

BK. 54 Dr. 16

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Plan Survey

Lexington Ave.

From Hamline Ave To No. Co. Line

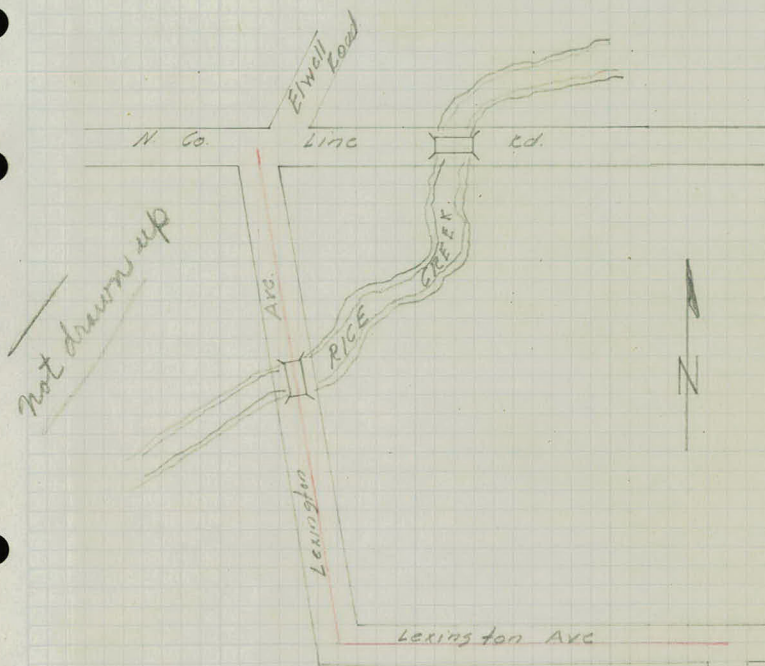
Road Acc't. No. 3

Date Filed 6-11-41

File

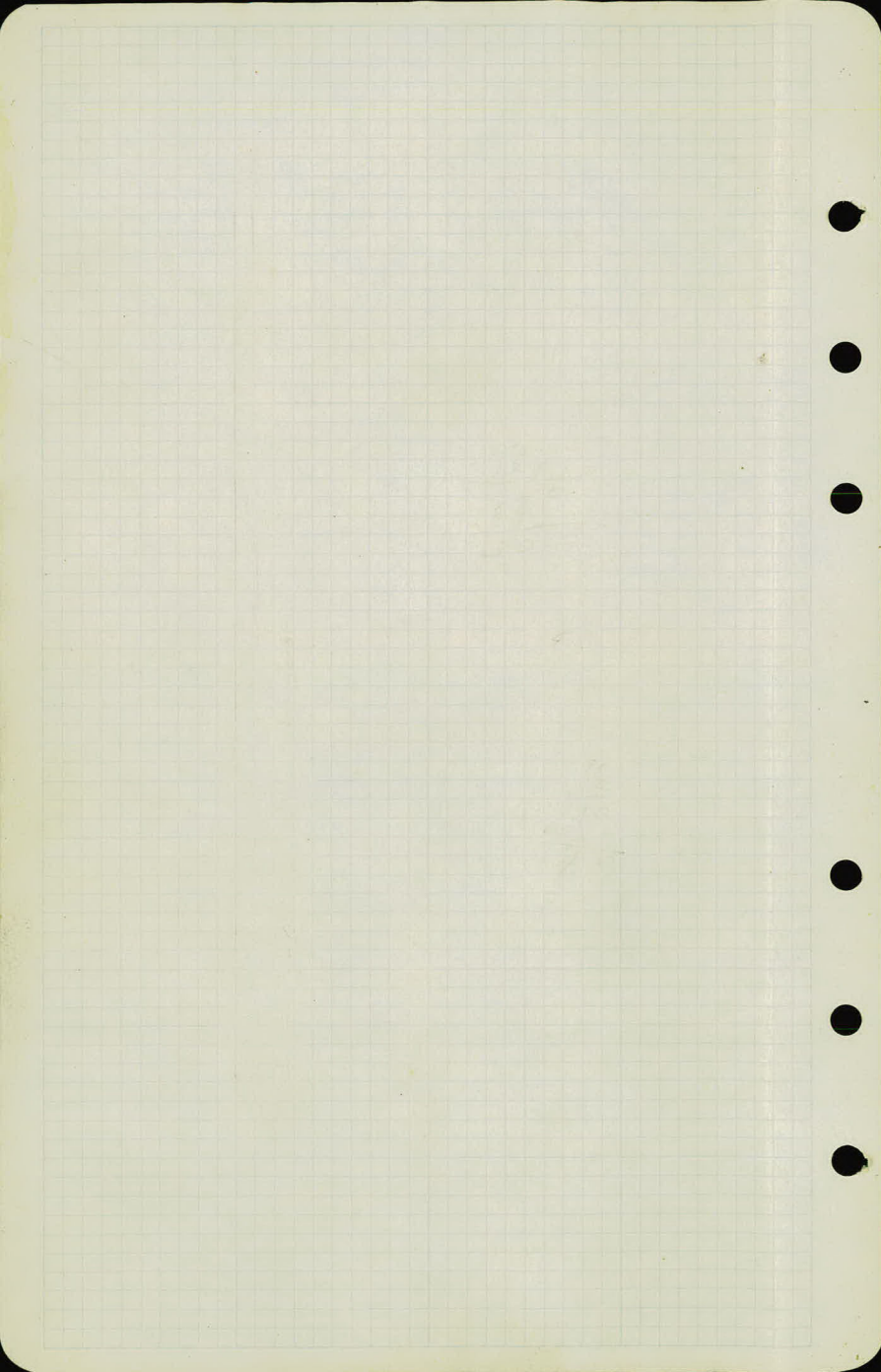
Also
Bridge Survey
Lexington Ave. & Rice Creek
May 1949

PLAN SURVEY
LEXINGTON AVE.
Hamline Ave to N. Co. Line Rd.



INDEX.

- Align - 1-2
- Topog. - 3-10
- Levels - 11-12
- X Sections - 13-22



Alignment,



Sta. Point Δ Lt. Δ Rt.

36 +48.13 = 6 N. Co. Line

PT

+95.88

PG

40° 43'

Δ 81° 26'

23.41'

36 41.8'

30° 41.8'

D- 96° 00'

+75

16 +68.95

P.I.

81° 26'

T- 57.90'

27.98

26 41.8'

+50

18° 41.8'

L- 84.83'

27.98

12 41.8'

+25

6° 41.8'

R- 67.28'

15.7

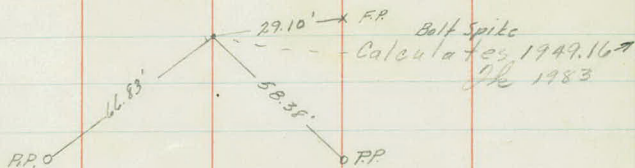
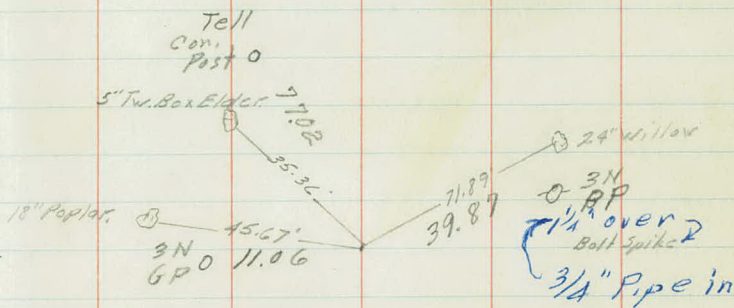
16 +11.05

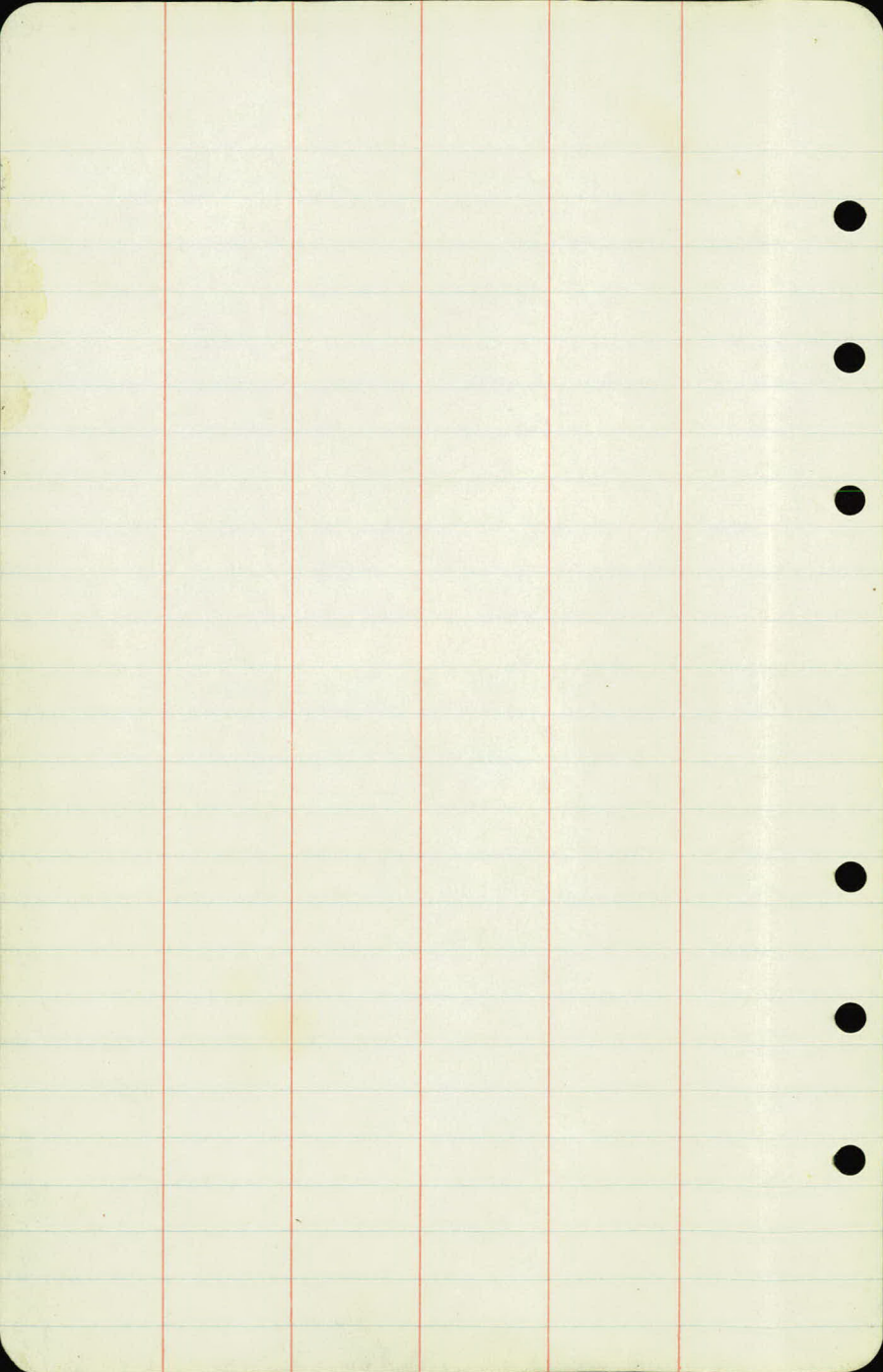
P.C.

0° 00'

0 +00

P.I. = Sta 250 + 52.97 Hamling Ave.





Topography

185-End Swamp.

155-End Swamp -

5 103-6.15" X 32' Vit 16' 10' 11' 16' 108-RR-28'

4 10 12'

3 10' 12' 124-RR-

2 10' 12'

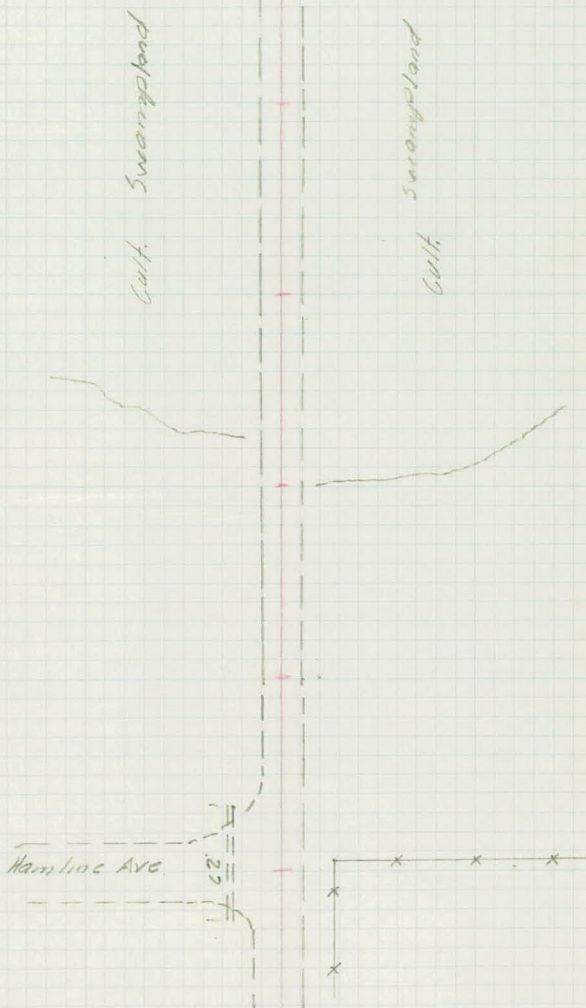
1 9' 11' 137-RR-28'

134-W. End 18" Conc Culv 26'

0 12' 107-Fc Cor-28'

1-26-39

4



+63-P.P.-28'

12

10'

11'

Bog. Swamp.
+50 End Cult.

11

10'

11'

+74-P.P.-

10

10'

12'

9

10'

11'

+87-P.P.-

8

10'

11'

7

10'

10'

+98-P.P.-28

6

10'

10'

Swamp

Cult.

Cult.

Cult.

+62-PP-31'

+26-36" Cott-14'

11'

11' +1P-Δ in Ditch-52'

19

18

11'

9'

+77-PP-31'

+55-30" Cott-16'

+38-30" Cott-20'

+19-Δ in Fc-23'

+11-Range Tie

+10-18" Oak & Fc Cor-29'

17

10'

10'

+92-Ent.

+90-Δ in Fc 18'

+77-Ent Fc-27' & 5" Tw. Am Elders-38'

+69-Fc Cor-32'

+60-Range Tie to Ditch 150 17'

+53-GP-24'

+46-Ent 18" G.M.-28'

+45-Range c/c to Fc. 125'

14'

9'

+52-PP-18'

+36-Δ in Fc-12'

+12-20" Willow-43'

16

15'

9'

15

15'

9'

Fc-18" Ditch-87'

+67-Range Tie to Δ in Fc.

+54-PP-27'

+36-Δ in Fc-20'

14

+17-L-42" X 30" G.M.-

16'

11'

9'

19'

+65-End Survey

13

11'

9'

FC-22'

FC-17'

FC-22'

FC-17'

FC Approx Rt. Δ to Fore Tang.

Cannot locate End C/L

FC-16'

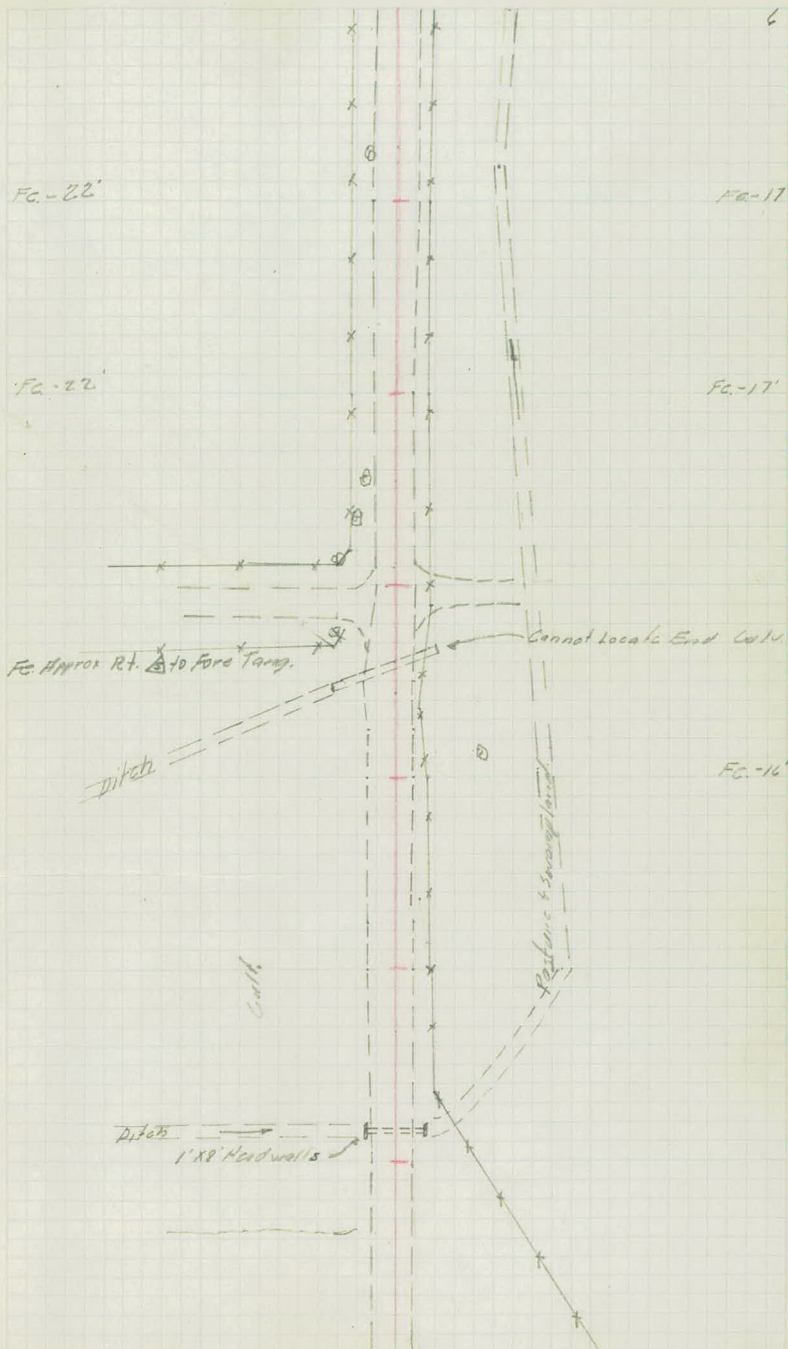
Ditch

Cult.

Pasture & Swamp Land

Ditch

1' x 8' Hand walls



26 11' 9' Edge Creek - 78' - 108'

25 11' 11' Edge Creek - 49' - 65' ^{411-RP-28'}

24 10' 9' Edge Creek - 31' - 62'

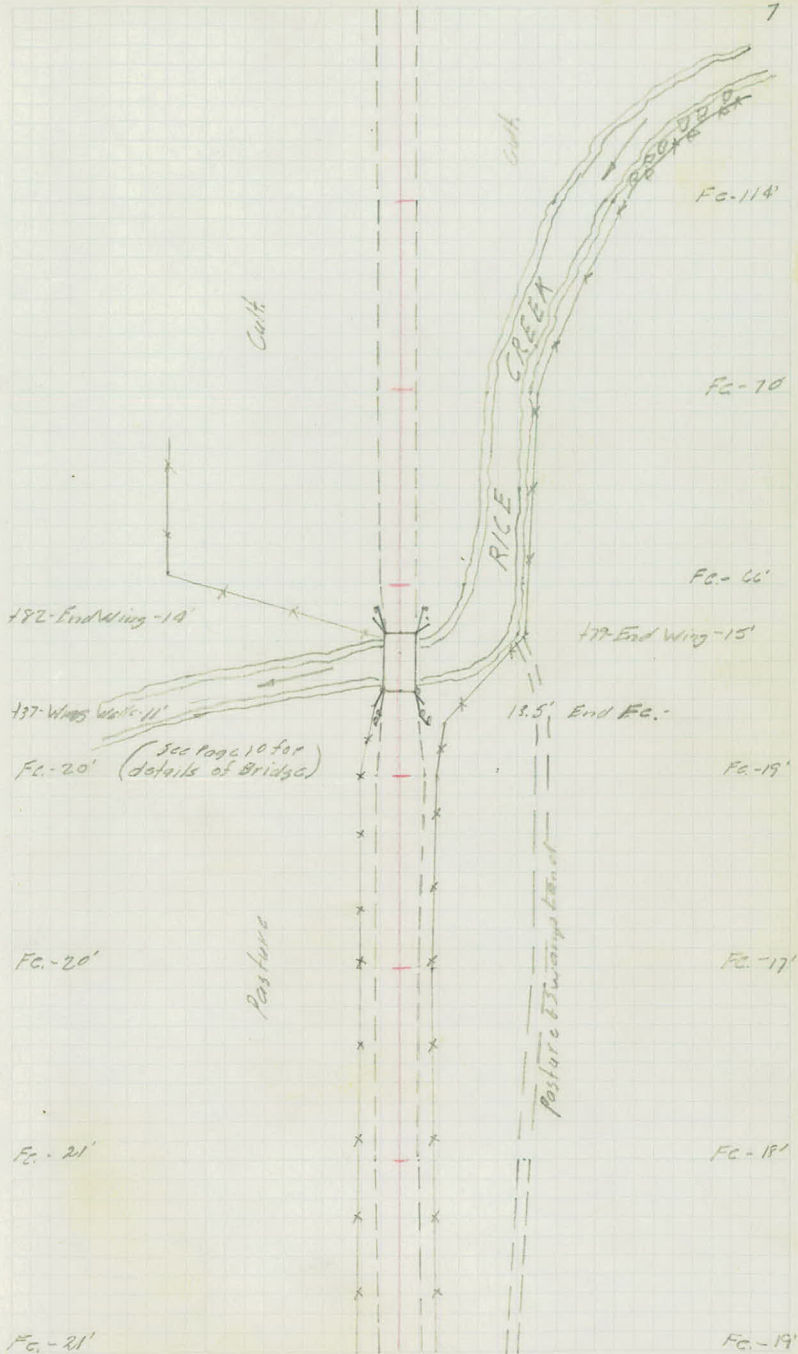
+88-End G.R.
+65-Roads Tie to Creek
+74.85-N End Bridge
+99.7-S End Bridge
+131-D in G.R.-10'
+27-B in G.R.-12'
+18-D in Fc.-19'
+75-Water-60'
+13-D in Fc.-63'
+95-Water-27'
+51-D in G.R.-10'
+29-D in Fc.-23'
+27-B in G.R.-13'
RP-27'

23 11' 12'

22 12' 10'

21 12 10 ^{418-RP-28'}
Dike 69'

20 10' 11'



33

11'

9'

+41-PP-27'

32

Group - 4-12" willows - 25' 12'

10'

31

12'

9'

+57-PP-27'

30

12'

9'

29

12'

10'

+13-PP-28'

28

12'

9'

+09-36" Coll - 14'

+47-Δ mfc. 32'

+37-Group 5-12" Oaks - 42'

Δ in FC

27

12'

8'

Fc-23'

Fc-31'

Fc-31

Fc-31'

Fc-32'

Pasture

Hay Meadow

Cult.



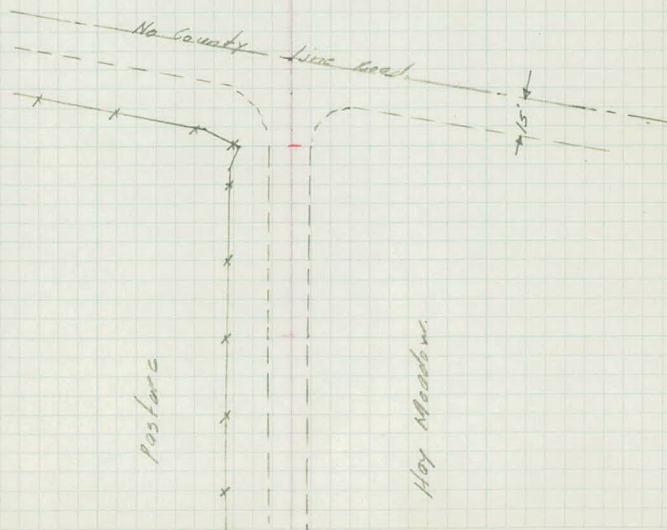
36 109-D in Fe-45' 12' 10' 112-PP-30'
Fe-28'

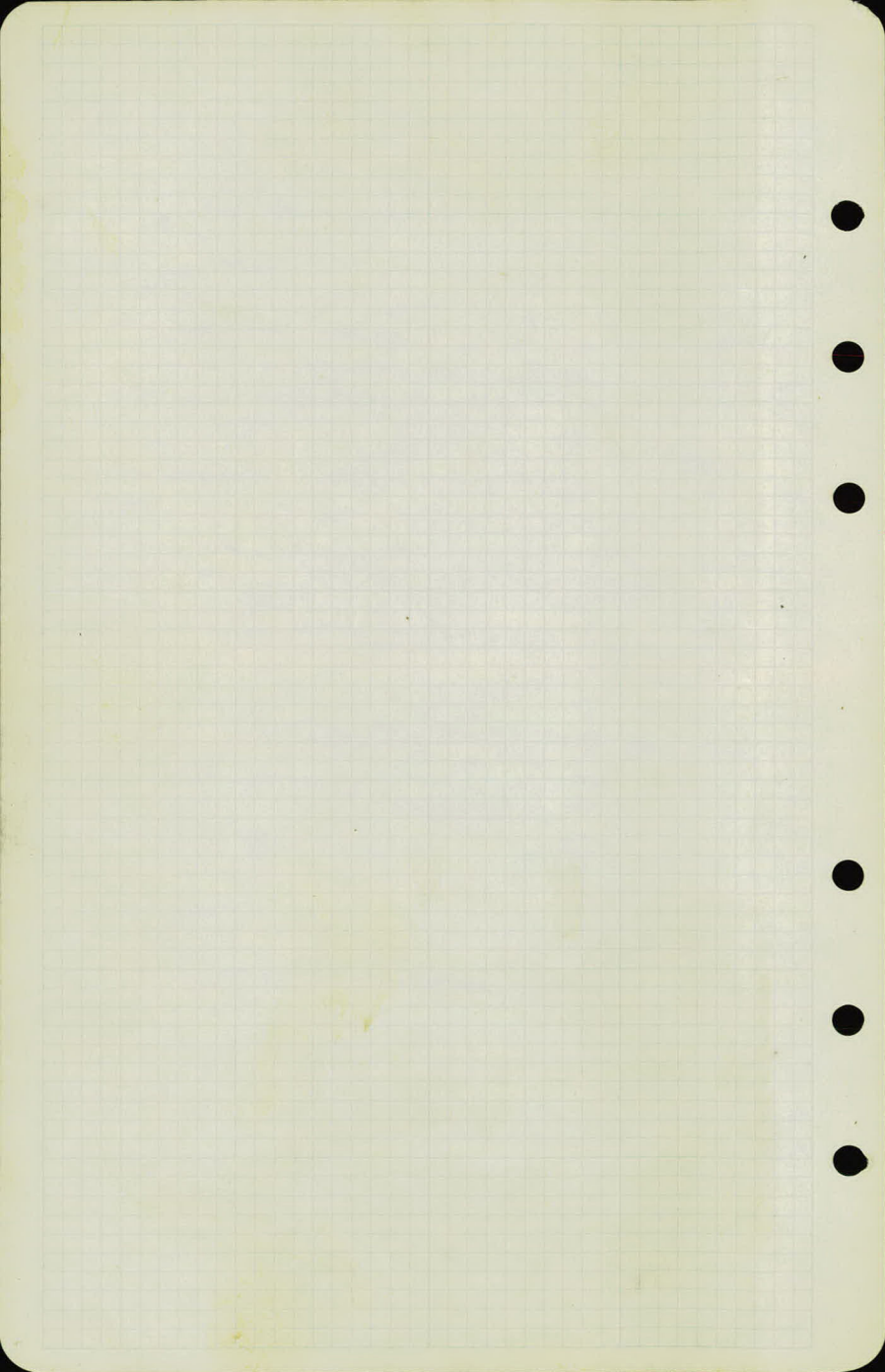
188-D in Fe-32'

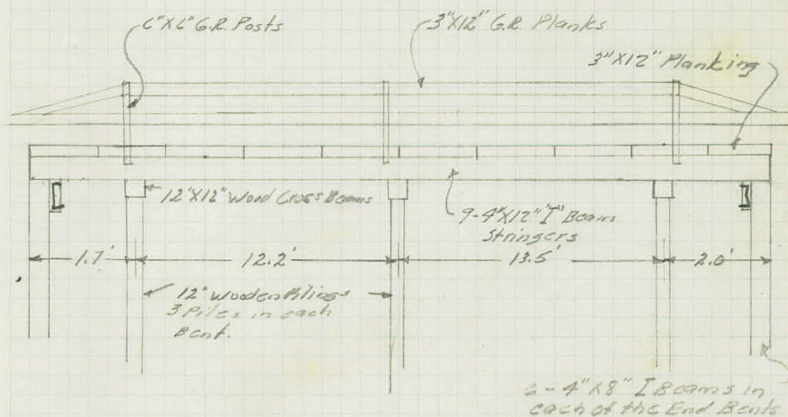
35 12' 9'

112-PP-27'

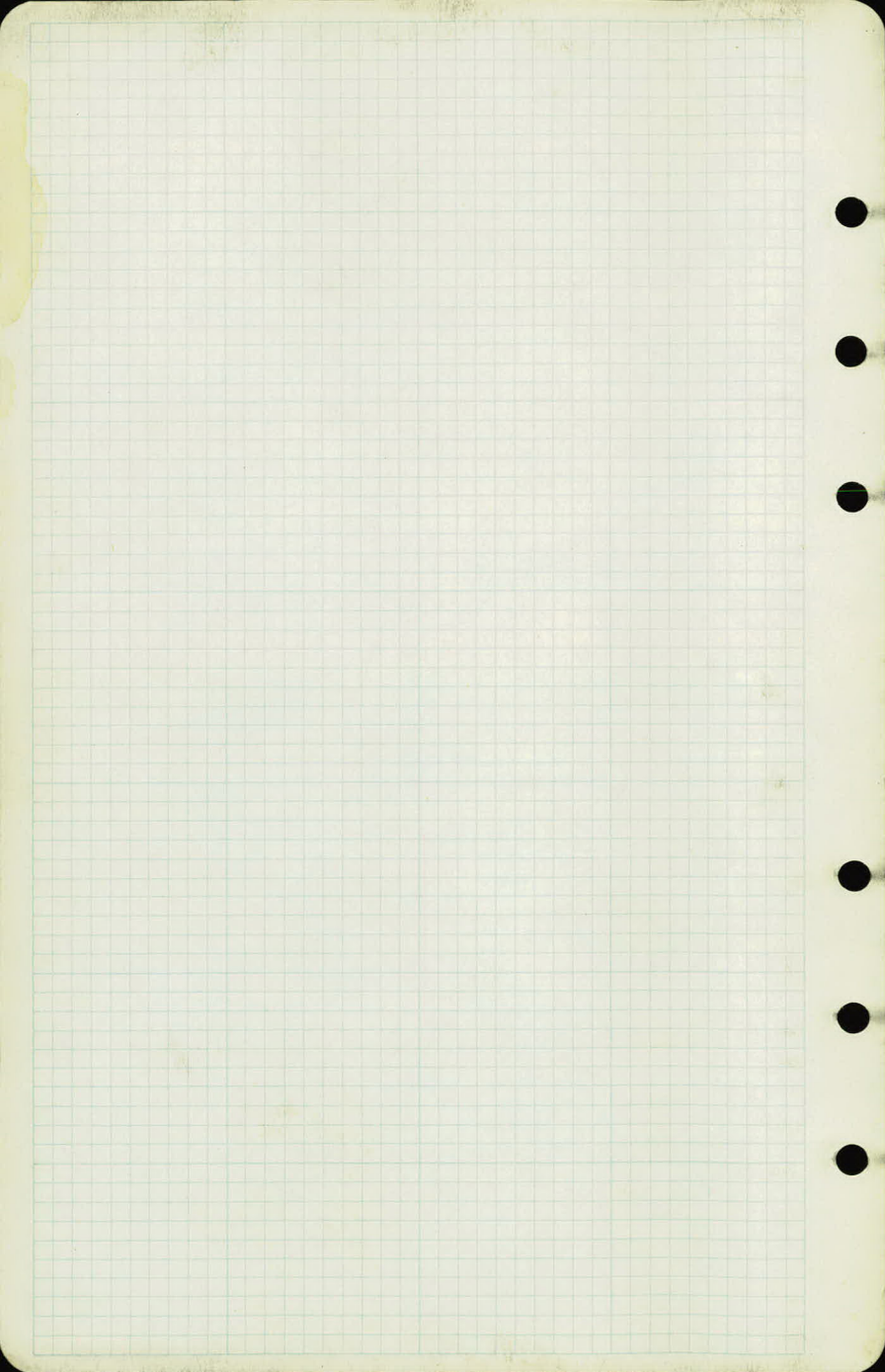
34 11' 9'







2-4"X8" I Beams in each of the End Bents



Bench Levels

Sta.	+	π	-	Elev.	
B.M.	1.60	895.24 ✓			893.69 ✓
T.P.	6.94	895.35 ✓	6.83	888.41 ✓	
T.P.	2.05	891.80 ✓	5.60	889.75 ✓	
T.P.	5.43	891.74 ✓	5.49	886.31 ✓	
B.M.			4.13	887.61 ✓	
T.P.	5.58	891.83 ✓	5.49	886.25 ✓	
T.P.	6.00	891.66 ✓	6.17	885.66 ✓	
T.P.	4.36	891.35 ✓	4.67	886.99 ✓	
T.P.	6.18	893.46 ✓	4.07	887.28 ✓	
B.M.			2.05	891.41 ✓	

(Note: Use bench elevations of X-sections)
for correct Elevations

Description

Spk. in R.P. M.E. Cor. Hamline & Lexington Ave.

Spk. in 18th Oct 29th Lt. Sta 17+10

Spk. in 20th Box Elder N.W. Cor. McColina & Lexington Ave.

7400 Pl. 2500' H.

7410 Pl. 2500' H.

7420 Pl. 2500' H.

x sections

Sta.	+	π	-	Elev.
B.M.	0.22	893.86 ✓		893.64
0	+0.0			93.7
+34	Flow line West End 18" Conc Culv.			
+43				92.8
+69				92.3
1				91.8
+50				90.2
2				88.2
+50				87.2
3				87.5
I.P.	6.85	894.28 ✓	6.43	887.43 ✓
+50				87.8
4				88.4

Lt. R. Rt.

Spk. in R.R.N.E. Cor. Hamline & Lexington

$\frac{0.4}{50}$ $\frac{0.2}{9}$ $\frac{0.2}{10}$ $\frac{0.5}{10}$ $\frac{0.7}{15}$ $\frac{1.3}{17}$ $\frac{1.6}{26}$ $\frac{1.1}{37}$ $\frac{0.4}{50}$

3.38

$\frac{0.2}{50}$ $\frac{0.7}{45}$ $\frac{0.7}{33}$ $\frac{3.7}{26}$ $\frac{5.5}{22}$ $\frac{1.5}{16}$ $\frac{1.2}{10}$ $\frac{1.1}{9}$ $\frac{1.3}{14}$ $\frac{1.7}{19}$ $\frac{3.0}{26}$ $\frac{3.3}{26}$ $\frac{3.0}{50}$

$\frac{1.5}{50}$ $\frac{2.0}{31}$ $\frac{4.0}{28}$ $\frac{4.1}{29}$ $\frac{3.9}{20}$ $\frac{1.9}{15}$ $\frac{1.8}{11}$ $\frac{1.5}{9}$ $\frac{1.9}{14}$ $\frac{2.2}{19}$ $\frac{4.5}{19}$ $\frac{4.7}{27}$ $\frac{4.8}{39}$ $\frac{4.4}{50}$

$\frac{5.1}{50}$ $\frac{5.5}{27}$ $\frac{5.6}{18}$ $\frac{3.0}{13}$ $\frac{2.6}{9}$ $\frac{2.1}{9}$ $\frac{2.5}{15}$ $\frac{2.8}{20}$ $\frac{6.0}{20}$ $\frac{6.3}{27}$ $\frac{6.3}{36}$ $\frac{6.1}{50}$

$\frac{6.4}{50}$ $\frac{6.7}{24}$ $\frac{6.8}{20}$ $\frac{4.3}{15}$ $\frac{3.9}{7}$ $\frac{3.7}{7}$ $\frac{3.8}{9}$ $\frac{4.1}{14}$ $\frac{7.3}{21}$ $\frac{7.3}{28}$ $\frac{7.2}{50}$

$\frac{7.1}{50}$ $\frac{7.3}{27}$ $\frac{7.9}{21}$ $\frac{8.5}{18}$ $\frac{8.6}{16}$ $\frac{6.5}{13}$ $\frac{5.7}{9}$ $\frac{6.0}{14}$ $\frac{6.6}{18}$ $\frac{9.1}{22}$ $\frac{9.2}{22}$ $\frac{8.1}{26}$ $\frac{7.9}{50}$

$\frac{7.4}{50}$ $\frac{7.5}{30}$ $\frac{8.7}{24}$ $\frac{8.9}{20}$ $\frac{9.2}{16}$ $\frac{7.3}{14}$ $\frac{7.0}{7}$ $\frac{6.7}{9}$ $\frac{7.1}{16}$ $\frac{7.2}{19}$ $\frac{8.8}{23}$ $\frac{8.6}{26}$ $\frac{8.2}{50}$

$\frac{7.8}{50}$ $\frac{7.6}{26}$ $\frac{8.6}{27}$ $\frac{8.9}{18}$ $\frac{7.1}{15}$ $\frac{6.8}{10}$ $\frac{6.4}{10}$ $\frac{6.8}{10}$ $\frac{6.9}{16}$ $\frac{8.7}{20}$ $\frac{8.2}{22}$ $\frac{7.7}{50}$

No. 1 in T.R. 31

$\frac{7.7}{50}$ $\frac{7.8}{35}$ $\frac{8.1}{24}$ $\frac{8.8}{22}$ $\frac{9.3}{17}$ $\frac{7.1}{15}$ $\frac{6.8}{10}$ $\frac{6.5}{10}$ $\frac{6.8}{10}$ $\frac{7.2}{15}$ $\frac{8.5}{20}$ $\frac{8.2}{25}$ $\frac{8.1}{50}$

$\frac{7.8}{50}$ $\frac{8.0}{29}$ $\frac{8.9}{23}$ $\frac{9.2}{20}$ $\frac{9.2}{18}$ $\frac{6.8}{15}$ $\frac{6.3}{10}$ $\frac{5.9}{10}$ $\frac{6.2}{10}$ $\frac{6.6}{15}$ $\frac{8.1}{19}$ $\frac{8.0}{50}$

Sta	+	π	-	Elev.
		894.29 ✓		
4	+50			89.0
5				89.2
	+03	Flow Line & Culv.		
	+50			89.4
6				89.8
	+50			90.2
7				90.1
T.P.	9.65	899.77 ✓	9.16	890.12 ✓
	+50			90.3
8				90.2
	+50			90.0
9				89.7

Lt.

R.

Rt.

$$\begin{array}{cccccccc} 77 & 77 & 91 & 91 & 62 & 57 & 53 & \\ \hline 50 & 24 & 22 & 20 & 15 & 10 & & \end{array} \quad \begin{array}{cccc} 58 & 60 & 84 & 83 \\ \hline 10 & 15 & 20 & 50 \end{array}$$

$$\begin{array}{cccccccc} 79 & 82 & 90 & 95 & 58 & 53 & & \\ \hline 50 & 24 & 20 & 11 & 14 & 7 & & \end{array} \quad \begin{array}{cccc} 51 & 55 & 61 & 96 \\ \hline 10 & 15 & 18 & 19 \end{array} \quad \begin{array}{cc} 81 & 84 \\ \hline 26 & 50 \end{array}$$

935

965

$$\begin{array}{cccccccc} 74 & 74 & 57 & 54 & 49 & 53 & 55 & 85 \\ \hline 50 & 20 & 15 & 11 & & 10 & 14 & 19 \end{array} \quad \begin{array}{cc} 86 & 92 \\ \hline 26 & 35 \end{array} \quad \begin{array}{c} 90 \\ \hline 50 \end{array}$$

$$\begin{array}{cccccc} 54 & 60 & 60 & 50 & 46 & 45 \\ \hline 50 & 31 & 18 & 15 & 10 & 10 \end{array} \quad \begin{array}{cccc} 49 & 51 & 70 & 76 \\ \hline 13 & 16 & 24 & 37 \end{array} \quad \begin{array}{c} 81 \\ \hline 50 \end{array}$$

$$\begin{array}{cccccccc} 36 & 23 & 46 & 50 & 50 & 45 & 42 & 41 \\ \hline 50 & 33 & 29 & 25 & 21 & 14 & 8 & \end{array} \quad \begin{array}{cc} 43 & 45 \\ \hline 8 & 13 \end{array} \quad \begin{array}{cc} 57 & 58 \\ \hline 18 & 24 \end{array} \quad \begin{array}{cc} 59 & 67 \\ \hline 32 & 50 \end{array}$$

$$\begin{array}{cccccc} 26 & 19 & 01 & 47 & 50 & 45 \\ \hline 50 & 43 & 33 & 24 & 19 & 10 \end{array} \quad \begin{array}{cccc} 42 & 44 & 46 & 10 \\ \hline 8 & 19 & 23 & 50 \end{array} \quad \begin{array}{c} 30 \\ \hline \end{array}$$

$$\begin{array}{cccccccc} 63 & 59 & 36 & 93 & 101 & 96 & 95 & 97 \\ \hline 50 & 46 & 32 & 25 & 21 & 7 & & \end{array} \quad \begin{array}{cccc} 97 & 101 & 100 & 51 \\ \hline 9 & 15 & 22 & 30 \end{array} \quad \begin{array}{cc} 64 & 70 \\ \hline 40 & 50 \end{array}$$

$$\begin{array}{cccccccc} 56 & 47 & 29 & 80 & 93 & 100 & 98 & 96 \\ \hline 50 & 41 & 32 & 26 & 23 & 19 & 8 & 9 \end{array} \quad \begin{array}{cccc} 99 & 102 & 103 & 98 \\ \hline 14 & 19 & 27 & 31 \end{array} \quad \begin{array}{cc} 58 & 61 \\ \hline 42 & 50 \end{array}$$

$$\begin{array}{cccccc} 45 & 22 & 71 & 111 & 111 & 103 \\ \hline 50 & 33 & 25 & 19 & 16 & 15 \end{array} \quad \begin{array}{cc} 100 & 98 \\ \hline 8 & \end{array} \quad \begin{array}{c} 100 \\ \hline 10 \end{array} \quad \begin{array}{cccc} 100 & 95 & 47 & 47 \\ \hline 19 & 24 & 31 & 38 \end{array} \quad \begin{array}{c} 56 \\ \hline 50 \end{array}$$

$$\begin{array}{cccccccc} 44 & 32 & 13 & 101 & 113 & 119 & 107 & 102 \\ \hline 50 & 43 & 33 & 74 & 22 & 19 & 14 & 7 \end{array} \quad \begin{array}{cc} 101 & 104 \\ \hline 10 & 15 \end{array} \quad \begin{array}{cccc} 106 & 102 & 100 & 96 \\ \hline 15 & 19 & 24 & 28 \end{array} \quad \begin{array}{cc} 41 & 53 \\ \hline 36 & 50 \end{array}$$

Sta	+	K	-	Elev.
		898.77 ✓		
9	+50			89.4
10				89.0
T.P.	2.43	890.95 ✓	11.25	88.52 ✓
	+60			88.5
	+82			88.0
11				87.6
	+50			86.6
12				86.3
	+50			86.3
13				86.3
T.P.	5.88	891.41 ✓	5.42	88.53 ✓
	+50			86.2
14				86.3

4.

4.

21

$$\frac{42}{50} \frac{17}{37} \frac{113}{28} \frac{125}{25} \frac{123}{19} \frac{112}{16} \frac{106}{8} \frac{104}{-} \frac{107}{8} \frac{111}{12} \frac{120}{17} \frac{114}{21} \frac{44}{34} \frac{56}{50}$$

$$\frac{71}{50} \frac{52}{33} \frac{114}{26} \frac{130}{24} \frac{131}{19} \frac{117}{16} \frac{110}{7} \frac{108}{-} \frac{113}{11} \frac{118}{13} \frac{127}{20} \frac{126}{23} \frac{75}{30} \frac{82}{42} \frac{83}{50}$$

$$\frac{27}{50} \frac{29}{34} \frac{49}{28} \frac{47}{18} \frac{31}{16} \frac{27}{10} \frac{25}{-} \frac{30}{9} \frac{36}{14} \frac{44}{16} \frac{41}{23} \frac{34}{27} \frac{24}{43} \frac{28}{50}$$

$$\frac{55}{50} \frac{57}{34} \frac{53}{18} \frac{37}{14} \frac{33}{8} \frac{30}{-} \frac{35}{10} \frac{41}{13} \frac{53}{16} \frac{56}{26} \frac{54}{50}$$

$$\frac{67}{50} \frac{67}{30} \frac{62}{18} \frac{42}{14} \frac{37}{8} \frac{34}{-} \frac{38}{10} \frac{41}{14} \frac{62}{17} \frac{63}{31} \frac{61}{50}$$

$$\frac{77}{50} \frac{77}{18} \frac{53}{13} \frac{48}{10} \frac{44}{-} \frac{48}{10} \frac{53}{13} \frac{77}{17} \frac{80}{50}$$

$$\frac{84}{50} \frac{83}{18} \frac{54}{14} \frac{51}{11} \frac{47}{-} \frac{51}{10} \frac{54}{13} \frac{82}{27} \frac{82}{50}$$

$$\frac{84}{50} \frac{83}{17} \frac{54}{13} \frac{50}{10} \frac{47}{-} \frac{52}{11} \frac{57}{14} \frac{83}{18} \frac{83}{50}$$

$$\frac{84}{19} \frac{55}{14} \frac{51}{10} \frac{47}{-} \frac{51}{10} \frac{54}{12} \frac{84}{17} \frac{82}{50}$$

N41 in T.R.R. 121

$$\frac{96}{50} \frac{96}{21} \frac{62}{16} \frac{55}{10} \frac{52}{-} \frac{55}{8} \frac{58}{12} \frac{85}{19} \frac{85}{27} \frac{89}{50}$$

$$\frac{85}{50} \frac{83}{22} \frac{89}{18} \frac{60}{14} \frac{56}{9} \frac{51}{-} \frac{55}{8} \frac{59}{12} \frac{89}{18} \frac{90}{23} \frac{85}{30} \frac{87}{50}$$

Sta. + π - E/cv

891.41 ✓

14 +17 Flow Line & Culv. & Ditch Levels.

+50

86.5

15

86.7

+50

86.7

16

86.3

+25

86.10

Flow Line 50' End 12" C.M.

+96 also Ditch Levels Running 30' from End of Culv.

+50

86.10

+75

86.3

17

86.4

B.M.

+34

86.4

Lt.

L

Rt.

$$\frac{113}{200} \quad \frac{114}{100}$$

$$\frac{1145}{100}$$

$$\frac{120}{100}$$

ditch

$$\frac{76}{50} \quad \frac{75}{27} \quad \frac{72}{19} \quad \frac{57}{15} \quad \frac{54}{11} \quad \frac{49}{9} \quad \frac{53}{13} \quad \frac{60}{16} \quad \frac{91}{24} \quad \frac{88}{35} \quad \frac{77}{46}$$

$$\frac{68}{50} \quad \frac{69}{27} \quad \frac{70}{20} \quad \frac{58}{18} \quad \frac{52}{13} \quad \frac{47}{8} \quad \frac{51}{19} \quad \frac{54}{17} \quad \frac{77}{38} \quad \frac{77}{50} \quad \frac{82}{107} \quad \text{(ditch)}$$

$$\frac{60}{50} \quad \frac{62}{29} \quad \frac{59}{21} \quad \frac{54}{19} \quad \frac{50}{13} \quad \frac{47}{7} \quad \frac{51}{13} \quad \frac{53}{16} \quad \frac{70}{35} \quad \frac{70}{50} \quad \frac{72}{50}$$

$$\frac{77}{50} \quad \frac{77}{29} \quad \frac{68}{22} \quad \frac{59}{20} \quad \frac{52}{14} \quad \frac{51}{6} \quad \frac{54}{12} \quad \frac{54}{16} \quad \frac{80}{31} \quad \frac{77}{39} \quad \frac{80}{50} \quad \frac{82}{50}$$

$$\frac{78}{50} \quad \frac{77}{22} \quad \frac{54}{16} \quad \frac{52}{11} \quad \frac{53}{8} \quad \frac{59}{10} \quad \frac{60}{13} \quad \frac{75}{29} \quad \frac{76}{50}$$

$$\frac{78}{100} \rightarrow \frac{83}{100} \rightarrow \frac{9.55}{100}$$

$$\frac{78}{50} \quad \frac{78}{37} \quad \frac{52}{27} \quad \frac{49}{15} \quad \frac{53}{11}$$

$$\frac{61}{11} \quad \frac{76}{16} \quad \frac{77}{31} \quad \frac{77}{50}$$

$$\frac{47}{50} \quad \frac{50}{23} \quad \frac{47}{17} \quad \frac{48}{9}$$

$$\frac{51}{10} \quad \frac{59}{14} \quad \frac{57}{18} \quad \frac{73}{37} \quad \frac{77}{50} \quad \frac{79}{50}$$

$$\frac{30}{50} \quad \frac{47}{11} \quad \frac{50}{11}$$

$$\frac{56}{8} \quad \frac{58}{14} \quad \frac{71}{15} \quad \frac{73}{50}$$

$$\frac{22}{50} \quad \frac{41}{35} \quad \frac{58}{50} \quad \frac{59}{19} \quad \frac{49}{15} \quad \frac{49}{10} \quad \frac{50}{8} \quad \frac{54}{12} \quad \frac{59}{16} \quad \frac{78}{24} \quad \frac{82}{50} \quad \frac{87}{50}$$

Sta.	+	π	-	E/cv.
		891.41 ✓		
18				86.4
B.M.	3.72	891.27 ✓	3.86	86.4 ✓
+50				86.4
19				86.3
+50 ✓				86.3
20				86.2
+50				86.2
21				86.2
+50				86.2
22				86.4
+50				86.6
23				87.0
I.P.	3.45	890.47 ✓	4.25	882.02 ✓

1-30-39

18

K. 17,
L. B. H.,
L. C.,
M. J. G.,
D. T.

11

4

$\frac{13}{50} \frac{36}{34} \frac{61}{27} \frac{69}{23} \frac{69}{17} \frac{57}{15} \frac{55}{11} \frac{50}{9} \frac{54}{7} \frac{59}{11} \frac{80}{17} \frac{85}{26} \frac{92}{50}$

Spk. in 18' Oak 28' dt 17+10

$\frac{12}{50} \frac{28}{36} \frac{59}{28} \frac{67}{21} \frac{62}{16} \frac{55}{13} \frac{52}{10} \frac{49}{9} \frac{53}{13} \frac{58}{17} \frac{78}{17} \frac{91}{50}$

$\frac{14}{50} \frac{28}{34} \frac{62}{27} \frac{65}{21} \frac{56}{16} \frac{53}{10}$

$\frac{50}{11} \frac{55}{14} \frac{57}{18} \frac{77}{41} \frac{92}{50} \frac{93}{50}$

$\frac{54}{50} \frac{48}{30} \frac{70}{24} \frac{70}{21} \frac{58}{15} \frac{53}{10} \frac{50}{9} \frac{58}{7} \frac{60}{13} \frac{89}{16} \frac{87}{31} \frac{93}{45} \frac{110}{47} \frac{110}{52} \frac{93}{54}$

$\frac{79}{50} \frac{67}{41} \frac{67}{27} \frac{77}{21} \frac{73}{17} \frac{58}{13} \frac{55}{9} \frac{51}{10} \frac{57}{14} \frac{60}{18} \frac{98}{48} \frac{96}{52} \frac{103}{56} \frac{119}{56}$ 2. Ditch 3' Bottom

$\frac{86}{50} \frac{73}{58} \frac{75}{27} \frac{81}{21} \frac{59}{14} \frac{54}{9} \frac{51}{9}$

$\frac{55}{8} \frac{58}{13} \frac{94}{18} \frac{94}{33} \frac{92}{50}$

$\frac{92}{50} \frac{71}{36} \frac{70}{21} \frac{72}{16} \frac{58}{13} \frac{55}{10} \frac{51}{9} \frac{57}{12} \frac{60}{18} \frac{103}{27} \frac{98}{50} \frac{94}{50} (12.2) \frac{12.2}{2. Ditch}$

$\frac{75}{50} \frac{78}{21} \frac{74}{16} \frac{60}{14} \frac{55}{11} \frac{51}{9} \frac{54}{8} \frac{60}{12} \frac{93}{18} \frac{96}{29} \frac{95}{50}$

$\frac{76}{50} \frac{80}{26} \frac{81}{17} \frac{62}{14} \frac{56}{11} \frac{49}{10} \frac{54}{12} \frac{57}{16} \frac{77}{50} \frac{99}{50} (12.9) \frac{12.9}{2. Ditch}$

$\frac{75}{50} \frac{82}{35} \frac{80}{20} \frac{55}{14} \frac{52}{10} \frac{47}{9} \frac{50}{7} \frac{54}{13} \frac{69}{17} \frac{83}{34} \frac{94}{50}$

$\frac{65}{50} \frac{69}{31} \frac{77}{26} \frac{75}{20} \frac{68}{15} \frac{51}{13} \frac{49}{9} \frac{43}{10} \frac{46}{14} \frac{53}{17} \frac{61}{33} \frac{71}{50} \frac{83}{50} (13.5) \frac{13.5}{2. Ditch}$

Sta.

+

T

-

Elev

890.47

23

+24

87.3

+44.7

87.26

+50

+55

+60

+65

+70

Approx High Water Line

8.5

Elev. Water at Present Time

11.5

+79.8

87.31

+86

87.0

Lt.

K

Rt.

$$\frac{50}{50} \quad \frac{56}{41} \quad \frac{92}{29} \quad \frac{80}{18} \quad \frac{37}{11} \quad \frac{35}{9} \quad \frac{32}{9} \quad \frac{33}{9} \quad \frac{37}{12} \quad \frac{51}{16} \quad \frac{59}{31} \quad \frac{71}{50} \quad \checkmark$$

87.3

$$\frac{138}{50} \quad \frac{138}{30} \quad \frac{111}{9} \quad \frac{330}{9} \quad \frac{321}{9} \quad \frac{318}{9} \quad \frac{111}{9} \quad \frac{105}{31} \quad \frac{102.84}{34} \quad \frac{84}{50} \quad \checkmark$$

$$\frac{128}{10}$$

$$\frac{129}{10}$$

76.5

$$\frac{140}{10}$$

$$\frac{141}{10}$$

76.8

$$\frac{137}{10}$$

$$\frac{139}{10}$$

77.7

$$\frac{128}{10}$$

$$\frac{127}{10}$$

79.9

$$\frac{106}{10}$$

$$\frac{116}{10}$$

$$\frac{106}{50} \quad \frac{101}{27} \quad \frac{98}{9} \quad \frac{340}{9} \quad \frac{326}{9} \quad \frac{326}{9} \quad \frac{108}{9} \quad \frac{126}{24} \quad \frac{130}{31} \quad \frac{141}{41} \quad \checkmark$$

$$\frac{91}{50} \quad \frac{85}{31} \quad \frac{79}{18}$$

$$\frac{86}{10} \quad \frac{35}{9} \quad \frac{39}{9} \quad \frac{56}{13} \quad \frac{113}{21} \quad \frac{125}{32} \quad \frac{136}{43} \quad \frac{133}{50} \quad \checkmark$$

Sta.

+

X

-

Elev.

89047 ✓

24

86.60

+50

85.8

25

85.6

+50

85.5

26

85.5

+50

85.4

27

84.7

+35

86.2

+50

86.3

28

86.5

+50

86.4

Lt.

K

Rt.

$$\frac{82}{50} \frac{82}{20} \frac{41}{12} \frac{39}{9} \frac{39}{7} \frac{41}{11} \frac{47}{17} \frac{86}{17} \frac{104}{29} \frac{140}{40} \frac{129}{50} \quad \checkmark$$

$$\frac{90}{50} \frac{93}{24} \frac{85}{19} \frac{55}{14} \frac{50}{9} \frac{47}{9} \frac{52}{9} \frac{58}{14} \frac{91}{19} \frac{99}{32} \frac{141}{42} \frac{128}{50} \quad \checkmark$$

$$\frac{100}{50} \frac{99}{35} \frac{92}{20} \frac{57}{14} \frac{52}{9} \frac{49}{9} \frac{54}{9} \frac{58}{12} \frac{86}{16} \frac{102}{41} \frac{135}{50} \quad \checkmark$$

$$\frac{93}{50} \frac{92}{34} \frac{90}{21} \frac{58}{14} \frac{53}{10} \frac{50}{9} \frac{53}{8} \frac{59}{13} \frac{92}{21} \frac{91}{50} \quad \checkmark$$

$$\frac{95}{50} \frac{89}{20} \frac{57}{14} \frac{54}{9} \frac{50}{9} \frac{55}{11} \frac{58}{17} \frac{85}{28} \frac{92}{50} \quad \checkmark$$

$$\frac{91}{50} \frac{90}{20} \frac{60}{13} \frac{54}{8} \frac{51}{9} \frac{53}{9} \frac{56}{12} \frac{86}{19} \frac{85}{50} \quad \checkmark$$

$$\frac{85}{50} \frac{83}{20} \frac{55}{14} \frac{49}{10} \frac{58}{9} \frac{52}{9} \frac{57}{13} \frac{87}{18} \frac{89}{50} \quad \checkmark$$

$$\frac{65}{50} \frac{64}{20} \frac{48}{14} \frac{44}{10} \frac{43}{9} \frac{48}{13} \frac{52}{17} \frac{63}{25} \frac{68}{50} \quad \checkmark$$

$$\frac{42}{50} \frac{43}{34} \frac{45}{21} \frac{42}{15} \frac{43}{10} \frac{42}{9} \frac{48}{10} \frac{50}{14} \frac{60}{16} \frac{62}{26} \frac{69}{50} \quad \checkmark$$

$$\frac{25}{50} \frac{34}{32} \frac{37}{18} \frac{41}{10} \frac{40}{9} \frac{43}{13} \frac{43}{16} \frac{55}{33} \frac{53}{50} \quad \checkmark$$

$$\frac{0.8}{50} \frac{27}{31} \frac{40}{18} \frac{43}{11} \frac{41}{9} \frac{43}{13} \frac{46}{16} \frac{54}{28} \frac{50}{41} \frac{37}{50} \quad \checkmark$$

Sta.	+	π	-	Elev.
		890.47 [✓]		
29				86.6
T.P.	3.54	891.16 [✓]	2.85	887.62 [✓]
+50				86.6
30				86.7
+21				86.7
+50				86.6
31				86.1
+50				86.1
32				86.1
+50				86.0
33				85.7
+50				85.0

Lt

K

Rt

$$\frac{1.7}{50} \frac{3.2}{31} \frac{4.3}{23} \frac{4.3}{14}$$

$$\frac{3.9}{11} \frac{4.5}{15} \frac{4.9}{15} \frac{3.4}{50}$$

✓

$$\frac{3.7}{50} \frac{4.3}{41} \frac{5.1}{31} \frac{5.4}{20} \frac{5.1}{16} \frac{4.9}{11} \frac{4.6}{8} \frac{5.0}{16} \frac{5.5}{16} \frac{3.9}{50}$$

✓

$$\frac{2.7}{50} \frac{4.0}{37} \frac{4.9}{27} \frac{4.8}{11}$$

$$\frac{4.5}{10} \frac{5.1}{10} \frac{5.5}{18} \frac{5.4}{50}$$

✓

$$\frac{1.7}{50} \frac{2.3}{45} \frac{4.1}{32} \frac{4.7}{25} \frac{4.8}{14} \frac{4.8}{10} \frac{4.5}{10}$$

$$\frac{5.0}{9}$$

$$\frac{5.6}{17}$$

$$\frac{5.8}{50}$$

✓

$$\frac{1.3}{50} \frac{2.4}{41} \frac{3.7}{52} \frac{4.2}{17} \frac{4.9}{12}$$

$$\frac{4.6}{9} \frac{5.2}{9} \frac{5.6}{12} \frac{7.3}{18} \frac{8.0}{50}$$

✓

$$\frac{1.1}{50} \frac{2.2}{42} \frac{3.6}{32} \frac{4.2}{24} \frac{4.8}{16} \frac{5.2}{10} \frac{5.1}{10}$$

$$\frac{5.4}{7}$$

$$\frac{5.8}{10}$$

$$\frac{8.7}{17}$$

$$\frac{9.0}{26}$$

$$\frac{9.7}{50}$$

✓

$$\frac{1.1}{50} \frac{2.1}{42} \frac{3.2}{33} \frac{4.4}{25} \frac{6.3}{22} \frac{6.3}{20} \frac{5.6}{15} \frac{5.3}{8} \frac{5.1}{9} \frac{5.6}{9} \frac{5.9}{12} \frac{8.5}{17} \frac{9.2}{37} \frac{9.1}{50}$$

✓

$$\frac{0.9}{50} \frac{1.9}{45} \frac{2.7}{27} \frac{6.3}{22} \frac{6.6}{18} \frac{5.6}{15} \frac{5.3}{10} \frac{5.1}{10} \frac{5.5}{9} \frac{6.1}{12} \frac{8.0}{17} \frac{8.2}{32} \frac{7.7}{50}$$

✓

$$\frac{1.1}{50} \frac{3.1}{32} \frac{5.6}{26} \frac{6.1}{20} \frac{5.6}{18}$$

$$\frac{5.3}{9}$$

$$\frac{5.2}{8}$$

$$\frac{5.8}{14}$$

$$\frac{6.4}{17}$$

$$\frac{7.9}{17}$$

$$\frac{8.1}{34}$$

$$\frac{8.1}{50}$$

✓

$$\frac{4.6}{50} \frac{6.0}{33} \frac{6.2}{21} \frac{6.8}{18} \frac{6.8}{16} \frac{6.0}{15} \frac{5.7}{9} \frac{5.5}{9}$$

$$\frac{6.2}{8}$$

$$\frac{6.7}{12}$$

$$\frac{8.9}{17}$$

$$\frac{8.6}{33}$$

$$\frac{8.6}{50}$$

✓

$$\frac{6.0}{30} \frac{7.6}{33} \frac{8.1}{18} \frac{6.7}{14} \frac{6.4}{8}$$

$$\frac{6.2}{8}$$

$$\frac{6.6}{12}$$

$$\frac{7.1}{15}$$

$$\frac{8.3}{32}$$

$$\frac{8.4}{50}$$

$$\frac{8.3}{50}$$

✓

Sta	+	π 891.16 [✓]	-	E/cv
34				85.6
	+50			86.6
T.P.	775	893.23 [✓]	568	105.48 [✓]
35				87.2
	+50			87.4
36				88.0
	+16			89.5
	+29			89.0
	+43.13			89.2
B.M.			188	891.35 [✓]

Lt.

2.

Dt.

$$\frac{47}{50} \quad \frac{60}{33} \quad \frac{63}{16} \quad \frac{58}{9} \quad \frac{56}{-} \quad \frac{60}{8} \quad \frac{64}{12} \quad \frac{81}{17} \quad \frac{80}{33} \quad \frac{77}{50} \quad \checkmark$$

$$\frac{30}{50} \quad \frac{46}{33} \quad \frac{53}{24} \quad \frac{56}{19} \quad \frac{49}{16} \quad \frac{48}{9} \quad \frac{46}{9} \quad \frac{52}{13} \quad \frac{55}{16} \quad \frac{71}{30} \quad \frac{73}{50} \quad \checkmark$$

$$\frac{32}{50} \quad \frac{58}{34} \quad \frac{73}{27} \quad \frac{75}{20} \quad \frac{69}{18} \quad \frac{62}{11} \quad \frac{60}{9} \quad \frac{65}{13} \quad \frac{73}{16} \quad \frac{88}{35} \quad \frac{91}{50} \quad \checkmark$$

$$\frac{34}{50} \quad \frac{55}{34} \quad \frac{62}{27} \quad \frac{72}{20} \quad \frac{62}{17} \quad \frac{59}{10} \quad \frac{58}{8} \quad \frac{62}{12} \quad \frac{68}{16} \quad \frac{89}{18} \quad \frac{91}{33} \quad \frac{93}{50} \quad \checkmark$$

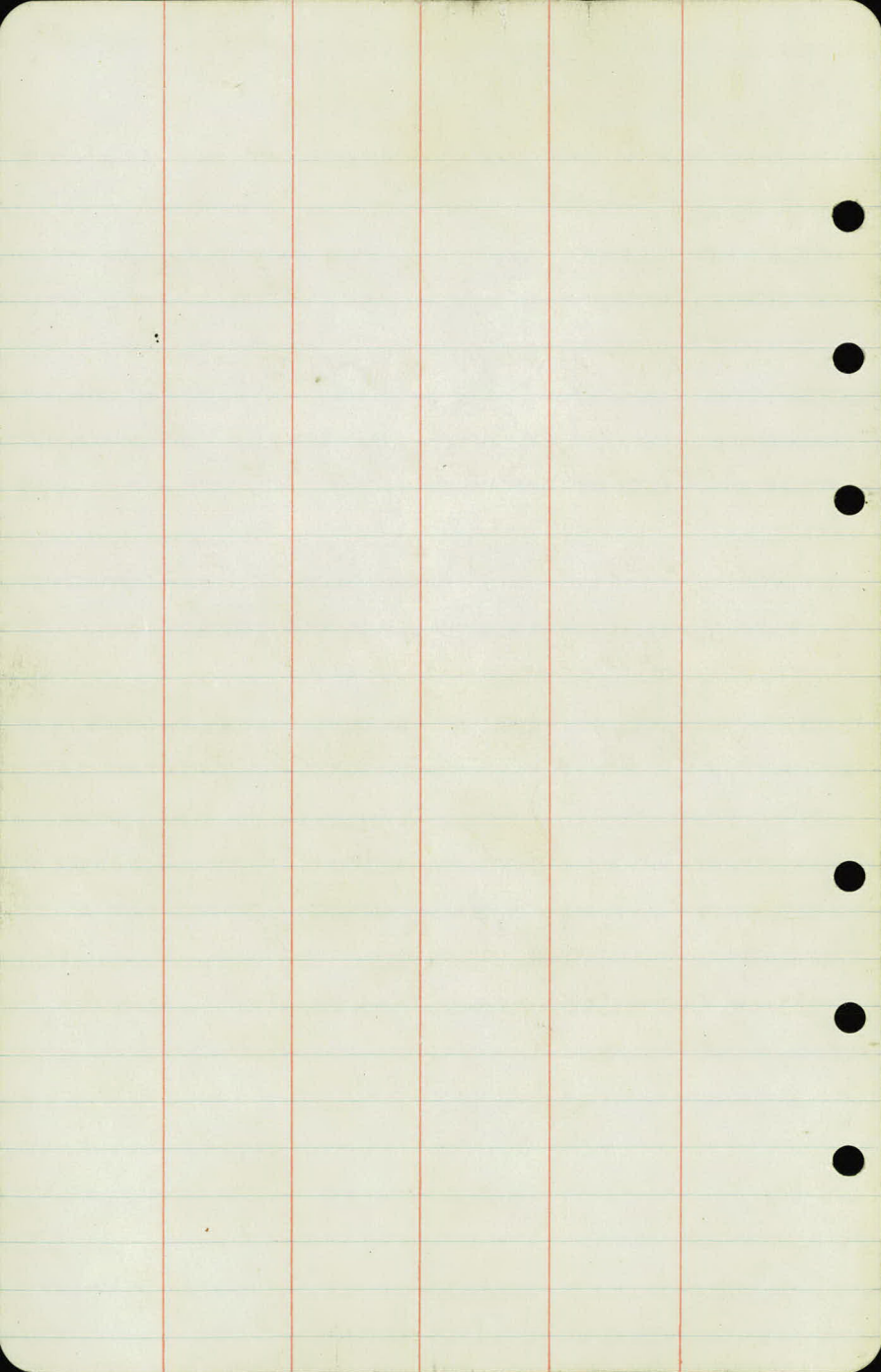
$$\frac{40}{50} \quad \frac{48}{37} \quad \frac{57}{28} \quad \frac{57}{17} \quad \frac{54}{16} \quad \frac{54}{12} \quad \frac{52}{10} \quad \frac{56}{14} \quad \frac{61}{16} \quad \frac{73}{30} \quad \frac{87}{50} \quad \checkmark$$

$$\frac{41}{50} \quad \frac{52}{27} \quad \frac{99}{18} \quad \frac{47}{-} \quad \frac{57}{17} \quad \frac{62}{24} \quad \frac{80}{33} \quad \frac{89}{50} \quad \checkmark$$

$$\frac{26}{50} \quad \frac{38}{19} \quad \frac{42}{-} \quad \frac{51}{24} \quad \frac{53}{50} \quad \checkmark$$

$$\frac{22}{50} \quad \frac{31}{25} \quad \frac{40}{-} \quad \frac{46}{25} \quad \frac{49}{50} \quad \checkmark$$

Spk. in 20" Air Blower NW Cor. N. Coline 4 Lexington Ave.



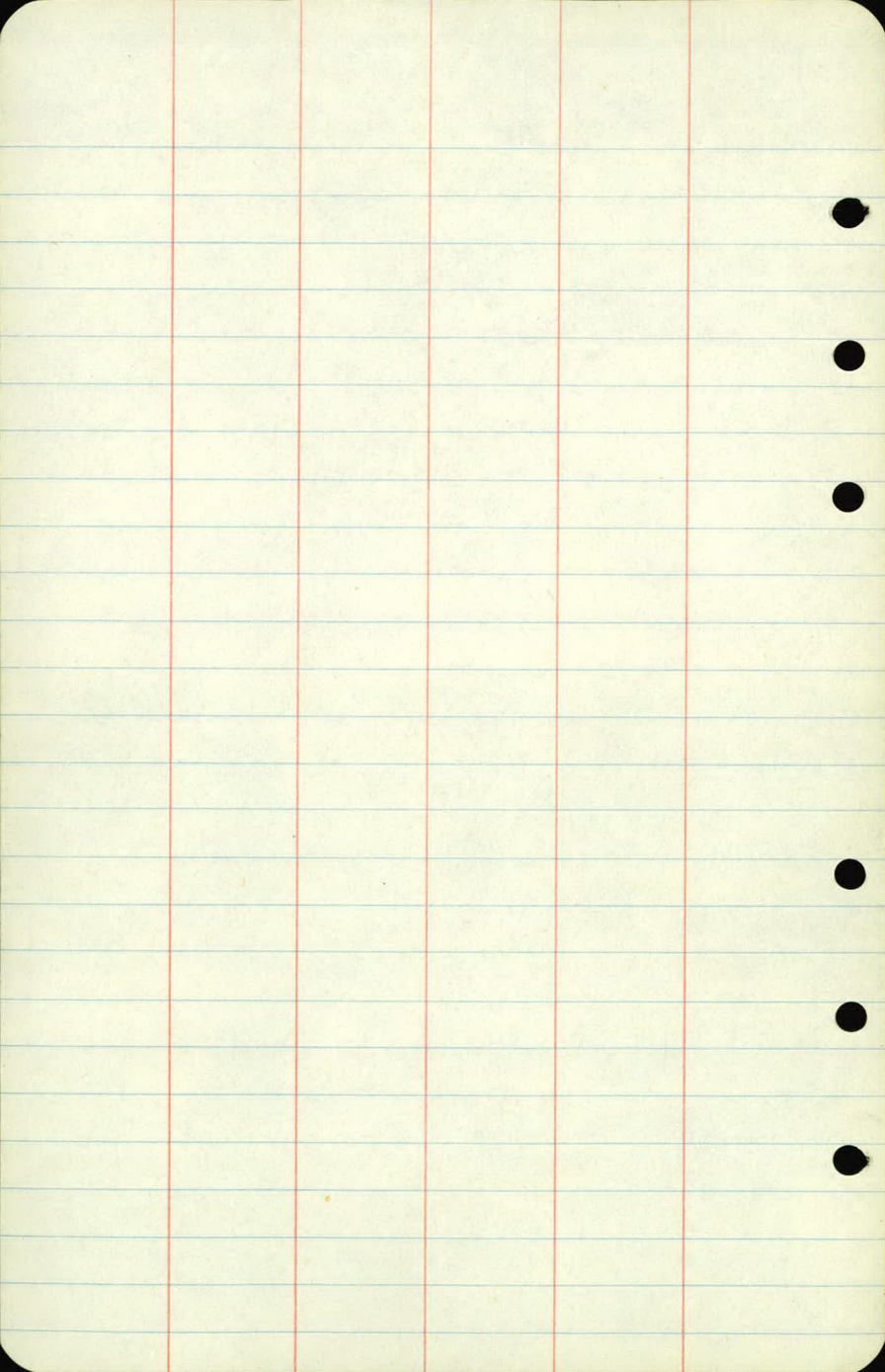
BRIDGE SURVEY
LEXINGTON AVE & RICE CREEK

Alignment	See Bk 54- Page 2 (Found old pts)
Topography	- Pages 1-2
X Sections	" 3-10
Soundings	" 11-14
stadia	15-17

Rec 5-13-49

5-11-49

B.



Topography
for

Bridge Location

Lexington Ave & Rice Creek

5-11-49

A.B.

27 Fe-25 11-8
+80-PP-28 ✓
+75 Tie to Cr. ✓
+70 Bank Cr. -85 ✓

26 Fe-28 11-8 Cr. 64-89 ✓
+10-PP-28 ✓

25 Fe-25 10-9 Cr. 38-65 ✓
+50 West edge Cr. Bank 27 ✓
+50 E " " " 65 ✓

24 Fe-22 8-8 Cr. 24-65 ✓
+35 Water. Edge -60 ✓
+40 8" W. edge Water 27 ✓
+37 end Fe 13 ✓
+37 Beg Wing Wall -13 ✓
+32 1 in g.R. -11 ✓
+27 GRP -12 ✓
+24 1 in Fe 19 ✓
+88 End GR -10 -
+88 Edge Water 25 -
+98 Pt E bank 65 -
+63 Pt. of ditch 60 -
+48 Edge Water -53 -
+46 E ditch -34 -
+30 Edge Water -30 -
+20-1 in Fe-20 -

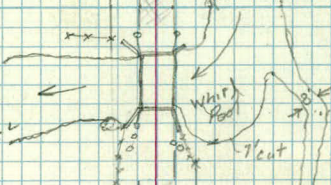
23 Fe-20 ✓ 10-10 Fe-20, PP-27 ✓ Cr. 78 ✓
+31 Twn W - 49

22 Fe-20 9-9 Fe-20, E ditch 7/
+18-PP-28

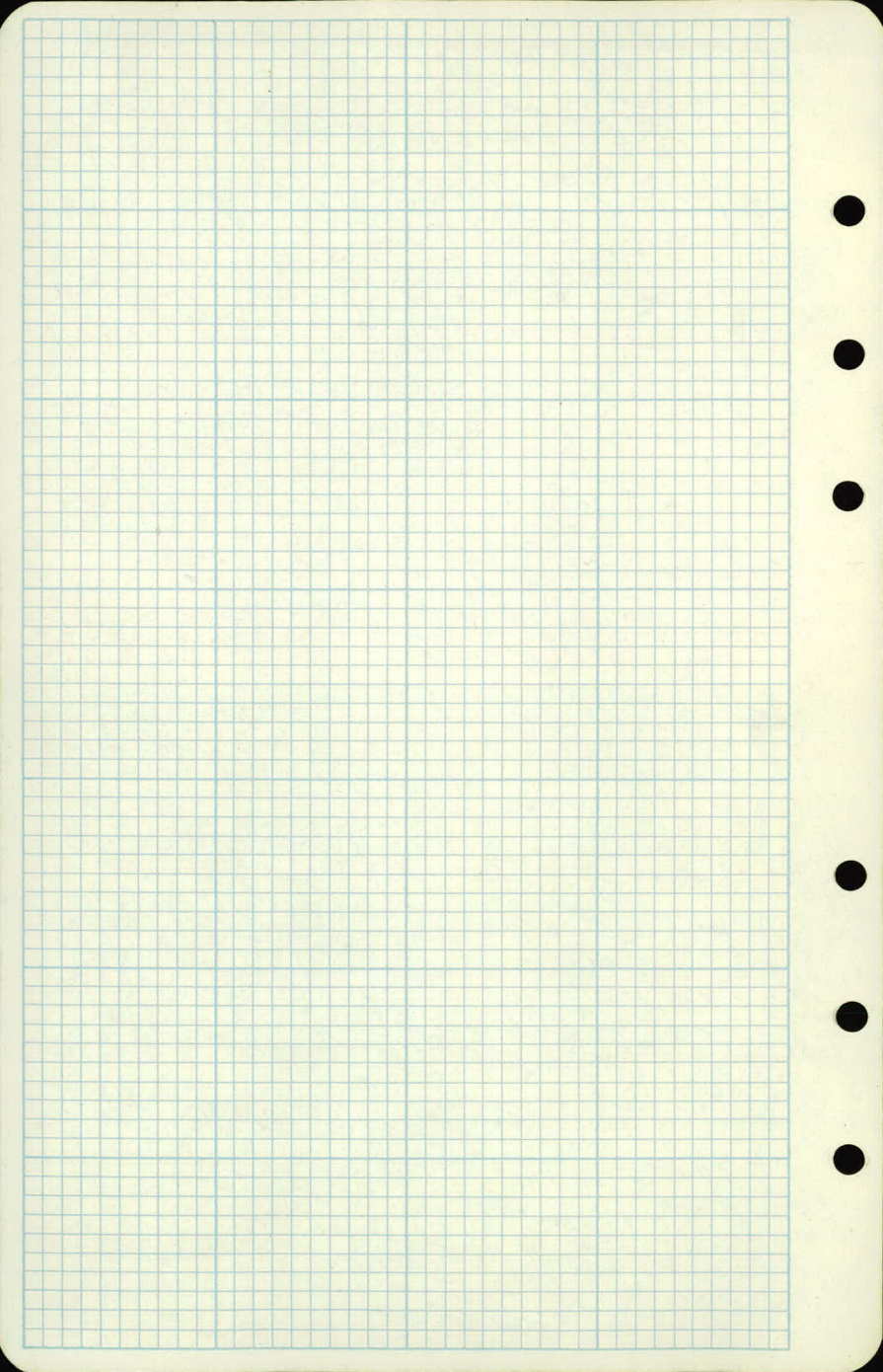
21 Fe-20 10-8 Fe-19, E ditch -65 ✓

+88 end Grail 10' ✓
 +84 Fe Cor. 22.5 ✓
 +75 Deck Air Aht. -9.5 ✓
 +82 end Aht. -18 ✓
 +75 edge W - 77 9.5 ✓
 +44.7 Air Aht. 10, Deck -9.5 ✓
 +43 Stump 12 ✓
 +39 Beg GR -10 ✓

+80 end Wing W. 15 ✓
 +78 Bank -75 ✓
 +74.5 L in Aht. 9 ✓
 +44.7 Air Aht. -9.5 ✓
 +36 Beg Wing 11.5 ✓
 +38 end Fe 92 ✓
 +31 L in GR -10 ✓
 +27 Beg GR. -12 ✓



4' ditch



Bridge Survey
Lexington Ave & Rice Creek

X Sections

Sta 21 to Sta 26

5-12-49

G.B.
A.M.
M.B.
B.C.

Sta	+	π	-	Elev.
BM	2.96	890.51		887.55
20 + 50				86.1
20 + 00				85.9
21 + 00				86.0
+ 50				86.0
22				86.2
+ 50				86.4
23				86.9
+ 24				87.2
+ 32				87.2

Lt

Q

Rt

Spk in 18" oak 29' Lt @ 17+10

4.4

4.6

Lt

$\frac{9.0}{60}$	$\frac{8.7}{50}$	$\frac{6.8}{32}$	$\frac{6.6}{17}$	$\frac{5.3}{14}$	$\frac{4.9}{9}$	4.5	$\frac{5.0}{9}$	$\frac{5.6}{12}$	$\frac{9.0}{19}$	$\frac{9.6}{22}$	$\frac{9.2}{50}$
------------------	------------------	------------------	------------------	------------------	-----------------	-----	-----------------	------------------	------------------	------------------	------------------

Lt

$\frac{7.2}{50}$	$\frac{6.8}{37}$	$\frac{7.1}{26}$	$\frac{6.8}{18}$	$\frac{5.3}{14}$	$\frac{4.8}{11}$	4.5	$\frac{5.0}{11}$	$\frac{8.5}{19}$	$\frac{9.0}{29}$	$\frac{9.1}{50}$
------------------	------------------	------------------	------------------	------------------	------------------	-----	------------------	------------------	------------------	------------------

Lt

$\frac{6.7}{50}$	$\frac{7.3}{35}$	$\frac{7.3}{36}$	$\frac{7.5}{22}$	$\frac{7.0}{18}$	$\frac{5.0}{13}$	$\frac{4.7}{9}$	4.3	$\frac{4.7}{10}$	$\frac{4.9}{12}$	$\frac{7.2}{18}$	$\frac{8.4}{33}$	$\frac{9.4}{50}$
------------------	------------------	------------------	------------------	------------------	------------------	-----------------	-----	------------------	------------------	------------------	------------------	------------------

Lt

$\frac{6.8}{50}$	$\frac{7.3}{28}$	$\frac{7.9}{22}$	$\frac{7.3}{18}$	$\frac{4.8}{13}$	$\frac{4.4}{10}$	4.1	$\frac{4.4}{9}$	$\frac{4.7}{13}$	$\frac{6.2}{19}$	$\frac{7.2}{27}$	$\frac{8.7}{50}$	$\frac{9.3}{70}$	$\frac{11.6}{72}$
------------------	------------------	------------------	------------------	------------------	------------------	-----	-----------------	------------------	------------------	------------------	------------------	------------------	-------------------

(12.3)
77
Ditch

$\frac{5.8}{50}$	$\frac{6.1}{32}$	$\frac{7.0}{26}$	$\frac{6.7}{19}$	$\frac{4.3}{12}$	$\frac{4.0}{10}$	3.6	$\frac{4.0}{10}$	$\frac{4.3}{13}$	$\frac{5.3}{18}$	$\frac{5.9}{26}$	$\frac{6.7}{41}$	$\frac{7.6}{50}$	$\frac{8.8}{70}$
------------------	------------------	------------------	------------------	------------------	------------------	-----	------------------	------------------	------------------	------------------	------------------	------------------	------------------

(12.7) 12.0
78 45-
ditch

$\frac{13.0}{84}$	$\frac{5.1}{50}$	$\frac{5.5}{57}$	$\frac{8.9}{28}$	$\frac{8.6}{22}$	$\frac{4.9}{14}$	$\frac{3.5}{9}$	3.3	$\frac{3.6}{10}$	$\frac{5.3}{17}$	$\frac{7.4}{48}$	$\frac{8.4}{73}$	$\frac{11.4}{77}$	$\frac{12.9}{84}$
-------------------	------------------	------------------	------------------	------------------	------------------	-----------------	-----	------------------	------------------	------------------	------------------	-------------------	-------------------

(12.7) 12.0
78 45-
ditch

$\frac{13.0}{50}$	$\frac{10.1}{45}$	$\frac{10.1}{29}$	$\frac{8.7}{19}$	$\frac{3.7}{10}$	$\frac{3.5}{7}$	3.2	$\frac{3.4}{9}$	$\frac{4.6}{14}$	$\frac{13.2}{23}$	$\frac{12.3}{39}$	$\frac{7.2}{51}$	$\frac{8.5}{73}$
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Sta	+	π 890.51.	-	Elev
23+49.7				87.4
+ 48				77.5
+ 53				76.5
+ 58				75.0
+ 63				74.7
+ 68				76.3
Water Elev.		5-11-49		12.28 = 78.23
+ 73				78.2
+ 75				87.2
+ 86				86.8
24				86.4
+ 50				85.4

Lt

Q

Rt

✓

2 stream edgew

$\frac{13.8}{50}$	$\frac{12.3}{22}$	$\frac{12.0}{10}$	$\frac{4.4}{10}$	$\frac{3.4}{9}$	3.1	$\frac{12.3}{14}$	$\frac{16.3}{27}$	$\frac{15.3}{38}$	$\frac{12.3}{50}$	$\frac{7.8}{57}$	$\frac{8.0}{73}$	$\frac{11.3}{77}$	$\frac{18.1}{85}$
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$\frac{12.0}{10}$	$\frac{4.1}{10}$	$\frac{3.3}{9}$
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13.2	13.0	12.8
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19.6	14.0	13.5
------	------	------

15.9	15.5	15.2
------	------	------

16.1	15.8	15.5
------	------	------

17	14.9	14.2	13.6
----	------	------	------

12.3	edgew
------	-------

12.3

12.3	edgew
------	-------

18.0 ✓

$\frac{11.2}{50}$	$\frac{13.5}{81}$	$\frac{12.3}{14}$	$\frac{11.2}{9.7}$	$\frac{4.5}{9.7}$	$\frac{3.4}{8}$	3.3	$\frac{3.5}{6}$	$\frac{4.4}{9.5}$	$\frac{11.0}{9.5}$	$\frac{12.5}{17}$	$\frac{16}{25}$
-------------------	-------------------	-------------------	--------------------	-------------------	-----------------	-----	-----------------	-------------------	--------------------	-------------------	-----------------

✓

$\frac{9.7}{50}$	$\frac{9.1}{23}$	$\frac{6.8}{16}$	$\frac{3.8}{9}$	3.7	$\frac{3.9}{8}$	$\frac{4.3}{10}$	$\frac{10.2}{19}$	$\frac{11.4}{24}$	$\frac{14.8}{25}$	$\frac{14.8}{33}$
------------------	------------------	------------------	-----------------	-----	-----------------	------------------	-------------------	-------------------	-------------------	-------------------

$\frac{8.5}{50}$	$\frac{8.4}{22}$	$\frac{4.5}{12}$	$\frac{4.0}{8}$	4.1	$\frac{4.5}{9}$	$\frac{12.3}{25}$	$\frac{14.8}{30}$
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4

$\frac{9.6}{50}$	$\frac{9.6}{40}$	$\frac{9.7}{23}$	$\frac{5.5}{12}$	$\frac{5.2}{9}$	5.1	$\frac{5.7}{11}$	$\frac{9.6}{21}$	$\frac{10.6}{27}$	$\frac{14.7}{28}$	$\frac{15}{35}$
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Sta	+	π 890.51.	-	Elev
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25				85.2
----	--	--	--	------

	+50			85.2
--	-----	--	--	------

26				85.1
----	--	--	--	------

	+50			85.1
--	-----	--	--	------

27				85.4
----	--	--	--	------

	+50			86.1
--	-----	--	--	------

28				86.3
----	--	--	--	------

BM		2.95		887.56
----	--	------	--	--------

Lt.

K

R+

$$\frac{10.7}{50} \quad \frac{10.3}{33} \quad \frac{9.6}{21} \quad \frac{6.0}{14} \quad \frac{5.6}{11} \quad 5.3$$

$$\frac{5.8}{11} \quad \frac{9.3}{20} \quad \frac{10.4}{37} \quad \frac{14.8}{38}$$

$$\frac{9.9}{50} \quad \frac{9.7}{29} \quad \frac{9.3}{22} \quad \frac{6.0}{13} \quad \frac{5.7}{11} \quad 5.3$$

$$\frac{5.8}{11} \quad \frac{9.8}{19} \quad \frac{9.8}{50}$$

$$\frac{9.5}{50} \quad \frac{9.4}{30} \quad \frac{9.1}{20} \quad \frac{6.3}{14} \quad \frac{5.8}{11} \quad 5.4 \quad \frac{5.6}{8} \quad \frac{6.0}{12} \quad \frac{9.4}{20} \quad \frac{10.4}{36} \quad \frac{9.4}{50}$$

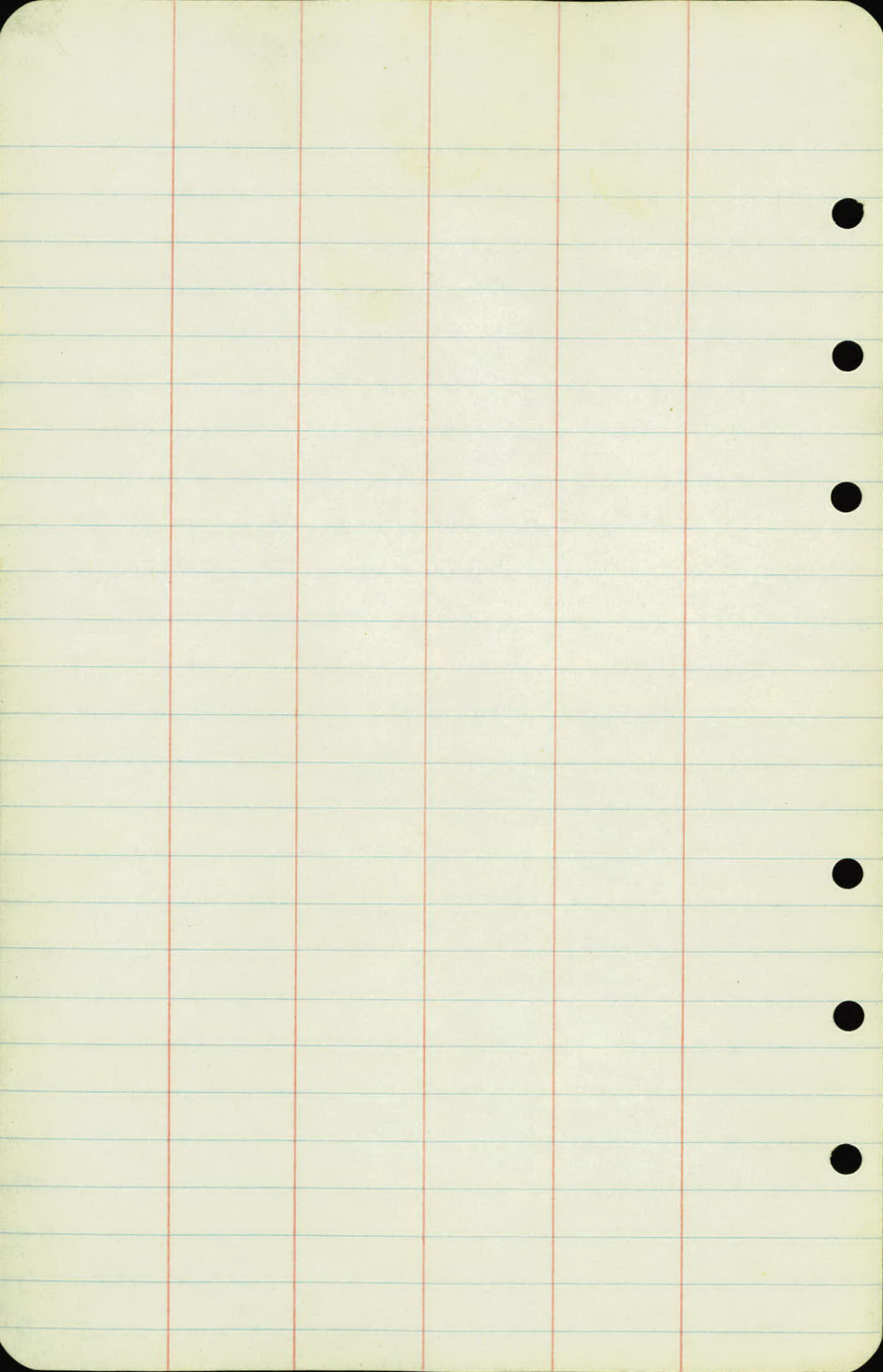
5.4

5.1

4.9

4.2

sph. in 18" oak 29' Lt. 5th. 17+10



6-10-49

Lexington & Rice Creek

Additional X Sections

Sta 23+40 to 23+74.1

Sta	+	π	-	Elev
BM	9.03	891.69		882.66
23 + 40		87.2		87.3
+ 45.1				78.5
+ 47.8				77.2
+ 71.3				77.6
+ 74.1				79.1
+ 80				87.0

C-10-49

A.K.
G.B. M.B.
A.M. B.C.

Lt

E

Rt

Spk. in twin Willow @ Sta 22+40 Rt.

15.0	14.4	12.8	12.2	11.0	5.2	4.6	4.4	5.1	11.2	14.0	16.6	16.6	14.1	8.6
35	25	22	17	12	12	8		11	11	19	27	34	43	53

15.1	13.4	13.2
28	16	10

13.2

✓

13.2	14.8	14.8
10	19	42

9.5	13.6
57	48

15.1	14.3
24	10

14.5

✓

14.8	14.6
10	19

14.1	14.6	14.1	12.2
50	27	10	10

14.1

✓

14.1	15.5
9	19

12.3	14.1	13.5	12.3
36	34	15	10

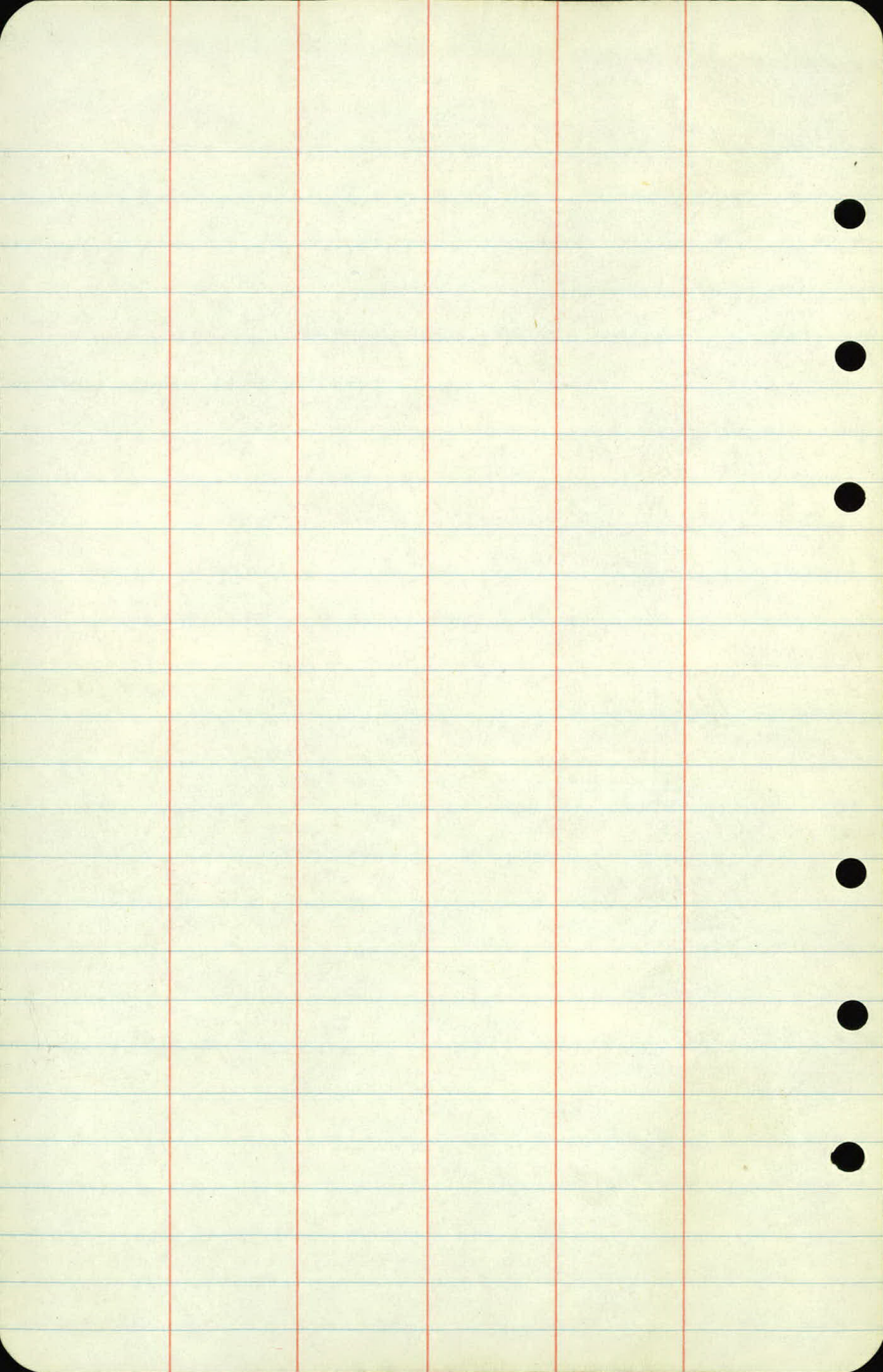
12.6

✓

12.9	13.6	14.8
9	16	28

✓

10.8	10.7	9.9	5.6	4.7	4.7	48.6.5	10.8	12.1	13.8	16.1	
31	23	12.5	12.5	8		8	13.5	13.5	20	22	30



Abutment Elevations

Lexington & Rice Creek

6-2-49

Sta	+	π	-	Elev
-----	---	-------	---	------

B.M	2.15	889.70		887.55
-----	------	--------	--	--------

B.M			7.04	882.66
-----	--	--	------	--------

Sta. 23	4.48	891.39	2.79	886.91
---------	------	--------	------	--------

Top of Sheeting S E Cor.			4.84	86.55
-----------------------------	--	--	------	-------

Top Bent S E Cor.			5.30	86.09
----------------------	--	--	------	-------

Bott. Sheeting S E Cor.			10.43	80.96
----------------------------	--	--	-------	-------

Top Sheeting S W cor.			4.93	86.46
--------------------------	--	--	------	-------

Top Bent S W cor			5.30	86.09
---------------------	--	--	------	-------

Bott. Sheeting S W cor.			11.85	
----------------------------	--	--	-------	--

Top Bent			5.39	86.00
----------	--	--	------	-------

Top Bent	} NW cor		5.30	
---------------------	----------	--	-----------------	--

Top Sheet			5.30	86.09
-----------	--	--	------	-------

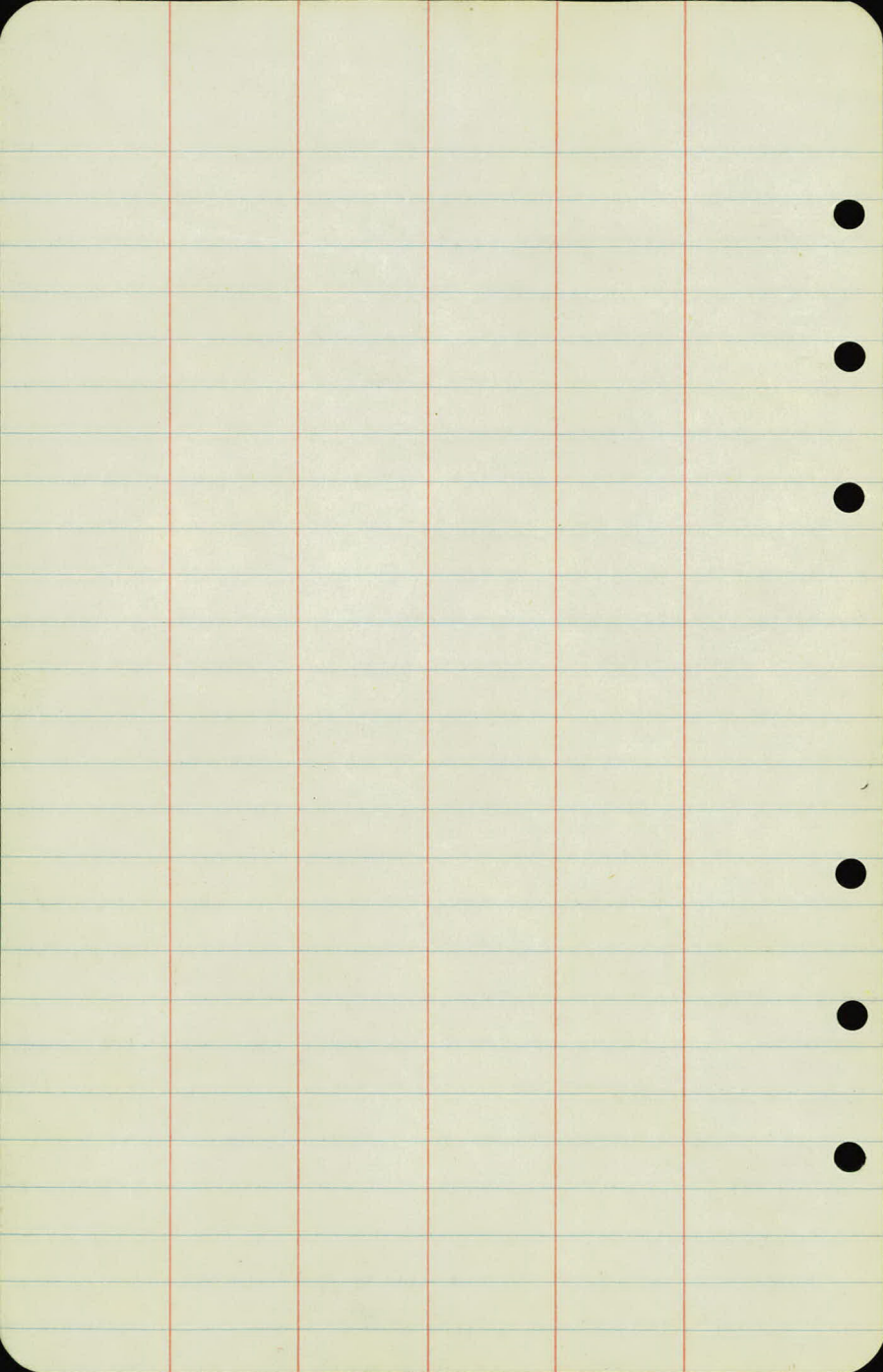
Top Sheet	} NE cor.		5.37	86.02
-----------	-----------	--	------	-------

Top Bent			5.37	86.02
----------	--	--	------	-------

Bott Sheet			11.85	79.54
------------	--	--	-------	-------

Spt in ~~cut~~ 24" Cott. Left @ Sta 17 ±

Spt in twa Willow R@ 22+40



Soundings
for
Bridge Location

LEXINGTON & RICE CREEK

Equipment:

Standard 50# Hammer

$\frac{3}{4}$ " Point, $\frac{1}{2}$ " Steel Rod

(Top of water)
water 0.9' deep

Sto 23 + 44 - 13' Rt El = 878.73

Feet	Blows	Blows/ $\frac{1}{10}$ '
0-4 Push	-	
4-8	35	1-
8-12	47	1+
12-16	46	1+
16-20	67	1+
20-22	44	2+
22-24	41	2+
24-25	27	3-
25-26	29	3-
26-27	25	2.5-
27-28	40	4
28-29	52	5+
29-30	65	6+
30-31	53	5+
31-31.5		
32-32.5	42	8+
31.5-32		
32.5-33	38	8-
32-33		
33-34	71	7+
33-33.5		
34-34.5	48	10-
33.5-34		
34.5-35	50	10
34-34.2		
35-35.2	14	7
34.2-34.3		
35.2-35.3	13	13
34.3-34.4		
35.5-35.4	15	15

Sta 23+45 - 14' Lt

Elev. 878.73 Top of water

Water 0.9' deep

Feet	Blows	Blows
0-5 push	-	0
5-8	24	1-
8-12	47	1
12-16	60	3
16-20	72	2-
20-24	101	2.5-
24-25	30	3
25-26	37	4-
26-26.5	18	3
26.5-27	17	3
27-27.5	27	5
27.5-28	26	5
28-28.5	37	7+
28.5-29	32	6+
29-29.5	31	6+
29.5-30	31	6+
30-30.5	28	6-
30.5-31	22	4+
31-31.5	26	5+
31.5-32	22	4+
32-32.5	24	5-
32.5-33	24	5-

Sta 23+45 - 14' R+ cont.

Feet	Blows	Blows / 0.1'
33 - 33.5	29	6 -
33.5 - 34	39	8 -
34 ^{34.5}		
34.5 - 35	56	11 +
34.5 ³⁵		
35 - 35.5	42	8 +
35 ^{35.5}		
35.5 - 36	36	8 -
35.5 ³⁶		
36.5 - 37	71	14 +
36 ^{36.5}		
37 - 37.5	77	15 +
36.5 ³⁷		
37.5 - 38	131	22 +
37 ^{37.1}		
38 - 38.1	45	45
37.1 ^{37.2}		
38.1 - 38.2	50	50

Sta 23 + 75 13' Lt.

Elev. 878.73

Top of water

Depth - 1.0'

Feet	Blows	Blows / 0.1'
0-5 Push		
5-8	19	-
8-12	54	1+
12-16	52	1+
16-20	126	3+
20-21	43	4+
21-22	49	5-
22-23	38	4-

Rod - going crooked
pulled to start New hole.

← H →

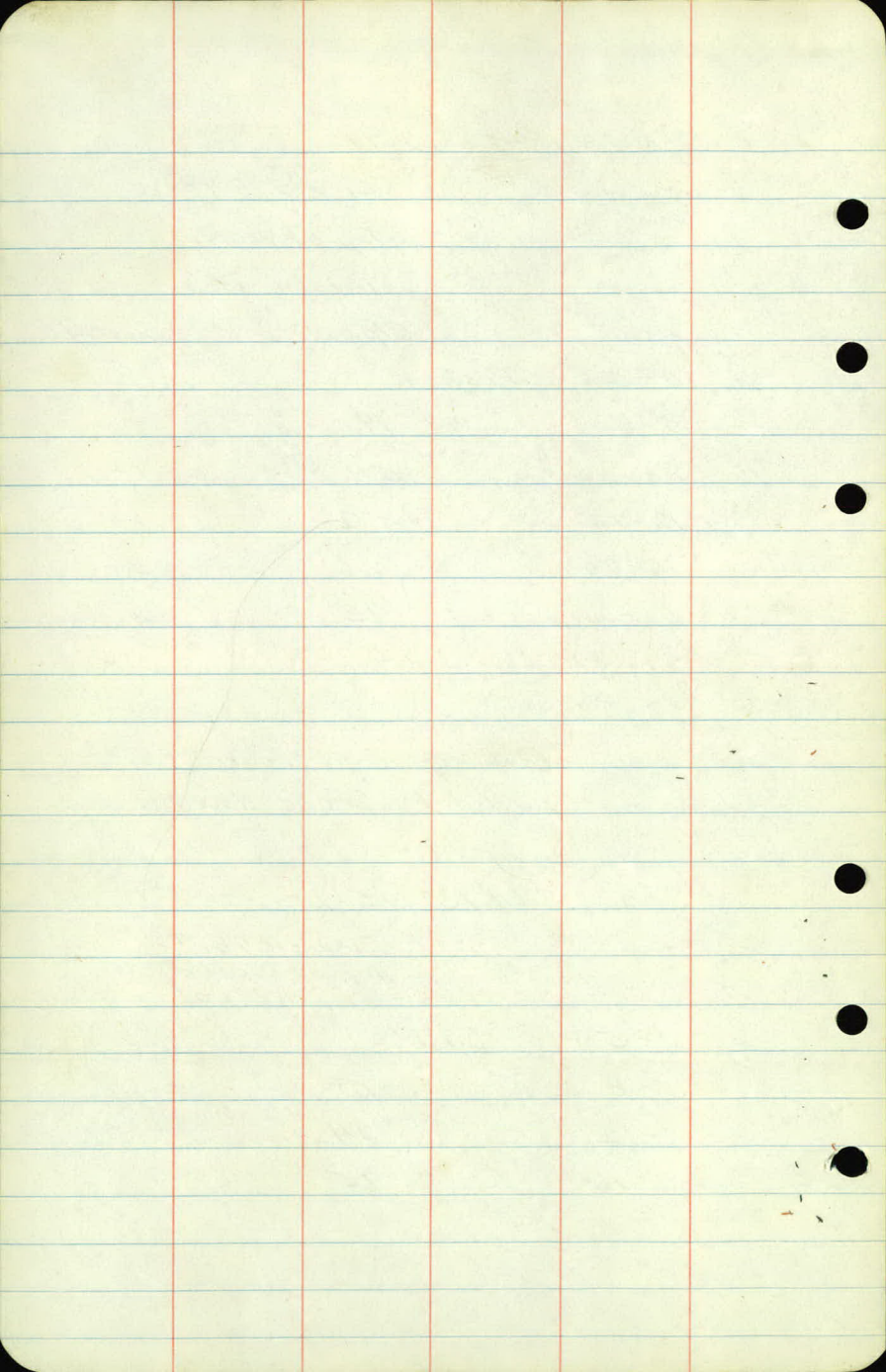
Sta 23 + 75 15' Lt.

Elev = 878.73

Top of water

Depth 1.0'

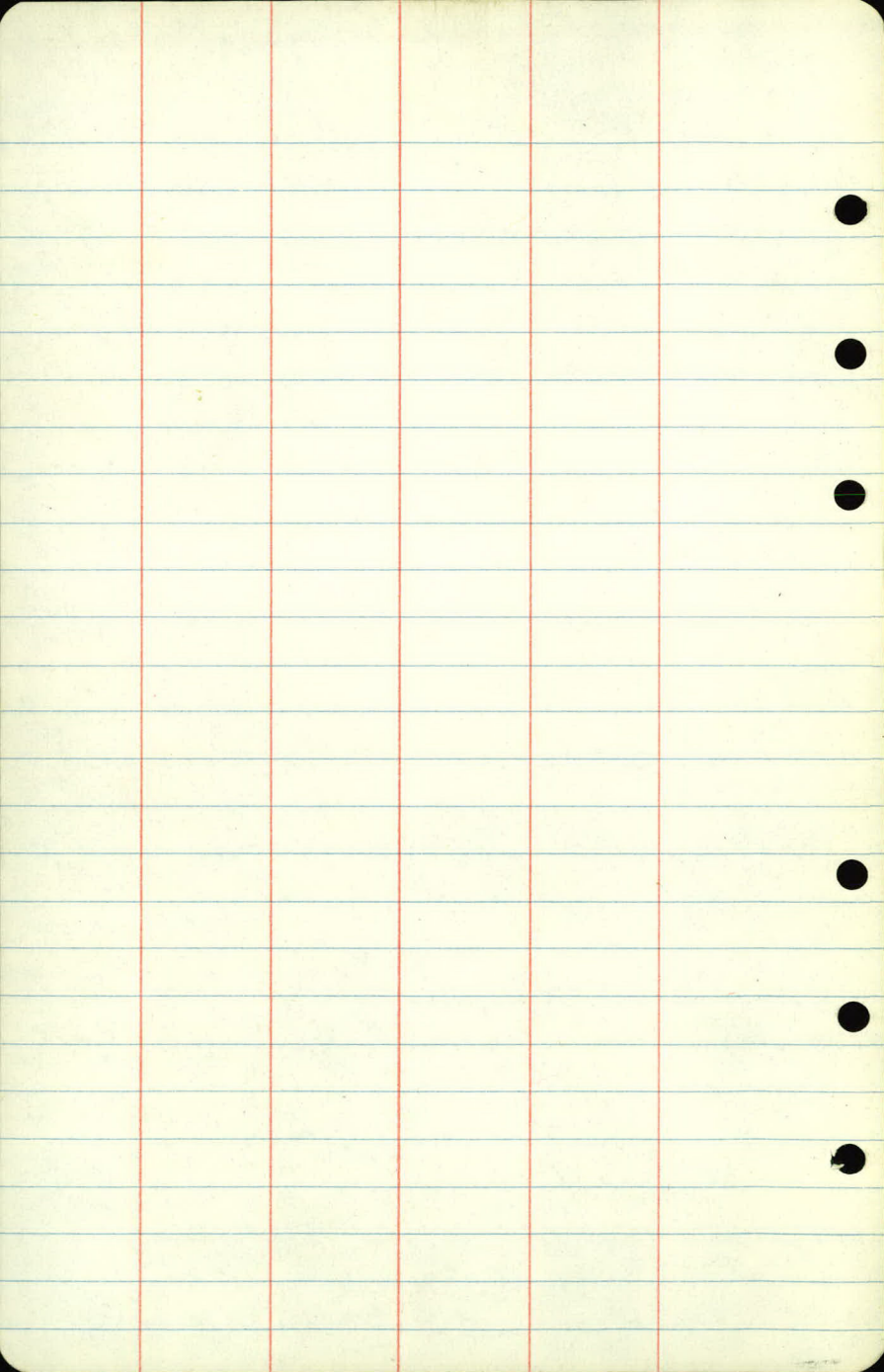
0-5	push	
5-8		13
8-12		24
12-16		15.



Sta. 23 + 75, 10' Left.

Feet		Blows	Blows/ft.
0-5	Push	—	
5-8		20	
8-12		44	
12-16		66	
16-17½		34	
17½-20		60	
20-21		35	

Spacing Rod in Hammer broke
end 5-23-49.



DIST.	VERT. ANGLE	ROD EQUIV.	ROD	DIFF.	ELEV.
-------	----------------	---------------	-----	-------	-------

Stadia for
Bridge Location

LEXINGTON & RICE CREEK

6-1-49

GB

AM

MB

BC

Rec

6-1-49
P.M. TC

OBJECT

AZ

STADIA

T @ Sta 23

To Sta 27

0°00'

Top of S Creek Bank

337°40'

" N " "

337°15'

" S " "

282°15'

" N " "

292°30'

" S " "

264°05'

" N " "

275°20'

" S " "

258°25'

" N " "

265°25'

" S " "

256°55'

" N " "

261°45'

" S " "

255°20'

" N " "

260°35'

Top of W Ditch Bank

164°40'

" E

148°50'

" W

122°40'

E

70°20'

W

55°20'

E end ditch - Big Creek

33°45'

W pt of ditch & creek

41°15'

South bank Creek

57°30'

" " "

22°00'

DIST.	VERT. ANGLE	ROD EQUIV.	ROD	DIFF.	ELEV.
-------	----------------	---------------	-----	-------	-------

49'

87'

88

132'

193'

208'

340'

360'

523'

528'

610'

595'

51

213

150'

82' ✓

98' ✓

85' ✓

115' ✓

86'.

48'.

157'

OBJECT

AZI

STADIA

OBJECT	AZI	STADIA
Top N Bank Creek	15°20'	
N " "	9°30'	
1 @ Sta 27		
To Sta 21	180°00'	
Top of N. Bank of Creek	165°50'	
S	148°30'	
N	135°00'	
N	106°15'	
S	114°15'	
N	94°40'	
S	105°40'	
N	92°55'	
S	100°00'	
N	99°30'	
S,	96°20'	
N	93°40'	
N	83°20'	
S	85°00'	
N	69°00'	
S	69°00'	

88' ✓

135' ✓

178' ✓

162' ✓

104' ✓

110' ✓

134' ✓

156' ✓

186' ✓

228' ✓

310' ✓

335' ✓

395'

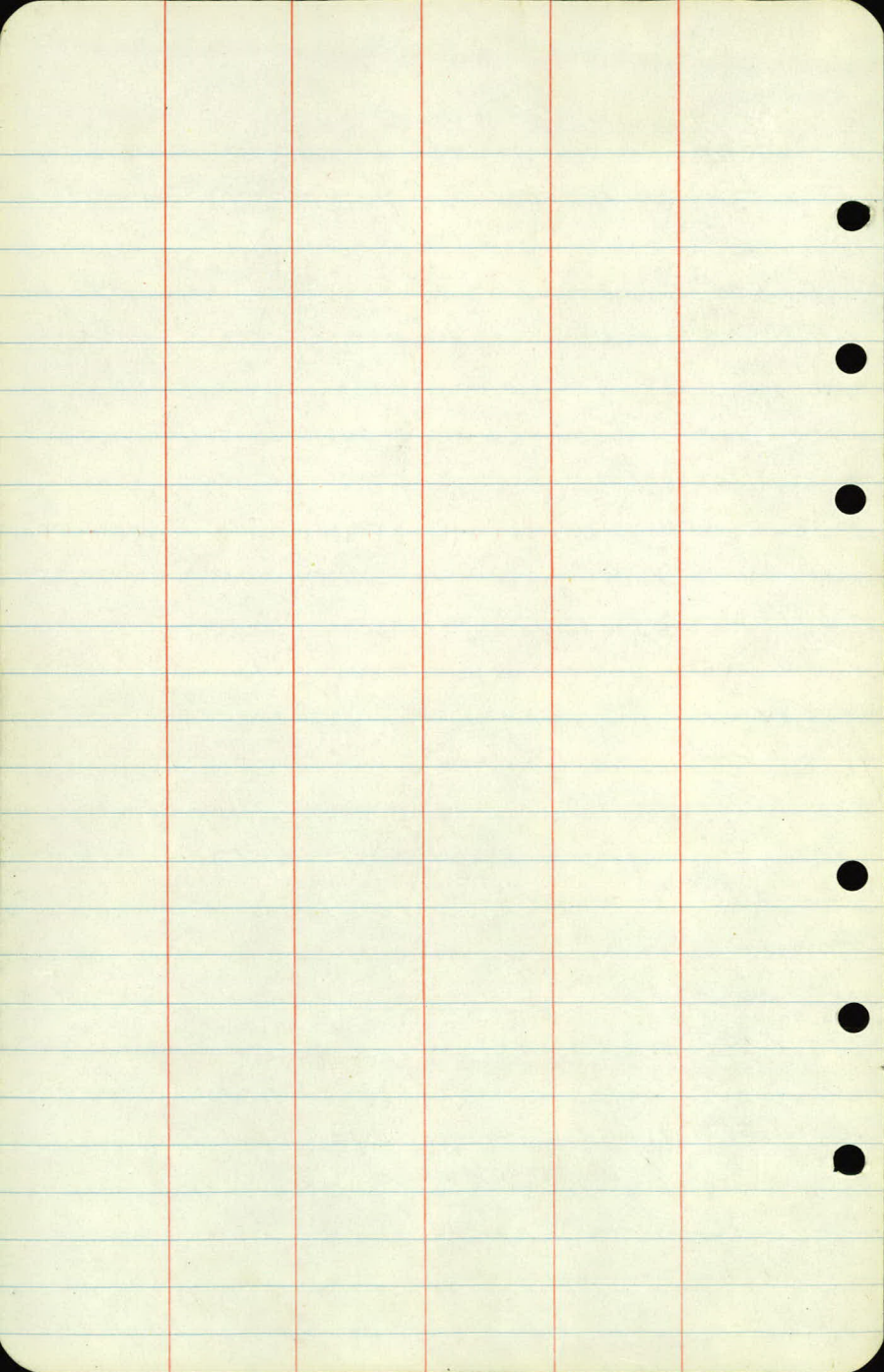
385'

385'

430'

375'

420'



Soundings
for
Bridge Location
Lexington & Rice Creek

7-13-49

G.B.

A.M.

M.B.

B.C.

Sta. 23+60, 9.4 'W

Elev. 876.29 = Ground

Feet

Blows

0-1	Pest
1-2	
2-3	
3-4	
4-5	8
5-6	8
6-7	8
7-8	8
8-9	12
9-10	12
10-11	14
11-12	14
12-13	16
13-14	16
14-15	16
15-16	16
16-17	23
17-18	25
18-19	26
19-20	24
20-21	29
21-22	44
22-23	72
23-24	60
24-25	65

Sta. 26 + 60, 9.4' W cont

Feet

Blows

25-26 48

26-27 52

27-28 42

28-29 119

29-30 135

Rod bent

30-31

Not going straight

31-32

32-33

33-34

34-35

Sta 23+05, 20' East

Elev. 880.05 = Ground

Feet Blows

0 1

1 2

2 3

3 4

4 5

5 6

6 7

7 8

8-9

9-10

10-11

11-12

12-13

13-14

14-15

15-16

16-17

17-18

18-19

19-20

20-21

21-22

push

26

39

5th

22

22

21

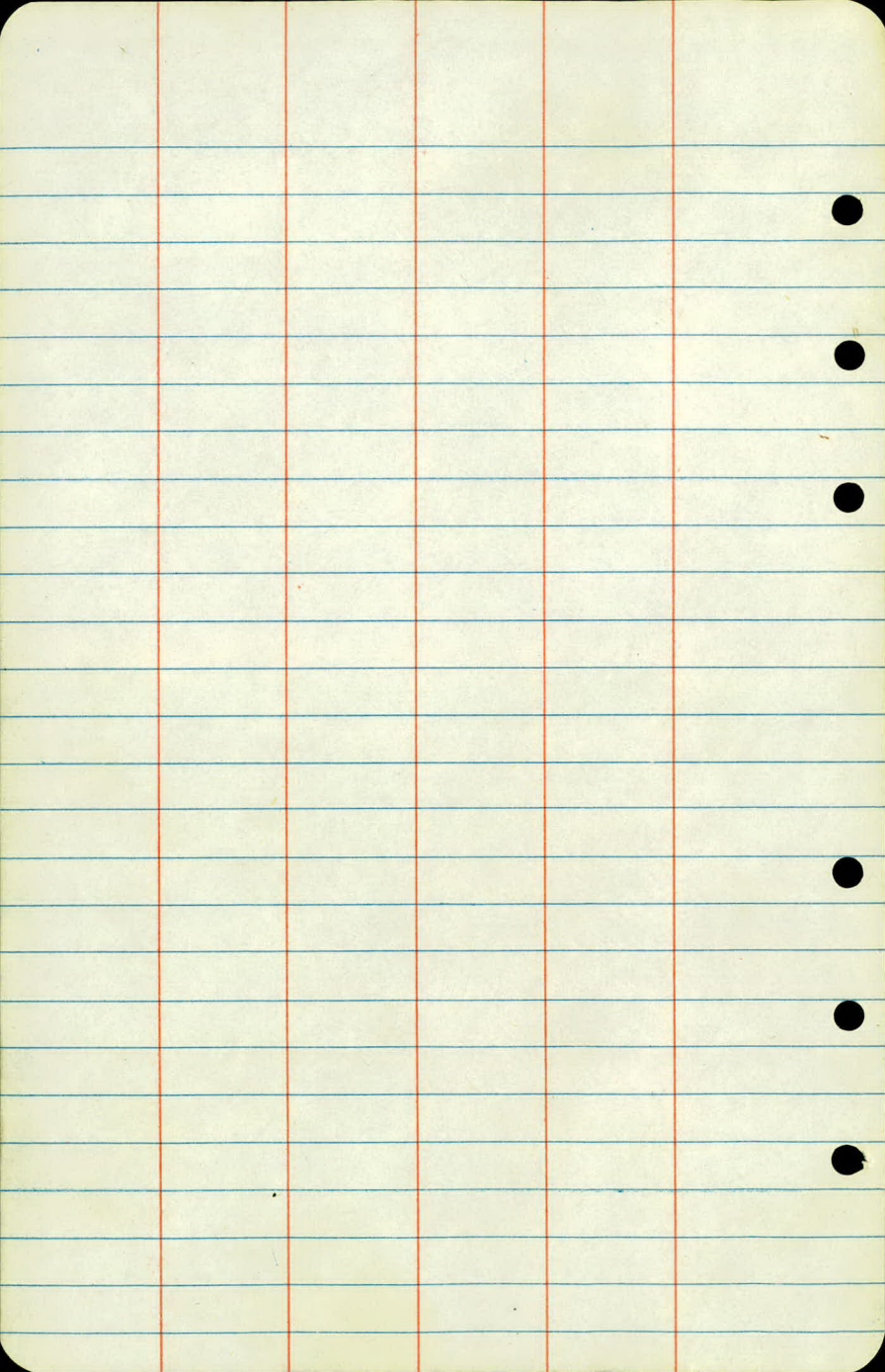
23

32

36

Sta. 23785, 20' East Cor't

Feet	Blows
22-23	29
23-24	23
24-25	43
25-26	36
26-27	28
27-28	29
28-29	52
29-30	66
30-31	59
31-32	48
32-33	52
33-34	86
34-35	108
35-36	96
36-36.6	150
36.6-36.8	50
36.8-36.9	31
36.9-37.0	39



Profile

25' Lt & Rt. Betw'n Sta 24 & 25

And

X Sections @ Sta 24 to 25

Additional Levels

Lexington Ave. Bridge

Profile 25' Bl. of E

Sta	+	π	-	Elev
BM	7.93	890.59		882.66
23			60	84.6 ✓
+24			56	85.0 ✓
		W.S.	13.3	77.3 ✓
+34			133	77.3 ✓
+43			15.0	75.6 ✓
+48			166	74.0 ✓
+66			17.1	73.5 ✓
+72			151	75.5 ✓
+84			131	77.5 ✓

7-19-49

Lt

Q

Rt

Spk in Twn Willow Rt @ Sta 22+40

Sta	+	π	-	Elev
		890.59		

23	+85		11.6	79.0 ✓
----	-----	--	------	--------

	+90		13.5	77.1 ✓
--	-----	--	------	--------

24			13.3	77.3 ✓
----	--	--	------	--------

Lt

Q

Rt

Profile 25' Lt of E

Sta	+	π	-	Elev.
		890.59		

23			7.1	835 ✓
----	--	--	-----	-------

+10			6.9	837 ✓
-----	--	--	-----	-------

+30			10.0	806 ✓
-----	--	--	------	-------

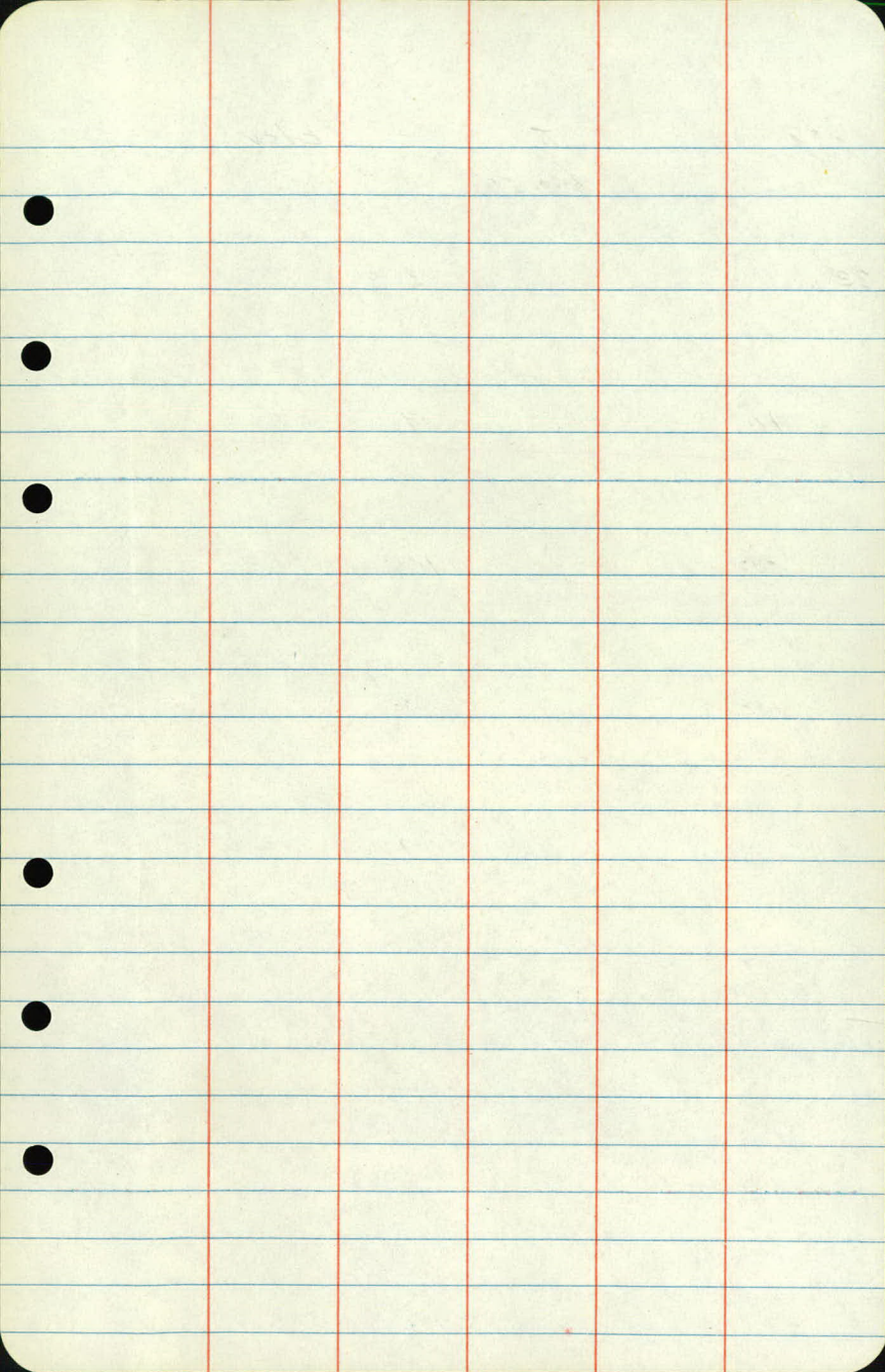
+36			10.3	803 ✓
-----	--	--	------	-------

+42			13.3	773 ✓
-----	--	--	------	-------

+48			14.3	763 ✓
-----	--	--	------	-------

+60			13.8	768 ✓
-----	--	--	------	-------

+69			13.8	76.8 ✓
-----	--	--	------	--------



Sta	+	π	-	Elev.
		890.59		

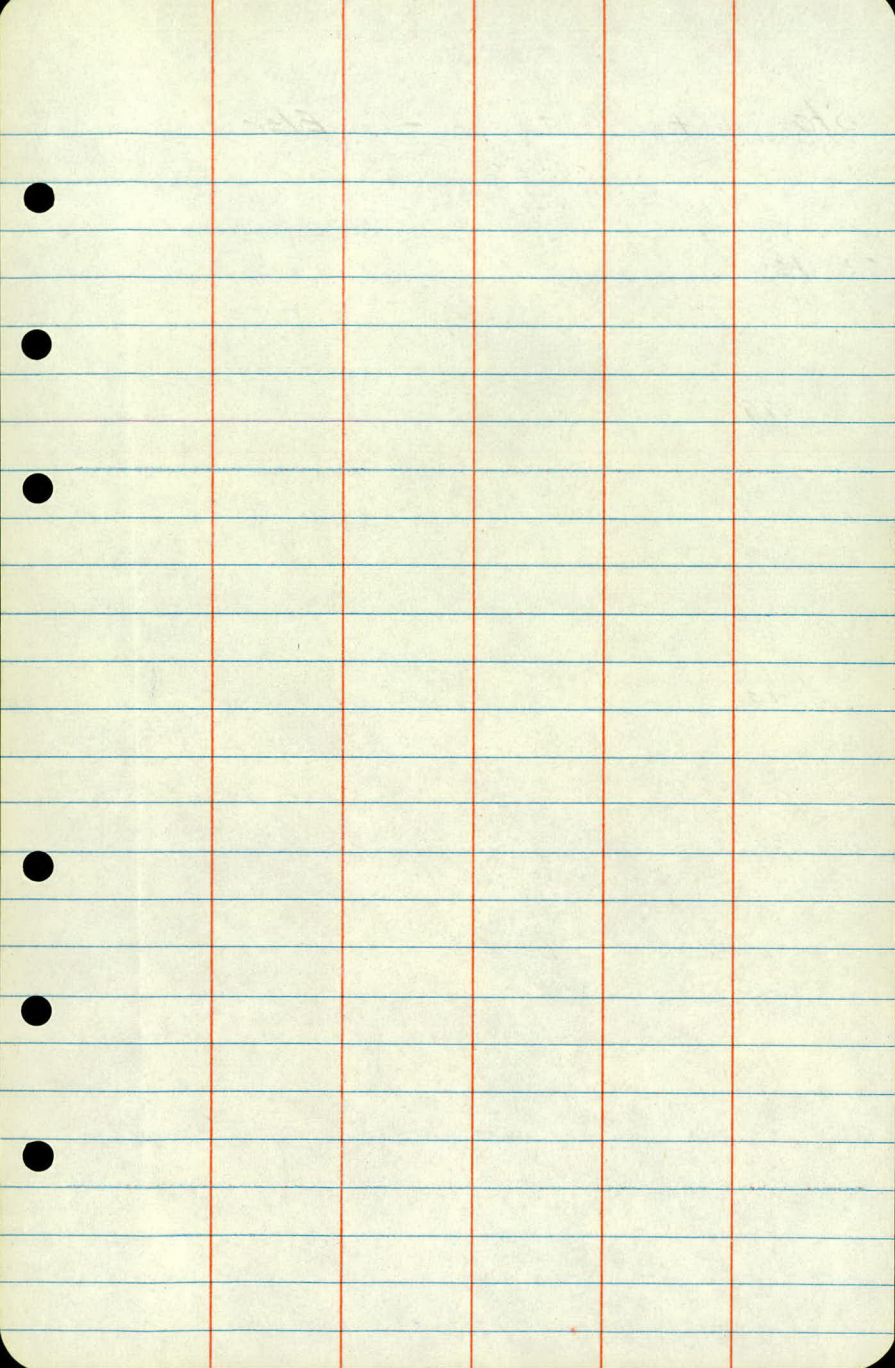
23	+71		13.3	77.3 ✓
----	-----	--	------	--------

	+74		13.1	77.5 ✓
--	-----	--	------	--------

	+90		100	80.6 ✓
--	-----	--	-----	--------

	+83		94	81.2 ✓
--	-----	--	----	--------

24			87	81.9 ✓
----	--	--	----	--------



X Sections

Sta.	+	π	-	Elev
------	---	-------	---	------

890.59

23 +39

+49

+69

+79

B.M.

7.94

882.65

882.66

0.90
5410

85-90

250

6

445

89036

4.53

85.83

540✓

545✓

551✓

557✓

563✓

5.68✓

74✓

79✓

85✓

90✓

~~90~~

90.36

$$\begin{array}{r}
 1 \\
 0.46 \\
 BM - 5.68 \\
 \hline
 6.14 \\
 7 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 38.11 \\
 6.14 \\
 \hline
 39.25 = HI
 \end{array}$$

$$6.84 = FL$$

$$\begin{array}{r}
 6.10 \\
 \hline
 .74
 \end{array}$$

$$4 \quad 752$$

$$\begin{array}{r}
 6.84 \\
 6.20 \\
 \hline
 .64
 \end{array}$$

$$\begin{array}{r}
 6.10 \\
 .16 \\
 \hline
 6.26 \\
 16 \\
 \hline
 6.42 \\
 16 \\
 \hline
 6.58 \\
 16 \\
 \hline
 6.74
 \end{array}$$

$$\begin{array}{r}
 6.58 \\
 6.13 \\
 \hline
 .45
 \end{array}$$

BM 1

882.66?

7.70

890.36 = +11

Sta 21

4.36

86.00

Sta 22

4.18

86.23

4.53

85.83

4.45

85.91

Sta 23 + 59.40 = 4

4.49

85.84

4.48

85.88

Sta 25

5.07

85.29

Sta 26

5.13

85.23

90.36

L

E

E

76.8 77.3 79.3 81.5 86.5 87.0
 138 133 118 91-41 3.6
 50 26 23 12.6 9

81.3 86.6 80.8 78.0 77.3 74.9 77.3 82.8
 33 40 98 12.6 133 157 133 78 6.0
 11 11 14 20 28 41 56

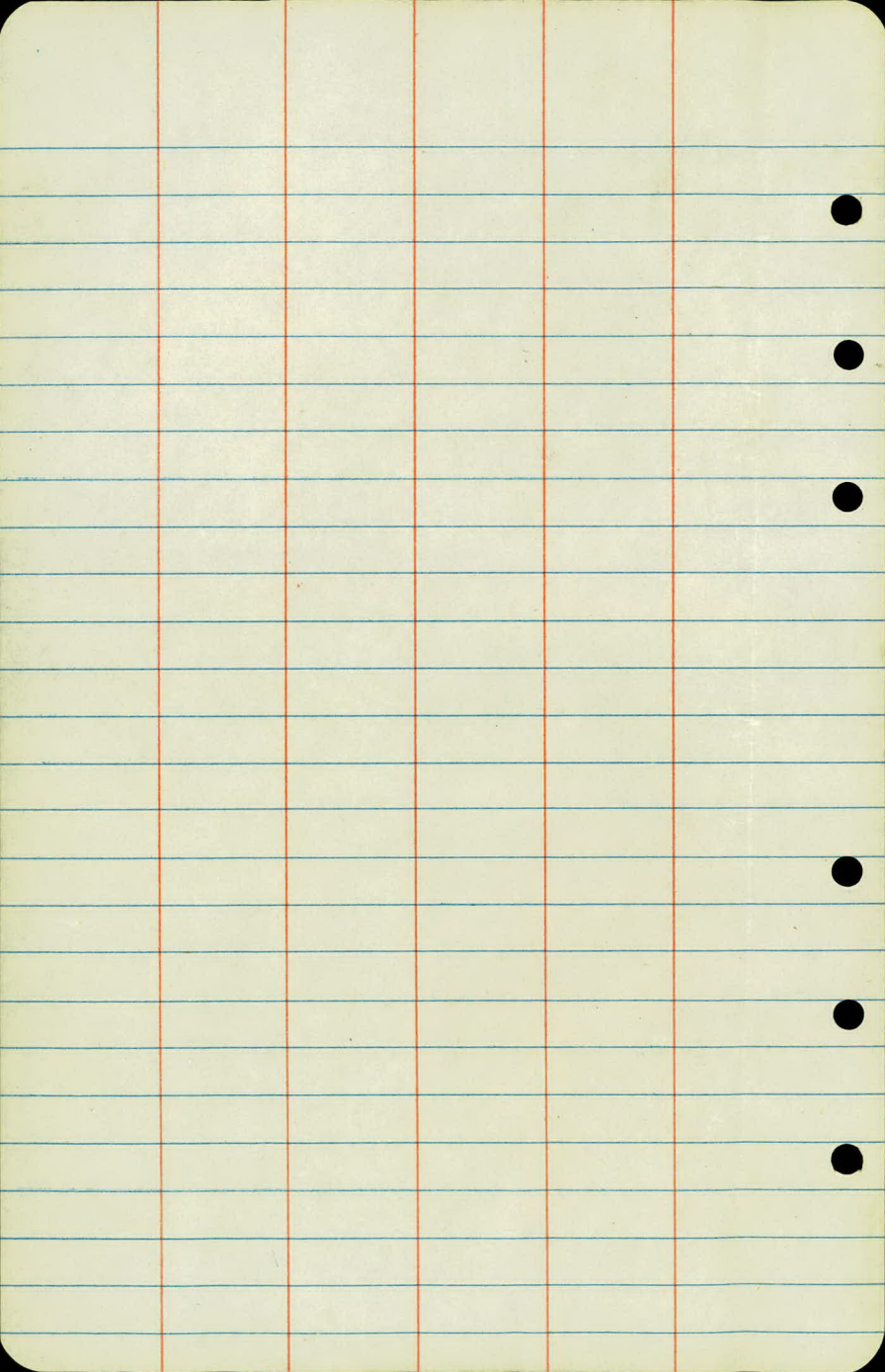
76.3 76.2 76.5 77.3 77.5
 14.3 14.4 14.1 133 131
 50 34 26 19

77.3 74.0 74.2 75.8 76.3 81.4
 133 166 164 148 133 92
 12 24 31 41 47 57

77.3 76.3 77.3
 133 143 133
 50 34 17

77.3 77.3 74.6 74.2 78.2 72.3 75.8
 133 133 160 164 174 183 148
 10 21 28 36 45 55

80.8 80.6 81.8 86.2 86.9 87.1 80.8 85.9 87.1 74.5 77.3 75.7 75.3 74.4 77.6
 9.8 10.0 88-44 37 3.5 38 47-102 111 133 149 153 142 131
 50 27 125 9 9 14.2 19 23 29 44 51 61



Piling cutoff Check

Lexington Ave Bridge

9-26-49

Elev. on top of pile cutoff.

Pile No

Sta	+	π	-	Elev
BM	3.91	886.57		882.66
	South	Abut		882.64 GR=3.93

3 3.92

4 3.93

5 3.93

6 3.92

7 3.93

8 3.92

9 3.92

North Abut 882.53 GR. 4.04

14 3.92

15 3.93

16 3.93

17 3.94

18 3.94

19 3.94

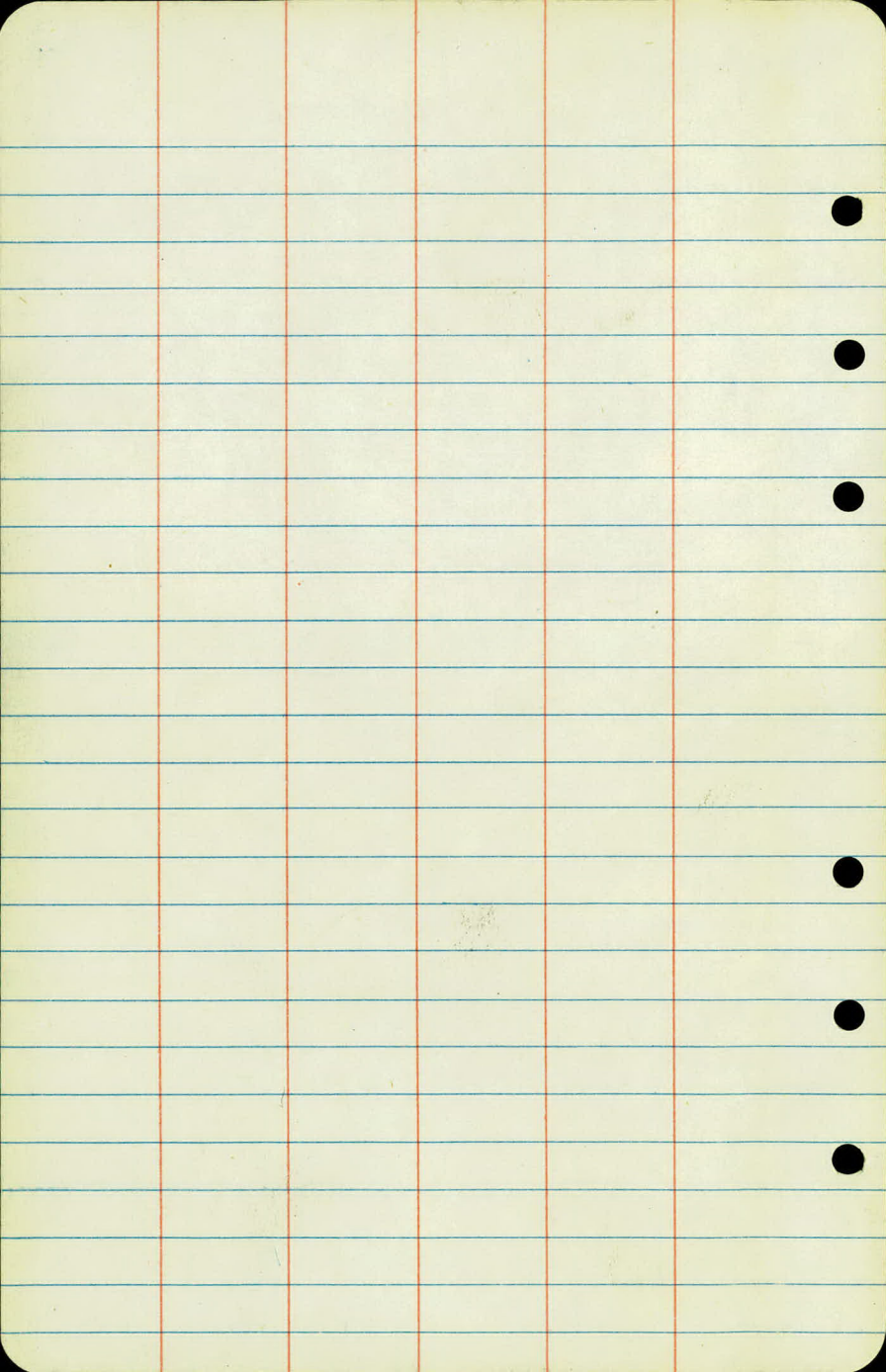
20 3.93

Wing cutoffs to be given
Later.

Spt in turn Willow Rt @ Sta 22+40

Sta	+	π	-	Elev
B.M.	7.07	889.73		882.66
Pile # 1			6.83	
2			5.38	
10			5.33	
11			6.64	
12			7.12	
13			5.52	
21			5.21	
22			6.83	
Water Elev			12.66	877.07
Deck SE Cor.			4.08	85.65 85.90
" NE Cor.			4.07	

Spt in twn. Willow Rt @ Sta 22+40



DROP HAMMER

Weight 7000 Lbs.

STEAM HAMMER

For _____ Abutment, Pier No. _____

Make _____

Cut-off Elev. _____

Size _____

DATE DRIVEN	PILE NO.	KIND <u>Treated</u>	DIAM. BUTT INCHES	DIAM. TIP INCHES	LENGTH IN LEADS FEET	FEET CUT-OFF LENGTH	FEET BELOW CUT-OFF	DROP OF HAMMER FEET	STEAM HAMMER		INCHES PENET PER BLOW	BEARING IN TONS	REMARKS
									BLOWS PER MIN.	ENERGY PER BLOW			
9/21	14	TEST	13"	8"	50.7	18.6	31.4	15'			3/4"	17.1	DRIVING - HARD
9/21	9	TEST	13"	8"	50.6	20.9	29.1	"			3/4"	17.1	"
9/22	10		12"	7"	34.9	6.3	28.6	"			7/8"	16.0	"
9/22	11		13"	7"	35.1	7.4	27.6	"			3/4"	17.1	HIT - BOULDER TIPPED
9/22	3		12"	7"	35.0	8.3	26.7	"			7/8"	16.0	GOOD DRIVING
9/22	2		13"	8"	35.1	7.6	27.4	"			1"	15.0	HARD
9/22	1		12"	7"	34.9	7.8	27.1	"			1"	15.0	"
9/22	4		13"	8"	35.0	10.7	24.3	"			3/4"	17.1	"
9/22	5		12"	8"	35.0	11.6	23.4	"			3/4"	17.1	"
9/22	6		12"	8"	34.9	11.8	23.1	"			7/8"	16.0	"
9/22	7		13"	8"	35.1	11.3	23.7	"			7/8"	16.0	"
9/23	8		12"	7"	35.0	10.3	24.7	"			3/4"	17.1	"
9/23	20		12"	7"	35.1	11.6	23.4	"			7/8"	16.0	"
9/23	21		13"	7"	35.1	7.8	27.2	"			1"	20.0	"
9/23	22		12"	7"	34.9	9.8	25.1	"			1/2"	20.0	"
9/23	19		13"	7"	35.1	8.5	26.5	"			1/2"	20.0	"
9/23	13		12"	7"	35	10.0	25.0	"			3/4"	17.1	"
9/23	12		12"	6 1/2"	35	12.0	23.0	"			3/4"	17.1	"
9/23	15		12"	7"	35.1	11.6	23.4	"			1/2"	20.0	"
9/23	16		12"	7"	35.1	12.5	22.5	"			1/2"	20.0	"
9/23	17		12"	8"	35	11.8	23.2	"			1/2"	20.0	"
9/23	18		12"	8"	35.1	8.5	26.5	"			1/2"	20.0	"
TOTALS						236.7	562.9						

file with plan

Test Piles 2 pcs. 101.3 ft. lg.
Piles Ordered 20 pcs. 35 ft. lg.
Piles Ordered 20 pcs. 40 ft. lg.
Plan Quantity 20 pcs. 40 ft. lg.
Plan Quantity 20 pcs. 40 ft. lg.

Average Bearing Tons 17.1
Average Bearing Tons 17.6
Average Bearing Tons 15
Required Bearing Tons 15

A. E. Moeschler
INSPECTOR
10/3/49
DATE
Sheet _____ of _____ sheets

For drop hammers use average of last 5 blows.

For steam hammers use average of the last foot or portion of last foot.

Show location of piles by number in sketch on back of this form.

Indicate test piles and batter piles on sketch. Show directional arrow.

Include test pile record on this report.

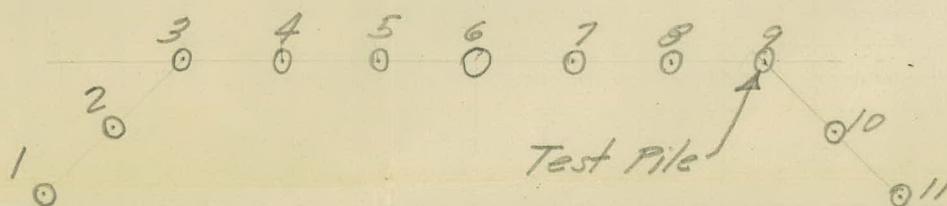
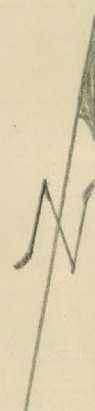
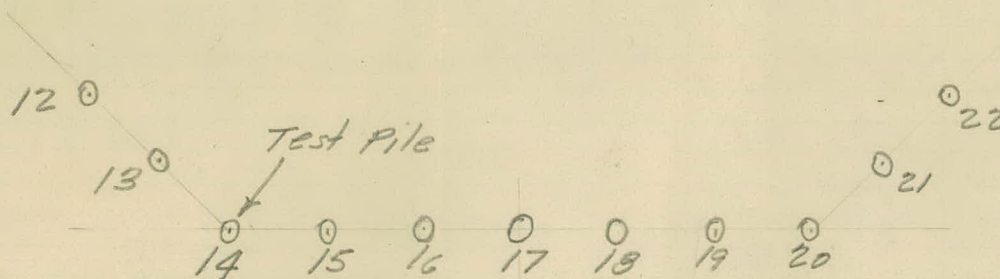
Under column (kind) indicate if treated or untreated and name species.

Show complete summary at end of report. Show average bearing, average cut-off and average length below cut-off for the entire unit.

Submit report in duplicate for all railway grade separations and similar projects.

Indicate the length jettied for each pile in the remarks column.

Formula Used: $P = \frac{2Wh}{s+1}$



9-14 = Test Piles