

X-SECTION BOOK

N<sup>o</sup> 2.

Hackensack Division  
#80

FIELD BOOK

380

C.J. White - Asst. Engr.

1910.



# 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, 1895, 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.

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

*Handwritten calculations and notes on the right page of the notebook, including various arithmetic problems and surveying data.*

$$\begin{array}{r} B.7m.1255.35 \\ + 10.91 \\ \hline 1266.27 \text{ H.I.} \\ - 1.36 \\ \hline 1264.91 \\ + 7.11 \\ \hline 1272.02 \text{ H.I.} \\ - 8.71 \\ \hline 1263.31 \text{ T.P.} \\ + 2.77 \\ \hline 1266.08 \text{ H.I.} \\ - 6.86 \\ \hline 1259.22 \text{ T.P.} \\ + 1.79 \\ \hline 1261.01 \\ 2714 \\ \hline 2714 \\ 1.75 \\ \hline 1.75 \\ 4050 \\ \hline 4050 \end{array}$$

$$\begin{array}{r} 72.0 \\ 64.5 \\ \hline 7.5 \text{ E} \\ 9.5 \text{ d} \end{array}$$

$$\begin{array}{r} 66.1 \\ 59.5 \\ \hline 6.6 \text{ d} \\ 8.1 \text{ E} \\ 8.5 \\ \hline 10.1 \text{ d} \end{array}$$

$$\begin{array}{r} 72.0 \\ 62.9 \\ \hline 9.2 \text{ E} \\ 10.5 \\ \hline 11.2 \text{ d} \end{array}$$

$$\begin{array}{r} 72.0 \\ 62.9 \\ \hline 9.2 \text{ E} \\ 10.5 \\ \hline 11.2 \text{ d} \end{array}$$

$$\begin{array}{r} 14.0 \\ 9.9 \\ \hline 4.1 \end{array}$$

$$\begin{array}{r} 1.75 \\ 1.75 \\ \hline 3.5 \\ 875 \\ \hline 875 \end{array}$$

$$\begin{array}{r} 525 \\ 6125 \\ \hline 6125 \end{array}$$

$$\begin{array}{r} 59.5 \\ 19 \\ \hline 57.6 \end{array}$$

$$\begin{array}{r} 1.75 \\ 1.75 \\ \hline 3.5 \\ 1750 \\ \hline 1750 \end{array}$$

$$\begin{array}{r} 1.75 \\ 1.75 \\ \hline 3.5 \\ 875 \\ \hline 875 \end{array}$$

$$\begin{array}{r} 1.75 \\ 1.75 \\ \hline 3.5 \\ 1575 \\ \hline 1575 \end{array}$$

$$\begin{array}{r} 8.1 \\ 5.7 \\ \hline 2.4 \end{array}$$

$$\begin{array}{r} 10.5 \\ 8.9 \\ \hline 1.6 \end{array}$$

$$\begin{array}{r} 1.75 \\ 1.75 \\ \hline 3.5 \\ 350 \end{array}$$

$$\begin{array}{r} 72.0 \\ 61.9 \\ \hline 10.1 \text{ E} \\ 10.95 \\ \hline 12.1 \text{ d} \end{array}$$

$$\begin{array}{r} 72.0 \\ 61.7 \\ \hline 10.3 \text{ E} \\ 11.18 \\ \hline 12.3 \text{ d} \end{array}$$

$$\begin{array}{r} 72.0 \\ 61.0 \\ \hline 11.0 \text{ E} \\ 11.0 \text{ d} \end{array}$$

$$\begin{array}{r} 66.1 \\ 60.7 \\ \hline 5.4 \text{ E} \\ 6.25 \\ \hline 7.4 \text{ d} \end{array}$$

$$\begin{array}{r} 14.7 \\ 9.9 \\ \hline 4.8 \\ 2.4 \\ \hline 17.2 \end{array}$$

$$\begin{array}{r} 14.3 \\ 9.1 \\ \hline 5.2 \end{array}$$

$$\begin{array}{r} 13.5 \\ 9.2 \\ \hline 4.3 \end{array}$$

$$\begin{array}{r} 7.0 \\ 5.4 \\ \hline 1.6 \end{array}$$

$$\begin{array}{r} 66.1 \\ 57.6 \\ \hline 8.5 \text{ E} \\ 9.35 \\ \hline 10.5 \text{ d} \end{array}$$



# SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
2811 ✓	64.5		-0.3 16.3	-2.1	-4.1 20.1
" +60	64.5		0.0 16	-1.4	-4.6 20.6
2812 ✓	64.5		DC 0.9 14.9	-0.4	-1.5 17.5
" +10				00	
" +31			D00		
" +35			+1.5 12.3	+0.5	-2.4 18.4
" +70					D00
" +90	62.9		+4.8 17.2	+5.2	+4.1 16.2
2813 ✓	62.8		+3.4 15.1	+4.3	+4.4 16.6
" +15			D00		
" +35	62.2		DC 1.4 15.4	+1.0	+0.9 11.4
" +45					D00
" +60	61.7		-0.3 16.3	-1.1	-2.7 18.7
2814 ✓	61.0		-1.2 17.2	-1.5	-2.7 18.7
" +30					00
" +50	60.7		DC 0.4 14.4	+0.7 11.1	+1.6 5.6
" +60					-0.2 16.2
" +75					D00
2815 ✓	60.5		+2.7 14.1	+3.3	+1.9 12.9
" +70	60.1		+1.7 12.6	+2.2	+1.5 12.3
" +74			D00		D00
" +90					00
2816 ✓	60.0		DC 1.9 15.9	-0.5	-1.0 17.
2817 ✓	59.5		DC 1.5 15.5	-0.8	-2.1 18.1
" +70	57.6		DC 1.3 15.3	-0.7	-1.4 17.4
" +85					00

1261.01 H.I.  
- 11.27  
1249.74 T.P.  
+ 10.15  
1259.89 H.I.  
- 1.43  
1258.46 T.P.  
+ 8.04  
1266.50

1266.50  
- 7.38  
1259.12

AREA'S	Cubic Yds.		Remarks
	XCAVATION	Embankment	
9582 ✓	1082.5	237.4	2 ft 0.4 high. R. Ditch 0.6 high L. Ditch OK.
8482 ✓	86.6		
3205 ✓			2 ft 0.4 high. R. Ditch = 0.8 high. L. ditch OK
00	00	32.7	
2680 ✓	1308 ✓	17.4	8.5
00 +70	128.98 ✓		144.7
	105.47 ✓		43.4
00 +15		1.3	77.5
351 ✓	14.13 ✓		2.7
	00	21.7	
4325 ✓		75.1	2 ft 0.7 high R. ditch 1.0 L. " OK
5818 ✓			
	00	58.1	8.5
468 ✓	2299 ✓	1.7 ✓	
00 +70			84.0
	67.75 ✓		144.9
00 +74	144.03 ✓		163
	00	17.6	
3656 ✓		159.9	
4977 ✓		114.4	
3994 ✓			
	00		
		<del>932.15</del>	

OK