1478

LEVEL BOOK

No. 380F

Our Leather Bound Engineers Note Books are carried in the following rulings:

No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.

No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.

No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.

No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

We also carry the Note Books listed above, bound in extra strong Fabri-Hide (otherwise the same quality of book), which can be furnished at a somewhat lower price.

In ordering Fabri-Hide covered books, add the letter *"F"* to catalog number.

POWDER HOUSE
CAÑON ROAD

Tom J. Allen
Project Supt.

For balance of Index see page 79.A

Alignment

16+14.24 BC.

13+00

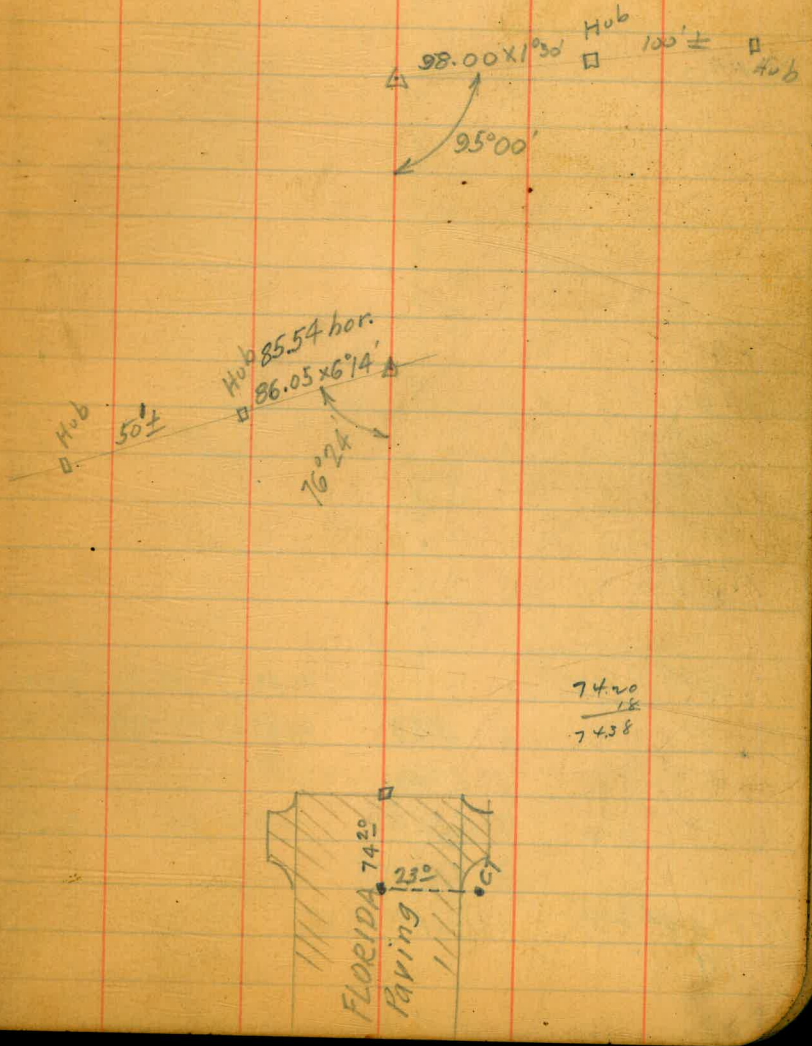
7+50

3+00

0+00

Ties.

12/1/33



L 205 R 18.5

29+00

28+61±

26+50

23+00

17+43.66 E.C. Δ = 4°55' R = 1500 T = 64.40 L = 128.72 Det per ft 68.757"

17+00 43.02 2° 27' 30" 44.21

49.29 1° 37' 28" 50.60

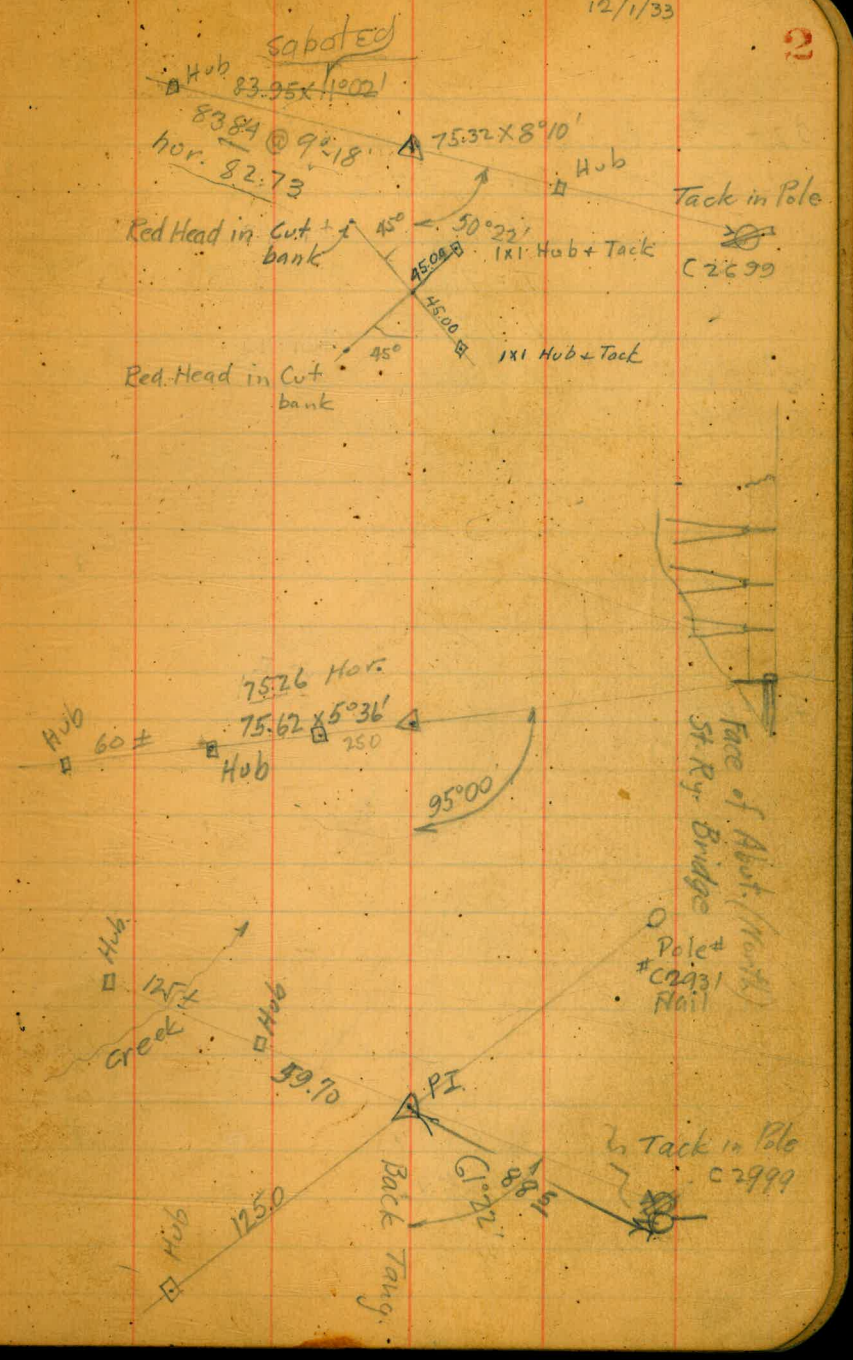
16+50 34.47 0° 40' 11" 35.50

16+14.94 B.C.

35.06

12/1/33

2



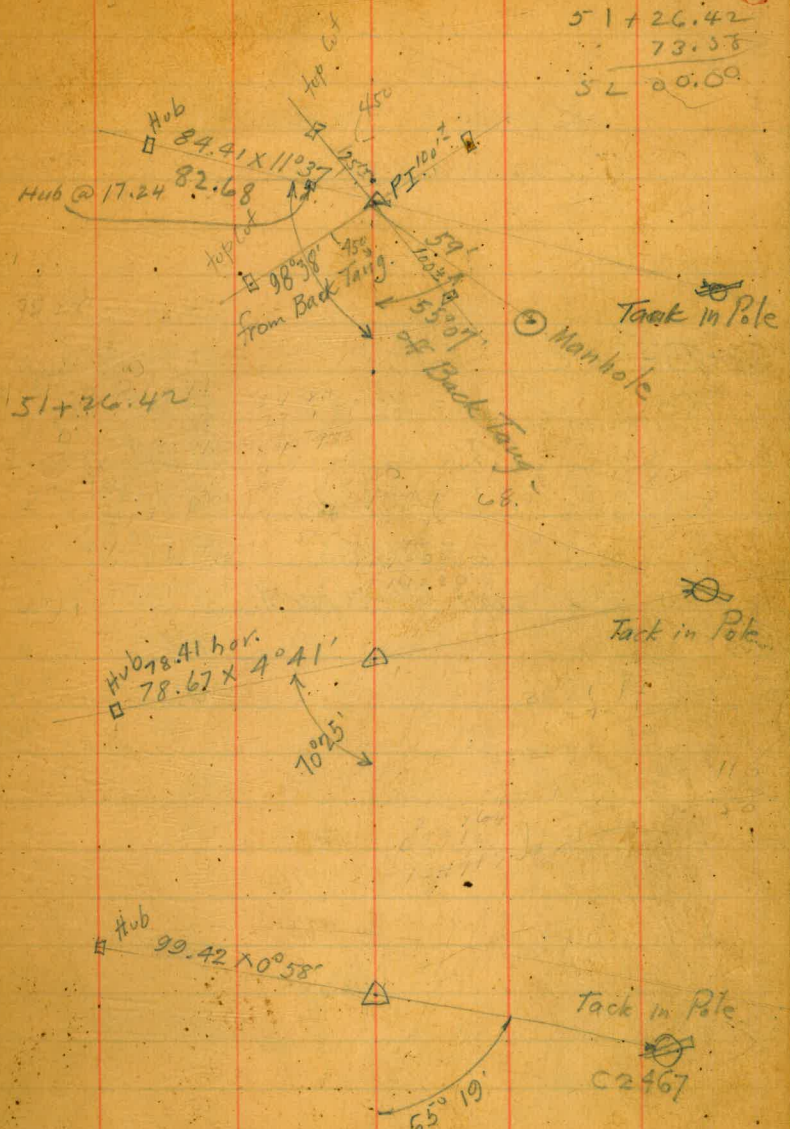
	L		R
	184	Def.	18.5
52+73.46 E.C.	23.76	2° 48' 30"	23.17
52+50 Δ = 5°37'		2° 21' 37"	
R = 1500			
52+00 T = 73.58	50.01	1° 24' 19"	49.39
L = 147.04	74.45		
	23.56		
51+50 E = 1.80	23.84	0° 27' 01"	23.27
51+26.42 B.C. Def. per ft. 68.575"			

4.8+00

37+25

26.54 50.01 101.22 12/1/33 3

51+26.42
73.58
S.L. 00.00



Alignment

20.5R

18.5R

D = 14° 21.6'

@ 18 out L = 309.920

16 in L = 287.765

16R.

68+75.05 E.C. 21°28½

+50 edge Pave 23.85 24.04

68+16.15 ℄ int

68 Δ = 42°57' 19°41'

+50 ⊙ LC 159.04 R = 400 16°06'

T = 157.36 12°31'

67 L = 299.85 8°57'

+50 Def. 0°04.3' per ft. 52.56 5°22' 47.69 47.98

66 26.17 1°47' 23.64 23.80

65+75.20 B.C. 0°00'

60+00

Ties

12/1/33

4

Pavement @ 67+88

Tack in header Pershing Dr. Pavement.

61.00

53°43'

90.60

Tack in Pole #C1624

51.42 X 11°03'

50.47

94°18'

Tack in Pole C1704

Levels

Sta.		+	HI	−	El.
BM.					197.99
		1.467	199.457		
0+00	End pave. Florida St.			5.44	194.02
0+00.20	Hub			5.27	194.19
1+00				3.7	195.76
1+50				4.1	195.36
2+00				5.3	194.16
T.P.				4.343	195.114
		0.818	195.932		
3+00	Hub			3.858	192.07
3+40				8.9	187.03
4+00				10.0	185.93
5+00				10.9	185.03
5+15				9.7	186.23
5+50				9.9	186.03
6+00				11.4	184.53
T.P.				10.830	185.102
		5.614	190.716		
B.M. #1	200' W. 7+50 Pole # C3225			7.216	183.500
		7.216	190.716		
6+88				8.8	181.92
7+00				6.0	184.72
7+12				3.2	187.52
7+50	Hub			2.532	188.136
7+75	W.W.			5.8	184.92

12-2-33
AE Franklin
HL Landsseer Notes
J.L. Partridge Rod

Grade R −1.907

SW. Cor. Myrtle & Florida B/P

194.04			0	
194.12	−1.1 / 32.7	0 / 14	C 1.6	+64 / 32.4
192.21	+0.6 / 26.6		C 1.9	+5.0 / 31
		0 / 24 @ +65		
190.30	−24 / 34.6	0 / 13	C 1.8	+4.3 / 30.3
			0 @ +26	
188.40	−20 / 34		F 2.5	0 / 26
186.49	−24 / 34.6		F 1.5	0 / 22.6 +0.5 / 26.7
			0 @ +15	
185.54				
184.58	−2.9 / 35.5		0	+9.9 / 35.9
				0 / 15 @ 6+50
			0 @ +94	
182.68	−33 / 36.0	0 / 19	C 2.1	+10.5 / 36.5
180.83	+4.1 / 30.1		C 7.3	+10.5 / 36.5

Revised Bases

Sta.		+	H.I.	−	El
8+00			190.716	5.0	185.72
9+00				10.0	180.72
T.P.				12.722	177.994
		2.023	180.017		
10+00	Hub			2.1	177.92
10+75				7.5	172.52
11+00				7.8	172.22
11+70	Top bank		141.23 157.00	8.0	172.02
11+73	Wash			11.2	168.82
11+85	"		14.23	11.2	168.82
11+88	Top bank			9.1	170.92
12+00				8.4	171.62
12+16	W.W			8.9	171.12
13+00	Hub			7.335	172.682
14+00				11.1	168.92
BM. #2 60'W 12+45			Pole # C3099	1.410	178.607
		1.410	180.017		
T.P.				12.882	167.135
		2.048	169.183		
15+00				3.4	165.78
15+35				4.7	164.48
15+50	Wash			7.9	161.28
15+75	Top bank			6.0	163.18
16+00				5.8	163.38
16+14 94	B.C			5.660	163.52

0/26 @ 8+21

Grd.	R	℄	L
180.77	+ 2.1/28.1	C 5.0	+ 8.5/34.5
178.86	− 0.8/32.2	0/20 C 1.9	+ 5.7/31.7
176.96	− 2.1/34.1	0/8 C 1.0	+ 7.7/33.2
175.05	− 2.0/34.0	F 2.8	− 1.7/33.7
	11+90 0/26		
173.14	+ 1.8/27.8	0/17.6 F 1.5	− 4.8/38.2
171.23	+ 3.2/29.2	C J.A. 0/16.	− 2.7/32.2
169.32	0/26	0/4.6 F 0.4	F −3.4/36.1
	Side shot		
167.42	− 0.8/32.2	F 1.7	− 4.4/37.6
166.5			
165.51	− 0.3/31.5	F 2.1	− 0.5/31.7
165.23			

Sta		+	H.I.	−	Elev
			169.183		
(16+79.3	P.I.)			5.1	164.08
17+35	Top bank			5.3	163.9
17+43.66	E.C.				
17+50	W.W.			7.9	161.3
17+55	Top bank			5.6	163.6
17+90				6.4	167.8
18+00	W.W			7.3	161.88 ✓
18+10				6.0	163.18
19+00				8.2	160.98 ✓
20+00				9.9	159.28 ✓
T.P.				9.630	159.553 ✓
		4.606	164.159		
21+00				5.6	158.55 ✓
21+50				7.0	157.15
21+75				8.8	155.35
21+88	W.W.			10.2	153.95
22+25				5.7	158.45
22+50				5.9	158.25
22+63				4.3	159.85
23+00	~~Hub~~ out			4.822	159.34 ✓
24+00				7.6	156.55 ✓
24+85				9.8	154.35
25+00				9.7	154.45 ✓
BM #3	150' W 21+50 Pole #C 2845			7.090	157.069
		7.090	164.159 ✓		

Rate = −1.344 ½ × 1.4907

Grade	R		℄		L
164.00	−22/34.3		C 0.1	0/0	+0.5/26.5
			℄ C 0.3	0/13.7	
163.14			0.0		17+42
			0.0		+55
162.38	−2.0/34		F 0.50	0/9.2	+7.1/28.1
161.03	−1.0/32.5		Grade		+4.0/30.0
159.69	−0.8/32.2		F 0.4	0/3	+3.7/29.7
158.34	−50/38.5	0/2	C 0.2		+2.0/28.0

Note: Revised Grades from Sta 22+00 to Sta 38+50 See Pages 67, 70, 71

155.66	−2.6/34.9	0/21.7	C 3.7		+6.3/27.3
154.31	−1.4/33.1	0/19.8	C 2.2		+7.3/33.3
152.97	−2.0/34.0	0/9.2	C 1.4	+7.5/33.5	

Side Shots

Sta	+	H.I.	−	Elev
		164.159		
T.P			8.745	155.414
	8.625	164.039		
26+00			6.2	157.8
26+20			4.7	
26+50	Hub		4.025	
27+00			5.0	159.0
27+15			5.3	158.7
27+40		30+00	3.8	
27+75		80.45	6.1	
27+85		24+19.55	7.5	
27+96	W.W		13.0	
28+00			10.7	153.3
28+35			8.3	
28+50		24+1955	6.0	157.1
29+00	Hub		4.700	159.3
30+00			8.4	155.6
T.P			10.870	153.169
	0.352	153.521		
BM #4	150' W 30+45 Pole # C2635		12.446	141.075
	12.446	153.521		
31+00			3.0	150.52
32+00			11.7	141.82
T.P.			12.320	141.201
	0.546	141.747		

Grade	R	℄	I
151.63	− 2.7 / 35.0	0 / 20 C 6.2	+ 16.1 / 42.1
150.28	+ 4.6 / 30.6	C 8.1	+ 18.5 / 44.5
148.94	+ 2.6 / 28.6	C 4.4	+ 6.8 / 32.8
148.3	+ 39 / 29.9	C 8.8	+230 / 49
147.59	+ 4.0 / 30	C 11.7	+ 28.3 / 54.3
146.25	+ 5.2 / 31.2	C 9.4	+ 20.0 / 46.0
146.9	El 157.1 + 3.7 / 29.7	C 10.2	+ 25.3 / 51.3 29+80
	side shot		
144.90	+ 2.5 / 28.5	C 5.6	+ 10.7 / 36.7
143.56	+ 81 00 − 44 / 27.6	F 1.7 0 / 10	+ 60 / 32

8

Sta.	+	H.I.	−	Elev	Grd	R	℄	L
		141.747						
33+00			3.6	138.14	142.22	-64 / 40.6 / -7.0 / 41.5	F 4.1	0 / 26
34+00			5.2	136.55	140.87	-7.9 / 42.0	F 4.3	-06 / 31.9
35+00			8.6	133.15	139.53		F 6.4	-2.0 / 34
35+50			9.7	132.05				
36+00			8.4	133.35	138.19	-8.3 / 43.5 / -4.5 / 37.8	F 4.8	0 / 26
37+00			5.6	136.15	136.84		F 0.7	0 / 20 / +1.7 / 27.7
37+25	Hub		5.345	136.402				
T.P			5.345	136.402				
		2.844	139.246					
38+00			3.8	135.45	135.50	-3.9 / 3.7	Grade	+1.2 / 27.2
38+30 52	℄ Bridge	out	4.12	135.126				
39+00			4.0	135.25	135.50	Ret ? on Paving	F 0.3	0 / 16.4 / 0 / 24 / -1.6 / 30.4
39+08	N Edge Pave.		3.74	135.506		Note for Returns to East, West Road See Page 66		
39+21	℄ Pave		3.72	135.53	135.50			
39+35	S Edge Pave.		3.64	135.60				
40+00			7.3	131.95	135.50	-10.8 -10.4 -8.8 -3.8 / 47.2 31 14.6 70	F 3.6	-3.8 / 18.2 -9.6 / 26 -10.7 / 31 -8.0 / 43.0
40+85	(40+50 Gr = 134.6 EI 128.6 − 6.7 / 41.1 F 4.0 − 4.8 / 38.2)		11.7	127.55				
41+00			11.1	128.15	133.72	-10.6 / 46.9	F 5.6	-2.6 / 34.9
41+50			7.2	132.05				
42+00			7.5	131.75	131.93	-5.6 / 39.4	F 0.2	0.0 / 1.0
43+00			10.7	128.5	130.15	6.2 / 40.1	F 1.6	0 / 20.5 / +2.3 / 28.3
T.P.			10.294	128.952				
		1.450	130.402					
44+00			2.9	127.50	128.36	-6.8 / 41.2	F 0.9	0 / 19.0 / +3.1 / 29.1

Sta	+	H.I.V	-	Elev
		130.402		
45+00			4.9	125.50
46+00			6.5	123.90
47+00			H	122.7
B.M. # 5 200'W 46+45 Pole # C 84			12.250	118.152
	12.250	130.402		
48+00	Hub		7.185	123.217
48+50			7.1	123.30
49+00			10.9	119.50
T.P			10.145	120.257
	7.186	127.443		
49+50			9.9	117.54
50+00			8.4	119.04
50+50			10.0	117.44
51+00			10.2	117.24
51+26 42	B.C. Hub		6.86	120.583
51+50			4.6	122.84
52+00	E.P.I.		5.8	121.64
52+73 46	E.C.	19.1	19.55	107.89
53+00		11.0	21.45	106.00
53+90		7.8	18.25	109.20
53+85		2.9	12.35	115.10
T.P.			12.555	114.888
	2.100	116.988		
54+00			3.5	113.49

Grd	R		℄	I
126.58	-7.1 / 41.6		F 1.1	0/20 +7.5 / 28.5 +5.8 / 31.8
124.80	-4.6 / 37.9		F 0.9	0/11.3 0/16 +5.7 / 31.7
123.01	-3.8 / 36.1		F 0.3	
		Curb Shot	0/0 +28	
121.22	-12.4 / 49.6	0/12.9	C 2.0	+7.2 / 33.2
119.44	-11.0 / 47.3	0/0.3	C 0.1	+8.0 / 34.0
117.66	-4.2 / 37.3	0/11.0	C 1.4	+6.6 / 32.6
115.87	-4.4 / 37.6	0/4	C 1.4	+11.8 / 37.8
115.40				
114.98	-7.5 / 42.3	0/17.7	C 8.0	+17.9 / 43.9
114.09			C 7.5 PI	
112.77 52 PI →	-8.1 / 43.1	0/11.6	C 6.9	+18.0 / 44 +7.8 / 38.8 +11.7 / 38.6
112.31	-7.7 / 41.6		F 6.3	0/16.5
53+50	-7.1 / 41.1		F 4.2	0/8.0 +9.9 / 35.9
110.52	-8.1 / 43.1	0/14.6	C 3.0	+8.2 / 34.2

Sta	+	H.I.	−	Elev	Grd	R		℄		I	
		116.988									
55+00			6.7 ✓	110.29	108.74	−2.1 / 34.1	0 / 9.6	C	1.5 ✓	+5.8 / 31.8	
56+00			7.8 ✓	109.19	106.96	0 / +0.8 / 26.8		C	2.2	+4.3 / 30.3	
57+00			11.0 ✓	105.99	105.17 ✓	−1.1 / 32.7	0 / 17	C	0.8	+4.6 / 30.6	
T.P.			10.180	106.808							
	2.395	109.203									
58+00			4.2 ✓	105.00	103.38	−1.0 / 32.5	0 / 17.8	C	1.6	+6.2 / 32.2	
59+00			4.6 ✓	104.60	101.60	0 / 26	0 / 2.1	C	3.0	+3.5 / 33.5	
B.M.#G 150'W 59+85 Pole #1704			11.284	97.919							
	11.284	109.203									
59+50			4.8	104.40							
60+00 Hub			6.26 ✓	102.94	99.82	−2.2 / 34.3	0 / 17.3	C	3.1		+10.6 / 36.6
60+50			8.5	100.70							
61+00			11.6 ✓	97.60	98.04		−3.6 / 36.4	F	0.4	0 / 2	+10.1 / 36.1
T.P.			12.643	96.560							
	1.478	98.038									
62+00			2.3 ✓	95.74	96.25	−3.8 / 36.7		F	0.5	0 / 11	+3.2 / 29.2
63+00			4.4 ✓	93.64	94.47		−3.5 / 36.3	F	0.8	0 / 5.3	+4.8 / 30.8
64+00			6.3 ✓	91.74	92.68		−2.7 / 35	F	0.9	0 / 7	+3.7 / 29.7
65+00			6.6 ✓	91.44	90.89	−1.5 / 33.3	0 / 9	C	0.55	+2.6 / 28.6	
65+89.88 Hub			10.31	87.728							
T.P.			10.312	87.726							
	4.696	92.422									
B.M.#47 Pole #C1604			4.416	88.006							

Out Pole moved see p. 34

Revised see p 30

sidesho[t]

Intermediate tsos see p 22

Revised Bases p 25–31 X Sect on

	El	+	π	+
BM #7	88.006		92.88	4.88
65+89.88 BC	87.73	5.15		
66+00	87.58	5.3		
66+50	87.88	5.0		
67+00	88.58	4.3		
67+50 P.C.	87.68	5.2		
67+88.8	87.00	5.88		
68+00				

Rwd Curve
Checked upto 1468
Rwd
Rwd

Grade	R	℄	I
		F 3.6	
90.7	$-\frac{2.2}{34.8}$	F 2.5	$-\frac{.09}{32.8}$
90	-2.2	F 2.4	$-\frac{0.7}{32}$
89.11	$-\frac{1.7}{33.5}$	F 1.2	$\frac{0}{17}$ $+\frac{1.8}{27.8}$
88.22	$-\frac{2.3}{34.4}$ $\frac{0}{14}$	C 0.3	
87.33	$-\frac{2.3}{34.5}$ $\frac{0}{18.4}$	C 0.3	
	-		
	$-\frac{2.0}{34.0}$	0.0	

Sewer Location, RE Pit. Rd. ℄

BM # 4 El = 141.07
+ 0.01
141.08
− 8.14
132.94 Rim

13294
4.55
Top of 12" pipe

37+25

36

3.27 18"
17+43
MH #

-5.42 INV-

BM # 4 141.07
+9.90
29+0 150.97
28 − 6.12
Rim 144.85
− 5.42
Invert = 139.43

-5°-0'
20.3'
MH
22.40

BM 17861
23+0 + 0.79
17940
22 − 12.16
TP 16724
+ 3.85
INV 17109
− 6.90
Rim 164.19

Rim 157.70
− 6.35
151.35
Invert

29.25'
11°-06'
MH
12"

164.18
4.28
168.47
6.65
Rim = 161.82
7.25
Branch
154.57 Invert

#11
3348
18
17+43.66 EC

17.98'
58°
MH #5
12"
37'
24.3'
59°-38'

16+793 P.I.

Rim 164.18
5.25
158.93

58.6'
55°-00'
MH #4

Top 12" pipe thru line = 158.93

Channel Change
Loc Poles

13+00

31°-50'
132'
PO
Power Line
59°-25'
51°-19'
61'
76'
Channel Change
Dead Man

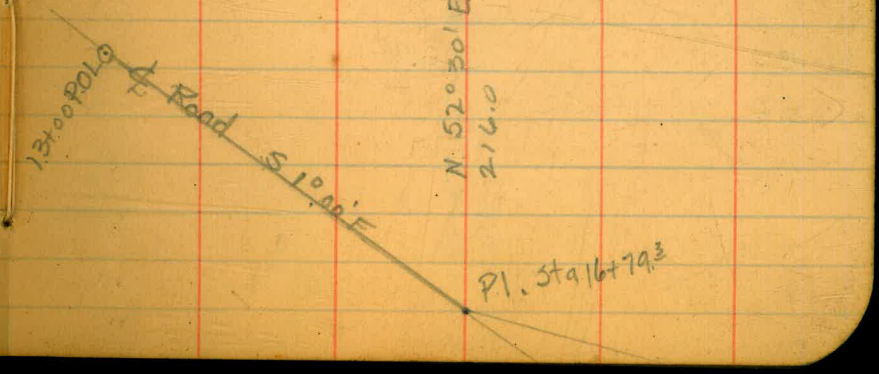
12 BM # 2 17861
+ 3.70
18231
− 3.84
Rim 17847
1.29
Invert = 165.57
4 rise North

32°-44'
136.2'
MH #3

Drainage Area Sta 16+79.3

Sta	H.I	Vert Δ	Int.	Horiz.
12+45			5.34	
7+11			4.95	
2+16	5.2	-5'20'	2.16	
	5.2			
0+00 = P.I.	Sta 16+79.3			

Total Area 40.5 Acres



	Int.
23+15	1.97
21+18	2.40
18+78	3.85
14+93	2.48

Note Add + 200 x 600 ± Tennis Courts

40+87	4.56
36+31	1.98
34+33	5.06
29+27	3.00
26+27	3.12

Drainage South starts at this point

S 44°30'W 456. S 75°00'W

S 40°15'E 198. S 44°30'W

S 4°15'E 506.0

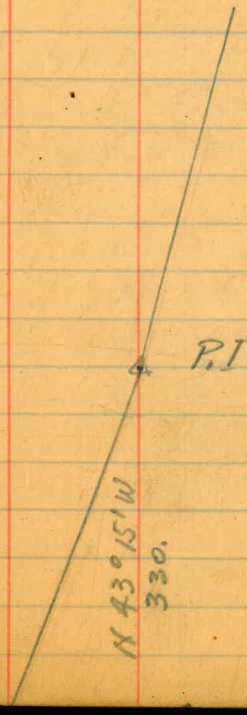
S 32°30'E 300.0

S 32°45'W 312

52+57	0.53
52+04	1.50
50+54	2.25
48+29	221 × 2 = 442
43+87	3.00

S 75°00'W 300.0
S 87°45'W 442
N 40°00'W 225.
N 46°45'W 150.
N 63°30'W 53.0

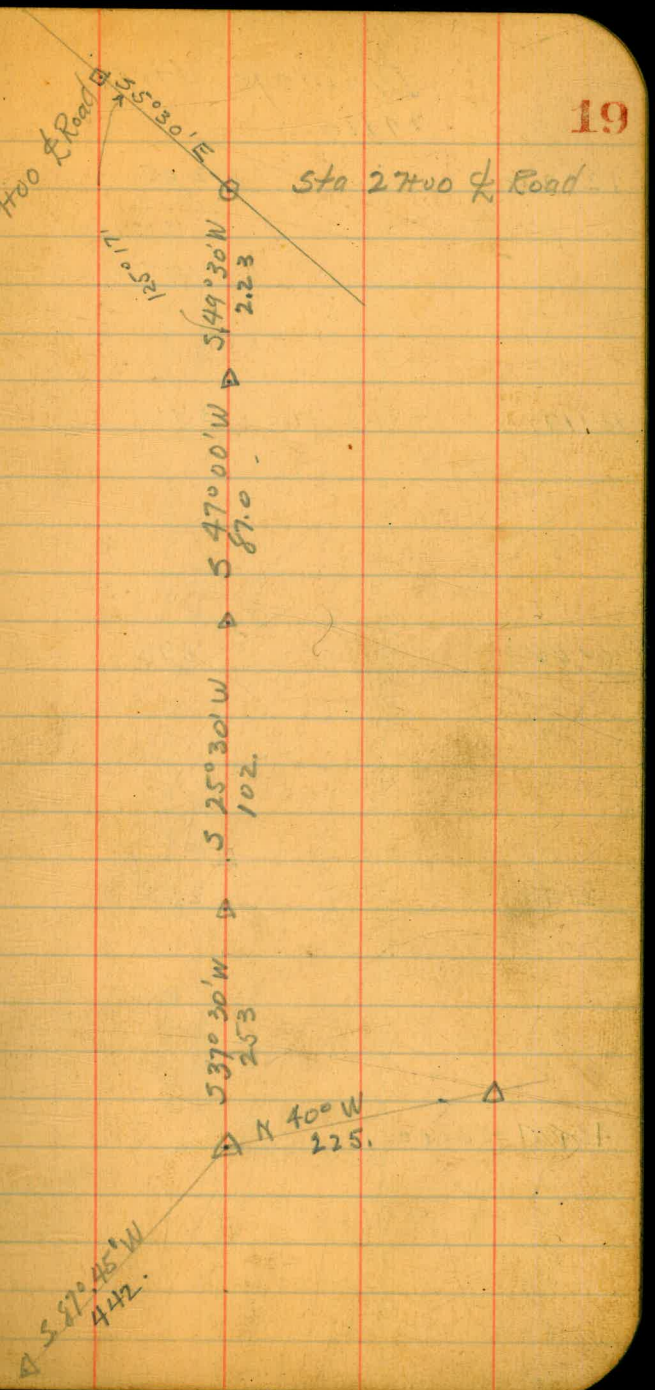
Sta	H.I	Vert Δ	Int	Horr
56+87	5.25	-10°36'	3.30	



Drainage Area from Sta 16+79.3 to 27+00

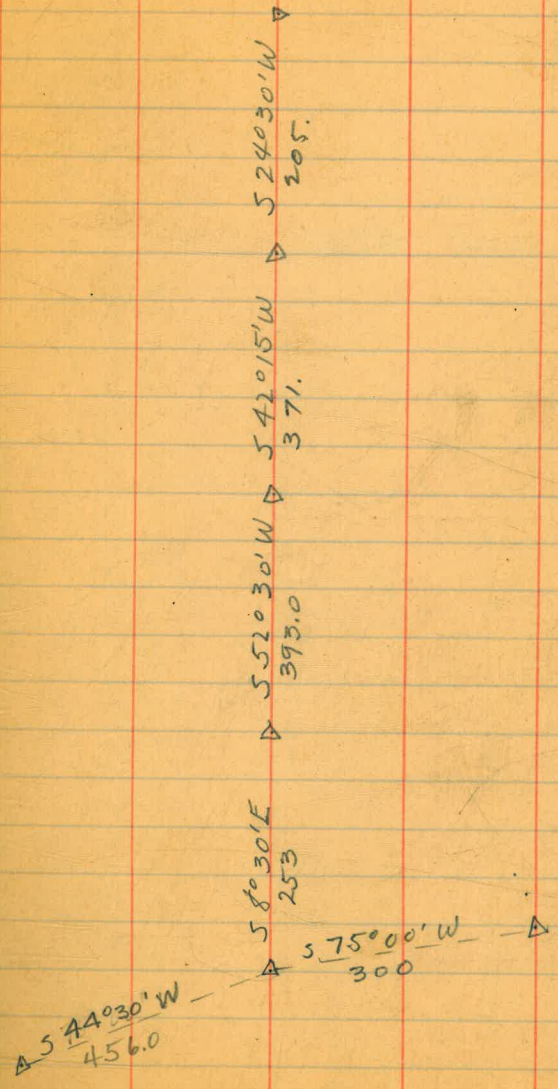
	Ht.	Vert ∠	Int.
6+65	4.5	-16°35'	2.23
4+42			0.87
3+55			1.02
2+53			2.53
40+87 = 0+00			

Total Area 14.8 Acres

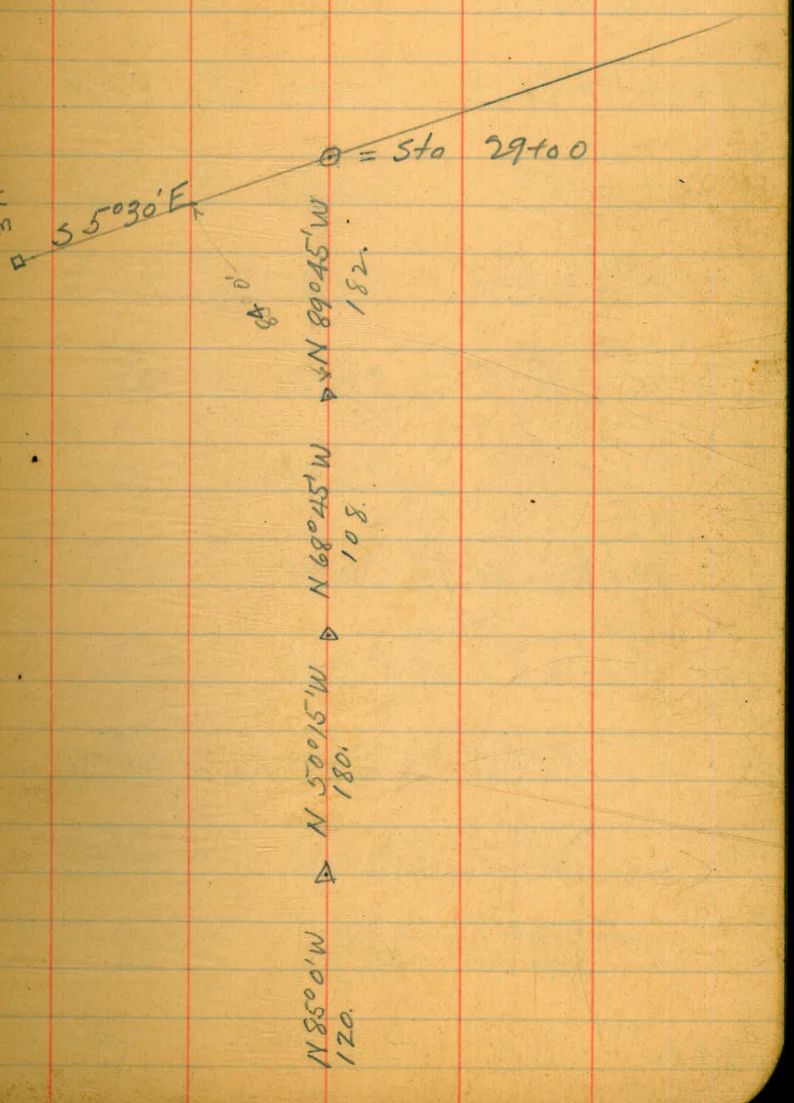


Drainage Area 27+00 to 29+00

12+22	2.05
10+17	3.71
6+46	393
2+53	2.53
40+87 = 0+00	



	H.I	Vert A	Int.
19+12		+16° 05'	182
17+30			1.08
16+22			1.80
14+42			1.20



stas see p 11

Intermediate +50 XSects

R -6.7 ℄ 4.9 -4.8 I.

+50	R		℄		I
41+50	132.8 -4.4 37.6	F 0.5	0 20		+ 2.9 28.9
42+50	131.08 -5.5 39.8	F 1.3	0 19.3		+ 2.4 28.4
43+50	129.2 -5.8 39.7	F 1.4	0 20.5		+ 2.3 28.3
44+50	127.5 -5.8 39.7	F. 1.2	0 20		+ 1.8 27.8
45+50	125.7 -3.8 36.9	F. 0.6	0 16		+ 3.9 29.9
46+50	123.9 -3.0 35.5	C. 0.9			+ 5.4 31.4
47+50	121.8 -5.2 33.8	0 12	C. 0.9		+ 4.3 30.3
48+50	120.3 -11.8 48.7	0 15	C. 2.9		+ 7.4 33.4
49+50	118.55 -8.3 43.2	F 1.1	0 2.5		+ 9.5 35.5
50+50	116.77 -2.3 34.5	0 5	C. 0.8		+ 8.9 34.6
51+50	115.0 -7.5 41.7	C. 8.0			+ 17.0 43.
52+50	113.7 -7.5 42.8	F. 2.8	0 4		+ 16.3 42.3

12/8/33
Landwer
Frankl
Partridge

	R	℄		I
53+50	111.4 -7.1 41.6	F 4.2 0 0 +72		+ 9.9 35.9
54+50	109.6 -9.0 44.5	0 9.4	C 1.3	+ 6.4 32.4
55+50	107.8 -1.5 33.4	0 19	C 2.2	+ 5.5 31.5
56+50	106.1 -1.0 32.5	0 11.6	C 1.0	+ 4.5 30.5
57+50	104.3 -1.0 32.5	0 21.3	+1.7	+ 6.6 21.6
58+50	102.5 0 26		C.0.7	+ 6.0 31.0
59+50	101.7 0 26		C. 3.8	+ 8.5 34.5
60+50	98.9 -2.8 35.2	0 8	C. 1.6	+ 13.3 39.3
61+50	97.15 -3.5 36.8	F 0.2 +88 0	0 15	+ 5.5 31.5
62+50	95.4 -3.6 36.4	F 0.6	0 3.1	+ 4.1 30.1
63+50	93.6 -3.3 36.0	F 0.9	0 6	+ 5.7 31.7
64+50	91.6 -2.0 34	F 0.9 65 +115 0	0 8.5	+ 2.0 28
65+50	90.6 -2.1 34.2	F 2.4		- 0.8 32.2

Revised Bases sec 24 on sta X

Intermediate Grades

	R	℄	I
27+50	El 1595 / G 149.6 +30 / 29.0	C 0.9	+16.0 / 42.0
28+50	El 161.7 / G	page 8	
29+50	14.8 +4.5 / 30.5	C 1.2	+27.4 / 53.4
30+50	Grey Excavating		
31+50	El 146.8 -1.9 / G 144.3 24	0 / 15.5 C 2.5	+7.0 / 33.
32+50	El 139.6 -7.3 / Gr 142.9 42.0	F 3.3 ✓ 0 / 16.3	+4.6 / 30.6
33+50	El 137.0 -5.8 / G 141.5 39.7	A F 3.5 X	0 / 26
34+50	El 134.8 -7.4 / G 140.2 42.1	F 5.4 ✓	-0.3 / 31.5
35+50	El 132.0 -8.0 / Gr 138.9 43.0	F 6.9 ✓	-1.3 / 33.0
36+50	El 135.8 -8.2 / Gr 137.5 43.3	F 1.7 ✓ 0 / 20.2	+1.3 / 27.3
37+50	El 136.0 -3.4 / Gr 136.2 36.1	F 0.2 ✓ 0 / 18.7	+1.5 / 27.3
38+50	El 135.2 -4.4 / Gr 135.5 37.6	F 0.3 ✓	0 / 26
39+50	El 135.0 -6.8 / 135.5 43.2	F 0.5	-0.5 / 31.7

	R	℄	I
15+50	E 161.0 / G 166.4 -1.0 / 32.5		F 5.4 ✓ -2.6 / 34.9 { 10' E
16+50	E 1639 / G 164.6 -32 / 358		F 0.7 ✓ 0 / 15 0 / 26
17+50	E 161.5 / G 163.1 +0.4 / 26.6	0 / 6C	F 1.6 ✓ 0 / 6 +2.5 / 28.5
18+50	El 162.6 -2.0 / G 161.7 34.0	0 / 24.9	C 0.9 ✓ +3.2 / 29.2
19+50	El 160.8 -3.8 / G 11 36.7		0.0 ✓ +3.2 / 29.2
20+50	El 158.7 -2.3 / G 159.0 34.6		F 0.3 ✓ 0 / 13.3 +3.3 / 29.3
21+50	El 157.1 -3.4 / G 157.6 36.1		F 0.5 ✓ 0 / 3 +1.8 / 27.8 { 10' E
22 +15	F 153.9 / G 157.0 -3.8 / 36.7		F 3.1 ✓ 0 / 12.8 Gr+1.5 +36 / 29.6 { Stake 10 E
22+50	1584 / 156.4 -43 / 37.5	0 / 4.	C 2.0 ✓ +8.5 / 34.5 12/12/33
23+50	E 156.6 / 155.0	0 / 26.0	C 1.6 ✓ +4.6 12/11/33
24+50	E1-156.0 / G. 153.6 -1.2 / 32.8	0 / 21.3	C 2.4 ✓ +7.1 / 33.1
25+50	El 154.7 / 152.3 -2.5 / 34.8	0 / 14.4	C 2.4 ✓ +8.1 / 34.1 (R+F. 2.5 in W 5')
26+50	1601 / 151.0 +2.0 / 28.0		C. 9.1 ✓ +16.3 / 42.3

	R	℄	I
3+50	E 186.9 G 189.3 — 2.2 / 34.3	F 2.4	0 / 7.5 + 50 / 31
4+50	E 185.3 G 187.4 — 3.0 / 35.5	F 2.1	— 2.0 / 34
5+50	E 186.0 G 185.5 — 3.4 / 36.1	C 0.5	0 / 7 + 1.5 / 27.5
6+50	E 182.3 G 183.6 — 2.7 / 35.1	F 1.3	0 / 14.5 + 106 / 36.6
7+50	page 5.		
8+50	E 182.3 G 179.8 — 1.8 / 33.7	C 2.5	0 / 19.5 + 64 / 32.4
9+50	E 179.0 G 177.9 — 1.0 / 32.5	C 1.1	0 / 12.2 + 52 / 31.2
10+50	E 174.7 G 176.0 — 3.2 / 35.8	F 1.3	0 / 6.8 + 5.2 / 31.2
11+50	E 171.6 G 174.1 — 2.5 / 34.8	F 2.5	— 3.5 / 36.3
12+50	E 173.3 G 172.1 + 3.5 / 29.5	C 1.2	0 / 11.3 — 1.6 / 33.3
13+50	E 170.3 G 170.3 + 2.0 / 28	0	— 1.7 / 33.6
14+50	E 167.0 G 168.4 — 0.2 / 31.3	F 1.4	— 4.0 / 37

Inter X sects. 12/11/33
Landmeer Frankel Partridge

	R	℄	I
0+50	E 195.6 G 193.1 — 0 / 26	C 2.5	0 / 15 + 70 / 36.5
1+50	E 195.4 G 193.2 + 0.9	C 2.2	+ 57 / 31.7
2+50	E 193.6 G 191.3 — 1.2 / 32.8	C 2.3	0 / 23.7 + 43 / 30.3
3+0	— 2.4 / 34.6	C 1.8	0 / 13 + 43 / 30.3

X Sects on Revised Bases See p 25

Dec 13 - Revised Road Beds Fill = 46 Cut = 42

	R	℄	L
0+00			
0+50	5' W. } 0/21	+2.5	+ 6.3/27.3
1+00	5 W } - 1.3/25.1	0'/12.5	+1.6 + 5.0/26.0
+25	0/21		
1+50	+ 1.4/22.4	+2.2	+ 5.0/26.0
2+00	+ 0.8/21.8	+1.9	+ 4.5/25.5
2+50	+ 0.4/21.4	+2.3	+ 3.9/24.9
3+00	- 2.6/26.9	0/13	+1.8 + 4.0/15
		0 +26	
+50	- 2.1/26.1	-2.4	0/7 + 5.0/26.0
4+00	- 2.3/26.5	-2.5	- 1.3/25.1
+50	- 3.1/27.6	-2.1	- 2.3/26.5
5+00	- 3.0/27.5	-1.5	0/21
+50	- 2.3/26.5	0/5.8 +0.5	+ 2.7/23.7

X Sects ℄ or F from Stakes + notes

25

	R	℄	L
6+00	- 2.0/26.0	0	+ 8.3/29.3
+50	- 3.0/27.5	-1.3	0/14.5 + 7.8/28.8
		0 +94	
7+00	- 1.1/24.8	0/18.6	+2.1 + 9.5/30.5
+50	5' W. } + 4.6/21.6	+7.3	+ 10.2/31.2
8+00	+ 2.9/27.5	+5.0	+ 7.4/28.4
+50	- 1.3/25	0/19.4	+2.5 + 5.2/26.2
9+00	0/21	+1.9	+ 5.2/26.2
+50	- 0.6/23.9	0/12.2	+1.1 + 4.6/25.6
10+00	- 1.4/25.1	0/8	+1.0 + 5.9/26.9
		0 +34	
+50	- 3.0/27.5	-1.3	0/7.4 + 3.2/24.2
11+00	- 3.0/27.5	-2.8	- 2.5/26.8
+50	- 2.6/26.9	-2.5	- 3.8/28.7

	R	℄	L
12+00	+ 1.7 / 22.2	0 / 17.7 − 1.5 (0+82)	− 4.5 / 29.8
+50	+ 2.9 / 23.9	+ 1.7 / 0 / 11.4	− 1.5 / 25.3
13+00	+ 2.1 / 23.1	+ 1.4 / 0 / 16	− 1.3 / 25 {5' E
		(0+23)	
+50	+ 1.2 / 22.2	0	− 1.7 / 25.7
14+00	0 / 21	0 / 4.6 − 0.4	− 4.1 / 29.3
+50	− 1.0 / 24.5	− 1.4	− 4.3 / 29.5
15+00	− 1.0 / 24.5	− 1.7	− 3.7 / 28.6
+50	− 1.4 / 25.1	− 5.4	− 0.7 / 24
16+00	− 1.5 / 25.3	− 2.1	− 1.4 / 25.1 {5' E
+50	− 2.8 / 27.2	− 0.7 0 / 15.7	− 0.3 / 20.5 {5" E
℄ CURVE 3 16+79.3 Δ	− 1.2 / 24.8	0 / 3 + 0.3 0 / 13	+ 1.0 / 22.0
17+50	+ 0.9 / 21.9	0 / 6.6 − 1.6 0 / 6	+ 2.3 / 23.3

	R	℄	L
18+00	− 1.2 / 24.8	− 0.5 0 / 19	+ 1.7 / 22.7
+50	+ 0.5 / 21.8	+ 0.9	+ 2.7 / 25.1
19+00	− 0.3 / 23.5	0	+ 2.9 / 25.5
+50	− 1.1 / 24.7	0	+ 2.5 / 24.8
20+00	− 0.8 / 24.2	− 0.4	+ 2.9 / 23.9
+50	− 1.5 / 25.4	− 0.3 0 / 13.6	+ 1.2 / 22.2
21+00	− 1.9 / 26	+ 0.2	+ 1.4 / 23.4 {5' E
+50	− 3.9 / 29	− 0.5	+ 1.5 / 22.5
22+00	− 5.3 / 30.9	− 3.1 0 / 12.8	+ 3.8 / 24.8
+50	− 5.4 / 30.1 0 / 4	+ 2.0	+ 7.5 / 28.5
23+00	− 0.6 / 23.9 0 / 21.7	+ 3.7	+ 5.3 / 26.3 {5' E
+50	+ 0.4 / 21.6 (+40 0)	+ 1.6	+ 4.4 / 25.4 {5' E

	R	℄	L
24+00	0/21	0/18.3 C 2.2	+ 6.0/31
+50	0/21	C 2.4	+ 6.2/27.2
25+00	0/21	C 1.4	+ 6.2/27.2
+50	-2.6/26.9	0/14.4 C 2.4	+ 7.1/28.1
26+00	-1.3/25	0/26 C 6.2	+ 14.7/35.7
+50	+ 3.7/24.7	C 9.1	+ 15.8/36.8
27+00	+ 5.0/26	C 8.7	+ 16.6/37.6
+50	+ 3.5/24.5	C 9.9	+ 15.5/36.5
28+00	+ 2.3/23.3	C 4.4	+ 7.3/28.3
+50	+ 4.6/25.6	C 8.8	+ 21.6/42.6
29+00	+ 4.7/25.7	C 11.7	+ 26.4/47.4
+50	+ 5.4/26.4	C 11.2	+ 23.5/44.5

55
23

	R	℄	L
30+00	146.25 + 5.7/26.7	C 9.4	+ 17.8/38.8
+50	151.1 / 145.6 + 4.8/25.8	C 5.5	+ 10.7/31.7
31+00	℄ 148.2 / 144.9 + 2.9/23.9	C 3.3	+ 9.5/30.5
+50	10' W } - 1.5/25.3	0/15.5 C 2.0	+ 6.0/31
		0+82.4	
32+00	- 3.5/28.0	F 1.7	0/9.7 + 4.4/25.4
+50	- 5.5/31.3	F 3.3	0/16.6 + 2.5/23.5
33+00	5' W } - 7.0/33.5	F 4.1	- 0.8/24.2
+50	10' W } - 6.8/33.2	F 4.5	- 1.4/25.1
34+00	5' W } - 7.6/34.4	F 4.3	- 1.7/25.5
+50	- 7.4/34.1	F 5.4	- 1.8/25.7
35+00	- 7.8/34.7	F 6.4	- 3.1/29.6
		0+15	
+50	- 7.6/34.4	F 6.9	- 3.2/27.8

10 ft Rod

	R	℄	L
36+00	$-\frac{8.3}{35.4}$	F 4.8	$-\frac{0.5}{23.7}$
+50	$-\frac{5.6}{31.4}$	F 1.7	$\frac{0}{20.2} + \frac{0.8}{21.8}$
37+00	$-\frac{3.9}{28.9}$	F 0.7	$\frac{0}{20.5} + \frac{1.3}{22.3}$
+50	$-\frac{2.3}{26.5}$	F 0.2	$+ 1.2$
38+00	$-\frac{2.5}{26.9}$	Gr.	$+ \frac{0.9}{21.9}$
+50	$-\frac{3.0}{27.5}$	F 0.3	$-\frac{0.4}{23.6}$
39+00	Paving	F 0.3	$\frac{0}{17} + \frac{0.8}{22.2}$
+50	$-\frac{3.5}{31.3}$	F 0.5	$-\frac{0.5}{23.8}$
40+00	$-\frac{10.2}{38.3}$	F 3.6	$-\frac{10.3}{38.5}$
+50	$-\frac{7.0}{33.5}$	F 4.0	$-\frac{5.4}{31.1}$
41+00	$-\frac{8.7}{36.1}$	F 5.6	$-\frac{3.4}{28.1}$
+50	$-\frac{2.6}{26.9}$	F 0.5	$\frac{0}{21}$

	R	℄	L
42+00	$-\frac{4.0}{29}$	F 0.2	$\frac{0}{1} + \frac{2.8}{23.8}$
+50	$-\frac{5.3}{31.0}$	F 1.3	$\frac{0}{4} + \frac{1.9}{22.9}$
43+00	$-\frac{5.8}{31.7}$	F 1.6	$\frac{0}{19} + \frac{1.3}{22.3}$
+50	$-\frac{4.2}{29.3}$	F 1.4	$\frac{0}{20} + \frac{1.5}{22.5}$
44+00	$-\frac{5.0}{30.5}$	F 0.9	$\frac{0}{19} + \frac{2.5}{23.5}$
+50	$-\frac{5.6}{31.4}$	F 1.2	$\frac{0}{20.5} + \frac{1.1}{22.1}$
45+00	$-\frac{4.6}{29.9}$	F 1.1	$\frac{0}{20} + \frac{1.2}{22.2}$
+50	$-\frac{3.1}{27.6}$	F 0.6	$\frac{0}{17} + \frac{3.1}{24.1}$
46+00	$-\frac{3.1}{27.6}$	F 0.9	$\frac{0}{17.3} + \frac{3.1}{24.1}$
+50	$-\frac{1.6}{25.4}$	$\frac{0}{14}$ C 0.9	$+ \frac{5.0}{26}$
47+00	$-\frac{2.7}{27.1}$	F 0.3	$\frac{0}{15.6} + \frac{3.5}{24.5}$
+50	E 1228 G 1229 $-\frac{23}{26.5}$	C 0.7	$+ \frac{40}{25}$

	R.	℄	L
48+00	$-\frac{2.6}{26.9}$	$\frac{0}{12.7}$	C 2.0 ✓	$+\frac{6.2}{27.2}$
+50	$-\frac{2.5}{26.7}$	$\frac{0}{15}$	C 2.9 ✓	$+\frac{6.0}{27}$ {E. 5'
49+00	$-\frac{9.7}{37.6}$		C 0.1 ✓	$+\frac{8.0}{29.0}$
+50	$-\frac{7.5}{34.3}$		F 1.1 ✓	$\frac{0}{2'}$	$+\frac{8.4}{29.4}$
50+00	$-\frac{2.2}{26.3}$	$\frac{0}{11}$	C 1.4 ✓	$+\frac{5.0}{26.6}$
+50	$-\frac{2.3}{26.5}$	$\frac{0}{5.1}$	C 0.8 ✓	$+\frac{7.8}{28.8}$
51+00	$-\frac{4.3}{29.5}$	$\frac{0}{3.8}$	C 1.4 ✓	$+\frac{10.5}{31.5}$
+50	$-\frac{6.5}{32.9}$	$\frac{0}{17}$	C 8.0 ✓	$+\frac{18.0}{39.0}$ {OUT 10' E
52+00	$-\frac{7.1}{33.6}$	$\frac{0}{120}$	C 6.9 ℄	$+\frac{17.3}{38.3}$
+50	$-\frac{8.0}{35}$		F 2.8 ✓	$\frac{0}{4}$	$+\frac{14.4}{35.4}$
53+00	$-\frac{7.1}{33.6}$		E 6.3 ✓	$\frac{0}{16.5}$	$+\frac{7.9}{28.9}$
+50	$-\frac{7.1}{33.6}$		F 4.2 ✓	$\frac{0}{94}$	$+\frac{20.0}{30}$

	R.	℄	L
54+00	$-\frac{2.2}{26.3}$	$\frac{0}{14}$	C 3.0	$+\frac{7.1}{28.1}$
+50	$-\frac{5.9}{31.9}$	$\frac{0}{88}$	C 1.3 ✓	$+\frac{5.0}{26}$
55+00	$-\frac{1.1}{24.7}$	$\frac{0}{9}$	C 1.5 ✓	$+\frac{5.0}{26}$
+50	$-\frac{0.6}{23.9}$	$\frac{0}{18.7}$	C 2.2 ✓	$+\frac{5.1}{26.1}$
56+00	+66 $\frac{0}{21}$ $+\frac{1.0}{22}$		C. 2.2 ✓	$+\frac{4.0}{25}$
+50	$-\frac{0.6}{23.9}$	$\frac{0}{11.6}$	C. 1.0 ✓	$+\frac{4.5}{25.5}$
57+00	$-\frac{0.4}{23.6}$	$\frac{0}{17}$	C. 0.8 ✓	$+\frac{3.6}{24.6}$
+50	$\frac{0}{21}$		C 1.7 ✓	$+\frac{6.0}{27}$
58+00	$-\frac{0.5}{23.8}$	$\frac{0}{18.8}$	C 1.6 ✓	$+\frac{5.2}{26.2}$
+50	$\frac{0}{21}$	$\frac{0}{14.5}$	C 0.7 ✓	$+\frac{4.7}{25.7}$
59+00	10' W $-\frac{0.3}{23.5}$	$\frac{0}{20}$	C 3.0 ✓	$+\frac{6.6}{27.6}$
+50	$+\frac{0.8}{21.8}$		C 3.8 ✓	$+\frac{7.5}{28.5}$

	H	−	T	+
BM #7	88.006			
			92.45	4.45
65+75 BC	88.06	4.39		
66	87.7	4.8		
+50	87.6	4.9		
67	88.6	3.9		
+50	87.6	4.9		
68 +Hub	86.98	5.47		
+50 Pave.	86.60	5.85		
68+75.05 Pave. EC	86.50	5.95		
BM #7	88.006	4.45		

Revision (Curve backed 145')
Rate = −1.764'

Grade	R	℄	L
90.4	−2.5 / 34.8	F 2.4	−.07 / 31.3
90.0	−2.0 / 34.0	F 2.3	−.06 / 31.9
89.1	−1.7 / 33.6	F 1.5	0 / 19.3 +1.1 / 27.1
88.2	−2.2 / 34.3 0 / 15.8	C 0.4	Pavement
87.3	−2.3 / 34.5 0 / 14.6	C 0.3	
Pavement	2.0 / 34.0 0 / 14.4	0	
	−3.4 / 36.1 0 / 21.6	0	
	−3.3 / 36.0 0 / 21	0	

See page 41

12/11/33

30

X Sects on Revised Bases see p 31

Dec 13. Revised Roadbeds Fill = 46 Cut = 42

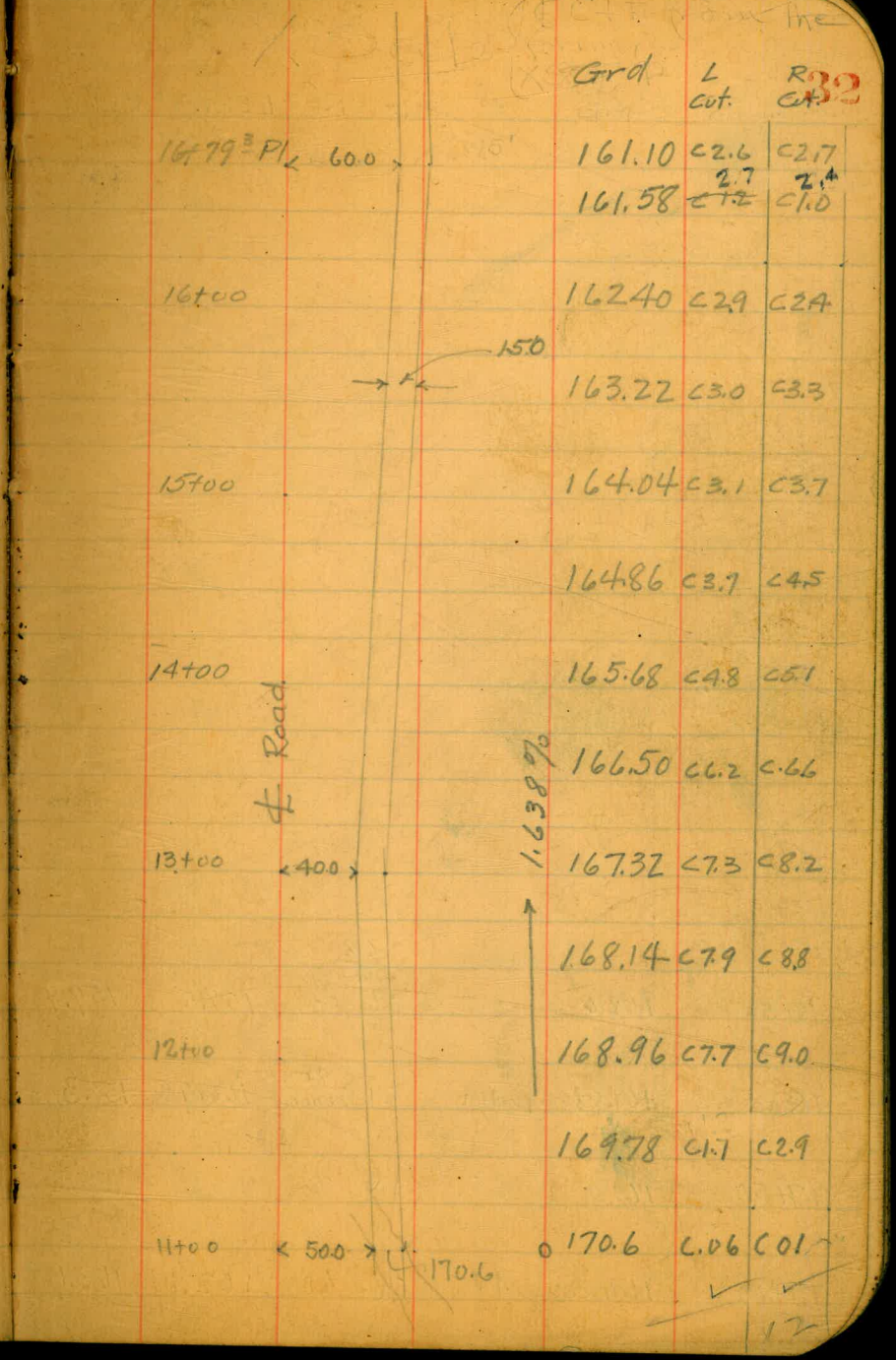
		R	℄	L
60+00		$\frac{13}{250}$	$\frac{0}{17}$ C 3.1	+ $\frac{9.2}{30.2}$
+50		$\frac{20}{26}$	$\frac{8}{8}$ C 1.6	+ $\frac{11.4}{32.4}$
61+00		$\frac{30}{27.5}$	F 0.4	$\frac{0}{2}$ + $\frac{8.8}{29.8}$
+50	10' W	$\frac{33}{28.0}$	F 0.2	$\frac{0}{3}$ + $\frac{4.4}{25.4}$
62+00		$\frac{27}{27.1}$	F 0.5	$\frac{0}{48}$ + $\frac{2.4}{25.4}$
+50		$\frac{31}{27.7}$	F 0.6	$\frac{0}{3}$ + $\frac{2.5}{23.5}$
63+00		$\frac{3.1}{27.7}$	F 0.8	$\frac{0}{5.4}$ + $\frac{3.0}{24}$
+50		$\frac{26}{26.9}$	F 0.9	$\frac{0}{6.7}$ + $\frac{3.5}{24.5}$
64+00		$\frac{3.0}{27.5}$	F 0.9	$\frac{0}{6.8}$ + $\frac{2.8}{23.8}$
+50		$\frac{2.4}{26.2}$	F 0.9	$\frac{0}{8.4}$ + $\frac{1.3}{22.3}$
65+00		$\frac{1.2}{24.8}$	C 0.55	+ 2.5/23.5
+50			F 1.24	

X Sect C or F from Slake Angles

	R	℄	L
66+00		F 2.3	
+50		F 1.5	
67+00		C 0.4	
+50		C 3.0	3
68+00			
+50			
+75			

Channel Change from Sta 11+00 to 18+50

	℄ Elev	+	L-	R-	L. Elev	R. Elev
16+79.3 P.I.	164.08	2.2	2.6	2.5	163.7	163.8
16+50	161.7	4.7	3.6	3.8	~~162.8~~ 164.3	164.0 162.6
16+00	163.38	7.0	5.1	5.6	165.3	164.8
15+50	161.3 (ground)	10.0	5.1	4.8	166.2	166.5
15+00	165.78	6.2	4.9	4.3	167.1	167.7
14+50	167.0	5.7	4.1	3.3	168.6	169.4
14+00	168.92	5.6	4.0	3.7	170.5	170.8
13+50	170.3	6.0	3.6	3.2	172.7	173.1
13+00	172.68	6.0	4.1	3.2	174.6	175.5
12+50	173.3	5.8	3.1	2.2	176.0	176.9
12+00	171.62	7.0	1.9	0.6	176.7	178.0
11+50	171.6	5.1	5.2 / 5.6	4.0	171.5	172.7
11+00	172.2	3.4	5.1 Channel +4	.44	171.7	170.7



Sta.	℄ Elev	+	L-	R-	L Elev.	R Elev.
			6.8 channel			
18+50	162.6	2.5	6.6	5.2	158.5	159.9
18+00	161.88	4.4	5.4	8.0 channel	160.9	158.3
17+50	161.9	6.5	6.9	7.3	161.5	161.1
17+00	164.38	4.7	7.0	6.0	162.1	163.1

B3

		Grd	L Cut	R Cut
18+50	< 60.0	⊙ 158.3	C0.2	C1.6
18+00		159.12	C1.8	F0.8
		159.94	C1.6	C1.2
17+00	< 600	160.76	C1.3	C2.3

24

Levels to BM #7 from BM #6

	+	H.I.	−	Elev	
BM #6	1.75	99.669		97.919	
T.P			9.36	90.309	
	2.38	92.689			
65+89.88 Hub			4.94	87.749	87.728
B.M. #7			5.09	87.599	
	4.13		14.45	10.32	
			4.13	97.919	
			10.32		

150' W. 59+85 Pole # 1704 Galv. spike

Pole # C1610 Galv. Spike

Revised Road Bed

Fill = 20.
Cut = 18.

12-17-33

35

	R	℄	L	Grd
68+75.05 EC.	+0.5 / 18.5	0		
68+50	+0.6 / 18.6	0		
68+00	-1.6 / 22.4	0 / 14.0	0	
67+50	-1.6 / 22.4	0 / 14.7	+03 / 0	
66+00	-1.2 / 21.8	0 / 15.8	+04 / 0	+1.0 / 19.0
66+50	-1.0 / 21.5	+0.5 / 0	0 / 18.0	
66+00	10 w. -2.6 / 23.9	-23 / 0	-1.6 / 22.4	
65+75.20	10'W -2.3 / 23.4	-2.4 / 0	-1.6 / 22.4	⊕ 89.55
	1.7	+06	0.7 / 21.1	
65+50	10'W -2.6 / 23.9	-2.4 / 0	-1.8 / 21.7	⊕ 90.0
65+00	-0.7 / 21.1	0 / 9.2	+0.6 / 0	+2.2 / 20.2
64+50	-2.0 / 23.0	-0.9 / 0	0 / 9.0	+1.2 / 19.2
64+00	-2.5 / 23.7	-09 / 0	0 / 6.8	+2.2 / 20.2
63+50	-2.5 / 23.8	-09 / 0	0 / 6.7	+2.8 / 20.8

1.78407

	R	℄	L
63+00	+2.5 / 20.5	-08 / 0	0 / 5.7	-2.9 / 24.4
63+50	-2.4 / 24.2	-0.6 / 0	0 / 3.5	+1.7 / 19.7
62+00	-2.1 / 23.2	-0.5 / 0	0 / 5.0	+2.2 / 20.2
61+50	-3.1 / 24.7	-02 / 0	0 / 20	+35 / 21.5
61+00	-2.8 / 24.2	-0.4 / 0	0 / 20	+7.8 / 25.8
60+50	-2.4 / 23.6	0 / 0		+10.5 / 28.5
60+00	0 / 18.0	+31 / 0		+8.5 / 26.5
59+50	0 / 18.0	+3.8 / 0		+6.8 / 24.8
59+00	0 / 18.0	+3.0 / 0		+5.5 / 23.5 +6.0 / 240
58+50	5'W 0 / 18.0	+07 / 0		+4.2 / 22.2
58+00	0 / 18.0	+1.6 / 0		+4.6 / 22.6
57+50	+0.2 / 18.2	+1.7 / 0		+5.4 / 23.4
57+00	0 / 18.0	+0.8 / 0		+3.0 / 21.0 5'E.

1.78407

48

	R	℄	L
56+50	−0.3 / 20.5 — 0 / 12.6	+1.0 / 0	+4.0 / 22.0
56+00	+0.9 / 18.9	+2.2 / 0	+3.6 / 21.6
55+50	−0.2 / 20.3	+2.2 / 0	+4.8 / 22.8
55+00	−1.1 / 21.6 — 0 / 9.5	+1.5 / 0	+4.2 / 22.2
54+50	−0.7 / 21.1 — 0 / 8.8	+1.3 / 0	+5.0 / 23.0
54+00	0 / 18.0	+3.0 / 0	+6.5 / 24.5
53+50	−6.7 / 30.1	−4.2 / 0 — 0 / 10.0	+8.5 / 26.5
53+00	−7.0 / 30.5	−6.3 / 0 — 0 / 16.6	+1.8 / 19.8
52+73 46 E.C.			
52+50	−7.8 / 31.7	−2.0 / 0 — 0 / 3.2	+13.2 / 31.1
52+00	−6.6 / 29.9 — 0 / 13.4	+6.9 / 0	+16.4 / 34.4
51+50	−5.1 / 27.7 — 0 / 17.3	+8.0 / 0	+18.0 / 36.0
51+00	−4.5 / 26.8	+1.4 / 0 — 0 / 3.8	+9.0 / 27.0
50+50	0 / 18.5	+0.8 / 0	+7.0 / 25.0

1.78 40 D

Slope changed to 1/2 tol

	R	℄	L
50+00	0 / 18.0	+1.4 / 0	+5.1 / 23.1
49+50	−7.2 / 30.8	+1.1 / 0 — 0 / 1.0	+7.0 / 25.0
49+00	−8.8 / 33.2 — 0 / 10.0	+0.4 / 0	+6.9 / 24.9
48+50	0 / 18.0	+2.9 / 0	+5.9 / 23.9 5'E
48+00	0 / 18	+2.0 / 0	+5.2 / 23.2
47+50	0 / 18.0	+0.7 / 0	+0.6 / 18.6
47+00	−1.0 / 21.5	+0.3 / 0	+0.8 / 18.8
46+50	0 / 18.0	+0.9	+1.1 / 19.1
46+00	−2.4 / 23.6	−0.9 / 0 — 0 / 11.6	+0.4 / 18.4
45+50	−2.6 / 23.9	−0.6 / 0	+0 / 18.0
45+00	−4.4 / 26.6	−1.1 / 0	0 / 19.7
44+50	−5.4 / 28.1	−1.2 / 0	0 / 20.0
44+00	−4.6 / 26.9	−0.9 / 0	0 / 18.0

1.78 40 D

	R	℄	L
43+50	-3.6 / 25.4	-1.4 / 0	0 / 18.0
43+00	-5.2 / 27.8	-1.6 / 0	0 / 20.0
42+50	-4.3 / 26.4	-1.3 / 0	0 / 18
42+00	-3.0 / 24.5	-0.2 / 0	+0.5 / 18.5
41+50	-2.2 / 23.3	-0.5 / 0	0 / 18.0
41+00	-8.4 / 32.6	-5.6 / 0.0	-3.4 / 25.1
40+50	-8.9 / 32.3 -7.0 / 30.5	-5.9 / -4.0 / 0	-5.6 -7.4 / 28.4 31.1
40+00	-10.4 / 35.6 -10.4 / 35.2	-3.6 / 0	-10.8 / 36.2
39+50	-5.0 / 27.5	-0.5 / 0	Pave
39+00	Pave	-0.1 / 0	0 / 18.0
38+50	-2.3 / 23.5	-0.3 / 0	-0.6 / 20.9
38+00	-2.0 / 23.0	0.0 / 0	+0.2 / 18.2
37+50	-2.0 / 23.0	-0.2 / 0	0 / 19.0

1.78 ft/ft

		R	℄	L
37+00		-3.3 / 25.0	-0.7 / 0	0 / 20.0
36+50		-5.4 / 28.1	-1.7 / 0.	0 / 20
36+00		-7.6 / 31.4	-4.8 / 0	-0.7 / 21.1
35+50		-7.5 / 31.3	-6.9 / 0	-3.4 / 25.1
35+00		-7.4 / 31.1	-6.4 / 0	-3.2 / 24.8
34+50	5'W	-7.8 / 31.7	-5.4 / 0	-2.4 / 23.6
34+00	10'W	-7.3 / 31.0	-4.3 / 0	-2.0 / 23.0
33+50		-6.2 / 29.3	-4.5 / 0	-2.0 / 23.0
33+00		-6.1 / 29.6	-4.1 / 0	-1.2 / 21.8
32+50			-3.3 / 0	
32+00			-1.7 / 0	
31+50		-1.0 / 21.5 0 / 14.2	+2.0 / 0	
31+00		+2.6 / 20.6	+3.3 / 0	+7.6 / 25.6

1.84 ft/ft

	R	℄	L
30+50	+4.1 / 22.1	+5.5 / 0	+9.5 / 27.5
		+8.3 / 0	
30+00	+5.7 / 23.7	+9.1 / 0	+16.6 / 34.6
		+10.3 / 0	
29+50	+5.2 / 23.2	+11.7 / 0	+22.0 / 40.0
29+00	+5.0 / 23.0	+11.7 / 0	+25.2 / 43.2
28+75		8.4 / 0	
28+50	+4.3 / 22.3	+8.8 / 0	+20.2 / 38.2
28+25			
28+00	+2.7 / 20.7	+4.4 / 0	+6.8 / 24.8
27+75			
27+50	+4.5 / 22.5	+9.9 / 0	+15.6 / 33.6
27+25			
27+00	+5.4 / 23.4	+8.7 / 0	+15.5 / 33.5
26+50	+5.0 / 23.0	+9.1 / 0	+14.8 / 32.8
26+00	+1.0 / 19.0	+6.2 / 0	+13.2 / 31.2
25+50	−2.2 / 23.3 0 / 13.6	+2.4 / 0	+6.5 / 24.5
25+00	−0.2 / 20.3 0 / 9.3	+1.4 / 0	+5.6 / 23.6
		+1.7	
24+50	+0.3 / 18.3	+2.4 / 0	+5.7 / 23.7

25 to 32 incl Left restaked 11/21 (Sept 60)

	R	℄	L	
24+00	+0.3 / 18.3	+2.2 / 0	+5.0 / 23.0	5'E
23+50	+0.6 / 18.6	+1.6 / 0	+4.7 / 22.7	10'E
23+00	+1.8 / 19.8	+3.7 / 0	+5.2 / 23.2	5'E
22+50	−3.3 / 25.0 0 / 4.0	+2.0 / 0	+6.4 / 24.4	5'E
22+15		0 / 0		
22+00	−5.5 / 28.3	−3.1 / 0	0 / 12.7 +3.0 / 21.0	
21+50	−4.6 / 26.9	−0.5 / 0	0 / 3.0 +0.7 / 18.7	
21+00	−1.2 / 21.8 0 / 4.1	+0.2 / 0	+1.3 / 19.3	
20+50	−1.5 / 22.3	−0.3 / 0	0 / 12.8 +1.5 / 19.5	
20+00	−0.8 / 21.2	−0.3 / 0	0 / 3.0 +2.2 / 20.2	
19+50	−1.0 / 21.5	0 / 0	+1.9 / 19.9	
19+00	0 / 18.0	0 / 0	+2.7 / 20.7	
18+50	+0.8 / 18.8	+0.9 / 0	+0.9 / 18.9	
18+06		0 / 0		
18+00	−1.0 / 21.5	−0.5 / 0	0 / 9.3 +1.1 / 19.1	

134 ft.

	R	℄	L
17+50	+0.8 / 18.8 ; 0 / 7.0	-1.6 / 0 ; -1.2 / 0	+1.6 / 19.6
17+00			
16+79 3 P.I.	-1.1 / 21.7	+0.3 / 0 ; 0 / 13.3 ; 0 / 18 ; -1.3	
16+50	-1.7 / 22.6	-0.7 / 0 ; 0 / 15.7 ; -0.4 / 20.6	5'E
16+00	-1.8 / 22.7	+2.1 / 0 ; -5.3	-1.4 / 22.1 5'E
15+50	-0.7 / 21.1	-5.4 / 0	-1.6 / 22.4
15+00	-1.0 / 21.5	-1.7 / 0	-3.5 / 25.3 5'E
14+50	-1.1 / 21.7	-1.4 / 0	-2.6 / 23.9
14+00	+0.4 / 18.4 ; 0 / 4.7	-0.4 / 0	-1.6 / 22.4
13+50	+1.2 / 19.2	0 / 0 ; 0 / 0	-1.8 / 22.7 5'E
13+22			
13+00	+1.6 / 19.6	+1.4 / 0 ; 0 / 16.5	-1.1 / 21.7
12+50	+2.7 / 20.7	+1.2 / 0 ; 0 / 0 ; 0 / 11.0	-1.7 / 22.6
12+32			
12+00	0 / 18.0 ; 0 / 17.0	-1.5 / 0	-5.0 / 27.5

	R	℄	L
11+50	-3.0 / 24.5	-2.5 / 0	-3.6 / 25.4
11+00	-3.0 / 24.5	-2.8 / 0	-2.3 / 23.5
10+62		0 / 18.0	
10+50	-3.2 / 24.8	-1.3 / 0 ; 0 / 8.0	+1.3 / 19.3
10+34		0 / 0	0
10+00	-1.1 / 21.7 ; 0 / 8.0	+1.0 / 0	+3.8 / 21.8
9+50	-0.5 / 20.8 ; 0 / 12.0	+1.1 / 0	+4.2 / 22.2
9+00	+0.5 / 18.5	+1.9 / 0	+4.8 / 22.8
8+50	+0.4 / 18.4	+2.5 / 0	+5.0 / 23.0
8+00	+3.1 / 21.1	+5.0 / 0	+6.6 / 24.6
7+50	10'W +5.0 / 23.0	+7.3 / 0	+10.0 / 28.0
7+00	0 / 18.0	+2.1 / 1 ; 0 / 0	+8.6
6+94			
6+50	+2.7 / 24.1	-1.3 / 0 ; 0 / 14.3	+4.3 / 22.3
6+00	-1.1 / 21.7	0 / 0	+6.0 / 24.0
5+50	-2.0 / 23.0 ; 0 / 5.6	+0.5 / 0	+2.7 / 20.4

	R	℄	L
5+00	-.32 / 24.8	-1.5 / 0	0 / 18.0
4+50	-2.7 / 25.1	-2.1 / 0	-2.2 / 23.3
4+00	-2.4 / 23.6	-2.5 / 0	-1.8 / 22.7
3+76			0 / 18.0
3+50	-2.5 / 23.8	-2.4 / 0	0 / 8.0 +4.3 / 22.3
3+28		0 / 0	
3+00	-2.4 / 23.6 0 / 13.0	+1.8 / 0	+3.4 / 21.4
2+50	-0.8 / 18.8	+2.3 / 0	+3.5 / 21.5
2+00	+1.0 / 19.0	+1.9 / 0	+4.0 / 22.0
1+50	+1.3 / 19.3	+2.2 / 0	+4.7 / 22.7
1+00	10'W. -0.9 / 21.4 0 / 13.3	+1.6 / 0	+4.4 / 22.4
0+50	10'W. +0.3 / 18.3	+2.5 / 0	+5.8 / 23.8
0+00			

6.2 / 4.6

Restake @ big cut 30+00

	141.074		150.02	+ 8.95
31	148.1	1.9		+ 3.2 144.9
30+50	145.2	4.8		+ 1.0 144.2
32	141.4	8.6		F 2.2 143.6
32+50	139.6	10.4		F 3.3 142.9
P.	149.28 (.074)		161.91	12.63
30+50	150.8	11.1		C= 5.2 145.6
30	151.9	10.0		+ 5.6 146.3
+50	157.4	4.5		+ 10.4 147.0
29	159.3 Hub	2.6		+ 11.7 147.6
+50	156.5	5.4		+ 8.2 148.3
28	153.5	8.4		+ 4.5 149.0
+50	159.7	2.2		+ 10.0 149.7
27	159.0	2.9		+ 8.7 150.3
+50	159.0	2.9		+ 8.1 150.9
26	156.8	5.1		+ 5.2 151.6
+50	154.0	7.9		+ 1.7 152.3
25	154.1	7.8		+ 1.1 153.0

1/2 to 1' Steps

Grade

Re. x Sect

	+	H.I.	−	Elev	Grd
BM #7	7.85	95.45		87.60	
65+75.20 BC Hub			5.68.	89.77	89.55
66+00			5.5	90.0	89.10
66+50			6.1	89.4	88.21
67+00			6.9	88.6	87.32
67+50			7.9	87.6	86.90
68+00			8.6	86.9	86.75
68+16.15 ℄ Int edge pave			8.68	86.77	
68+50			8.88	86.57	
68+75.05 EC.			8.99	86.46	
68+16.15 ℄ Int edge pave.			8.68	86.77	
68+00 Edge pave.			8.60	86.85	
67+75 " "			8.44	87.01	
67+50 "			8.26	87.19	
67+25			7.85	87.60	
67+00			7.07	88.38	
66+75			5.98	89.47	
66+50			4.31	91.14	
66+25			2.39	93.06	
66+00			0.29	95.16	

cut or fill ℄	L	℄	R
C. 0.22	−0.8 / 21.2	+0.2 / 0	−1.1 / 21.7
C 0.90	−0.6 / 20.9	+0.9 / 0	−1.1 / 21.7
C 1.19	+0.3 / 18.3	+1.2 / 0	−1.1 / 21.7
C 1.28	+1.7 / 19.7	+1.3 / 0	0 / 15.0 +0.5 / 18.5
C 0.70		+0.7 / 0	0 / 17.0 −1.0 / 21.5
C 0.15		+0.2 / 0	0 / 15.0 −1.5 / 22.3
		0 / 0	+0.3 / 18.3
		0 / 0	+0.5 / 18.5

Check Levels

	+	H.I	−	Elev		
BM#7	5.82	93.419		87.599		{New BM set @ 34 Pole #C 1610 Galv. Spike Marked 87.594}
T.P			3.345	90.074		
	9.12	99.194				
BM#6=T.P.			1.285	97.909	.919	Pole # 1704 Galv. spike {Marked 97.914}
	11.025	108.934				
T.P			2.845	106.089		
	10.846	116.935				
T.P.			8.670	108.265		
	11.575	119.840				
T.P.			0.673	119.167		
	9.930	129.097				
BM#5			10.940	118.157	.157	{46+45 Pole # C 2284} Galv spike. Marked 118.155 Pole has been burned.
T.P.			1.218	127.879		
	10.887	138.766				
T.P.			3.526	135.240		
	11.305	146.545				
T.P.			5.638	140.907		
	10.503					
BM#4			10.336	141.074	.075	{30+45 ± Pole # C 2635} Galv spike {Marked 141.074}
T.P.			1.118	150.292		
	11.958	162.250				
T.P.			0.769	161.481		

	+	H.I	−	Elev.			
	4.335	165.816		161.481			
BM#3			8.752	157.064	.069	{21+50 ± Pole #C2845} Galv. spike.	Marked 157.066
T.P.			2.870	162.946			
	8.264	171.210					
T.P.			0.250	170.960			
	9.430	180.390					
BM#2			1.788	178.602	.607	Pole #C3099 Galv. spike	Marked 178.604
T.P.			2.098	178.292			
	11.014	189.306					
BM#1			5.836	183.470	.500	Pole # C3225 Galv. Spike	Marked 183.485
T.P.			1.502	187.804			
	11.206	199.010					
T.P.			4.216	194.794			
	5.505	200.299					
B.M.			2.292	198.007	197.99	B/P S.W. Cor Myrtle + Florida St.	

24" Culvert at Sta 65+70

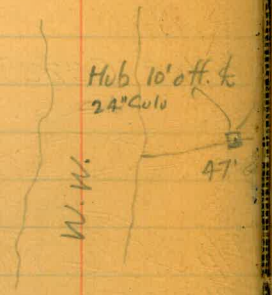
91.8
88.6
3.2

91.8
87.1
4.7

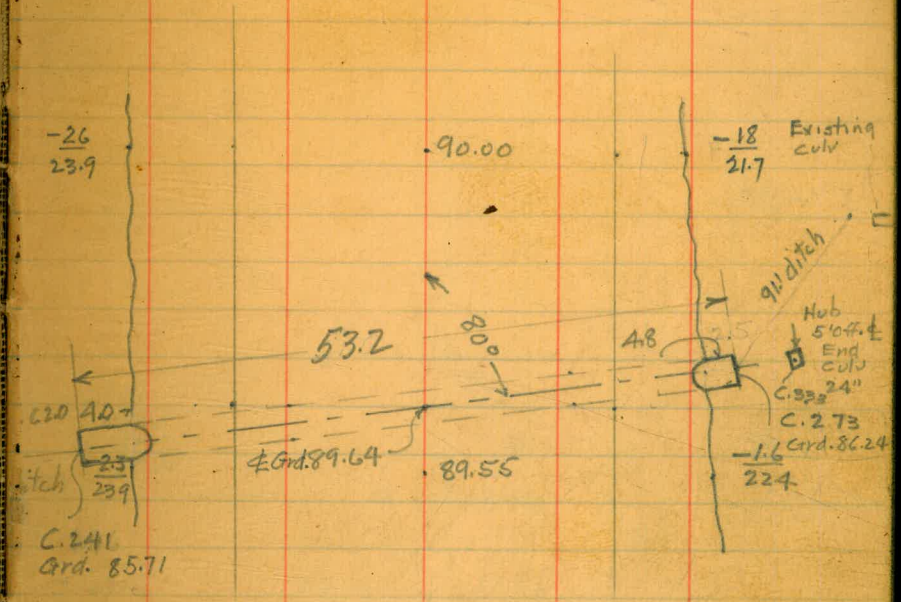
65+50

65+70

65+75



R ℄ L



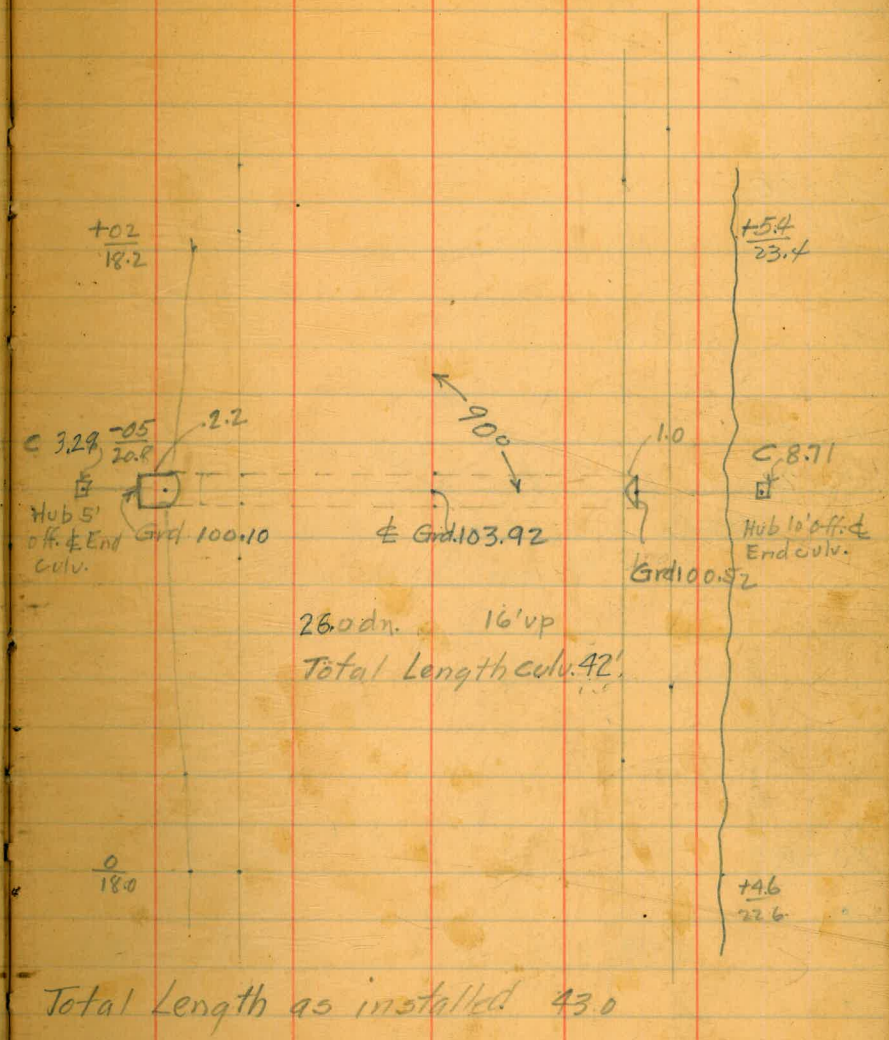
Toe of slope to toe of slope 44.4
up stream 4.8
down " 4.0
Total length Culv 53.2

24" Culvert at Sta 57+70

57+50

57+70

58+00

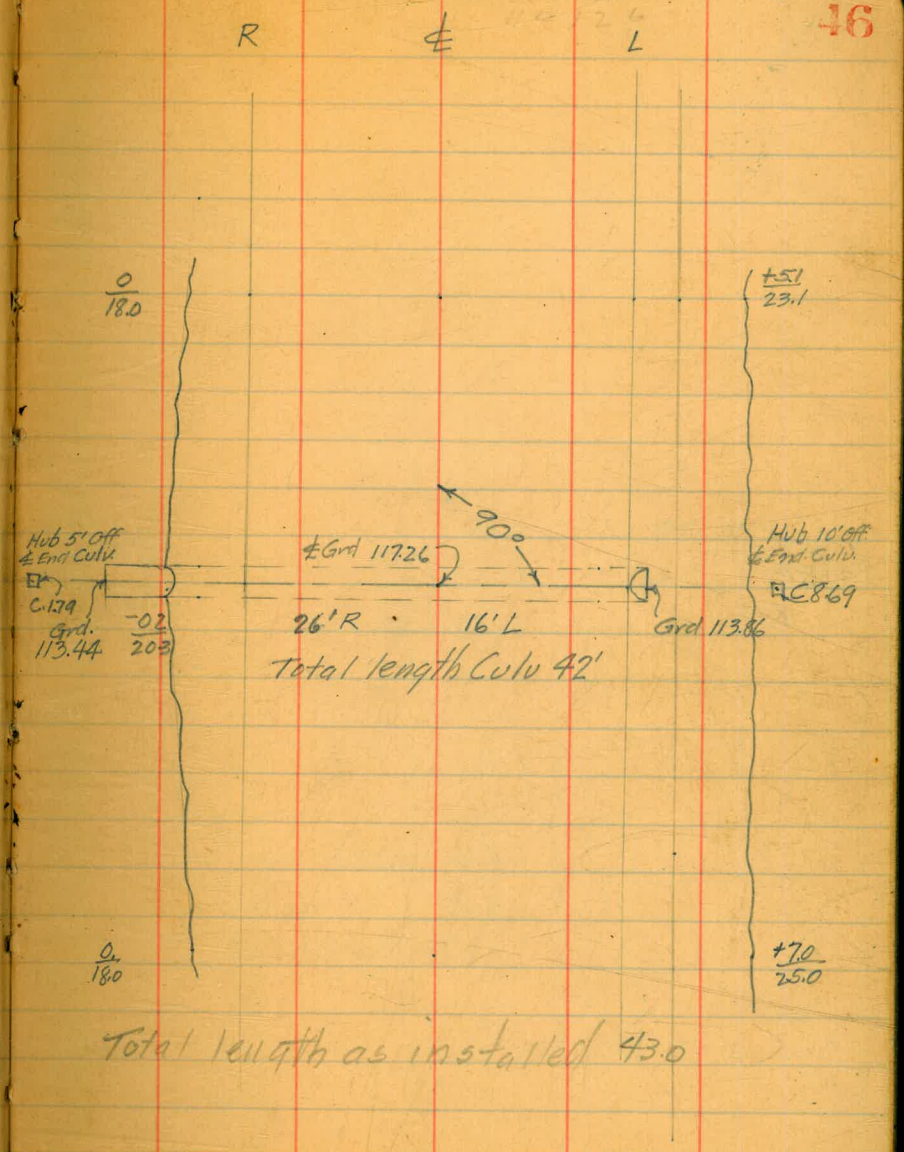


24" Culvert at Sta 50+22

50+00

50+22

50+50

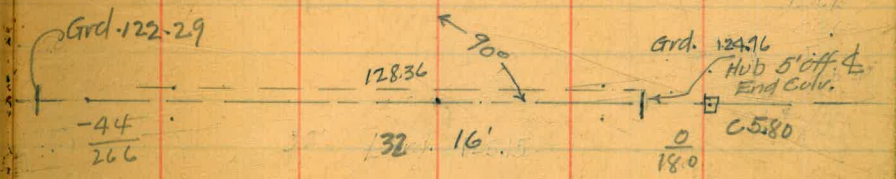


24' Culvert at Sta. 44+00

R ℄ L

44+00

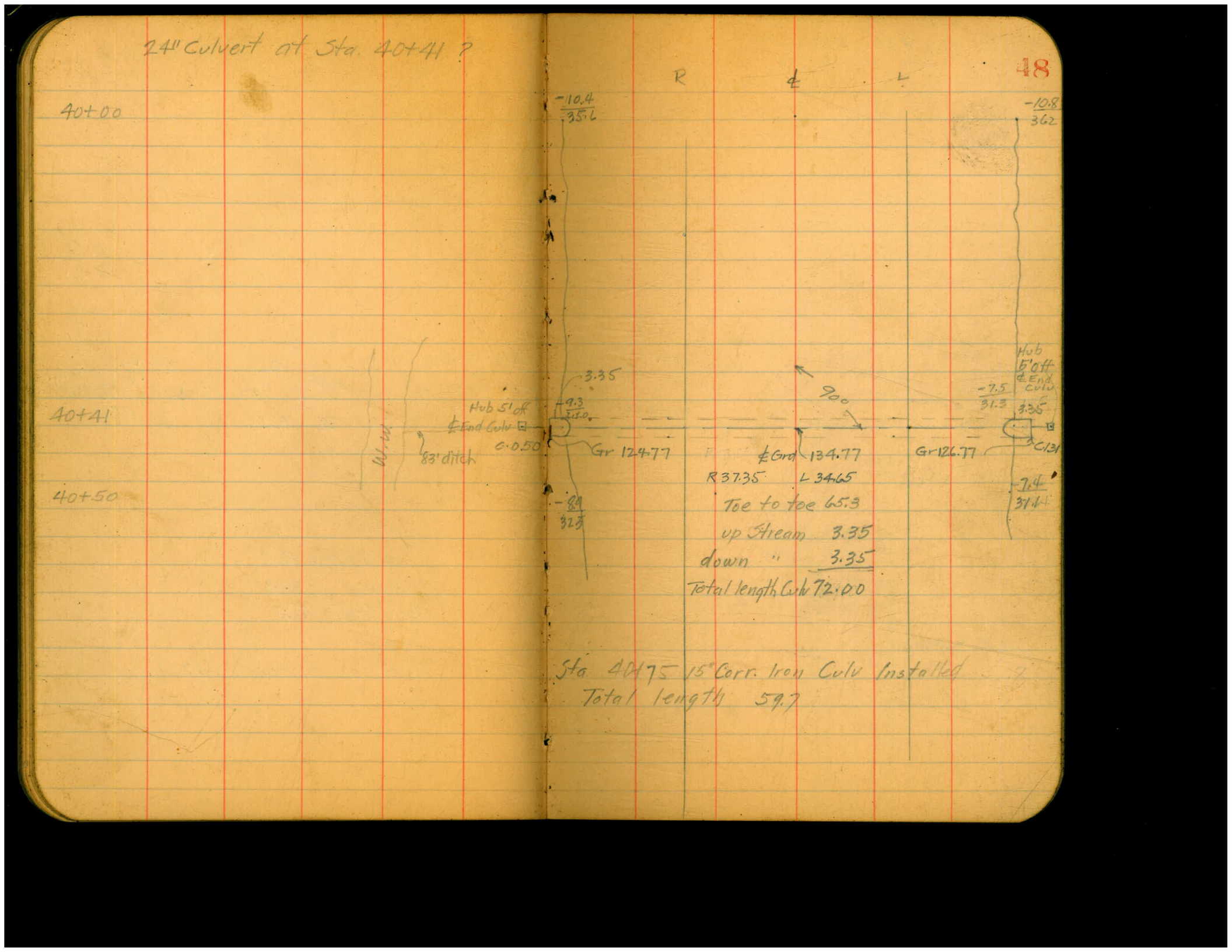
Hub 5' off ℄ End Culv.
C1.17



up stream 16.0
down " 32.0
Total length 48.0

Total length as installed 52.7

24" Culvert at Sta. 40+41 ?

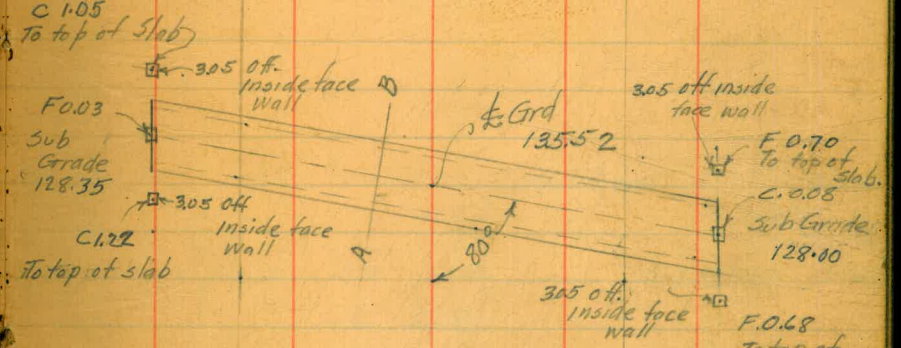


Sta 40+75 15" Corr. Iron Culv Installed
Total length 59.7

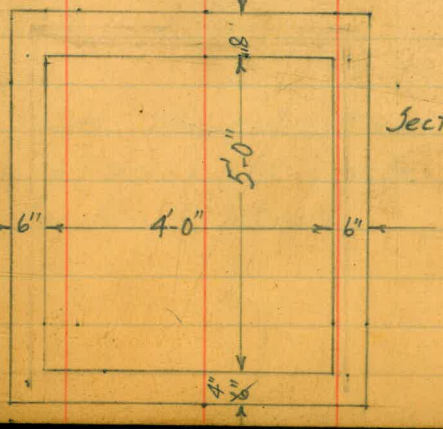
4'x5' Box Culvert
Sta 38+31.13

38+31.13

L ℄ R



22.44 Lt.
22.23 Rt.
44.67 Total length



Section at AB

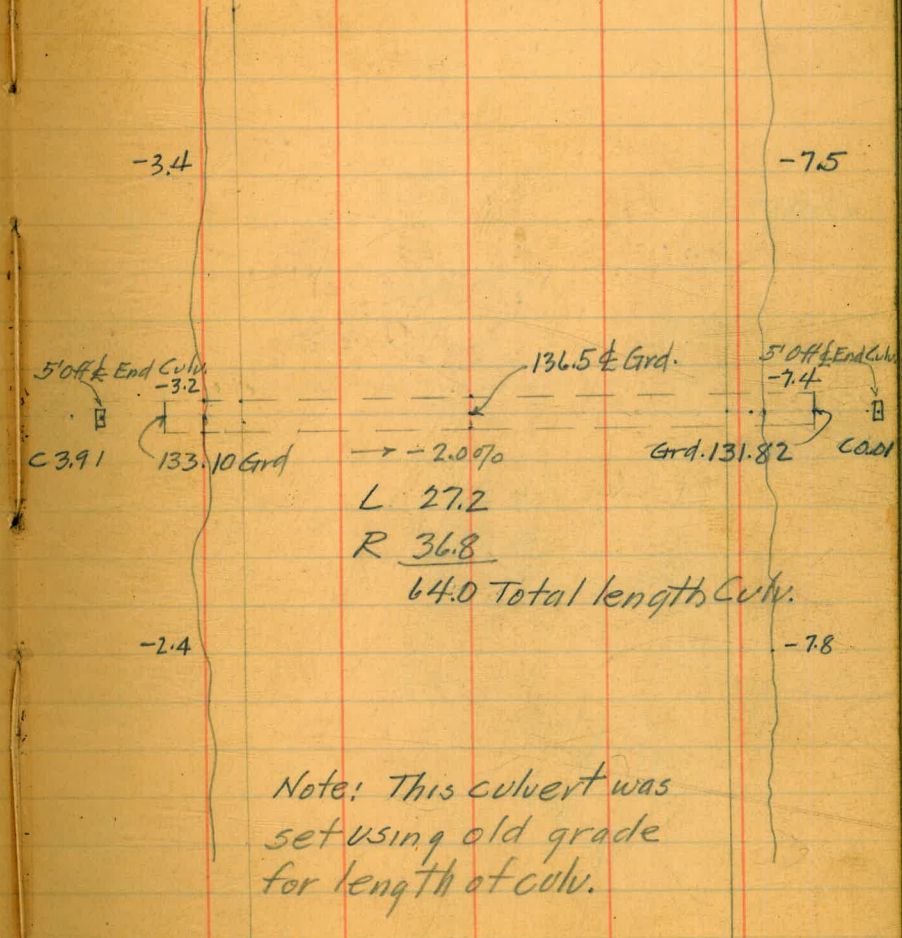
24" Culvert at Sta 35+00

L ℄ R

35+50

35+00

34+50



Note: This culvert was set using old grade for length of culv.

30" Culvert at Sta 27+96°

27+50

27+96°

2

28+00

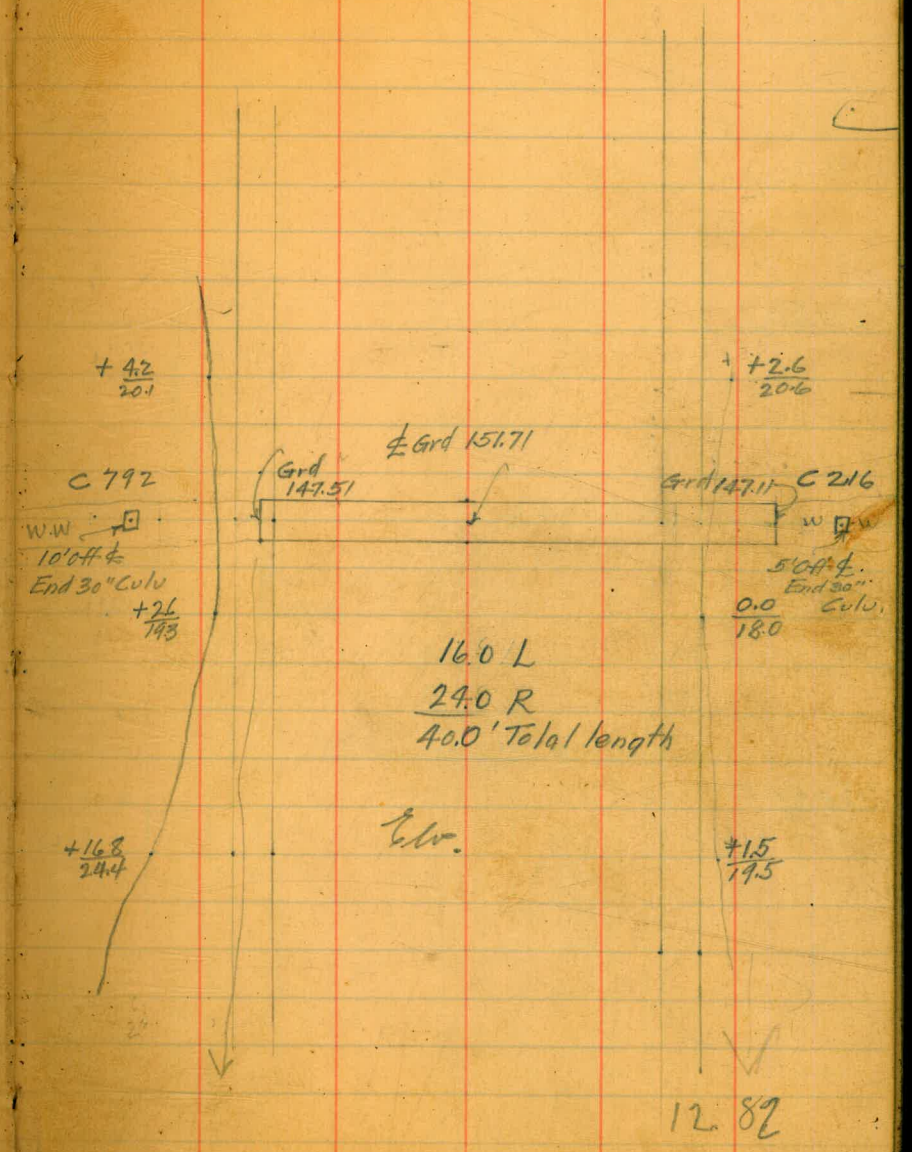
28+50

12.82
.42
12.82

L ℄ R

2.16
.4
2.56

51



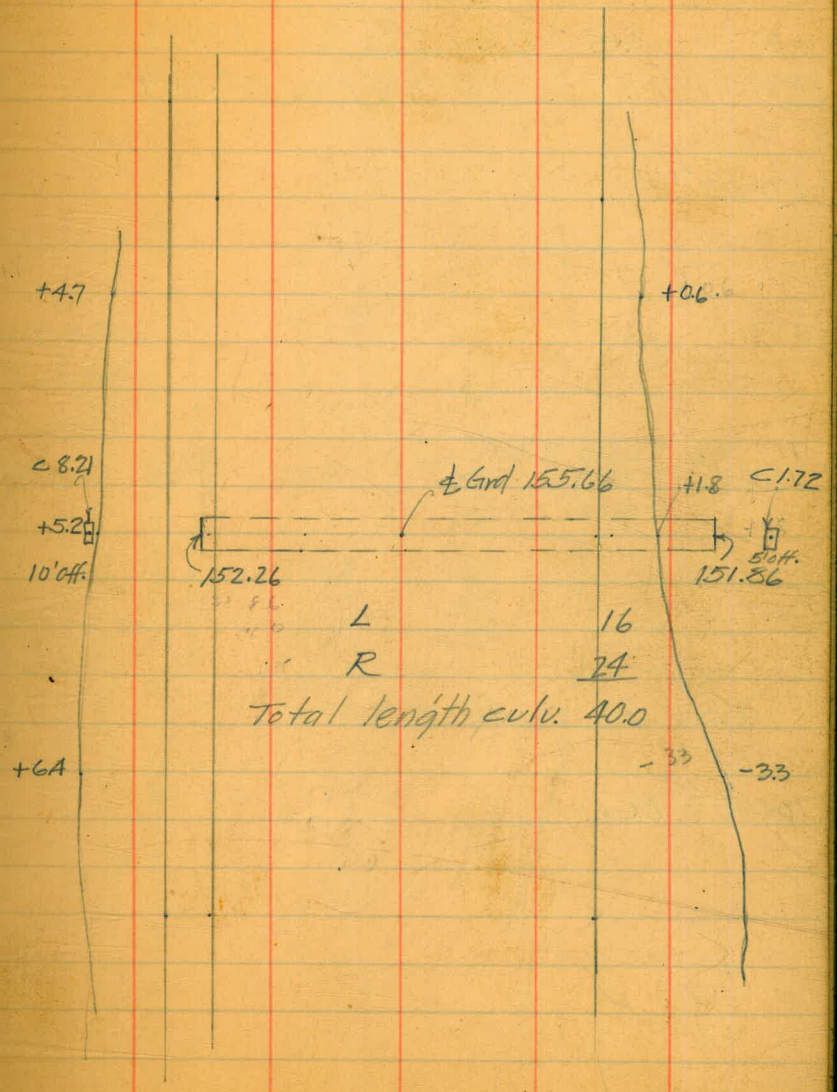
24" Culvert at Sta 23+00

23+50

23+00

22+50

L ℄ R



H.L. Landyeer
A.E Franklin ch
J.H Partridge

53

36" Culvert at St 17+25 ℄

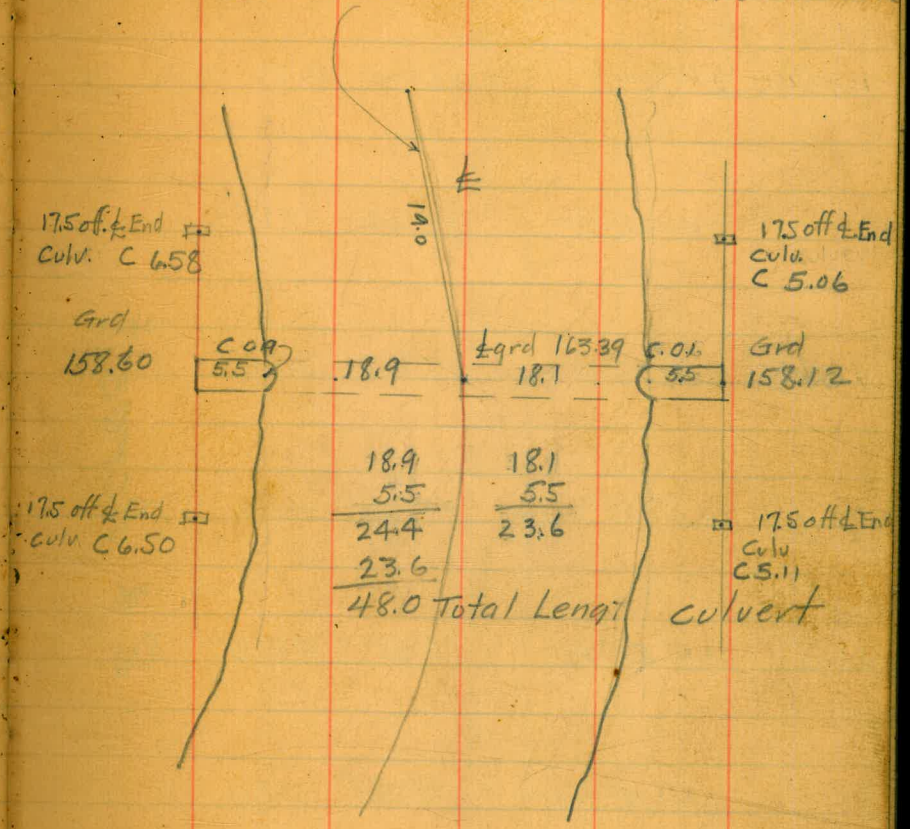
	+	H.I.	−	Elev.
BM #2	0.265	178.869		178.604
T.P.	3.14	169.524	12485	166384
T.P	"		5.46	164.064

17+43 ℄ EC

17+25 ℄

16+49 ℄ B.C.

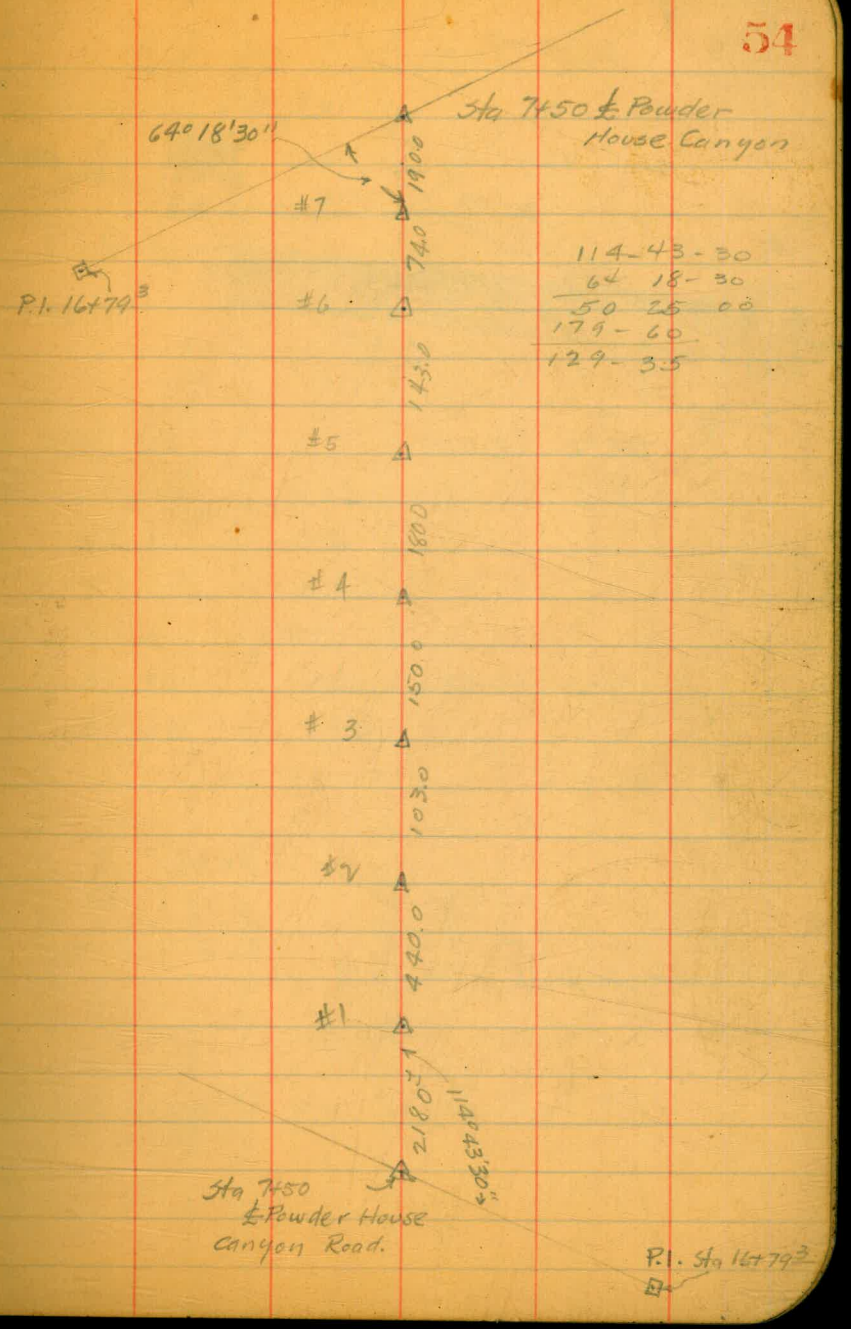
Def 21'46" ch. 19.0. Culv. set on Rad. Line



Drainage Area of wash at Sta. 7+50

	Hor. Δ	Vert. Δ	Int.
14+98±	Rt 129°35½ Δ #1	+15° 01	190.
13+08±	ΔLt 8° 08'	+5° 55'	74.0
12+34±	ΔRt 27°58'	+1° 50'	143.0
10+91±	ΔRt 22° 05'	+4° 34'	180.0
9+11±	ΔRt 33° 43'	+3° 07'	150.0
7+61±	ΔRt 53° 22'	+0° 20'	103.0
6+58±	ΔRt 83° 08'	-4° 30'	440.0
2+18±	ΔRt 18° 15'30"	-13° 47'	218.0
0+00	ΔLt 114°43'30"		
0+00 = ℄ Sta 7+50			

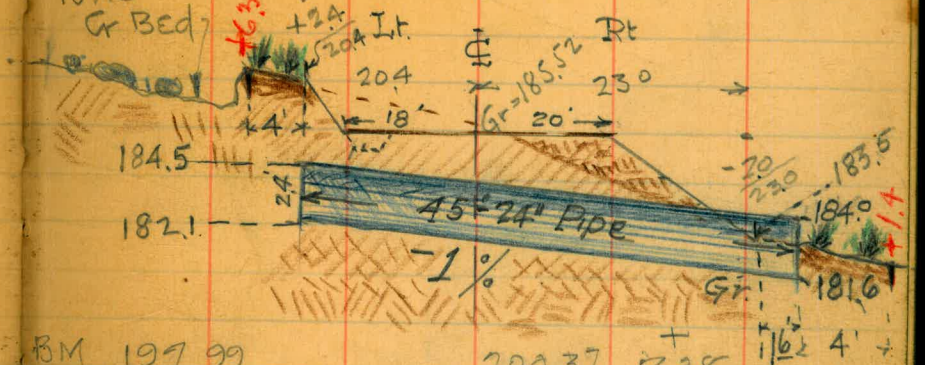
2.4 Acres ±



114-43-30
64 18-30
50 25 00
179-60
129-35

1/11/34
JAP
AEF

5+50 Culvert 24"



BM	197.99		200.37	2.38
Stump				
TP	196.05	-4.32	197.19	1.14
	188.0	9.2		
Lt □	188.39	8.80		
Gr.	187.1	10.1		
P	188.39	-8.80	191.03	2.64
Rt □	183.05	-7.98		
		21.10		

+6.16

-14.94
183.05
197.99

□ 188.39
Gr 182.1
Lt Cut 6.3

□ 183.05
Gr 181.6
Rt Cut 1.4 to Bottom Pipe

Total length as Installed 56.5

Channel Change at sta 7+50

3+15
3+00

2+50

2+00

1+50

1+00

0+50

0+15 EC
0-9
0-18
0+27 B.C.

C0.2. ← Grade
C2.1. ← C. 2.3

C4.0. ← C 3.4

C1.5. ← C 1.9

Cut stakes as offset

C2.2. ← C. 1.7

C1.5. ← C 1.2
← 2' ditch

C3.1. ← C 2.6

C4.8 C 4.4
C3.6 C 2.9
C2.0

R 24.96
Δ 64°
T. 15.0
L 27.01

C 1.3
C.0.0

Rubble outside of curve.

W.W →

East channel change

H.L Landweer. ↑
A.E Franklin ch
J.H Partridge ch

57

Grd

158.6

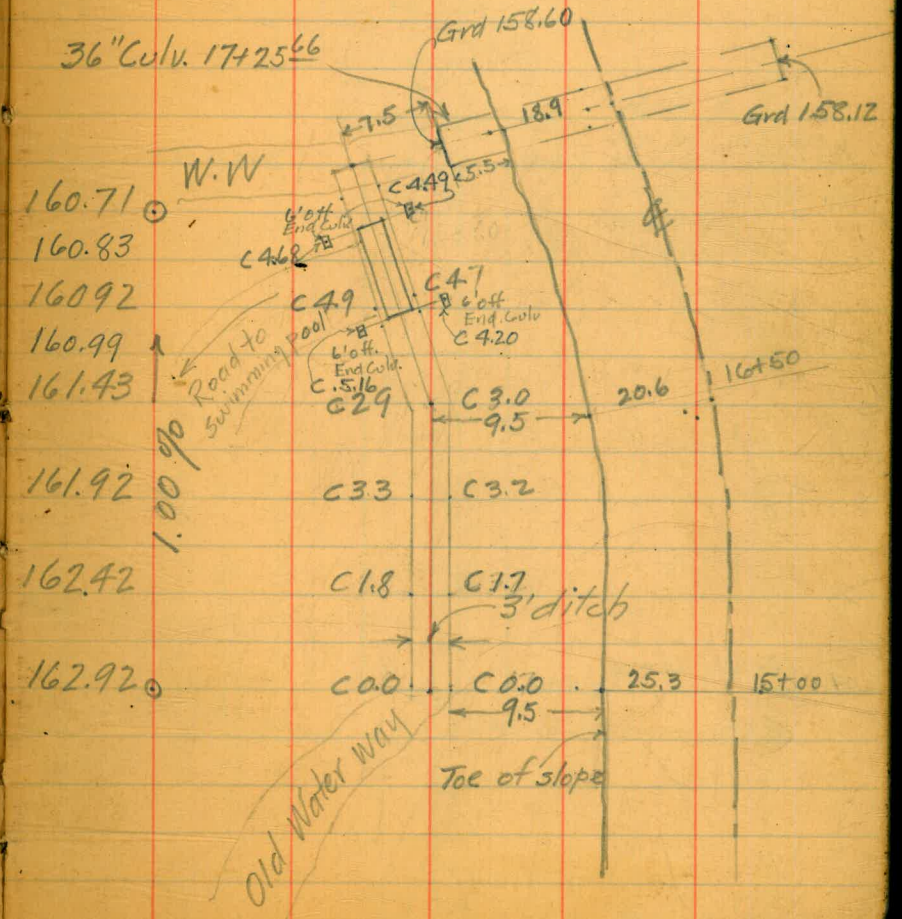
2+21.3 ℄ Int culv. 17+25.66

2+09.0
2+00
1+93
} 24" culvert 16' Line feet.
1+49 △

1+00

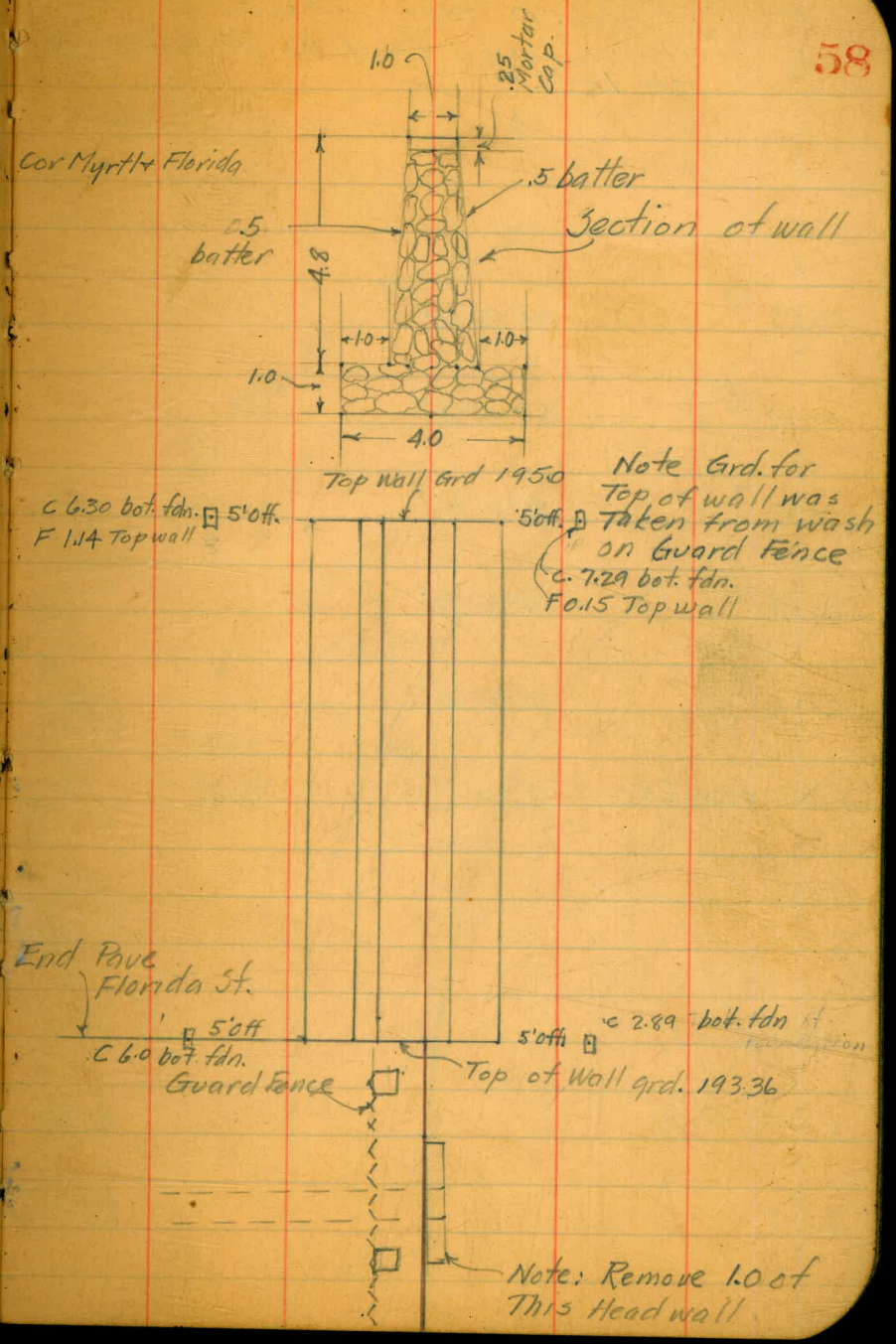
0+50

0+00



Rubble wall to be constructed at the end of Pave. Florida St.

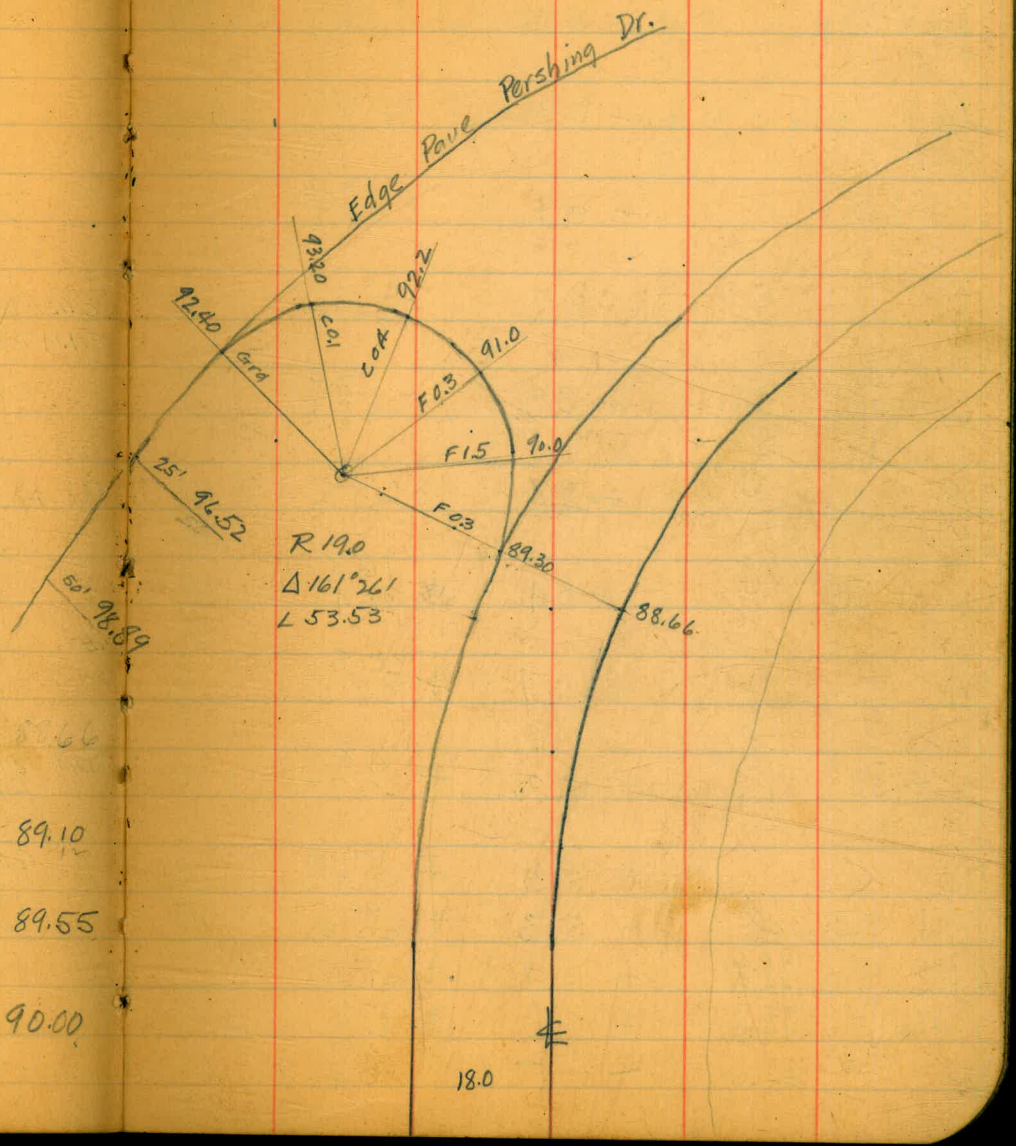
	+	H.I	−	Elev	
BM	1.70			197.99	B/p S.W Cor Myrtle Florida
0+15.0					
0+00					



H L Landwehr
A.E Franklin ch.
J.A Partridge ch.

Return from Powder House Canyon Road to Pershing Dr on Left.

		Δ	Grd ℄
0+53 ^{53}	EC=PCC.	161°26'00"	
0+42 ^{82}		129°08'48"	
0+32 ^{12}		96°51'36"	
0+21 ^{41}		64°34'24"	
0+10 ^{71}		32°17'12"	
66+25=0+00	PRC.	0°00'	℄ Grd. 88.66
66+00			89.10
65+75 ^{20}	BC		89.55
65+50			90.00



1/3/34 Stas 25 — 37 { 1/2 To 1
AFF
JAP Rd Bed 18' CUT

25+00			+ 1.4	+ 5.4 / 20.7			
+50			+ 2.4	+ 5.8 / 20.9			
26			+ 6.2	+ 11.4 / 23.7			
+50			+ 9.1	+ 13.0 / 24.5			
27			+ 8.7	+ 13.5 / 24.8			
+50			+ 9.9	+ 15.0 / 25.5			
28			+ 4.4	+ 7.0 / 21.5			
+50			+ 8.4	+ 16.8 / 26.4			
29			+ 11.7	+ 20.5 / 28.3			
+50			+ 10.3	+ 18.0 / 27.0			
30			+ 8.3	+ 14.6 / 25.3			
+50	151.4 / 145.6		+ 5.8	+ 8.5 / 22.3			
31	148.6 / Gr = 144.90		+ 3.7	+ 6.1 / 21.0			
+50	145.3 / 144.3		+ 1.0	+ 4.6 / 20.3			
32	143.6		— 1.7	+ 2.7 / 19.4			

Left side Harvest

60

	El	Gr 1.1			½ 2.1
27+75	157.2	149.7	+ 3.7 / 21.7	+78	+ 10.0 / 23.9
28	153.6	149.0	+ 2.7 / 20.7	+4.6	+ 6.4 / 21.2
28+25	154.7	148.7	+ 4.0 / 22	+60	+ 8.0 / 22

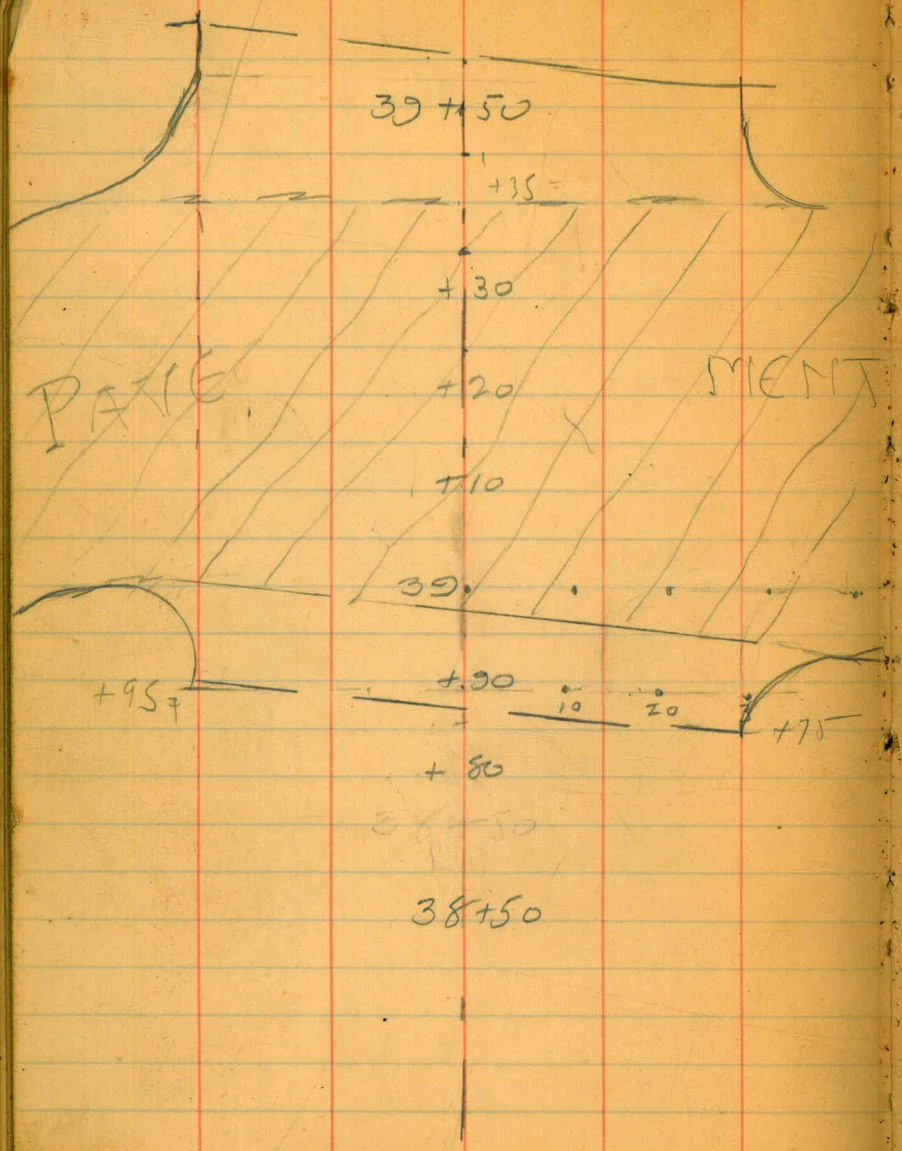
1/3/34 Stas 25 — 37 — 1/2 To 1
AEF
JAP
Rd Bed ℄ 18' — Cut

25+00			+1.4	+5.4 / 20.7			
+50			+2.4	+5.8 / 20.9			
26			+6.2	+11.4 / 23.7			
+50			+9.1	+13.0 / 24.5			
27			+8.7	+13.5 / 24.8			
+50			+9.9	+15.0 / 25.5			
28			+4.4	+7.0 / 21.5			
+50			+8.4	+16.8 / 26.4			
29			+11.7	+20.5 / 28.3			
+50			+10.3	+18.0 / 27.0			
30			+8.3	+14.6 / 25.3			
+50	151.4 / 145.6		+5.8	+8.5 / 22.3			
31	148.6 / Gr=144.90		+3.7	+6.1 / 21.0			
+50	145.3 / 144.3		+1.0	+4.6 / 20.3			
32	143.6		−1.7	+2.7 / 19.4			

Cl ⓑ left side Harvest

	El	Gr 1:1			½:1
27+75	157.2	149.7	+3.7 / 21.7	+7.8	+10.0 / 23.9
28	153.6	149.0	+2.7 / 20.7	+4.6	+6.4 / 21.2
28+25	154.7	148.7	+4.0 / 22	+6.0	+8.0 / 22

9/10/34



1/10/34
AEF
JAP

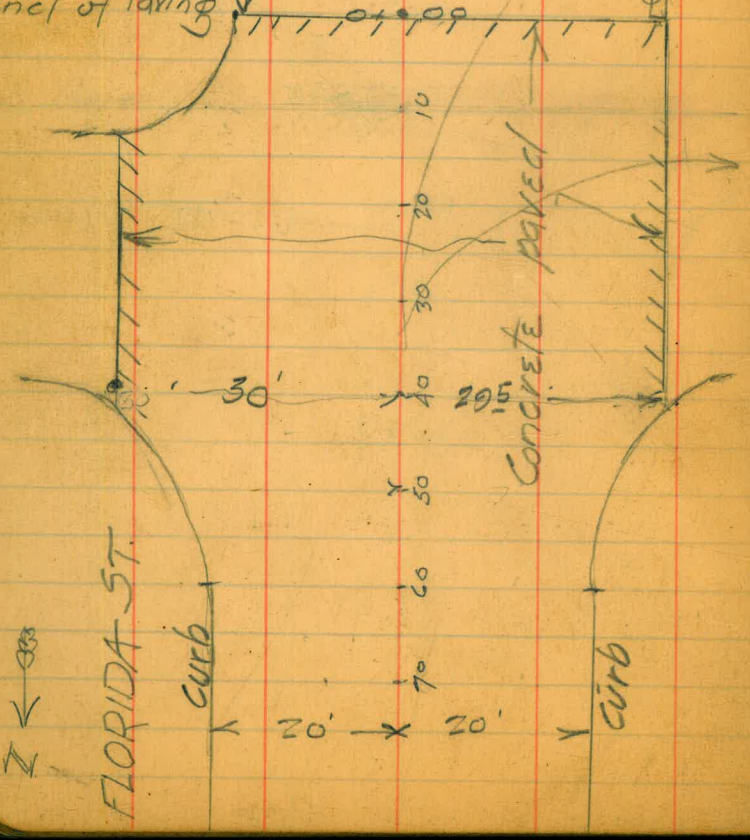
	−	℄ Gr	+
	197.99	198.77	194.52 F 0.4 0.78
0+20	194.1	4.7	194.70 F=0.3
+40	194.4	4.4	194.70 F 0.3
+60	194.4	4.4	194.50 F 0.2
+80	194.3	4.5	194.3
1	194.3	4.5	
+20	194.2	4.6	
2 +00	193.1	5.7	
+20	191.4	7.4	

Encl of Paving

-1.90% Grade Check

Grade Levels O.K.

Orig Grade O.K.



	−	℄	−	198.8	+
P	196.00	2.80		196.15	0.15
3	190.7	5.4			
+50	189.4	6.7		188.4	-.4
4	188.0	8.1			
+50	187.2	8.9		7.5	-0.3
5	186.4	9.7		186.5	-0.1

(H.I. = 198.77)

	4.58	4.64 0+00	4.71	4.94	5.17	5.39
	194.19	194.13	194.06	193.83	193.60	193.38
3.80	4.42	4.86	5.08	5.22	5.40	5.63
PA.97	194.35	193.91	193.69	193.55	193.37	193.14
3.85	4.44	4.96	5.26	5.45	5.60	5.78
194.32	194.33	193.81	193.51	193.32	193.17	192.99
3.96	4.60	5.04	5.32	5.41	5.51	5.62
194.81	194.17	193.73	193.45	193.36	193.26	193.15
4.16	4.74	5.06	5.27	5.24	5.16	5.12
194.61	194.03	193.71	193.50	193.53	193.61	193.65
	4.79	5.01	5.19	5.08	4.87	
	193.98	193.76	193.58	193.69	193.90	
	4.80	4.91	5.11	4.94	4.77	
	193.97	193.86	193.66	193.83	194.00	
-70'	4.64	4.86	5.05	4.85	4.69	
	194.13	193.91	193.72	193.92	194.08	

gutter ℄ gutter

10' 10' 10' 10'

Grade Change from Sta 22+00 to 38+60

1-26-34
H.L Landweer
A E Frankland
J. A Partridge

	+	H.I	−	Elev.	Grd.		L	℄		R
BM #3	4.86	161.926		157.066						
						← 1.84448				
22+00 BVC.			5.3	156.6	⊙	157.00	0 / 18.0	−.04 / 0		+.02 / 18.2
					⊙	156.70				
22+50 M.V.C.			5.1	156.8	⊙	156.46	+0.6 / 18.6	+.03 / 0		0 / 18.0
					⊙	156.27				
23+00 EVC			5.8	156.1	⊙	156.16	+0.6 / 18.6	−.01 / 0		+0.1 / 18.1
23+50			6.3	155.6		155.99	+.06 / 18.6	−.04 / 0		−.08 / 21.2
24+00			5.6	156.3		155.82	+2.8 / 20.8	+.05 / 0		−1.8 / 22.7
24+50			6.1	155.8		155.65	+2.0 / 20.0	+.01 / 0		−2.3 / 23.5
25+00			7.2	154.7		155.48	+1.4 / 18.7	−.08 / 0		−3.3 / 25.0
25+50			8.3	153.6		155.31	+1.0 / 18.5	−1.7		−5.8 / 28.7
26+00			5.0	156.9		155.14	+4.6 / 20.3	+1.8 / 0	0 / 12.0	−5.0 / 27.5
T.P	3.59	161.146	4.37	157.556						
26+50 BVC			2.0	159.0	⊙	154.97	+6.0 / 21.0	+4.0 / 0		+2.0 / 20.0
					⊙	154.86				
27+00 M.V.C.			2.9	158.3	⊙	154.69	+6.0 / 21.0	+3.6 / 0		+1.4 / 19.4
					⊙	154.46				
27+50 E.V.C.			1.7	159.5	⊙	154.18	+6.6 / 21.3	+5.3 / 0		+0.8 / 18.8

Note: Grades Revised from Sta 22+00 to 38+50 See Pages 67 70 71

Old

−0.3400

	+	HI	−	Elev	Grd.
		161.146			
28+00			7.6	153.6	153.55
28+50	B.V.C.		5.d	155.8	⊙ 152.93
					⊙ 152.56
29+00	M.V.C.		3.8	157.4	⊙ 152.08
					⊙ 151.52
29+50	E.V.C.		4.7	156.5	⊙ 150.76
T.P	1.48	158.416	4.21	156.936	
30+00			4.5	153.9	149.22
30+50			7.7	150.7	147.68
31+00			10.4	148.0	146.14
31+50			13.3	145.1	⊙ 144.60
T.P.	0.59	145.916	13.09	145.326	⊙
32+00			4.5	141.4	143.06
32+50			6.5	139.4	141.52
33+00			8.1	137.8	139.98
33+50	B.V.C.		8.5	137.4	⊙ 138.44
					⊙ 137.75

Void

30

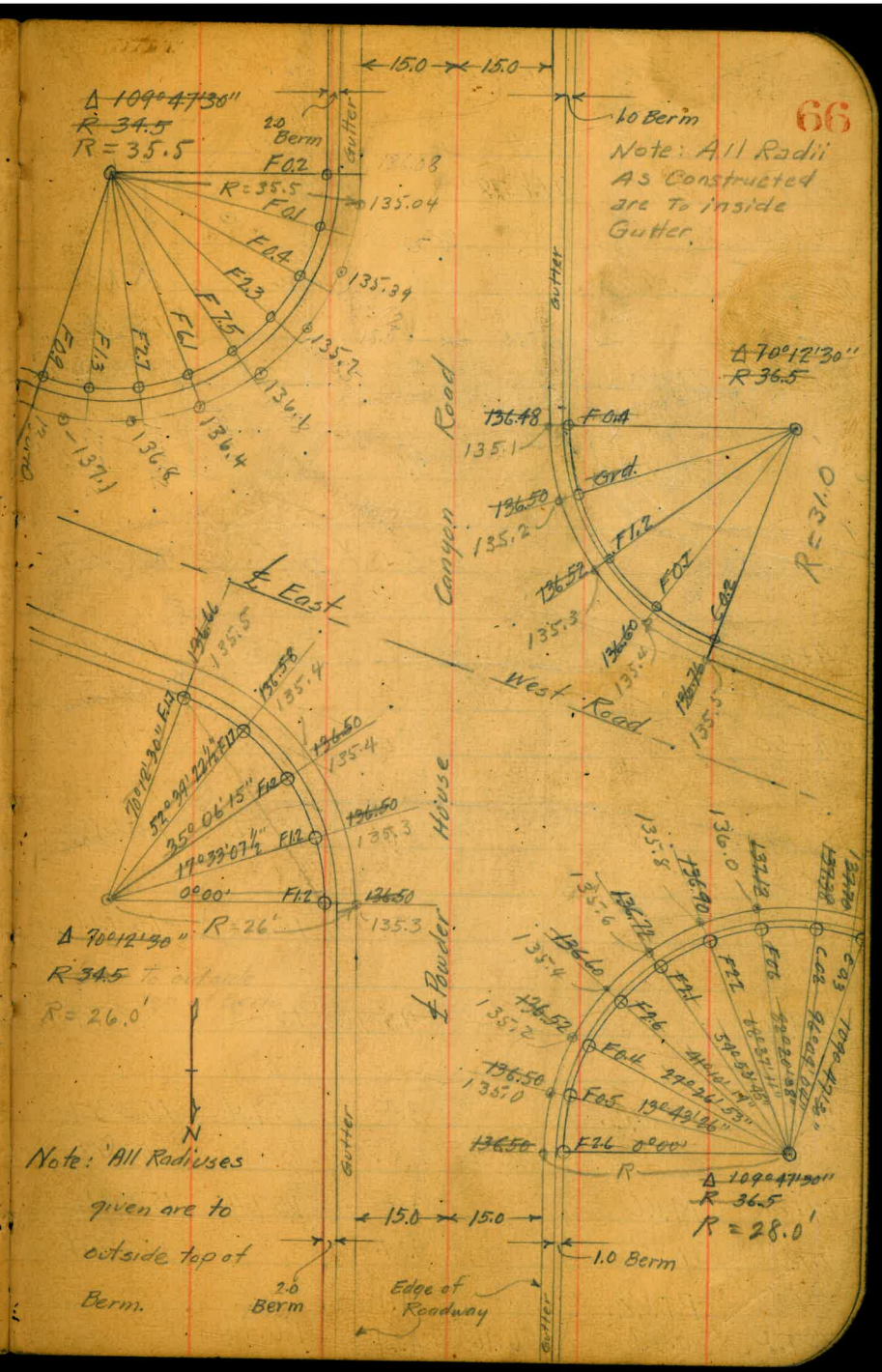
L	℄	R
+18 / 18.9	0 / 0	−2.0 / 23.0
+3.4 / 19.7	+2.9	0.0 / 18.0
+50 / 20.5	+5.3 / 0	+1.2 / 21.2
+40 / 20.0	+5.8 / 0	+2.0 / 20.0
+3.4 / 19.7	+4.7 / 0	+3.2 / 21.2
+2.4 / 19.2	+3.0 / 0	+2.4 / 20.4
+2.2 / 19.1	+1.9 / 0	+1.4 / 19.4
+1.6 / 18.8	+0.5 / 0	−1.8 / 22.7
+3.0 / 19.5	−1.7 / 0	−5.2 / 24.8
+0.8 / 18.4	−2.1 / 0	−3.6 / 25.4
0 / 18.0	−2.2 / 0	−3.0 / 24.5
−0.2 / 20.3	−1.0 / 0	−1.4 / 22.1

	+	H.I	−	Elev	Grd.	L			R
		145.916							
34+00	MVC		9.0	136.9	⊙ 137.24	+0.3 / 18.3	−03 / 0		−08 / 21.2
					⊙ 136.88				
34+50	E.V.C.		9.5	136.4	⊙ 136.70	+0.2 / 18.2	−0.3 / 0		−1.0 / 21.5
35+00			10.3	135.6	136.50	+0.7 / 18.2	−0.9 / 0		−1.6 / 22.4
T.P.	6.13	142.616	9.43	136.486					
35+50			8.6	134.0	136.30	−0.2 / 20.3	+2.3 / 0		−2.2 / 23.3
36+00			8.3	134.3	136.10	0 / 19.0	−1.8 / 0		−2.0 / 23.0
36+50		Void	7.0	135.6	135.90	+0.3 / 18.3	−03 / 0		−1.6 / 22.4
37+00	B.V.C.		6.4	136.2	⊙ 135.70	+0.8 / 18.8	+0.5 / 0	0 / 8.0	−1.9 / 22.8
					⊙ 135.61				
37+50	M.V.C.		6.6	136.0	⊙ 135.55	+0.5 / 18.5	+0.4 / 0	0 / 12.0	−1.0 / 21.5
					⊙ 13551				
38+00	E.V.C.		7.1	135.5	⊙ 135.5	+0.4 / 18.4	0 / 0		−1.8 / 22.7
BM			7.45	135.166	135.126	Nail in ℄ Bridge Sta 38+30			

0.040 ↓

0.010 ↓

Returns to East + West Road



Grade change from Sta. 22+00 to 34+50

	+	H.I.	−	Elev	Grd.
BM #3	3.71	160.78		157.07	
22+00	P.C.V.C.		4.1	156.7	157.00
					156.68
22+50	M.V.C.		3.9	156.9	156.48
					156.16
23+00	P.T.V.C.		4.6	156.2	155.96
23+50			5.1	155.7	155.59
24+00			5.1	155.7	155.22
24+50			5.0	155.8	154.82
25+00			5.6	155.2	154.48
25+50			5.6	155.2	154.11
26+00			4.5	156.3	153.74
26+50	P.C.V.C.		3.4	157.4	153.37
					153.17
27+00	M.V.C.		3.4	157.4	152.92
					152.64
27+50	P.T.V.C.		4.4	156.4	152.32
T.P	0.27	156.76	4.29	156.49	

−1.34 40

−0.74 40

H.L. Landweer
A.E. Franklin
J.A. Partridge
2-23-34

L ℄

Pole #C2845

0 / 18.0	−0.3 / 0	0 / 18.0
+0.8 / 18.8	+0.4 / 0	0 / 18.0
+0.7 / 18.7	+0.2 / 0	+0.2 / 18.2
+0.5 / 18.5	+0.1 / 0	0 / 18.0
+3.2 / 21.2	+0.5 / 0	0 / 18.0
+2.8 / 20.8	+1.0 / 0	+0.5 / 18.5
+2.3 / 19.2	+0.7 / 0	+0.3 / 18.3
+1.5 / 18.8	+1.1 / 0	0 / 18.0
+2.6 / 19.3	+2.6	−3.2 / 21.8
+3.4 / 19.7	+4.0 / 0	+3.3 / 21.3
+4.4 / 20.2	+4.5 / 0	+2.4 / 20.4
+4.2 / 20.1	+4.1 / 0	+2.6 / 20.4

	+	H.I	-	Elev	Grd
		156.76			
28+00			2.6	154.2	151.64
28+50	P.C.V.C.		3.4	153.4	⊙ 150.98
					⊙ 150.58
29+00	M.V.C.		3.9	152.9	⊙ 150.14
					⊙ 149.59
29+50	P.T.V.C.		4.2	152.6	⊙ 148.96
30+00			6.1	150.7	147.62
30+50			7.4	149.4	146.28
31+00			8.9	147.9	144.94
31+50			11.6	145.2	143.60
32+00.			13.3	143.5	142.26
T.P.	1.54	145.82	12.48	144.28	
32+50			3.8	142.0	140.92
33+00			5.6	140.2	139.58
33+50	P.C.V.C.		7.0	138.8	⊙ 138.24
					⊙ 137.64

Note Grades Revised from Sta 28+50 to 34+50 See Page 70

L	℄	R
+2.6 / 19.3	+2.6 / 0	0 / 18.0
+3.7 / 19.9	+2.4 / 0	+2.0 / 20.0
+3.4 / 19.7	+2.8 / 0	+2.4 / 20.4
+3.2 / 19.6	+3.6 / 0	3.2 / 21.2
+2.6 / 19.3	+3.1 / 0	+4.8 / 22.8
+2.4 / 19.2	+3.1 / 0	+3.6 / 21.6 5' W
+2.4 / 19.2	+3.0 / 0	+2.8 / 20.8
+5.2 / 20.6	+1.6 / 0	-.02 / 20.3
+4.0 / 20.0	+1.2 / 0	+1.0 / 19.0
+2.8 / 20.8	+1.1 / 0	+1.4 / 19.4
+0.6 / 18.6	+0.6 / 0	+ 1.1 / 19.1
+0.2 / 18.8	+0.6 / 0	+0.8 / 18.8

	+	H.I 145.82	−	Elev.	Grd.
34+00	M.V.C.		8.4	137.4	⊙137.18
					⊙136.87
34+50	P.T.V.C.		9.1	136.7	⊙136.70
B.M. #4			4.75	141.07 ✓	

← −0.40%

L	℄	R
+0.3 / 18.3	+0.2 / 0	e / 18.0
+0.2 / 18.2	00 / 0	+0.2 / 18.2

Pole # C 2635

54+00
65+75
10.648

65+75
54.001
11.751
1.784
1.78468
18.624

1.784
.752
3568
8920
12488
1.341568
19.624
20.965568

110.82
20.96
89.86
90.40
.54

90.4

Grade Change From Sta 28+50 to Sta 38+50

				Elev	Grd	L	℄	R
BM #4	12.79	153.86		141.07	-3.35%			
28+50	B.V.C.		0.6	153.3	150.98	+3.4 / 19.7	+2.3 / 0	+1.5 / 19.5
28+75					150.61			
29+00	M.V.C.		2.3	151.6	150.19	+3.2 / 19.6	+1.4 / 0	+1.8 / 19.8
29+25					149.71			
29+50	E.V.C.		2.5	151.4	149.17	+3.0 / 19.5	+2.2 / 0	+2.8 / 20.8
30+00			4.5	149.4	148.04	+2.6 / 19.3	+1.4 / 0	+1.5 / 19.5
30+50			5.4	148.5	146.91	+1.6 / 18.8	+1.6 / 0	+2.0 / 20.0
31+00			6.8	147.1	145.78	+0.8 / 18.4	+1.3 / 0	+0.8 / 18.8
31+50			8.7	145.2	144.65	+0.6 / 18.3	+0.5 / 0	-1.8 / 22.7
32+00			10.4	143.5	143.52	0.0 / 18.0	0.0 / 0	0.0 / 18.0
32+50			11.9	142.0	142.39	0.0 / 18.0	-0.4 / 0	-03 / 20.5
T.P	1.07	142.09	12.84	153.86		-06 / 20.9	-1.1 / 0	-4.4 / 26.6
33+00			1.9	140.2	141.26	-1.4 / 22.1	-1.3 / 0	-3.0 / 24.5
33+50	B.V.C.		3.3	138.8	140.13			
33+75					139.61			
34+00	M.V.C.		4.6	137.5	139.18	-1.0 / 21.5	-1.7	+2.6 / 23.9

2.26%

	+	H.I	−	Elev	Grd
		142.09			
34+25					138.82
34+50			5.3	136.8	138.56
35+09			5.8	136.3	138.12
35+50			6.1	136.0	137.69
36+00			6.8	135.3	137.25
36+50			5.6	136.5	136.81
37+00			5.9	136.2	136.37
37+50	BVC		6.2	135.9	135.94
37+25					135.75
38+00	M.V.C.		6.5	135.6	135.61
38+25					135.53
38+50	E.V.C.		6.9	135.2	135.50
B.M.			6.93	135.16	

0.875 / 0.050

L	℄	R
−1.4 / 22.1	−1.8 / 0	−2.8 / 24.2
−1.7 / 21.8	−1.8 / 0	−2.8 / 24.2
−1.7 / 21.8	−1.7 / 0	−3.2 / 24.8
−.08 / 21.2	−2.0 / 0	−3.4 / 25.1
−.02 / 20.3	−.03 / 0	−2.6 / 23.9
0.0 / 18.0	+.02 / 0	−2.8 / 24.2
0.0 / 18.0	0.0 / 0	−1.8 / 22.7
+.03 / 18.3	0.0 / 0	−1.8 / 22.7
	−.03 / 0	

135.13 ℄ Bridge

6-12-34 Powder House Rd Grades

Miller
Bliss
Walker

	BM 2	18' Lt.	℄	16 Rt.
0+80	178.61		195.00	
	1.64			
12+00	180.25	173.1	173.6	173.1
	9.31	2.8	2.3	2.8
	170.94	2.8	2.3	2.8
	4.96	0.0	0.0	0.0
+50	175.90			
	10.05	172.2	172.7	172.2
	165.85	3.7	3.2	3.7
	1.21	3.7	3.2	3.7
	167.06	0.0	0.0	0.0
13+00		171.2	171.7	171.2
		4.7	4.2	4.7
		4.7	4.2	4.7
		0.0	0.0	0.0
+50		170.3	170.8	170.3
		5.6	5.1	5.6
		5.6	5.1	5.6
		0.0	0.0	0.0
14+00		169.3	169.8	169.3
		6.6	6.1	6.6
		6.6	6.1	6.6
		0.0	0.0	0.0
+50		168.4	168.9	168.4
		7.5	7.0	7.5
		7.5	7.85	7.5
		0.0	F0.85	0.0
15+00		167.4	167.9	167.4
		8.5	8.0	8.5
		8.62	8.5	8.5
		−0.12	F0.5	0.0
+50		166.5	167.0	166.5
		9.4	8.9	9.4
		9.4	9.3	9.4
		0.0	−0.4	0.0
		Rt.		Lt.
16+00		166.1	166.0	165.5
		1.0	9.9	1.6
		1.0	9.9	1.6
		0.0	0.0	0.0
+14.94 BC Lt.		166.0	165.7	165.2
		1.1	1.2	1.9
		1.6	1.2	1.9
		F0.5	0.0	0.0
+50	165.57	165.5	165.1	164.5
		1.6	2.8	2.6
		1.6	2.8	2.6
		0.0	0.0	0.0
+79.3 Ctr Curve		165.1	164.50	163.9
		2.0	2.6	3.2
			out	
17+00		164.7	164.2	163.7
		2.4	2.9	3.4
		2.4	2.9	3.4
		0.0	0.0	C1.5

9.8

RT. 164.57 LT.

1.907 ÷ .95 = 2.00 %

169.32
3.36
165.96
3.80
165.52

		16 Rt.	℄	18 Lt.
17+43				
	T.P. Stub Lt. Sta 227+00	163.8	163.6	163.1
	167.06	3.3	3.5	4.0
	10.08	3.3	3.5	3.2
	156.98	0.0	0.0	C.0.8
18+00	4.52	162.7	162.9	162.4
	161.50	4.4	4.2	4.7
	4.43	4.4	4.2	4.7
	157.07	0.0	0.0	0.0
+50	4.43	161.7	162.2	161.7
	161.50	5.4	4.9	5.4
		5.4	4.9	5.4
		0.0	0.0	0.0
19+00		18' Lt.	161.5	16 Rt.
	B.M. 178.604	6.1	5.6	6.1
	0.44	6.1	5.6	6.1
	179.044	0.0	0.0	0.0
+50	10.10		160.9	
	168.94	6.7	6.2	6.7
		6.7	6.2	6.7
		0.0	0.0	0.0
20+00	179.044		160.2	
	10.12	7.4	6.9	7.4
	T.P. 168.92	7.4	6.9	6.9
	0.40	0.0	0.0	C.0.5
+50	169.32		159.5	
	3.36	8.1	7.6	8.1
	165.96	8.1	7.6	8.1
		0.0	0.0	0.0
21+00			158.8	
		8.8	8.3	8.8
		8.8	8.3	8.8
		0.0	0.0	0.0
+50			158.2	
		9.4	8.9	9.4
		9.4	8.9	8.8
		0.0	0.0	C.0.6
22+00 P.V.C			157.50	
		10.1	9.6	10.1
		10.1	9.6	10.1
		0.0	0.0	0.0
+25	out			
+50			157.0	
		5.0	4.5	5.0
		5.0	4.5	5.0
		0.0	0.0	0.0
+75	out		156.7	
		5.3	4.8	5.3

15707
441

72

99
82
17.24

Lt.

18.

		18' Lt	℄	16' Rt.	
23+00	A/161.50		156.5		
	6.17	5.5	5.0	5.5	
	155.33	5.5	5.0	5.5	
	3.75	0.0	0.0	0.0	
+50	A/159.08		156.1		
		5.9	5.4	5.9	
		5.9	5.4	5.05	
		0.0	0.0	C. 0.85	
24+00			155.7		
		6.3	5.8	6.3	
		5.1	5.8	5.7	
		C 1.2	0.0	C. 0.6	
+50			155.3		
		6.7	6.2	6.7	
		5.1	6.2	5.4	
		C. 1.6	0.0	C. 1.3	
25+00			155.0		
		7.0	6.5	7.0	
		5.7	6.5	5.8	
		C. 1.3	0.0	C. 1.2	
+50			154.6		157.40
		7.4	6.9	7.4	
		6.2	5.7	6.4	
		C. 1.2	C. 1.0		
26+00			154.2		
		3.7	3.2	3.7	
		4.1	3.7	3.8	
		C. 1.3	C. 1.5	C. 1.6	
+50 P.V.C.			153.9		
		4.0	3.5	4.0	
		4.1	4.0	4.2	
		C. 1.6	C. 1.2	C. 1.8	
+75	out		153.7		
27+00			153.4		
		4.5	4.0	4.5	
		4.2	4.2	3.6	
		C 2.0		C. 1.5	
+25	out				
+50 Eve.			152.8		
		5.1	4.6	5.1	
		2.5	2.8	2.35	
		2.6	1.8	2.75	
28+00			152.1		
		5.8	5.3	5.8	
		4.0	4.6	4.9	
		1.8	.8	.9	

6/16/34

Green Watson Lane

73

		18' Lt	℄	16' Rt	
28+50 P.V.C.		151.0	151.5	151.0	
		6.4	5.9	6.4	
		5.55	5.1	5.15	
		.85	.8	1.25	
29+00		150.2	150.7	150.2	
		150.2	150.7	150.2	
		4.05	3.55	4.05	
		2.35	3.05	2.15	
		+1.70	+0.50	+1.90	
+25			150.2		
+50 P.V.C.		149.17	149.67	149.17	
		5.05	4.55	5.05	
		2.45	3.55	3.55	
		+2.60	+1.00	+1.50	
30+00		148.04	148.5	148.04	
		3.0	2.5	3.0	
		1.7	1.2	1.3	
		+1.3	+1.3	+1.7	
+50	6/18/34	146.91	147.41	146.91	
	Green Watson	4.8	4.6	4.1	
		3.0	2.1	2.6	
		+1.1	+0.9	+1.5	
31+00		145.78	146.28	145.78	
		6.1	5.6	6.1	
		5.1	4.6	4.9	
		+1.0	+1.0	+1.2	
+50		144.65	145.12	144.65	
		5.4	5.9	6.4	
		4.9	5.7	5.9	
		+1.5	+0.2	+0.5	
32+00	T.P.	143.52	144.02	143.52	
	144.40	7.5	7.0	7.5	
	1.26	6.7	6.4	7.0	
	145.68 H.I.	+0.8	+0.4	0.5	
+50		142.39	142.89	142.39	
		3.3	2.8	3.3	
		2.9	2.8	3.1	
		+0.4	0.0	+0.2	
33+00		141.26	141.76	141.26	
		4.4	3.9	4.4	
		4.4	3.9	4.2	
		0.0	0.0	0.2	
+50 P.V.C.		140.13	140.63	140.13	
		5.55	5.05	5.55	
		5.5	5.0	5.56	
		0.0	0.0	0.00	

144.40
1.28
145.68

10.30
141.08
151.38

2.22%

See Page 78

		18' Lt	℄	16' Rt.
33 + 75	Out	139.61	140.11	139.61
34 + 00		139.18	139.68	139.18
		6.5	6.0	6.5
		6.5	5.9	6.5
		0.0	℄ 0.1	0.0
+ 25	Out.	138.82	139.32	138.82
+ 50	E.V.C.	138.56	139.06	138.56
		7.1	6.62	7.1
		7.1	6.6	6.5
		0.0	0.0	+ 0.6
35 + 00	T.P.	138.12	138.62	138.12
	138.62	3.0	2.55	3.0
	2.55	2.9	2.55	3.3
H.I.	141.17	3.3	0.00	+ 0.7
+ 50		137.69	138.19	137.69
		3.48	2.98	3.48
		3.48	2.98	3.48
		0.00	0.00	0.00
36 + 00		137.25	137.75	137.25
		3.9	3.42	3.9
		3.9	3.4	3.9
		0.0	0.0	0.0
+ 50		136.81	137.31	136.81
		4.36	3.86	4.36
		4.4	3.9	
		0.0	0.0	
37 + 00		136.37	136.87	136.37
		4.8	4.30	4.8
			4.1	
			+ 0.2	
+ 50	P.V.C.	135.94	136.44	135.94
+ 75		135.75	136.25	135.75
38 + 00		135.61	136.11	135.61

Void

See Page 76

2.26

0.873 %

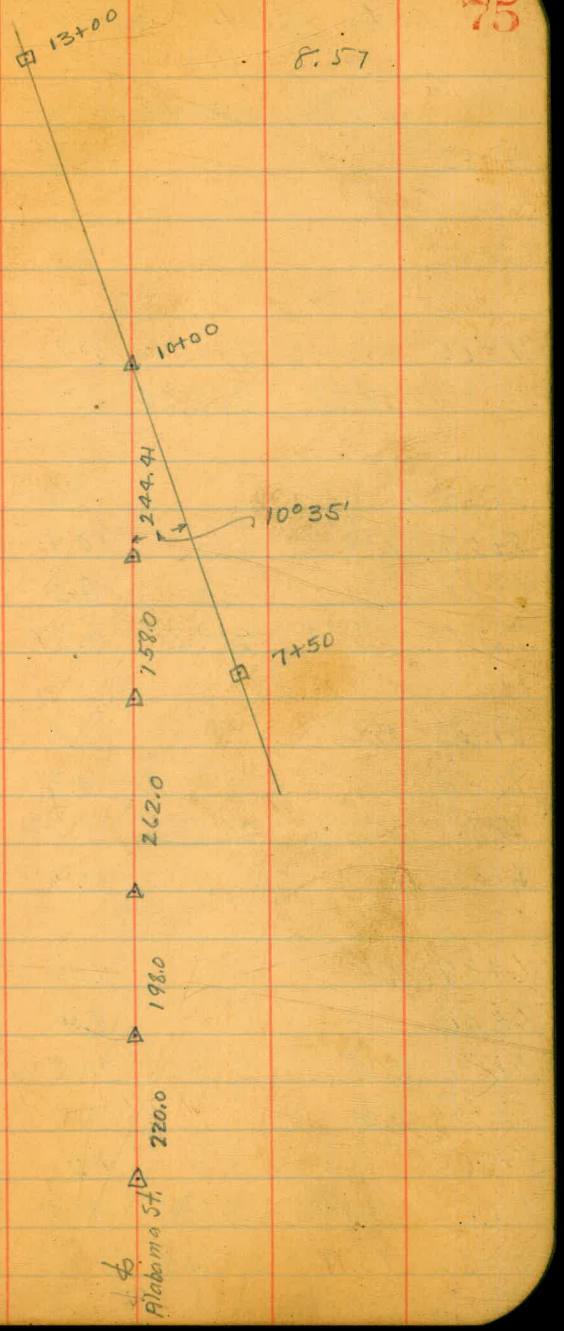
		18' Lt	℄	16' Rt.	
38 + 25		Void	136.03	135.53	
+ 50	E.V.C.	135.50	136.00	135.50	
39 + 00			136.00		
		5.45		1.784	B.M.
				.892	118.51
+ 50			136.00		1136
		137.50		131.93	127.515
				F. 8.9	0.56
40 + 00	2.35	135.15	136.00	131.04	128.955
					8.55
					137.505
+ 50					1.94
					135.565
41 + 00	3.60	133.90	45+00	10.85	126.65
+ 50			46400	12.90	124.60
					137.50
					6.41
42 + 00	5.10	132.40			131.09
+ 50	6.41	131.09		19° 30'	
	7.30	130.20			
43 + 00	7.05	130.45			
		.9426	50.4700	53.54	
+ 50			47130		
			33400		
			28278		
			51220		
			47130		
			4090		
			3770		
44 + 00			2196		

See Page 76

Alignment Alabama St connection for Powder House Canyon Road

10+82.41 = 10+00 ℄ Powder House Canyon Road

8+38	Lt 18°41'
6+80	Lt 9°00'
6+39 P.O.T.	
4+18	Rt 3°30'
2+20	Rt 23°00'
0+00 = End pave. Alabama St	Rt 11°00'



Profile of Alabama st Connection for Powder House Canyon Road

		+	H.I	−	Elev
BM		11.98	189.90		177.92
10+82	H			11.98	177.92
10+00				8.2	181.7
9+00				1.9	188.0
T.P		12.28	202.04	0.14	189.76
8+38	△			9.0	193.0
8+25	W.W.			10.9	191.1
8+00				4.2	197.8
T.P		12.24	214.21	0.07	201.97
7+40	B.G.			6.2	208.0
7+00				0.3	213.9
T.P.		12.26	225.86	0.61	213.60
6+80	△			9.7	216.2
6+39	Hub			6.18	219.68
6+00				8.4	217.5
5+50	W.W			20.5	205.4
5+15	B.G			5.7	220.2
5+00				0.9	225.0
T.P		13.17	238.35	0.68	225.18
T.P.		13.11	251.14	0.32	238.03

Hub Sta 10+00 ℄ Powder House Canyon Road

T.P.	10	11.98	+	95.02	
B.M	13	113.0	+	100.0	
	7	11.1	−	Elev	

	+	H.I.	−	Elev	
		251.14			
4+18 △			12.0	239.1	
4+00			9.4	241.7	
3+25			0.5	250.6	
T.P.	12.78	263.24 ✓	0.68	250.46 ✓	
3+00			11.0	252.2	
2+20 △			6.0	257.2	
2+00			5.2	258.0	
1+00			3.0	260.2	
0+00	End pave & Alabama St.		3.09	260.15	
T.P	12.13	274.53 ✓	0.84	262.40 ✓	
T.P.	6.36	280.49	0.40	274.13 ✓	
BM			0.87	279.62 ✓	279.52

29+00	150.2	150.7	150.2
	7.3	6.70	7.3
	6.5	6.2	6.5
	8	3	4
+50			

Chisel Mark at Base of flag pole at Mun. Swim Pool

		18 Lt.	℄	16 Rt.	
			151.38		8.55 / 148.83 / 157.40
29+00			150.7 ℄		P.I. 0
		149.12	149.12	149.12	
29+50	H.I	149.17 / 2.21	149.67 / 1.71 / 1.30 / .40	149.17 / 2.21 / 1.6	
30+00	H.	147.94 / 3.44 / 2.8 / 1.14	148.44 / 2.94 / 2.2 / .7	147.94 / 3.44 / 3.35 / .09 / 1.52	
	+50	146.76 / 6.34 / 4.70 / 1.64	147.26 / 4.12 / 3.55 / .57	146.76 / 6.34 / 5.1 / +1.24	
31+00		145.58 / 7.52 / 6.3 / 1.2	146.08	145.58 / 7.52 / 6.2 / 1.3	T.P.
	+50	144.40 / 3.05 / 1.40 / 1.65	144.90 / 6.48	144.40 / 3.05 / 2.35 / 0.70	
32+00		143.22 / 4.23 / 3.2 / 1.0	143.72 / 3.73 / 3.10 / .63	143.22 / 4.23 / 3.53 / .7	
	+50	142.04 / 5.41 / 4.7 / 0.7	142.54 / 4.91 / 4.71 / 0.0	142.04 / 5.41 / 4.9 / 0.5	
33+00	P.V.C.	140.86 / 6.59 / 6.54 / 0.0	141.36 / 6.09 / 5.7 / 0.4	140.86 / 6.59 / 5.7 / .89	
	+50	139.68 / 7.77 / 6.95 / .82	140.18 / 7.27 / 6.8 / C 0.47	139.68 / 7.77 / 7.35 / .42	P.V.C
34+00	H.I	138.68 / 3.79 / 3.00 / 0.79 / C0.6	139.18 / 3.29 / 2.78 / 0.51	138.68 / 3.79 / 3.25 / .54 / C.0.4	139.0 P.I

2.36 %
1.18

			B.M. 141.075 (2.12) H.I 143.195			
		℄	18' Lt	℄	16' Rt	
34+50		138.66	138.06	138.56	138.06	E.V.C
		4.54 / 4.54 / 0.0	4.41 / 3.6 / +0.8	3.9 / 3.5 / +0.4	4.41 / 3.3 / +1.1	
35+00		E.V.C	137.63	138.15	137.63	
			4.84 / 3.80 / 1.0	4.34 / 4.34 / 0.0	4.84 / 4.84 / 0.0	
	+50		137.19	137.69	137.19	
			5.28 / 4.5 / 0.8	4.78 / 4.4 / 0.4	5.28 / 4.85 / 0.4	
		Ex. 137.75 / 3.07				
36+00			136.75	137.25	136.75	0.873 %
	H.I	140.85 / 5.28 ℄	PVT.			
	+50	135.57 ℄	136.32	136.82	136.32	
			4.53 / 3.83 / .70	4.03 / 4.03 / 0.0	4.53 / 3.83 / .70	
37+00			135.88	136.38	135.88	
			4.97 / 4.03 / 0.00	4.47 / 3.75 / .72	4.97 / 4.05 / .92	
	+50	P.V.C	135.45	135.95	135.45	
			5.40 / 4.2 / 1.2	4.90 / 4.05 / .85	5.40 / 4.7 / 0.7	P.I. 135.51
38+00			135.11	135.61	135.11	
			5.74 / 4.35 / 1.39	5.24 / 4.45 / .79	5.74 / 4.3 / 1.4	
	+50	E.V.C	135.0	135.50	135.0	
			5.85 / 5.08 / .80	5.35 / 4.75 / .60	5.85 / 4.53 / 1.3	
34+06						
upper End Box.		134.30		157.13		5.9.
					6.9 / 6.35 / .65	

Grades used as stakes were set at Close of C.W.A. Grade + 0.5 = Crown Grd. + 1.0 = Berm Grd.

℄ Sta.		Grd.	℄ Sta		Grd.	
0+00	B.V.C.	194.04				−0.71%
0+20	V.C.	194.52				
0+40	V.C.	194.70	26+50	B.V.C.	153.37	
0+60	V.C.	194.70	26+75	V.C.	153.17	
0+80	E.V.C.	194.50	27+00	V.C. P.I.	152.92 / 153.00	
		−1.90%	27+25	V.C.	152.64	
			27+50	E.V.C.	152.32	−1.35%
16+29.30	B.V.C.	164.75				
16+50	V.C.	164.55	28+50	B.V.C.	150.98	
16+75	V.C.	164.14	28+75	V.C.	150.61	
16+79.30	P.I.	164.00				
17+00	V.C.	163.73	29+00	V.C. P.I.	150.19 / 150.30	
17+25	V.C.	163.39	29+25	V.C.	149.71	
17+29.30	E.V.C.	163.33	29+50	E.V.C.	149.17	
		−1.34%				−2.26%
22+00	B.V.C.	157.00	33+50	B.V.C.	140.13	
22+25	V.C.	156.68	33+75	V.C.	139.61	
22+50	V.C. P.I.	156.48 / 156.33	34+00	V.C. P.I.	139.18 / 139.00	
22+75	V.C.	156.16	34+25	V.C.	138.82	
23+00	E.V.C.	155.96	34+50	E.V.C.	138.56	

℄ Sta.		Grd	℄ Sta	
			67+50	86.90
		−0.875%	68+00	86.75
37+50	B.V.C.	135.94	68+16.15	℄ Int. edge Pave. Pershing Dr.
37+75	V.C.	135.75		
38+00	V.C. P.I.	135.61 / 135.50		For Left Return to Pershing Dr See Page 59
38+25	V.C.	135.53		
38+50	E.V.C.	135.50		
		−0.0%		
		For Returns to East + West Road See Page 66		
39+50	B.V.C.	135.50		
39+75	V.C.	135.45		
40+00	V.C.	135.06		
40+25	V.C.	135.01		
40+50	E.V.C.	134.61		
		−1.78%		
65+50		90.00		
65+75.20	B.C.	89.55		
66+00		89.10		
66+50		88.21		
67+00		87.32		

79A.

Index Cont.

IMPROVED TABLES

AND

INFORMATION

TABLE VI (continued)

SINES, COSINES, TANGENTS, COTANGENTS (continued)

deg.	sin 0′	tan 0′	sin 10′	tan 10′	sin 20′	tan 20′	sin 30′	tan 30′	sin 40′	tan 40′	sin 50′	tan 50′	deg.
46	7193	1.0355	7214	1.0416	7234	1.0477	7254	1.0533	7274	1.0599	7294	1.0661	43
47	314	.0724	333	.0786	353	.0850	373	.0913	392	.0977	412	.1041	42
48	431	.1106	451	.1171	470	.1237	490	.1303	509	.1369	528	.1436	41
49	547	.1504	566	.1571	585	.1640	604	.1708	623	.1778	642	.1847	40
50	660	1.1918	7679	1.1988	7698	1.2059	7716	1.2131	7735	1.2203	7753	1.2276	39
51	771	.2349	790	.2423	808	.2497	826	.2572	844	.2647	862	.2723	38
52	880	.2799	898	.2876	916	.2954	934	.3032	951	.3111	969	.3190	37
53	986	.3270	8004	.3351	8021	.3452	8039	.3514	8056	.3597	8073	.3680	36
54	8090	.3764	107	.3848	124	.3934	141	.4019	158	.4106	175	.4193	35
55	192	.4281	208	.4370	225	.4460	241	.4550	258	.4641	274	.4733	34
56	290	.4826	307	.4919	323	.5013	339	.5108	355	.5204	371	.5301	33
57	387	.5399	403	.5497	418	.5597	434	.5697	450	.5798	465	.5900	32
58	480	.6003	496	.6107	511	.6212	526	.6319	542	.6426	557	.6534	31
59	572	.6643	587	.6753	601	.6864	616	.6977	631	.7090	646	.7205	30
60	660	1.7321	8675	1.7437	8689	1.7556	8704	1.7675	8718	1.7797	8732	1.7917	29
61	746	.8040	760	.8165	774	.8291	788	.8418	802	.8546	816	.8676	28
62	829	.8807	843	.8940	857	.9074	870	.9210	884	.9347	897	.9486	27
63	910	.9626	923	.9768	936	.9912	949	2.0057	962	2.0204	975	2.0353	26
64	988	2.0503	9001	2.0655	9013	2.0809	9026	.0965	9038	.1123	9051	.1283	25
65	9063	.1445	075	.1609	088	.1775	100	.1943	112	.2113	124	.2286	24
66	135	.2460	147	.2637	159	.2817	171	.2998	182	3183	194	.3369	23
67	205	.3559	216	.3750	228	.3945	239	.4142	250	.4342	261	.4545	22
68	272	.4751	283	.4960	293	.5172	304	.5386	315	.5605	325	.5826	21
69	336	.6051	346	.6279	356	.6511	367	.6746	377	.6985	387	.7228	20
70	397	2.7475	9407	2.7725	9417	2.7980	9426	2.8239	9436	2.8502	9446	2.8770	19
71	455	.9042	465	.9319	474	.9600	483	.9887	492	3.0178	502	3.0475	18
72	511	3.0777	520	3.1084	528	3.1397	537	3.1716	546	.2041	555	.2371	17
73	563	.2709	572	.3052	580	.3402	588	.3759	596	.4124	605	.4495	16
74	613	.4874	621	.5261	628	.5656	636	.6059	644	.6470	652	.6891	15
75	659	.7321	667	.7760	674	.8208	681	.8657	689	.9136	696	.9617	14
76	703	4.0108	710	4.0611	717	4.1126	724	4.1653	730	4.2193	737	4.2747	13
77	744	.3315	750	.3897	757	.4494	763	.5107	769	.5736	775	.6382	12
78	781	.7046	787	.7729	793	.8430	799	.9152	805	.9894	811	5.0658	11
79	816	.1446	822	5.2257	827	5.3093	833	5.3955	838	5.4845	843	.5764	10
80	9848	5.6713	9853	5.7694	9858	5.8708	9863	5.9758	9868	6.0844	9872	6.1970	9
81	877	6.3138	881	6.4348	886	6.5606	890	6.6912	894	.8269	899	.9682	8
82	903	7.1154	907	7.2687	911	7.4287	914	7.5958	918	7.7704	922	7.9530	7
83	925	8.1443	929	8.3450	932	8.5555	936	8.7769	939	9.0098	942	9.2553	6
84	945	9.5144	948	9.7882	951	10.078	954	10.385	957	10.711	959	11.059	5
85	962	11.430	964	11.826	967	12.250	969	12.706	971	13.197	974	13.727	4
86	976	14.300	978	14.924	980	15.605	981	16.350	983	17.169	985	18.075	3
87	986	19.081	988	20.206	989	21.470	990	22.903	992	24.542	993	26.432	2
88	994	28.636	9995	31.242	9996	34.368	997	38.189	997	42.964	9998	49.104	1
89	9998	57.290	9999	68.750	9999	85.940	9999	114.58	1.000	171.88	1.000	343.77	0
deg.	60′ cos	60′ cot	50′ cos	50′ cot	40′ cos	40′ cot	30′ cos	30′ cot	20′ cos	30′ cot	10′ cos	10′ cot	deg.

TABLE VII

RODS IN FEET AND INCHES

Rods	Feet Inches	Rods	Feet Inches	Rods	Feet Inches	Rods	Feet Inches	Rods	Feet Inches
1	16—6	21	346—6	41	676—6	61	1006—6	81	1336—6
2	33—0	22	363—0	42	693—0	62	1023—0	82	1353—0
3	49—6	23	379—6	43	709—6	63	1039—6	83	1369—6
4	66—0	24	396—0	44	726—0	64	1056—0	84	1386—0
5	82—6	25	412—6	45	742—6	65	1072—6	85	1402—6
6	99—0	26	429—0	46	759—0	66	1089—0	86	1419—0
7	115—6	27	445—6	47	775—6	67	1105—6	87	1435—6
8	132—0	28	462—0	48	792—0	68	1122—0	88	1452—0
9	148—6	29	478—6	49	808—6	69	1138—6	89	1468—6
10	165—0	30	495—0	50	825—0	70	1155—0	90	1485—0
11	181—6	31	511—6	51	841—6	71	1171—6	91	1501—6
12	198—0	32	528—0	52	858—0	72	1188—0	92	1518—0
13	214—6	33	544—6	53	874—6	73	1204—6	93	1534—6
14	231—0	34	561—0	54	891—0	74	1221—0	94	1551—0
15	247—6	35	577—6	55	907—6	75	1237—6	95	1567—6
16	264—0	36	594—0	56	924—0	76	1254—0	96	1584—0
17	280—6	37	610—6	57	940—6	77	1270—6	97	1600—6
18	297—0	38	627—0	58	957—0	78	1287—0	98	1617—0
19	313—6	39	643—6	59	973—6	79	1303—6	99	1633—6
20	330—0	40	660—0	60	990—0	80	1320—0	100	1650—0

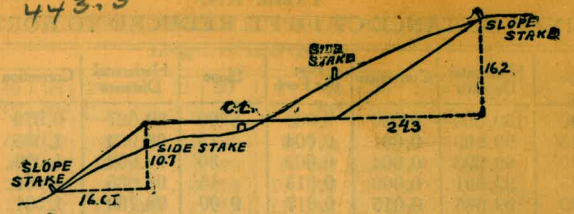
TABLE VIII

LINKS IN FEET AND INCHES

Links	Feet Inches	Links	Feet Inches	Links	Feet Inches	Links	Feet Inches	Links	Feet Inches	Links	Feet Inches
1	0- 7.92	18	11-10.56	35	23- 1.20	52	34- 3 84	69	45- 6 48	86	56- 9 12
2	1- 3.84	19	12- 6.48	36	23- 9.12	53	34-11 76	70	46- 2 40	87	57- 5 04
3	1-11.76	20	13- 2.40	37	24- 5.04	54	35- 7 68	71	46-10 32	88	58- 0 96
4	2- 7.68	21	13-10.32	38	25- 0.96	55	36- 3 60	72	47- 6.24	89	58- 8 88
5	3- 3.60	22	14- 6.24	39	25- 8.88	56	36-11 52	73	48- 2 16	90	59- 4 80
6	3-11.52	23	15- 2.16	40	26- 4.80	57	37- 7.44	74	48-10 08	91	60- 0 72
7	4- 7.44	24	15-10.08	41	27- 0.72	58	38- 3 36	75	49- 6 00	92	60- 8 64
8	5- 3.36	25	16- 6.00	42	27- 8.64	59	38-11 28	76	50- 1 92	93	61- 4 56
9	5-11.28	26	17- 1.92	43	28- 4.56	60	39- 7 20	77	50- 9.84	94	62- 0 48
10	6- 7.20	27	17- 9.84	44	29- 0.48	61	40- 3 12	78	51- 5 76	95	62- 8 40
11	7- 3.12	28	18- 5.76	45	29- 8.40	62	40-11 04	79	52- 1 68	96	63- 4 32
12	7-11.04	29	19- 1.68	46	30- 4.32	63	41- 6 96	80	52- 9 60	97	64- 0 24
13	8- 6.96	30	19- 9.60	47	31- 0.24	64	42- 2.88	81	53- 5 52	98	64- 8 16
14	9- 2.88	31	20- 5.52	48	31- 8.16	65	42-10.80	82	54- 1 44	99	65- 4 08
15	9-10.80	32	21- 1 44	49	32- 4.08	66	43- 6.72	83	54- 9 36	100	66- .000
16	10- 6.72	33	21- 9.36	50	33- 0.00	67	44- 2 64	84	55- 5 28	101	66 -7 92
17	11- 2.64	34	22- 5.28	51	33- 7.92	68	44-10.56	85	56- 1.20	102	67- 3.84

97-63
85-54
12.09

11 93.3
7 50
443.3



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1 65	1 80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3 45	3.60	3 75	3.90	4.05	4.20	4 35	2
3	4.50	4 65	4.80	4.95	5 10	5 25	5 40	5.55	5.70	5.85	3
4	6.00	6 15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7 50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9 00	9 15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10 65	10.80	10.95	11.10	11.25	11.40	11.55	11 70	11.85	7
8	12.00	12 15	12.30	12.45	12.60	12.75	12.90	13 05	13.20	13.35	8
9	13 50	13 65	13 80	13 95	14.10	14.25	14.40	14 55	14.70	14.85	9
10	15.00	15 15	15 30	15 45	15.60	15.75	15.90	16.05	16.20	16 35	10
11	16 50	16 65	16 80	16.95	17 10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18 15	18.30	18 45	18.60	18 75	18.90	19.05	19.20	19 35	12
13	19 50	19 65	19.80	19.95	20.10	20.25	20 40	20.55	20.70	20.85	13
14	21.00	21 15	21.30	21.45	21 60	21.75	21.90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24 15	24 30	24 45	24.60	24.75	24 90	25 05	25.20	25.35	16
17	25.50	25 65	25.80	25 95	26.10	26 25	26 40	26.55	26.70	26.85	17
18	27.00	27 15	27.30	27 45	27.60	27.75	27.90	28.05	28 20	28.35	18
19	28 50	28 65	28 80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30 00	30 15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31 50	31 65	31.80	31.95	32 10	32 25	32.40	32.55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33.60	33 75	33.90	34.05	34.20	34.35	22
23	34 50	34 65	34.80	34.95	35.10	35 25	35 40	35.55	35.70	35 85	23
24	36.00	36 15	36.30	36 45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37 80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39 00	39 15	39.30	39 45	39 60	39.75	39.90	40.05	40.20	40.35	26
27	40 50	40 65	40 80	40.95	41.10	41.25	41 40	41.55	41.70	41.85	27
28	42 00	42 15	42.30	42.45	42.60	42 75	42.90	43.05	43.20	43.35	28
29	43 50	43 65	43.80	43 95	44.10	44 25	44 40	44.55	44.70	44 85	29
30	45 00	45 15	45.30	45 45	45.60	45.75	45.90	46.05	46 20	46.35	30
31	46.50	46.65	46.80	46 95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48 00	48.15	48.30	48 45	48.60	48 75	48.90	49.05	49 20	49.35	32
33	49.50	49 65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51 00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52 50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54 00	54.15	54.30	54 45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55 50	55 65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57 00	57.15	57.30	57 45	57.60	57 75	57.90	58.05	58.20	58 35	38
39	58 50	58.65	58 80	58.95	59.10	59 25	59.40	59 55	59.70	59.85	39
40	60 00	60 15	60 30	60 45	60 60	60.75	60 90	61.05	61 20	61.35	40
41	61.50	61 65	61 80	61 95	62 10	62 25	62.40	62 55	62 70	62.85	41
42	63 00	63.15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64.35	42
43	64.50	64 65	64 80	64.95	65.10	65 25	65 40	65.55	65.70	65.85	43
44	66 00	66 15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67 50	67 65	67 80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69 00	69 15	69 30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70 50	70 65	70 80	70 95	71.10	71.25	71 40	71.55	71.70	71.85	47
48	72.00	72 15	72.30	72.45	72.60	72.75	72.90	73 05	73.20	73 35	48
49	73 50	73 65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

141.075
9.08
150.155
148.04
2.11

143.185
141.36
1.825
1.42
.41

.9954
75.62
19908
59724
49770
69678
65.2727

145.68
141.075
4.585
4.6

143.20
140.18
3.02

5+73.46
53+23.4

150.19
150.155
.045

150.
3.42
3.10
.32

150.15
149.17
.98

143.20
140.28
2.92

99.4
25.
76.4

150.19
147.59
2.60

137.30
1.75
135.55
2.58
141.075

3.42
2.7
.7
.25) 1.75 (.7
17.5

143.575
138.62
4.955

150.155
1.310
148.855

140.28
139.78
2.65

137.20
135.45

3.42
2.65
.77

2.5) 1.75 (.7
1.75

.9724) 75.26 (77.29
68068
71920
68068
28520
19448
9072

143.195
139.78
3.415

135.45
1.75
.20

135.50
1.75
137.25

2.92
3
3.142

2-T to 3-2½
2-#3-2

12.30

60° 00
51.5'
8.1'

168.92
1.54
167.38

168.92
3.87
165.05

168.92
3.88
165.54

168.9
3.29
165.51

168.92
3.08
165.84

.953

2.53
34.8

2+21.3

48'

674
4.45
2.29

168.92
2.87
166.05

2 | 1.907
18
10
10
7
4
1

167.00
1.92
168.92
2.92
166.00

178.60
0.70
179.30
172.18
7.12

3.42
2.92
.50

179.30
12.30
167.00

168.92
3.01
165.91

168.92
3.85
165.07

168.4
3.00
165.82

10.45
97.92
108.37

7.12
6.0
1.5

Revised Section

12/13/33

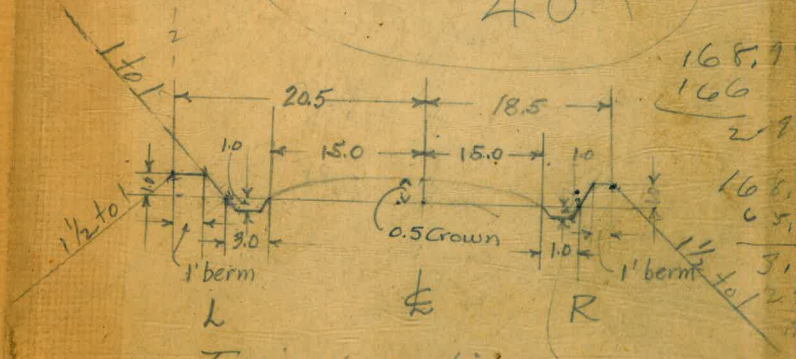
173.14
9.5
.64
1.21

DIT

20' 18'
23' 21'
15' 15'
18' 18'
24'
3:1
1:1
2.0

173.14
1.91
171.23
1.95
172.18

Rd = 36
40'



Typical section as staked for construction

168.92
1.66
2.92

168.92
3.12
3.17