

1069

DEEPEY

BYGONES

1860

No. 702

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 $30.6 + (20 - 16) \times 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on $1\frac{1}{2}$ see inside of back cover.

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BOOK 1069

140.00
220.00
6.2
376.2

10685
376.2
11061.2

1320
780
550

Fenton Colo. 366

ADOLF FRESE OPTICAL CO., INC.

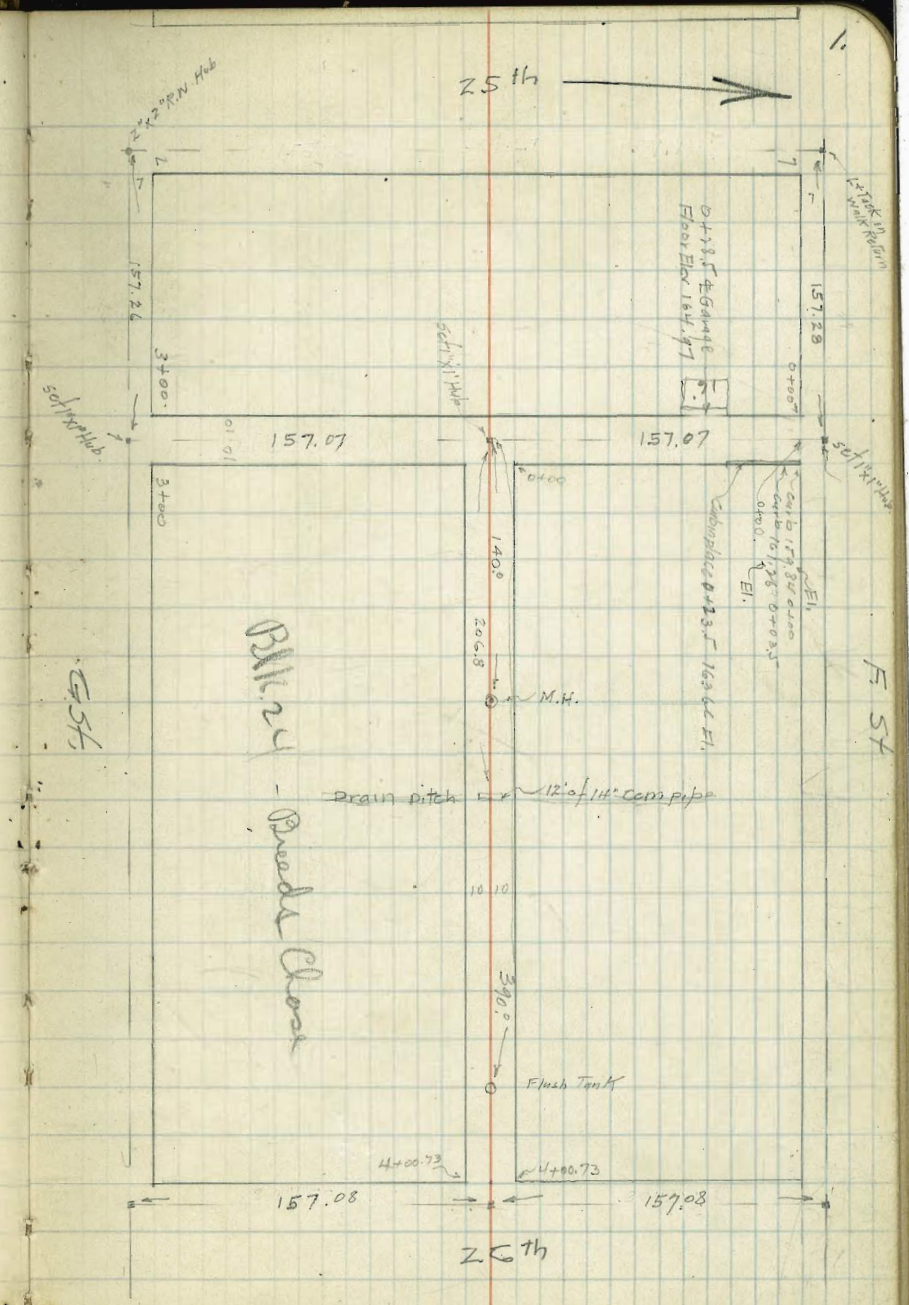
716-718 So. Hill St.

LOS ANGELES, - - - CAL.

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X ✓ Columbia	55	
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Survey of Alley between 25th & 26th St
 Alley between 9th and
 Alley between Est. & G St

578.08
 167.27
 407.73



10.34
172.14
182.48

180.36
172.14
182.48

2

180.36
172.14

Cross Section Levels South from "F" St on Alley between "F" & "G" Sts. N. + S.

Station	FS	Elev	Remarks	Level	Remarks
B.S. 2.12	182.48			180.36	
+0.20	169.64	169.44	TP 13.04	165.82	5.8
S Carb F St W Line Alley	7.96	161.68			5.1
" " " " E " Alley	10.47	159.17			4.9
S Line F St	0+00	159.84			4.4
E on Alley Carb	9.80	159.84			1.5
E	8.20	161.44			1.4
W on Alley Carb	7.71	161.93			5.8
4.08	165.82	161.74	TP 7.90		6.5
W Floor Garage & 16' opening 2' back Alley line	0+28.5	164.97			7.8
E	1.80	164.07			7.1
E End Carb south 3.5 south of 0+00	0+23.5	163.66			6.7
	0+50	161.76			3.8
F	3.40	162.42			7.3
E	3.00	162.82			8.5
W	0.90	164.92			8.6
0+75	0.90	164.92			8.9
E	3.60	162.22			9.7
E	4.40	161.42			9.5
1+00	4.70	161.12			7.7
F	4.00	161.82			8.5
5' W E	3.22	162.62			10.4
W	0.8	165.02			10.5
W	0.7	165.12			11.7
E + 6' East	3.4	162.42			10.7
E	4.3	161.52			10.2
E + 7	4.8	161.02			8.5
E / line	5.9	159.92			
1+50.07					

Level	Remarks
180.36	
180.36	
169.44	
169.44	
161.64	
161.64	
161.74	
161.74	
164.32	
164.42	
160.02	
159.30	
158.02	
158.72	
159.12	
162.02	
158.52	
157.32	
157.22	
156.92	
156.12	
156.32	
158.62	
157.32	
155.42	
155.32	
154.12	
155.12	
155.62	
157.32	

N Prop Line G St
3+00

509 . 3

Alley Between 25th & 26th St.

5.28
8.10
13.38

380
27.90
407.90

4

Cross Section Levels East from South Side of Alley to 26th St

E. Line of N. & South Alley

0+00
165.82

South Side of Alley to 26th St
Elev.

S			5.3	160.52
E			5.8	160.02
N			6.5	159.32
N		0+25	9.6	156.22
E			9.6	156.22
S			9.9	155.92
	0.63	153.36	T.P. 13.09	152.73
S		0+50	2.4	150.96
E			2.1	151.26
N			1.5	151.86
N		0+75	5.7	147.66
E			6.0	147.36
S			6.0	147.36
S		1+00	8.7	144.66
E			9.3	144.06
N			9.7	143.66
	3.08 +	143.50	T.P. 12.14	140.42
N		1+25	4.9	138.6
E			5.1	138.4
S			6.3	137.2
Top M. Hole		1+30	5.28	138.2
Flow Line			13.38	130.1
S		1+50	10.3	133.2
E			9.5	134.0
N			8.2	134.8

+

143.50
1+75

N
E
S
S
E
N
N
E
S
S
E
N
E
S
E
S

1+96.8

14" Drain pipe

2+75

N
E
N
S
E
S
E
N
E
S
E
S
E
S

2+30

Man. Hole

2+50

12.10

155.40

2+75

12.40

167.51

3+25

Elev

10.1	133.44
10.2	133.3
10.7	132.8
10.4	133.1
8.6	134.9
10.0	133.5
3.3	140.2
3.6	139.9
3.9	139.6
3.28	140.22
0.8	142.7
0.9	142.6
0.8	142.7
T.P. 0.2	143.30
8.5	146.9
9.3	146.1
9.4	146.0
2.2	143.2
2.5	142.9
2.2	153.2
T.P. 0.29	155.11
8.0	159.5
7.9	159.6
7.5	160.0

165.82
13.09 -
152.93
0.63 +
153.36
12.14 -
140.42
3.08 +
143.50
0.20 -
143.30
12.10 +
155.40
0.29 -
155.71
12.40 +
167.51

	+	↑	-	
		167.57		
		3450		
S			1.6	165.9
E			1.1	166.4
N			1.1	166.4
	+ 11.79	179.17	T.P. 0.13	167.38
N		3467	8.5	170.7
E			8.4	170.8
S			9.0	170.2
S + 4 south Garage floor			9.2	170.0
S		3480	6.2	173.0
E Flush Tank Top			6.34	172.83
N			6.3	172.9
N		Property W. Line 26 th St	3.9	175.3
E			4.0	175.2
S			3.9	175.3
S		W. Curbline 26 th St	4.23	174.94
N.			4.06	175.11
			1.86	178.11

177.71
5.09
182.80
2.80
180.00

167.57
0.13 5
167.38
11.79+
179.17
1.86-
178.31
5.09
183.20
2.80
180.40

Brass plug 26th St 4th St NW Cor. B.M. 178.122

$\Delta 5+80^6 = 3+90$ place of beginning $80^{\circ}54'$ $84^{\circ}57'Lt$ to Sta 4+60

2646
7

$\Delta 3+16^9$

$83^{\circ}11'Lt$

916
 $\Delta 0+0$
B.S. - P.O.T.

$14^{\circ}17'Lt$

$\Delta 79+01^{40}$ Int fence line

$122^{\circ}37'30"Lt$

776
E

75+30

$452^{\circ}51'30"Lt$

$N34^{\circ}12'20"E$

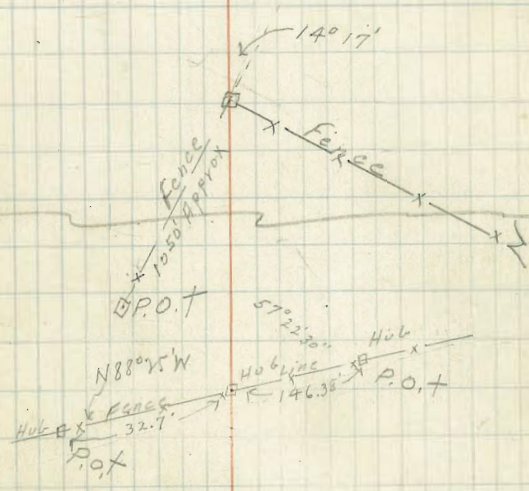
To int fence

32.70
146.35
179.05

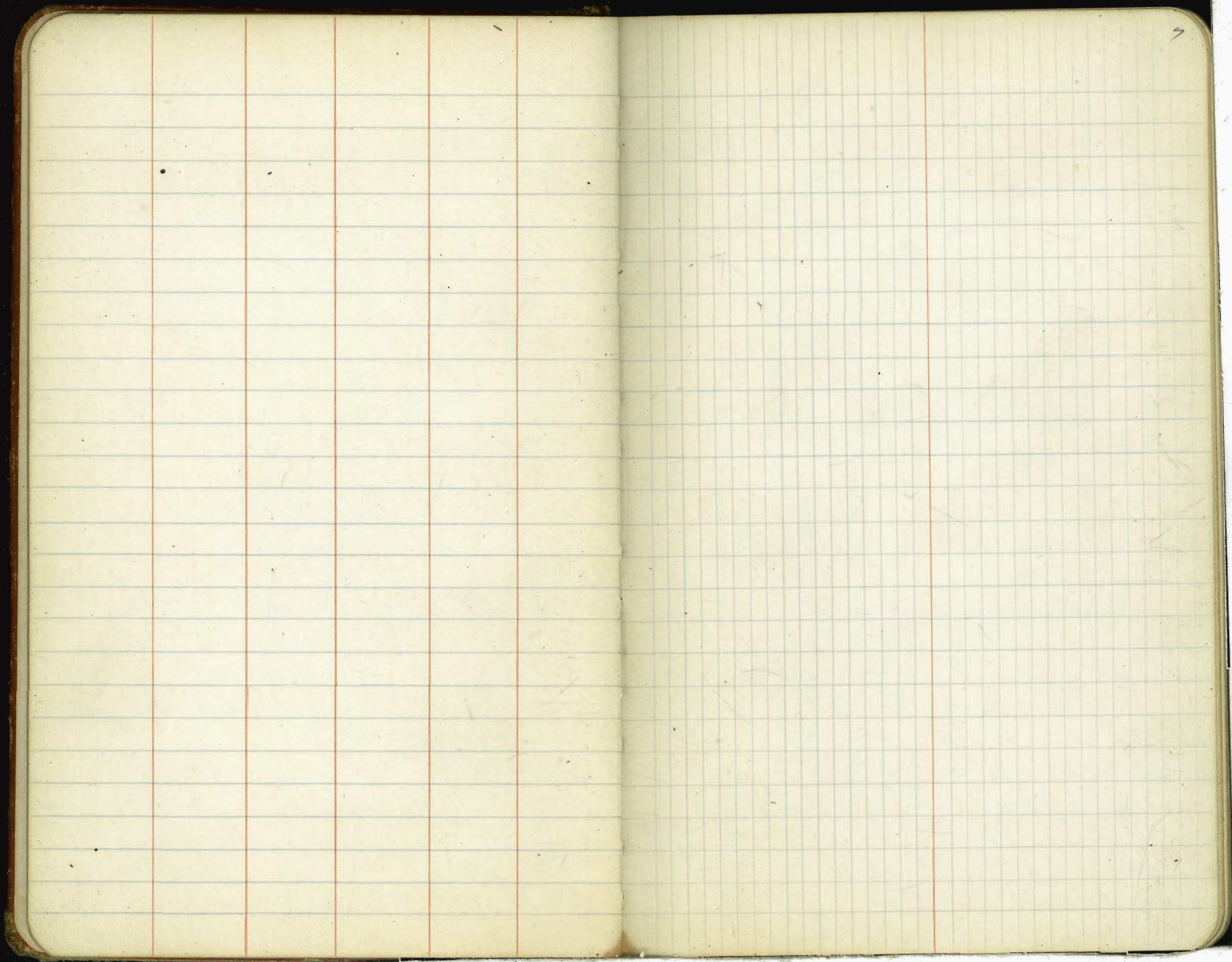
6

Tic into 3+90

0+0 to 3+90
 $N0^{\circ}29'30"E$



32.70
146.35
179.05



Survey of grain fields in Pueblo Lots 1324 & 1325
Field #4

11/9/19 Dunkle
G. Moore
B. Moore

Δ 25+33

13° 01' LT

159.8

N32°39'W

Δ 23+73^x

24° 42' LT.

165.4

N7°57'W

22+07⁸ Δ

28° 24' 30" RT

162.8

N26°31'30"W 236'21"-30

Δ 20+45

X

47° 31' 30" RT

138.5

N83°53'W

17+25 P.O.T.

+ 65'

Δ 16+60

24° 10' LT.

166.0

N10° 17'E

11+0 P.O.T.

0+0 Δ

99° 57' RT.

B.S. granite Mon S.E. P.L. 1324

□

□

□

□

□

□

□

□

74'

found

□

1" x 3" hUL

□

50' x 40' W

□

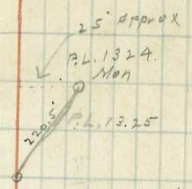
granite Mon S.E. P.L. 1324

□

Note Granite Mon - 1" x 3" hUL - Sta 0+0 and Sta 110+65 are on same line

Field #4

				71° 37' RT	N 83° 54' 30" E
					N 58° 59' E
Δ 2	Δ 57+20	x	280	80° 57' 30" LT	S 15° 02' E
	Δ 55+00	x	550		54° 03' 30" E
Δ 2	Δ 49+50	x	101°	48° 55' 30" LT	S 33° 47' 30" W
	Δ 47+65	x	140		58° 52' W
22+0	Δ 46+25	x	100	27° 56' LT	S 61° 43' 30" W
	Δ 45+25	x	390		536° 48' W
Δ 20	Δ 42+35	x	205°	24° 55' 30" LT	586° 39' W
	Δ 40+30	x	175		59° 45' LT
Δ 16	Δ 37+35	x	265		N 33° 36' W
	Δ 34+35	x	175	14° 17' RT	N 47° 53' W
11+0	Δ 31+70	x	265		16° 17' 30" LT
0+0	Δ 29+90	x	160		N 31° 35' 30" W
3.5.9	Δ 28+70	x	120	89° 34' RT	558° 50' 30" W
	Δ 27+13	x	157		48° 43' LT
					N 72° 26' 30" W
					22° 02' 30" RT
					585° 31' W
					32° 46' 30" LT
					N 61° 46' 30" W
					16° 06' 30" LT
					N 45° 45' W



check angles forward and back from here ✓

Field #V

Δ 85+70	92° 15' 30" Rt	N 54° 33' 30" E
Δ 83+70	X 40° 01' 30" Rt	N 14° 32' E N 10° 23' 30" N
Δ 79+20	31° 24' Lt	N 05° 56' E N 21° 00' 30" E
Δ 78+00	40° 38' 30" Lt	N 06° 34' 30" E N 61° 39' E
Δ 75+35	72° 39' Lt	S 20° 46' 30" E S 40° 12' E
Δ 74+10	36° 39' Lt	S 15° 52' 30" W S 9° 03' E
Δ 71+80	31° 11' Rt	S 15° 18' 30" E S 40° 14' E
Δ 70+45	17° 39' Lt	S 20° 20' 30" W S 22° 35' E
Δ 69+00	26° 23' 30" Lt	S 28° 42' W S 3° 28' W
Δ 67+60	37° 06' 30" Rt	S 8° 22' 30" E S 33° 18' E
Δ 64+55	76° 35' Lt	S 68° 12' 30" W S 43° 17' W
Δ 62+20	31° 27' Lt	N 00° 20' 30" W S 74° 44' W
Δ 60+80	124° 08" Rt	S 21° 28' 30" E S 49° 24' E

Δ 113+27³ = 550+0

2661

80° 03' LT to 52 16+60

S 89° 43' E
N 38° 58' 30" E

Δ 110+61²

3762

98° 17' 30" LT to 52 01+0
58° 34' 30" W
S 42° 44' E

Δ 106+85

3184

41° 45' 30" RT S 33° 11' E
58° 41' 30" E

Δ 103+66²

3184

43° 31' 30" RT S 76° 42' 30" EE
N 51° 59' E

Δ 99+10

252

25° 09' RT N 78° 08' 30" E
N 26° 50' E

Δ 96+55

335

74° 53' 30" LT S 26° 58' E
N 48° 03' 30" E

Δ 93+20

335

34° 45' LT S 7° 47' W
N 82° 48' 30" E

Δ 91+25

252

26° 42' LT S-34° 29' W
57° 29' 30" E

Δ 88+70

300

67° 46' RT S 33° 11' E
N 41° 50' 30" E

Survey of grain field in Pueblo Lots 1316 & 1317
Field #5

11/10/10 Dunkle
C. Moore
B Moore

12

A 16+35

12° 40' LT

275
210

A 13+60

27° 16' 30" RT

250

A 11+10

60° 07' LT

195

A 9+15

49° 33' 30" RT

115

A 8+00

28° 09' 30" LT

165

A 6+35

79° 25' LT

160

A 4+75

19° 13' LT

400

O + 6 - Hub Marked 12+53 - 1 E of fence

47° 24' 30" LT

B.S. = P.O.T. 10+60 1 E of fence

□ Lot 5



□ 1st Hub side Campbell
Road marked 12+53

A 35+05

83° 40' LT

125

□ Lath

A 33+90

34° 07' 30" RT

115

300

A 30+90

41° 30' RT

210

A 28+80

62° 30' LT

95

A 27+85

48° 26' 30" RT

240

A 25+45

23° 12' LT

260

A 22+85

39° 28' LT

345

A 19+90

56° 00' 30" RT

95

A 18+45

58° 52' 30" RT

x

□ Lath

Δ 50+80

89° 16' 30" RT ✓

□ Lat

320

Δ 49+00

22° 58' RA ✓

180

Δ 47+20

70° 00' LT ✓

180

Δ 46+00

32° 49' 30" LT ✓

120

Δ 44+95

39° 02' 30" LT ✓

105

Δ 43+95

40° 38' 30" LT ✓

100

Δ 40+95

20° 52' 30" LT ✓

300

Δ 38+30

16° 26' 30" LT ✓

265

Δ 36+30

26° 34' RT ✓

200

□ Lat

A 76+80

42°16'30" Lt ✓

60

□ Lat

A 74+00

30°18' Lt ✓

280

A 72+65

116°07'30" Rt ✓

135

A 69+25

107°29' Rt ✓

340

A 63+45

76°11' Lt ✓

580

A 62+40

53°23' Lt ✓

105

A 59+70

129°06'30" Rt ✓

170

A 57+00

45°38'30" Lt ✓

270

A 54+00

48°34'30" Lt ✓

300

□ Lat

Δ 95+68

8° 39' Lt ✓

2186 849

Δ 93+50

27° 40' 30" Rt ✓

300

Δ 90+50

19° 32' Rt ✓

185

Δ 87+65

67° 14' Lt ✓

190

Δ 85+75

43° 11' Rt ✓

235

Δ 83+40

44° 35' Rt ✓

200

Δ 81+40

68° 27' Lt ✓

205

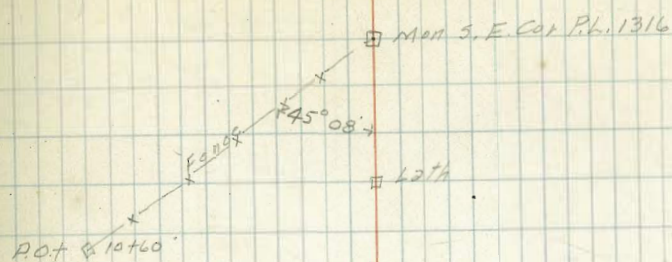
Δ 79+35

27° 25' 30" Rt ✓

195

Δ 77+40

86° 35' Lt ✓



Δ 125+25

53° 44' RT ✓

RT ✓

95
61.5

Δ 124+30

73° 00' RT ✓

210

Δ 122+20

71° 48' LT ✓

82.6

Δ 121+37^A

64° 43' LT ✓

270°

Δ 118+67^A

29° 30' LT ✓

327.4

Δ 115+40

88° 35' RT ✓

337.4

Δ 112+02⁶

43° 01' 30" LT ✓

414°

Δ 107+88⁶

85° 18' 30" LT ✓

104+25 = ♀ Camp Kearney road

371°

Δ 104+17⁶

66° 30' LT ✓

27.4

RT ✓

143+61R = 0+0

7° 09' Rt to Sta 4+75

142+97E Camp Kearney road

Δ 140+47A

57° 24' Lt ✓

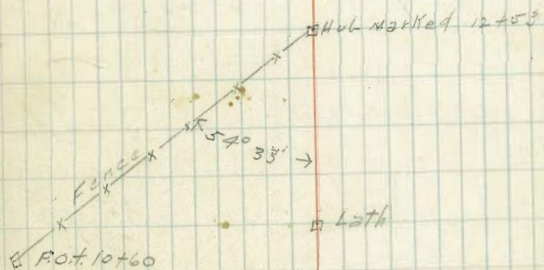
Δ 131+40

6° 43' Rt

314°

907.4

x24px



Field #6 Known as Bakers Point

12/12/19 Dunkle
C. Moore
B. Moore

111 P.L. 1326-1327

19

Δ 10+55

32°42'30" L ✓

100

Δ 9+55

88°59'30" L ✓

240

Δ 7+15

82°45' RT ✓

190

Δ 5+25

52°20' L ✓

90

Δ 4+35

17°19' RT ✓

180

Δ 2+55

25°18'30" L ✓

165

Δ 0+90

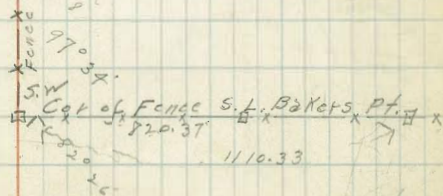
100°54'30" RT ✓

90

N5°55'30"W

0+0 = Hub S.W. cor of Fenced field
Forward sight Hub N. end of fence

both on line bet Hubs at N.E. ends of fence



Field #6

20

A 30+90

22°15'30" LHV

300

A 27+90

22°54'30" LHV

200

A 25+90

22°26'30" RLV

185

A 24+05

29°19' RLV

320

A 20+85

59°49' LHV

260

A 18+25

33°43'30" RLV

300

A 15+25

99°15'30" RLV

270

A 12+55

79°18' LHV

100

A 11+55

36°24'30" RLV

100

⊙V

Δ 53+65 → 28°58'30" LH

135

Δ 52+30 → 21°15'30" LH

300

Δ 49+30.00 → 124°27' RH

101.7

Δ 48+28³⁰ → 58°10'30" RH ✓

488.3

Δ 43+40. × 4°33' RH ✓

300

Δ 40+40 × 19°46' L ✓ ✓

310

Δ 37+30 × 44°44' RH ✓

300

Δ 34+30 × 41°15' LH ✓

240

Δ 31+90 × 38°04'30" RH ✓

100

1" x 1" Hub Williams Plot

✓ checks from here each way ✓

Field #6

22

A 76+80

55° 01' RTV

A 75+00

48° 15' LT ✓

A 73+00

25° 06' 30" L
35° 06' 30" LT ✓

A 70+75

25° 11' 30" LT ✓

A 66+50

✓ 31° 56' 30" RT ✓

A 64+60

36° 11' LT ✓

A 61+60

117° 37' RT ✓

A 60+55

55° 59' 30" RT ✓

A 54+65

65° 39' LT ✓

Δ 93+85 x 22° 53' RT ✓

Δ 92+20 x 52° 32' 30" LT ✓

Δ 90+15 x 53° 17' 30" LT ✓

Δ 88+50 x 29° 30' LT ✓

Δ 85+50 x 16° 22' RT ✓

Δ 83+80 x 30° 12' 30" RT ✓

Δ 81+75 x 13° 37' 30" RT ✓

Δ 80+75 x 59° 41' RT ✓

Δ 78+70 x 32° 05' LT ✓

/65

205

/65

300

170

205

100

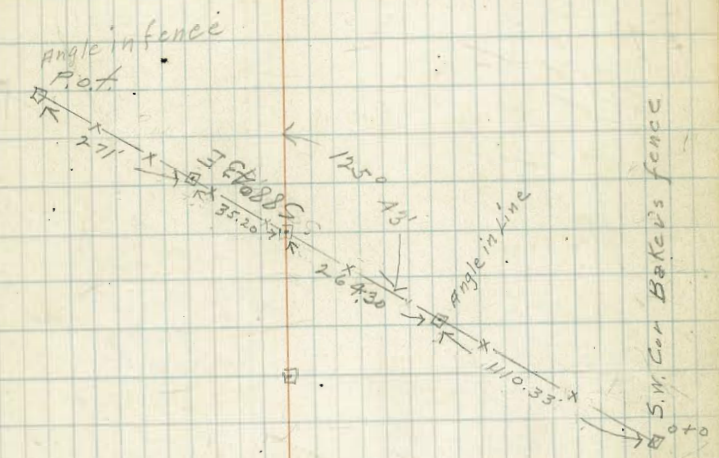
205

190

127+51 ⁹¹ = 0+0	82° 26' RT to sta 0+90
A 116+41 ⁵⁸	0° 21' 30" RT
A 113+77 ²⁸ = int fence line 4.6 x 30	125° 43' RT
A 110+30	39° 26' LT
A 109+35	71° 32' LT
A 106+35	17° 47' 30" RT ✓
A 103+85	86° 40' RT
A 102+85	28° 51' RT ✓
A 99+85	104° 36' LT ✓

600 x 300 x 100
 250 x 300
 95 x 347.28

264.3 x 110.33



171
 37.4
 264.3
 170.1

Surrey grain field No 7 between Miramar and Sorrento roads IN P.L. 1321

1/6 Dunkle
20 C Moore
B Moore

25

Δ 17+71	59° 07' 30" RT	266 x 115
Δ 15+05	48° 46' RT	255
Δ 12+50	43° 55' LT	100
Δ 11+50	108° 43' 30" LT	470
Δ 6+80	88° 23' 30" LT	160
Δ 5+20	44° 02' RT	365
Δ 1+55	86° 48' 30" LT	155

O+O P.O.T. on fence line 300' E. of Hub marked 13+12
B.S. = Hub marked 13+12

□ Lath

□

□

□

□

□

□

□

□

□

□

□

← Fence Line

Hub marked 13+12 ⁴⁰ should be 23+72

$\Delta 43+43$ $4^{\circ}24' \text{ LT}$

120

583

 $\Delta 37+60$ $31^{\circ}47'30'' \text{ RT}$

340

 $\Delta 34+20$ $49^{\circ}38' \text{ LT}$

123

 $\Delta 32+95$ $17^{\circ}51'30'' \text{ LT}$

300

 $\Delta 29+95$ $108^{\circ}27' \text{ RT}$

200

 $\Delta 27+95$ $59^{\circ}19'30'' \text{ LT}$

235

 $\Delta 25+60$ $65^{\circ}55'30'' \text{ RT}$

300

 $\Delta 22+60$ $39^{\circ}09'30'' \text{ LT}$

374

 $\Delta 18+86$ $64^{\circ}16' \text{ RT}$

115

$\Delta 70+00$ $69^{\circ}56'30'' \text{LT}$ $\Delta 68+05$ $49^{\circ}20' \text{LT}$ $\Delta 66+10$ $78^{\circ}26'30'' \text{RT}$ $\Delta 63+06 \frac{75}{15}$ $29^{\circ}16'30'' \text{LT}$ $\Delta 57+41 \frac{30}{15}$ $75^{\circ}13' \text{LT}$ $\Delta 56+44$ $112^{\circ}18' \text{LT} \checkmark$ $\Delta 54+40$ $51^{\circ}04'30'' \text{RT}$ $\Delta 52+65$ $50^{\circ}37'30'' \text{RT}$ $\Delta 45+90$ $24^{\circ}45' \text{LT}$ 195 x
195 x
303.25 x
514.95 x
97.8 x
204 x
175 x
675 x
247 xH/L
Williams Pot Marked 5+65

P.L. 1328

⊙ concrete Mon P.L. 1356

P.L. 1321

← Parallel fence

date

$\Delta 92+05$ $42^{\circ}02' RT$

235 x

 $\Delta 89+70$ $53^{\circ}24'30'' RT$

185 x

 $\Delta 87+85$ $69^{\circ}07' RT$

130 x

 $\Delta 86+55$ $41^{\circ}08' LT$

175 x

 $\Delta 84+80$ $8^{\circ}12' LT$

760 x

 $\Delta 77+20$ $41^{\circ}59'30'' LT$

x

100

 $\Delta 76+20$ $72^{\circ}57' LT$

75 x

 $\Delta 75+45$ $52^{\circ}18'30'' LT$

300

 $\Delta 72+45$ $87^{\circ}15'30'' RT$

245

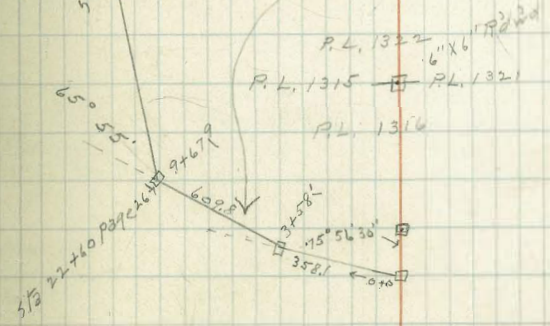
△ 125+80	116° 00' RT	770
△ 118+10	81° 13' 30" LT	210
△ 116+00	8° 36' RT	140
△ 114+60	33° 48' LT	65
△ 113+95	93° 00' LT	470
△ 109+25	101° 12' RT	385
△ 105+40	56° 38' 30" LT	385
△ 101+55	123° 02' 30" RT	520
△ 96+35	66° 00' 30" LT	430

Δ 146+18	122° 53' 30" LT	138.2
Δ 144+80	35° 44' RT	270 x
Δ 142+10	25° 37' LT	220 x
Δ 139+90	20° 35' LT	265 x
Δ 137+25	56° 19' 30" LT	275 x
Δ 134+50	54° 21' 30" LT	68.2 x
133+81 ⁸		266.8 x
Δ 131+15	121° 24' RT	365 x
429+95		245*
Δ 127+50	83° 39' LT	170 x

williams
 1" x 1" Hub Marked (1438⁵⁸? / 17+17³⁰?)

Sta 18+86 Page 26

Note - All ground from this line south to Camp Kearney road plowed but not sowed to grain in 1918 or 1919



Δ Lath

162+00⁹⁰ = 10+0

Δ 159+00⁹⁰

0° 11' 30" RT

Δ 154+22

19° 02' RT

Δ 147+52

30° 12' RT

134 x
670 x
478.90 x
300.0 x

□ Williams P.O. +

□ Williams hub Marked 13+12⁴⁰

□ Hub Dunkle's angle in fence

□ Hub Dunkle's
Hub (RTN) of fence also angle in fence

x-section for proposed reservoir on water line between
La Jolla & Delmar

B.M. 6.30 435.80 429.50

"A" Line
0+50 5.0 430.80
1+0 4.7 431.1

1+50 5.1 430.7

2+0 5.4 430.4
+50 5.8 430.0

"B" Line
0+0 5.7 430.1
0+50 5.5 430.3

1 5.4 430.4

+50 5.6 430.2

2 5.9 429.9

+50 6.2 429.6
3 6.7 429.3

"C" Line

0+0 7.4 428.4

+50 7.0 428.9

1 6.8 429.0

+50 7.1 428.7

2 7.1 428.4

+50 7.5 428.3

3 8.3 427.5

"D" Line

0+0 10.3 425.5

+50 9.8 426.0

1 9.3 426.5

+50 9.1 426.7

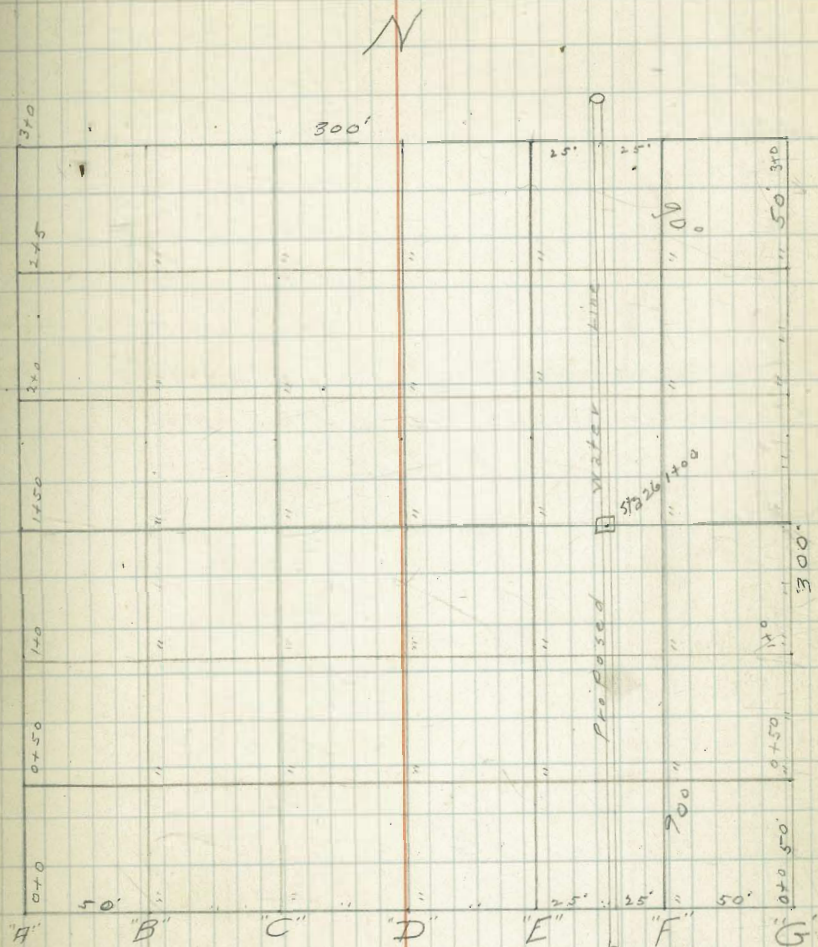
2 9.2 426.8

+50 9.9 425.9

3 10.1 425.9

1/4 Dunkle
1/4 C Moore
3/4 B Moore

32



"E" Line 435.8

0+0	13.2	422.6
+50	12.3	423.5
1	11.6	424.1
+50	11.7	424.1
2	11.5	424.3
+50	11.9	423.9
3	12.3	423.5
T.P. on Hub 261+00 offset line 4.88 423.35	12.33	423.47
on Hub 261+00 True Line	5.76	422.59

"F" Line 420.0

0+0	9.2	419.2
+50	8.2	420.2
1	7.8	420.6
+50	7.3	421.1
2	6.9	421.5
+50	7.1	421.3
3	7.5	420.9

"G" Line

0+0	—	—
+50	11.9	416.5
1	11.0	417.0
+50	10.3	418.1
2	10.2	418.2
+50	10.1	418.3
3	—	—

22+13⁶ = 0+00

90° 19' RT

152.6

20+81

89° 56' RT

87.3

12+08

41° 56' RT

19.2

10+16

137° 49' RT

10.6

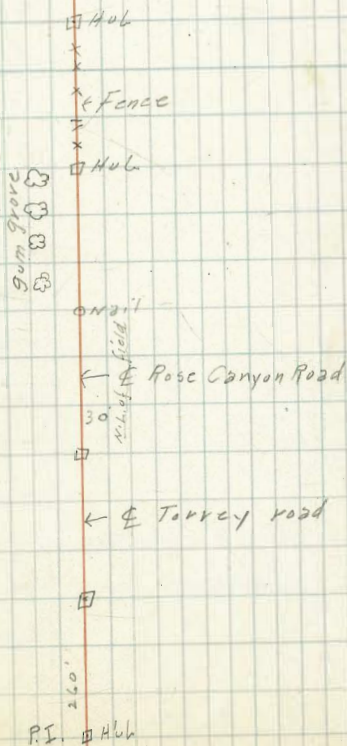
0+0

B.S. = P.I. Sou of P.T. Marked 109+13³⁴

260

260

P.I.



(Recross Section Reservoir Site) (See page 32 for cut)

Williams,
Moore. March 17-20 35
B. Shaw.

	10.04	432.64		422.6 Hub 261+00 True line CP pipeline
259 F			14.7	417.9
259 Pipe Line			12.7	419.9
" E			10.9	421.7
" D			7.8	424.8
" C			5.2	427.4
" B			2.8	429.8
254+50 A 1.80 from E Edge Pavement on Pavement			7.2	430.4
" B			2.8	449.8
" C			4.6	428.0
" D			7.1	445.5
" E			10.2	422.4
" Pipe Line			11.9	420.7
" F			13.6	419.0
260 F			12.6	420.0
" Pipe Line			10.9	421.7
" E			9.4	443.2
" D			6.5	446.1
" C			4.2	428.4
" B			2.5	430.1
" A 7.2 East from East edge Pav.			1.7	430.9
260+50 A 16.3 east from E edge Pav.			1.4	431.2
" B			2.2	430.4
" C			3.7	428.9
" D			6.0	446.6

432.64

260+50	E	8.6	424.0
"	" Pipeline	10.7	422.4
"	" F	12.0	420.6
261+00	F	11.6	421.0
"	Pipeline Hub	10.04	422.60
"	E	8.6	424.0
"	D	6.0	426.6
"	C	3.9	448.7
"	B	2.5	430.1
"	A 25.5 East of East edge Pk.	2.0	430.6
261+50	A	2.4	430.2
"	B	2.7	449.9
"	C	4.0	448.6
"	D	5.8	426.8
"	E	8.5	424.1
"	Pipe line	10.0	422.6
"	F	11.3	421.3
262+00	F	11.6	421.0
"	" Pipeline	10.2	422.4
"	" E	8.8	423.8
"	" D	6.4	426.2
"	" C	4.0	429.6
"	" B	3.0	429.6
"	" A	2.5	430.1
262+50	A	2.8	429.8
"	" B	3.2	429.4

	432.64		
262+50 C		5.0	427.6
" " D		7.0	425.6
" " E		9.3	423.3
" " Pipeline		10.6	422.0
" " F		11.9	420.7
263+00 F		12.5	420.1
" Pipeline		11.2	421.4
" " E		9.9	422.7
" " D		7.6	425.0
" " C		5.7	426.9
" " B		4.3	428.3
" " A		3.4	429.2
263+50 A		4.4	428.2
" " B		5.0	427.6
" " C		6.4	426.2
" " D		8.2	424.4
" " E		10.6	422.0
" Pipeline		11.9	420.7
" F		13.0	419.6
264+00 F		13.4	419.2
" Pipeline		12.3	420.3
" E		11.4	421.2
" D		9.3	423.3
" C		7.4	425.2
" B		5.8	426.8
" A		5.2	427.4

Levels to observe settlement of fill in break of new La Jolla
Reservoir
Iron pins about 3' above bottom one North & 1 South of Cone tunnel

Mar. 17, 21			0.000	iron davel assumed elev.
N. pin	4.846	4.846	2.037	2.809
S. pin			2.031	2.815
Mar 21, 21				
N. pin	4.588	4.588	1.776	2.812
S. pin			1.770	2.818
Mar 27, 21				
N. pin	4.678	4.678	1.872	2.806
S. pin			1.869	2.809

March, 1921

Comly
Carroll.

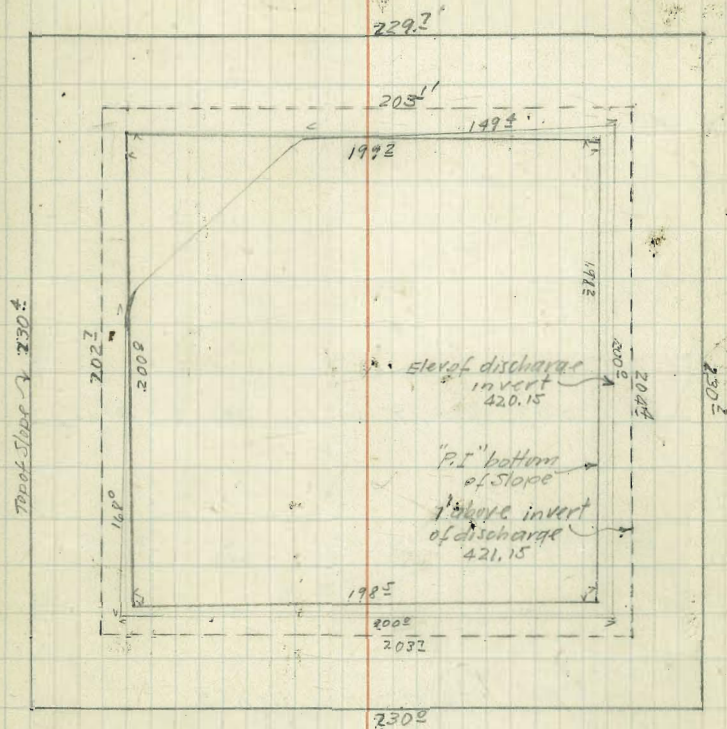
38

Levels on finished Torrey Pines Reservoir.

	B.S.	H.I.	F.S.	Elev	
				423.90	B.M. bolt in phone pole near S.E. Cor. Resrv.
Top S.W. Cor.	11.44	435.34	5.31	430.03	
" N.W. "			5.30	430.04	
" N.E. "			5.32	430.02	
" S.E. "			5.30	430.04	
T.P.		11.69		423.65	Top of Terra slab.
Bot. Gallery at Valve	1.08	424.73	9.86	414.87	
Invert of Discharge			4.58	420.15	
Bot. S.E. Cor.			5.60	419.13	
" N.E. "			5.13	419.60	
" Ctr.			5.09	419.64	
" S.W. Cor.			5.00	419.73	
" N.W. "			4.34	420.39	
Top Spillway Pipe			+5.07	429.80	

Comby Ogden April 8, 1921.

39



Torrey Pines Reservoir
finished dimensions

8" Gutters - 25 Rise to Prop from Curb

Kalmia St First to Albatross

curb 1/4 1/4 1/4 Curb
1920 1970

FRONT ST

Kalmia

199
565
201.65
565
200.11
1991
579.32

1991 1992 1994 1995 1997 1998

201.13 200.99 201.33 201.14 201.38

204.16 313 202.89 204.40 204.44 204.39 204.12 398 471
8.43 9.05 8.88 7.93 8.19

206.88 206.99 207.48 207.64 208.13

210.07 210.42 210.56 208.59 1991 1992

FIRST ST

ST

211.0

213.0

8" Gutters 25 Rise for Walks

40

curb 1/4 1/4 curb
176.0 176.0

Albatross

Kalmia St

ST

178.0 177.83 178.0 177.83 178.0

182.25 182.58 182.25 182.58 182.25

187.50 187.33 187.50 187.33 187.50

192.25 192.08 192.25 192.08 192.25

197.0 196.83 197.0 196.83 197.0

Front

Kalmia St

1975 ST

198.0

198.0

267.06 Ft Stockton + Trias

273.54	264.15	61.30	58.24	55.28	52.32	49.36
3.53	8.92	7.87	2.62	5.58	8.54	11.50
270.61	+1.9	+1.2	-0.2	-0.9	-0.8	0.0
306						
273.07						
1298						
260.14	64.25	61.25	58.25	55.25	52.25	49.25
072	8.82	11.82	2.61	5.61	8.61	11.61
260.86	+1.9	+1.4	+0.5	-1.0	-1.1	-0.5
	46.4					
	146.6					
	+0.4					
	46.25					
	146.1					
	-0.1					

270.01 BR SR Pine + Trias

279.96	261	261.12	257.24	255	251.94
8.96	11.96	16.12	4.8	7.12	10.18
51.94	4.9	4.6			
208	50.4	80.4			
51.02					

carb states 8/20/21
Grapes
Pine
Shaw

270.01	263.45	43.90	42.04
279.97	7.87	9.14	8.88
11.50			
268.40			
0.52			
268.92			
10.5	45.44	48.91	49.46
263.92	12.44	10.7	11.92

Cherry

246.25	46.5	45.9	46.3	246.4
246.25	47.0	47.4	47.8	
49.25			47.8	249.36

St.

247.2

St.

52.25	51.94	252.32
-------	-------	--------

55.25	55.06	255.28
-------	-------	--------

58.25	57.94	258.24
-------	-------	--------

61.25	61.20	
-------	-------	--

Ampudia

264.25	264.25	63.80	64.09	264.15

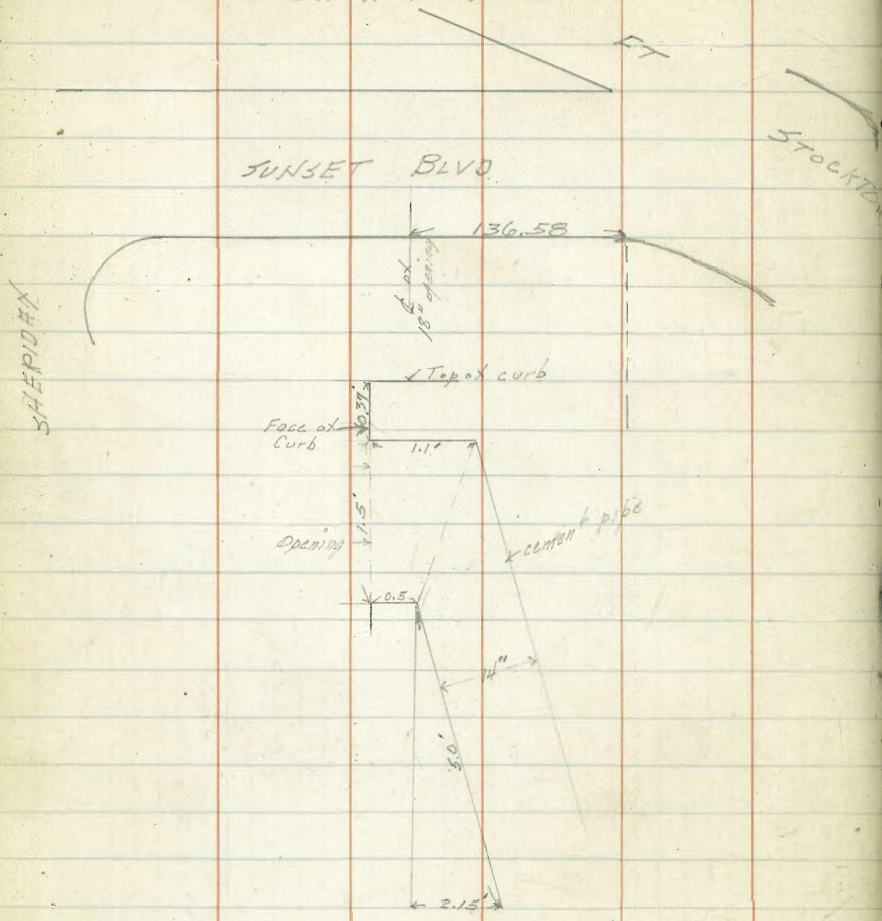
Pine

Man 40
Tic hub 60
St. Tic hub

264.2

264.5

SUNSET BLVD.
DATA FOR PAVING.



6/28/22

Gregory Moore

Cross SECTION of 18' Alley
in BIK 1 NUTTS Add
bet 1st + 3rd Univ. to Robin

	2.72	287.24	284.52	NW Univ + 3rd B.P.
		3.1 Univ.		
E	4.05	√82.19	on paving	
C	4.32	√82.89	-	
W	4.33	√82.91	-	
	50' S	= center garage on W		
-1.5 = Edge cement apron	5.2	√82.0		
W	5.1	√82.1		
C	4.8	√82.4	on M.H.	
E	4.5	√82.7		
	73' S			
E = center garage dirt floor	5.0	√82.2		
C	5.1	√82.1		
W	5.1	√82.1		
	113' S			
W	5.0	√82.2		
C	5.0	√82.2		
E = center garage dirt floor	4.8	√82.0		
	133' S			
E = center garage dirt floor	5.0	√82.2		
C	5.2	√82.0		
W	5.0	√82.2		
	165' S			
W	4.8	√82.1		
C	5.1	√82.1		

E	50	287.2	
	200' S		
E	50	√82.2	
C	52	√81.9	
W	50	√82.2	
	248' S		
-1.2 = edge cement apron	5.80	√81.0	
W	5.7	√81.5	
C	5.7	√81.5	
E	5.8	√81.0	
+1.8 = edge cement apron	5.45	√81.8	
	261' S		
16 E of E = edge cement apron	5.60	√81.6	
	300' S		
E	5.4	√81.8	
C	5.7	√81.5	
W	5.8	√81.0	
TP	3.56	285.27	
	348' S		
W	3.3	√82.0	
C	3.5	√81.8	
E = edge of Apron cement	3.23	√82.1	
	375' S		
E	3.2	√82.1	
C	3.8	√81.5	
W	3.6	√81.7	

M.

787.2

43

38527

410'5

W	4.8	✓ 80.5
C	4.9	✓ 80.4
E	4.4	✓ 80.9

415.5'5 = H.L. Robinson

E	5.06	✓ 80.71	on 6/27/19
C	5.39	✓ 79.68	✓ ✓
W	5.30	✓ 79.97	✓ ✓
chH	10.45	274.82	BP NY = 80

6/28/22 Gregory
 Moore
 Miller
 Shaw

CROSS SECTION OF bet 10th & Vt
 20' Alley Penn. & Rob'n
 Bk 215 University Hgts

4.23 286.24 282.01 BPSE 10th & Rob'n

Curb is in on both sides of alley from E. ob line
 of 10th St to 12' E of E. ob line

4' W. of E.L. of (Rob'n) 10th

S 5.21 281.03 on curb
 N 5.00 281.24 ✓ ✓

E L 10th St. = 0+00

N 4.5 81.7

+S 5.2 81.0

C 5.2 81.0

S 5.2 81.0

0+35

S 4.4 81.8

C 4.3 81.9

N 4.2 82.0

0+75

N 3.6 82.6

C 4.4 81.8

S 4.5 81.7

Garage on S is 4' out of alley
 - N = 4' - 1+00 = center of garages both side

S 4.7 81.5

C 4.1 82.1

N 3.6 82.6

1+14

N = center of garage dirt 3.5 82.7

C 4.2 282.0

S 4.1 282.1

1+42

S = cement walk to house 3.73 282.51

C 3.6 82.6

N 2.9 83.3

1+75

N 2.3 83.9

C 2.7 83.5

S fence 0.5 in alley 2.8 83.4

2+00

S 2.5 83.7

C 2.5 83.7

N 2.1 84.1

2+18

1.5' S of N = center garage (dirt) 2.3 83.9

C 2.3 83.9

S 2.4 83.8

T.P. 5.42 289.56 4.10 286.14

2+63

S = cement floor garage 5.42 84.14

C 5.4 84.2

+9 = fence 4.9 84.7

3+11

N = center garage (dirt/floor) 5.5 84.1

5.7 83.9

28956

+7 59 283.7

S 63 83.3

3162

S = center garage (dirt) 5.1 84.5

C 5.3 84.3

N 5.7 83.9

3175

N 5.0 84.1

C 5.1 84.5

S 5.0 84.6

3189

S 4.8 84.8

C 5.3 84.3

N 5.2 84.4

4100

N 5.1 84.5

C 5.1 84.5

S 4.8 84.8

4150

S 4.3 85.3

C 4.5 85.1

N = center garage (cement floor) 4.4 85.2

4180 = W.L. Vermont cement curb

N 4.21 85.35

C 4.4 85.2

S 4.39 285.17 cement curb

date B.P. 3.57 285.99 NW + Robin

46

923

CROSS SECTION OF
20' Alle / Blk 225 Univ Hgts
Vt. to Richmond Essex + Robn

29521

47

9.23 295.21 285.98 BP SW
Rpn + Vt
E. L. Vermont

S	6.50	88.91	on curb
C	6.30	88.91	on M.H.
+5	6.2	89.0	
N	6.7	88.5	
on N curb	6.27	88.96	
	0+38		
N	4.7	90.5	
+4	5.3	89.9	
C	4.8	90.6	
S	5.0	90.7	
	0+59		
S	4.5	90.7	
C	4.6	90.6	
+8.2 = edge cement apron	4.85	90.86	
N on cement	4.63	90.58	
+1.3 = front of garage	4.45	90.76	
	0+71.5 = West End of 3' cement walk on N		
N = S. edge of cement walk	4.45	90.76	
+1.6	4.5	90.7	
+2.5	5.1	90.1	
C	4.4	90.6	
S	4.3	90.9	

S	
C	
+7	
N = S. edge of cement walk	
	1434
N	
C	
+8.2 = edge of cement apron	
+9.6 = front of garage	
	1443
S	
C	
N	
+0.7 = edge of cement apron	
	1489
N	
C	
S = center garage cement floor	
	2+18
1' Not S. L. fence	
C	
+9.5 = edge cement apron	
N	
	2+43
N	

1400 = E. End of 2' cement walk end	4.5	90.7
	4.3	90.9
	5.0	90.2
	4.60	90.61
	4.6	90.6
	4.2	91.0
	4.1	91.1
	4.0	91.2
	4.1	91.1
	4.1	91.1
	4.3	90.9
	4.25	90.98
	3.8	91.4
	4.2	91.0
	4.0	91.2
	3.5	91.7
	3.7	91.5
	3.47	91.74
	3.47	91.74
	3.3	91.9

295.21

295.21

0		3.3	291.9
+9.3 = edge cement apron		3.4	91.81
S		3.4	91.8
	2+84		
0.6 5x5 L. = center garage (cement)		2.7	92.5
S		3.0	92.2
C		3.0	92.2
N		2.9	92.3
	2+94		
N		2.8	92.4
C		3.0	92.2
S		2.9	92.3
+0.7 = center garage (cement)		2.70	92.51
T.P.	710	299.91	240
	3+43		292.81
S		6.9	293.0
C		7.1	92.8
N center garage dirt floor		7.3	92.6
	3+93		
N center garage dirt floor		6.4	93.5
C		6.7	93.2
+9.3 center garage (dirt floor)		6.3	93.6
	4+30		
S = center garage (cement)		6.04	293.81
C		6.4	93.5
N center garage (dirt)		6.1	93.8

4+80

299.91

48-

N		6.0	293.9
C		5.6	94.3
S		5.6	94.3
	5+00		
S		5.2	94.7
C		5.3	94.6
N		5.4	94.5
	5+40		
N center garage plank/floor		5.0	94.9
C		5.2	94.7
S		5.1	94.8
	5+85		
S		4.9	95.0
C		4.9	95.0
N		4.9	95.0
	600.5 = W.L. Richmond		
N		5.06	94.85 cement curb
C		5.00	94.91
S		5.20	94.91 cement curb
chk BM		4.92	294.99 BP SW Pet 295.01 Esso

6/25/22
 Gregory
 Moore
 Miller
 Shaw

CROSS SECTION OF ALLEY
 Bk 48 Park Villas 15' wide
 bet Ariz + Arnold
 from Nightman to Landis

on B.M.	11.36	30.16	289.80	B.P. SE Ariz. + Arnold
		S.L. Nightman (not graded)		
W.		5.4	295.8	
C		5.4	295.8	
E		5.2	296.0	
TP	1.91	29.22	585	29.531
		0+35		
E		2.1	95.1	
C		2.0	95.2	
W		2.3	94.9	
		0+65		
W on cement apron		3.20	94.0	
C		2.9	94.3	
E		3.1	94.1	
		1+00		
E		3.9	93.3	
C		4.1	93.1	
W		4.4	92.8	
		1+30		
W		4.9	92.3	
C		4.5	92.7	
E		4.7	92.5	
		1+82		
E		5.5	91.7	
C		5.9	91.3	

49

W center garage (dirt)	5.9	91.3
	200'	
W center garage (dirt)	6.0	91.2
C	6.0	91.2
E	6.0	91.2
	2+33	
E	7.0	90.2
C	6.8	90.4
W	7.2	90.0
	2+70	
W	8.1	289.1
C = Man hole	8.0	89.2
E	7.9	89.3
	3+00	
E	8.2	89.0
C	8.0	89.2
W	8.1	89.1
	3+43	
W	8.9	88.3
C	8.6	88.6
E	8.3	88.9
	4+00	
E	9.2	88.0
C	9.7	87.5
W	9.8	87.4

797.22

4+50

W 10.1 286.8

C 10.1 86.8

E 10.3 86.9

T.P. 6.29 792.67 10.84 286.38

5+00

E 6.30 86.4

C 6.30 86.4

W 6.30 86.4

5+50

W 6.2 86.5

C 6.3 86.4

E 6.3 86.4

5+66

E 5.0 87.7

C 6.1 86.6

W 5.7 87.0

6+00 = N.L. Landis

W 4.2 88.5

C No allej returns in. 4.4 88.2

E 3.6 89.1

N. cb Line Landis

E 4.00 88.7 of cement

W 4.30 88.4 ✓ ✓

chk. BM. 7.40 285.5 ✓ 285.51

8/31/02

Gregory
More
Ellis
ShawX section of Winders St 80 wide SW cbs
from E.L. India to E.L. Middletown90.2
77.00BP SW
India + Winder

35' E

90.2

51

13.25

90.75

E.L. India

S	11.0	79.2
cb cement	11.30	78.9
1/4	11.2	79.0
C	10.7	79.5
1/4	10.9	79.3
cb	10.8	79.4
N	10.5	79.7
10' E		
N	5.5	84.7
+8	6.4	83.8
+12	3.4	86.8
cb	3.3	86.9
+3	3.3	86.9
+6	6.6	83.6
1/4	3.9	86.3
C	4.7	85.5
+10	6.2	84.0
1/4	9.3	80.9
+2	10.2	79.8
+7	9.4	80.8
cb	9.5	80.7
+7	10.9	79.3
S	10.6	79.6

S

+7

cb

+6

1/4

+3

C

1/4

+5

+7

+8

+12

cb

+6

+7

N

N

cb

+3

+6

1/4

C

+5

+8

9.2

10.3

8.5

7.6

8.0

5.0

3.8

2.9

2.5

4.5

2.5

2.2

2.2

2.0

5.7

3.4

50' E

0.0

1.4

2.1

0.8

1.5

2.4

2.6

4.8

81.0

79.9

81.7

82.6

82.2

85.2

86.4

87.3

87.7

85.7

87.7

88.0

88.0

88.2

86.5

86.8

90.2

88.8

88.1

89.4

88.7

87.8

87.6

85.4

90.25

90.2

1/4	4.8	85.4
+7	4.6	85.6
cb	7.8	87.4
+5	6.7	87.5
S	6.4	83.8

75 E

S	3.4	86.8
+9	3.5	86.7
+12	5.3	84.9
cb	3.6	86.6
+6	2.4	87.8
1/4	2.2	88.0
c	1.4	88.8
1/4	0.5	89.7
T.P.	12.03	101.85
cb	0.43	89.2
N	11.3	90.5
	10.1	91.7

100 E

N	9.0	97.8
cb	10.1	91.7
1/4	10.7	91.1
c	11.9	89.9
1/4	12.3	89.5
cb	12.7	89.1
S	13.2	88.6

WINDER

101.8

52

125 E

S	10.7	91.1
cb	10.6	91.2
1/4	11.0	90.8
c	10.7	91.1
1/4	9.6	92.2
cb	8.8	93.0
N	7.3	94.5

150 E

N	5.3	96.5
cb	7.0	94.8
1/4	8.0	93.8
c	8.6	93.2
1/4	8.8	93.0
+9	8.8	93.0
cb	8.1	93.7
S	7.8	94.0

200 E = W.L. Columbia 75 wide 12 cbs

S	1.3	100.5
cb	2.1	99.7
1/4	1.3	100.5
c	1.7	100.1
1/4	1.7	100.1
cb	1.8	100.0
+2	3.3	98.6
+5	2.0	99.4
N	1.1	100.7

T.P.	12.21	113.95	0.11	101.74
	W	cb		118.9
N			14.0	99.9
cb			12.3	101.6
1/4			12.1	101.8
c			12.0	101.9
+5			12.6	101.3
1/4			11.2	102.7
cb			12.0	101.9
S			11.6	102.3
	W	1/4		
S			9.8	104.1
cb			10.0	103.9
1/4			9.1	104.8
c			9.8	104.1
1/4			10.1	103.8
cb			10.8	103.1
N			10.9	103.0
	Center	Columbia		
N			9.0	105.9
cb			8.5	105.4
1/4			8.0	105.9
c			7.9	106.0
1/4			8.1	105.8
cb			8.1	105.8
S			8.4	105.5

S
cb
1/4
c
1/4
cb
N

N
cb
1/4
c
1/4
cb
S

S
cb
1/4
c
1/4
cb
N

T.P. 12.57 126.52

WINDER 53

113.9

F 1/4

6.5	107.4
6.0	107.9
6.1	107.8
6.1	107.8
6.6	107.3
6.7	107.2
7.0	106.9

F cb

5.3	108.6
4.3	109.6
4.3	109.6
4.2	109.7
4.1	109.8
4.1	109.8
4.2	109.7

E. L. Columbia

2.6	111.3
2.3	111.6
2.3	111.6
2.2	111.7
2.2	111.7
2.5	111.4
2.8	111.1

0.00 113.95

12652

25' E

N	10.6	115.9
cb	10.1	116.4
1/4	10.5	116.1
C	10.1	116.4
1/4	9.6	116.9
cb	10.1	116.4
S	10.5	116.0

59.08' E = E.L. Middletown on N.

S	4.5	122.0
cb	4.5	122.0
1/4	4.8	121.7
C	4.2	122.3
1/4	4.0	122.5
cb	4.2	122.3
N	5.5	121.0

84.38' E = E.L. Middletown on C.

S	0.0	126.5
cb	+0.1	126.6
1/4	0.0	126.5
C = E.L. Middletown	0.2	126.7

109.68' E on S
59.08' - N } = E.L. Middletown

N	5.5	121.0
cb	3.2	123.3
1/4	1.3	125.2
C	0.2	126.3

126.5

1/4

cb

S

+ 1.4

+ 4.0

+ 5.1

126.5

52

129.9

130.5

131.6

8/31/22 Gregory

X section of Columbia St from N.L. Chalmers to E.L. Middletown

75' St 12' obs

see X section of intersection for N.L. Winder

113.95 from page 53 113.9
25' N of N.L. Winder St

E	3.4	110.7
cb	5.5	108.4
1/4	8.4	105.5
C	10.0	103.9
1/4	11.0	102.9
cb	11.7	102.2
W	12.2	101.7
40' N		
W	11.5	102.4
cb	11.0	102.9
1/4	10.4	103.5
C	9.2	104.7
1/4	8.3	105.6
cb	7.0	106.9
E	4.3	109.6
45' N		
E	3.6	110.3
cb	6.8	107.1
1/4	8.4	105.5
C	9.4	104.5
60' N		
E	3.6	110.3
+6	3.6	110.3

51

113.9

cb	6.3	107.6
1/4	7.1	106.8
C	8.6	105.3
74.5' N		
E	3.2	110.7
+3	4.3	109.6
cb	5.8	108.1
1/4	6.5	107.4
C	7.4	106.5
1/4	8.4	105.5
cb	9.3	104.6
W	10.0	103.9
75' N		
E	4.4	109.5
cb	5.8	108.1
1/4	6.5	107.4
C	7.4	106.5
93.30' N = E.L. Middletown on E 172' St		
W	9.6	104.3
cb	8.8	105.1
1/4	7.4	106.5
C	6.6	107.3
1/4	5.6	108.3
cb	4.6	109.3
E	3.6	110.3

152.55 N

113.9

W	98	104.1
cb	85	105.4
1/2	75	106.4
C = E.L. Middletown	58	108.1

93.30 N. on E.L.
211.82 - W.E. L. Middletown

W	70	106.9
cb	68	107.1
1/2	65	107.4
C	58	108.1
1/2	43	109.6
cb	43	109.6
E	36	110.3

For S.L. Minder see x section at intersection

H.B. → 25' 5" of S.L. Minder

E	35	110.0
cb	48	109.1
1/2	65	107.4
C	85	105.4
1/2	102	107.7
cb	125	101.4
W	133	100.6

50' 5"

W	140	99.9
cb	131	100.8
+8	108	103.1

1/2

C

1/2

cb

E

E

cb

1/2

C

1/2

cb

W

W

cb

1/2

+5

C

1/2

cb

E

E

cb

1/2

10.2

8.5

6.2

3.6

2.7

75' 5"

1.5

2.0

7.5

9.0

11.2

13.6

14.4

100' 5"

13.6

13.6

11.7

9.5

8.0

5.2

2.2

1.2

125' 5"

1.0

1.4

4.0

113.9

56

103.7

105.4

107.7

110.3

111.2

112.0

111.9

106.4

104.9

102.7

100.3

99.5

100.3

100.3

102.2

104.4

105.9

108.5

111.7

112.7

112.9

112.5

109.9

113.95

113.9

C	7.3	106.6
1/4	10.2	107.5
+12.74	12.9	101.0
cb	14.4	99.5
W	14.4	99.5

150' S

W	15.8	100.1
cb	15.8	100.1
+0.10	13.1	100.8
1/4	9.5	100.0
C	5.7	108.2
1/4	2.7	111.2
cb	0.4	112.5
+R	1.3	112.6
E - already cut 3'	0.0	113.9
T.P.	0.34	113.17

175' S

E	0.0	113.2
cb	0.9	112.3
1/4	1.7	111.5
C	4.5	108.7
1/4	7.3	105.9
cb	10.3	102.9
W	13.3	99.9

113.2

COLUMBIA

57

113.2

300' S

W	12.8	100.4
+7	11.8	101.4
cb	9.8	103.4
1/4	7.1	106.1
C	4.9	108.3
1/4	2.8	110.4
cb	2.1	111.1
E - already cut 3'	1.2	112.0

225' S

F	3.0	110.2
cb	3.5	109.7
1/4	5.2	108.0
C	6.4	106.8
1/4	8.5	100.7
cb	11.1	102.1
W	12.7	100.5

250' S

W	14.1	99.1
cb	12.3	100.9
1/4	10.6	102.6
C	8.9	104.3
1/4	7.2	106.0
+11	6.1	107.1
cb	7.1	106.1
E	5.7	107.5

11317

275' 5

E		10.0	103.2
+10		11.0	102.2
cb		10.1	102.1
1/4		10.6	102.6
c		12.2	101.0
T.P.	4.34	13.04	100.13
1/4		3.3	99.2
cb		4.6	97.9
+4		6.4	96.1
W		6.3	96.2

300' 5 - N.L. Chalmers

W		10.3	92.2
cb		10.0	92.5
1/4		8.2	94.3
c		6.3	96.2
1/4		5.8	96.7
cb		5.6	96.9
+11		4.3	98.2
E		2.8	99.7

1132

58

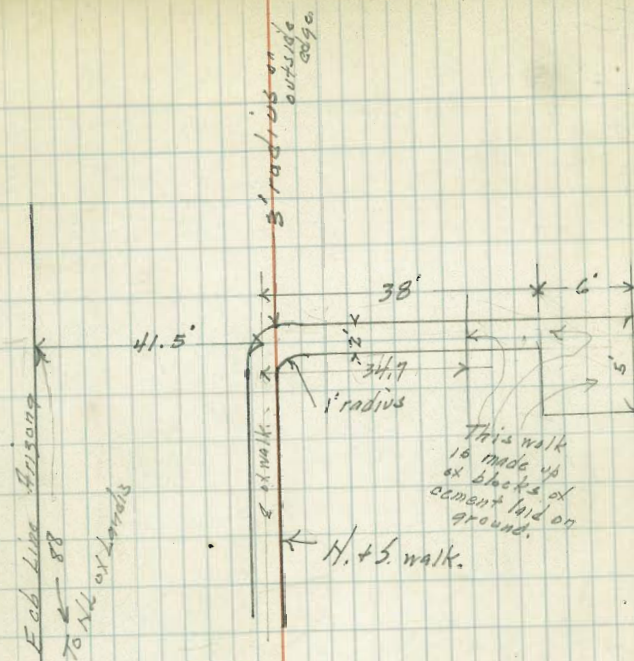
9/17/22 Gregory Moore Ellis

Levels on & of proposed Culvert
 88' N. of N.L. of Landis from
 E. cb Line of Arizona to Alley E. of Arizona

	4.43	289.74	285.31	BP SE Landis Ariz
0+00 = E. cb Line of Arizona in gutter	5.7	284.04		
" " " " " " on curb	4.96	284.78		
8' E of above = edge of sidewalk	4.76	284.98		
41.5' E of E. cb Line = & of walk on W. of house	4.45	285.29		
85.5' " " " " = E. End of cement walk	4.58	285.16		
100' " " " " " " " " " "	4.6	285.14		
136.5' = N.L. of Alley	3.1	286.64		

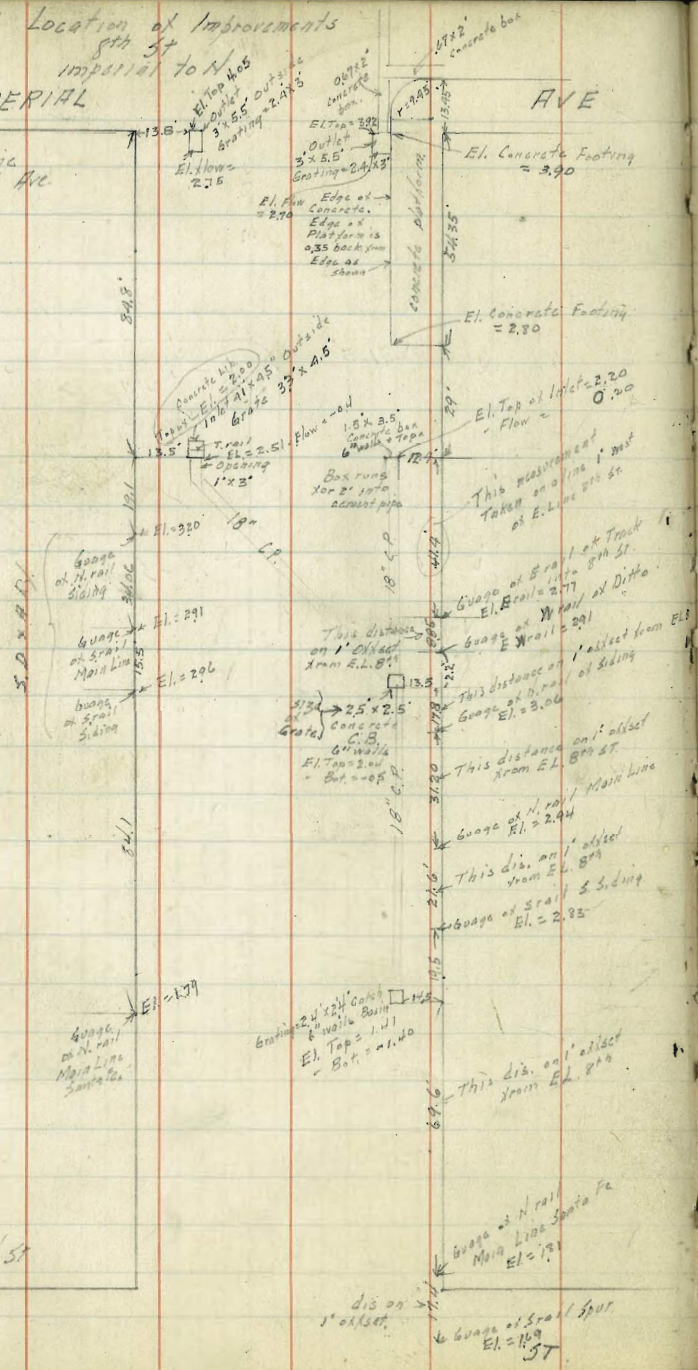
Levels on & of Walk running N+5 from
 sta 41.5 as shown on sketch

10' S of & of E+W Walk	4.42	285.32
20' " " " " " " " " " "	4.33	285.41



12/24/24
 Location of Improvements
 8th St
 Imperial to N
 Imperial Ave

South Line
 Imperial Ave



991
 147
 196

60

North Line N. St

N

Gauge of N rail
 Main Line Santa Fe
 El = 1.79

Gauge of S rail Spur
 El = 1.79

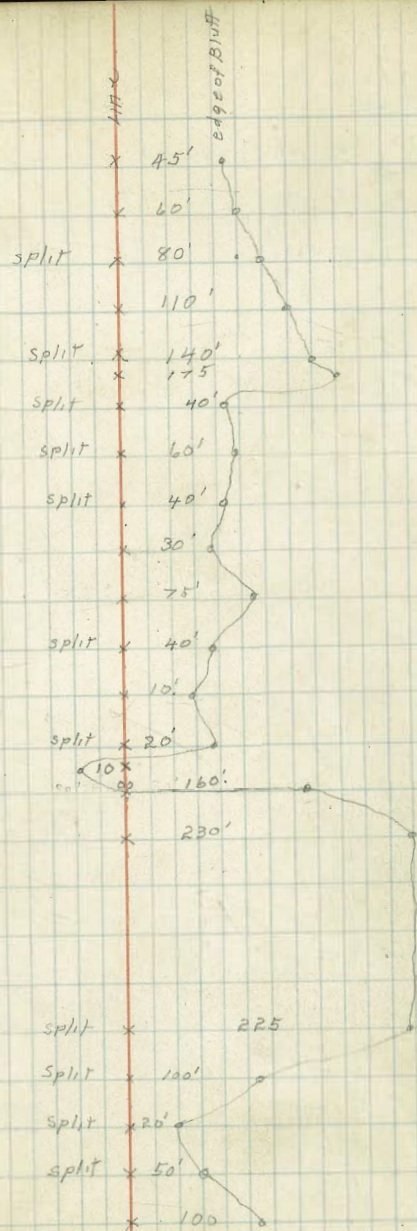
10/24/22 Gregory Elevation Bellville's Lot
Palmetto St

61

	9.71	279.02	269.31	BM.
	3.60	278.45	4.17	274.85
Elev. of Hub SE. cor. of Lot.			3.60	274.85
25' Nod. ✓			5.30	273.15
W. last above			4.30	274.15
25' S. - ✓ ✓			3.50	274.95

Traverse of Bluffs in PL 1324
 See Book 1064 Pg 8 for original survey

	Δ 49+50	
105	49+00	
	48+00	
	Δ 47+65	27°-56' LT
140	47+00	
	Δ 46+25	24°-55'-30" LT
	45+50	
90	Δ 45+25	59°-45' LT
	44+35	
205	Δ 40+30	14°-17' RT
	40+30	16°-17'-30" LT
595	39+30	
	37+30	
	Δ 34+35	89°-34' RT
265	33+00	
Foundstak	Δ 31+70	48°-43' LT
	30+30	
180	30+10	
	Δ 29+90	22°-02'-30" RT
120	Δ 28+70	32°-42'-30" LT
	28+60	
157	Δ 27+13	16°-06'-30" LT
	Δ 25+33	13°-01' LT
180	Δ 23+73.2	24°-42' LT
157.8	Δ 22+07.2	28°-24'-30" RT
142.8	Δ 20+45	47°-31'-30" RT
385	18+00	
P.O.T.	17+25	



Traverse by stadia of P. Lot 1331 Moore

9/19/23

63

PK SE. COR. PL 1331 AZIMUTH PL. 1325 southerly direction

1	Gold Road to Terry Pines	90° 00'	550
2		90° 00'	900
3		104° 24'	990
4		96° 30'	1200
5		93° 30'	1450
6		90° 00'	1550
7	PK (B)	90° 00'	1720
8		254° 34'	265
9		16° 19'	580
10	PK (C)	90° 00'	137
11		12° 18'	1030 CANON edge
12		27° 14'	910 50' from Bluff

13		41° 40'	760 50' from Bluff
14		59° 47'	580 " "
15		79° 07'	600 " "
16		94° 20'	580 " "
17		114° 12'	740 " "
18		133° 50'	850 West end of road 50' from Bluff
19	(D) PK	156° 10'	435
20		148° 30'	340 CANON edge
21		172° 10'	655 " "
22		169° 51'	890 " "
23		190° 55'	1200 " "
24	(E)	202° 37'	845 P.O.T.
25		202° 37'	260 CANON edge

26

230° 14'

350 CANYON edge

27 π (E)

251° 51'

510 " "

28

308° 00'

260 " "

29 ϕ old Torrey Road π (G)

273° 46'

500
495

30 ϕ Torrey Road = #1

352° 48'

1335

31

90° 00' approx. line to west

160.71

F		4.7	156.0	
+9.1	= Sly 6 Car Garage #123 Conc Ribbons 0+70	4.67	156.04	✓

W+0.5	= Wly Park Pole			↓
	1+0			

-9	= Sly 6 Car Garage on Conc Ribbons	3.81	156.90	↓
----	---------------------------------------	------	--------	---

F		3.3	157.4	
---	--	-----	-------	--

1/2		3.2	157.5	
-----	--	-----	-------	--

+6		2.8	157.9	
----	--	-----	-------	--

W		0.3	160.4	✓
---	--	-----	-------	---

+0.2	= Sly Dry Rock Wall	0.2	160.5	↓
------	---------------------	-----	-------	---

1+20

-0.4	= Wly Bare Dry Wall	7.24	163.1	✓
------	---------------------	------	-------	---

W		7.20	162.7	
---	--	------	-------	--

+5		1.8	158.9	
----	--	-----	-------	--

1/2		2.1	158.6	
-----	--	-----	-------	--

F		2.4	158.3	
---	--	-----	-------	--

1+22

F	= Sly Garage 2 Conc Ribbons South Entrance	2.64	158.07	✓
---	---	------	--------	---

F-9.3	= Sly 6 Car Garage Conc Ribbons	3.26	157.45	✓
-------	------------------------------------	------	--------	---

TP	7.43	167.20	0.94	159.77	x
----	------	--------	------	--------	---

1+40.19 = S-L F+W Alley

F	Top Conc Wall	6.53	160.67	↓
---	---------------	------	--------	---

F	Ground	7.5	159.7	
---	--------	-----	-------	--

167.20

1/2		7.6	159.6	
-----	--	-----	-------	--

+5		7.2	160.0	
----	--	-----	-------	--

W		2.8	164.4	
---	--	-----	-------	--

1+60.19 = W-L F+W Alley

W		2.5	164.7	
---	--	-----	-------	--

+4		6.0	161.2	
----	--	-----	-------	--

1/2		6.8	160.4	
-----	--	-----	-------	--

F		7.5	159.7	
---	--	-----	-------	--

1+64

F+1.2	= Sly Tel. Pole			✓
-------	-----------------	--	--	---

1+73

-1.8	= Sly Garage So. End	7.0	160.2	✓
------	----------------------	-----	-------	---

F		6.9	160.3	
---	--	-----	-------	--

+3		6.2	161.0	
----	--	-----	-------	--

1/2		5.9	161.3	
-----	--	-----	-------	--

+5		5.7	161.5	
----	--	-----	-------	--

W		2.5	164.7	
---	--	-----	-------	--

1+89

F-2.2	= Sly 2x6 Fence			✓
-------	-----------------	--	--	---

1+98

W+0.5	= Wly Park Pole			↓
-------	-----------------	--	--	---

2+0

W		2.6	164.6	
---	--	-----	-------	--

+0.1	= Sly Board Fence			↓
------	-------------------	--	--	---

+6		4.9	162.3	
----	--	-----	-------	--

167.20

Z	5.3	161.9
+8	5.5	161.7
F	6.0	161.2
+10	7.8	159.4
2+25		
-10	7.9	159.3
F	5.9	161.3
+4	5.2	162.0
Z	5.1	162.1
+6	4.6	162.6
N	2.5	164.7

2+50

F-11 = Nly Lath Fence
2+51.5

N	3.1	164.1
+5	4.1	163.1
Z	4.4	162.7
+8	4.3	162.9
F	4.4	162.8
+11 = 2' 3" Conc Walk	4.58	162.62

2+56

F-1.5 S 2 1/2" 3" Conc Walk 3.16 164.04

2+64

N +0.1 = Nly Board Fence

167.20

2+68.5		
F-1.7 = Nly 2' Conc Walk	2.97	164.23 ✓
2+72		
-1.7 = Nly 2' Conc Walk	3.65	163.55 ✓
F	3.6	163.6
Z	3.7	163.5
+5	3.4	163.8
N	2.6	164.6
+2.5 = 2' Jo Garage Conc Floor	2.31	164.89 ✓
2+84		
N	2.2	165.0

+0.4 = Sly Board Fence

+5	4.3	162.9
Z	4.6	162.6
+8	4.6	162.6
F Top Conc Wall	4.26	162.94 ✓
+1.7 = Nly 2' Conc Walk	5.72	161.48 ✓

3+00.38 = S 2" F.S.H

F ^{500 130# P 94} Floor 3rd over Conc		
Z	6.53	160.67
+ Gutter	5.65	161.55

N Top Cb = Nly Board Fence 5.27 161.93 ✓

3+14.38 = S Cb Linc F.S.H

N on Paving	5.90	161.30
Z " "	7.13	160.07
F " "	8.42	158.78

Cross Section Fwy Alley
Block 24 Br'd + Chose

See Sketch Page 65

TP	0.81	160.58	159.77	Page 66
	0+0 = East Limit NYS Alley			
S		0.7	158.9	
L		1.0	157.6	
H		1.0	159.6	
	0+13			
H-12' = 2' Garage Dirt Floor	1.6		159.0	✓
S-0.1 = 2' Garage Dirt Floor	3.1		157.5	✓
	0+22			
H Top Conc Wall	2.39		157.19	✓
+1.0 - Fly "	2.39		157.19	
Top Fwy Wall	3.80		156.78	✓
H Ground	3.8		156.8	
+5	3.3		157.3	
+8	4.5		156.1	
L	4.7		155.9	
L 5 = Fly Sheet Metal Bldg	4.3		156.3	✓
	0+30			
S-0.1 = 2' Door to Shop	5.08		155.50	✓
	Conc Floor			
H +1.0 = 2' Conc Walk	5.28		155.30	✓
	0+36			
S = Fly Shop Fly Wire Fence	7.2		153.4	✓
	Base Conc Found			
L	7.4		153.2	
+3	7.4		153.2	
+6	6.3		154.3	

160.58

H	6.3		154.3	
+0.2 = Top ^{0.7} Conc Wall	5.44		155.14	✓
	0+50 = Fly Conc Wall at H.			
-0.3 Top 80 Conc Wall	5.49		155.09	✓
H	8.0		152.6	
+6	9.6		151.0	
L	9.9		150.7	
S	9.1		151.5	
	0+80			
H-6.5 = 2' Garage Conc Floor	9.73		150.85	✓
	0+64			
S-0.8 = Fly Wire Fence				✓
	0+68			
H-0.1 = Fly Picket Fence				✓
TP	2.70	151.32	11.96	148.62
	0+76			
-5.2 = 2' Garage Dirt Floor	4.0		147.3	
S	4.0		147.3	
L	3.7		147.6	
H	3.7		147.6	
	0+82			
S+0.7 = Fly Shed				✓
	0+91			
S+0.5 = Fly Shed - Fly Beard Fence				✓

15/122

170

H	74	143.9
L	70	144.3
S	67	144.6

1701

S+14 = Sky Tol Polk

New Fence built in May 1920

16+12.85 End of new fence in brush

15+31.25

$\Delta 19^{\circ}39'$ Rt

15+00.30

P.O.T.

14+14.90 Int New fence
Built in May 1920
Two wire

$\Delta 49^{\circ}58'$ Rt

13+83.4

P.O.T.

12+73.4

$\Delta 32^{\circ}48'$ Lt

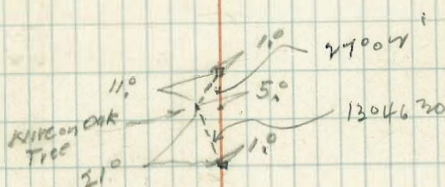
7+43.0

4

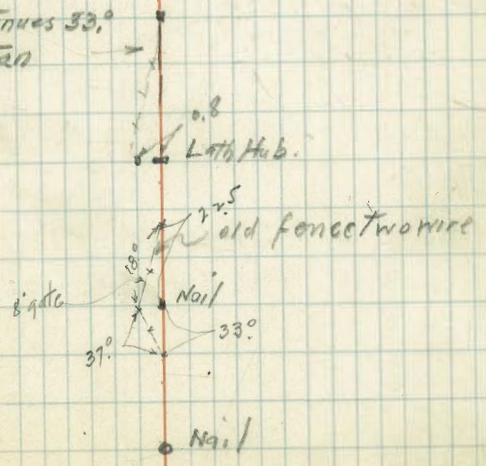
- See Book 1061 Page 13 -

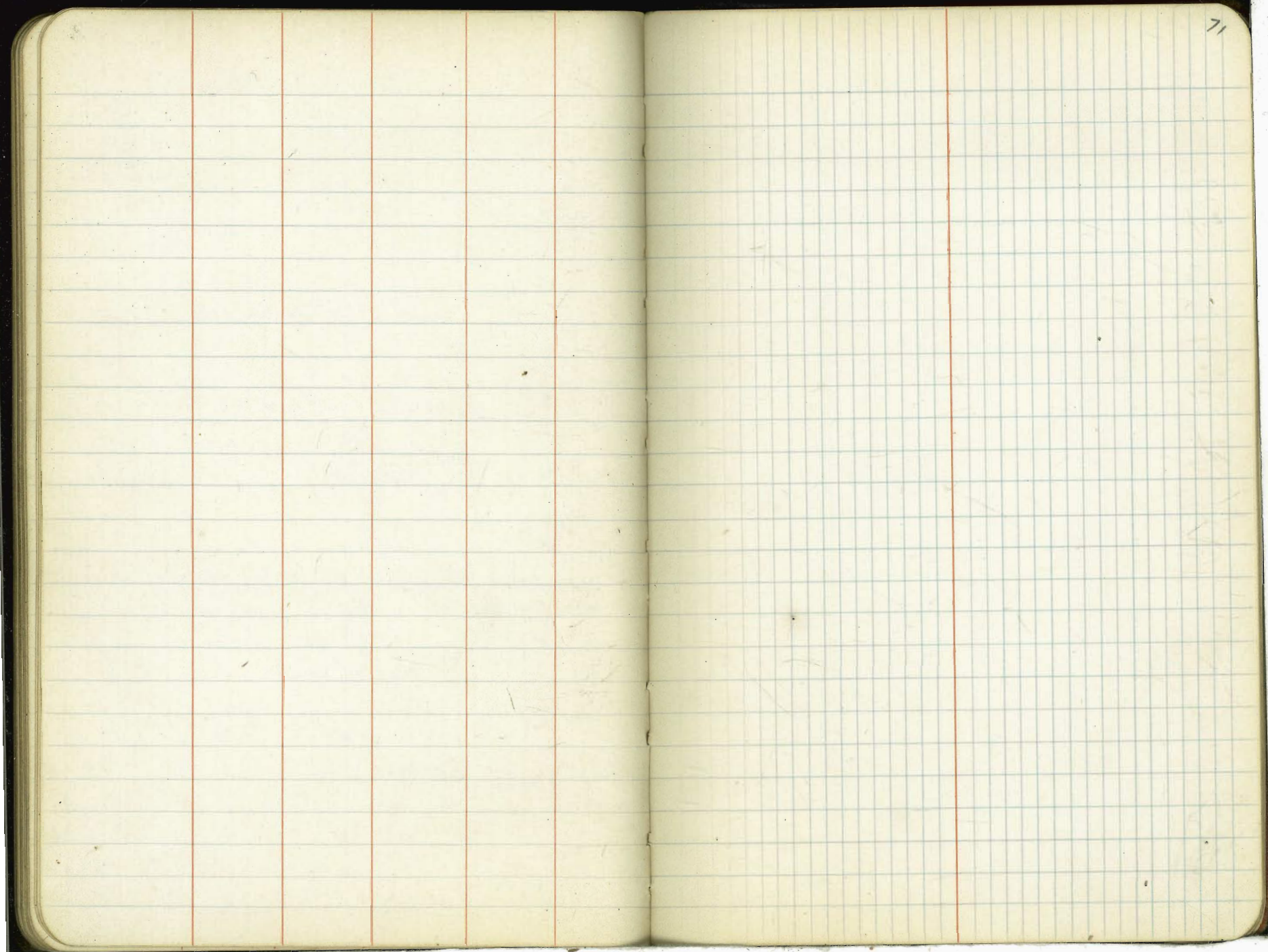
564'00" IT "W" X 531'12" ST "W" X 580'10" ST "W" X N 79° 10' 00" W

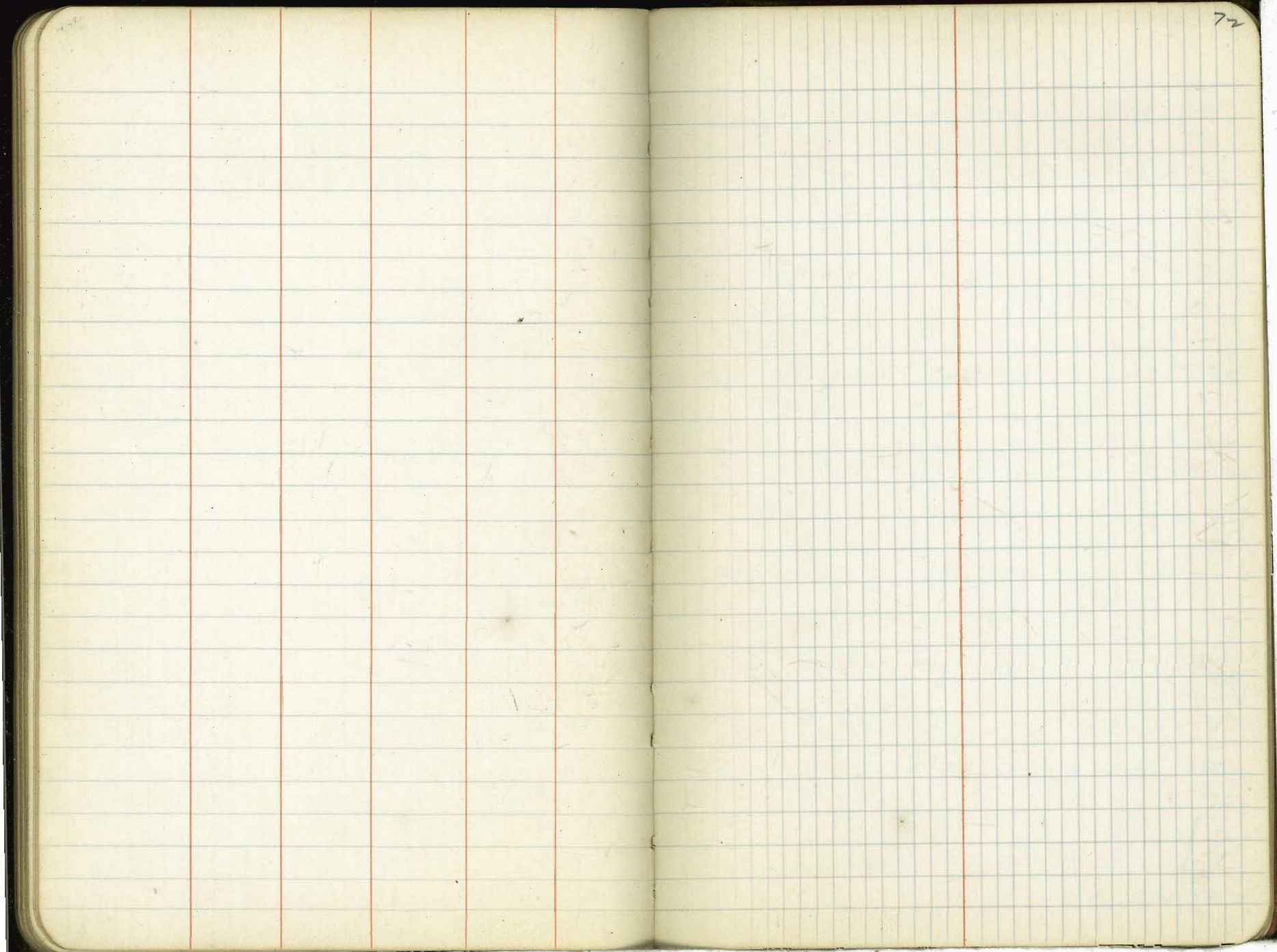
1373.8 70
141.5
33
1745
15+00.30
30.95
15+31.25
81.60
16+12.85



old fence continues 33° ahead on this Ten







Survey of 3 wire fence built by Baker in May 1920
 - Down Rose Canyon -
 Sorrento Road

77 + 77.17	$\Delta 10^{\circ}53'30''$ LT	315.90	No. fence N $27^{\circ}15'15''$ E
77 + 10.97	$\Delta 21^{\circ}53'30''$ LT	61.15	N $28^{\circ}08'45''$ E
76 + 87.59	$\Delta 18^{\circ}19'$ RT	23.38	N $50^{\circ}02'15''$ E
76 + 56.69	$\Delta 17^{\circ}55'$ RT	30.90	N $31^{\circ}43'15''$ E
76 + 30.74	$\Delta 15^{\circ}57'$ LT	25.95	N $13^{\circ}48'15''$ E
76 + 05.80	$\Delta 18^{\circ}51'$ RT	24.94	N $29^{\circ}45'15''$ E
75 + 41.6	$\Delta 9^{\circ}32'30''$ RT	64.2	N $10^{\circ}54'15''$ E
75 + 17.4	1 st fence $\Delta 62^{\circ}15'30''$ RT	24.2	N $12^{\circ}45''$ E
74 + 50.90	$\Delta 17^{\circ}13'$ LT	66.50	N $60^{\circ}53'45''$ W

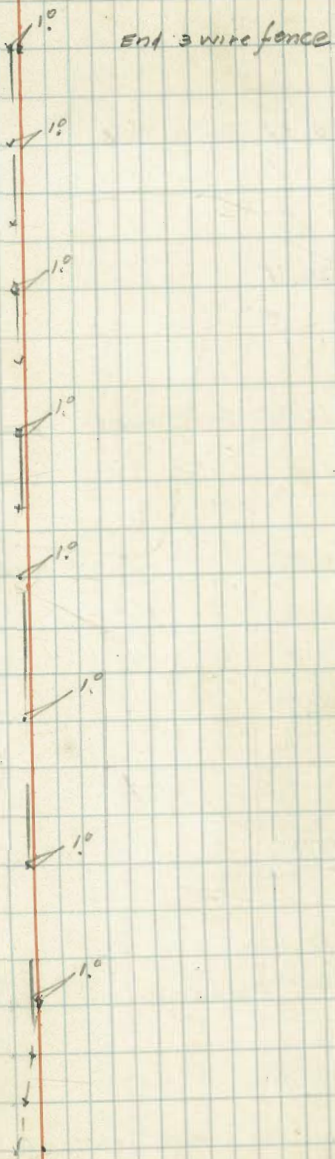
See Book 1061 Pg. 17

Surveyed in June 21 - 1970

1970

73

Williams
 Moore
 Keeler



77+72.12
3 15.90
80+88.02 74

86+42.22 Δ 25°07' Lt 79.44 N31°05'15" E

85+85.35 Beg. of fence Δ 19°45' Rt 56.87 N76°12'15" E

Three wire fence tied to old
Alderberry Tree
wire set out at Rt 45 7 toward
wash.

84+20.15 Δ 2°35' Rt 165.20 no fence N56°27'15" E

83+16.75 End of fence Δ 38°49'30" Rt 103.40 no fence N53°52'15" E
Fence wire at Rt 45
and 5 in brush about 3'
toward wash.

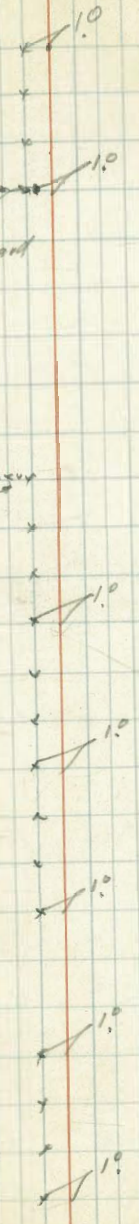
82+69.45 Δ 22°25' Lt 47.50 N15°02'45" E

82+40.87 Δ 23°46' Lt 28.38 N37°37'45" E

82+14.72 Δ 17°08' Rt 26.15 beg. of fence N61°21'45" E

81+13.92 End fence Δ 5°27' Rt 100.80 no fence N44°13'45" E

80+88.02 Beg. of short fence across wash 3 wire 5 posts
Δ 11°31'30" Rt 25.90 N38°46'45" E



90 + 25.98 =
1+00 Feb Survey
Pg. 18 BK. 1061

89 + 35.91 =
0+00 Feb. survey
Pg. 18 BK. 1061

88 + 76.46 Beg. of fence

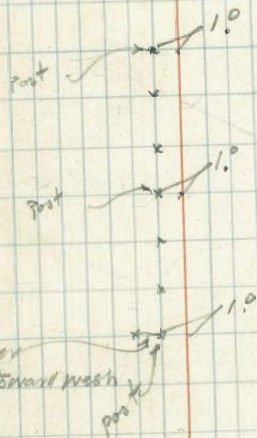
Δ 16°24'30" Rt 59.45

87 + 90.46

Δ 130°54' Lt 86.00 no fence N 55°59'15" E

87 + 21.66 End of 3rd fence

Δ 18°48' Rt 68.80 No fence N 69°53'15" E



38° back from
this point to End of fence
built in Feb. 1919

68
18
86

86 + 42.22
79.44 75
87 + 21.66
68.80
87 + 90.46
86.00
88 + 76.46
79.45
89 + 35.91
90.07
90 + 25.98

Traverse of Bluffs in PL 13 24
 See Book 1069 p 62
 " " " p 98 for original survey

$\Delta 75+35 = 25+85$	$72^{\circ} 39' \text{ LT}$
$\Delta 74+10 = 24+60$ ¹²⁵	$36^{\circ} 39' \text{ LT}$
$\Delta 71+80 = 22+30$ ¹³⁰	$31^{\circ} 11' \text{ RT}$
$\Delta 70+45 = 20+95$ ¹³⁵	$17^{\circ} 39' \text{ LT}$
$\Delta 69+00 = 19+50$ ¹⁴⁰	$26^{\circ} 22' 30'' \text{ LT}$
$\Delta 67+60 = 18+10$ ¹⁴⁵	$37^{\circ} 06' 30'' \text{ RT}$
$16+00$	
$15+00$	
$\Delta 64+55 = 15+05$	$76^{\circ} 35' \text{ LT}$
$\Delta 62+20 = 12+70$ ¹³⁵	$31^{\circ} 27' \text{ LT}$
$\Delta 60+80 = 11+20$ ¹⁴⁰	$124^{\circ} 08' \text{ RT}$
$9+80$	
$9+15$ ^{300'}	
$8+50$	
$\Delta 57+60 = 8+20$	$71^{\circ} 37' \text{ RT}$
$7+50$	
$6+50$ ^{280'}	
$5+60$	
$\Delta 55+00 = 5+50$	$60^{\circ} 57' 30'' \text{ LT}$
$5+10$	
$4-$	
$3+10$	
$2+20$	
$1+20$	
$0+50$	
$\Delta 49+50 = 0+00$	$48^{\circ} 55' 30'' \text{ RT}$

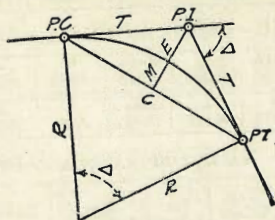
	30	split of Δ
	20	split of Δ
	15	split of Δ
	10	split of Δ
	5	split of Δ
	15	split of Δ
	5	
X	45	edge of bluff
	15	split of Δ
	5	
	10	split of Δ
	15	
	5	
	15	
	20	split of Δ
	10	
	65	
	50	
X	80	edge of bluff
	40	
	50	
	15	
	35	
	40	
	55	
	25	

H 19 to edge

edge of bluff

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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



CURVE FORMULAS

Radius= $R = \frac{50}{\sin \frac{D}{2}}$ (1) Degree of Curve= D and $\sin \frac{D}{2} = \frac{50}{R}$ (2)

Tangent= $T = R \tan \frac{\Delta}{2}$ (3) Length of Curve= $L = 100 \frac{\Delta}{D}$ (4)

Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$ (5) = $R \text{vers} \frac{\Delta}{2}$ (6)

External= $E = T \tan \frac{\Delta}{4}$ (7) = $R \div \cos \frac{\Delta}{2} - R$ (8) = $R \text{exsec} \frac{\Delta}{2}$ (9)

Long Chord= $C = 2 R \sin \frac{\Delta}{2}$ (10) Δ = Central Angle

EXPLANATION AND USE OF TABLES

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

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = 158 - 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 = $\frac{1}{2} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For c ft. = (in minutes) $.3 \times C \times D^\circ$ or = defl. for 1 ft. from Table III $\times C$. For Sta. 158 of above curve = $.3 \times 54.5 \times 8\frac{1}{2} = 136.2'$ or $2^\circ 16.2'$, or = $2.50 \times 54.5 = 136.2'$ from Table III. For Sta. 159 deflection angle = $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 115.27$ and from Table V correction = .10 or $E = 115.37$. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $\div 42 = 5.5$ or $D = 5^\circ 30'$.

255	A 99+10	25-09 RT
	A 96+55	74-53-30 LT
	95+55	335
335	A 93+20	34-45 LT
195	A 91+25	26-42 LT
	89+50	225
235	D 88+70	67-40 RT
	87+50	300
300	A 86+70	92-15-30 RT
200	A 83+70	40-01-30 RT
450	A 79+20	31-24 LT
	A 78+00 = 28+50	40-38-30 LT
	28+00	120
	27+50	265
	27+00	200



2095
167
2.2078
99748
3
279894

180
8570
8750

2905
149.78
50 22

1500
360
720
756.00
16.0
589
591

10000

29038
145.19
54.81
9035
145.19

28038
140.19

170
756
535
167

20.48
17.25
5.23
3.5

100000
100000

290
4030
20.48

1800
167
1800
167
1300

10.8
4.2
2.6
4.536

1-3-67
340
203
384
340
927

4300
4330
105

1.7

700 ft. com
450 ft. con

6.4
130
460
34

160
180
21.6
23.8

6.4
7
6.4
54
43
54
9.7



3 900 ft
3 4 1/2 900 ft
250 50 110
10 1/2 10 000 ft
23

Notes

1-2-21
150.19

9568.6
849.0
10417.6
371.0
371

1220
349
371

300
170
46.6
456.6
77.10
0.32666

3L Univ.
+50 Ctr. com. on W
+73 diff on E
1413
1433
1464

1330
750
5.80
32.42
16.21

28
2.5
15.5

+48 com. on E + W
+48 - - E

310

120
1320
14.50

3 +48 com. apr on E
+75

120

10.30
130
15.10

4 +10
+15.5 = 4.4. Robin

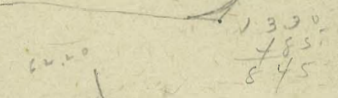
1380
790
590

18
6.25
6.55

00
+36
+75

550
260
290

1700
1414



+18
+63

1270
1300
1500

3+11

3855.80

+62 4 ms

N10-17E

MES-SSN
16+60

+75

1410
1400
19510
1445

+89

2095
135
2300
2460

4+51

125
2075
165
810

+80

589-408

38-58
10-17
28.41

1080
1080 B
108
108
108

13747.4

13747.4

6306.75
5741.80

14061.4

131150

150 00 00

122 37 33

1330

435.80

7854

1330 17

1330

252

144

31476

7854

113097.6

590

7.40

330

1000

28.35

EL. 429.5 Edge Pavement

EL. 422.5 Hub 261+00 Pipe Lho

1330

175

130

8.90

30

1.8

1.8

2.9

10.8

1505

305

150

180

1.8

1.8

2.9

10.8

1330

130

130

9.10

4172.8

432 (20.75)

407 3200

3829

4148 35100

12284

21.6

21.6

2.4

2.4

21.6

1.8 x 12 = 21.6

1.8 x 12 = 21.6

12

21.6

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

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

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

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