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)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

1810

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.

Pages

1-5 - Prop. Culvert - Curlew & Brookes

6-12 - X-Sect. Martin - 30th to 31st

13-17 X " Alley Block 6 Ocean Beach

18-25 Alignment Rubbish sited. Homeland villas

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35-44 Alig & Line Rubbish Road Homeland Villas Hts

53-65 x Sect Commonwealth Ivy to Laurel

65-72 x " Pentucketh Ivy to Juniper

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1

Location of Prop. Culvert.

See B. 1621 - P. 8

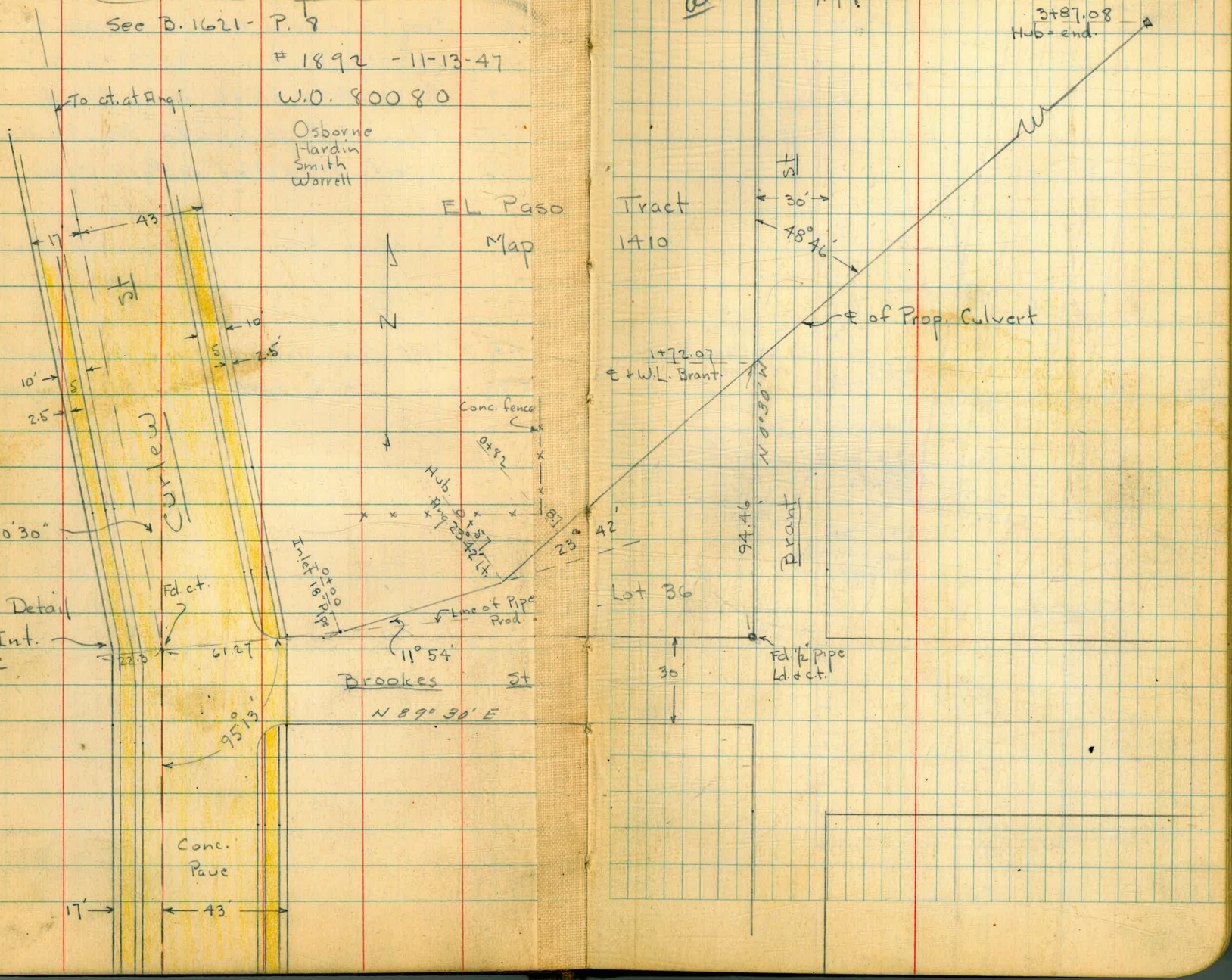
1892 - 11-13-47

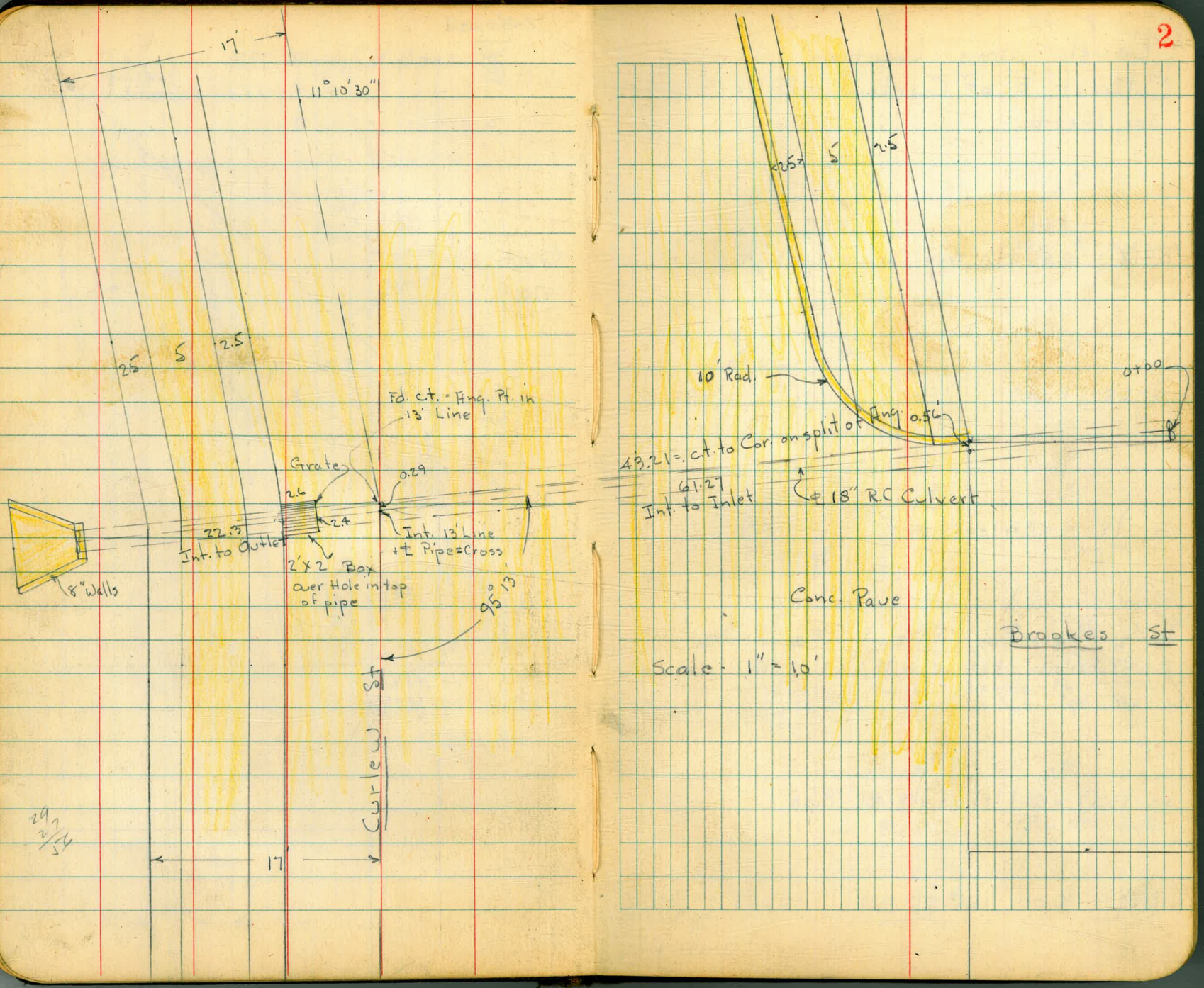
W.O. 80080

Osborne
Hardin
Smith
Worrell

EL Paso

Map




17'
11° 10' 30"
2.5
5
2.5
Fd. c.t. = Hng. Pt. in 13' Line
Grate
2.6
0.29
2.4
32.3
Int. to Outlet
Int. 13' Line
± Pipe = Cross
2'x2' Box over Hole in top of pipe
8" Walls
95° 13'
17'
10' Rad.
0+00
43.21 = c.t. to Cor. on split of Hng. 0.56'
61.27
Int. to Inlet
± 18" R.C Culvert
Conc. Pave
Brookes St
Scale: 1" = 10'

Levels along Location of Prop Culvert E. of Curlew - N. of Brookes
See sketch.

Conc. Pave

0-18 - 0.56 Lt.= Prop. Cor.= end cb. Ret. + edge of

0-28 = E. cb.

0-48 = ℄ Curlew

0-68.25 = W. cb. face + ℄ 2'x2' inlet.

0-83.57 = Outlet of 18" RC. Pipe

B.M. 2.00 155.57 153.57 B.P. in E. cb. of Curlew opp ℄ Ostego Dr. B.1621-P.27

Lt. = N. ℄ Rt. = S. 3

148.54 7.03 0.56 Top

147.75 7.82 0.56 gut.

147.99 7.58 14.4 = ℄ = edge pave

147.75 7.82 9.7 gut.

148.50 7.07 9.7 = P.C. Top 10' Rad Ret

147.59 7.98

147.12 8.45 20 in gut.

148.24 7.33 20 - along ℄

147.73 7.84

147.27 8.30 20 along ℄

147.46 8.11 20 gut.

148.14 7.43 20 along cb. Top

147.42 8.15 Top cb

146.69 8.88 Top grate gut.

143.95 11.62 F.L. Pipe

147.11 8.46 20 Top

146.45 9.12 20 gut.

148.72 11.85 Flow line

145.91 9.66 Top Head wall

155.57 ✓

1+25

T.P.	11.52	166.42	0.67	154.90

1+00

0+82 - 8.7 Lt. = Cor. Conc. fence

0+75

0+57 = Ang. 23° 42' Lt. = Hub. - Section split

0+30

0+00 = Inlet of ℄ 18" R.C. culvert.

Lt. ℄ Rt.

157.0	156.5	152.4	152.0	152.4	156.8	160.8	167.2
9.4	9.9	14.0	14.4	14.0	9.6	5.6	+0.8
20	5	3		2	7	20	40

166.42

155.2	155.4	151.3	151.2		151.4	156.5	171.5
0.4	0.2	4.3	4.4		4.2	+0.9	+15.9
20	6	4			8	12	50

154.5	154.1	150.2	150.2	152.9	166.8
1.1	1.5	5.4	5.4	+1.3	+11.2
20	3		14	17	45

154.0	154.1	149.5	149.6	149.6	155.6	162.8
1.6	1.5	6.1	5.95	6.0	0.0	+7.2
20	10	4	on Hub	9	13	30

152.6	152.4	149.0	147.8	148.9	151.6	154.8
3.0	3.2	6.6	7.8	6.7	4.0	0.8
20	10	4		6	10	20

150.1	148.7	142.03	148.7	149.7
5.5	6.9	9.54	6.9	5.9
10	2	F.L. pipe	2	10
	Top bank		Top bank	

155.57

153.54

Check Starting B.M.			4.44	153.58
T.P.	122	~~158.02~~ 157.98	9.66	156.76

3+87.08 = Hub. = end.

3+50 = ℄ Creek

3+05

2+75 = ℄ Creek

2+45

2+15

1+80 = ℄ Stock pile of dirt

1+60

Lt. ℄ Rt.

5

172.6 +6.2 25 | 169.0 +2.6 10 | 167.6 +1.2 | 166.3 0.1 6 | 161.9 4.5 8 ℄Creek | 162.6 3.8 18 | 169.9 +3.5 22

169.8 +3.4 30 | 166.0 9.4 15 | 160.5 5.9 | 163.9 2.5 12 | 171.6 +5.2 25

166.8 +0.4 25 | 163.8 2.6 10 | 159.8 6.6 | 158.8 7.6 8 ℄Creek | 159.9 6.5 13 | 168.8 +2.4 30

Notes Reduced. 11.18.87

162.9 3.5 25 | 158.5 7.9 10 | 157.4 9.0 | 154.7 6.7 8 | 165.6 0.8 20

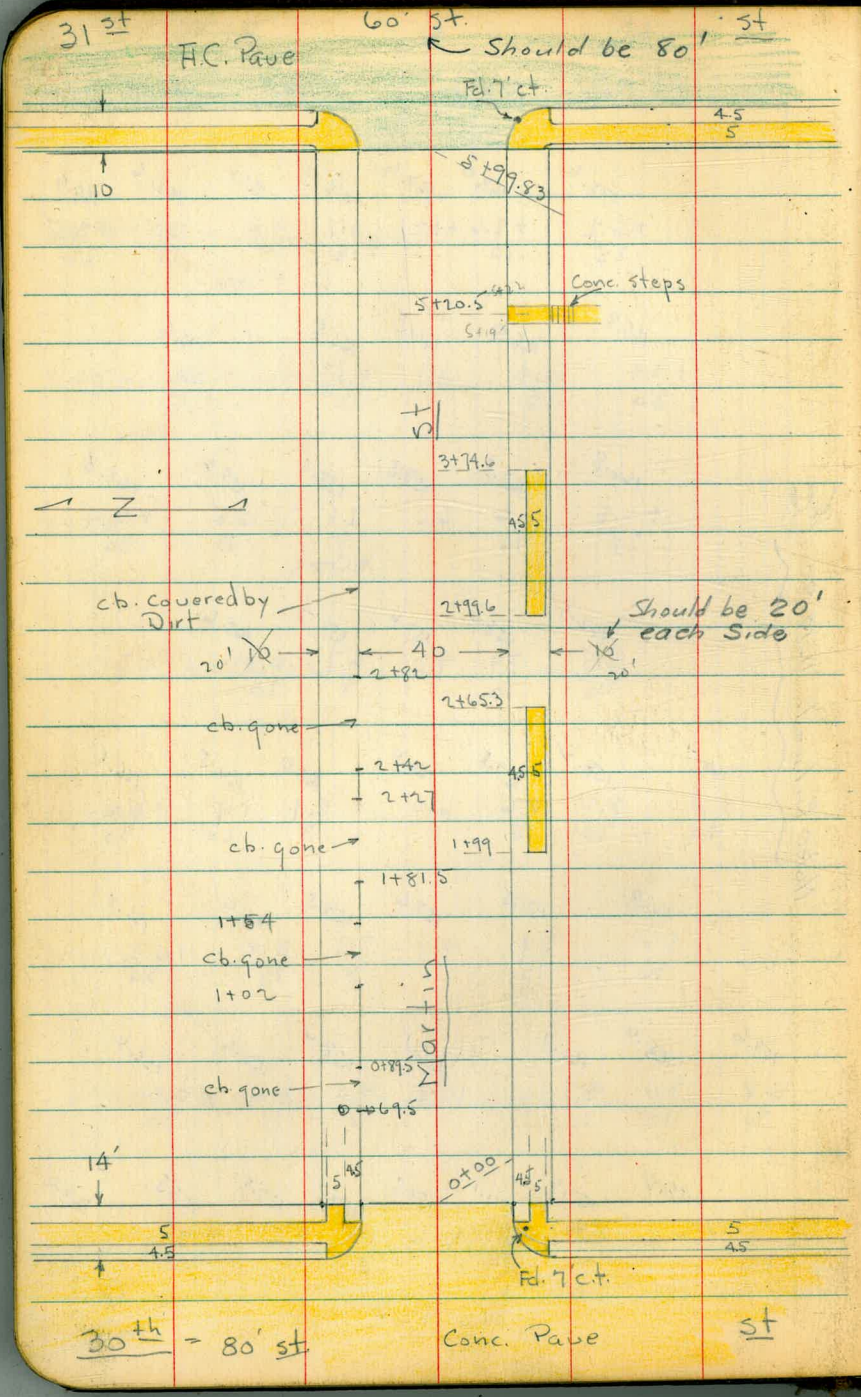
166.4 0.0 40 | 158.✓ 8.2 20 | 157.8 8.6 5 | 160.4 6.0 | 161.0 5.4 8 | 164.5 1.9 20 | 166.6 +0.2 30

160.8 5.6 30 | 157.✓ 8.9 15 | 157.6 8.8 | 158.5 7.9 8 | 162.6 3.8 15 | 166.7 +0.3 30

159.6 6.8 30 | 163.4 3.0 15 | 162.7 3.7 10 | 156.1 10.3 | 158.4 8.0 6 | 162.6 3.8 15 | 166.4 0.0 30

158.✓ 8.2 20 | 157.9 8.5 4 | 154.1 12.3 2 | 153.8 12.6 | 154.1 12.3 3 | 157.9 8.5 6 | 163.5 2.9 20 | 169.0 +2.6 40

166.42 ✓



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6

X-Sect Martin - from 30th to 31st

#1923

W.O. 310 46

12-3-47

Osborne
Hardin
Smith
Worrell

X-Sect. Martin - 60' st. - 10' cbs. from ℄ 30th to ℄ 31st curbs in - some walks

0-04 = P.C. 10' Rad.

Rods on Mid points of 10' Rad. Curve on Ret.

0-14 - Cont.

0-14 = E. cb.

0-27

0-40 = ℄ 30th - Paved - Conc.

Reduced by W.K.L. 12/5/47

S.E. ℄ ct. 30th + Martin	3.34	74.60 ~~75.06~~	7.08	71.26 = ~~71.72~~	from 30th + O.J. See P. 12
B.M.	2.04	78.80		76.76	S.E. Top Hyd. 30th + Greely

Lt. = N. ℄ Rt. = S.

69.61 4.99 20 Top | 69.11 5.49 20 gut | 70.49 4.77 10 | 70.37 4.23 | 70.50 4.10 10 | 69.39 5.21 20 gut | 71.19 3.41 20 Top

N.E. Ret. 69.69 4.91 Top | 69.31 5.29 gut | 70.59 4.01 gut | 71.18 3.42 - S.E. Ret. Top

70.35 4.25 100 Top | 70.03 4.57 100 gut | 69.84 4.76 50 Top | 69.41 5.19 50 gut | 70.79 3.81 50 gut | 71.24 3.36 50 Top | 71.29 3.31 100 gut | 71.77 2.83 100 Top

69.71 4.89 30 Top P.C. Ret. | 69.39 5.21 30 gut | 69.55 5.05 20 | 70.06 4.54 10 | 70.46 4.14 | 70.69 3.91 10 | 70.76 3.84 20 | 70.60 4.00 30 gut | 71.15 3.45 30 Top P.C. Ret.

70.95 3.65 100 | 70.15 4.45 50 | 69.97 4.63 30 | 69.99 4.61 20 | 70.61 3.99 | 71.14 3.46 20 | 71.24 3.36 30 | 71.42 3.18 50 | 71.97 2.63 100

71.37 3.23 100 | 70.48 4.12 50 | 70.14 4.46 30 | 70.15 4.45 20 | 70.72 3.88 | 71.29 3.31 20 | 71.44 3.16 30 | 71.69 2.91 50 | 72.28 2.32 100

74.60
~~75.06~~

Fd. to be off

1+50

T.P.	0.46	62.08 ~~62.54~~	12.98	61.58 ~~62.08~~

1+02 - 19.6 Lt. = Beg. cb. gone
1+22 - 22.7 Rt. = ± 6" Tree
1+06 - 22.7 Rt. = ± 4" Tree

1+00

0+89.5 - 19.9 Lt. = end - cb. gone - Beg. cb. broken down
0+88 - 21.3 Rt. = ± 6" Acacia
0+69.5 - 19.8 Lt. = Beg. cb. gone

0+64 - 22.2 Rt. = ± 6" Acacia
0+50 - 21.9 Rt. = ± 3" Acacia
0+46 - 19.9 Lt. = Beg. Cb. broken down - in poor Cond.

0+25
0+12 - 21.5 Rt. = ± 18" Palm
0+03 - 21.5 Rt. = ± F.H.

0-00 = E.L. 30th = edge Conc. Pave

Lt. ℄ Rt.

60.2 1.9 30
60.1 2.0 20
60.7 1.4 10
61.1 1.0
61.2 0.9 10
61.0 1.1 20 gut.
61.76 0.32 20 Top
62.0 0.1 30

62.08
~~62.54~~

63.21 11.39 19.6 Top

63.4 11.2 30
63.32 11.28 19.7 Top
63.4 11.2 19.7 gut.
63.8 10.8 10
64.2 10.4
64.2 10.4 10
64.0 10.6 20 gut.
64.90 9.70 20 Top
65.0 9.6 30

64.09 10.51 19.9 Top
65.36 9.24 19.8 Top

66.8 8.1 30
66.38 8.22 19.9 Top
66.1 8.5 19.9 gut.
67.0 7.6 10
67.4 7.2
67.4 7.2 10
66.9 7.7 20 gut.
67.91 6.69 20 Top
68.1 6.5 30

66.66 7.44 19.9 Top

68.3 6.3 30
68.05 6.55 19.9 Top
67.7 6.9 19.9 gut.
68.5 6.1 10
68.9 5.7
68.8 5.8 10
68.3 6.3 20 gut.
69.51 5.09 20 Top
69.1 5.5 25
70.3 4.3 30

69.81 4.79 29.5 edge walk
69.70 4.90 24.5
69.63 4.97 20 Top
68.99 5.61 20 gut.
69.70 4.90 10
70.03 4.33
70.45 4.15 10
70.31 4.29 20 gut.
71.16 3.44 20 Top
71.20 3.40 24.5
71.28 3.32 29.5 edge walk

~~75.06~~
74.60

2+99.6 = Beg. walk on Rt.

2+94.5 = 20' Lt. = cb. ø (dug Hole to Locate):

2+82 - 20' Lt. = Beg. cb. - (covered by dirt.)

2+65.3 = end of walk on Rt.

2+50

2+42 - 19.9 Lt. = end cb. on Lt.

2+30 - Walk on Rt.

2+27 - 19.8 Lt. Beg. cb. in

		56.88		55.36
T.P.	1.52	~~57.34~~	6.72	55.82

2+00

1+99 = Beg. 5' Conc. walk on Rt.

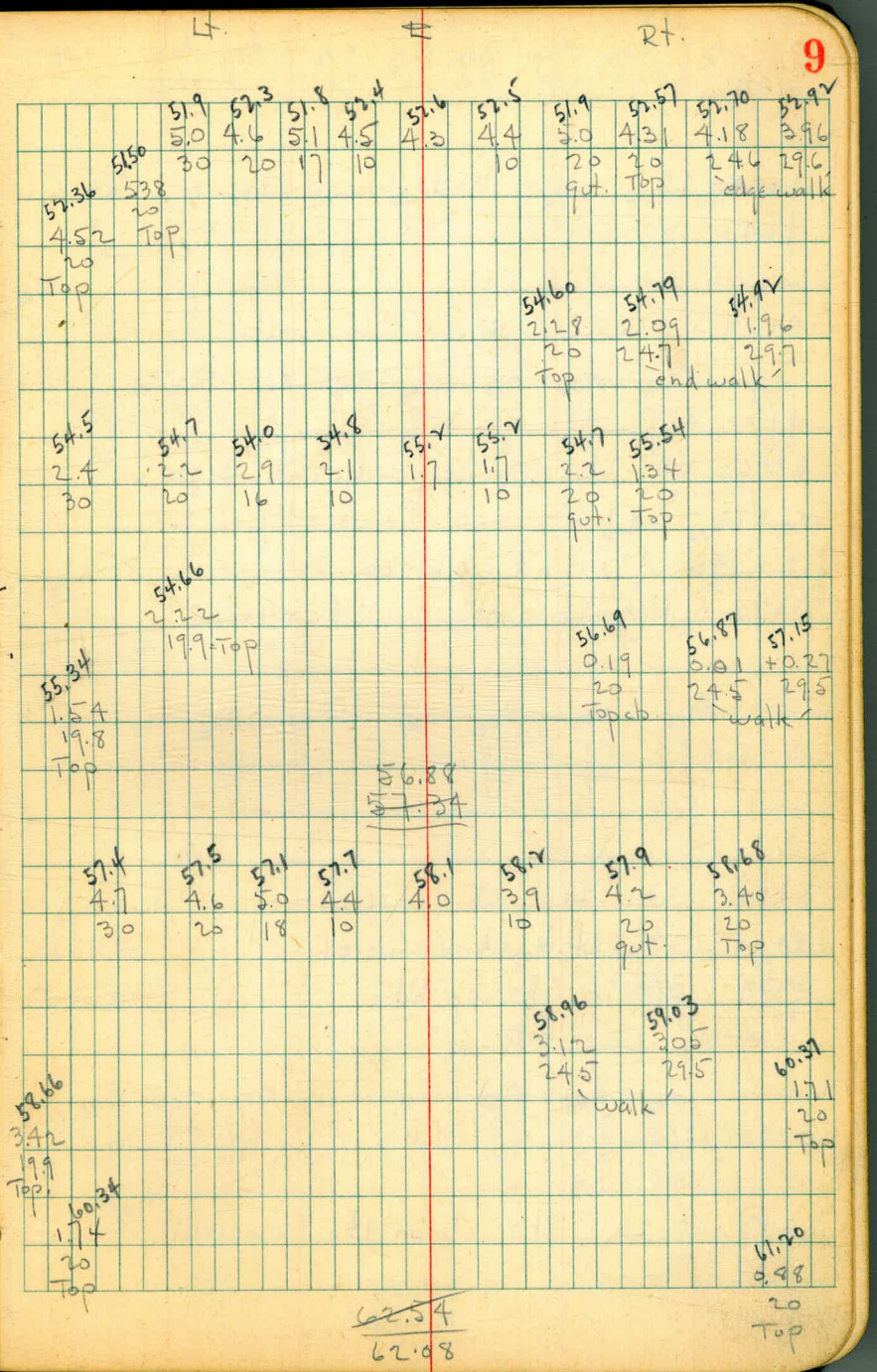
1+74 - Brk. in cb. on Rt.

1+81.5 - 19.9 Lt. = Beg. cb. gone

1+68 - 22.5 Rt. = ± 6" Acacia

1+54 - 20' Lt. = end cb. gone

1+59 - Brk. in cb. on Rt. (for Grade)



4+70

4+48 - 27' Lt. = End - Sly. Hedge

4+40

4+19 - 26.5 Lt. = ± 2.5 Conc. walk

4+00

3+96 - 28' Lt. = Sly. of 3' Hedge - 4' High

3+82 - 19.9 Lt. = cb. (covered)

3+74.6 = End walk on Rt.

3+72 - 19.9 Lt. = cb. (covered)

3+60

3+52 20' Lt. = cb. (covered)

3+45 - 20' Lt. = cb. (covered)

3+39 - Brk. in cb. on Rt.

3+30

3+17 - 20' Lt. = cb. on Lt. (covered)

Lt. ℄ Rt.

48.0 8.9 30 | 48.04 8.84 20 Top | 47.5 9.4 20 gut. | 48.0 8.9 10 | 48.3 8.6 | 48.1 8.8 10 | 47.9 9.0 20 gut. | 48.51 8.37 20 Top | 49.1 7.8 30

48.46 8.3 30 | 48.28 8.60 20 Top | 48.1 8.8 20 gut. | 48.6 8.3 10 | 48.9 8.0 | 48.7 8.2 10 | 48.3 8.6 20 gut | 48.88 8.00 20 Top | 49.1 7.8 30

48.85 8.03 26.5 walk

49.2 7.7 30 | 48.9 8.0 20 | 48.56 8.32 19.9 Top cb. | 48.8 8.1 17 | 49.4 7.5 10 | 49.7 7.2 | 49.4 7.5 10 | 48.9 8.0 20 gut. | 49.33 7.55 20 Top | 49.6 7.3 30

49.80 7.08 20 Top | 49.99 6.89 24.5 end walk | 50.14 6.74 29.5

48.69 8.19 19.9 = Top

50.0 6.9 30 | 50.1 6.8 20 | 49.9 7.0 17 | 50.3 6.6 10 | 50.7 6.2 | 50.4 6.5 10 | 49.7 7.2 20 | 50.08 6.80 20

48.81 8.07 20 Top

49.02 7.86 20 Top

50.45 6.43 20 Top | 50.66 6.22 24.5 | 50.83 6.05 29.5 walk

50.7 6.2 30 | 50.9 6.0 20 | 50.7 6.2 17 | 51.1 5.8 10 | 51.5 5.4 | 51.3 5.6 10 | 50.4 6.5 20 gut. | 50.91 5.97 20 Top

50.20 6.68 20 = Top

56.88
~~57.34~~

Indexed

Rods on Mid points of 10' Rad. Returns

5+99.83 = w.L. 31st = edge F.C. Pave

B.M. on S.W. 7' ct. 47.81 5.51 ~~42.30~~ 42.76
T.P. 3.77 ~~48.27~~ 12.84 ~~44.50~~ 44.04

5+70

5+69 = Brk. in cb. on Lt.

5+55 = Brk. in cb. on Lt.
5+41.5 = Brk. in cb. on Lt.

5+30

5+20.5 = ± 3.5' conc. walk to cb.
5+07 = Brk in cb. on Lt.

5+00 = Brk. in cb. on Rt.
4+98 = Brk. on cb. on Lt.

Lt. ℄ Rt.

N.W. Ret. 41.94 5.87 Top; 41.37 6.44 Gut; 41.71 6.10 Gut; 42.31 5.50 Top S.W. Ret.

47.17 5.69 28.9 Cor. Ret.; 42.23 5.58 20 Top; 42.57 6.24 20 Gut.; 41.77 6.09 10 PC 10 Rad.; 41.89 5.92; 41.93 5.88 10; 42.06 5.75 20 Gut.; 42.73 5.08 20 Top; 42.47 5.34 30 = Cor. Ret.

47.81
~~48.27~~

43.5 13.4 30; 43.81 13.07 20 Top; 43.0 13.9 20 Gut; 43.4 13.5 10; 43.7 13.2; 43.7 13.2 10; 43.5 13.4 20 Gut; 44.41 12.47 20 Top; 44.5 12.4 30

43.88 13.00 20 Top.

44.40 12.48 20 = Top.

45.34 11.54 20 = Top.

46.1 10.8 30; 45.97 10.91 20 Top; 45.7 11.7 20 Gut.; 45.7 11.2 10; 46.0 10.9; 45.9 11.0 10; 45.6 11.3 20 Gut.; 46.48 10.40 20 Top; 46.9 10.0 30

47.05 9.83 20 Top cb.; 47.24 9.64 25 Walk; 47.71 9.17 30

47.26 9.63 20 Top

47.75 9.13 20 Top; 47.6 9.5 30; 47.67 9.21 20 Top; 46.7 10.2 20 Gut.; 47.0 9.9 10; 47.3 9.6; 47.7 9.7 10; 46.9 10.0 20 Gut; 48.09 8.79 20 Top; 48.6 8.3 30

56.88
~~57.34~~

Used as new elev.
see page 7

S.E. cr. 30th + Martin			4.85	71.26	
	1.02	76.11	13.20	75.09	True elev.
	0.26	88.29		88.03 =	
			0.26	88.04 =	N.W. B.P. 30th + Ocean View
	3.04	88.30	1.93	85.26	
	13.19	87.19	0.11	74.00	
	13.00	74.11	0.75	61.11	
B.M.	13.20	61.86	0.12	48.66	N.W. B.P. 31st + Ocean View
T.P.	11.82	48.78	10.85	36.96	

30' E. = ℄ 31st

10' E. - Cont.

10' E. = W. cb. — 37.69 / 10.12 / 100 / Top. ; 37.07 / 10.74 / 100 / gut.

Lt. ℄ Rt.

36.85	39.76	40.62	40.75	40.88	41.05	41.15	41.29	41.75
10.96	8.05	7.19	7.06	6.93	6.76	6.66	6.52	6.06
100	50	30	20		20	30	50	100

41.58	42.22	42.05	42.67
6.23	5.59	5.76	5.14
50	50	100	100
gut.	Top	gut.	Top

40.49	39.84	41.65	40.98	41.11	41.12	41.20	41.25	41.37	41.51	42.14
7.32	7.97	6.16	6.83	6.70	6.69	6.61	6.56	6.44	6.30	5.67
50	50	30	30	20	10		10	20	30	30
Top	gut.	Top	gut.						gut.	Top
		P.C. Ret.								P.C. Ret.

47.81
~~48.2~~

Indexed

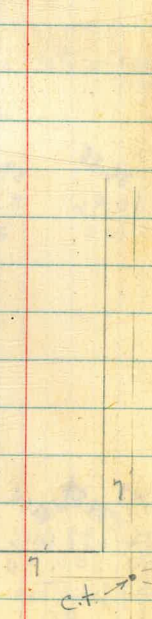
X-Sect. 20' Alley in Block 6
Ocean Beach - Map 279

W.O. 25001

4-8-48

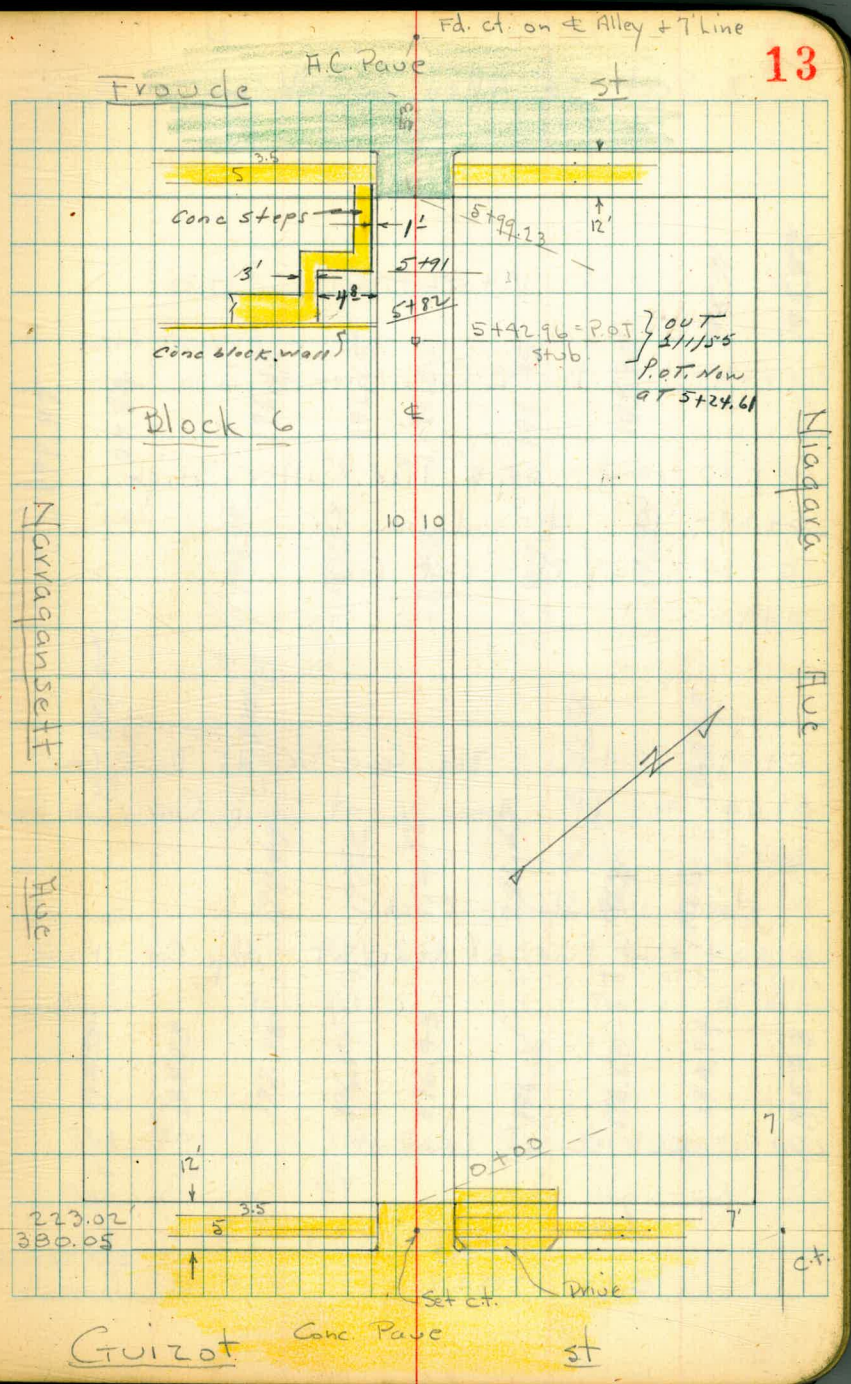
Osborne
Hardin
Worrell
Rorer

For Re-cross-section see 2262-66
2/11/55 - Cliff Allen



Fd. ct. on ℄ Alley + T line

13



X-Sect. 20' Alley in Blk. 6 - O.B.

T.P.	0.17	194.42	11.20	194.25

0+67 - 10.6 Rt. = ℄ Conc. Apron to Doub. Gar. Conc. floor

0+50 - 10' Lt. = Beg. 8" Tile Wall - 6' High

0+27 - 10' Lt. = end Conc Dr.

0+24 - 10.9' Rt. = end Gar.

0+20

0+09.5 - 10.1 Lt. = Beg. Conc. Dr. to Doub. Gar. Conc. floor.

0+04 - 10.9 Rt. = Conc. Dr. at Doub. Gar. - Conc. floor

Conc. Dr. starts at ch.

0+00 = N.W. Line of Guizot = edge Conc. Pave.

0-12 = N.W. ch. of Guizot

	0.45	205.45	13.28	205.00
	0.30	218.28		217.98

S.W. Del Monte + Guizot

Lt. ℄ Rt.

194.42

198.37 — 7.08 / 20 — 198.29

197.84 — 7.61 / 10 — 197.23

196.15 — 9.3 / 15 — 198.42 — 7.03 / 20 / Dr. — 198.93 — 7.52 / 10.1 / Dr. — 197.49 — 7.96 / 10 / Top — 197.35 — 8.22 / 25 / gut — 197.13 — 8.10 / 10 / Top / 2 Rad.

196.65 — 8.8 / 10 — 198.87 — 7.58 / 10 / Dr. — 197.05 — 8.4 / 10 — 197.06 — 8.39 / 10 / gut. — 196.79 — 8.66 / 10 / gut

196.05 — 9.4 — 197.05 — 8.4 — 196.56 — 8.89 — 196.43 — 9.02 — 205.45

196.45 — 9.5 / 20 — 197.95 — 8.5 / 10.9 / along Gar. — 196.75 — 8.7 / 10.9 / ground — 196.63 — 8.82 / 10 / gut — 196.06 — 9.39 / 10 / gut

195.95 — 9.5 / 20 — 196.95 — 8.5 / 10.9 / along Gar. — 196.71 — 8.74 / 10 / Top — 196.65 — 8.80 / 10 / Top / 2 Rad.

195.71 — 9.74 / 10.6 / apron — 197.25 — 8.20 / 10.9 / floor Gar. — 196.88 — 8.47 / 12.5 = on Conc. Dr. to Gar. — 194.74 — 10.71 / 35 / gut.

195.72 — 9.73 / 13 / floor — 195.33 — 10.12 / 35 / Top

3+00 - 10' Rt. = Beg. 10" Conc. Wall - Board fence on Top.

2+99.5 = ℄ Sewer MH 11.31 on Rim

2+69 - 27.7' Rt. = ℄ Dbl. Gar. - Dirt floor

2+50.5 - 6.9' Lt. = Nly. P. pole # J.P.A 4538

2+50

2+49 - 10.5 Rt. = end Gar. - Conc. found

Conc found

2+29 - 10.4 Rt. = S.E. Cor. - Sing Gar. - Dirt floor

2+19 - 30' Rt. = ℄ Sing. Gar. - Dirt floor

2+00

1+93 - 13.9' Lt. = ℄ Sing. Gar. - Conc. floor

1+86.5 - 10' Rt. = end wall

1+70.5 - 10.1 Rt. = Beg. 2' Rock & Conc. wall

1+50

1+24.5 - 10.2 Lt. = end wall.

1+24.5 - 7.7' Lt. = Nly. P. pole # J.P.A. 4520

1+00

0+95 - 10.2 Lt. = ℄ 2.5 Conc. walk thru Wall

194.42

5+25.5 -8.3' Lt = Nly. P. pole # P.A. 4590

5+24.5 -10.3 Lt. = end wall

5+00

of footing about 12" below ground.

4+73 - 10.5' Lt. = Beg. 4" Tile wall - 4.5' High - Bottom

4+60

4+55 - 20.4' Lt. = ℄ Sing Gar. Conc. floor

4+40

T.P.	0.95	174.04	8.78	173.09

4+00

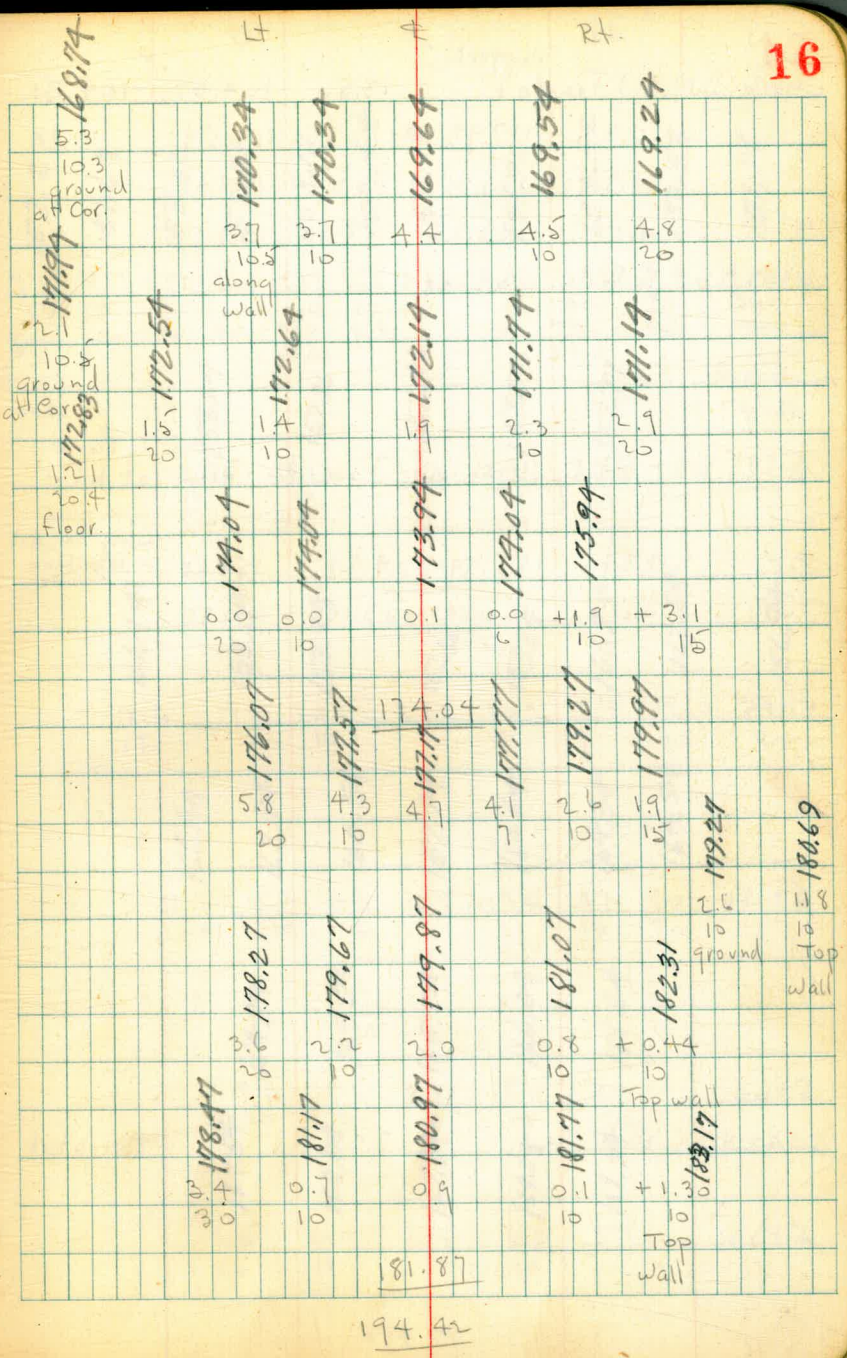
3+99.5 -10' Rt. = end Conc. wall and fence

3+50.5 -74 Lt = Nly. P. pole # P.A. 4560

3+50

3+25

T.P.	0.72	181.87	13.27	181.15



Check B.M. (SW. Froude)	Newport +		13.56	104.37 ✓	104.31
	0.34	117.93	12.76	117.59	
	0.28	130.35	13.20	130.07	
T.P.	0.13	143.27	12.85	143.14	
6+11.23 = S.E.ly. cb. Line					
5+99.23 = SEly Line of Froude = edge of H.C.					Pave
					Alley
					Nwly. Cor. Ref. on NW. Line of Froude
T.P.	4.34	155.99	9.24	151.65	
T.P.	0.00	160.89	13.15	160.89	
5+95					
5+80					
5+60					
5+42.96 = P.O.T. Stub			7.28		Top stub
5+30					

Lt. ℄ Rt.

152.22 | 151.62 | 153.01 | 152.38 | 153.10 | 152.44 | 152.19 | 151.94 | 152.52 | 150.53 | 151.19

3.77 50 Top | 4.37 50 gut. | 2.98 30 Top | 3.61 30 gut. | 2.89 10 Top 3' Rad | 3.55 10 gut. | 3.80 | 4.03 10 Gut. | 3.47 10 Top 3' Rad | 5.46 30 gut. | 4.80 30 Top

steep down grade

steep down grade

153.74 | 152.86 | 152.46 | 152.52 | 152.77

2.15 10 Top | 3.13 10 gut. | 3.53 | 3.47 9.9 gut | 3.22 9.9 Top

155.99 / 160.89

161.44 | 155.04 | 153.94 | 152.94 | 153.84 | 161.74 | 162.04 | 156.94

12.6 19 Top | 19.0 15 | 20.1 10 | 21.2 | 20.2 5 | 12.3 7 | 12.0 10 | 17.1 20

162.94 | 162.84 | 160.54 | 157.74 | 160.64 | 164.34 | 164.54

16.1 20 | 11.2 10 | 13.5 2 | 16.3 | 13.4 2 | 9.7 10 | 9.5 20

164.94 | 164.54 | 165.24 | 166.04 | 166.64

9.1 20 | 9.5 10 | 8.8 | 8.0 10 | 7.4 20

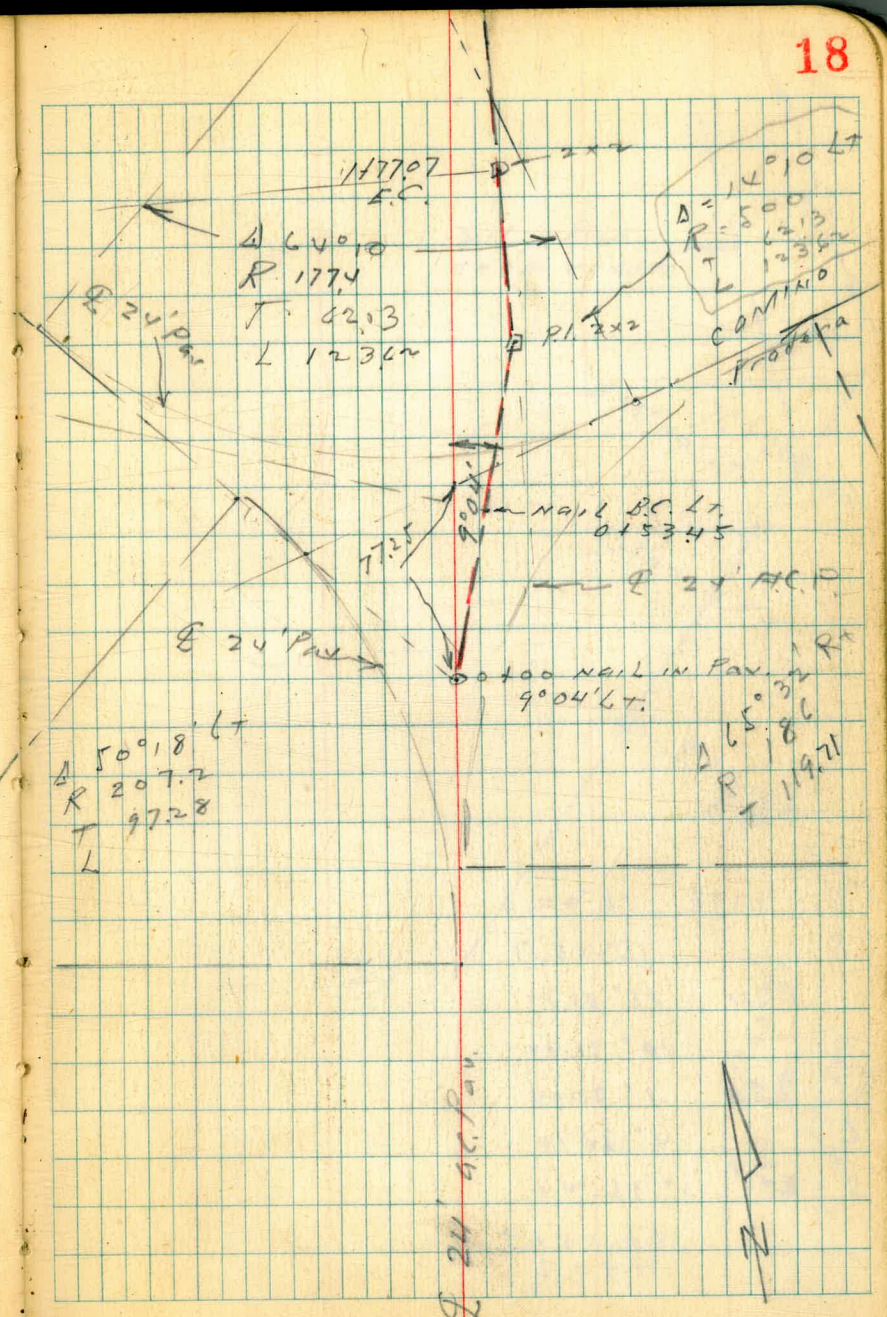
167.54 | 168.04 | 167.64 | 168.04 | 168.24

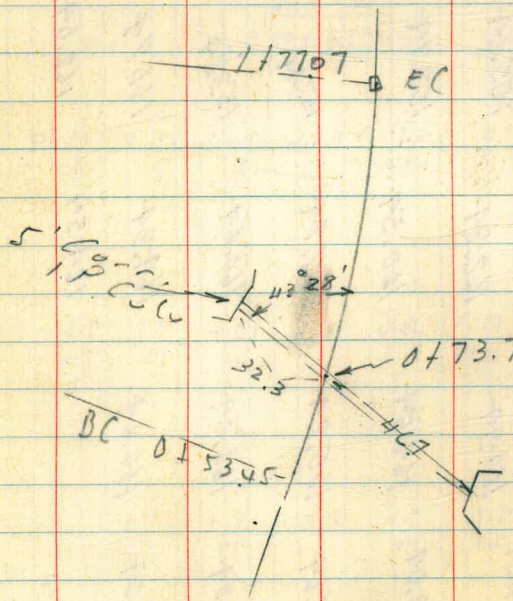
6.5 20 | 6.0 10 | 6.4 | 6.0 10 | 5.8 20

174.04

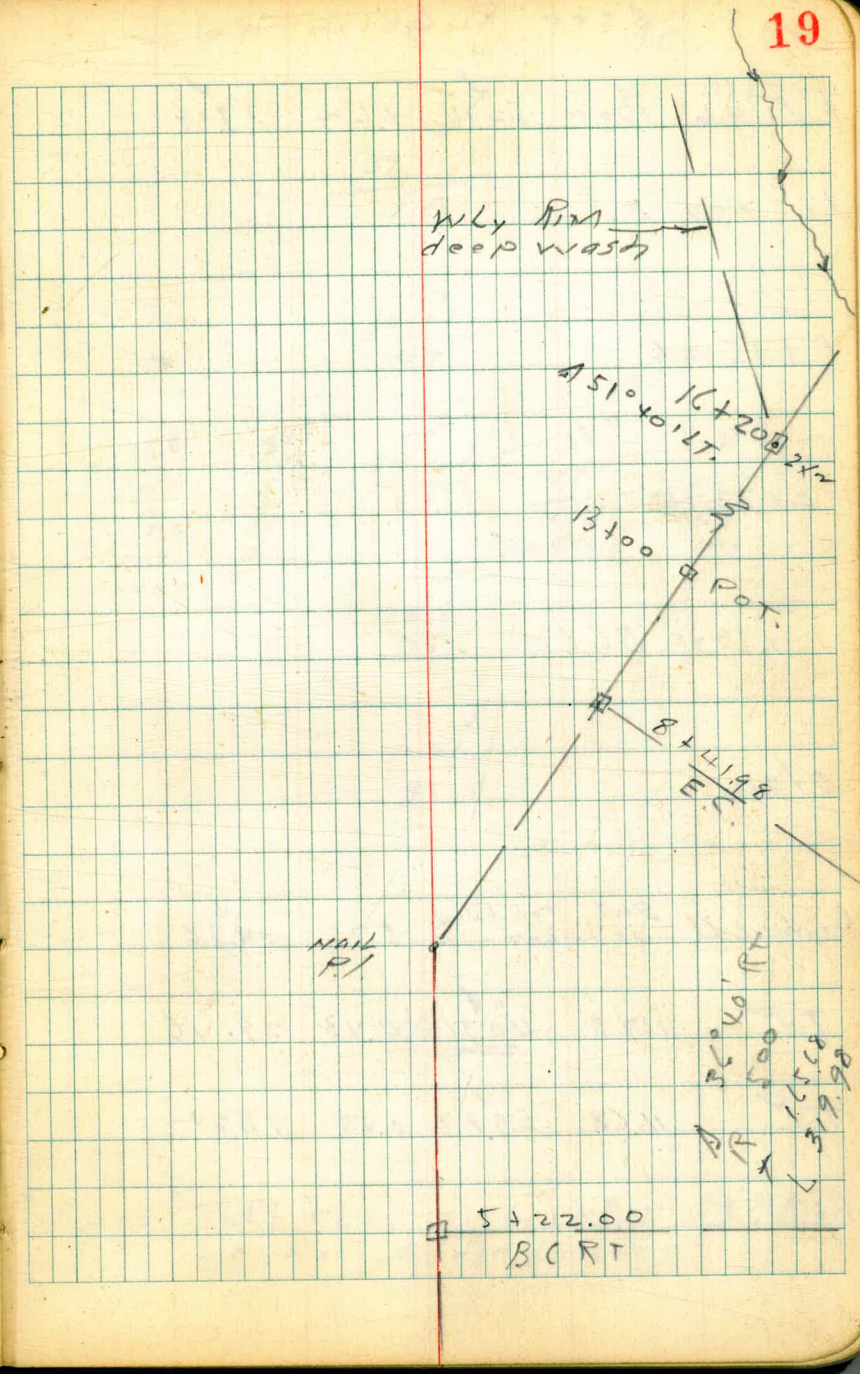
Align. of Rubbish Rd.
Homeland Villas

Moore
Begg
Sherman
Enoch
11-11-48.





8	+4.98	18°20.0
8		15°55.7
	+50	13°03.8 ↗
7		10°11.9 ↗
	+50	7°20.0 ↗
6		4°28.1 ↗
5	+50	1°36.2 ↗



X sec Rubicon Rd

T.P. EC. Hub	13.0 N	52.11 ✓	1.6 N	39.09 ✓
1+77.07 E.C.				
1+15.26				
0+73.75				
53.45 B.C. Lt.				
0+00				
Set chisel X	BM. Top hdwl at inlet end		5.75	34.96 ✓
T.P	11.25	40.71 ✓	0.43	29.46 ✓
T.P	11.68	29.89 ✓	0.45	18.21
BM BP	4.94			13.7 N

Lt. ℄ Rt

39.1 ✓
1.6

34.01 ✓
4.7

29.0 35.0 34.61 ✓ 33.0 27.0
11.7 5.7 6.1 7.7 13.7
32.3 32.3 VC.7 VC.7
Inv. Hdwl Top Hdwl Inv
Inlet

33.71 ✓
7.0

31.21 ✓
9.5

40.71 ✓

Top c6. SELy Cor. Balboa Ave Bridge at Rose Canon Creek

4+40					
4+13					
4					
3+90					
3+79					
+50					
T.P.	11.00	62.29 ✓	0.82	51.29	
3					
+50					
+30		Rt P.I.	61250		
2					
		52.11			

Lt 16" Eucal 20 — 58.6 / 3.7 / 20 — ⊄ 52.1 ✓ / 10.2 Creek — Rt. 53.9 / 8.4 / 20

15" di. Eucal. 23

58.7 / 3.6 / 20 — 55.6 ✓ / 6.7 — 50.6 / 11.7 / 25 = Creek

12" di Eucal. 22

P.P. 61253 / 18 — D.M. / 3

54.0 ✓ / 8.3

62.29

49.5 ✓ / 2.5

44.6 ✓ / 7.5

40.7 ✓ / 11.4

52.11

T.P.	12.38	95.34 ✓	0.60	82.96
+50				
7				
+50				
T.P.	12.60	83.56 ✓	0.92	70.96
6				
+50				
T P	12.25	71.88 ✓	2.66	59.63
+27 B.C. RT				
5				
V +50				
		62.29		

Lt ℄ Rt

83.1 ✓
+0.5

81.0 ✓
2.6

64.8 18.8 50 | 69.3 14.3 30 | 74.0 9.6 20 Main Creek

76.6 ✓
7.0

80.1 3.5 20

83.56

62.7 9.2 20 Main Creek

63.1 ✓
8.8

64.7 7.2 13

67.0 4.9 20

61.6 10.3 20

60.2
1.7

61.3 10.6 20

71.88

59.0 3.3 20

60.6 1.7 4

56.3 ✓
6.0 Creek

58.6 3.7 5

60.6 1.7 20

56.8 5.5 20 Small Creek

57.3 ✓
5.90

55.1 7.2 6 Main Creek

57.8 4.5 12

59.8 2.5 20

56.9 5.4 20

53.9 8.4 10 Small Creek

54.0 ✓
8.3

53.2 9.1 15 Main Creek

62.29

11+50				
11				
T.P.	12.7x	130.68 ✓	0.36	117.9x
10+50				
T.P.	12.3x	118.30 ✓	0.31	105.96
10				
9+50				
9				
T.P.	11.13	106.27 ✓	0.20	95.14
8+41.98 EC				
8				

95.34

125.2
5.5

119.1
11.6

130.68
111.9 ✓
6.4

118.30
106.3 ✓
0.0

101.5 ✓
4.8

97.3 ✓
9.0

106.27
92.0
83.9
3.3

88.1
76.4
7.2

95.34

	+50			
15				
	+50			
14				
T.P.	13.09	155.73 ✓	0.17	142.64
	+50			
13				
	+50			
T.P.	12.11	142.76 ✓	0.03	130.65
12				
		130.68		

℄

147.13
8.6
146.13
9.6
144.73
11.0
145.13
12.6
155.73
141.1
1.7
136.7
6.1
133.4
9.4
142.76
129.9
0.8
130.68

16 + 97

16 + 57

T.P. 2x2 P.I. Hub   12.31   164.27   3.77   151.96

16 + 20   Δ 51°40' Lt

16

155.73

163.9
0.4
15

164.3
0.0

163.8
0.5
7

160.0
4.3
20

157.5
6.8
15

157.3
7.0

156.3
8.0
13

152.8
11.5
25

164.27

151.9
3.8

150.5
5.2

155.73

X-Sec. Alley Blk 50 Park Villas -

For Grade Est.

From.

Wightman to University :

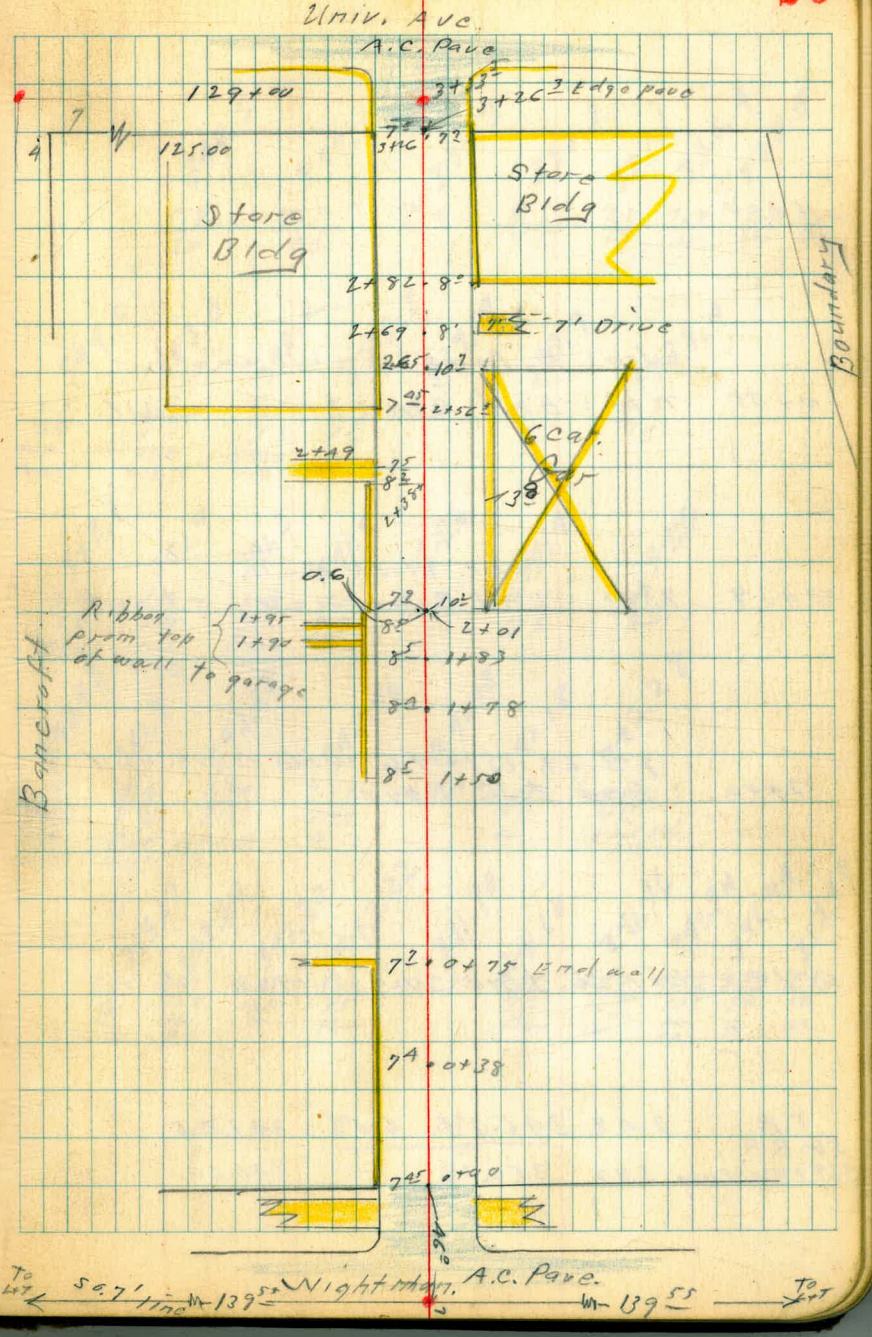
Bet. Bancroft & Boundary

Sommermeyer
McCoy
Allen
Jones

W.O. 25001

11-18-48

INDEXED
WIC
NOV 19 1948



Alley Blk. 50 Park Villas

1+00

also = N. Paco. E. + W. wall.

0+75 7 Lt. = End Conc. block wall.

Conc. block wall.

0+38 7 Lt. = End Conc wall, start

7 45 Lt. = Start 6" Wide Conc. wall

0+00 = End A.C. Pave.

0-10 Nly. cl. line Wight man

T.P.	2.48	346.33	6.53	343.85
S.W.B.P. 32nd + Wight man	3.98	350.38	—	346.40

340.5 339.0 338.3 338.2 337.1 336.9 335.5

5.8/30 7.3/7 5 8.0 8.1/7 5 7.2/13 7.9/45 12.8/50 13.2/60

394.0 393.0 390.2 390.3 339.9 339.9 339.4

2.3/40 top wall; 3.3/7 1 Top wall; 6.1/7 1 Base wall; 6.0/7 5; 6.4; 6.4/7 5; 6.9/30

393.1 392.9 391.3 391.9 341.6 341.4 341.0

3.2/15 Grd.; 3.4/7 5 Top walls; 5.0/7 4 Base walls; 4.4/7 4 Grd.; A.7; 4.9/7 5; 5.3/30

342.83 341.9 342.83 342.96 342.18 342.18 342.26

3.50/7 45 top wall; 4.4/7 45 Base wall; 3.50/7 45 End cl.; 3.87/7 45 G; 4.15; 4.15/7 5 G; 4.05/7 5 End cl.

343.67 342.64 342.30 342.22 341.98 341.68 341.46 341.94 336.94 337.46

2.56 G 50 in drive; 3.69/10 2 cl. B.C.; 4.03/10 5 G; 4.11/7 5 Pave; 4.35; 4.65/7 5 Pave; 4.87/10 5 G; 4.39/10 5 cl. cl.; 9.39/50 G; 8.93/50 cl.

346.33

Alley Blk. 50 Park Villas.

1+95 9½ Lt. = ℄ 2' wide Conc. Ribbon

Edge of wall.

1+90 9½ Lt. ℄ 2' Ribbon also = Back

1+83 8½ Lt. = line of wall.

1+78 8¼ Lt. = line of wall

T.P. 2.98 336.41 12.90 333.43

T.W. = Top of wall

B.W. = base of wall

1+50 8½ Lt. = start 5" wide Conc. wall.

346.33

℄

334.59	333.37
1.82	3.04
16½ Gar.	9½ Conc. Ribbon

334.57	333.31
1.84	3.10
16½ Gar.	9½ Conc. Ribbon

333.3	331.1	333.1	332.7	331.5	331.0
3.1	5.3	3.3	3.7	4.9	5.4
8½ T.W.	8½ B.W.	8½	7½		7½

333.8	333.6	332.0	332.4	332.4	331.9	331.2	329.2
2.6	2.8	4.4	4.0	4.0	4.5	5.2	7.2
15	8¼ T.W.	8¼ B.W.	8¼	7½		7½	50

336.41

338.1	336.2	335.6	336.2	336.2	334.0	334.0	329.3	328.7
8.2	10.1	10.7	10.1	10.1	12.3	12.3	17.0	17.6
30	8½ T.W.	8½ B.W.	8½ Gnd.	7½		7½	35	65

346.33

2+56.5 — 7.45 Lt. = start stucco store Bldg

2+49 — 7.5 Lt. = End drive (Rough edge)

2+38 — Cont.

8.2 Lt. = End Conc. wall.
Apron Edge very irregular
2+38 — 7.5 Lt. = start Conc. Apron to Sing Gar.

14' Rt. = Gar.
2+33 — 10.5 Rt. = Edge Conc Apron

2+01 — Cont.

14.2 Rt. = start 6 car Gar.
10.2 Rt. = start Conc. Apron to 6C ar. Gar.
2+01 — 8.2 Lt. = End Conc. wall
7.2 Lt. = start Conc. wall.

336.41

331.2 / 333.9 / 331.5
2.2 / 35 Gar. — 3.0 / 19 Dr. — 4.9 / 7.5 Drive

334.21 / 333.4
2.2 / 35 at Gar. — 3.0 / 18 Drive

336.6 / 331.3 / 331.6 / 331.7 / 331.3 / 331.2
+0.2 / 8.2 T.W. — 5.1 / 8.2 B.W. — 4.8 / 7.5 Conc. (Rough) — 4.7 / 7.5 Grd. — 5.1 — 5.2 / 7.5

331.28 / 331.43
5.13 / 10.2 Apron — 4.98 / 14 Gar Floor

331.5 / 334.4 / 331.5
1.9 / 15 Grd. — 2.0 / 8.2 T.W. To St. — 4.9 / 8.2 B.W. To So

332.9 / 336.6 / 332.3 / 332.9 / 331.4 / 331.0 / 331.22 / 331.36
3.5 / 8.2 Grd. — +0.2 / 7.5 T.W. To No. — 4.1 / 7.5 B.W. To No — 3.5 / 7.5 — 5.0 — 5.4 / 7.5 — 5.19 / 10.2 Apron — 5.05 / 14 Gar

33 c.41

Alley Blk 50 Park Villas

N.W.B.P. Univ ✕ Boundary 3.77 333.26 (333.44) — 0.18 see page 31 ℄

3+40³ S'ly. Gutter line Univ

T.P. 4.85 337.03 4.23 332.18

3+26³ = start. A.C. Pave.

3+26 7⁵ Lt. / 7⁷ Rt. } = End store Bldg.s

2+87 8' Rt. = ℄ 3' wide door to Bldg.

2+82 8⁰ Rt. = start stucco store Bldg.

2+76 8' Rt. = End same.

2+69 8' Rt. = start Conc. drive. No Garage.

2+65 14¹ Rt. = End 6 car Gar.
10³ Rt. = End Conc. Apron

336.41
4.23

332.95 — 4.08 / 50 / G
332.20 — 4.83 / 7⁵ / G
332.13 — 4.90 / 337.03
332.04 — 4.99 / 7⁵ / G.
331.31 — 5.72 / 50 / G

332.80 — 3.61 / 7⁵ / Cb
332.67 — 3.74 / 7⁵ / G
332.39 — 4.02
332.39 — 4.02 / 7⁵ / G
332.44 — 3.97 / 7⁵ / Cb

331.8 — 4.6 / 7⁴⁵ / at Bldg.
331.4 — 5.0
331.5 — 4.9 / 7⁵
332.76 — 3.65 / 8 / Threshold

331.78 — 4.63 / 8
331.73 — 4.68 / 16

331.53 — 4.88 / 8⁰
331.7 — 4.7 / 16 / Broken on edge

331.5 — 4.9 / 7⁴⁵ / At Bldg.
331.4 — 5.0
331.3 — 5.1 / 7⁵
331.3 — 5.1 / 10³
331.25 — 5.16 / 10³ / Apron
331.25 — 5.14 / 14¹ / Gar.

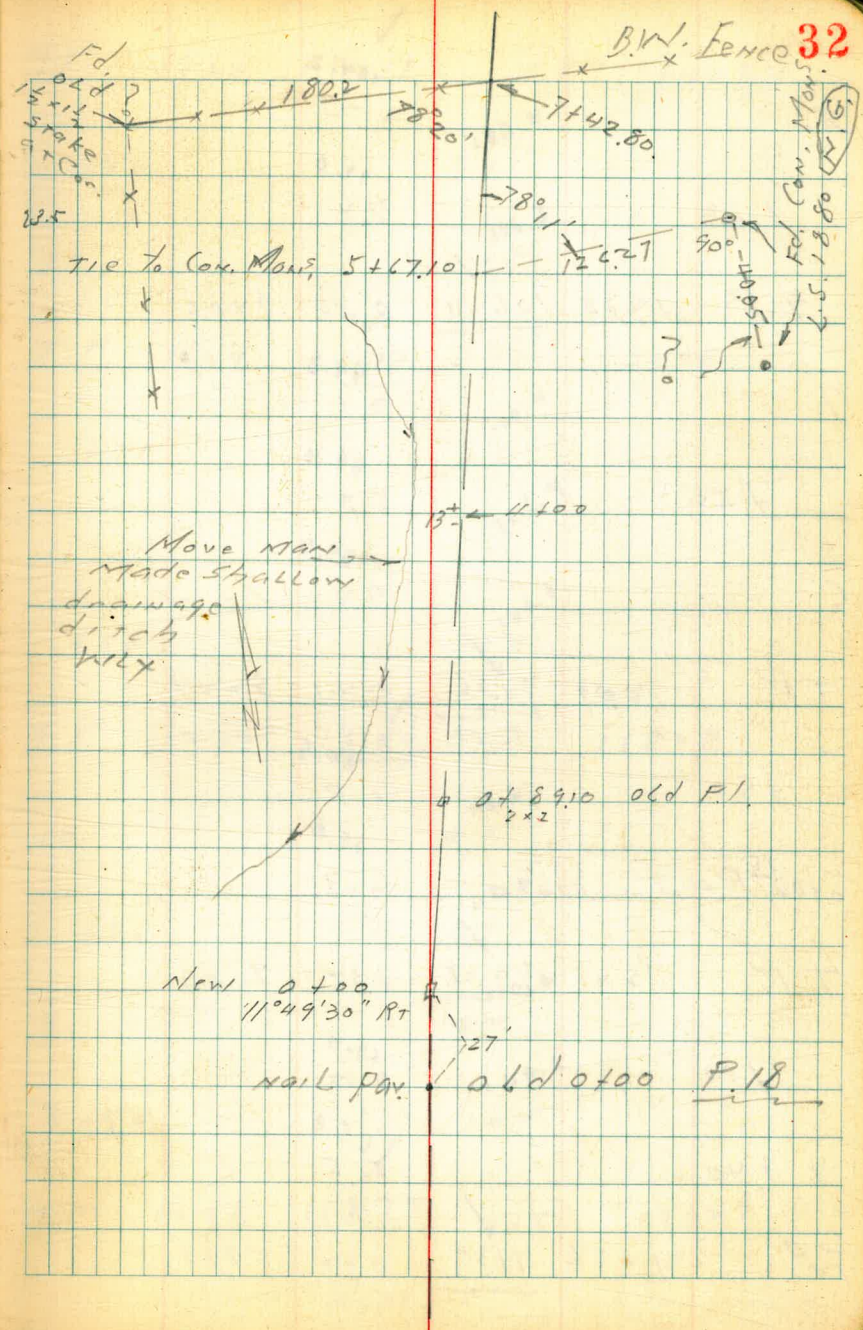
336.41

Alley Blk 50 Park Villas

Orig. B.M. (P.27) S.W.B.P. 32 Wightman			4.20	346.40	346.40
T.P.	8.27	350.60	1.42	342.33	
From P. 30.	10.49	343.75	—	333.26	

2nd Align. Rubbish Rd.

		℄		
4		7.8	52.0	
			50.8	
+95		8.9		
			49.2	
+50		10.5		
T.P.	12.96	59.75 ✓	0.3 W	46.79
			46.6	
3		+0.5		
			44.4	
+50		2.7		
2+31	9 Rt ℄ 18" d. Poplar 7+00			
2+16	P.P. 9 Lt (P)	61250		
			41.1	
2		6.0		
			35.9	
1		11.2		
			35.8	
0+89.10	old P.I.	11.3		
BM	12.15	47.11 ✓		34.96



8			104.2 2.2	
+50			99.0 7.4	
T.P	12.38	106.44 ✓	0.30	94.06
7			94.3 0.1	
+50			89.4 5.0	
6			85.0 9.4	
T.P	12.09	94.36 ✓	0.21	82.27
+50			80.5 2.0	
5+00 25 P.O.T. 1x2 Stake			75.8 6.7	
T.P	12.41	82.48 ✓	1.32	70.07
+50			69.4 2.0	
4 +40			65.9 5.5	
T.P	1.56	71.39 ✓	0.92	58.83

T.P	13.24	154.17 ✓	0.84	140.93
+50			138.4 3.4	
12			136.3 5.5	
T.P	11.49	141.77 ✓	0.72	130.28
+50			130.4 0.5	
11			125.9 5.1	
+50			120.1 10.9	
T.P	12.72	131.00 ✓	0.47	118.28
10			115.6 3.1	
+50			112.0 6.7	
9			110.6 8.2	
8 +50			108.6 10.2	
T.P	12.46	118.75 ✓	0.15	106.29

106.44

16+05.6	Old P.I. 16+20	2.20	151.97 ✓	151.96 ✓	
16		2.1	152.1		
+50		3.0	151.2		
15		1.8	152.4		
+50		2.3	151.9		
14	Δ 48°05' Rt	3.7	150.5		
+50		7.0	147.2		
13		11.0	143.2		

15+17

Alignment "L" Proposed Rubbish Road
Homeland Villas #2

13x4 map
p. 319 St. Book
P 1788
854
933

1+51.87 E.C.

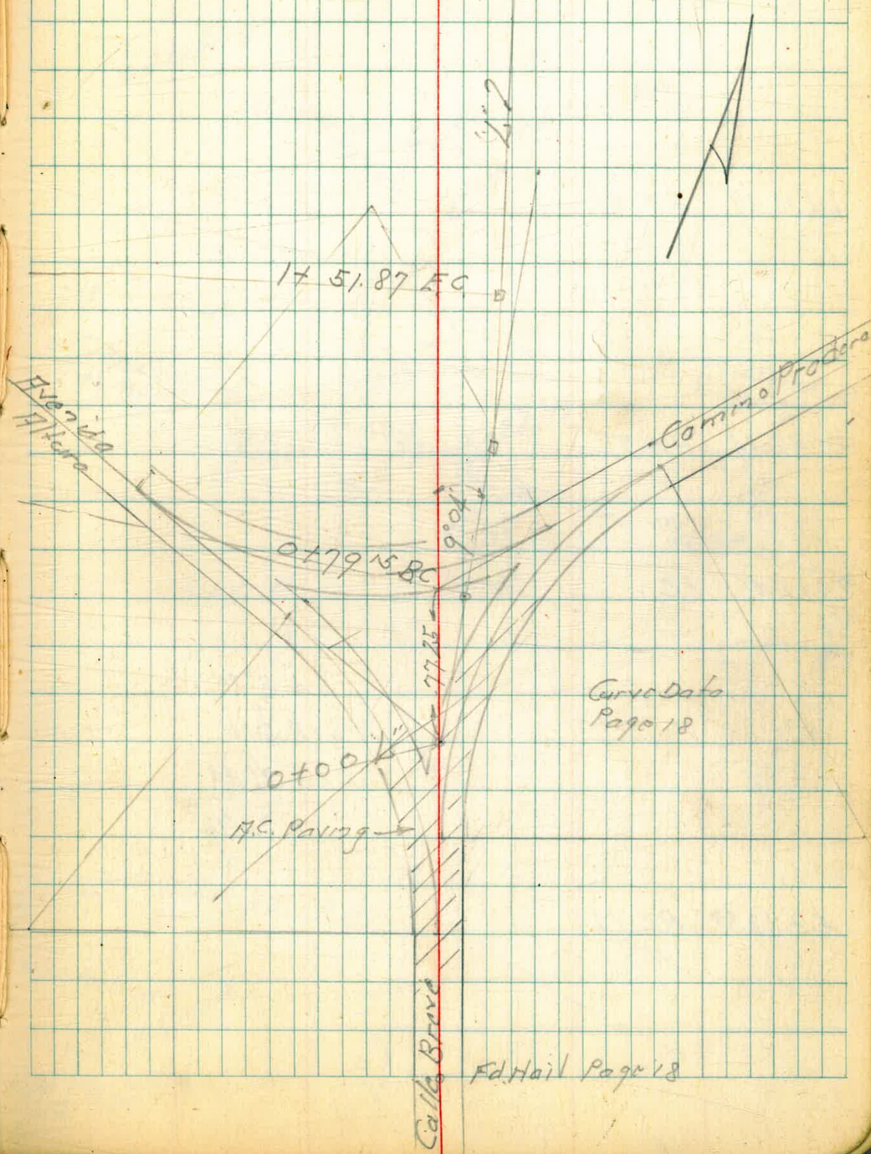
Δ 8°20'
R 500'
T 36.43
L 72.72

0+79.15 BC Lt

0+0 0 Same as Moores #1 Page 18

Dec. 8-48
Sisson
Smith
Becker
Borger

W.O. 60332



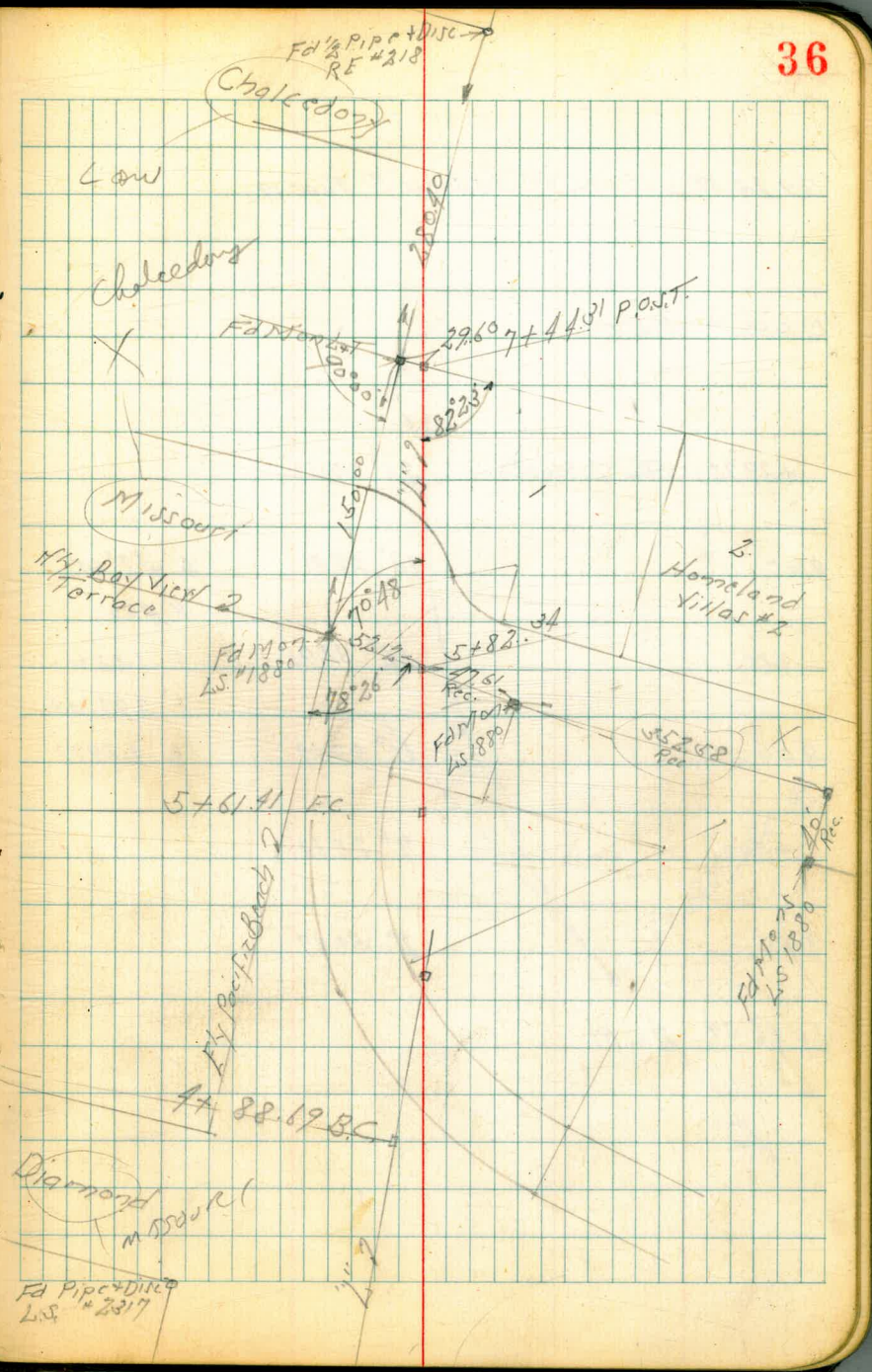
6+46.39 B.C. Pt.

5+82.34 P.O.T.

5+61.41 E.C.

Δ 8°20'
R 500'
T 36.43
L 72.72

4+88.69 B.C. Lt.



16+25.09 = 16+20.00 Moores #1 Page 19

12+50.00 P.O.T.

+39.72 E.C. 21° 00.50'

9+0 18° 09.81' Δ 42°01'

R 400'

+50 14° 34.95' T 153.61

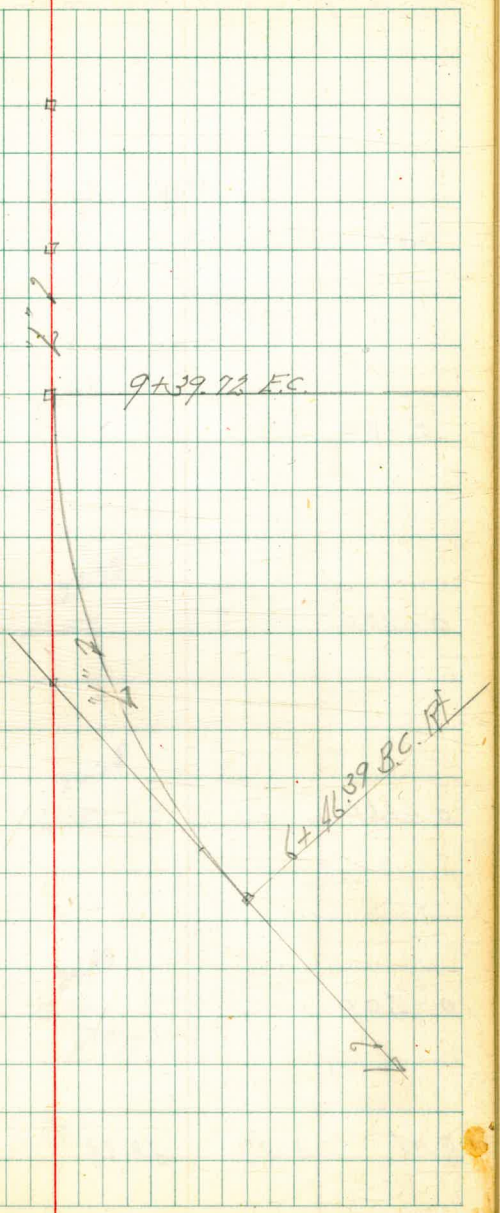
L 293.83

8+0 11° 00.09' D 4.2972

+50 7° 25.23'

7+0 3° 50.37'

6+46.39 B.C.R.



Cross Section "L" Line Proposed Rubbish Road Homeland Villas #2
Alignment Page 35

0+0					
0-50					
0-100					
0-150					
0-200					
BM	3.37	38.33		34.96	Chisel □ 32' Lt 0+73 Top H.W. of Curb. Page 20

Lt.			℄	Rt.
31.52 / 6.81 / 37' - W.E. AC Pav.	31.12 / 7.21 / 26	31.31 / 7.02 / 10	31.23 / 7.10	31.71 / 6.62 / 17' - E.E. AC Pav.
			29.62 / 8.71	
			27.78 / 10.55	
			26.28 / 12.05	
			24.43 / 13.90 / 0.7' P AC	
			38.33	

+50					
+31	12.6 Rt of ℄ = wly Pow + Tel Pole # 61250				
2+0					
TP	12.65	50.25	0.73	37.80	
1+51.87	E.C.				
1+04	8' Lt of ℄ = 5' Pepper Tree				
0+99					
0+79.15	B.C. Lt				
0+40					

38.33

Lt ℄ Rt

45.6	45.0	44.2	42.1	43.1	43.5
4.6 / 37	5.2 / 20	6.0	8.1 / 14 = Bottom 4' wide ditch	7.1 / 17	6.7 / 21

40.7	40.7	40.3
9.5 / 20	9.5	9.9 / 20

50.25

36.5	37.22	37.7
1.8 / 20	1.11 on Hub	0.6 / 20

34.99	35.7	35.70	35.19	34.72	35.54
3.24 / 22 = Top Conc Headwall Culvert	2.6 / 13	2.63 = Wly AC Paving	3.14 / 27 on AC	3.61 / 45 on AC	2.79 / 67 = S Ely AC Pav.
34.23	34.38	34.68	34.68	34.49	35.51
4.10 / 5 on AC Paving	3.95 / 30 on AC	3.65 on AC Pav	3.65 / 25 on AC	3.84 / 41 on AC	2.82 / 67 = S Ely Strip paving
32.93	33.2	33.06	32.61	33.37	
5.40 / 41 = Ely Strip Pav.	5.1 / 20	5.27 = Wly Strip Pav	5.72 / 11	4.96 / 24 = Ely Strip Pav	

38.33

"L" Line Rubbish Road

5+25.05				
+88.69 = BC Lt				
TP	12.04	72.72	1.07	60.68
+50				
1+0				
+92	6' Lt of ℄ = 12" Euc. Tree			
+78	24' Lt of ℄ = Dead Man			
+70	℄ Lt of ℄ = 2' Euc Tree 12' Rt = 12" Euc Tree			
+50				
TP	12.96	61.75	1.46	48.79
2+0				

50.25

Lt	℄	Rt
58.8 / 56.5 / 58.6 / 60.0 / 68.3		75.7 / 76.8
138/45 · 162/40 Bottom Marsh · 141/34 · 127/22 · 44		+3.5/30 · +4.1/30
56.3 / 56.6 / 54.1 / 56.3 / 63.61		70.9 / 73.1
164/50 · 161/31 · 18.6/27 Bottom Marsh · 164/31 · 9.11 Bottom Marsh		1.8/20 · +0.4/30
	72.72	
52.5 / 53.5 / 54.0 / 53.1 / 54.7 / 59.5 / 62.4		
92/40 · 8.2/31 · 7.7/12 · 86/84 Bottom Marsh · 70 · 1.2/20 · +0.7/31		
57.9 / 55.8 / 55.3 / 52.0 / 50.5 / 51.2 / 51.2		
38/43 · 59/26 · 64/27 · 9.7/19 · 11.2 Bottom Marsh · 10.5/30 · 10.5/40		
56.9 / 53.7 / 50.7 / 47.6 / 47.4 / 49.1		
48/40 · 8.0/30 · 11.0 · 14.1/18 · 14.3/30 Bottom Marsh · 12.6/41		
	61.75	
53.7 / 50.1 / 48.2 / 48.1 / 45.2 / 46.7		
+3.5/40 · 0.1/30 · 2.0 · 2.1/25 · 5.0/27 Bottom Marsh · 3.5/35		

50.25

8+0				
TP	12.50	96.53	0.68	84.03
+50				
7+0				
+46.39	B.C. Rt			
TP	12.17	84.71	1.18	71.54
6+0				
5+61.41	= E.C.			

72.72

Lt. ℄ Rt.

84.0 12.5/35	85.6 10.9/22	87.3 9.2	88.7 7.8/25		

96.53

77.8 6.9/35	82.4 2.3/17	83.8 0.9	85.7 +1.0/20		
78.6 6.1/35	79.8 4.9/22	81.5 3.2	83.4 1.3/20	84.2 0.5/30	
68.7 16.0/47	72.6 12.1/27	78.6 6.1/8	80.1 4.6	81.8 2.9/20	83.0 1.7/30

84.71

62.9 9.8/50	62.8 9.9/42 = Hubs	64.2 8.5/20	71.5 1.2	79.1 +6.4/20	80.3 +7.6/30
61.5 11.2/50	60.8 11.9/40 Bottom Hubs	61.4 11.3/22	68.96 3.76 87 Hub	76.2 + 3.5/20	78.4 + 5.7/30

72.72

"L" Line Rubbish Road

+50					
TP	13.00	120.87	0.67	107.87	
10+0					
+60					
TP	13.16	108.54	1.15	95.38	0.75 Stub 9+39.72 EC
+39.72 EC.					
9+0					
8+50					
		96.53			

Lt. ℄ Rt.

110.1 / 10.8 / 20 — 110.6 / 10.3 — 110.7 / 10.2 / 20

120.87

103.3 / 5.2 / 20 — 103.8 / 4.7 — 105.3 / 3.2 / 20

94.3 / 14.2 / 37 — 96.0 / 12.5 / 20 — 98.4 / 10.1 — 100.2 / 8.3 / 13 — 100.7 / 7.8 / 20

108.54

90.5 / 6.0 / 40 — 91.8 / 4.7 / 30 — 95.38 / 1.15 0.75 Stub — 98.7 / +2.2 / 13 — 99.8 / +3.3 / 23

87.3 / 9.2 / 40 — 88.8 / 7.7 / 23 — 92.5 / 4.0 — 94.6 / 1.9 / 7 — 95.8 / 0.7 / 20

82.2 / 14.3 / 35 — 81.2 / 15.3 / 30 : Bottom Ditch — 83.0 / 13.5 / 24 — 90.7 / 5.8 / 4 — 90.9 / 5.6 — 92.2 / 4.3 / 20

96.53

+50				
13+0				
+50	P.O.T.			
13+0				
TP	12.13	145.11	0.79	131.98
+50				
TP	12.19	132.77	1.29	119.58
14+0				
		120.87		

Lt | ℄ | Rt

Lt	℄	Rt
141.7	140.9	140.3
5.4	4.2	4.8
20		20
137.8	136.8	136.1
7.3	8.3	9.0
20		20
137.1	134.95	133.1
8.0	10.46	12.0
20	07 Hub	20
133.4	131.3	129.5
11.7	13.8	15.6
20		20
	145.11	
125.0	125.5	125.0
7.8	7.3	7.8
20		20
	132.77	
117.7	118.4	118.1
5.2	3.5	3.8
20		20
	120.87	

BM			4.09	152.05	028 446 16+25.09 151.96 Bg125
+25.09 = 16+20					
16+0					
+50					
15+0					
+50					
TP	11.03	156.14	0.00	145.11	
14+0					
		145.11			

Lt.		Rt.
	152.05	
154.6	151.05	148.7
1.5	4.09	7.4
20	028 446	20
152.3	150.3	148.9
5.8	5.8	7.2
20		20
149.6	147.7	145.6
6.5	8.4	10.5
20		20
148.7	146.6	144.6
7.4	9.5	11.5
20		20
147.0	145.3	143.9
9.1	10.8	12.2
20		20
	156.14	
145.1	143.7	142.6
9.0	1.4	2.5
20		20
	145.11	

WO 25010

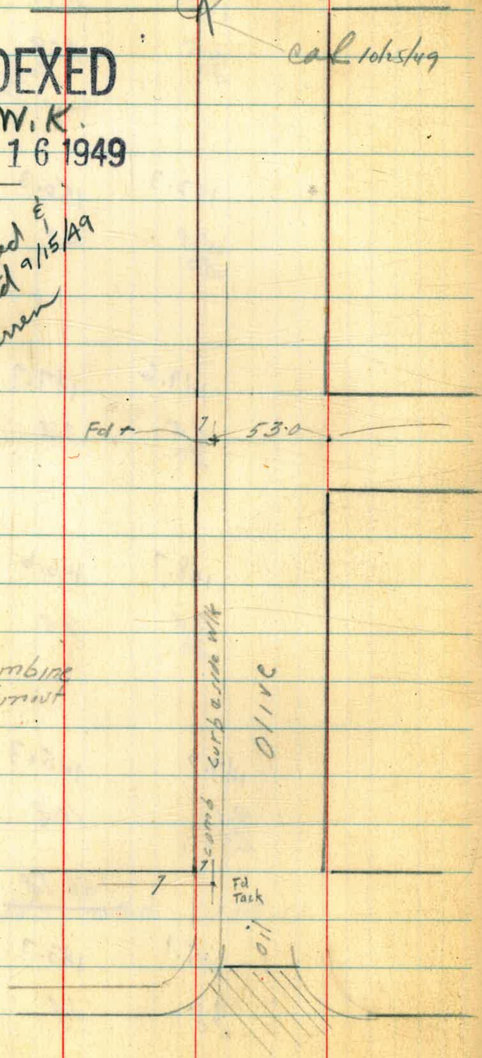
Moore
Begg
Sherman
Sisson
9-13-49

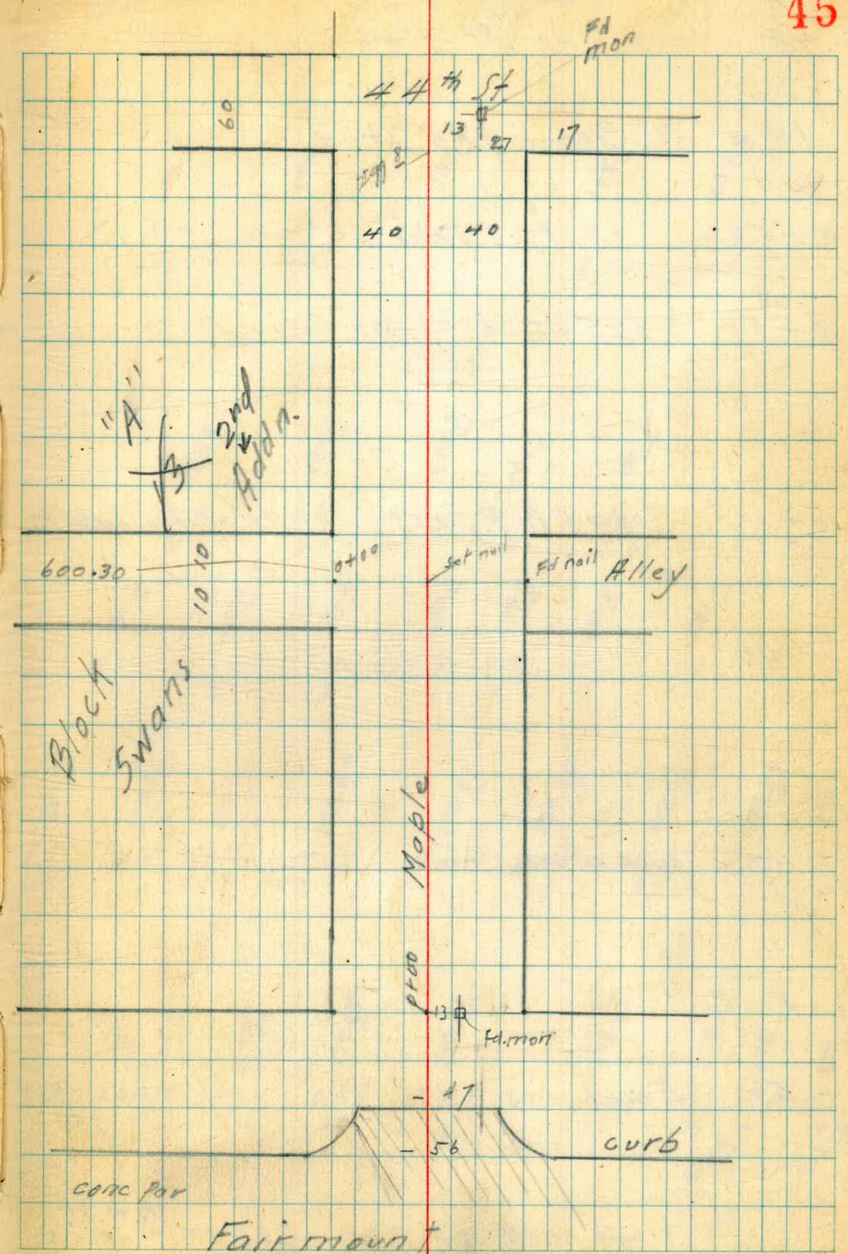
X Sec Maple from Fairmont to 44 St. & Alley Blk 13 "A" Swans 2nd Addn.

cal 10/15/49

notes Reduced & plotted 9/15/49 McClarren

Check B.M.
lead & Tack
7+9½ NW 288.77 Columbine & Fairmount





84	40 R 3' walk		
75	40 Rt 3' walk		
64	8" Pepper 31.6 Lt		
0+50	39.8 fence Lt		
0+39	38.5 Lt 6" Pepper		
0+02 0+00	29.5 R P. #355	40 Lt beg. picket fence	
- 40			
- 47	edge of conc. par.		
- 56	E curb line		10.99 7.82 837 cb 75
	8.64 288.81	280.17	N.W.B.P. Maple & Fairmount

Maple

357/40 285.24

285.26

3.55
40

	286.8	286.1	285.3	285.1	284.6	
	2.0 40	2.7 20	3.5	3.7 20	4.2 40	
	285.0	284.2	283.3	283.1	282.8	
0+00	3.8 40	4.6 40	5.5	5.7 20	6.0 40	
	281.6	281.4	280.6	280.0	279.8	280.8	281.0	
	7.2 40	7.4 28	8.2 15	8.8	9.0 12	8.0 15	7.8 40	
	281.1	280.36	279.76	279.64	279.39	279.06	278.75	279.29	279.9
	7.7 40	8.45 cb end	9.05 25.8	9.17 13	9.42	9.75 13	10.06 27.6	9.52 cb end	8.9 40
	280.29	279.75	279.47	279.25	279.03	278.77	278.64	278.53	279.13
	8.52 cb 40	9.06	9.34 26	9.56 15	9.78 conc par	10.04 15	10.17 26	10.08 40	9.68 cb
							277.75	278.26	
							11.06 9 75	10.55 cb	

288.81

Maple

1+00 fence 36.2 Lt

1+85 36 Lt 3' w/k

1+60 35.8 /

290.3
288.8

3.61 290.26 2.16 286.65 T.P.

1+40 end of Picket fence 40 Lt

1+38 29.5 Rt Pole · P 4375
1+35 30.5 18" Pap
1+09 30.7 Lt 4" Pap

1+00 fence 39.8 Lt

+86 8" Pap 31.3 Lt

288.81

288.6 288.3 288.0 287.8 287.7
1.7 2.0 2.3 2.5 2.6
40 20 20 40

288.62
1.64
36

288.8 288.3 287.4 287.0 286.6 286.5
1.5 2.0 2.9 3.3 3.7 3.8
40 35 20 20 40

290.26

287.3 286.9 286.6 286.0 286.1
1.5 1.9 2.2 2.8 2.7
40 20 20 40

287.0 286.4 286.1 285.4 285.0
1.8 2.4 2.7 3.4 3.8
40 20 20 40

288.81

Maple

2+99 ±	W Line 44th St	end of fence 40 Lt
2+90		
2+73	38.3 ℄ Pole #399	
2+69	℄ 4' Wlk 40 Rt	
2+62	3' W/K 40' Lt	
2+45	40' Rt ℄ con drive 7' wide lev across	
2+35	end Picket beg wire 40 Lt	
2+14	brk. fence 36.5 to 40	
	290.26	

284.6	283.7	284.1	282.3	283.4	283.4
5.7	6.6	6.2	8.0	6.9	6.9
40	20		22	24	40

284.3	284.6	284.6	283.6	284.3	284.3	286.1
6.0	5.7	5.7	6.7	6.0	6.0	4.2
40	20		15	16	37	40

286.8	286.6	286.3	286.3	286.4	287.11
3.5	3.7	4.0	4.0	3.9	3.15
40	20		20	37	40

287.18
3.08
40

288.51	288.2	287.9	287.9	287.98
1.8	2.1	2.4	2.4	2.28
40	20		20	40

289.1	288.7	288.4	288.3	288.1
1.2	1.6	1.9	2.0	2.2
40	20		20	40

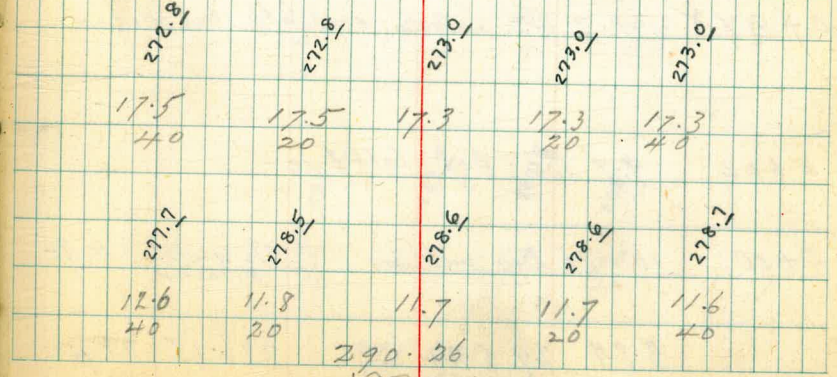
290.26

Maple

3+59 ± E Line 44

3+29 ± ℄ 44th St

290.26



X Sec. Alley BLK ~~13~~ "A" Swans 2nd Adn.

2+02	9.0 Lt	Pole	PA 2663		
2+00					
1+50				10.5 end fence Rt	
1+46	end of fence Lt.				
1+00			9.6 R Fence		
+95	10.8 Lt beg fence				
+90	9' Lt of BC JTTA	2633			
+70	12.7 Lt 3' Wlk		9.5 Rt fence		
0+31	{ 10 Lt end of Picket 9.7 Rt fence end lath beg wire				
0+02	9.7 Rt beg Lath fence				
0+00	10.1 Lt Beg pick fence		1½ sq cobble pilaster	10 Rt	
	8.14	295.39	286.65	TP 47	

290.5	291.3	291.6	291.7	292.0	
4.9 / 40	4.1 / 10	3.8	3.7 / 10	3.4 / 40	
	290.5	290.8	291.0	291.5	291.9
	4.9 / 10	4.6	4.4 / 9	3.9 / 10	3.5 / 10.5
	290.2	290.0		290.2	290.7
	5.2 / 10	5.4		5.2 / 9.2	4.7 / 10
289.7		289.5	289.4	285.9	290.0
5.68 / 12.7		5.9	6.0 / 9	9.5 fence	5.4 / 10
	288.1	288.2	288.2	289.2	289.2
	7.3 / 10	7.2	7.2 / 9	6.2 / 9.7	6.2 / 10
	287.3	287.5	287.5	288.8	
	8.1 / 10	7.9	7.9 / 8	6.6 / 10	

295.39

	X Sec	Alley	Blk 13 "A" Swarts 2nd Addn.	
+50				
+25	12.5	beg wire fence		
4+00	92 Lt	Pole	Pf 2727	
3+50				
+45	end of fence	11.3 Rt		
3+00				
	6.61	298-98	3.02	292.37 TP
+72	11.7 Rt	N.W cor	Dbl	beg picket 11.7 Rt
2+53	11.5 Rt	SW cor	Dbl gor.	
		29539		

293.7 293.7 294.1

5.3 5.3 4.9

10 10

293.2 293.4 293.6 293.5 294.3

5.8 5.6 5.4 5.5 4.7

40 10 10 40

292.8 293.4 293.6

6.2 5.6 5.4

10 10

291.8 292.4 292.8 292.9 293.0

7.2 6.6 6.3 6.1 6.0

40 10 10 40

298.98

292.61

2.78

11.7

291.9 292.1 292.41

3.5 3.3 2.98

10 11.5

295.39

	X Sec	Alley	Blk "A" 13	Swans 2nd 1 Addn.
	check to original		12.51	280.16	280.17
			3.95	288 72	288 77
	1.59	292.67	7.90	291.08	TP
6+00 30					
5.75	Tel Pole 9 3 Lt		P36157		
5+45 5	14 Lt S. Gar				
5+00	8.7 Lt	Pole	PP2773		
4+94	14.5 Lt ℄ Single Gar. Contd Dwelling				
4+70.	℄ Con patio Slab 14.6 Lt				
		298.98			

.01 see p 46

.05 see p 45

295.6 / 3.4 / 10

295.1 / 3.9 / 6

295.1 / 3.9

295.4 / 3.6 / 10

295.3 / 3.7 / 10

294.7 / 4.3 / 6

294.8 / 4.2

294.9 / 4.1 / 10

294.71 / 4.27 / 14

294.59 / 4.39 / 12 / apron 8' wide

294.6 / 4.4 / 10

294.5 / 4.5

294.6 / 4.4 / 10

294.2 / 4.8 / 30

294.2 / 4.8 / 10

294.2 / 4.8

294.3 / 4.7 / 10

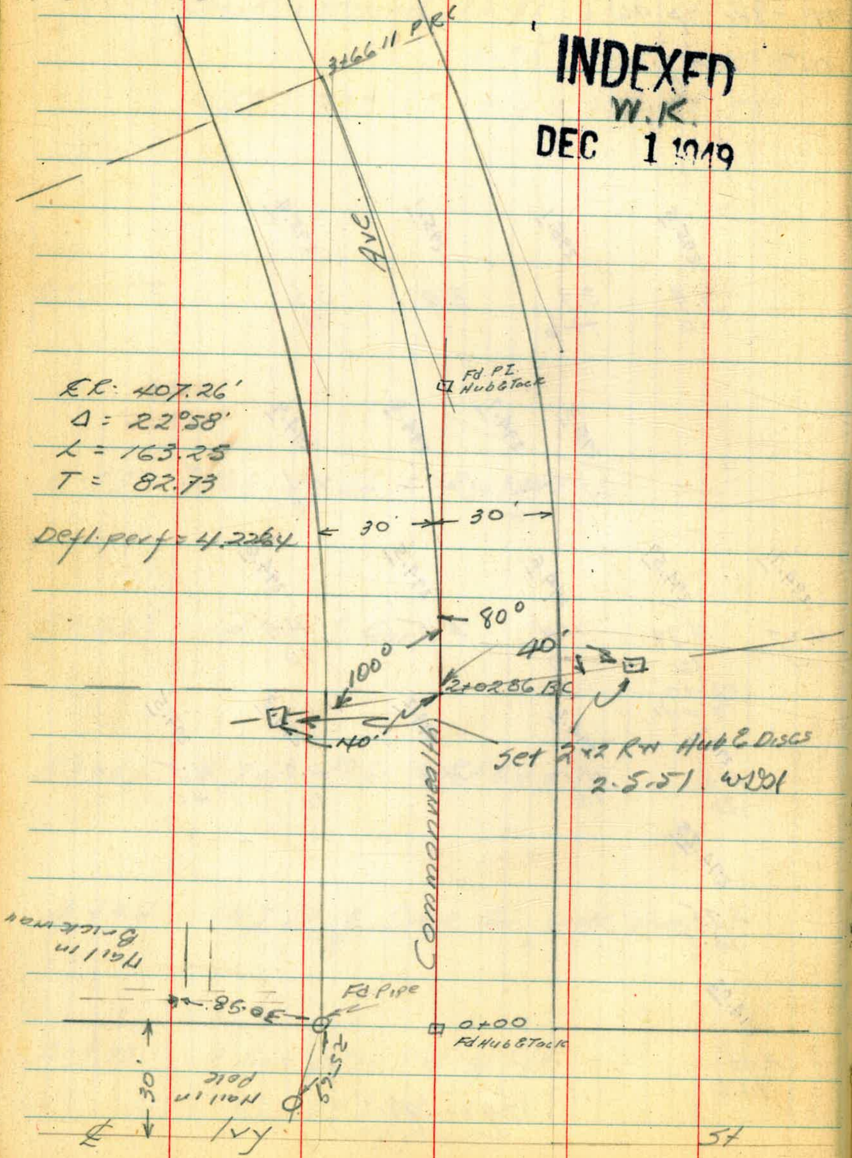
294.5 / 4.5 / 40

294.23 / 4.75 / 14.5

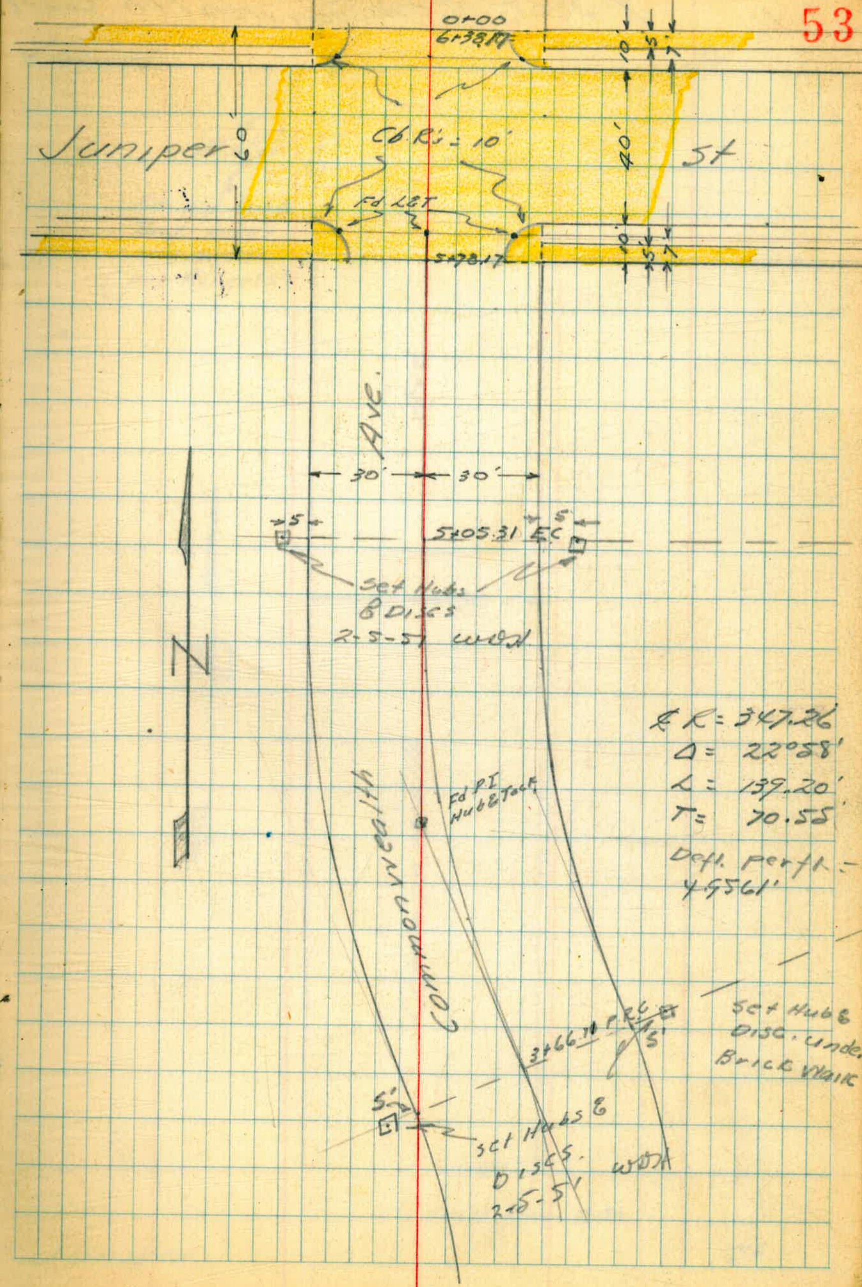
294.02 / 4.96 / 14.6

298.98

11-29-49 X Sect Commonwealth
Ivy to Laurel
Hendricks
Johnson
Greer
Cota
W O#.31478



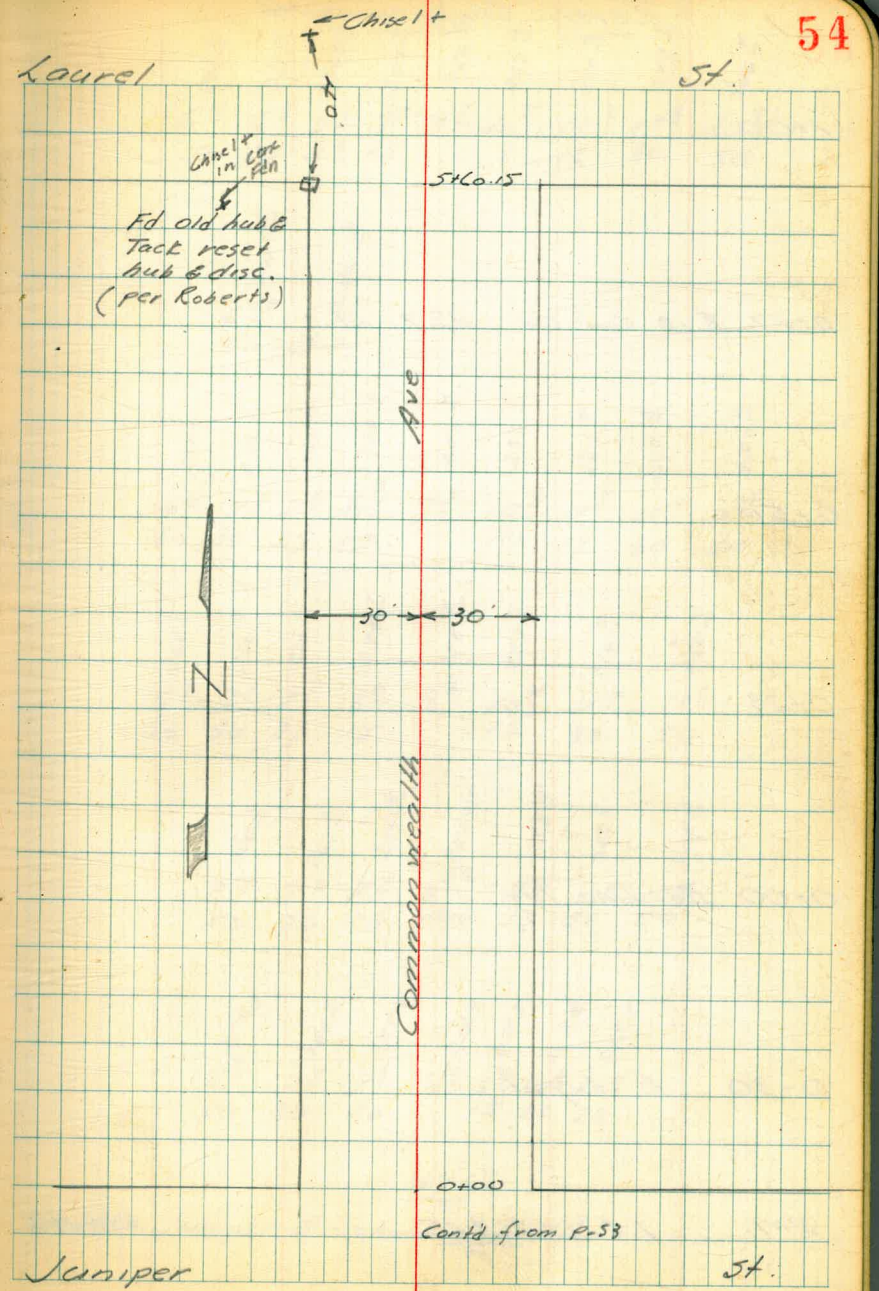
Cont'd P.54



X Sect Commonwealth Cont'd

Laurel

54.



Contd from P-53

Juniper

54.

Levels Commonwealth

1+00

0+77 ℄ 10' Conc. Dr. 39.7' Lt.

0+50

0+23

0+00 No. Line Ivy

0-30 ℄ Ivy St.

BM. 1.22 267.65 266.43

3 WBP Juniper & Commonwealth

267.65

Levels Commonwealth Cont'd.

2+64 Beg 4' High hedge 29' Rt

2+50

2+09

2+02.86 B.C.

1+90

1+50

1+09 ℄ C.B. Conc Walk 35.5 Lt

267.65

℄

262.5	262.6	262.2	260.1	259.7	259.4	259.3	260.4	
5.3	5.1	5.5	7.0	7.18	8.13	8.4	7.14	
50	38	30	20		15	30	50	

262.5	262.2	261.5	260.3	259.7	259.3	258.4	257.7	256.1	257.0	257.6
5.2	5.5	6.2	7.4	7.18	8.4	9.6	10.0	11.6	10.7	10.1
50	33	30	24	15		15	27	30	35	50

262.2	262.8	262.0	260.2	259.7	259.3	258.6	251.0	250.0	253.2	253.8
5.0	4.9	5.7	7.5	7.8	8.4	9.1	/	17.7	14.5	13.9
50	33	30	24	15		17	30	32	40	50

262.2	262.4	262.2	260.1	259.7	259.2	258.2	251.4	246.1	245.6
4.8	5.3	5.5	7.6	8.0	8.5	9.0	16.3	21.6	22.1
44	33	30	24	13		14	30	37	50

261.7	261.8	259.8	259.4	258.2	258.2	254.4	249.4	242.6	241.1	241.1
5.8	5.9	7.9	8.3	9.0	9.0	13.3	18.3	25.1	26.1	26.4
50	30	26	16		9	17	30	41	45	55

261.23	261.66
5.92	5.99
47	35.5

267.65

Levels Commonwealth Cont'd.

3+80 ℄ Int. of Prod. of 3' Conc. Walk 38.1' Rt

3+66.1 PRL Sewer MH (West Rim on Line)

3+59 End Hedge 30' Rt.

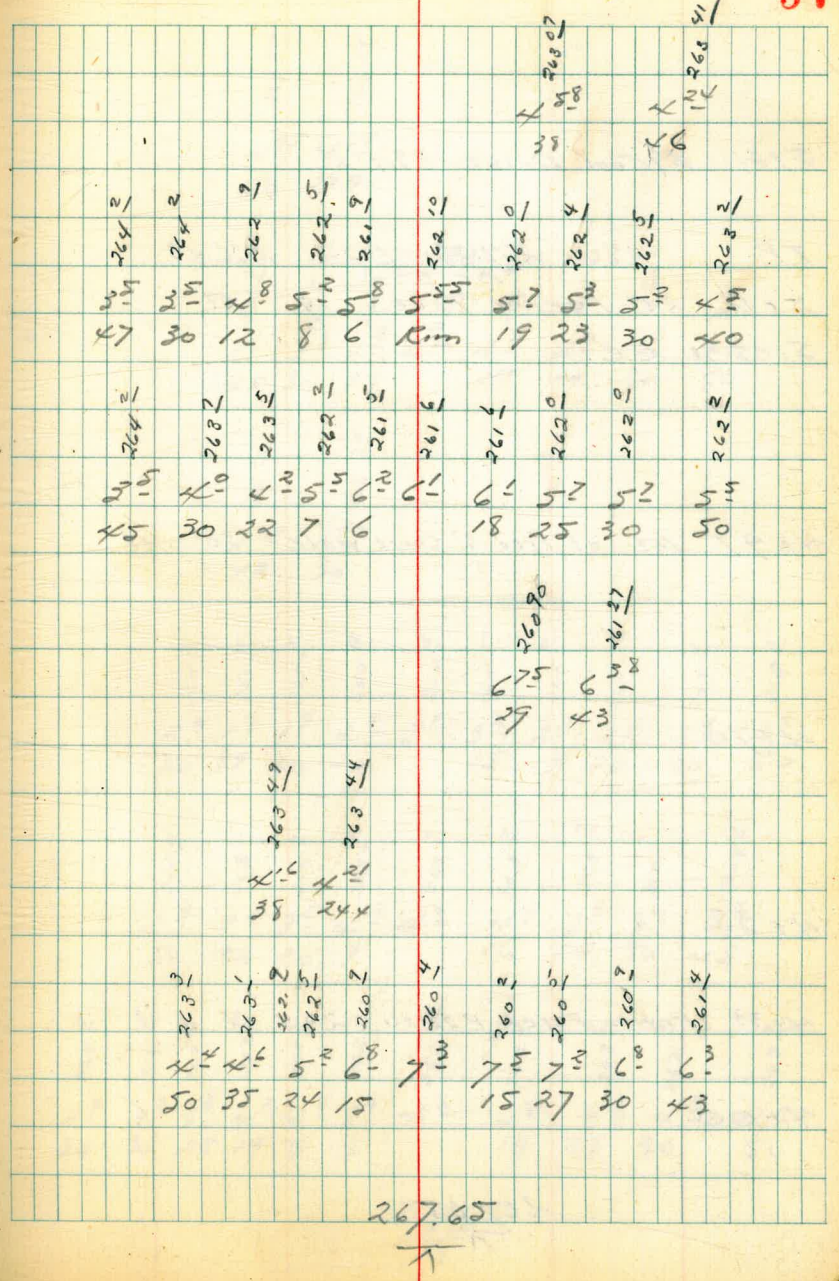
3+50

3+21 ℄ Int. of Prod. of 3' Conc. Walk 29.0 Rt

3+14 ℄ Int. of Production of 3' Conc. Walk 24.4' Rt.

3+00

267.65



267.65

Levels Commonwealth Contd

5+21 Rt Conc. Drive 29.9' Lt

TP #80 271.23 1.22 266.43

5+12 24" Pepper Tree 19' Rt

5+05.31 E.C.

4+97 Int of Prod. 3' Conc. Walk 30' Lt

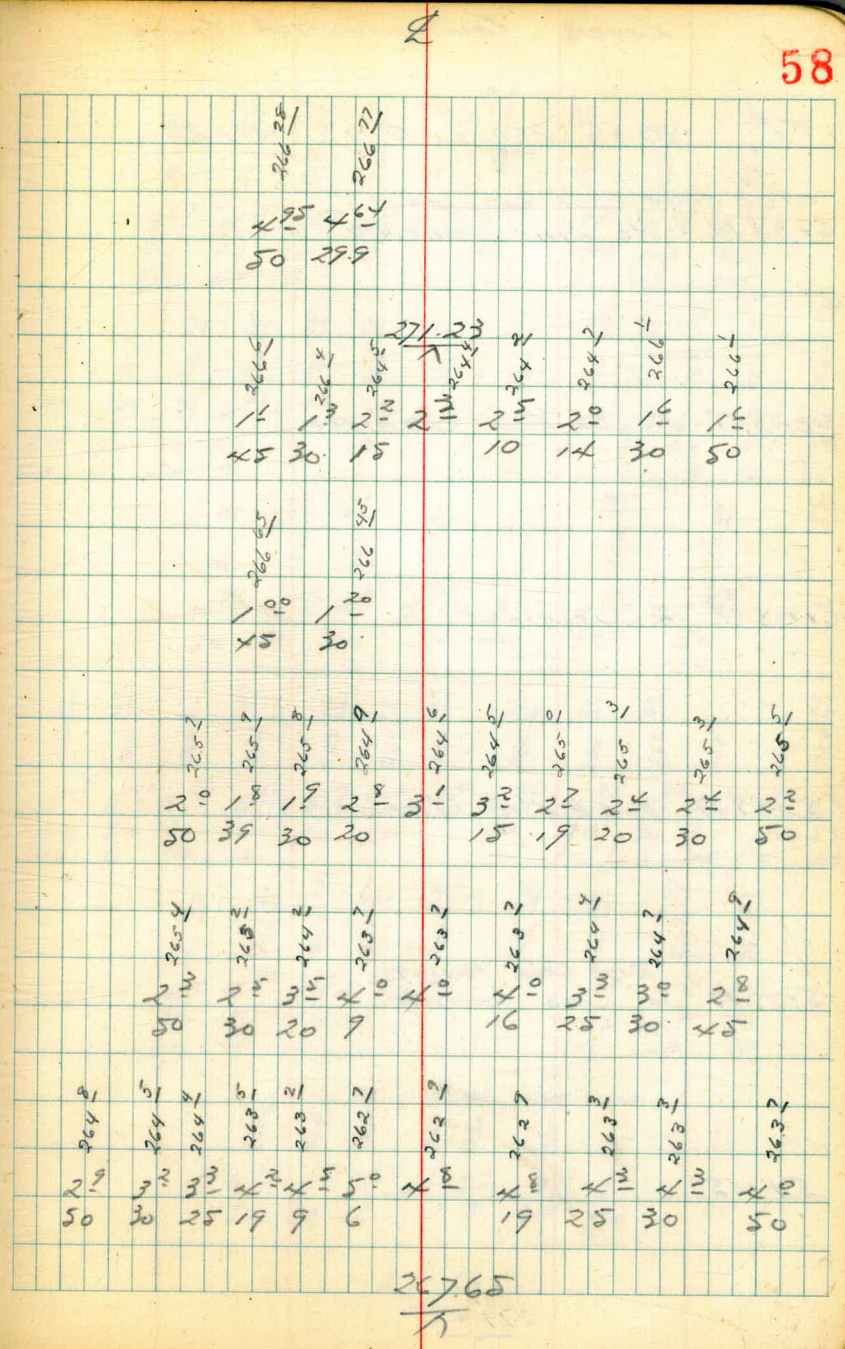
4+70

4+35

4+33 Power Pole # P22 24 23' Lt

4+00

267.65



Levels Commonwealth Con'td

T.P.	10.66	281.86	0.03	271.20

0+00 Ahead Edge Conc. Pave.
6+38.17 = No Line Juniper

6+28.17 No Cb. Line Juniper

6+08.17 & Juniper

5+88.17 So. Cb Line Juniper

Edge Conc. Paving.
5+78.17 So Line Juniper

5+45

271.23

Levels Commonwealth Cont'd

1+50 ℄ 5.3' Conc Walk 16.3' Lt

1+18 Beg 6" Conc Wall 29.5' Lt.

1+00

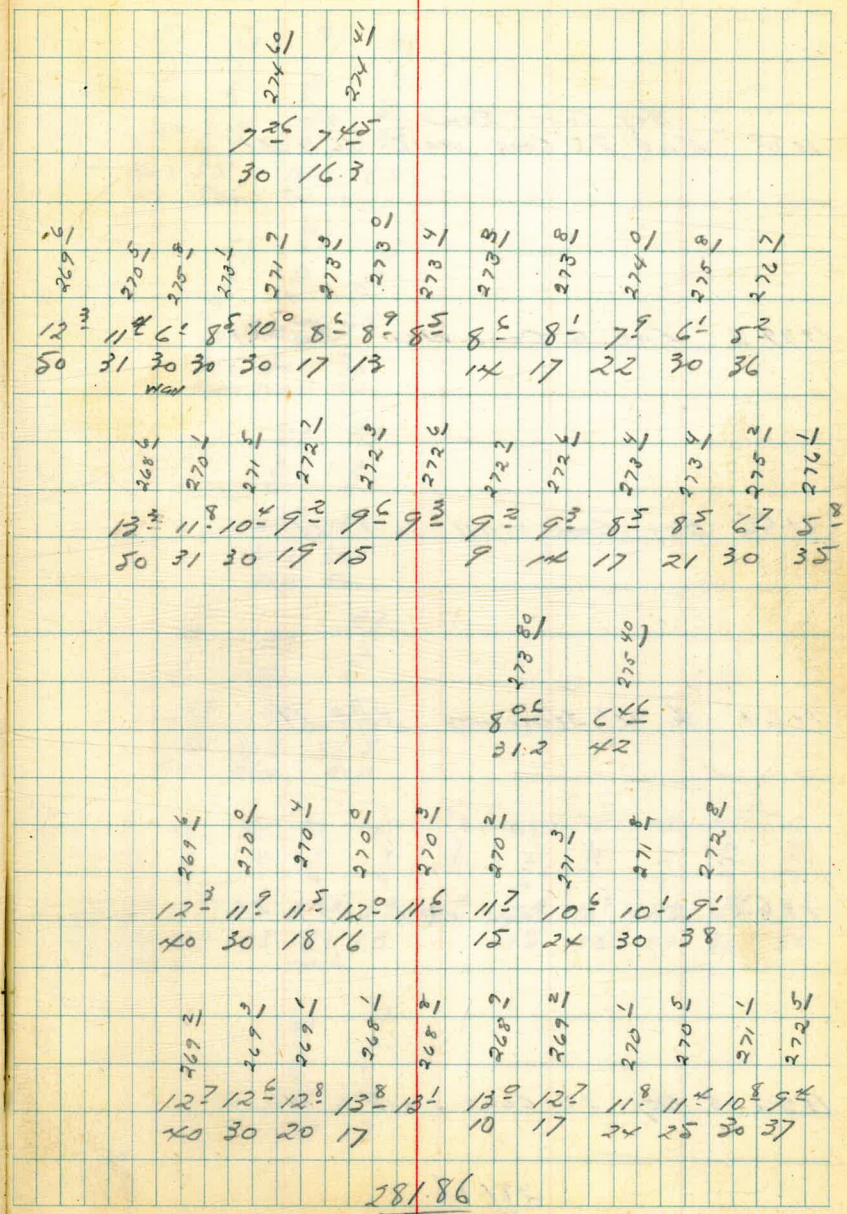
0+96 Power Pole # 2320 19.5' Lt

0+74 ℄ 8' Conc. Dr. Ft.

0+50

0+25 Power Pole # 450863H 19' Rt.

281.86



281.86

Levels Commonwealth Cont'd

Beg Conc Ramp to Gar.
1482 End 2.5' Conc. Walk 16.9 Lt

1479.5 End 6" Conc Wall 30 Lt

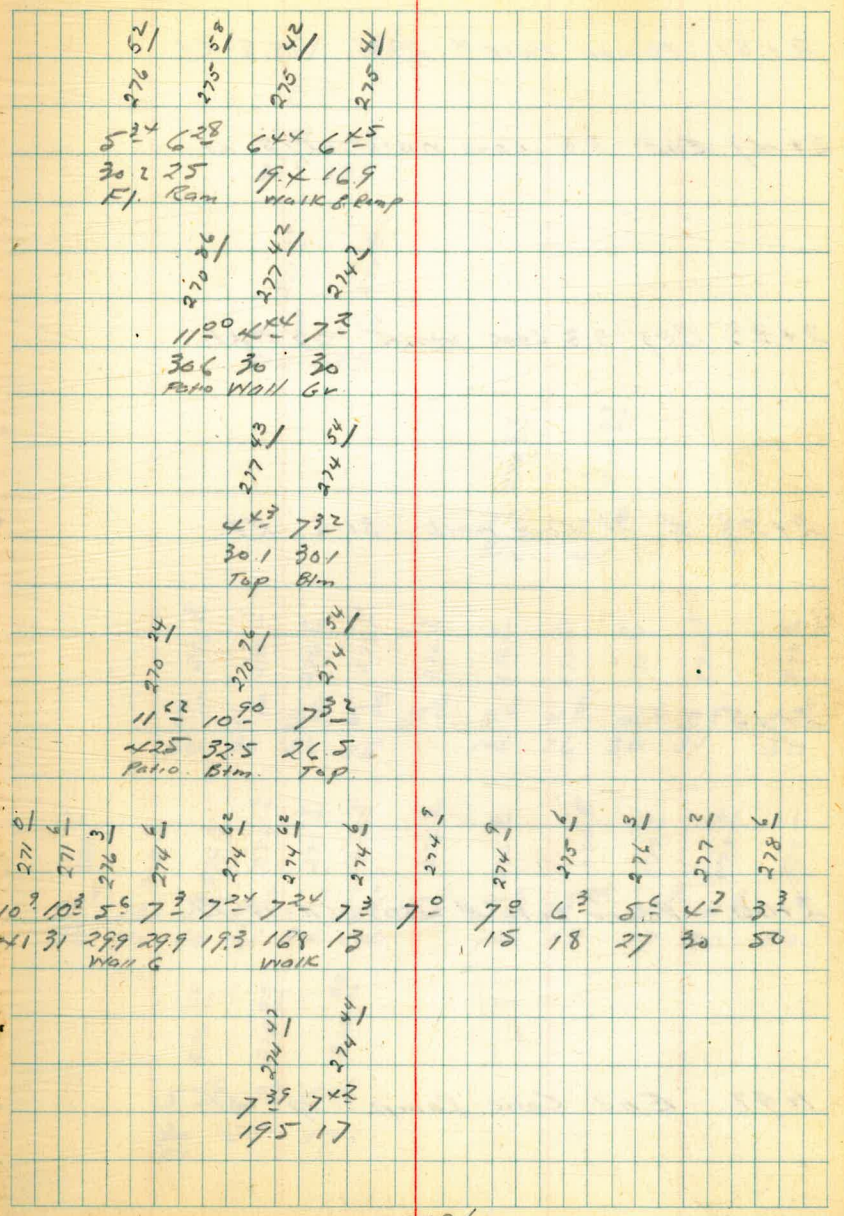
1466 Beg Conc Wall 30.1' Lt.

1464 4' x 4' Stairway 26.5 Lt

1462 End 6" Conc Wall 29.9 Lt.

1452.15 Beg 2.5 Conc Walk on Lt.

281.86



281.86

Levels Commonwealth Cont'd

2+51 Power Pole # 2338 18.8' Lt.

2+49 End 3.3' Conc. Walk 27.5 Lt.

2+33 Beg 3.3 Conc. Walk 27.5 Lt.

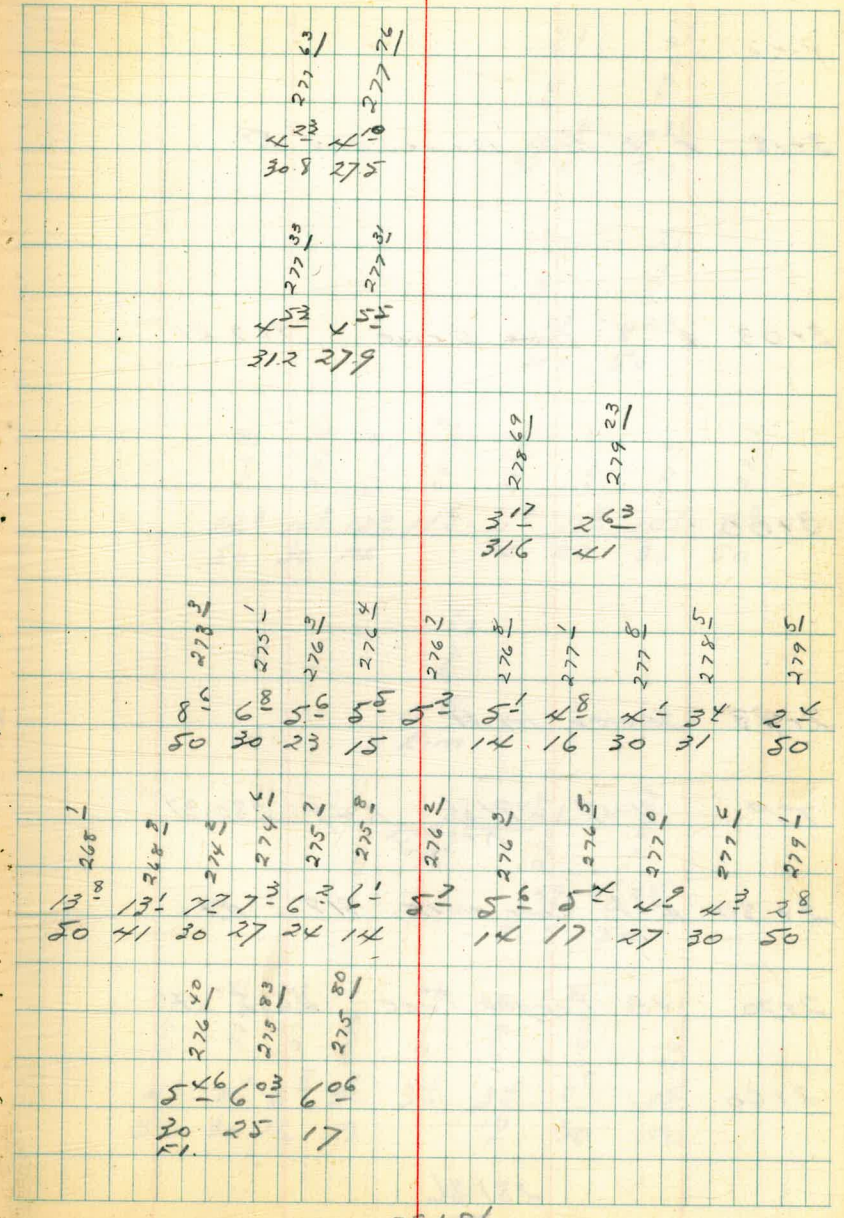
2+28 ℄ 3' Conc Walk 31.6' Rt.

2+15

2+00 Power Pole # 450864H 19' Rt.

1+97 End Conc Ramp 17' Lt.

281.86



281.86

Levels Commonwealth Contd

3+18 ℄ 7' Conc. Drive 31.4' Rt.

3+03 ℄ 8' Conc. Drive 31.7 Rt.

3+00

2+93 Sewer M.H.

T.P.	11.49	291.86	1.49	280.37

2+80 ℄ 3' Conc. Walk 31.9' Rt.

2+70 18" Pepper Tree 26.5' Lt.

2+60

281.86

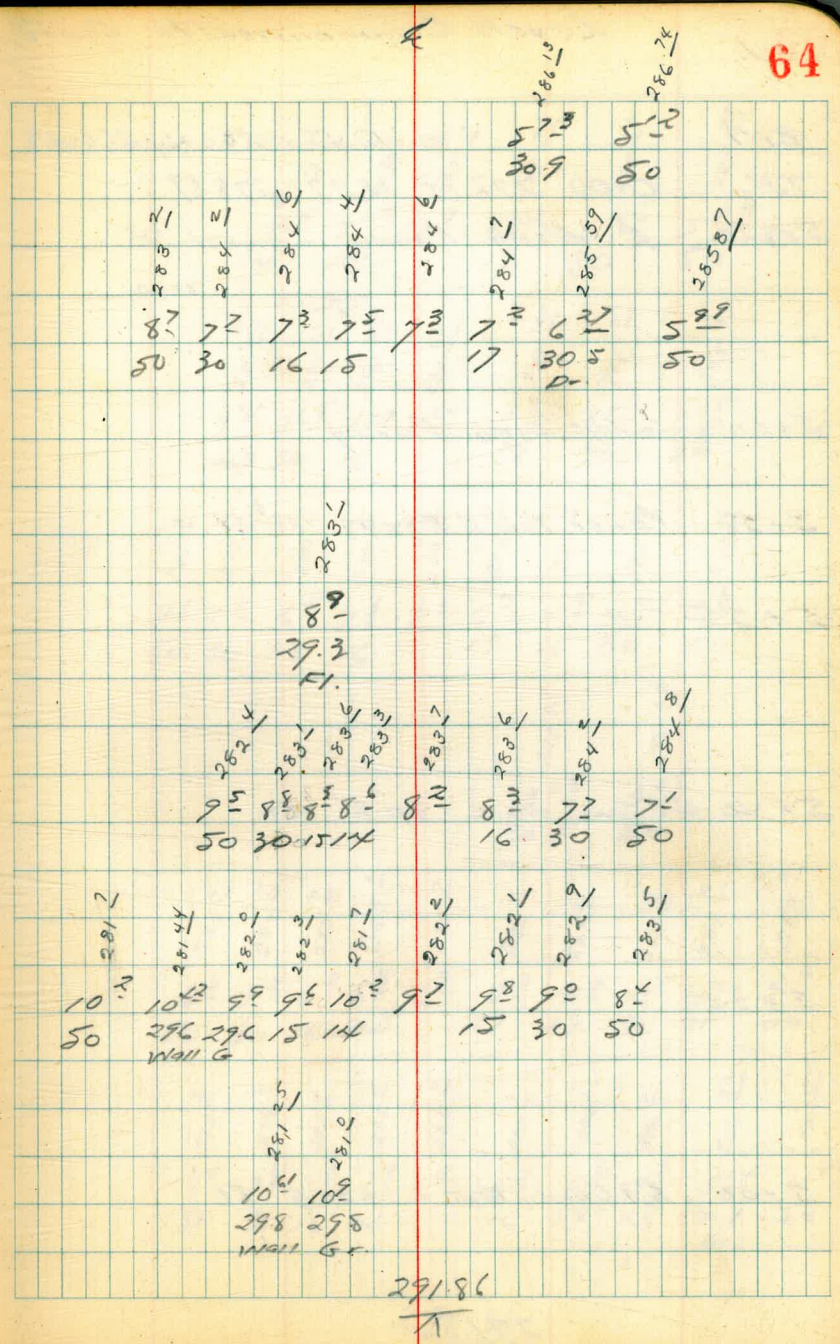
281.86

281.86

Levels Commonwealth. Cont'd

4+79	℄ 3' Conc. walk 30.9' Rt.
4+50	℄ 7' Conc Drive 30.5' Rt.
4+02	Power Pole # 2452 15' Lt
3+95	℄ Garage Dirt ft. 29.3' Lt
4+00	
3+80	Power Pole # 450865 N. 19' Rt. End Wire fence ℄ 27.8' Lt.
3+51	Beg. Wire Fence 27.6 Lt. End Conc. Ret Wall 29.6 Lt.
3+26	Beg 4" Conc Ret. Wall 29.8 Lt.

29.86



Levels Commonwealth Cont'd.

BM			12.45	266.44	261.43
T.P.	0.00	278.89	12.97	278.89	
5+82±	℄ Asph Paving Laurel St.				
5+60.8	So. Edge Asph. Paving				
5+58	Power Pole # P3x99 18' Lt.				
5+55					
5+40	℄ 3' Conc walk 30.5' Rt				
5+34					
5+00	℄ 9' Conc. Dr. 30.9' Rt				

291.86

℄

5+84 B.P. Juniper & Commonwealth

284.21 284.84 285.19 285.44 285.61 285.73
7.65 7.02 6.67 6.42 6.26 5.93
47 18 19 30 50

5+67.8 284.22 30'

284.01 284.21 284.37 284.62 285.02 285.27 285.51
7.81 7.65 7.49 7.24 6.84 6.59 6.35
47 30 16 18 30 50

282.81 285.1 285.7 284.7 284.7 284.51 287.3 287.82 288.06
9.1 6.8 6.2 7.3 7.1 6.15 4.6 4.04 3.8
50 30 18 16 19 30 30 50

288.08 288.28
3.78 3.58
30.5 50

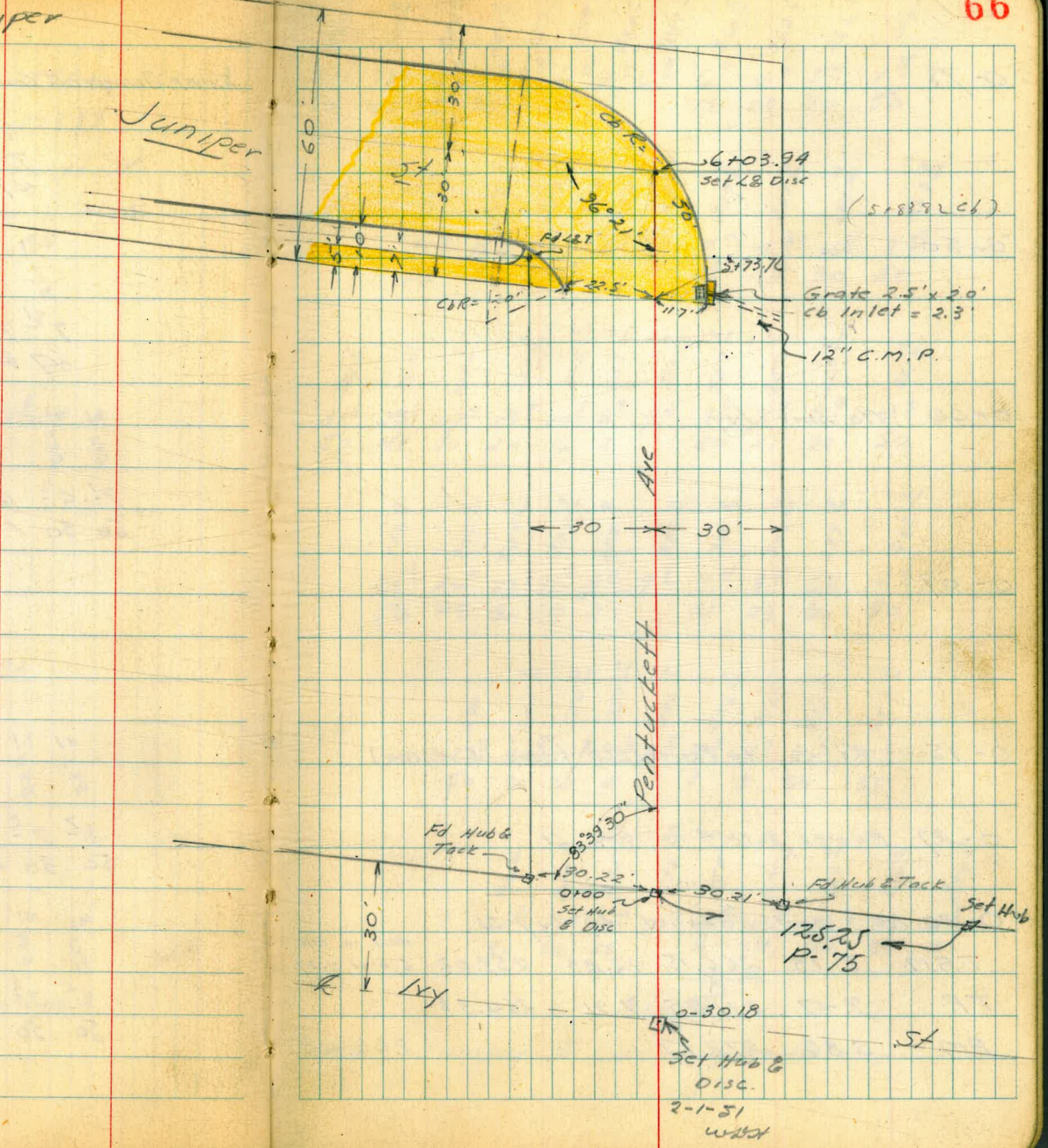
283.2 284.7 285.2 285.1 285.2 286.0 287.2 287.4 287.9 288.2
8.7 7.2 6.2 6.8 6.3 5.9 4.7 4.5 4.0 3.7
50 30 16 14 17 27 30 31 50

283.5 284.6 285.4 285.0 285.4 285.7 286.1 286.2 286.82 287.44
8.4 7.3 6.5 6.9 6.5 6.3 5.8 5.7 5.04 4.42
50 30 16 14 16 19 26 30.9 Dr. 50

291.86

11-30-49
Hendricks
Johnson
Greer
Cota
WO#: 31478

X Sect. Pentucketh Ave
Ivy to Juniper



Levels Pentucket Ave

0-78

0+50

0+00 No Line Ivy

0-09

0-15 Rt. Ls to Pentucket (here & Ahead)

0-27 Power Pole #? C.L. Lt

0-30.18 Seat Parallel to Ivy St.

					Nail in Pole
T.B.M.	7.13	266.15	12.83	259.02	C.L. Lt 0-27
T.P.	7.47	271.85	7.91	264.38	
B.M.	5.86	272.29			266.43

266.15

SW BP Juniper & Commonwealth

Levels Pentucket Cont'd

2+00

(1+20 to 2+05) Row of 10-4" Eugenia Trees 23' Rt

1+87 ℄ 7' Conc walk 28.4 Lt.

1+77 ℄ Conc walk 22' Rt

1+50

1+16.5 Sewer M.H.

TP	10.46	272.04	4.57	261.58	S. Rim S MH.

1+00

266.15

℄

265.0	265.1	266.2	266.7	267.5	268.7	268.8	270.2
7.0	6.2	5.3	5.1	4.5	3.3	3.2	1.8
50	30	11		17	23	30	50

264.78	264.52
7.26	7.52
44	28.9

267.39	267.62
4.65	4.42
22	31

262.3	262.4	263.2	263.7	264.4	266.1	266.4	268.1
9.7	9.6	8.8	8.3	7.6	5.9	5.6	3.9
50	30	10		16	23	30	50

261.58

10.46

Rim

272.04

257.31	258.1	260.2	260.7	260.4	260.5	261.2	262.4	262.7	265.2
8.9	8.1	6.2	5.3	5.18	5.7	5.0	3.8	3.5	0.5
50	30	7	4	1		16	27	30	50

266.15

Levels Pentuckett Cont'd.

3+18

TP 4.08 274.18 1.94 270.10

3+10 ℄ 2.5' Conc Walk 27' Lt

3+00

2+86 ℄ 3' Conc Walk 30.8 Rt

2+83 12" Elm. Tree 26' Lt.

2+50 Beg Pickett fence 283 Lt

2+22 Power pole # 2230 16' Lt.

2+19 3" Pepper Tree 24.5' Lt

2+12 ℄ 7' Conc. Dr. 30.5 Rt.

272.04

274.18

272.04

Levels Pentuckett Cont'd

4+00					
3+79	Power Pole # P2252 23' Lt.				
3+75	End Lath fence 29.6' Lt.				
TP.	2.32	271.93	4.57	269.61	No Rim SMH 3+71.5
3+71.5	Sewer MH.				
3+32	4' Conc. Dr. 29.3' Lt.				
3+30	18" Elc Tree 26' Lt.				
3+27	Beg Lath fence 29.2' Lt. End Pickett fence 29.2' Lt.				

274.18

℄

270.7	269.9	268.8	268.3	267.8	266.3	265.1	
1.2	2.0	3.1	3.6	4.1	5.4	6.8	
46	30	19		10	30	50	

270.2	270.2	270.0	269.4	269.4	268.4	266.9	266.3
1.2	1.2	1.9	2.5	2.5	3.2	5.0	5.4
50	30	20	12		17	30	43

271.93
⊼
4.59 269.61
Rim

269.6	270.3
4.6	3.9
50	29.3

269.5	270.3	270.3	269.9	269.8	268.0	267.7
4.7	3.9	3.9	4.3	4.4	6.2	6.5
50	30	16		18	30	50

274.18
⊼

Levels Pentuckett Contd

℄ 2.3 Cb. Inlet 11.3 Rt.

5+73.76 50 Line Jumper Rt Ls to Pentuckett

5+72

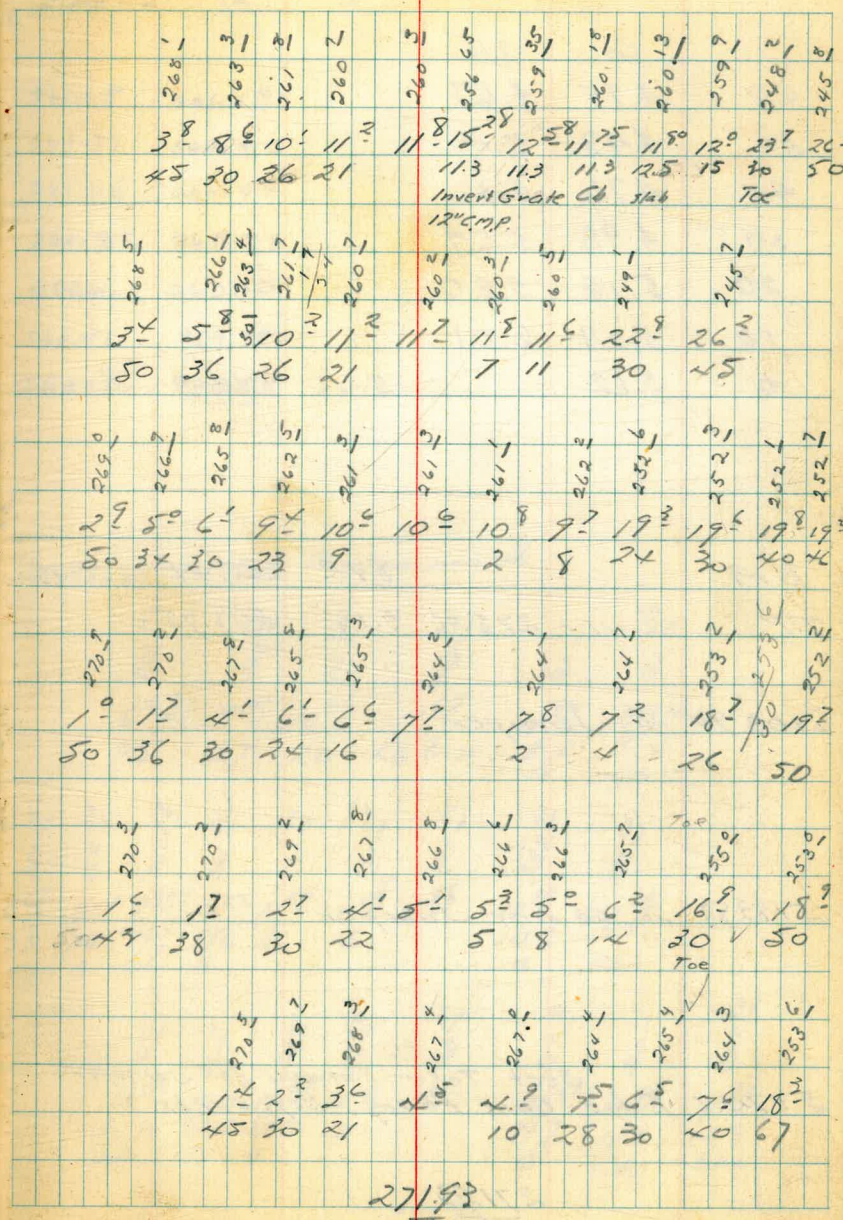
5+50

5+00

4+40

4+25

271.93
11



Levels Pentucket Cont'd

	cb	gut.	+	HI	−	—
60	4.15	4.67				
50	4.43	5.00				
40	4.76	5.32				
30	4.98	5.57				
20	5.14	5.80				
10	5.29	6.01				
0	5.62		5.62	265.80		
B.M.			8.72	266.44		266.43
T.P.	6.41	275.16	3.18	268.75		

6+03.94 ℄ Juniper

5+83.82 So. Cb. Line Juniper

Sect Taken Parallel to Juniper

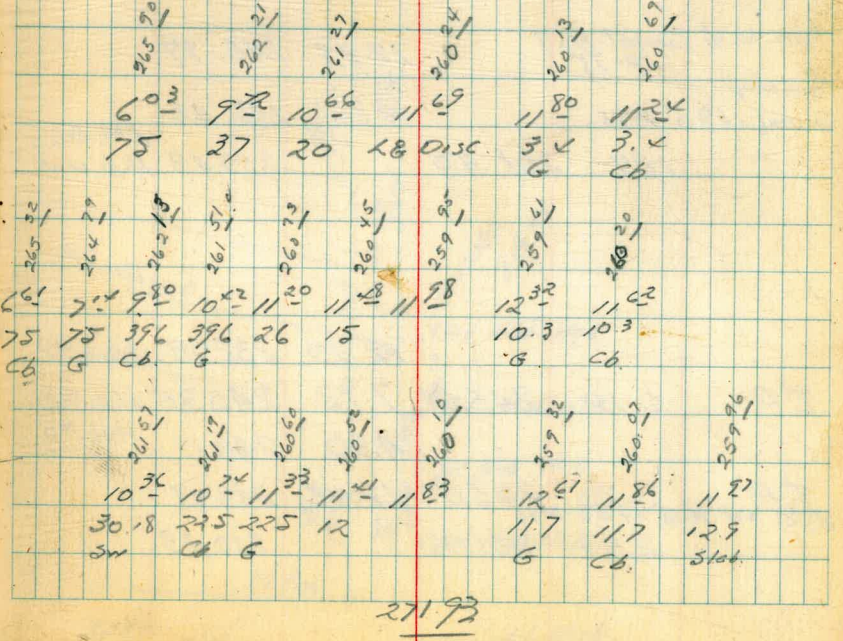
5+74.1 Edge Conc. Paving. Beg. Curbs

27193

Elev

261.65	261.13
261.37	260.80
261.04	260.48
260.82	260.23
260.66	260.00
260.51	259.79
260.18	259.35

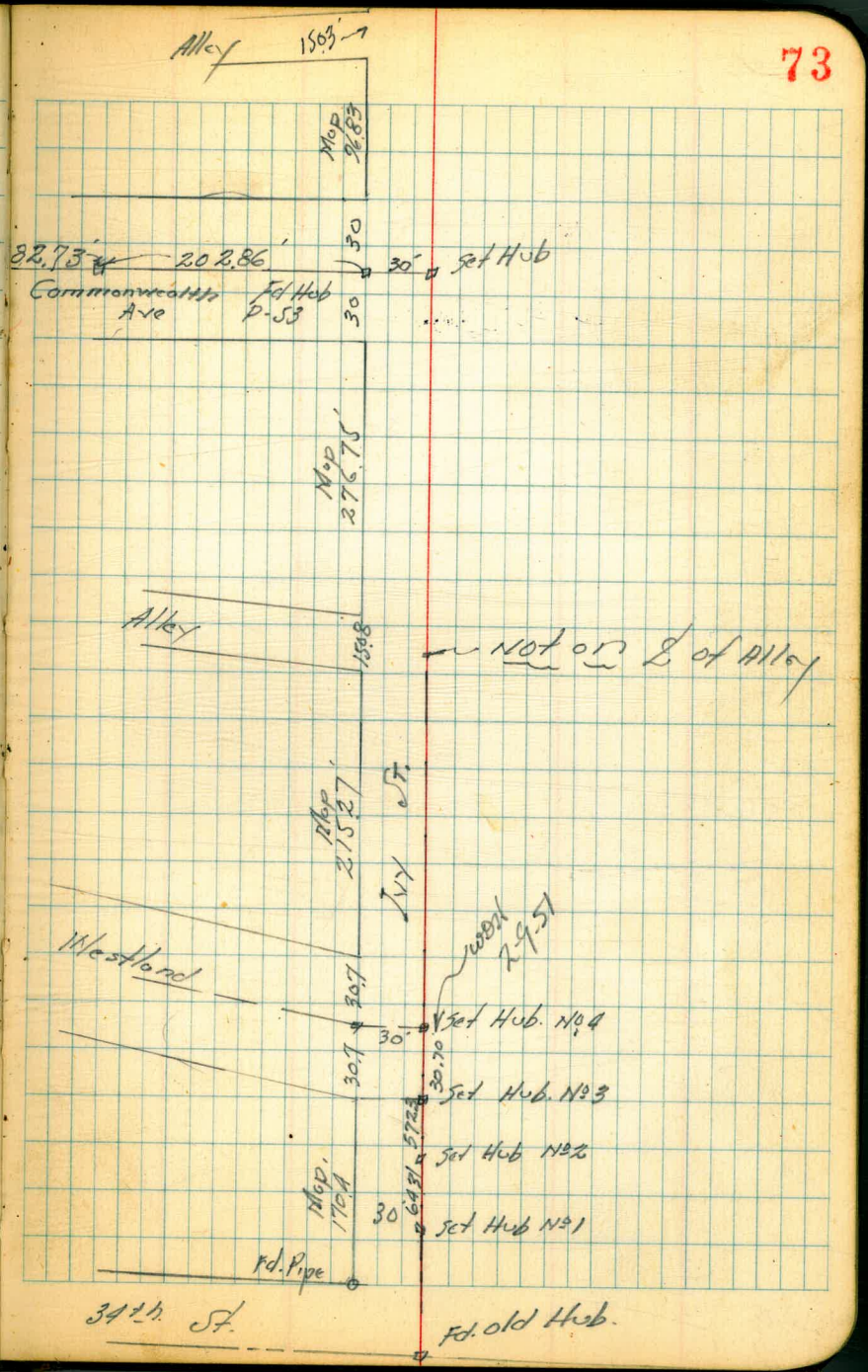
2xx BP. Juniper & Commonwealth.



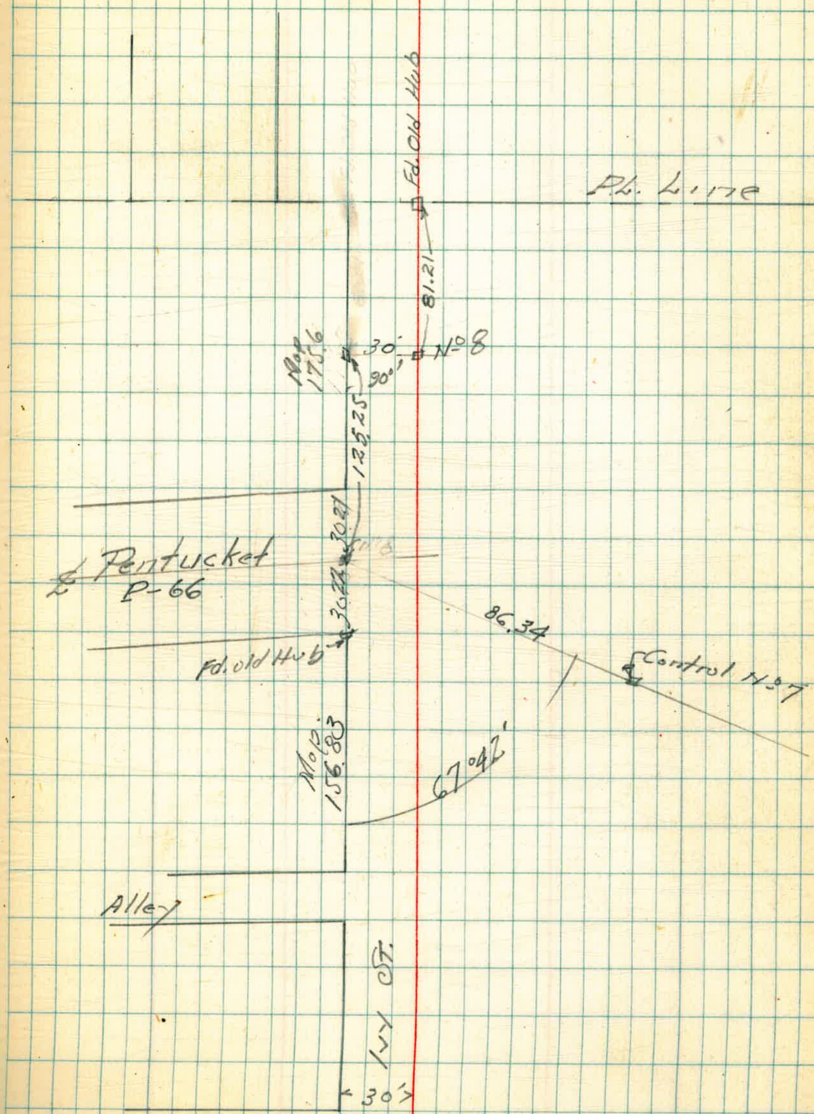
271.93

~ Ivy. St. ~ Topog. Control

				001	
1+87 · P-68				264.92 · P-68	
Chk. & 7' Conc. Walk			632	264.91	
N Line Ivy					
Check Direc Way			687	264.36	
T.P.	11.77	271.23	211	259.46	
T.P.	12.60	261.57		248.97	No 7 Control Hub
on Hub Control No 7 P. 75			12.33	248.97	
on Hub Control No 8 P 75			482	256.48	
	1.87	261.30		259.43	B.M. Below Hub 0+00
			12.49	232.98	Hub #1
T.P.	0.12	245.47	7.72	245.35	Hub #2
			4.90	248.17	Hub #3
T.P.	3.20	253.07	12.05	249.87	
B.M. on Hub 0+00 P 55					
	2.49	261.92		259.43	

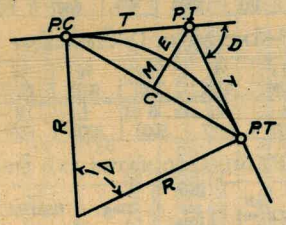


Fd Hub P-53
P.I.


Fd. Old Hub
Pl. Line
81.21
No8 17.56
30'
No8
90°
125.25
30.21
Pentucket
P-66
30.21
86.34
Control No7
Fd. old Hub
No8 156.83
67°42'
Alley
Ivy St.
30'

See page 14 for additional space.

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

Radius=R=$\frac{50}{\text{sin. } D/2}$ (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)=Rvers $\frac{\Delta}{2}$ (6)

External=E=T tan $\frac{\Delta}{4}$ (7)=R ÷ cos. $\frac{\Delta}{2}$—R(8)=R 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. Δ=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=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 $(54.50 \div 100)^2$=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=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6 ÷8⅓=115.27 and from Table V correction=.10 or E=115.37 ft. Or suppose Δ=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

Table I.—Minutes in Decimals of a Degree.

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Table II.—Inches in Decimals of a Foot.

1/16	3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

Table III.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid. Ord.	Tan Offset	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan Offset	Def. for 1 Foot
0° 10′	34377.5	.036	.145	0.05′	7°	819.02	1.528	6.105	2.10′
20	17188.8	.073	.291	0.10	20	781.84	1.600	6.395	2.20
30	11459.2	.109	.436	0.15	30	764.49	1.637	6.540	2.25
40	8594.42	.145	.582	0.20	40	747.89	1.673	6.685	2.30
50	6875.55	.182	.727	0.25	8	716.78	1.746	6.976	2.40
1	5729.65	.218	.873	0.30	20	688.16	1.819	7.266	2.50
10	4911.15	.255	1.018	0.35	30	674.69	1.855	7.411	2.55
20	4297.28	.291	1.164	0.40	40	661.74	1.892	7.556	2.60
30	3819.83	.327	1.309	0.45	9	637.28	1.965	7.846	2.70
40	3437.87	.364	1.454	0.50	20	614.56	2.037	8.136	2.80
50	3125.36	.400	1.600	0.55	30	603.80	2.074	8.281	2.85
2	2864.93	.436	1.745	0.60	40	593.42	2.110	8.426	2.90
10	2644.58	.473	1.891	0.65	10	573.69	2.183	8.716	3.00
20	2455.70	.509	2.036	0.70	30	546.44	2.292	9.150	3.15
30	2292.01	.545	2.181	0.75	11	521.67	2.402	9.585	3.30
40	2148.79	.582	2.327	0.80	30	499.06	2.511	10.02	3.45
50	2022.41	.618	2.472	0.85	12	478.34	2.620	10.45	3.60
3	1910.08	.655	2.618	0.90	30	459.28	2.730	10.89	3.75
10	1809.57	.691	2.763	0.95	13	441.68	2.839	11.32	3.90
20	1719.12	.727	2.908	1.00	30	425.40	2.949	11.75	4.05
30	1637.28	.764	3.054	1.05	14	410.28	3.058	12.18	4.20
40	1562.88	.800	3.199	1.10	30	396.20	3.168	12.62	4.35
50	1494.95	.836	3.345	1.15	15	383.07	3.277	13.05	4.50
4	1432.69	.873	3.490	1.20	30	370.78	3.387	13.49	4.65
10	1375.40	.909	3.635	1.25	16	359.27	3.496	13.92	4.80
20	1322.53	.945	3.718	1.30	30	348.45	3.606	14.35	4.95
30	1273.57	.982	3.926	1.35	17	338.27	3.716	14.78	5.10
40	1228.11	1.018	4.071	1.40	18	319.62	3.935	15.64	5.40
50	1185.78	1.055	4.217	1.45	19	302.94	4.155	16.51	5.70
5	1146.28	1.091	4.362	1.50	20	287.94	4.374	17.37	6.00
10	1109.33	1.127	4.507	1.55	21	274.37	4.594	18.22	6.30
20	1074.68	1.164	4.653	1.60	22	262.04	4.814	19.08	6.60
30	1042.14	1.200	4.798	1.65	23	250.79	5.035	19.94	6.90
40	1011.51	1.237	4.943	1.70	24	240.49	5.255	20.79	7.20
50	982.64	1.273	5.088	1.75	25	231.01	5.476	21.64	7.50
6	955.37	1.309	5.234	1.80	26	222.27	5.697	22.50	7.80
10	929.57	1.346	5.379	1.85	27	214.18	5.918	23.35	8.10
20	905.13	1.382	5.524	1.90	28	206.68	6.139	24.19	8.40
30	881.95	1.418	5.669	1.95	29	199.70	6.360	25.04	8.70
40	859.92	1.455	5.814	2.00	30	193.18	6.583	25.88	9.00

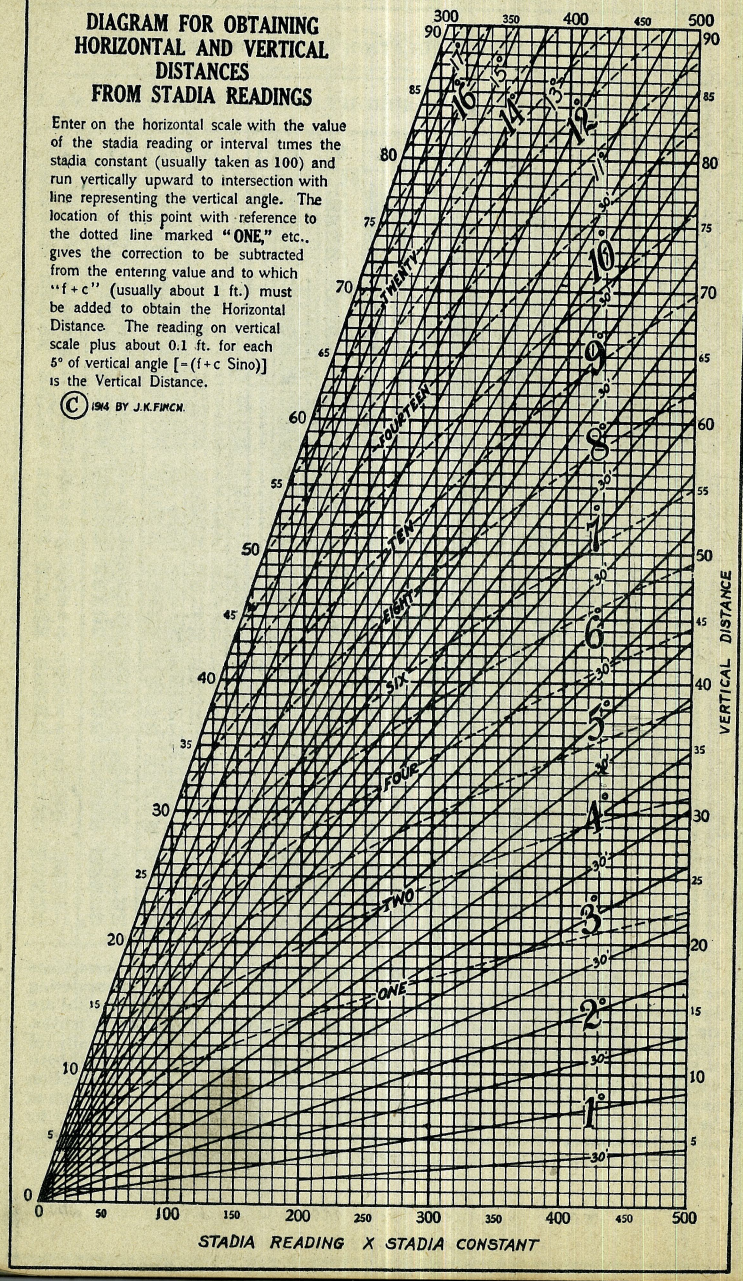
Note. Chord Deflection=2 times tangent deflection.

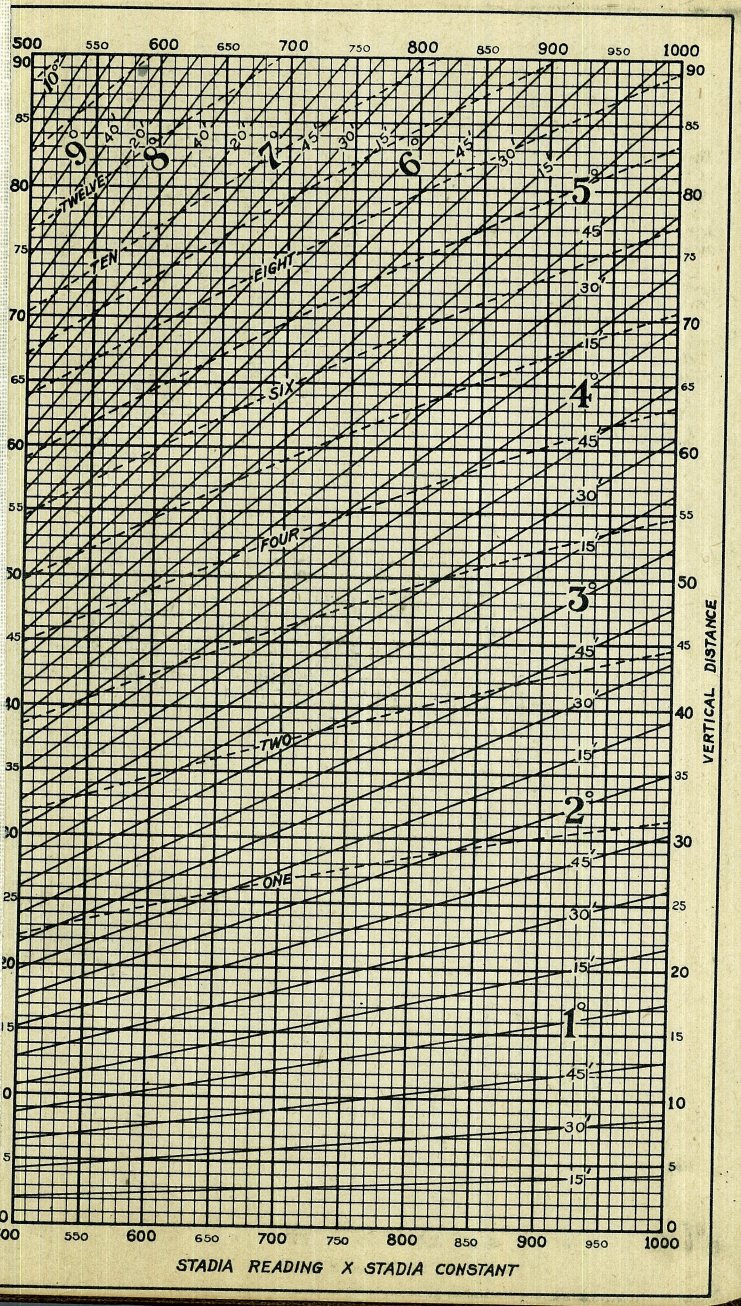
Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
1°	50.00	.22	11°	551.70	26.50	21°	1061.9	97.57
10′	58.34	.30	10′	560.11	27.31	10′	1070.6	99.16
20	66.67	.39	20	568.53	28.14	20	1079.2	100.75
30	75.01	.49	30	576.95	28.97	30	1087.8	102.35
40	83.34	.61	40	585.36	29.82	40	1096.4	103.97
50	91.68	.73	50	593.79	30.68	50	1105.1	105.60
2	100.01	.87	12	602.21	31.56	22	1113.7	107.24
10	108.35	1.02	10	610.64	32.45	10	1122.4	108.90
20	116.68	1.19	20	619.07	33.35	20	1131.0	110.57
30	125.02	1.36	30	627.50	34.26	30	1139.7	112.25
40	133.36	1.55	40	635.93	35.18	40	1148.4	113.95
50	141.70	1.75	50	644.37	36.12	50	1157.0	115.66
3	150.04	1.96	13	652.81	37.07	23	1165.7	117.38
10	158.38	2.19	10	661.25	38.03	10	1174.4	119.12
20	166.72	2.43	20	669.70	39.01	20	1183.1	120.87
30	175.06	2.67	30	678.15	39.99	30	1191.8	122.63
40	183.40	2.93	40	686.60	40.99	40	1200.5	124.41
50	191.74	3.21	50	695.06	42.00	50	1209.2	126.20
4	200.08	3.49	14	703.51	43.03	24	1217.9	128.00
10	208.43	3.79	10	711.97	44.07	10	1226.6	129.82
20	216.77	4.10	20	720.44	45.12	20	1235.3	131.65
30	225.12	4.42	30	728.90	46.18	30	1244.0	133.50
40	233.47	4.76	40	737.37	47.25	40	1252.8	135.35
50	241.81	5.10	50	745.85	48.34	50	1261.5	137.23
5	250.16	5.46	15	754.32	49.44	25	1270.2	139.11
10	258.51	5.83	10	762.80	50.55	10	1279.0	141.01
20	266.86	6.21	20	771.29	51.68	20	1287.7	142.93
30	275.21	6.61	30	779.77	52.89	30	1296.5	144.85
40	283.57	7.01	40	788.26	53.97	40	1305.3	146.79
50	291.92	7.43	50	796.75	55.13	50	1314.0	148.75
6	300.28	7.86	16	805.25	56.31	26	1322.8	150.71
10	308.64	8.31	10	813.75	57.50	10	1331.6	152.69
20	316.99	8.76	20	822.25	58.70	20	1340.4	154.69
30	325.35	9.23	30	830.76	59.91	30	1349.2	156.70
40	333.71	9.71	40	839.27	61.14	40	1358.0	158.72
50	342.08	10.20	50	847.78	62.38	50	1366.8	160.76
7	350.44	10.71	17	856.30	63.63	27	1375.6	162.81
10	358.81	11.22	10	864.82	64.90	10	1384.4	164.86
20	367.17	11.75	20	873.35	66.18	20	1393.2	166.95
30	375.54	12.29	30	881.88	67.47	30	1402.0	169.04
40	383.91	12.85	40	890.41	68.77	40	1410.9	171.15
50	392.28	13.41	50	898.95	70.09	50	1419.7	173.27
8	400.66	13.99	18	907.49	71.42	28	1428.6	175.41
10	409.03	14.58	10	916.03	72.76	10	1437.4	177.55
20	417.41	15.18	20	924.58	74.12	20	1446.3	179.72
30	425.79	15.80	30	933.13	75.49	30	1455.1	181.89
40	434.17	16.43	40	941.69	76.86	40	1464.0	184.08
50	442.55	17.07	50	950.25	78.26	50	1472.9	186.29
9	450.93	17.72	19	958.81	79.67	29	1481.8	188.51
10	459.32	18.38	10	967.38	81.09	10	1490.7	190.74
20	467.71	19.06	20	975.96	82.53	20	1499.6	192.99
30	476.10	19.75	30	984.53	83.97	30	1508.5	195.25
40	484.49	20.45	40	993.12	85.43	40	1517.4	197.53
50	492.88	21.16	50	1001.7	86.90	50	1526.3	199.82
10	501.28	21.89	20	1010.3	88.39	30	1535.3	202.12
10	509.68	22.62	10	1018.9	89.89	10	1544.2	204.44
20	518.08	23.38	20	1027.5	91.40	20	1553.1	206.77
30	526.48	24.14	30	1036.1	92.92	30	1562.1	209.12
40	534.89	24.91	40	1044.7	94.46	40	1571.0	211.48
50	543.29	25.70	50	1053.3	96.01	50	1580.0	213.86

DIAGRAM FOR OBTAINING HORIZONTAL AND VERTICAL DISTANCES FROM STADIA READINGS

Enter on the horizontal scale with the value of the stadia reading or interval times the stadia constant (usually taken as 100) and run vertically upward to intersection with line representing the vertical angle. The location of this point with reference to the dotted line marked **"ONE,"** etc., gives the correction to be subtracted from the entering value and to which "f + c" (usually about 1 ft.) must be added to obtain the Horizontal Distance. The reading on vertical scale plus about 0.1 ft. for each 5° of vertical angle [= (f + c Sino)] is the Vertical Distance.





DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

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.