467

K & E

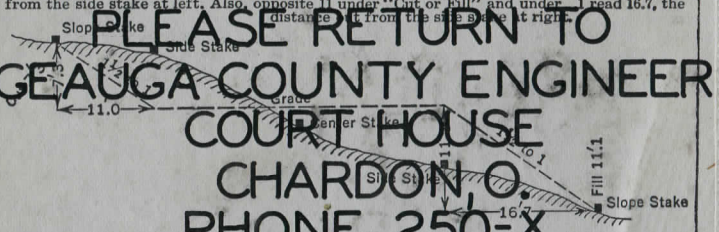
FIELD BOOK

F 360

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



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

Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

KEUFFEL & ESSER CO., N. Y.

For Curve Tables see end of book.

Please return to
County Engineer
Court House
Chardon, Ohio

The paper in this book No. F360
is made of 100% high grade rag stock
with a WATER RESISTING surface sizing.

Sisson Rd Culvt
outlet drainage
1950 Pg 65-66

C.H. 26 Drainage Problems Pg 68 Morgan Rd
C.H. 40 " " Pg 68 Philips Rd
C.H. 42 Drainage problem Pg 69 Under Rd

"Delving at Judge's Gulch" by Pomeroy Pg 1 TH 97
" 70

County Line Rd proposed reloc. at Judds Gulch (prelim. levels) pg 70

Burrows Rd (#60-C) 1955 Pg 71-75
Culvert Elevins

Fairgrounds Bldg Location Pg 76
for fairway

BOOK 167

INDEX

BRIDGE AT

S. Abutment.

Span (abut. to abut) 33'
Ctr bridge seats ± 14" back
top deck to FL 23'
bottom bridge to FL 21'
Roadway 13.85'
Width S abut. top 17.00'
" " " bottom 23.00'
6 layers stone
depth (horiz.) of cor stones
2nd layer up : ± 3.5'
± 7" batter W side
± 7" face abut. (bottom) to rock overhang
approx. same E side
18" rock overhang to point of greatest recess of rock (± 2.5' up from rubble; 5' down from bottom tier. E side
22" rock overhang to point of greatest recess of rock ± 3.5' up from rubble
± 11.3 bottom of bot. stone W side to rubble (should hit solid footing at ± 12.8'

JUDGE'S GULCH

± 6.5 bottom of bot. stone E side to rubble (probably 9.5 to solid footing
8.1 middle same as above
Good footing at 8.5

6' Au. horiz bow (in at ctr) in bottom tier

11-30-43 Pom - E. Hall - J. Randles

12+58.60 — P.O.T R.R. spike set

CH. #40 PHILIPS ROAD THOMPSON

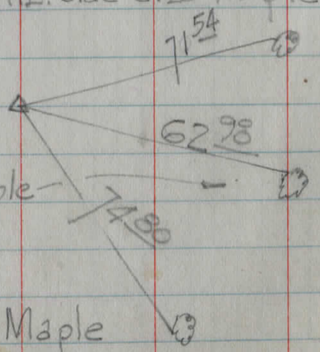
2+62.5 2½' x 3' Stone box O.K.
Plank flooring

Note: Stakes set 25' off ℄
" Chaining not accuate for private surveys.

Note Stakes set 30' off ℄ 1957

Spike N.E. side end Maple

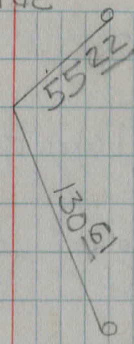
0+0 I.P. fd



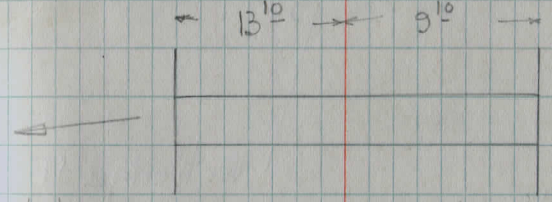
Vert. spike E root 28" Maple

Spike N root 30" Maple

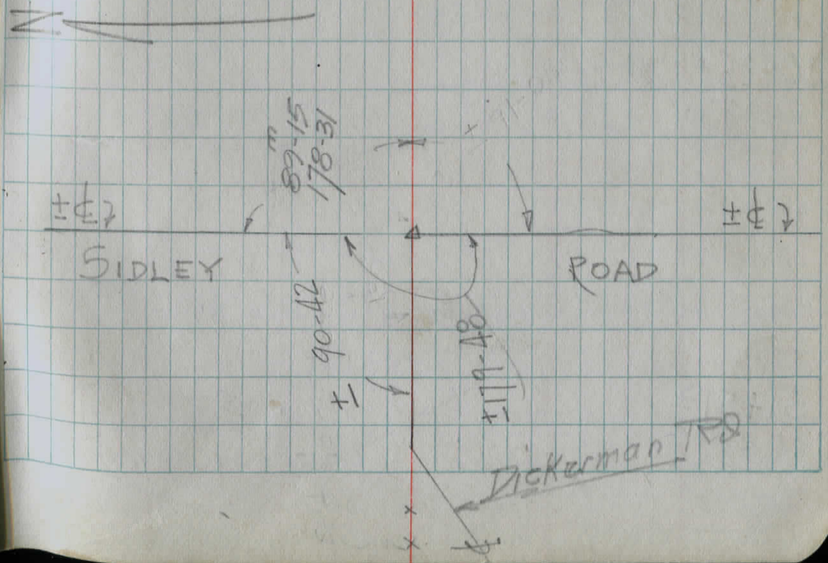
Spike S.W. side C.E.I. pole # 192 194

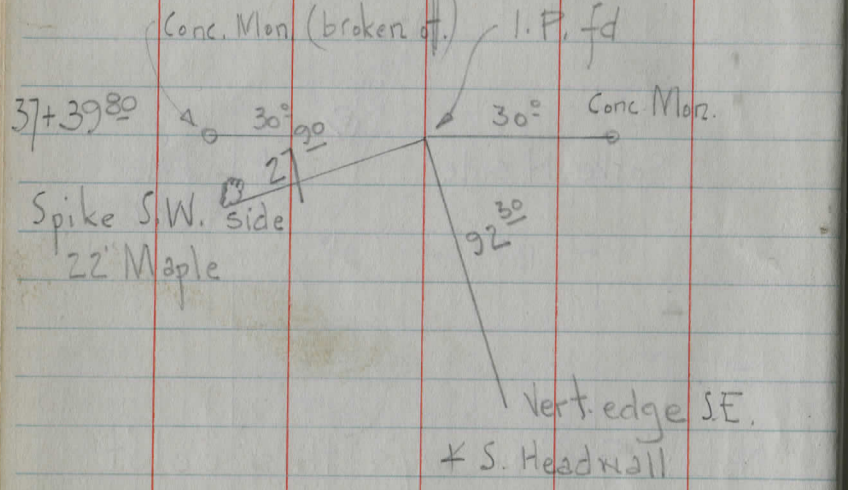


Spike N side C.E.I. pole # 566809



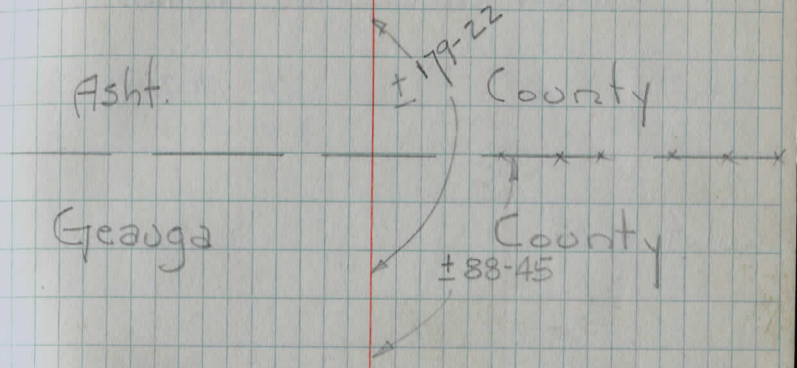
Note: Green says this culv't not large enough



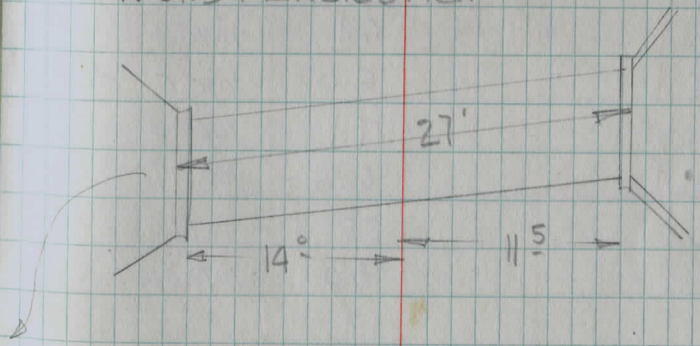


36+25.3

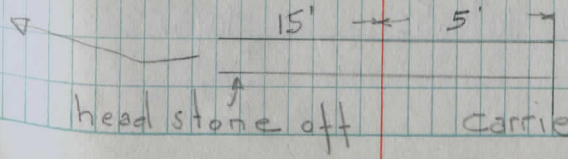
31+51.5



15' x 4'
Conc. Slab Top culvt. Stone side walls. Exc. cond.



2½' x 2' Stone Box Not too good



Head stone off Carries 90% road

H_2O

SECTIONS

T.P	10.54	1085.23	0.86	1074.69
3 to				1071.1
Culvt	+62.5			1070.5
2 to				1069.8
T.P.	5.40	1075.55	6.37	1070.15
1 to				1070.3
Inlet N col.			6.1	1070.4
outlet N Col.			6.0	1070.5
outlet Sculvt			7.1	1069.4
Inlet Sculvt			6.8	1069.7
100 W			2.5	1074.0
100' S			3.0	1073.52
100' N			1.7	
0 to			4.2	1072.3
B.M.	2.90	1076.52		1073.62

PHILIPS ROAD

NORTH

SOUTH

7.0 5.9 4.4 4.8 4.4 4.1 4.4 5.1 5.7 4.6 4.5 2.7 3.8
30 21 16 12 10 4 5 6 9 14 20 30
8

12.1 6.6 5.0 6.8 12.1
FL Hedl 2 Hedl FL
13' 9'

8.3 7.9 7.3 6.4 5.5 5.7 6.7 6.8 6.3 8.0 6.1 6.2
30 23 18 14 5 5 6 9 16 20 30
14 18

6.9 6.8 7.2 7.3 6.7 6.1 6.2 6.9 5.9 6.9 8.2 6.1 5.9
30 20 18 15.5 14 4 6 8 18 19 24 30
21

U.S.G.S. BM

12+00				1092.5
11+00				1092.0
10+00				1091.6
T.P.	7.12	1097.27	1.83	1090.15
9+00				1090.4
8+00				1088.3
7+15				1086.3
B.M.			6.13	1085.85
6+00				1083.9
T.P.	8.64	1091.98	1.89	1083.34
5+00				1081.2
4+00				1075.1
		1085.23		

5.0 5.0 5.8 4.8 6.0 5.1 5.3
25 13 11 9 11 30
30

5.6 6.2 5.7 5.3 6.3 5.6 6.1
25 12 10 9 12 30
30

G1 6.5 5.6 5.7 6.8 6.1
25 12 4 7 10
30 30

13 1.5 2.6 1.5 1.6 2.4 1.6 1.3
25 16 12 4 7 9 30
30

2.7 3.0 4.6 3.6 3.7 4.6 3.3 2.8 2.7
25 16 13 3 7 9 15 30
30

4.7 4.4 5.6 6.6 6.1 5.7 6.7 5.4 4.9 4.7
25 20 14 13 10 7 9 15 30
30

Spk S root 24" Maple 6+07 Lt 30'

7.7 8.3 9.5 8.9 8.1 9.0 8.0 7.2 7.0
25 13 12 11 7 9 13 30
30

2.9 2.7 3.6 5.2 4.6 4.0 4.9 2.9 2.1
25 20 14 12 11 8 11 30
30

6.0 5.7 10.9 10.4 10.1 10.8 11.4 4.9 5.3
25 17 10 8 6 8 17 30
30

20+0		76.2		1073.4
B.M.			1.77	1081.18 ✓
19+0		80.9		1078.9
T.P.	1.14	1082.95	12.37	1081.81
18+0		84.3		1082.8
17+0		86.7		1086.1
16+0		1089.1		1088.7
15+0		90.8		1090.8
T.P.	0.32	1094.18 ✓	3.41	1193.86 ✓
14+0				1092.5
13+0				1093.0
		1197.27 ✓		

6.7 6.4 9.7 8.7 9.0 9.5 10.3 5.3
0 7 12 17 21 26 29 39 55
-5

Spike NE root 15" Hemlock 19+25 Rt ± 25'

2.0 1.9 4.1 3.6 3.5 4.0 4.5 1.3 1.1 0.9
0 7 10 15 19 24 29 37 46 50
-5

9.9 10.1 11.7 11.1 11.0 11.4 11.9 9.9 9.7
0 8 11 17 21 26 31 35 44
-5

7.5 7.4 9.0 8.3 8.1 8.7 9.3 7.5
0 11 12 17 22 27 32 34 55
-5

5.1 5.4 6.3 5.7 5.5 5.9 6.6 5.3 5.2
0 11 +8 18 22 28 32 34 44 55
-5 13

3.4 3.6 4.4 3.8 3.4 4.1 4.6 3.7 3.7
0 12 14 18 23 30 33 34 46 50
-5

Stk 14+0 Qoit 12-1-43

4.6 4.9 5.7 4.8 6.0 5.3 5.6
25 13 11 8 10 30
30

4.2 4.4 5.0 4.3 5.4 4.8 4.9
25 13 11 9 11 30
30

BM			4.50	1057.35 ✓
28+0		56.5		1057.4
+85				53.0
27+0		57.9		1057.6
26+0		59.4		1059.0
T.P	1.90	1061.85	10.65	1059.95
25		60.5		1060.9
24				
24		62.3		1062.5
23		64.5		1061.9
22+0		66.8		1066.9
T.P.	0.44	1070.60	12.79	1070.16
21+0		69.8		1069.4
		1082.95 ✓		

Spike S.E. root 26" Elm 28+10 Lt ± 70'

5.3	5.1	4.6	4.4		5.5	6.8	5.0	5.4
0								
-5	9	16	20		29	32	37	55

± 30' 68 File 7

3.9	4.5	3.6	3.3		4.2	5.4	3.7	4.2
0								
-5	5	13	20		27	31	34	44

2.4	2.6	2.1	1.9		2.8	4.1	2.5	
0								
-5	9	13	20		27	31	33	
7							55	

10.1	10.1	9.3	8.9	9.7	11.4		9.8	
0								
-5	5	12	20	27	32	10.2	34	
							55	

34 F.L. Field file

8.3	8.1	7.4	7.3	8.1	10.3	8.8	8.3	
0								
-5	9	14	19	27	32	34	45	
							55	

6.1	5.5	6.3	5.6	5.4	5.7	6.6	5.8	6.3
0								
-5	8	10	16	19	25	30	34	44
								55

3.8	3.5	4.3	3.4	3.1	3.7	4.6	3.8	3.6
0								
-5	9	11	16	20	26	30	33	43
								55

13.1	12.8	13.8	13.2	12.9	13.5	14.2	13.0	12.7	
0									
-5	9	11	16	21	26	30	34	44	
									55

36		52.6		1054.2
T.P.	2.56	1058.96	3.00	1056.40
35		53.7		1054.2
34		55.0		1054.7
33		54.4		1054.5
32		54.0		1054.5
+51 5				1054.8
31+0		54.5		1055.2
T.P.	4.20	1059.40	6.65	1055.20
30+0		54.8		1055.1
29+0		56.3		1056.3
		1061.85		

52.8

6.4 6.2 4.8 5.5 7.7 6.1

0 +5 11 25 36 41 47 55

5.7 7.3 5.9 5.2 5.8 7.5 5.7

0 8 12 17 26 36 41 48 55

4.4 4.6 6.0 4.7 6.6 4.6

0 -5 8 11 24 38 44 Level

5.0 5.7 4.9 6.2 4.9 4.7

0 -5 13 24 35 41 55

5.4 5.3 4.9 5.7 5.2 5.0

0 -5 13 22 30 36 55

50.1 50.8 51.6 51.7

8.8 8.1 7.3 4.6 7.7

300 200 F.L. FL

4.9 4.2 5.1 6.6 5.3 5.0

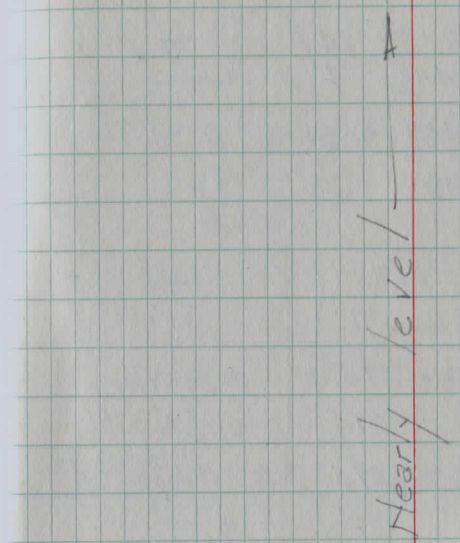
0 11 21 30 33 37 46 55

7.0 6.7 6.2 6.1 6.9 8.7 7.2

0 -5 10 16 27 30 36 38 55

6.4 6.7 5.7 5.5 6.4 8.2 6.4

0 -5 8 15 21 30 32 38 55



Spike S.E. root 24" Elm 36+40 Lt 25'

5.5	5.7	6.4	5.2	4.8	5.6	6.3	5.0	
0	8	12	16	25	35	37	42	55
8								

6.0		6.7	5.6	4.9	6.5		5.4	
0								
-5	12	12	15	26	38		41	55
6								
	9.1					8.4		
	FL					FL		1050.6

B.M.		5.77	1053.19 ✓	
Co. line	53.5		1054.2	
37	53.0		1054.1	
	1058.96 ✓			

12-7-43
Porr.
Hall
Randles

TOPOG

+42 24 15" Map.
18' +28
3+17 25' 18" Map
2+93 24.5 24" Map
+93 9'
+88 27' 24" Map.
+80 .28' ≠

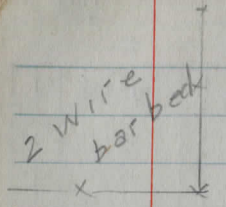
22' +71 Light brush
21.5' +71
1+62 29.5' 24" Map.
+86 29.5' 12" Map. N.G
+60 29.5 15" Map. N.G.
0+27 28' ≠

0+07 22½ 2½' x 1½' Stone Box 31

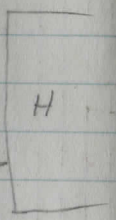
11

9+58 28 ≠
7+82 28' ≠

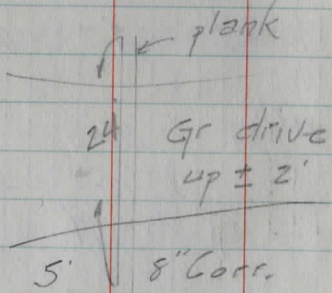
Gt. Drive
12" x 16" Corr.
12'
+55
+52 28' ≠
≠ 21 +51
24" Map
29' 6+06
24" W.Ch. 25' +60
5+01 28' ≠
19' +85
Loc. brush
25' 4+12
+70 14
24 +66
+61 28' ≠



23+52 23' ≠
23+46 ditch
+90 23' ≠
19' 21+18
+59 21' 10" Wal
+46 21' 15" Wal.
20+06 24' ≠



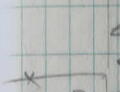
19+25 22' ⊖



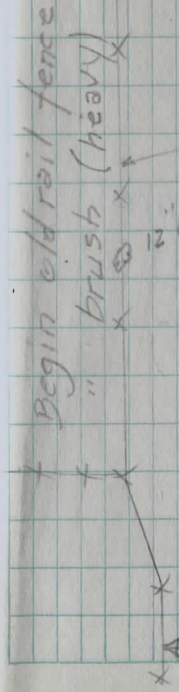
18+33
16+54
14+82

24' ≠
26' ±
26' ≠
13+35 ± P.L.
13+06 28' ≠
11+27 28' ≠

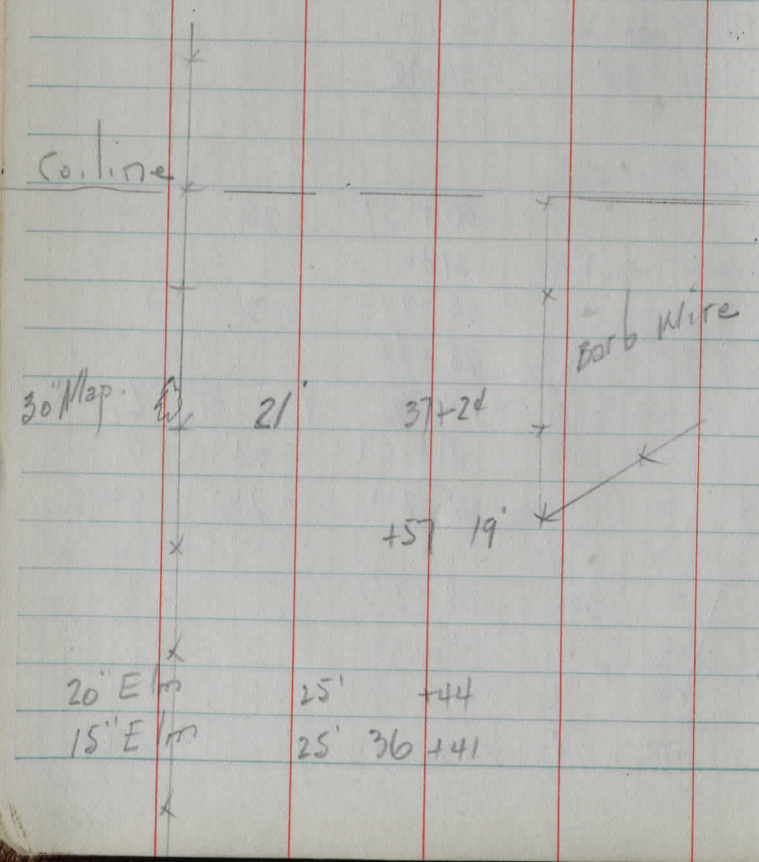
24" Elm 29' 36+07
35+84 26' ≠
⊖ 30" Elm 23' +69
6' D. boulder 16' +68
34+06 25' ≠



+94
+32 25' ≠
10" Ash +21
10" Thick 32' 32+12
12" Ash 32' 31+95



30+57 25' ≠
29+0
28+90 23' ≠
28+45
+78 9' 5" T or tile
27+07 23' ≠
25+24 ± 23' ≠
24+23
24+03 9' outlet
4" field tile


Co. line
Barb Wire
30" Map
21'
37+24
+57 19'
20" Elm
25'
+44
15" Elm
25' 36
+41

12-8-43
Pom Hall Randles

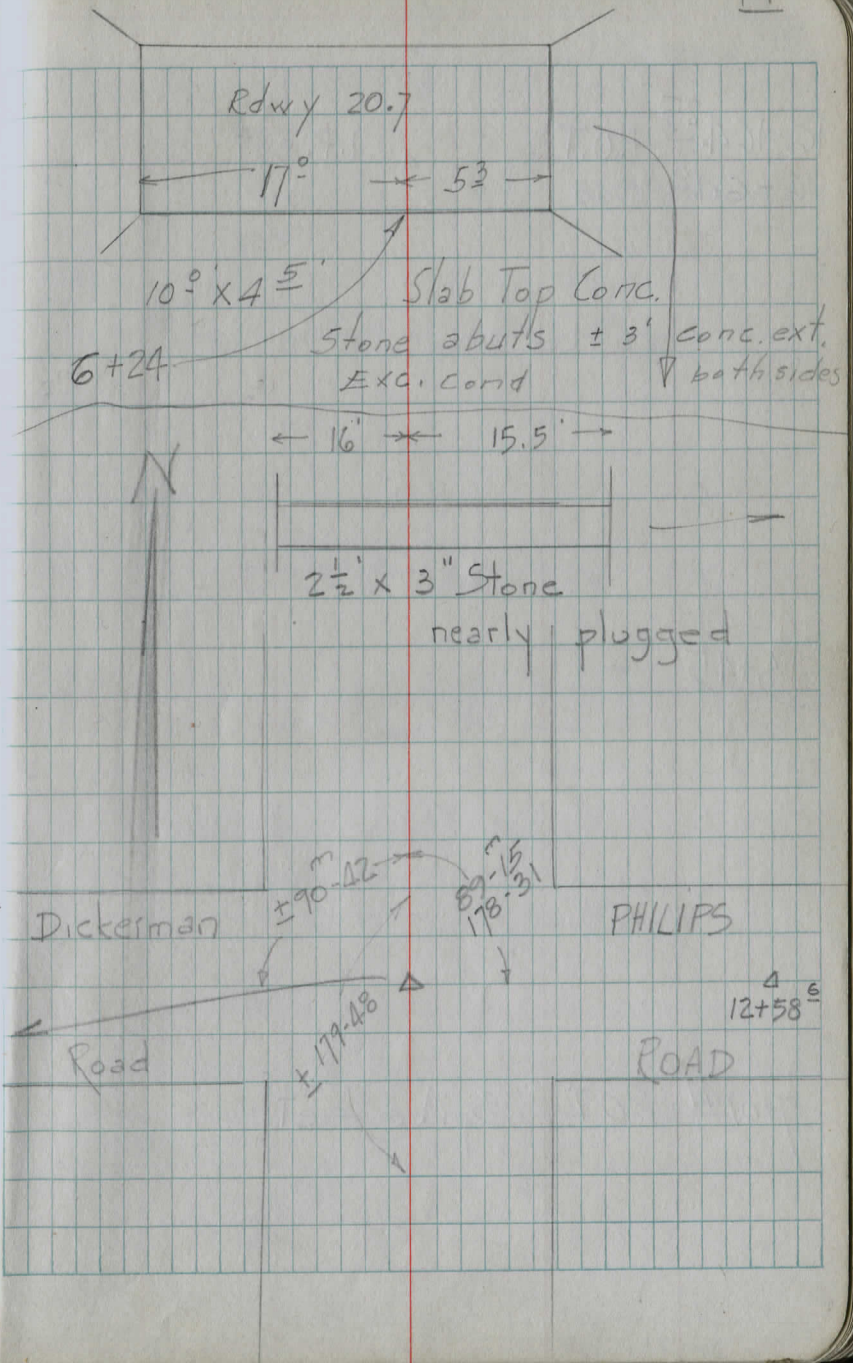
SIDLEY ROAD

6+24

0+26.5

0+0 ▲ I.P. fd See ref pg 3 this book

Stakes set 25' Lt
" " 30' " 1948



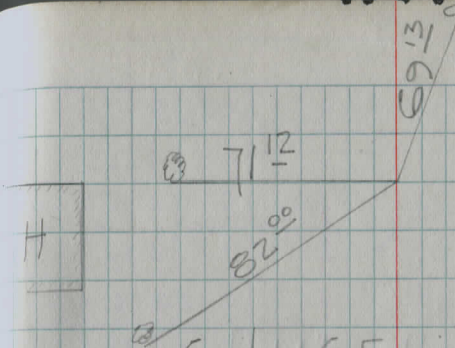
16+64.25 P.O.T
16+64.9 1948

4 I.P. set

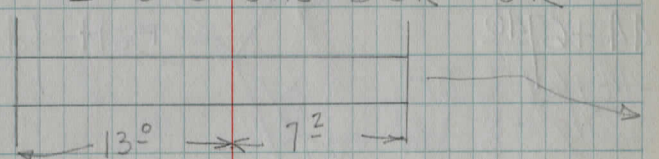
13+45

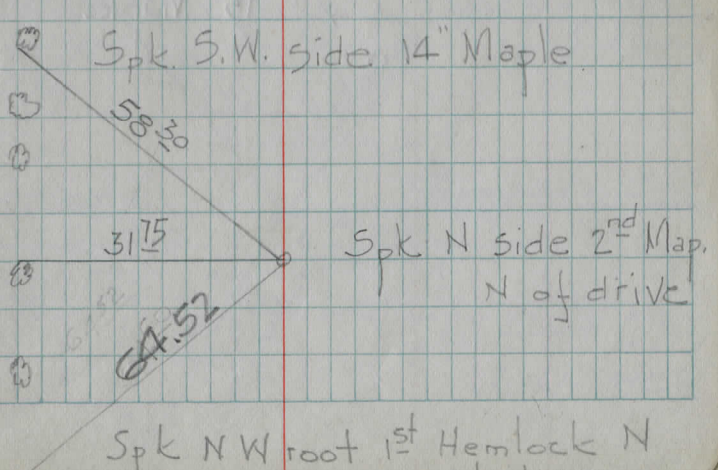
9+01.44 POT Spike set

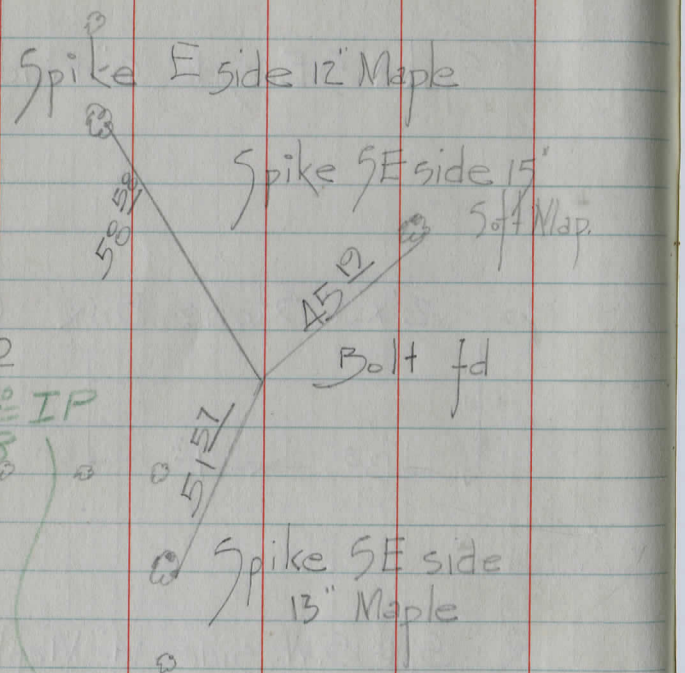
Spk SE side
CEI #572834



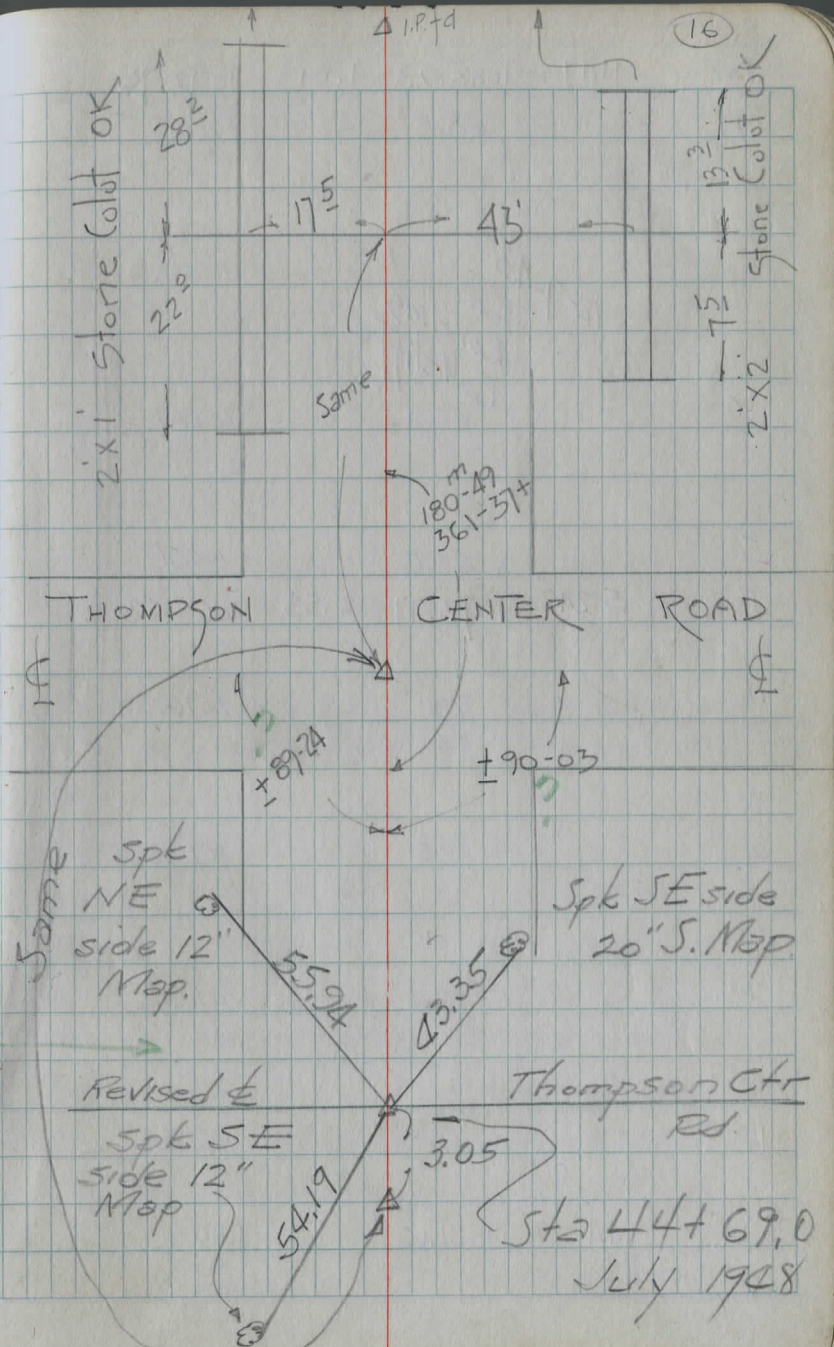
2'x3' Stone Box OK







44+67.40
44+67.90 = IP
July '48



T.P.	11.17	1083.93	1.01	1072.76
7		68.8		1070.7
+24	12-9-43 Pom Randles Radcliffe			1068.9
6		66.3		1068.1
5		68.6		1068.1
T.P.	5.24	1073.77	12.53	1068.53
4		71.8		1070.0
3		79.3		1075.8
2		77.4		1076.4
1				1074.8
B.M.	7.44	1081.06		1073.62

SECTIONS SIDLEY ROAD (17)

5.0	4.4	3.9	4.2	3.5	3.1	3.5	4.3	4.7	5.0
-5	5	10	13	18	23	29	34	42	55

10.2 FL | 3.8 Hdwl 17 | (4.9 E) | 3.6 Hdwl 5.5 | 10.3 FL.

7.5	8.4	6.9	6.2	(5.7	6.3	7.3	5.3	7.7	9.5
-5	6	7	10	14	22)	29	32	41	47	50 CH

5.2	5.6	6.9	6.0	5.7	6.1	7.0	10.4	8.7
-5	7	11	17	22	30	35	39 ch.	55

9.3	10.1	12.2	11.5	(11.1	11.5	12.2	10.9	10.4
-5	8	12	17	23)	29	34	38	55

1.8	3.4	5.9	5.5	(5.3	5.9	4.7	3.8
-5	8	12	16	22)	30	35	55

3.7	4.0	5.7	4.9	(4.7	5.9	5.3	6.5
-5	6	12	18	23)	33	35	55

3.7	3.8	5.8	7.8	6.3	7.6	7.0	7.3
30	22	18.5	12		8.5	14	30

BM.			4.73	1069.00 ✓
14		67.6		1068.8
+45				1069.1
13		69.3		1069.3
12		70.3		1070.4
T.P.	2.64	1073.73 ✓	12.84	1071.09
11		75.8		1072.9
10		80.1		1077.6
9		80.3		1080.2
8		80.9		1076.3
		1083.93 ✓		

E Foot 22" Elm 14+05 Lt 35'

6.1 5.5 (4.9) 5.6 5.6
-5 7 21 30 55
12

8.7 3.7 (4.6) 4.2 8.6 8.6 10.1
FL Hdwl 13 Hdwl/FL 100 200
7

4.4 4.5 5.8 4.9 (4.4) 5.0 6.1 6.5 6.9
-5 5 9 15 22 29 33 40 55

3.4 2.7 4.3 3.6 (3.3) 3.8 4.3 5.0 5.5
-5 7 12 18 22 28 32 35 55

8.1 9.6 11.8 11.2 (11.0) 12.0 10.7
-5 6 12 18 23 32 39
55

3.8 4.5 4.4 6.0 7.2 6.5 (6.3) 7.2 5.9
-5 4 8 11 14 19 23 31 35
55

3.6 3.8 4.4 (3.7) 4.2 4.9 5.1
-5 8 11 23 28 33 55
38

3.0 4.9 8.3 7.9 (7.6) 7.9 6.4 4.9
-5 11 16 21 28 35 38 42
55

23		72.2		1072.3
22		74.1		1073.8
21		75.2		1075.1
T.P.	2.24	1077.08	5.37	1074.84
20		74.8		1074.8
19		74.9		1074.8
18		75.3		1075.4
17		75.4		1075.2
16		76.9		1075.8
T.P.	6.98	1080.21	0.50	1073.23
15		73.7		1071.3
		1073.73		

4.9 5.9 5.0 (4.8) 5.1 5.7 5.1
-5 6 8 13 (20) 25 28 32 55

3.0 3.5 4.5 (3.3) 4.1 3.2
-5 5 8 (20) 28 36 55

1.9 2.1 3.4 2.4 (2.0) 2.4 3.0 2.3
-5 6 9 15 (19) 24 28 34 55

5.4 5.5 6.2 5.6 (5.4) 6.2 6.3
-5 6 10 15 (22) 29 35 50

5.3 6.2 5.4 5.0 (5.4) 6.0 5.6
-5 5 8 14 20 (25) 30 39 55

4.9 4.8 6.1 (4.8) 5.2 5.8 5.3 5.4
-5 5 8 (20) 25 29 31 55

4.8 4.8 6.1 5.3 (5.0) 5.3 5.7 5.2
-5 6 10 16 (21) 26 31 36 55

4.2 4.6 7.2 4.8 (4.4) 4.7 5.5 4.3
-5 6 9 12 (20) 27 32 37 55

0.0 1.0 2.2 3.7 2.8 (2.4) 3.2 1.4 +0.2 +0.5 +1.0
-5 0 6 10 15 (20) 29 31 34 40 55

T.P.	3.15	1063.94	10.27	1060.79
31		62.4		1061.5
30		64.0		1062.9
29		65.6		1064.4
28		67.3		1066.0
27		68.3		1067.1
	0.86	1071.08	6.86	1070.22
26		69.4		1068.5
T.P.				
25		70.6		1069.4
24		71.5		1071.3
		1077.08		

8.7 8.5 10.5 9.8 9.6 9.8 10.4 9.1
-5 8 12 13 17 23 27 31 33 55

7.1 7.0 8.4 9.4 8.6 8.2 8.7 9.1 7.9 8.5
-5 7 9 12 13 17 23 28 32 34 40 55

5.5 5.9 8.0 7.0 6.7 7.1 7.1 6.4 6.6
-5 6 11.5 12.5 18 23 28 32 33.5 55

3.8 4.2 6.7 5.4 5.1 6.1 5.1 5.3
-5 5 9 17 23 31 33 55

2.8 3.5 5.3 4.2 4.0 5.1 4.0 4.8
-5 7 11 17 27 31 38 55

Stake 26+0

7.7 8.8 10.1 9.0 8.6 8.8 9.1 9.8
-5 5 9 15 21 24 32 46 55

6.5 7.2 8.8 7.8 7.7 8.7 8.4 9.2
-5 4 8 15 23 29 35 55

5.6 6.9 6.1 5.8 6.7 6.5
-5 6 13 20 28 36 55

40		49.8		1049.0
39		51.3		1050.4
38		53.2		1052.6
T.P.	1.51	1054.96	10.49	1053.45
37		54.5		1053.8
36		56.1		1055.6
35		57.9		1057.2
34		59.0		1058.3
B.M.			1.90	1062.04
33		60.2		1059.4
32		61.4		1060.5
		1063.94		

5.2 5.4 7.5 6.8 6.3 (6.0) 6.4 7.0 7.1 5.3 4.5 5.1 4.5
-5 8 11 12 14 18 (23) 28 30 33 35 39 43 55

3.7 4.0 4.9 5.9 5.1 (4.6) 5.0 5.6 3.9 3.2
-5 8 10 12 13 15 (22) 27 31 34 38 55

1.8 2.6 2.9 4.2 2.9 (2.4) 2.7 3.4 1.3
-5 6 10 12 13 15 (21) 27 31 34 55

9.4 9.1 10.3 11.4 10.4 (10.1) 10.5 11.0 8.4
-5 6 10 12 13 18 (23) 27 31 34 55

7.8 7.4 8.7 10.0 8.7 (8.3) 8.6 9.4 7.3 7.5
-5 6 9 12 13 17 (22) 27 31 33 55

6.0 5.7 6.9 8.4 7.2 (6.7) 7.0 7.4 5.5 5.8 5.9
-5 7 9 11 12 17 (22) 27 31 33 37 55

4.9 4.4 6.1 6.8 5.9 (5.6) 5.9 6.4 4.7 5.0
-5 7 10 12 13 18 (23) 27 31 33 55

Spike E root 40' Soft Maple 33+50 Pt 25'

3.7 3.5 4.4 5.6 4.8 (4.5) 4.8 5.2 3.9 4.0
-5 6 9 13 14 17 (23) 28 32 34 55

2.5 4.4 3.7 (3.4) 3.8 4.1 2.7 3.0
-5 8 11 12 17 (24) 29 32 34 55

			7.50	1035.64
T.P.	3.54	1043.14	9.50	1039.60
BM			4.99	1044.11
		out FL E	8.4	1040.7
		in FL E	8.4	1040.7
		out FL W	8.2	1040.9
		in FL W	7.8	1041.3
		100 W	6.7	1042.4
		100 E	4.8	1044.3
+67.40			5.0	1044.1
44		43.7		1043.9
43		45.0		1044.8
	3.29	1049.10	9.15	1045.81
42		46.6		1046.2
T.P.				
41		47.9		1047.6
		1054.96		

Spike SE root 15' Maple ± 45' NW of intersection

5.4	7.0	6.1	5.5		5.2	5.6	6.6	5.9	5.6	5.3	
-5	10	15	20		27	33	38	44	47	55	
5	14										
4.1	4.6	6.0	5.3	4.6	4.3	4.7	5.5	4.8	4.2		
-5	8	11	14	19	26	31	36	38	42	55	
		12									
8.4	8.8	9.5	10.4	9.6	9.0	8.8	9.5	10.1	8.7	8.5	8.1
-5	8	11	13	15	20	35	31	35	39	45	55
			14			29		36			
7.1	7.4	8.3	9.0	8.6	7.8	7.4	8.0	8.8	6.6	6.8	6.1
-5	7	10	12	13	18	23	29	34	37	44	55
			13					35			

23' +38
+35 22' +
+33 23'
‡ 30 7+12
6+80 26.5' ‡
+34
+20 27.5'
+16 21.5'
creek
5+0
+86 8" Ch.
+57 8" Ap
4+30 24.5' 8" Ap
+26 28.5' ‡
19.5' +19
+15
22' 3+0 H
+87 ± 40'
+80 8' M.B
2+45 grad. down
20' +70
1+49 28' ‡
18.5' 0+33
15.5 15.5'
0+26
± 3'x 6" Stone (pluged

TOPO SIDLEY ROAD

grad. up 18' 15+90.
-20" Elm 15+58 25.5' ‡
28' 14+98
+92 12'
13+82 25.5' ‡
36' 13+01
18" W.Ch 30' 12+39
12+05 ‡
End Map 36' 11+95
11+25 14'
32' 11+0
row map. 12"-15"
Beg 31' 10+27 ‡
+56 26.5' ‡
38' +50
grad up +45
8+35
± 100' +85
12-10-43
Pom Randles Radcliffe
37' 7+49
8-15" Hem.

P.L. End tree row
woven wire
fence on trees

42+60

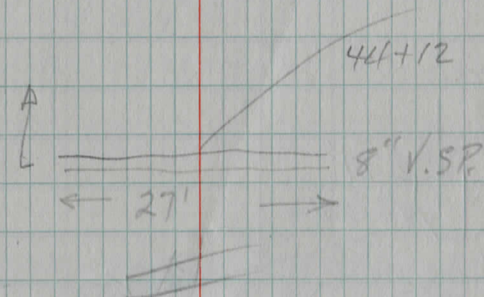
40+80 17.5' +

1 wire
11' + Elec
23' P.L.

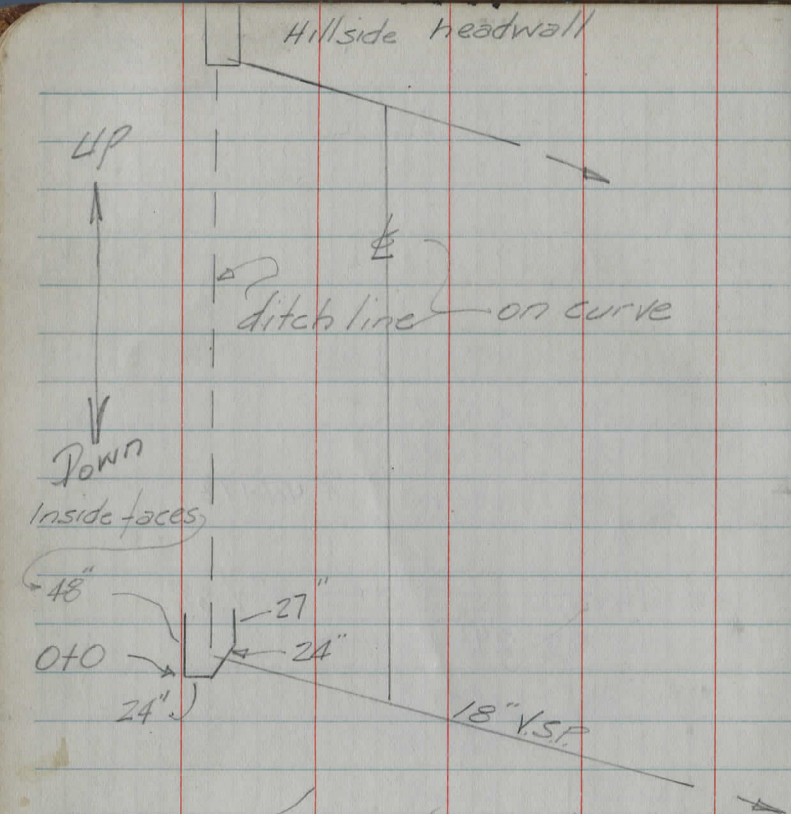
Beg tree row 28.5' 37+80
6" to 12"

36+40 11' +
33+76 9.5' +
33+52 ✓ 15' E 36" Map

13' to 25'
33+25 to +55 rock pile
31+30 16' +
28+60 +
26+12 down 1.5 @ +50'
26+02 21' +
C E 1 & Tel to here
24+27 22' + &
P.L. ? 22+95
± 125' +53 22' +
21+79 +
19+05 +
17+30 24' +
H
± 100' 16+41



+55 27' +
8" Map 27 +45
14" Map 27 44+25
13" Map 27 44+07
Beg ornamental hedge 20' 43+14
43+14 19' +
14" Map 27' 43+12



0-30 Double stones along edge of drive

Note: Alignment for − (minus) sta. = hillside hdwl to ± 8' E big Map

0-77 Dry Boulder stone Ret. wall (W side Dr.)

large flat stonewalk

℄ E wall horse passage

dry boulder ret wall

8+73 12" Enc. V.S.P. Outlet needs opening ± 50' S

Shows evidence of consid. H_2O surch.

12" dr. pipe ± 40' up has surch.

CHARDON - MENTOR RD
STORM SEWER East Hill at Maple Rock School
6-44
Pom Meyer

175 End of regd tile = ± 25' E of creek

		HI		El.
BM Ass'd	13.11	113.11		100.00
0+20		✓		
1+0				
T.P.	13.20	125.46	0.85	112.26
1±77		✓		
1±82	Side	hill wash		Loc. inlet
2+0				
T.P.	12.15	136.53	1.08	124.38
3+0				
3+22		✓		
T.P.	12.82	148.28	1.07	135.46
4				
T.P.	12.31	159.9?	0.67	147.61
5				

HE ℄ Road side of x rd culvt

0+0

H S

11.96 12.90 13.27 12.61 11.95

H_2O High 5 5.5-6.5 7 10

109.11

0.85 4.0 0.25

Stk bot. ditch ℄

5.80 6.80 6.86 5.80

5.6 3 1.5 0

1±75

1.08 6.40 2.37

Sk ditch ℄

2.34 5.3 3.10

Stk ditch

2.8 4.0 4.16 4.0 2.81

3.0 2.1 1.3 0.5 0

4.19 7.8 5.53

Stk ditch ℄

149.8

6.85 10.1 8.17

Stk ditch ℄

BM		H.I.		1022.94
		159.9 ±		
5+80		✓		
T.P	13.20	172.3 ±	0.80	159.1 ±
6+0				
7+0				
7+50		✓		
8+0				
8+73			1.54	170.68
			3.43	
BM	4.97	176.08	1.21	171.11
			7.60	168.48
			10.3	165.78

Bottom SE ∠ board House 50' Lt

2.95 3.83 2.95
6.1 2.2 0
rounded

N. 45 ± 14.3 12.73
stk ditch ℄

stk 8.4 6.41
5.07 ditch ℄

4.93 6.4 6.3 6.4 4.93
0 1.7 2.1 2.8 4

1.56 4.6 2.49
stk ditch ℄

Surch. level
FL inlet
S.W ∠ S Hdwl
FL outlet
30' S

12" to ± 6+50
6+50 inlet

15" to 4+0
4+0 inlet

18" 4+0 to 0+0
inlet at 1+75

B.M. 0.29 100.00

3.15
8.7
± 16.3

0+0
F.L. inlet Dr.
± top stone ref. wall Hor W side
base " " "

8-1-44
Pomnard
Maynard
Meyers

T.H.#60 BURROWS RD.

LEVELS MONT.-THOMP.

B.M.	4.60	104.60 ✓		100.00	
73+66					101.0
74+0					100.2
T.P.	4.24	102.97 ✓	5.87	98.73	
75+0					97.87
T.P.	2.34	101.07 ✓		98.73	
76+0				5.9	95.87
77+0					92.47 7.0 / 30
78+0			℄ 12.2		88.87

TWP. LINE ROAD
WEST OF 528

N.W. & S headwall Culvt Sta 73+

N S

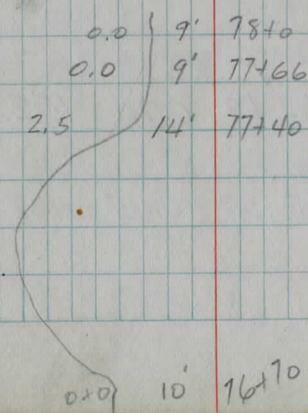
4.20 Hdwl | 4.0 6 | 3.6 ℄ | 3.8 7.5 | 6.0 16.8 | 4.60 Hdwl

9.5 30 | 8.4 19 25 | 7.4 11 | 5.0 6.5 | 4.4 ℄ | 3' ℄ | 4.4 9 | 4.9 13 | 6.6 16 | 7.1 25 | 5.9 30

12.8 30 | 11.3 22 | 11.1 17.5 | 6.2 5.5 | 5.5 3 | 5.1 ℄ | 4.7 6 ℄ | 4.7 15.6 | 5.1 18 | 4.3 21 | 1.8 25 | 0.9 30

14.5 30 | 14.3 22 | 13.3 17.5 | 6.8 6.5 | 5.9 4 | 5.2 ℄ | 5.0 6 ℄ | 5.1 14 | 6.1 17 | 5.1 20.5 | 2.7 24 | 2.1 30

6.3 24.5 | 6.3 16 | 8.1 9 12 | 9.7 7 | 8.7 4 | 8.6 ℄ | 8.3 4.5 | 8.4 12 | 9.1 15 | 5.7 21 | 5.4 30



78± 60: end of ravine

B.M.	8.43	108.43		100.00	
73					103.73
T.P.	12.09	120.10	0.42	108.01	
72					111.50
T.P.	12.24	131.76	0.58	119.52	
71+40	Rock in roady				
71+0					121.56
T.P.	7.10	138.33	0.53	131.23	
70+0					129.53
T.P.	12.61	143.84		131.23	
69+30	Rec. 12" pipe on skew Xroadcolvt				
69+0					138.44
T.P.	9.88	153.14	0.58	143.26	
68+40	apparent end of rock				
68+0					142.74
67+0					148.14
	10.21	162.45	0.90	152.24	
66+0					155.95
T.P.	2.90	165.30	0.05	162.40	
65+0					160.40

N

9.4 8.7 7.9 5.5 4.8 4.7
30 18 12.5 8.5 5 ℄

72+45 N Co Fo

1.5 0.7 10.1 8.4 8.6
38 30 9 5 ℄
35 10.5

+0.6 +0.1 1.1 6.9 11.1 10.0 10.2
35 30 18.5 11.5 8 5.5 ℄
Rock top

+0.3 0.7 9.5 8.6 8.8 8.7 8.6 11.5 8.7 5.9 6.8 7.6
30 19 9 6 ℄ 3 ℄ 8 9-12 12.5 17.5 25 30 Rock
Rock

+1.7 0.0 2.4 6.6 5.7 5.5 5.4
30 26 19 12 10.5 8 ℄
level 13 ℄

10.2 10.8 11.5 10.8 10.5 10.5 10.4 10.7 11.9 12.9 10.5 6.7
30 20.5 18 14 8 2 ℄ 3.5 8 10 17 30
14

9.1 7.7 6.0 6.4 5.3 5.0 5.1
30 25 16.5 12.5 8.5 ℄ 4.5

5.1 4.4 7.9 6.8 6.5 6.6 6.5 7.3 4.7 4.6
30 17 11.5 8 ℄ 3 5.5 8 11 30
℄

5.8 4.8 6.5 5.0 4.9
30 15 11.5 7 ℄
℄

S

4.5 4.7 5.8 7.3 8.0 8.9
3 ℄ 10 13.5 16 22.5 30

8.5 8.4 9.9 8.4 8.0 12.4
4 ℄ 10 15 17 22 30

10.1 10.2 12.1 9.4 7.3 6.9
3.5 ℄ 9 11 13 14.5 24 30
Rock top

5.4 6.0 6.8 5.7 5.5
5.5 10 14-16 20 30

10.2 10.4 10.7 11.9 12.9 10.5 6.7
3.5 8 10 14 17 30

5.9 +2.7 +2.1
8 23 30

5.0 5.8 3.9 2.6
5.5 8.5 10.5 30

					162.45
T.P.	4.35	166.75		162.40	
64+0					162.25
B.M.			3.34	163.4	
63+0			5.7 ℄		161.05
62+0			4.7 ℄		162.05

4.3
P.I.
℄

N

S

32

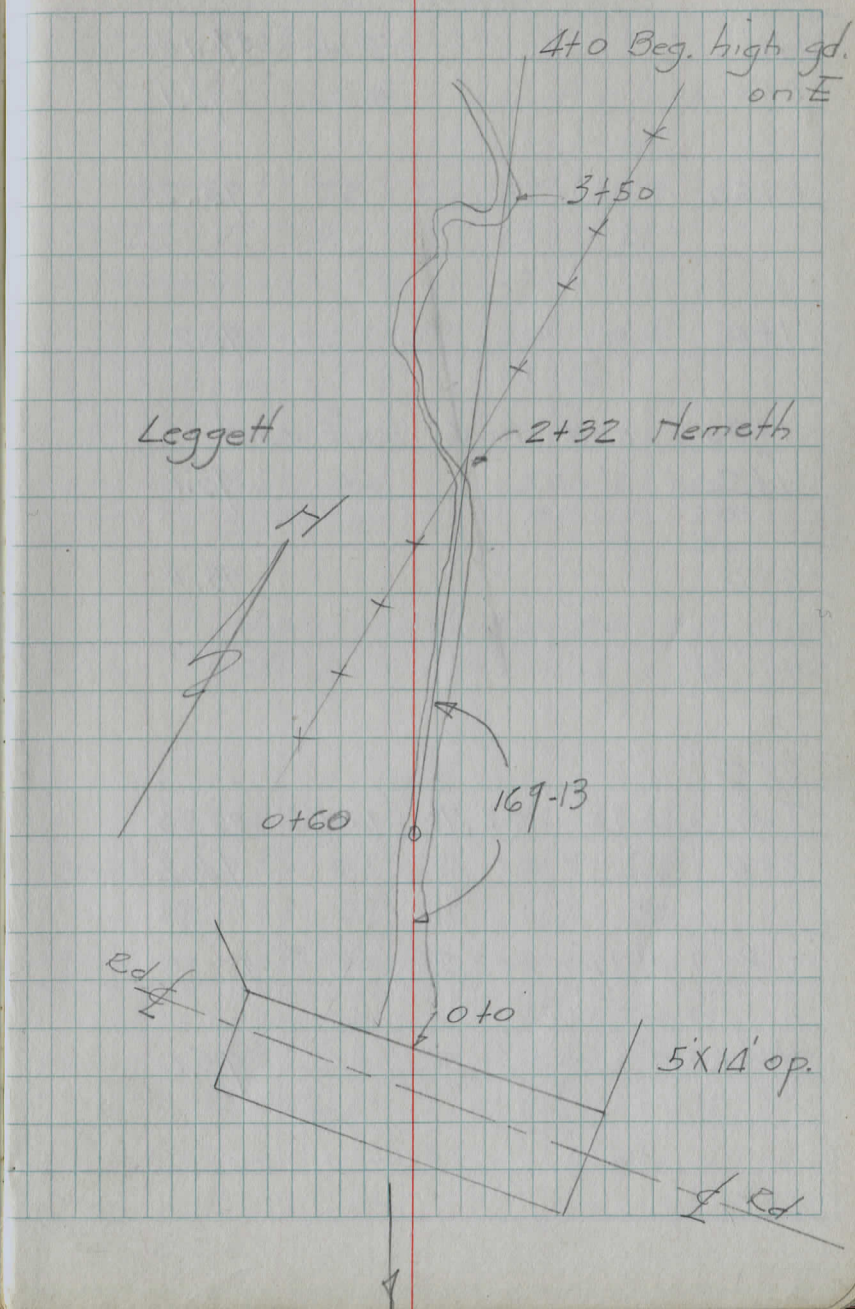
6.3 5.5 6.2 4.9 4.5 4.5 5.2 2.8 2.6
30 15.5 11 8.5 4 5.5 9 11.5 30
12
℄

Spk NE root 28" Map. S side 63+70
(2nd Wk of drive)

DRAINAGE ON LEGGETT ROAD AT BRIDGE NEAR LEGGETT-HEMETH PROP. LINE.

8-23-44
Hall-Maynard
for

C.H.=26



Levels M of Bridge

B.M.	0.28	100.28		100.00
0+0			3.14	97.14
0+0			8.2	92.1
0+60				93.2
1+0				93.2
1+30	end	high	bank east	
1+50				93.1
2+0				93.4
3+0				
T.P.	3.95	102.78	1.45	98.83
3+0				94.2
T.P.	4.72	103.55		98.83
4+0				95.0

N.W. bridge seat

Top opening

F.L. = Lowest point chan.

W E

6.0 2.1 7.2 (7.1) 5.6 +0.9
22 12 6 13 21

1.0 6.1 (7.1) 6.4 +0.4
40 7 10 16
30

3.5 4.0 5.0 (7.2) 4.5
25 10 9 10 25
18 50

4.0 4.4 5.2 (6.9) 2.9 3.5
25 10 12 24 35
18

2.6

level 5.5 (8.6) 6.3 5.1 4.9 5.5
46 34 27 17 30
Creek 5' wide

(8.5) 5.2 4.6 up steep
12 25

Sta.	W Hog	℄	E
3+70		○ 6" Elm	
3+50	brush	5' ⊕ 2-12" Will	
3+25	⊕ 6'	dead 12" Will	
3+0		17' fence	
2+60	4" Elm ⊕ 1'		
2+50		6' 18" Elm	
2+45		10' 14" Elm	
2+42		7' 6" "	
2+30		12' 8" "	
2+12	8" Map. 1'	2+40 to 0+0	
2+0	2'-12" Elms 1'	brush	
1+76	8" Map 6'		
1+76	8" Map 10'		
1+68	10" W Ch 8'		
1+60	6" Map. 7'		
1+25	15" Elm 12'		

1+25 to 0+0 small amount of brushing & small amount of straightening & deepening channel

Evidence of some H_2O over flowing to E at 3+50

W E

Topo Hot Bridge

BM.	4.73	104.73		100.00
0+0	= S side bridge			
1+0			11.3	93.4
1+25			11.0	93.7
BM	2.82	102.82		100.00
2+0			9.15	93.67
3+30			9.6	93.2
Levels along N road ditch				
1+0			5.7	97.1
2+0			6.8	96.0
3+0			7.1	95.7
T.P.	5.76	102.20	6.38	96.44
3+90			6.3	95.9
4+0			6.7	95.5
5+0			7.1	95.1
6+0			7.8	94.4
7+0			8.3	N. side bridge
7+15			10.9	in Creek at ?
BM			2.80	

H.W. bridge seat

Ent. of creek from S.W

Solid rock

" "

Bridge = 0+0 HI = 102.82

3+0 where H_2O goes over rd.

= W side Nemeth drive

Road ditch east ?

93.9 Nemeth drive meets

91.3 brushing bridge - 7.3 x 20

NE cor of NE wing

B.M. 3.73 100.00

F.L. -0.10

Top bell W end culvt = 0+0

Station	Ground Exist. ditch	Grade Rod	Cuts
0+0	5.4	5.4	
0+50	5.1	6.05	6.05 2.80 C 3.25'
1+0	5.9	6.70	6.70 4.20 C 2.50'
+50	6.7	7.35	7.35 5.35 C 2.0'
2+0	8.0	8.00	8.00 7.00 C 1.0'
+50	8.7		
3+0	9.2		

1.3%

LEVELS for CULVT outlet on PRINCETON ROAD ± 2200' S of CHARDON - WINDSOR RD.

10-27-44

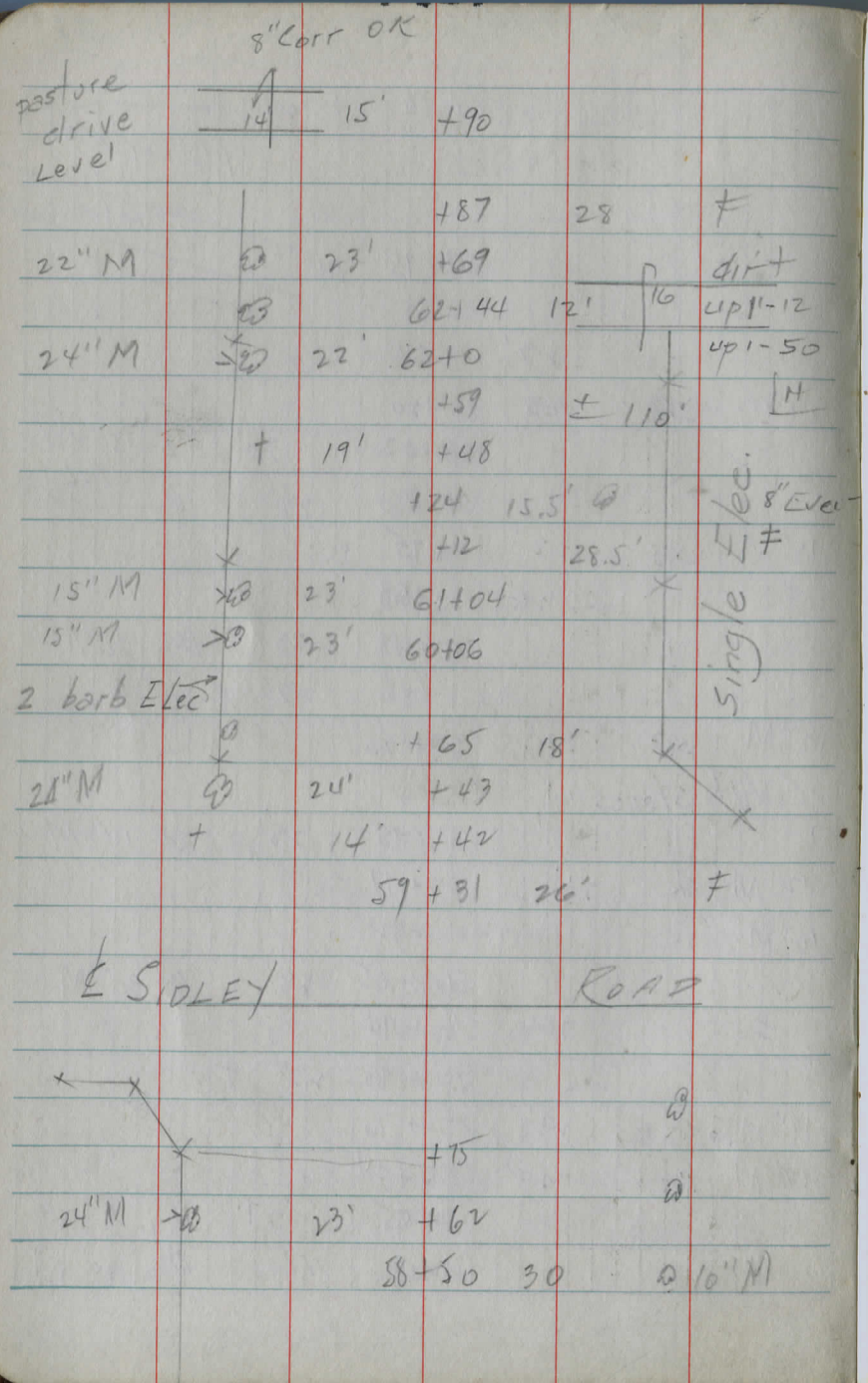
Porm & Co.

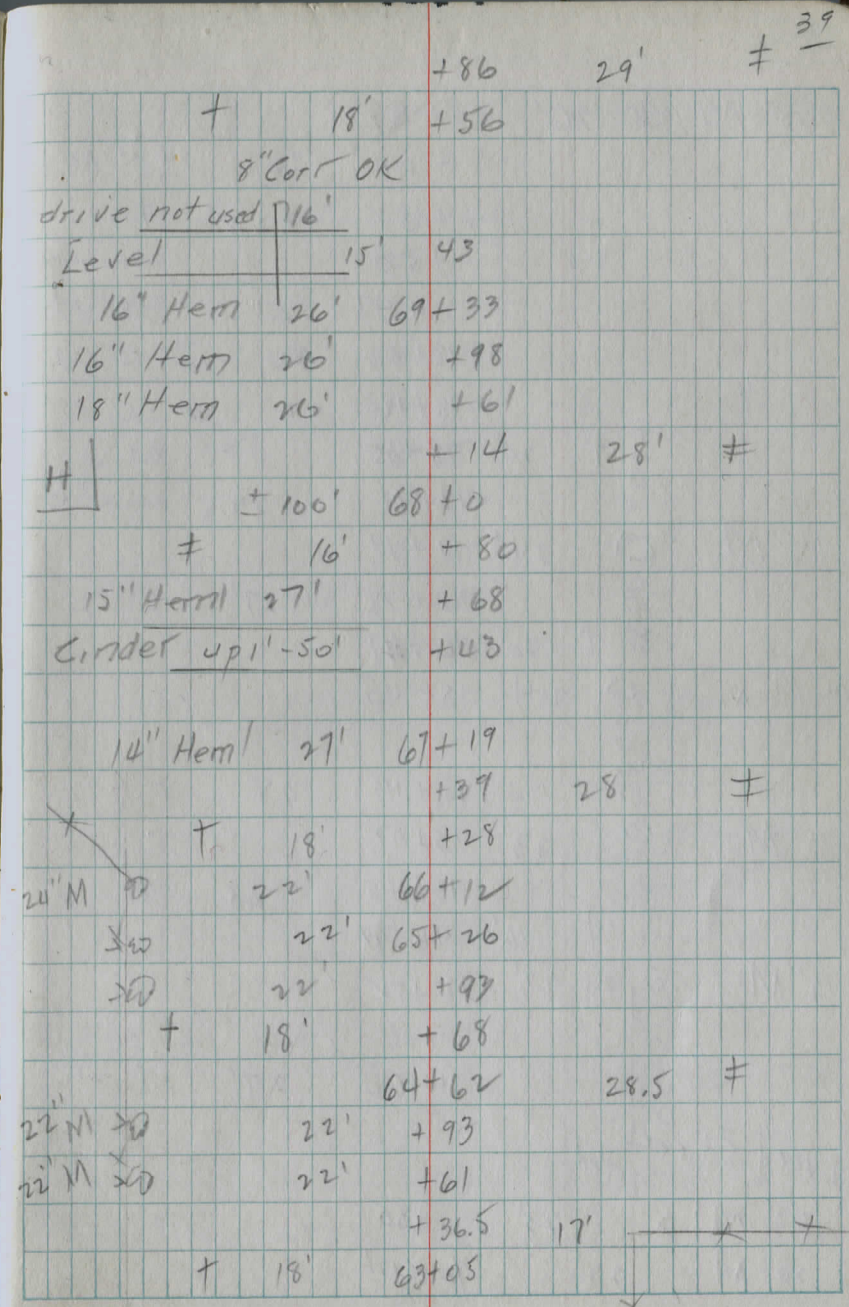
contd Topo Thompson Ctr Road

≠ 25' +35
+16 28'
54+16 22'
23' +87
+34 24' 26" M
16" M 23' 53+33
15" Corr NC
+81 24 26" M
gravel level 17' 15.5'
+66
conc Hdwl +54 20'
≠ 27' +49
+28 21'
+28 24 14" M
13" M 23' 52+20
H
+76 23' 18" M
±70' +73
12" M 23 +46
+02 22 20" M
12" M. 24' 51+0
≠ 27 +93 19'
+48 20'
+48 22 24" M
15" M. 24' 50+36
+80 22' 27" M
12" M 23' 49+75

FROM Fd. Bk. #152

58+13 ±100'
H
6" tile (replace)
Level
57+75 14'
23' +61
14" M 23 +20
58+02 30' 15" M
P.L
+86 28'
15" M 22' +75
≠ 26' +68
+48 28 30" M
+48 23'
12" M 22' 57+20
Culvt stones (10)
+95 28' 14" M
12" M 21' +77
10" M 22' +32
56+05 28' 30" M
≠ 26' +94
+88 23'
18" M ap 22' +70
18" M 22' 55+24
+85 27' 18" M
+35 27' 20" M


8" Corr OK
pasture drive Level
14
15'
+90
+87
28
22" M
23'
+69
dirt
62+44
12'
16
up 1'-12
24" M
22'
62+0
up 1-50
+59
± 110'
H
19'
+48
124
15.5'
8" Elec
+12
28.5'
15" M
23'
61+04
15" M
23'
60+06
2 barb Elec
single
+65
18'
24" M
24'
+43
14'
+42
59+31
26'
E SIDLEY
ROAD
+75
24" M
23'
+62
58+50
30
10" M


+86
29'
18'
+56
8" Corr OK
drive not used
16'
Level
15'
43
16" Hem
26'
69+33
16" Hem
26'
+98
18" Hem
26'
+61
+14
28'
H
± 100'
68+0
16'
+80
15" Hem
27'
+68
Cinder up 1'-50'
+43
14" Hem
27'
67+19
+39
28
18'
+28
24" M
22'
66+12
22'
65+26
22'
+93
18'
+68
64+62
28.5
22" M
22'
+93
22" M
22'
+61
+36.5
17'
18'
63+05

15" M 26' +87

+68 21 26' M

+58 25.5' ±

+50

+47 21 15" M

78+30 20 12" M

78+12 22 12" M

20' 78+05

77+99 29.5'

14" M 24' 77+19

76+78 27' ±

20' 76+37

14" M 24' 75+45

75+11 28' ±

15" M 23' 73+77

73+40 28' ±

16' 72+99

12" M 23' 72+12

71+60 29' ±

Every 5 trees spotted

15" M 23' +80

20" M 22' 70+14

+34 27 ± 40

+25 26 P.L.

14" M 25 87+20

17' 86+60

85+59 28' ±

15" M 27' 85+44

16 84+93

83+84 27' ±

16" M 27 83+65

16 83+10

82+07 27' ±

14" M 26' +94

16' 81+44

8" Corr Lower

+74 13' 16' Not too good

up 1-30' gravel

+59 22' 12" M

+33 26' ±

14" M 26' 80+27

+96 21 14" M

ch. wire

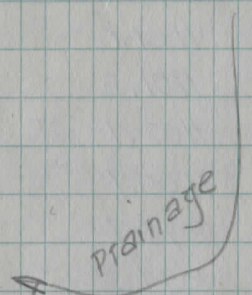
+74 17

20' +74

79-07 +80'

		+72		15" X
24" M	25'	+71		
		+61	24'	20" M
+	16'	93+07		X
		+82	26'	15" M
		+51	26	15" M
		+40	27	≠
				15" M
		+21	25	
20" M	24'	92+13		
		+62	25'	4" tomelch
		+48	25'	4" " "
+	18'	91+47		
		+98	25'	4" tomelch
		+83	28'	+
15" M	24'	+64		H
		90+43	+ 70'	
		90+43	26'	30" M.
			12'	Corr (Lower) grade
		90+11	13'	up 1'-30
+	16	89+85		
		89+	27.5	≠
12" M	25'	88+		
+	18'	88+28		

QED



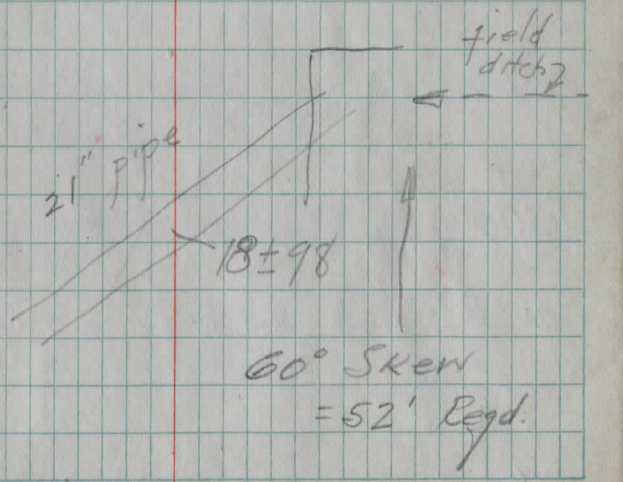
	96+56	26'	
	+92	24'	≠
	+80	21'	14" M
	+65	23'	12" M
24" M	+50		
A	+43	25	14" M
Every 5 trees to here	P.C.		Field Dr.
	+23	25	24" M
	95+04	25'	24" M
+	18' +71		
	+53	22'	12" X
	+46	22'	12" M
	94+08	28'	

2.99	1105.87		1102.88
		6.9	1099.0
		4.9	1101.0
		4.6	1101.3
		3.8	1102.1
		5.0	1100.9
		7.2	1098.7
		6.6	1099.3
		9.4	1096.5
		10.3	1095.6
		10.6	1095.3
		10.5	1095.4
			1102.4
			1099.5

THOMPSON CTR RD
SEC G

Prop. culvt 18+98

N.W ± N rd w/ culvt 17±70
Bot. Sditch 19+12 (Field ditch frm S)
Bot. field ditch 20' S ±
" " " 30' " "
Nat. ground " " " 19+12
± 18+98
N rd ditch 18±85
± N rd marg 18±75 → #1
30' NW of last
Bot. outlet ditch (culvt 17±70) = ±75 NW
±140' NW of #1
±170' N.W of #1 (nat ground outlet ditch culvt 16±60) bot. ditch ±
Sta 17+0 Sditch .5 down
" 18+0 " "



4-4-47 3 PM
Maynard
Bandle (ro)
Pomeroy
Wet Rain

X Sections

	+	H.I	−	E	
12+50			0.18	862.91	862.91
11+75					
11+60					
BM	2.94	863.09	3.44	860.15	Quit 4-4-47
11+40					
11+0					
10+50					
10+0					
BM D	0.68	863.59		862.91	

CHAG. RIVER RELOC.

W Lt ℄ Rt East

52.6 → 10.5 Start of Rapids also N end deep hole

58.8
14.8/10 12.1/8 (River) 6.0/5 4.3/3 5.4/21.5 4.2/50

55.6
12.7/19 9.2/17 9.5/12 10.2/9 9.5/6 7.5 4.4/8 4.9/21 4.3/50
Ch Riv Deep Hole   Sp Crk

857.0
13+5/32 12+2/26 (River) 6+13/28 6+5/10 6+6 8+13/9 10+13/13 (SC) 10+13/17 (SC) 7+8/19 5+13/27 4+19/45

857.7
6+0/50 6+7/33 8+7/25 8+4/20 6+1/15.5 5+9 5+6/4 6+9/13 6+7/20.5 9+7/30 9+0/50
Spring Creek

Reversed ? J.M.
855.67
6+3/50 6+3/22 3+7/6 4+3/2.5 8+10/3 9+2/6 7+4/16 5+7/28.5 5+4/53

858.6
6+8/55 6+8/44 3+0/36 1+5/23 1+7/16 5+02 6+44/13.5 5+8/21 5+4/30 6+2/38 5+7/50

Spk SW root 30" Syc.

℄

	+	HI	−	E	
5+30					
5+50					
BM1	5.50	868.88		863.38	
6+10					
6+20					
6+50					
BM	3.76	867.16	4.08	863.40	(863.38)
7+0					
8+0					
8+60					
9+0					
9+50					
BM "D"	4.57	867.48		862.91	

Lt W

Rt E 4

59.1

9.0/50 9.0/13 9.8 9.9/11 4.5/19.5 4.6/35 4.8/50

59.0

8.4/50 9.9 9.7/18 7.2/29 5.6/50

60.0

5.9/50 5.9/32 7.3/17.5 7.2 6.8/18 7.5/50

62.1

4.9/50 5.6/27 5.1 5.0/19.5 6.7/35 7.4/50

62.0

4.1/50 5.2 4.6/28.5 5.5/50

L.P. (C)

61.8

4.9/50 4.9/26 5.8/15 5.7 6.4/27 6.2/50

60.4

6.2/50 7.1 7.1/40 6.3/50

61.3

4.7/50 4.8/22.5 6.2 7.8/15 6.9/29 7.6/35 6.4/44.5 7.4/50 SPOT

59.6

5.8/50 5.2/27 9.0/14 7.9 7.9/30 SPOT

58.4

6.5/50 5.9/34 9.1/21 9.7/16 9.7/7 9.1 9.5/11 8.4/21.5 9.2/33 8.9/50

	+	HI	−	E	
1+50					
2+0					
T.P.	10.99	874.01		863.02	
BM			4.00	864.88	(864.83)
T.P			5.86	863.02	
2+00					
2+50					
3+00					
3+50					
4+00					
4+50					
5+00					
5+20					

868.88

Lt W — Rt E

862.7

3.3/51 3.1/29.5 4.7/23 12.3/8 12.3/4 11.3 1.9/12 0.9/24 −1.5/50 DAMN upsteep

70.2

3.8/12 2.6/26 1.6/39 0.3/50 up steep →

50' offset stk 2+0

63.3

6.6/50 7.8/22 7.8/14 5.6

61.8

6.1/50 7.3/15 7.1 6.6/10 6.9/15 7.3/43 3.7/50

62.0

5.4/50 6.0/44 5.7/29 8.0/23.5 6.9 6.5/11 8.0/50

61.0

5.0/50 5.2/37 4.1/27 8.6/12 7.9 7.4/11 8.6/25 8.4/46

59.6 ← ~~7.3~~ 9.3 !

5.4/50 6.0/34 5.1/20.5 8.8/10.5 9.3 8.3/12.5 7.5/38 2.8/50

59.6

6.4/50 7.0/36 5.8/18.5 8.8/10 9.3 8.3/6 7.9/10.5 7.4/36.5 1.3/47

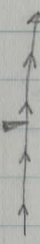
59.7

7.1/50 4.6/30.5 5.5/20 8.7/11.5 9.2 8.9/6 6.3/13 4.8/26 2.2/50

60.2

6.7/50 6.7/25.5 8.5/6 8.7 8.0/8 5.0/17 4.5/50

+ angle	Stadia	Rod	
	107	13.1	5' W River
	141	10.1	
88°-00'	155	6.6	
178°-00'	104	15.8	Mid-River
	99	13.	3' W River
163°-50'	158	6.3	N. Point W. River Bank
	190	6.9	
	122	5.5	
	108	10	
	89	10	
	69	11.9	
134°-47'	62'	14.8	
	872.93		



Set at 1+0 angle from NE

0+30

BM.	4.60	872.93	5.68	868.33	868.32
1+0					
		874.01			

59.8
62.8
66.3
57.1
59.9
66.6
66.0
67.1
62.9
62.9
61.5
58.1

856.0 61.1 66.3 66.3

16.9	5.8	6.6	6.6
Edge River	15	77	50

56.0	58.3	70.4	67.8	67.5	66.4	66.4	73.7	74.3	75.3
15	15.7	3.4	6.2	6.5	7.6	7.6	0.3	-0.3	-1.3
45	35	15	6	5	10.5	16	31	34	50
IN River	Edge River						53' upstream		

Trees over 6" @ ± 4' up.

6-16-47 Sta 8+00 to end = 36
stumps counted by J. M & J CP

6-23-47 Sta 0+00 to 8+00
118 stumps

154

Slopes CHAG. River

	+	HI	-	E	Grade
					62.04
+50					852.9
BM	2.90	862.04	5.55	859.14	9.14
					64.69
10+0					853.1
					11.59
+50					853.3
9+0					853.5
8+0					853.9
7+0					854.3
B.M.	1.31	864.69		863.38	

7-1-47
C. Pomeroy
E. Colebrook

Lt (West) Stake (out)	Ground ℄	Rt (East) stake (12' out)
		9.14 / 2.64 / 6.50 ✓
Spk willow stump 20' E ℄ 10+40		
		11.59 / 6.59 / C 5'-0" ✓
All stks set 12' Rt of ℄. Graded to top of stk		
	64.69 / 53.30 / 11.39 / 4.89 / 6'-6" ✓	11.39 / 10.65 = exc. / .74 ditch
		6.4.69 / 53.5 / 11.19 / 3.69 / C 7'-6" ✓
	64.69 / 53.90 / 10.79 / 3.29 / C 7'-6" ✓	
		864.69 / 54.3 / 10.39 / 2.39 / C 8'0" ✓

I. P. ℄ Grilly & McGraw

	+	H.I.	−	E	Gr.
					67.17
5+0					855.1
					12.07
					67.17
5+50					854.9
					12.27
					67.17
6+0					854.7
					12.47
					67.17
6+50					854.5
					12.67
BM 7-18-47	3.79	867.17		863.38	
BM			1.88	860.16	
					862.09
+60					852.46
					9.58
					862.09
11+0		862.09			852.70
					9.34

12.07
4.57
7.50 = 7'-6"

stks 12' Rt of ℄ Pom. Colebk.

12.28
6.78
5'-6"

12.47
6.97
5'-6"

12.67
6.67
6'-0"

I.P. McGraw-Grilley

Horiz. Spk SW side 30" Elm 60' Rt of ℄ Sta. 11±0

9.58
2.08
7.50
12' stk

9.58
9.08
.50
Spring creek at ent. to river

9.34
7.84
1.50
stk ± ℄

9.34
4.84
4.50
stk 12'

	+	H.I	−	
BM			2.29	864.88
3+0				855.7
				11.47
4+0				855.5
				11.67

867.17

229

Walnut
67.17
855.9
11.27

To be Corrected!!

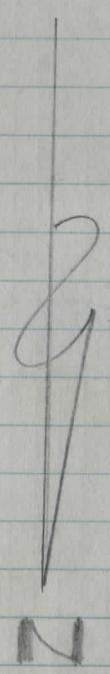
11.47
2.97
8.50

11.67
5.17
6.50 ✓

Fullertown Rd. Ext.

7-29-47

Pom-Colebrook



Dug-no find
Set I. P.
156.6
I. Ps set
139.64
30°
Spk S side
24" Ash
Spk NW side
10" Elm
90-33-20
389.55
141.8
76.45
ctr 4" Elm
#52
30.00
prob CEI
Tacked hub
td 0.25 S of
spk set
57.90
#51
Spk N side
10" Apple
30.00
#50
90-33-20
30.06
#46
#45
30.00
#43
#64
29.52
#42
#60
Spk E of NE
side CEI
16.94
Spk sunk
SH Mon
74.5
170.0
30.00
31.72
x in Nerd
hdwl
#87
0.45

7-29-47

CHAG River Reloc.

			1.66	869.21 ✓	
1+0	10' Lt		0.67		856.7
1+0					856.7
	7.38	870.87 ✓	3.48	863.49 ✓	
2+0			3.67		856.3
					866.97
3+0			4.07		855.9
					11.07
					866.97
4+0			5.47		855.50
					11.47
					866.97
4+50			6.17		855.3
					11.67
BM	2.09	866.97 ✓		864.88	

5 stks 12' W of Ⓒ

SPIKE S.W. SIDE CLUMP 6" ELMS

870.87
856.70
14.17
0.6 ✓
13.5

866.97
856.30
10.67
3.6
7.00 ✓

866.97
855.90
11.07
4.00
7.00 ✓

866.97
855.50
11.47
5.00
6.00 ✓

866.97
855.30
11.67
6.17
5.50 ✓

E trench = ± 0.6 low

E trench = ± 0.2 low

9+0 I.P. set POT

Barn

1 ± 10 28'

1+0 30

0+50 30

Spk W side 12" Elm (S. clump)

109.99

Spk SE side 6" twin Elm

10.88

Spk NW side 8" Elm

24.81

14.27

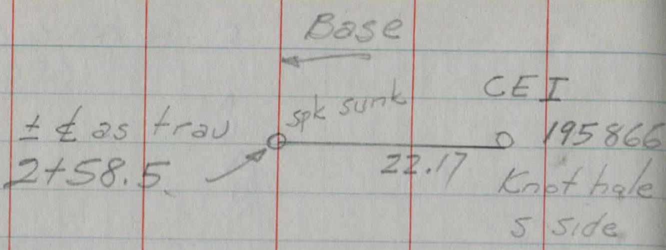
brush row

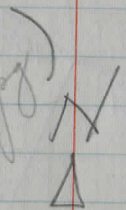
Spk SE side 9" Ash

133.13

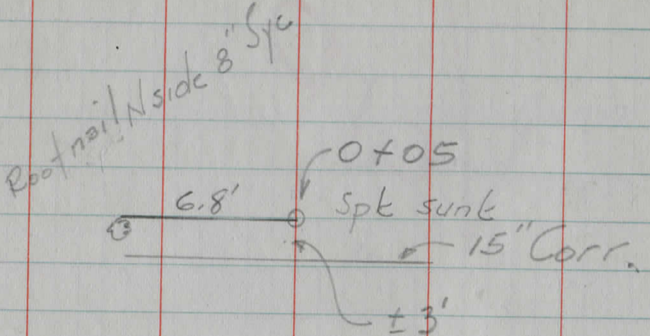
Spk W side 20" Elm (in swamp)

VOID





River Rd
Base line for
sections (see next pg)
8-29-47



BM	4.59	104.59		100
0+00				
1+31.6	= culvert over base = 7.7 E of outside W hdwl			
2+05				

River Road
Sections to determine
approx ydage
8-29-47

Ref Spk N root 8" Syc

East ←

5.6/35 15.1/28 12/19 (Ft. Rock Wall) 7.5/14 5.7/8 5.3/℄

87.4 17.2/28 100.3 4.3/8 (Edge New Fill) 100.2 4.4/℄

16.5/28 (Flow line bottom channel) 8.5/15 3.2/12.5 5.5 (Edge traveled road) 2.6/℄

BM1	0.92	870.13	869.21

2+0

1+50

0+0

Ck levels in channel

8-29-47

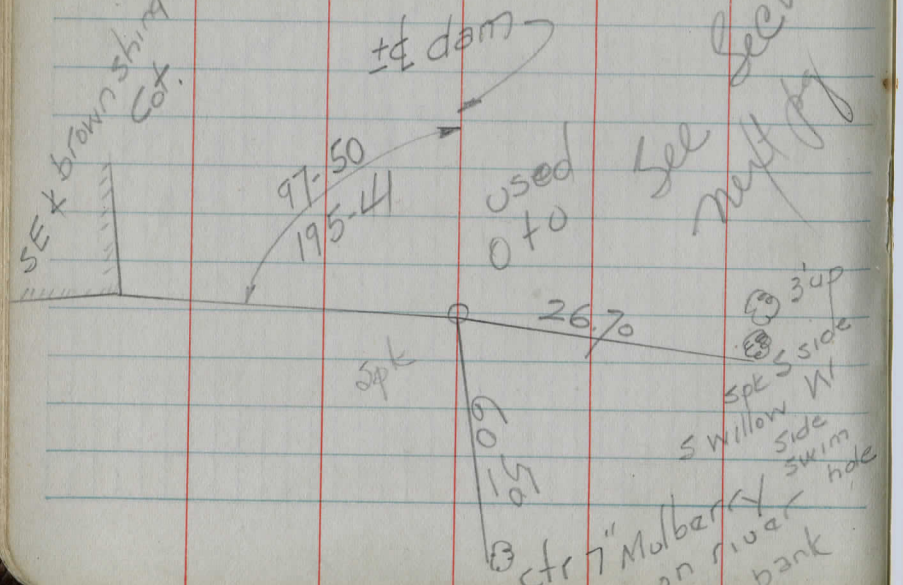
Chag. River

70.13
856.3
13.83

70.13
856.5
13.63

70.13
857.1
13.03

Dam(n) data



14.1
Ground

14.0
Ground

± 12.8
FL River

Sections for ± yardage placed in dam

1+50		
1+00		
0+50		
0+0		
BM	0.69	869.21

W

℄

E

57

6.4/38 6.8/28 7.3/19 9.4/7 12.4/4 ℄ 34/E. Edge River

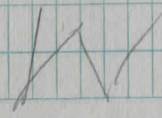
Level 2.8/30 5.9/21 6.4/8 7.7/℄ 11.8/10 River

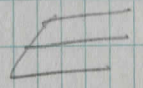
3.8/℄ 5.1/5 9.5/16 12.8/18 River

Level

4.2/℄ 4.5/7.5 7.3/15 7.6/21 10.9/27.5 River

Level





BM	4.57	869.36	864.79	
				12.3 15' E - E Bank River

Vert spk in Syc

859.6

9.7 9.9 9.9 9.7 9.8

[illegible] NW → 50' NW → 20' NW → 70' NW. → W Side W Fill

3-18-48

Soundings Thompson Ctr.
G = Grav C = Cinder

67+20

55

55 - 57 Fr Drs

44

33

22+0

14 to 15 Fr. drains

13+0

3+0

H S 59

4" 8'

2" G 5" C

2" 8'

6" 8

5"

8" 6

5" / 10 Edge

1/2" 9 4" 6

2" G 3" C

2" 6 4" 9

1" 12' 6" 9

2 1/2 C 2 1/2 G

2" 5 = Edge

5" G 9

12" G

5" G 6

1" 9

4" G 9 10" G & C 6

2" G 5" C

4" G 6 1/2" 9

1/2" 9 1" 6 5" G & C 4 1/2

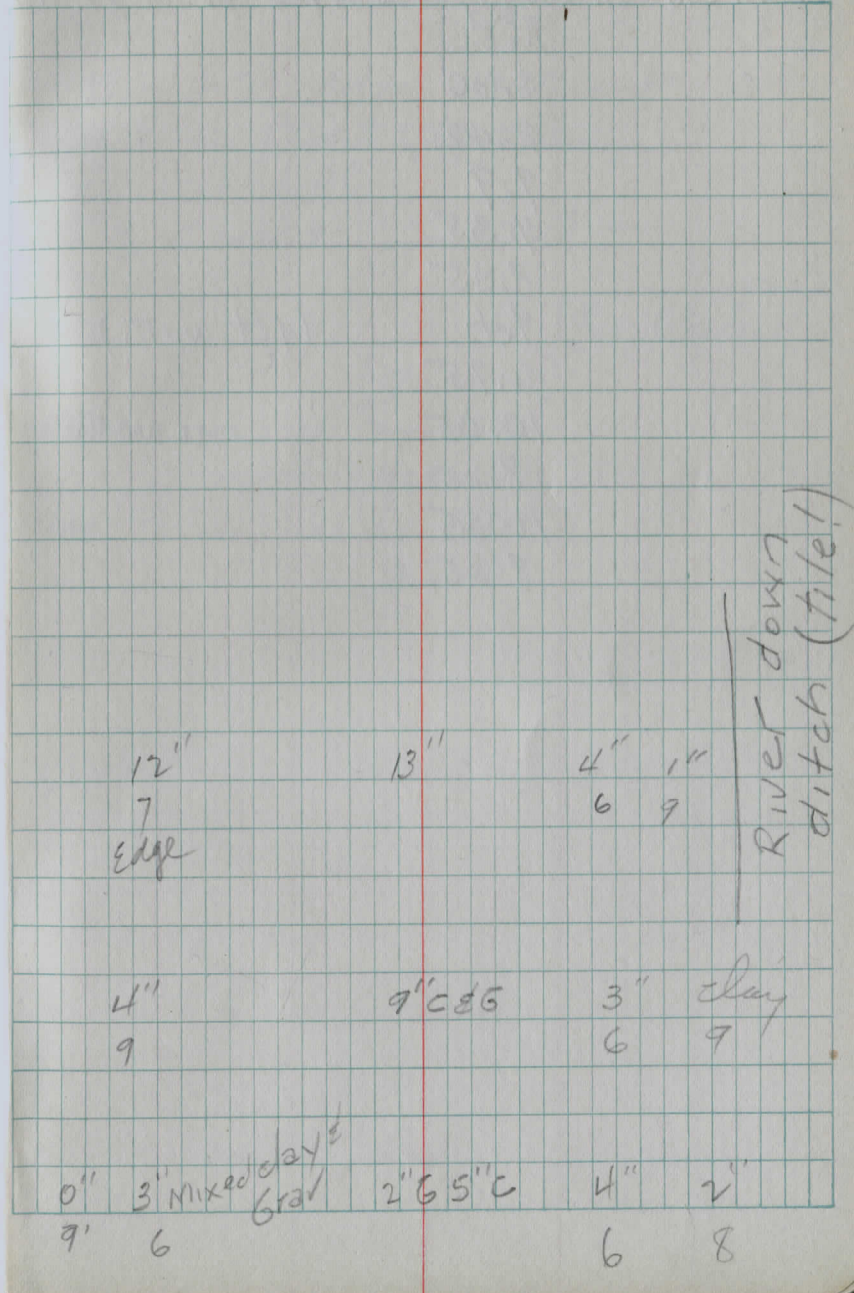
1" G 4" C

5" G & C 6 1/2" 9

95

87

76+78

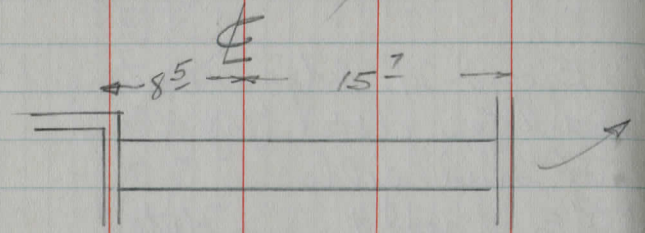

River down (111')
12"
7
Edge
13"
4"
6
1"
9
4"
9
9" C&G
3"
6
clay
9
0"
9'
3" Mixed clay & Gravel
6
2" G 5" C
4"
6
2"
8

Sidley Rd (CH. 58 Sec A) 10/2/48

Levels on Bridge outlet about 1/2 mi North of S. line Thompson

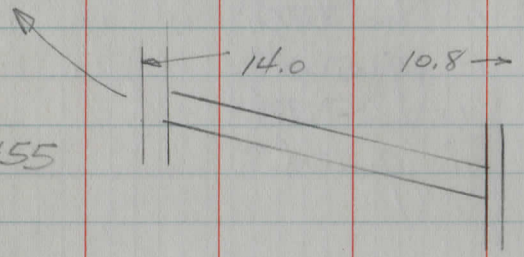
Rod		
3.60		Top E. end N. bdge abutment
2.42		bdge floor (top plank)
9.9		Top mud sills
7.35		50' E of road ℄ in ditch
8.35		100' " " " " " " on N
9.4	(1 ft water)	250 " " " " " " (X-s [illegible])
6.75		" " " " (Ground) " " " "
10.05	no water	500 " " " in ditch " " " "
8.25		" " " " ground " " " "
10.25		700 " " " in ditch
8.35		" " " " ground

Culvt Ext. No 7 G-H

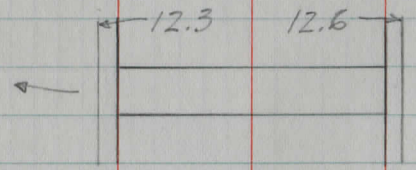


6+60

6+70 Dr. pipe Lt 11.6



16+55



17+70

20+17 Dr pipe Lt 12.5

21+90 " " Rt 12.5

33+47 " " Rt 12

3-28-49 SM FCP

62

Plan: Ext. 16' NW with 24" RCP
12' use with
conc C.B.

Plan: Replace with 36' of 42" RCP
Lt 6' Rt with conc slab

Plan: Remove top 12" of hdwls
Ext 4' Rt & 8' Lt with 27" RCP
24"

℄

35+0 Dr pipe Lt 19'

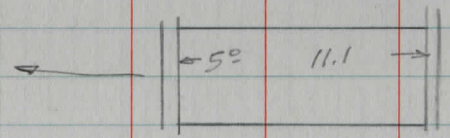
39±0 " " Rt 12'

46+35 ——— culvt

47+10 Dr pipe Lt 13.0 Plan = Slope ditch to culvt 46+35

47+48 " " Rt 12.5

52+66 " " Lt 15.5

51+02 

55+99 Plan = Salvage exist 30" x 28' pipe culvt

56+54 Plan = Ext both ends 4' with 18" pipe

57+80 6" Dr. tile 14' Rt plan = Replace with 12" pipe

No exist culvt Plan = 36' x 24" RCP with stop walls

Plan = Ext 8' Lt

59+52

59+09 = ℄ Sidley Rd

59+52

62+44 Dr pipe Rt 12'

67+43 Dr Lt

69+43 Dr pipe Lt 15'

80+74 " " Rt 13'

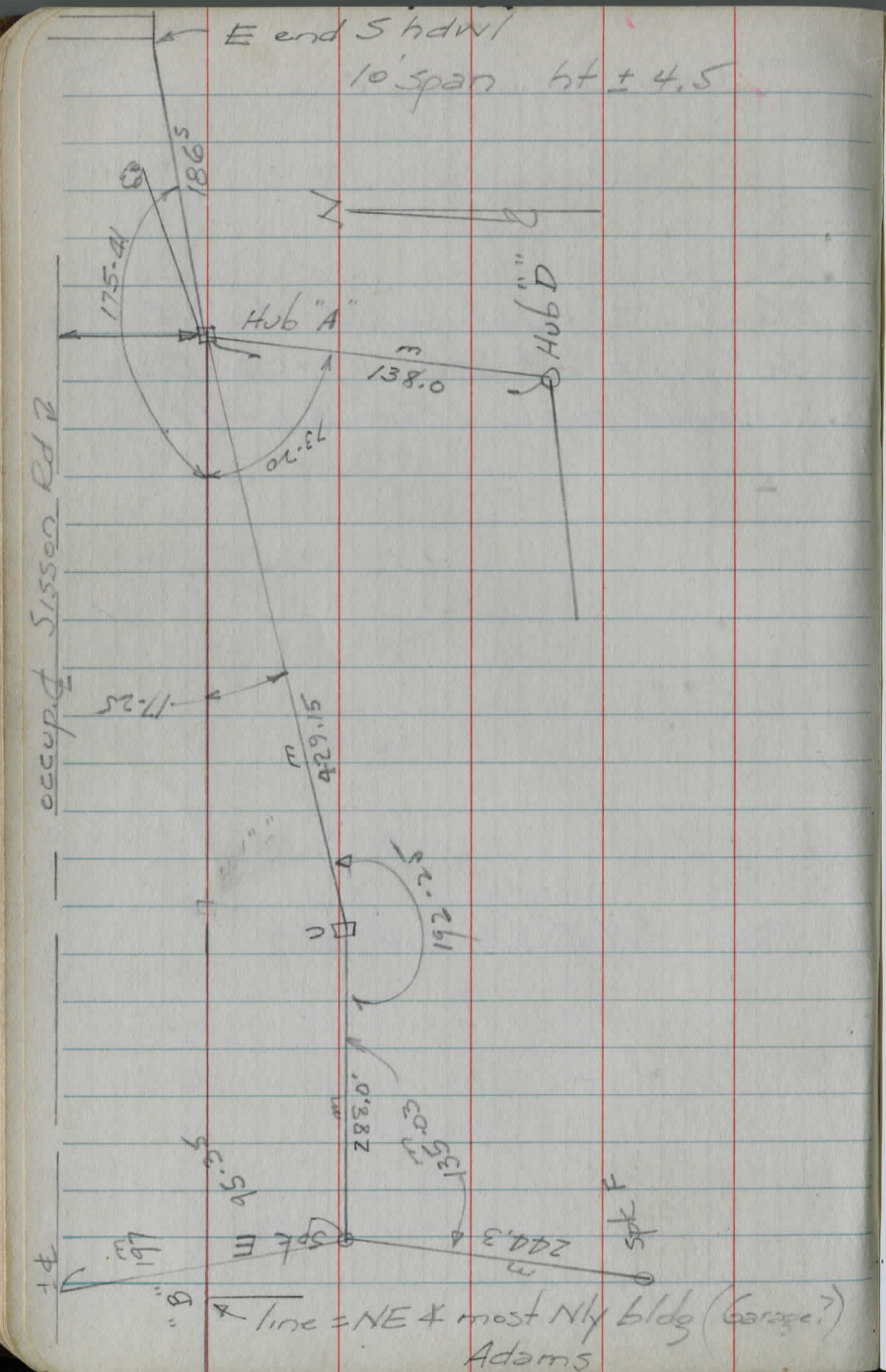
90+11 " " " 13'

93+91

Plan = Clean outlet only

Plan Eliminate exist culvt Leg 48' x 40' 30" pipe at Sta. 59+42. Use salvaged pipe from 55+99

Plan = Eff 5' Lt ℄ 4' Rt



SISSON RD CULV'T OUTLET

5/3/50

See levels next pg.

Sisson Rd Culvert

	+	HI	−	E	
B.M.	7.30	107.30		100.00	
			9.8		92.5
Set at	B.S.	Stadia	Ang	Red	
"A"	"B"			4.33	98.0
		65'	155-00	5.55	96.8
		130'	221-20	10.80	91.5
		111'	246	10'	92.3
T.P.	4.72	98.53	8.29	93.81	
T.P.			8.76	93.54	
"D"	"A"				
		5'	90-0	6.0	92.5
		112'	209-30	6.8	91.7
T.P.	3.83	97.37		93.54	
"C"	"A"	96.	19-07	6.6	90.8
			H.A. 22-24		
		170	V.A. 2-141	13.0-6.63	91.0
		115	84-16	7.7	89.7
		170	97-40	8.2	87.2
		230	123-10	8.5	88.9
		220	161-50	9.0	88.4
	ang to E		192-25		
TP.	4.62	95.69	6-30	91.07	
E	C	93	127-20	8.3	87.4
		M 744.3	135-03		
			95-35		

SE & E end So. bdwl
outlet F.L. H_2O 1.6

℄ Rd ℄ culvt

℄ where H_2O goes over Road

H_2O 2.4' Chan'l bends Wly

H_2O 1.4'

1 1/2 Way between A & C

H_2O 1.0

℄ Chan'l H_2O 1' Bends West; Main Chan'l - Smaller Chan'l to the North

Main Chan'l H_2O 1', Mostly ℄ bends South

H_2O 1' Chan'l NE bends W

H_2O 1' Just Main Chan'l

H_2O 1.2' Only Chan'l Bends Wly from due South

H_2O 1' " " SE end H-Shoe bend

H_2O 1.3 Main Chan'l from SE to W

H_2O 1.9 Only Chan'l

"C" Nearly to P.P.

Set at	BS	95.69			
TP	6.00	97.64	4.05	91.64	
F	E				
		STAD	ANG	ROD	
		160'	273-04	10.30	87.3
		210'	223-32	11.7	85.9
B.M.	6.32				

Final Grades 5/17/50

	+	H.I.	-	Elev
BM	-.5	99.5		100.00
0+0		99.5 91.5 G 8.0	8.0 2.5 R 5.5 C	
F.L. (exist)				
1+0		99.5 91.0 G 8.5	8.5 3.0 R 5.5 C	Ch 6.7 R
2+0		99.5 90.5 G 9.0	9.0 3.5 R 5.5 C	Gd 6.2 R
T.P.	3.50	97.4	8.40	96.00
3+0		90.0 G 7.4	7.4 2.9 R 4.5 C	Ch 5.6 R
		97.4	7.9	Gd 4.8
4+0		89.5 G 7.9	1.4 R 6.5 C	

H_2O 1' Over Chan 25' Downstream From Culvert Stream

H_2O 1' " "

Spk Spoot 8" Apple East & South of Confluence

at 1st bend Set culvt

5+0	97.4 89.0 G 8.4	8.4 4.9 R 3.5 C	
5+07	F.L. exist		Ch 8.1

5-8-51 MERRITT & MAYNARD — MORGAN ROAD #26

BM	4.03	104.03		100.00	10d NAIL W. Side CEI Pole

This is a 2 Bbl-15 to be replaced with one 24". OUTLET NEEDS blasting

5-8-51 MERRITT & MAYNARD — PHILLIPS ROAD #40

BM.	6.23	1059.42		1053.19
TP.	4.19	1059.71	3.90	1055.52
31+51.5				

5-4-53 MAYNARD LARGEN — LEVELS ON OUTLET AFTER PARTIAL BLOWING

BM.	4.32	59.84		1055.52
50' North			8.76	51.08
Hump 100' N			8.73	51.11
BEND to EAST			9.8	50.04
50' W of N&S FENCE			10.3	49.54
CULVERT O.L.F.L.			8.06	51.78

W. — E. — 68

72' South Culvert #7 Sta 100+33 ± CH. #26 Morgan Road

97.1	99.6	97.2	96.3	94.6	92.9	91.8
6.9	4.4	4.8	7.7	9.4	11.1	12.2
INLET F.L.		O.L.F.L.	100	200	300	400

N. — S.

Spk 2" down in S.E. Root 24" Elm 25' North of 36+40

Highest Pt E. End N. Hdwall of Culvert at 31+51.5

Good	Stone Walls		Deck ?			Wood Floor		Field Drain
48.7	49.5	50.8	51.1	51.6	52.1	51.6	1054.7	51.8	52.0 From South
11.0	10.2	8.9	8.6	8.1	7.6	8.01	5.0	7.92	7.69
430	400	300	250 (BEND EAST)	200	100 OUTLET F.L.			F.L.	F.L. Fd Drain

Converges with Stream from 36+25

5-8-51
MERRITT & MAYNARD

SEC D. UNDER ROAD #42

BM. 2.85 102.85 100

This STATION PROBABLY 72+60 IN F.B. 152 PAGE 15 & 35

32' 15" Pipe

Top Culvert Pipe W. End (Back) ~~77+40~~ 72+60

Station	W		E			
	98.3 ~~[illegible]~~ 4.55 Inlet FL	100.9 2.0	97.6 5.3 FL			
~~77+40~~ 72+60	98.3 ~~96.3~~ 4.6 ditch	99.9 3.0	98.0 4.9 E ditch & outlet channel			
~~78~~ 73+20	97.8 5.1	99.4 3.5	97.8 5.1 Channel flows NE'ly from ditch			
~~78+60~~ 73+80	97.6 5.3 15'	98.9 4.0	97.9 5.0 15 Ditch	97.2 5.7 55 Ch'l		
~~79~~ 74+20	96.4 6.5 15	98.2 4.7	96.9 6.0 15 Ditch	97.0 5.9 30	95.9 7.0 50 Ch'l	
~~80~~ 75+20	95.4 7.5 17	97.0 5.9	95.4 7.5 15 ditch	95.5 7.4 50	94.0 8.9 110 Ch'l	
~~81~~ 76+20	94.6 8.3 17	96.1 6.8	94.4 8.5 15	96.7 6.2 20	93.8 9.1 75	92.3 10.6 135
~~82~~ 77+20						

9-2-52 C. L. ROAD. JUDGES GULCH

	+	H.I.	−	Elv	
BM	5.95	996.85 ✓		990.90	✓
			1.97	994.8	
also T.P.			5.00 + 21.72 =	26.72 = 970.13	
143 ± 67 new			3.58	993.2	
			6.16	990.7	
			1.15	995.7	
143 ± 16 new			0.10	996.7	
T.P.	9.62	1005.43 ✓	1.04	995.81	✓
142 ± 0 new			3.68	1001.8	
			4.2	1001.2	
T.P.	11.62	1015.88 ✓	1.17	1004.26	✓
140 ± 97			5.87	1010.0	
140 ± 97			3.45	1012.4	
140 ± 97 new			9.4	1006.5	
			1.5	1014.4	
TP	9.76	979.89		970.13	
			10.35	969.5	
			5.2	974.7	
			4.24	975.6	

Spk E root 12" Wch 15' SW of

6' S W of P.I. Proposed N. Side Gulch UP N.E. Down S.W. Bank 12' S'ly

Vert ∠ 20°10' ℄ Stream Stadia (on slope) 63'

℄ Prop 100' N 112' E of OLD P.I. S of Gulch

30' E of Next above. Brink at 25' more E.

30' W " 2d "

℄ Prop 115' N.E. UP 1', 30' S.W. Down 1', 30' E'ly, 45' to Brink

℄ Prop 65' N.E. Level Westly

22' E of Next above Drops 10' in 30' out.

prop ℄ 3' E

30' E Next above

Prop New P.I. (℄ present metal)

100' East Next above " "

ELV from Vert ∠ (43' Not TP)

50' W of TP ℄ Creek Under E 1/3 present bridge

50' E of Prop ℄ (℄ chanl) (Spring in N bank)

100' E of " " "

6-23-55

Elev on the first three culv's E of Rt 528 on Burrows Rd. Montville Thompson Twp

	+	HI	−	elev
B.M.	7.63	107.63		100.0
T.P.	11.92	119.00	0.55	107.08
T.P.	8.30	127.21	0.09	118.91
T. P.	0.43	128.37	3.27	123.94
T. P. (x)			0.81	123.56

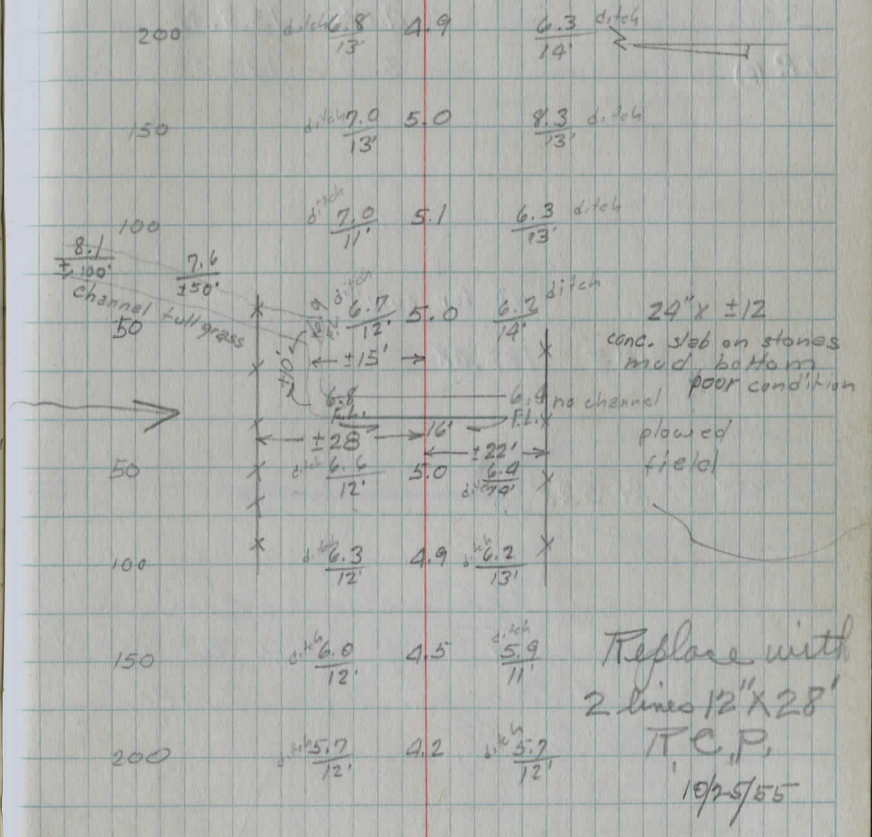
HI for culv.

T.P. (x)	4.78	128.34		123.56

1 3500' E Rt 528 ——————————

Slab was made in 3 or 4 sections. middle sections have partially fallen.

spk in N.W. root most E elev by first bridge E of Rt 528 on Burrows Rd.



E occupation

6/23/55

	+	HI	-	Elev
T.P. (x)	4.78	128.34		123.56
T.P.	6.44	131.11	3.67	124.67
T.P.	8.42	137.57	1.96	129.15
BM.			4.05	133.52
T.P. (s)			5.14	132.43
		HI for culv't		
T.P. (s)	3.05	135.48		

±2300' E. Rt 528

stone footers have partially fallen in. Slab sections have separated and have let road fall through. N headwall has fallen off.

Vert. spk. SW root 12" maple ± 300' E of second culv't E of Rt 528 on N side Burrows Rd.
(most Ely of a group of 3 map)

200	4.7 / 12'	3.6	4.7 / 12'	
150	5.3 / 12'	4.2	5.4 / 12'	
100	6.1 / 13'	4.5	5.5 / 12'	
50	ditch 6.4 / 10'	4.6	ditch 6.0 / 12'	
8.2 / ±100' ; 7.5 / ±50	6.6 F.L.	4.1 — 20.60' —	6.4 F.L.	no channel
50	6.9 / 15'	4.6	6.5 / 12'	
100	6.5 / 13	4.7	6.2 / 12'	
150	6.3 / 12'	4.6	5.9 / 10'	
200	6.1 / 13'	4.4	5.6 / 11'	

channel has been cleaned

36" x ± 12" conc slab on stone footers. Very poor condition

planted field

℄ occupation

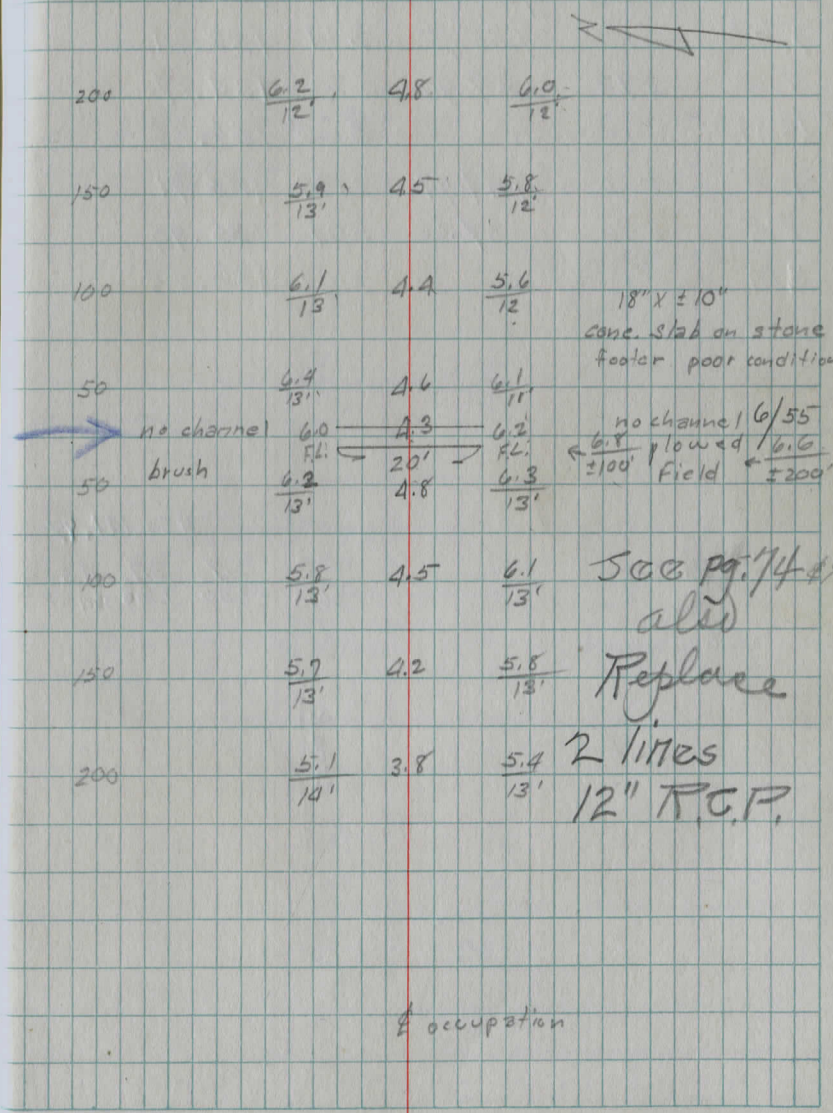
Replace to 24" x 28' RCP 10/25/55

6/23/55

	+	HI	−	elev
T.P. (S)	3.05	135.48		132.43
T.P.	5.60	137.37	3.71	131.77
T.P.	5.49	139.09	3.77	133.60
T.P. (B)			4.00	135.09
		HI for culvt		
T.P. (B)	4.25	139.34		

±800' E Rt 528

Slab sections have partly fallen.



10/25/55

	+	HI	-	elev
BM	3.04	136.56		133.52
T.P.	4.35	135.78	5.13	131.43
T.P.	6.08	138.72	3.14	132.64
T.P.	4.93	139.90	3.75	134.97
BM			3.65	136.25
T.P.	5.06	141.97	2.99	136.91
T.P.	2.96	139.86	5.07	136.90
B.M.			3.61	136.25

±800' E Rt 528

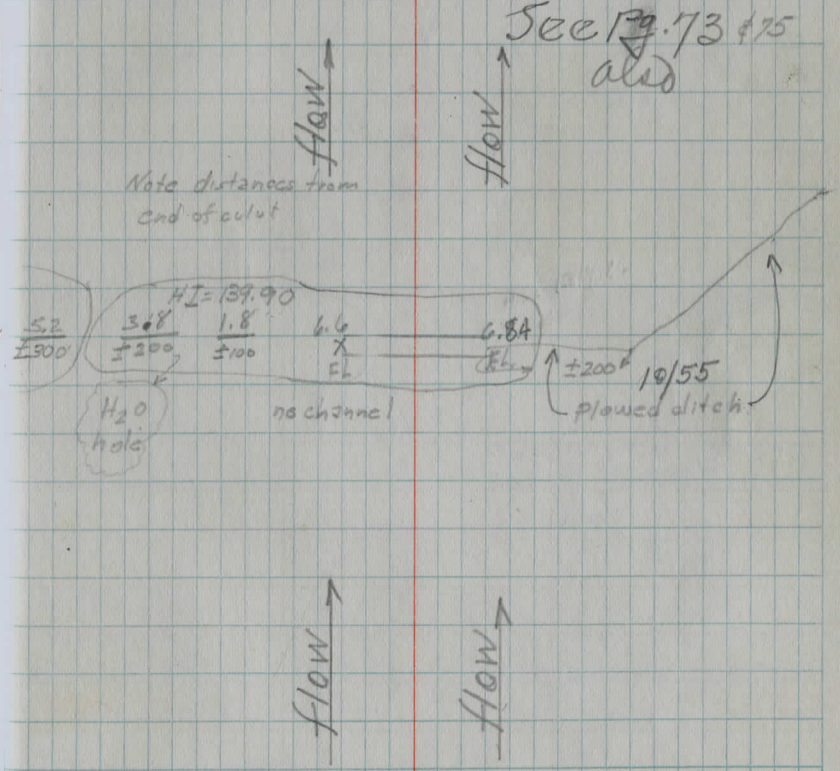
HI = 141.97

5.5	2.7	3.7	4.4
±690	±600	±500	±400

creek

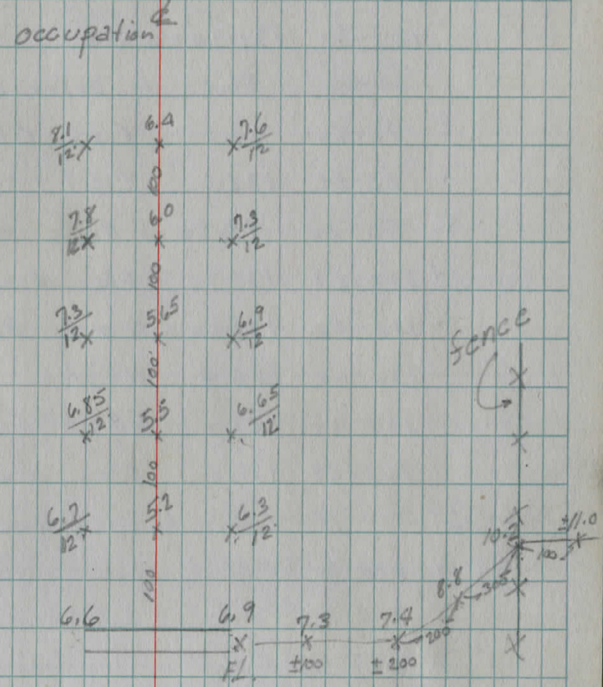
Vert spk. SW root 12" maple ± 300' E of second culv't E of Rt 528 on N side Burrows Rd

Spk W. side C.E.I. #92622 by culvt ± 800' E of Rt 528. N side Burrows Rd.



	+	HI	-	elev
B.M.	3.68	139.93		136.25
B.M.			3.68	136.25

10/26/55



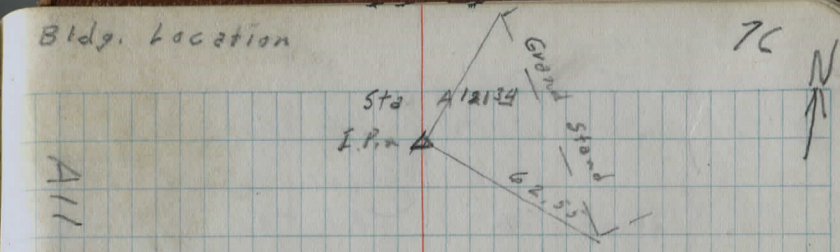
Continued from
see Pg 73 & 74
also

July 1954 — Burton Fair Grounds

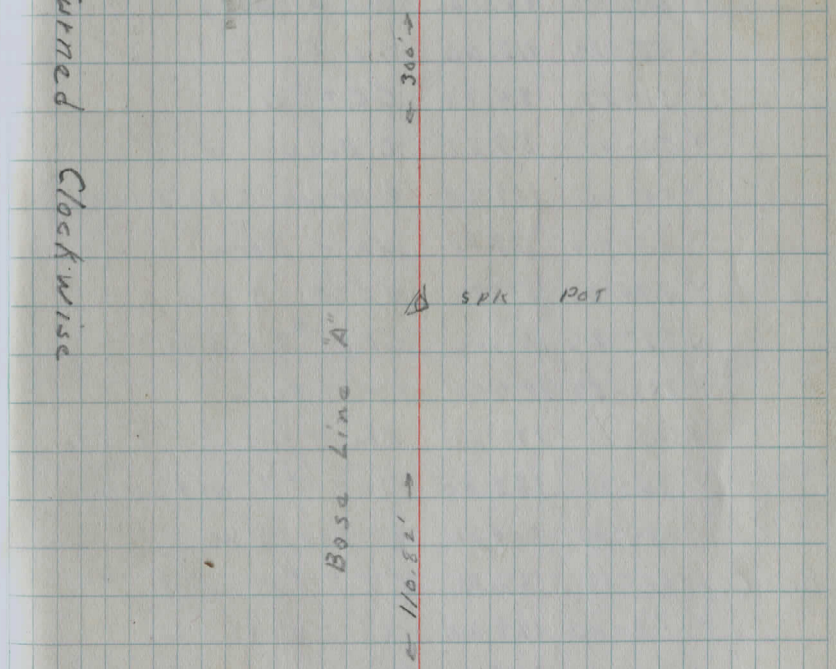
Sta.	Hort. ∠	Dist.		
A-B	299-21	62.55	S. & Grandstand	
	163-33	121.34	NW & "	
	00-00	80.0	+ Drive East	at Int. 53' Wide
	70-46	50.0	CEI Pole #1	
	22-52	122.0	CEI " #2	
	00-00	99.50	+ Drive West	10' Wide
	337-58	133.90	Elec Box outlet	E. Side
	332-45	145.00	NW & Bldg ?	
	330-00	152.4	NE & "	
	334-35	157.1	SE & "	
	343-09	171.5	Elec. Box	E. Side
A1-B1	208-50	102.1	Elec Box	E. Side
	218-20	121.5	Iron Pole	"
	218-01	122.7	Iron Pipe	"
	229-33	63.4	Elec. Box	
	152-28	103.8	CEI # 3	W. Side
	255-42	60.8	Block Bldg. NW &	S. Side
	273-08	59.9	" SW &	"
	274-27	47.7	Elec. Box	"
	87.42	48.6	CEI # 4	W. Side
	318-51	71.3	Elec Box	E. Side
	307.57	89.00	CEI # 1	E. Side
		20.00	Drive East	at Int. 18' Wide
	325.16	119.6	CEI # 2	E. Side
	334.32	108.4	Elec Box	"

Bldg. Location

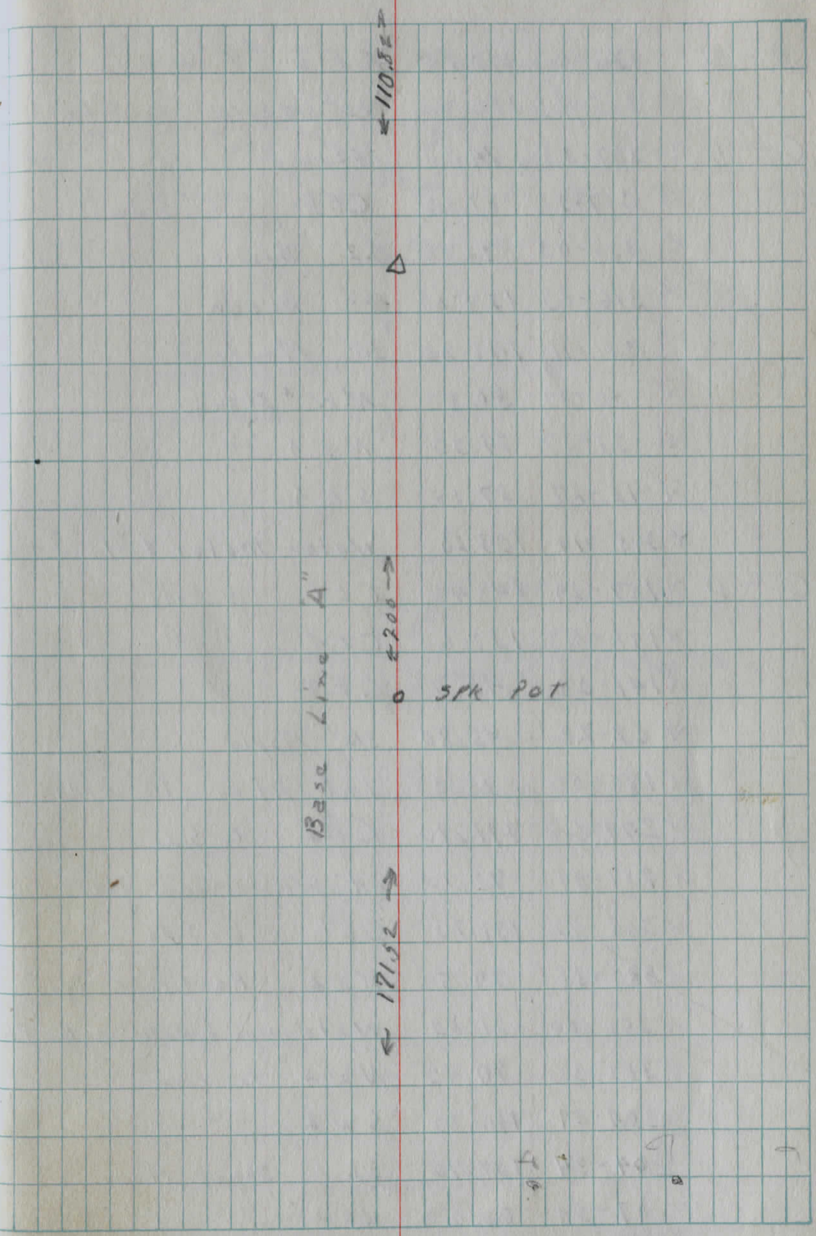
7C



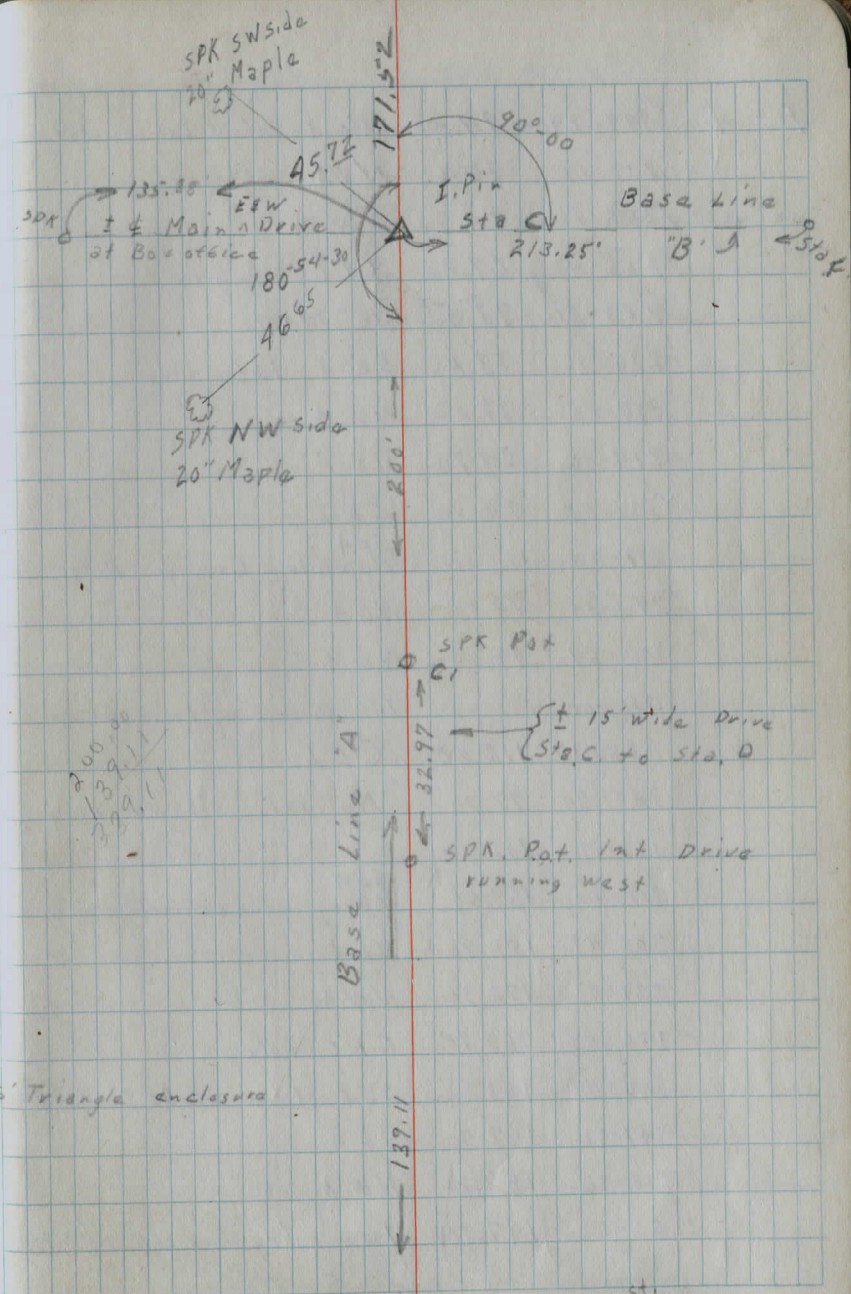
All ∠ Turned Clockwise



Sta	∠ Hort	Dist			
H'-B	✓ 342.40	153.9	Elec Box		E side
	✓	111.2	Drive	W. side	At ent 24' wide
	✓ 26.45	108.1	CEI #5		W. side
	✓ 37.08	121.	CEI	W. 20' of	CEI #5
B - C	✓ 66-11	60.65	Manhole		
	✓ 65-42	95.80	NE ∠ Bldg		
	✓ 47-30	118.60	SE ∠ "		
	✓ 31-37	94.30	CEI #6		
	✓ 00-00	57.50	℄ Drive W.		
	✓ 00-00	109.50	℄ Drive ± 60' ∠ to NE		
	✓ 309-14	99.90	NW ∠ Barn		
	✓ 295-07	151.76	NE ∠ "		
	✓ 327-26	123.60	CEI #3 E. side		
	✓ 337-50	197.80	SW ∠ Barn		
	✓ 340-15	191.20	Elec. Box		E. Side
	✓ 15-50	183.50	CEI #7 W. side		
	✓ 00-00	200.00	℄ Road W.		
B. - C.	✓ 61-35	58.70	CEI #5 W side		
	✓ 00-00	28.00	Rd West		
	✓ 335-35	57.30	Elec. Box		
	✓ 309-11	82.40	CEI E side		
	✓ 311-41	88.20	NW ∠ #2 Barn		
	✓ 294-46	138.80	NE ∠ " "		
	✓ 349-01	124.60	Elec. Box		
	✓ 337-03	159.50	CEI E Side		
	✓ 336-03	162.60	SE ∠ #2 Barn		



B₁-C	25-03	117.70	CEI #9 W. side
	355-43	126.90	20" Maple E. side
C-D	307-33	74.90	Stump
	317-26	89.50	CEI E. side
	325-03	92.80	22" Basswood Tree E side
	316-03	124.10	22" Beech
	301-11	141.20	30" Maple
	50-39	31.50	N.W. # Stand
	21-37	21.50	N E "
	12-27	37.15	S E "
	345-49	103.20	Water meter & Stand pipe
C₁-D	159-29	143.40	CEI W. side
	151-53	132.60	CEI " "
	141-00	45.70	CEI " "
	62-22	45.80	36" Maple
	180-00	35.00	Int Rd E. 10' wide
	249-56	111.90	CEI E side
	287-44	92.10	24" Whitewood Tree
	303-42	131.70	CEI E. side
	380-31	79.50	NE 4 Restroom Bldg
	352-00	21.60	Water pipe ? wall E. Pt.
	352-30	90.40	NW 4 Restroom
	354-59	110.30	S W 4 "
	04-34	107.70	S E 4 Sheep Shed
	07-54	66.0	NE 4 " "
	47-52	98.5	N W 4 " "



F - E	199-29	94.40	NE ∠ School Exhibits Bldg
	239-15	36.60	NW ∠ " " "
	253-11	64.20	SW ∠ " " "
	255-41	67.40	CEI S. Side
	253-26	93.50	36" Maple
	236-11	33.40	SW ∠ Into Bldg
	229-55	27.00	NW ∠ " "
	214-16	34.70	NE ∠ " "
	304-52	24.50	CEI S. Side
	291-32	113.10	SE ∠ Hamddan Grange Bldg
	295-34	94.40	NE ∠ " " "
	300-54	99.50	NW ∠ " " "
	270-00	102.00	Int. Drive S. w/ Drive E&W
	325-37	112.20	CEI
	344-04	99.70	Manhole Sewer Line
	192-43	101.40	" " "
	317-25	163.60	SE ∠ N. Wing Domestic Arts Bldg
	322-49	151.90	NE ∠ " " "
	327-41	172.30	NW ∠ " " "
	336-52	160.70	CEI Pole
	340-49	163.80	SE ∠ Com. of O.E.S. Bldg
	347-42	157.90	NE ∠ " " "
	350-26	197.30	NW ∠ " " "
	00-00	147.70	Int Rd running S.E. at ∠ 40" ∠

Sta. F

△ SPK Pot Sta C to Sta D

E

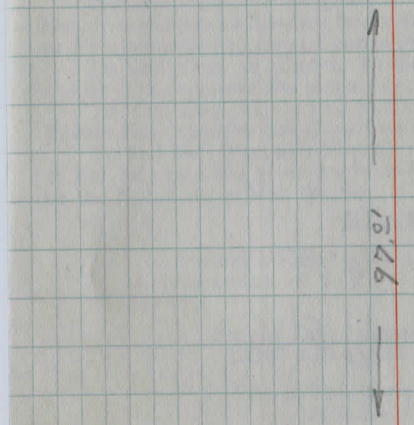
255.31'

12' wide

Sta E △ SPK Pot ℄ Drive S.

97.01

E1 – E	229-07	81.80	CEI Pole
	238-12	90.70	NE ℄ Stand
	250-23	81.50	NW ℄ "
	253-30	94.80	SW ℄ "
	273-33	165.50	NE ℄ old Auction Bldg
	284-24	170.80	NW ℄ " " "
	287-21	169.60	CEI
	290-57	66.50	SE ℄ Ticket Office
	290-47	59.70	8" Maple
	293-54	51.40	8" Pine
	297-49	44.00	10" Pine
	309-34	37.90	NE ℄ Ticket Office
	325-32	54.90	NW ℄ " "
	15-25	67.50	CEI
	52-34	95.40	30" Maple
	85-16	67.50	NW ℄ old Foundation
	83-12	32.20	SW ℄ " "
	109-40	34.80	SE ℄ " "



Sta. E ∆ spk ± ℄ Claridon-Troy
(E)

7-0
8-0
9-0
+50
10
+50
11
11+60

11.59
9.08
2.51

CURVE TABLES.

Published by KEUFFEL & ESSER CO.

HOW TO USE CURVE TABLES.

Table I. contains Tangents and Externals to a 1° curve. Tan. and Ext. to any other radius may be found nearly enough, by dividing the Tan. or Ext. opposite the given Central Angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table I.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P. = 23° 20′ to the R. at Station 542+72.

Ext. in Tab. I opposite 23° 20′ = 120.87
120.87 ÷ 12 = 10.07. Say a 10° Curve.

Tan. in Tab. I opp. 23° 20′ = 1183.1
1183.1 ÷ 10 = 118.31.

Correction for A. 23° 20′ for a 10° Cur. = 0.16
118.31 + 0.16 = 118.47 = corrected Tangent.

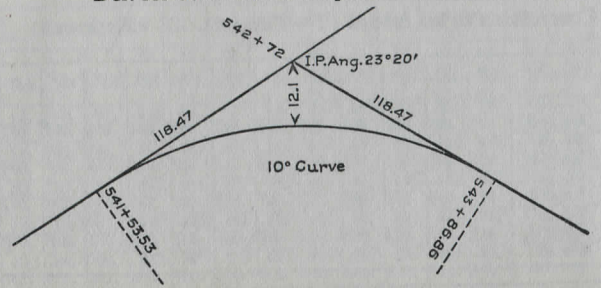
(If corrected Ext. is required find in same way)
Ang. 23° 20′ = 23.33° ÷ 10 = 2.3333 = L. C.

2° 19½′ = def. for sta.	542	I. P. = sta.	542+72
4° 49½′ = " " "	+50	Tan. =	1.18.47
7° 19½′ = " " "	543	B. C. = sta.	541+53.53
9° 49½′ = " " "	+50	L. C. =	2.33.33
11° 40′ = " " "	543+	E. C. = Sta.	543+86 86
	86.86		

100 − 53.53 = 46.47 × 3′ (def. for 1 ft. of 10° Cur.) = 139.41′ =
2° 19½′ = def. for sta. 542.

Def. for 50 ft. = 2° 30′ for a 10° Curve.

Def. for 36.86 ft. = 1° 50½′ for a 10° Curve.



Natural Trigonometrical Functions

Angle.	Sin.	Tan.	Sec.	Cosec.	Cotg.	Cosin.	
° ′							° ′
32	.5299	.6249	1.1792	1.887	1.600	.84805	58
10	.5324	.6289	1.1813	1.878	1.590	.84650	50
20	.5348	.6330	1.1835	1.870	1.580	.84495	40
30	.5373	.6371	1.1857	1.861	1.570	.84339	30
40	.5398	.6412	1.1879	1.853	1.560	.84182	20
50	.5422	.6453	1.1901	1.844	1.550	.84025	10
33	.5446	.6494	1.1924	1.836	1.540	.83867	57
10	.5471	.6536	1.1946	1.828	1.530	.83708	50
20	.5495	.6577	1.1969	1.820	1.520	.83549	40
30	.5519	.6619	1.1992	1.812	1.511	.83389	30
40	.5544	.6661	1.2015	1.804	1.501	.83228	20
50	.5568	.6703	1.2039	1.796	1.492	.83066	10
34	.5592	.6745	1.2062	1.788	1.483	.82904	56
10	.5616	.6787	1.2086	1.781	1.473	.82741	50
20	.5640	.6830	1.2110	1.773	1.464	.82577	40
30	.5664	.6873	1.2134	1.766	1.455	.82413	30
40	.5688	.6916	1.2158	1.758	1.446	.82248	20
50	.5712	.6959	1.2183	1.751	1.437	.82082	10
35	.5736	.7002	1.2208	1.743	1.428	.81915	55
10	.5760	.7046	1.2233	1.736	1.419	.81748	50
20	.5783	.7089	1.2258	1.729	1.411	.81580	40
30	.5807	.7133	1.2283	1.722	1.402	.81412	30
40	.5831	.7177	1.2309	1.715	1.393	.81242	20
50	.5854	.7221	1.2335	1.708	1.385	.81072	10
36	.5878	.7265	1.2361	1.701	1.376	.80902	54
10	.5901	.7310	1.2387	1.695	1.368	.80730	50
20	.5925	.7355	1.2413	1.688	1.360	.80558	40
30	.5948	.7400	1.2440	1.681	1.351	.80386	30
40	.5972	.7445	1.2466	1.675	1.343	.80212	20
50	.5995	.7490	1.2494	1.668	1.335	.80038	10
37	.6018	.7536	1.2521	1.662	1.327	.79864	53
10	.6041	.7581	1.2549	1.655	1.319	.79688	50
20	.6065	.7627	1.2577	1.649	1.311	.79512	40
30	.6088	.7673	1.2605	1.643	1.303	.79335	30
40	.6111	.7720	1.2633	1.636	1.295	.79158	20
50	.6134	.7766	1.2661	1.630	1.288	.78980	10
38	.6157	.7813	1.2690	1.624	1.280	.78801	52
10	.6180	.7860	1.2719	1.618	1.272	.78622	50
20	.6202	.7907	1.2748	1.612	1.265	.78442	40
30	.6225	.7954	1.2778	1.606	1.257	.78261	30
40	.6248	.8002	1.2808	1.601	1.250	.78079	20
50	.6271	.8050	1.2838	1.595	1.242	.77897	10

Cosin.	Cotg.	Cosec.	Sec.	Tan.	Sin.	Angle

Angle.	Sin.	Tan.	Sec.	Cosec.	Cotg.	Cosin.	
° ′							° ′
39	.6293	.8098	1.2868	1.589	1.235	.77715	51
10	.6316	.8146	1.2898	1.583	1.228	.77531	50
20	.6338	.8195	1.2929	1.578	1.220	.77347	40
30	.6361	.8243	1.2959	1.572	1.213	.77162	30
40	.6383	.8292	1.2991	1.567	1.206	.76977	20
50	.6406	.8342	1.3022	1.561	1.199	.76791	10
40	.6428	.8391	1.3054	1.556	1.192	.76604	50
10	.6450	.8441	1.3086	1.550	1.185	.76417	50
20	.6472	.8491	1.3118	1.545	1.178	.76229	40
30	.6494	.8541	1.3151	1.540	1.171	.76041	30
40	.6517	.8591	1.3184	1.535	1.164	.75851	20
50	.6539	.8642	1.3217	1.529	1.157	.75661	10
41	.6561	.8693	1.3251	1.524	1.150	.75471	49
10	.6583	.8744	1.3284	1.519	1.144	.75280	50
20	.6604	.8796	1.3318	1.514	1.137	.75088	40
30	.6626	.8847	1.3352	1.509	1.130	.74896	30
40	.6648	.8899	1.3386	1.504	1.124	.74703	20
50	.6670	.8952	1.3421	1.499	1.117	.74509	10
42	.6691	.9004	1.3456	1.494	1.111	.74314	48
10	.6713	.9057	1.3492	1.490	1.104	.74120	50
20	.6734	.9110	1.3527	1.485	1.098	.73924	40
30	.6756	.9163	1.3563	1.480	1.091	.73728	30
40	.6777	.9217	1.3600	1.476	1.085	.73531	20
50	.6799	.9271	1.3636	1.471	1.079	.73333	10
43	.6820	.9325	1.3673	1.466	1.072	.73135	47
10	.6841	.9380	1.3711	1.462	1.066	.72937	50
20	.6862	.9435	1.3748	1.457	1.060	.72737	40
30	.6884	.9490	1.3786	1.453	1.054	.72537	30
40	.6905	.9545	1.3824	1.448	1.048	.72337	20
50	.6926	.9601	1.3863	1.444	1.042	.72136	10
44	.6947	.9657	1.3902	1.440	1.036	.71934	46
10	.6967	.9713	1.3941	1.435	1.030	.71732	50
20	.6988	.9770	1.3980	1.431	1.024	.71529	40
30	.7009	.9827	1.4020	1.427	1.018	.71325	30
40	.7030	.9884	1.4061	1.422	1.012	.71121	20
50	.7050	.9942	1.4101	1.418	1.006	.70916	10
	.7071	1.	1.414	1.414	1.	.70711	45

Cosin.	Cotg.	Cosec.	Sec.	Tan.	Sin.	Angle

23
.6 higher

544.5
311.2
1096.4
1962.1
400
2362.1
137.05
2499.15

9.4
1.4
8.0
5.9
2.1

7.1
1.5
5.6

5.1
3.6

1370.5
274.1
1096.4

2478.7
2362.1
116.6

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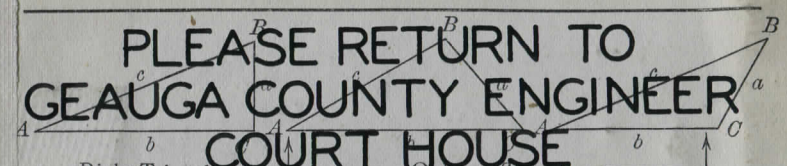
GEAUGA COUNTY ENGINEER
COURT HOUSE
CHARDON, O.
PHONE 250-X



Right Triangle — Oblique Triangles

Solution of Right Triangles

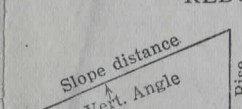
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a\sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c\sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90° - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90° - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A,$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180° - C, \tan \frac{1}{2}(A - B) = \frac{(a-b)\tan \frac{1}{2}(A+B)}{a+b}, c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a+b+c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{b\,c}}, \sin \frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{a\,c}}, C = 180° - (A+B)$
a, b, c	Area	$s = \frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{b\,c \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10′. From Table, Page IX. cos 5° 10′ = .9959. Horizontal distance = 319.4 × .9959 = 318.09 ft.

Horizontal distance also = Slope distance minus slope distance times (1 — cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. Cosine 5° 10′ = .9959. 1 — .9959 = .0041. 319.4 × .0041 = 1.31. 319.4 — 1.31 = 318.09 ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance $= 302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

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