

Book # 73 - Dr # 8

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Maint. Survey

Ditch

From Co. Rd 1 To Charley L.

Road Acc't. No. 63

Date Filed 6/15/31

File Maint.

Cool + windy. (plenty wind-tick.)

4-27-31

L Co. Rd. I



← Wooden Bridge.

0+00 Bottom ditch
Elev = 199.31



Diff =
2.30

22+34.0 Inv. Elev = 195.01

← 24" x 49' C.I.P.

← 195.24 = Elev Top Culv.

Elev. water = 194.19

Charley
Lake.

6th.

B.M. 3.41 203.41 200.0 Assumed.
 0+00 Bottom & Ditch 97.3

+50 97.4

1+00 96.7

+50 96.9

2 96.8

+50 96.4

T.P. 7.74 208.29 ✓ 2.86 ✓ 200.55

3 96.6

+50 96.6

4 96.9

+50 96.8

T.P. 7.02 210.93 ✓ 4.38 ✓ 203.91

5 96.6

+50 97.3

6 97.2

Lt.

L

Rt

spike in 12" Birch 12' Lt 0+20.

$$\frac{5.3}{4} \quad 61 \quad \frac{5.3}{4}$$

Water Elev. 0+00 4.8 = 198.61 Elev.

6.0

$$\frac{4.2}{21} \quad \frac{4.8}{6} \quad \frac{6.5}{5} \quad 67 \quad \frac{6.5}{5} \quad \frac{4.8}{6} \quad \frac{4.2}{21}$$

6.5

$$\frac{4.3}{20} \quad \frac{4.6}{8} \quad \frac{6.5}{6} \quad 66 \quad \frac{6.5}{6} \quad \frac{4.6}{8} \quad \frac{4.2}{20}$$

7.0

$$\frac{7.2}{26} \quad \frac{6.3}{18} \quad \frac{7.3}{11} \quad \frac{10.7}{5} \quad 11.7 \quad \frac{10.7}{6} \quad \frac{8.0}{10} \quad \frac{7.9}{25}$$

11.7

$$\frac{3.7}{18} \quad \frac{9.2}{4} \quad \frac{10.7}{3} \quad 11.4 \quad \frac{9.4}{4} \quad \frac{5.6}{11} \quad \frac{3.7}{21}$$

11.5

$$\frac{7.2}{13} \quad \frac{12.0}{4} \quad \frac{13.1}{3} \quad 14.3 \quad \frac{13.7}{3} \quad \frac{11.8}{4} \quad \frac{5.7}{16} \quad \frac{5.7}{22}$$

13.6

$$\frac{3.0}{22} \quad \frac{10.5}{6} \quad \frac{12.8}{4} \quad 13.7 \quad \frac{13.3}{4} \quad \frac{11.4}{6} \quad \frac{4.2}{16} \quad \frac{3.7}{20}$$

210.93 ✓

+50

97.6

7

96.9

+50

T.P.

521

210.19 ✓

5.95

204.98 ✓

96.0

8

97.1

+50

96.4

9

96.0

+50

T.P.

137

209.67 ✓

1.89

208.30 ✓

96.5

10

98.2

+50

97.4

11

97.0

50

T.P.

283

206.51 ✓

5.99

203.68 ✓

96.5

12

B.M.

3.63

202.88 ✓

96.4

+50

T.P.

718

207.97 ✓

5.72

200.79 ✓

96.2

Lt

~~Lt~~

Rt.

13.3

$$\frac{0.7}{28} \frac{5.5}{19} \frac{6.8}{12} \frac{11.2}{4} \frac{12.6}{3} 14.0 \frac{12.6}{3} \frac{11.2}{4} \frac{6.2}{12} \frac{+1.5}{26}$$

14.9

$$\frac{+5.0}{41} \frac{+2.7}{30} \frac{00}{27} \frac{4.2}{22} \frac{5.1}{13} \frac{10.6}{4} \frac{12.0}{3} 13.1 \frac{12.0}{3} \frac{9.6}{4} \frac{4.0}{15} \frac{0.7}{23} \frac{+8.0}{37}$$

13.8

$$\frac{+5.0}{36} \frac{4.9}{20} \frac{6.2}{12} \frac{10.0}{4} \frac{13.2}{3} 14.2 \frac{13.3}{3} \frac{10.1}{4} \frac{4.3}{14} \frac{+7.6}{40}$$

13.1

$$\frac{+2.4}{30} \frac{3.2}{23} \frac{6.0}{15} \frac{9.8}{6} \frac{11.2}{1} 11.5 \frac{11.2}{1} \frac{9.2}{3} \frac{5.0}{10} \frac{+3.8}{30}$$

12.3

$$\frac{+0.8}{26} \frac{4.6}{18} \frac{6.6}{11} \frac{10.0}{4} \frac{12.5}{2} 12.7 \frac{12.5}{2} \frac{10.4}{4} \frac{7.8}{6} \frac{5.1}{15} \frac{0.1}{24}$$

13.2

$$\frac{+0.5}{25} \frac{00}{20} \frac{4.2}{15} \frac{7.7}{3} \frac{9.8}{25} 10.1 \frac{9.8}{25} \frac{8.3}{3} \frac{4.2}{13} \frac{0.5}{18} \frac{0.0}{24}$$

spt. in 18" Cottonwood 10' Rt. Sta. 11+70

12.3

Al. ✓
207.97

13 96.0

+50 96.2

14 95.8

+50 95.9

T.F. 458 208.12 ✓ 443 203.54 ✓

15 95.8

+50 95.8

16 95.7

+50 96.0

17 95.8

+50 95.7

18 96.0

+50 96.1

19 96.1

$$\frac{0.8}{25} \quad \frac{1.4}{20} \quad \frac{6.2}{14} \quad \frac{9.6}{4} \quad \frac{11.5}{3} \quad 12.0 \quad \frac{11.5}{3} \quad \frac{9.8}{7} \quad \frac{5.9}{11} \quad \frac{0.5}{21} \quad \frac{0.0}{26}$$

11.8

$$\frac{+2.0}{32} \quad \frac{+1.5}{27} \quad \frac{3.8}{19} \quad \frac{5.6}{10} \quad \frac{9.4}{3} \quad \frac{11.4}{2.5} \quad 12.2 \quad \frac{11.8}{2.5} \quad \frac{10.0}{3} \quad \frac{7.4}{6} \quad \frac{+1.0}{23} \quad \frac{+1.5}{25}$$

12.1

$$\frac{0.0}{27} \quad \frac{0.4}{23} \quad \frac{6.0}{15} \quad \frac{7.0}{10} \quad \frac{9.8}{3} \quad \frac{11.9}{2.5} \quad 12.3 \quad \frac{11.8}{2.5} \quad \frac{10.0}{3} \quad \frac{6.0}{9} \quad \frac{0.0}{20} \quad \frac{0.0}{25}$$

12.3

$$\frac{0.0}{28} \quad \frac{0.8}{22} \quad \frac{5.2}{16} \quad \frac{9.2}{4} \quad \frac{11.4}{3} \quad 12.4 \quad \frac{12.0}{3} \quad \frac{9.5}{4} \quad \frac{5.8}{16} \quad \frac{0.5}{20} \quad \frac{0.0}{25}$$

12.1

$$\frac{+4.0}{33} \quad \frac{+3.5}{28} \quad \frac{3.5}{21} \quad \frac{5.8}{12} \quad \frac{9.6}{3} \quad \frac{12.0}{2.5} \quad 12.3 \quad \frac{11.7}{2.5} \quad \frac{9.0}{4} \quad \frac{3.4}{15} \quad \frac{+1.5}{24} \quad \frac{2.0}{30}$$

12.4

$$\frac{+4.0}{32} \quad \frac{+3.0}{27} \quad \frac{3.3}{18} \quad \frac{7.6}{5} \quad \frac{11.8}{2} \quad 12.1 \quad \frac{11.6}{2} \quad \frac{8.8}{3} \quad \frac{2.3}{19} \quad \frac{+3.0}{22} \quad \frac{+3.0}{28}$$

12.0

$$\frac{+3.7}{30} \quad \frac{+9.2}{26} \quad \frac{4.2}{19} \quad \frac{10.2}{2} \quad \frac{11.8}{1} \quad 12.0 \quad \frac{11.8}{1} \quad \frac{10.2}{2} \quad \frac{4.4}{15} \quad \frac{+2.0}{22} \quad \frac{+2.0}{27}$$

208.12 ✓

+50

95.9

20

T.F.

6.36

208.62 ✓

5.86

202.26 ✓

95.6

+50

95.8

21

95.6

+50

T.F.

3.62

206.70 ✓

5.54

203.08 ✓

95.6

22

95.4

+34

B.M.

END DITCH, Inv. Culv.

Top of New END Culv. >

9.26

~~497.44~~ ✓

Left Σ Right

122

$\frac{+0.5}{29}$	$\frac{0.0}{26}$	$\frac{5.7}{19}$	$\frac{10.0}{3}$	$\frac{12.1}{25}$	$\frac{12.5}{25}$	$\frac{12.4}{25}$	$\frac{10.0}{3}$	$\frac{3.8}{18}$	$\frac{+1.0}{23}$	$\frac{+1.0}{28}$
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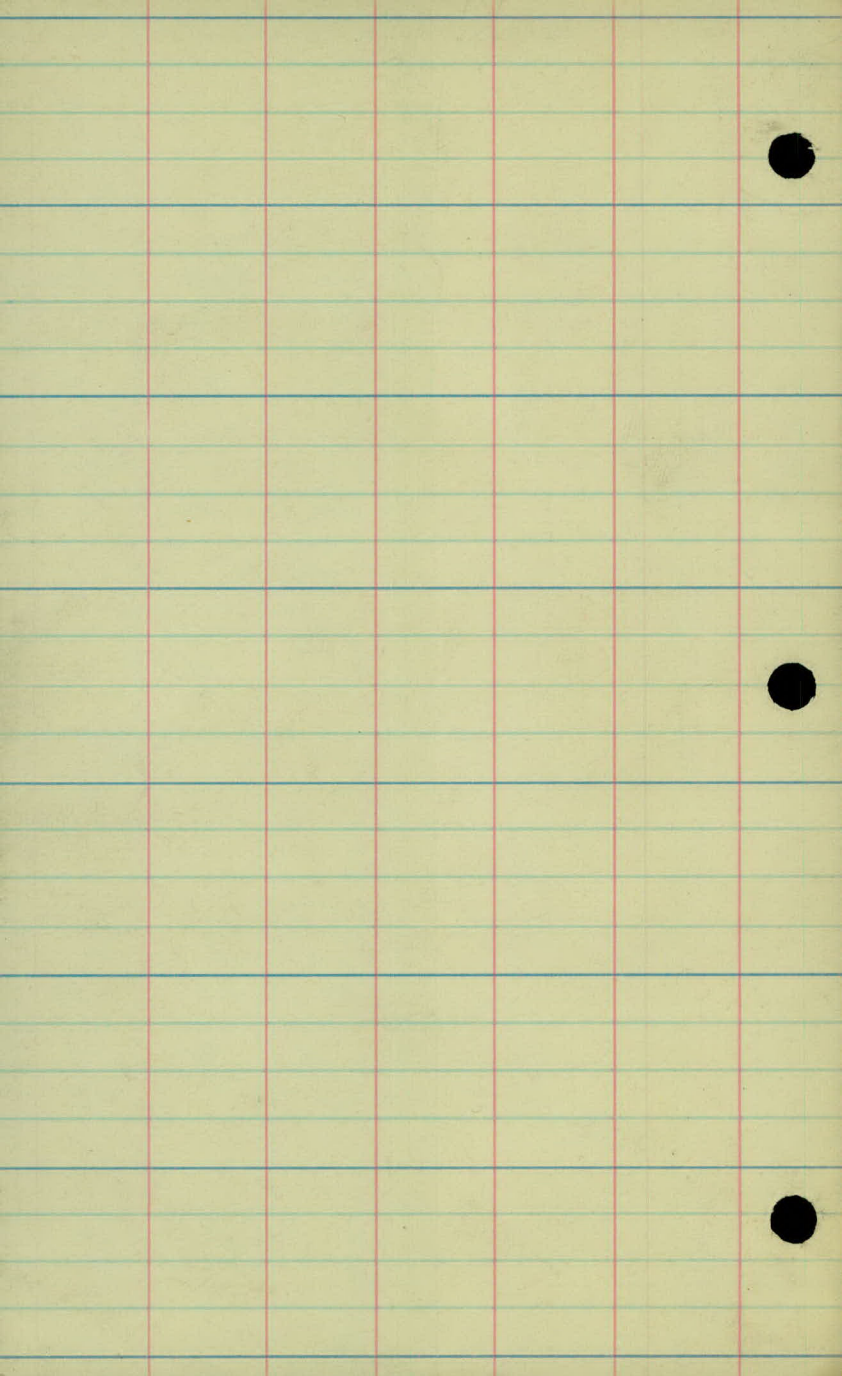
128

$\frac{0.7}{30}$	$\frac{0.5}{24}$	$\frac{4.7}{18}$	$\frac{10.3}{3}$	$\frac{12.7}{25}$	$\frac{13.0}{25}$	$\frac{12.3}{25}$	$\frac{10.8}{3}$	$\frac{1.7}{20}$	$\frac{1.7}{25}$
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130

$\frac{3.5}{19}$	$\frac{4.0}{14}$	$\frac{8.6}{3}$	$\frac{11.0}{15}$	$\frac{11.3}{15}$	$\frac{11.0}{15}$	$\frac{8.5}{3}$	$\frac{2.7}{11}$	$\frac{2.4}{16}$
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1169 Elev. = 195.01 ✓



Ditch Survey
from
Co. Rd. 7" to Charley Lake.

INDEX

Align	p. 1
Topog	p. 2-3
Levels	p. 4-9

Wm. A. Foster

Nov. 17, 1937

0+00 = to Hodgson Rd

9+94.2 = 0+00 and E of Ditch

1
Mount.

Turtle Lake Rd

Ditch
Approx. 3 to 600

P.P. R. 1270

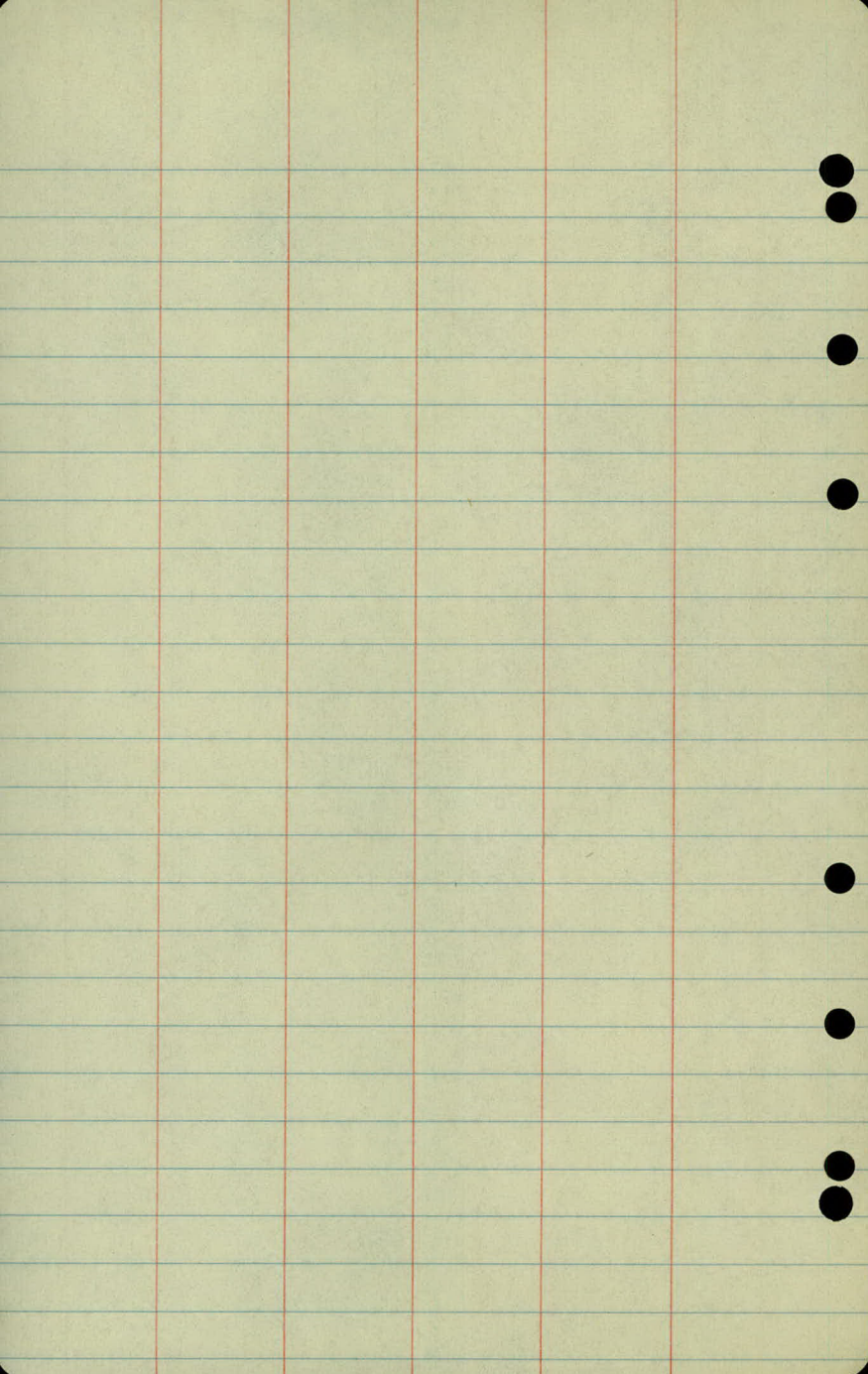
1925
S. End of E. Cult.

8 ft. 2 in.

E. Ditch

22 + 45
Shadwell

Charley
Lake



Topography

23

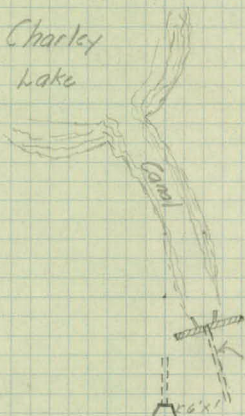
22

10

+ 96-36" X 346' C.M.
+ 93-36" X 345' C.M.

9400

Charley
Lake



(122' End Edge water)
0-80'

+90 Edge Headwall 40'

+89 5' Conduit

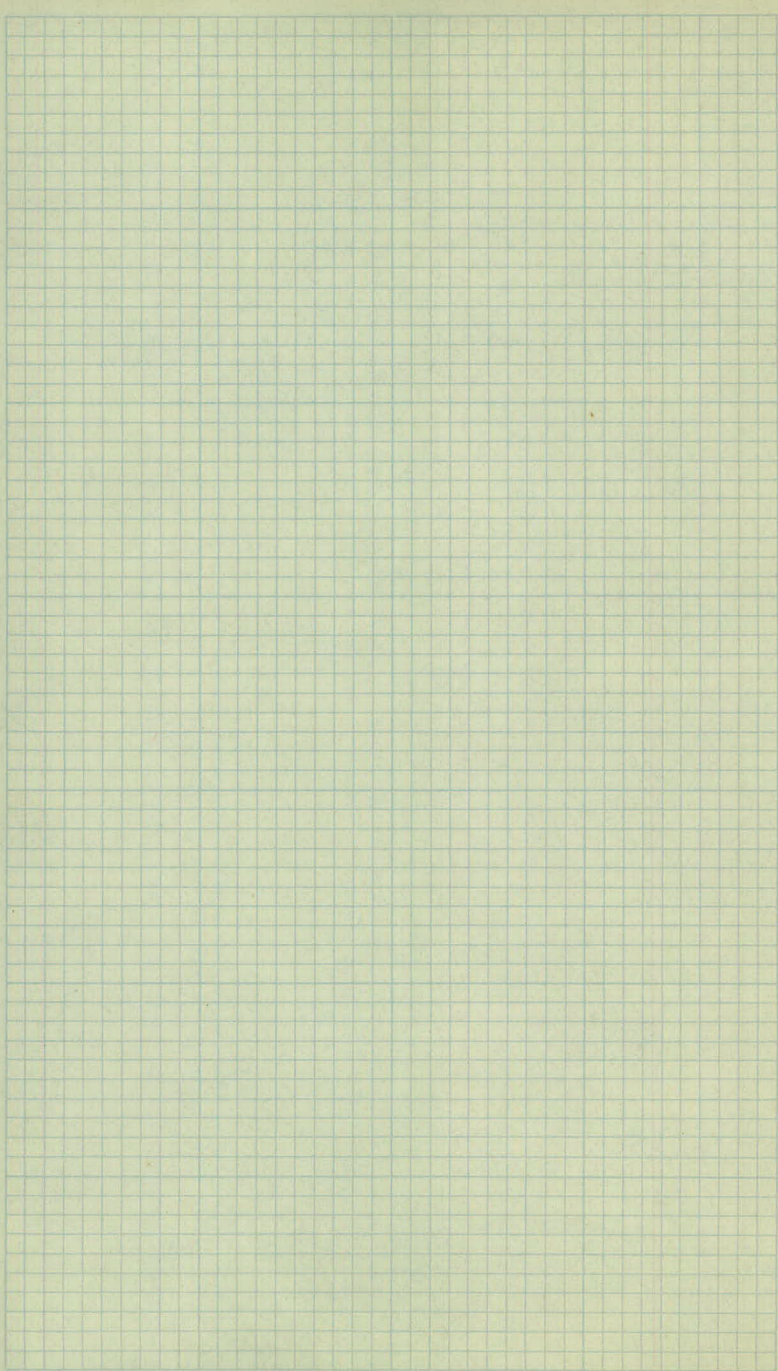
+80 Edge Headwall 5'

Water Dept. Conduit

+95 H. End 24\"/>

Ditch

Ca. Rd. 7"



Levels
Co. Rd. "J"

Sta	+	Δ	-	Elev
B.M.	1.44	913.67		914.23
T.P.	1.40	906.39	3.68	904.99
6+00				900.6
7				899.1
+50				98.6
T.P.	6.06	904.90	7.33	898.84
8				98.9
9				98.7
+50				899.3
+93				
+96				
10				900.0
11				898.7
12				99.7
13				902.0

Lt £ Rt
 N.E. Cor. Schae 15th & Hodgson Rd. & Co. Rd. "1"

pitch

pitch

 $\frac{8.1}{16}$

58

 $\frac{10.4}{17}$

10.1

10d 2 1/2 in off take diked

10.77311.210.67810.910.96010.59.56210.38.9569.2

(895.8)

outlet 9.1
15.5

(895.3)

9.5
17 111V.

(895.8)

outlet 9.1
15.5

(895.6)

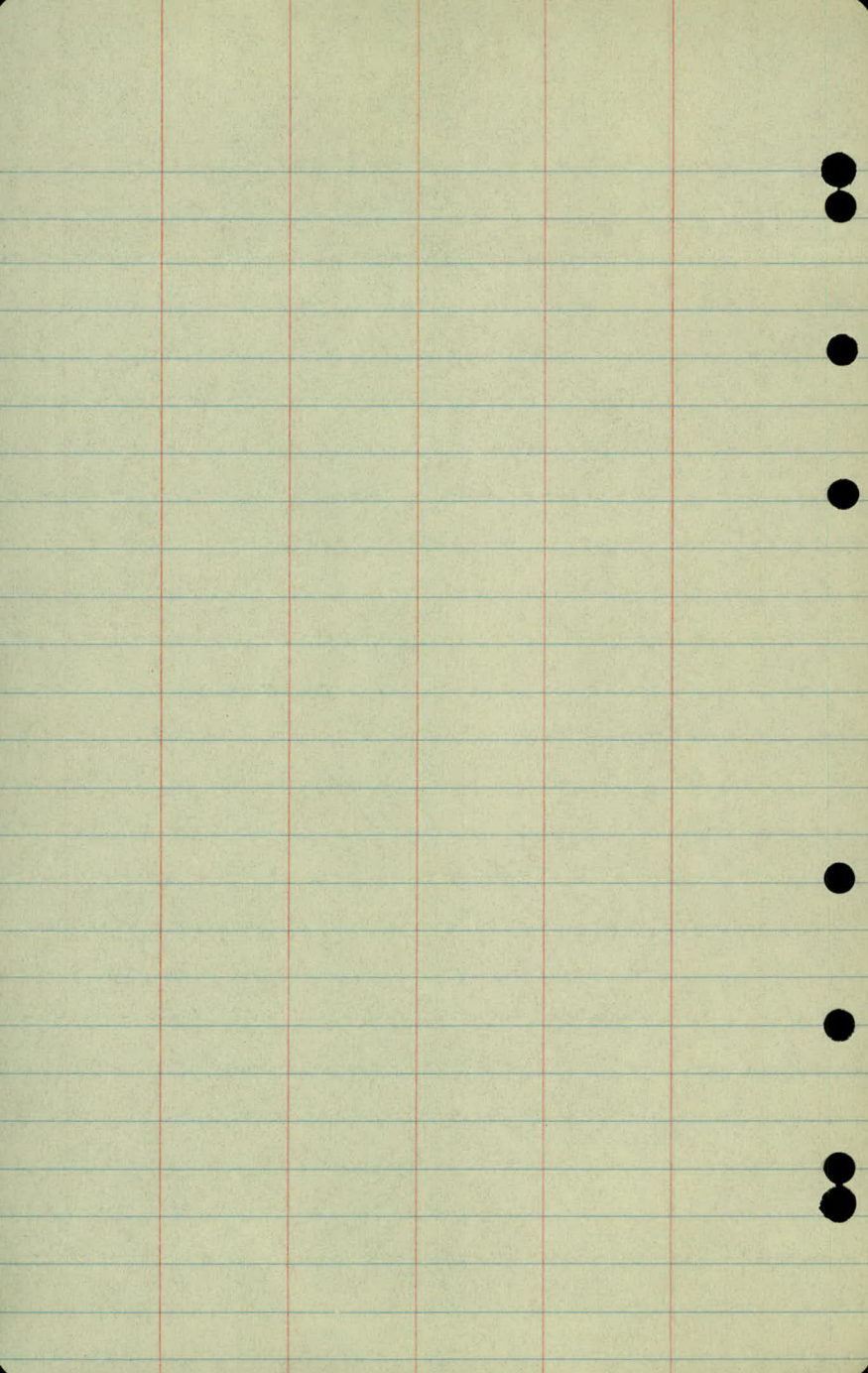
9.3
19 111V.9.6

49

9.010.5629.39.6508.956

2.9

5.3



Ditch Levels
Co. Rd. "1" to Charley Lake.

Sta	+	T	-	Elev
		909.90		
-1+00				896.2
1+00				95.6
2				95.4
3				95.5
4				95.8
T.P.	7.41	906.66	5.68	899.22
5				95.7
6				95.7
7				95.7
8				95.7
9				95.1
10				95.6
T.P.	3.23	906.17	4.42	902.24

from page

87

INVERT COLV.

93

Co. Lp. "I"

95

99

91

110

110

110

110

116

111

Sta	+	π	-	Elev.
		906.17		
11				895.5
12				95.1
13				94.8
14				95.0
15				94.7
16				94.9
T.P.	6.96	907.22	5.41	920.76
17				95.8
18				95.0
19				95.0
20				94.9
21				94.7

10.71111.411.211.511.311.412.212.212.312.5

Sta	+	-	+	-	Elev.
22			907.22		94.5
+45					94.3
					97.8
B.M.	2.26	903.95	5.53		901.69
					93.13
B.M.	13.29	914.98			901.69
T.P.	3.99	914.98	9.05		912.98
T.P.	7.32	916.75	5.49		909.43
B.M.			4.44		902.31
					902.23
					912.31
					912.23

12.712.9

Flow line of 24" Iron Culv.

94

Flow line of Conduit.

10.82

Elev. of Charley Lake.

Top Step of School Ho.

Note: Cannot find south end of 24" Culv. at
sta. 224 and it looks like it enters canal under
water dept. conduit.

