128

DIETZGEN

TRADE MARK

ENGINEER'S FIELD BOOK

No. 400

+68.5 to 80 + 4.65 = 84.65 a

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

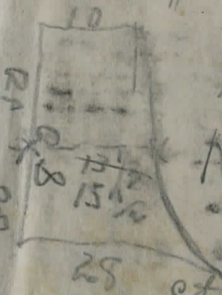
Distances from Center for Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment

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

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

Rd - 123A
about 61+70 End gold mine
mun Corned ande

" 70+70 ...
93+50+ — ...



Monument Stone
at Bridge

Sta 127+. Hks Rd ... Rd
Bridge creek 12" or 13" plank 14' long OkH.

(128)

287.50
47.50
240. Ex...

5+50
3
2 50
1 1/2
25
47.50

173/339 - lot 32 Tract 2 - Gharder
173/359: Kirby 27.01 A.

BOOK 128

Index

County Home Rd #5, Sec 3 6/12/1948
HRZ & E.E.H.

Drainage easterly from Walters angle 3 to 86+85

Rod	H.I.	Elev.	
+6.26	106.26	100.00	Top conc. catch
-1.75		104.5	℄ Rd at N. end
-4.25		102.0	F.L. (E. end)
-8.31		97.95	F.L. 6" tile
-4.55		101.7	℄ Rd over
-6.4		99.85	S. road ditch
-9.2		97.05	Ground 150'
-10.8		95.45	F.L. tile 150'
-11.1		95.15	Ground 300'
-5.5		100.75	℄ road
-7.45		98.80	N. ditch
-6.9		99.35	Bottom 10"
-6.2		100.05	N. ditch

SW℄ Walter's
12"×15" in N ditch ±200' E of ℄ corner.
curve over 12" corr. pipe ±200' NW of C.B
12" " " " " " "
tlet to S. from C.B.
" tile
over 6" tile
S. of Road
" "
" "
200' E of 6" tile
" " " "
pe in N. ditch 100' E of 6" tile
60' E of 6" tile

E. A. Fiedler & Ralph Douglas - July 8th 1926

6

176° - 07'

5

4

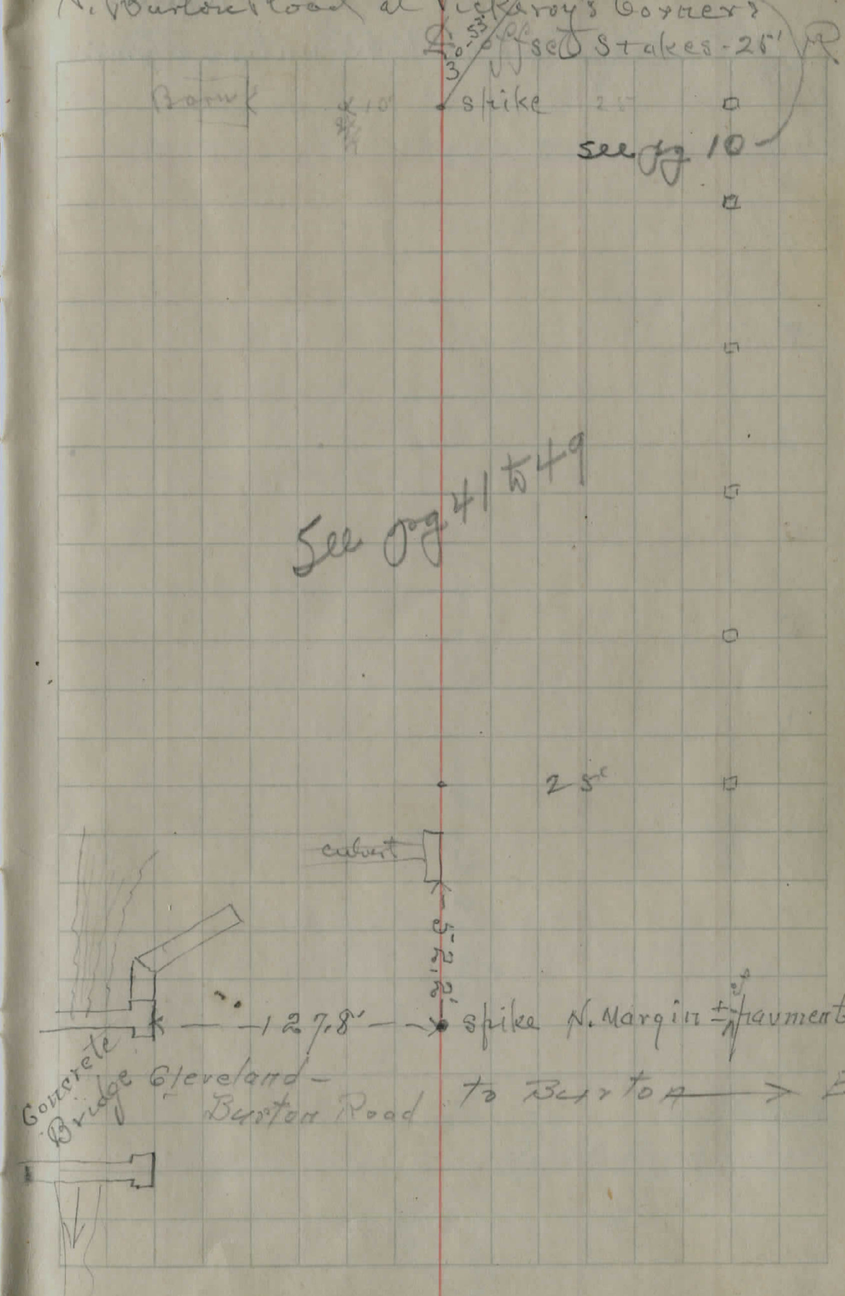
3

2

1

Sta 0

N. Burton Road at Vickeroy's Corners



Sec. "A" - North Burton Road, Burton Twp. Fiedler & Ralph Douglas, July 20th 1926
(Offset stakes set 25' to R. unless otherwise noted) (Temp. 92°) (Bert Bigelow Cont.)

10

9

8

7

6

5

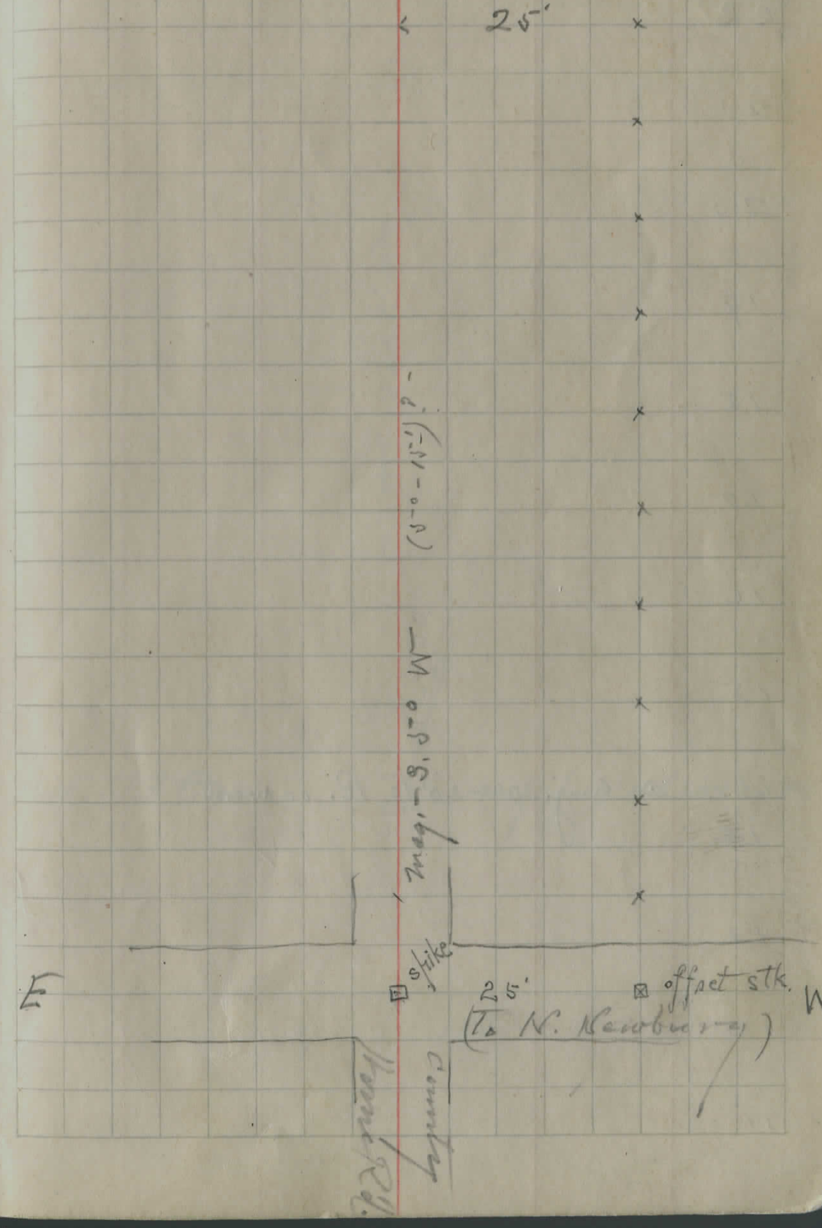
4

3

2

1

Sta 0



Fiedler & Douglas July 21st 1926

R 2

21

20

19

18

17

16

15

+22.4 △ Ang. 0° -20' to R. or west

14

13

12

11

Prof. & Lot line

831.6'

0°-20'

½ iron pipe 4" below surface

F. & D. - July 21st - 26

Temp 94°

33

32 △

31

30

29

28

27

26

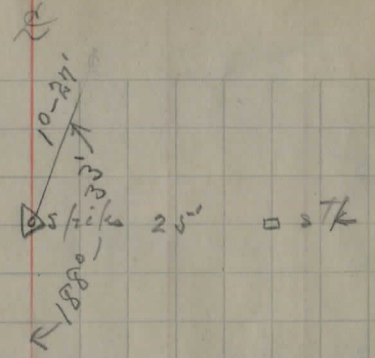
25

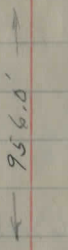
24

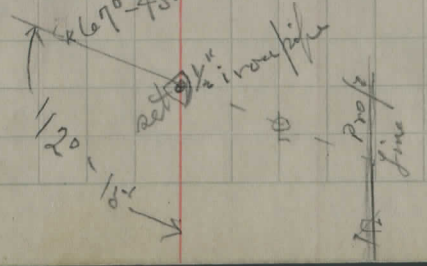
23

+44 △ (Iron Pipe set) ang to L. 67° - 45'

22







45

44

43

42

41

40

39

+36 △ Ang. to R 16° - 37 8'

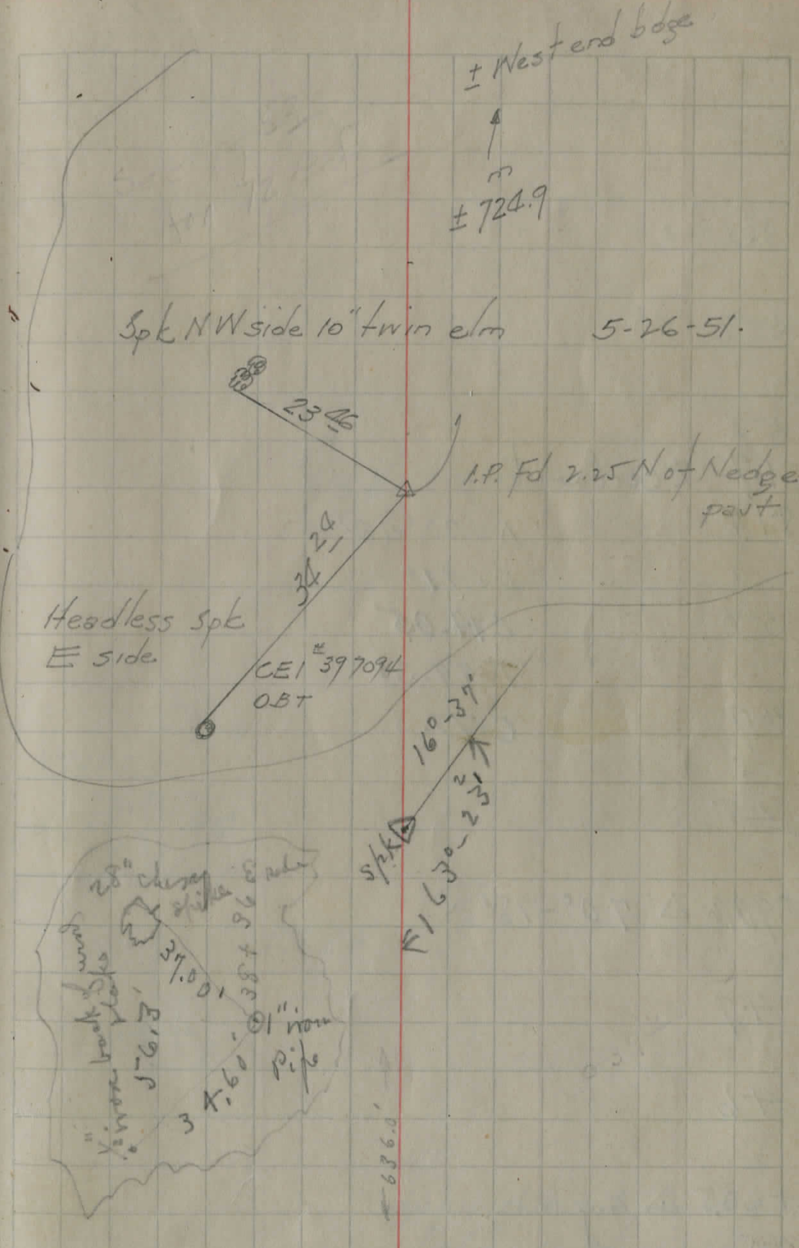
38

37

36

35

34



Dick - Fiddler & Canfield Friday A.M. Aug 27-'26

54

53

52

51
+81.7 ℄ culvert
+81.7

Δ = 70°-18'
D = 91°
E 14.05
T = 44.31
C = 77.3

50

49

48

+90.6 Δ 70°-18' R

47

46

+60.5 △ ang to R.
45

℄

+02.93

6

3.0' 14.8

15.0
23.4
71.4

47+90.6
44.3 ✓
47+46.3 ✓ PC
77.3
48+23.6 ✓ PT.

91)70.3333327 73
637
663
637
263
273

△ spike bet. end plank & wheel stone ℄ of W. end Bridge

65

64

63

62

61+643 PI Ref in back book

61

60

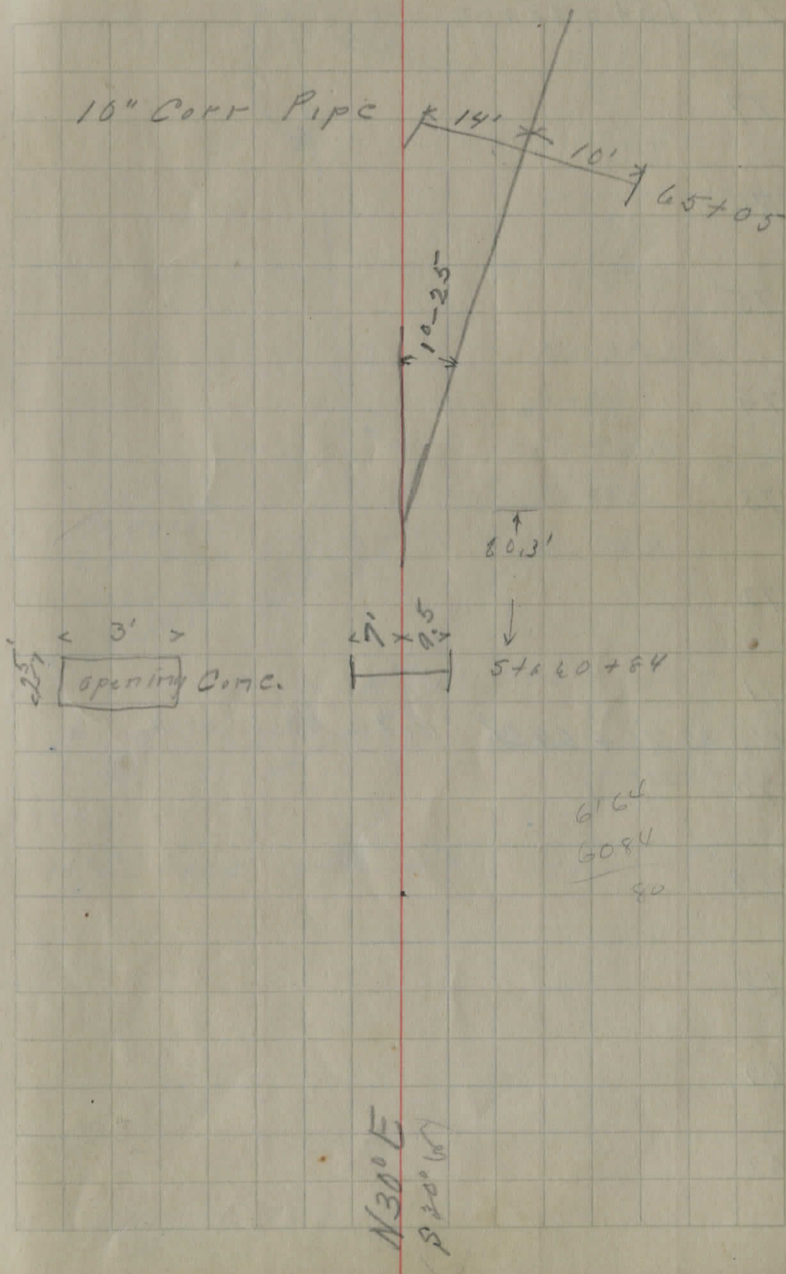
59

+.02 93 . spike in tree
58

57

56

55



78 P I Sta 78+w

77

76

75

74

73

72

71

P I Sta 70+29.87 Ref in back book

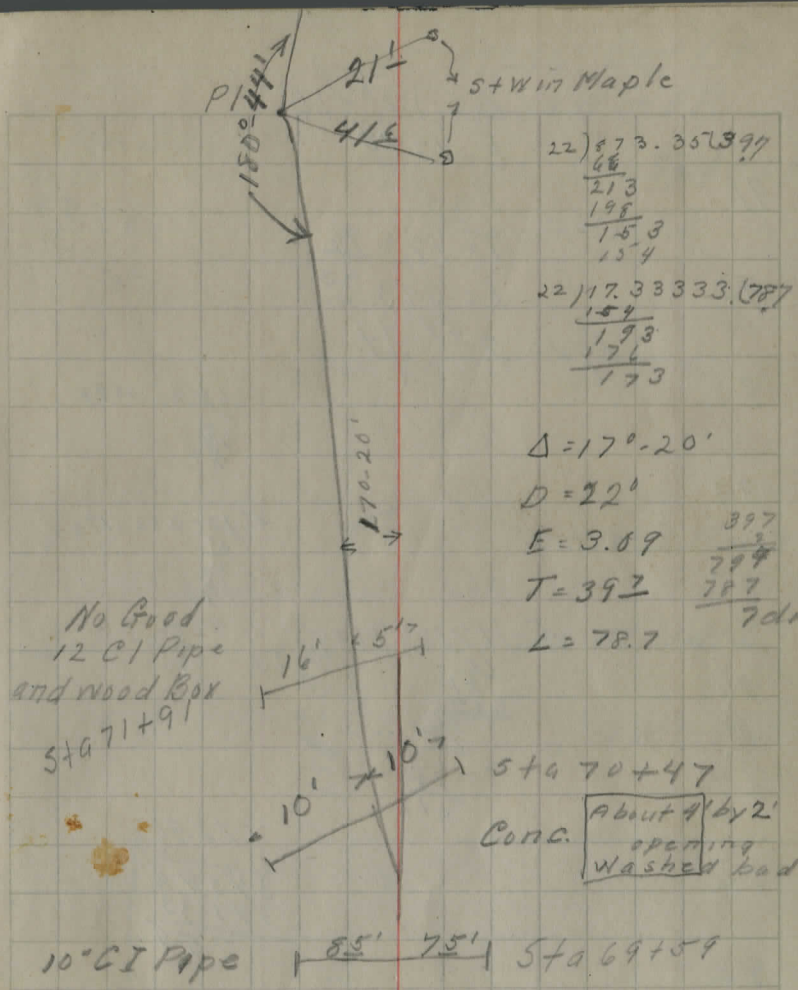
70

69

68

67

66



22) 873.35739?
66
213
198
153
154

22) 17.33333.(787
154
193
176
173

Δ = 17°-20'

D = 22'

E = 3.89

T = 39.7

L = 78.7

397
394
787
787
7 diff

91 $\Delta = 17^\circ - 10$

$E\ 12^{98}$ 12 Approx

$D = 5^\circ$ 345.92

90 $T = 172^{96}$ +)2.6

$L = 343.^{33}$ 1.3

89 Equ = 2^{59} ft.

5)64.90 (12.98

88 5)864.82 (172.96

87

86 5)1716.67(343.33

84

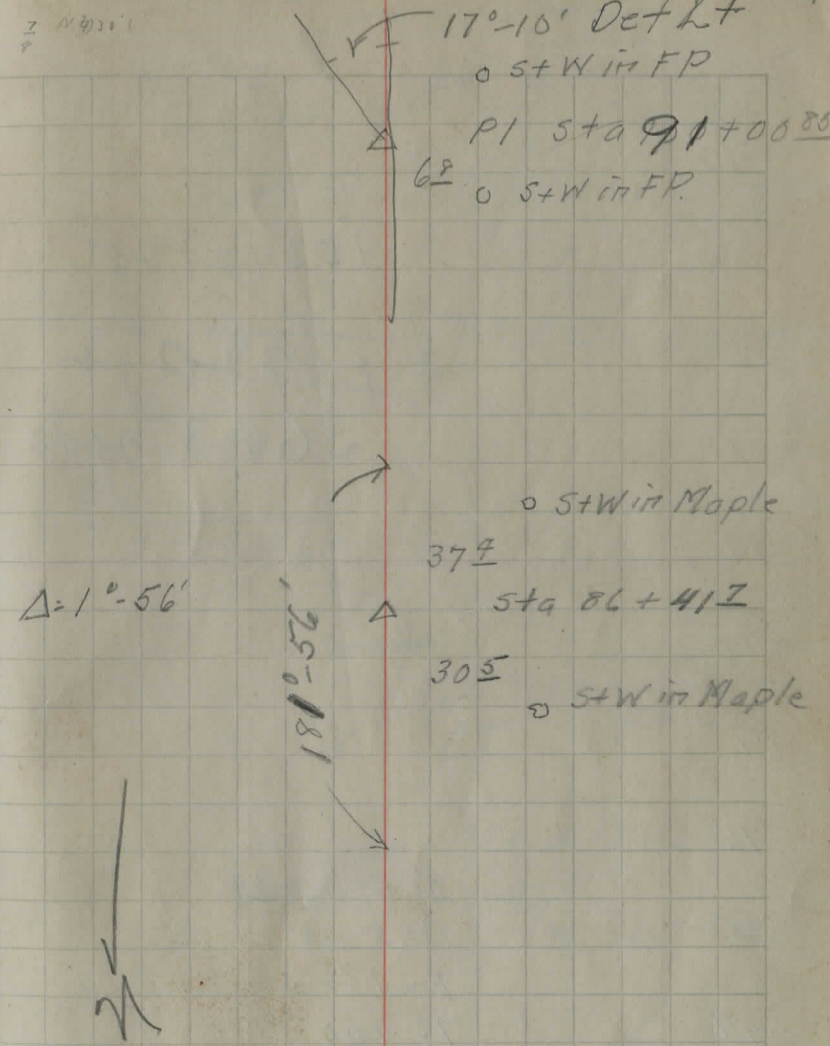
83 172.96
2
345.92
343.33
2.59

82

81

80

79



103

102

101

100

99

98

97

96

95

94

93

92

103+29.45
6
3 | 10930 lin ft
3643 lin yds.

Δ = 4°-00 Lt.
D = 2°-00
E = 1.75
T = 100.04
L = 200'

5+W Barn Door

3°-52' Defl Rt.

125'

Barn 5+a 103+29.45 = 5+a 6+00 Sur 30' vey from the South E.A.F. to fit Angle in Field, S.+W. N.E. Cor Barn

See Page 1

103+29.45
96
7 29.45

No Headwalls

10³ 6'

5+a 97+36 12" C.I.P. Culv Stone Cover Extend

4°-0" Defl Rt

PI 5+a 96+00

495

395

5+W in Oak

5+W in Maple

N

2.06+

10929.45
10560
369.45
366.80
2.65

Topo Aquilla Rd #6 10/27/72

1972	S,	N
+93	Beg Brush 18'	
+92	24" Walnut 18'	
+38	15" Walnut 18'	
+25		20' Beg Brush
+25		34' CCL
+22	24" Elm 18'	
+00	1'	10'
3+00	20" Elm 17'	
+94	15" Walnut 18'	
+87	18" Walnut 18'	
+51	Pavemt. edge 1'	10'
+32		
2+27	Stone Wall 6'	13' (Bridge Rd)
	River ⟷	
+75	end stone wall 7'	
+70	24" Stump 9'	
+67	Beg Stone Wal 7'	6 Doub. 30" Stump
+52	24" Walnut 16'	
+40		22' end Brush
+27		23' CEL
1+00	Rd. Edge 12'+5'	
+55		18' Beg Brush
+52	20" Cherry 28'	20' CEL
+13		15 — End. 12" Conc Pipe Runs East
0+0	Pavement edge 49+31'	

11

8+0	Rd. width	3'	9'
+93			21' Trip. 6" chevy
+62			21' Beg Brush
+48	8" Osage Orange	19'	
+18	Beg Brush	18'	
7+0	Rd width	3'	8'
+33			30 CCL
+22	Beg fence	17'	26' Beg fence
+19	end Brush	17'	25' end Brush
+02	6" Ash	15'	
6+0		3'	9'
+62			20' Apple Clump
5+0	Rd width	3'	8.5'
+77	6" Ash	15'	
+58	6" Ash	15'	
4+0	Rd width	4'	10'

Aquilla Rd. 10/27/72
X. sec.

B.M.	2.59	102.59		100.00	Spk.
0+0					
+50					
1+00					
+50					
+75					
"					
T.B.M.	3.65	99.22	7.02	95.57	
2+27					
..					
+50					
3+00					
4+00					
5+00					
6+00					

S. N.

N. side CEI 8 32 316 4' up NW of Aquilla & Fisher

96.59 6.00 45 — 99.14 3.45 — 97.84 4.75 30

96.59 6.00 30 — 96.59 6.00 26 — 95.39 7.20 22 — 95.84 6.75 19 — 96.44 6.15 — 96.34 6.25 8 — 93.79 8.80 13 — 95.59 7.00 18 — 95.59 7.00 25

93.99 8.60 30 — 93.99 8.60 27 — 95.59 7.00 16 — 95.74 6.85 — 95.19 7.40 11 — 92.89 9.70 14 — 94.99 7.60 19 — 94.97 7.62 25

92.49 10.10 25 — 92.59 10.00 23 — 95.69 6.90 10 — 95.64 6.95 — 95.24 7.35 8 — 92.84 9.75 15 — 92.79 9.80 25

95.84 6.75
90.09 12.50 Flk. creek

Spk N. side 20" ELM 3rd West of river S. side Road

88.22 11.00 F/L creek
96.97 3.25

92.82 6.40 30 — 92.78 6.44 21 — 92.40 6.82 11 — 94.82 4.40 4 — 95.07 4.15 — 95.02 4.20 12 — 91.48 7.74 20 — 91.48 7.74 30

91.82 7.40 30 — 91.67 7.55 19 — 93.62 5.60 11 — 94.12 5.10 — 93.85 5.37 15 — 91.87 7.35 26 — 91.92 7.30 30

93.62 5.60 30 — 93.55 5.67 15 — 93.78 5.44 — 93.27 5.95 19 — 91.82 7.40 23 — 92.97 6.25 25 — 92.92 6.30 30

92.52 6.70 30 — 92.67 6.55 15 — 94.10 5.12 11 — 94.47 4.75 — 94.39 4.83 12 — 94.17 5.05 20 — 94.22 5.00 30

93.12 6.10 34 — 93.52 5.70 16 — 95.72 3.50 9 — 96.38 2.84 — 95.50 3.72 17 — 93.52 5.70 24 — 93.42 5.80 30

Cont Next Pg

L H #5 — 10/27/72

		99.22'		
T.P.	6.82	104.51'	1.53	97.69'
7+0				
8+0				
T.B.M.			8.98	95.53'

Check Levels (Fisher Rd. South 500')

BM	2.46	102.46		100.00	
0+0	℄ ℄ Aquilla & Isl		4.18	98.27	
3+0			8.26	94.25	(.13) ck
4+0			8.70	93.75	(.03) ck
6+0			7.95	94.50	(.03) ck
BK	2.92	102.92	2.92	100.00	
0+0			4.80	98.12 + 4.41 = 102.53	
			4.80	98.12	102.46 ck
1+50			5.20	97.72 + 4.41	102.13 (.22)
1+00			5.55	97.37 + 4.41 =	102.05 101.78 (.27)
1+50			6.20	96.72 + 4.41 =	101.13 (.42)
2+00			6.30	96.62 + 4.41	101.03 (.32)
+13			6.07	96.85	101.54 (.79)
+50			6.25	96.67	101.88 (.99)
3+00			6.10	96.82	101.23 (1.33)
TBM			7.33	97.59	4.41
4+50			5.00	97.92	102.33 1.52
4+00			3.80	99.02	103.43 3.02
+50			2.30	100.62	105.03 2.22
5+00			0.40	102.52	106.93 1.52
BM.			2.92	100.00	

S				N			
95.86'	96.01'	96.11'	97.51'	97.85'	97.36'	95.67'	96.22'	95.11'
8.65	8.50	8.40	7.00	6.66	7.15	8.84	8.29	9.40
30	20	15	8		13	20	24	30
98.91'	99.94'	99.51'	100.51'	100.81'	100.45'	99.21'	100.51'	100.41'
5.60	4.57	5.00	4.00	3.70	4.00	5.30	4.00	4.10
30	14	12	9		12	18	21	30

6/6/73

SPK N. Side CEI

Note:
See Pg 34 This Book
For New X sec. (S. of Fisher Rd.)

N. Burton Road Line "B"
Fiddler & T. Snyder - July 24th - 1926
C.H. = 21

10

9

8

7

6

5

4

+40 △ ang to R 110°-27' R

3

2

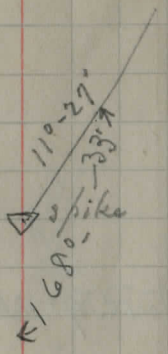
1

0

℄ County Home Rd ?
"Pleasant Hill"

ACQUILLA

Offset stakes set ℄ at 25' to Left, except as noted -



stake 25'

spike = Sta. "0" Sec. A.

July 26 — 26 — T. & S.

22

21

20

19

18

17

16

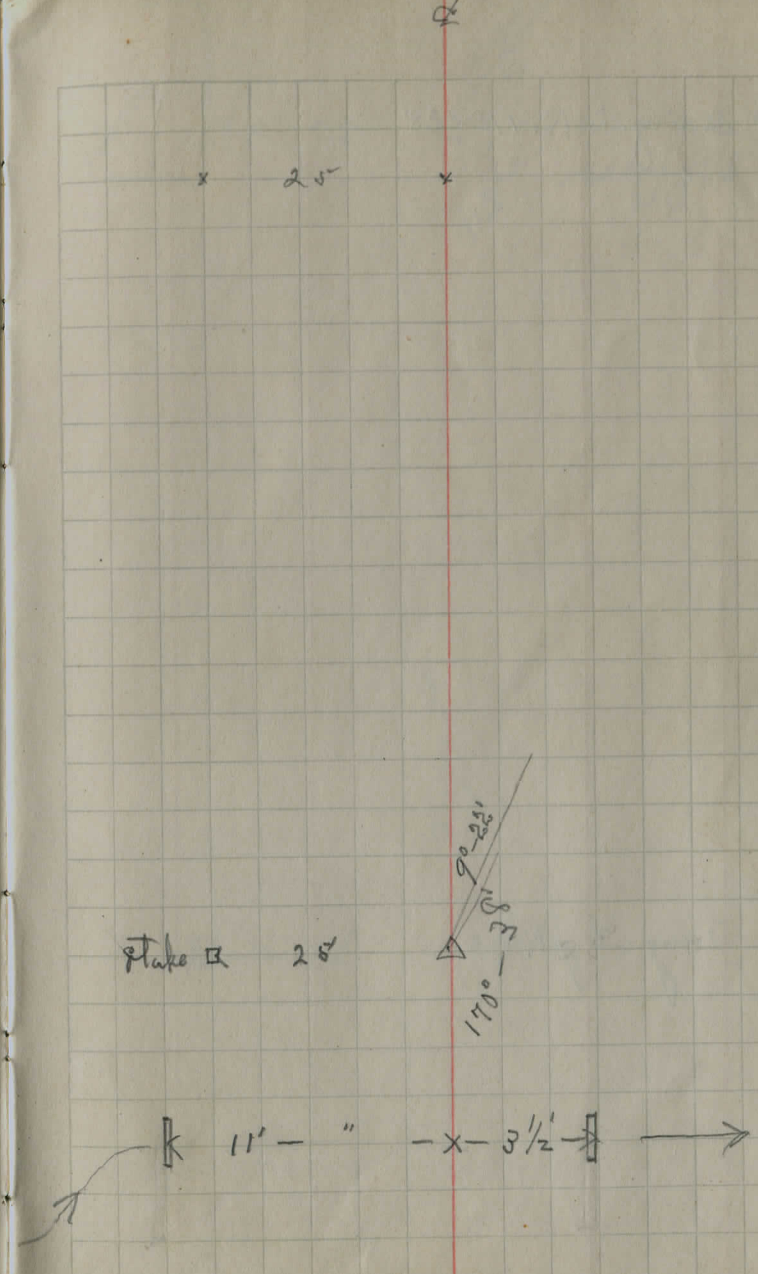
15

14 △ Ang to R. 9°-22'

13

+02 ℄ of 9' culvert
12

11



Culvert stone walls - concrete top & parapets

+60.3 △ ang. to R. 11°-23'

34

33

32

31

30

29

28

27

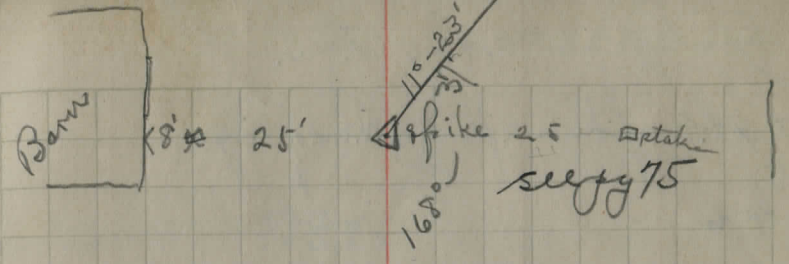
+85.5 Tangent pt.

26

25

24

23



Tangent

stake ☐ 25' spike

July 26 – 1926 F.+S.

+94.4 spike in W. flank at W. end of bridge

+

46

45

44

43

42

41

40

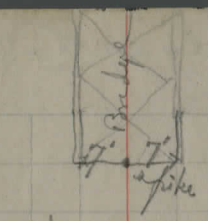
39

38

37

36

35



16

F. & S. July 27 F. & S.

58					
57					
56					
55					
54					
+26	℄ pipe culvert				
53					
52					
51					
+74.85	tang pt. spike				
50					
49	approx. ℄ Road to R.T.H.# 132				
48					
47					

℄

× 25 • spike

× 25 • spike

see this bk pg 60 for refs

July 28 – F. & S. – 29th 26

70

69

68

67

66

65

64

63

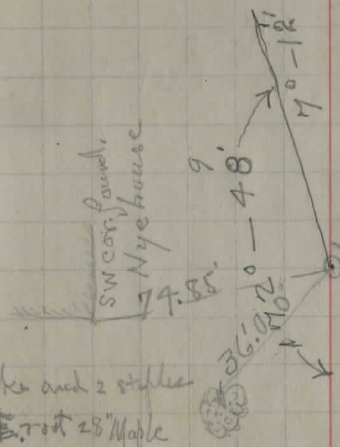
+93.75 △ ang to L. 7° – 1 12′ (Rd. Rec. Orig. ang 6°)

62

61

60

59



(B.S. to 34 + 60)

∠ Measured Aug. 18th – F. & S.

See pg 75

Spike and 2 staples in E. root 28" Maple

Aug. 9th 1926 - Fiedler & D.T. Snyder - Fair

81

80

79

+85 Hub. Tangent pt.

—

78

77

76

+60 Lot & Prop. line

75

74

73

72

71

25'

— — × 20' base of old fort

91

90

+15,55 iron in rock

89

88

87

86

85 no offset stake

+98.1 △ 8°-19' to R.

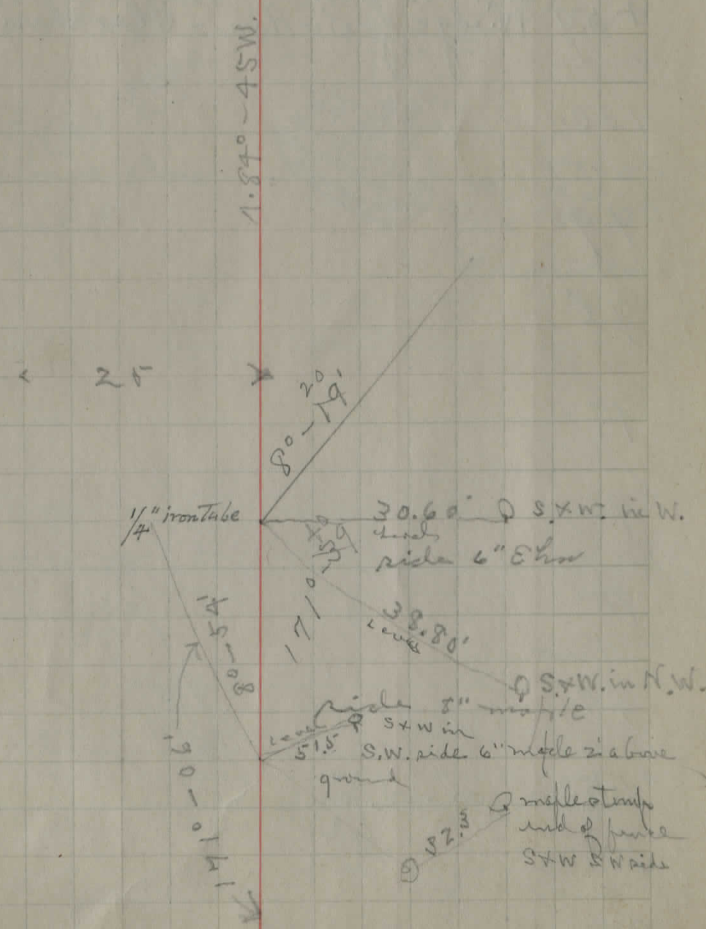
84

+68.5 △ 8°-54' to L. or N.

83

82

+68.5
31.5
100.0



102

101

+59 △ 10-00 to L. W. edge of Burton C.+#3 - Claridon 9' pav.

100

99

98

97

96

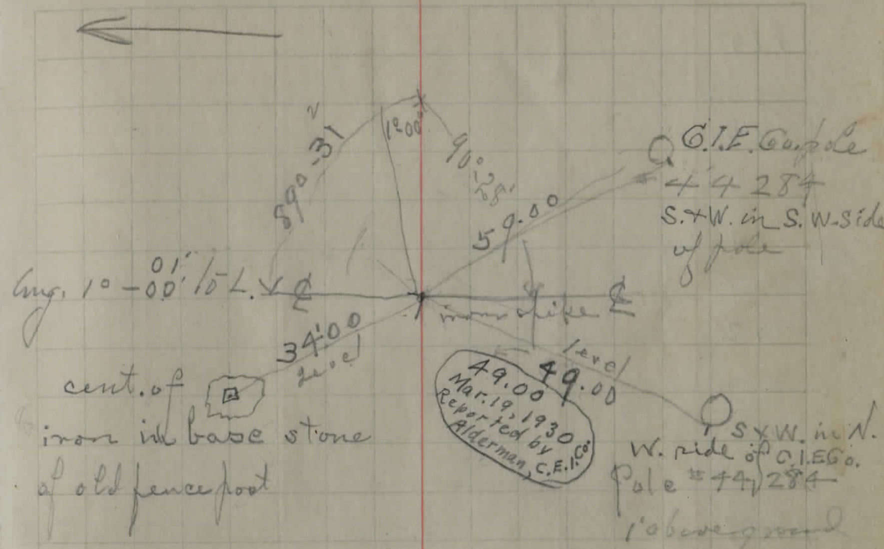
95

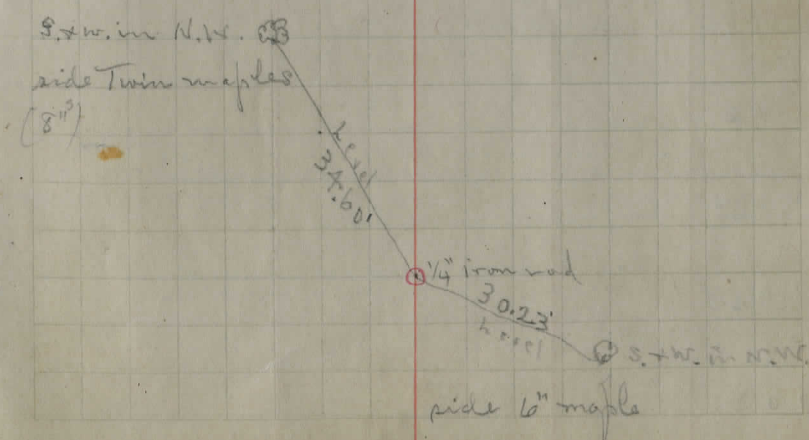
94

+45.2 Iron rod 3/8"

93

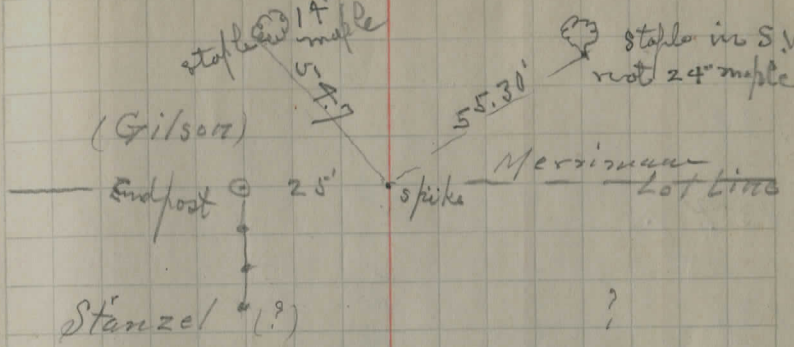
92





115
14
13
12
11
110
9
8
7
6
5
4
103

127
126
+35.7
125
124
123
122
121
120
119
118
117
116



Fuller & Snyder Aug. 23rd 1926 – 1/2 day B... 1/2 day Gen Co. L ℄ R

139

138

137

136

135

134 △

133

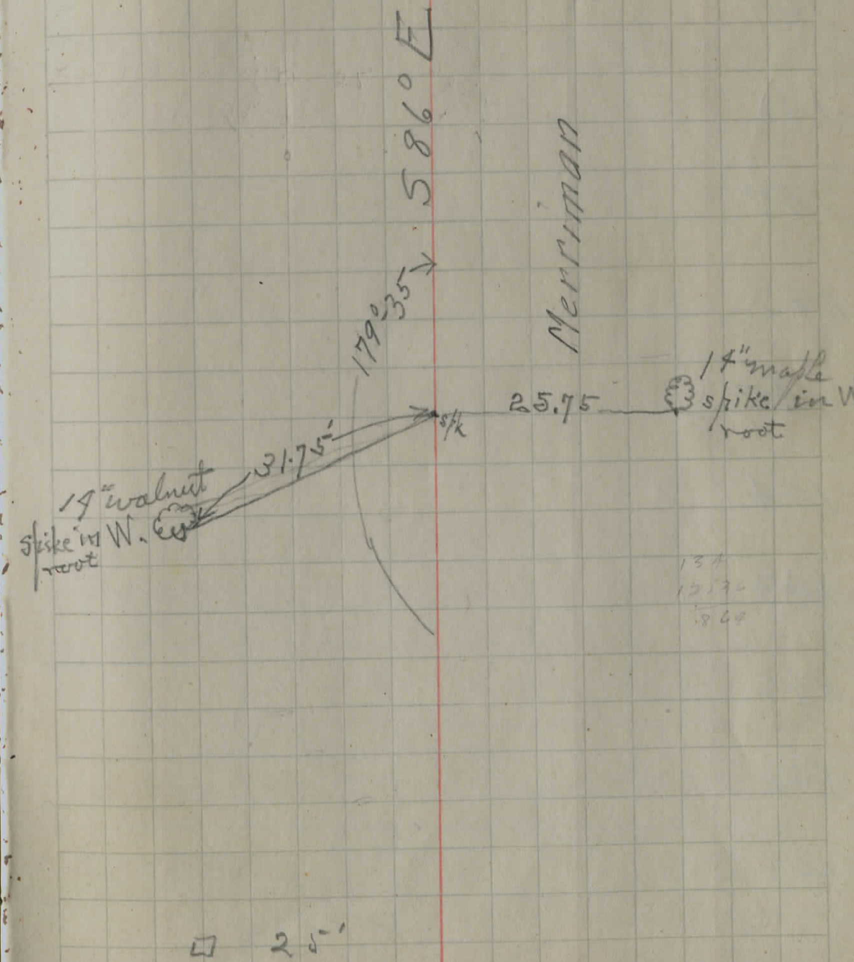
132

131

130

129

128



151

150

149

148

147

146

145

144

143

142

141

140

162

161

160

159

158

157

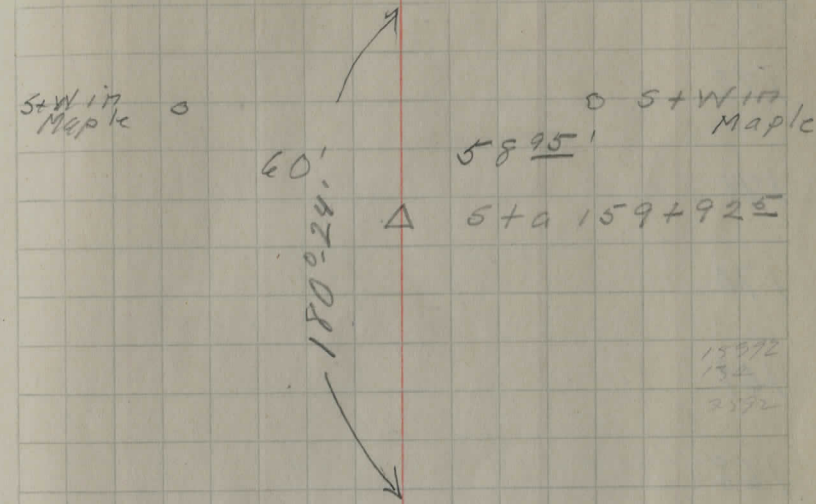
156

155

154

153

152



173

172

171

170

169

168

167

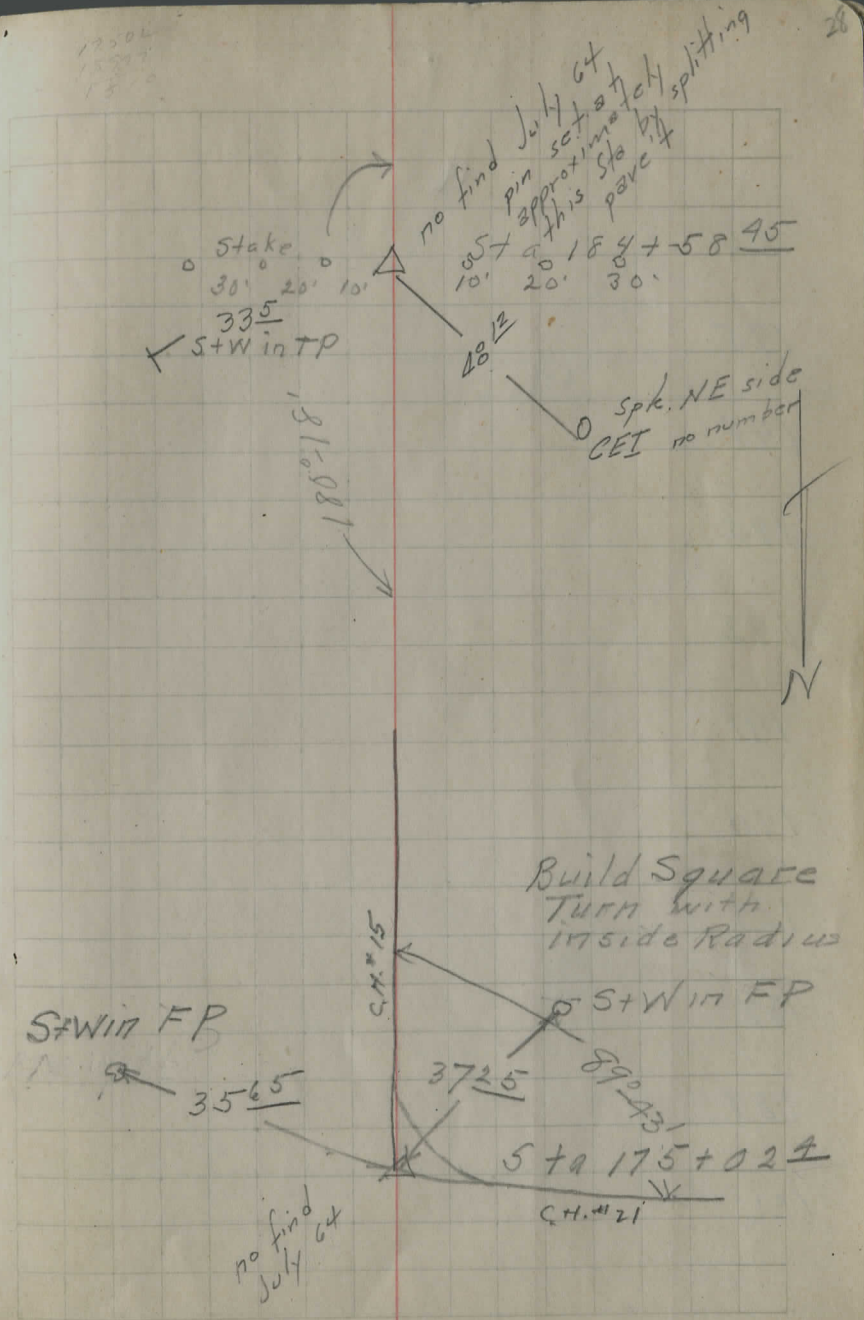
166

165

164

163

185
184
183
182
181
180
179
178
177
176
175
174



196

195

194

193

192

191

190

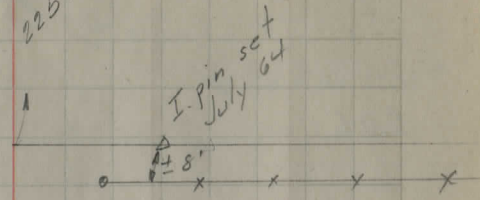
189

188

187

186

225 29



207

206

205

204

203

202

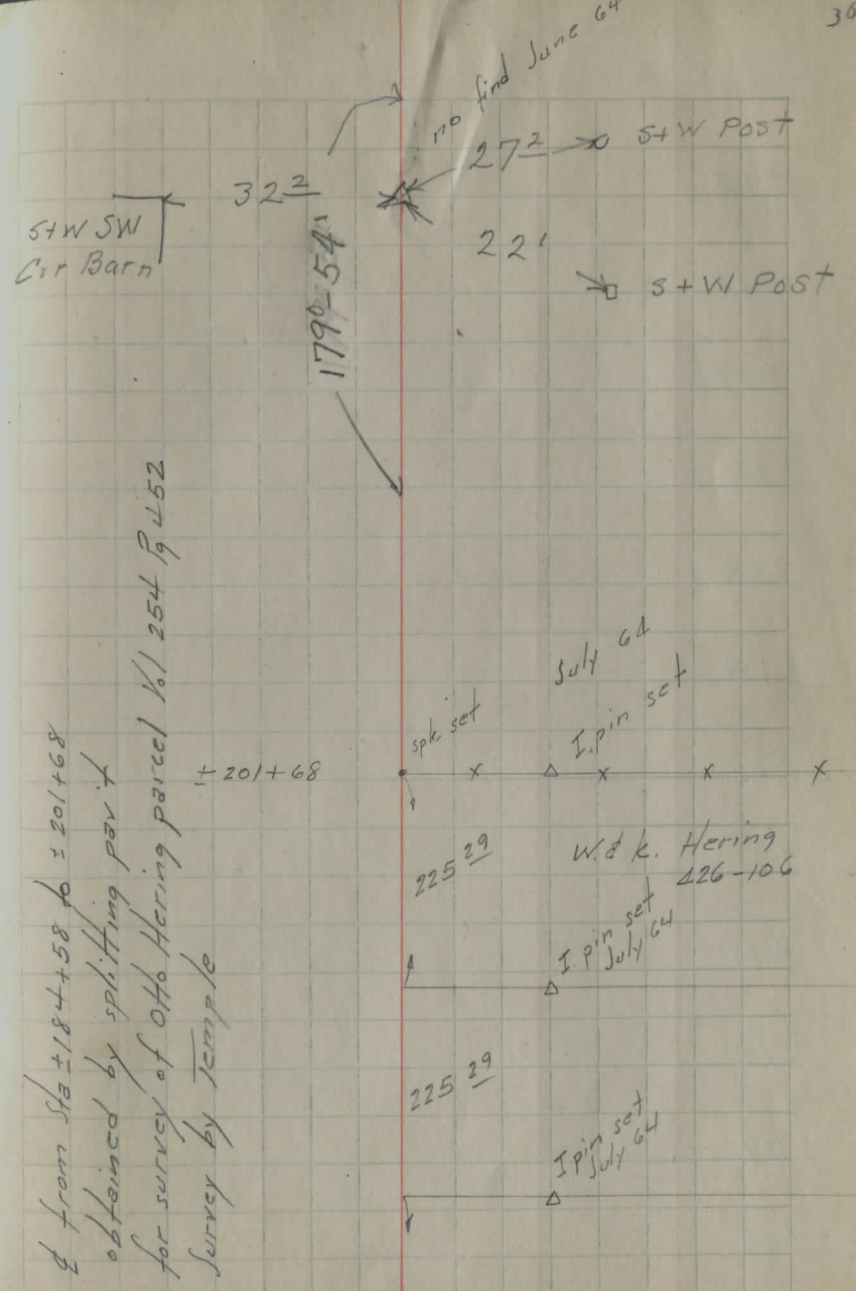
201

200

199

198

197



219

218

217

216

215

214

213

212

211

210

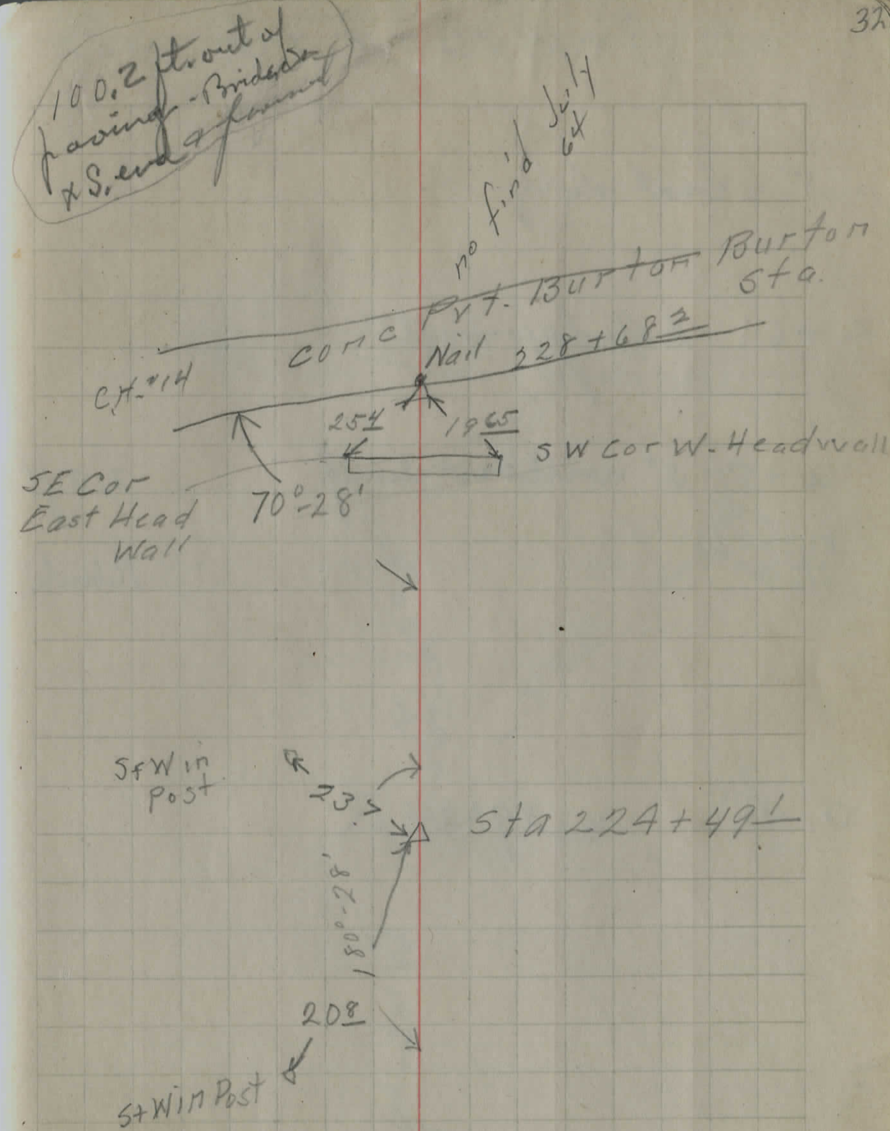
209

208

228+68.2 | 4.33
211 20
17482

End of Survey

228+68.2	
228	
227	
226	
225	
224	
223	
222	
221	
220	



4-9-1930 - F. + G.

5 Last stake

4 + 61 ℄ Bridge - (road)

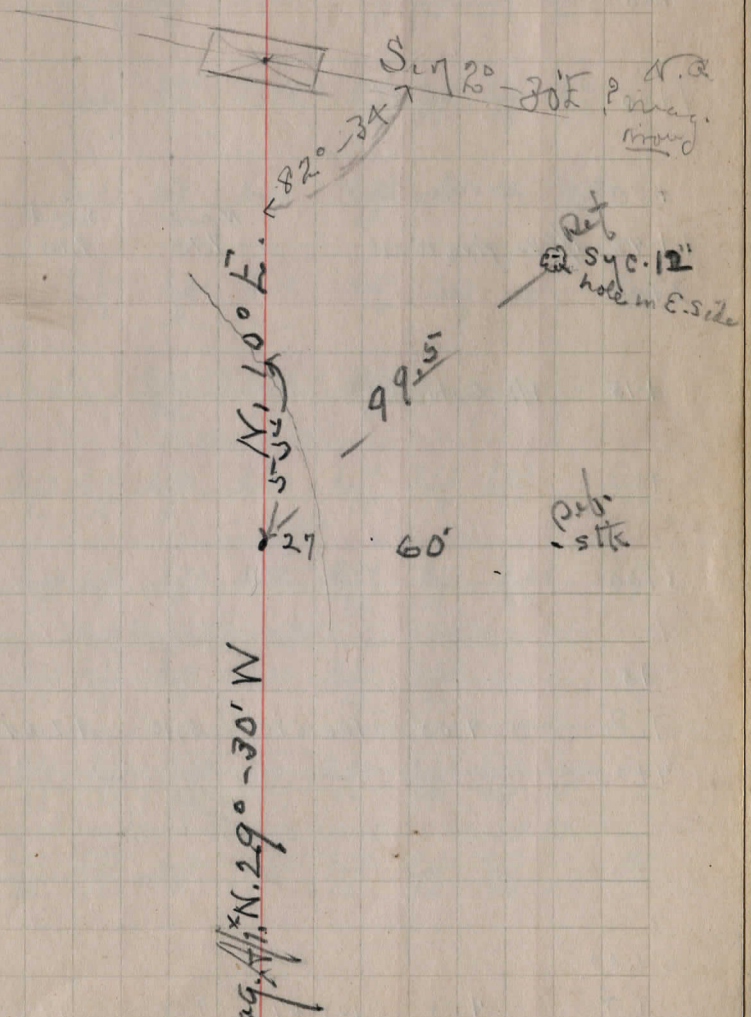
2 + 75 - 3' willow clump. 20 ft L

+ R. bank

0 △ 39°-24' R

Bain Solon Rd

33



H. Patterson
D. Grassel
D. Wenzel

5 Aquille Road
Fisher Rd – S. 500'
X sec.

6/6/73

Cont. from Pg. 12

B.M.	2.74	102.74		100.00
0+0 = ℄ – ℄ Aquille & Fisher				
+50				
1+00				
+50				
1+42 F/L Culv. pipe 12"x18"			N. end 7.70	S. end 7.90
2+00				
+15 F/L Culvert				
+50				
3+00				
+50				
T. P.	9.03	106.67	5.10	97.64
4+00				
+50				
5+00				
T. P.	4.03	101.67	9.03	97.64
B.M.			1.66	100.01

E ℄ W.

Spk N. side CEI # 83.2316 4' up NW ℄ Aquille & Fisher.

Drive	100.2 / 2.50 / 150	99.0 / 3.70 / 100	98.0 / 4.70 / 21	98.04 / 4.70	97.5 / 5.20 / 21		96.8 / 5.90 / 30	
	97.2 / 6.80 / 30	97.3 / 5.40 / 17	98.1 / 4.60 / 9	97.7 / 5.20 / 7	97.74 / 5.00	96.6 / 6.10 / 15	95.8 / 6.90 / 19	96.8 / 5.90 / 23	97.0 / 5.70 / 30
	97.2 / 5.40 / 30	×	97.1 / 5.60 / 9		97.34 / 5.40	97.3 / 5.40 / 12	95.7 / 7.00 / 18	96.8 / 5.90 / 22	97.2 / 5.40 / 30
	95.7 / 7.00 / 30	95.4 / 7.30 / 18	96.6 / 6.10 / 12		96.74 / 6.00	96.5 / 6.20 / 14	Drive		96.7 / 6.00 / 30
	94.3 / 8.40 / 30	94.1 / 8.30 / 12	96.5 / 6.20 / 6		96.64 / 6.10	96.2 / 6.50 / 14	95.2 / 7.50 / 18	×	94.7 / 8.00 / 30
			93.2 / 7.50 / 7.5		96.84 / 5.70	92.4 / 10.30 / 17			
96.8 / 5.90 / 30	96.3 / 6.40 / 25	95.4 / 7.80 / 20	95.8 / 6.90 / 18	96.6 / 6.10 / 6	96.64 / 6.10	96.1 / 6.60 / 15	95.2 / 7.50 / 18	94.6 / 8.10 / 20	94.2 / 8.50 / 30
97.2 / 4.80 / 30		96.5 / 6.20 / 18	95.9 / 6.80 / 11	96.8 / 5.90 / 7	96.84 / 5.90	96.5 / 6.20 / 12	95.2 / 7.50 / 19	94.5 / 8.20 / 22	95.6 / 9.10 / 30
100.0 / 2.70 / 30		98.8 / 3.90 / 18	96.7 / 6.00 / 11	97.7 / 5.00 / 7	97.94 / 4.80	99.4 / 5.30 / 13	96.3 / 6.40 / 20		94.7 / 8.00 / 30
101.9 / 4.80 / 30	102.1 / 4.30 / 23	98.3 / 8.40 / 13	99.2 / 7.50 / 9		97.27 / 7.4	98.8 / 7.90 / 12	98.7 / 8.00 / 20	97.2 / 9.50 / 22	95.9 / 10.70 / 25	97.2 / 8.80 / 30
103.7 / 3.00 / 30	104.2 / 2.50 / 21	99.8 / 6.90 / 13	100.2 / 6.00 / 8	100.67 / 6.00		100.3 / 6.40 / 12	100.1 / 6.60 / 16	102.3 / 4.50 / 23		102.2 / 8.80 / 30
				102.5 / 4.20						

4-9-1930 - T. & G.

Bridge data - Bainbridge - Solon Rd

B.M.	+1.71	101.71		100.00	
0			9.90	91.8 (92.2 surface water)	d.w 0.4
+40			10.2	91.5	
1			6.4	95.3	
+50			6.9	94.8	
2			7.0	94.7	
3			7.4	94.3	dw 2.2
+44		Bot. Bk / Top Bank	11.8 / 6.0	89.9 / 95.7	dw 4.0
4			10.6	91.1	
+61 = ℄ Bridge			(10.5)	s. water 91.2	
Concrete Abut.			(0.34)	101.37	S.W. cor. bridge seat W. root
1+90	90' R	B.M.	[5.24]	96.47	10" Syc.

B.M. is Hi-water mark Mar. 1930

L ℄ R

Chagrin River

S.W. wing wall - blue mark

2d stone from w. end. & 3d from top. on ledge x

2.2/45.	10.9/35.		9.90	10.60/25.	6.30/35.	5.1/60.	
10.3/30.			10.2	7.0/12.0	6.1/30.		
6.0/30.			6.4	7.0/9.	9.7/16.	10.3/33. edge w.	
9.7/30.	9.0/25.	7.1/21.	6.9	6.1/30			
	8.8/30.		7.0	6.6/18.	5.8/30.		
13./30.	8.3/23.	6.8/15.	7.4	7.0/30.			
	14.4/30		11.8/6.0	6.9/12.	7.5/25.	8.5/26.	9.1/30.
7.5/56	9.6/46	11.0/43	10.9/30.	11.3/20	10.6	10.3/10.	11.4/30 · 10.9/37. · 8.6/46.
10.5 s. water	12/30 (89.7)	10.8/13. (90.9)	10.7 (91.0)	13.0/13.0 (88.7)	17.0 abut. (84.7)		

hi. w. mark

		H.I.		Elev's	
B.M.[1]	+4.44	104.44		100.00	
T.P.			−9.28	95.16	
	+2.15	97.31			
Sta 5			7.0	90.31	water 0.4 deep
		~~T.P. Hinckley~~			
Concrete Abutment	+3.69	105.06		101.37	Bridge seat S.W. cor.
Int rd. to N. £	1.9			103.2	
Frame ½ way to bridge	2.8			102.3	
E. end "	2.7			102.4	
W " "	1.4			103.7	×
W. Abut. S.W. cor bridge seat	2.44			102.6	
" " N.W. cor " "	2.26			102.8	
25' W. of bridge £	3.5			101.6	
50' " "	4.8			100.3	
100 " " "	5.2			99.9	
W. abut. ground below B.M. #1	9.0			96.0	
W. abt. ground at N.E. cor. (bank	11.3			93.8	
Top W. wings	3.6			101.5	
Av. ground	7.±	R + L at gates			W. of bridge

Stone Abut. west side river 18'±

Concrete " East " " 19½'

" N. wing " " " 13±

" S " – – – 50±

96.5 Hi water Feb 1930 Mar.

T. to ? 6 ...

H.I.							
4/40	4.3/33	4.2/2.5	5.7/2.3	6.3/13	7 0	8.5/13	–

May 10th 1935 — Fiedler & W. G. Marks

Comparative Levels at Nye's pond — Burton Tp. Co. Road #21

	Rod	H.I.	Rod	Elev. (assumed)	
B.M. #1	+5.45	105.45		100.00	spike in E. side of 1st tel. pole W. of inlet to 6" tile drain Coates Farm, S. side of road
			-5.11	100.34	℄ Road & N. of " " " " " "
			8.00	97.45	21 ft. S. of ℄ road = flow line " " " " " "
			5.26	100.19	surface of water in Nye pond N. of road
			3.60	102.85	Highest point over tile drain, & 320' N. of ℄ Road
			5.27	100.18	400 ft. N. of ℄ road over tile drain
			8.30	97.15	500 " " " " " " "
			10.00	95.45	527 " " " " " " " apparently the outlet.
			11.00	94.45	580 " " " " out in "cat tail swamp".

(Margin note, circled: 25.0± ℄ road To N. side of pond Elev. 100.2)

Levels along line of 6" & 8" tile drain from inlet 21' S. of ℄ road to pasture fence — open ditch beyond.

	Rod	H.I.	Rod	Elev.	
B.M. #1	+2.80	102.80		100.00	
			-2.60	100.20	surface of water Nye pond N. of road
			5.35	97.45	inlet to Coates 6" tile drain 21' S. of ℄ road
			5.90	96.90	250' S. of ℄ road — aug. in pipe line — flow line, 8" tile
			6.20	96.60	338' S. " " " opening " " " "
			5.50	97.30	532' S " " " aug. " " " surface ground
			7.40	95.40	660'± S. " " " outlet of 8" " " at pasture fence
			7.70	95.10	775' S (115' open ditch) " " " bottom of open ditch

5+80	94.5
0+30	96.2

GRADES for DRAINAGE, NYE'S POND.
BURTON TWP. County Hwy. #21.

B.M.	5.51	105.51		100.00	Assumed.
5+80					
5+50					
5+25					F.L. Grade
5+00			4.71	100.80	94.80
4			4.31	101.20	95.20
3			3.91	101.60	95.60
2					96.00
1					96.40

Apr. 15, 1935, Snow Squalls. W.C. Marks, O. Jahn

Spike in E. Side Tel. Pole.

6.0 cut, marked on posts of batter-boards.
6.0 " " " " " " "
6.0 " " " " " " "
6.0 " " " " " " "

County Home Road Sec. A&B June 1948
Burton Twp.

11+00

10+00

9+00

8+00

7+00

6+00 Δ = 3-52' L

5+00

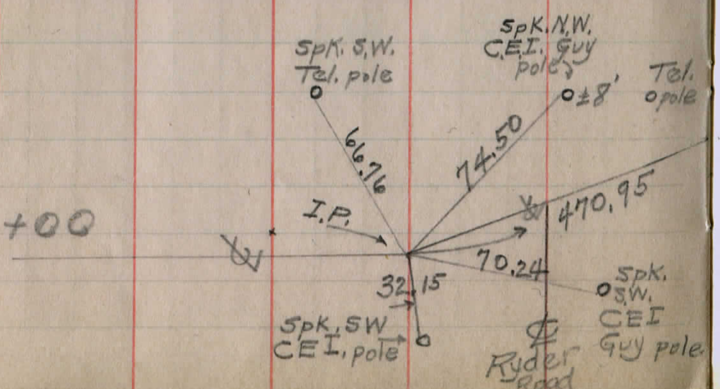
4+00

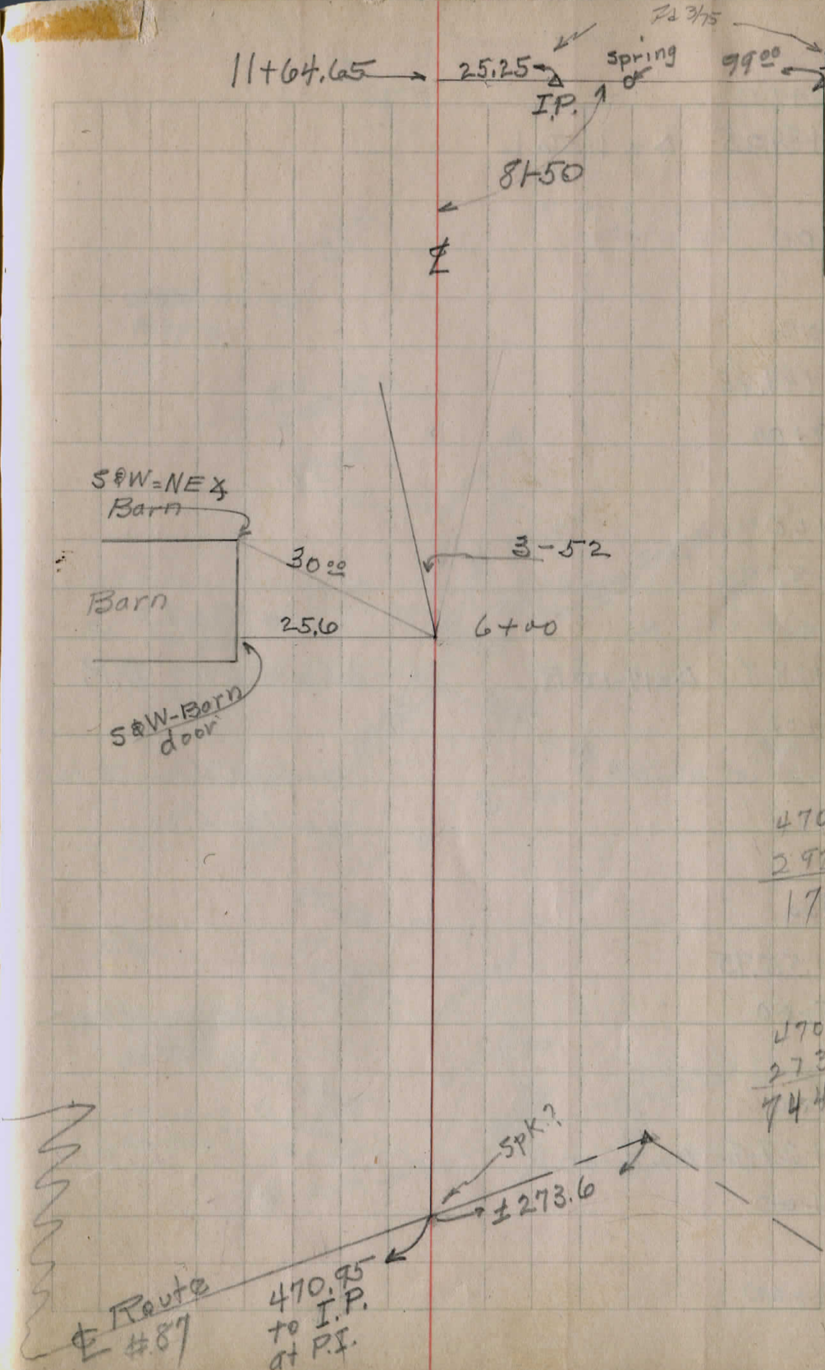
3+00

2+00

1+00

Sta 0+00





470.95
292.95
178.00

470.95
273.6
744.55

23+00

22+89.25 Δ = 1-56 L

22+00

21+00

20+49.45

20+00

19+00

18+98.95

18+28.8 Δ = 17-10 R. I.P.

18+00

17+00

16+00

+55.75

15+00

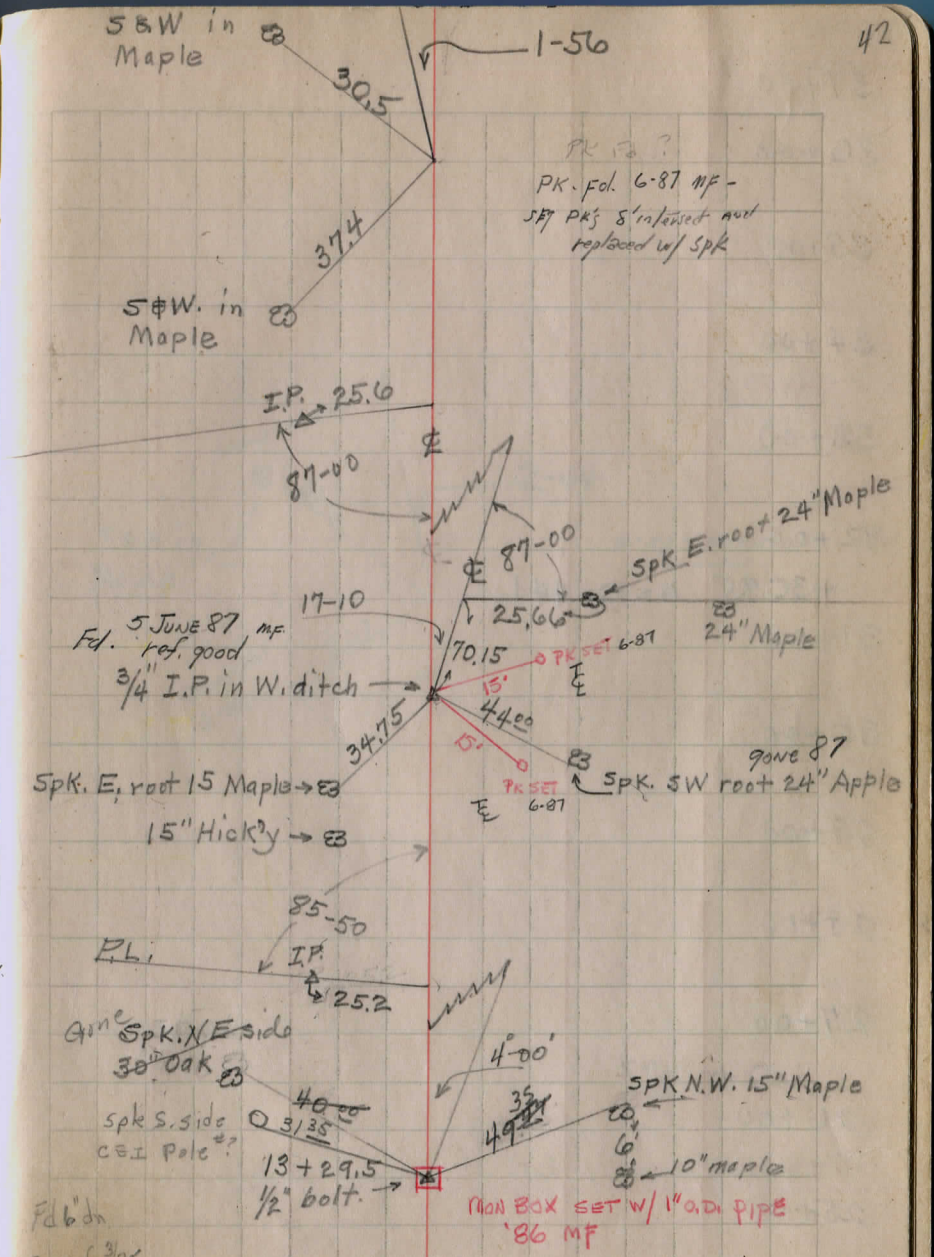
14+00

13+29.5 Δ = 4-00 R I. pin

13+00

12+00

Fd 3/75



37+00

36+00

35+00

34+00

33+00

32+00

+30.95 Δ=0-44L

31+00

30+00

29+00

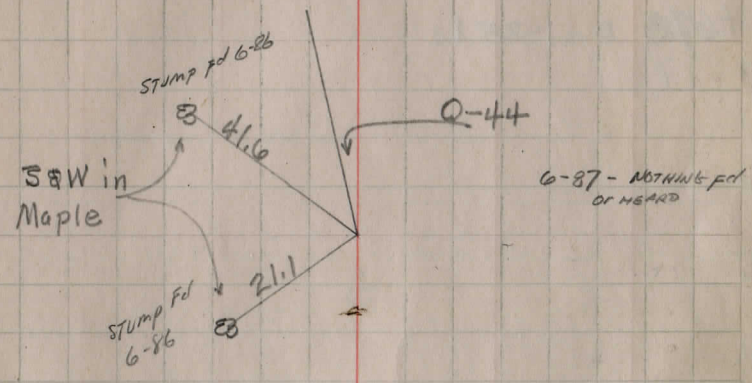
28+00

27+00

26+00

25+00

24+00



51+00

50

49

48+00

+67.3 Δ = 1-25 L

47

46

45

44

43

42

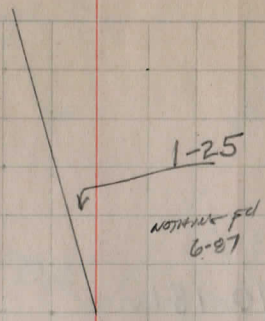
41

40+00

39+01.4 Δ = 17-20 R

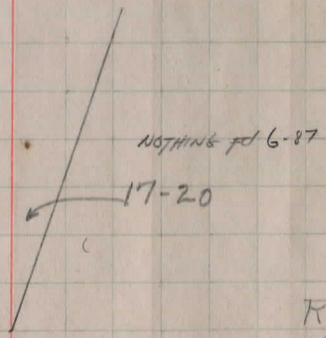
39+00

38+00



Ref = back of book

℄



Ref = back of book

65+00

64+00
+82.4

63

62+00
+52.3 Δ = 70-18L

61+00

60

59

58

57

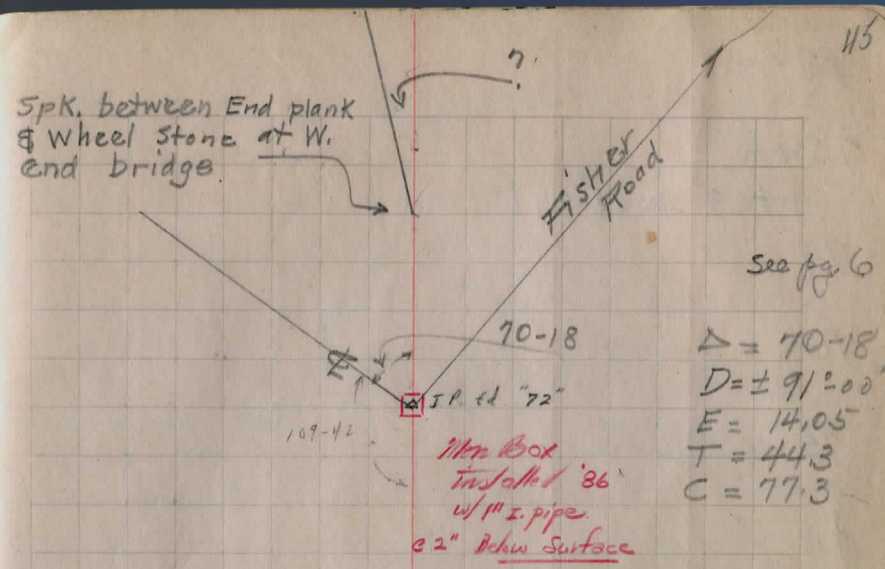
56

55

54

53

52+00



See pg. 6

Δ = 70-18
D = ± 91°00'
E = 14.05
T = 44.3
C = 77.3

79+00

78+00

+42.9 Δ=1-27L

77

76

75

74

73

72+00

+06.9 Δ=16-37L

71+00

70

69

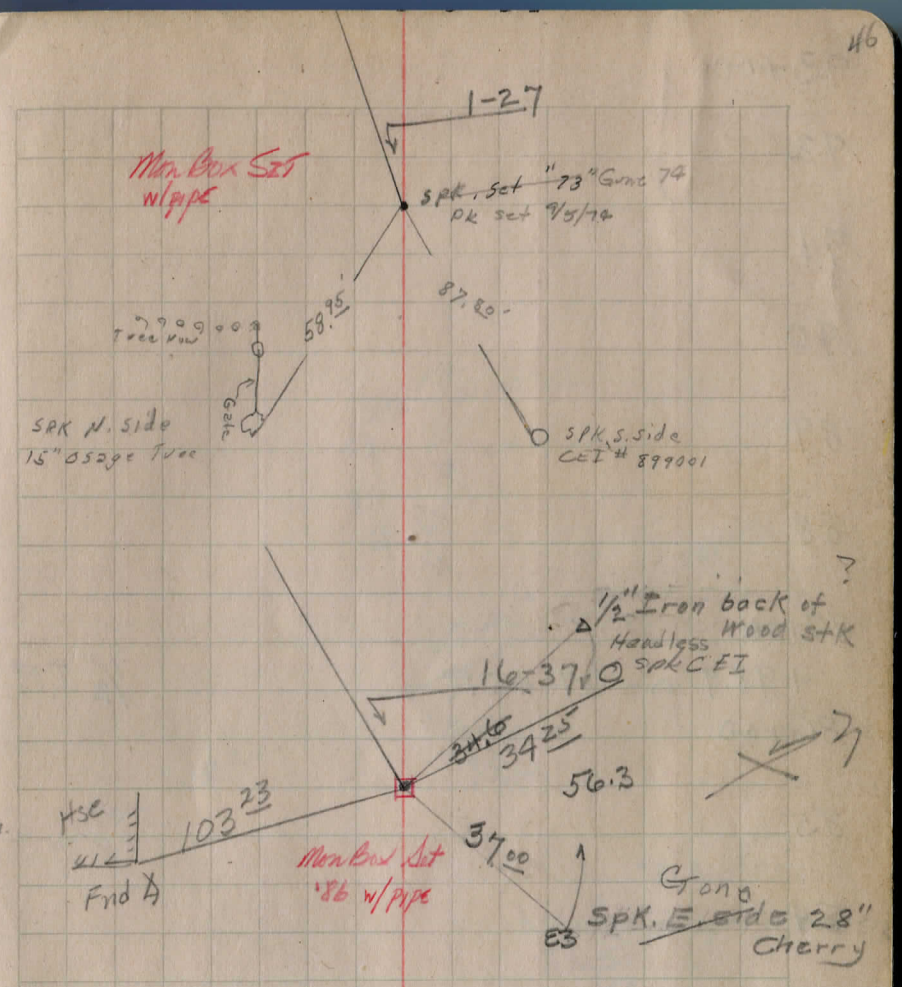
68

67

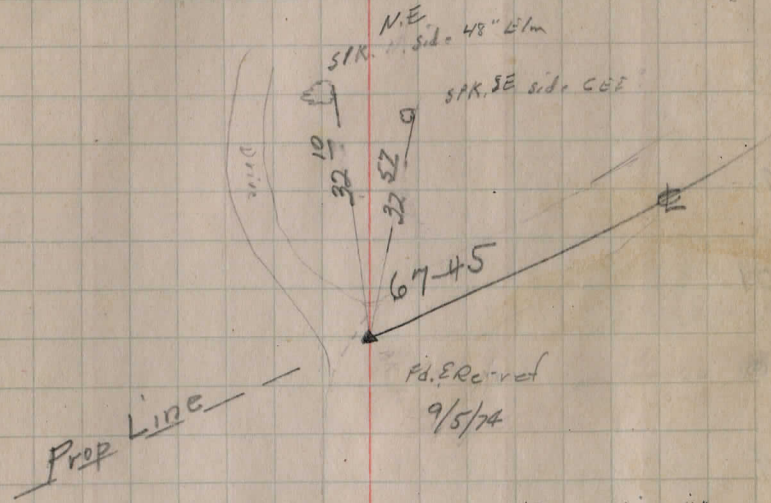
66+00

1" IP?

? Fd 8/74 12"



93+00
92
91
90
89
88
87+00
+98.9 Δ = 67-45R ½" I.P.
86+00
85
84
83
82
81
80+00



See "As Built" PLANS.
New curve designed Jun'86
Tube ~~55~~
56

107

106

105

104

103

102

101

100

99

98

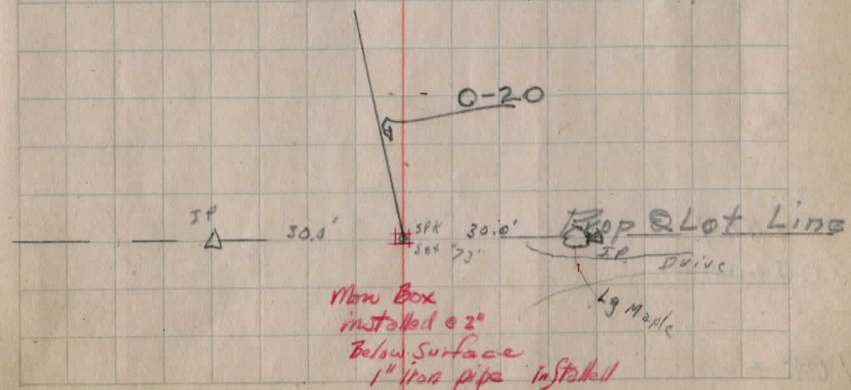
97

96+00

+20.5 Δ = 0-20 L ½" IP (?) (found)

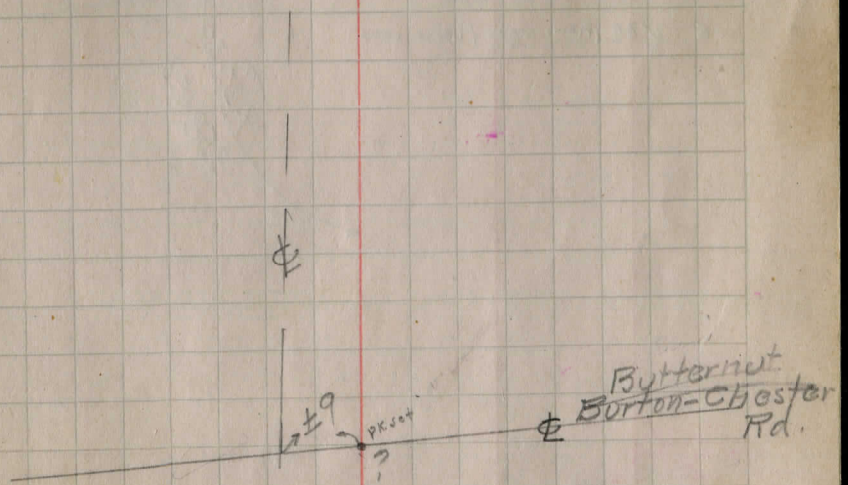
95+00

94+00



+42.9
109+00

108+00

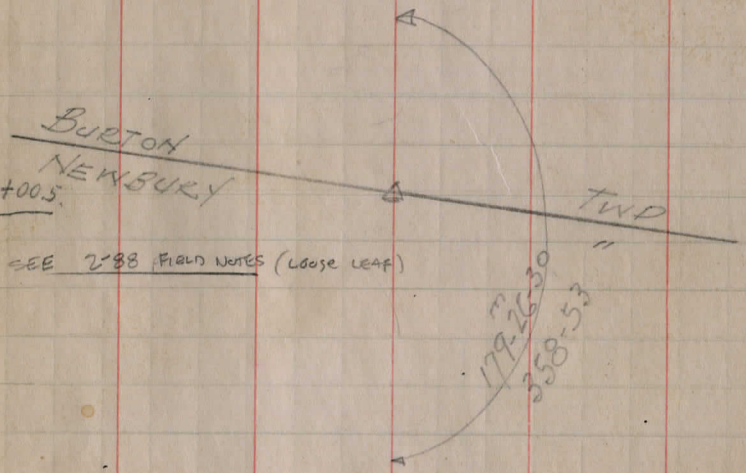


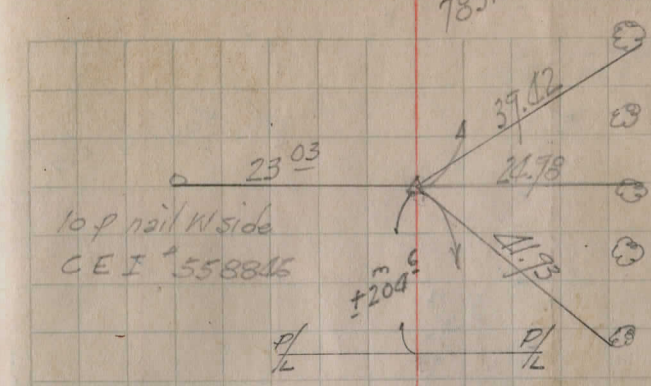
Sept 1950

BUTTERNUT RD

CH #21 Sec F "pf"

142+52.55 P.O.T. ½" I.P. set td 8-21-57





8-21-57
I.P. fd See ref.
Fd bk = 125 pg 13

I.P. fd S½. 100+58.9
Fd bk = 125
pg 11

℄ Aquilla Rd

150+36.41

158.06-30
316-13

103.88 Pt to

10.39 to F Pipe

14.34 of Pipe

85.35

I.P. set top of S slope of ditch fd 8-21-57

S&W in SE side 24" Pig Hick.

Δ = 21-53-30

S&W in NE side 24" Pig Hick.

See ref bk #78 pg 115

20'

11.7 9.1

2.5 x 3 stone Culv't

I.P.Fd

20'

24.52

I.P.Fd

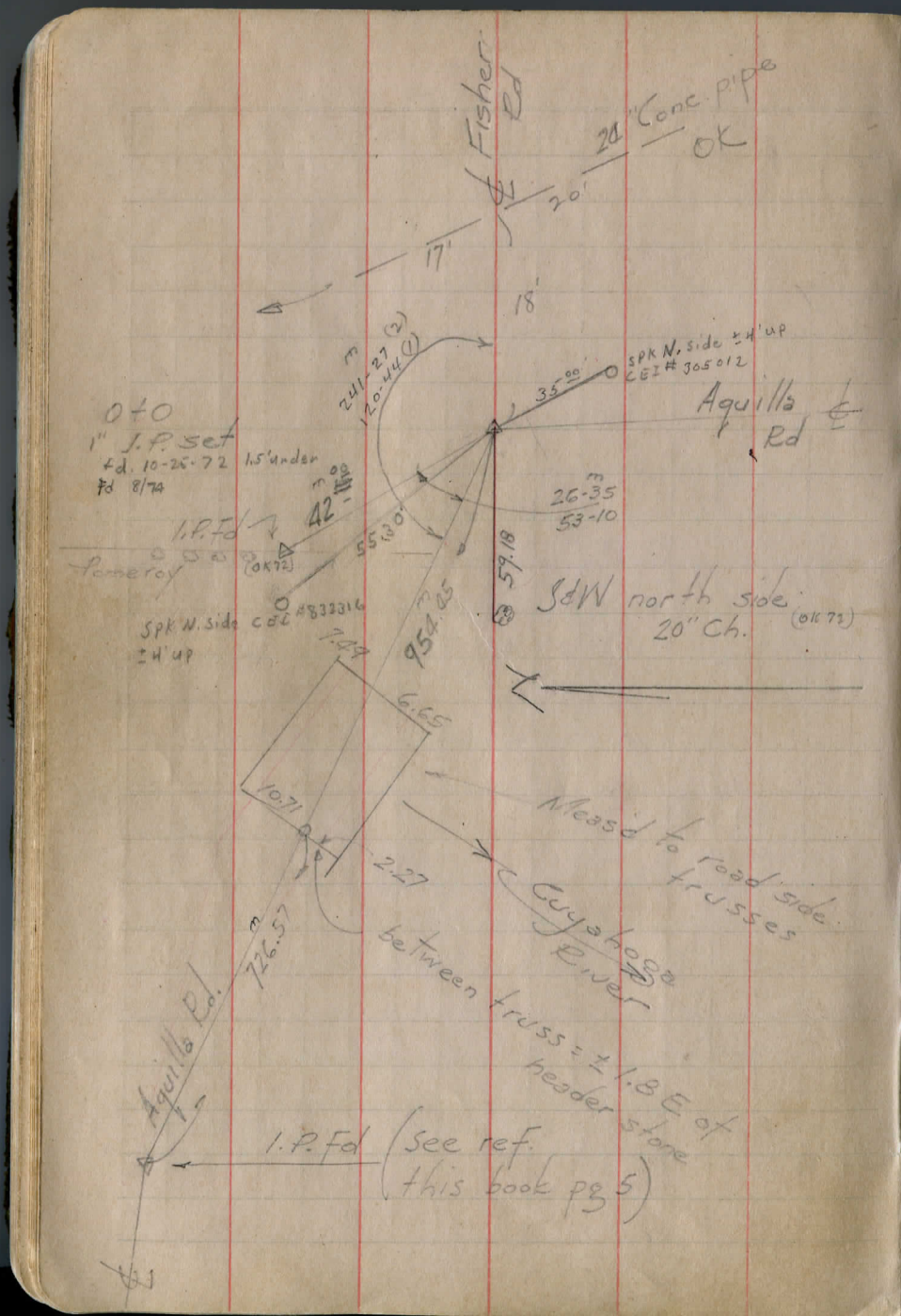
27.97m

63-27

472.05m

290.2

50.53
930
968.53
-204.67
783.86m



FISHER Rd Burton Twp 53

May '51 from Maynard Bender

All stks set 30 Lt (N) except 20 & 22 set 30' Rt (S)

14" x 30" op. Stone culvt NG!!

11.5 ±10' inlet covered with debris

15+31.5

± 3' Fill over top

Replaced '52

Vert. spk W root 24" Ch (stump '74)

37.34

30 00

11+48 20 I.P. set & P.O.T.

Vert. spk W root 24" Ch. OK 74

Spk Fd 9/74

73.20

Vert spk N side 24" beech N side fence

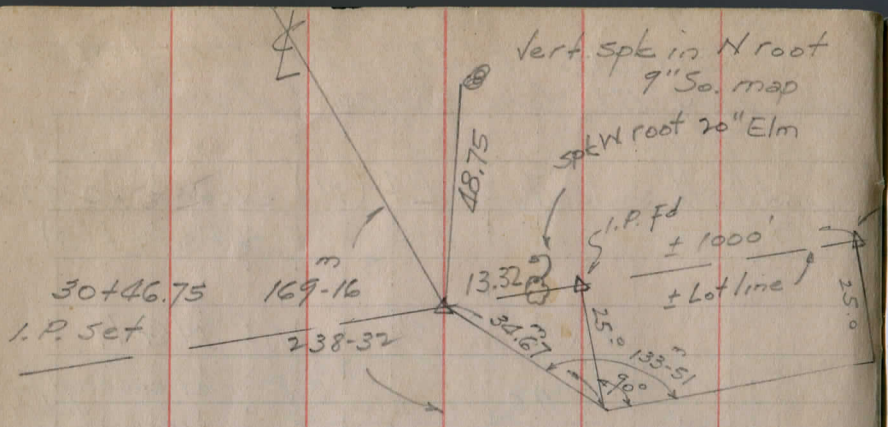
inlet plugged by former.

7.5 7.5

7+25

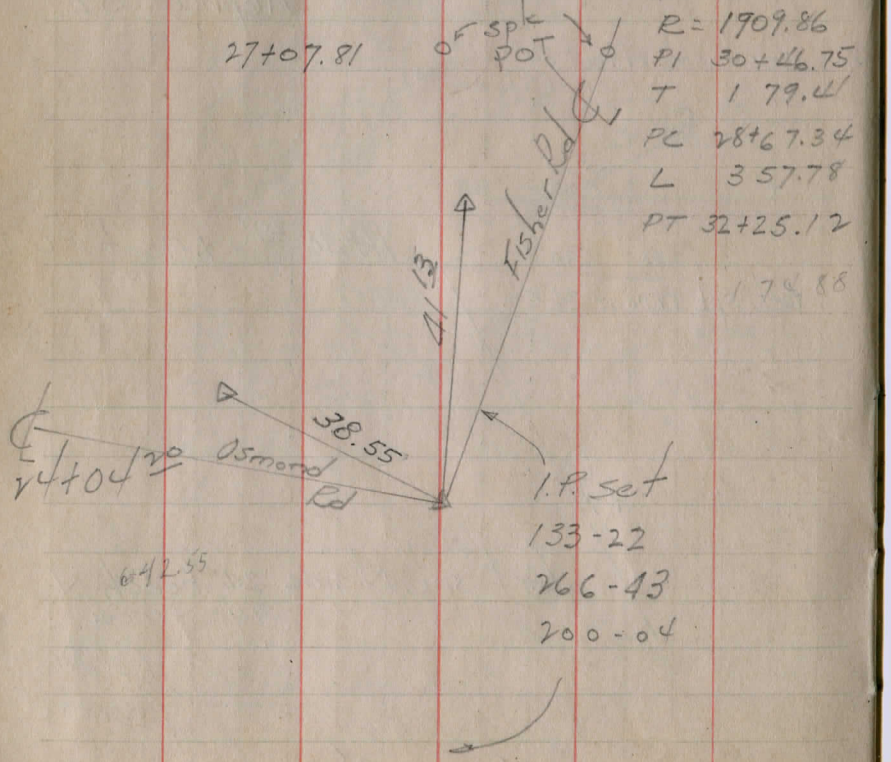
12" boiler.

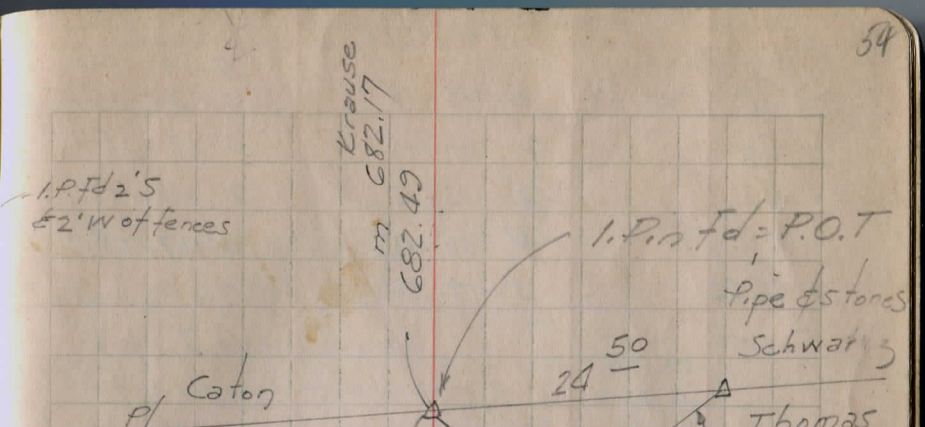
Replaced '52



Δ = 10-44 Lt
D = 3°
R = 1909.86
PI 30+46.75
T 179.44
PC 28+67.34
L 357.78
PT 32+25.12

27+07.81





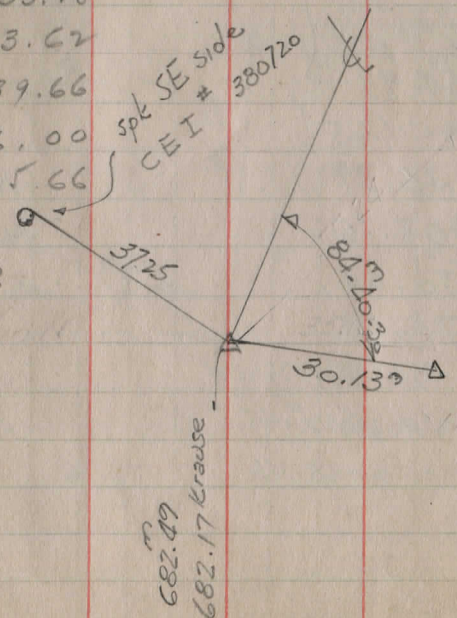
P.I 35+44.65
I.P set
Δ = 16-12 Lt
D = 6°
R = 954.93
PI 35+44.65
T 135.89
PC 34+08.76
L = 270.00
P.T. 36+78.76

		forward		back
35+0	91.24	2°-45'		5-22
36+0		5-45'	78.76	2-22

	40+39.66	Forward	back
Sta 41	60.34	0-45-15	5-19-30
" 42		2-00-15	4-32-15
" 43		3-15-15	3-19-15
" 44		4-30-15	2-04-15
+ 65.66		5-19-30	0-49-15

Δ = 10-39 Rt Δ/2 = 5-19-30 t = 0932'
D = 2-30
R = 2291.83
P.I = 42+53.28
T = 213.62
PC = 40+39.66
L = 426.00
PT = 44+65.66

42+53.28
1. Pin Fd
10 Ext



169-21
338-42
148-03

Sta 53+03.37 easterly
run 7-27,28-1954
P.o.m. Temple Canfield

	m	(7-54)
1	147-39-	
2	295-18+	
3	82-57	

Krause (1951)
127-44-14 75' External existg

53+03.37
I.P. Fd

51+0 = last stk set

to I.P. 42+53.28

Krause
1051.30
1051.33

48+70

17.3 ⟷ 14.7

72" or 74" D Multi plate culvt

Spk N side CEI #899533x

79.91

63+06.31 spike set P.O.T

±2' SW of SW wheel track ± 5' NE of SW ditch

132.92

Spk in road face CEI #899534

Spk in N'ly side 10" Hick

68.05

P.I.

41.91

I. Pin fd

56+22.61 pin fd July '54 3" under

P.O.T.

50.21

Spk in road face CEI #899537x

○ Spk set PT 54+77.72 correct PT = 54+78.16

73 ± 33

Vert. spk S root 30" Ch (3 trunks at 4.5' up)

75.05

1½" I.P. set

90°-40'

30.0±

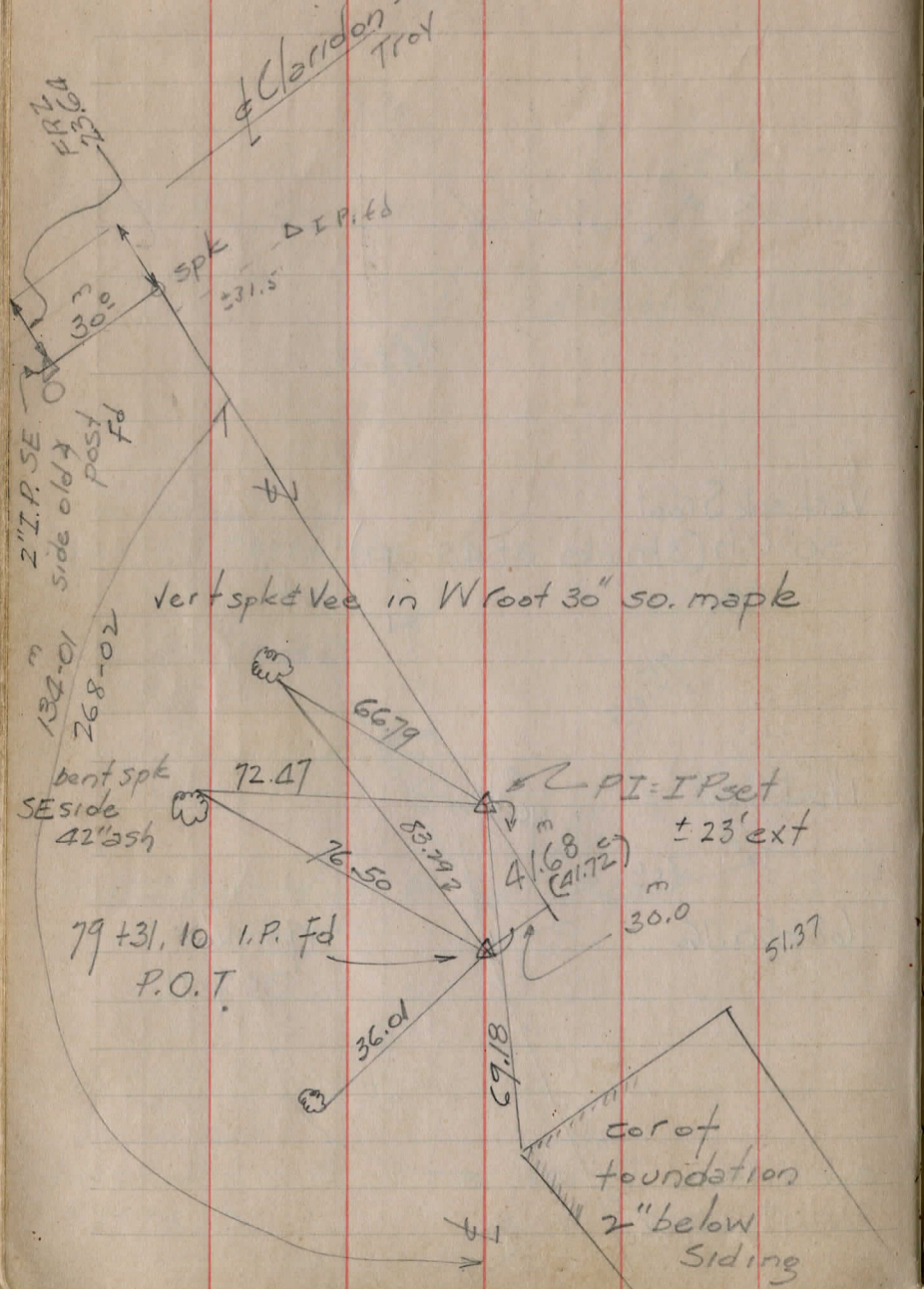
68+50.16

178-40'

357-21

82.30

Spk NW side CEI #584922

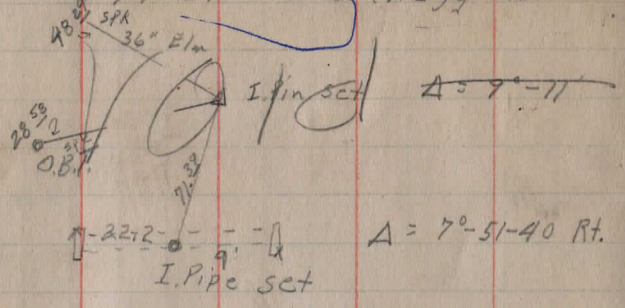


Last side stk 1954 = 78+00

H. Patterson
P. Young
G. Diedrich

Osmond Rd. Burton twp.

1-14-61 Cool: Hazy 42°-



~~18+72.22~~

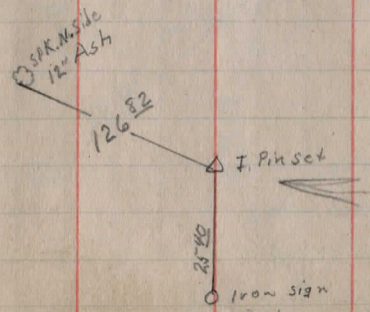
17+41.78

Δ = 7°-51-40 Rt.

I. Pipe set

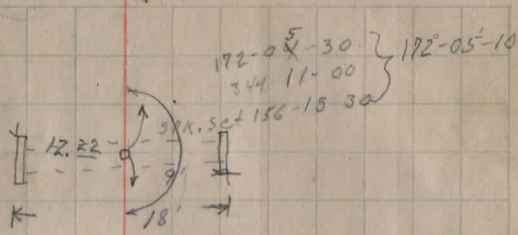
6+57.41

Δ I Pin set Δ = 0°-45-20 Lt.

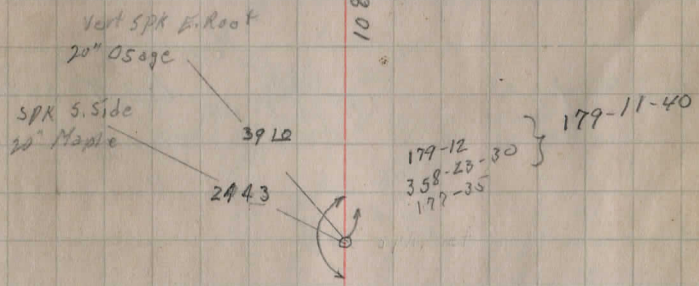


0+0

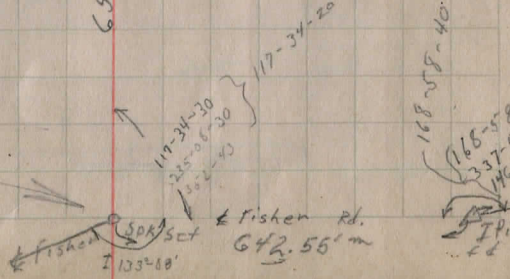
216.28



1084.37' ±



654.39' ±



OSMOND

27+12.85

SPK POK

463.42

22+49.25

OSPK

3.02

I. P set

Δ = 3°-08-50 Rt.

271.69

19+58.06

~~Eliminated~~

Δ = 4°-20 Rt.

SPK SW side 15" cherry

I Prop Pipe

100.30

23 98

SPK N side 20" cherry

17 50

157°-01-30

178-17

356-32

174-50-30

178°-16-50

I Prop. Pipe

462.30

SPK NE Side OBT = 26-4

171.25

SPK NW side = 577433 X

39 32

51 98

30

173-06-10

346-12-30

159-15-30

176-00-30

352

168-02-30

176-00-50

I. Prop Pipe

160.01

9°-01'

18°-02'

27°-03'

176-51

353-42-30

170-33-30

176-51-10

294.69' m

SPK NE Side OBT = 26-6

15 82

~~175-33-10~~

~~175°-33'-00~~

~~351°-01'-20~~

~~166°-27'-30~~

175-39-30

351-19-30

167-00

175-40

~~SPK~~ I. Pin set

216.28

H. Patterson
R. Esing 11/15/73

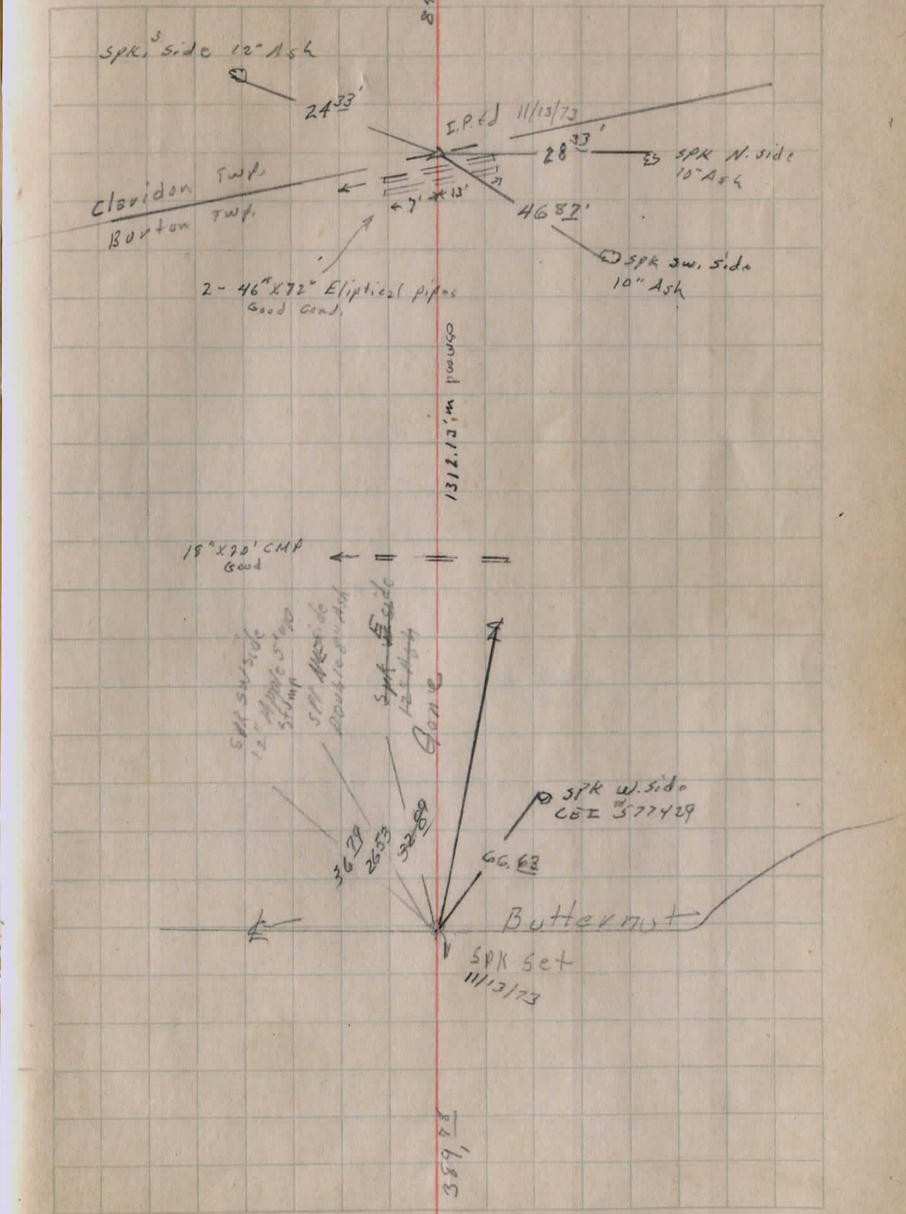
P.O.T.

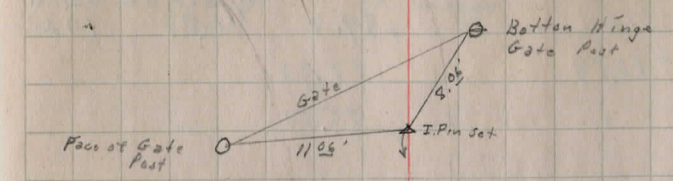
Set stakes 100' intervals 30' L+R

31+04.69

△ I Pin Set Fd I Pipe 10/13/75

391.84




Camp
Divide
Button Hinge
Gate Post
Gate
4.06'
I. Pin Set
Face of Gate
Post
11.05'

84,100' N

	+1.67	201.67	Grade		9.5
2+00			196.0	5.67	
3			193.10	8.57	
3+50			189.20		
			185.30		
	+3.40	203.40			
				C 1.60	
2			197.	4.80	6.40
+50			196.	C 6.00	
				1.40	7.40
3			193.1	C 6.2	
				4.10	10.3
TP	-4.12		199.28		
	+0.54	199.82		5.28	
		rounded		1.54	6.82
				C 5.80	C 4.0
3+50			189.2	6.82	10.82
-10.89	-10.89		188.93		
4			85.30		

22.21

22.21

19.20 ℄ 2' to R for error

18.15

Sta	Ground	Grade	Cut	Fill	+1.42
0	196.4				2 - 5.50
+50	196.				+50 - 4.0
1	195.5				3 - 6.3
+50	195.2				10.65
2	196.	197.0		1.0	
+50	198.0	196.0	2.0		
3	195.3	193.10	2.1		
+50	190.8	189.20	1.6		
4	184.3	185.30		1.0	
+50		181.40			
+75	177.5	179.45		2.0	
5	174.8	177.50		2.7	
+50	171.1	173.60		2.5	
6	167.4	169.70		2.3	
+50	164.6	165.80		1.2	
7	161.2	161.90		0.7	
+50	155.8				
8					
+50					
9					
+50					
10					

100' V.C.
2.0%
197.00
7.8%

2+35 - 2+50 - 2000
3 - 2+50 - 6800
3 - 3+50 - 6000
3+75 - 3+50 - 1250
27) 16050 (575
135
255
243
120
105
490 yds
6 to 6.8 cu. yds deduct
27) 2835 (105
27
135
135

Aug. 20th '26 T.T.S.

63

H.I.	Elev.	
201.42	200.00	
		4.42
		5.42
		8.2
		12.22

Fidler & Snyder Aug 13th P.M. CH-#21

Sta.	+R	H.I.	-R	Elev.	
B.M.	+2.68	202.68		200.00	assumed
Sta 0			6.1	196.6	
" 1			7.2	195.5	
+50			7.5	195.2	
2			6.7	196.0	grade
+50			4.7	198.0	197 = Tang 195 = V.C. 96 = "
3			7.4	195.3	193 = Tang 192 = V.C. 92 = "
3+50			11.9	190.8	189.00
T.P.			-11.78	190.90	
	+0.01	190.91			
4			6.6	184.3	185.00
			-10.82	180.09	
+50	+0.63	180.72			181.00
4+75			3.2	177.5	179.00
5			5.9	174.8	177.00
+50			9.6	171.1	173.00
T.P.			-11.60	169.12	
6			13.3	167.4	169.00
TP	+0.00	169.12			
+50			4.5	164.6	165.00
7			7.9	161.2	161.00
+50			13.3	155.8	157.00

NOTE: P.O.B. is ℄ CH.#5 & CH.#21

L ℄ R

Elev. Top of foundation N.W. cor. Ch. Tower. 70'

+3.4 3.3/25 · +2.2 4.5/18 · +1.6 5.1/14 · +0.4 6.8/12 · 6 7 · -0.2 6.9/9 · -0.9 5.8/15 · -1.0 5.3/25

+3.9 0.8/25 · +2.4 2.3/12 · +0.3 4.0/11 · 4 7 · -0.2 4.9/15 · 0.0 4.7/25

+4.1 3.3/25 · +3.3 4.1/15 · +2.5 4.9/13 · -0.2 7.6/12 · 7 4 · -1.6 9.0/12 · -1.2 8.6/14 · +2.8 4.6/20 · +2.4 5.0/25

+4.4 7.5/25 · +1.4 10.5/15 · -0.6 12.5/11 · +0.5 11.4/8 · 11 9 · -0.4 12.3/12 · -2.1 14/14 · +0.7 11.2/15 · +2.7 9.2/20 · +3.4 8.5/25

6 6

3 2

5 9

9 6

13 3

4 5

7 9

13 3

Sta	+Rd		-Rd	Elev	
T.P.		169.12	-11.64	157.48	
	+1.31	158.99			
8			5.8	152.2	153.00
+58			10.2	147.8	
9			12.9	145.1	
T.P.			-10.27	148.72	
	+0.43	149.15			
10			5.9	143.3	
11			7.9	141.3	
12			8.7	140.5	
B.M.			-8.68	140.47	

58
102
129

59
79
87

N.E. cor. N parapet culvert at 12+02 - W. of Walton

	+R	H.I.	-R	Elev.
B.M.	+0.16	200.16		200.00
Sta 37			4.2	196.00
38			5.1	195.1
(+12 = drive to S. & +45 to N driveway)				
+50			7.4	192.8
T.P.			-10.90	189.26
	+0.82	190.08		
39			2.5	187.6
+50			9.1	181.0
T.P.			-11.96	178.12
	+0.01	178.13		
40			3.5	174.6
+50			8.3	169.8
41			11.1	167.0
T.P.			-10.78	167.35
	+0.18	167.53		
42			4.4	163.1
43			7.4	160.1
T.P. + 44			9.7 -11.25	157.6 156.28
	+2.48	158.76		
45			3.8	154.0
46				153.1

Aug. 17th 1926 – Fiedler & Snyder – "Hoerst Hill"

N.E. cor. of foundation house just S. of east cement steps.

4.2

+0.9 +0.3 -1.0 -0.2 | -0.2 -1.3 +0.3 +0.8
4.2/25 4.8/16 6.1/14 5.3/12 5 1 5.3/9 6.4/14 4.8/15 4.3/20 & 25

+1.3 +0.7 -1.1 -0.2 | -0.5 -1.4 +1.3 +1.4 +1.9
6.1/25 6.7/20 8.5/16 7.6/14 7 4 7.9/12 8.8/14 6.1/15 6.0/20 5.5/25

+5.3 +1.7 -1.0 -0.6 | +0.1 -0.9 +1.7 +2.2 +2.5
4.3 + 2.8/25 0.8/16 3.5/15 3.1/14 2 5 2.4/10 3.4/13.0 0.8/15 0.3/20 0.0/25

+3.7 +1.1 -0.6 -0.1 | -0.2 -1.2 +0.9 +1.2 +0.8
5.4/25 8.0/16 9.7/15 9.2/13 9.1 9.3/12 10.3/14 8.2/15 7.9/20 8.3/25

+2.2 +1.5 +0.3 -1.2 -0.6 | -0.6 -0.9 +1.0 +1.5 +1.4
1.3/25 2.0/20 3.2/13 4.7/12 4.1/10 3 5 4.1/10 4.4/16 2.0/17 2.0/20 2.1/25

8 3

11 1

21.3' 4 4

7 4

16' 9 7

3 8

5 7

		158.76			
46+50			7.7	151.1	
			6.65	152.1	
B.M.			-8.25	150.51	x on W.
			6.74	152.02	Top of N.E. cor
			4.28	154.48	Top of
			8.30	150.46	

	Ground	grade	cut	fill	End area
37	196.0	196.00			
+50	195.6	195.5	0.1		00
△195. 38	195.10	194.0	1.10		60
+50	92.8	190.5	2.30		118
39	187.6	186.0	1.60		100
+50	181.0	181.5		+35 1.0	= 0.0
40	174.6	177.0		2.9	
+50	169.8	172.5		3.2	
41	167.0	168.0		1.5	
inter. +25	166.0	165.75			grade Rd

B.M.	+0.85	H.S. 200.85	200.00		
38			194.00	c 1.9 L 4.95	6.85
"			"	c 1.7 R 5.15	
+50			190.50	c 3.1 L 7.25	10.35
" "			~	c 3.80 R 6.55	10.35
			186.00	c 6.9 L 7.95	14.85
				c 3.7 R 11.15	
	-11.15				

7.7

Bridge floor at Wood

Abut. Iron bridge at S.W. cor bridge seat of S. Truss

of retaining wall x sluice box 45+98 - R side ℄

Dam across race over opening of 18" sewer pipe

Flow line in " " "

cu. ft.

30 x 50 = 1500 2020

89 x 50 = 4450 2122

109 x 50 5450 2523

50 x 35 1750

27) 13150 (487 cu. yds.
108
235
216
190
187

490
457
523
1540

ℓ X

Sta	+Rod	H.I.	-Rds	Elev.	
B.M.	+1.24	201.24		200.00	+ on top
			8.85	192.4	top bridge
			10.15	191.1	top of E
87			11.30	189.9	
88			8.8	192.4	
+65			6.1	195.1	
+75			5.6	195.6	
+93	rock		2.3	198.9	
89			2.1	199.1	
T.P.			-0.26	200.98	
	+11.74	212.72			
+25				202.0	
90			8.6	204.1	
+60			5.8	206.9	
91			3.0	209.7	
T.P.			-0.14	212.58	
	+11.24	223.82			
+50			9.8	214.0	
92			5.0	218.8	
			-0.30	223.52	

Wednesday Aug. 18th 26 Fiedler-Snyder 1.30
+5.55 SW

1st Hill west of Haffner's Corner Burton
of ledge 197'lo R.d. Sta 88+97 approx
of floor (8.85)
Abut. N. side (10.15)

(NOTE 1952: HAFFNER'S CORNERS = ⅀ CH. #3 & CH. #21)

11 30

8 8

6 1

5 6

+1.7 +0.1 -1.2 -0.2 +0.4 2 3 +0.7 +1.4 +1.7 +2.1
0.4/25 2.0/20 3.2/15 2.3/10 1.7/9 2 1 1.4/10 0.7/11 0.4/25 0.0/25

10.7 high pt. of solid rock 10.7/5

+1.6 +1.5 +0.2 -0.1 -0.5 +1.9 +2.3
25 X 7.0/20 7.1/14 8.4/11 8 6 8.7/12 9.1/14 6.7/17 6.3/25

5 8

+2.2 +2.1 +2.0 +0.3 +0.8 +1.4 +1.6 +2.0
0.8/25 0.9/15 — 1.0/9 2.7/6 3 0 2.2/9 1.6/15 1.4/16 1.0/20 x 25

+1.6 +1.5 -0.1 +0.3 -0.4 -0.6 +1.4 +1.5
9.2/25 8.3/10 9.9/7 9.5/6 9 8 10.2/10 10.4/12 8.4/16 8.3/25

+5.9 +5.0 +0.3 +0.2 -0.3 +5.0 +6.0
4.9 + 0.9/20 x 25 0.0/13 4.7/6 5 0 4.8/10 5.3/12 4.9/(20) 2 +1.0/2 x 25 0.0/20

	+ Rod	H.I.	− Rod	Elev.
				223.52
	+11.39	234.91		
92+50			11.40	223.5
93			5.7	229.2
			−0.42	234.79
	+6.04	240.53		
+50			7.1	233.4
94			5.1	235.4
95			3.7	236.8
96			2.6	237.9
97			1.4	239.1
B.M.			−3.34	237.19

Spike in S.E. side 8" soft maple 20' 15 L Sta 94+06

+8.6 +8.3 +8.1 +3.2 −0.2 | +0.1 +1.6 +4.0 +8.9 +9.9
2.8 3.1 3.3 8.2 11.6 | 11.30 9.5 7.4 2.5 1.5
25 20 12 5 1 11 40 | 12 13 15 20 25

+5.1 +4.9 −1.0 | 0.0 −0.3 +5.1 +5.7
0.6 0.8 6.7 | 5.7 6.0 0.6 0.0
25 11 2 5.7 | 12 13 23 25

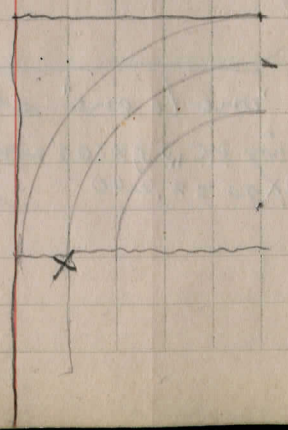
+2.2 +3.1 +2.1 +0.7 −0.8 −0.8 | +0.9 +0.9 +2.7 +3.1
4.9 4.0 5.0 6.4 7.9 7.9 | 5.0 6.2 4.4 4.1
25 15 8 6 4 2 7 1 | 14 16 20 25

+0.7 +1.1 +0.4 −0.7 | 0.0 −1.0 +0.9 +1.3
4.4 4.0 4.7 5.8 | 5.1 6.1 4.2 3.8
25 12 7 4 5 1 | 12 15 17 20 25

0.0 −0.1 −0.5 | −0.2 −0.7 0.0
3.7 3.8 4.2 | 3.9 4.4 3.7
25 6 5 3.7 | 14 15 20 25

26

14



Sta	ground	Sub-grade	℄ cut	fill	End Area
92+75	226.35	226.30			
9.5	236.8				

1 to 1 slope 100 v.c. 93.50
(Regular section & 200 vc at 93+50)

Sta	ground	Sub-grade	corrected cut	fill	End Area
+50					0 0.
94	235.4	234.25	1.15		54.
232.50 +50	233.4	100 VC 231.94	1.46		132.
93	229.2	228.50	0.70		104
+50	223.5	224.5		1.0	104
92	218.8	220.5		1.7	
91	209.7	212.5		2.8	
204.8 V.C. 90	204.1	apex 204.5		0.7	
+50					
89					

100 V.C.

5.5%

deduct for "one to one" slope
" by raising V.C. .55' x 100' curve
= .55 x 100 x 40' = 2,200

125	end area
750	"
1200	"
950	"
375	"
3400	Total
2200	v.c. correction

27) 5600 (207
54
200
189

27 x 50 = 1350
93 x 50 4650
118 x 50 5900
104 x 50 5200
52 x 50 2600
27) 19700 (730 cu. yds.
189
80
81

730
207
523 cu. yds.

Sta	Ground	Grade	cut	fill
87	189.9	189.9		
+50		0 75		
88	192.4	193.5		
+75	195.6			
89	199.1	199.0		
+50				
90	204.1	204.5 △		
+50	206.9			
91	209.7			
+50	214.			
92	218.8			
+50	223.1			
93	229.2			
+50	233.4			
94	238.4			
+50				
95	236.5			

Dist Cut
L & R

16 14

19 22
23 23
21 20
20 20.5
18 20

#5 Fisher Rd
to W.

1974 Imp. 8/21/74

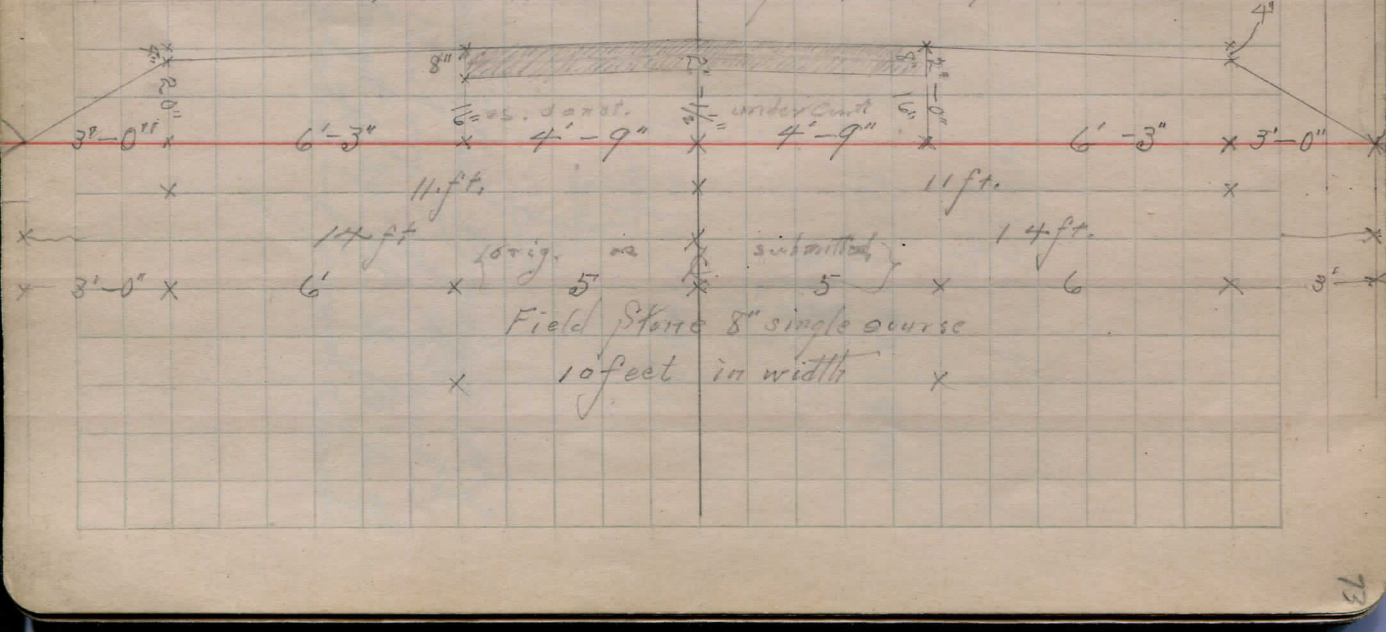
					FG.	
TBm.	2.22	102.22		100.00		
T.P.	6.61	102.38	6.45	95.77		
2+50			7.08	95.30	97.50	F 2.20
3+00			7.89	94.49	97.06	F 2.57
4+00			6.80	95.58	96.51	F 0.93
5+00			6.94	95.44	96.42	F 0.98
6+00			6.58	95.80	96.79	F 0.99
7+00			3.78	98.60	97.85	C 0.75 meet ext'g.
TP	6.63	102.63	6.38	96.00		
TBM.			2.63	100.00		ck 0.00 K

Assumed spk N.S. & CEI 85Z316

stks @ 30' Lt.

21 - 28 + 52

Typical Section for Waterbound Macadam
Burton & Tufi Roads



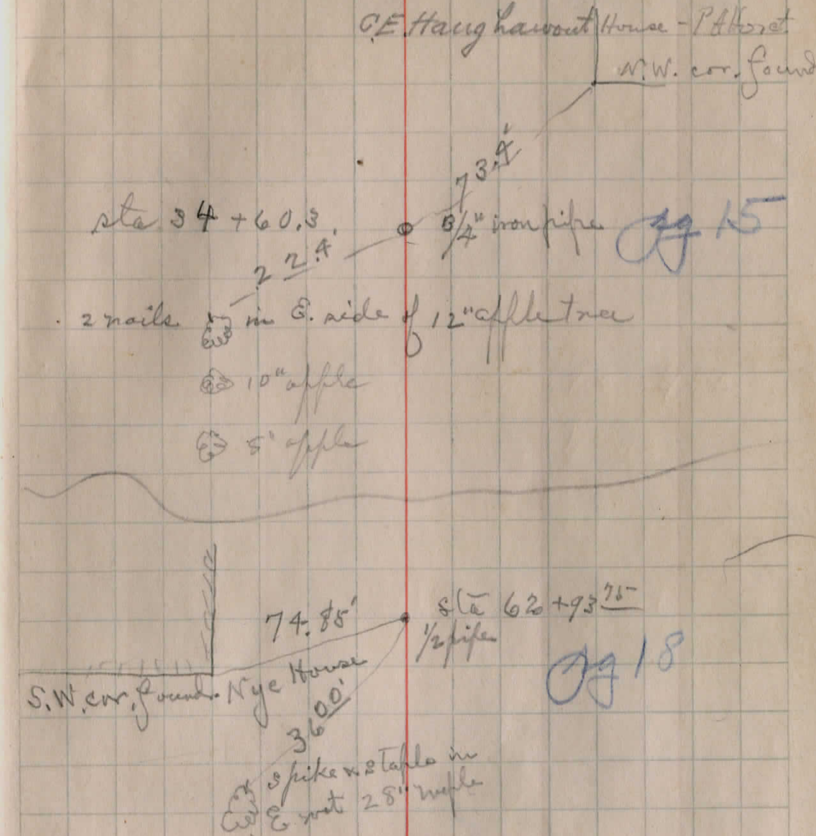
70°-20

14)1272.1(91
126
32

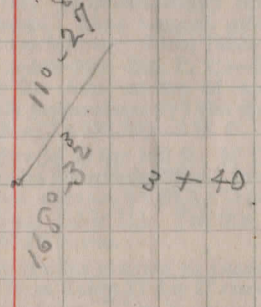
91)1279.8(14.08
91
364
364
890
819
810

91)4036.8(44.31
364
396
364
280
273
7

Pin Truss Steel Bridge. N. of Hickox Cor. Newburg Twp. (Beard) farm. about 139 ft. & 10 & 7 bearing plates — Good Cond.
7-16-37


C.E. Haughawout House - P.A. Horst
N.W. cor. found.
73.4'
sta 34+60.3
3/4" iron pipe
pg 15
22.4'
2 nails in E. side of 12" apple tree
10" apple
8" apple
74.85'
sta 62+93.75
1/2 pipe
pg 18
S.W. cor. found. Nye House
36.00'
spike & 2 staples in E. root 28" maple

12 to 2 = 9' opening
15" wide out to out
3/4 to R to S and L



½ pipe

14+22.4 Iron pipe on lot line
Ang. 0°-20' to R. or South.

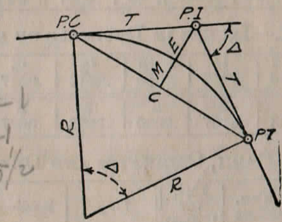
2" Culvert 13.5 bet parapets
" " 148

Hayes A. Walton

Aug 9 – Sny. 1 day Bet'n N
" 10 – " ½" " "

38+36 = 16°-37-8 To Left inc 163-2½

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



22+65
21
22+44
Snyder – 24"-1
Dodg. – 21-1
" 20½

S 5°-15' W
pipe 22+44

CURVE FORMULAS

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

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

Middle ordinate$=M=R(1-\cos. \frac{\Delta}{2})$ (5) $=R\text{vers}\frac{\Delta}{2}$ (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$=C=2R\sin.\frac{\Delta}{2}$ (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. $\Delta=62°\ 10'$ $D=8°\ 20'$. From Table IV for 1° curve T=3454.1 and $\div 8\frac{1}{3}$=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157+45.50. Also from (4) L=746.00 and P. T.=Sta. P. C.+L=164+91.50.

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

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) $.3\times C\times D°$ or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=$.3\times 54.5\times 8\frac{1}{3}$=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′+8° 20′÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or E=91.37 ft. Or suppose $\Delta=32°$ and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and÷42=5.5 or D=5° 30′.

LEGAL NOTICE

Notice is hereby given to all persons concerned that in the matter of "The South Burton Road, Burton Township, Geauga County, Ohio," the County Surveyor has made an estimated assessment upon the real estate to be charged therein, with the compensation, damages, costs and expenses of said improvement which are to be specially assessed, and that a schedule of such assessments has been filed with the Trustees and also at the office of the County Surveyor, for inspection of persons interested.

Said road to be improved is described as follows:

"Beginning at the intersection of the West line of Burton Township with the center line of the road leading from South Newbury to Burton Village; thence North-easterly along said center line to its intersection with the center line of the road leading from Pope's Corners in Troy Township to Burton Village; thence Southerly along said center line to the South line of Burton Township. Also including the road leading North from the intersection of the aforesaid roads to the East and West Center Road, (known also as I. C. H. No. 33), a total distance of approximately 5.42 miles."

That the 22d day of June, 1926, at 8:00 o'clock P. M., at the office of the Board of Trustees, has been fixed as the time and place for the hearing of objections that any interested party may have thereto. All persons desiring to make objections will file them in writing with the Township Trustees before the time of said hearin.

A. O. NEWCOMB,
A. D. WLATERS,
E. L. TAYLOR,
Trustees of Burton Township, Gea
County, Ohio.
June 7-14

That the 22d day of June, 1926, at 8:00 o'clock P. M., at the office of the Board of Trustees, has been fixed as the time and place for the hearing of objections that any interested party may have thereto. All persons desiring to make objections will file them in writing with the Township Trustees before the time of said hearin.

A. O. NEWCOMB,
A. D. WALTERS,
E. L. TAYLOR,
Trustees of Burton Township, Geauga County, Ohio.
June 7-14

P. I. – S. Burton Rd S. of bridge 91+10

120-44 – POLE MOVED
241-27

184-58
175-02
9.50

N 77-05 E

23
4
92+

38+36
32
636.

160) 500.0
480
200
160
400
320

22+44 00
14+22.40
8 21.60

32+80
22+44
9 56

drive of Frank Osmond

10' – stake

3) 80.1

Sta 117 Top of Hill W. of ...

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.

For Single Track Embankment.

PLEASE RETURN TO
GEAUGA COUNTY ENGINEER
COURT HOUSE
CHARDON, O.
PHONE 250-X

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	25.2	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.

Made in Germany.