

Walker Res
Xsections -

FIELD BOOK

380

to 0+00 to -

130

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 130 embank.

To S. di. m... at station 230
 Bridge ... on profile
 passes ...

200
 500
 125
 1000

228600 (59 ay.)
 135
 250

54
 174

a

AREA'S

Cubic Yds.

Remarks

EXCAVATION

Embankment

Excav.

Embank.

Sta. 67+50 To 75+89.5 - page 2 to 4

Sta.

Sta. 112+62 To 130 - page 12 to 14

Sta. 187-206 - page 23 to 25

Pay quantities for unfinished ... station

116+62 - 117+88 77 - 77

127+12 - 127+09 77 - 77

Conc. ... from profile to date ...

585-705 70 -

Current data 67

Stock Estimate - one page
 forward. -

H.P. Sorenson.
E.G. Baker.

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.	
			LEFT	RIGHT
			Loose.	Solid.
66+83-	7980+10		20	5
140	7821+50		400	200
355+20	371+80		5	3
46+50	102+64+		25	
517+60	648		90	35

b.

EXCAVATION	AREA'S		Cubic Yds.	Remarks
	Embankment	Excav.		
Final				
This work is not complete so there will no doubt be more rock in estimate Final. When completed				
Final as far as rock is concerned.				
Lump Estimate - much of the work incomplete. See last Est. for stations at which work was done.				

INDEX

SECTION.

Page to page

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
a					
b					
2	4	67-80	X		
5	6	67-80	X		Quan
7	9	88-102	X		
11	14	111+133	X		
17	27	123-123	X		
28	29	177-181	X		
30	31	1355-372	X		
32	33	1355-371	⊗		
33	37	615-653	⊗		(Rev.)
38	39	586-596	⊗		OK
40		623+50	⊗		Highway Ditch
41	43	1387-410	⊗		X sec
43	44	556-587	⊗		
44		584-586	⊗		OK
45	46	1387-378	⊗		
47		142-452	⊗		
48	49	372-384	⊗		

C

AREA'S		Cubic Yds.		Remarks
EXCAVATION	Embankment	Excav.	Embank.	
49	327	0	0	Extra Ditch ✓
49	327	0	0	Hand Ditch ✓
50	452	459	0	X sections ✓
55	500	600		Curve Data
56	58	327	354	0 ✓ X sections ✓
59	60	534	546	0 ✓ X " Quan ✓
61	540	546		Curve Data
64	653	664	0	X sections. Quan ✓
65	337	0	0	Channel change ✓

SECTION.

Yardage
Areas, as compensated from
primary and final X-sections.

2

A2

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks	
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.		
			<i>Walker Remar Xsections</i>								
67											
+50	29.1	30.5	$\frac{R6.11}{19.1}$	$\frac{F1.5}{14.3}$	$F1.4$	$\frac{F13}{14.0}$	$\frac{D6.10}{19.0}$	67+40	0.0	0.0	6
+71	29.8	29.8	$\frac{60.7}{20.7}$	60.0		$\frac{F0.0}{12}$	$\frac{60.6}{20.6}$	67+50	7.0		11
+50	29.1	30.5						67+70	22.0		
68	31.1	28.8	$\frac{6.40}{24.0}$	62.3		$\frac{63.2}{23.2}$		68	153.8		98
+50	27.7	27.0	$\frac{R1.14}{19.4}$	$\frac{F0.5}{12.8}$	$\frac{60.0}{6}$	60.7	$\frac{65.8}{25.8}$	68+50	85.0		221
+75	26.6	26.1	$\frac{R6.9}{18.7}$	$\frac{F1.0}{13.5}$	$\frac{60.0}{6}$	60.5	$\frac{26.0}{26.0}$	68+75	84.0		78
69	27.3	25.3	$\frac{R5.5}{12}$	$\frac{F0.0}{20}$	2.3	62.0	$\frac{67.5}{27.3}$	69	142.4		105
+50	28.3	23.5	$\frac{63.0}{23.0}$	$\frac{65.2}{64.8}$			$\frac{61.7}{37.2}$	69+50	358.5		464
70								70	360.2		665
											545

B.M. 1032.79
B.M. 1334.01

SECTION.

3
5

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.	
70	22.3	21.8	13.0 230	151 145	113.9 33.4 116.3 36.3					
+50	23.9	20.0	22.5	41.0	28.3	70+50	228.1			
71	21.3	18.3	22.1	13.0	26.9	71	185.6			
+50	18.7	16.5	22.6	12.2	24.0	71+50	132.2			
72	18.7	16.5	25.2	13.2	24.3	72	184.8			
+72+50	15.7	13.0	24.1	12.7	25.5	72+50	179.0			
72	18.6	12.2	23.1	11.9	24.5	72+72.5	130.0			
+95	11.4	11.4	22.7	10.0	21.4					
73	11.0	11.3	22.4	10.0	21.8	73	356			
+25	8.2	10.4	20.5	12.0	16.2					
+50	0.4.1	0.7.7	17.7	15.6	19.8					
74	9.8.3	0 8.8	31.8	10.5	23.7					
+50		0.7.9	37.2	12.4	22.9					
75	9.8.3	0.7.4	40.5	9.9	17.1					
+47										
+50	0.2.8	0.7.2	41.1	4.4	24.8	75+50	20.0			
76	0.5.2	0.6.9	33.4	11.7	31.1	76	963			
+23	26.7.	0.6.7		10.0		76+23	128.5			
+50	0.8.5	0.6.3	18.6	6	35	76+50	187.0			
77	0.9.9	0.5.2	19.1	13	32.8	77	230.0			
+50	10.2	0.4.4	19.1	16	35.4	77+30.7	294.0			
78	11.9	0.3.4	20.4	14	31.6	77+85	354.0			Hub 77+63.8

Subtotal Exc. 3753

70 to 77+50

PT + 300
= + 59.3

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
78	087	0.46 03.0	$\frac{C18}{218}$	65.7	$\frac{C67}{267}$
+25	054	0.20	$\frac{C18}{218}$	63.4	$\frac{C48}{248}$ 16°
+50	038	1301.0 0.10	$\frac{C06}{206}$	62.8	$\frac{C02}{292}$ 15°
+75	00.4	0.00	$\frac{F20}{150}$ $\frac{C00}{3}$	66.4	$\frac{C30}{220}$
+78	1300.00	1300.00	$\frac{F54}{201}$	60.0	$\frac{C20}{220}$
+80	97.2	99.8	$\frac{F102}{273}$ $\frac{F26}{6}$		$\frac{C00}{14}$ $\frac{C07}{207}$
79	97.7	99.0	$\frac{F100}{270}$ $\frac{F13}{6}$		$\frac{C00}{13}$ $\frac{C07}{207}$
-10	98.6	98.6	$\frac{F84}{246}$ $\frac{F43}{18}$	60.0	$\frac{C00}{204}$
+25	99.0	98.0	$\frac{F90}{255}$ $\frac{F47}{12}$ $\frac{C00}{6}$	61.0	$\frac{C17}{217}$
+50	97.3	97.3	$\frac{F98}{267}$ $\frac{F72}{14}$ $\frac{F10}{6}$	60.0	$\frac{C15}{215}$
+75	95.9	96.6	$\frac{F114}{291}$ $\frac{F75}{10}$	$\frac{F07}{3}$	$\frac{C24}{222}$
+89.5	91.1	96.2	$\frac{F101}{303}$ $\frac{F18}{12}$ $\frac{F18}{5}$	$\frac{F51}{5}$	$\frac{C00}{8}$ $\frac{C11}{17}$ $\frac{C28}{228}$

Bridge

7-5-20 (4)
Geo. Weistman
T. Peterson
A. Kennedy

AREA'S		Cubic Yds.		Remarks
EXCAVATION	Embankment	Excav.	Embank.	
57.1			163	
78	231.5		180	
78+25	156.7		123	
78+50	108.7		70	
78+75	42.5		5	
78+80	10.3		7	
79	9.0			C0.3
79+10	omit		23	
79+25	"			
79+50	15.6		18	
79+75	22.8		11	
79+90	16.0		3	
80+00	Hub	0.0		
		Subtotal Exc.		1953
		$\frac{C0.3}{20}$	C0.1	$\frac{C1.2}{20}$

Total Excavation
67 to 80 5706 Cu. Yds.

Planned Quantities 5598
(as shown on profile)

SECTION.

Final x Section.

5

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S	Cubic Yds.		Remarks
			LEFT	C.	RIGHT		EXCAVATION	Embankment	
			<i>Nov. 3, 1920</i>						
			<i>H. Sorenson</i>						
			<i>EG. Baker</i>						
			<i>GE. McGuire</i>						
BM.	108	1335.09			<i>1334.01</i>				
67	320	32.3			<i>3' 2 1/2</i>				
	30.6	30.9			<i>00 ft. 120 5 1/2 120 00 ft.</i>				
+70	30.0	29.8			<i>18 70 5 1/2 120 180 200</i>				
68	29.0	28.8			<i>24 80 120 5 1/2 6 1/2 80 28</i>				
	27.2	27.0			<i>24 180 120 6 1/2 120 180 270</i>				
+75	26.3	26.1			<i>85 121 5 1/2 7 9 78 99 200</i>				
69	25.3	25.3			<i>24 180 120 7 9 120 180 250</i>				
	25.3	25.3			<i>97 110 88 8 1/2 87 104 2 1/2</i>				
	26.23	26.23			<i>19.0 17.0 120 88 12.0 18.0 26.0</i>				
	23.1	23.0			<i>98 118 98 9 5/8 98 118 1 1/2</i>				
	21.6	21.8			<i>24 170 120 9 8 120 180 250</i>				
	20.5	20.6			<i>9.78 25.31</i>				
	18.3	18.3			<i>03 53 34 32 50</i>				
	16.4	16.4			<i>22 170 120 31 120 180</i>				
	14.8	14.8			<i>15 67 46 45 66</i>				
	14.28	14.28			<i>28 180 120 4.6 120 180</i>				
	13.	11.34			<i>31 80 58 57 78</i>				
	12.7	12.7			<i>230 180 120 57 120 180</i>				
	12.1	12.1			<i>54 100 81 80 100 10</i>				
	11.5	11.3			<i>220 170 120 79 120 180 270</i>				
					<i>69 120 98 98 118 26</i>				
					<i>220 180 120 98 120 180 230</i>				
					<i>71 138 112 115 150 69</i>				
					<i>240 180 120 116 120 150 240</i>				
					<i>115 1269</i>				
					<i>15 82 62 60 74 45</i>				
					<i>25 80 120 62 120 180 230</i>				
					<i>27 90 68 66 86 12</i>				
					<i>240 180 120 6.6 120 180 240</i>				
					<i>36 63 73 72 89 27</i>				
					<i>250 170 120 74 120 180 240</i>				
					<i>51 41 80 80 98 67</i>				
					<i>220 170 120 78 120 170 220</i>				

Note:

Culvert at Sta. 67+50 was not put in as it is not necessary to have one at this place, i.e. the water cannot be taken away from the road by installing it. The culv. at 74+ handles this water.

STA.	ELEVA.	GRADE	EXCAVATION	Embankment	Excav.	Embank.	Remarks
BM	145	1335.46				1334.01	65+
T.O.	8.51	43.04			0.93	3453	
					12	41.3	
					37.0	23.0	
					1.8	26.3	
					36.0		55.~
					120	31.0	
					30.0	20.2	
						10.2	
T.O.	0.15	32.67			10.52	5252	
T.O.	2.81	23.85			11.66	2101	
BM					9.19	1466	T.O. Hub Sta. 78.
						Elev. 1469	

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
73		11.4 11.3 11.2 11.1 11.0 10.9 10.8			
+41	10.9	10.4	77 20	105 18.0	84 120
+43	10.2	9.9 9.8 9.7	80 100	41 40	88 100
+50	10.1	9.7 9.6 9.5	82 120	94 40	92 120
74	9.0	8.6 8.5 8.4	101 21.0	100	106 120
+50	8.3	7.8 7.7 7.6	106 23.0	110 115	112 120
75	7.8	7.4 7.3 7.2	107 24.0	105 110	115 120
T.O	4.97	11.37	10.88		8.40
+50	7.7	7.3 7.2 7.1	30 20	37 40	44 120
+50	7.6	7.2 7.1 7.0	30 18.0	38 40	44 120
76	7.8	7.4 7.3 7.2	40 17.0	43 45	48 60
+23	6.9	6.7 6.6 6.5	44 17.0	45 45	63 120
+50	6.5	6.3 6.2 6.1	48 17.0	48 50	69 120
77	5.2	5.3 5.2 5.1	44 25.0	44 17.0	44 80
+307-1532	4.6	4.4 4.3 4.2	131 24.0	70 20	68 89
+85	3.7	3.4 3.3 3.2	140 37.0	50 70	63 80
78	3.1	2.9 2.8 2.7	109 36.0	86 70	80 92
+50	1.2	0.8 0.7 0.6	100 50.0	100 24.0	98 116
79	9.4	9.6 9.5 9.4	125 14.0	118 120	140 120
T.P	4.46	1303.99	1154		1249.53
+50	9.7	9.2 9.1 9.0	64 16.0	13 40	59 77
+75	9.6	9.6 9.5 9.4	74 19.0	71 70	87 120
+80	9.6	9.6 9.5 9.4	86 17.0	78 80	99 120

AREA'S	Cubic Yds.		Remarks
	EXCAVATION	Embankment	
BM 7.94	1303.99		
T.O 9.30	1311.91	138	
T.O 8.94	1319.17	1.68	
77-85		38 30	
+307		+1.0 32.0	
77		1.0 31.0	
T.O 9.74	129.33	158	1317.59
+50		56 35.0	
+23		74 31.0	
76		23 29.0	
Sta. 73+ 18" x 72" Pi.			
12 pcs. 15" Pi at Sta. 77+ flat placed since it does not seem necessary.			
Fact	Loose	20 CY.	
	Solid	5	
Grade O.K. as constructed 67 to 80			

113
112
111

SECTION.

STA.	ELEV.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
88+50	91.7	95.0	F 1.5 14.3	F 3.3	F 10.0 27.0
89	95.9	95.1	C 0.4 20.4	C 0.8	C 1.8 21.8
89+50	97.0	95.2	0.0 20	C 1.8	C 2.5 22.5
90	96.8	95.2	C 0.5 20.5	C 1.6	C 2.5 22.5
90+50	95.6	95.3	0.0 20	C 1.3	C 1.0 21.0
91	94.5	95.3	F 1.4 14.1	F 0.8	F 0.6 21.0
91+30.8			0.0		C 5.0
91+69	1297.0	1295.4	12	C 1.6	25
92	1298.4	1295.7	D 0.10 C 0.5 14.9	C 2.7	C 6.8 27.0
92+50	1298.0	1296.2	F 0.8 13.2	C 1.8	C 7.3 27.3
93	1300.3	1296.7	C 1.3 21.3	C 3.6	C 5.0 22.5
93+50	1302.0	1297.2	C 1.4 21.5	C 4.8	C 7.8 28

17
9
17
4.5
25
17

AREA'S

Cubic Yds.

Remarks

EXCAVATION

Embankment

Excav.

Embank.

00

~~57.0~~

81.2

82.2

54.7

9.5

90.0

140.0

112.9

164.3

228.8

138

53

128

151

127

59

57

132

243

257

364

490

91+30.8
91+69

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
94	1304.3	1297.7	C 22.2 22.2	C 6.6	C 10.2 30.2
+50	1305.6	1298.2	C 22.4 22.4	C 7.4	C 7.0 27
95	1303.7	1298.7	C 1.6 21.6	C 5.0	C 7.8 28
+50	1304.6	1299.1	C 1.5 21.5	C 5.5	C 11.0 31.0
96	1303.1	1299.6	00 20	C 3.5	C 7.8 27.8
+50	1301.9	1300.0	00 00	C 1.9	C 5.0 25
97	1299.4	1300.4	F 26 16.0	F 1.0	C 0.9 21.0
+50	1298.4	1300.8		F 8.4	
97+90	1301.4	1301.4	00 20	00	00 20
98	1304.5	1301.6	C 30 21	C 2.9	C 3.3 21.3
+60	10.4	1302.5	C 7.1 27.1	C 7.9	C 9.9 25 30.8
+70	10.3	1302.6	C 6.7 26.7	C 7.7	C 9.8 24 30.4
99	1309.2	1303.1	C 3.4 23.4	C 6.1	C 6.9 15 24 30.6
+25			00 20	C 2.7	C 8.2 28.2
+38	1303.7	1303.7	F	00	C 5.5 25.5
99+50		1303.8			
101+25	1306.4	1306.4		00	00 20
101+35	1307.2	1306.6	00 20	C 0.6	C 0.8 20.8
101+50	1308.5	1306.8	C 1.3 21.3	C 1.7	C 1.9 21.9
101+75	1310.0	1306.8	C 2.2 22.2	C 3.4	C 3.1 23.1
102	1306.1	1306.9	C 1.4 21.4	F 0.8	C 1.8 21.8
+10					

AREA'S		Cubic Yds.		Remarks
EXCAVATION	Embankment	Excav.	Embank.	
		565		
	295	492		
	236	484		
	287	432		
	180	253		
	93.2	59		
	120			
97+10	00	2		Subtotal Exc. 4348 ✓
	16	29		Check infield
	1403	627		" " "
	423.7	154		" " "
	406.8	395		" " "
	304.3	216		" " "
	1630	50		" " "
	47.9	11		" " "
	00			
	80	8		" " "
	36.2	34		" " "
	84.7	107		" " "
	146.0	68		" " "
	00			Subtotal 1699
	00			
Grand Total				6047

24
20
26
12
38

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.	Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment		
97+90	1301.4					00 20	00	00 20	
98	1301.6 ✓					C 1.0 21.0	C 0.9	C 1.3 21.3	
98+60	1302.5					C 7.1 27.1	C 7.9	C 9.9 28	C 10.8 32.8
98+70	1302.6					C 6.7 26.7	C 7.7	C 9.6 24	C 10.4 30.4
99	1303.1 ✓					C 3.4 23.4	C 6.1	C 6.9 15	C 10.6 30.6
99+25	1303.5					3+99+25 = 22 +38 F 4.0 18.0	C 2.7	C 5.5 25.5 = +38	3+99+23
99+50	1303.8					F 9.0 24	00	00 20	
99+88	1304.5					14.0 31	F 3.6 F 7.4	F 6.0 F 16.0	
100	1304.6 ✓					F 18 39	F 17.4	F 18 36	
100+20	1305.0			T.P. 1301.97		F 19.2 40.7	F 18.3	F 19 40.7	
100+40	1305.2					F 18.6 40.2	F 18.6	F 18.6 40.2	
100+60	1305.3			T.P. 1301.95		F 11.5 29.7	F 13.7	F 15.0 39	
101	1306.1 ✓					F 2.9 16.2	F 3.0 F 4.5	F 5.3 20.1	
101+25	1306.4					15.0 18	F 1.2 13.8	00 20	00 20
101+35	1306.6					00 20	00	00 20	
101+50	1306.8 ✓			B.M. Bridge		C 1.3 21.3	C 1.7	C 1.9 21.9	
101+75	1306.85			1306.6		C 2.2 22.2	C 3.4	C 3.4 23.1	
102	1307.10 1306.9 ✓					C 1.9 21.9	C 2.2 F 0.8	C 2.6 22.6	
102+10	1306.7					00 20	00	00 20	

SECTION.

13

STA.	ELEVA.	GRADE	CUT OR FILL.		AREA'S	Cubic Yds.		Remarks
			LEFT	C. RIGHT		EXCAVATION	Embankment	
120	13.5	09.8	$\frac{61.6}{21.6}$	03.7	$\frac{63.3}{23.3}$	148.0		
+43	09.2	09.2	$\frac{61.0}{21.0}$	60.0	$\frac{60.4}{20.4}$	30.0	142	
+45					$\frac{F0.0}{12}$			
+70	06.4	08.2	$\frac{60.8}{20.8}$	$\frac{60.0}{16}$	F18 $\frac{F2.9}{16.4}$	8.6	19	
+80					$\frac{F0.0}{12}$			
121	07.6	07.3	$\frac{61.9}{21.9}$	60.3	$\frac{60.0}{5}$ F19 $\frac{F1.9}{14.9}$	31.0	22	
+15	08.1	06.6	$\frac{64.5}{24.5}$	61.5	$\frac{F0.0}{12}$ D6.11 $\frac{D6.11}{19.1}$	104.1	37	✓
+55	12.4	04.9	$\frac{67.1}{27.1}$	67.5	$\frac{64.6}{24.6}$	326.9	319	
122	09.3	03.0 ✓	$\frac{62.7}{22.7}$	66.3	$\frac{68.6}{28.6}$	290.6	516	
					$\frac{F0.0}{12}$			
+40	02.1	01.2	$\frac{F2.6}{15.9}$	$\frac{60.0}{5}$ 60.9	$\frac{65.6}{25.6}$	77.7	273	
+42	01.0	01.0	$\frac{F3.0}{16.5}$	60.0	$\frac{65.3}{25.3}$	61.0	5	
+80					$\frac{F0.0}{12}$			
123	93.9	97.1	$\frac{F3.2}{19.8}$	F3.2	$\frac{F1.4}{14.1}$ D6.08 $\frac{D6.08}{18.8}$	3.2	69	
+25	92.3	96.0	$\frac{F8.3}{24.5}$	F3.7	$\frac{F2.1}{15.3}$ D6.00 $\frac{D6.00}{18}$	00	2	
+60	88.4	94.8	$\frac{F6.4}{21.6}$	F6.4	$\frac{F3.2}{16.8}$			
124	87.4	94.4	$\frac{F7.0}{22.5}$	F7.0	$\frac{F7.0}{22.5}$			
125	87.3	98.01	$\frac{F10.8}{28.2}$	F10.8	$\frac{F10.8}{28.2}$			
+65	88.3	02.2	$\frac{F11.5}{29.2}$	F13.9	$\frac{F11.1}{28.7}$			
126	00.6	04.0	$\frac{F3.0}{16.5}$	F3.9	$\frac{F4.5}{16.2}$			
+30					$\frac{F0.0}{12}$			
						00		
							Subtotal Ex.	5677

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.		AREA'S	Cubic Yds.		Remarks	
			LEFT	C. RIGHT		EXCAVATION	Embankment		
+4									
+42	06.1	06.1	$\frac{C1.4}{21.4}$	00.0	$\frac{F1.4}{14.1}$	$\frac{D1.00}{18}$	220	3	$\Delta 7^{\circ}04'$
+50	07.1	06.5	$\frac{C1.7}{21.7}$	00.6	$\frac{F0.4}{12.6}$	$\frac{D0.100}{19.0}$	354	8	D 2°
127	11.6	09.0	$\frac{C2.0}{28.0}$	03.6	$\frac{F0.4}{12.6}$	$\frac{D0.10}{19.0}$	1426	163	T 176.9
128	16.7	14.0	$\frac{C6.9}{26.9}$	02.7	$\frac{C0.0}{12}$	$\frac{D0.00}{18}$	1252	496	LC 353.3
+05					$\frac{F0.0}{12}$			151	RC, 139+892
+45	16.3	16.3	$\frac{C4.8}{24.8}$	00.0	$\frac{F1.5}{14.3}$	$\frac{D0.00}{18}$	560		41 37 107 137 207 237 307
+55					$\frac{F0.0}{12}$			157	42
+75	22.6	17.7	$\frac{C8.3}{28.3}$	04.9	$\frac{C0.7}{20.7}$		2260	223	1310 +42.6 = 143+93.83° 1032
129	25.0	19.0	$\frac{C5.9}{25.9}$	06.0	$\frac{C3.4}{22.4}$		2569		
+50	26.2	21.5	$\frac{C3.7}{23.7}$	04.7	$\frac{C5.7}{25.7}$		2261	447	
130	31.0	24.0	$\frac{C9.0}{29.0}$	07.0	$\frac{C5.4}{23.4}$		3504	534	426 62 488
+40	35.6	26.0	$\frac{C7.8}{29.8}$	09.6	$\frac{C9.7}{25}$	$\frac{C9.7}{29.7}$	467.0	605	
+50	30.7	26.5	$\frac{C6.4}{26.4}$	08.2	$\frac{C8.8}{28.8}$		3943	160	1386 130+50 121 18.4
+80	33.5	28.0	$\frac{C4.4}{24.4}$	05.5	$\frac{C6.3}{26.3}$		2624	365	
131	34.4	29.0	$\frac{C4.0}{24.0}$	05.4	$\frac{C6.1}{26.1}$		252.3	191	
131+50	31.3	30.5	$\frac{C0.5}{20.5}$	00.8	$\frac{C1.5}{21.5}$		528	282	
131+60	30.9	30.8	$\frac{00}{20}$	00	$\frac{00}{20}$		16.0	13	
132	27.8	32.0	$\frac{00}{20.1}$	00	$\frac{F3.4}{17.1}$		00	10	
133		32.6							
						Sub-total	Exc.	3808	

7000
353
39+89
353
426
7004
3538
176.9
Cur 1414

SECTION.

320 45 2
483

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
		59.79			
145	66.48	28	55.0		53.2
144	62.14	6.0	53.8		50.6
PT. + 938			53.8		
143	58.64	6.4	53.4		52.0
141+66.2					
142+106	55	77	53.1		56.0
141	45.54	6.2	52.7		55.3
150	42.57	6.6	51.1		52.4
140	40.47	10.8	49.3		50.8
PC + 630	11.5	11.2	48.5		46.3
139	11.3	14.6	45.2		48.5
145	10.6	16.0	43.8		49.2
TOP	0.97	18.99	11.77	48.02	
138		7.1	41.1		36.1
BM	0.55	39.50	10.34	38.65	13.8
137	7.8	9.1	37.0	37.0	30.4
150	6.9	6.5	35.8		32.0
136	6.1	5.9	34.4		33.6
160	4.6	3.3	33.8		36.2
135	6.2	5.6	32.4		33.9
134	33.2	32.7			
133+10	33.9	32.7			
133	30.4	32.6			

3865
290
4155
3275
1905

Change in field
0.2

41 55
327
855

115 17
45
70

EXCAVATION	Embankment		Excav.	Embank.	Remarks
	MA 62.6	53.8			
	55.0	8.8			Excavation
	61.6	7.6			290 41.55 3865 1290 51.55
					38.65 3.70 42.35 0.48 41.87 10.74 52.61 0.46 52.21 9.37 61.58
					10' W. 514° W. 44.0 10' " 526° E. 41.5
					TOP L.E. 50.9 JP SE. 52.8
					72.5 5 6.35
					12.5 3 0.45
					5.3 -6.6 5.5
					-1.6 14.4 -1.2 -0.5 12.8 +0.8 20.8 7.3 7.15
					+1.8 21.8 +3.1 +3.9 23.9 7.45
					+0.5 20.5 +1.1 +0.5 20.5 32.8

H.D.S.
#13.
#14.

SECTION.

Today Oct 16.

STA.	ELEVA.	GRADE	CUT OR FILL.			
			LEFT	C.	RIGHT	
					Ground	
+60	103	83	-25 157	-37	-5' 167	70.2 724
153	69.15	73	+10 100	-0.2	-32 171	73.3 734
+40	54	64	+10 210	-0.5	-13 140	75.3 744
154	57	57	+10 200	-0.7	-15 142	75.8 750
B.M.	910	1380.72				
+80	20	51	+11 211	-1.6	+1.8 213	760 74.8
155	44	52	+10 210	+0.2	+0.1 120	D.C. 157 765 197 74.7
+25	57	56	+10 208	-0.7	-10 128	75.4 750
T.P.	220	814				
Oct 14, '20						
B.M.	1220	825.59				
156	71	88	+17 217	-1.0	-21 156	72.8 74.3
+50	85	89	+10 204	-0.1	-37 176	73.6 74.2
+93	41	88	+17 191	-2.4	-38 177	73.4
157		86				74.9
+50	71	88	+17 217	-1.1	-28 166	75.3 75.3
+82	54	88	+10 201	-0.8	-34 171	760
158	56	79	+13 203	-1.1	-30 166	76.2 76.8
+50	24	65	+10 200	-0.5	-26 154	77.8 77.2
+71	08	57	+15 251	+0.0	-29 161	78.7
+80	05	57	+15 250	+0.0	-31 171	79.0

81.2

74.1
75.7

3.5 change

19

AREA'S			Cubic Yds.		Remarks
EXCAVATION	Embankment	Excav.	Embank.		
					72.39 73.3 79.72
90	-18 107	-30 186			
80	+11 211	-0.9 161			
70	+16 216	+1.0 130			80.80 5.55 72.39 10.82 83.21 71.9 75.3
64	+07 207	+0.0 130			
59	+19 219	+2.1 221			
60	+18 218	+1.0 205			
64	+11 211	+0.0 149			
Revised Cuts.					
95	+11 211	+0.0 143			
96	+11 211	-1.1 165			
95	+10 210	-1.7 161			
95	+10 210	-0.1 161			
85	+13 213	+0.0 161			
70	+10 210	-0.1 153			
66	+13 213	+0.0 153			
64	+15 215	+0.1 153			
64	+15 215	+0.8 161			

Moen Sollom Subs. 163-784 (131)
SECTION.

Oct 16th.

STA.	ELEVA.	GRADE	CUT OR FILL.	
			LEFT	RIGHT
			Top of foot.	
			100' ft. Sta.	
159	794	79.9	+1.7 2.1	+0.8 1.5
160	80.6	80.0	+1.8 2.8	+1.2 1.8
161	76.3	76.4	0.6	0.6
162	77.4	78.6	4.4	2.8
163	72.2	72.2		
164	70.7	73.0		
+20				
+40	1374.1	74.9		
+75	76.3	80.0		
165	1377.0	78.6		
166	1381.1	81.1		
+4.5	1382.9	82.9		
167	1384.1	88.2		
167+50	1384.4	88.4		

Corrected by Sorenson.

Fin. Grade
 Revised 5-16-21
 B.S.
 E.E.B.
 To get more material
 300' V.C. Run

AREA'S		Cubic Yds.		Remarks
EXCAVATION	Embankment	Excav.	Embank.	
69	77.9	+6.9 26.4	+1.6 15.3	115.8
67	78.6	+0.6 25.6	+0.6 12.6	135.6
D 27.52				24.6
D 16.00				4.8
T 38.3				196.8
LC 174.2				98.4
PI 157+89.4				1180.8
288				723.9
157+00.4				70.7
79.4				70.7
197				78.67
1.97				1.97
77.47				76.78
11.22				11.22
86.10				87.93
157+00.4				157+00.4
174.2				174.2
87.4				87.4
F6.3				F4.8
21.5				19.0
F2.6				F3.5
15.9				17.0
3				0.0
20				2.0
16.0				11.2
25				66.107
51.7				54.158
122				122.2
137.4				162.142
67.4				67.4
120				120.0
52.6				52.6
104				104.0
50.0				50.0
16.0				16.0
219				219.0
199.2				199.2
184.8				184.8

239
 162
 107
 1
 revision

79.72
 2.75
 82.47
 11.35
 90.12
 4.0

20
 13.4
 13.4

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.	
			LEFT	RIGHT
			Rock 20' left	El. 1388.00
+85			Rev grade. 135	
168	(82.6)	1384.2	84.1	
168+2.5			84.0	
169	(77.7)	1383.8	83.6	
170	(80.3)	1385.1	84.6	
+20	(83.5)	1385.5		
+50	86.9	1386.9		
171	90.3	1387.7	1393.71	
171+15	91.7	1387.9		
+40			TP 172+80 Rock 30' left	
172	(83.9)	1386.7	El. 1385.77	
173	(78.7)	1383.9		
174	(81.5)	1383.2		
+60				
+75				
175	(88.0)	1385.6		
175+50	(84)	1387.9		
176	(90.9)	1390.0		
176+50				
177	(94)	1391.0		

90.12
 0.66
 T.P. 89.46
 6.16
 95.62

701.50
 0.77
 702.27

21

AREA'S		Cubic Yds.		Remarks
EXCAVATION	Embankment	Excav.	Embank.	
16.0	00	00	00	
4.1	14.3	20	20	88.7
	F1.6			
	F7.0			
	F5.8			
	20.7			
	F2.0			
	15			
	F4.8			
22	00			
26	20			
44.9	C3.7			
154	23.7			
121.6	68.42			
124.1	57			
0	00			
	18			
	F1.0			
	13.5			
	F2.8			
	15.3			
	F8.2			
	24.3			
	00			
	18			
	F1.5			
	14.3			
	F4.0			
3.0	18			
50000	F1.0			
16.3	43			
76.3	142			
77.1	120			
52.7	233			
199.2	363			
192.4	456			

sub-total 1235cy
 7.0
 22.5
 19.8
 20.4
 18.6
 6.5
 2.5
 20.6
 1.5
 15
 15.4
 15
 18
 2.0
 2.0
 2.0
 2.1
 19.8
 12.8
 19.5
 00
 20
 00
 20

Change

64
 20
 3.20

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
177+50	(969) 91.0				BM 1391.56
177+75	(959) 91.0				
178	(933) 91.0				
178+17.4					
Equation					
177+10		1391.0			FAS
continued on page 28					
186		1417.0			
+25		1418.0			
+40	(209)	1418.5			
+50	(210)	1419.0			
187	(215)	1420.3			
187+50	(237)	1421.9		1428.70	
188	(244)	1422.1			
+25	(238)	1422.4	507		
188+60	(228)	1422.8		B.M. El. 1423.63	
B.M. sta 188+59.3 Top iron monument					

116.95
 0.79
 118.14
 10.50
 126.94

12200
 2000
 222
 231
 179
 2297

22
 Pas. Kennedy
 Aug. 21, 20

		AREA'S		Cubic Yds.		Remarks
		EXCAVATION	Embankment	Excav.	Embank.	
300.5	247	C12.4	C5.4		C11.5	
233.4	172	C10.0	C4.4		C2.5	
138.4	57	C6.5	C2.3		C2.0	
40.0	20	C3.2	00		F15 00.00	
0.0		00	FAS		143 18	
		20			F5.2 0	
					19.8	
97.0	27	C0.5 C1.0	C1.9		C3.0	
106.7	38	20.5 20			23.0	
80.3	173	C1.5	C2.0		C3.2	
97.1	164	20.5	C1.2	C2.1	23.2	
126.7	207	C0.6		13	C3.2	
65.5	93	20.6	C1.8	12	23.2	
22.0	57	C0.8			C2.9	
	78	20.8	C1.8	12	22.9	
		C1.3			C4.1	
		21.3	C2.5		24.1	
		00			C2.1	
		20	C1.4		22.1	
		C0.8 F0.9			C.11	
		18.8 13.2	00		21.3	

SECTION.

Original Section

128.0

127.96 27.00

7-19-20
Geo. Weetman
T. Rasmussen
T. Peterson

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.	
	143433									
189	24.3	22.7	0.0 2.0	1.0 1.5	1.0 1.1	84.0				
+40	22.2	22.2	DC 1.0 1.1	F0.7 1.1	1.0 1.0	31.5	86			
+54	20.8	22.0	DC 1.5 1.5	F1.5 1.2	1.0 1.2	10.0	11			
190	19.9	21.7	DC 1.0 1.5	F2.2 1.5	1.5 1.8	00	9			
191	18.8	22.2	F3.1 1.7	F3.4 1.7	1.9 1.7					18x22 CUT.
192	19.1	24.2	F5.1 1.7	F5.1 1.7	1.9 1.7					
192+50	20.6	26.0	F5.0 1.5	F5.4 1.9	1.9 1.7					
193	25.7	28.0	F3.0 1.5	F2.3 1.2	1.1 1.1	3.2				
+10										
+15	28.6	28.6	F1.0 1.5	C0.0 1.0	1.0 1.0	28.0				
+20	31.1	29.2	DC 1.0 1.2	F0.5 1.2	1.0 1.0	96.7	34			
193+50	33.2	30.0	DC 2.0 2.3	C3.2 1.0	1.0 1.0	153.1	83			
194	34.5	32.3	C2.2 2.2	C2.7 1.0	1.8 1.8	104.4	238			
+50	35.4	33.0	C2.4 2.4	C2.4 1.0	1.0 1.0	123.3	211			
195	37.5	34.0	C3.7 2.3	C3.5 1.0	1.0 1.0	189.4	289			
+55	40.1	35.1	C2.7 2.2	C5.0 1.0	1.0 1.0	217.2	414			
+65	37.9	35.7	C1.2 2.1	C2.7 1.0	1.0 1.0	100.0	176			
+95	35.9	35.9	DC 1.6 1.6	F0.0 1.0	1.0 1.0	14.1	21			
196	35.5	36.0	DC 1.4 1.4	F0.4 1.0	1.0 1.0	9.8	2			
+A0	30.4	36.8	F6.2 2.3	F6.4 1.0	1.0 1.0					
197										

Handwritten calculations and notes on the right side of the page, including numbers like 12.0, 12.5, 13.0, 13.5, 14.0, 14.5, 15.0, 15.5, 16.0, 16.5, 17.0, 17.5, 18.0, 18.5, 19.0, 19.5, 20.0, 20.5, 21.0, 21.5, 22.0, 22.5, 23.0, 23.5, 24.0, 24.5, 25.0, 25.5, 26.0, 26.5, 27.0, 27.5, 28.0, 28.5, 29.0, 29.5, 30.0, 30.5, 31.0, 31.5, 32.0, 32.5, 33.0, 33.5, 34.0, 34.5, 35.0, 35.5, 36.0, 36.5, 37.0, 37.5, 38.0, 38.5, 39.0, 39.5, 40.0, 40.5, 41.0, 41.5, 42.0, 42.5, 43.0, 43.5, 44.0, 44.5, 45.0, 45.5, 46.0, 46.5, 47.0, 47.5, 48.0, 48.5, 49.0, 49.5, 50.0, 50.5, 51.0, 51.5, 52.0, 52.5, 53.0, 53.5, 54.0, 54.5, 55.0, 55.5, 56.0, 56.5, 57.0, 57.5, 58.0, 58.5, 59.0, 59.5, 60.0, 60.5, 61.0, 61.5, 62.0, 62.5, 63.0, 63.5, 64.0, 64.5, 65.0, 65.5, 66.0, 66.5, 67.0, 67.5, 68.0, 68.5, 69.0, 69.5, 70.0, 70.5, 71.0, 71.5, 72.0, 72.5, 73.0, 73.5, 74.0, 74.5, 75.0, 75.5, 76.0, 76.5, 77.0, 77.5, 78.0, 78.5, 79.0, 79.5, 80.0, 80.5, 81.0, 81.5, 82.0, 82.5, 83.0, 83.5, 84.0, 84.5, 85.0, 85.5, 86.0, 86.5, 87.0, 87.5, 88.0, 88.5, 89.0, 89.5, 90.0, 90.5, 91.0, 91.5, 92.0, 92.5, 93.0, 93.5, 94.0, 94.5, 95.0, 95.5, 96.0, 96.5, 97.0, 97.5, 98.0, 98.5, 99.0, 99.5, 100.0.

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.	
197	51.52 31.3	38.0	F8.1 24.2	F6.7	F6.0 21.0					
+50	35.8	39.0	F4.2 18.3	F3.2	F1.6 14.4	2.3				
+78	39.2	39.2	F0.0 18.7	13.4	C0.0 20.6	14.0	8			
+85			F0.0 12							
198	41.1	40.2	C0.0 20	6.9	C1.2 21.2	46.5				
199	41.3	41.0	C0.1 20.1	10.3	C0.6 20.6	29.1	140			
+50	42.5	41.5	C0.0 20	12	C1.0 21.0	42.5	66			
+74	41.6	41.6	D.C. 1.0 19.0	F0.7 13.1	F0.0 12	11.5	24			
200	40.1	41.8	D.C. 0.6 18.6	F1.5 14.3	F1.7 14.7	1.3	6			
+70	39.9	41.7	F2.2 15.3	F1.8	F1.2 13.8	2.5	5			
+90	41.5	41.5	R. 1.0 19.1	F0.7 13.1	F0.0 12	8.2	4			
201	42.3	41.5	C0.0 20	12	C0.8 21.1	40.2	9			
+30	43.2	41.3	C1.3 21.3	C1.9	C2.0 22.0	90.1	72			
+60	41.9	41.2	D.C. 1.3 19.3	F0.0 12	C0.7 20.6	25.4	64			
202	44.4	41.0	C1.1 21.1	13.4	C1.5 24.5	149.5	130			
+26	46.3	41.9	C1.2 21.2	15.3	C1.3 28.3	242.2	179			
+45	47.3	41.0	C2.6 22.6	16.3	C10.3 30.3	311.6	195			
+80	46.5	41.0	C4.1 24.1	15.5	C6.8 26.8	265.0	374			
203	42.1	41.0	C2.9 22.9	C1.1	C2.7 22.7	97.1	114			
+10	41.0	41.0	C1.1 21.1	F0.0 12	F0.0 12	17.4	21			
+15	39.0	41.0	F2.0 15	F2.0	F2.0 15	0	2			

SECTION.

STA.	ELEV.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.	
204	51.5 38.8	+1.0	$\frac{F22}{153}$	F22	$\frac{F23}{153}$					
205	388	41.0	$\frac{F22}{153}$	F22	$\frac{F22}{153}$					
204	388	+1.0	$\frac{F22}{153}$	F22	$\frac{F22}{153}$					
206	40.2	41.0	$\frac{F0.7}{10.1}$	F0.8	$\frac{F0.6}{7}$ $\frac{C1.0}{21.0}$	14.5				
BM	12" white oak									Quit on 7 - -20
	4.75	1443.53			1438.78	67				
TR	9.83	1452.31		105	1442.48					
	8.61	1451.60		9.32	1442.99					
				5.85	1445.80					
207	41.8 100 41.6	41.8 ✓ 1441.8	$\frac{-1.5}{14.2}$	-0.2	$\frac{0.0}{2.0}$ $\frac{+1.5}{21.5}$	9.8	21.5			BM of sta 207.
+50	40.7	42.6	$\frac{-3.6}{17.5}$	-2.3	$\frac{-0.7}{12.1}$ $\frac{0.0}{20.0}$	6.6	8.0			Reynold Tasmussen Chief REKrueger (rod) 7/21/20 Kenneth Kennedy, stake Late start get Meeting AMM. with Level - Cloudy Warm
+80	41.6	43.2	$\frac{-3.5}{17.5}$	-2.0	$\frac{-1.2}{13.8}$ $\frac{+1.3}{17.3}$	8.0	5.6			
208	42.9	44.0 ✓	$\frac{-2.4}{15.4}$	-1.1	$\frac{-0.6}{12.9}$ $\frac{0.0}{20.0}$	7.4	12.0			
209	5p 46.6	46.6 ✓	$\frac{D.C.0.4}{12.4}$ $\frac{-0.9}{13.4}$	0.0	$\frac{+0.4}{20.4}$	5.0	56.4	127		
	8.75	1454.50			1445.75		77			
+70	45.2	46.5	$\frac{-2.8}{16.2}$	-2.5	$\frac{-1.9}{14.9}$ $\frac{0.0}{18.2}$	6.8	3.1			-1.0 DC1.1 13 19.1
210	46.7	48.0 ✓	$\frac{-2.0}{15.0}$	-1.3	$\frac{-1.1}{13.6}$ $\frac{0.1}{19.1}$	6.5	8.0			
210+40	49.7	47.6 ✓	$\frac{+1.0}{21.0}$	+1.3	$\frac{+0.8}{20.8}$	6.1	95.6	77		
211	50.1	47.4 ✓ 48.3	$\frac{+2.5}{22.5}$	+1.8	$\frac{0.0}{20.0}$	6.2	178.8	238		
+50	47.6	47.6	$\frac{+1.3}{21.0}$	0.0	$\frac{-1.1}{13.6}$ $\frac{0.4}{15.6}$	6.9	32.0	140		
		45.5 ✓	$\frac{0.0}{20.0}$ $\frac{0.0}{12.0}$	-0.8	$\frac{-1.2}{13.8}$ $\frac{0}{18.8}$	6.8	12.0	29		
212	42.8	41.2	$\frac{-3.2}{16.8}$	-3.4	$\frac{-3.7}{17.5}$	8.3	0			

206-70-215

SECTION.

① H.B. These elevations and readings computed from Grade Elev. and \pm by HOS.

STA.	ELEV.	GRADE	CUT OR FILL.				AREA'S		Cubic Yds.		Remarks	
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.			
212+40	122	1454.50 423 45.1	-3.9 17.9	-3.1	-3.3 17.0	9.1	0					
	1.55	1145.19		1037	1444.13							
213	29	428 44.9	-2.1 16.0	-2.1	-1.8 14.7	0.8 18.2	9.5	10				
214	59	40.8 42.5	-2.6 15.9	-2.1	-2.0 15.0	3.5 18.2	11.0	38	F.O.B.	-1.3 14.0	-0.5 12.6	DC 1.6 196
215	35	38.1	-2.9 17.9	-3.1	-3.6 17.4	7.6	0	10		0.0 12	0.0	
215+25	10.3	35.4 37.9	-2.5 15.7	-2.5	-2.5 15.7	7.8						
+58	60	31.7	0.0 20.0	0.0	0.0 20.0	7.95	8.0					
216	399	37.6	+1.5 21.5	+2.2	2.0 22.0	8.1	98.8	83				
+66	70	37.3	+1.3 20.3	+0.7	0.0 20.0	8.3	43.4	158				
217	373	37.1	+1.6 21.6	+0.2	0.0 4.0	8.4	29.5	54				
T.P.	7.31	1445.56		7.43	1438.25			7				
+07		37.4	+1.4 21.4	0.0	-0.8 13.2	8.5	24.5	8				
+20	365	37.4	0.0 20.0	-0.9	-1.0 13.5	8.2	8.0					
+50	112	34.2 37.8	-3.6 17.4	-3.4	-3.2 16.8	7.8						
218	326	38.4	-4.3 18.5	-3.8	-3.8 17.7	7.2						
+70	100	336 40.5	-5.3 20.0	-4.9	-4.5 18.8	5.1						
219	379	41.2	-3.6 17.4	-3.3	-2.8 16.2	4.4						
+50	427	42.7	0.0 20.0	0.0	0.0 20.0	2.9	8.0					
T.P.	893	1453.28		1.21	1444.35			187				
220	52	40 43.9	+3.6 23.6	+4.2	+4.2 24.2	9.4	194.4					
220+20		old Road						246				

right angle

SECTION.

27

STA.	ELEVA.	GRADE	CUT OR FILL.				AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT		EXCAVATION	Embankment	Excav.	Embank.	
		1453.28									
220+30	29	44.1	14.2	+5.3	15.8	92	248.5				Res Kennedy 8/13/20 Fair
+150		fence on left, 33' - 3 strands new,				#	313			FO.1	20
+65		44.2	+3.9	+5.3	+5.0	91	234.6				
221	68	44.4	+1.8	+2.1	+2.8	89	86.7			CO.4	20.4 20
+10			+1.6	+1.2	+1.2						
+40		44.5	21.6	0.6	13.8	88	14.0				
450		44.25	8.0	-0.7	-2.0		7.0			00	
222	142	39.1	44.0			23					F20 12
+30	163	37.0	43.9			9.6					
+55	145	35.8	43.5			9.8					
+70		43.3	43.3			10.0					
223	5.8	47.5	43.0			10.3					
B.M.			020	1453.08							223+39.2 = Lath hub set by Ras on top cor f.p. Sta 220+65

SECTION.

106.28
0.35
105.93
11.00
116.93

R. E. Krueger
Bert. Anderson,
Albert Lokken,

8/26/20
clear hot

117.0
13

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.	
<i>continued from page 22</i>										
B.M.	2.05	1425.68			1423.63	Top of Sec	Cor Man	188+59.3		
186										
185+85										
185+40										
T.P.	3.87	1418.33		11.22	1414.46		20			
185	5.6	17.7	14.6	+2.8 22.8	8.0 8.0	-1.9	-5.0 19.5	24.8		
+50	7.9	10.4	14.7	+2.0 22.0	8.0 15.0	-3.8	-5.6 20.4	13.0		
184	8.6	09.7	14.0	+1.7 21.7	8.0 20.0	3.5	-6.0 21.9	0.0		
+60	11.0			-1.7 20.5	8.0	4.3	-6.6 21.6			+60 42' - 15" 19.1
183+35	9.5	08.8	13.0	-4.0 20.0	8.0	-4.2	-4.0 18.0	0.0		
+10				8.0 20.0	8.0		8.0 20.0	16.0		
183	3.9	14.4	17.4	+1.0 21.0	8.0	+2.0	+3.8 23.8	108.8		
T.P.	5.89	1422.07		2.15	1416.18			305		
182+45	3.9	18.2	11.4	+2.7 22.7	8.0	+6.8	+7.7 27.7	291.3		
								485		
182	5.8	16.3	10.0	+3.3 23.3	8.0	+6.3	+8.8 28.8	290.6		
T.P.	2.51	1413.82		10.76	1411.31			568		
181	2.9	05.9	06.0	8.0 20.0	8.0	-0.1	8.0 20.0	16.0		
+75	8.5	05.3	04.7	+0.5 20.5	8.0	+6.8	+9.6 29.6	37.3		
								43		

SECTION.

STA.	ELEVA.	GRADE	CUT OR FILL.			AREA'S		Cubic Yds.		Remarks
			LEFT	C.	RIGHT	EXCAVATION	Embankment	Excav.	Embank.	
180+50	043	035								
T.P.	2.83	141382	+1.4	+0.8	+1.0/21.0					
180	+8 99.8	1404.65	0.0	12.00	14 01.82	57.0				
		01.0	0.0/20.0	-1.2	0.0/2.0	180+3				
						180	13.6			
179+80	66 98.0	00.0	+2.0/22.0	0.0/5.0	-0.2	-0.5/12.8	23.0			
+60			+1.0/21.0	0.0	0.0/2.0		26.0			
179+45	5.3 99.3	98.2	+2.0/22.0	+1.1	+0.5/20.5	64.4				
+35			+2.0/22.0	+1.1	0.0/2.0	59.1				
179+00	13.2 91.4	96.0	0.0/20.0	-4.6	-2.0/22.5	00				
T.P.	1.52	1395.15		11.02	1393.63					
+70	91 86.0	94.3	-6.0/21.0	-8.3	-10.0/27.0					
178	9.7 95.4	92.0	-6.6/21.9	-6.6	-6.6/21.9					
177+50	10.0 85.1	91.0	-6.0/21.0	-5.9	-6.0/21.0					
Equation at P.I. cont Page 22										
177+16										

75.62
 1.32
 94.30
 11.95
 106.28

106.3

13

29

SECTION.

Force

STA.	ELEVA.	GRADE	CUT OR FILL.		
			LEFT	C.	RIGHT
355	13039	06.0	F22 153	F2.1	F1.7 145
356	044	06.1	F1.6 144	F1.7	F1.3 140
357	040	06.2	F23 155	F2.2	F2.2 153
358	040	06.3	F22 153	F2.3	F2.0 150
359	053	06.4	F1.8 147	F1.1	F1.7 146
360	06.3	06.5	F0.2 124	F0.2	F0.2 124
361	05.5	06.6	F0.9 135	F1.1	F0.2 123
362	04.1	06.7	F2.9 165	F2.6	F1.7 145
450	04.9	06.8	F1.5 143	F1.9	F1.0 135
363	07.0	06.8	C0.6 206	C0.2	C0.2 204
450	05.9	07.0	F1.1 F13.7	F1.1	F1.1 F13.7
364	07.1	07.2	F0.7 124	F0.1	F0.5 121
365	07.1	07.6	F0.3 125	F0.5	F0.5 128
+70	07.0	07.5	C15 215	F0.5	F0.6 130
366	08.5	07.4	C1.5 215	C1.1	C1.1 211
+50	07.1		C6.5 265	C6.5	C6.5 265
367	12.8	06.3	C5.8 27	C6.4	C7.1 27.1
+25	12.3	05.9		C6.4	
+70	08.2				
368	08.7	04.5		C4.2	
+25	07.7	04.1			
369	01.0	02.8			
+50	09.3				
370	08.1				

Fine day?

AREA'S

EXCAVATION		Embankment	Excav.	Embank.	Remarks
Note:					
Fills & cuts staked by Lind.					
GROUND GRADE DITCH.					
TO D. ELEV. ELEV. 11.8					
DITCH. 360+57 to 360+33. stake					
USG 2 0.5 Iron rod + cap					
BM. 7-250		1311.26		1308.76	SPIKE IN 60 FT. Sta 360
355	78 73	35 W.	41	100/180	100/180
56	71 70	40 W.	42	100/180	100/180
57	81 78	33 W.	40	100/180	100/180
58	74 70	29 W.	40	100/180	100/180
59	67 65	45 W.	45	100/180	100/180
60	48 46	65 W.	46	100/200	100/200
57	47 46	15 W.	46	100/200	100/200
61	56 44	57 W.	47	111/191	111/191
62	69	43	48		
58	70 67	43 W.	48	100/180	100/180
63	46	67	48		STAKED BY LIND
64	46 45	67 W.	50	115/195	115/195
65	50 20	77 W.	56	120/201	120/201
355 to 367 + 25 Staked by LIND					
Top 510 ft. Sta. 365					

Sept. 30, 1920
Lind - McGuire