

PLANS SURVEY  
FROST AVENUE

From Rice Str.  
To Arcade Street  
CO. RROJ. N<sup>o</sup> 23-68  
RD. <sup>9</sup>/<sub>c</sub>. N<sup>o</sup> 65

Office of Ramsey Co. Engineer  
ST. PAUL, MINN.

Date Filed 5-5-23

File No. "3" (23-68)

0  
Frost Ave. Survey

Job. 23-68

Alignment Notes.

Sta. 0+00 to 24+15.7

1-Page.

RE Austin Transit  
Stooglund } chain  
Rathenberg }

5-5-23

File # 3

Frost Ave24+15.7 Mont.24+17.4 - This dist. originally  
used in plotting profile -

21+28.7 P.O.T

12+50.8 P.O.T

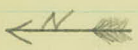
9+27.7

9+28.3 & 500 R.R.

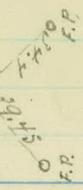
2+59.2 P.O.T

0+00 Mont. &amp; Rice St.

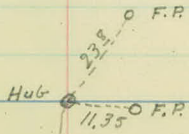
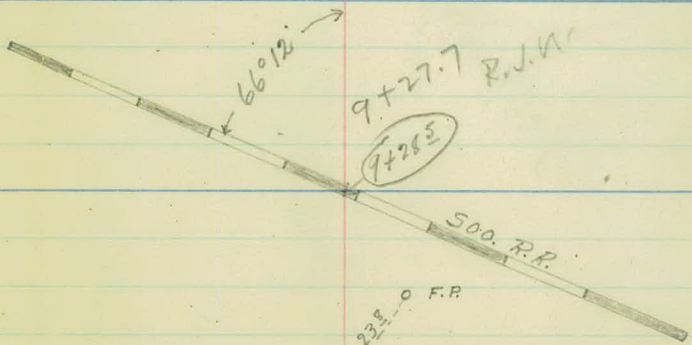
Mont.   Ctr. Sec. 18



2862

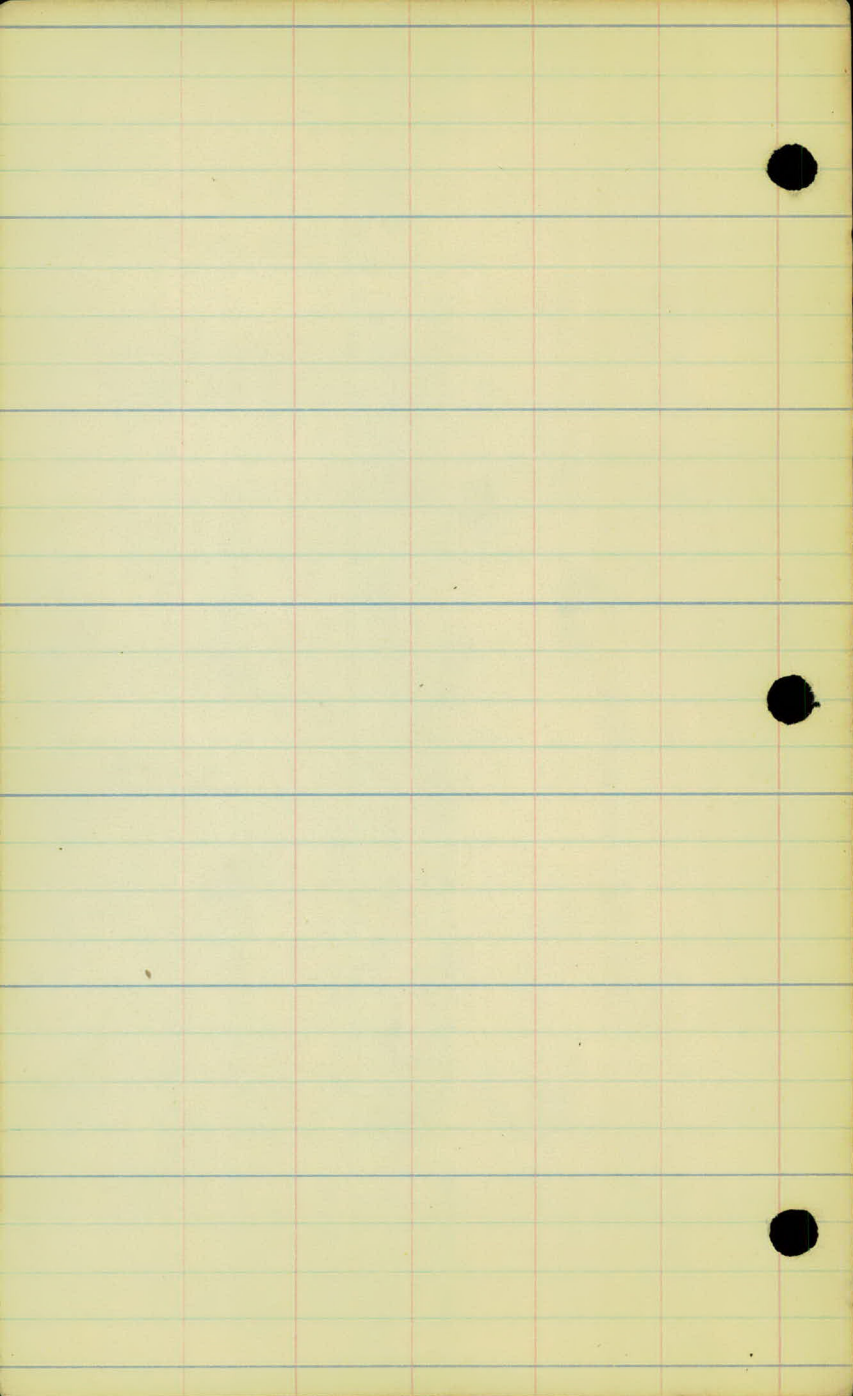


Hug



2572

Mont.   W 1/4 Con. Sec 18



3-15-23

Frost Ave Surrey  
From Sta 7100 - 19400

R.I.L } 3-15-23  
W.M.C.D }

{ R.E. Austin  
steep run.  
Kieling  
Walsh  
Maloney

bb 23-68

Station	B.S.	H.I.	F.S.	ROD	Elev
	8.14	176.55			166.01
7+00				2.4	169.4
8+00				7.6	167.2
9+00				9.0	167.8
+36			7.45		169.40
	11.62	181.02			
10+00				4.2	176.8
			0.10		180.9
	12.38	193.30			
10+50				10.2	183.1
11+00				37	189.6
			12.5		192.05
	12.12	204.17			
11+50				10.2	194.0
12+00				5.8	198.3
+76.2				4.8	199.4
12+50				2.0	202.2
+9.0			0.17		204.00
	11.06	215.06			
13+00				10.1	205.0
+67				7.5	207.6
14+00				6.9	205.7
15+00				5.5	204.6
+78.5				5.8	206.2
16+00				6.3	204.8
17+00				9.9	205.2

First Ave + Rice St Elev 168.01

Down

Elev 168.01

First Ave + Courtland

Elev 207.41

T.P. Top of W Rail Sub Line Ry

168.01

884

17685

745

169.40

11.62

181.02

0.15

180.87

12.38

193.30

1.25

192.05

12.12

204.17

17.

204.00

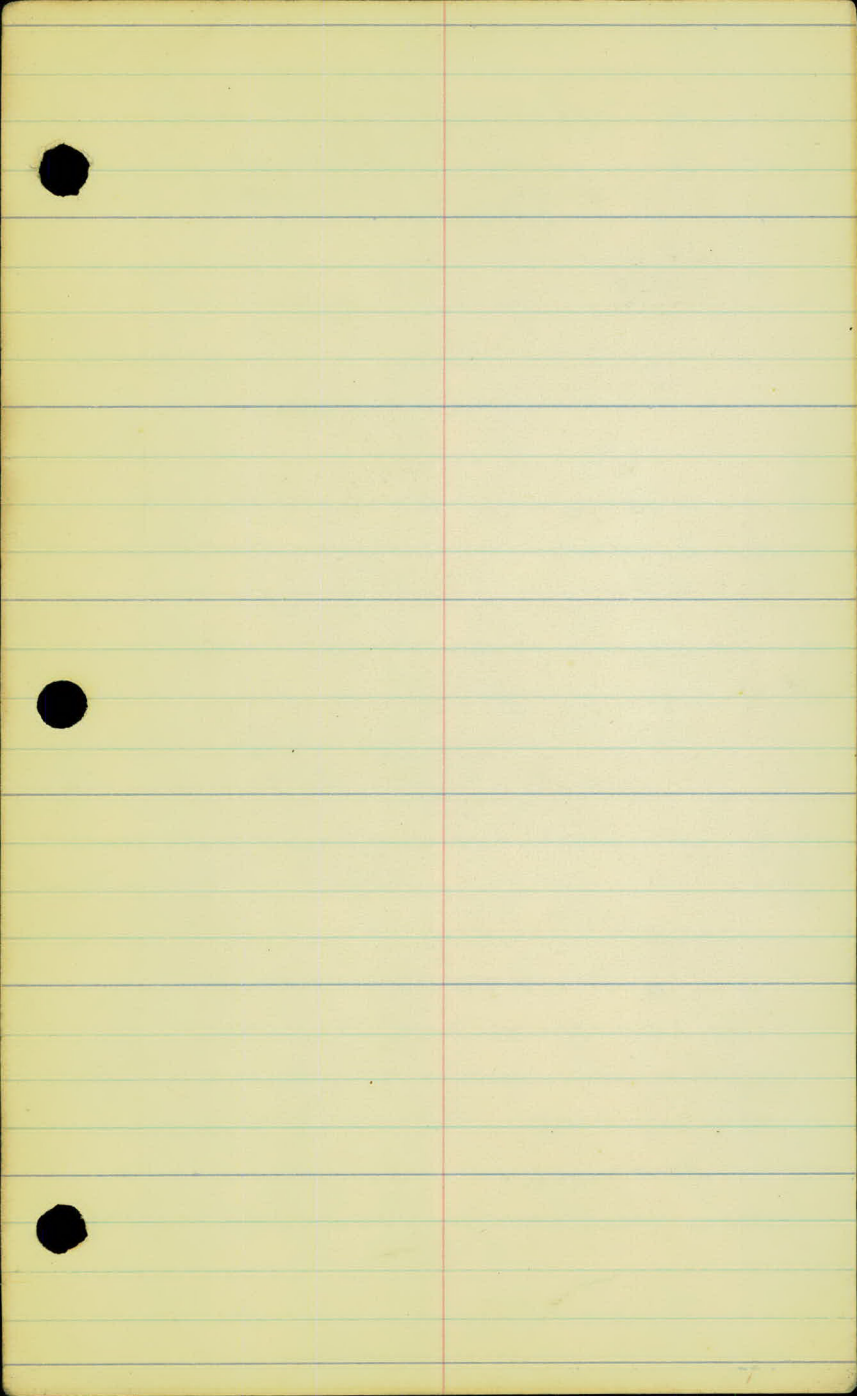
17.06

215.06

TR

TR

Sta.	+	H.I.	-	Red.	Elev.
		215.06			
18+00				14.1	200.7
+20				16.9	199.2
19+00				8.9	206.2
T.P.	7.30	201.33	- 1.05		213.98
T.R.	8.29	215.77	10.75		210.50
B.M.	Mount 20+70			11.30	207.47



Stations Culverts Frost Ave From Sta 7 to 19

6+85 12" Corrugated Iron pipe Culvert  
 $\frac{25}{33} L - \frac{28}{20} \text{ @ } 1694 - \frac{39}{16} R - \frac{44}{33}$

Flows Right Length 36'

8+90 36" Concrete Pipe Culvert  
 $\frac{-90}{38} L \quad \text{ @ } 1695 - \frac{110}{27} R - \frac{115}{35}$

Flows Right Length 65'

12" Corrugated Iron Pipe Culvert  
18+20  $\frac{-53}{33} L \quad \text{ @ } 1940 + \frac{1.7}{8} R + \frac{2.7}{32}$

outlet 8' Right of @

Length 24' Flows Left

Frost Ave Line from Sta 7 to 19+00  
Cross Sections

RIE  
W.M.C.D.  
W.M.  
R.R. } 3-15-23

## Frost Ave Line from Sta 7+00 to 19+00

7+00 169.4

+36 169.7

8+00 169.2

+35 168.7

9+00 169.8

+40 168.2

+10+00 176.8

+50 183.1

11+00 189.6

+50 194.0

+80

12+00 198.3

+50 202.2

13+00 205.0

L

Q

R

$$-\frac{22}{33} - \frac{26}{23} \frac{00}{15} + \frac{02}{4} - \frac{05}{5} - \frac{41}{16} - \frac{35}{33}$$

$$+\frac{12}{33} + \frac{18}{23} \frac{00}{18} - \frac{07}{15} + \frac{07}{6} - \frac{05}{6} + \frac{05}{8} + \frac{08}{18} + \frac{08}{33}$$

$$+\frac{40}{33} + \frac{40}{29} - \frac{02}{19} + \frac{05}{14} + \frac{08}{9} - \frac{08}{3} + \frac{03}{6} = \frac{24}{12} - \frac{42}{33}$$

$$+\frac{06}{33} + \frac{10}{29} \frac{00}{21} + \frac{08}{15} + \frac{08}{9} + \frac{06}{3} - \frac{01}{3} + \frac{08}{6} - \frac{23}{12} - \frac{42}{33}$$

$$-\frac{70}{33} + \frac{02}{18} + \frac{05}{9} - \frac{06}{5} - \frac{45}{13} - \frac{42}{33}$$

Center of Seeline Rv

$$\frac{00}{33} - \frac{10}{17} + \frac{03}{12} - \frac{03}{7} - \frac{04}{8} - \frac{30}{19} - \frac{44}{33}$$

$$-\frac{33}{33} - \frac{04}{25} + \frac{02}{7} - \frac{05}{6} - \frac{56}{16} - \frac{70}{33}$$

$$-\frac{04}{33} - \frac{03}{20} - \frac{03}{11} + \frac{02}{3} - \frac{05}{10} - \frac{10}{27} - \frac{05}{36} \text{ on pipe line}$$

$$\frac{04}{33} - \frac{22}{17} - \frac{07}{8} - \frac{00}{6} - \frac{04}{15} - \frac{09}{20} - \frac{09}{33}$$

$$+\frac{26}{33} + \frac{32}{17} - \frac{01}{9} - \frac{00}{6} + \frac{05}{19} + \frac{45}{25} + \frac{61}{33}$$

$$+\frac{06}{33} + \frac{28}{16} - \frac{00}{12} - \frac{02}{4} + \frac{03}{6} + \frac{30}{18} + \frac{50}{19} + \frac{261}{43} + \frac{270}{63}$$

$$-\frac{40}{33} - \frac{25}{14} - \frac{03}{5} + \frac{03}{7} + \frac{22}{13} + \frac{120+36}{23 \ 29} + \frac{222}{40} + \frac{233}{65}$$

$$-\frac{02}{33} + \frac{04}{20} + \frac{10}{10} - \frac{07}{5} + \frac{105}{12} - \frac{06+03+35}{17 \ 24 \ 32} + \frac{218}{46} + \frac{218}{65}$$

12

+50

13

## Frost Ave Levels from 7+00 to 19+00

13+67 207.6

14+00 208.2

+30 208.9

+40 209.1

15+00 209.6

+78± 208.2

16+00 208.8

+60 207.5

+75 206.9

17+00 205.2

18+00 200.7

+20 196.0

19+00 206.2

Frost Ave Line from Sta 7 to 19+00

13/67

$$+ \frac{0.2}{11} - \frac{1.3}{17} - \frac{0.8}{23} \frac{0.0}{25} + \frac{19.6}{42} + \frac{19.8}{50} + \frac{15.7}{55} + \frac{15.7}{67}$$

$$+ \frac{4.0}{33} + \frac{5.0}{14} + \frac{0.5}{6} \frac{0.0}{13} + \frac{1.0}{19} + \frac{4.0}{26} + \frac{2.17}{37} + \frac{15.7}{45} + \frac{15.7}{65}$$

$$+ \frac{4.5}{33} + \frac{5.5}{15} \frac{0.0}{7} \frac{0.0}{13} - \frac{1.6}{17} - \frac{1.6}{19} + \frac{3.0}{29} + \frac{3.0}{33}$$

$$- \frac{0.2}{16} - \frac{2.3}{20} \frac{1.8}{22} - \frac{0.8}{28} - \frac{0.8}{33}$$

$$\frac{5.5}{33} \frac{6.7}{12} + \frac{1.5}{6} + \frac{0.5}{3} + \frac{0.8}{7} + \frac{0.6}{13} - \frac{0.1}{32} - \frac{0.0}{33}$$

$$\frac{0.0}{33} + \frac{2.3}{9} + \frac{0.3}{3} + \frac{0.5}{7} + \frac{0.9}{17} + \frac{2.1}{24} + \frac{2.5}{33}$$

$$- \frac{2.5}{33} \frac{0.0}{10} + \frac{0.5}{4} + \frac{0.8}{12} + \frac{1.2}{23} + \frac{3.0}{33}$$

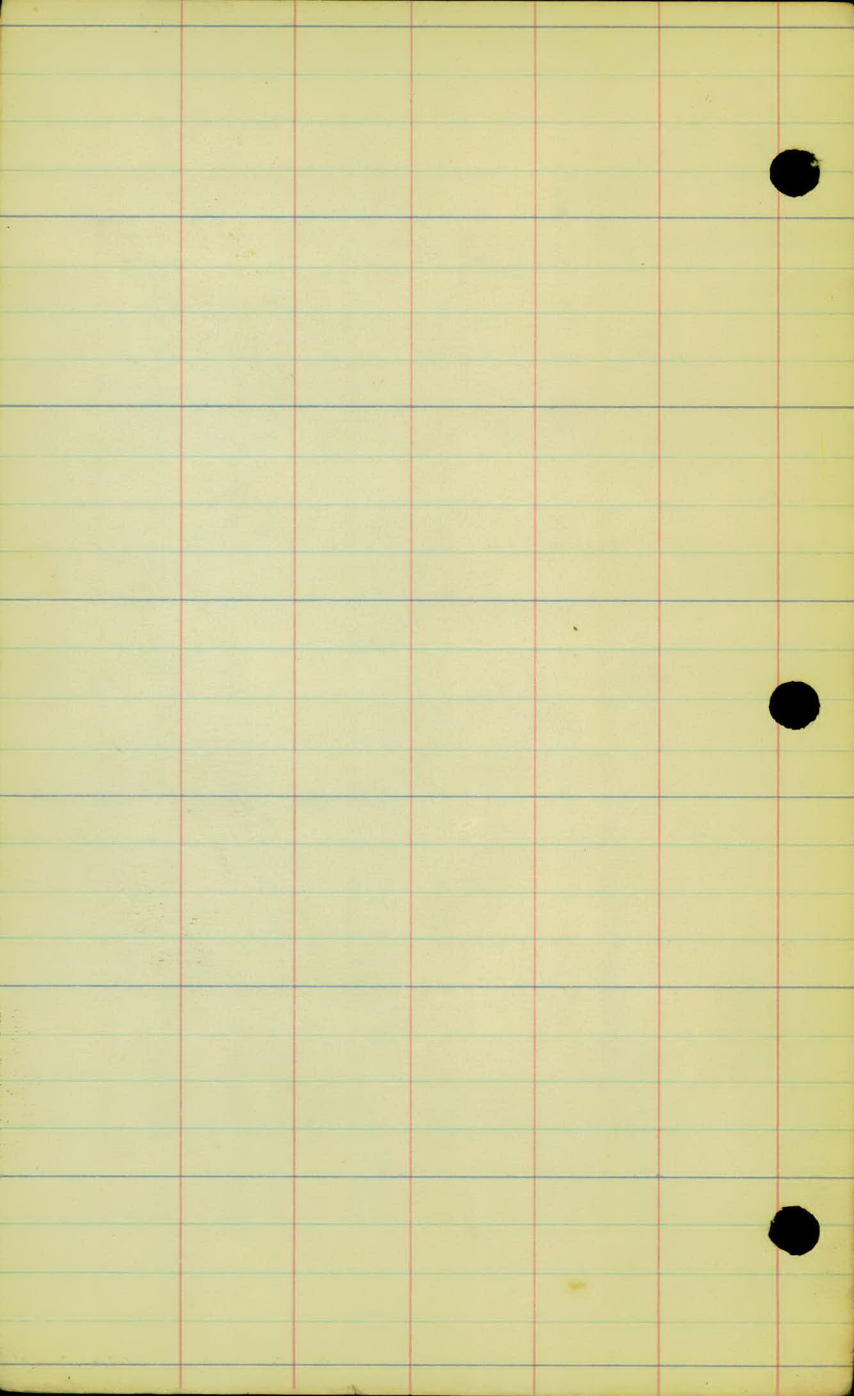
$$- \frac{2.5}{33} - \frac{6.8}{19} - \frac{3.1}{9} - \frac{0.7}{2} + \frac{1.4}{15} + \frac{2.6}{33} + \frac{5.5}{39}$$

$$+ \frac{1.0}{8} + \frac{1.5}{19} + \frac{4.0}{33} \frac{4.0}{40}$$

$$- \frac{9.0}{33} \frac{4.0}{13} - \frac{0.5}{2} + \frac{1.1}{11} + \frac{0.9}{30} - \frac{1.8}{33}$$

$$\frac{7.0}{33} - \frac{5.5}{21} - \frac{3.7}{8} - \frac{1.1}{8} + \frac{2.7}{18} + \frac{3.0}{26} + \frac{1.5}{33}$$

$$- \frac{6.5}{33} - \frac{1.8}{10} + \frac{2.3}{8} + \frac{3.0}{20} + \frac{3.0}{33}$$



29/2/14/200

0.5

1/2

R.

Reservoir

13+00

+162

825

12+00

120 End Fence

11+00

City water pipe

5+460

10+00

700 bing

277

9+285

9+00

700 20

8+00

7+00

3-15-23

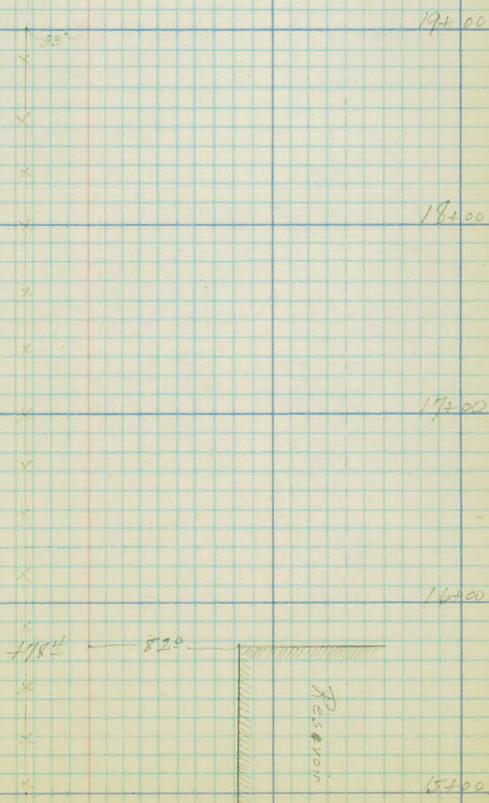
Frost Ave. Sta 7+00 - 19+00

(24+2)

A.  $\frac{1}{2}$

R.

Frost Ave. Sta 1+00 - 19+00



3-15-23

Frost. Ave. Sta. 7+00 to 19+00

Survey of  
Frost Ave.

From - McMenamy St  
To - Arcade St.

①

Ang. L. & Ang. R

Frost Ave. Survey - McMenemy to Arcade.

102+86.2 Mont. Arcade St.

95+00 P.O.T

84+100 P.O.T

79+50 P.O.T

76+65.8 Mont 0° 03' & Edgerton St.

72+00 P.O.T.

54+06.25 P.O.T

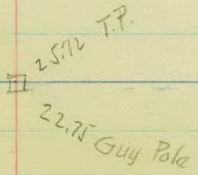
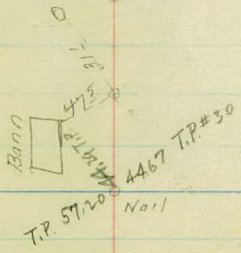
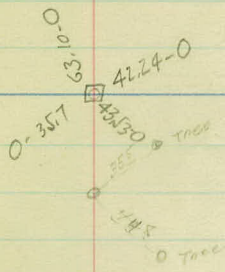
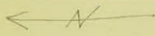
50+49 Mont. 0° 47' McMenemy

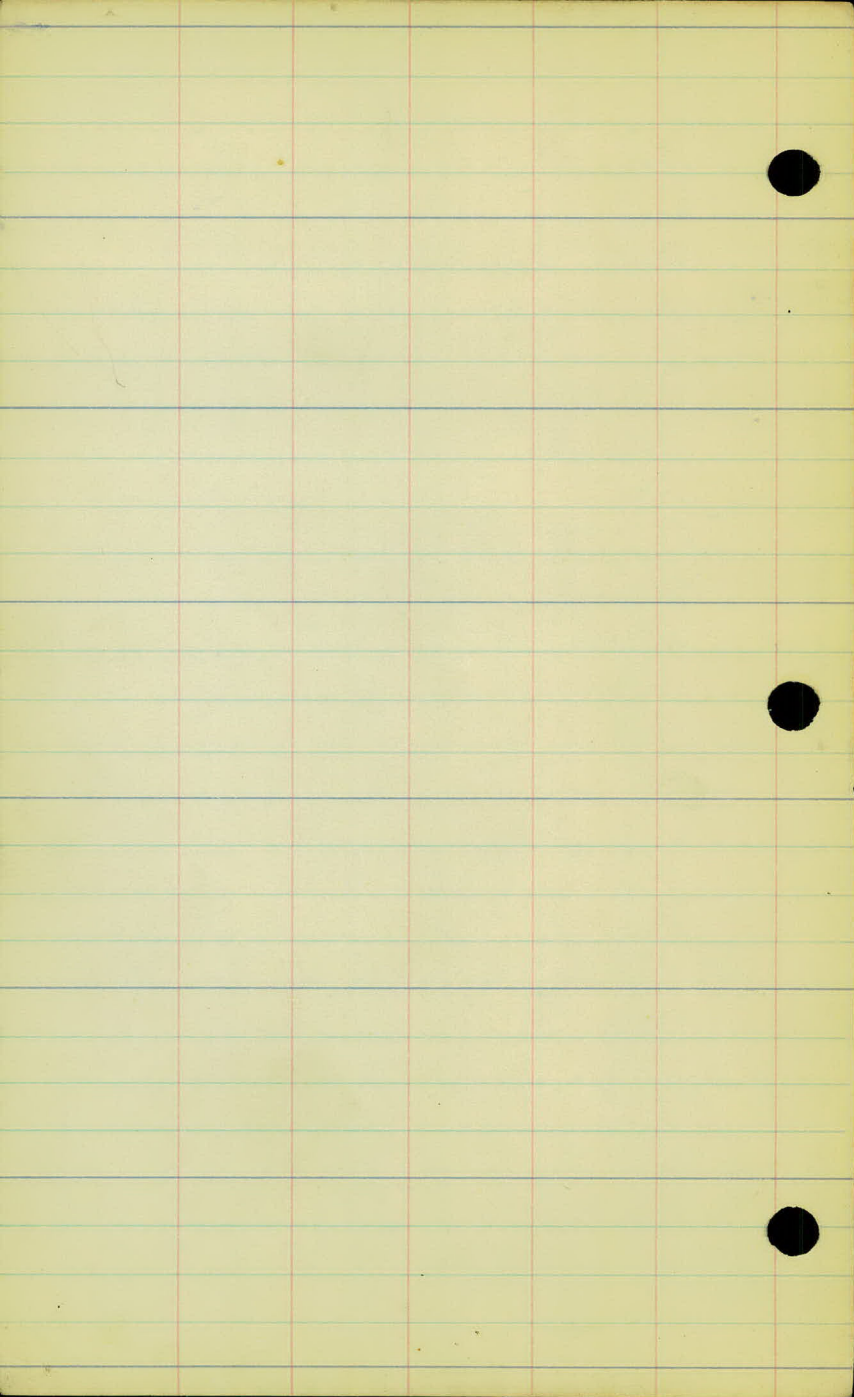
0+00 & Rice St.

L

E

R





Rice St.

McManamy St.

Edgerton St.

Arcade St.

Ties to  
Survey on  
Frost Ave  
from Rice St  
to Arcade St

24 B.M.

F.P. 78.72

245.17

41.62

18.61

24.10 F.P.

25.72 T.P.

54.50 B.M.

44.67 T.P.

44.29 T.P.

43.24

43.10

B.M. Sp. in Poplar tree Pt.

190 N. of Int. Rice x Frost  
on Rice St

Elev. 175.85

B.M. on Guy Pole

S.W. Cor. McManamy St.

Elev. 214.54

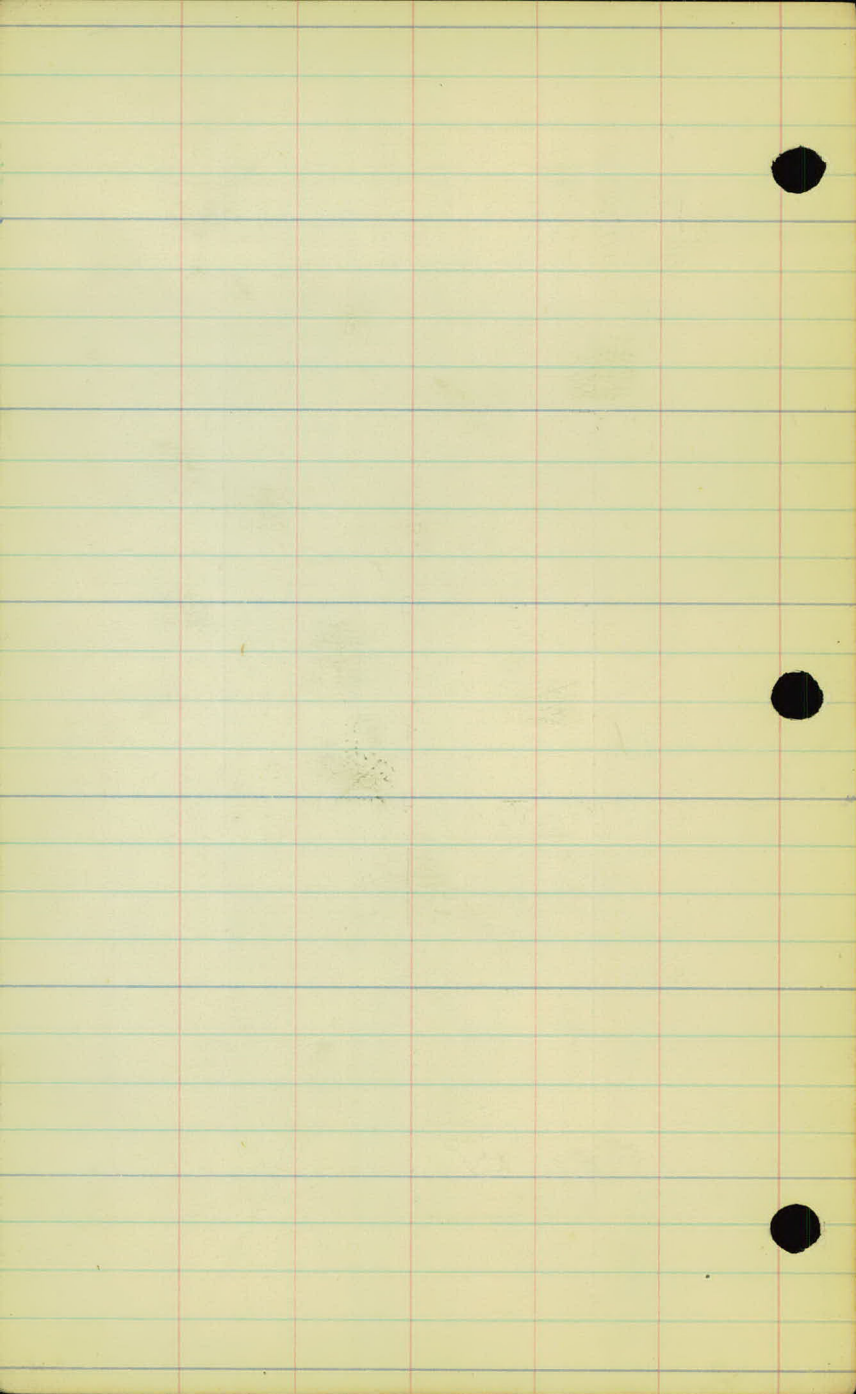


Sec. 18 - 29-22



Sec. 17





Frost. Ave. Surrey

McMenamy - To - Arcade St

Artificial Topography.

3-12-23

① Frost. Ave.

R. E. Austin Notes  
S-S Kosqun } chain  
R-Walsh }

A

R

57+00

(P108)

+69 T.P. 27' L



56+00

+85 T.P. 27' L



55+00

+11 T.P. 26' L



54+00

+17 T.P. 26' L



53+00

+16 T.P. 25' L



52+00

+84 T.P. 26' L  
+102 T.P. 27' L



51+00

+174 Fence 27' L

+109 T.P. 18' R  
+173 Fence 16' R  
+19 T.P. 13' R

□ Mont  
McMenemy St

50+49

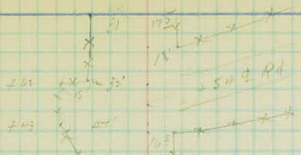
3-13-23

(2)

Frost. Ave.

64+00

(P2058)



+39 End Fence

63+00

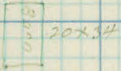
+11 T.R. 35'



+10

62+00

+75 T.R. 35'



+76

61+00

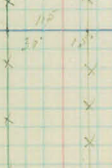
+61 T.R. 35'

+39 Fence



60+00

+24 T.R. 37'

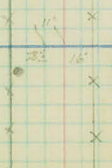


59+00

+34 Fence

58+00

+84 T.R. 35'



57+00

29 16

③ Frost. Ave.

D30f8

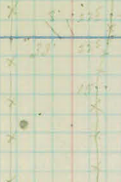
71400

188 T.R. 28' L



182 Tace 27' R  
 177 Tace 25' R  
 154 Tace 20' R

150 T.R. 28' L



168 Tace 24' R  
 149 Tace 21' R  
 124 Tace 18' R

116 T.R. 28' L



115 Tace 22' R  
 107 Tace 20' R  
 100 Tace 20' R

182 T.R. 28' L



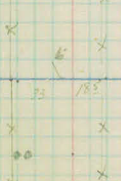
186 Tace 32' L  
 145 Tace 28' L

102 (2) T.R. 28' (31) L



154 Tace 31' R  
 147 Tace 29' R

134 T.R. 27' L



124 Tace 24' R  
 95 Tace 30' L  
 58 Tace 21' R



112 Tace 21' R



64400

④ Frost, Ave

7450

78+00

A

31'  
25'

+100 TR 20'L

+118 Fence, car  
+105 Drain 17' R  
+120 TR 35' R  
77+00

+165 E Edgerton St

+115 E.P. 17' R  
+120 End Fence  
76+00

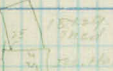
+112 TR 25'L

+178 Tree 24' R

+197 E.P. 30'L

+102 E.P. 24' R  
75+00

+178 TR 20'L



+131 Tree 34'  
+170 End Fence + Tree  
+154 Tree 31' R  
74+00

+138 TR 30'L

+195 Tree 21' R  
73+00

+182 End Fence

+104 Tree 32' R  
+127 Tree 24' R  
+110 Tree 21' R  
+105 Tree 22'  
72+00

+108 TR 20' E

+145 Tree 32' R

+154 Tree 31'  
+134 Tree 27' R  
71+00

31' 25'

5

Frost. Ave.

196 T.P. 232 L

DS 98

8500

195 T.P. 231 L

8400

197 T.P. 233 L

8300

197 T.P. 233 L

8200

196 T.P. 232 L

8100

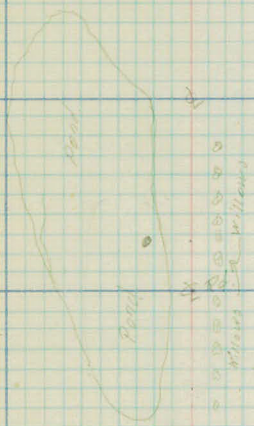
197 T.P. 233 L

8000

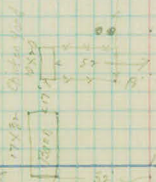
197 T.P. 233 L

7900

7800



END POINT



3-13-23

(6)

Frost. Ave.

171 T.P. 20' L

91.400

135 T.P. 20' L

90.400

97.000 T.P. 20' L

89.400

End Fence

25'



88.400

103 T.P. 20' L

Field

26'

26'

87.400

125 T.P. 20' L

Field

26.5' 106'

26'

25'

86.400

25'

85.400

(7)

Frost. Ave.

P708

97-100

+116 T.P. 24' L

96-100

+111 T.P. 25' L

97-100

+114 T.P. 24' L

96-100

+108 T.P. 24' L

95-100

+119 T.P. 21' 22' L

91-100

92-100

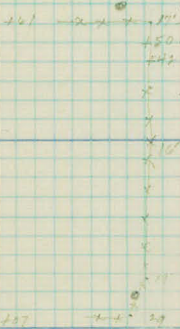
92-100

⑧

Frost. Ave

+86-4. Parade

+47 T.R. 32' L  
+50 T.R. 23' L



+50 G.P. W. R

+25 T.R. 45' N

102+00

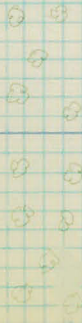
+63 T.R. 87' N

+21 T.R. 37' N

100+00

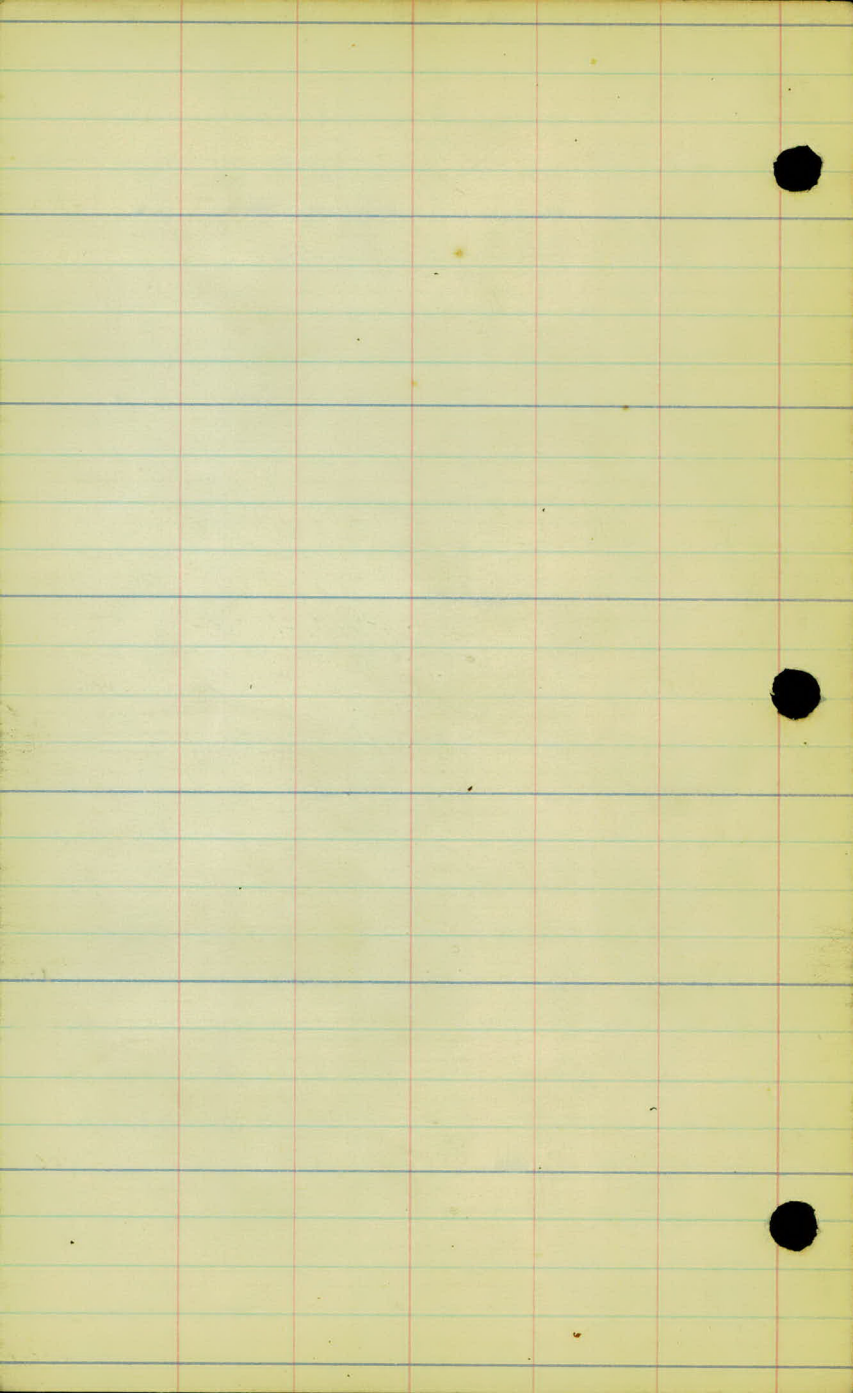
+47 T.R. 20' L

+80 T.R. 23' L



100+00

99+00



Frost Ave Line Levels

R.S. Ling Levelman  
Wm. McDonald Rodman

Frost Ave Line Sheet #1 of 3

Station	B.S.	I.I.	F.S.	Rod	Elev
50+49	9.43	223.97			214.54
50+49				10.7	13.27
51+00				8.5	15.17
52+00				3.5	220.47
53+00				1.2	222.77
54+00				1.8	222.17
55+00				4.5	219.47
			5.54		218.43
	2.73	221.16			
56+00				5.5	215.66
57+00				7.5	213.66
58+00				11.1	210.06
<del>54+00</del>			12.62		208.54
	5.05	213.59			
54+00				8.1	205.49
60+00	17.21			7.6	205.89
61+00				4.6	208.99
62+00				5.3	206.29
63+00				6.7	206.89
+30				6.2	207.39
64+00				5.8	207.79
65+00			40.2		209.37
65+00				2.4	211.19
			0.55		213.04
			18.71		214.54
			17.21		213.04
			1.50		1.50

Frost Ave Line

B.M. SW Cor of Mc Menemary St Elev 214.54

RIL }  
WMOB } 372.23

TP

TP

B.M. Tele Pole 64+50 30' Left

TP

Frost Ave Line Sheet #2 of 5

Station	B.S.	I.I.	F.S.	Prod	Elev
					213.04
	11.08	224.12			
66+00				9.8	214.32 ✓
67+00				8.1	216.02 ✓
68+00				9.0	215.12 ✓
69+00				7.6	216.52 ✓
70+00				6.0	218.12 ✓
71+00				4.9	219.22 ✓
72+00				4.4	219.72 ✓
73+00				4.4	219.72 ✓
74+00				5.3	218.82 ✓
75+00	1108		214.37	5.2	218.92 ✓
76+00	<u>975</u>		<u>213.04</u>	7.5	216.62 ✓
	1.33		1.33		214.37 ✓
			9.75		
	<u>11.61</u>	225.98			
			(9.54)		216.44 ✓
			(12.52)		213.46 ✓
76+65				11.9	214.08 ✓
77+00				10.1	215.88 ✓
78+00				4.3	221.68 ✓
79+00				0.7	225.28 ✓
80+00				1.1	224.88 ✓
81+00				1.4	224.56 ✓
82+00				1.7	224.28 ✓

Frost Ave Line

RIL	}	3-12-23	213.04
WMCD			1008
			224.12
			975
			214.37
			1161
			22598
			1233
			213.65

21368
799
22167
473
21694

225.98
216.44
9.54

TR

B1

B.M. 77+06 Elec<sup>Guy</sup> Pole 16' R S.E. Cor Edgerton St

Old B.M. Elec Pole SW Cor 214.27

Center of Edgerton St

Frost Ave Line Sheet #3 of 5

Station	B.S.	H.I.	F.S.	Rod	Elev
		225.98			
83+00				2.0	223.98 ✓
			2.19		223.79
	6.45	232.24			
84+00				1.5	223.74 ✓
85+00				7.9	224.34 ✓
86+00				7.2	225.04 ✓
87+00				5.5	226.74 ✓
88+00				6.7	225.54 ✓
+50					
89+00				6.6	225.64 ✓
+12			(5.43)		226.81 ✓
90+00				3.1	229.14 ✓
91+00				1.1	231.14 ✓
92+00				2.2	230.04 ✓
93+00				3.2	229.04 ✓
94+00				2.5	229.74 ✓
95+00				2.3	229.74 ✓
			2.50		229.74 ✓
	0.35	230.09			
96+00	880			1.4	228.69 ✓
97+00	1161			3.3	226.79 ✓
	2041				
98+00	1742			6.0	224.09 ✓
	2.99				
99+00				9.4	220.69 ✓
100+85			12.73		217.36
	0.55	217.81	17.42		214.37
					2.99

RIL }  
WMCD } 3-12-23

88+50

B.M. <sup>18"</sup> Black Oak 89+12.50' R

T.P. on spike 95+10

T.P. nail in Tele pole 16'L

## Frost Ave Line Sheet #4 of 5

Station	B.S.	I.I.	F.S.	Rod	Elev
		217.91			
100+00				2.1	215.81 ✓
101+00				5.1	212.81 ✓
102+00				9.9	208.01 ✓
+65			10.39		207.52
	5.29	212.81			
102+86!				5.22	204.59 ✓
Check Levels		212.81			
			0.31		212.50
	11.90	224.40			
	<del>11.90</del>		0.41		223.99
	10.52	234.51			
			3.66		226.85
	3.62	230.47			
88+50	Prop Culvert			5.1	225.37
			5.87		224.58
	1.35	225.93			
			12.16		213.77
			5.54		220.39
	1.46	221.85			
			12.17		209.68
			9.84		212.01
	7.86	217.87			
			10.3		218.84
	5.51	224.35			
			9.91		214.44

R.I.L }  
WMCD } 3-12-23

B.M. on Guy Pole 12' R 102+65

End of Line at Intersection of W.B. road

TP

B.M. Elev 226.81

TP

B.M. 213.68

TP

B.M. 64+50 209.57

B.M. Elev 814.54

Station B.S. H.I. F.S. Rod Elev

Frost Ave Line

Cross Sections

R J Long Levelman

Mr Mc Donald Rodman

Walter Maloney Chain

Red- Reichling "

## Frogs Ave Line Cross Sections

Station	Elev	
50+49	213.27 ✓	RIL W.M.C.D } 3-13-23 W.M. RR.
51+00	215.17 ✓	
52+00	220.47 ✓	
53+00	222.77 ✓	
+50	223.47	
54+00	222.17 ✓	
55+00	219.47 ✓	
56+00	215.66 ✓	
57+00	213.66 ✓	
58+00	210.06 ✓	
59+00	205.49 ✓	
60+00	205.99 ✓	
61+00	208.99 ✓	

$$\frac{+0.0}{33}$$

$$\frac{0.0}{32}$$

$$\frac{0.0}{33} \frac{0.7-1.2}{23 \ 15} - \frac{0.6}{9} - \frac{0.2}{8} - \frac{0.5}{16} - \frac{1.2}{11} - \frac{1.3}{33}$$

$$+\frac{5.5}{33} + \frac{5.0}{24} + \frac{4.0}{19} \frac{0.0}{13} \frac{0.0}{9} - \frac{0.2}{5} - \frac{0.5}{7} - \frac{0.5}{12} + \frac{2.3}{14} + \frac{2.4}{32}$$

$$+\frac{7.3}{33} + \frac{8.5}{25} + \frac{5.0}{19} \frac{0.4}{12} - \frac{0.1}{7} - \frac{0.1}{10} + \frac{4.3}{13} + \frac{2.8}{33}$$

$$+\frac{10.3}{33} + \frac{10.0}{26} + \frac{0.3}{13} \frac{0.0}{8} + \frac{0.5}{15} + \frac{5.0}{33}$$

$$+\frac{7.5}{33} + \frac{7.0}{26} \frac{0.0}{13} + \frac{0.1}{9} + \frac{3.6}{12} + \frac{3.4}{33}$$

$$\frac{+0.6}{33} \frac{0.0}{28} - \frac{0.2}{20} + \frac{0.5}{6} - \frac{0.7}{8} - \frac{0.0}{19} - \frac{4.5}{33}$$

$$-\frac{2.0}{33} - \frac{1.8}{30} - \frac{0.2}{23} + \frac{0.5}{7} \frac{0.0}{5} - \frac{2.9}{12} - \frac{3.3}{15} - \frac{5.0}{19} - \frac{7.0}{33}$$

$$+\frac{1.5}{33} + \frac{2.7}{28} \frac{0.0}{21} + \frac{0.9}{9} \frac{0.0}{11} + \frac{1.2}{13} \frac{0.0}{24} - \frac{0.4}{33}$$

$$-\frac{2.2}{33} - \frac{0.2}{25} + \frac{0.9}{11} - \frac{0.3}{2} - \frac{1.3}{15} - \frac{2.5}{19} - \frac{3.2}{33}$$

$$+\frac{1.8}{33} + \frac{1.5}{26} + \frac{2.4}{13} + \frac{1.2}{2} - \frac{4.6}{7} - \frac{6.5}{16} - \frac{8.0}{33}$$

$$+\frac{3.0}{33} + \frac{1.8}{22} + \frac{2.0}{12} + \frac{0.9}{7} - \frac{5.0}{10} - \frac{11.0}{33}$$

$$+\frac{3.0}{33} + \frac{1.0}{27} + \frac{0.4}{17} + \frac{1.0}{9} - \frac{0.5}{5} + \frac{0.2}{9} - \frac{5.0}{33}$$

## Frost Ave Line Cross Sections

Station	Elev
62+00	208.29
63+00	206.89 ✓
+50	207.39 ✓
64+00	207.79 ✓
65+00	211.19 ✓
66+00	214.32 ✓
67+00	216.02 ✓
68+00	215.12 ✓
69+00	216.52 ✓
70+00	218.12 ✓
71+00	219.22 ✓
72+00	219.72 ✓

R.I.L.  
 W.M.C.D.  
 W.M.  
 R.R.

3-13-23

L

Frost Ave Line

L

R

$$-\frac{0.2}{33} + \frac{0.1}{23} + \frac{0.5}{16} + \frac{0.1}{8} - \frac{0.3}{5} - \frac{0.0}{9} + \frac{0.4}{10} - \frac{0.1}{33}$$

$$-\frac{4.0}{33} - \frac{2.0}{20} - \frac{0.5}{16} - \frac{0.3}{12} + \frac{0.3}{3} - \frac{0.0}{6} - \frac{0.3}{8} + \frac{0.5}{11} + \frac{1.1}{27} + \frac{0.0}{33}$$

$$-\frac{0.6}{10} - \frac{2.5}{33} \text{ Road on Right}$$

$$-\frac{0.0}{33} - \frac{0.3}{17} + \frac{0.3}{13} + \frac{0.6}{6} - \frac{0.4}{6} - \frac{0.8}{14} - \frac{1.2}{17} - \frac{0.8}{33}$$

$$+\frac{1.2}{33} + \frac{0.8}{20} + \frac{0.5}{16} + \frac{0.4}{6} - \frac{0.3}{6} - \frac{1.0}{10} - \frac{3.0}{14} - \frac{3.5}{33}$$

$$+\frac{5.0}{33} + \frac{0.5}{24} - \frac{0.0}{17} + \frac{0.3}{6} - \frac{0.3}{6} - \frac{0.3}{11} + \frac{2.0}{15} + \frac{1.6}{21} + \frac{1.3}{33}$$

$$+\frac{1.0}{33} + \frac{1.0}{26} - \frac{0.0}{22} - \frac{0.0}{14} + \frac{0.6}{6} - \frac{0.2}{5} + \frac{1.2}{10} + \frac{0.2}{20} - \frac{0.2}{33}$$

$$+\frac{0.6}{33} - \frac{0.0}{25} + \frac{0.3}{19} + \frac{0.8}{8} - \frac{0.0}{5} - \frac{2.0}{9} - \frac{2.3}{16} - \frac{2.7}{33}$$

$$+\frac{1.5}{33} + \frac{0.6}{24} - \frac{0.0}{16} + \frac{0.5}{8} - \frac{0.2}{5} - \frac{2.5}{10} - \frac{3.0}{16} - \frac{5.0}{33}$$

$$+\frac{2.3}{33} + \frac{1.3}{25} + \frac{0.8}{22} + \frac{0.5}{15} + \frac{0.1}{8} - \frac{0.3}{5} - \frac{0.5}{10} - \frac{1.0}{22} - \frac{0.8}{33}$$

$$+\frac{0.5}{33} - \frac{0.0}{24} - \frac{0.2}{22} - \frac{0.0}{15} + \frac{0.6}{7} - \frac{0.0}{2} + \frac{0.4}{10} + \frac{3.0}{12} + \frac{2.8}{33}$$

$$\frac{0.0}{33} - \frac{0.2}{23} - \frac{0.2}{20} - \frac{0.5}{8} - \frac{0.2}{2} - \frac{0.4}{17} + \frac{1.0}{28} + \frac{1.5}{33}$$

## Frost Ave Line Cross Sections

Stations	Elev	
73+00	219.72 <sub>v</sub>	RIL W.M.C.D. W.M. RR
74+00	218.82 <sub>v</sub>	
75+00	218.92 <sub>v</sub>	
76+00	216.62 <sub>v</sub>	
+65	214.08 <sub>v</sub>	
77+00	215.88 <sub>v</sub>	
+15	216.68	
78+00	221.68 <sub>v</sub>	
79+00	225.28 <sub>v</sub>	
80+00	224.88 <sub>v</sub>	
81+00	224.58 <sub>v</sub>	
82+00	224.28 <sub>v</sub>	
83+00	223.98 <sub>v</sub>	

3-13-22

Frost Hike Line

LER

$$+\frac{5.0}{33} - \frac{0.8}{28} - \frac{0.4}{20} + \frac{0.0}{16} + \frac{0.2}{13} + \frac{0.5}{7} - \frac{0.2}{3} - \frac{0.2}{10} + \frac{2.3}{14} + \frac{2.0}{26} + \frac{0.6}{33}$$

$$+\frac{3.5}{38} + \frac{1.0}{32} + \frac{0.4}{24} + \frac{0.0}{15} + \frac{0.4}{6} - \frac{0.8}{10} - \frac{1.5}{15} - \frac{2.0}{33}$$

$$+\frac{2.2}{34} + \frac{1.8}{28} + \frac{0.4}{24} - \frac{0.5}{21} - \frac{0.4}{18} + \frac{0.0}{13} + \frac{0.4}{6} - \frac{1.0}{10} - \frac{0.5}{13} - \frac{1.5}{22} - \frac{1.7}{28}$$

$$+\frac{5.5}{33} + \frac{2.0}{25} + \frac{0.0}{18} - \frac{0.1}{13} + \frac{0.4}{4} + \frac{0.0}{11} + \frac{6.5}{21} + \frac{6.8}{33}$$

Center of Edgerton  $\frac{+1.7}{33} - \frac{1.0}{33}$

$$+\frac{5.0}{33} + \frac{4.7}{23} + \frac{0.0}{12} - \frac{0.8}{14} + \frac{2.5}{23} + \frac{2.6}{33}$$

$$+\frac{1.5}{33} + \frac{1.5}{30} + \frac{5.0}{24} + \frac{0.5}{15} - \frac{0.6}{13} + \frac{5.0}{23} + \frac{10.0}{33}$$

$$+\frac{8.6}{33} + \frac{8.5}{25} + \frac{0.0}{14} + \frac{0.4}{14} + \frac{7.0}{27} + \frac{6.6}{33}$$

Driveway

$$+\frac{3.8}{33} + \frac{3.0}{25} + \frac{1.0}{17} - \frac{0.2}{6} - \frac{0.2}{18} + \frac{1.0}{27} + \frac{3.8}{33}$$

$$+\frac{0.8}{33} + \frac{1.0}{22} + \frac{2.0}{17} - \frac{0.7}{11} + \frac{0.0}{4} - \frac{0.7}{19} + \frac{7.4}{28} + \frac{4.4}{28}$$

$$-\frac{3.5}{33} - \frac{3.0}{20} - \frac{0.4}{11} - \frac{0.3}{14} - \frac{1.5}{18} - \frac{1.8}{33}$$

$$-\frac{3.7}{33} - \frac{3.2}{14} - \frac{0.3}{10} - \frac{0.4}{18} - \frac{3.3}{17} - \frac{2.2}{33}$$

$$-\frac{3.2}{33} - \frac{3.2}{17} - \frac{0.6}{11} - \frac{0.3}{9} - \frac{2.5}{14} - \frac{2.0}{33}$$

## Frost Ave Line Cross Sections

Station	Elev	
84+00	223.74 $\checkmark$	R.I.L W.M.C.D } 3-13-23 W.M R.R }
85+00	224.34 $\checkmark$	
86+00	225.04 $\checkmark$	
87+00	226.74 $\checkmark$	
88+00	225.54 $\checkmark$	
+50		
89+00	225.64 $\checkmark$	
+45	226.44	
90+00	229.14 $\checkmark$	
91+00	231.14 $\checkmark$	
+45	233.34	
+55	230.54 $\checkmark$	
92+00	230.04 $\checkmark$	
93+00	229.04 $\checkmark$	
94+00	229.74 $\checkmark$	

Frost Ave Line

L
Q
R

$$-\frac{22}{33} - \frac{22}{22} - \frac{0.6}{14} - \frac{0.2}{6} - \frac{0.8}{11} - \frac{0.0}{33}$$

$$-\frac{10}{33} - \frac{10}{24} - \frac{10}{16} - \frac{0.0}{6} - \frac{0.3}{33} + \frac{5.0}{31} + \frac{5.4}{33}$$

$$+\frac{2.8}{33} + \frac{2.8}{23} + \frac{1.2}{21} + \frac{1.5}{10} + \frac{1.8}{1} - \frac{0.8}{2} - \frac{0.0}{31} + \frac{4.5}{28} + \frac{4.0}{33}$$

$$+\frac{3.8}{33} + \frac{2.8}{18} + \frac{1.5}{12} + \frac{1.8}{2} - \frac{0.7}{1} - \frac{0.5}{20} + \frac{1.8}{29} + \frac{1.8}{33}$$

$$+\frac{2.0}{33} + \frac{1.7}{25} + \frac{1.1}{18} + \frac{0.2}{14} - \frac{0.2}{6} - \frac{0.0}{10} - \frac{1.0}{17} - \frac{1.5}{33}$$

$$-\frac{0.5}{33} - \frac{1.0}{17} - \frac{0.2}{12} - \frac{0.0}{6} - \frac{1.6}{10} - \frac{2.6}{33}$$

$$+\frac{0.3}{33} - \frac{0.0}{20} + \frac{0.3}{18} + \frac{0.5}{2} - \frac{0.0}{12} - \frac{0.5}{18} + \frac{1.8}{27} + \frac{2.2}{33}$$

$$+\frac{2.0}{33} + \frac{1.9}{23} + \frac{1.6}{14} + \frac{1.9}{2} - \frac{0.8}{2} - \frac{0.8}{17} - \frac{0.0}{23} + \frac{3.7}{31} + \frac{3.6}{33}$$

$$+\frac{2.6}{33} + \frac{2.8}{25} + \frac{2.3}{17} + \frac{2.3}{3} - \frac{0.8}{8} - \frac{0.8}{18} - \frac{0.0}{23} + \frac{2.0}{30} + \frac{2.0}{33}$$

$$+\frac{1.5}{33} + \frac{1.0}{23} + \frac{0.4}{2}$$

$$+\frac{4.0}{33} + \frac{4.0}{30} + \frac{0.5}{19} - \frac{0.0}{10} - \frac{0.0}{13} + \frac{0.5}{25} + \frac{2.0}{30} + \frac{3.0}{33}$$

$$+\frac{2.8}{33} - \frac{0.1}{22} + \frac{0.3}{15} - \frac{0.0}{25} + \frac{2.2}{31} + \frac{2.2}{33}$$

$$+\frac{0.9}{33} + \frac{0.9}{28} + \frac{0.1}{23} - \frac{0.0}{24} + \frac{2.3}{31} + \frac{2.3}{33}$$

$$-\frac{0.5}{33} - \frac{0.5}{16} + \frac{0.2}{9} - \frac{0.4}{5} - \frac{0.5}{33}$$

## Frost Ave Line Cross Sections

Station	Elev		
95+00	229.94	R.I.	} 3-13-23
+45	229.29	W.M.C.D.	
96+00	228.69	W.M. P.R.	
97+00	226.79		
98+00	224.09		
+50	222.79		
99+00	220.69		
100+00	215.81		
101+00	212.81		
+30	211.91		
102+00	208.01		
+49	205.89		
+52	205.69		
+56	205.5		
+86	204.59		

$$\begin{array}{r}
 +\frac{05}{33} + \frac{05}{18} \frac{00}{16} - \frac{06}{12} - \frac{09}{33} \\
 + \frac{22}{33} + \frac{25}{31} \frac{00}{23} + \frac{04}{13} + \frac{13}{15} + \frac{11}{33} \\
 + \frac{35}{23} + \frac{35}{29} \frac{00}{33} \quad \frac{00}{10} \frac{00}{23} + \frac{30}{29} + \frac{30}{33}
 \end{array}$$

$$\begin{array}{r}
 +\frac{65}{33} + \frac{65}{30} + \frac{50}{28} \frac{02}{11} \quad \frac{00}{10} + \frac{03}{20} + \frac{33}{27} + \frac{32}{33}
 \end{array}$$

$$\begin{array}{r}
 +\frac{92}{33} + \frac{90}{31} + \frac{50}{27} + \frac{03}{20} \quad \frac{00}{24} + \frac{45}{30} + \frac{42}{33} \\
 + \frac{67}{33} + \frac{63}{25} + \frac{03}{19} \quad \frac{00}{14} + \frac{03}{25} + \frac{04}{29} + \frac{03}{33} \\
 + \frac{22}{33} + \frac{192}{22} \frac{00}{18} - \frac{02}{6} - \frac{05}{11} - \frac{02}{15} \frac{33}{23} - \frac{46}{33}
 \end{array}$$

$$\begin{array}{r}
 \frac{00}{33} - \frac{04}{24} \quad \frac{00}{7} - \frac{33}{14} - \frac{36}{33}
 \end{array}$$

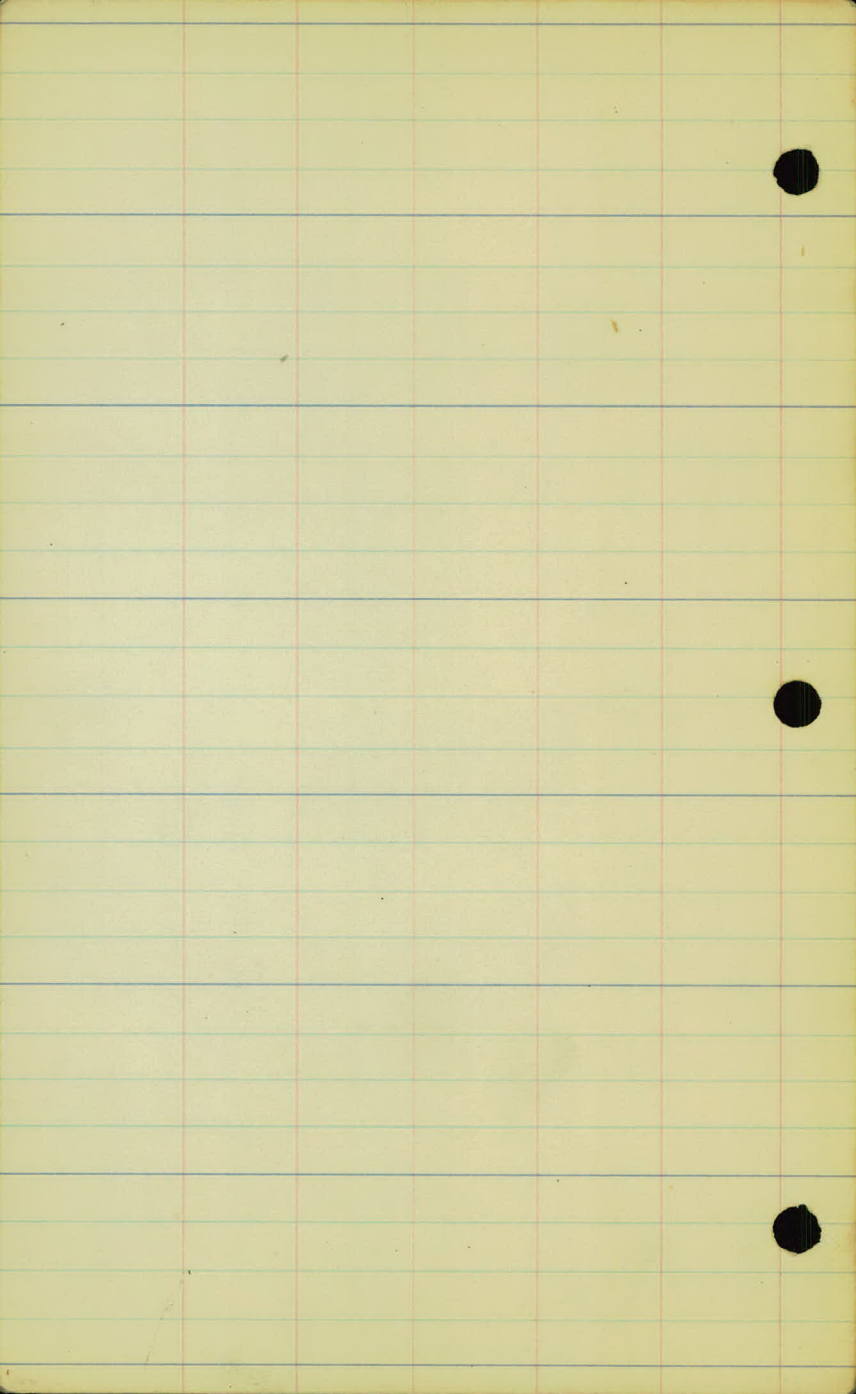
Arrowway

$$\begin{array}{r}
 +\frac{20}{33} + \frac{15}{24} - \frac{05}{12} \frac{00}{7} \quad \frac{00}{5} \frac{00}{12} \frac{00}{33} \\
 +\frac{27}{23} + \frac{25}{14} \frac{00}{17} - \frac{08}{11} - \frac{01}{8} - \frac{01}{6} - \frac{01}{15} + \frac{14}{18} + \frac{14}{33} \\
 + \frac{33}{33} + \frac{38}{15} - \frac{02}{12} + \frac{02}{6} \frac{00}{10} + \frac{02}{24} + \frac{48}{28} + \frac{50}{33} \\
 + \frac{20}{33} + \frac{21}{16} - \frac{03}{4} \quad \frac{00}{16} + \frac{12}{18} + \frac{18}{20} + \frac{66}{25} + \frac{66}{33} \\
 \frac{00}{16} + \frac{16}{20} + \frac{30}{33}
 \end{array}$$

$$\begin{array}{r}
 -\frac{16}{33} \frac{00}{20} + \frac{06}{33}
 \end{array}$$

End of Line

$$\begin{array}{r}
 -\frac{10}{33} + \frac{18}{33}
 \end{array}$$

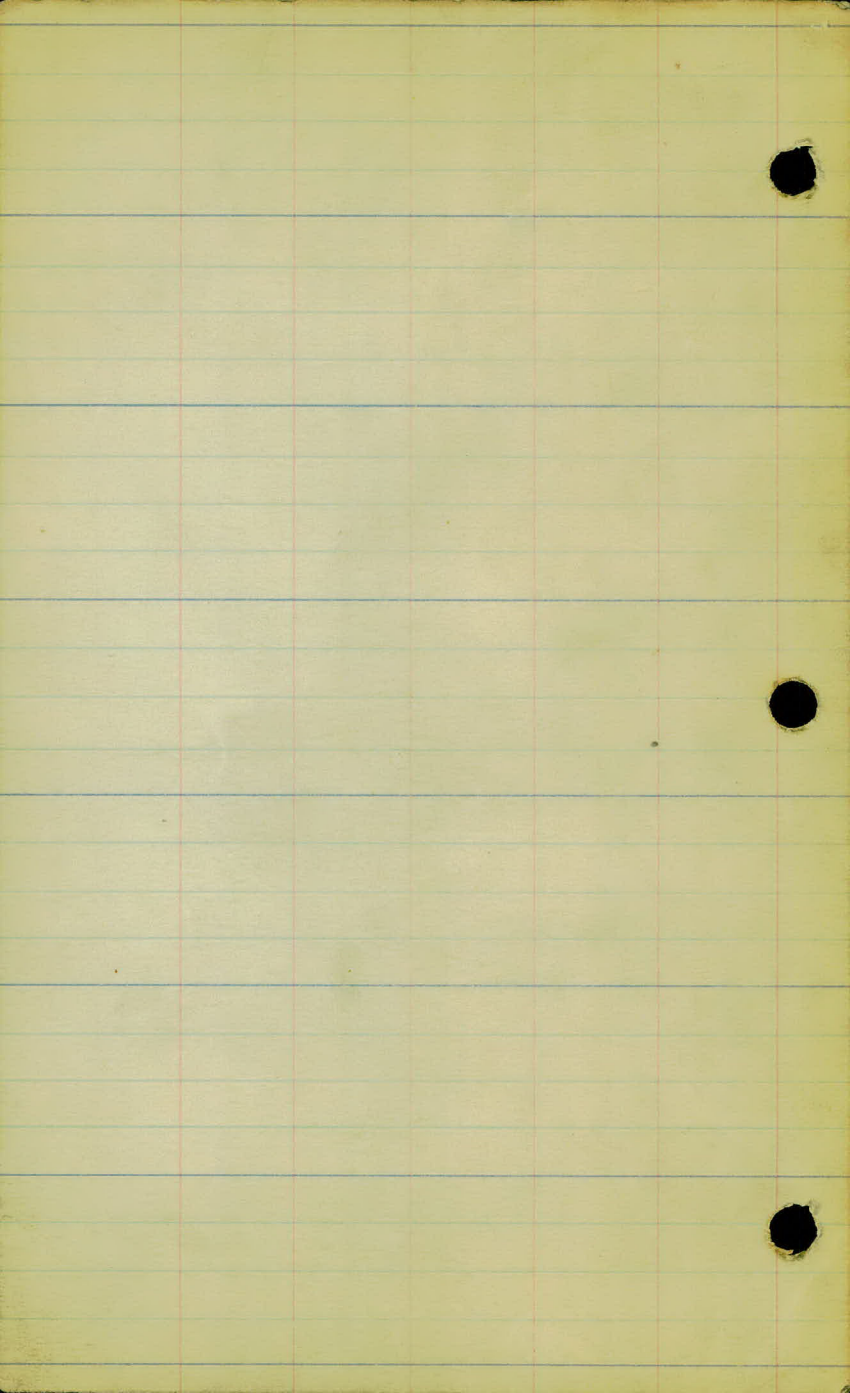


Frost Ave Line Culverts

88+50 W 22 Culvert Recommended.

L
30'
<hr/>
224.0

£		R	
	20	33	50
225.4	<hr/>	<hr/>	<hr/>
	222.1	221.5	220.9



R.J.W.  
H.D.V

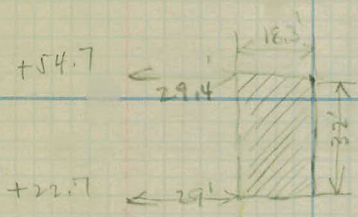
Proj. 23-68

9/1/23

±

File #3

6+00



5+00

n=50

B.M

6.75 174.33 ✓

167.58

4.48 169.85 ✓

12.5 161.8 ✓

13.1 161.2 ✓

7.5 166.8

12.6 161.7

9-1-23 Raining

Top, Ment. Int. Frost Ave x Rice St

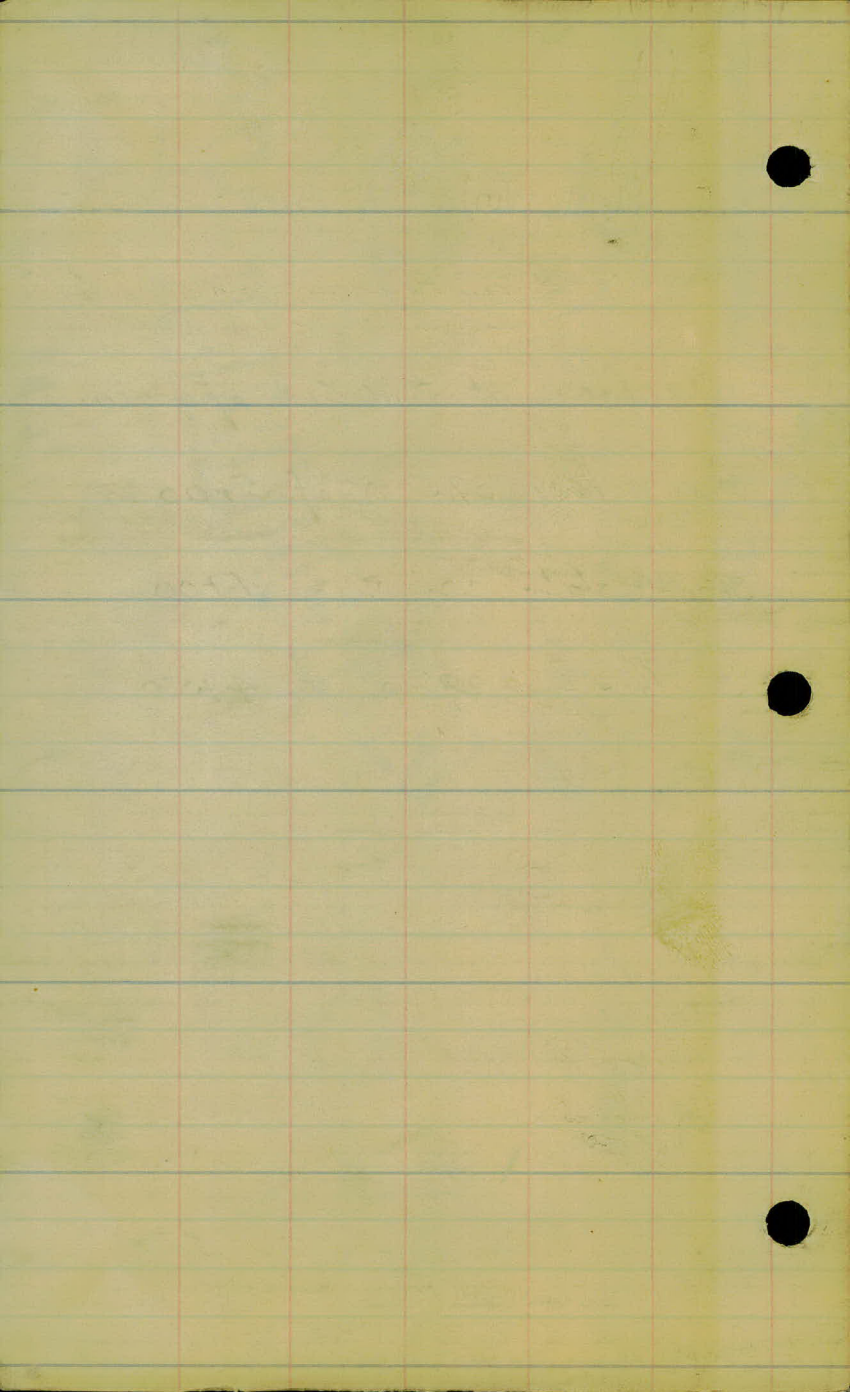
Top of Barn Foundation

Surface at S.W. Cor. of Barn -

Slope stake 37.5' R. of 5+00

Slope stake 22' R. of 4+00

Surface 29' R. of 4+50



U2480