

Construction Notes of
County Ditch # 10

Extension Ditch-Walker-Remer Road
County Ditch # 14.
County Ditch # 13.

FIELD BOOK

361

C. J. Bark,
Inst man.

146

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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.

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	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.

For Keith's Railroad Curve Tables see end of book.

Sta 147 Adam Vanarsie

Sta	Elev	Grade	Lt.	±	Rt
25+600	215.4		$-\frac{4.1}{5.6}$	-4.1	$-\frac{4.1}{5.6}$
(Lateral No 4)					
0+00			00	0.0	00
1	219.25		$-\frac{1.2}{2.7}$	-1.2 ✓	$-\frac{1.2}{2.7}$
2	18.50		$-\frac{1.7}{3.2}$	-1.7 ✓	$-\frac{1.7}{3.2}$
3	17.75		$-\frac{2.8}{4.3}$	-2.8 ✓	$-\frac{2.8}{4.3}$
4	17.00		$-\frac{3.6}{5.1}$	-3.6 ✓	$-\frac{3.6}{5.1}$
5	16.75		$-\frac{3.5}{5.0}$	-3.5 ✓	$-\frac{3.5}{5.0}$
6	16.50		$-\frac{3.7}{5.2}$	-3.7 ✓	$-\frac{3.7}{5.2}$
7	16.25		$-\frac{3.5}{5.0}$	-3.5 ✓	$-\frac{3.5}{5.0}$
8	16.00		$-\frac{3.9}{5.4}$	-3.9 ✓	$-\frac{3.9}{5.4}$
9	15.75		$-\frac{4.4}{5.9}$	-4.4 ✓	$-\frac{4.4}{5.9}$
10	15.50		$-\frac{4.3}{5.8}$	-4.3 ✓	$-\frac{4.3}{5.8}$
11	15.25		$-\frac{4.9}{6.4}$	-4.9 ✓	$-\frac{4.9}{6.4}$
12	15.00		$-\frac{4.9}{6.4}$	-4.9 ✓	$-\frac{4.9}{6.4}$
13	14.19		$-\frac{5.4}{6.9}$	-5.4 ✓	$-\frac{5.4}{6.9}$
13+82.6	13.524		$-\frac{0.1}{1.2}$	-0.1	$\frac{0.1}{1.2}$

Sta	Elev.	Grade	Lt.	±	Rt.
63	12.00		$-\frac{3.9}{5.9}$	-3.9 ✓	$-\frac{3.9}{5.9}$
64	11.92		$-\frac{3.7}{5.7}$	-3.7 ✓	$-\frac{3.7}{5.7}$
65	11.84		$-\frac{2.1}{4.1}$	-3.8 ✓	$-\frac{3.8}{5.8}$
66	11.76		$-\frac{3.2}{5.2}$	-3.2 ✓	$-\frac{3.2}{5.2}$
67	11.68		$-\frac{3.2}{5.2}$	-3.2 ✓	$-\frac{3.2}{5.2}$
68	11.60		$-\frac{3.0}{5.0}$	-3.0 ✓	$-\frac{3.0}{5.0}$
69	11.52		$-\frac{0.8}{2.8}$	-1.8 ✓	$-\frac{1.8}{3.8}$
70	11.44		$-\frac{3.0}{5.0}$	-3.0 ✓	$-\frac{1.4}{3.4}$
71	11.36		$-\frac{1.1}{3.1}$	-1.1 ✓	$-\frac{1.1}{3.1}$
72	11.28		$-\frac{3.1}{5.1}$	-1.2 ✓	$-\frac{1.2}{3.2}$
73	11.20		$-\frac{3.8}{5.8}$	-1.9 ✓	$-\frac{1.9}{3.9}$
74	11.12		$-\frac{4.2}{6.2}$	-4.2 ✓	$-\frac{4.2}{6.2}$
75	11.04		$-\frac{4.8}{6.8}$	-4.8 ✓	$-\frac{4.8}{6.8}$
76	10.96		$-\frac{4.2}{6.2}$	-4.2 ✓	$-\frac{4.2}{6.2}$
77	10.88		$-\frac{3.7}{5.7}$	-3.7 ✓	$-\frac{3.7}{5.7}$
78	10.80		$-\frac{3.9}{5.9}$	-3.9 ✓	$-\frac{3.9}{5.9}$
79	10.72		$-\frac{3.7}{5.7}$	-3.7 ✓	$-\frac{3.7}{5.7}$
80	10.64		$-\frac{3.0}{5.0}$	-3.0 ✓	$-\frac{3.0}{5.0}$
1	10.56		$-\frac{3.9}{5.9}$	-3.9 ✓	$-\frac{3.9}{5.9}$
2	10.48		$-\frac{4.2}{6.2}$	-4.2 ✓	$-\frac{4.2}{6.2}$
3	10.40		$-\frac{4.1}{6.1}$	-4.1 ✓	$-\frac{4.1}{6.1}$
4	10.32		$-\frac{3.5}{5.5}$	-3.5 ✓	$-\frac{3.5}{5.5}$
5	10.24		$-\frac{4.1}{6.1}$	-4.1 ✓	$-\frac{4.1}{6.1}$
6	10.16		$-\frac{4.1}{6.1}$	-4.1 ✓	$-\frac{4.1}{6.1}$
7	10.08		$-\frac{3.9}{5.9}$	-3.9 ✓	$-\frac{3.9}{5.9}$

(Avg. Est. = Exc. = 10148.4 yds.
 Clearing = 5.0 Acres
 Sta. 40 to Sta. 139 + 21-3

main Ditch - 4' Bottom
#10

Sta.	Elev.	Grade	Lt	E	Rt
113	2225	$-\frac{34}{54}$	-3.4	-3.4	$-\frac{2.0}{4.0}$
114	2.000	$-\frac{52}{72}$	-5.2	-5.2	$-\frac{5.2}{7.2}$
5	1.55	$-\frac{3.3}{5.3}$	-3.3	-3.3	$\frac{3.3}{5.3}$
6	1.10	$-\frac{0.9}{2.9}$	-0.9	-0.9	$-\frac{0.9}{2.9}$
7	0.65	$-\frac{4.1}{6.1}$	-4.1	-4.1	$-\frac{4.1}{6.1}$
8	0.20	$-\frac{1.4}{3.4}$	-3.8	-3.8	$\frac{3.8}{5.8}$
9	199.75	$-\frac{3.3}{5.3}$	-3.3	-3.3	$-\frac{3.3}{5.3}$
120	9.30	$-\frac{1.6}{3.6}$	-1.6	-1.6	$-\frac{1.6}{3.6}$
1	8.85	$-\frac{3.8}{5.8}$	-3.8	-3.8	$-\frac{3.8}{5.8}$
2	8.40	$-\frac{4.1}{6.1}$	-4.1	-4.1	$-\frac{4.1}{6.1}$
3	7.95	$-\frac{3.9}{5.9}$	-3.9	-3.9	$-\frac{3.9}{5.9}$
4	7.50	$-\frac{4.2}{6.2}$	-4.2	-4.2	$-\frac{4.2}{6.2}$
5	7.05	$-\frac{4.8}{6.8}$	-4.8	-4.8	$-\frac{4.8}{6.8}$
6	6.60	$-\frac{3.6}{5.6}$	-3.6	-3.6	$-\frac{3.6}{5.6}$
7	6.15	$-\frac{4.1}{6.1}$	-4.1	-4.1	$-\frac{4.1}{6.1}$
8	5.70	$-\frac{4.5}{6.5}$	-4.5	-4.5	$-\frac{4.5}{6.5}$
9	5.635	$-\frac{2.8}{4.8}$	-4.2	-4.2	$\frac{4.2}{6.2}$
130	5.570	$-\frac{4.4}{6.4}$	-4.4	-4.4	$-\frac{4.4}{6.4}$
1	5.505	$-\frac{3.7}{5.7}$	-3.7	-3.7	$-\frac{3.7}{5.7}$
2	5.440	$-\frac{3.3}{5.3}$	-3.3	-3.3	$-\frac{3.3}{5.3}$
3	5.375	$-\frac{3.1}{5.1}$	-3.1	-3.1	$-\frac{3.1}{5.1}$
4	5.310	$-\frac{3.5}{5.5}$	-3.5	-3.5	$-\frac{3.5}{5.5}$
5	5.245	$-\frac{2.4}{4.4}$	-2.4	-2.4	$-\frac{2.4}{4.4}$
6	5.180	$-\frac{0.9}{2.9}$	0.0	0.0	0.0
7	5.115	$-\frac{3.3}{5.3}$	3.3	3.3	$-\frac{5.3}{5.3}$

Main Ditch

2.3
1.2

7.0
1.4
9.2
2.5

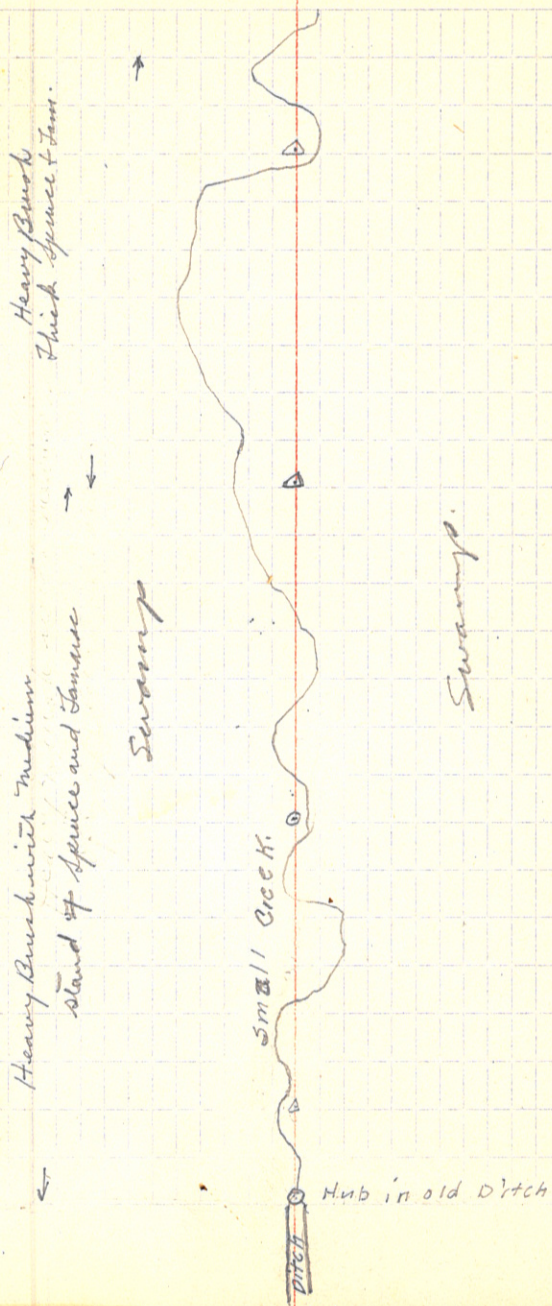
main ditches

Sta.	Elev.	Grade	Lt	E	Rt
138		5050	$-\frac{2.7}{4.7}$	-2.7	$-\frac{2.7}{4.7}$
9	↓	4985	$-\frac{2.6}{4.6}$	-2.6	$-\frac{2.6}{4.6}$
139+21.3	↓	4970		-0.0	

Ditch #10

Sta.	\square	\triangle	Bearing
20			
19			
18+67 ³	Δ . R.		26°00' R 581° E
18			
17			
16			
15			
14			
13			
12+75 ²	Δ L.		16°00' L N 72°45' E
12			
11			
10			
9			
8			
7			
6+60 ²	P.O.T.		
6			
5			
4			
3			
2			
1+09 ³	Δ L.		22°54' L N 89° E
1			
0+00			

Remer County Ditch - Extension ^{NW} + 6.5. 512 10



Sta.
+ 41 50

A

40

9

8

37+10.9 Δ R 47° 07' R

7

36+35.0 Δ B 44° 34' R

6

5

4

3

2

31+70.0 T.o. +

1

30

9

8

7

6

25+13.7 17° 46' L N 89° 10' E

5

4

23+00 P.o. +

2

1

