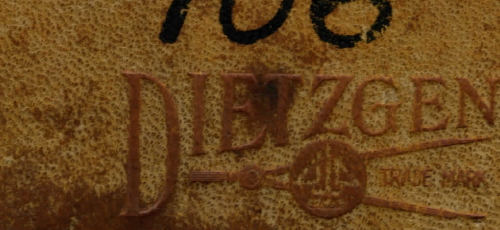
RUSSELL TWP.
Gravel Roads

106



ENGINEERS'
LEVEL BOOK
No. 10

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	8.8	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.

Russell TWP.
Gravel Road

Contracts:
SR 306 at CH. 29
Dines Corners No. 29, C&Dpt fg 34
SR 306 at CH. 36
Halls Corners Easterly fg 34
Peffers Road - No. 36-A13.82 Dpt 28433
Core Hill Section - 44-66

MUSIC ST. #36 Sec B 1952 67
CHAGRIN RIVER BRIDGE ON PEKIN RD 1953 76, 77 & 78 & 79
Music St. Sec. B. bridge dope fg 74

Please return to the
County Surveyors Office
Chardon Ohio

CH. 29 PEKIN ROAD

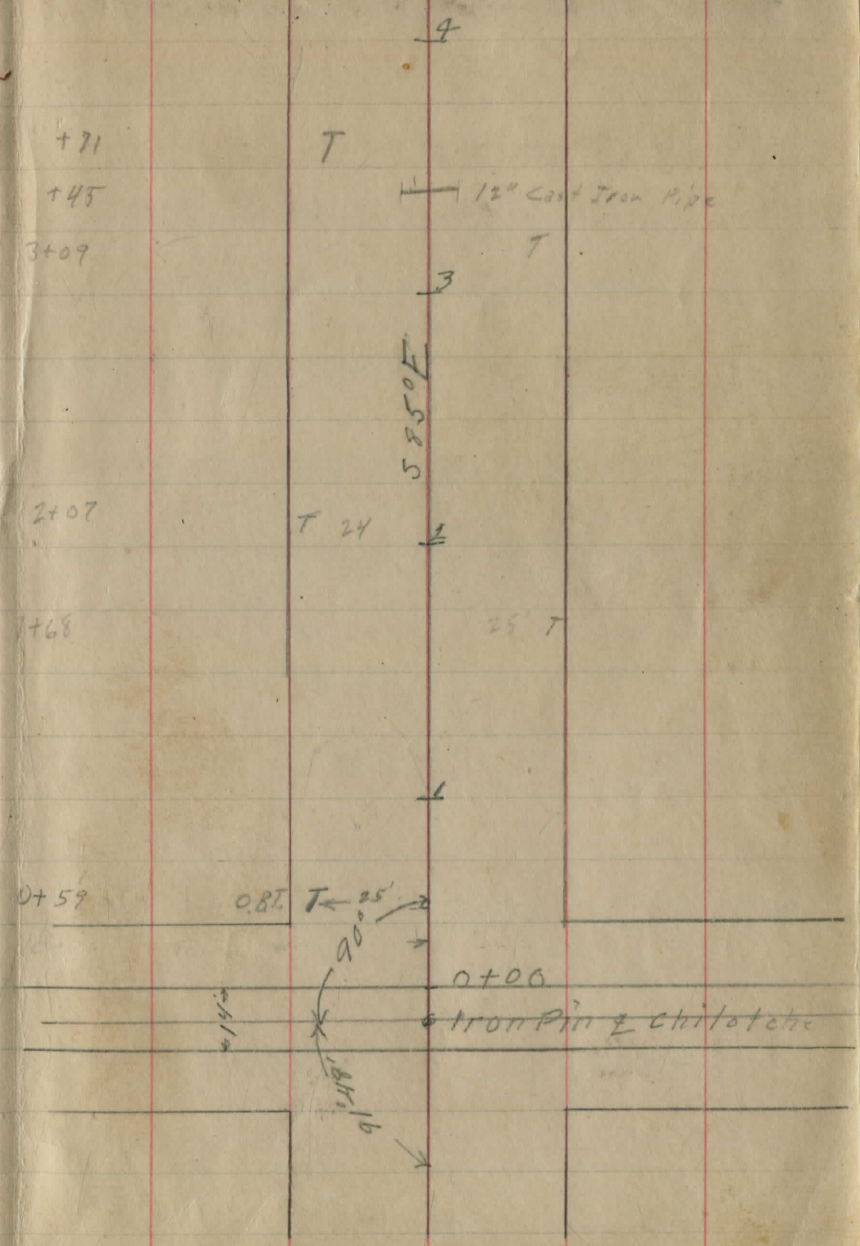
DINES CORNERS EASTERLY.

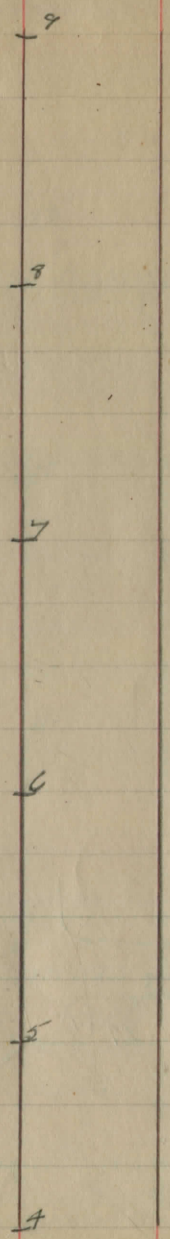
Road Improvement

PEKIN Rd - Twp 87

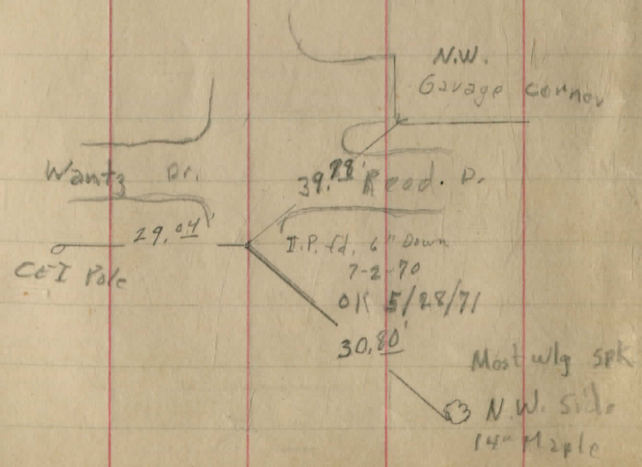
Stakes Set 30' off & N. Side 100' Sta.

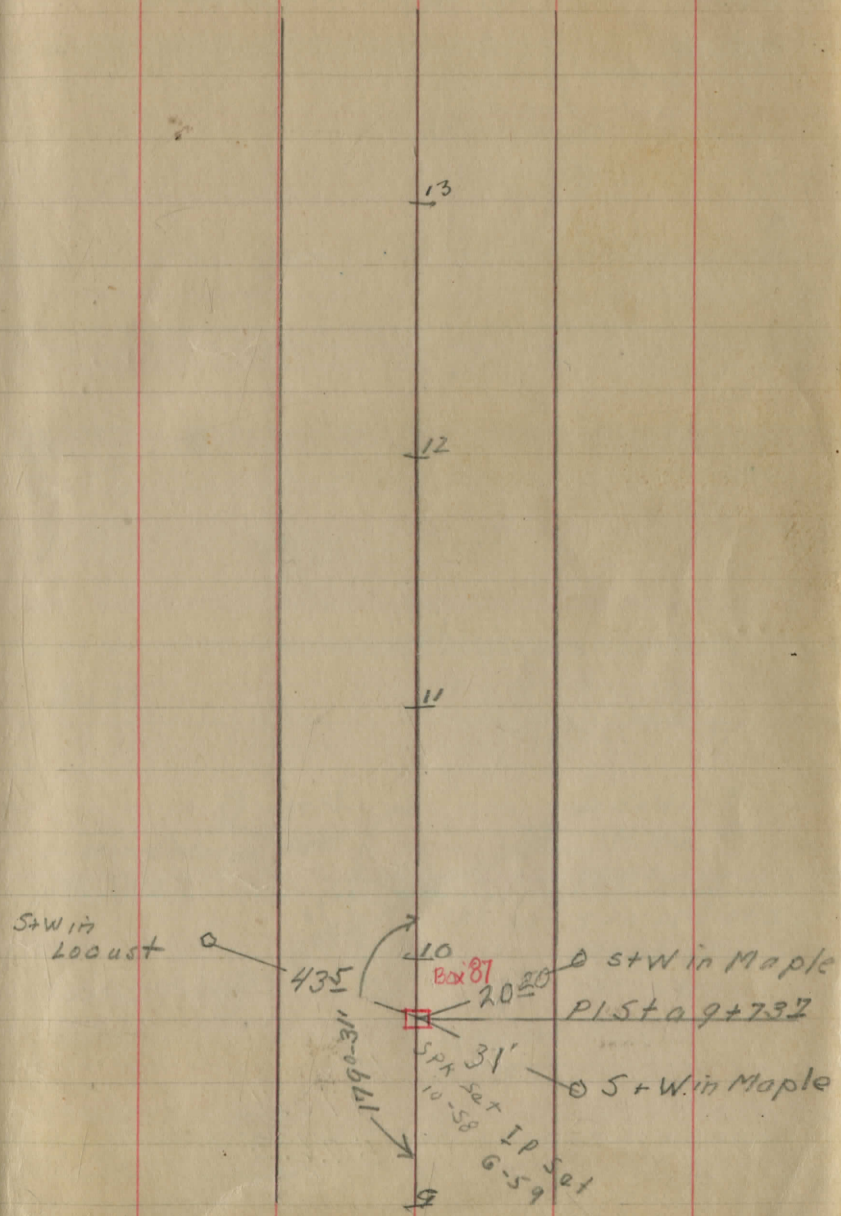
(PEKIN Rd)

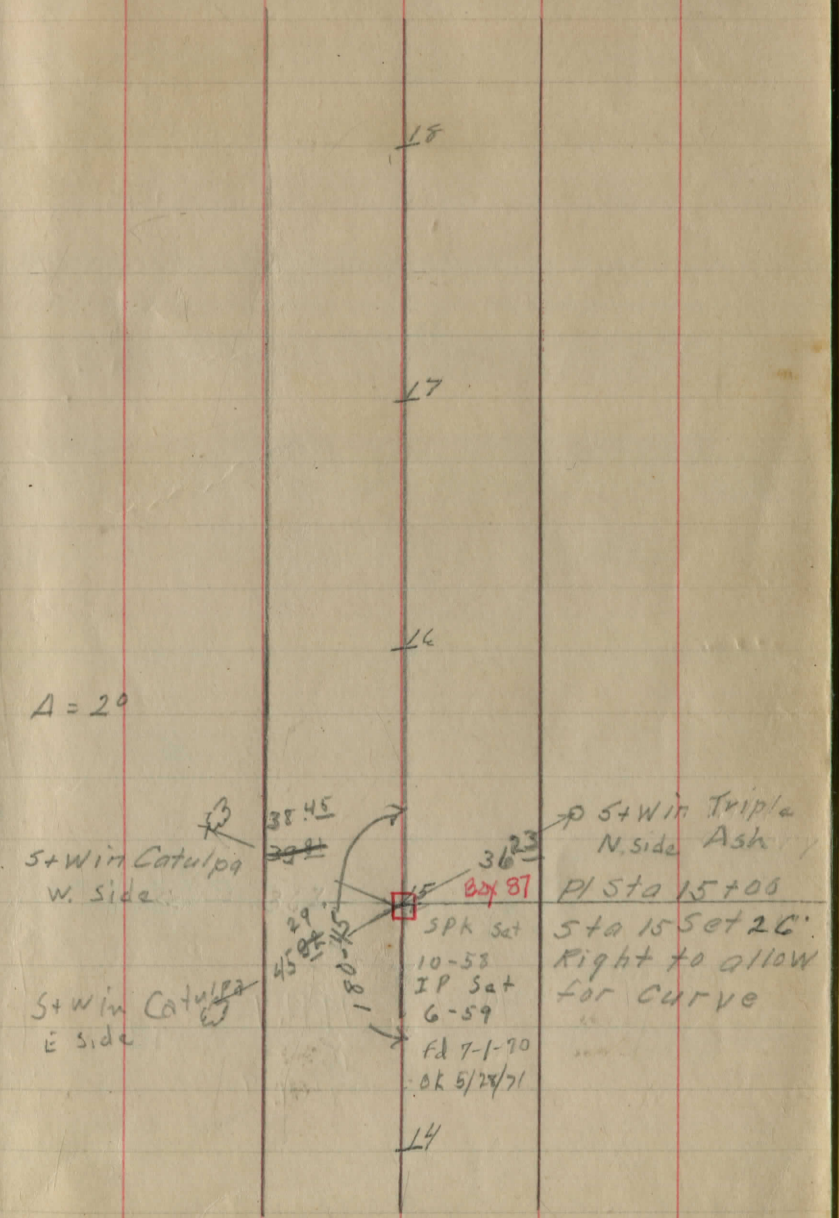



9
8
7
6
5
4

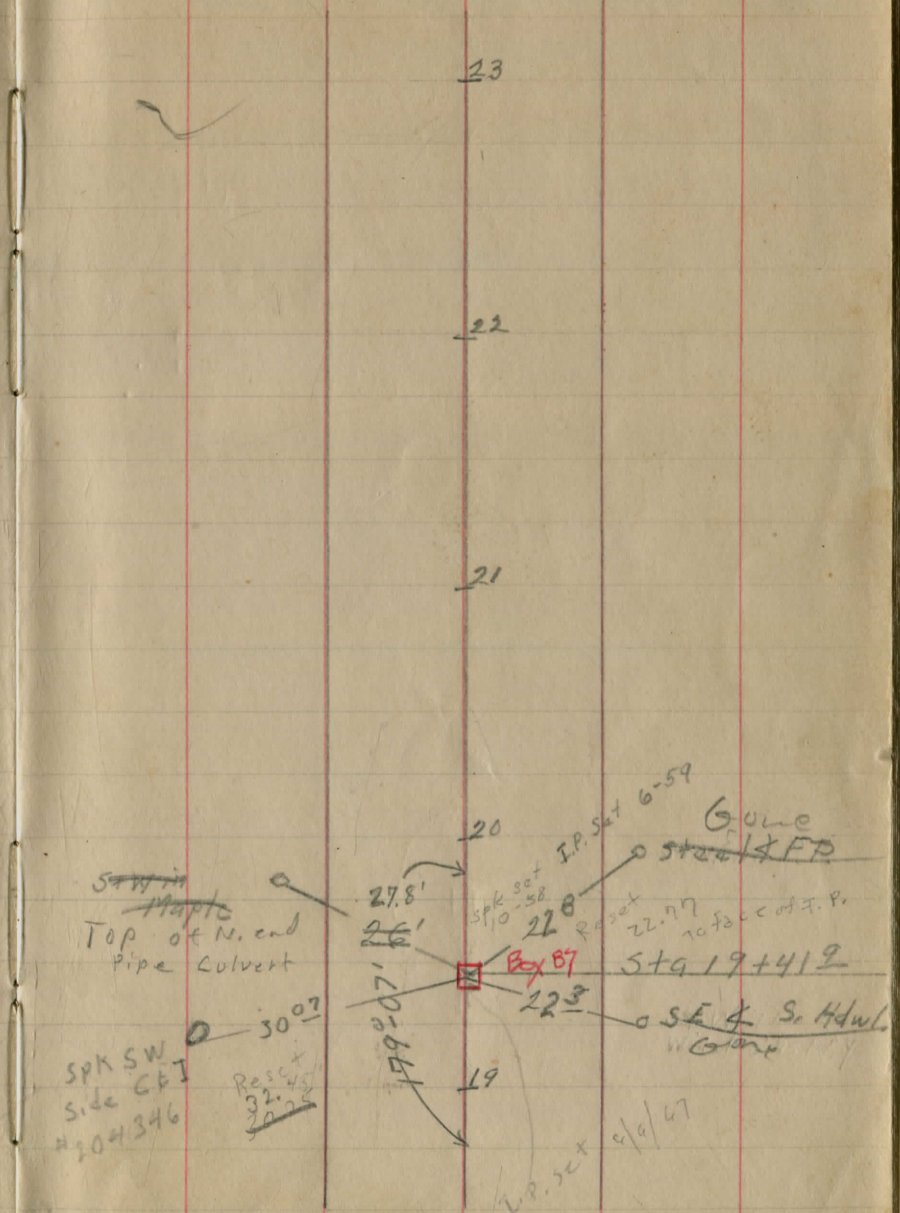
10+00.04
4 13.70
2630





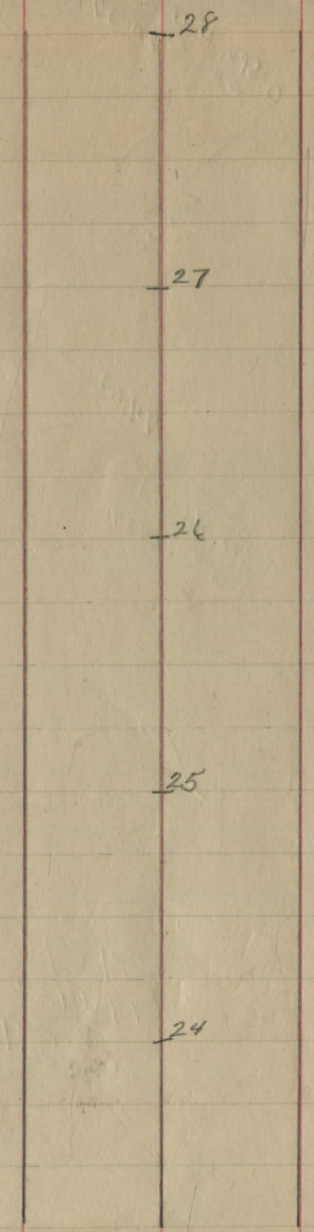


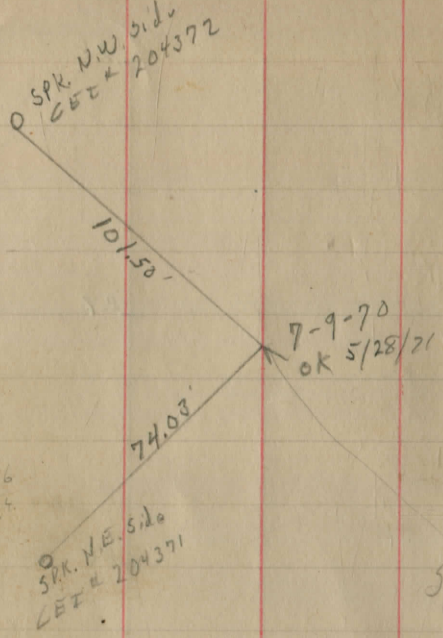
1500
973.7
526.3



1941.9
15
441.9

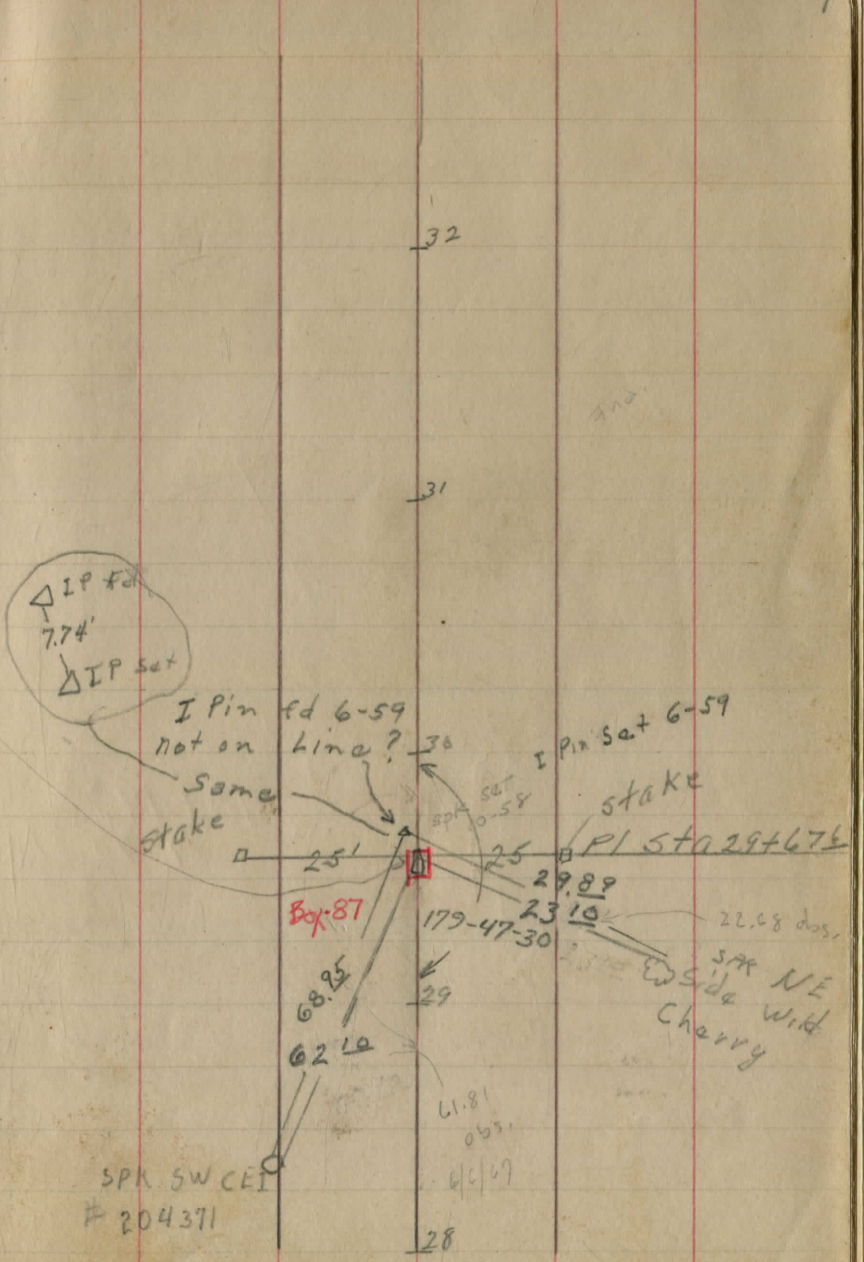
27.8'

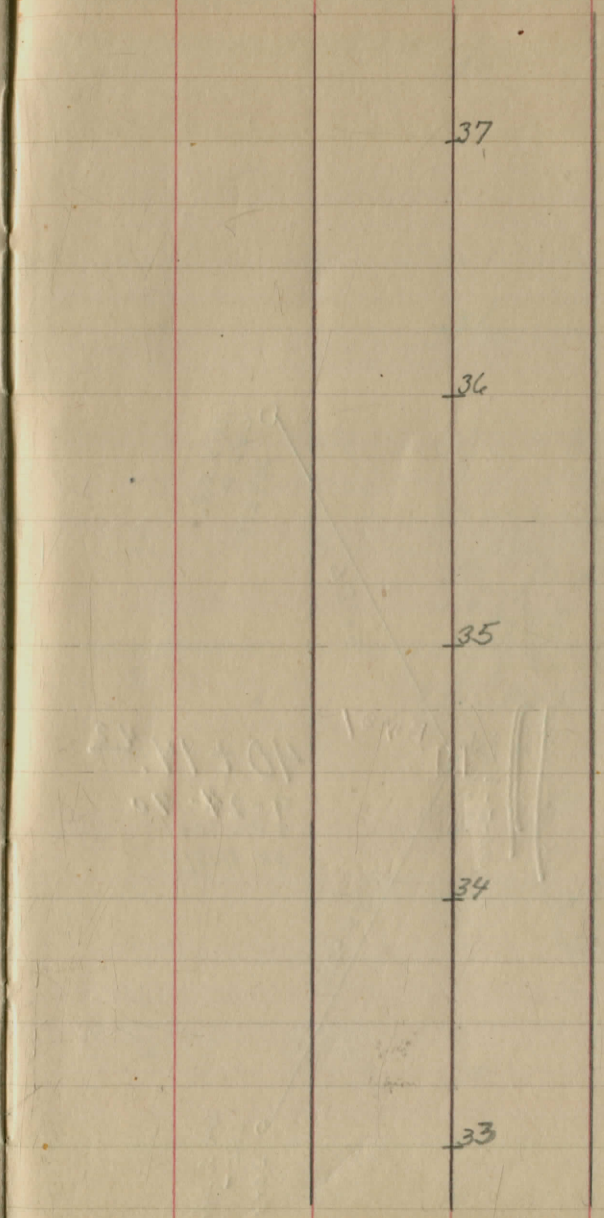

28
27
26
25
24

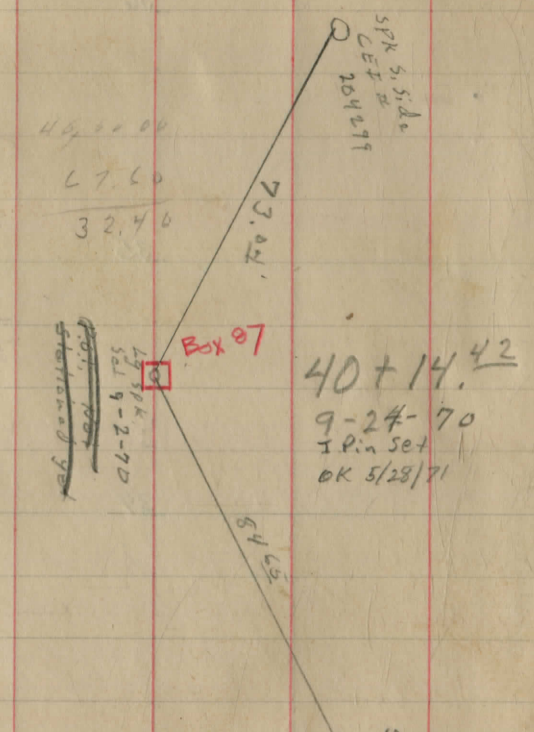


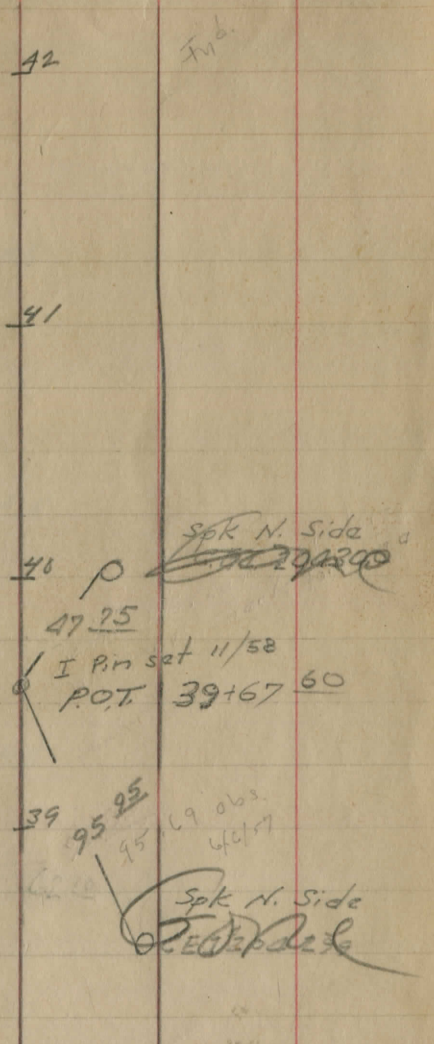
29+73.69
? 178°-58' (6-59)

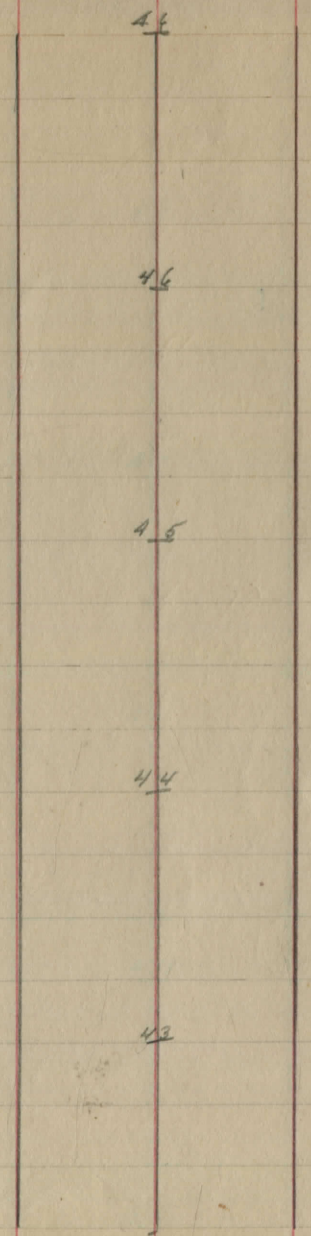
2967.6
1941.9
1025.7

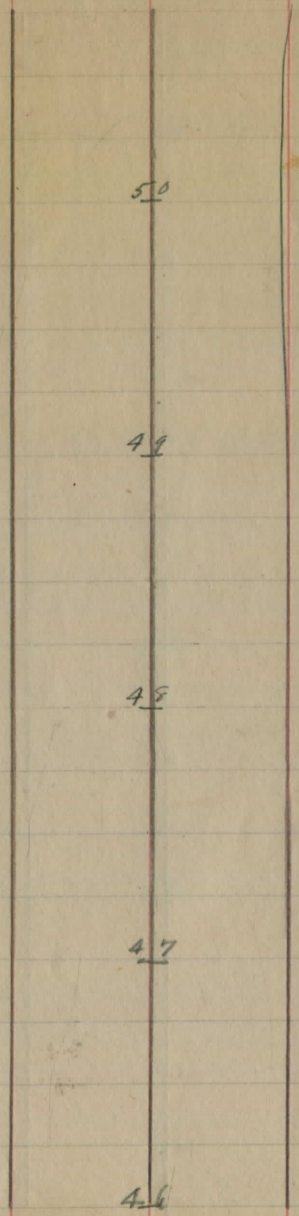


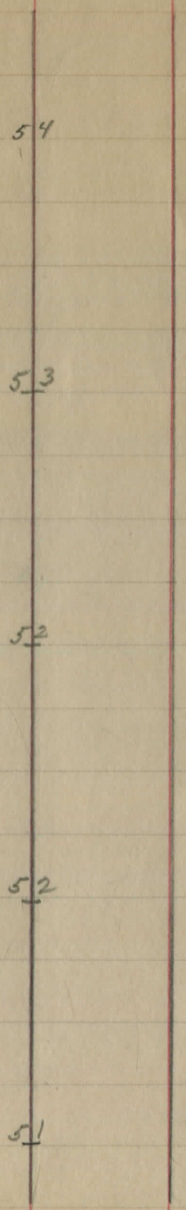

37
36
35
34
33

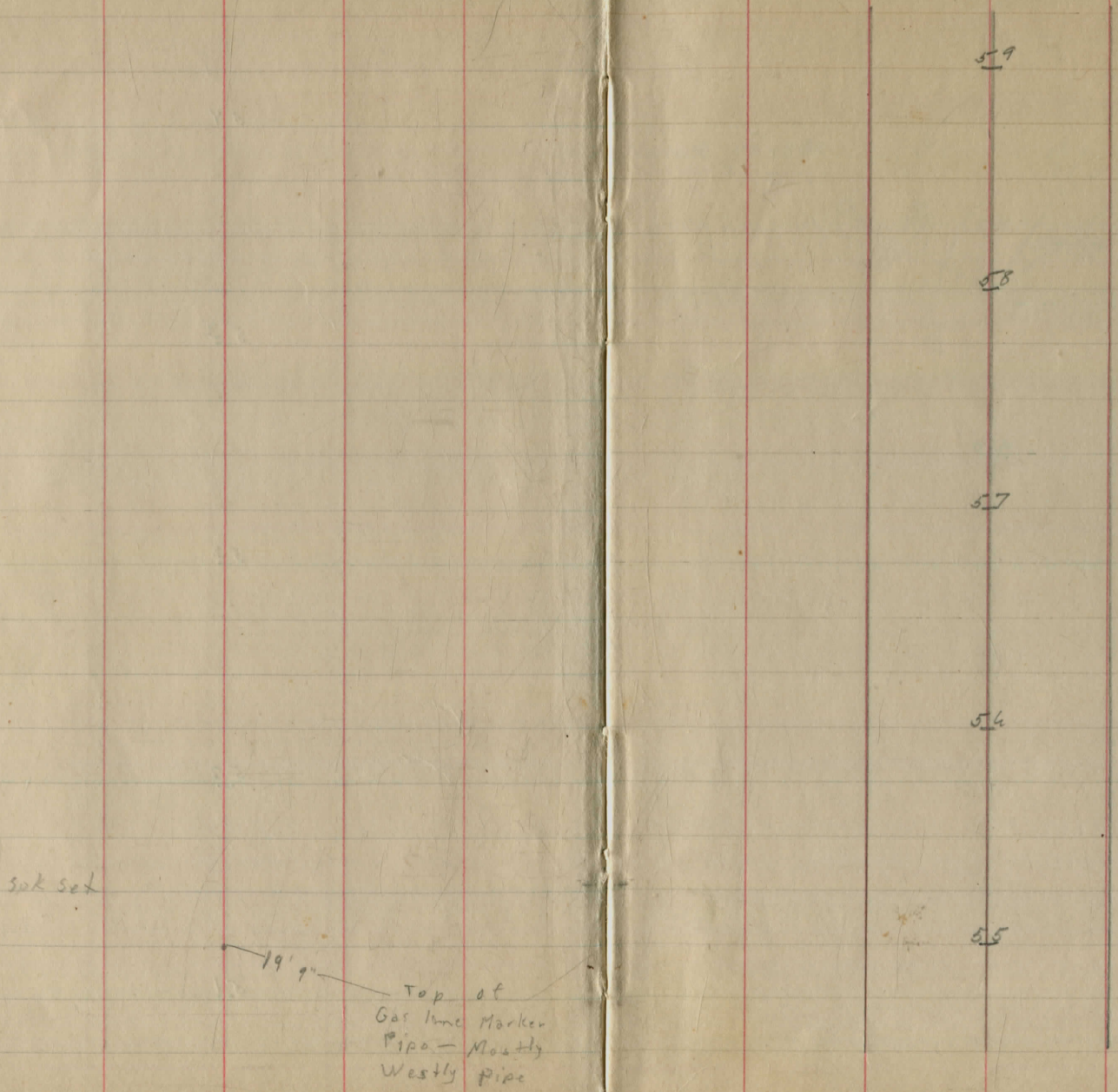

Spk S. Side
CEI #
204299
47.02'
Box 87
40+14.42
9-24-70
I Pin Set
OK 5/28/71
54.62'
Spk S. Side
CEI #
204300

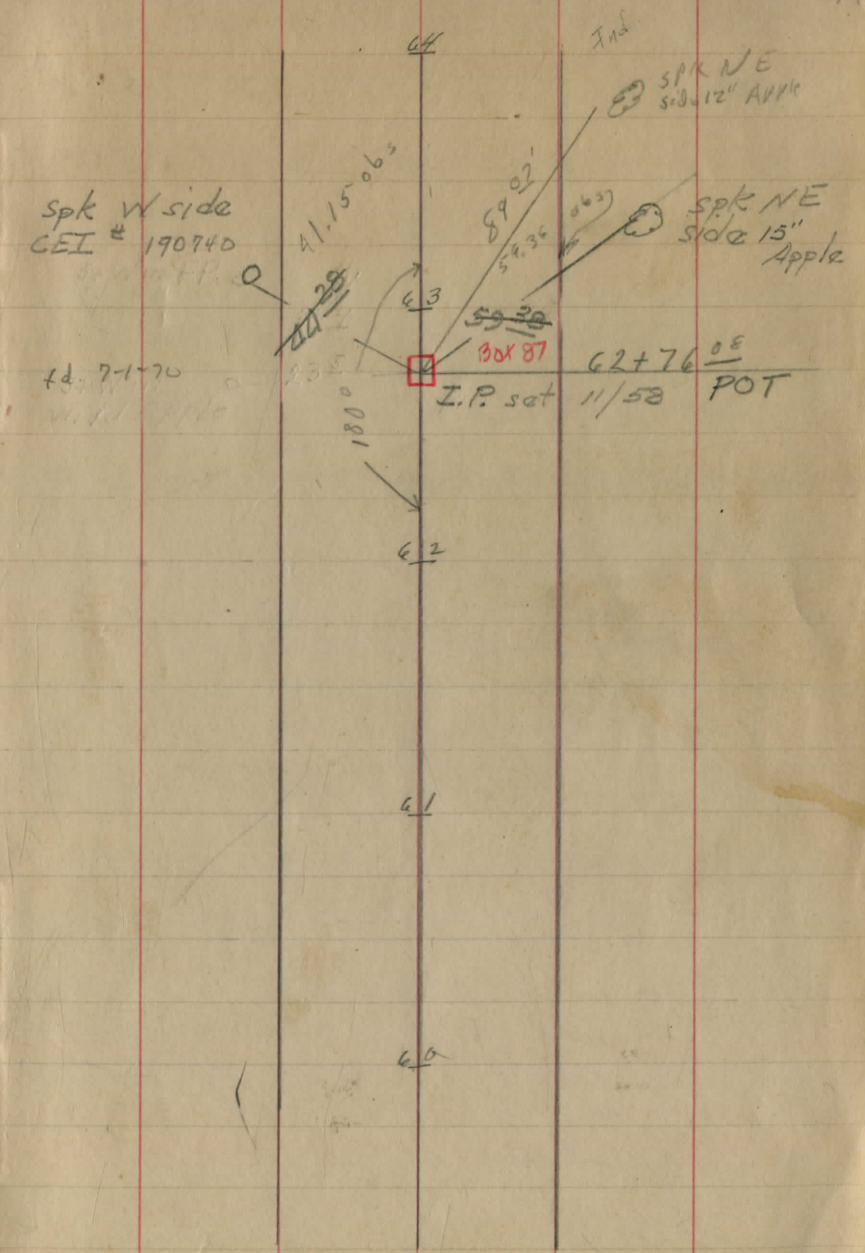

42
41
40
Spk N. Side
47.25
I Pin set 11/58
P.O.T. 39+67.60
39
95.25
95.69 obs.
Spk N. Side
38


4 7
4 6
4 5
4 4
4 3


5.0
4.9
4.8
4.7
4.6


5 4
5 3
5 2
5 1


5+9
5+8
5+7
5+4
5+5
Sak Set
19'9"
Top of
Gas line Marker
Pipe — Mostly
Westly Pipe


64
Ind
spk NE
side 12" Appl
spk W side
CEI # 190740
41.15-06
89°02'
59.36
spk NE
side 15" Apple
63
59.30
Box 87
62+76.08
POT
I.P. set 11/58
td. 7-1-70
180°
62
61
60

7.0

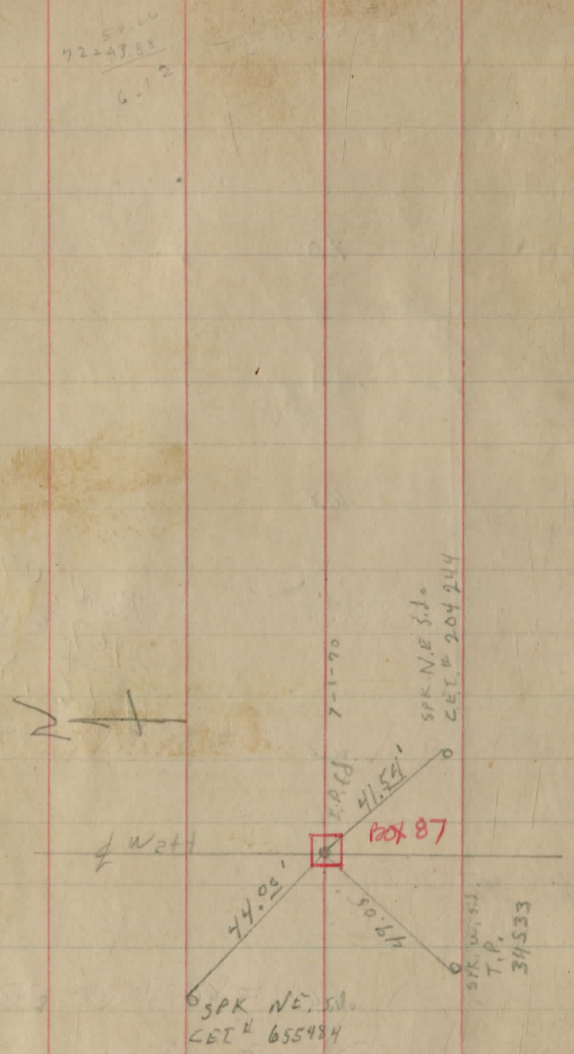
6.8

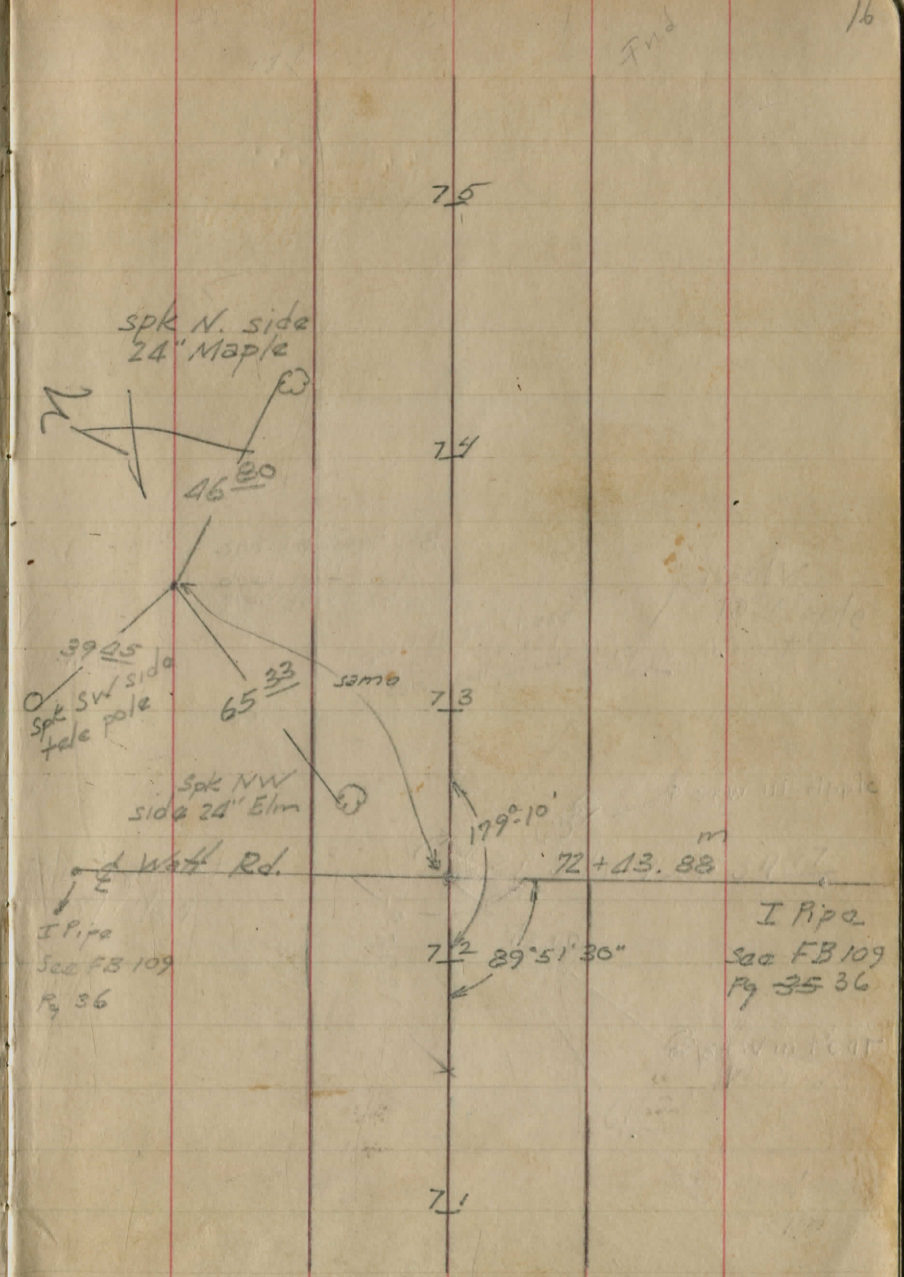
6.7

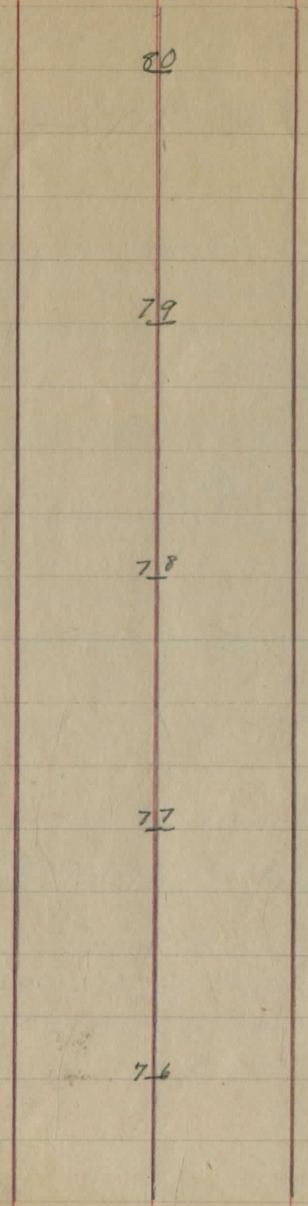
6.6

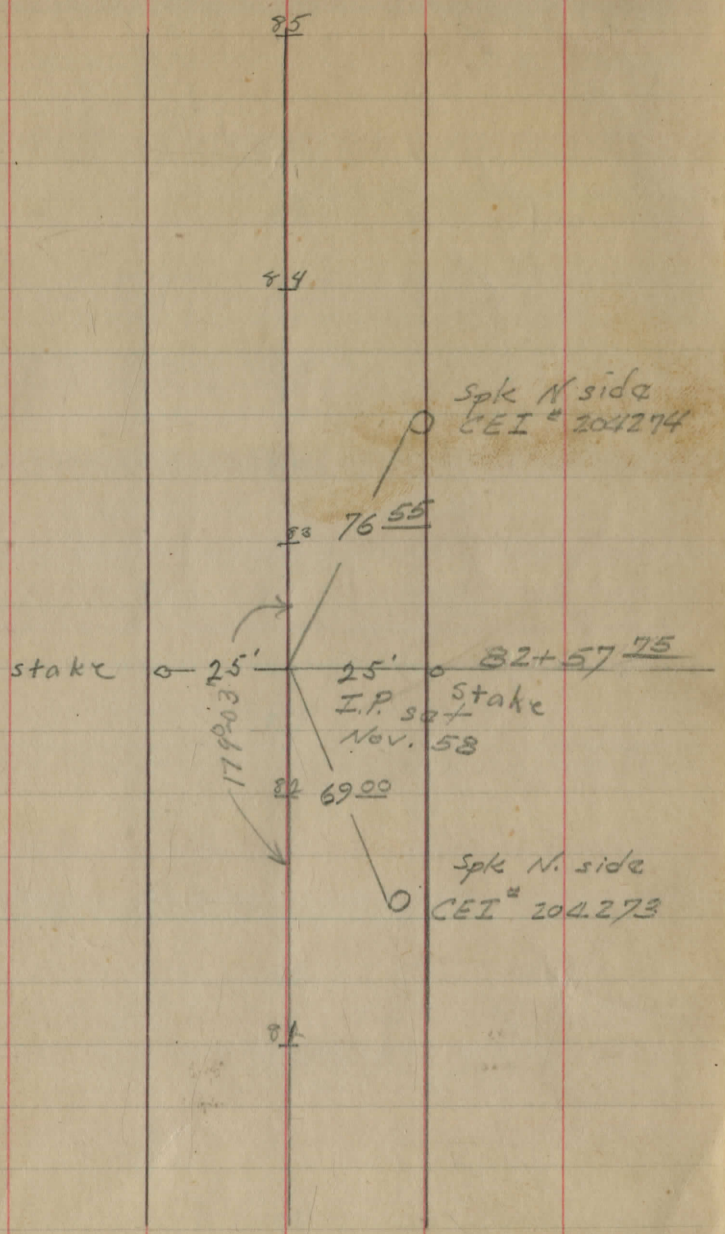
6.5

7234.47
2967.60
4266.87

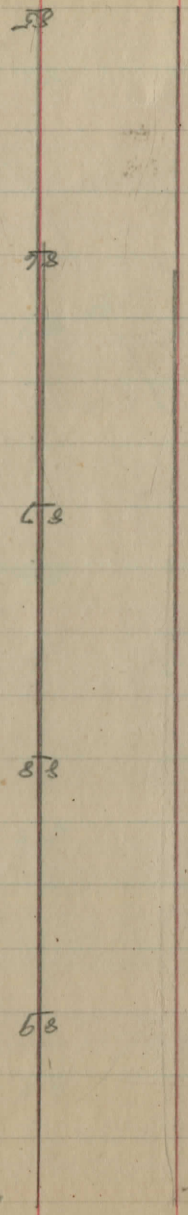

72+43.88
6.12
N
7-1-90
T.P.Cd.
SPK N.E. Sid.
CET # 204244
41.54'
Box 87
℄ Watt
44.09'
50.14'
SPK N.E. Sid.
CET # 655484
SPK W. Sid.
T.P.
34533

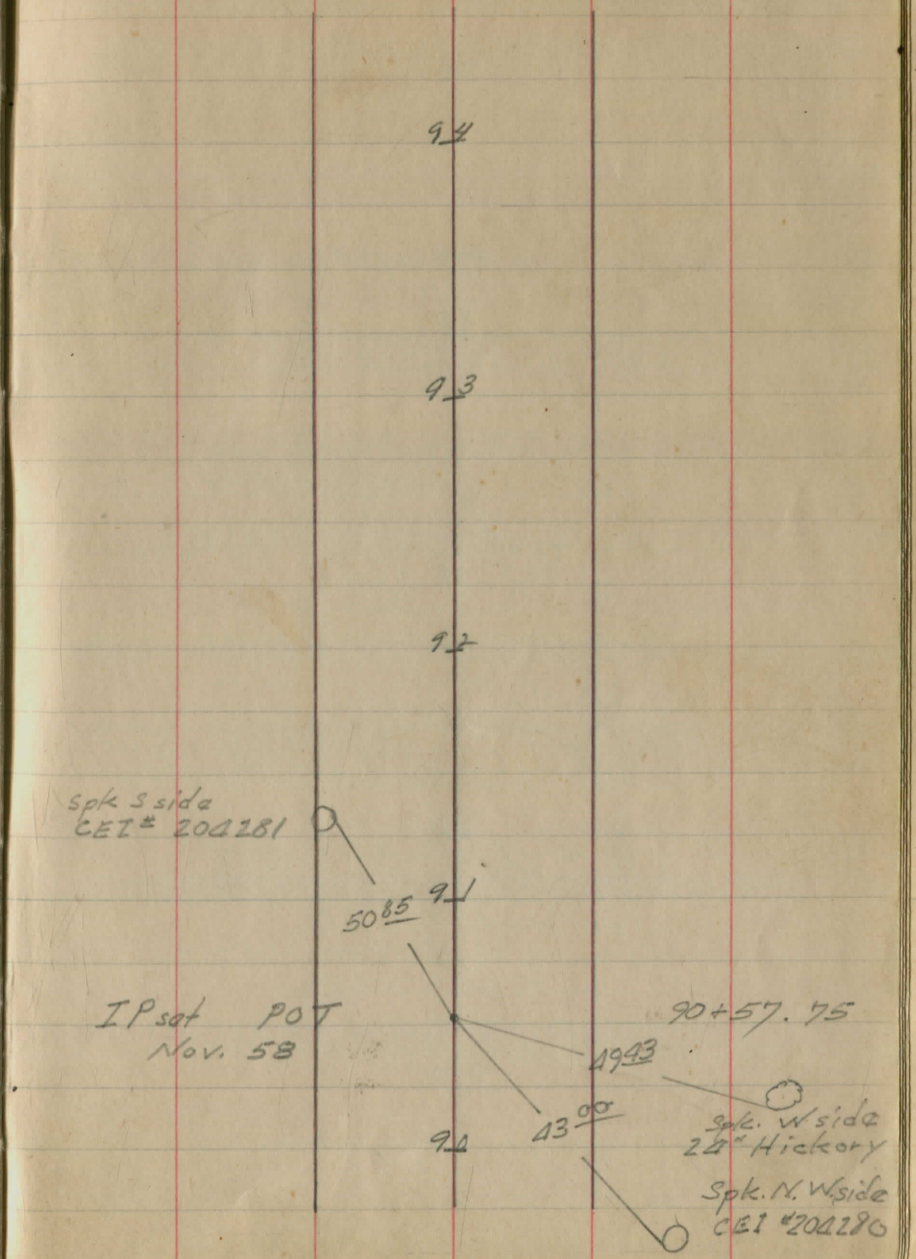

Trvd
75
74
73
72
71
SPK N. side
24" Maple
N
46
20
39
25
Spk SW side
tele pole
65
33
same
Spk NW
side 24" Elm
179°10'
℄ Watt Rd.
72+43.88
I Pipe
See FB 109
Pg 36
89°51'30"
I Pipe
See FB 109
Pg 35 36

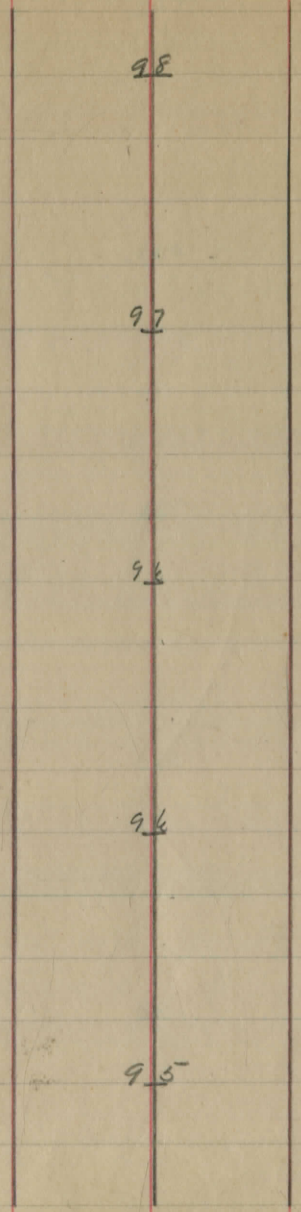

80
79
78
77
76

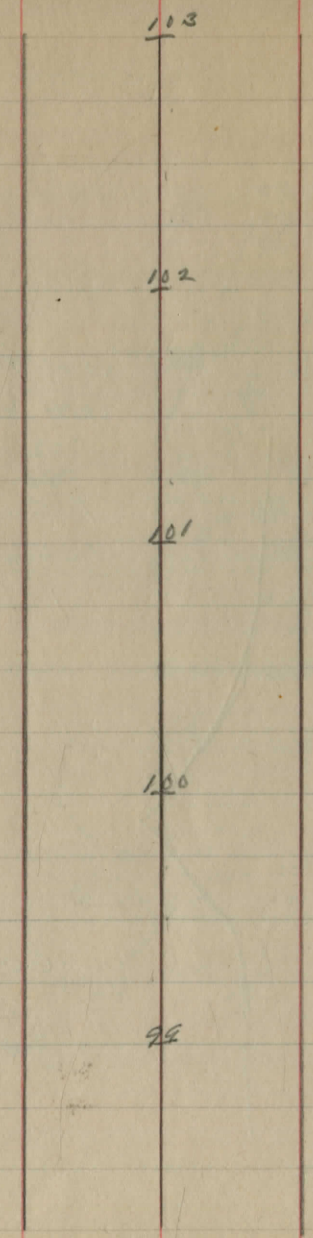


825.175
72.38
1013.75


8
7
6
5
4


94
93
92
91
90
Spk S side
CEI # 204281
50 85
IP set POT
Nov. 58
90+57.75
19 43
43 00
Spk. W side
24" Hickory
Spk. N. W side
CEI #204280


98
97
96
95
94
93


103
102
101
100
99

82 57 75
21 48 25
104 06 00
200
106+06 00

104 00 00
82 51 75
21 48 25

3865

10600
10460
140

104+60
82 52
2208

107

Vert. spk N side
14" Cherry

Δ = 11° 04' L

38 65

106+06.00
I Pin set
Nov. 58

21 80

Spk. W. side
10" Hemlock

106

37 60

Spk N side
15" Maple

D = 5°
E = 1.94
T = 66.74

105

Spk NW side
25" Map.

35 18

I Pin set
Nov. 58

104+06.00

32 58

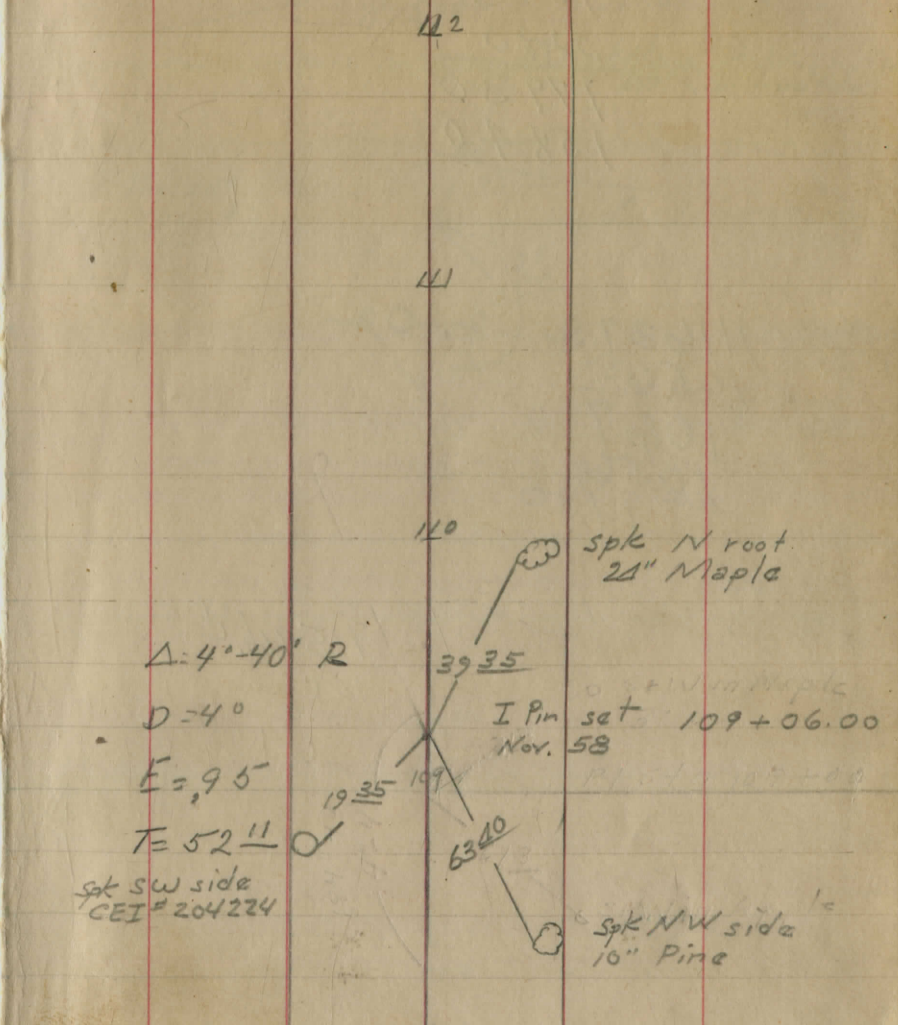
104

43 43

Vert. Spk. S.
root 25" Map

Spk N root
20" Map.

109 00
106 00
300



5280) 11267.30 (2,13
10560
7073
5280
17930
15840

5280) 11627.3 (2.202
1056
1067
1056
1130

11594.4
109
69 M

Newbury Twp Sta 1
End of Survey
Russell Twp ±116+32.9

Spk N side
30" bo wad Elm
Willow

64.88

I Pin set
Nov 58
to Syl "73"
Δ 28-00' Lt.

Pl 116+00.40

98
18

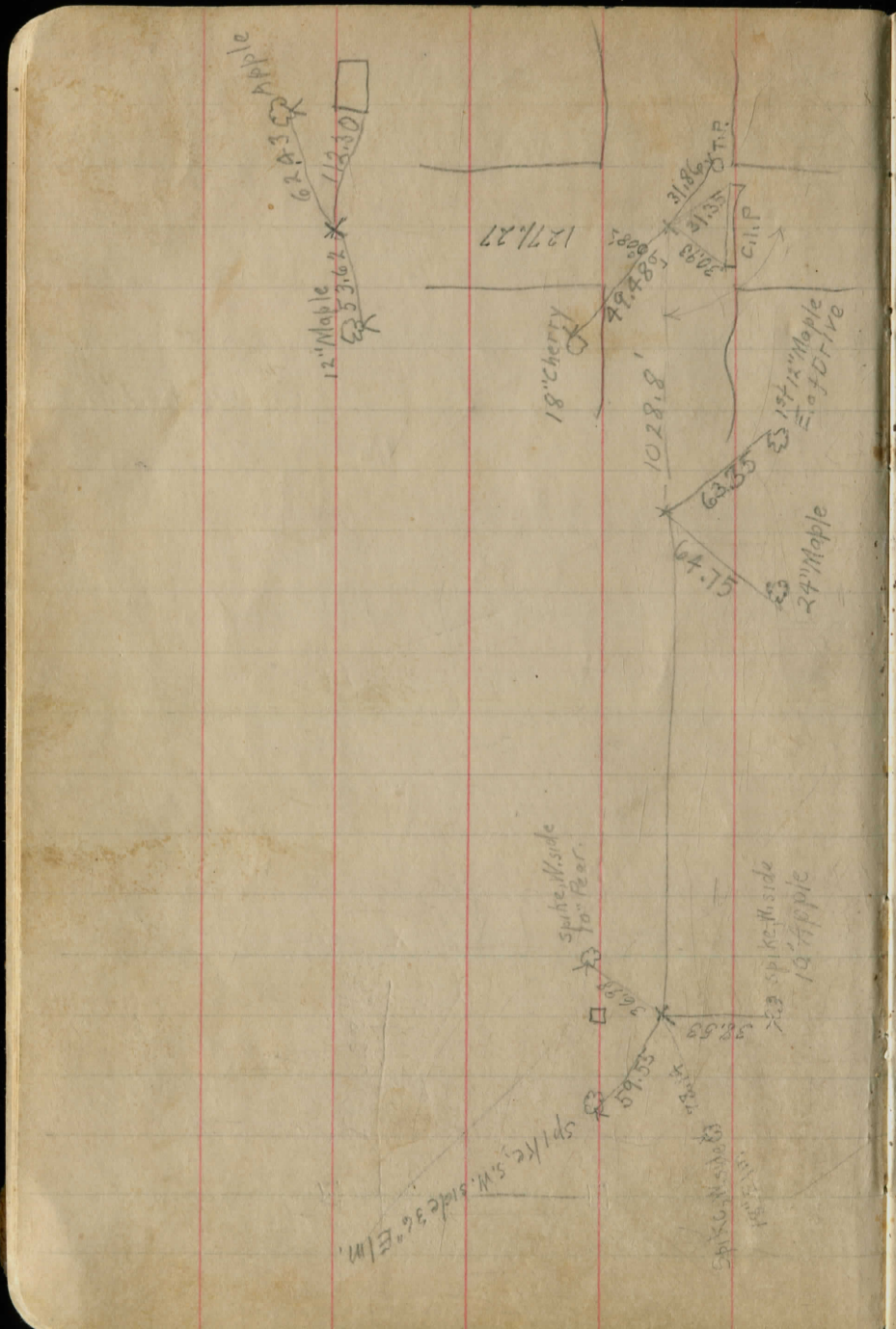
152°-00

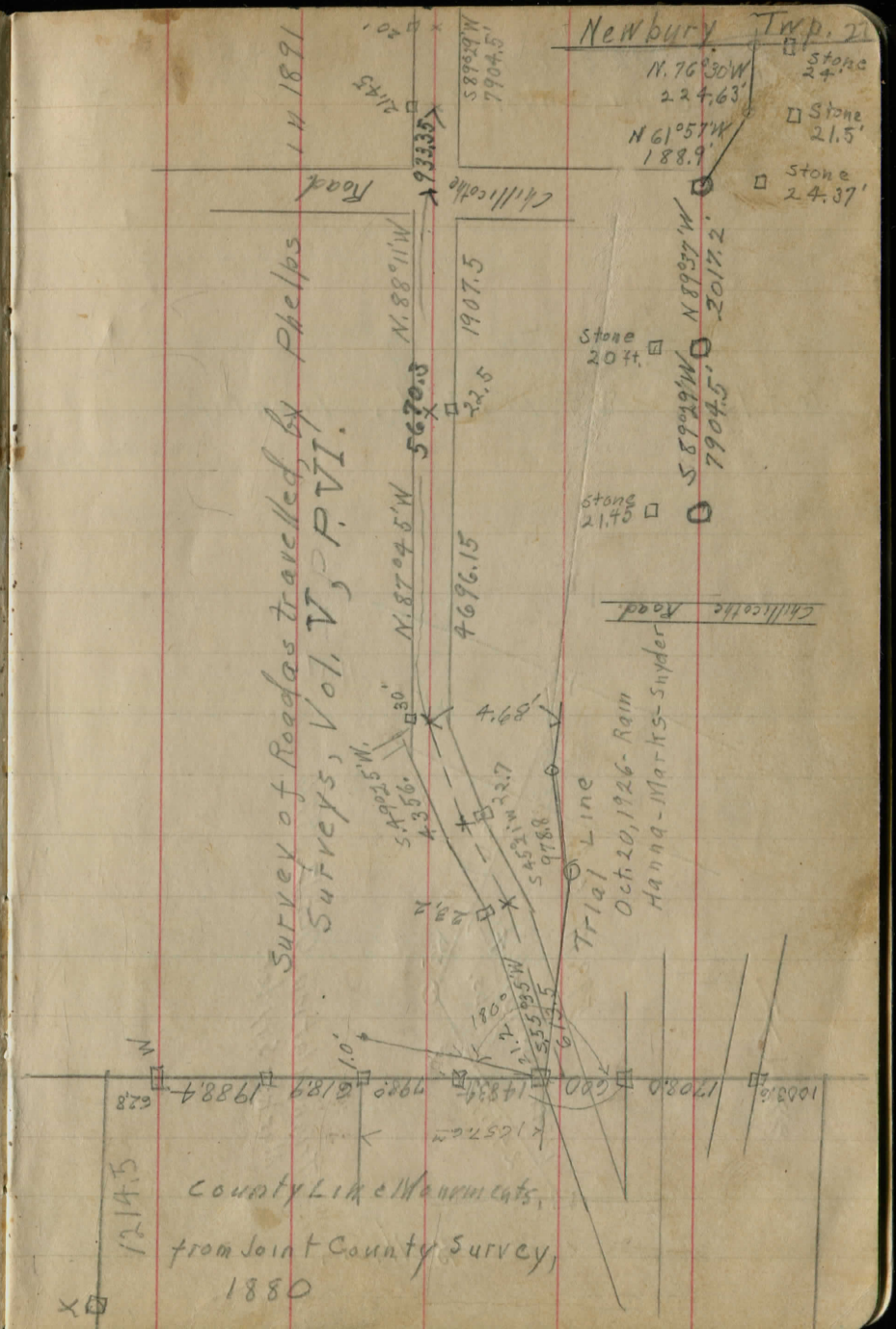
Spk N side
25" Elm
Walnut

115

114

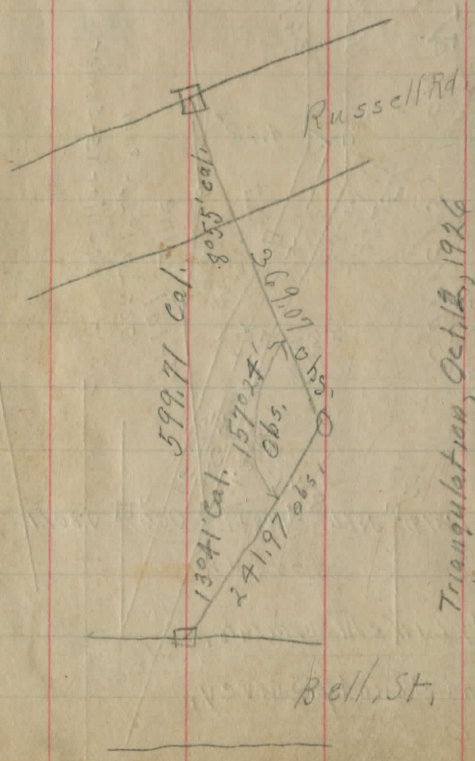
113


Apple
62.43
12" Maple
53.62
1330
127.27
31.86
31.35
C.L.P.
29.23
58.26
49.485
18" Cherry
1028.8'
15½" Maple
63.35
64.15
24" Maple
spike, W. side
10" Pear
spike, W. side 36" Elm
spike, W. side
10" Apple
spike, W. side 36" Elm
59.55
52.59
spike, W. side 36" Elm


Newbury Twp. 21
Stone 24'
N. 76°30'W
224.63'
Stone 21.5'
N 61°57'W
188.9'
Stone 24.37'
Chillicothe Road
1 W 1891
S 89°59'W
7904.5'
933.35
N. 88°11'W
Stone 20 ft.
N 89°59'W
7904.5'
201.2'
1907.5
22.5
5620.3
N. 87°45'W
4696.15
Stone 21.45
Chillicothe Road
30'
4.68'
S 4°02.5'W.
43.56'
S 45°31'W
22.7
97.88
Survey of Roads travelled by Phelps Surveys, Vol. V, p. VI.
Trial Line
Oct. 20, 1926 - Ram Hanna - Martis - Snyder
180°
1.0'
M
628
1988.4
1489.2
1252.6'
1214.5
1008.3
1708.3
County Line Monuments from Joint County Survey, 1880

Oct. 23, 1926, Fair.
Marks, Grau, Snyder.

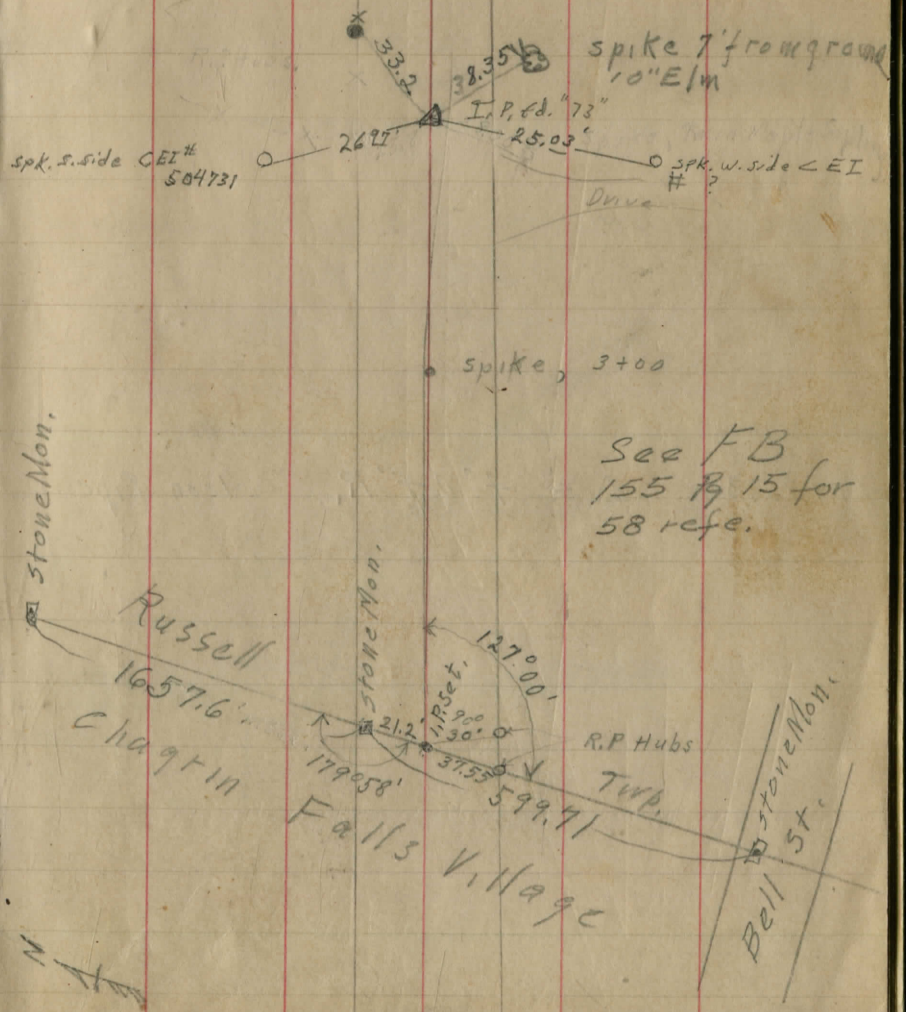
6+13.5 $\Delta = 10°14'$ L. Iron Pipe



Triangulation, Oct 13, 1926
Marks Snyder.

Walter's Road - from Halls Corners to Chagrin Falls

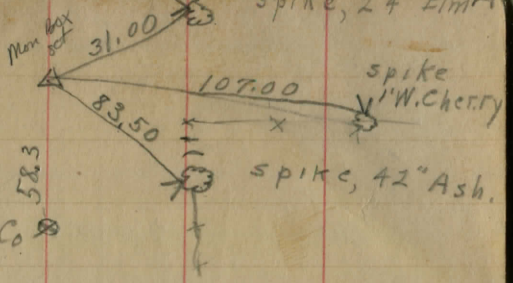
28



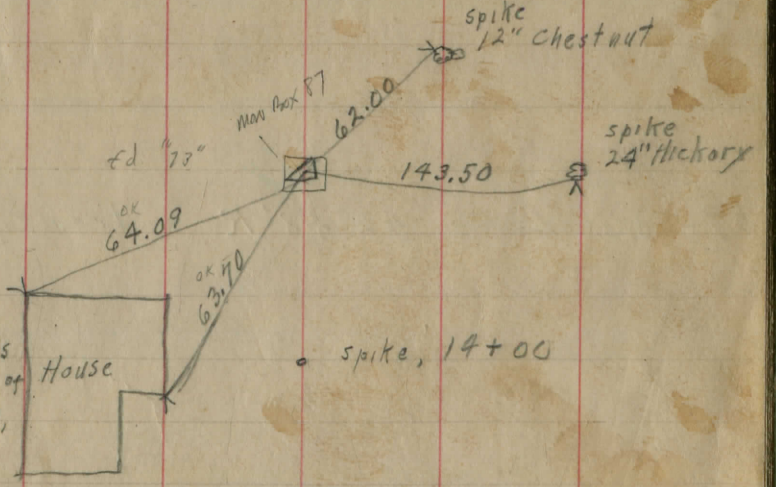
27+00. Δ = 0°50'

15+92.3 Δ = 4°04' R. Iron Pipe

stopped, Oct. 23, 1926



Iron Pin set by Root Eng. Co
Meas, July 29, 1927



59+53.6 Δ = 42°48' R Iron Pipe

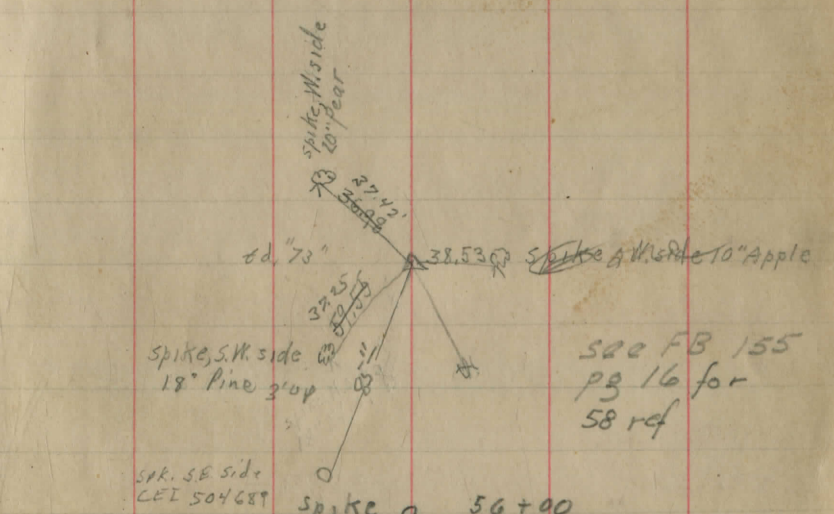
Lot 12 Tr. 3

Lot Line Iron Pipe 29.7'

69+78.4

Lot 13 - Tr. 3

Spike 69+00



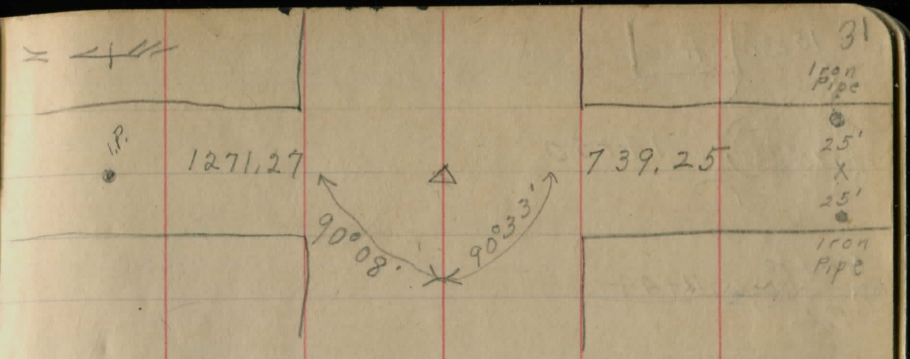
See FB 155
PB 16 for
58 ref

2.80 mi

116+23.9 Δ = 0°00' Iron Pin, ℄ Chillicothe Rd.

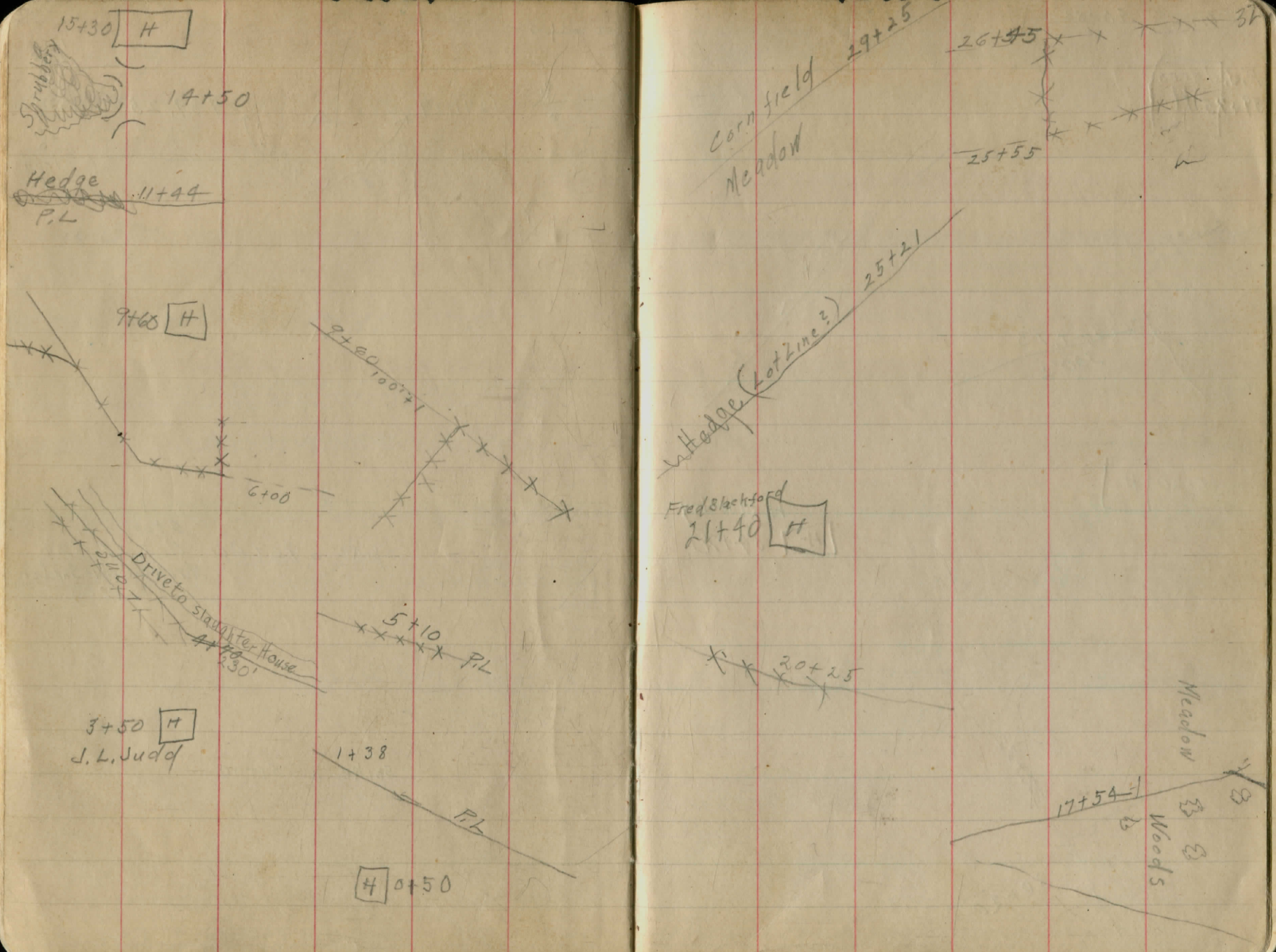
1629.2

105+94.7 Δ = 0°20' L Iron Pipe

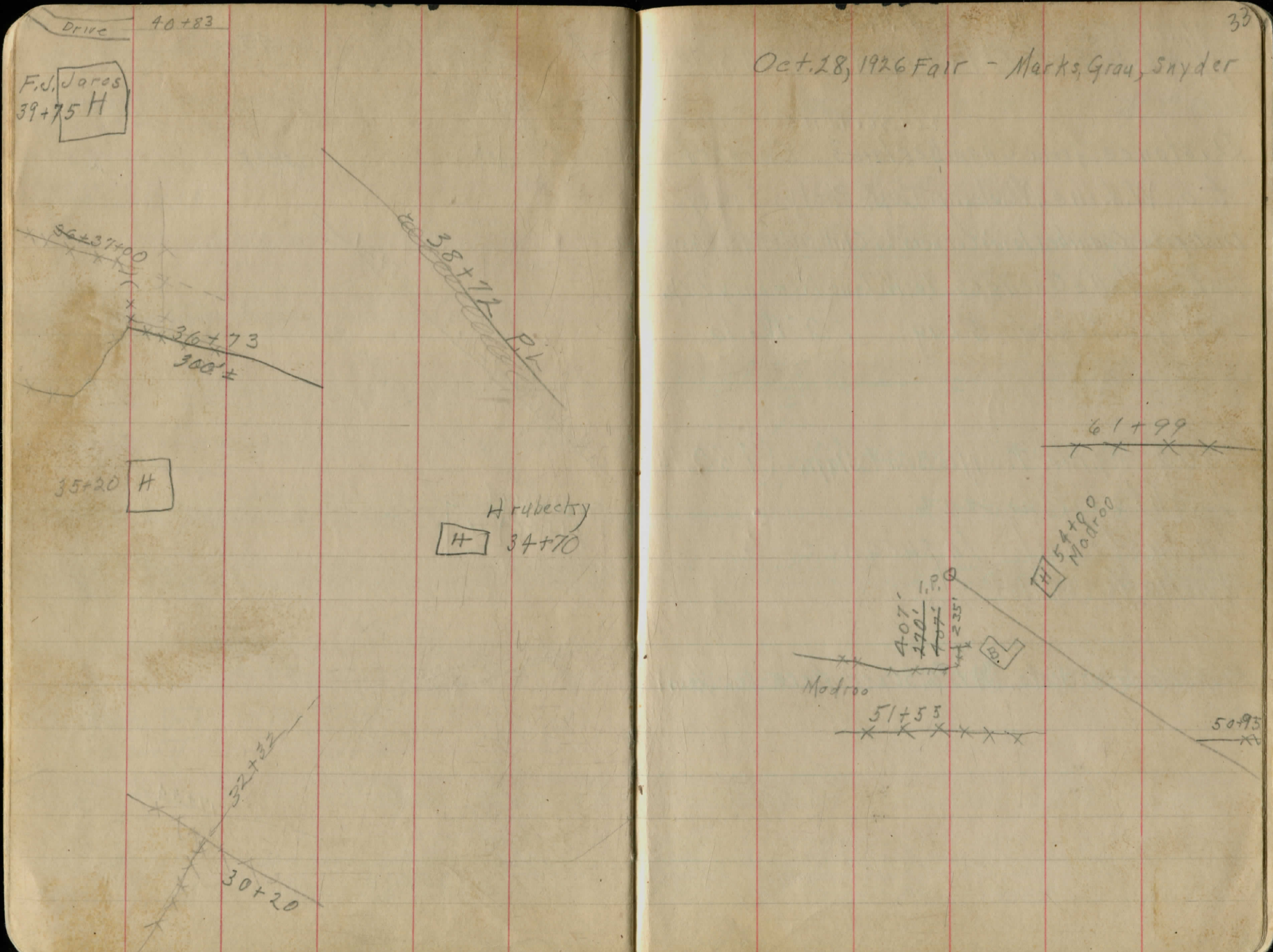


Stopped,
Spike ∘ 96+00 Oct. 27, 1926
Marks-Grau-Snyder

Spike ∘ 81+00


15+30
H
Shrubbery
14+50
Hedge
11+44
P.L
9+65
H
2+80
100'
6+00
Drive to slaughter House
2+10
4+20
230'
5+10
P.L
3+50
H
J. L. Judd
1+38
P.L
H
0+50
29+25
Corn field
Meadow
26+45
25+55
25+21
Hedge (Lot Line?)
Fred Blachford
21+40
H
20+25
17+54
Meadow
Woods

Oct. 28, 1926 Fair - Marks, Grau, Snyder



HALL'S CORNERS EASTE

I CH-36 TH.155

Distance from Chamberlain's Corners to W. Line Newbury Twp. (Phelps Survey
Dist. from Chamberlain's Corners to Chillicothe Rd. (Marks' Survey)
Dist., Hall's Corners to W. Line Newbury Twp.
Traffic Bound Slag. 10' Wide.

12500 Sq. Yds. Traffic Bound Slag., (480 lbs. per sq. yd) @$0.66 $8250.00
Lights & Barriers 8.00
Industrial Insurance 55.00
Total. $8313.00

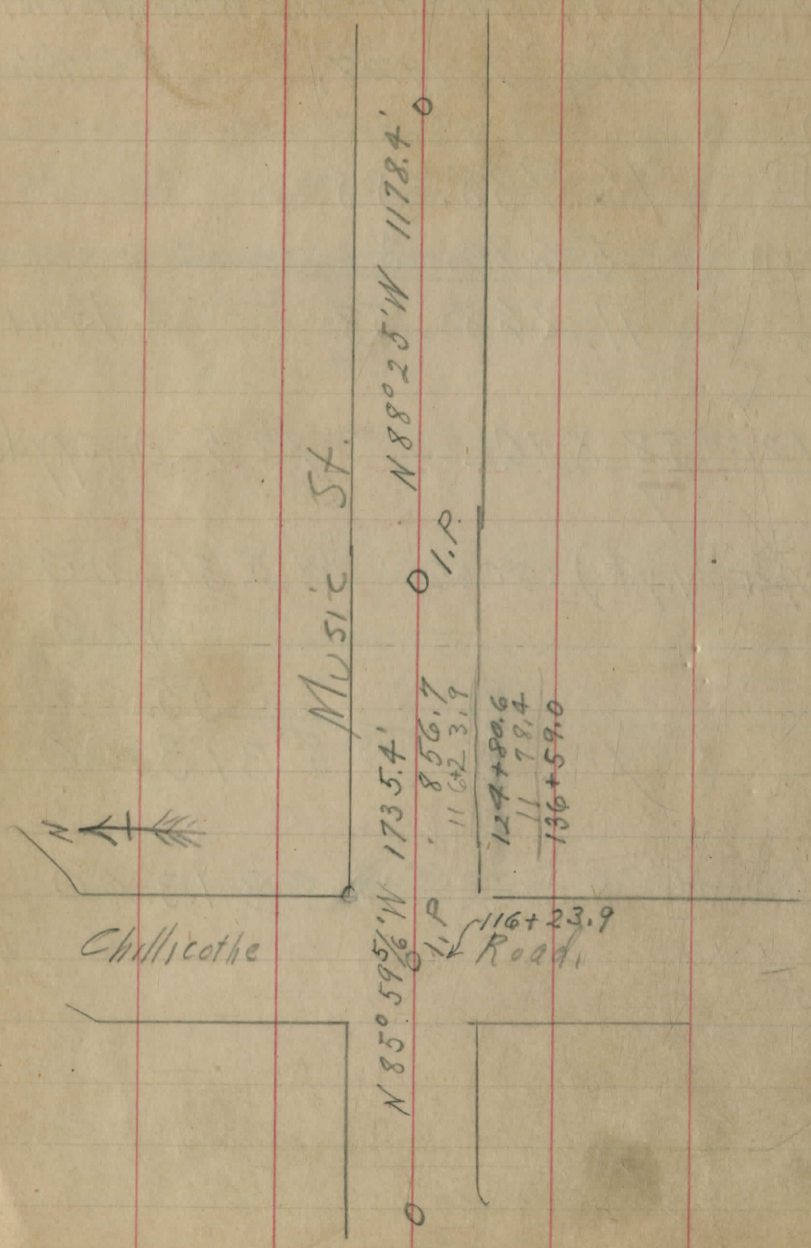
Property Assessments, (Av. $6.50 per Acre for 1/2 mi. on each side $8313.00

RLY TO W. LINE OF NEWBURY TWP.

May 17, 1927. W. C. Marker

16938.88
5670.3
11268.58 = 2.13 mi.

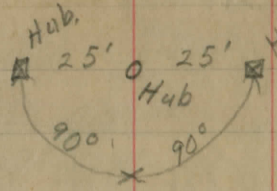
$\frac{11268.58 \times 10}{9}$ = 12520. sq. yds.



June 15, 1927 - Marks, D. Parks, R. Hassel

35

143+00 Δ=0°07' R.



136+59.0 Δ= 30' Iron Pipe

Δ Hub.

SEE PG 67 this book For 1952 references

131+00 0°00'

Spike 25' stake

600' = Ditch bare rock

Δ = 2°25' Left
124+80.8

36" Maple
30.95
Iron Bar
89.40
30" Cherry

120+00 0°00'

Spike 25'

Tel. Pole

Iron Pipe 42.5
31.86
116+23.9 Δ=0°00'
℄ Chillicothe Rd.
49.48
Iron Bar

18" Cherry

178+00 Δ = 0°00"

166+90.6

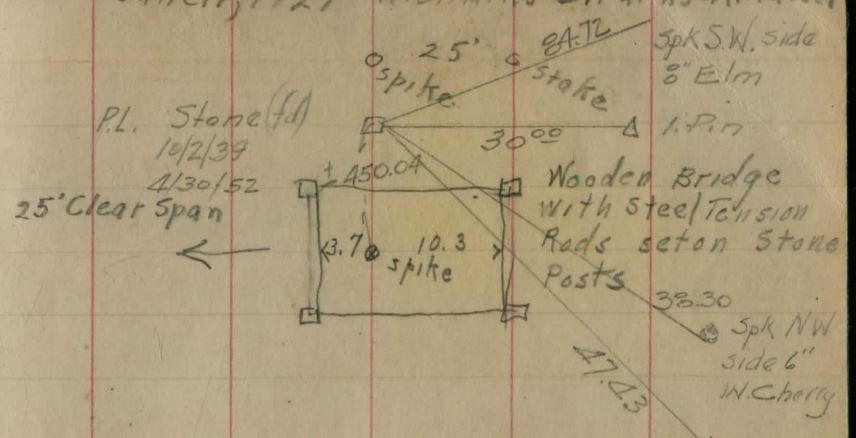
166+00 Δ = 0°00

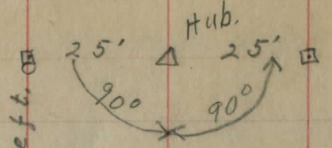
157

154+00 Δ = 0°20'

150+94.6 Δ = 0°08' Left

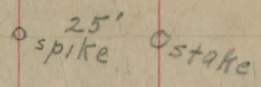
June 17, 1927 - W.C. Marks - D. Parks - R. Hassel

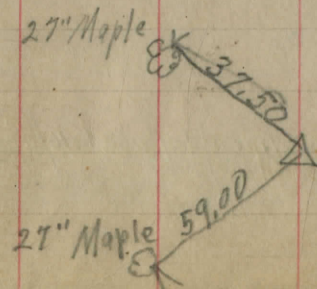




Stakes on Left.

25





221+94.0 Δ = 0°00'

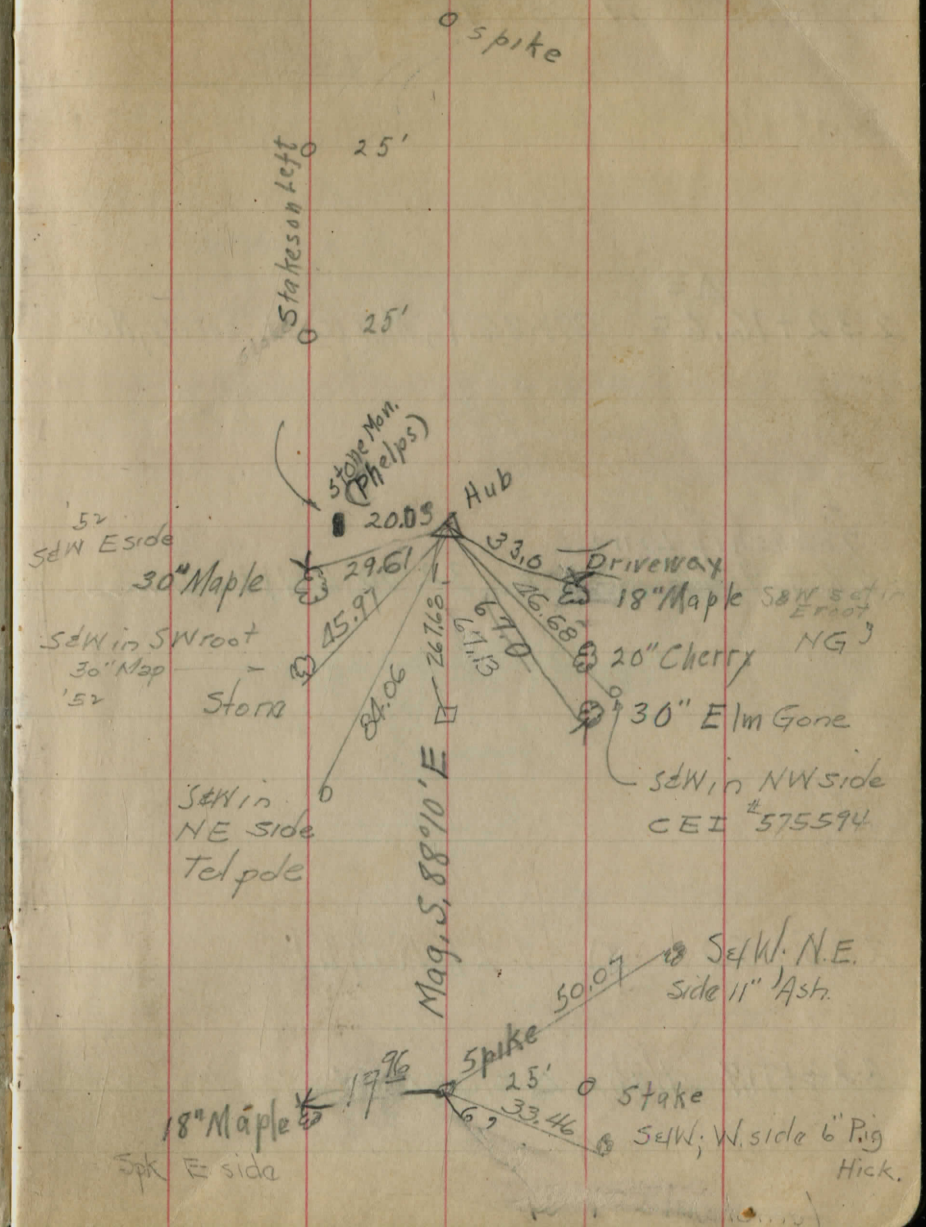
219

2249.7
204.754
2016.3

210

204+75.4 Δ = 0°54' Right Pipe fd & used 10/2/39

185+00 Δ = 0°00' Pipe fd & used 10/2/39

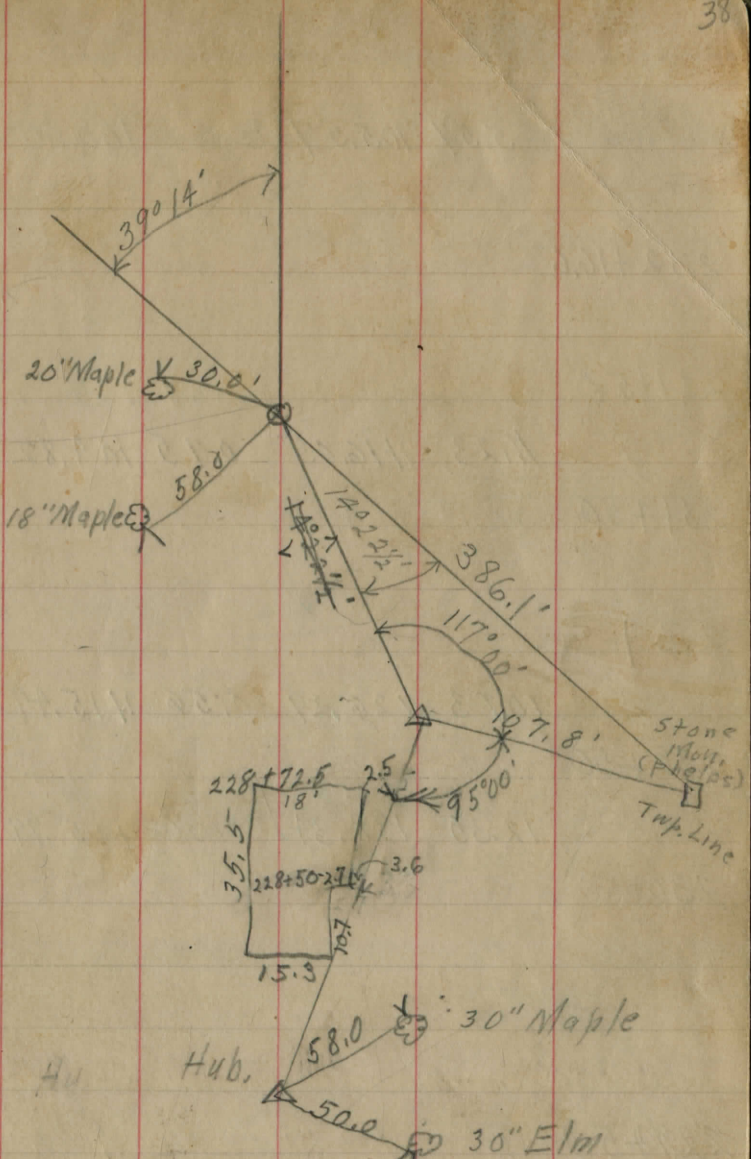


232+16.6 = 3+86.1, Music St. Surrey, New bury

Township Line
228+90.2 Δ = 32°00' Left

225+50 Δ = 9°21' Right

224+91.7 Hub. Δ = 0°00'



	5.57	105.57		100.00
232+16.6				
231+50				
	11.23	116.05	0.75	104.82
231+50				
231				
	10.73	126.29	0.56	115.49
230+50				
	12.35	138.34	0.30	125.99
230+50				
229+50				
	11.98	149.96	0.36	137.98
229+50				

Left ℄ Right

Assumed, R.R. spike, E. side 20" Maple, 30.0' Left of 232+16.6

97.6 98.6 99.8 99.6 100.6 101.3 100.3 99.4 98.1

8.0 7.0 5.8 6.0 5.0 4.3 5.3 6.2 7.5

50 14 9 4 0 6 12 26 40

Porch

103.6 104.2 105.0

2.0 1.4 0.6

60 40 16

105.8 105.9 105.3 106.7 105.1 106.3 105.2

10.3 10.2 10.8 9.4 11.0 9.8 10.9

0 4 6 14 27 29 45

111.2

4.9

50

111.2 112.9 111.3 112.5 113.9 112.9 116.1

4.9 3.2 4.8 3.6 2.2 3.2 0.0

0 19 21 22 27 41 47-60

121.9 120.9 118.5 119.6 119.5 118.1 119.8 119.1 121.2 119.9 126.3 3.0

4.4 5.4 7.8 6.7 7.0 8.2 6.5 7.2 5.1 6.4 1.0 3.0

75 50 37 0 25 20 31 33 45 50 64-80

133.0 131.4 131.1 128.9 126.6 125.1 125.7 129.0 126.6 129.9 124.0

5.4 7.0 7.3 9.5 11.8 13.3 12.7 9.4 11.8 8.5 8.4

75 35 13 0 11 25 37 43 46 60 72

134.0 132.9

4.4 6.0

80 100

133.3 131.3 130.9 131.7

5.1 7.1 7.5 6.7

23 35 43 48

143.86 143.56 139.36 140.46 141.26 139.96

6.1 6.4 10.6 7.2 8.7 10.0

86 57 35 20 11 0

137.46 135.96 138.16 137.36

12.5 14.0 11.8 12.6

56 58 73 83

136.46 143.56 140.96

13.0 6.4 9.0

86 95 115

149.96

229

7.69 156.28 0.37 149.59 146.0 +10.0 100

229

12.10 161.69 7.69 149.59

228+50

11.75 172.90 0.54 161.15 172.90 0.0 80

228

128

227+50

11.37 184.14 0.13 172.77

227+50

228

148.36 1.6 0 | 143.16 6.8 17 | 138.96 11.1 33 | 139.26 10.7 53 | 146.26 3.7 63 | 144.56 5.4 66

146.16 3.8 70 | 147.16 2.8 80 | 146.36 3.6 90 | 145.46 4.3 93

151.3 +5.0 80 | 156.3 0.0 70 | 145.8 10.5 49 | 149.6 6.7 25 | 149.5 6.8 13

153.5 2.8 105 | 149.6 6.7 125

157.9 3.8 75 | 155.7 6.0 79 | 156.9 7.8 87 | 157.1 4.6 96 | 161.1 0.6 100 | 154.7 7.0 120

156.7 +5.0 90–70 | 161.7 0.0 55 | 154.2 7.5 45 | 160.2 1.5 24 | 156.8 4.9 0

155.4 6.3 18 | 148.3 13.4 36 | 146.1 15.0 45 | 146.7 15.0 61

174.10 0.8 70 | 169.1 3.5 50 | 166.5 6.4 41 | 166.1 6.8 35 | 168.0 4.9 24 | 164.9 8.0 7 | 162.1 10.8 0

160.9 12.0 11 | 155.9 17.0 35 | 154.9 18.0 49 | 160.9 12.0 61 | 164.3 6.6 70

163.8 9.1 89

170.7 2.1 10 | 163.9 4.0 5

162.1 10.8 22 | 160.6 12.3 42

148.44 5.7 85 | 146.14 8.0 48 | 148.74 10.4 39 | 173.1 11.1 30 | 174.4 9.6 23 | 173.9 10.3 14

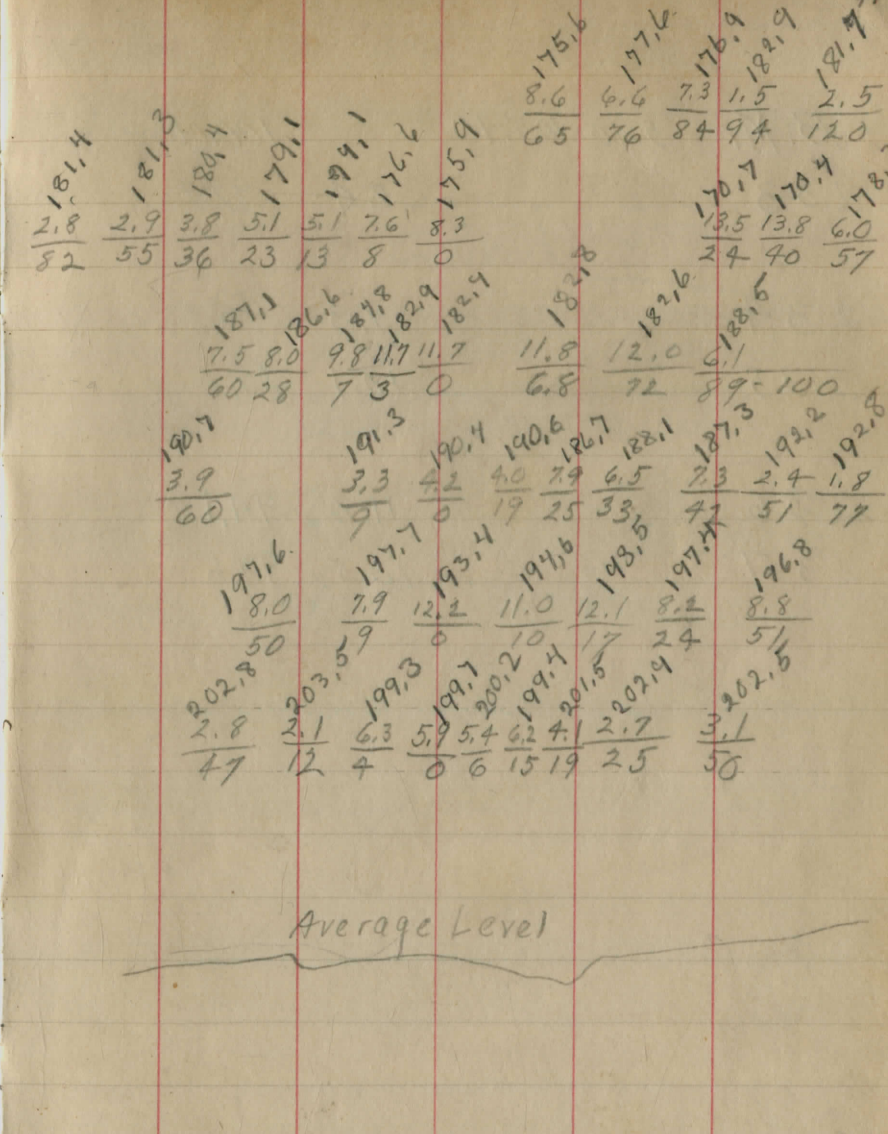
172.1 12.1 63

169.6 14.6 71 | 169.8 14.4 87 | 180.1 4.1 100 | 178.2 6.0 120

175.7 8.8 103

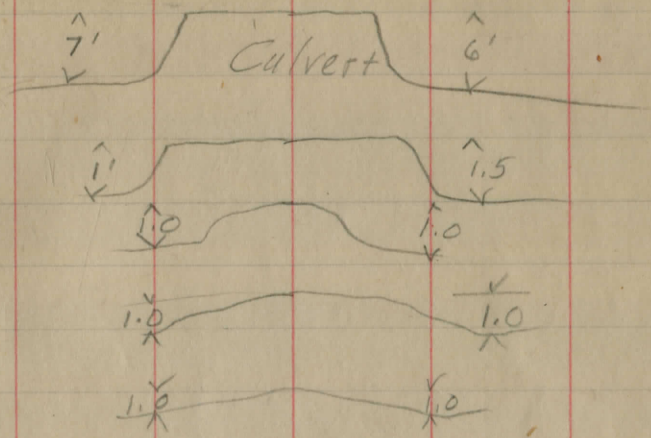
172.2 12.0 125

		184.14		
227				
227				
	11.47	194.55	1.03	1083.11
226+50				
226				
	11.17	205.60	0.12	194.43
225				
224				
223			2.1	203.50
222+20			1.4	204.2
222			1.4	204.2
221			4.2	201.4
220			7.3	198.3
219			9.8	195.8
218			7.5	198.1



B.M.	5.10	105.10		100.00
233			7.4	97.7
234			9.3	95.8
235			10.1	95.0
236			11.0	94.1
237			10.5	94.6

Assumed, on R.P. 30' L. Sta 232+16.6



Relocation of Core Hill on Music Street

Note: Sideslakes set 30' Lt.

Sta 224 + 91.72 PI Def Lt 5°46' Pipe found

Curve Data:
- Δ = 5°46' Lt.
- D = 4°
- T = 72.15
- L = 144.17
- Correction -.13

PC = 224+17.55 = 2°53		0°00'
224+50	− 2°16	0°37
225+00	− 1°16	1°37
225+50	− 0°16	2°37
PT = 225+63.72	− 0°00	2°53

224

223

222

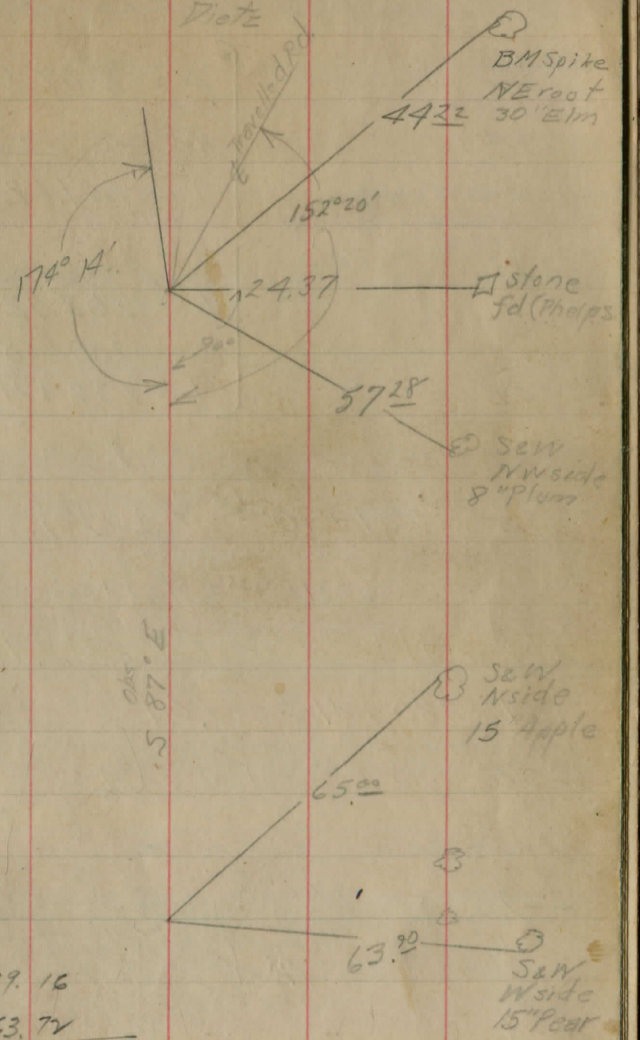
Sta 221 + 94.00 POT Spike Set

220

219

218

9/17/55 Richey H.J.J. Dietz



731 89.16
225 63.72
625.44
72.15
697.59

234

233

232

231

230

229

228

227

226

Curve Data

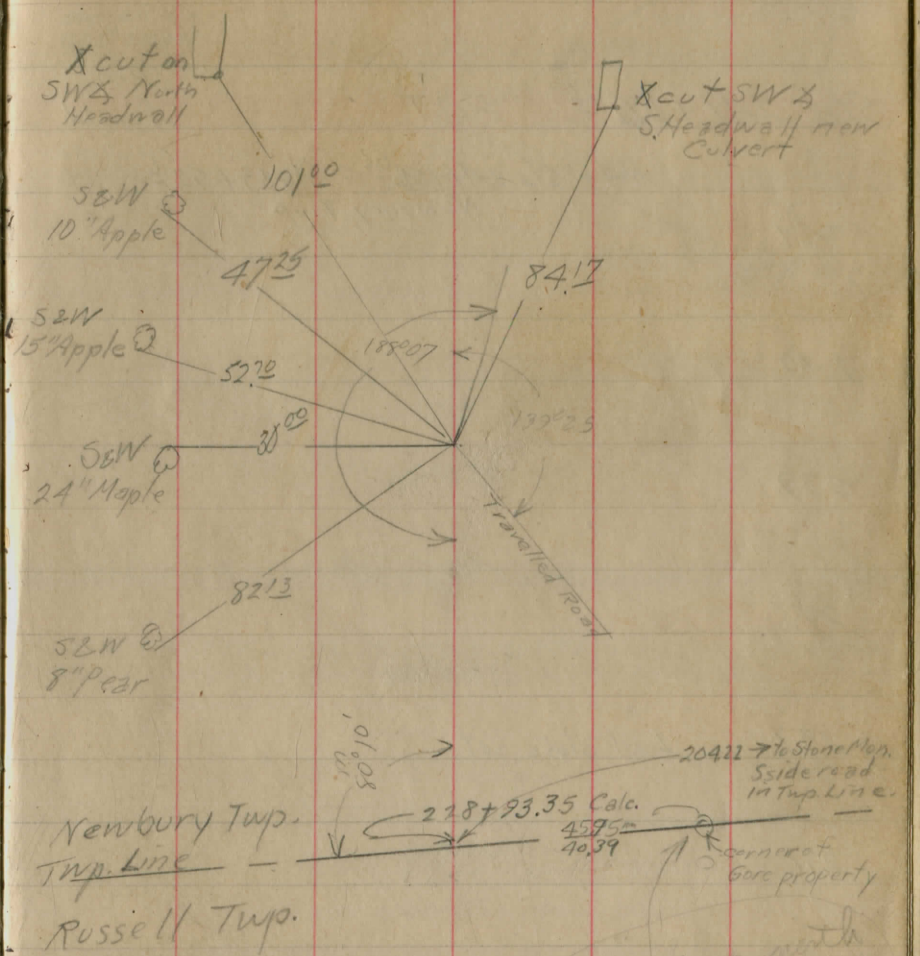
Δ = 8°07 Rt.
D = 4°
T = 101.62
E = 3.6
L = 202.92
PC = 230 + ~~88.54~~ 87.54
PT = 232 + ~~91.46~~ 89.46

230+87.54 = 8°00
231+00 − 0°15
231+50 − 1°15
232+00 − 2°15
232+50 − 3°15
232+89.46 − 4°04

Sta 231+90.26 PI Def. Rt. 807 Pin found

Sta 231+90.26 = Sta 3+86 Newbury Twp.

22893.35
22563.72
329.63
72.15
401.78



Sta 241+55.66 POT pin found

Note Sta 241+55.66 = Sta 13+62.6
Newbury Twp

241

240

239

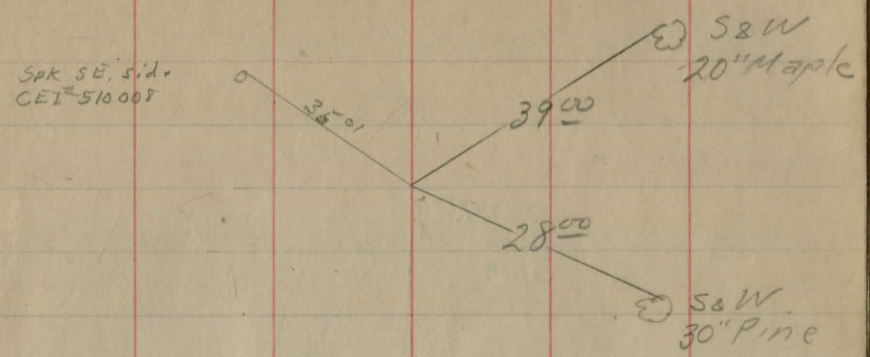
238

237 Last stake set

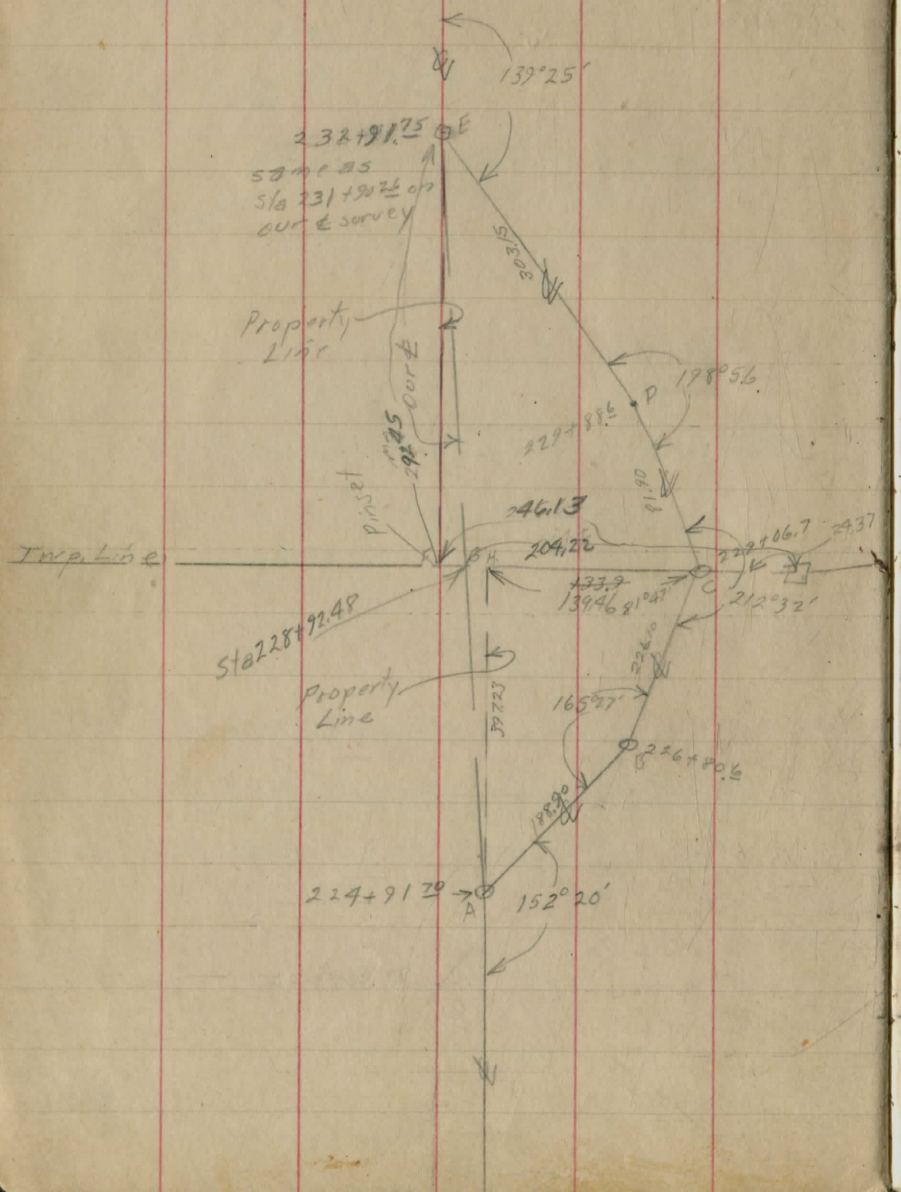
236

235

234



Data on Travelled Road



old cut 4's at 229+88

old cut 45' at 229+06

Topography on Core & Hill

222+59 27 ⊙ 12"Ap

222+26 27 ⊙

221+96 13 T

220+80 Drive

℄

226+50 15'

T 6' 226+50

225+67 3 ⊙ 15"NC

Drive

225+60 15'

225+10 40 ⊙ 30"E

225+00 28

224+91 30 ⊙ 8"PI

224+85 28 ⊙ 8"PI

T 20 224+05

224 27

223+87 27 ⊙ 6"PI

223+80 Drive

223+41 28 ⊙ 15"Cot

223+45

80' H

222+95

Orchard ← 30'

10"Ap ⊖ 19

12"Ap ⊖ 13

15"Ap ⊖ 1'

Brush 12'

8"WC ⊖ 1'

231+24 21 T

230+96

230+47

230+27

230+12 6.5 ⊖ 12"Ap.

230+04 10 ⊖ 12"Ap.

229+72 29 ⊖ 12"Ap.

229+25

228+93 1' ⊖ 8"WC

228+90

228+74 13 T

228+65 19 →

228+58 26 ⊖ 3-6"M

228+55 23 ⊖ 12"M

228+40 30 ⊖ 10"WC

228+30 29 ⊖ 2-8"WC

228 32 →

227+85 32 ⊖ 15"WC

227 23 →

226+80

Brush one ℄

24"W ⊖ 13

2x1 Stone Box Culvert Flow Lt. 22.5' long.

PL 235+92

237 27 →

236+83

236+78 20.5 2

235+91 24 T

235+40 24 →

234+60 23 →

234+23 25 ⊖ 12"Ap.

234+05 Drive.

234+07

150 →

234+80

233+45 23 T

3x3 Stone Box Culvert 18' long

232+85 18' 1'

8"Ap ⊖ 20

10"Ap ⊖ 27

8"Ap ⊖ 28

10"Ap ⊖ 29

24"M. ⊖ 30

232+80

232+55

232+30

232+05

231+70

231+65

Good station. ← 60

231+45

+80 15 →

+55 12 →

Build new

Cut new channel 100' ℄ at rt. ∠s

Cross Sections Core Hill

BM#1	11.40	1211.96 (12.0)		1200.56
220			9.6	02.4
221			6.8	05.2
222			4.0	08.0
223			4.8	07.2
224			7.7	043
BM#1	1.30	1201.86 (01.9)	11.40	1200.56
225			3.4	98.5
226			7.3	94.6
	1.32	1191.67 (91.7)	11.51	1190.35
227			6.7	85.0
	2.17	1183.27	10.57	1181.10
228			7.0	76.3
	0.60	1172.50	11.37	1171.90
	0.24	1160.35	12.39	1160.11

9/10/35

℄

Spike N Edge 30" Elm 30' Rt ℄ Sta 225+10

30/62	14/6.9	11/8.6	8/7.2	10/7.1	13/8.1	17/5.9	30/5.2
30/4.3	15/4.1	12/5.7	8/4.5	8/4.1	12/5.2	16/4.0	30/3.5
30/4.5	15/4.7	12/5.8	9/5.0	10/4.7	13/6.0	18/4.0	30/3.2
—	—	—	19/5.4	13/8.8	11/8.1	15/8.9	19/6.5	25/5.3 —
—	—	14/0.3	6/4.5	2/3.5	8/3.2	15/3.5	18/4.5	23/0.4 —
—	—	—	30/7.8	12/7.3	22/9.0	30/9.0		

Top stone 75' Lt ℄ Sta 226+90

—	30/5.1	15/7.7	30/9.2	—	—
—	30/4.4	30/13.3	—	—	—

		1160.35			
229			7.7	52.7	
BM #2			10.47		1149.88
	0.66	1148.53	12.48	1147.87	
	1.00	1136.98	12.55	1135.98	
230			8.7	28.3	
	1.17	1125.96	12.19	1124.79	
230+50			8.9	17.1	
	0.58	1113.77	12.77	1113.19	
231			30	10.8	
232			9.2	1104.6	
	2.72	1103.74	12.75	1101.02	
Culvert 232+85					
233			4.6	1099.1	
234			4.9	98.8	
235			56	98.1	

Spike N root 18" Maple 175' Rt ℄ Sta 229+75

					30/8.2	19/6.8	28/7.8	42/11.2		
					25/12.0	10/9.4	18/9.5	19/10.7	21/9.7	30/9.4
							30/10.8	30/7.9		
							30/4.8	30/0.8		
					24/12.1	22/12.5	16/11.3	8/10.1	9-10/10.2	22/11.2 30/11.7
200/11.6	100/10.1	50/10.5			H/10.4 93.3	H/5.3	℄ Rd 2.8	F.I 10.9 93.3	—	—
					28/7.1	18/3.5	℄ Rd 10/30	5/3.3	4/6.5	30/6.8 — —
					30/4.9	18/5.5	15/6.0	6/4.5	30/5.2	— — —
					— —		30/6.9	9/6.6	7/5.8	12/7.1 23-/5.6

		1103.74			
236			6.4	97.3	
culvert 236+78			5.9	97.8	
	9.06	1107.03	5.77	109797	
B.M.#3			12.49		1094.54
237			8.7	1098.3	
238			3.4	1103.6	
	11.43	1118.20	1.26	1106.77	
239			4.6	13.6	
	11.55	1129.75	0.00	1118.20	
240			6.9	22.9	
241			3.4	26.3	
241+56			1.9	27.8	

℄

— 30/71 7/7.6 3/6.9 5/5.9 12/6.6 14/7.4 26/7.7

150/105 75/9.9 Fl./9.1 H/5.8 H/5.1 Fl./9.0

Spike S. root 24" Willow 75' Lt & Sta 236+80

30/12.5 9/10.9 2/9.2 6/8.3 19/9.1 28—/10.7

Check Levels & Profile of Travelled Road.

BM #3	7.86	1102.40		1094.54	
	6.26	1107.26	1.40	1101.00	
			10.6	96.6	
	11.29	1118.36	0.19	1107.07	
232			5.8		
	12.11	1130.02	0.45	1117.91	
231			3.4		
	12.06	1141.42	0.66	1129.36	
	11.10	1152.27	0.25	1141.17	
230			10.5		
BM #2			2.39	1149.88	1149.88
229					
	11.59	1163.54	0.32	1151.95	
229			6.6		
	12.24	1175.13	0.65	1162.89	
228			6.4		
	12.28	1186.89	0.52	1174.61	
227			4.9		
	10.73	1196.87	0.75	1186.14	

Flow 100' Rt & of culvert at Sta 232+85

Readings on right are in old cut

25/60

123/27

35/17.5

38/4.5

11.9/36/5

35/15.5

42/11.5

		1196.87			
226			6.0		
	5.86	1202.58	0.15	1196.72	
B.M. 1			2.05	1200.53	1200.56

$\frac{34}{19}$

Bench Mark Levels from Chillicothe Rd

BM #9	1.88	1195.79			1193.91
	11.73	1197.49	10.03	1185.76	
	1.84	1195.56	3.77	1193.72	
BM.	0.49	1189.78	6.27	1189.29	
	0.63	1180.21	10.20	1179.58	
	5.35	1176.84	8.72	1171.49	
	2.11	1185.16	0.79	1176.05	
	2.32	1178.81	8.67	1176.49	
BM	4.53	1178.81	4.53	1174.28	
	0.46	1166.36	12.91	1165.90	
	0.64	1154.04	12.96	1153.40	
	0.23	1141.32	12.95	1141.09	
	0.35	1129.35	12.32	1129.00	
	0.14	1117.20	12.29	1117.06	
	0.72	1105.79	12.13	1105.07	
	0.10	1092.74	13.15	1092.64	
	0.75	1083.23	10.26	1082.48	
	11.97	1095.12	0.08	1083.15	
	9.26	1104.11	0.27	1094.85	

E'ly along Music Street
Chillicothe Rd. Sec E.

Spike N root 18" lone Maple 30' Rt ± Sta 128 ±

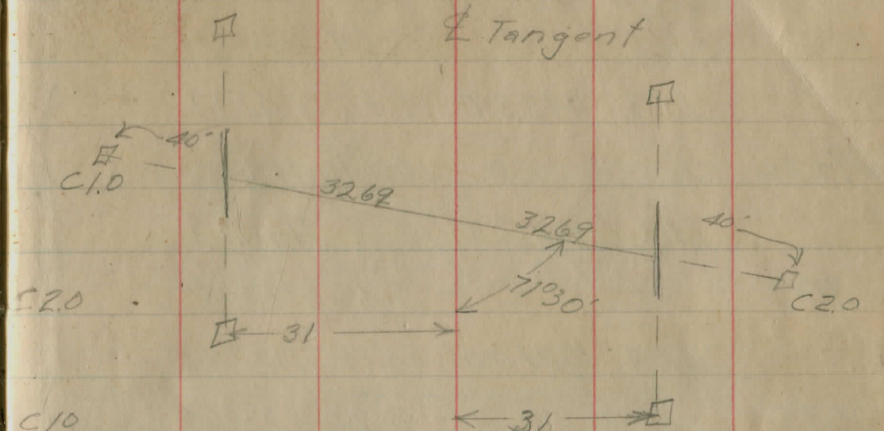
Spike N root 30" Maple 25' Rt ± Sta 151 ±
opposite EC Martin Drive.

		1104.11			
	11.02	1114.96	0.17	1103.94	
	12.49	1127.05	0.40	1114.56	
	11.73	1136.96	1.82	1125.23	
BM	7.64		7.64	1129.32	Spike N root 24" Maple 25' Rt ℄ Sta 175 ±
	12.65	1149.19	0.42	1136.54	
	12.57	1161.62	0.14	1147.05	
	12.02	1173.50	0.14	1161.48	
	11.88	1184.66	0.72	1172.78	
	9.90	1193.33	1.23	1183.43	
	9.72	1202.30	0.75	1192.58	
	11.35	1213.59	0.06	1202.24	
	8.87	1222.25	0.21	1213.38	
BM	4.36	1222.25	4.36	1217.89	Spike N root 15" Maple 30' Rt ℄ Sta 202 ± opposite SW Cor. M.B.H. Otto property
	1.56	1219.38	4.43	1217.82	
	0.29	1208.07	1.60	1207.78	
	8.81	1208.13	8.75	1199.32	
	0.78	1204.50	4.41	1203.72	
	9.04	1212.78	0.76	1203.74	
our BM #1			12.22	1200.56	Spike NE root 30" Elm 30' Rt ℄ Sta 225 +10

	BS	HI	FS	Elev	
BM #3	7.55	1102.09		1094.54	
	4.73	1104.89	1.93	1100.16	
℄ Grade				1107.0	
Flow R				1095.50	
Stake R			9.03	1095.86	7.03
Flow L				1093.30	
Stake L			11.95	1092.94	10.95

1039

Culvert 232+85



Skew 18°30' to tangent

4 x 3 Box

07 / 3.4 / 18 / 6.5 / 15 / 34.5

07 / 03 / 14 / 15 / 36

04.6 / 33.3 / 14.3

Slope Stakes

BM #2	4.87	1154.75		1149.88
229			5.84	1148.91
	1.18	1143.37	12.56	1142.19
229+50			0.19	1143.18
	1.49	1132.28	12.58	1130.79
230			-5.16	1137.44
	0.84	1121.00	12.12	1120.16
230+50			-10.71	1131.71
231			-4.99	1125.98
	3.38	1112.08	12.30	1108.70
231+50			-8.19	1120.27
232			-2.99	1115.07
new # BM4	2.73	1103.59	11.22	1100.86
BM #3			9.07	1094.52

Top stake 230+50 Rt

1094.54

L. & R.

Stakes set 1' back of true point

C5.8 / 29.7	C5.8 / 28.7	C4.7 / 27.9	C4.8 / 28.0
F2.3 / 17.9	F2.6 / 16.9	F3.0 / 17.5	F2.6 / 18.5
F11.1 / 32.1	F11.4 / 30.1	F9.8 / 27.8	F9.6 / 27.8
F15.8 / 38.7	F15.8 / 36.8	F13.4 / 33.1	F13.1 / 35.1
F17.3 / 41.1	F12.4 / 39.1	F13.0 / 32.5	F12.6 / 34.5
F15.8 / 38.9	F15.8 / 37.9	F12.4 / 31.6	F11.4 / 33.6
F13.8 / 35.8	F13.9 / 33.8	F12.7 / 32.3	F12.9 / 34.3

X cut SW4 Steadwall Culv. 30' Rt. 232+85

BM #2	9.45	1159.33		1149.88	
BM #2	12.65	1171.02	0.96	1158.37	
228+50			16.37	1154.65	
	11.75	1181.13	1.64	1169.38	
228			20.75	1160.38	
	12.80	1193.47	0.46	1180.67	
227+50			27.35	1166.12	
227			21.62	1171.85	
226+50			15.88	1177.57	
	9.19	1202.05	0.61	1192.86	
BM #1	1.73	1202.29	1.50	1200.55	1200.56
226+00			18.97	1183.32	
225+50			13.23	1189.06	
225			7.63	1194.66	
BM #1	10.67	1211.23			1200.56
224+50			11.84	1199.39	

C 15.7 / 44.2	C 15.5 / 43.2	C 5.6 / 28.4	C 5.6 / 29.4	
C 19.6 / 50.0	C 19.3 / 49.0	C 9.1 / 33.6	C 9.0 / 34.6	
C 17.5 / 46.8	C 17.2 / 458	C 11.0 / Just to 32.5	C 11.2 / 35.0	
C 15.6 / 44.1	C 15.4 / 43.1	C 10.0 / 35.0	C 9.9 / 36.0	
C 13.4 / 40.5	C 13.0 / 39.5	C 8.2 / 32.3	C 8.4 / 33.3	
C 11.3 / 37.7	C 11.1 / 36.7	C 9.3 / 34.0	C 9.4 / 35.0	
C 8.9 / 34.3	C 8.9 / 33.3	C 5.9 / 28.9	C 5.6 / 29.9	Hub set at same grade at 8' back
C 6.7 / 30.9	C 6.5 / 29.9	C 5.9 / 28.9	C 6.0 / 29.9	
C 5.4 / 28.8	C 5.2 / 27.8	C 4.7 / 27.0	C 4.8 / 28.0	

	1211.23		
224+00		8.12	1203.11
223+50		5.43	1205.80
223+00		3.79	1207.44
222+50			1208.14
222+00		3.44	1207.79
221+50			1206.56
221+00			1205.21

C3.5 / 26.1	C3.4 / 25.1	C3.5 / 26.2	C3.7 / 27.2
C0.1 / 21.0	C0.0 / 20.0	C2.0 / 23.0	C2.3 / 24.0
F0.3 / 20.4	F0.4 / 19.4	C0.9 / 21.3	C1.1 / 22.3
—	—	—	—
F0.3 / 20.4	F0.4 / 19.4	C0.8 / 21.2	C0.9 / 22.2
—	—	—	—
—	20.0	21.5	—

BM #4	4.47	1105.33			1100.86
232+50			- 5.23	1110.56	
233+00			- 1.40	1106.73	
233+50			1.75	1103.58	
234+00			4.21	1101.12	
234+50			5.99	1099.34	
235+00			7.09	1098.24	
236+00			7.83	1097.50	
BM #3			1.85	1094.48	1094.54

℄

F 11.5 / 37.0	F 11.5 / 36.0	F 14.2 / 41.4	F 13.6 / 42.4
F 10.1 / 34.4	F 10.2 / 33.4	F 10.1 / 33.2	F 9.1 / 34.2
F 6.5 / 28.0	F 6.5 / 27.0	F 6.8 / 26.7	F 6.7 / 27.7
F 2.8 / 19.2	F 3.1 / 18.2	F 2.9 / 17.8	F 2.9 / 18.8
F 1.6 / 18.8	F 1.5 / 17.8	F 0.4 / 19.4	F 0.1 / 20.4
F 1.0 / 19.4	F 1.1 / 18.4	F 0.4 / 19.4	F 0.2 / 20.4
F 2.1 / 17.6	F 2.3 / 16.6	F 1.3 / 18.0	F 1.2 / 19.0

new BM #4	8.91	1109.77		1100.86	
234				1101.12	
233+50			6.19	1103.58	
233			3.04	1106.73	
	11.55	1118.77	2.55	1107.22	
232+50			8.21	1110.56	
232			3.70	1115.07	
	12.85	1127.91	3.71	1115.06	
231+50			7.64	1120.27	
231			1.93	1125.98	
	12.43	1137.85	2.49	1125.42	
230+50			6.14	1131.71	
230			6.41	1137.44	
	12.53	1149.59	0.79	1137.06	
229+50				1143.18	
229				1148.91	
	12.25	1160.88	0.96	1148.63	
BM #2				1149.88	
228+50			6.23	1154.65	
	12.57	1171.13	2.32	1158.56	
228			10.75	1160.38	
227+50			5.01	1166.12	C1.0
	12.40	1183.51	0.02	1171.11	
227			11.66	1171.85	C 5.0
226+50			5.92	1177.59	C3.6
	11.94	1193.46	1.34	1182.12	
226			10.14	1183.32	= 2.5

225+50	1189.06
225	1194.66
224+50	1199.39
BM#1	1200.56

BM#2	2.22	1152.10		1149.88
229			3.19	1148.91
	12.03	1162.94	1.19	1150.91
228+50			8.29	1154.65
228			2.56	1160.38
	7.79	1169.18	1.55	1161.39
227+50			3.06	1166.12
227				1171.85
226+50				1177.59
226				1183.32

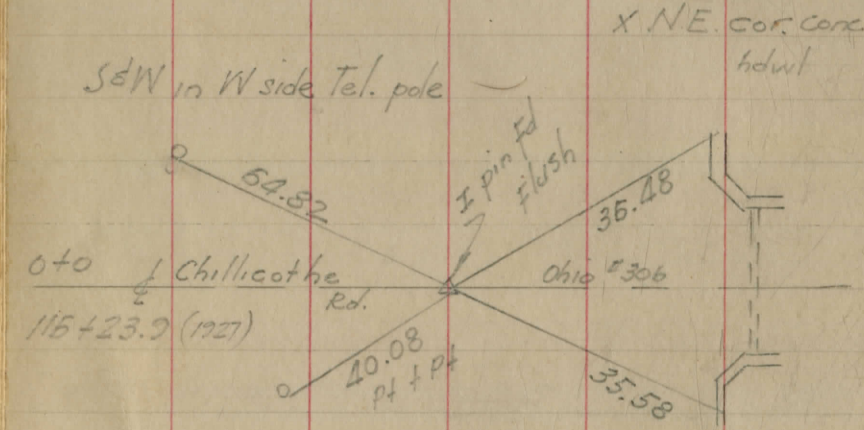
229
2.55
5.79

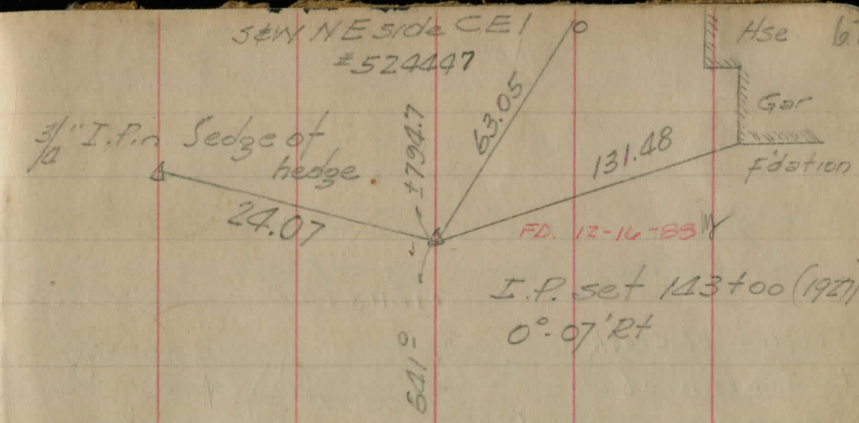
11.47

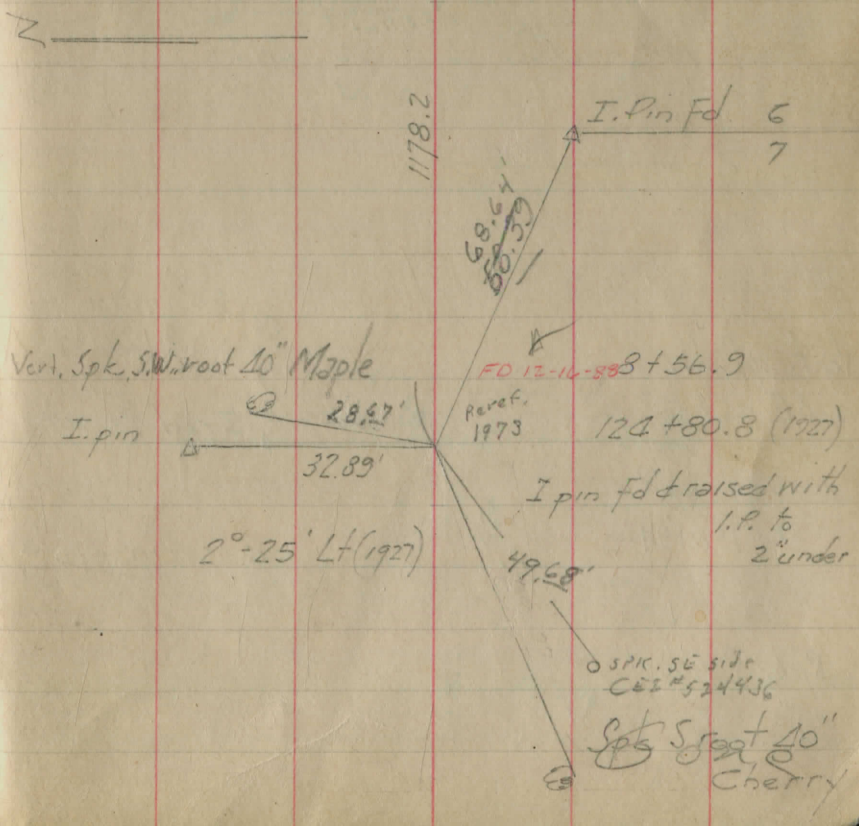
4-30-52

MUSIC STREET CH #36 Sec B

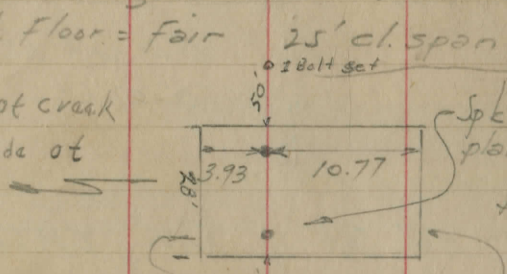
Alignment



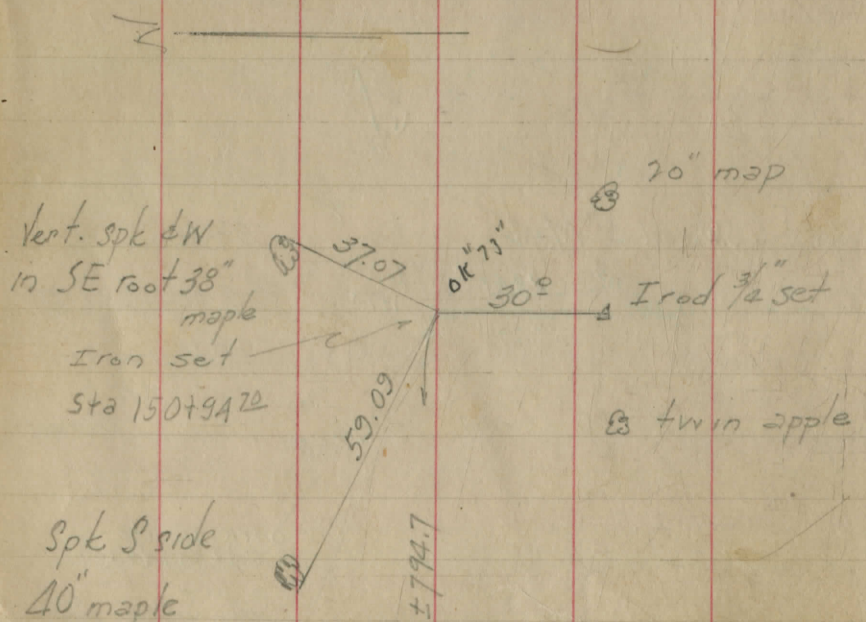


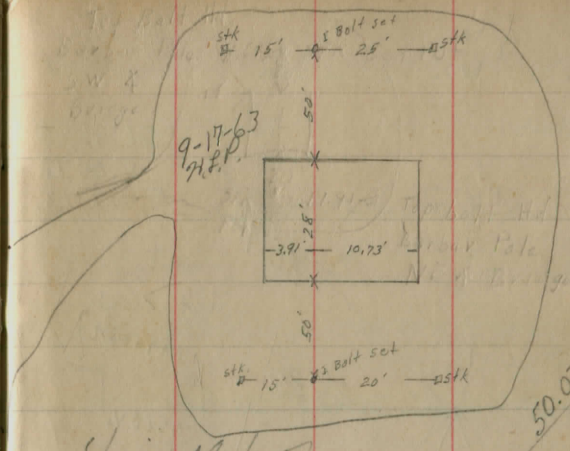


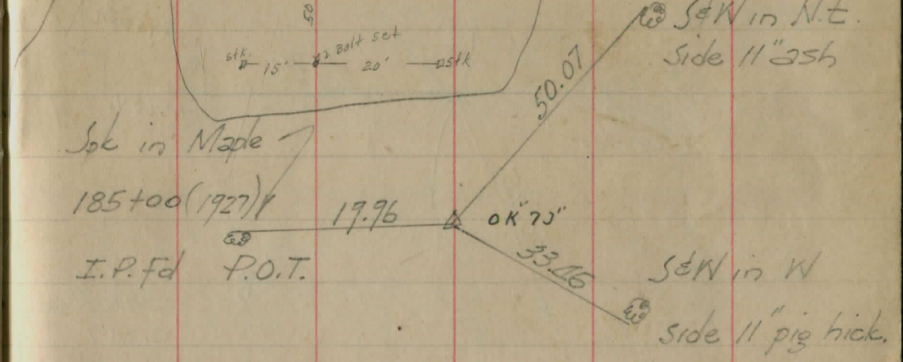
Stone abuts = good 10" Is on 21½" ctrs = good
Plank Floor = fair 25' cl. span

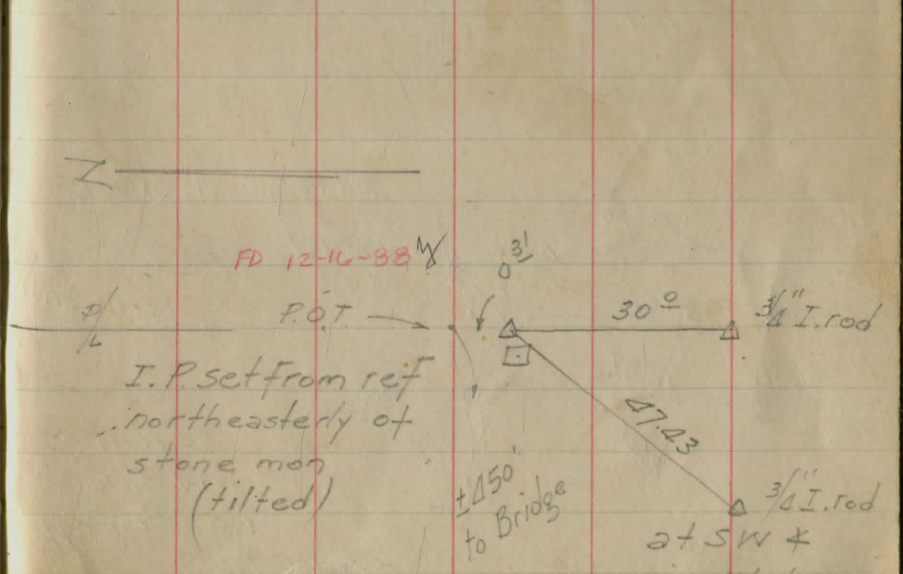


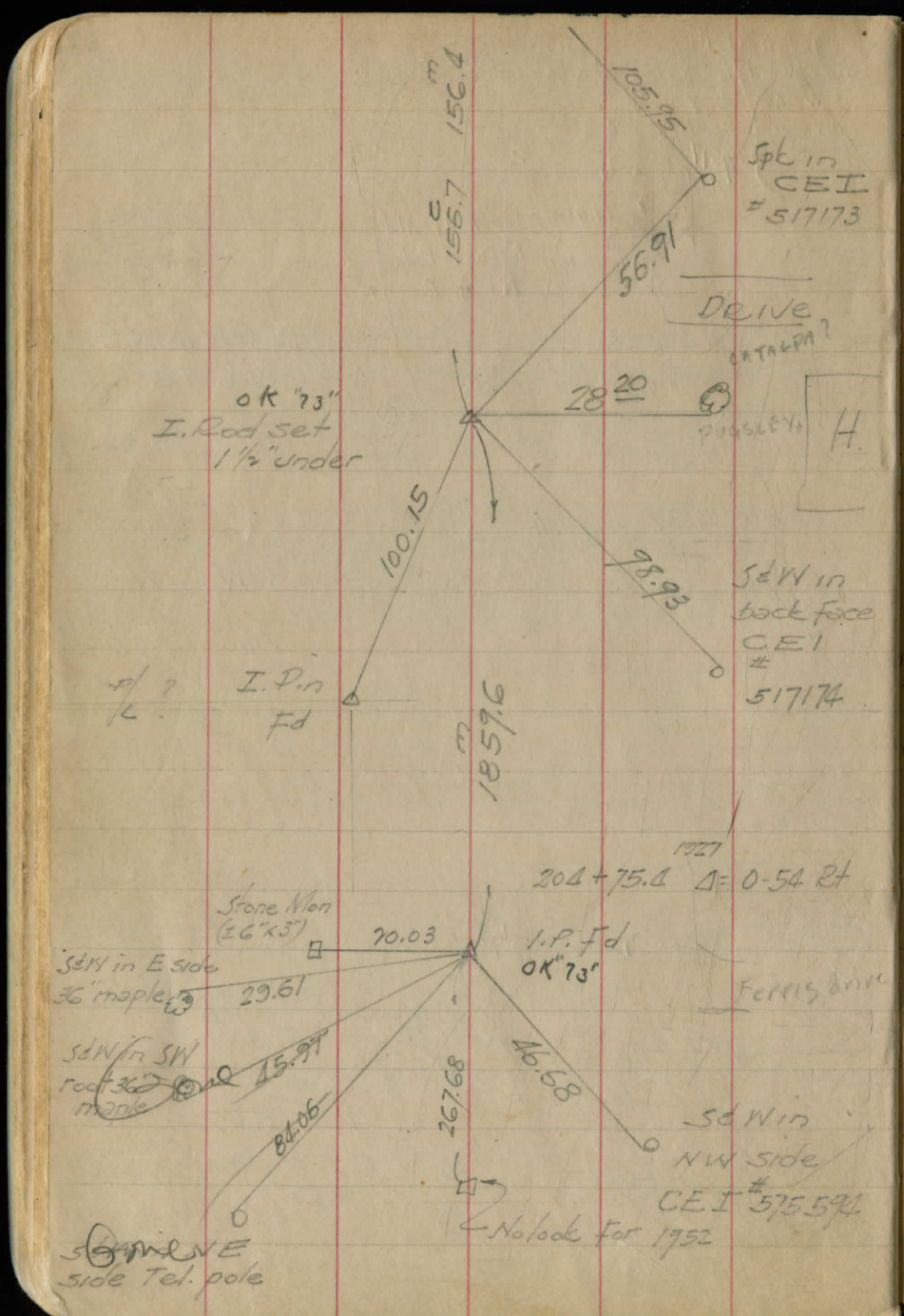
could put another I @ 16" on S
" " " " " 12" " N

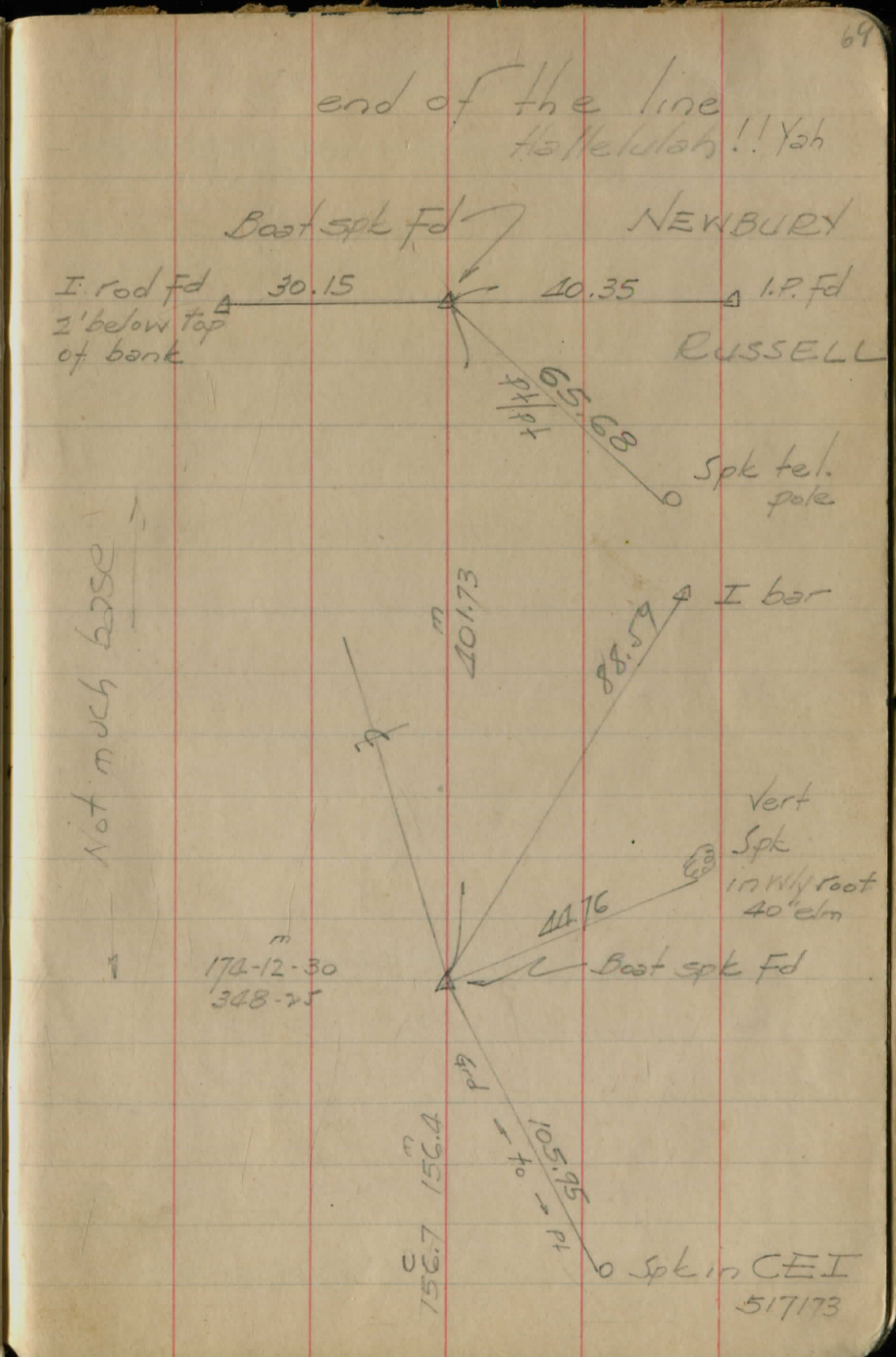






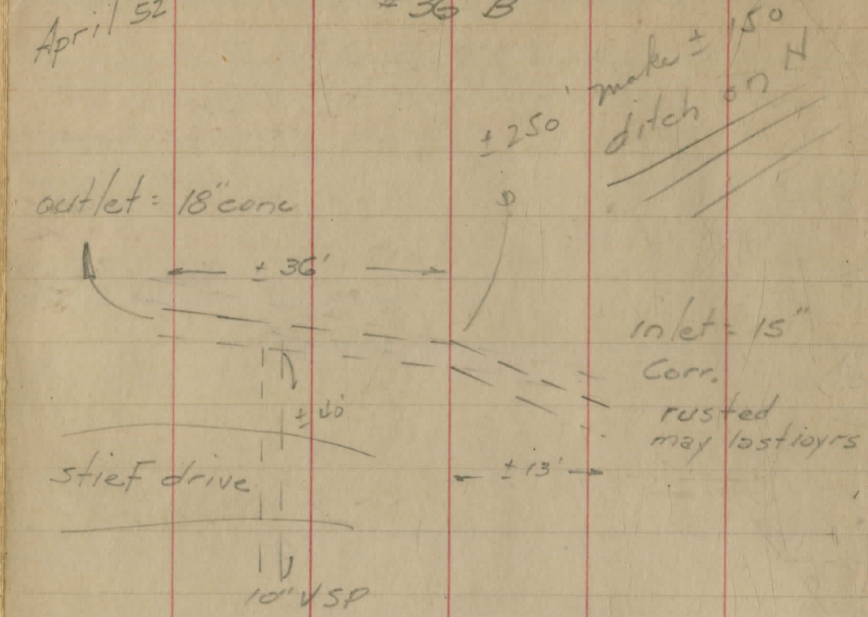



105.95
Spk in CEI #517173
56.91
Drive
CATALPA?
28 20
OK "73"
I. Rod set 1½" under
PUGSLEY
H.
100.15
98.93
Sdw in back face CEI # 517174
I. P. in Fd
185.96
1927
204+75.4 Δ = 0-54 Rt
Stone N lon (16"x3")
70.03
I.P. Fd OK "73"
Sdw in E side 36" maple
29.61
Sdw in SW rod 36" maple
15.97
84.06
26.68
46.68
Sdw in NW side CEI # 575594
No look for 1952
NE side Tel. pole


end of the line
Hallelulah!! Yah
Boat spk Fd
NEWBURY
I. rod Fd 1' below top of bank
30.15
40.35
I.P. Fd
RUSSELL
65.68
Spk tel. pole
I bar
88.59
401.73
Not much base
Vert Spk in wily root 40" elm
40.76
174-12-30
348-25
Boat spk Fd
105.95
Spk in CEI 517173

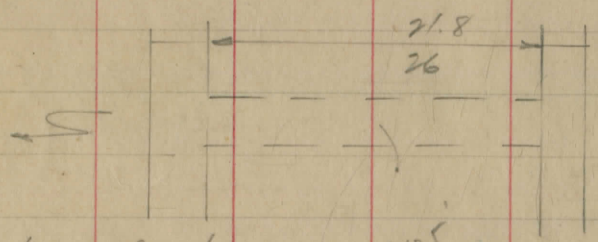
Culverts Music ST

April '52 #36 B



Conc slab on stone walls

30" x ± 18" openg

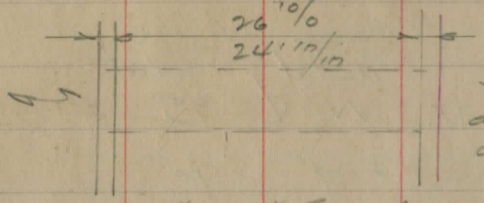


take off stone

holders

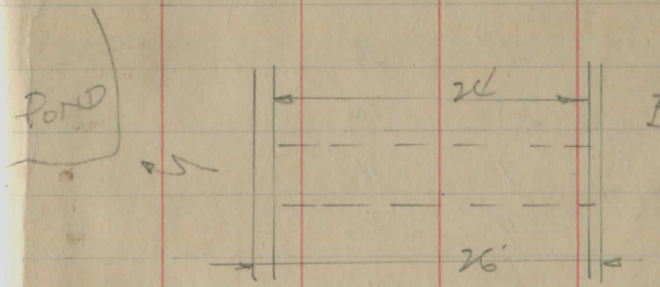
± 125'

1178.7

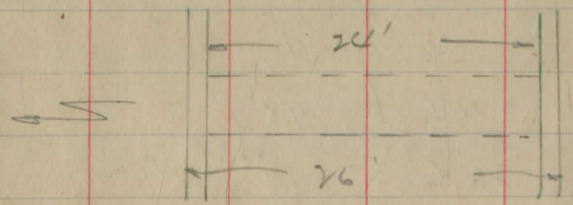


24" x ± 19" Conc box

± 500' W of Pugsley



30" x 24" conc box ± 300 E of Manaks



30" x 24" x 26' Conc. box culvt

Excellent cond.

50' E of Davidson drive

7-3-52

Music St Stks

	± edge metal N & S	± edge metal
+75.52 I.F.		
26	9'	10'
24	9'	9'
22	8	10
20 +34.75		
20	9'	9'
18	7.5	10
16	9	11
14	8	10
12+0	10	11
10+0	10	10
8 +57.05		
8+0	12.5	9
6+0	12	9
4+0	10.5	7.5'
2+0	10.5'	10'
1+0	11'	10'
0+0	& 306	

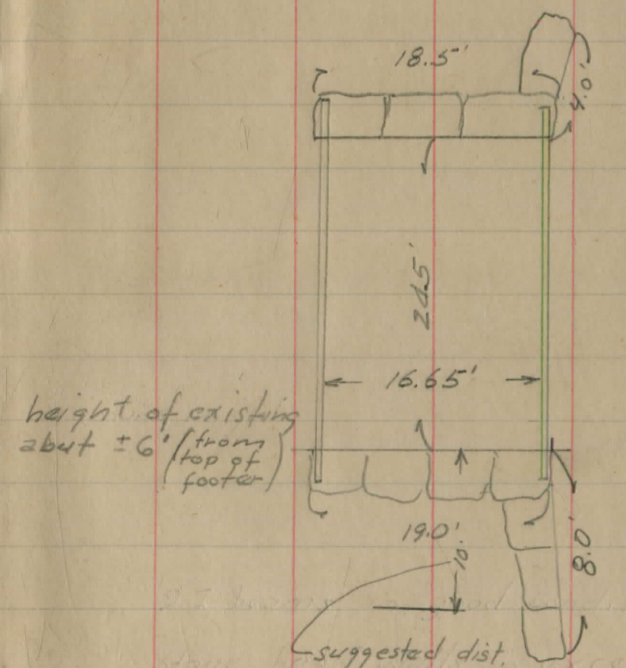
(7-7-52)

	N & S	
60	9	11
58	9	10
56	9	9
54	6	10
52	5	11
+64.13 Spk 42° Plunk from West Wheelstone		
50	5	10
48	7.5	9.5
46	8	10
44	10	8
42	10	6
40	9	7
38	6'	10'
36	7	9
+70.60 I.F.		
34	6'	10'
32	8	10
30	9	10
28	9	9

	N	S
96	9	6
94	9	6
92	8	7
90	8	7
+62.10 I. Bolt (Chas Ferris)		
88	8	7
86	8	9
84	8	9
82	8	10
80	8	8
78	9	8
76	10	8
74	9'	8'
72	10'	8'
70	6.5	11
+85.8 I.P.		
68	1.5'	15'
66	9	9
64	8	10
62	9	12

5'10" = 1 1+0.

	N	S	
108	9	5	
+121.66 Bolt			
106	9	5	
104	10	6	
102	10	5	Culvert
100	11	9	
98	9	5	



existing abut. in good condition

10/21/53 → Z

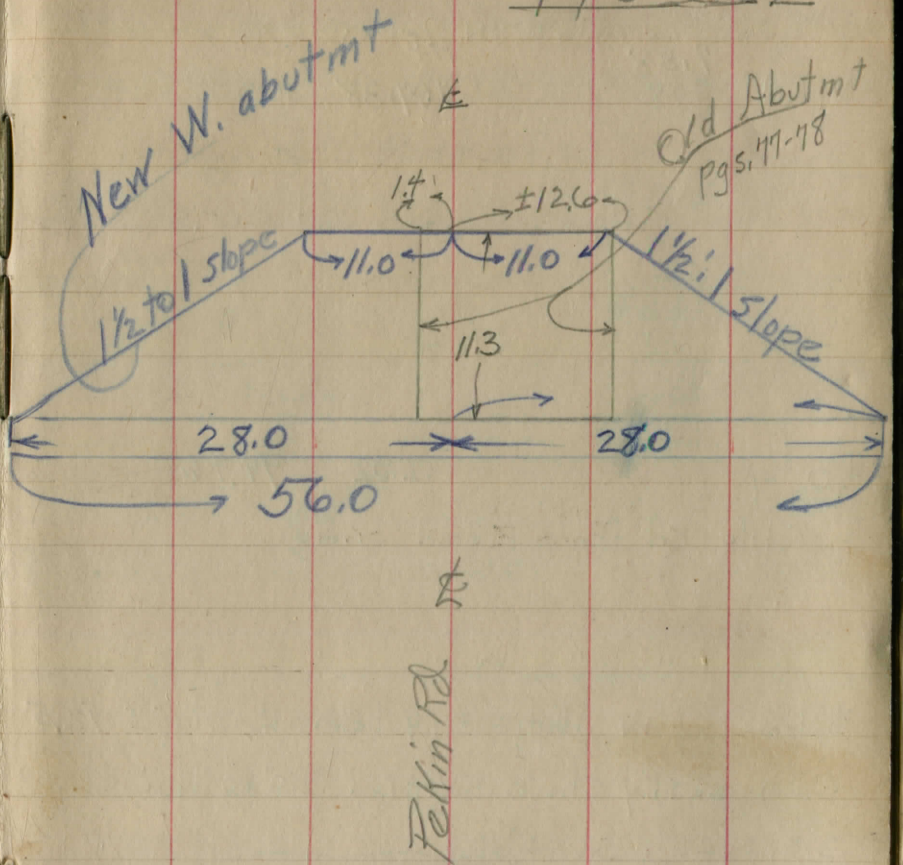
SE ¼ truss stone split

NE ¼ " " shoved NE

" " " plate at outer edge of stone seat

SW " " " even with outer edge stone seat

NW " " " 5" in



10-16-53

CHAGRIN HI RIVER

7.38

BM set 9.38 107.38 100.00

bridge seats at cor.s

" Floor

H_2O top 12.92 94.46

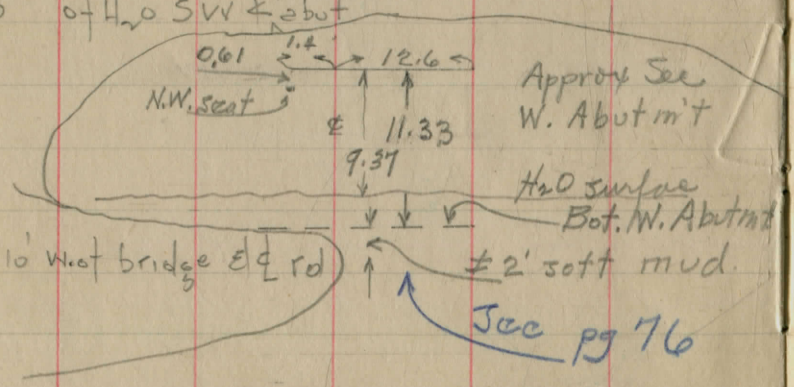
profile rd from E end bridge

" " " W " "

bottom of W abut. = ± 1.9 below H_2O top ≐ 92.5

Can easily shove sight rod 2.5' in blue clay

2.3 of H_2O S W ℄ W abut



½ mi. W. of Chill. Rd 77

BRIDGE ON PEKIN RD.

Spk NE root 10" Elm 10' SE of SE ∠ bridge & 10' West of 34" sycamore

	NW	NE	SW	SE
E =	3.22	3.17	2.88	3.29
Rod =	4.16	4.21	4.50	4.09

E = 3.83 4.04

3.55 3.34

W end E end

7.7 8.2 7.0

100' E 200' E 300' E

0.3

90' W

underneath footer

0.9' of H_2O 12.4 rod

30' S of ℄ on line W abut 10' W of ←

9.1

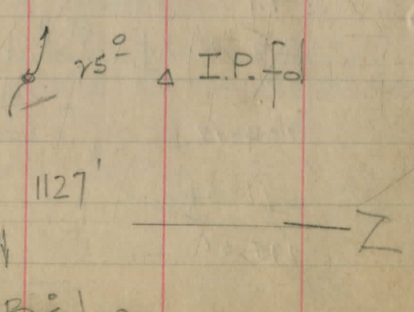
25' N of ℄ on W abut line

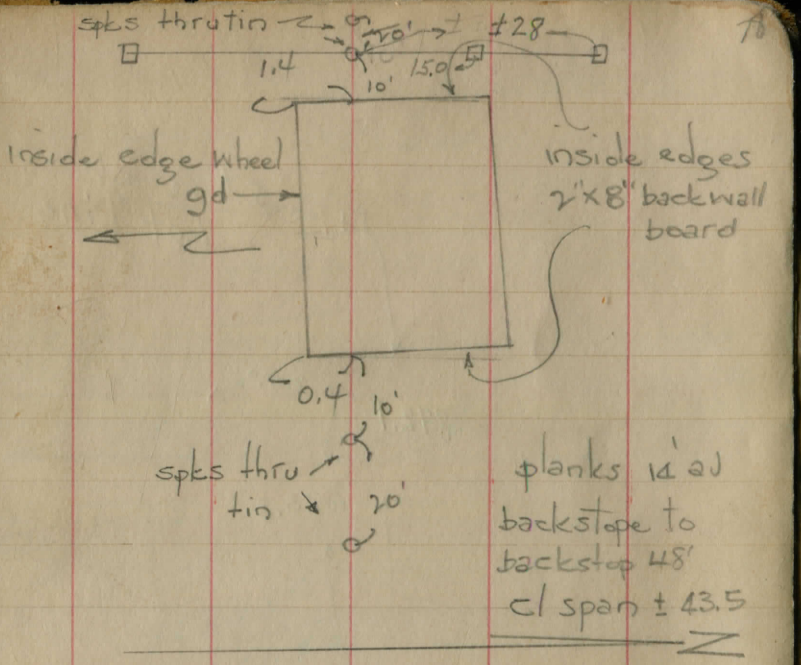
103-17	155'	3' W of W edge R rock
92-37	216'	BENDS due N-S E. EDGE RIVER
295-56	178'	W edge River

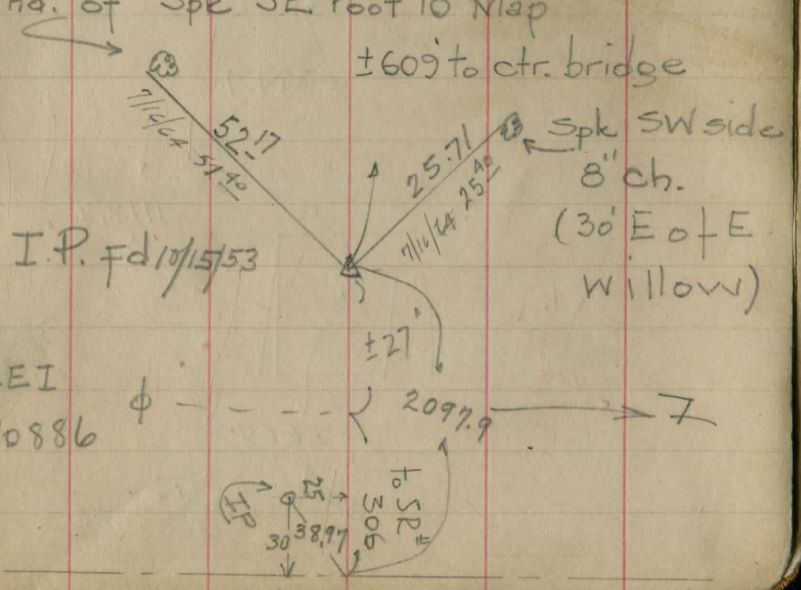
#144 Sec. B

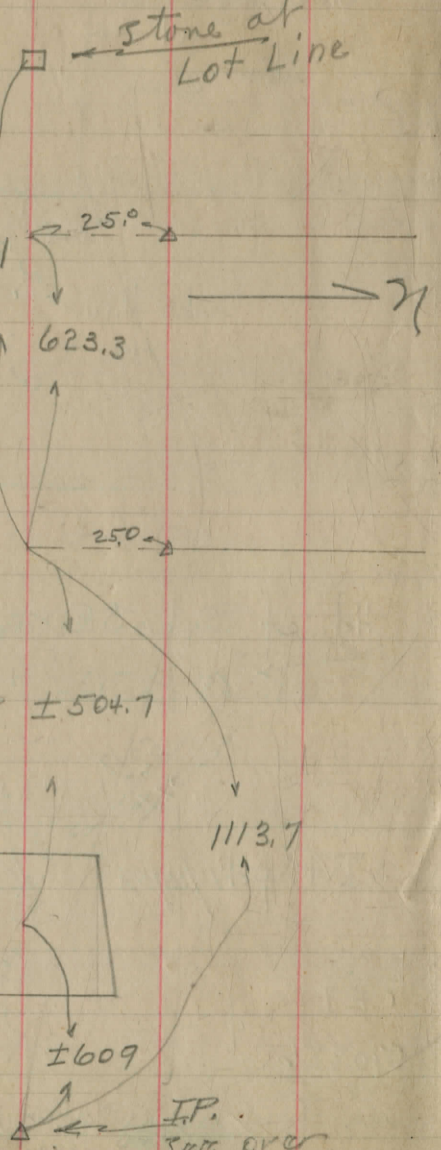
DEKIN RD & CHAGRIN RIVER BRIDGE

10-15-53









872.1
623.3
248.8

137.9
62.1
200.0

112.2
87.8
200.0

$\text{Tan}\frac{A-B}{2} = \text{Tan}\frac{A+B}{2}\left(\frac{a-b}{a+b}\right)$

$\text{Tan}\,21°46'\left(\frac{558.30-178.46}{558.30+178.46}\right)$

558.30
178.46
379.84
73676

379.84
.39 73
113952
341856
341856
13952
151.67012
147352
431811
368380
634312
589408
449040

$\frac{a}{b} = \frac{11-38}{21-46}$

B = 33-24
A = 10-08

68878
558.3
206634
551024
344390
344390

c = sin C / sin B

17847
55048
142768
71384
89230
89230
98278608

55048 | 38454587.4 | 698.56
330288
542578
495432
471467
440384
310834
275240
355940

m
1716.63
W/4 Spk

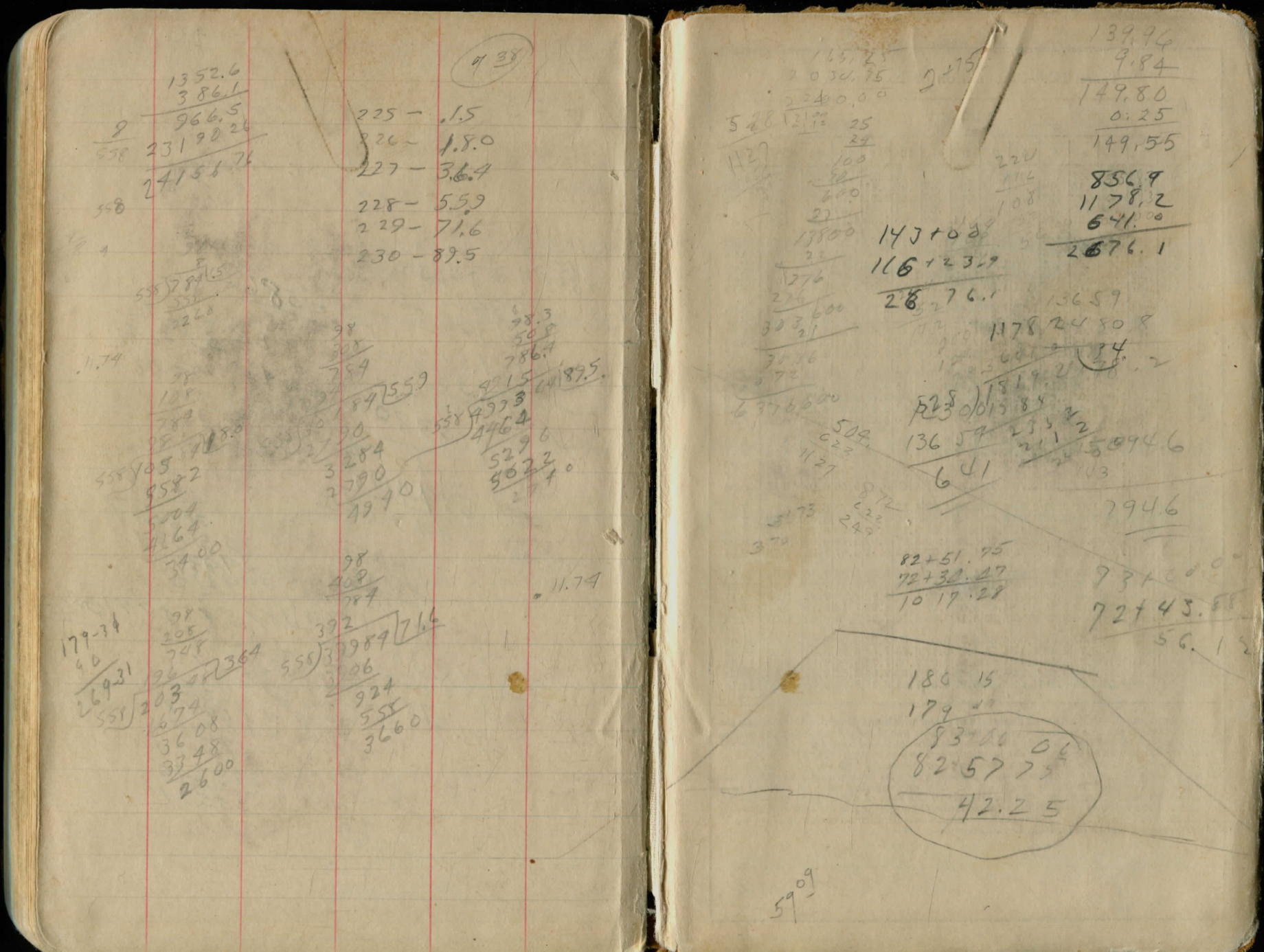


Table IX.—Calculation of Earthwork.

Width	Height 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w =16.2 and h =5.3, cu. yds. =1.48+.028+.089 =1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) =h, and ½ the roadbed =w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

Distances from Center of Roadway for Cross-Sectioning.

Roadway 16 feet wide. Side Slopes 1 on 1½.

0	8.0	8.2	8.4	8.6	8.8	8.9	9.0	9.2	9.4	9.6	0
1	9.5	9.7	9.9	10.0	10.2	10.3	10.4	10.5	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.0	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.