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STATE ROAD  
1920

*Transit Notes*

LEVEL BOOK

370

1920

**KEUFFEL & ESSER CO.**  
DRAWING MATERIALS  
AND  
SURVEYING INSTRUMENTS.

NEW YORK.  
CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

**Tables for Excavations and Embankments.**

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.  
FOR SINGLE TRACK EXCAVATION.

" Copyright, 1885, by Keuffel & Esser Co. "

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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

DSC  
2706129

J 1  
Preliminary Survey on  
State Road - notes.  
First farm N. from intersection  
state Road - Co. 1111 on  
W enducks side is  
Wenderson Turpin - address  
Girls School, Clermont.  
Bill Coates - Squire St.  
4<sup>th</sup> lanes past E. Lane on N  
side - Clermont.  
Hartie Parson -  
Mark Reppert -

2  
Set up at intersection that  
Road & Ch. line - needle bearing  
712° E.

Begin. pt. witnessed  
Maple 18 N 72½° E - 81'-2"  
Cor. house farm S 29° 10' E 83'-6"

Witness pegs -  
stake N 23° 51' W - 40.7' 1' N. of 2 wire pole -  
" S 23° 51' E - 49.2' edge of yard about 6' S. of S. corner cem. walls

29.9  
49.2

3

W. from Marion - He  
A has all taken from line - and to left  
Mark Azi. Needle

Sta. 0. 65° 26' N 67° 26' W ✓

17+14 Iron pin 63.0' N 64° 50' W ✓

(17+148)

28+64.4 Iron pin 68.1' N 62° 32' W ✓  
28+65.5

maple 20" S 10° E 34.17'

maple 9" N 32° 04' E 44.83'

33+11.6 57° 51' 59" S 59° 55' W ✓  
33+10.6

walnut 4' N 19° 35' W 106.85

apple 16" S 85° 30' E 95.0

62+93.25 55° 35' N 57° 25' W ✓  
62+91.8

28.5  
2.67  
3.11  
6.156  
62  
69.0885  
5

Course Notes -

10  
stakes in line with stretch of road

22.2 to 5 stake. 18.9 to white band tel pole

24.83 to N stake 27.25 to N small pile -  
along road

Sta. 17+14 is 68' NW from F.C. Grider road box  
along road (airways)

60.5' NW H.S. Brown mail box

28+64.4 witnessed by -

stake 26.5' S. (18° SE Brown's corner gate post  
" 24.5 N } these stakes in line with road

witnessed by stakes in line 71-5

stake S- 20.9' } in line

" N 20.4' }

stake N 31.33' } in line

" S 18.5' }

tel. pole S 20° E 39.1'

post 45.71° E 176.4'

6

70+88' Mark Az. Bearing

70+88' S 58°38' W 59°30' W ✓

(69+14.1)

~~74+81~~

(81+0.8)

Iron  
pin

67°30' ✓

staked

~~87+64~~

(93+80.9)

71°21' ✓

~~96+94~~

(103+17.7)

75°06' 76°30' ✓

stake S-19.2'

P.I. " N 28.00'

total pole S 36° E 58.5'

apple N 41° 26' W 129'

+ 11.875

62.9325

74.8075

12.808

67.6158

93.77

11.112

P.I. stake S. 20.2' 28'

" N 22.2' 16.8'

sycamore N 41° 50' W - 101'

SW cor. barn S 76° 42' E 104.5'

Elmer Hester barn on Tyra Hunter Farm

stake S 24.00'

" N 20.20'

total pole S 21° 12' W 23.83'

stake N 30.4'

" S 23.3'

total pole 25.2

8

Sta. Mark Azim Bearing ✓

118+07

81°4' N 81°55' W

118+67.8

125+09.5

Iron Pin

15.48

96.94

12.47

9

200' NW tracks.

102.77

15.44

Stake N 283'

102.17

15.48

117.65

Stake S 235'

Tel. pole 568' E 30'

Iron sign

2000 Turpins

N. 46°34' E 122.8'

Stake S 35'

Iron Pin

" N 24.7

N.W. cor W & K S. 30° E 38.8

E 140' 1/2  
97'

10

Sta Mark Azim Bear

126+43.2 stake 57°56' N 60°30' W

staked

132+70.3 <sup>Iron Pin</sup> Nail 49°02' N 50°30' W

staked

(132+64.2)

(137+91.1)

137+96.8 <sup>Iron Pin</sup> Stake 76°02' N 78.35' W

staked

11

P. Intersection

20" Maple 23'

20" Maple 27.3'

NS 10W

Stake N 35.6'

~~Def R.~~

P.I.

Stake 5 48.1'

N 21.9'

Poplar 30" N 15° W 44.7'

Walnut 14" N 30° E 58.6'

Tel pole S 30 E 34.4'

Stake N 10.9'

P. Intersection 11 S 25'

Tel pole S 30 W 52.5'



12

Sta Mark Azim Bear

~~148776.18~~~~148780.9~~ Iron Pin

60°40'N 62°3'W ✓ staked

~~157762.4~~ Iron Pin Nail

157771.0

50.2

~~157720.89~~

69°31'N 71°35'W ✓

13

P.L.C.

Stake N	29.6'
Stake S	10.4'
Cherry 8"	560°W 38.8'
Tel. pole	560°E 26'

Def L

Concrete Post S	— 20.5'
Stake N	20'
S	20'
Tel pole S	80°W 38.8'

14

Sta Mark Azim Bear ✓  
~~166+534~~ Iron Pin 49°19' N 56°35' W

166+41.6  
 1 51.6

169+532  
 164.90.0

173+10.6 Iron Pin 45°02' N 47°15' W ✓

172+99.2 P.I.

172+96 = Dist measured on Curve

179+22.4 Iron Pin 55°27' N 55°45' W ✓

179+11 on Tang

179+7 on Curve

15

P. Intersection

Stake N 24.5'  
 " S 16.2'  
 Tel pole N 70° W - 45.5'  
 Tel pole S 60° E - 56'  
 wild cherry N 80° E - 57.5'

Def R.

Stake N 20' 20.9  
 " S 20' 19.1  
 Tel pole (PW+8) string  
 W 63'  
 26" Maple E 63.3'

Def L

Stake N 20' 17.6  
 S 20' 22.4  
 Plum 8" N 35° W 66'  
 Tel poles S 35° E 50.8'

16

Sta Mark Azim Bear

186+19.9 Iron Pin 62°54' N 64°10' W

186.9 on Twp  
186+5 on Curve

187+81.5 69°17' N 71°35' W

187+70.6 on Twp.

187+65.4 on Curve

$$\frac{186.9}{65} = 34.6$$

205+83.3 Iron Pin 69°17' "

205+68

17

Def L

$$\left\{ \begin{array}{l} \text{Stake N } 20' 18.5 \\ \text{ " S } 20' 21.5 \\ \text{NE cor Cement Block Pouch} \\ \text{S } 10^\circ \text{W } 38.2' \\ \text{12" Maple S } 75^\circ \text{W } 30.8' \end{array} \right.$$

Def L

$$\left\{ \begin{array}{l} \text{NW cor Cement Block pouch} \\ \text{N } 10^\circ \text{E } 34.8' \\ \text{16" Maple S } 10^\circ \text{W } 21.6' \\ \text{Stake N } 20' 18.6 \\ \text{ " S } 20' 21.4 \end{array} \right.$$

No Def

$$\left\{ \begin{array}{l} \text{Stake N } 20' 18.6 \\ \text{ " S } 20' 21.4 \\ \text{NE cor Dr Hill Res } 56^\circ \text{N } 72' \\ \text{30" Maple N } 20^\circ \text{W } 22.6' \end{array} \right.$$

18

Sta Mark Azim Bear

221+87.5 Iron Pin 69°17'

221+72.2

227+31.6 Iron pin 66°13' N 67°38' W

~~227+17.6~~  
50

226+67.5

19

Iron Pin  
W side Stone  
Crossing E  
side Green St

NW cor Brownsburg State Bank

S20W 35.8'

SW cor Drug Store

N20°E 34.8'

Def R

Stake N 20' 19.3

S 20' 20.7

10' Poplar S 27.8'

14' Maple N20E 27.5'

NW cor Mrs Tyler Res

S45E 54.2'

20

Sta Mark Azim Bear

250+991 Stake S6°12' N58°10'W

79+82.4

261+97.9 <sup>Iron Pin</sup> <sub>Mark</sub> 63°18'

263+34.4 P.I.

50.1

262+84.3

Def  $\Delta$  6°36'

LETTER

21

P.I.  $\Delta$  {

- Stakes 17.5'
- Stake N 26° 22.5'
- Tel pole 8.6' - S80°W

End of Road E side Lane to  
Hoodleys field

{ NW cor Geo Ruse  
concrete walk S20°W 22.7'

{ SE cor J.W. Ruse  
Front Porch N20°W 102.8'

22

Sta Mark Azim Bearing

274+64A I.P. 11 65°48' Def L 2°30'

278+20

← LETTER →

23

15 Mile Post S 60 E 39.7  
Tel pole S 50 W 34.6End Rd  
Mail Box 45 E 30.8'  
Mile Post N 70 W 44.0'  
Stake S 20'  
Tel pole S 45 E 26.8'

40

Sta	Mark	Mark
191+50	→ Side Walk N 23.3	Side Walk S. 20' Stake
194+50	22.0	20' "
197+50	12.8 Curb	20' "
200+50	22.2 SWalk	20' "
203+50	22.8	24.4 Mark
208	24.5	24.5
211	26.7 sumn	5
214	27.6 W	16 Mark
217	10.9 Curb	28.3
220	24.1 S	29.5 W
222	24.1 W	25.1
224	29.2 W	19.3 Curb
227+176		

41

Side walks

Curb

Note S Edge NSW 9' N sedge Curb  
Sta 219 - Curb 9.5' S, SW, N side

70  
16.6  
53.4

22.2  
22.7  
22.2

	N	S	N	S
Sta	Fence	Fence	Tel pole	Tel pole
0+15	2'S		5'S	1'S
0+40				
1+00	2'N	1'S		1'N
1+70				1'N
2+00	3'N	1'S		
2+20			4'S	
2+80	3'N			2'N
3+00		1'S		
4+00	3'N	1'S	1'N	
4+40				1'N
5+00	3'N	1'S		
5+85			2'N	1'N
6+00	3'N	1'S		
7+00	3'N	2'S		
7+40				1'N
7+60			3'N	
7+90				
8+00	4'N			
8+70				0'00
9+00		4'S		

63

Cnd Fence N

Fence Begins Sta 4+00

End fence on South

Beginning Fence



64

Sta	N. Junc	Stems	N. Junc	S. Junc
9+60			2' N	
10+00	4' N	4' S		0.00
11+50	4' N	4' S		
11+30			2' N	0.00
12+60			2' N	0.00
13+00	4' N	5' S		6' N
13+30			3' N	
14+00	4' N	5' S		+20 6' N
15+00	5' N	5' S		
16+75		4' S		6' N
17+00	6' N	4' S	+5' 4' N	+20 6' N
18+00	5' N	4' S	+80 4' N	+75-6' N
20+00	3' N	4' S	+60 3' N	1' N
21+00	3' N	1' S		+50 0.00
22+00	2' N	1' S	+20-2' N	
23+00	3' N	1' S		1' N
24+00	3' N	1' S	2' N	+50 0.00
25+00	3' N	1' S		

65

Sta 15 to 17 - 7 large maples 1' N. (M.P.)

Sta 18+00 End Junc

19+70 Beginning of Junc on S.

66

	June N	June S	July N	July S
25+80	3' N	0' S	2' N	1' N
27+00	2' N	1' N		+15 2' N
27+10		00.0' N	+60 3' N	
28+30				3' N
29+00	3' N	00' N	2' N.	+70.00 N
30+00	6' N	3' S	+80.2' S	
31+00	1' S.	3' S		3' S
32+00	1' N	3' S	+40 00' N	+40.2' S
33+00	1' S	3' S	+75.2' S	+75.2' S
34+00	1' S.	5' S.	+20.2' S	+80.5' S
35+00	1' S	6' S.		
36+00	1' S	6' S	+25.2' S	5' S
37+00	6' S	6' S	+70.3' S	+70.5' S
38+00	1' S	6' S.		+80.5' S
39+00	06.5	5' S	+70.1' S	
40+00	1' N	4' S		+15.3' S
41+00	1' N	4' S		

67

+60 end June on both sides

+80 beginning June line S.

beginning June N

June on line on N.

Brace on pole 2' N. S. B.

June on boundary June 32 + 35° N

Area 1' S. S. B.

68

Sta	From N	To S	2l. N	2l. S
44+40	1' N	4' S	1' S	3' S
45+00	1' N	3' S		
46+00	3' N	3' S	1' S	2' S
47+0	4' N	3' S	+80' S	+30' S
48+00	3' N	4' S		
49+00	6' N	4' S	2' S	1' S
51+00	3' N	4' S		
52+00	3' N	4' S	+50' N	+20' S
53+00	3' N	4' S		+80' S
54+00	3' N	4' S	+30' N	
56+00	5' N	4' S	+20' N	1' S
57+00	3' N	4' S		+20' S
58+00	3' N	4' S	+20' N	
59+00	3' N	4' S	+50' N	+40' S
61+00				1' S
63+00	9' N	600' N	6' N	2' N
64+00	5' N	4' S		2' N

69

32' - 16' Across Road N. Flow for N

+20' +36' - 2 people 1' N N.B.  
Telephone Poles on Boundary

2 32' 16' sewers under  
at 61+90 Water flows

70

	Jan N	Z S	Feb N	Feb S
65+ov	6' N	1' S		+80 0
67+ov	8' N	1' S		+10-00
68+ov	8' N	2' S		1' S
69+ov	8' N	1' S		1' N
69+40			+70 7' N	
70+ov				
71+ov	8' N	00 N		1' N
72+ov	8' N	00 N	+50 1' N	50 6' N
73+ov	7' N	00 N		49 2' N
74+ov	6' N	00	+30 9' N	
75+ov	6' N	00 N		760 2' N
76+ov	6' N	00 N	+15 8' N	
77+ov	6' N	00 N		1 3' N
78+ov	5' N	1' S	3' N	1' N
79+ov	6' N	1' S	+20 3' N	+20 -1' N
80+ov	3' N	1' S		+20 -0
PI	6' N	3' N	1' N	+20 8' N
P.C	6' N	3' N		120 4' N
PT	6' N	3' N		

71

Del Gales on line

end fence on N  
Beginning June 11.

72

Sta	Jan N	Jan S	Feb N	Feb S
82+00	5' N	00'		1' N
83+00	5' N	00 N		+10' N
84+00	4'			
85+00	5' N	1' N	7' N	
86+00	10' N	11' N		+40' N
87+00	10' N	00 N		
88+00	10' N	00 N		1' N
89+00	8' N	00 S	7' N	
90+00	8' N	1' S	6' N	+20' N
91	8' N			
92+00	8' N	3' S	+10' N	+00' N
93+00	6' N	4' S		
94+00	11' N	5' S		2' S
95+00	11' N	3' S		-2' S
96+00	1' N	3' S	+20' N	+40' N
97+00	2' N	2' S		+50' N
98	2' N	2' S		

73

Ditch 84+12 // to road at NB  
to Sta 86+10. Deflect R 45°

87+00 cut from N

Beginning Jan

92+00 Beginning Jan

74

Sta	Jan	Feb	Jan	Feb
99+00	3' N	2' S		
100+00	3' N	2' S	4' N	1' S
101+00	3' N	4' S		5' S
102+00	3' N	4' S	4' N	
103+00	10' N	2' S		3' S
104+00	8' N	2' S		2' S
105+00	6' N	2' S	8' N	
106	4' N		4' N	3' S
107	4' N	3' S		2' S
108	4' N	5' S	9' N	14' S
109	6' N	4' S		
110	12' N	10'		1' N
111	12' N	10' S	10' N	4' N
112+00	15' N	2' N		4' N
113+00				6' N
114				8' N
				10' N

75

112+00 end from S

113+00 end from N

114 10' S, S.B. Rebound 4' N. S.O.

Rebound tracks from Rebound N  
9 pike at crossing on road

76

Sta	Jan N	Jan S	20 N	Jul 5
113+00				+10 <sup>22</sup> 15'N
115+40				+45 <sup>22</sup> 6'53" N
116+00	35' N	15' S		+10 <sup>22</sup> 20' N
	Shore line face is 20' 5' S.B.			
117+00		5' N		+40 <sup>22</sup> 10' N
118+00	10' N	1' N		+30 <sup>22</sup> 6' N
119+00	10' N	3' S		+10 <sup>22</sup> 3' N
120+00	5' N	3' S	4' 53' N	1' 12' N
121+00	3' N	4' S		
122+00	4'	3' S		+16 <sup>22</sup> 2' N
123	4' N	3' S		+12 <sup>22</sup> 3' N
124	2' N	2' S		
<del>125</del>	3' N			
125	4' N	0' 05		+10 <sup>22</sup> 3' N
126	1' N	2' S		
127	1' N	2' S		

77

Face 6' N S.B.

Face 6' N S.B. 2nd pole 15' N S.B.

→ 2nd pole 10' N R.R. (116+50 end center point)

Face 15+15 L. &amp; S. 115+50 end 8' N

N.R. of Railroad

R.R. Sign 117+00 &amp; Road

Facing Face on N

Face end face S

Face begins S.

78

DL	2' N	3' S	2' N	2' S
PI+100	1' N	2' S		1' N
PT	3' N	2' S		
128	3' N	2' S	<sup>+80</sup> 2' N	<sup>+10</sup> 2' S
130 <sup>to</sup>	2' N	2' S	<sup>+60</sup> 2' N	<sup>+10</sup> 1' S
131	2' N	2' S		1' S
132	2' N	4' S		3' S
OE	CON	3' S		
+PT	8' N	3' S		1' S
135	5' N	3' S	<sup>+40</sup> 1' N	<sup>+30</sup> 1' S
136	5' N	3' S		<sup>+50</sup> 1' S
OE	4' N	4' S		1' S
+50	6' N	1' N		
+100	8' N	5' N		6' N
PI	7' N	8' N		<sup>+20</sup> 7' N
+50	7' N	3' N		
+150	3' N	3' S		2' S
PT	8' N	7' S		

79

134 July 2' N N/B. 134+20 O.K. 1' S S 0



Flu	2' N	2' S	2' N	2' S
140	2' N	4' S	2' N	2' S
141	2' N	4' S		4' S
142	4' N	4' S		4' S
143	4' N	4' S		
144	5' N	5' S	5' N	2' S
145	5' N		5' N	4' S
146	4' N	2' S		4' S
147	8' N	1' S		1' N
OC	8' N	00' N		1' N
OC110	8' N	00' N	6' N	1' N
OC160	6' N	3' N		
OC180	00' N	1' S		1' S
OC	8' N	3' S		3' S
151	4' N	3' S	150	3' S
152	4' N	3' S		3' S
153	4' N	2' S	150	2' S
154	4' N	2' S		2' S

face Southly Cray 135 to 20

82

Sta	Jan N	Jan S	Jul N	Jul S
155 + 0	12' N	1' S	<sup>+20</sup> 12' N	
156	12' N	00' N	<sup>+20</sup> 8' N	
157 + 0	8' N	00' N		
PT		1' N		12' N
020	3' N	1' S	2' N	
159	4' N	1' S		1' N
160	5' N	00' S		
161	6' N	00' S		<sup>+10</sup> 8' N
162	10' N	00' S	<sup>+70</sup> 8' N	<sup>+90</sup> 10' N
163	8' N	00		
164	8' N	00	<sup>+20</sup> 6' N	<sup>+20</sup> 5' N
PT + 100	1' S	2' S		
PT	3' S	3' S	4' S	2' S
+50	2' N	2' S		1' N
168	2' N	2' S		3' N
169	4' N	3' S		
170	2' N	3' S		<sup>+10</sup> 1' N

83

July Pole on 2 lines OT + 100

165 + 50. Paper 11 N S D

	From N	To S	W. N	24 S
170	2' N	3' S		150 00N
171	3' N	6' S		
172	5' N	6' S		
OT	11' N	6' N	+50 2'S	+50 4'S
OT	0' N	8' S		
174	2' N	5' S		10 4'S
176	10' N	4' S		7'S
177	2' N	2' S		20 1'S
BC	15' N	00 S		0'S
OT	15' N	2' N		
OT		0' N		+10 00N
180	8' N	00 N		
181	8' N	1' S	+70 2' N	+5 60N
182	8' N		+70 4' N	1'S
183	10' N	2' S	+50 8' N	+50 1'S
185	Curve	3' S		2'S

Sta.	June N	June S	Jul N	Jul S
230+70			6'S	+10 18'S
231+00	6'S	15'S	<sup>+20</sup> 8'S	
232	4'S	18'S	+10 26'S	+10 12'S
233	2'S	10'S		+50 7'S
234	1'S	8'S	-10' 2'S	
235		6'S	+60 4'S	3'S +40
236			+10 2'S	4'S
237	2'N	8'S	+70 2'S	+80 2'S
238	2'N	8'S	+70+70 2'S	+70
239			+30	2'S
240	4'N	6'S	+50+60 20' 00'N	+70 2'S
242	3'N	3'S	+10 1'S	+90 1'S
243	2'N	5'S	+70 00'N	+70 1'S
244	2'N	5'S	+80 00'N	+40
245	3'N	4'S	+30 00'N	2'N
246	3'N	4'S	+90 1'S	
247	3'N	4'S	1'S	2'N

Jul full on 8.3.

Reference to 200' 235 + 237

20 feet N or S of 30' P. P. P.

88

Sta	Jan N	Jan S	Jan N	Jan S
248	6'N	00N	00N	200 3'N
249	6'N	2'N		
PC	8'N	3'N		
PI	3'N	8'N	00N	10'N
PT	4'N	3'N		
250	1'N	2'N	2P 2'S	3'N
251	1'N	1'S		200 0'N
252	2'N	6'S	+20 00N	1
253	4'N	4'S	+50 1'S	3'S
254	6'N	2'S	+50 1'N	+60 1'S
255	6'N	3'S	2P 1'N	
256	6'N	3'S	+60 3'N	+50 2'S
257	6'N	3'S	20 2'N	
258	6'N	2'S	+30 4'N	1'S
259	6'N	3'S	+30 4'N	+50 2'S
260	6'N	4'S	4'N	70 1'S
261	5'N	3'S	50 2'N	

89

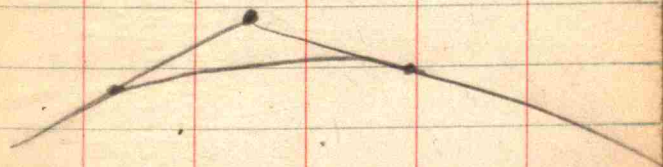
	26 N	26 S	26 N	26 S
262.	6 N	3 S		+70-15
OC	6'N	1'S		
DI	6'N	0'S	2'N +40	2'N +40
264.	6'N	0'S	+85 0'N	+85 4'N
265	4'N	3'N	+50 1'S	+91 2'N
266	5'N	3'N	+60 2'N	
267	3'N	4'N	+90 0	+60 3'N
268	5'N	3'N	+11 0'N	
269	4'N	3'N	+70 +90 25 0'S	3'N
270	4'N	2'N	+50 0	+40 2'N
271	3'N	1'N		
OC	2'N	0'N	+30 2 S	
PI	2'N	1'S		+30 1'S
PT	1'N	1'S	1'S +20 3'S	
273	2'N	2'S		+50 1'S
274	3'N	1'S	+40 +50 2'S	
275	4'N	0'S		

+40  
3'N Sweet 3.

92

	N	S		
276	A'N	OS	+40 +20 15	+40 1'N
277	4'N	OS	+90 <del>20</del>	<del>1'N</del>
228	4'N	1S	2S	1N

93



138

$$\begin{array}{r} 15+00 \\ 2+18 \\ \hline \end{array}$$

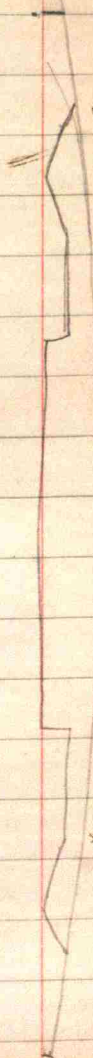
$$\begin{array}{r} 17+18 \\ 2+8 \\ \hline \end{array}$$

$$\begin{array}{r} 19+03 \\ 7+6 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ 7+6 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ 68 \end{array}$$

139





152

153

00'01\$  
-----  
05.  
05.  
1.02  
00'8

154

$$\begin{array}{r}
 .06496 \\
 13 \\
 \hline
 4 \overline{) 06509} \quad | \quad 1627 \\
 \underline{4} \\
 25 \\
 \underline{24} \\
 10 \\
 \frac{10}{29}
 \end{array}$$

$$\begin{array}{r}
 3252 \\
 \hline
 162725 \\
 \underline{16260} \\
 1250 \\
 01396 \\
 \underline{2792}
 \end{array}
 \quad | \quad 50.4$$

155

$$\begin{array}{r}
 .01600 \\
 01626 \\
 \hline
 2 \\
 \hline
 03252
 \end{array}$$

$$\begin{array}{r}
 4 \overline{) .05593} \\
 2792 \overline{) 139775} \quad | \quad 50.4 \\
 \underline{13960} \\
 17500
 \end{array}$$

156

$$\begin{array}{r} 8 \overline{) 383} \quad \downarrow 48 \\ \underline{32} \phantom{00} \\ 63 \end{array}$$

$$3 \overline{) 4326}$$

$$\begin{array}{r} 06525 \\ \underline{06496} \\ 29 \end{array}$$

~~00000~~

$$\begin{array}{r} 000756 \\ \underline{00727} \\ 29 \end{array}$$

$$4 \overline{) 06538} \quad \downarrow 101$$

$$\begin{array}{r} 016345 \\ \underline{1506} \\ 2850 \\ \underline{1506} \\ 1506 \end{array}$$

$$\begin{array}{r} 00753 \\ \underline{2} \\ 1506 \end{array}$$

157

$$\begin{array}{r} 10 \overline{) 5146} \\ \underline{55} \phantom{00} \\ 99 \end{array}$$

$$20 \overline{) 4733}$$

~~55~~

$$\begin{array}{r} \phantom{00} 53 \\ \underline{\phantom{00} 53} \\ 86 \end{array}$$

$$\begin{array}{r} 2 \overline{) 10226} \\ \underline{3} \phantom{00} \\ 43 \phantom{00} \\ \underline{2} \phantom{00} \\ 86 \phantom{00} \\ \underline{2} \phantom{00} \\ 46 \end{array}$$

$$\begin{array}{r} 6977 \\ \underline{6254} \\ 623 \end{array}$$

158

69° 17'

3 2

$$\begin{array}{r} 66^{\circ} 15' \\ 9 \quad 33 \end{array}$$

$$\begin{array}{r} 245.25 \\ \times 5.542 \end{array}$$

$$\begin{array}{r} 250.793 \\ 17.8 \end{array}$$

$$\begin{array}{r} 250 \\ 97.1 \end{array}$$

$$\begin{array}{r} 264 \\ 250 \\ 97.1 \end{array}$$

2.9

$$\begin{array}{r} 13 \\ 250.97.1 \\ 13 \quad 50.8 \end{array}$$

$$\begin{array}{r} 264.47.9 \end{array}$$

5642'

10° 25'

45.02

55° 29'

7 27

$$\begin{array}{r} 62^{\circ} 54' \\ 6^{\circ} 23' \end{array}$$

69° 17'

$$\begin{array}{r} 18 \\ 116 \\ 4 \\ 38 \end{array}$$
1320  
3

3960

$$\begin{array}{r} 226 \quad 13.2 \\ 1 \quad 18.4 \end{array}$$

$$\begin{array}{r} 227 \quad 31.6 \\ 17 \quad 98.5 \end{array}$$

245.25.1

186.19.9  
6.6
$$\begin{array}{r} 187.81.5 \\ 18. \quad 1.8 \end{array}$$

$$\begin{array}{r} 205.83.3 \\ 18. \quad 4.2 \end{array}$$

$$\begin{array}{r} 221.87.5 \\ 4. \quad 26.7 \end{array}$$

$$\begin{array}{r} 226 \quad 13.2 \\ 186 \quad 19.9 \end{array}$$

$$\begin{array}{r} 39 \quad 92.3 \\ 32.5 \end{array}$$

.8

159

186.19.9  
6.6
$$\begin{array}{r} 187.81.5 \\ 18. \quad 1.8 \end{array}$$

$$\begin{array}{r} 205.83.3 \\ 18. \quad 4.2 \end{array}$$

$$\begin{array}{r} 221.87.5 \\ 4. \quad 26.7 \end{array}$$

$$\begin{array}{r} 226 \quad 13.2 \\ 186 \quad 19.9 \end{array}$$

$$\begin{array}{r} 39 \quad 92.3 \\ 32.5 \end{array}$$

.8

160

76.03  
15.20

60.43

49 2  
27 1

76.53

179.224  
7 30

186 54

9-97.3  
86 8

10. 84.1  
137. 96 8

147. 80.9  
9. 1 5-

157. 82.4  
6. 57.2

69. 51  
20. 12

~~19. 19~~

119. 19  
5. 27

48. 5 2

49 19

4. 17

43. 02

81.14  
23.25  
57-56'

70.0.8  
69.14.1

7000.8  
6914.1

1086.7

5+11.8  
14.7

5+26.5  
1324 70.

37+96

125 + 9.8  
1 33.2

126 43.0

57° 56  
8° 54

754

49° 02'

157 82.4  
7 54.7  
16.3

166.53.4  
6.57.2

173.10.6  
6 11 8

15.67.8  
 6.41.7  
 +25.09.5  
 208 43  
 112 73  
 6.6 26.8  
 41.9  
 627.1  
 120°  
 87  
 1548  
 9.40  
 24.08  
 50.0  
 12180  
 1250  
 9250.8  
 60 43  
 8.58  
 69° 31'  
 26.8  
 12  
 .066  
 .066  
 .066  
 26.8  
 26.8  
 40  
 660  
 660

5  
 MIN 43  
 14.2  
 28.8  
 120 13.2  
 6 27.1  
 132.70.3

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
 ROADWAY 14 FEET WIDE. SIDE SLOPES 1 1/2 TO 1.  
 FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julian A. Hall, M. Am. Soc. C. E.