

1668



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ENGINEER'S  
FIELD BOOK  
No. 403F

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P-1-only

1668

**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

CITY ENGINEER'S OFFICE

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 1 1/2 see inside of back cover.  
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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.

Archer St. & contours

1-2



X sec Archer St., Dawes Ely

1 + 00

0 + 73

0 + 55

0 + 35

0 + 00 E. L. Dawes

Reduced & Plotted 6-16-42  
C.D.H.

SW. 7' Mon.					
Set B.M. Archer Dawes	9.17	173.46	8.93	164.29	
T.P.	4.53	173.46	8.93	164.29	
T.P.	1.77	175.86	12.74	174.09	Rock ✓
T.P.	0.29	186.83	12.02	186.34	
T.P.	2.96	198.76	0.17	195.40	Rock
T.P.	7.97	195.57	3.32	187.65	
Set B.M. R.R. Spike in Pav.	1.58			189.39	
T.P.	8.70	190.97	4.68	182.27	
T.P.	5.46	186.95	6.30	181.49	
T.P.	12.21	187.79	9.93	175.88	
ANBP	0.40	185.51		185.11	
INCurb					

170.82	170.6	168.5	168.0	168.2	165.5	166.1	164.9
2.4	2.9	5.0	5.5	5.3	5.0	7.4	8.6
41	40	22	5	5	5	12	30
7' Con. Dr.							

172.70	169.1	167.1	166.7	166.9	166.1	164.5	163.7	163.15
0.76	4.4	6.4	6.8	6.6	7.4	9.0	8.8	10.31
70	40	24	5	6	5	17	30	45
8 Sim. gar. Con.								

172.59	170.2
0.87	3.3
50	47
Top	
8 Bot. 3' Con. steps	

168.6	166.5	165.9	165.2	165.3	165.9	165.1	164.1	163.1
4.7	7.0	7.6	8.3	8.2	7.6	8.4	2.4	10.4
40	24	22	5	2	7	5	12	30

173.46  
173.49  
5' Ht. of water line

8 Agate and W. B. Farnell St.

Foot Hill Blvd. & Aguanan

Archer

Lt

Bk.

✓ P 174.57

3

2+44

2+23

T.P. 10.24 184.53 1.08 174.09 old Rock T.P.

2+00

1+78

1+63

1+50

1+41

T.P. 552 175.17 3.81 169.65  
175.17 3.79 169.70

1+27

1+25

173.46  
173.49

176.0  
+ 0.8  
40

174.5  
0.7  
28

174.0  
1.2  
25

173.1  
2.1  
5

184.53  
173.1  
2.1

172.6  
2.2  
5

171.4  
3.8  
12

170.8  
4.4  
30

169.45

5.72

30.0

2 3' Con. walk

169.4

6.23

35 2' do. gar. apron

174.2  
1.0  
41.3  
Top steps

172.4  
2.8  
39.6  
Bot. 21' Con. steps

171.5  
3.7  
25

170.4  
4.8  
22

169.9  
5.3  
5

170.0  
5.2

169.8  
5.2

168.9  
6.3  
16

168.1  
7.1  
30

167.11

8.0

31.5 Singan Con. Y.

175.17

175.17

171.59

1.89

40.1

2' Sin. gar. Con.

173.46

173.49

166.11

7.35

30.4

2 3' Con. walk

Archer

4 + 00

3 + 75

3 + 55

3 + 40

T.P.

8.60 192.70 0.43 184.10

3 + 00

2 + 92

2 + 83

2 + 50

184.53

LT

BL

RT

21

185.7	185.7	185.7	185.0	184.2	182.9	180.6	179.7
5.0	7.0	7.0	7.7	8.5	9.8	12.1	13.0
40	20	5		5	15	30	40

184.6	186.4	185.9	184.9	184.6	183.8	183.0	181.3	180.0	179.7
8.1	6.3	6.8	7.8	8.1	8.9	9.7	11.4	12.7	13.0
40	35	20	22	5		5	20	30	40

ditch

184.2	183.2	183.1	183.2	182.5	180.7	179.4	178.7
8.5	9.5	9.6	9.5	10.2	12.0	13.3	14.0
40	25	5	9.5	5	20	30	40

183.9	182.7	181.3	182.2	182.0	180.9	178.4	177.8
8.8	10.0	11.4	10.5	10.7	11.8	14.3	14.9
40	35	5 ditch		5	15	30	40

183.9	181.3	180.7	180.6	180.1	178.4	175.8	177.9
8.6	3.7	4.3	3.9	4.4	6.1	8.7	6.6
40	22	5	3.9	5	15	20 ditch	30

179.9	179.4	178.2	177.7	178.1	175.1	176.4
4.6	5.1	6.3	6.8	6.4	9.4	7.7
	5	10	17	21	30	40

draw ditch

179.4	178.5	177.4	176.9	177.2	174.5
5.1	6.0	7.1	7.4	2.3	10.0
	5	"	22	30	35

180.7	179.0	177.6	176.7	176.4	176.1	175.0	174.4
3.8	5.5	6.9	7.8	8.1	8.0	9.5	10.1
40	27	20	5		5	12	30

184.53

Archer

T.P. 1276 221.04 0.01 20808

7+35

T.P. 1269 208.09 7.33 195.40 <sup>old Rock T.P.</sup> 195.40

7+00

6+50

6+00

5+50

T.P. 1274 202.73 2.73 189.97

5+00

4+50

192.70

LT

B.L.

R+

5

210.3	207.1	205.3	204.7	203.9	202.2	200.5	199.0	196.6	195.1
+ 2.2	1.0	2.8	3.2	4.2	5.9	7.6	9.1	11.5	13.0
40	25	23	8	5		5	15	30	40

204.7	202.7	199.9	199.5	198.7	197.4	196.4	194.8	192.7	191.5
+ 2.9	2.0	2.8	3.2	2.0	5.3	6.3	7.9	10.0	11.2
40	25	23	9	5		5	15	30	40

199.5	196.6	195.2	194.9	194.1	192.7	191.3	190.3	188.4	187.0
3.2	6.1	7.5	7.8	8.6	10.0	10.9	12.2	14.3	15.7
40	25	23	11	5		5	15	30	40

197.5	195.1	193.1	192.7	191.4	190.2	189.4	187.1	186.3	185.1
5.2	7.6	9.0	10.0	11.3	12.5	13.3	15.4	16.3	17.6
40	24	22	10	5		5	23	30	40

194.2	192.6	190.1	190.0	189.1	187.3	186.7	185.0	183.6	182.5
8.5	10.1	12.4	12.7	13.6	15.0	16.0	17.7	19.1	20.2
40	25	22	8	5		5	15	30	40

191.2	189.6	187.6	187.6	187.1	185.9	184.5	182.9	181.9	180.8
1.5	3.1	5.1	5.1	5.0	6.8	8.2	9.8	10.8	11.9
40	20	23	7	5		5	15	30	40

188.7	188.2	186.2	186.4	185.9	185.1	184.1	182.8	181.2	180.2
4.0	4.5	6.5	6.3	6.8	7.6	8.6	9.9	11.5	13.5
40	30	20	7	5		5	15	30	40

192.70



Archer

10+00

T.P.

0.41

224.93

9.49

224.52

Rock

9+70

9+35

9+00

8+70

T.P.

13112

234.01

0.15

220.89

8+35

8+00

7+70

221.04

234.1  
+ 9.2  
40

230.3  
+ 5.4  
26

227.4  
+ 2.5  
26

226.0  
+ 1.1  
7

223.9  
+ 1.0  
5

222.2  
27

221.2  
+ 3.7  
5

219.1  
+ 5.8  
15

214.7  
+ 10.2  
30

212.7  
+ 12.2  
40

237.5  
+ 3.5  
40

232.2  
+ 1.8  
24

229.6  
+ 4.4  
23

229.2  
+ 4.8  
8

227.5  
+ 6.5  
5

224.93  
225.9  
+ 8.1  
5

223.9  
+ 10.1  
5

221.7  
+ 12.3  
15

219.6  
+ 16.4  
30

214.8  
+ 19.2  
40

237.0  
+ 3.0  
40

233.3  
+ 0.7  
26

230.7  
+ 3.3  
24

229.9  
+ 4.1  
9

228.1  
+ 5.9  
5

225.9  
+ 8.1  
5

224.9  
+ 9.1  
5

222.8  
+ 11.2  
15

218.9  
+ 15.1  
30

216.5  
+ 17.5  
40

237.3  
+ 3.3  
40

231.8  
+ 2.2  
25

230.0  
+ 4.0  
24

229.6  
+ 5.4  
9

226.3  
+ 7.7  
5

225.2  
+ 8.8  
5

224.6  
+ 9.4  
5

221.9  
+ 12.1  
15

217.3  
+ 16.2  
30

214.7  
+ 19.3  
40

232.9  
+ 1.1  
40

229.0  
+ 5.0  
26

226.5  
+ 7.5  
22

225.3  
+ 8.7  
9

223.3  
+ 10.7  
5

221.8  
+ 12.2  
5

221.0  
+ 13.0  
5

218.7  
+ 15.8  
15

214.3  
+ 19.2  
30

212.6  
+ 21.2  
40

227.5  
+ 6.5  
40

222.7  
+ 1.7  
24

220.5  
+ 0.5  
22

219.6  
+ 1.4  
8

218.5  
+ 2.5  
5

216.9  
+ 4.1  
5

216.1  
+ 4.9  
5

214.0  
+ 7.0  
15

210.2  
+ 10.8  
30

208.1  
+ 12.9  
40

220.9  
+ 0.1  
40

216.2  
+ 4.8  
24

214.5  
+ 6.5  
22

213.6  
+ 7.4  
9

212.1  
+ 8.9  
5

210.5  
+ 10.5  
5

209.5  
+ 11.5  
5

207.2  
+ 13.8  
15

203.9  
+ 17.1  
30

201.7  
+ 19.3  
40

215.9  
+ 5.1  
40

213.1  
+ 7.9  
26

210.7  
+ 10.3  
23

209.7  
+ 11.3  
9

208.3  
+ 12.7  
5

206.7  
+ 14.3  
5

206.1  
+ 14.9  
5

203.8  
+ 17.2  
15

200.7  
+ 20.3  
30

198.9  
+ 22.1  
40

221.04

Archer

T.P. 1224 261.57 0.18 249.33

T.P. 1276 249.51 0.11 237.75

11 + 30

T.P. 1215 16732 51.1 222.16

11 + 00

10 + 80.53 W.L. Fanuel end of Street

10 + 68

Set BM. chisel  Top Hd. nail  
Archer + Fanuel 12.49 212.44 ✓

10 + 47. ✓

10 + 33

10 + 25

224.93

Lt

B.L.

Rt

7

229.8  
231.0  
232.8  
234.7  
235.6  
237.3

2.1  
40  
41  
5  
1.3  
+ 0.4

50  
25  
5  
5  
30

214.5  
214.9  
219.3  
220.5  
221.8  
224.6

10.4  
10  
10.0  
5.6  
3.1  
0.3

20  
30  
15  
5  
5  
30

Bot. Wash

219.3  
216.5  
213.4  
211.8  
211.9  
212.1  
214.1  
215.4  
216.5

5.0  
8.4  
11.5  
13.1  
130  
12.8  
10.8  
8.5  
8.4

40  
22  
15  
5  
130  
5  
11  
30  
40

220.8  
218.9  
218.2  
216.2  
214.7  
213.1  
211.0  
211.9  
215.7

4.1  
6.0  
6.7  
8.7  
10.2  
11.8  
13.9  
13.0  
9.2

40  
30  
15  
5  
100  
5  
10  
30  
40

224.1  
220.1  
218.3  
216.8  
214.9  
215.4  
214.2  
210.3  
209.3  
205.80  
210.44

0.8  
4.8  
6.6  
8.1  
9.0  
9.5  
10.7  
10.6  
15.6  
16.3  
12.49

40  
20  
10  
5  
90  
5  
12  
30  
30  
43.8  
43.8

228.0  
223.9  
222.4  
218.9  
218.7  
217.9  
217.4  
216.9  
218.1  
212.3  
212.8  
212.8

13.1  
1.0  
2.5  
6.0  
6.2  
7.0  
7.5  
8.0  
10.8  
12.6  
10.7  
12.5

40  
27  
25  
8  
5  
70  
5  
2  
24  
30  
32  
34

229.4  
225.9  
223.9  
221.3  
219.2  
218.3  
218.1  
216.5  
214.0  
212.1

4.5  
1.0  
1.1  
3.6  
5.7  
6.6  
5.8  
8.4  
10.5  
12.2

40  
26  
24  
7  
5  
6  
5  
15  
30  
40

224.93

Top Hd. nail

check to G.M. 220 Hub 6.18 290.24 290.23 P.9

13 + 21.4 approx. h.k. Res. Size

13 + 00

T.P. 10.79 290.24 0.23 285.63

12 + 50

12 + 28

T.P. 12.56 285.96 0.77 273.40

12 + 00

T.P. 12.73 274.17 0.13 261.44

11 + 80

11 + 60

261.74

LT

RT

8

288.6

28  
40

281.2

15.4  
40

Direct produced  
Date 10/14/44

289.8

50

285.4

50

222  
290.1

6.34  
5

287.6

8.8  
5

289.7

6.7  
30

281.6

8.8  
30

274.9  
11.1  
25

274.9

11.1  
25

280.9

2.1  
5

278.0

2.0  
5

283.9

1.5  
15

278.3

2.7  
20

284.5

4.1  
30

275.5

10.5  
30

262.1

23.9  
50

265.2

26.9  
25

261.3

2.0  
5

278.0

2.7  
20

278.3

10.5  
30

253.2

2.0  
50

255.2

15.2  
25

270.0

2.0  
5

285.26

8.0  
5

265.6

8.2  
19

266.0

10.3  
30

247.4

14.2  
50

249.4

9.2  
25

274.17

25.50

256.3

5.3  
5

257.9

5.1  
30

242.5

19.1  
50

243.9

15.7  
25

245.9

5.1  
5

249.2

17.4  
5

250.0

11.6  
30

261.57

EA 1009-59

TEST HOLES  
Pacific Beach Res. Site Lot 1

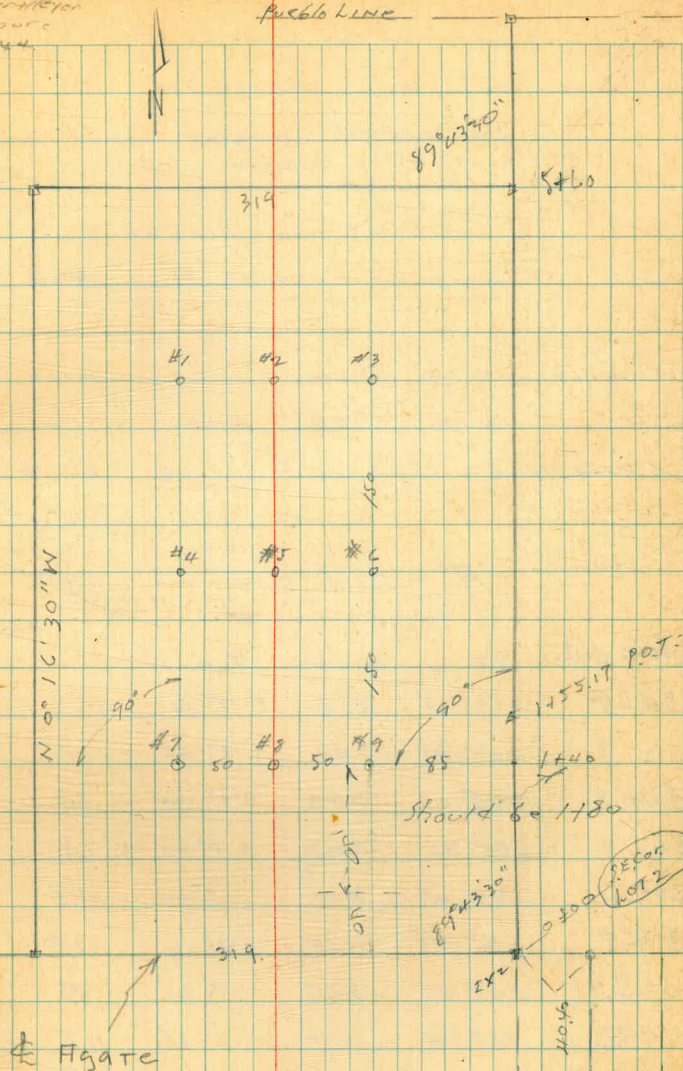
BM RPHUB 207 RT.	C. 99	297.22	290.23	9130.9 1609-64
#1		0.37	296.85	
#2		0.89	296.23	
#3		1.24	295.58	
#4		6.29	290.93	
#5		7.75	289.47	
#6		7.09	290.13	
#7		13.26	283.96	
#8		14.33	282.89	
#9		11.13	286.09	

Elev. Hubs set C.E. of Ctr. Test Holes

Test Holes dug do N. of Points  
as shown on Sketch

C. S. Moore  
SOUTH BEACH  
N. MOORE  
6-7-44

Pueblo Line



Contours of Cañon N.W. of  
Res. Site Sketch P. 1

~~Horizontal~~ angles turned clockwise  
angle set up to zero (0°00' = N 1°24' W)  
LT. of N.W. Cor.

Stadia of N.W. side of Cañon

Transit on Control "A" Rod = 5.0

B.M. 2x2 Hub 10.93 301.16 290.23 P. 9

T.P. 1.99 298.81 4.34 296.82

Elev. Hub Control "A" 14.08 284.73 ✓

" " " "B" 6.50 292.31 ✓

"A" Rod 5.0

Vert. Dist.

Ground Elev.

Horiz. Dist.	Ht.	Stadia	V. A		Ground Elev.
346.9	254° 44'	352	-7° 14'	-4.39	240.8
337.7	263° 05'	340	-4° 45'	-2.81	256.6
341.8	272° 06'	342	-1° 35'	- .94	275.3
341.9	280° 33'	342	+1° 02'	+ .61	290.8
309.6	285° 07'	310	+2° 05'	11.3	296.0
314.5	296° 54'	315	+2° 15'	12.4	297.1
326.7	309° 00'	327	+1° 44'	.98	294.5
299.6	322° 11'	306	+2° 12'	11.5	296.2
349.1	330° 11'	350	+2° 58'	18.1	302.8
393.7	343° 44'	395	+3° 20'	22.9	307.6
347.6	346° 45'	348	+2° 00'	12.2	296.9
297.8	338° 48'	298	+1° 30'	7.8	292.5

Rim of cañon

" " "

" " "

" " "

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" " "

ok " " " West Line Fossil

" " " S.E. Cor. Stone cabin (under construction)

Along Ditch	AZ.	Rod = 50 Stad.	N. V. L V. L	Vert. Dist.	
354.0	329° 52'	354	+0° 08'	0.8	285.5
260.0	313° 44'	260	-0° 05'	0.4	284.3
272.0	299° 22'	272	+0° 18'	1.4	286.1
264.0	286° 07'	264	-0° 10'	0.8	283.9
275.0	279° 05'	275	-0° 10'	0.9	283.8
284.9	276° 15'	285	-1° 15'	6.2	278.5
272.1	267° 42'	273	-3° 23'	16.0	268.7
232.4	272° 55'	233	-6° 00'	24.1	260.6
212.1	286° 46'	215	-6° 47'	25.2	259.5
228.9	310° 30'	230	-4° 02'	16.1	268.6
203.0	323° 53'	208	-5° 49'	20.7	264.0
224.2	338° 12'	225	-3° 35'	14.0	270.7
232.3	343° 11'	234	-6° 15'	25.4	259.3
264.0	334° 41'	264	+0° 04'	0.3	285.0
297.0	343° 38'	297	+0° 30'	2.6	287.3
300.0	352° 36'	300	+0° 10'	0.9	285.6
272.0	351° 08'	272	0° 00'	—	284.7
239.2	355° 46'	240	-3° 20'	13.9	270.8
201.0	352° 46'	205	-8° 09'	28.8	255.9
191.7	344° 18'	198	-10° 33'	35.7	249.0
184.5	331° 29'	187	-7° 45'	24.9	259.8
183.9	319° 49'	197	-7° 18'	25.0	259.7
214.5	309° 31'	217	-6° 19'	23.7	261.0
191.6	301° 10'	196	-8° 49'	29.7	255.0
182.2	277° 24'	191	-12° 29'	40.3	244.4

284.7					
284.3					
286.1					
283.9					
283.8					
278.5					
268.7					
260.6					
259.5					
268.6					
264.0					
270.7					
259.3					
285.0					
287.3					
285.6					
284.7					
270.8					
255.9					
249.0					
259.8					
259.7					
261.0					
255.0					
244.4					

at gully  
 rim of gully  
 " " "  
 " " " and bot. of Swale to North  
 " " "  
 " " "  
 Bot. " "

N.W. ly side Cañon					
Long Dist	Az	Stadia	Rod 5.0 V.A.	Vert Dist	
215.1	262°54'	222	-10°13'	38.8	245.9
293.7	242°51'	303	-10°00'	51.6	233.1
244.7	217°48'	257	-12°17'	55.5	229.2
195.9	253°04'	211	-15°32'	54.4	230.3
171.0	264°42'	188	-16°37'	54.2	230.5
167.4	273°08'	184	-16°31'	52.8	231.9
161.7	290°10'	175	-16°05'	46.6	238.1
171.1	293°37'	180	-14°43'	44.2	240.5
167.2	308°23'	180	-15°35'	46.6	238.1
157.6	320°39'	169	-15°02'	42.3	242.4
152.3	332°55'	162	-14°10'	38.4	246.3
176.6	339°32'	184	-11°38'	36.3	248.4
182.4	343°38'	190	-11°38'	37.5	247.2
173.5	351°24'	183	-11°45'	36.5	248.2
197.8	02°10'	203	-09°10'	31.9	252.8
226.4	10°21'	230	-07°19'	29.0	255.7
213.8	13°48'	220	-09°45'	36.7	248.0
183.2	05°51'	192	-12°20'	40.0	244.7
155.7	356°57'	168	-15°45'	43.9	240.8
150.5	345°27'	164	-16°31'	44.6	240.1
136.9	328°10'	154	-19°31'	48.5	236.2
140.6	311°40'	160	-20°25'	52.3	232.4
142.8	291°29'	165	-21°38'	56.5	228.2
133.8	281°57'	159	-23°33'	58.2	226.5
153.9	268°50'	175	-20°20'	57.0	227.7

BOTTOM OF GULLY.

BOTTOM OF GULLY FANS OUT.

## N. WEST SIDE CANYON

	Az.	STADIA	V. L.	Vertical Dist.	
161.0	255°02'	184	-20°21'	60.4	224.3
185.5	248°12'	205	-18°08'	60.6	224.1
212.2	243°38'	230	-16°16'	61.8	222.9
197.7	238°31'	222	-19°21'	69.4	215.3
162.6	242°12'	190	-22°20'	66.8	217.9
140.0	248°32'	170	-24°55'	65.0	219.7
138.4	265°43'	168	-21°50'	64.0	220.7
117.6	275°54'	149	-27°26'	60.9	223.8
127.7	293°16'	155	-24°50'	59.1	225.6
119.3	308°12'	146	-25°23'	56.5	228.2
122.9	328°37'	144	-22°34'	51.0	233.7
114.4	349°32'	136	-23°33'	49.8	234.9
146.5	01°22'	158	<sup>Red 10°</sup> -15°44'	41.2	238.5
180.7	09°27'	192	-14°00'	45.1	239.6
204.9	17°00'	212	<sup>Red 8°</sup> -10°35'	38.3	243.4

## SOUTHEASTLY SIDE CANYON

192.5	22°38'	197	-08°40'	29.3	255.4
169.0	17°05'	175	-10°49'	32.2	252.5
135.6	11°03'	143	<sup>Red 10°</sup> -13°02'	31.4	248.3
110.8	356°57'	117	<sup>Red 8°</sup> -19°29'	37.3	244.4
100.7	336°36'	123	-25°18'	47.5	237.2
105.0	318°15'	130	-26°03'	51.3	233.4
109.4	298°55'	135	-25°50'	52.9	231.8
104.8	275°51'	132	-27°00'	53.4	231.3
122.1	262°52'	149	-25°14'	57.4	227.3

BOTTOM OF MAIN WASH.

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## SOUTHEASTERLY SIDE CANYON.

	Az.	STADIA	V. L		
128.0	249°00'	155	-21°42'	58.8	225.9
130.3	238°05'	155	-23°30'	56.6	228.1
161.6	235°10'	181	-18°45'	54.8	229.9
135.9	231°11'	161	-22°50'	57.2	227.5
114.4	228°48'	133	-22°08'	46.4	238.3
94.2	248°03'	115	-25°15'	44.3	240.4
82.4	271°07'	106	-28°12'	44.2	240.5
76.9	299°57'	98	-27°40'	40.3	244.4
75.6	332°07'	95	-26°53'	38.3	246.4
84.4	359°10'	93	<sup>Rod 12"</sup> -17°40'	26.9	250.8
108.0	15°14'	113	<sup>Rod 12"</sup> -12°10'	23.3	254.4
149.4	21°01'	154	-10°04'	26.5	258.2
184.4	26°17'	187	-06°42'	21.7	263.0
179.6	33°23'	181	-02°56'	9.2	275.5
138.8	31°46'	141	-05°20'	13.0	271.7
107.2	27°35'	110	-09°13'	17.4	267.3
66.4	11°00'	70	<sup>Rod 10"</sup> -13°12'	15.6	264.1
48.3	338°05'	60	-26°12'	23.8	260.9
48.3	293°19'	62	-28°03'	25.7	259.0
55.2	261°41'	71	-28°10'	29.5	255.2
75.2	227°31'	89	-23°10'	32.2	252.5
94.7	215°02'	108	-20°35'	35.5	249.2
125.9	220°57'	137	-16°33'	37.4	247.3
120.7	205°45'	126	-11°55'	25.5	259.2
79.1	199°57'	88	-18°33'	26.5	258.2

BOTTOM OF SIDE GULCH.

BOTTOM OF SIDE GULCH.

BOTTOM OF SIDE GULCH.

BOTTOM OF SIDE GULCH.

SOUTHEASTERN SIDE CANYON

	Az.	STADIA	V.L.		
466	228°53'	55	-23°05'	19.8	264.9
320.1	264°48'	41	-27°46'	16.9	267.8
255	334°04'	33	-24°03'	12.3	272.4
56.6	28°15'	58	-09°09'	9.1	275.6
102.6	31°55'	103	-03°50'	6.9	277.8
133.8	39°13'	134	-01°47'	4.2	280.5
158.0	37°15'	158	-00°50'	2.3	282.4
171.0	39°33'	171	+00°32'	1.6	286.3
25.6	225°02'	29	-20°00'	9.3	275.4
46.1	195°38'	56	-16°02'	14.8	269.9
71.6	172°55'	74	<sup>Exp 7°</sup> -10°20'	13.1	269.6
98.0	176°11'	99	-07°50'	13.5	271.2
122.0	195°42'	123	-03°11'	6.8	277.9
115.9	165°40'	116	-02°00'	4.1	280.6
87.7	160°14'	88	-04°25'	6.7	278.0
68.0	152°44'	68	<sup>Exp 10°</sup> -01°00'	1.2	278.5
33.2	183°24'	34	-09°05'	5.3	279.4
135.8	149°07'	136	+02°10'	5.1	289.8
110.9	136°36'	111	+01°47'	3.5	288.2
64.0	130°45'	64	-00°15'	0.3	284.4
25.0	167°37'	25	-03°44'	1.6	283.1
8.0	207°16'	8	-05°08'	0.7	284.0
29.0	53°02'	29	+01°55'	1.0	285.7
92.5	51°15'	93	+04°00'	6.5	291.2
143.5	46°11'	144	+03°14'	8.2	292.9

2/12

11:50 to Archer

15

BACK UP, FINISH SIDE HILL SHOTS.

BOTTOM OF SIDE GULLY

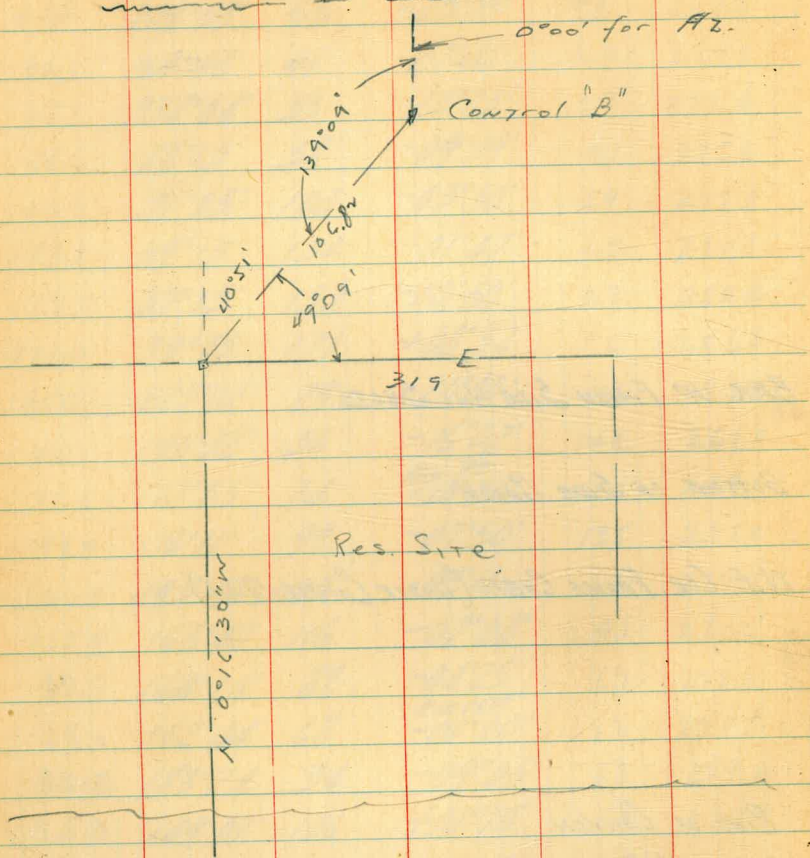
N.E. COR. FRAME CABIN (UNDER CONSTRUCTION.)

RIM OF CANYON.

"  
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"  
"  
"  
"  
"

N.W. COR. RES. SITE - 8' W. & 5' LOWER

TRANSIT ON CONTROL "B" - on Sly RIM Cañon



TRANSIT ON "B" Rod 5.0  
 A Clockwise Elev. 29231

	Az.	Stadia	V A		
347.3	320°03'	348	+3°00'	18.1	310.4
355.7	329°49'	357	+3°38'	22.4	314.7
357.5	336°40'	359	+3°48'	22.9	315.2

beg. Stadia on NWly side of Cañon.  
 Rim Cañon " "  
 " " "  
 " " "

	Hz	Stadia	V. A		
306.2	345° 54'	308	+ 4° 38'	24.8	317.1
334.5	358° 00'	337	+ 5° 08'	30.0	322.3
250.7	5° 33'	252	+ 4° 19'	18.9	311.2
324.0	9° 30'	327	+ 5° 31'	31.2	323.5
278.0	13° 47'	280	+ 4° 50'	23.5	315.8
313.8	18° 44'	310	+ 4° 50'	27.0	319.3
363.9	11° 25'	367	+ 5° 10'	32.9	325.2
378.8	21° 30'	382	Rod 10' + 5° 10'	34.9	322.2
389.9	25° 48'	391	Rod 10' + 3° 03'	20.7	308.0
325.9	26° 12'	326	+ 1° 07'	6.3	298.6
282.8	22° 35'	283	+ 1° 21'	6.6	298.9
237.0	16° 15'	237	+ 0° 34'	2.3	294.6
207.0	7° 48'	207	- 0° 10'	0.6	291.7
226.6	357° 33'	227	+ 2° 38'	10.4	302.7
195.0	358° 45'	195	- 0° 08'	0.4	291.9
215.8	344° 10'	216	+ 1° 40'	6.6	298.9
186.0	339° 21'	186	- 0° 20'	1.4	290.9
189.0	323° 27'	189	- 0° 39'	2.1	290.2
292.8	320° 40'	293	+ 1° 26'	7.3	299.6
307.6	333° 25'	308	+ 2° 18'	12.3	304.6
273.2	341° 19'	274	+ 3° 09'	15.1	307.4
239.8	335° 51'	240	+ 1° 50'	7.7	300.0
242.9	329° 02'	243	+ 1° 12'	5.1	297.3
257.0	325° 17'	257	+ 0° 20'	1.5	293.8
240.0	317° 57'	240	- 0° 39'	2.7	289.6

Hz	Stadia	V. A			
					rim Cañon, N.W. side
					" " "
					" " "
					" " "
					" " "
					" " "
					" " "
					" " "
					in Cañon
					" " "
					" " "
					" " "
					" " "
					" " "
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					" " "
					" " "
					" " "
					" " "
					" " "
					" " "
					Bot of Swale
					in Cañon
					" " "
					" " "
					" " "
					" " "



	Hz.	Stadia	V. A	Rod 50	
195.6	27° 39'	198	Rod 10' - 0° 28'	22.4	264.9
192.8	29° 36'	196	Rod 10' - 7° 27'	25.1	262.2
234.3	32° 27'	237	- 0° 11'	25.4	266.9
279.0	36° 24'	280	Rod 10' - 3° 39'	17.8	269.5
331.5	33° 45'	332	Rod 11' - 2° 10'	12.5	273.8
355.6	34° 23'	356	Rod 10' - 1° 56'	12.0	275.3
234.1	34° 31'	237	Rod 10' - 5° 13'	21.4	265.9
203.5	32° 18'	206	Rod 11' - 6° 25'	22.8	263.5
159.8	16° 38'	167	- 12° 05'	34.1	258.2
136.4	15° 32'	145	Rod 7' - 14° 04'	34.1	256.2
98.8	0° 36'	114	Rod 8' - 21° 30'	38.9	250.4
85.1	336° 20'	102	Rod 12' - 24° 02'	37.9	247.4
99.5	335° 35'	117	- 22° 44'	41.6	250.7
101.7	319° 06'	121	- 23° 39'	44.4	247.9
89.8	317° 47'	109	Rod 10' - 24° 55'	41.6	245.7
73.5	317° 16'	90	Rod 10' - 25° 28'	34.9	252.4
52.5	318° 44'	65	Rod 8' - 26° 00'	25.6	263.7
35.7	318° 40'	46	- 28° 10'	19.1	273.2
17.0	" "	22	- 28° 10'	9.2	283.1

	Control "B"				
20.0	61° 10'	20	Rod 5.5' 0° 00'		291.8
29.1	358° 09'	30	- 26° 02'	14.2	278.1
51.5	349° 25'	63	- 25° 12'	24.2	268.1
75.1	349° 08'	85	Rod 10' - 22° 06'	29.6	257.7
85.9	352° 41'	101	Rod 10' - 22° 45'	36.0	251.3

NW side Cañon

"

"

"

BOTTOM of Cañon

"

"

"

Duplicate 23)

open

"

"

"

"

"

on N.W. side "

" " " "

Bottom "

Beg. of SE ly side Cañon

ON RIM Cañon

" " "

Sly Side "

" " "

" " "

" " "

## Control "B" Rod 5.0

	H <sub>z</sub>	Stadia	V Δ		
87.0	358° 31'	101	Rod 10 -21° 57'	35.0	252.3
105.7	8° 46'	115	Rod 12' -16° 37'	31.5	253.8
75.5	6° 58'	87	Rod 10 -21° 21'	29.5	257.8
92.7	11° 57'	100	Rod 13' -15° 40'	26.0	258.3
52.2	7° 44'	62	-23° 25'	22.6	269.7
37.2	25° 40'	42	-19° 40'	13.3	279.0
26.0	74° 10'	26	0° 00'		292.3
47.6	39° 43'	50	Rod 8 -12° 40'	10.7	278.7
67.3	29° 30'	70	Rod 18' -11° 22'	13.5	265.8
83.0	27° 00'	80	Rod 13' -10° 55'	16.0	268.3
106.6	30° 00'	109	Rod 10 -8° 30'	15.5	271.8
115.1	24° 50'	120	Rod 10' -11° 45'	23.9	263.4
137.2	19° 10'	144	Rod 10' -12° 30'	30.4	256.9
155.0	21° 50'	160	Rod 10' -10° 15'	28.0	259.3
137.6	30° 40'	141	-9° 02'	21.7	270.6
153.4	32° 50'	156	-7° 30'	20.1	272.2
146.5	30° 55'	148	-5° 47'	14.8	277.5
116.9	39° 47'	118	-5° 45'	11.8	280.5
96.8	43° 30'	98	-6° 20'	10.7	281.6
78.0	53° 30'	80	Rod 10' -9° 17'	12.7	274.6
52.8	64° 15'	54	-8° 40'	8.0	284.3
41.0	79° 55'	41	Rod 13 0° 00'		290.0
38.0	101° 20'	38	Rod 28 0° 00'		294.5
63.0	97° 20'	63	Rod 22 0° 00'		295.1
69.9	82° 47'	70	-2° 46'	3.4	288.9

## Sly side Cañon

Bot. of side gulley from EAST

Sly side Cañon

Bot. of side gulley

Sly " Cañon

" " "

" RIM "

" Side "

" " "

Bot. Side gulley

Ridge of " "

Sly Main

" "

" Toe of Main Cañon

" " " " "

Sly side " "

" " " "

" " " "

" " " "

Ridge of E gulley

Bot. " E "

S. Side " " "

" " " " "

S. RIM " " "

" " " " "

S. side of gulley

Control "B" Rod 50

	H <sub>z</sub>	Stadia	V A		
80.0	68° 52'	81	- 6° 30'	9.3	283.3
89.1	63° 20'	91	- 8° 20'	13.1	279.2
103.8	54° 35'	104	- 2° 50'	5.1	287.2
114.0	50° 33'	114	Rod 7' - 0° 40'	1.3	289.0
143.0	46° 43'	143	- 0° 20'	0.8	291.5
144.0	57° 25'	144	+ 0° 26'	1.1	293.4
121.0	65° 30'	121	- 1° 15'	2.6	289.7
107.3	71° 12'	108	- 4° 30'	8.4	283.9
93.7	79° 21'	94	- 3° 18'	5.4	286.9
88.0	89° 20'	88	- 0° 20'	0.5	291.8
83.0	98° 18'	83	Rod 2.2 0° 00'		295.1
111.0	97° 45'	111	Rod 2' 0° 00'		295.3
115.0	85° 42'	115	- 1° 00'	2.0	290.3
124.9	77° 45'	125	- 1° 43'	3.7	288.6
139.0	70° 10'	139	Rod 4.8 0° 00'		292.5
153.0	63° 27'	153	Rod 2.3 0° 00'		295.0
167.0	57° 57'	167	Rod 1.8 0° 00'		295.5
168.0	46° 57'	168	0° 00'		292.3
197.7	61° 03'	198	+ 2° 10'	7.4	299.7
173.0	73° 14'	173	Rod 0.5 0° 00'		296.8
160.0	83° 23'	160	Rod 3.3 0° 00'		294.0
154.0	95° 25'	154	Rod 1.0 0° 00'		296.3
157.6	108° 29'	158	+ 2° 54'	7.9	300.2
202.6	104° 26'	203	+ 2° 48'	9.9	302.2
200.7	96° 42'	201	+ 2° 12'	7.7	300.0

S. side of gulley  
 Bot. " "  
 RIM " "  
 Ridge " "  
 RIM MAIN CANYON  
 Top Ridge of gulley  
 RIM " "  
 Bot " "  
 S side " "  
 " " " "  
 RIM " "  
 " " " "  
 S side " "  
 Bot. " "  
 N RIM " "  
 on Bench  
 " "  
 RIM MAIN CANYON  
 on Bench  
 " "  
 Bot. of gulley  
 S RIM " "  
 Bench  
 "  
 "





El. 294.31 = Control "B" Rod 5' ✓

500	Ht.	Stadia	V A		
204.8	37° 08'	206	Rod 10' -4° 22'	15.5	271.8
199.9	41° 22'	200	Rod 14' +0° 30'	52	280.1
197.0	45° 53'	197	Rod 10' -0° 10'	0.6	286.7
189.9	51° 51'	190	+1° 03' ✓	3.5	295.8
222.7	51° 57'	223	+2° 02' ✓	7.9	300.2
219.9	49° 44'	220	+1° 22' ✓	5.2	297.5
220.0	45° 38'	220	Rod 8' 0° 00'		289.3
218.6	39° 31'	219	Rod 10' -2° 35'	9.9	277.4
218.5	34° 35'	221	-6° 14' ✓	23.8	268.5
221.4	33° 17'	222	Rod 8' -6° 10'	24.0	265.3
234.1	34° 25'	235	Rod 10' -5° 12'	21.3	266.0
231.7	37° 00'	233	Rod 8' -4° 29'	18.2	271.1
237.8	41° 44'	238	Rod 8' -10° 40'	6.9	281.4
237.0	45° 40'	237	Rod 5.7 0° 00'		292.0
237.7	50° 11'	238	+2° 10' ✓	9.9	302.2
257.5	50° 03'	258	+2° 39' ✓	12.0	304.3
	47° 36'	252	Rod 0.0 0° 00'		297.3
	45° 33'	250	Rod 5' 0° 00' ✓		292.3
246.9	42° 40'	247	Rod 10' -1° 14'	5.3	282.0
249.5	39° 47'	250	Rod 11' -2° 46'	12.0	274.3
247.7	37° 15'	249	Rod 10' -4° 11'	18.1	269.2
265.2	38° 44'	266	Rod 12' -3° 10'	14.7	270.6
264.9	43° 30'	265	Rod 8' -1° 17'	5.9	283.4
	46° 39'	259	Rod 2' 0° 00'		295.3
260.4	50° 00'	261	Rod 5' +2° 43' ✓	12.3	304.6

duplicate 19)

R.M.  
R.M.

R.M.  
"

R.M.

29731 Rod  
29731 41.

Control "B"

	HZ	Stadia	V.A		
286.1	51°12'	287	Rod 5' +3°17'	✓ 16.4	308.7
	46°40'	284	Rod 1' 0°00'		296.3
279.9	42°44'	280	Rod 8' -1°17'	6.3	283.0
277.3	39°16'	278	Rod 11' -2°55'	14.00	272.3
279.1	36°55'	280	Rod 12' -3°22'	16.4	268.9
297.1	35°17'	298	Rod 10' -3°10'	16.4	270.9
299.0	36°30'	300	Rod 7' -3°23'	17.7	272.6
299.0	38°09'	300	-3°18'	✓ 17.2	275.1
303.9	42°12'	304	-0°58'	✓ 5.1	287.2
310.0	46°13'	310	+1°24'	✓ 2.2	294.5
323.7	50°04'	325	+3°43'	✓ 21.0	313.3
348.6	48°57'	350	+3°43'	✓ 22.6	314.9
346.1	47°28'	347	+3°08'	✓ 18.9	311.2
332.0	44°40'	332	+1°30'	✓ 2.9	295.2
	42°20'	326	Rod 5' 0°00'	✓	292.3
	40°01'	325	Rod 11' 0°00'		286.3
309.5	36°44'	310	Rod 7' -2°25'	12.6	277.7
307.4	34°33'	308	Rod 12' -2°39'	14.2	271.1
335.7	34°16'	336	Rod 10' -1°55'	11.2	276.1
342.8	36°22'	343	-1°32'	✓ 9.2	283.1
	38°04'	345	Rod 8.3 0°00'		289.0
354.9	39°58'	355	+0°54'	✓ 5.6	297.9
363.6	41°12'	364	+2°00'	✓ 12.6	304.9
368.9	43°28'	370	+3°17'	✓ 21.2	313.5

RIM

RIM

"

✓

✓

Rod 5 ✓

Central "B"

	Hz.	Stadia	V.A.		
375.3	44°38'	378	+3°55' ✓	25.8	318.1
398.1	45°45'	400	+4°04' ✓	28.3	320.6
398.6	43°27'	400	+3°24' ✓	23.7	316.0
389.4	41°00'	390	+2°28' ✓	16.8	309.1
382.7	40°19'	383	+1°33' ✓	10.3	302.6
	37°50'	370	Rod 4' 0°00'		293.3
354.6	35°17'	355	-2°00' ✓	12.6	279.7
355.6	34°19'	356	Rod 10' -2°04'	12.8	274.5 =
379.7	34°30'	380	Rod 10' -1°32'	10.2	277.1
382.7	35°10'	383	-1°31' ✓	10.1	282.2
387.0	37°56'	387	Rod 10' +0°37'	4.2	296.5
397.7	40°30'	398	+1°35' ✓	11.1	303.4
406.7	42°42'	408	+3°14' ✓	23.9	316.2
416.0	44°49'	418	+4°06' ✓	29.9	322.2

(278.3) + 19

R.M.

"

approx on Pueblo Line

"

"

"

"

Bot. Carbon

"

"

R.M.

Curb & Gutter Levels on  
NARRAGANSETT CT.

ENTIRE  
SOUTH SIDE  
of  
9-11-44

Ld. Plug cb.				Narr. Ave
NW corner	12.82	217.99	205.17	La Cresta
T.P.	4.03	220.41	1.41	210.58
T.P.	0.19	208.92	11.88	208.73
Set B.M. on 7" pipe (33)	201.40	10.91	198.01	B.C. on E.C. See sketch

NELY RETURN See sketch

0-12.3

cb	424	197.16
gt	470	196.70

Part #1

cb	352	197.88
gt	410	197.30

Part #2

cb	280	198.60
gt	336	198.04

Part #3

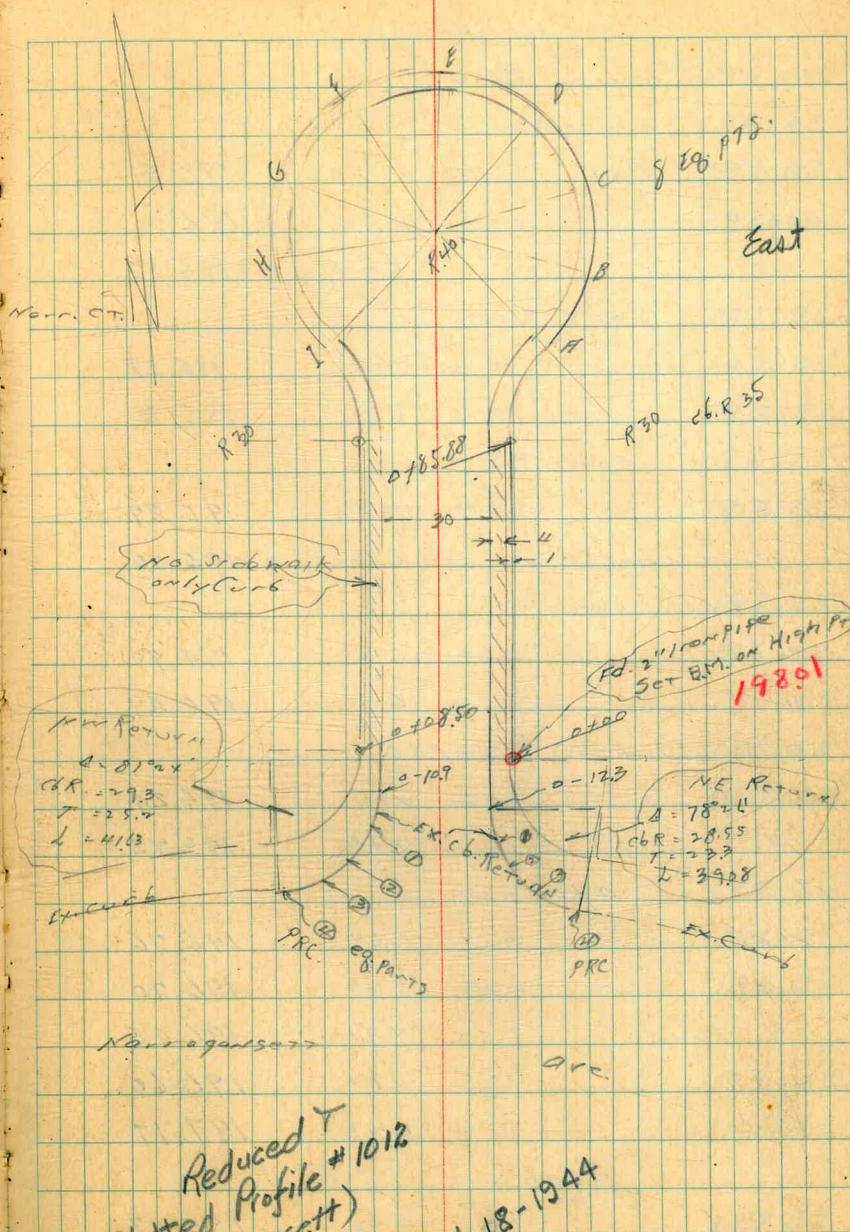
cb	206	199.34
gt	262	198.78

Part #4 P.R.C.

cb	123	200.17
gt	174	199.66

Indexed  
C.S.K.

26



Reduced  
Plotted Profile # 1012  
(Narragansett)

Sept. 18-1944  
C.B.H.

201.40

Nwby Ret.

o-10.9

CTC CT. Pay 4.89 196 51

cb 4.70 196 70

9T 5.28 196 12

part #1

cb 5.15 196 25

9T 5.70 195 70

part #2

cb 5.83 195 57

9T 6.34 195 06

part #3

cb 6.50 194 90

9T 6.91 194 49

part #4 = PRC

cb 7.16 194 24

9T 7.65 193 75

o f 00

Wcb 4.64 196 76

9T 5.20 196 20

E pay. 4.94 196 46

9T 4.80 196 60

Ecb 4.23 197 17

o f 08.5

Ecb 4.23 197 17

201.40

9T 4.80 196.60

E 4.95 196.45

9T 5.17 196.23

Wcb 4.60 196.80

o f 47.19

Wcb 4.44 196.96

9T 4.95 196.45

E 4.88 196.52

9T 4.68 196.72

Ecb 4.18 197.22

o f 85.88 BC at Banggo

Ecb 4.15 197.25

9T 4.68 196.72

E 4.74 196.68

9T 4.75 196.65

Wcb 4.20 197.20

"A" See sketch

cb 4.04 197.36

9T 4.69 196.71

CTC Banggo 4.49 196.91

"B"

cb 3.93 197.47

9T 4.54 196.86

"C"

cb 3.88 197.52

9T 4.49 196.91

201.40

"D"

cb	3.84	197.56
97	4.45	196.95

"E"

cb	3.74	197.66
97	4.41	196.99

"F"

cb	3.74	197.68
97	4.37	197.08

"G"

cb	3.85	197.55
97	4.43	196.97
	3.43	197.97

196.97

"H"

cb	4.03	197.37
97	4.50	196.84

"I" PRC

cb	4.12	197.26
97	4.67	196.73

T.P.	0.44	188.91	12.93	108.47
------	------	--------	-------	--------

T.P.	0.23	176.25	12.89	176.87
------	------	--------	-------	--------

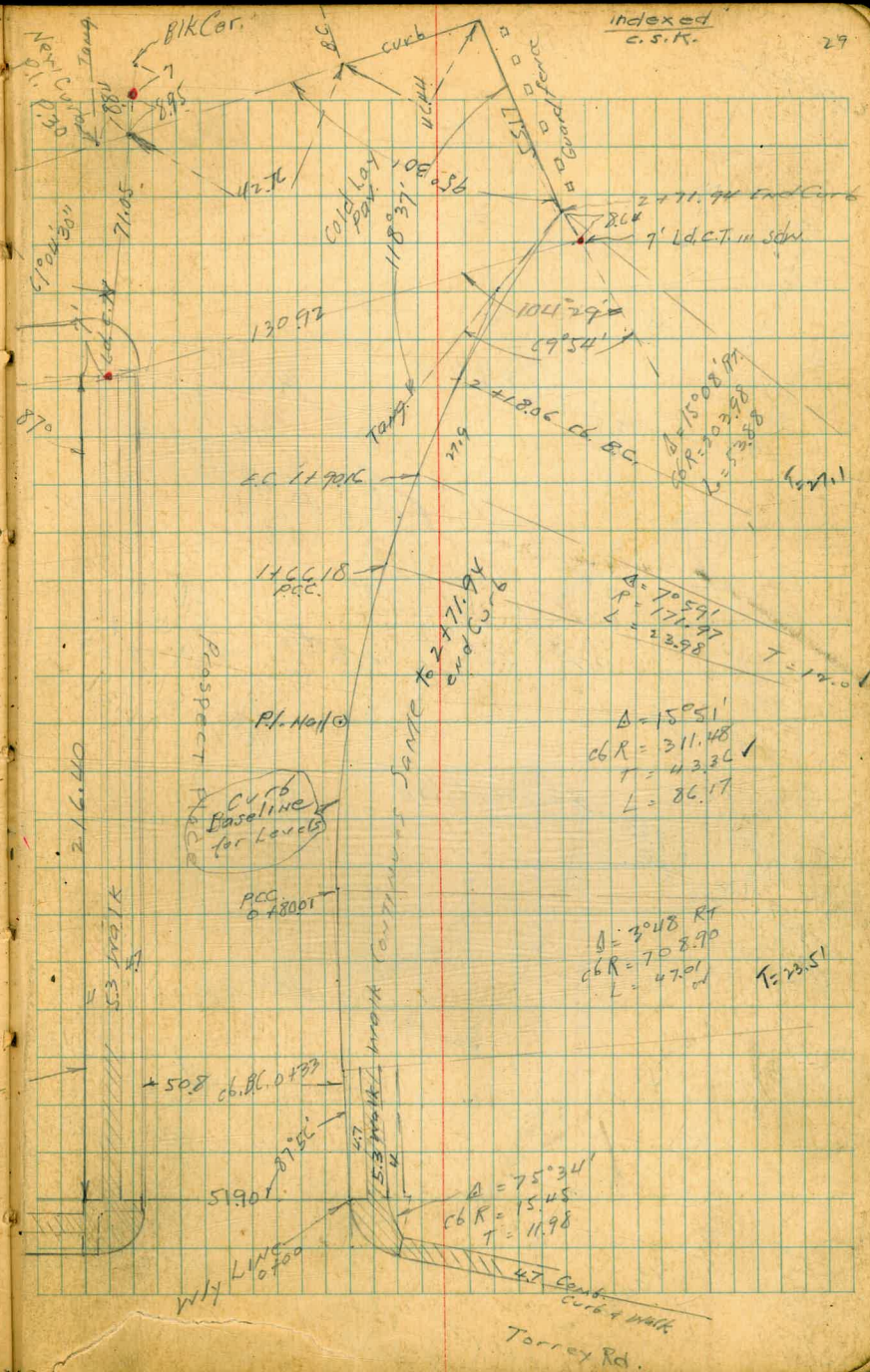
T.P.	2.09	165.86	12.48	163.77
------	------	--------	-------	--------

check to BMBP curb  
 N.E. Cor of  
 CAPITALA Blvd & Narr. Ave

	8.40	157.46	157.52
			0.06

Location & Levels on Existing Curb  
on Nly Side of Prospect Place  
Torrey Rd. to Park Row

Location of Trees, drives etc. Park Row  
and Levels p. 33



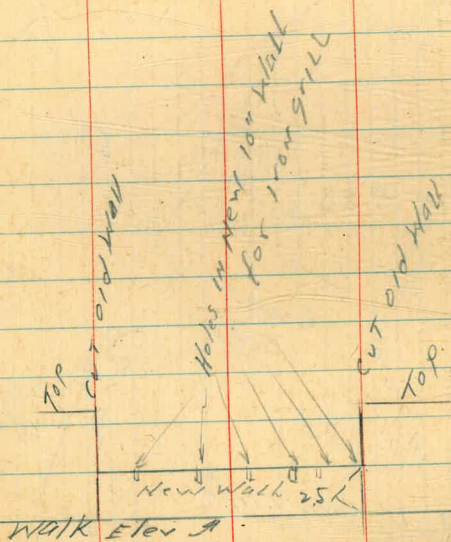
Torrey Rd.

Torrey Rd.



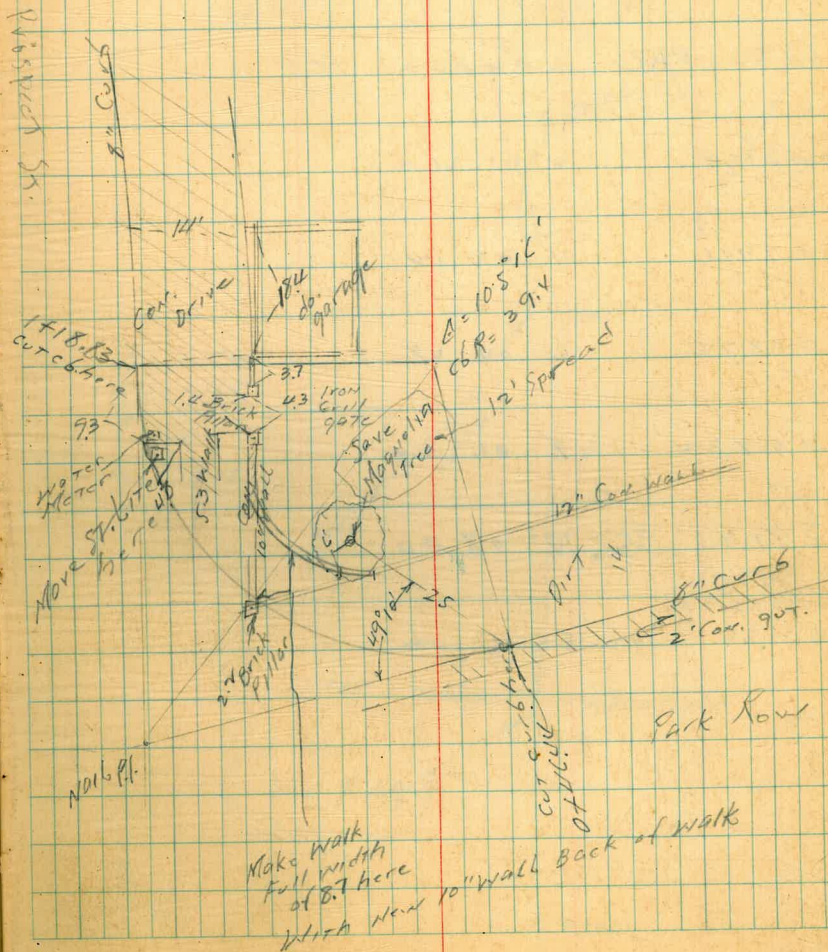


Sketch for New Walk



Owner will permit removal  
of all shrubs, palms & trees,  
except Magnolia tree shown  
as is

Sketch for New curb Return  
on Nly Cor Prospect + Park Row



Make walk  
full width  
of 8.7 here  
with New 10\"/>

Sketch of directional proposed curb  
on Nly Side Prospect Pl.

Torrey Rd. to New proposed  
Return on Nly Cor. of  
Prospect St. + Park Row

0+00 PRC = 0+80.01 PCC

0+39.58  $\Delta = 01' 30''$

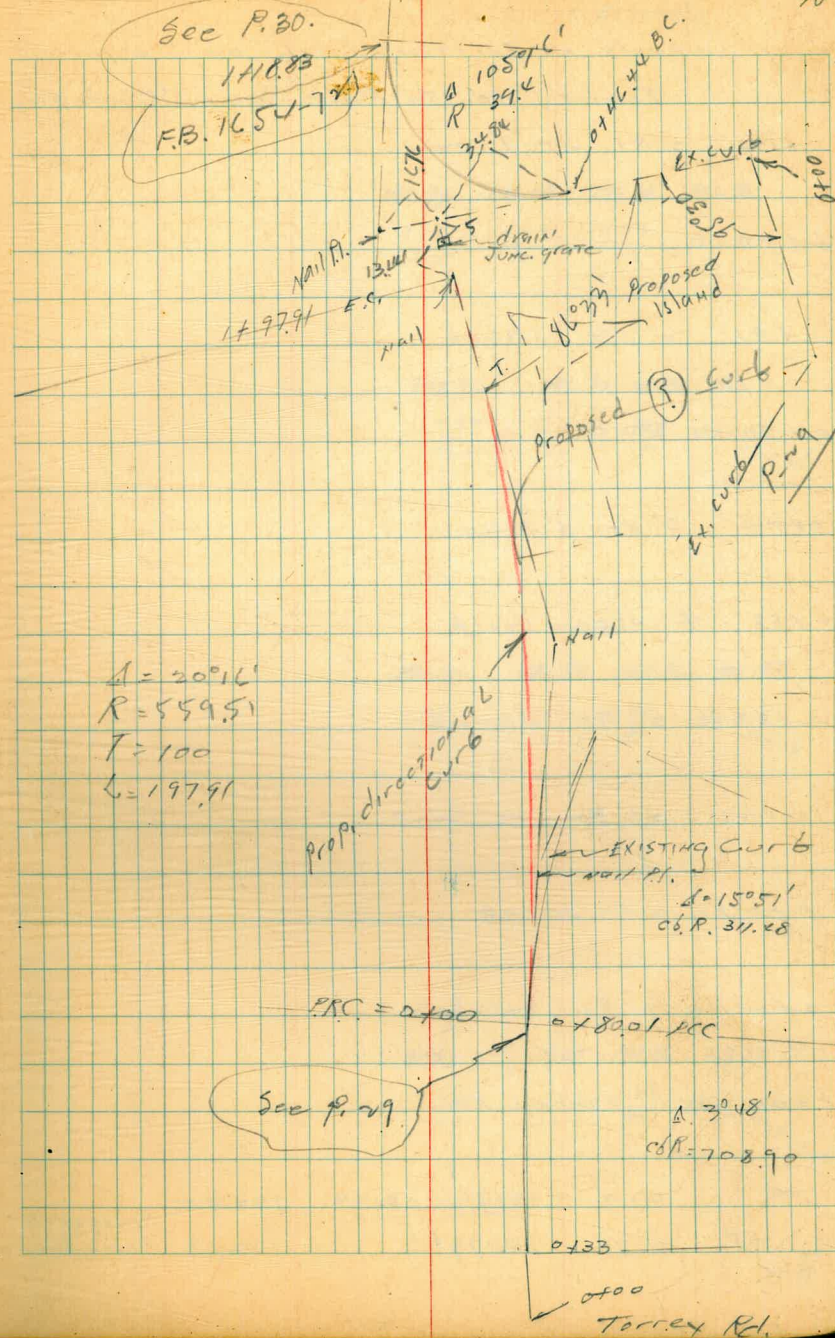
0+79.16  $\Delta = 03' 12''$

1+18.74  $\Delta = 04' 48''$

1+58.32  $\Delta = 06' 24''$

1+97.91 EC  $\Delta = 10' 08''$

2+11.35 Int. EX. curb



Levels of EXISTING Curb on Prospect Pl.  
Terrey Rd. to Park Row. Sketch p. 99

1412 2 RT ST. LITE.

1400

191 2' RT Shrub

0+80.01 P.C.C.

0+78 3' RT 15" Palm

0+53  $\phi$  45 con. walk

0+33 BC 2' RT Shrub

0+26 2.5 RT 12" Palm

0+08 2' RT Shrub

0+01 1 RT Tel. Pole

0+00 W.L. Terrey Rd.

T.P.	4.19	<u>150.74</u> ✓	0.24	144.55	Prospect Pl.
So. Cor. B.P.	12.71	144.79 ✓		132.08	Park Row.
BM.					

LT.

Curb  
Baselines

77

140.99	140.98	139.88	140.36
9.75	10.26	10.86	10.38
20	10	97	

142.82	142.37	141.56	142.11
7.92	8.42	9.18	8.63
20	10	97	Top cb.

146.90	146.53	145.86	146.39
3.84	4.21	4.88	4.40
20	10	97	Top cb.

149.61	149.27	148.86	149.25
1.13	1.47	1.88	1.39
20	10	97	Top Curb

150.74 ✓

2+18.00 BC

2+15 3' RT 4" PALM

2+01 2' RT 14" TREE

1+90.14 EC

1+85.5 E 3.2 CON WALK

1+80.18 3' RT 12" TREE

1+47 E 10' CON. DRIVE

1+38 2' RT 5" TREE

1+29 3' RT 14" TREE

T.P. 0.66 138.40 13.00 137.74

1+18.5 E 11' CON. DRIVE

150.74

LT.

CURB  
B.L. 30

130.65	130.72	130.62	130.29	129.56	130.03
<u>7.75</u>	<u>7.68</u>	<u>7.78</u>	<u>8.11</u>	<u>8.84</u>	<u>8.77</u>
40	30	20	10	97	

132.17	132.09	131.87	131.52	131.98
<u>6.23</u>	<u>6.31</u>	<u>6.53</u>	<u>6.86</u>	<u>6.44</u>
30	20	10	97	

139.53	139.35	139.12	138.75	139.12
<u>3.87</u>	<u>4.05</u>	<u>4.26</u>	<u>4.65</u>	<u>4.28</u>
30	20	10	97	

136.21	135.95	135.95	136.07
<u>2.19</u>	<u>2.45</u>	<u>2.95</u>	<u>2.33</u>
20	10	97	46

gutter

138.40 ✓

139.17	138.78	138.22	138.75
<u>11.57</u>	<u>11.96</u>	<u>12.52</u>	<u>11.99</u>
20	10	97	46

gutter

150.74

2+71.94 END CB.

2+50 3' RT 4' Palm

2+48 2' 4' Con. walk

2+33 3' RT 4' Palm

2+23.5 2' 9' Con. drive

138.40

LT.

curb  
B.L.

35

129.20	128.76	127.28	128.38
9.20	9.44	11.12	10.04
20	10	97	66

129.51	129.95	128.96	127.87	128.78
8.88	8.95	9.44	10.53	9.52
30	20	70	97	

129.60	129.79	129.89	129.82	129.93	128.97	129.22
8.80	8.61	8.51	8.56	8.97	9.93	9.18
50	40	30	20	10	97	

130.09	130.17	130.27	130.21	129.83	128.99	129.62
8.36	8.23	8.13	8.19	8.57	9.46	8.78
50	40	30	20	10	97	curb

129.36	129.58	129.86
9.04	8.82	8.54
97		66

drive Walk

138.40

Levels on Ex. curb, etc.  
 Sketch P. 30  
 for cut back return

0+94.6 Remove shrub

0+87.5

0+70.5 remove 3' Palms

0+58.4 5' RT. Remove 2' clematis trees

0+46.44 B.C. new curb CUT curb here

0+25

0+00

13840

LT

Ex. 14' Curb  
 Bk.  
 and Lime Curb  
 of Prop. Return

36

129.75	129.39	128.70	129.33	129.95	
8.65	9.00	9.70	9.07	8.95	Ex. 5 dm
30	20	8.3	8.3		
		97	Ex. 6		

130.02	129.59	128.85	129.22	129.5	
8.38	8.80	9.58	9.18	8.9	ground
40	30	21	21		
Par.	Par.	97	Ex. 6		

128.66	128.06	128.85		129.0	
9.74	10.34	9.55			ground
20	8.3	8.3			
	97	Ex. 6			

129.19	128.96	127.51	128.82	128.2	
9.20	9.90	10.89	10.08		ground
24	12	2	2		
		97	Ex. 6		

129.75	129.23	128.99	127.35	128.20	
8.65	9.17	9.96	11.05	10.70	curb
36	24	12	97		

129.59	129.12	128.16	126.55	127.37	
8.81	9.28	10.24	11.85	11.03	curb
36	24	12	97		

128.66	126.99	125.72	126.53		
9.74	11.40				
24	12	12.68	11.87		curb
		97			

13840

and grate  
 of INLET

Proposed  
Curb  
8.6.

CUT CURB here  
1418.83 end Prop. Ret. E. edge drive

1406.6 Remove Shrub

138.40

129.96	129.09	128.61	129.22
8.94	9.36	9.79	9.18
20	10	97	200

Top  
Curb

129.91	129.00	128.63	129.29	129.3
8.99	9.40	9.77	9.11	9.1
20	10	18	1.8	
		97	EXC6	

ground  
parking

138.40 ✓



Levels on Pav. on Line  
of proposed directional curb  
on Prospect Pl.

Terrace Rd. to Park Row

Sketch P. 32.

1+40

1+1874

0+79.16

0+39.58

0+00 = PRC = 0+80.01 PCC P. 29

BM. P. 33

10.22

142.30 ✓

132.08 ✓

LT

Line of  
Directional  
Curb

RT

78

131.94	131.53	131.73	130.94	130.77
$\frac{10.38}{20}$	$\frac{10.77}{10}$	1107	$\frac{11.38}{10}$	$\frac{11.53}{20}$

133.36	132.90	132.93	131.88	131.38
$\frac{8.94}{20}$	$\frac{9.40}{10}$	9.87	$\frac{10.47}{10}$	$\frac{10.92}{20}$

136.27	136.89	135.30	134.61	132.11	132.96
$\frac{5.93}{20}$	$\frac{6.41}{10}$	7.00	$\frac{7.69}{10}$	$\frac{8.19}{16.797}$	$\frac{7.84}{16.766}$

139.57	139.03	138.27	138.09
$\frac{2.73}{20}$	$\frac{3.27}{10}$	4.03 Pav	$\frac{4.21}{3.1}$ 97.14 drive

141.56	142.11
$\frac{0.74}{97.}$	0.19 Topob.

142.30 ✓

Check to orig. B.M.

3.38 13208

2 + 11.35

2 + 11.35

2 + 06.35 Junction Box

1 + 97.91 E.C.

T.P. 5.96 135.46 ✓ 1280 129.50

1 + 71

1 + 58.32

142.30 ✓

LT

Line of  
Directional  
Curb

RT

39

129.11  
6.35  
Top c6.

128.31  
7.15  
cut.

128.24  
7.22  
Top of grade of  
Junct. Box

129.76	129.27	128.84	128.62	128.51
<u>5.70</u>	<u>6.19</u>	<u>6.67</u>	<u>6.84</u>	<u>6.95</u>
20	10		10	20

135.46 ✓

130.73	130.99	130.25	130.06	129.95
<u>11.57</u>	<u>11.81</u>	<u>12.05</u>	<u>12.24</u>	<u>12.35</u>
20	10		10	20

131.17	130.93	130.72	130.99	130.29
<u>11.13</u>	<u>11.37</u>	<u>11.58</u>	<u>11.81</u>	<u>12.01</u>
20	10		10	20

142.30

Walker  
Hazard  
Hardin  
12-19-44

CROSS SECTIONS IN  
LA BINDA PARK

Between Marcey <sup>and</sup> Ocean View Blvd  
from 29th to 30th St.

F.B. 1615  
75

12.45 80.90

NVT-62  
Logan  
68.45

LINE 0 (= 0+00 North)

0+00		8.5	72.4	✓
+50 F.		7.7	73.2	✓
1+00		7.2	73.7	✓
+50		6.6	74.3	✓
2+00		6.2	74.7	✓
2+38	Asphalt N. edge Paved Area	6.03	74.87	
7' N	" " " "	5.99	74.91	
2+50	on Pav.	6.08	74.82	✓
7' N	" " " N. edge	5.98	74.92	✓
3+00	" "	6.05	74.85	✓
7' N	" " " "	5.91	74.99	✓
3+50	" "	5.91	74.99	✓
7' N	" " " "	5.90	75.00	✓
4+00	" "	5.89	75.01	✓
7' N	" " " "	5.85	75.05	✓
4+11		5.86	75.04	
7' N	N.E. Cor Asphalt Pav.	5.78	75.12	
T.P.		3.64	82.46	2.08
4+50		7.3	75.2	✓
5+00		7.1	75.4	✓

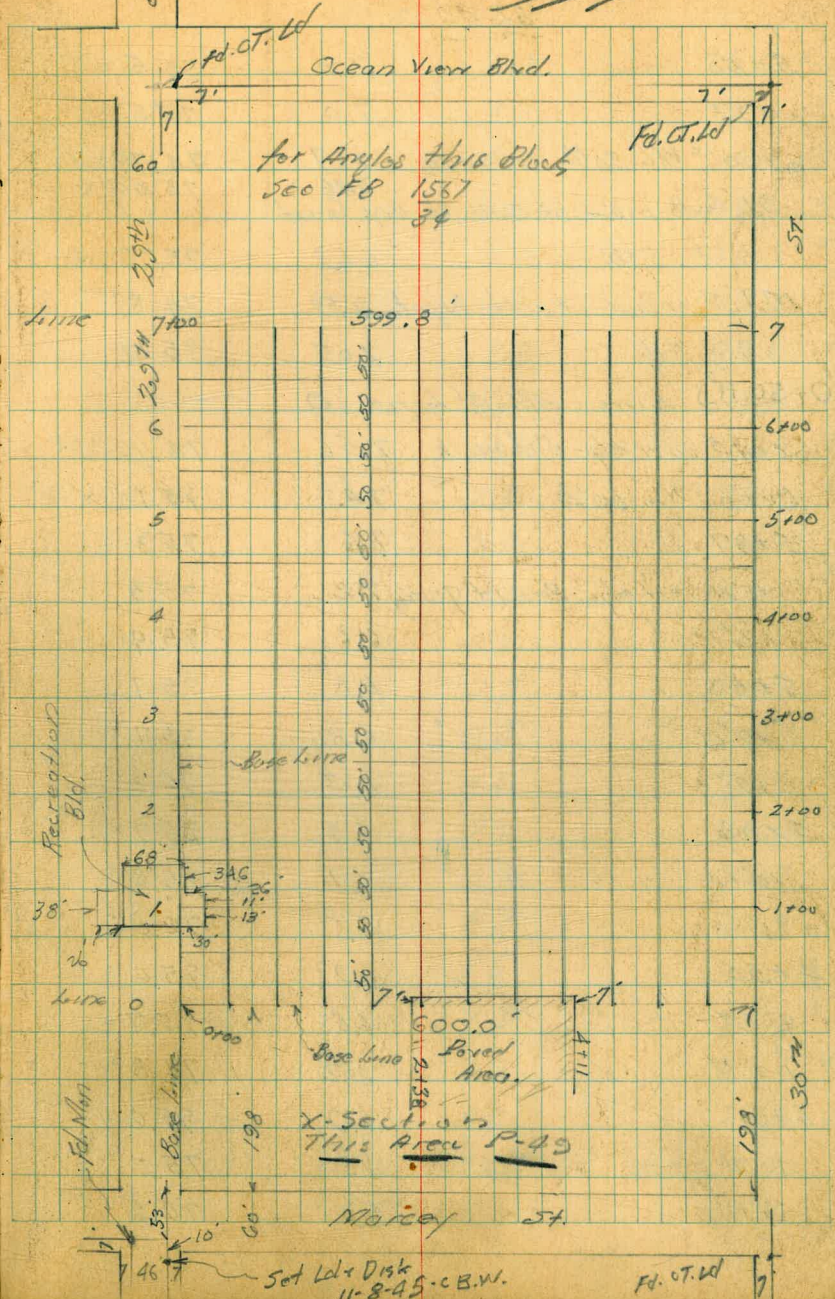
Reduced & sections plotted  
C.B.H. 12-19-44

Set Ld & Disk  
in Conc. Slob

INDEXED  
C.S.M.

1645-54

46



for Angles this Block  
500 FB 1567  
34

X-Sections  
THIS AREA P-49

Set Ld & Disk  
11-8-45 - C.B.W.

Fd. Ct. Wd

82.46

5+50	7.0	75.5 ✓
+97	7.0	75.5
6+00 = WL. 30th on Conc. Pav.	7.67	74.79 ✓
	7.46	75.00 ✓
91 South on cut. of South cb Ivy Court.		
" " "cb.	6.68	75.78 ✓
15.9' N on cut at N. cb Ivyst.	7.59	74.87
" " "cb.	7.05	75.41
(0+50N) Line 50' of line 0		
6+045 on W edge Sidewalk	7.56	74.90 ✓
6+00 = WL. 30th	7.4	75.1 ✓
5+97	7.2	75.3
11' N = N edge Present Grading	7.2	75.3
12' N	6.6	75.9
5+50	6.8	75.7 ✓
10' N " " " "	6.8	75.7 ✓
12' N	6.3	76.2 ✓
5+00	6.8	75.7 ✓
10' N " " " "	6.7	75.8 ✓
15' N	6.5	76.0 ✓
4+50	6.9	75.6 ✓
10' N " " " "	6.8	75.7 ✓
12' N	6.2	76.3 ✓
4+00	6.9	75.6 ✓
10' N	6.8	75.7 ✓
12' N	6.0	76.5 ✓

82.46

11

3+50	7.3	75.2 ✓	
10' N	7.1	75.4 ✓	
12' N	6.7	75.8 ✓	
3+00	7.4	75.1 ✓	
11' N	7.2	75.3 ✓	
13' N	6.6	75.9 ✓	
2+50	7.4	75.1 ✓	
11' N	7.3	75.2 ✓	
13' N	6.3	76.2 ✓	
2+00	7.5	75.0 ✓	
11' N	7.4	75.1 ✓	
13' N	6.0	76.5 ✓	
1+50	7.8	74.7 ✓	
10' N	7.7	74.8 ✓	
13' N	6.2	76.3 ✓	
1+00	8.2	74.3 ✓	
10' N	7.9	74.6 ✓	
13' N	6.8	75.7 ✓	
0+50	8.7	73.8 ✓	
8' N	8.6	73.9 ✓	
15' N	7.5	75.0 ✓	
0+00	9.1	73.4 ✓	
15' N	8.9	73.6 ✓	
TR 3.64	82.46	3.64	78.82

82.46

## Levels on Ground on Corners Recreation Bldg

Wing. SW. on Ground.	8.4	741
60' E. " "	8.2	74.3
SE. " " "	7.0	75.5 ✓
NE Wing.	6.7	75.8
26' W	6.8	75.7
NE. Main Bld.	5.9	77.6
15' W	7.1	75.4
NW. " "	6.8	75.7
20.6 S	7.0	75.5
NW. Cor Wing.	7.4	75.1
<u>(1+00 N)</u> Line 1		
0+30' at Bld.	6.9	75.6
+50	6.8	75.7 ✓
+75	6.0	76.5
1+00	6.1	76.4 ✓
+50	5.8	76.7 ✓
2+00	5.9	76.6 ✓
+50	6.0	76.5 ✓
3+00	6.9	75.6 ✓
25' N	6.3	76.2 ✓
37' N	5.0	77.5 ✓
3+50	6.7	75.8 ✓
25' N	6.7	75.8 ✓
35' N	5.8	76.7 ✓

42

4+00 <sup>10' N</sup>	6.5	76.0 ✓
25' N	6.2	76.3 ✓
	7.3	75.2 ✓
35' N	5.8	76.7 ✓
4+50	6.0	76.5 ✓
10' N	6.3	76.2 ✓
12' N	7.0	75.5 ✓
20' N	7.1	75.4 ✓
35' N	5.5	77.0 ✓
5+00	6.2	76.3 ✓
10' N	6.3	76.2 ✓
12' N	7.5	75.0 ✓
22' N	7.7	74.8 ✓
35' N	7.2	75.3 ✓
5+50	6.3	76.2 ✓
10' N	6.9	75.6 ✓
12' N	7.9	74.6 ✓
22' N	7.8	74.7 ✓
35' N	6.7	75.8 ✓
5+97	7.3	75.2
6+00 = WL. 30+19	7.8	74.7 ✓
6+04.5 = W edge Sidewalk	8.17	74.29
<u>(1+50 N)</u> 50' N Line 1		
6+04.5 on Walk	8.86	73.60
6+00 =	8.3	74.2 ✓
5+97	7.1	75.4

82.46

5+50	6.8	75.7	✓
5+00	5.9	76.6	✓
4+50	5.7	76.8	✓
4+00	5.2	77.3	✓
3+50	5.3	77.2	✓
3+00	4.8	77.7	✓
2+50	4.5	78.0	✓
2+00	4.4	78.1	✓
1+50	4.7	77.8	✓
1+00	5.4	77.1	✓
0+50	5.5	77.0	✓
0+04	5.7	76.8	
0+00	6.0	75.5	✓
0-30 <sup>2</sup> / <sub>3</sub> Graded Roadway, 29 <sup>th</sup>	6.9	75.6	
<u>2+00</u> Line 2			
-30'	6.0	76.5	
-11' Cut	6.3	76.2	
-10' dirt cb.	6.0	76.5	
0+00 = EL 29 <sup>th</sup>	5.9	76.6	✓
1+05	4.8	77.7	
0+50	4.3	78.2	✓
1+00	4.2	78.3	✓
1+50	3.6	78.9	✓
2+00	3.7	78.8	✓
+50	3.7	78.8	✓

82.46

43

3+00	4.3	78.2	✓
+50	4.9	77.6	✓
(3+50)			
15' N-	4.8	77.7	✓
22' N	5.8	76.7	✓
45' N	4.9	77.6	✓
4+00	5.1	77.4	✓
16' N	5.6	76.9	✓
23' N	6.8	75.7	✓
42' N	6.7	75.8	✓
48' N	5.8	76.7	✓
4+50	6.0	76.5	✓
18' N	6.6	75.9	✓
22' N	7.6	74.9	✓
5+00	6.9	75.6	✓
18' N	7.0	75.5	✓
22' N	7.7	74.8	✓
5+50	7.0	75.5	✓
18' N	7.5	75.0	✓
22' N	8.4	74.1	✓
5+97	7.2	75.3	✓
6+00 = Y.L. 30 <sup>th</sup>	8.8	73.7	✓
1045' N Edge Walk	9.54	72.92	✓
(6+00)			
22.5' N = 5' cb. Area ct.	9.76	72.70 on cb	
" " " " "	10.44	72.02 " Conc. Cut	
47.3' N = " " " "	10.08	72.38 " cb	
" " " " "	10.60	71.86 " Conc. Cut	

(2+50N) 50' N of line 2		
6+045 on Walk	10.04	72.42
6+00 = WL. 30th	9.6	72.9 ✓
5+97	8.0	74.5
5+50	7.6	74.9
5' South	7.7	74.8
5+00	7.2	75.3
5' South	7.3	75.2
7' South	7.8	74.7
4+50	6.6	75.9
6' "	7.5	75.0
4+00	5.8	75.7 ✓
3+75	5.0	77.5
3+50	4.7	77.8 ✓
3+00	4.2	78.3 ✓
2+50	3.3	79.2 ✓
2+00	2.7	79.8 ✓
1+50	2.7	79.8 ✓
1+00	3.2	79.3 ✓
0+50	3.6	78.9 ✓
0+05	4.2	78.3
0+00 = EL. 29th	5.0	77.5 ✓
0-10 = det. cb.	5.1	77.4
-11 Gant.	5.6	76.9
0-30 = EL. 29th	5.0	77.5

(3+00N) line 3		
-30	4.9	77.6
-11	4.5	78.0
10	3.6	78.9
0+00	3.7	78.8 ✓
+05	2.5	80.0
0+50	2.7	79.8 ✓
1+00	2.2	80.3 ✓
+50	2.0	80.5 ✓
2+00	2.0	80.5 ✓
+50	2.8	79.7 ✓
3+00	3.7	78.8 ✓
+50	4.5	78.0 ✓
4+00	5.5	77.0 ✓
+50	6.5	76.0
5+00	7.4	75.1 ✓
+50	8.3	74.2 ✓
+97	8.9	73.6
6+00 = WL. 30th	10.4	72.1 ✓
+045 on W edge walk.	10.25	71.51
(3+50N) 50' N of line 3		
6+045 on W	11.64	70.82
6+00	10.9	71.6 ✓
5+97	9.6	72.9
5+50	8.4	74.1 ✓

82.46

5+00	7.3	75.2	✓
4+50	6.6	75.9	✓
4+00	6.2	76.3	✓
3+50	4.5	78.0	✓
3+00	4.0	78.5	✓
2+50	3.1	79.4	✓
2+00	2.2	80.3	✓
1+50	2.2	80.3	✓
1+00	2.1	80.4	✓
0+50	2.2	80.3	✓
0+00	2.1	80.4	
0+00 = EL 29th	2.2	79.6	✓
0-07'	2.8	79.7	
-10' = Gut. <sup>out</sup>	2.6	78.9	
-30' = EL 29th	3.0	79.5	
<b>4+00 N</b> Line 4			
-30' = EL 29th	2.0	80.5	
-10' = Gut	2.6	79.9	
-9' = dist ch	1.8	80.7	
0+00	2.0	80.5	✓
+20	2.3	80.2	
0+50	1.6	80.9	✓
1+00	1.3	81.2	✓
1+50	1.4	81.1	✓
2+00	2.0	80.5	✓

45

2+50	2.7	79.8	✓
3+00	3.4	79.1	✓
+50	4.4	78.1	✓
4+00	5.4	77.1	✓
150	6.4	76.1	✓
5+00	8.0	74.5	✓
150	3.8	72.7	✓
170	10.0	72.5	
180	10.8	71.7	
6+00 = 116.30th	10.9	71.6	✓
1095 on Walk.	11.31	71.15	
<b>4+50 N</b> Line 50' N of Line 4			
6+04.5 on Walk.	10.46	72.00	
6+00	10.8	71.7	✓
4' N on cb Holy court.	10.45	72.01	
8' " " Gut.	10.73	71.73	
29' N on "	10.64	71.82	
" " " cb.	9.98	72.48	
5+50	9.1	73.4	✓
5+00	8.5	74.0	✓
4+50	6.8	75.7	✓
4+00	5.7	76.8	✓
3+50	4.3	78.2	✓
3+00	2.8	79.7	✓
2+50	2.0	80.5	✓
2+00	1.3	81.2	✓



82.46

1+50	0.9	81.6	✓
1+00	1.2	81.3	✓
0+50	1.9	80.6	✓
0+00 = EL. 29 <sup>th</sup>	0.7	81.8	✓
0-09'	0.6	81.9	
0-11' Curt.	1.5	81.0	
0-30' = EL. 29 <sup>th</sup>	1.1	81.4	
T.P. 8.27	89.20	1.53	80.23
<u>5+00N</u> ~ Line 5 ~			
-30' = EL. 29 <sup>th</sup>	6.8	82.4	
-10' - Curt.	7.2	82.0	
-9' ditch.	6.6	82.6	
0+00	6.4	82.8	✓
0+50	7.5	81.7	✓
1+00	7.0	82.2	✓
27' x 1	5.6	83.6	✓
(0+80) 27' N	5.8	83.4	
1+50	6.9	82.3	✓
2+00	7.2	82.0	✓
2+50	7.8	81.4	✓
3+00	8.8	80.4	✓
+35'	10.0	79.2	
12' N on Pitt MH	9.14	80.06	
3+50	10.5	78.7	✓
4+00	11.2	78.0	✓

89.20

4+50	12.1	77.1	✓
5+00	13.5	75.7	✓
2+50	14.2	75.0	✓
27' ditch	16.2	73.0	✓
5+90	14.9	74.3	
6+00 = V.L. 30 <sup>th</sup>	16.5	72.7	✓
704.5 on Walk	16.47	72.73	
<u>5+50N</u> ~ 50' N of Line 5 ~			
6+04.5 = on Walk	15.72	73.48	
6+00 = V.L. 30 <sup>th</sup>	15.5	73.7	✓
5+90	14.3	74.9	
5+50	13.1	76.1	✓
5+00	12.1	77.1	✓
4+50	12.0	77.2	✓
4+00	10.6	78.6	✓
3+50	10.1	79.1	✓
3+00	8.4	80.7	✓
2+50	7.4	81.8	✓
2+00	6.4	82.8	✓
1+50	6.0	83.2	✓
1+00	5.6	83.6	✓
0+50	5.6	83.6	✓
0+00 = EL. 29 <sup>th</sup>	5.2	84.0	✓
0-8'	5.1	84.1	
0-10'	6.0	83.2	
0-30' = EL. 29 <sup>th</sup>	5.6	83.6	

89.20

6+00 N			Line 6
0-30	= EL. 29 <sup>th</sup>	4.4	84.8
0-11	= Gut	4.7	84.5
0-8	= <sup>out</sup> <sub>CB</sub>	4.1	85.1
0+00	= EL. 29 <sup>th</sup>	4.3	84.9 ✓
+50		4.4	84.8 ✓
1+00		4.6	84.6 ✓
+50		4.9	84.3 ✓
2+00		5.8	83.4 ✓
+50		6.8	82.4 ✓
3+00		8.3	80.9 ✓
+50		9.4	79.8 ✓
4+00		10.2	79.0 ✓
+50		10.7	78.5 ✓
5+00		11.1	78.1 ✓
+50		12.3	76.9 ✓
+88		13.1	76.1
6+00	= W.L. 3 <sup>rd</sup>	14.4	74.8 ✓
1045	= on Walk	14.95	74.25

6+50 N			50' N of Line 6
6+045		14.16	75.04
6+00	= W.L. 3 <sup>rd</sup>	13.5	75.7 ↓
5+85		12.0	77.2
+50		11.0	78.2 ↓
5+00		10.4	79.0 ↓

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89.20

4+50		10.1	79.1 ✓
4+00		9.6	79.6 ✓
3+50		8.9	80.3 ✓
3+00		7.8	81.4 ✓
2+50		6.0	83.2 ✓
2+00		3.8	85.4 ✓
1+50		3.7	85.5 ✓
1+00		3.4	85.8 ✓
0+50		3.6	85.6 ✓
0+00	= EL. 29 <sup>th</sup>	3.4	85.8 ✓
0-8		3.1	86.1
0-10		3.5	85.7
0-30		3.2	86.0
7+00 N Line 7			
0-30		3.0	86.2
0-11		2.1	86.7
0+00		2.3	86.9 ✓
0+50		1.7	87.5 ✓
20'S		2.8	86.4 ✓
1+00		2.2	87.0 ✓
1+50		2.5	86.7 ✓
2+00		3.4	85.8 ✓
+50		4.6	84.6 ✓
3+00		6.4	82.8 ✓
+50		7.4	81.8 ✓

This Section  
in Graded Roadway  
Approx 3' N of E

89.20

4+00		8.5	80.7	✓
150		9.4	79.8	✓
5+00		10.4	78.8	✓
14'S		10.5	78.7	✓
5+50		11.6	77.6	✓
14		12.5	76.7	✓
15		10.5	78.7	✓
5+75		12.5	76.7	
14'S		12.9	76.3	
15'S		10.9	78.3	
6+00	WL 30th on Por	13.81	75.39	✓
TP	11.67 100.75	0.12	89.08	
CHK NE BR	29th & Ocean View	3.30	77.45	✓

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## LA BINDER PARK

78.03

-1+00

604.5' E = W edge Walk - 30th	3.19	74.84
600' E W.L. 30th	3.1	74.9
550' E	3.0	75.0
500' E	3.5	74.5
450' E	3.9	74.1
411 E E edge Pav.	4.27	73.76
400 E on Pav.	4.13	73.90
349.35 E		
72.7 S Δ in Blvd on Pav. edge	4.16	73.87
329.3 E		
82.7 S NE Cor Conc. Slab	4.08	73.95
329.3 E		
92.7 S on SE Cor "	4.02	74.01
307 E		
92.7 S " SW " " "	4.00	74.03
307 E		
82.7 S on NW " " "	4.07	73.97
286 E		
92.7 S Δ in Blvd on Ground	4.2	73.8
250' E		
82.7 S on S edge Pav.	4.15	73.98
238' E } SW Cor Asphalt Pav.	4.22	73.81
82.7 S }		
250' E	4.6	73.4
200' E	4.6	73.4
150' E	4.8	73.2
100' E	5.2	72.8
50' E	5.6	72.4
0+00 = EL 29th	6.8	71.2
10' W	6.7	71.3
11' W	7.2	70.8
30' W & "	7.0	71.0

-1+50

50

79.03

30' W & 29th	7.5	70.5
11' W	7.9	70.1
10' W	7.2	70.8
0+00 = EL. 29th	7.1	70.9
50' E	6.2	71.8
100' E	5.7	72.3
150' E	5.4	72.6
200' E	4.9	73.1
206' E } = NW Cor 816.	4.7	73.3
1387' S }		

Stations Indicated

7803

-1+80

-30' W & 29th	8.0	70.0
-10 "	8.1	69.9
9' W	7.6	70.4
0+00	7.5	70.5
50' E	6.6	71.4
100' E	6.2	71.8
150' E	6.0	72.0
200' E	5.5	72.5

-1+98 = N.L. Marcey

-30' W & 29th	8.3	69.7
0+00 = EL. 29th on Asphalt Walk	7.9	70.1
50' E on Asphalt Walk	7.57	70.46
100' E " " "	7.41	70.62

-1198

LA BANDA PARK

78.03

H.L. Morrey Cont. from P-50

150' E on Asphalt Walk	7.30	70.73
200' E " " "	6.94	71.09
T.P.	6.70	77.65
250' E on Walk	6.92	70.95
250' E		71.23
188' S	5.3	
250' E		72.4
167' S	4.8	
		72.9
300' E on W	6.27	
300' E		70.38
188' S	5.6	
300' E		72.1
128' S	4.8	
		72.9
350' E	6.34	
188' S		71.31
300' E	5.2	
350' E		72.5
198' S	4.6	
400' E		73.1
	5.72	
		71.93
400' E		
188' S	4.9	
400' E		72.8
166' S	4.8	
		72.9
450' E	5.45	
450' E		72.20
180' S	4.5	
		73.2
500' E on walk	5.08	
500' E		72.57
180' S	4.2	
		73.5
550' E " "	4.55	
550' E		73.10
180' S	3.7	
		74.0
590' E	4.10	
		73.55
595' E	3.88	
		73.77
600' E = W.L. 30th	3.79	
		73.86

77.65

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-1150

614' E Wcb 30th.	3.45	74.20
604' E Wedge Walk	3.30	74.35
600' E = W.L. 30th	3.2	74.5
550' E	3.2	74.5
500' E	3.7	74.0
450' E	4.2	73.5
425' E on Walk at Blvd	3.78	73.87
NE Cor Blvd on Walk	3.74	73.91
chf. conc Pav. 600' E = W.L. 30th	2.85	138.85
		74.80
		24.79
		201 diff.

Walker  
Hazard  
Herdin  
4-7-45

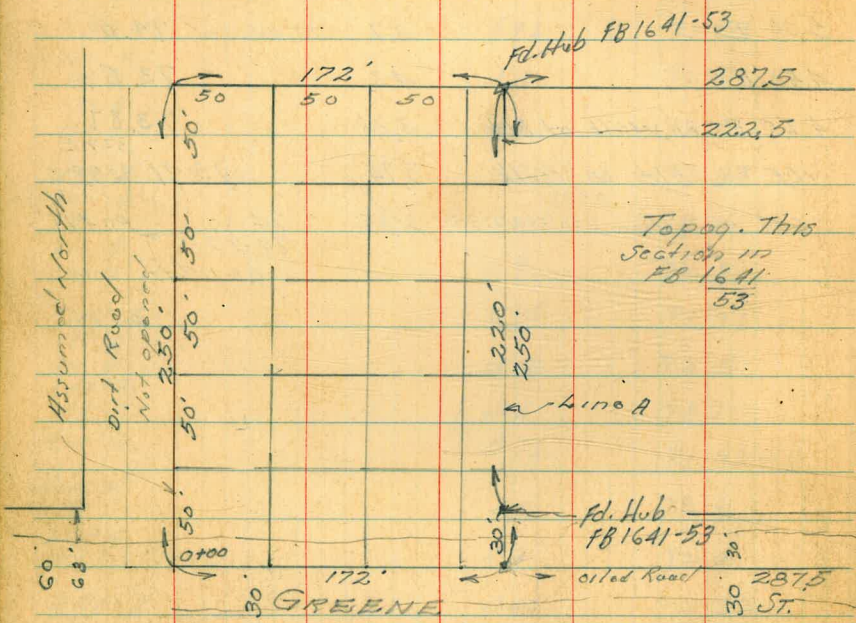
CROSS SECTIONS - PORTION of GROUNDS  
DOOR OF HOPE - GIRLS HOME

	0.01	73.46		73.45
T.P.	2.29	64.45	11.30	62.16

Cont. P 53

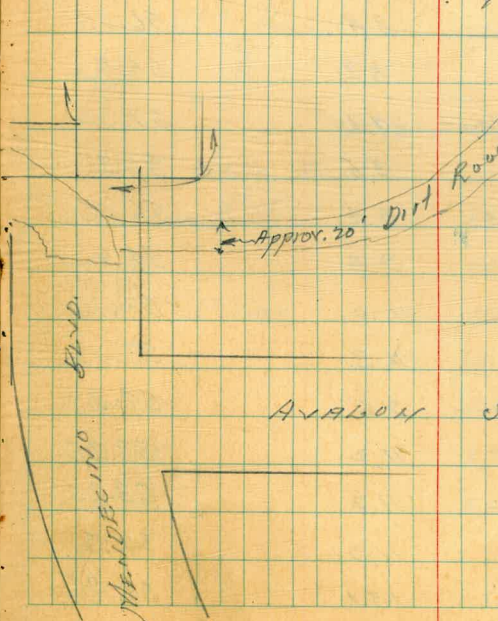
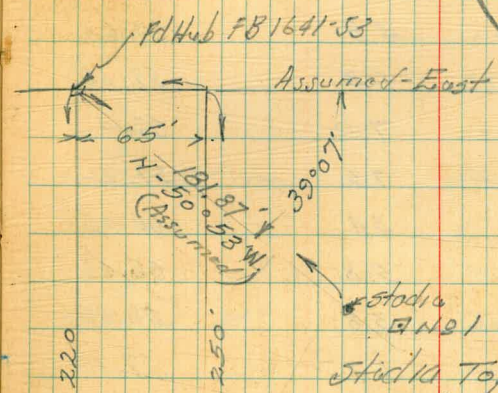
STN.  
SELY Topog  
Bolens  
& Greene

FB 1641-54



Indexed  
C.S.K.

See page  
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Girl's Herrio

Cont. from p. 52

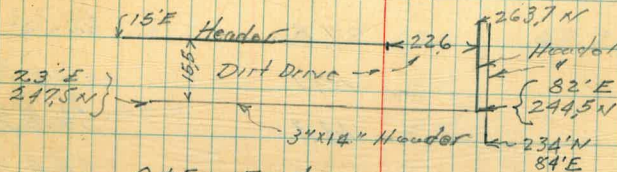
64.45

0100		4.03	60.42
13' N		5.13	59.32
23' N		4.4	60.05
30' N		4.8	59.65
6' W		5.3	59.15
30' N		7.0	57.4
7' W		7.2	57.2
30' N	↳ Dirt Road	7.2	57.2
25' W		4.4	60.05
30' N	↳ 10" Pepper Tree	4.4	60.05
2' E		5.8	58.65
49' N	5" " "	5.8	58.65
50' N		5.8	58.65
6' W		6.7	57.75
50' N		8.4	56.05
8' W		8.4	56.05
50' N		8.6	55.8
25' W		7.1	57.35
50' N	↳ 6" Pepper Tree	7.1	57.35
25' E		8.5	55.9
75' N		8.4	56.05
100' N	10" Pepper "	8.4	56.05
3' E		2.5	54.9
100' N		11.0	53.45
5' W		11.3	53.15
100' N	↳ Dirt Road	11.3	53.15
25' W		2.6	54.85
100' N	8" Pepper Tree	2.6	54.85
3' E		11.2	53.25
150' N	8" " "	11.2	53.25
4' W		11.2	53.25
150' N		11.9	52.5
4' W		13.1	51.35
150' N			

53

64.45

25' W		14.0	50.45
150' N		12.6	51.8
4' E		14.8	49.6
175' N	8" Pepper Tree	14.8	49.6
200' N	" " "	14.9	49.5
4' E		15.6	48.8
200' N		16.3	48.15
4' W		16.8	47.65
200' N		17.9	46.55
6' W		19.4	45.05
200' N	↳ Dirt Road	16.6	47.85
25' N			
200' N			
5' E			
242'	18" Tree		
250' N			
25' W			
250' N	↳ Dirt Road		
24' E			
244.5' N	24"		



0150 East

250' N in Drive		16.0	48.45
246' N		14.8	49.65
52' E		14.5	49.95
240.5' N	18" Tree	13.7	50.75
93' E		11.1	53.35
217' N	3" "	8.7	55.75
200' N		5.5	58.95
150' N		2.9	61.55
100' N		1.1	63.35
50' W			
30' N			
53' E			
24' N	↳ 6" Pepper	0.6	63.85



0750'E Cont from P-53

64.45

28'E				
24'N	8" Pepper	2.4	62.05	
18'N		0.3	64.15	
16'N	Edge oil Road	1.9	62.55	
0 N	" " "	0.64	63.81	
T.P.	8.57 70.13	2.89	61.56	SELY Top Greene Joto
1700 E				
0	on oil Pav	3.04	67.09	
16'N	edge "	3.7	66.4	
18'N		3.1	67.0	
24'N				
101'E	= 6" Pepper Tree	3.6	66.53	
30'N		3.7	66.43	
50'N		5.2	64.93	
100'N		7.8	62.33	
150'N		10.1	60.03	
200'N		13.3	56.83	
94'E				
227'N	4" Fig Tree	15.7	54.43	
250'N		16.9	53.23	
1750 E				
140'E				
250'N		14.7	55.43	
250'N		13.3	56.83	
153'E				
238'N	8" Euc. Tree	11.6	58.53	
145'E				
238'N		13.7	56.43	
128'E				
240'N	10" Pepper	14.4	55.13	
200'N		8.5	61.23	
144'E				
200'N		10.2	59.93	
167'E				
199'N	= 8" Euc. Tree	6.7	63.43	

1750 E Cont Girls Home

54

70.13

153'E				
187'N	8" Euc. Tree	7.6	62.53	
144'E				
187'N		9.1	61.03	
153'E				
162'N	8" " "	6.4	63.73	
153'E				
144'N		7.6	62.53	
150'N		6.0	64.13	
154'E				
110'N	8" " "	4.3	65.83	
100'N		3.9	66.23	
146'E				
100'N		4.6	65.53	
154'E	" " "			
87'N		4.0	66.13	
159'E				
61'N	12" " "	2.0	68.13	
50'N		1.4	68.73	
30'N		0.4	69.73	
T.P.	664 74.87	1.90	68.23	
24'N				
126'E	6" Pepper	6.1	68.77	
151'E	10" "			
24'N		4.9	69.97	
150'E				
19'N		4.4	70.47	
17'N	Edge oil Ravine	5.0	69.87	
0 E	" "	4.89	70.04	
chk starting 811		1.42	73.45	
T.P.	3.64 65.76	12.75	62.12	
on Hub station No. 1		9.13	56.63	Page 52

Walker  
Hazard  
Hardin  
4-10-48

Sketch P-52

Stadia Topog. Portion of  
land ~~SE 1/4~~ of Girls Home  
Clockwise

Readings from  $\square$  No 1 Fl. = 56.63

Station	Azimuth	Stadia	$\angle$	Horiz. Dist.	Diff. Elev.	True Elev.
E. Road - West	226°20'	127	+3°10'	196'	+10.8	67.4
	238°10'	162	+2°05'	162'	+5.9	62.5
12" Pine T	242°45'	151	+5°05'	150'	+13.33	69.9
12" Pine Tree	246°20'	141	+5°45'	140'	+14.06	70.6
5" Peach "	250°50'	143	+5°30'	142'	+13.6	70.2
	260°10'	135	+5°40'	134'	+13.3	69.9
	284°35'	137	+5°	136'	+11.9	68.5
	301°40'	155	+3°55'	154'	+10.6	67.2
	310°25'	172	+2°50'	171'	+8.5	65.1
	317°20'	154	+2°50'	154'	+7.6	64.2
	303°30'	124	+3°45'	124'	+8.1	64.7
	281°40'	107	+5°10'	106'	+9.6	66.2
	257°10'	113	+5°30'	112'	+10.8	67.4
	236°15'	131	+4°45'	130'	+10.8	67.4
	222°15'	160	+3°25'	160'	+9.5	66.1
	221°10'	164	+2°55'	164'	+8.3	64.9
	218°45'	174	+2°50'	174'	+8.6	65.2
	214°35'	195	+2°25'	195'	+8.2	64.8
E. DIRT Road - ELY 60' 90' Oil Road	217°35'	201	+2°40'	201'	+9.3	65.0
20' E. DIRT Road	205°40'	176	+1°55'	176'	+5.9	62.5
	209°30'	149	+2°05'	149'	+5.4	62.0
	210°15'	144	+2°35'	144'	+6.5	63.1
	218°15'	110	+3°25'	110'	+6.5	63.1

Girls Home - 55

## READINGS FROM STATION NO. 1

Station	Az	Stadia	v	Elev. 56.63 HI=5.0		Diff. Elev.	True Elev.
				Horiz. Dist			
	237°05'	75'	+4°40'	75'		+6.1	62.7
	280°10'	58	+4°15'	58'		+4.3	60.9
	316°36'	77	+2°50'	77'		+3.8	60.4
	334°50'	125'	+1°35'	125'		+3.4	60.0
	345°50'	117'	+1°0'	117'		+2.0	58.6
	339°30'	85'	+0°45'	85'		+1.1	57.7
	319°55'	45	+2°10'	45'		+1.7	58.3
	250°15'	34'	+4°40'	34'		+2.7	59.3
	218°20'	65	+2°50'	65'		+3.2	59.8
	198°0'	100	+2°05'	100'		+3.6	60.2
	194°05'	125'	+1°45'	125'		+3.8	60.4
	194°10'	128	+1°20'	128		+3.0	59.6
	193°05'	139'	+1°15'	139		+3.1	59.7
	192°45'	144'	+0°35'	144'		+1.5	58.1
Angle in Road E. 70' Dirt Road	191°	157'	+0°45'	157		+2.1	58.7
E. " "	184°45'	143	+0°05'	143		+0.2	56.8
	184°45'	131	<sup>on 7'</sup> +0°30'	131		+0.9	55.7
	184°45'	118'	+0°30'	118		+1.0	57.6
	184°55'	114'	+1°05'	114'		+2.1	58.7
	186°50'	71'	+1°25'	71'		+1.8	58.4
	188°25'	25'	+0°30'	25'		+0.2	56.8
	6°05'	21'	-2°05'	21'		-0.8	55.8
	7°45'	43'	-6°35'	43'		-4.9	51.7
	349°35'	66'	-2°40'	66'		-3.1	53.5

Readings From Sta. 1  
 Elev 56.63 HI = 5.0

Station	Azimuth	Stadia	V. A	Horiz. Dist.	Diff. El
	0°40'	84'	-2°45'	84'	-4.0
	358°25'	98'	-1°0'	98'	-1.7
	358°30'	114'	-0°35'	114'	-1.2
	8°55'	114'	-2°30'	114'	-5.0
	11°30'	92'	-4°25'	91'	-7.1
	22°55'	50'	-8°20'	49'	-7.2
	40°55'	31'	-7°25'	30'	-4.0
	58°50'	22'	-7°20'	22'	-2.8
	156°50'	38'	-5°0'	38'	-3.3
	170°	87'	-2°25'	87'	-3.7
	172°	109'	-2°05'	109'	-4.0
	172°10'	111'	-2°25'	111'	-4.7
E 20' Dirt Road	172°55'	124'	-1°46'	124'	-3.6
" " " "	147°50'	98'	-6°35'	97'	-11.2
	139°35'	82'	-7°35'	81'	-10.7
	139°35'	80'	-7°30'	79'	-10.3
	112°45'	61'	-9°05'	59'	-9.5
	89°	57'	-8°45'	56'	-8.6
	66°	65'	-8°30'	64'	-9.5
	49°10'	81'	-9°0'	79'	-12.5
	36°0'	110'	-7°40'	108'	-14.5
	29°45'	133'	-6°45'	131'	-15.5
	45°10'	165'	-7°20'	163'	-20.9
	52°25'	146'	-8°50'	144'	-22.1

Girls Home 57

52.6

54.9

55.4

51.6

49.5

49.4

52.6

53.8

53.3

52.9

52.6

51.9

53.0

45.4

45.9

46.3

47.1

46.0

47.1

44.1

42.1

41.1

35.7

34.5

READINGS FROM Sta. 1  
Elev. 56.63 HZ = 5.0

Girls' Home 58

Station	Azimuth	Stadia	V.A.	Horiz. Dist.	Diff. El.	True Elev.
	74°	120'	-10°15'	116'	-21.0	35.6
	86°40'	116'	-9°55'	113'	-19.7	36.9
	87°35'	116'	-10°40'	112'	-21.2	35.4
↳ 20' dirt Road	95°35'	116'	-10°05'	113'	-20.0	36.6
" " " "	77°45'	153'	-9°55'	149'	-26.0	30.6
	72°10'	157'	-10°	153'	-26.8	29.8
	70°35'	158'	-9°40'	154'	-26.1	30.5
	59°45'	175'	-9°10'	171'	-27.5	29.1
	52°40'	193'	-8°25'	189'	-27.9	28.7
	57°10'	214'	-8°35'	210'	-31.6	25.0
	63°15'	196'	-9°0'	192'	-30.3	26.3
	65°05'	193'	-9°20'	189'	-30.1	26.5
↳ 20' dirt Road	69°40'	188'	-9°15'	184'	-29.8	26.8
" " " "	62°05'	244'	-8°35'	239'	-36.0	20.6
	60°20'	235'	-8°45'	230'	-35.3	21.3
	59°45'	231'	-8°40'	226'	-34.4	22.2
↳ 20' dirt Road	57°30'	325'	-7°40'	319'	-43.0	13.6
" " " "	51°20'	504'	-5°25'	498'	-47.4	09.2
Top Hill	66°15'	231'	-8°25'	226'	-33.4	23.2
Ridge "	72°35'	270'	-4°35'	268'	-21.5	35.1
" "	84°30'	225'	-4°10'	223'	-16.3	40.3
Side "	77°45'	198'	-7°35'	194'	-25.9	30.7
	75°15'	180'	-8°10'	176'	-25.3	31.3
	91°25'	136'	-9°30'	132'	-22.1	34.5

Readings from sta N<sup>o</sup> 1  
Elev. 56.63 HI 5.0

Station	Azimuth	Stadia	V. Δ	Horiz. Dist.	Diff. Elev.
Top of Hill	92°05'	137'	-8°40'	134'	-20.4
Ridge " "	97°35'	173'	-3°30'	172'	-10.5
Top " "	119°55'	143'	-4°40'	141'	-12.4
on Bank edge Road	116°15'	112	-7°45'	110'	-15.0
edge "	116°	108	-8°30'	106'	-15.8
" "	151°45'	111	-4°25'	110'	-8.5
Ridge Hill	150°35'	121	-2°10'	121'	-4.6
" "	177°05'	147'	-0°15'	147'	-0.6
edge Road	178°35'	143'	-0°30'	143'	-1.2
	354°15'	158	+0°20'	158'	-0.9
	9°40'	166'	-1°05'	166'	-3.1
	23°15'	183'	-2°20'	183'	-7.4
	33°05'	217'	-3°40'	216'	-13.8
	40°10'	237'	-5°20'	235'	-21.4
	48°	260	-7°10'	256'	-32.2
	53°30'	283	-7°45'	278'	-37.8
	56°50'	305'	-7°55'	300'	-41.6
	0°50'	173'	-0°35'	173'	-1.8
	346°	181'	+0°15'	181'	+0.8
	333°55'	195'	+0°55'	195'	+3.1
	323°55'	210'	+1°15'	210'	+4.6
	318°40'	223	+1°55' or 7.0	223'	+7.4

Girls Home

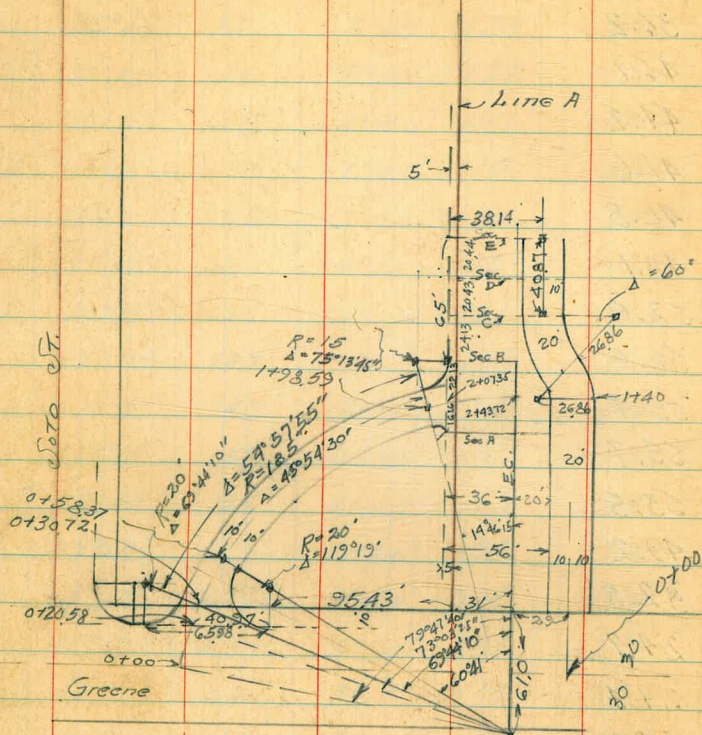
59

True  
Elev.

36.2  
46.1  
44.2  
41.6  
40.8  
48.1  
52.0  
56.0  
55.4  
55.7  
53.5  
49.2  
32.8  
24.7  
24.4  
18.8  
15.0  
54.8  
57.4  
59.7  
61.2  
64.0

Walker  
4-27-45

Door of Hope-Girls Home  
Proposed Drive Ways  
Cross Sections P-61



see large sketch P-65

indexed  
e.s.k.

60

No 1 Drive Way 2-Sections  
Girls Home

0+00 Section on S Greene

PM SE Top  
Greene & Site  
Page 54

7.75	62.31	61.56
20' Lt. - opp E.C.	8.24	61.07
£	6.92	62.39
45.5' Rt. opp E.C.	3.54	65.77

0+20.58 Section Parallel to Greene St

25.01 Lt. - Proposed cb E.C.	9.2	60.1
£	6.5	62.8
40.97 Rt. " " "	3.7	65.6

(0+18) Section Parallel to Greene

25' Lt. Gutter	9.3	60.0
£	7.6	61.7
41' Rt. "	4.6	64.7

0+30.72 Sections Radial

20' Rt.	5.0	64.3
10' Rt.	5.5	63.8
£ - Proposed E.L. Greene - Proposed cb P.R.C.	6.5	62.8
10' Lt. on Paving Stake	7.42	61.89
20' Lt.	8.3	61.0

0+58.37

20' Lt.	9.5	59.8
10' Lt.	8.7	60.6
£ on Pav Stake	7.91	61.4
10' Rt. " "	6.85	62.46
20' Rt.	6.1	63.2

69.31

0+75

Hyd

20' Rt.	6.2	63.1
10' Rt.	7.2	62.1
£	7.9	61.4
10' Lt.	9.2	60.1
20' Lt.	9.7	59.6

1+00

20' Lt.	10.1	59.2
10' Lt.	9.4	59.9
£	8.0	61.3
10' Rt.	7.2	62.1
20' Rt.	6.2	

1+25

20' Rt.	5.9	
10' Rt.	6.7	62.6
£	7.8	61.5
10' Lt.	8.8	60.5
20' Lt.	9.7	

1+50

20' Lt.	8.5	
10' Lt.	7.8	61.5
£	7.0	62.3
10' Rt.	6.1	63.2
20' Rt.	5.3	



6231

1+75

20' RT	4.3	
10' RT	5.0	64.3
∠	5.7	63.6
10' LT	6.3	63.0
20' LT	7.3	

1+98.59

20' LT	5.2	
10' LT	4.5	64.8
∠ on Pave. Struts	4.46	64.85
10' RT	3.9	65.4
20' RT	3.4	

2+07.35 Section Parallel to Line A Sketch P. 65

Small Radius

16.26 Rt. E.C. of Parking lot	3.2	66.1
∠	3.9	65.4

10' LT	3.5	65.8
--------	-----	------

22.13 Lt. on EC. 15' Radius	4.26	
-----------------------------	------	--

T.P. 9.36 7441	4.26	65.05
----------------	------	-------

Cross Section N 9 2 Drive

0+00

20' LT	1.68	
10' LT	1.48	72.9
3' Lt Rim Solder NH	1.31	
∠	1.46	72.95
10' RT	1.82	72.59
15' RT	2.00	

N Drive N 9 2

7441

62

0+20

15' RT	2.14	
10' RT	2.00	72.41
∠	1.98	72.43
10' LT	2.03	72.38
20' LT	2.07	

0+30 = End of Road

20' LT	2.5	
10' LT	2.37	72.04
∠	2.50	71.91
10' RT	2.13	72.28
15' RT	1.31	

0+50

15' RT on Cb.	1.70	72.7
" " Gut	2.3	
10' RT	2.7	71.7
∠	3.2	71.21
10' LT	3.1	71.3
20' LT	3.3	71.1

0+75

20' LT	4.1	70.3
10' "	4.1	70.3
∠	4.0	70.4
10' RT	3.4	71.0
15' RT Gut	2.8	
" " on Cb.	2.33	72.08

7441

1+00

15' Rt. on cb.	2.74	71.67
" " "Guts	3.5	
10' Rt	4.0	70.4
$\frac{1}{2}$	4.5	69.9
10' Lt.	4.8	69.6
20' Lt.	4.9	69 <sup>5</sup>

1+24

29' Lt on Radius Line	6.6	
20' Lt.	6.0	
10' Lt.	5.6	68.8
$\frac{1}{2}$	5.3	69.1
10' Rt.	4.8	69.6
15' Rt. Guts	4.1	
" " on cb.	3.57	70.84

1+40 = BC Lt.

15' Rt on cb.	4.09	70.32
" " "Guts	4.6	
10' Rt	5.1	69.3
$\frac{1}{2}$	5.7	68.7
10' Lt.	6.1	68.3
16.86 Lt. on <sup>Radius</sup> Paving Stake	6.24	

1+57.65 = P.R.C

10' Lt.	6.3	68.1
$\frac{1}{2}$	6.5	67.9
10' Rt.	6.9	67.5
20' Rt.	6.7	
36.86 Rt. on Radius Stake	7.5	

7441

1+96.25 = EC = Sec "C"

20' Rt.	8.0	
10' Rt.	8.6	65.8
$\frac{1}{2}$ on stake	8.25	66.16
10' Lt.	9.4	65.0
20' Lt.	9.9	64 <sup>5</sup>
38.93 Lt. on line "A" P-65	10.6	63 <sup>5</sup>
T.P. 7.50	7441	7.50 66.91

on Radius  
26.86  
1+96.25

2+16.68 = Sec "D"

43' Lt.	12.0	
38' Lt. on line "A"	11.5	62 <sup>2</sup>
10' Lt.	10.9	64.0
$\frac{1}{2}$	10.7	63.7
10' Rt.	10.1	64.3
20' Rt.	9.8	

2+37.12 =

20' Rt.	11.4	
10' Rt.	11.4	63.0
$\frac{1}{2}$ on Pav Stake	11.85	62.56
10' Lt.	12.3	62.1
20' Lt.	12.3	62 <sup>5</sup>
37.95 Lt. on line "A"	13.7	60 <sup>3</sup>
43' Lt.	14.5	

## DRIVE NO 2

74.41

2.752

43' Lt	15.4	
37.9' Lt - Line "A" Prod.	15.2	59.2
20' Lt	15.0	59.4
10' Lt	14.5	59.9
Σ	13.6	60.8
10' Rt.	13.9	61.0
20' Rt	12.5	

## Sec A

Line "A"	8.3	66.1
10' Rt.	7.8	66.6
20' Rt.	7.3	67.1
30' Rt.	6.8	67.6
56' Rt - Line Drive No 2	5.6	

## Sec "B"

5' Lt. of Line "A"	2.5	
Line "A"	2.3	
5' Rt	2.5	
20' Rt.	2.3	66.1
30' Rt	2.0	
40' Rt.	2.4	
T.P.	5.38	75.66
	4.13	70.28

CROSS SECTIONS DRIVE NO 3  
GIRL'S HOME - Sketch P. 68-

64

75.66 \* from opp. Page

0+00

25' Lt.	7.8	
10' Lt.	7.9	67.76
Σ	8.07	67.59
10' Rt.	8.5	67.16
25' Rt.	2.6	

0+20 0+16

25' Rt. - Proposed up B.C.

25' Rt.	2.6	
10' Rt.	7.8	67.86
Σ	7.2	68.5
10' Lt.	6.6	69.06
25' Lt.	6.2	

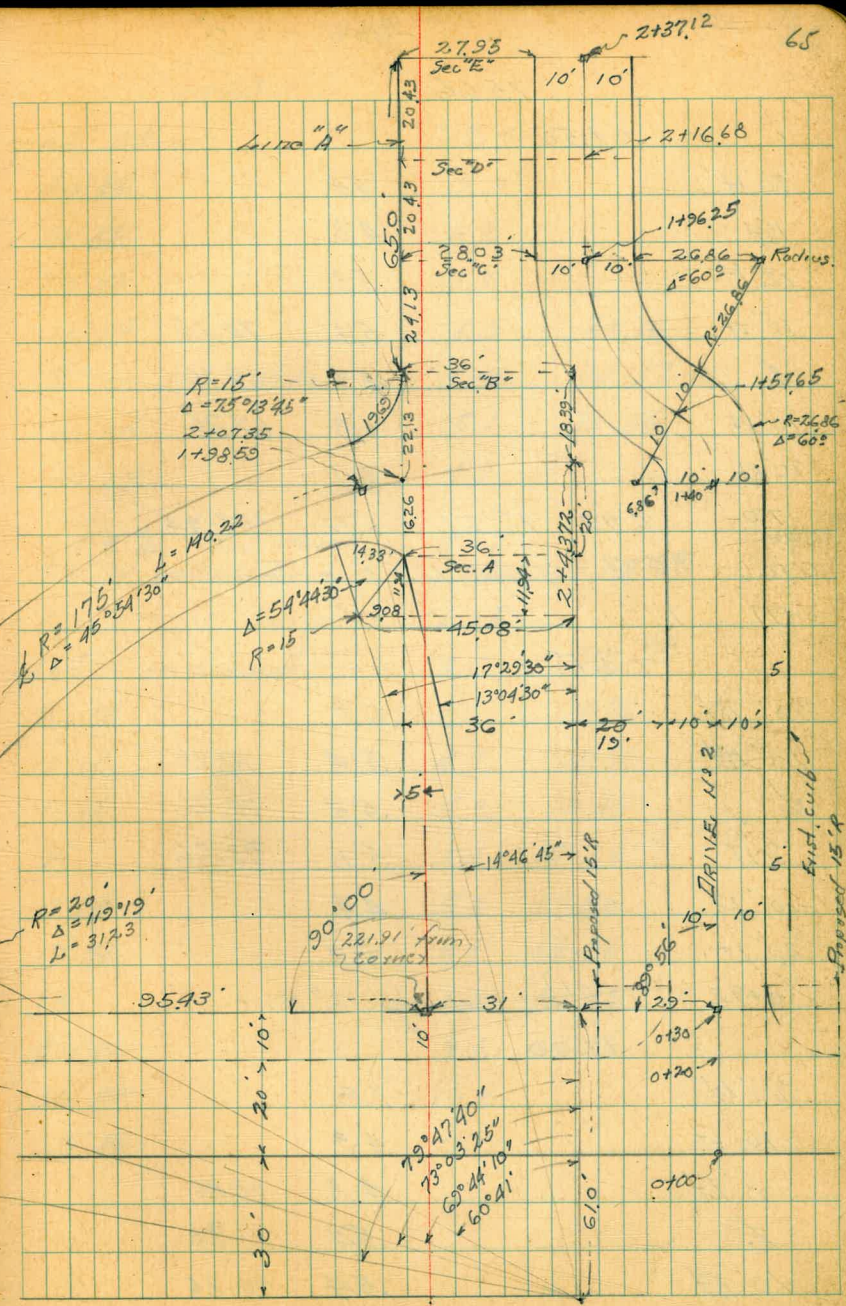
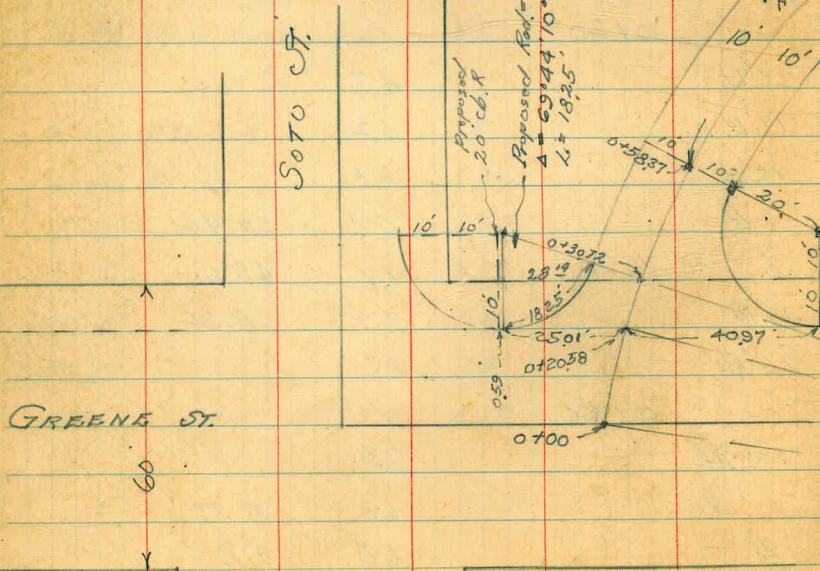
0+20

25' Lt.	4.7	
17' Lt.	5.2	
15' Lt.	6.1	
10' Lt.	6.2	69.46
Σ	7.1	68.6
10' Rt.	7.3	68.36
25' Rt.	8.1	

0+35

20' Rt.	7.3	
10' Rt.	6.8	68.86
Σ	6.5	69.2
10' Lt.	6.0	69.66
15' Lt.	5.1	
20' Lt.	5.0	

Sketch - Proposed Driveways  
Door of Hope Girls Home



75.66

0+50

70' Lt.	4.4	
15'	4.8	
12' Lt.	5.3	
10' Lt.	5.4	70.26
ℓ	5.9	69.76
10' Rt.	6.3	69.36
20' Rt.	6.7	

TR 6.72 75.66 6.72 68.94

0+66 6.4 Rt. N4Y edge 12" Pine Tree

0+77 7' " " " " "

0+75

20' Rt.	6.3	
10' Rt.	5.4	70.26
ℓ	5.4	70.26
9' Lt.	5.1	70.56
10' Lt.	4.4	
20' Lt.	4.0	

(0+92.6) 12.5 Lt. = SLY edge 12" Pine Tree

1+00

20' Lt.	3.8	
10' Lt.	4.3	
8' Lt.	4.8	70.86
ℓ	5.4	70.26
10' Rt.	5.4	70.26
20' Rt.	6.6	

1+23

62' Rt.	12.3	
40' Rt.	9.0	
30' Rt.	8.2	
20' Rt.	7.0	
10' Rt.	6.5	69.16
ℓ on Pav. Stake	5.49	70.17
10' Lt.	5.1	70.56
20' Lt.	4.3	

63.6 Lt. <sup>1+33</sup> Conc. Patch 3.02  
 52' Lt. on Conc. Patch 3.02 72.69

46.5 " " " Ramp 2.85  
 46.5 " on Ground 3.5 72.16

40' Lt.	3.9	71.76
19' Lt.	4.7	70.96
10' Lt.	5.2	70.46
ℓ	5.4	70.26
2' Rt.	5.8	69.86
19' Rt.	6.8	68.86
30'	8.2	67.46
40' Rt.	9.6	66.06
50' Rt.	10.6	
62' Rt.	12.1	

7566 Drive No 3

1742 = 8 Drive

62' Rt.	12.5	
40' "	2.6	66.06
30' Rt.	8.6	67.06
19' Rt.	7.0	68.66
9' Rt.	6.1	69.56
⊥ on Conc. Floor	5.12	70.54
9' Lt.	5.12	70.54
19' Lt.	5.2	70.46
30' Lt.	4.7	70.96
52' Lt.	3.6	72.06
63.6 Lt.	3.5	
1751		
63.6 Lt.	4.0	71.3
52' Lt.	4.3	71.4
30' Lt.	5.0	70.3
21' Lt. - bc. 12' R.	5.4	70.3
12' Lt.	5.4	70.3
9' Lt. on conc. Floor	5.12	70.54
⊥ " " "	5.12	70.54
9' Rt.	6.7	68.96
19' Rt.	7.4	
30' Rt.	8.2	67.5
50' Rt.	10.2	65.5
62' Rt.	12.5	

7566

67

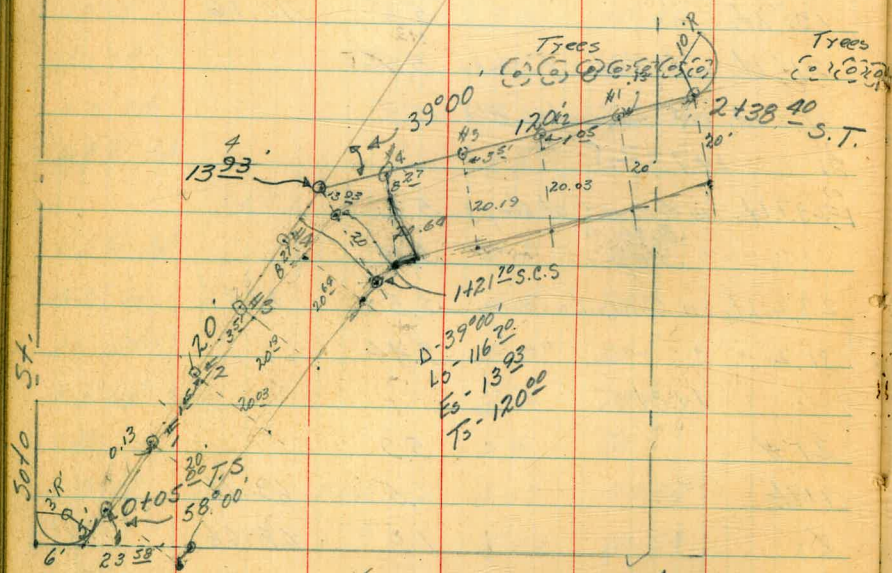
1763

62' Rt.	12.7	
50' Rt.	10.8	
40' R.	9.8	
17' Rt. B.C. 8' Rad.	7.4	
9' Rt.	6.7	68.96
3' Rt.	5.6	
⊥ on Garage Floor	5.12	70.54
12' Lt.	5.5	70.16
21' Lt. on Radius Stake	5.56	
31.2 Lt. at Laundry Old	5.3	
177325		
23.7 Lt. on Ground at stops	5.6	
" " Bottom		
" " Stop	5.19	
27.2 Lt. on Conc. Landing	3.50	72.16
31.2 " " " "	3.44	
1781		
21' Lt.	5.9	
9' Lt.	6.5	69.16
⊥	7.0	68.66
9' Rt.	7.9	68.26
20' Rt.	8.6	
1790		
20' Rt.	8.6	
9' Rt.	7.8	67.86
⊥	7.9	68.66
9' Lt.	6.7	68.96
20' Lt.	6.0	

Door of Hope Girls Home

Drive No 1

Grades Page 69

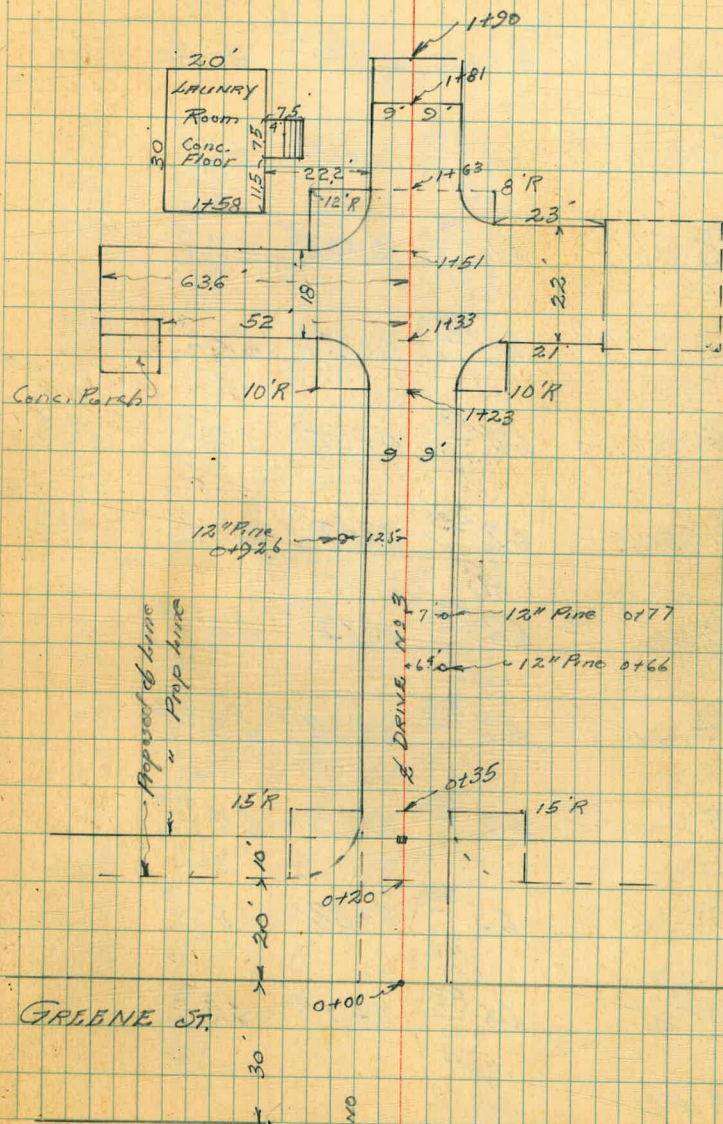


	X	4	4'
#1	25 <sup>00</sup>	0.13	20.13
#2	49 <sup>38</sup>	1.05	21.08
#3	74 <sup>85</sup>	3.51	23.70
#4	99 <sup>38</sup>	8.27	28.91

DOOR OF HOPE GIRLS HOME 68

DRIVE NO 3

Cross Sections See P-64-67



(Sketch Page 68)

Driveway No 1  
Girls Home - Through Collier Park

Sta.	Lt. Grade	Sta.	Rt. Grade	6156-461 4232 6649T 206-
0+30	61 <sup>29</sup> 5.93 -0.28	0+17 <sup>5</sup>	62 <sup>3</sup> 4.92 +0.25	6443TP 202T 72.45T 64.43-TR 492T 6875T 374-
+55	61 <sup>78</sup> 5.44 -0.50	0+42 <sup>5</sup>	61 <sup>8</sup> 5.44 +1.73	65.01TP 859 73.60T
+81	61 <sup>91</sup> 5.31 -1.41	0+67 <sup>5</sup>	61 <sup>9</sup> 5.32 +1.03	Abuse BM 61.56
1+06	62 <sup>04</sup> 5.18 -0.96	0+92 <sup>5</sup>	62 <sup>0</sup> 5.22 +1.02	566T 6722T 221-
+21 <sup>70</sup> SC.S	62 <sup>22</sup> 5.00 -1.41	1+02	62 <sup>1</sup> 5.12 +1.14	65.01TP 839 74.00T
+39	62 <sup>54</sup> 5.68 -0.54	1+13	62 <sup>24</sup> 5.06 +1.33	
+64	63 <sup>34</sup> 5.88 -0.93	1+38	63 <sup>04</sup> 5.18 +1.40	
+88	64 <sup>36</sup> 5.86 -0.68	1+63	64 <sup>06</sup> 5.16 +1.28	
2+13	65 <sup>58</sup> 1.64 -0.57	1+88	65 <sup>28</sup> 8.72 +1.05	
+38 <sup>40</sup> S.T.	66 <sup>82</sup> 0.40 +0.17	2+13	67 <sup>0</sup> 7.00 +0.31	
2+53 F.C.	66 <sup>00</sup> 0.29			
COY.	65 <sup>5</sup> 8.50 -0.80			

Driveway No 2  
Main Drive in front of Girls Home

Sta.	Lt. Grade	Rt. Grade
0+30	71 <sup>6</sup> 2.40 +0.41	71 <sup>90</sup> 2.70 +0.75
+50	65' 22' 69 <sup>0</sup> 4.45 4.73 0.28	71 <sup>28</sup> 3.72 2.57 +1.15
+75	68 <sup>5</sup> 0.25 1.22 -0.98	71 <sup>07</sup> 2.93 2.65 +0.28
1+00	67 <sup>2</sup> 1.05 2.15 -1.05	70 <sup>33</sup> 3.67 +0.34
+25	66 <sup>7</sup> 1.15-BC. 4' Radius 6.10 +0.80-0.20	69 <sup>05</sup> 4.65 1.03 +0.62
+50	67 <sup>83</sup>	68 <sup>13</sup> 5.87 +1.48
+75	38' 20'	66 <sup>38</sup>
+96 <sup>25</sup>	64 <sup>05</sup> 64 <sup>05</sup>	64 <sup>95</sup>
2+00	63 <sup>8</sup> 64 <sup>40</sup>	64 <sup>70</sup>
+16 <sup>68</sup>	62 <sup>60</sup> 63 <sup>20</sup>	63 <sup>50</sup>
+25	62 <sup>0</sup> 62 <sup>0</sup>	62 <sup>90</sup>
+37 <sup>12</sup>	61 <sup>12</sup> 61 <sup>70</sup>	62 <sup>02</sup>
+50	60 <sup>2</sup> 60 <sup>8</sup>	61 <sup>10</sup>



Driveway No 3.  
Rear entrance to Girls Home.

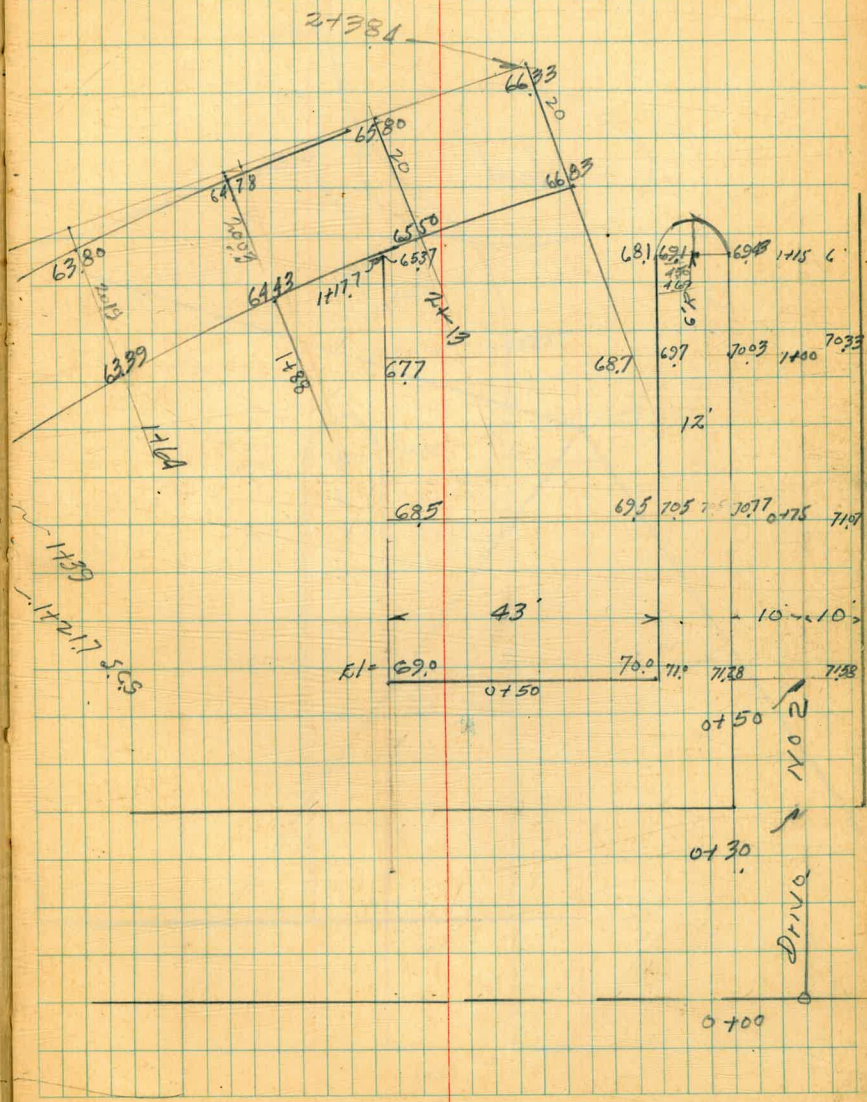
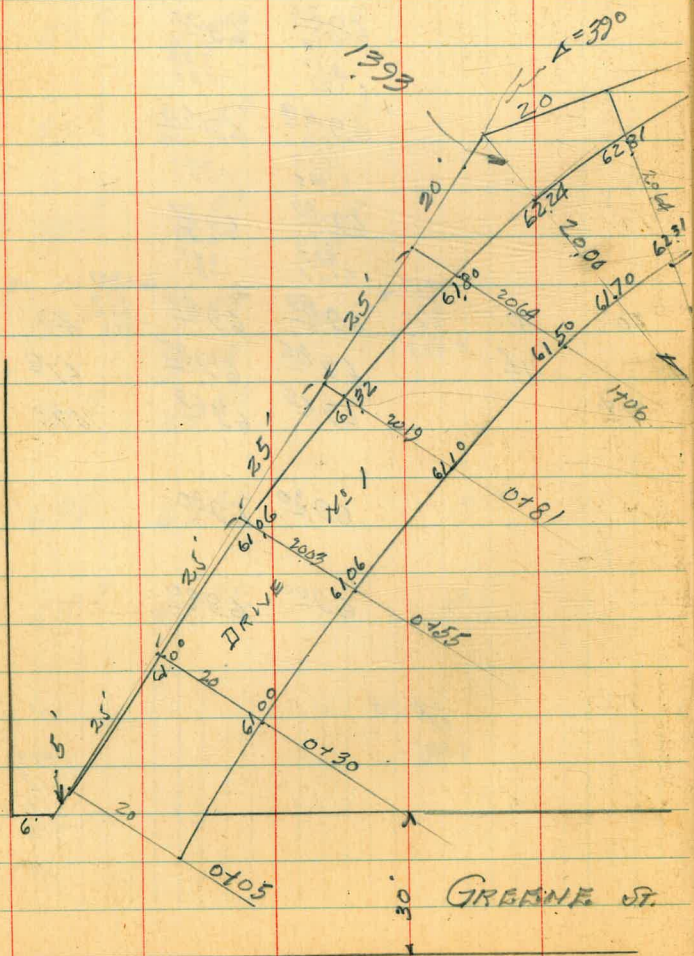
Ground  $\downarrow$   
Sta. Elev Grade cut Fill

0+30	69°	69°	0
+50	69 <sup>8</sup>	69 <sup>46</sup>	0 <sup>3</sup>
+75	70 <sup>3</sup>	69 <sup>88</sup>	0 <sup>4</sup>
1+00	70 <sup>3</sup>	70 <sup>09</sup>	0 <sup>2</sup>
1+23 = 86 10' Radius			
+25	70 <sup>2</sup>	70 <sup>09</sup>	0 <sup>1</sup>
+33		70 <sup>05</sup>	
+50	70 <sup>5</sup>	69 <sup>89</sup>	0 <sup>6</sup>
+75	69 <sup>1</sup>	69 <sup>50</sup>	0 <sup>4</sup>
+90	68 <sup>7</sup>	69 <sup>20</sup>	0 <sup>5</sup>

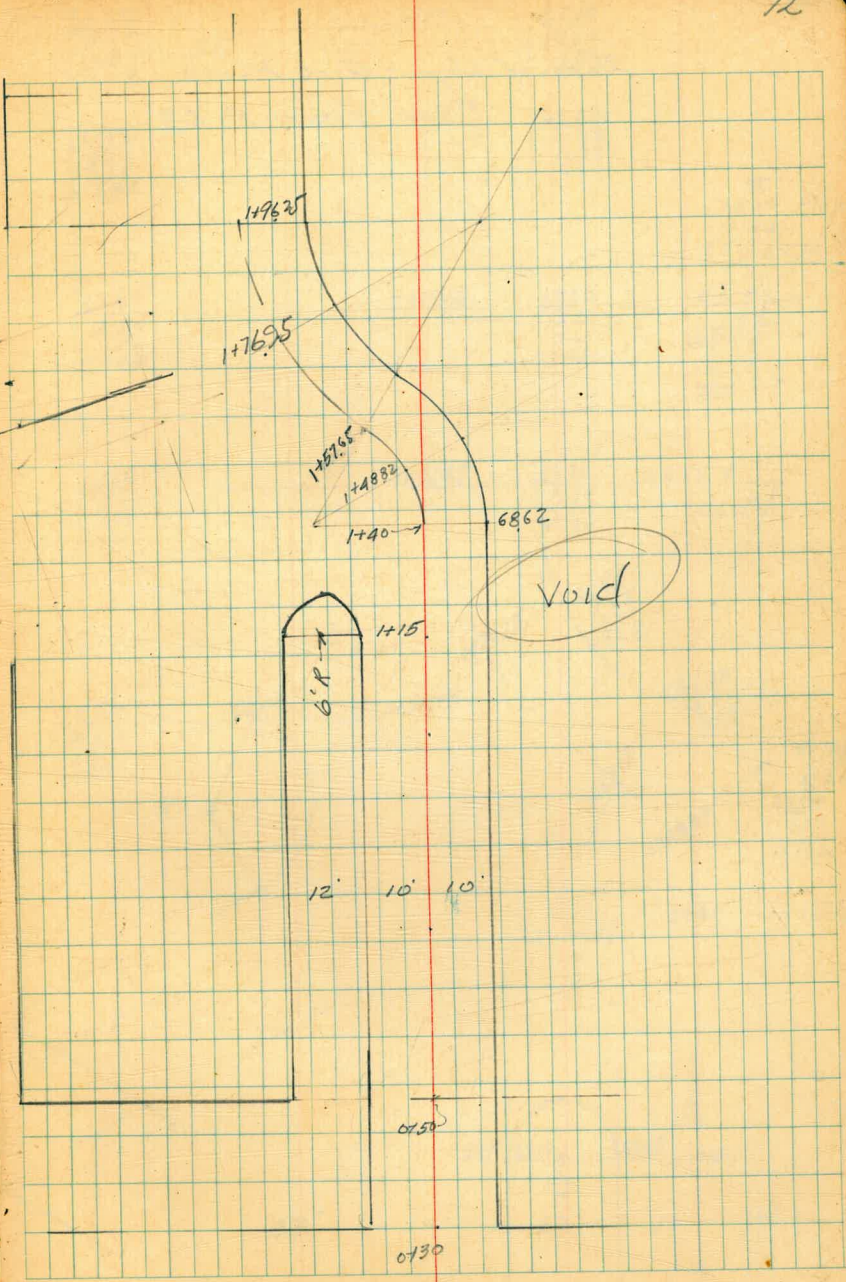
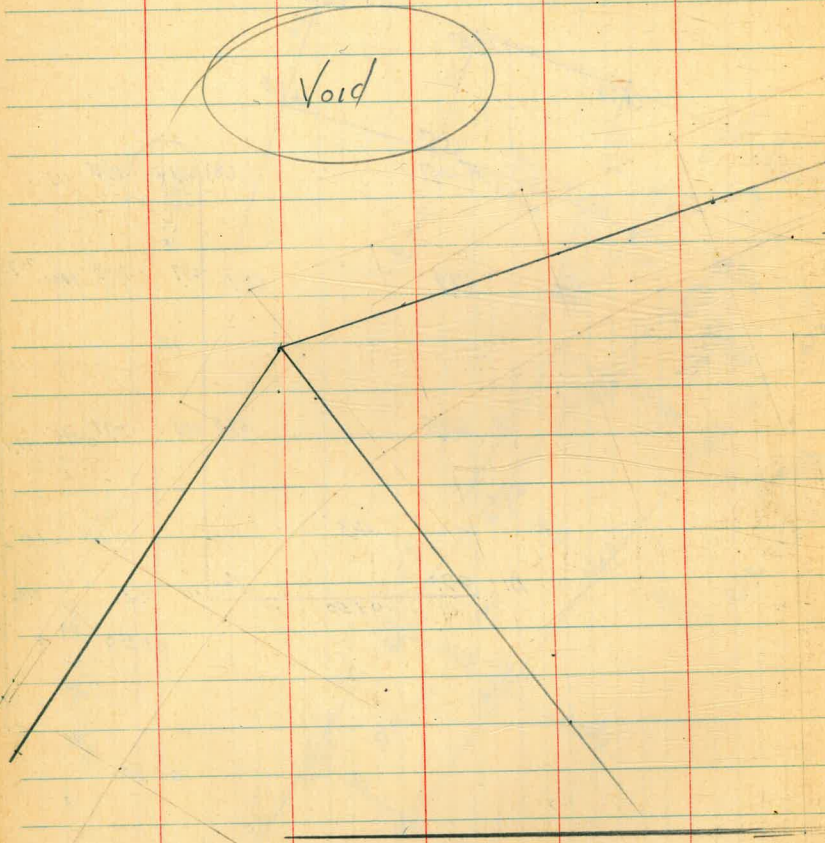
	Lt	Rt.	
	9'	9'	P-73 π 7630
	68 <sup>80</sup> 7.50 4.82 +1.68	68 <sup>80</sup> 7.50 7.79 -0.29	4.84 71.46 4.59+
	69 <sup>26</sup> 7.04 5.77 +1.27	69 <sup>26</sup> 7.02 7.38 -0.34	76,05π
	69 <sup>68</sup> 6.62 5.18 +1.44	69 <sup>68</sup> 6.62 6.41 +0.21	
	69 <sup>89</sup> 6.16 4.69 +1.47	69 <sup>89</sup> 6.47 6.47 -0.06	
60'	40'	69 <sup>89</sup>	41.89 6.16 6.74 -0.79
	71'	69 <sup>85</sup>	40'
71'		69 <sup>69</sup>	67 <sup>25</sup> 67.00 3.05 -0.87
		69 <sup>30</sup>	67°
		69 <sup>30</sup>	
		69 <sup>00</sup>	
		69 <sup>00</sup>	
	17.33 19'		
	69 <sup>85</sup>		19' 40'
			67.00
			3.05
			3.92
			-0.87

Door of Hope Girls Home

5670 ST.



VOID



Door of Hope - Girls Home  
Cont. from P. 69

6020  
972  
1090  
-1.18

38'

2450

6140  
1260  
1189  
-1071

73

6112  
820  
356  
+076

213712  
10

6232  
1168  
1037  
+071

6260  
732  
776  
-044

211668

6380  
1020  
261  
+053

7400 P. 69  
1144  
6256 TP  
736  
6952 π  
048  
6944 TP  
6867  
7630 π

6405  
587  
623  
-062

112625

6525  
875  
783  
+090

2886 R  
Δ=60°

6550  
442  
508  
-080

6600

117212

6655  
745  
1220  
-025

6763  
632  
649  
-017

10' R

145765  
14882  
R=2656  
Δ=60°

6800  
510  
+090

No. 1 Drive

Drive

43'

6810  
6910  
620

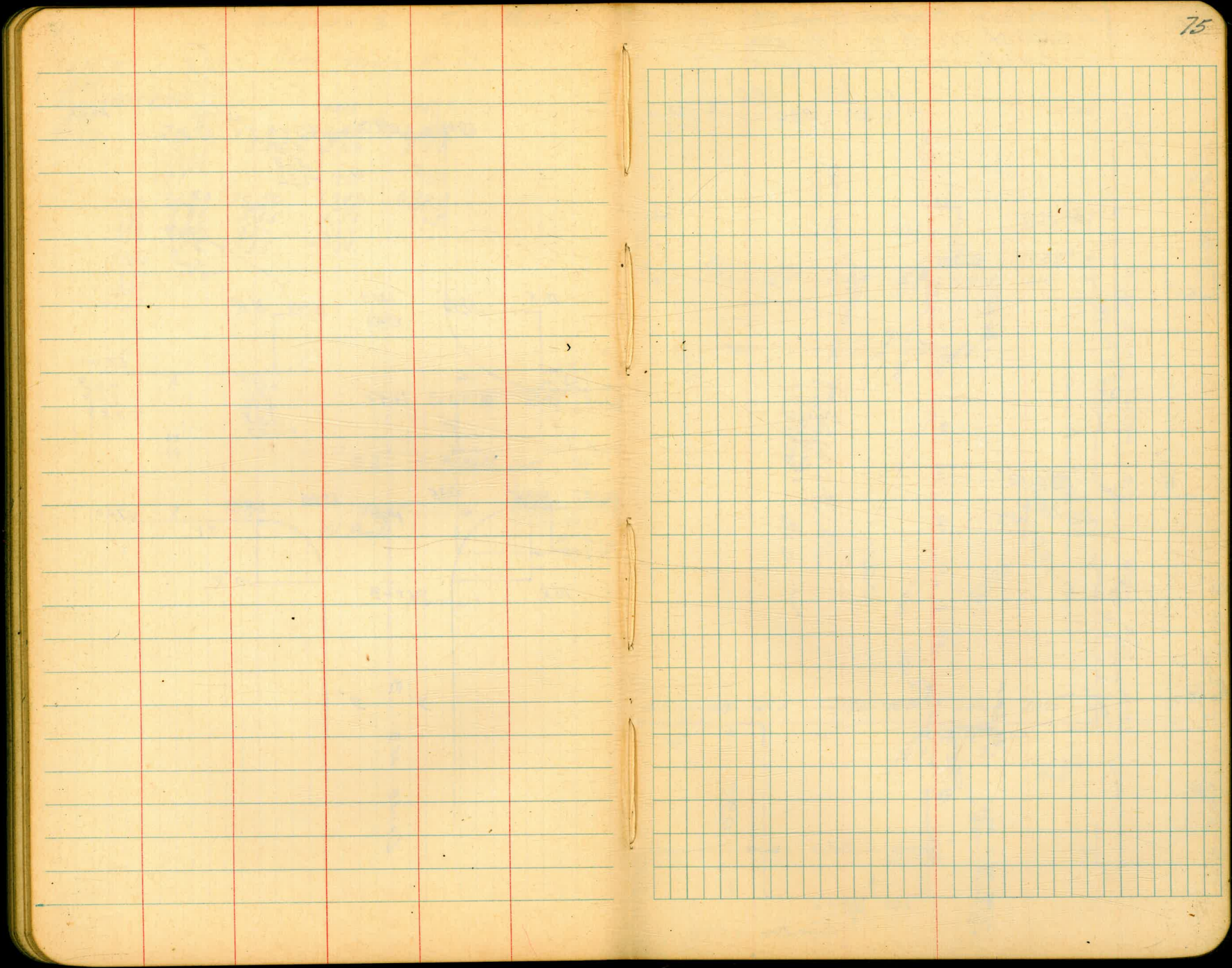
6943  
1715

> 12'

10 10'

No. 2







## Door of Hope Grounds

Survey as per sheet A552A-B.

C.H.S.

10-22-54

B099

W.O. # 2000 C

Scholin  
pullon

INDEXED

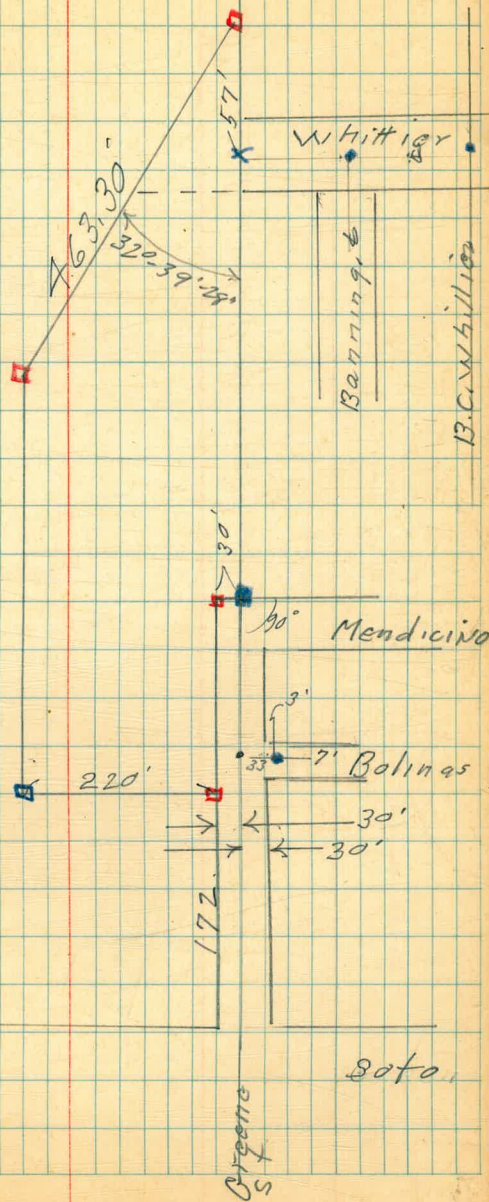
OCT 26 1954

Sheet A852A-B.

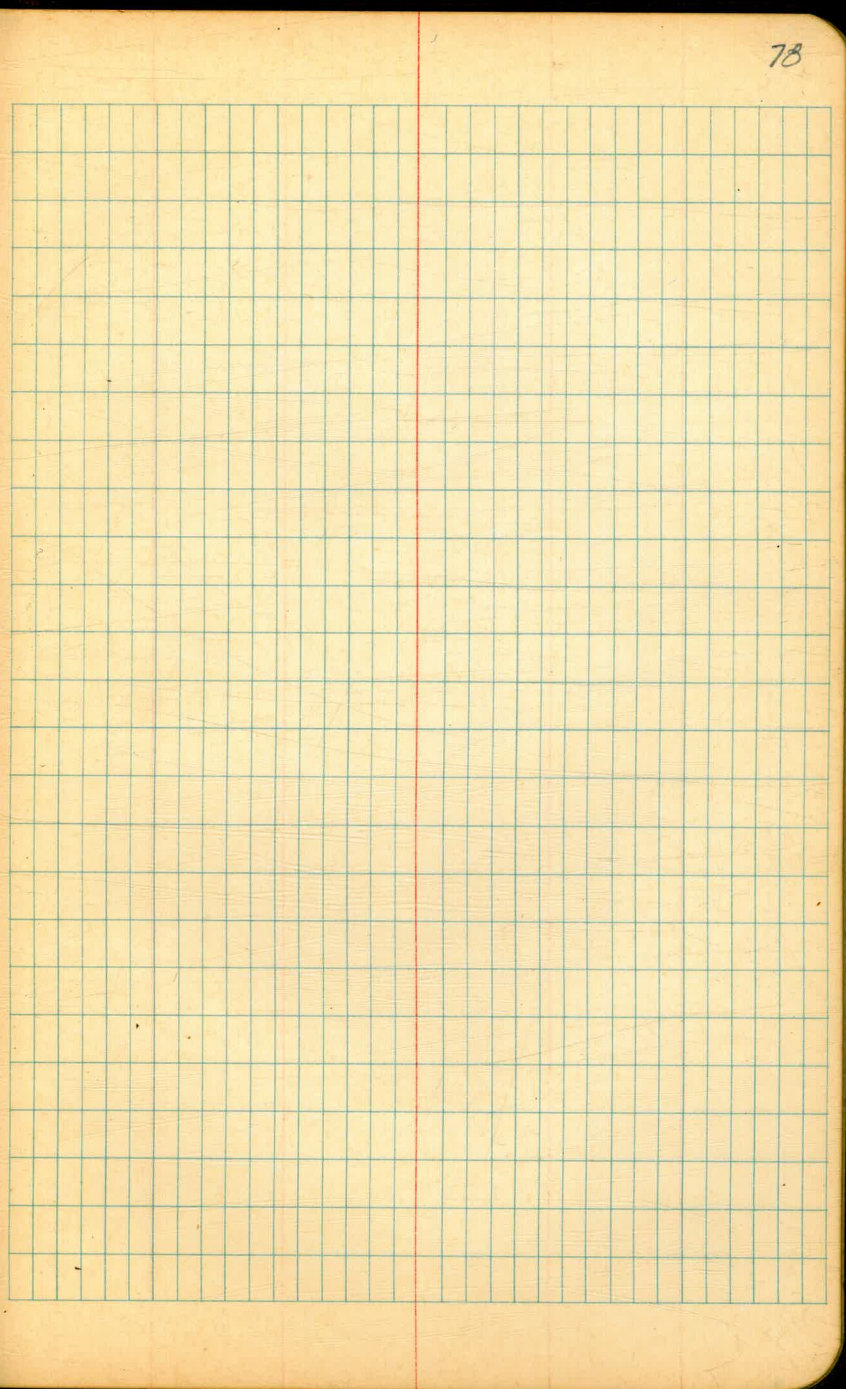
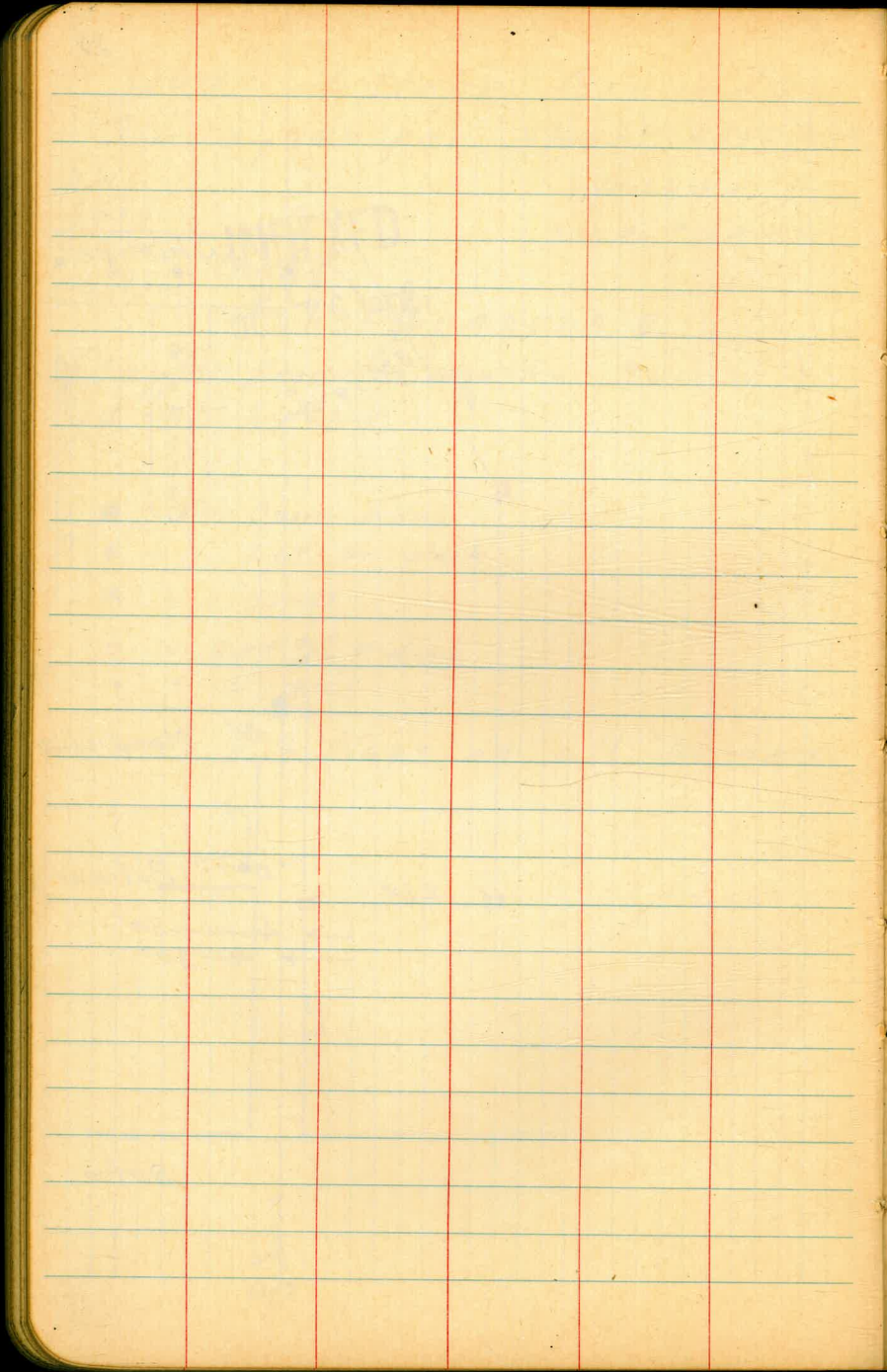
(Angle from Wabaska Survey.)  
 $\Delta = 32^{\circ} - 39' - 28''$ 

- = Fd. Conc. Mon.
- = " L.T. or disk
- ✕ = " cross
- ◻ = set 1/2 + disk
- = " Nail

Also put flags on all corners.







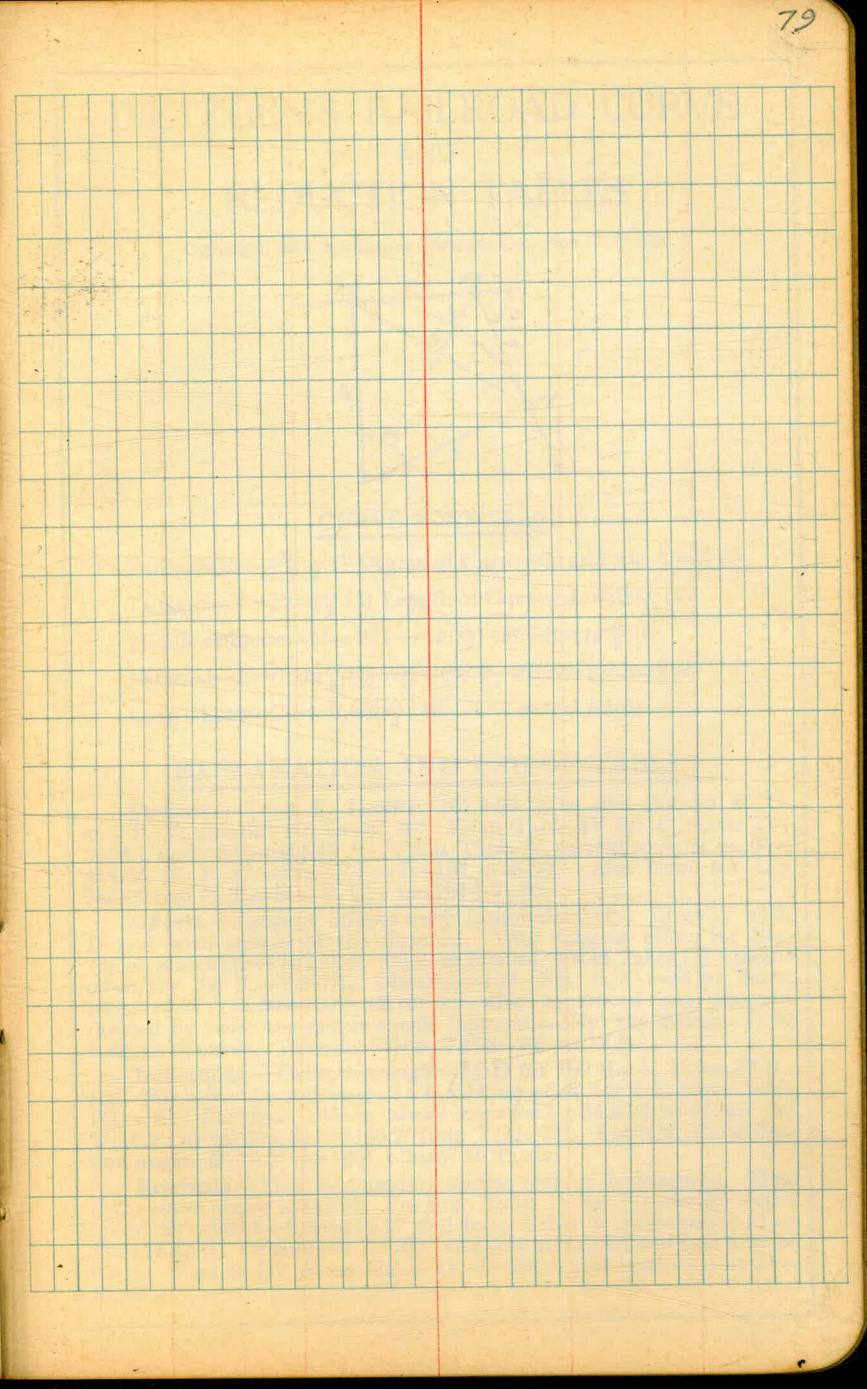
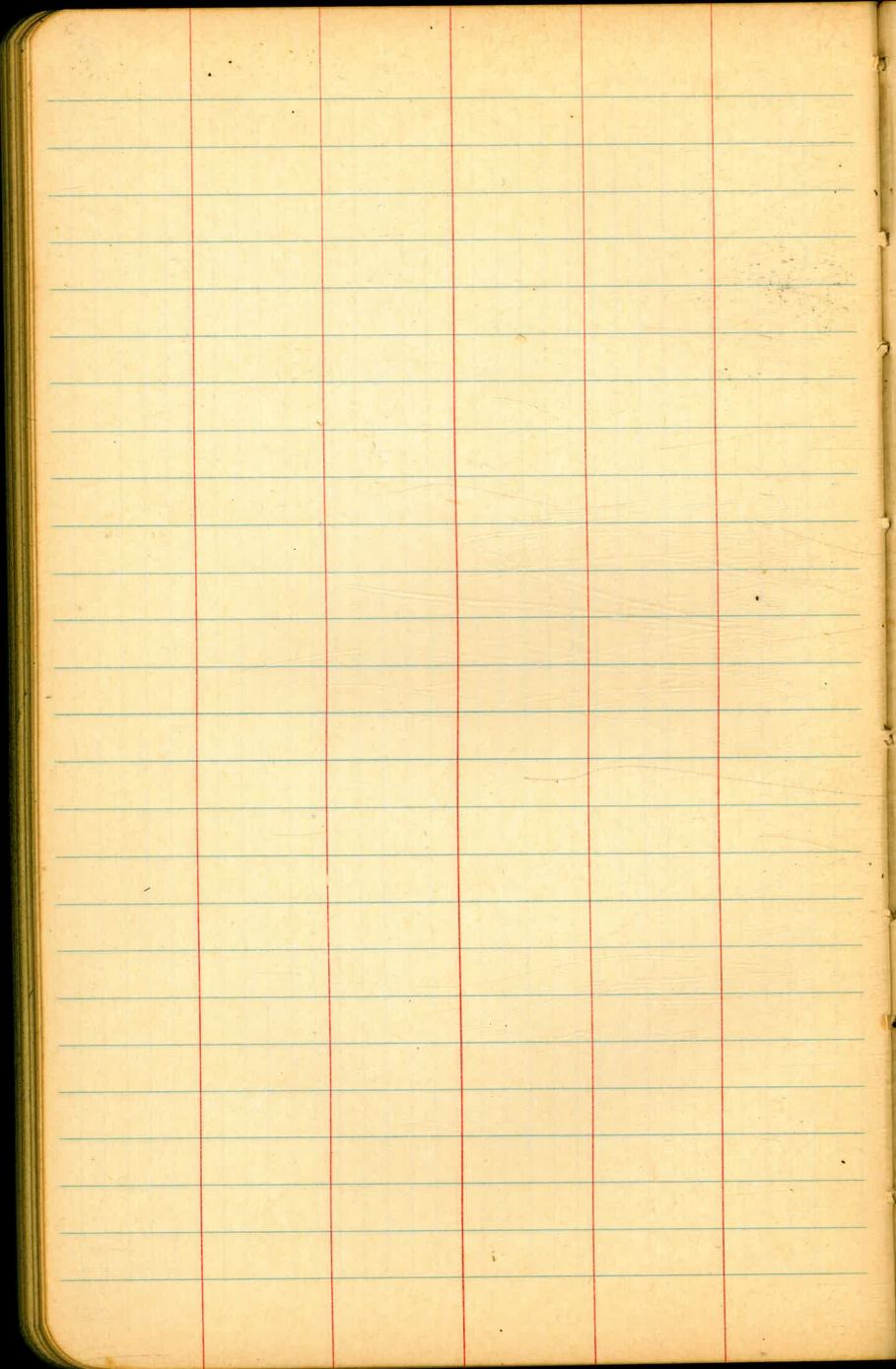


TABLE I.—MINUTES IN DECIMALS OF A DEGREE.

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	1/4	3-16	1/2	5-16	3/8	1/2	5/8	3/4	7/8
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

TABLE III.—RADI, 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° 20'	819.02	1.528	6.105	2.10
20	17188.8	.073	.291	0.10	30	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	8	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	12	499.06	2.511	10.02	3.45
50	2022.41	.618	2.472	0.85	13	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	441.63	2.839	11.32	3.90
20	1719.12	.727	2.908	1.00	14	425.40	2.949	11.75	4.05
30	1637.28	.764	3.054	1.05	14	410.23	3.058	12.18	4.20
40	1562.83	.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	3.826	1.35	17	338.27	3.716	14.78	5.10
40	1228.11	1.018	3.971	1.40	18	319.62	3.825	15.64	5.40
50	1185.73	1.055	4.217	1.45	19	302.94	3.935	16.51	5.70
5	1146.28	1.091	4.362	1.50	20	287.94	4.044	17.37	6.00
10	1109.33	1.127	4.507	1.55	21	274.37	4.154	18.22	6.30
20	1074.68	1.164	4.653	1.60	22	262.04	4.264	19.08	6.60
30	1042.14	1.200	4.798	1.65	23	250.79	4.374	19.94	6.90
40	1011.51	1.237	4.943	1.70	24	240.49	4.484	20.79	7.20
50	982.64	1.273	5.088	1.75	25	231.01	4.594	21.64	7.50
6	955.37	1.309	5.234	1.80	26	222.27	4.704	22.50	7.80
10	929.57	1.346	5.379	1.85	27	214.18	4.814	23.35	8.10
20	905.13	1.382	5.524	1.90	28	206.68	4.924	24.19	8.40
30	881.95	1.418	5.669	1.95	29	199.70	5.034	25.04	8.70
40	859.92	1.455	5.814	2.00	30	193.18	5.144	25.88	9.00

Note. Chord Deflection=2 times tangent deflection.

286  
797  
206.3  
146  
927  
46  
1387

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

TABLE VI.—CORRECTIONS FOR SUB-CHORDS AND LONG CHORDS.

FOR SUB-CHORDS ADD										Excess of arc per 100 ft.	LONG CHORDS				
D	10	20	30	40	50	60	70	80	90		D	200	300	400	500
4°	.00	.00	.01	.01	.01	.01	.01	.01	.00	.02	1	199.99	299.97	399.92	499.85
6	.00	.01	.01	.02	.02	.02	.02	.01	.01	.05	2	199.97	299.88	399.70	499.39
8	.01	.02	.02	.03	.03	.03	.03	.02	.01	.08	3	199.93	299.73	399.32	498.63
10	.01	.02	.03	.04	.05	.05	.05	.04	.02	.13	4	199.88	299.51	398.78	497.57
12	.02	.04	.05	.06	.07	.07	.07	.05	.03	.18	5	199.81	299.24	398.10	496.20
14	.02	.05	.07	.08	.09	.10	.09	.07	.04	.25	6	199.73	298.90	397.20	494.53
16	.03	.06	.09	.11	.12	.12	.12	.09	.05	.33	7	199.63	298.51	396.28	492.57
18	.04	.08	.11	.14	.15	.16	.15	.12	.07	.41	8	199.51	298.05	395.14	490.31
20	.05	.10	.14	.17	.19	.20	.18	.15	.09	.51	9	199.38	297.54	393.86	487.75
22	.06	.12	.17	.21	.23	.24	.22	.18	.10	.62	10	199.24	296.96	392.42	484.90
24	.07	.14	.20	.25	.28	.28	.26	.21	.12	.74	12	198.90	295.63	389.12	478.34
26	.09	.17	.24	.29	.32	.33	.31	.25	.15	.86	14	198.51	294.06	385.22	470.65
28	.10	.19	.27	.34	.37	.38	.36	.29	.17	1.00	16	198.05	292.25	380.76	461.86
30	.11	.22	.31	.39	.43	.44	.41	.33	.19	1.15	18	197.54	290.21	375.74	452.02
32	.13	.25	.36	.44	.49	.50	.47	.38	.22	1.31	20	196.96	287.94	370.17	441.15
34	.15	.28	.40	.50	.55	.57	.53	.43	.25	1.48	22	196.32	285.44	364.06	429.30
36	.17	.32	.45	.56	.62	.64	.60	.48	.28	1.66	24	195.63	282.71	357.43	416.53
38	.18	.36	.51	.62	.70	.71	.66	.53	.31	1.80	26	194.87	279.76	350.30	402.89
40	.21	.40	.56	.69	.77	.79	.73	.59	.35	2.06	28	194.06	276.59	342.69	388.43
42	.23	.44	.62	.76	.85	.87	.81	.65	.38	2.28	30	193.18	273.20	334.61	373.20
44	.25	.48	.68	.84	.94	.96	.89	.72	.42	2.50	32	192.25	269.61	326.08	357.28
46	.27	.52	.75	.92	1.02	1.05	.98	.78	.46	2.74	34	191.26	265.81	317.12	340.73
48	.30	.57	.81	1.00	1.12	1.14	1.06	.86	.50	2.99	36	190.21	261.80	307.77	323.61
50	.32	.62	.89	1.09	1.21	1.24	1.15	.93	.55	3.24	38	189.10	257.60	298.03	305.99
52	.35	.67	.96	1.18	1.31	1.35	1.25	1.01	.59	3.52	40	187.94	253.21	287.94	287.94
54	.38	.73	1.04	1.28	1.42	1.46	1.35	1.09	.64	3.80	42	186.72	248.63	277.51	269.54
56	.41	.78	1.12	1.38	1.53	1.57	1.46	1.17	.69	4.09	44	185.44	243.87	266.78	250.85
58	.44	.84	1.20	1.48	1.65	1.69	1.57	1.26	.74	4.40	46	184.10	239.93	255.78	231.95
60	.47	.91	1.29	1.59	1.76	1.81	1.68	1.35	.80	4.72	48	182.71	233.83	244.51	212.92

NOTE.—When a chord of less than 100 ft. is used the corrections given in the above table should be added to the nominal length of chord to get the length which should be used in order that the 100 ft. points will check with those obtained by using the standard 100 ft. chord. Thus in locating a 14° curve by 25 ft. chords measure 25°.06 for each chord. Long chords are useful in passing obstacles.

TABLE VII.—MIDDLE ORDINATES FOR RAILS IN FEET.

Deg. of Curve	LENGTH OF RAILS							Deg. of Curve	LENGTH OF RAILS.						
	32	30	28	26	24	22	20		32	30	28	26	24	22	20
1°	.022	.020	.016	.013	.011	.009	.008	15°	.356	.313	.273	.236	.200	.170	.139
2	.045	.038	.034	.029	.025	.021	.017	17	.378	.333	.290	.252	.213	.180	.148
3	.067	.058	.051	.044	.037	.031	.026	18	.400	.351	.306	.265	.225	.190	.156
4	.089	.079	.069	.060	.050	.042	.035	19	.423	.371	.324	.280	.238	.201	.165
5	.112	.099	.086	.074	.063	.053	.044	20	.445	.392	.341	.296	.250	.212	.174
6	.134	.117	.102	.088	.076	.064	.052	21	.466	.410	.357	.309	.262	.222	.182
7	.156	.137	.120	.104	.088	.074	.061	22	.487	.430	.375	.325	.275	.233	.191
8	.179	.158	.137	.119	.100	.085	.070	23	.509	.450	.390	.338	.287	.243	.199
9	.201	.175	.153	.133	.112	.095	.078	24	.531	.469	.408	.354	.299	.253	.208
10	.223	.196	.171	.148	.125	.106	.087	25	.552	.486	.424	.367	.311	.263	.216
11	.245	.216	.188	.163	.139	.117	.096	26	.573	.506	.441	.382	.323	.274	.225
12	.268	.236	.206	.179	.151	.128	.105	27	.594	.524	.457	.396	.335	.284	.233
13	.290	.254	.222	.192	.163	.138	.113	28	.618	.545	.475	.411	.348	.294	.242
14	.312	.275	.239	.207	.175	.148	.122	29	.638	.564	.491	.424	.361	.303	.250
15	.334	.295	.257	.223	.188	.159	.131	30	.660	.583	.508	.438	.374	.313	.259

309 007  
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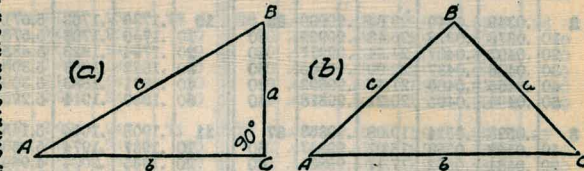
78 03  
70 30  
77 3

SLOPE REDUCTIONS.

When distances are measured on a slope they may be reduced to the equivalent horizontal distance by the following approximate rule:— subtract from the slope distance the square of the rise divided by twice the slope distance. Thus for a slope distance of 250.3 ft. and a rise of 15 ft. correction=15<sup>2</sup>÷2×250.3=.45 (by slide rule) or horizontal distance=250.3—.45=249.85. When vertical angle=V. A. is measured horizontal distance=slope distance—slope distance (1—Cos. V. A.). Thus for slope distance of 248.7 ft. and V. A. of 4° 20' from Table VIII Cos=.99714 and correction=1—.99714=.00286 per foot or total of .286×2½ (near enough)=.57 and horizontal distance=248.7—.57=248.13 ft.

TRIGONOMETRICAL FORMULAS.

- See fig. (a).
- sin.  $A = \frac{a}{c}$
  - cos.  $A = \frac{b}{c}$
  - tan.  $A = \frac{a}{b}$
  - cot.  $A = \frac{b}{a}$
  - sec.  $A = \frac{c}{b}$
  - cosec.  $A = \frac{c}{a}$



FORMULA FOR SOLVING TRIANGLES.

Given	Sought.	Right triangles. See fig. (a).
a, c	A, B, b	$\sin. A = \frac{a}{c}, \cos. B = \frac{a}{c}, b = \sqrt{(c+a)(c-a)}$
a, b	A, B, c	$\tan. A = \frac{a}{b}, \cot. B = \frac{a}{b}, c = \sqrt{a^2 + b^2}$
A, a	B, b, c	$B = 90^\circ - A, b = a \cot. A, c = \frac{a}{\sin. A}$
A, b	B, a, c	$B = 90^\circ - A, a = b \tan. A, c = \frac{b}{\cos. A}$
A, c	B, a, b	$B = 90^\circ - A, a = c \sin. A, b = c \cos. A$
Given	Sought.	Oblique triangles. See fig. (b).
A, B, a	b	$b = \frac{a \sin. B}{\sin. A}$
A, a, b	B	$\sin. B = \frac{b \sin. A}{a}$
a, b, C	A - B	$\tan. \frac{1}{2}(A - B) = \frac{(a - b) \tan. \frac{1}{2}(A + B)}{a + b}$
a, b, c	A	$\left\{ \begin{array}{l} \text{If } s = \frac{1}{2}(a + b + c), \sin. \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}} \\ \cos. \frac{1}{2}A = \sqrt{\frac{s(s - a)}{bc}}, \tan. \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{s(s - a)}} \\ \sin. A = \frac{2\sqrt{(s - a)(s - b)(s - c)} s}{bc} \end{array} \right.$
A, B, C, a	area	$\text{area} = \frac{a^2 \sin. B \sin. C}{2 \sin. A}$
A, b, c	area	$\text{area} = \frac{1}{2} b c \sin. A$
a, b, c	area	$s = \frac{1}{2}(a + b + c), \text{area} = \sqrt{s(s - a)(s - b)(s - c)}$

TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Angle	Sine.	Tan.	Cotg.	Cosin.	Angle	Sine.	Tan.	Cotg.	Cosin.	
32	.5299	.6249	1.600	.84805	53	.8000	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
33	.5446	.6494	1.540	.83867	57	.8387	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
34	.5592	.6745	1.483	.82904	56	.8290	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
35	.5736	.7002	1.428	.81915	55	.8192	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
36	.5878	.7265	1.376	.80902	54	.8090	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
37	.6018	.7536	1.327	.79864	53	.7986	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
38	.6157	.7813	1.280	.78801	52	.7880	1.0000	1.0000	.6000	
10	.1736	.3132	1.5724	.98481	50	.7660	1.0000	1.3071	.6428	
20	.3420	.6344	1.5560	.93969	40	.6428	1.0000	1.5560	.7660	
30	.5000	1.0000	1.5000	.86603	30	.5000	1.0000	1.5000	.86603	
40	.6428	1.5560	1.3071	.76604	20	.3420	1.0000	1.5724	.93969	
50	.7660	1.3071	1.5560	.64280	10	.1736	1.0000	1.5724	.98481	
	Cosin.	Cotg.	Tan.	Sine.	Angle.	Cosin.	Cotg.	Tan.	Sine.	Angle.

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	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
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	3.06
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	3.33
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	3.61
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	3.89
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	4.17
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	4.44
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	4.72
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	5.00
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	5.28
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	5.56
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	5.83
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	6.11
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	6.39
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	6.67
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	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
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	7.50
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	7.78
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	8.06
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	8.33
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	8.61
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	8.89
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	9.17
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	9.44
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	9.72
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	10.00
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	10.28
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	10.56
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	10.83
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	11.11

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 + .089 = 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 4. 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.

