✓ 214.4 +6.1 13	✓ 226.6 +11.1 31	✓ 231.6 +9.4 41	✓ 229.9 +10.0 53	✓ 230.6 +10.0 53
----------------------------	----------------------------	---------------------------	--------------	--------------------------	---------------------------	--------------------------	---------------------------	---------------------------

+31.4
83-Top Cut
63-Top Cut
67-Top Cut
224.16

✓ 186.2 -29.8 80	✓ 184.2 -27.9 77	✓ 194.2 -15.2 48	209.4 2.0	✓ 213.5 +4.1 13	✓ 223.1 +13.7 46	✓ 223.7 +14.3 53	✓ 223.7 +14.3 58	✓ 226.8 +17.4 63
---------------------------	---------------------------	---------------------------	--------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------

80-Bot. Map
46-1/4 Road
58-El Road
63-Top Road

✓ 186.7 -15.0 53	✓ 191.6 -19.1 27	✓ 201.6 -19.1 27	220.7 9.7	✓ 216.7 +5.0 13	✓ 212.0 +15.3 33	✓ 216.1 +14.4 38	✓ 216.5 +14.8 53	✓ 212.3 +16.6 81
---------------------------	---------------------------	---------------------------	--------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------

46-1/4 Road
63-Top Road

211.39

7+0

253.9	253.3	270.0	279.1	280.2	281.9	283.8
-16.1 55	-6.7 27	5.0	+2.1 21	+1.2 40	+1.6 53	+1.8 85

+50

246.5	254.0	262.5	267.5	272.2	273.5	274.0	275.5
-16.0 46	-8.5 27	12.5	+5.0 13	+9.7 40	+1.0 53	+1.5 59	+1.3 62

274.95

TP 13.21 274.95 0.33 261.74

6+0

194.6	202.1	223.8	237.5	249.6	255.9	262.9	263.3	263.6
-55.0 175	-17.5 140	-25.3 53	-12.1 27	12.5	+6.3 13	+13.3 41	+12.7 53	+1.0 63

262.07

TP 12.60 262.07 0.10 249.47

TP 12.74 249.57 0.01 236.83

+50

191.7	202.3	221.7	234.7	240.7	253.1	253.7	253.9	256.7
-43.0 125	-32.4 80	-13.0 27	2.1	+6.0 13	+18.4 43	+1.9 63	+19.2 45	+22.0 57

236.84

TP 13.12 236.84 0.44 223.72

5+0

189.6	190.3	211.1	221.5	229.5	245.5	246.5	246.8	248.7
-51.9 110	-31.2 80	-10.4 27	2.7	+8.0 13	+24.0 44	+25.0 53	+25.3 59	+27.4 62

224.16

224.16

+98.5 56.7 Rt at B: 2 + W/4 224 294.30
2.5 Conc Walk

+150

9+0

TP 12.75 296.54 2.41 283.79

+150

8+0

7+50

TP 12.15 286.20 0.90 274.05
274.95

Lt B Rt

284.7
-3.1
40

285.0
-2.1
27

287.8
8.7

288.5
+1.0
13

289.5
+1.7
25-W/4 R.

291.2
+3.9
33

292.5
+4.7
60

280.7
-5.0
40

284.7
-3.0
27

285.7
10.8

286.5
+0.8
13

288.2
+2.5
29-W/4 R.

290.2
+4.5
53

290.7
+5.0
80

296.54

222.3
-5.8
40

222.3
-3.8
27

223.1
6.1

224.5
+1.4
13

227.2
+4.1
32-W/4 R.

229.1
+6.0
53

226.8
+6.8
61.8-H/4-Mobury
Rail

276.7
-9.4
40

274.2
-6.4
27

278.1
5.1

282.6
+1.5
13

285.5
+4.4
35-W/4 R.

286.2
+5.6
53

287.2
+6.8
63.5-W/4-Mobury
Rail

267.2
-8.3
40

269.2
-6.3
27

276.5
10.7

276.2
+2.7
13

284.0
+8.5
41-W/4 R.

285.0
+9.5
53

286.0
+10.5
65

286.20

461557

✓
 +25 23 1/2 ft of B = 1/2 + Fly 3.84 292.70
 3' Conc Walk
 27
 234
 96
 +16 42' Rt of B = 6' Fuc. Tree
 ✓
 +06 23 1/2 ft of B = 1/2 + Fly 4.31 292.23
 3' Conc Walk
 11+0

✓
 +93 46' Rt of B = 2 1/2" Fuc Tree
 +85.69 = N.L. Olive
 ✓
 +79 25 1/2 ft of B = 1/2 6" Pepper Tree

+55.69 = 1/2 Olive

B.M.

5.19

291.35

13 May
Olive +
461557

+25.69 = S.L. Olive

70+0

296.54

Lt.

B

Rt

42

↓
 291.9
 -11
 27

↓
 293.0
 3.5

↓
 294.1
 +1.1
 13

↓
 292.0
 +4.3
 53

↓
 291.5
 -12
 27

↓
 292.7
 6.8

↓
 293.5
 +0.8
 13

↓
 296.8
 +4.1
 53

↓
 290.1
 -17
 27

↓
 291.8
 4.7

↓
 292.5
 +0.7
 13

↓
 295.8
 296.5
 +4.0
 53

↓
 288.5
 -3.0
 46

↓
 289.5
 -3.0
 27

↓
 291.5
 6.0

↓
 292.1
 +0.6
 13 = N.W. Road

↓
 294.4
 +2.9
 53

↓
 287.0
 -2.8
 40

↓
 287.5
 -2.0
 27

↓
 289.8
 8.7

↓
 291.1
 +1.3
 13

↓
 291.0
 +1.2
 27 = N.W. Road

↓
 293.8
 +4.0
 53

296.54

Lt. W B Rt. = F

+50

✓ 2261 -35 40	✓ 2226 -20 27	2798 59	2815 229.7 +11.9 13	2830 2760 +3.6 53
------------------------	------------------------	------------	------------------------------	----------------------------

TP 0.74 285.53 11.75 284.79 ✓ ^{on foot} 9' Rt 13+25

283.52

13+0

↓ 2839 -41 40	↓ 2855 -25 27	2880 85	↓ 2886 +0.6 13	↓ 2893 +1.3 53
------------------------	------------------------	------------	-------------------------	-------------------------

+50

↓ 2909 -33 40	↓ 2922 -20 27	2942 23	✓ 2948 +0.6 13	↓ 2954 +1.2 53
------------------------	------------------------	------------	-------------------------	-------------------------

+35 23' Lt of B = 1/4" Wire Fence Connects Picket Fence

12+0

↓ 2930 -20 40	↓ 2933 -17 27	↓ 2953 +0.3 20	2950 1.6	✓ 2957 +0.7 13	↓ 2961 +2.1 53
------------------------	------------------------	-------------------------	-------------	-------------------------	-------------------------

+96 35' Rt of B = 2' of Cluster & Small Euc. Trees

11+50
11+48
+27

38' Rt of B = 6" Euc Tree
233' Lt of B = 5 1/4" Picket Fence

↓ 2926 -18 27	2944 21	↓ 2952 +0.8 13	↓ 2970 +2.6 53
------------------------	------------	-------------------------	-------------------------

11+33

✓ 296.54
41' Rt of B = 4" Euc.

296.54

46755t.

BM

10.09 272.77

13 May
Quincy 4675

+66.90 = S-L Quincy

TP

10.99 282.86 344 271.87

+40

1640

+75

15450

27931

L

B

RT

45

$$\begin{array}{r} \downarrow \\ 2818 \\ +103 \\ 27 \\ \hline 2915 \\ 11.4 \\ \hline 28286 \end{array}$$

$$\begin{array}{r} \downarrow \\ 2668 \\ -47 \\ 13 \\ \hline 2646 \\ -69 \\ 17 \\ \hline 2786 \\ +71 \\ 53 \end{array}$$
Bo. Ham
Wash
$$\begin{array}{r} \downarrow \\ 2870 \\ +169 \\ 40 \\ \hline 2833 \\ +122 \\ 27 \\ \hline 2911 \\ 4.2 \\ \hline 2665 \\ -46 \\ 13 \\ \hline 2615 \\ 9.6 \\ 13 \\ \hline 2700 \\ -0.8 \\ 53 \\ \hline 2722 \\ +61 \\ 70 \end{array}$$
Bo. Ham
Wash
$$\begin{array}{r} \downarrow \\ 2844 \\ +121 \\ 40 \\ \hline 2811 \\ +88 \\ 27 \\ \hline 2900 \\ 0 \\ \hline 2682 \\ -41 \\ 13 \\ \hline 2589 \\ -134 \\ 13 \\ \hline 2654 \\ -69 \\ 53 \\ \hline 2743 \\ +20 \\ 73 \end{array}$$
Bo. Ham
Wash
$$\begin{array}{r} \downarrow \\ 2733 \\ +137 \\ 40 \\ \hline 2796 \\ +199 \\ 27 \\ \hline 2648 \\ -48 \\ 13 \\ \hline 2670 \\ -124 \\ 13 \\ \hline 2642 \\ -54 \\ 53 \\ \hline 2754 \\ +58 \\ 82 \end{array}$$
Bo. Ham
Wash
$$\begin{array}{r} \downarrow \\ 2801 \\ +148 \\ 40 \\ \hline 2762 \\ +114 \\ 27 \\ \hline 2609 \\ -57 \\ 13 \\ \hline 2580 \\ -93 \\ 13 \\ \hline 2657 \\ +04 \\ 53 \\ \hline 2736 \\ +83 \\ 72 \end{array}$$
Bo. Ham
Wash

27531

SM

5.13 297.15

JFBP
Quince &
Fairmount
297.19

TP 4.60 302.28 7.65 297.68

TP 8.73 305.33 12.55 296.60

TP 6.10 309.15 3.23 303.05

TP 11.36 306.28 0.21 294.92

TP 12.58 295.13 0.21 282.55

17 + 26.9 = 43.9 Quince

282.86

Lt.

B

Rt.

46

↓ 2858 +82 27	2776 53	↓ 2695 -8.1 1338051053	↓ 2725 -5.1 27	↓ 2823 +4.7 53
------------------------	------------	---------------------------------	-------------------------	-------------------------

↓ 285.5 +9.4 27	2761 68	↓ 268.6 -7.5 13	↓ 2761 0.0 30	↓ 2863 +10.2 53
--------------------------	------------	--------------------------	------------------------	--------------------------

282.86

Cross Section Olive St.

45th to 10th

Sketch Page 47

Indexed
c.s.k.

+42 23 Rt of 1/2 - Nly Power Pole

170

TP 12.15 284.18 0.25 272.03

0+50

TP 12.60 272.28 0.51 259.68

0+0 = F.L. 45th St

TP 1.11 260.19 12.87 259.08

TP 1.00 271.95 12.55 270.95

TP 1.18 283.50 12.85 282.32

BM 3.82 295.17 291.35

Profile 2566
6-15-45

13' Mon
Olive St 46th St
Page 42

May 19-45

S. 5500
8155 A
Orboral
Boggy Rod

At = 14

4

Rt 5

48

274.8
9.4
15

274.8
9.4
30

272.7
11.5

26.93
14.9
30

26.78
18.4
15

284.18

272.53
9.0
15

266.8
5.5
30

265.4
6.9

262.1
9.6
30

260.4
11.9
15

272.28

257.6
2.6
15

257.8
2.4
30 = 14.1

257.5
2.7
30

255.9
7.3

252.0
7.2
30 = 5.1

248.9
14.2
15

260.19

↓
+01 216 Rt of $\frac{1}{2}$ = Nly Power Pole

+00 = Nly 46 1/2 St

+50

↓
+25 172 Lt of $\frac{1}{2}$ = Fly Picket Fence ✓

+00

TP 1195 295.51 0.62 283.56

+65

↓
+59 19' Lt of $\frac{1}{2}$ = Nly Picket Fence ✓

+50

284.18

Lt.

S

RT

291.7

8.8
30

290.2

5.3

289.3

6.2
30

288.4

7.1
30

286.5

9.0

285.5

10.0
30

284.9

10.6
45

286.5

9.0

285.5

10.0
30

284.9

10.6
45

280.4

11.1
30

283.7

11.8

284.6

10.9
15

282.7

12.3
30

280.3

15.2
45

295.51

282.7

1.5
40

283.1

1.1
30

282.7

1.5

277.7

6.5
30

275.9

8.3
45

281.2

3.0
45

281.1

5.1
30

278.6

5.6

275.9

8.3
30

273.8

10.4
45

284.18

+63 30 Rt of $\frac{1}{2}$ = Fly Lab's Fence = Fly Walk on Rt ✓

+50

+22 30.2 Rt - Fly Lab's Fence

+20 = Fly & Conc Walk on Rt ✓

+05 20.5 Rt of $\frac{1}{2}$ = Fly Power Pole ✓

+10

+80 = F.L. 46th St.

IP 10.10 301.45 4.16 291.35 13th Mon
Olive + 46th
295.51

Lt.

S

Rt

50

294.27

7.18 ✓

31.1 = Fly Lab's
Conc Walk

296.6

296.1

295.8

295.71 ✓

4.9

5.1

5.8

5.71 ✓

31.1 = Fly Lab's
Conc Walk

296.88

4.57 ✓

31.1 = Fly Lab's
Conc Walk

298.0

297.0

296.4

3.5

4.5

5.1

297.0

295.9

294.3

4.5

5.6

7.2

301.45

640

TP 2.51 292.00 11.96 289.49

+50

+46 \checkmark 209 Rt of $\frac{1}{2}$ - Nly Anchor Pole

+3010 = $\frac{1}{2}$ Alley

+22 \checkmark 191 Rt. of $\frac{1}{2}$ - Nly Power Pole

540

4+75 = $\frac{1}{2}$ De Garage 27 Rt

301.45

Nly Anchor Pole
209 Rt of $\frac{1}{2}$
5+46

2875

2841

2824

2793

$\frac{15}{30}$

79

$\frac{86}{30}$

$\frac{127}{45}$

292.00

290.0

2885

2873

2863

$\frac{115}{30}$

160

$\frac{142}{30}$

$\frac{152}{10}$

290.7

289.7

2881

2854

$\frac{108}{30}$

118

$\frac{134}{30}$

$\frac{161}{80}$

2932

2916

2916

2910

$\frac{840}{30}$

99

$\frac{99}{30}$

$\frac{195}{30}$

293.60

$\frac{785}{36}$ = $\frac{1}{2}$ De Garage
Cont. Flood \checkmark

870

7+60.20 = FL Meolo

7+20.20 = 2 Meolo

BM 2.87 278.18 8.21 275.31

18' Mon. on top
Olive + Meolo

+80.2 = 21.6 Meolo

TP 4.08 283.55 12.53 279.47

6+50

292.00

Lt.

Z

Rt.

52

270.6

7.6
30

266.6

11.6

262.4

15.8
30

259.0

19.2
50

274.9

8.2
30

271.7

6.5

266.3

11.8
30

264.0

14.2
50

278.6

7.0
30

275.4

2.8

269.8

8.4
30

263.5

14.7
30

278.18

281.6

2.0
30

277.9

5.7

273.7

9.8
30

264.3

19.3
30

288.55

283.5

8.2
30

279.0

13.0

275.5

16.5
13

270.0

2.20
30

256.6

3.54
30

261.0

5.10
70

293.00

50 = Bot. North

Cross Section Menlo
Olive to Quince
Sketch Page 47

indexed
e-r-k.

May 21-45
5:00
Buss
Beggs

Lt. 21

L

Rt. = E

53

2+0

300.0	298.6	296.8	294.1	292.0	288.9
6.7 40	8.1 20	9.9	12.6 20	14.7 40	17.8 80

TP 16.42 306.71 1.06 296.29

306.71

+50

Profile 6-16-45

296.9	295.9	293.4	290.7	288.4	285.9
0.5 40	1.5 20	4.0	6.7 20	9.0 40	11.5 80

1+0

292.5	291.3	289.0	286.4	283.6	282.3
4.0 40	6.1 20	8.4	11.0 20	13.8 40	15.1 80

TP 12.00 297.35 2.67 285.35

297.35

0+50

286.4	284.0	281.3	279.5	279.2
4.0 40	4.0	6.7 20	8.5 40	9.8 80

0+0 = H.L. Olive

281.6	278.6	276.7	274.9
4.0 40	9.4	14.3 20	18.1 40

B.M. 12.71 288.02

275.31

B.M. 00
Olive +
Menlo
Page 52

288.02

Lt. Z Pt

+45

301.9	301.2	300.3	298.7	299.0	299.3
$\frac{18}{40}$	$\frac{55}{20}$	6.1	$\frac{80}{20}$	$\frac{77}{40}$	$\frac{7.9}{80}$

4+0

300.4	299.6	297.4	295.8	293.8	291.5
$\frac{60}{20}$	$\frac{71}{20}$	9.5	$\frac{109}{20}$	$\frac{139}{40}$	$\frac{152}{80}$

+50

301.7	299.4	297.6	293.0	291.6
$\frac{55}{40}$	$\frac{73}{20}$	9.1	$\frac{127}{40}$	$\frac{151}{80}$

5+0

301.8	300.9	299.6	297.0	296.6	292.6
$\frac{19}{40}$	$\frac{58}{20}$	7.1	$\frac{97}{20}$	$\frac{131}{40}$	$\frac{141}{80}$

2+50

301.6	300.4	298.9	296.7	294.7	292.2
$\frac{51}{40}$	$\frac{51}{20}$	7.8	$\frac{100}{20}$	$\frac{120}{40}$	$\frac{145}{80}$

306.71

306.71

+65

+50

+37

5+0

TP

4+62

306.71

5.46 311.45 0.72 305.99

lt. 2 ft. ft.

305.9 295.2 292.7 291.1 288.1 287.8
 5.6 16.3 18.8 20.4 22.4 22.7
 40=TOP RR 13 20 40 55
 Col.

308.2 307.0 304.5 291.5 289.4 288.2
 5.3 4.5 7.0 20.0 22.1 22.3
 40 20 70=TOP RR 20 40 55
 Col.

309.2 308.3 305.3 303.5 298.1 302.3 300.0 290.0
 5.3 5.3 6.2 8.0 13.4 9.2 11.5 21.5
 40 20 8 20 28 40 60

306.8 306.4 306.2 306.8 305.5 301.9
 4.7 5.1 4.7 4.7 6.0 9.6
 40 20 20 20 40 60

311.45

304.1 304.0 303.4 303.7 306.4 306.5 305.5
 4.6 2.7 5.3 3.0 2.5 2.8 1.8
 40 20 15 20 40 60

306.71

Lt. W

L

Rt. F

6+23

6+10

198.55 = 13 1/2 Quince

+90

5+81.55 = 5 1/2 Quince

311.45

3020	307.6	306.6	303.4	301.9	300.1
1.5 40-Top RR Cult. RR	5.9 20	4.9	7.1 20	9.6 10	11.4 80

2985	299.5	305.7	304.1	301.9	300.5
17.0 40	12.0 20	5.8 40-Top RR Cult. RR	7.1 20	9.6 10	11.0 80

2925	2930	2949	303.4	302.1	300.2
19.0 40	18.5 20	16.6	8.1 20-Top RR Cult. RR	9.4 10	11.0 80

2935	292.1	292.7	292.3	294.5	301.4	299.6
18.0 40	19.4 20	19.3	19.2 20	17.0 20	9.9 40	11.9 80

2953	292.1	291.2	290.1	289.3
16.2 40	19.4 20	20.5	21.1 20	22.2 10

311.45

Lt.

8

Rt

TP

8.54

302.91

Nails Port Polo
H Side Flyby
S. Quarter 4
48th to 49th

6758.55

511.45

3077

28
40

3073

42
20

3072

40

3049

66
20

3021

94
40

3007

108
80

511.45

Cross Section Quincy St.
45th to Main St
Sketch Page 47

Indexed
C.S.R

1435

Profile
6-15-45

140

TP 12.44 307.47 1.21 295.03

0+50

TP 13.08 296.24 1.76 283.16

0+0 = East line 15th St.

TP 1.76 284.92 11.64 283.16

TP 1.55 294.80 12.87 293.25

BM 3.21 306.12 302.91

Nail on
Pole
Page 57

Lt. = 11

2

8.5

May 22, 45
S. No. 4
811.11
0.500
8.777

58

300.0

299.5

298.4

297.4

296.8

7.5
40

8.0
30

9.1

10.1
30

10.7
45

297.4

297.0

295.5

294.3

293.9

10.1
40

10.5
30

12.0

13.1
30

13.6
45

307.47

288.8

288.6

286.9

284.9

284.2

7.4
40

7.7
30

9.3

11.3
30

12.0
45

296.24

269.7

267.2

264.4

265.9

269.2

15.4
45 Bottom
Box

17.7
30 Bottom
Box

20.5

19.0
30

15.6
45

284.92

B.M

11.21 272.74

13 May
Quince + 46th
272.77
Page 45

TP 0.93 283.95 12.61 283.02

40 see 46th St. Cross Section

TP 1.06 295.63 12.90 294.57

2750

272726 = E.L. Chamounc to North

B.M

6.68 300.79

13 May
Quince +
Chamounc to

149726 = L Chamounc

176726 = H.L. Chamounc to North

307.97

Lt.

Z

Rt

298.1
94
40

297.8
97
60

296.8
107

294.9
131
30

294.2
134
45

302.6
49
40

301.9
56
30

301.2
63

300.0
70
30

300.0
75
40

302.7
48
40

302.4
51
30

301.3
62

300.3
72
30

299.9
76
40

302.0
55
40

301.3
62
30

300.2
70

299.2
80
30

298.7
88
45

307.47

Quince St.

5+30 = 1/2 Alley to South

817 5.69 302.88

197 = N. L. 46th St. to North

180

TP 1303 308.57 0.57 295.54

150

410

TP 12.56 296.11 0.40 283.55

28395

Nails Pole
W Side Alley
S Quince St Alley
to North
302.91

Lt

S

Pt

60

301.5

71
30

301.7

69

301.8

68
30

296.3

123
45

297.3

113
30

300.7

79

301.0

76
30

299.4

92
50

296.2

121
45

297.9

107
30

300.5

81

297.1

115
30

293.2

151
30

308.57

294.6

115
45

295.5

96
30

294.9

12

290.8

53
30

290.2

58
45

287.8

93
45

286.4

97
30

286.2

99

283.9

122
30

279.3

168
45

296.11

+35

307.4	307.7	294.6	293.6	295.3	304.6	304.8	308.3
0.8	0.9	140	150	120	40	3.8	0.5
51-SY House	32-TOP RR	15		15	1/2-TOP RR	30	45
	Cut				Cut		

6+0

306.8	293.8	294.3	305.2	307.5	308.0
18	14.8	14.3	3.4	1.1	0.6
AA-TOP RR	30	30-SY+Bottom	15-TOP RR	30	45
Cut		Cut	Cut		

5+57 = E line of 46th to North

295.5	293.8	296.0	302.3	303.4	306.2	307.9
12.1	14.8	12.6	6.3	5.2	2.4	0.7
40	30	15	7-TOP RR		30	45
			Cut			

5+44

301.6	302.1	303.2	306.1	306.7
7.0	6.5	5.4	2.5	1.9
40	30		30	45

308.57

308.57

Cross Section Alley Block 5 Swans Add.
Between 46th + Menlo From Olive to Quince
Sketch Page 47

+ 18.5

+ 15

+ 0.8 = 1/2 Garage on Rt.

1+0

6.5 Lt of 1/2 = 1/4 by wire ✓

+ 67

6.1 Lt of 1/2 = Fly Tall Pole ✓

0+50

6.7 Lt of 1/2 = Wire Fence ✓

0+01

9' Lt of 1/2 = Sky Wire Fence Also 1/2 9" Fence ✓

0+0

= N.L. Olive St

8M

1249

301.98

289.49

Nail Anchor
Pole 209' Rt
5446 Olive
Page 51

Profile 6-18-45

indexed
c.s.k.

Lt. W

1/2

R=F

62

297.43

4.55

16.5 = 1/2 + 1/4
2 Conc Bolt ✓

298.2

3.8

15 = 1/2
Dobson
Dist Floor ✓

296.9

5.5

15 = 1/2 Garage
Dist Floor ✓

297.6

4.9
10

297.4

4.6
8

296.4

5.6

296.1

5.9
10

296.2

5.8
10

294.4

7.6
10

293.1

8.9

292.7

9.5
10

293.0

9.0
10

291.7

10.3
10

290.7

11.3

290.5

11.5
10

289.9

12.1
10

301.98

Sketch
P. 47

+76	9.5 Lt of $\frac{1}{2}$ " = 4 6" Pepper Tree ✓
+80	6.3 Lt of $\frac{1}{2}$ " = Fly Tel. Pole ✓
+335	
+25	
+17	7.3 Lt of $\frac{1}{2}$ " = Sly Picket Fence ✓
+07	
TP	5.32 302.99 4.31 297.67
2+0	7.2 Lt of $\frac{1}{2}$ " = 1 1/4 Wire Fence ✓
+81	6.1 Lt of $\frac{1}{2}$ " = Fly Porter Pole ✓
+52	10' Lt of $\frac{1}{2}$ " = 2 18" Pepper Tree ✓
+150	
+140	7.7 Lt of $\frac{1}{2}$ " = 2 1/4 Wire Fence ✓ 501.98

Lt.	$\frac{1}{2}$	Rt
295.8	296.1	296.3
7.2 20	6.9 10	6.7 10
<hr/>		
296.67		
6.32 ✓		
7.7		
Fly Tel. Pole 1 1/4 Conc kalk		
<hr/>		
		299.49
		5.35 ✓
		13 = 2 1/2 50'
		Out Floor
<hr/>		
296.7		
6.3		
17.1		
Fly Tel. Pole 1 1/4 Conc kalk		
<hr/>		
		302.99
297.2	297.5	297.6
4.8 15	4.5 10	4.6
<hr/>		
298.6	298.2	298.2
5.4 10	5.8	5.8 10
		5.6 15
		298.4

Lt

S

Rt

+74

293.49

293.99

950

87

900

87

✓
100% alk
Fly Conc
Slab

+50

293.3

294.48

294.6

294.5

294.8

97

16.8

85.1

100%

8.4

8.5

8.5

8.8

10

✓
Fly Conc
Slab
Hour

+41

16.8 Lt of S = Fly Hours

293.54

294.27

94.5

87

87.2

87

✓
Fly Conc
Slab

+19

294.07

294.81

89.2

89

8.18

8.18

✓
Fly Conc
Slab
Hour

310

8.3 Lt of S = Pick of Fence

293.2

294.3

295.3

295.1

295.5

98

22.7

87

96

7.7

7.7

7.9

7.5

10

✓
Fly Conc
Slab
Hour

2783

294.1

89.3

89.3

✓
Fly Conc
Slab
Hour

302.99

302.99

751

750

8.3' Lt of Z = Ely Tel Pole ✓

732

410

788

8.9' Lt of Z = My Picket & Lat's Fence ✓

782

7.2' Lt of Z = Ely Post Pole ✓

3769

302.99

Lt.

Z

Rt

65

298.47

4.52 ✓
11.3' 1/4 Conc Slab

294.7

296.09

296.3

296.6

297.4

8.3

6.90

6.7

6.4

5.6

9.6' Top Conc Wall

298.49

4.50 ✓
10.5' 1/4 Conc Slab

293.1

294.0

294.65

294.6

295.2

296.6

9.9

9.0

8.34

8.4

7.8

6.4

9' Conc Top Wall

294.34

8.65 ✓
8.9' 1/4 Conc Wall

289.8

13.2
6.0 = 2 Groups
Diff Floor

302.99

BM

6.69

302.92

Nails Pole
H Side Hilley
S Quince # 2616
to Hoff
302.91
Page 59

5 + 81.28 = S.L. Quince

+ 50

TP

9.20

309.61

2.58

300.41

+ 25

570

302.99

Lt

Z

Rt

66

301.6

8.0
10

301.8

7.8

302.5

7.1
8

304.1

5.6
10

301.3

8.0
10

300.9

8.7
10

301.3

8.3

302.0

7.6
8

303.2

6.4
10

306.7

7.9
17

309.6

296.5

6.5
10

299.8

8.8
10

300.3

8.7

300.7

7.3
7

302.3

8.7
10

296.2

6.8
10

298.7

7.7
10

299.1

8.7

299.6

7.4
10

300.1

8.9
15

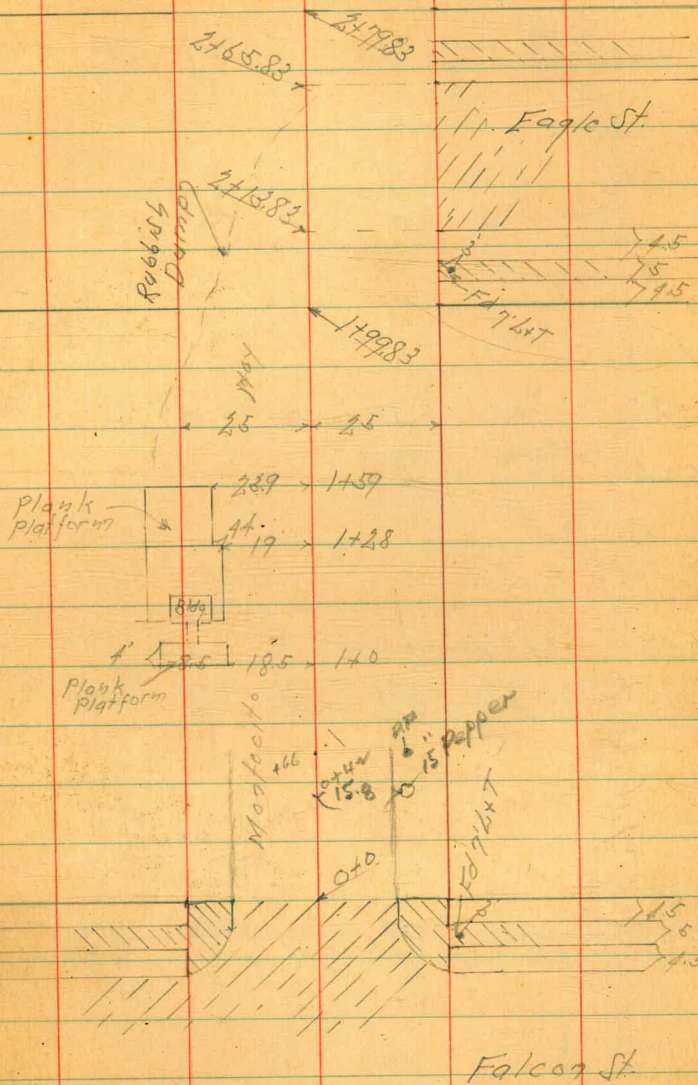
308.99

Cross Section Montecito today
Falcon to Eagle
Levels Next Page

Indexed
C.S.K.

July 27-45
Sisson
Osborne
Begg

67



+66 16.3 = NY Paper Pole
 +62 242 Lt of 1/2 Fly Lath Fence
 +42 15.8 Rt of 1/2 = NY 15" Poplar Tree

0+30

0+27 23.8 = Fly Stucco Wall + Fly Lath Fence

0+23

0+20 23.8 Lt of 1/2 = NY Stucco Wall

0+0 = F.L. Falcon

0-14 = F.Cb of Falcon St

BM

4.51

267.52

263.01

S.W. 8P
 No. 7 Aceto
 + Falcon

Lt = 11

1/2

Rt = 5

263.27	2630	2629	2626	2630	2639	264.30
4.30	4.5	5.1	4.9	4.5	3.6	3.2
25.8	2.5	1.3		1.3	2.5	26.5 = NY 2" Conc.

99 ft 4 car
 1700

264.10	2640	2638	2637	2641	264.5	266.4
3.42	3.5	3.7	3.8	3.4	3.0	4.1
25.2	2.5	1.2		1.2	2.1	2.5

S.W. Conc. Walk
 1700

265.35	267.05
2.14	0.47
21.5 = NY 2 1/2" Conc Steps Bottom	2.5.5 = Top Conc. Steps

264.44	264.13	263.56	264.02	263.61	264.04	264.3
3.1	3.39	3.96	3.58	3.91	3.48	3.2
2.5	15.06	1.5 = Gut Hat		14.9 = Gut Hat	14.9 = Gb	2.5

264.07	262.44	263.62	263.82	263.57	263.32	263.95
3.50	4.02	3.90	3.90	3.96	4.30	2.5.7
1.5 = Gut Hat	1.5 = Gut Hat			1.5	1.5 = Gut Hat	1.5 = Gb Top

267.52

1499.83 - W.L. Eagle

IP 2.64 265.72 4.44 263.08
S.W. BP
No. of cistern
Eagle
263.08

1475

1432

1408 17' Lt of L = 5 1/2 18' For T.C.C

0499

0481

0478

267.52

Lt.

g

Rt

69

2532 261.1 262.0 262.4 262.5 262.7 263.4
12.5 4.6 3.7 5.1 3.2 3.0 2.3
40 25 10 10 10 18 25

265.72

265.2 260.5 262.0 262.2 262.4 263.1
1.2 7.0 5.5 5.3 5.1 4.0
40 25 10 15 15 25

258.8 261.5 261.2 261.7 262.2 262.2 261.5
2.7 6.0 5.8 5.8 5.3 5.3 5.0
25 25 10 15 15 25 25

23.4 for plank platform

27 - W.V. House
Door to
Bathroom

263.43 262.2 262.0 262.0 262.3 262.5 262.67
4.09 5.3 5.5 5.5 5.9 5.0 4.85
25.8 25 13 13 13 25 25

25.8 - E.V. 4 Car
Garage
Wood Floor

E.V. D. Garage
Conc. Floor

262.75
4.77
25.5 - W.V. Door
Conc. Floor

263.27
4.75
4.55 - 2.4 Car
Garage
Conc. Floor
267.52
2.5 for floor

Lt. Lt. Lt.

2799.88 = F.L. Eagle

2365	2414	2465	2524	2580	2605	2613
292	213	192	133	70	52	41
40	25	10		10	18	25

2765.83 = F.Cb. Eagle

235.7	241.8	247.2	254.4	259.4	260.3	260.5	261.00
500	227	18.5	11.3	6.3	5.4	5.20	4.77
40	25	15		10	18	25	25 = NY Carb

butler

2759.83 = L Eagle

239.2	247.3	252.5	258.6	260.6	261.3	262.12
24.5	18.7	13.2	7.7	5.1	4.4	3.60
40	25	15	7		10	24.8 = NY Carb

2713.88 = W Cb. of Eagle 27.2 Lt of L - Sky Nuclear

250.1	258.3	263.2	263.7	262.6	263.5	262.42	263.05
15.6	7.4	7.5	2.0	2.1	5.9	2.30	2.67
40	25	12		8	23	25.6 = NY Carb	25.6 = NY Carb

26572

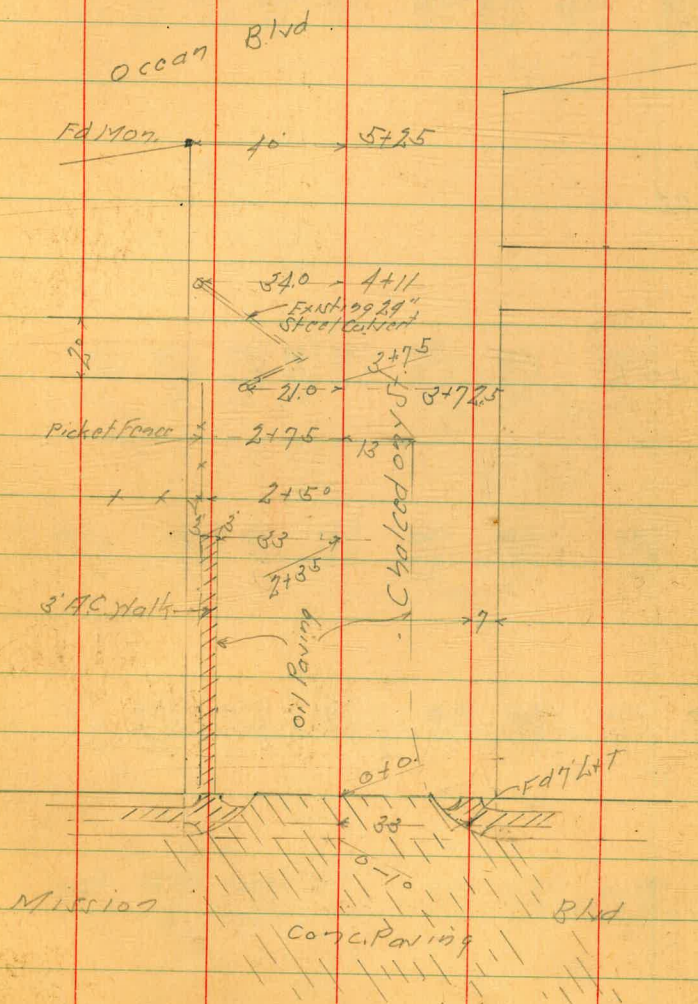
26572

Cross Section Chalcedony St.
Mission Blvd. to Ocean Blvd.
Levels next page.

Indexed
c.s.K.

Sept. 18-15
S. S. 007
B1151
B099

71



Cross Section Chalcedony St.
Mission Blvd. to Ocean Blvd.
Sketch Page 71

1+0

$\frac{446}{26}$ $\frac{446.6}{6.57}$ $\frac{449}{23}$ $\frac{447}{6.5}$ $\frac{451}{6.1}$ $\frac{455}{5.7}$ $\frac{455}{5.7}$ $\frac{453}{5.9}$ $\frac{458}{5.4}$ $\frac{460}{5.2}$
 40 35=H/F.C. 20 12 10 10 10 13=H/F.C. 20 20

0+72

$\frac{45.00}{8.23}$
 36=H/F.C. Coolwalk

0+50

$\frac{45.23}{6.0}$ $\frac{45.25}{5.95}$ $\frac{45.3}{5.9}$ $\frac{45.2}{6.0}$ $\frac{45.2}{5.5}$ $\frac{46.0}{5.2}$ $\frac{45.8}{5.4}$ $\frac{46.3}{4.9}$ $\frac{47.1}{4.1}$
 40 33=H/F.C. 20 15 10 10 14=H/F.C. 20 20

0+10 = C6 F.C.

$\frac{46}{5.4}$ $\frac{46}{5.4}$ $\frac{46.1}{5.1}$ $\frac{46.3}{4.9}$ $\frac{46.4}{4.8}$ $\frac{46.6}{4.6}$ $\frac{47.4}{3.8}$
 40 20 15 10 15=H/F.C. 20 20

0+0 = W.L. Mission Blvd = H/F.C. Conc Pav. C6 & Chalk

$\frac{46}{5.4}$ $\frac{46.09}{5.14}$ $\frac{45.68}{5.55}$ $\frac{45.75}{5.48}$ $\frac{46.7}{5.06}$ $\frac{46.23}{4.90}$ $\frac{46.34}{4.89}$ $\frac{46.85}{4.78}$ $\frac{47.3}{3.9}$
 40 22.5=C6 22.5=Chalk 20 20 22.5=Chalk 22.5=Chalk 20 20

0-10 = W.C6 Line Mission Blvd

$\frac{45.98}{5.25}$ $\frac{45.36}{5.87}$ $\frac{45.65}{5.38}$ $\frac{45.55}{5.28}$ $\frac{46.11}{5.17}$ $\frac{46.44}{4.79}$ $\frac{46.95}{4.25}$
 40=C6 40=C6 20 20 20 40=C6 40=C6

BM

2.74

51.23

48.49

NEBP
Chalcedony
Mission Blvd

51.23

72

Chalcedony St.

2+35 = W 1/2 AC Walk on Lt

2+0

1+94

1+81

1+50

1+40

1+12

51.23

Lt.

2

Rt.

73

43.84

7.69

36 = NY 3' Conc
Walk

43.9	43.98	43.9	43.2	44.0	44.2	44.2	44.0	44.5	44.6
7.2	7.25	7.3	7.5	7.2	7.0	7.0	7.2	6.7	6.6
40	33 = NY 1/2 AC Walk	20	19	15		10	12 = NY 1/2 AC	20	40

44.05

7.15

36 = NY 1/2 AC
Walk

44.12

7.11

36 = NY 1/2 AC
Walk

44.1	44.23	44.3	44.0	44.5	44.2	44.2	44.5	45.1	45.3
7.1	7.00	6.9	7.2	6.9	6.5	6.5	6.9	6.1	5.9
40	13 = NY 1/2 AC Walk	20	17	10		10	13 = NY 1/2 AC	20	40

44.33

6.90

36 = NY 1/2 AC
Walk

44.63

6.60

36 = NY 1/2 AC
Walk

51.23

Chalcedony St.

3+35

TP 0.24 39.32 12.15 39.08

3+10

2+85 = 1/2 8' Conc Drive on Lt.

2+75 = 1/2 oil paving

2+65

2+50

51.23

Lt

2

Pl

74

$\frac{425}{+35}$	$\frac{22.1}{32}$	$\frac{26.1}{3.5}$	$\frac{32.2}{6.0}$	$\frac{32.6}{1.7}$	$\frac{22.5}{1.8}$	$\frac{35.3}{1.0}$	$\frac{33.6}{5.7}$	$\frac{24.4}{7.9}$	$\frac{38.0}{7.3}$
40	31	32	15		12	22	30	40	53

39.32

$\frac{42.1}{8.1}$	$\frac{42.1}{8.1}$	$\frac{42.2}{8.0}$	$\frac{40.5}{7.1}$	$\frac{39.9}{7.3}$	$\frac{39.9}{7.3}$	$\frac{35.2}{15.9}$	$\frac{25.6}{15.8}$	$\frac{39.6}{11.6}$
40	20	16	13		20	30	40	50

$\frac{42.96}{8.27}$
 39.5-1/2 8' Conc Drive

$\frac{43.1}{8.1}$	$\frac{43.1}{8.1}$	$\frac{42.8}{8.4}$	$\frac{42.6}{8.2}$	$\frac{42.0}{8.2}$	$\frac{43.2}{8.0}$	$\frac{42.8}{8.1}$
40	20	10		10	20	40

$\frac{43.2}{8.00}$
 39.5-1/2 8' Conc Drive

$\frac{43.2}{8.0}$	$\frac{43.2}{8.0}$	$\frac{43.5}{7.7}$	$\frac{43.2}{7.5}$	$\frac{43.2}{7.5}$	$\frac{43.4}{7.9}$	$\frac{44.4}{7.8}$	$\frac{44.6}{6.6}$
40	20	10		10	13-11/10	20	40

51.23

4+11

<u>28.2</u>	<u>28.4</u>	<u>28.36</u>	<u>29.0</u>	<u>33.6</u>	<u>33.9</u>	<u>34.0</u>	<u>34.1</u>
10.6	10.9	10.96	9.7	5.9	5.4	5.3	5.3
80	40	40	20	20	20	40	50

21-10-10-10-10
Stack
Cul.

4+03

<u>34.5</u>	<u>34.0</u>	<u>34.1</u>	<u>34.0</u>	<u>34.0</u>	<u>34.0</u>	<u>34.3</u>	<u>34.8</u>	<u>35.3</u>
4.8	5.3	5.2	5.2	5.3	5.3	5.3	4.5	4.0
80	40	20	20	20	40	75	100	125

3+85 = 2 Alley to South

<u>32.8</u>	<u>36.5</u>	<u>35.1</u>	<u>34.2</u>	<u>34.2</u>	<u>34.3</u>	<u>34.1</u>	<u>35.6</u>	<u>35.7</u>	<u>35.3</u>
1.6	2.8	4.2	5.1	5.1	5.0	5.2	5.7	5.6	4.0
125	100	90	40	20	20	20	30	40	50

3+75

<u>34.9</u>	<u>33.5</u>	<u>32.2</u>	<u>32.0</u>	<u>34.5</u>	<u>34.8</u>	<u>34.9</u>	<u>34.1</u>	<u>36.8</u>	<u>35.8</u>
4.4	5.8	7.0	7.3	4.8	4.5	4.4	5.2	2.9	5.5
50	40	32	21	16	16	18	30	40	50

3+72.5

20.44
8.88
21-10-10-10-10
Stack
Cul.

2+60

<u>39.28</u>	<u>35.4</u>	<u>32.4</u>	<u>32.0</u>	<u>35.8</u>	<u>35.5</u>	<u>35.5</u>	<u>33.0</u>	<u>33.1</u>	<u>32.0</u>
0.4	3.9	4.9	7.1	3.5	3.8	3.5	5.3	5.2	2.3
50	10	30	22	14	22	22	28	40	45

39.52

39.52

5+38

31.3	31.5	30.2	30.5	30.7
8.0	8.0	9.0	9.3	9.1
60	70	30	20	

19.5	24.6	31.6	30.6
19.5	14.7	7.7	8.7
20	30	40	60

5+25 = F.L. Ocean Blvd at Lt

BM

9.16

30.16

on Map SE
Prop. Ocean Blvd
+ Chokodony

30.5	30.1	30.4	30.4	31.1	28.9	28.5	28.1	31.8
8.8	9.2	8.9	8.9	8.2	15.4	15.5	11.2	7.4
60	40	20	20	5	20	30	40	60

31.1
8.2
60

5+00

31.5	31.0	31.6	31.6	31.6	31.5	31.2	31.2
7.8	8.3	7.7	8.3	8.3	7.5	8.1	8.1
60	40	20	20	20	22	40	30

4+75

28.2	31.6	32.3	32.1	32.1	31.5	31.5	31.7
11.1	8.7	7.0	7.2	7.2	7.4	7.5	7.6
60	40	36	20	20	20	40	60

4+50

28.6	29.1	31.3	33.5	33.7	33.0	32.5	32.5
10.7	10.2	8.0	5.5	5.6	6.3	6.8	6.8
60	40	20	13	13	20	40	30

4+20

27.4	28.6	28.9	31.2	32.4	34.6	33.1	33.6
11.9	11.7	10.1	8.1	6.9	4.7	5.8	5.9
60	40	20	15	15	20	40	50

39.32

39.32

BM

1.43

48.50

N.E. BP
Chalcidony
+ Mirror Blvd
48.49

TP

10.85

49.93

0.24

59.08

57.50

3932

LT

Z

RT

77

253

263

265

304

309

289

233

153

221

307

303

140

130

145

89

84

104

160

250

172

86

70

60

40

29

25

5

10

20

30

40

50

3932

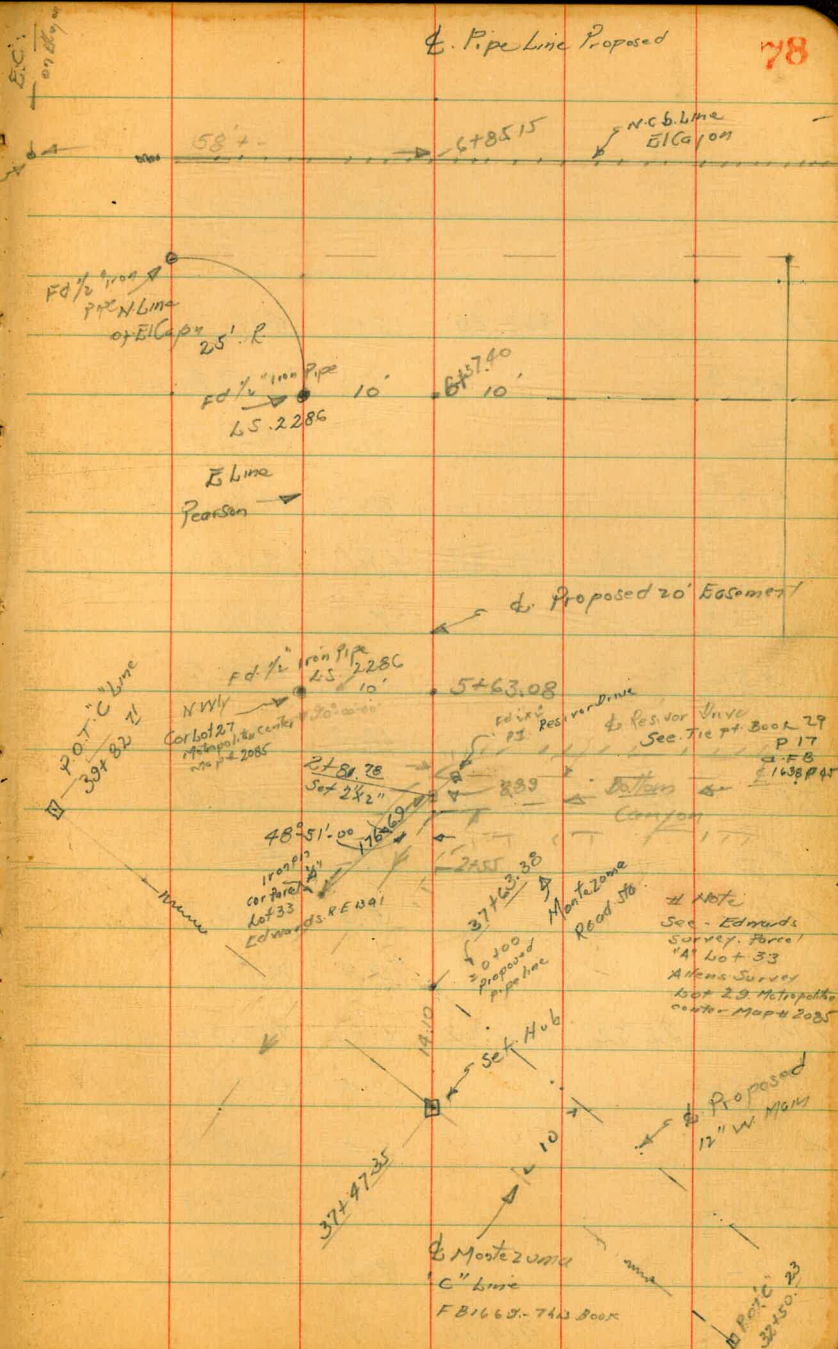
Bliss Notes
 King &
 Davis
 Phillips
 11/21/45

Alignment & Profile Proposed Pipe Line
 from Montezuma Road to Pearson, &
 El Cajon.

3.			9.5	404.7
+90			10.8	403.4
+62	App. of last pt		10.9	403.3
+55			11.0	403.2
+50			10.5	403.7
+26			6.5	407.6
T.P.	6.62	414.16	12.61	407.54
2			11.5	408.7
+50			8.8	411.4
T.P.	1.05	420.15	12.05	413.10
1			14.9	416.3
+50			9.3	421.9
0+00			3.4	427.8
0-14.1 to Montezuma			1.9	429.3
B.M.	11.55	431.15	419.60	Ground at Sta 38+00 &

6. Pipe Line Proposed

78



			0.50	453.39
				453.77 <small>Record</small>
				0.38 <small>error</small>
7P.	12.10	453.89	5.05	441.79
+85 ^B			7.0	439.8
6+80			7.3	439.5
+77 ^A			10.2	436.6
7P.	10.18	446.84	1.61	436.66
+69			7.1	431.2
+50			8.8	429.5
6.			12.5	425.8
7P.	12.26	438.27	0.01	426.01
+82			0.7	425.3
+50			5.3	420.7
5			9.8	416.2
7P.	12.52	426.02	0.66	413.50
+50			2.4	411.8
4			5.4	408.8
+50			7.3	406.9
+10			2.5	404.7

414.16

BM SWBP 67th E/Cajon

Top ex corb

Approx to ex 10th c 1 Main

Levels on Man Holes $\frac{1}{2}$ Orange Ave. May 21-95
 + Alley bet Van Dyke + 4th St. 5:30
 6:00
 6:30

B.M. 4.30 365.33 361.03 N.W. C.P.
 Orange
 Van Dyke

Man Hole $\frac{1}{2}$ Orange & Alley So. 4.38 360.95 on R.M.

Flow Line 9.80 355.53

Man Hole 336²⁵ So. of $\frac{1}{2}$ Orange on R.M.

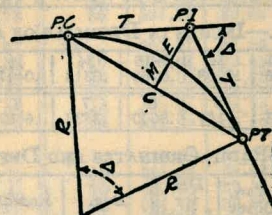
" " 11.09 359.24 Flow Line

Curb Level S.W. Orange & 4th 4.95 360.38
 N End Return

Curb Level S.W. Orange & 4th 4.33 361.00
 Van Dyke N End Return

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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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 = $T = R \tan \frac{\Delta}{4}$ (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) = $R + \cos \frac{\Delta}{2} - R$ (8) = $R \text{exsec} \frac{\Delta}{2}$ (9)

Long Chord = $C = 2 R \sin \frac{\Delta}{2}$ (10) Δ = 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 $+8\frac{1}{2} = 414.49$ 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 - Sta. P. C. = 54.50, hence offset = $7.27 \times (54.50 \div 100)^2 = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26) = 2.16$ 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 $D = 5^\circ 30'$.

TABLE I.—MINUTES IN DECIMALS OF A DEGREE.

Table with 4 columns of minutes (1-10) and 4 columns of decimal values (0.0167 to 1.0000).

TABLE II.—INCHES IN DECIMALS OF A FOOT.

Table with 2 columns of inch fractions (1-16, 1-8, 3-16, 1-4, 5-16, 3-8, 1-2, 5/16, 3/4, 11/16) and 2 columns of decimal values (0.0052 to 0.9167).

TABLE III.—RADI, ORDINATES AND DEFLECTIONS.

Large table with columns for Degree, Radius, Mid. Ord., Tan. Offset, Def. for 1 Foot, and corresponding values for degrees 0 to 30.

Note. Chord Deflection=2 times tangent deflection.

TABLE IV.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Table with columns for Central Angle, Tangent, External, and values for angles 1° to 30°.

Handwritten notes: 107 42 69, 3 72 39, 2 30

TABLE IV.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
91°	5830.5	2444.9	101°	6950.6	3278.1	111°	8336.7	4386.1
10'	5847.5	2457.1	10'	6971.3	3294.1	10'	8362.7	4407.6
20	5864.6	2469.3	20	6992.0	3310.1	20	8388.9	4429.2
30	5881.7	2481.5	30	7012.7	3326.1	30	8415.1	4450.9
40	5898.8	2493.8	40	7033.6	3342.3	40	8441.5	4472.7
50	5916.0	2506.1	50	7054.5	3358.5	50	8468.0	4494.6
92	5933.2	2518.5	102	7075.5	3374.9	112	8494.6	4516.6
10	5950.5	2531.0	10	7096.6	3391.2	10	8521.3	4538.8
20	5967.9	2543.5	20	7117.8	3407.7	20	8548.1	4561.1
30	5985.3	2556.0	30	7139.0	3424.3	30	8575.0	4583.4
40	6002.7	2568.6	40	7160.3	3440.9	40	8602.1	4606.0
50	6020.2	2581.3	50	7181.7	3457.6	50	8629.3	4628.6
93	6037.8	2594.0	103	7203.2	3474.4	113	8656.6	4651.3
10	6055.4	2606.8	10	7224.7	3491.3	10	8684.0	4674.2
20	6073.1	2619.7	20	7246.3	3508.2	20	8711.5	4697.2
30	6090.8	2632.6	30	7268.0	3525.2	30	8739.2	4720.3
40	6108.6	2645.5	40	7289.8	3542.4	40	8767.0	4743.6
50	6126.4	2658.5	50	7311.7	3559.6	50	8794.9	4766.9
94	6144.3	2671.6	104	7333.6	3576.8	114	8822.9	4790.4
10	6162.6	2684.7	10	7355.6	3594.2	10	8851.0	4814.1
20	6180.2	2697.9	20	7377.3	3611.7	20	8879.3	4837.8
30	6198.3	2711.2	30	7399.9	3629.2	30	8907.7	4861.7
40	6216.4	2724.5	40	7422.2	3646.5	40	8936.3	4885.7
50	6234.6	2737.9	50	7444.6	3664.5	50	8965.0	4909.9
95	6252.8	2751.3	105	7467.0	3682.3	115	8993.8	4934.1
10	6271.1	2764.8	10	7489.6	3700.2	10	9022.7	4958.6
20	6289.4	2778.3	20	7512.2	3718.2	20	9051.7	4983.1
30	6307.9	2792.0	30	7534.9	3736.2	30	9080.9	5007.8
40	6326.3	2805.6	40	7557.7	3754.4	40	9110.3	5032.6
50	6344.8	2819.4	50	7580.5	3772.6	50	9139.8	5057.6
96	6363.4	2833.2	106	7603.5	3791.0	116	9169.4	5082.7
10	6382.1	2847.0	10	7626.6	3809.4	10	9199.1	5107.9
20	6400.8	2861.0	20	7649.7	3827.9	20	9229.0	5133.3
30	6419.5	2875.0	30	7672.9	3846.5	30	9259.0	5158.8
40	6438.4	2889.0	40	7696.3	3865.2	40	9289.2	5184.5
50	6457.3	2903.1	50	7719.7	3884.0	50	9319.5	5210.3
97	6476.2	2917.3	107	7743.2	3902.0	117	9349.9	5236.2
10	6495.2	2931.6	10	7766.8	3921.9	10	9380.5	5262.3
20	6514.3	2945.9	20	7790.5	3940.9	20	9411.3	5288.6
30	6533.4	2960.3	30	7814.3	3960.1	30	9442.2	5315.0
40	6552.6	2974.7	40	7838.1	3979.4	40	9473.2	5341.5
50	6571.9	2989.2	50	7862.1	3998.7	50	9504.4	5368.2
98	6591.2	3003.8	108	7886.2	4018.2	118	9535.7	5395.1
10	6610.6	3018.4	10	7910.4	4037.8	10	9567.2	5422.1
20	6630.1	3033.1	20	7934.6	4057.4	20	9598.9	5449.2
30	6649.6	3047.9	30	7959.0	4077.2	30	9630.7	5476.5
40	6669.2	3062.8	40	7983.5	4097.1	40	9662.6	5504.0
50	6688.8	3077.7	50	8008.0	4117.0	50	9694.7	5531.7
99	6708.6	3092.7	109	8032.7	4137.1	119	9727.0	5559.4
10	6728.4	3107.7	10	8057.4	4157.3	10	9759.4	5587.4
20	6748.2	3122.9	20	8082.3	4177.5	20	9792.0	5615.5
30	6768.1	3138.1	30	8107.3	4197.9	30	9824.8	5643.8
40	6788.1	3153.3	40	8132.3	4218.4	40	9857.7	5672.3
50	6808.2	3168.7	50	8157.5	4239.0	50	9890.8	5700.9
100	6828.3	3184.1	110	8182.8	4259.7	120	9924.0	5729.7
10	6848.5	3199.6	10	8208.2	4280.5	10	9957.5	5758.6
20	6868.8	3215.1	20	8233.7	4301.4	20	9991.0	5787.7
30	6889.2	3230.8	30	8259.3	4322.4	30	10025.0	5817.0
40	6909.6	3246.5	40	8285.0	4343.6	40	10059.0	5846.5
50	6930.1	3262.3	50	8310.8	4364.8	50	10093.0	5876.1

TABLE V.—CORRECTIONS FOR TANGENTS AND EXTERNALS.

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table IV) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.53	.58	.63	.68
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39
35°	.11	.22	.34	.47	.58	.69	.79	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.22
95°	.39	.79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.88	5.38	5.83
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	.51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4.76	5.31	5.86	6.43	7.01	7.60
120°	.62	1.25	1.93	2.52	3.16	3.81	4.45	5.11	5.77	6.44	7.12	7.80	8.50	9.22

FOR EXTERNALS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.032	.035	.039	.043	.047	.051	.054
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	.036	.046	.056	.065	.074	.083	.093	.103	.112	.121	.135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.771	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.266	.353	.440	.528	.617	.707	.797	.891	.977	1.07	1.18	1.30
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.0						

TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Angle	Sine.	Tan.	Cotg.	Cosin.		Angle	Sine.	Tan.	Cotg.	Cosin.	
°						°					
32	.5299	.6249	1.600	.84805	58	30	.6225	.7954	1.257	.78261	30
10	.5324	.6289	1.590	.84650	50	40	.6248	.8002	1.250	.78079	20
20	.5348	.6330	1.580	.84495	40	50	.6271	.8050	1.242	.77897	10
30	.5373	.6371	1.570	.84339	30						
40	.5398	.6412	1.560	.84182	20	39	.6293	.8098	1.235	.77715	51
50	.5422	.6453	1.550	.84025	10	10	.6316	.8146	1.228	.77531	50
						20	.6338	.8195	1.220	.77347	40
33	.5446	.6494	1.540	.83867	57	30	.6361	.8243	1.213	.77162	30
10	.5471	.6536	1.530	.83708	50	40	.6383	.8292	1.206	.76977	20
20	.5495	.6577	1.520	.83549	40	50	.6406	.8342	1.199	.76791	10
30	.5519	.6619	1.511	.83389	30						
40	.5544	.6661	1.501	.83228	20	40	.6428	.8391	1.192	.76604	50
50	.5568	.6703	1.492	.83066	10	10	.6450	.8441	1.185	.76417	50
						20	.6472	.8491	1.178	.76229	40
34	.5592	.6745	1.483	.82904	56	30	.6494	.8541	1.171	.76041	30
10	.5616	.6787	1.473	.82741	50	40	.6517	.8591	1.164	.75851	20
20	.5640	.6830	1.464	.82577	40	50	.6539	.8642	1.157	.75661	10
30	.5664	.6873	1.455	.82413	30						
40	.5688	.6916	1.446	.82248	20	41	.6561	.8693	1.150	.75471	49
50	.5712	.6959	1.437	.82082	10	10	.6583	.8744	1.144	.75280	50
						20	.6604	.8796	1.137	.75088	40
35	.5736	.7002	1.428	.81915	55	30	.6626	.8847	1.130	.74896	30
10	.5760	.7046	1.419	.81748	50	40	.6648	.8899	1.124	.74703	20
20	.5783	.7089	1.411	.81580	40	50	.6670	.8952	1.117	.74509	10
30	.5807	.7133	1.402	.81412	30						
40	.5831	.7177	1.393	.81242	20	42	.6691	.9004	1.111	.74314	48
50	.5854	.7221	1.385	.81072	10	10	.6713	.9057	1.104	.74120	50
						20	.6734	.9110	1.098	.73924	40
36	.5878	.7265	1.376	.80902	54	30	.6756	.9163	1.091	.73728	30
10	.5901	.7310	1.368	.80730	50	40	.6777	.9217	1.085	.73531	20
20	.5925	.7355	1.360	.80558	40	50	.6799	.9271	1.079	.73333	10
30	.5948	.7400	1.351	.80386	30						
40	.5972	.7445	1.343	.80212	20	43	.6820	.9325	1.072	.73135	47
50	.5995	.7490	1.335	.80038	10	10	.6841	.9380	1.066	.72937	50
						20	.6862	.9435	1.060	.72737	40
37	.6018	.7536	1.327	.79864	53	30	.6884	.9490	1.054	.72537	30
10	.6041	.7581	1.319	.79688	50	40	.6905	.9545	1.048	.72337	20
20	.6065	.7627	1.311	.79512	40	50	.6926	.9601	1.042	.72136	10
30	.6088	.7673	1.303	.79335	30						
40	.6111	.7720	1.295	.79158	20	44	.6947	.9657	1.036	.71934	46
50	.6134	.7766	1.288	.78980	10	10	.6967	.9713	1.030	.71732	50
						20	.6988	.9770	1.024	.71529	40
38	.6157	.7813	1.280	.78801	52	30	.7009	.9827	1.018	.71325	30
10	.6180	.7860	1.272	.78622	50	40	.7030	.9884	1.012	.71121	20
20	.6202	.7907	1.265	.78442	40	50	.7050	.9942	1.006	.70916	10
							.7071	1.	1.	.70711	45
											°
	Cosin.	Cotg.	Tan.	Sine.	Angle.		Cosin.	Cotg.	Tan.	Sine.	Angle.

39+8277
2 35 36
17-17 35

TABLE IX.—CALCULATION OF EARTHWORK.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6		.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55
7		.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81
8		.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08
9		.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33
10		.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59
11		.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85
12		.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11
13		.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37
14		.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63
15		.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89
16		.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15
17		.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41
18		.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67
19		.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92
20		.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18
21		.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44
22		.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70
23		.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96
24		.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22
25		.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48
26		.48	.96	1.44	1.92	2.41	2.90	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74
27		.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00
28		.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26
29		.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52
30		.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78
31		.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04
32		.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30
33		.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55
34		.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81
35		.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08
36		.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33
37		.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59
38		.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85
39		.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11
40		.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w = 16.2 and h = 5.3, cu. yds. = 1.48 + .028 + .039 = 1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 2. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) = h, and 1/2 the roadbed = w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

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ATLANTIC OCEAN

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5 + 90.68 = P.O.T. 46 7 811
 1.5 97.5

36 + 40 32 + 50.23 8123
 34 + 71 15 11 40.31
 1.67 + 35 12
 108.50 20.50
 185.58 14.62

290.08
 30 + 36.94 - 45° 22' - 2.91 = + 34.13
 32 + 10.57 = 47° 42' 30"

645.50 6499.25
 1410 1410
 637.40 6185.15

95.25 457.50
 47° 42' 30" 5.01
 1974 462.51
 820 520
 32 + 20.50 457.31
 993 2.81
 32 + 10.57 460.12
 2781.78 128
57.58
185.58
880
172.69

19 + 38.96 = P.O.T. 4159
 + 42.68 = Int 76° 35' 20" 8163

45 + 02.8 4123.42
 3 98.1 61.61
 17.047 8163
 197.92 62.6
 24.1 20.6
 173.82

37 + 47.35 on line 153 104
 Road 45.6 76 35 28

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.