

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Drainage.....Survey

Otter Lake Rd. & Stillwater Ave.,
Also Re-location of X-Culv. Approx.
From Acc. No. of Hamstead Rd.,.....

Road Acc't. No.....

Date Filed 11-7-45.....

File.....

for
Carter
6/12/45
700 Regd

Drainage Situations

Otter Lake Rd & Stillwater Ave

7

379 10400 Swp End R+

23'

+17 24"X46' CM & Drain

23'

8 Ditch 41' 4pt

16 16

Ditch 29'

+50 Ditch 42'

7 Ditch 42'

+50 Ditch 42'

6 Ditch 41'

+50 Ditch 42'

+50 Air Ditch 30'

+20 Angle in Ditch 43

+21 End 18"X38' CM 33

5 Beg Main Ditch 50'

+83 Beg 18"X38' CM 33
Swp 24' X 300'

+93 Air Ditch 27'

+50 Ditch 29'

4 Ditch 30'

16 16

Swp 24' - 200'

+50 Ditch 30'

3 Ditch 31'

Swp 244/00'

+90 Ditch 32'

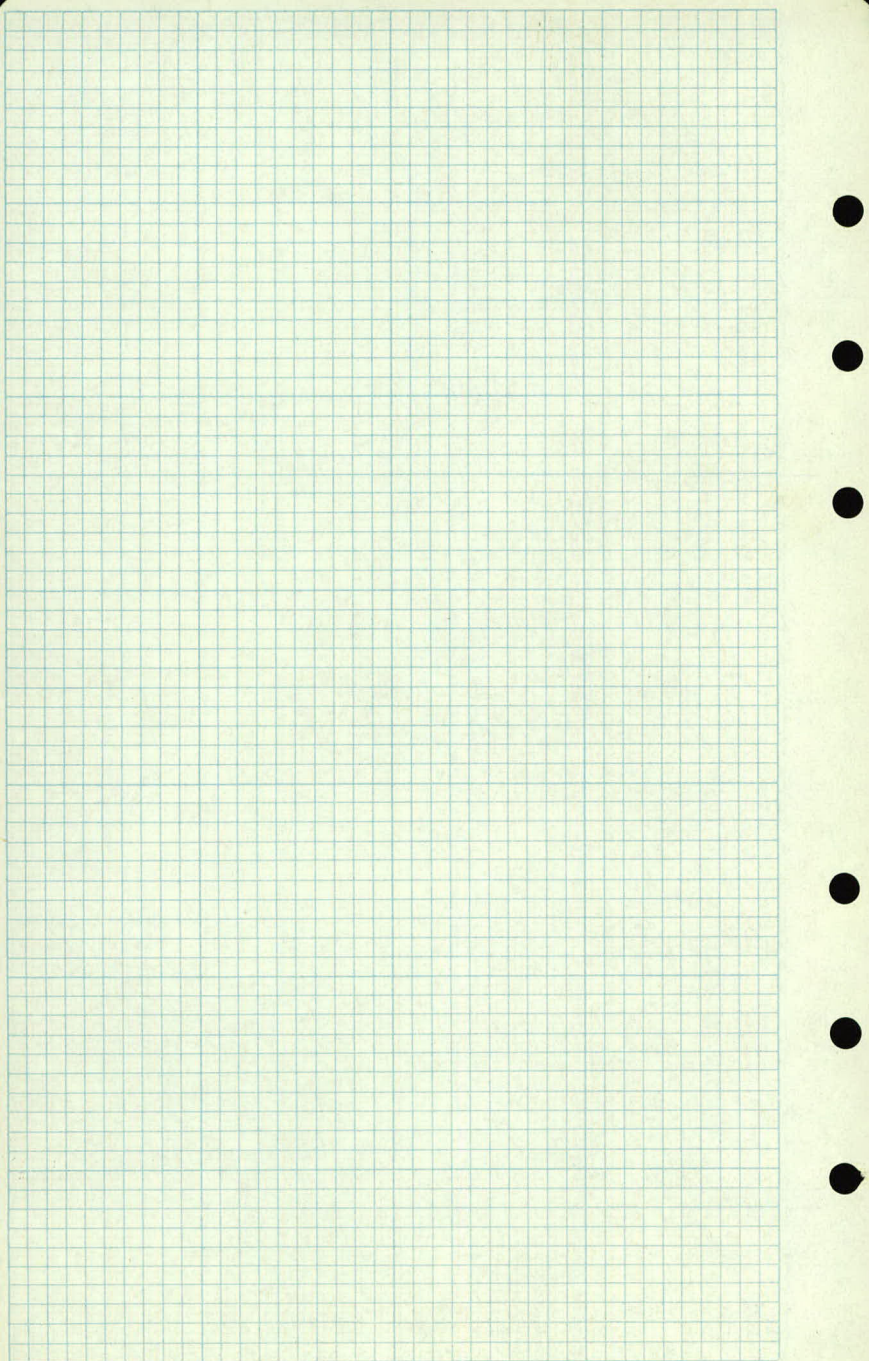
+50 Ditch 34'

+30 Beg Ditch 33'

+10 Beg Swp 24'

2

16' 16'



X Sections

Other Lake Rd.
@ Stillwater St.

Sta	+	π	-	Elev
		90198		

2+00

+3.0 Beg Ditch Lt

3

4

+83 Beg 18" CM

5+00 Int Main Ditch Lt also ~~to~~ still water str Rt

+21 End 18" CM Rt

+50

LH

R

RT

97.0

$$\begin{array}{r} 5.0 \\ 5.0 \end{array} \quad \begin{array}{r} 5.3 \\ 8.5 \end{array} \quad \begin{array}{r} 5.6 \\ 2.9 \end{array} \quad \begin{array}{r} 5.4 \\ 2.2 \end{array} \quad \begin{array}{r} 3.3 \\ 1.8 \end{array}$$

99.4

$$2.6 \quad \begin{array}{r} 3.1 \\ 1.9 \end{array} \quad \begin{array}{r} 5.4 \\ 2.4 \end{array} \quad \begin{array}{r} 5.6 \\ 4.7 \end{array} \quad \begin{array}{r} 4.1 \\ 1.0 \end{array}$$

96.4

96.4 Ditch

$$\begin{array}{r} 5.6 \\ 4.2 \end{array} \quad \begin{array}{r} 8.2 \\ 3.2 \end{array}$$

93.8

99.1

$$2.9 \quad \begin{array}{r} 6.8 \\ 3.6 \end{array} \quad \begin{array}{r} 7.1 \\ 4.3 \end{array} \quad \begin{array}{r} 7.1 \\ 5.2 \end{array}$$

94.9

96.8 Ditch

$$\begin{array}{r} 5.2 \\ 4.2 \end{array} \quad \begin{array}{r} 7.7 \\ 3.0 \end{array}$$

94.3

98.8

$$3.2 \quad \begin{array}{r} 6.2 \\ 2.5 \end{array} \quad \begin{array}{r} 7.5 \\ 8.8 \end{array} \quad \begin{array}{r} 7.2 \\ 1.0 \end{array}$$

94.5

96.1 Ditch

$$\begin{array}{r} 5.9 \\ 3.9 \end{array} \quad \begin{array}{r} 8.7 \\ 3.1 \end{array}$$

93.3

98.0

$$4.0 \quad \begin{array}{r} 6.1 \\ 2.9 \end{array} \quad \begin{array}{r} 5.8 \\ 4.1 \end{array}$$

95.9

92.3

Ditch

$$\begin{array}{r} 9.7 \\ 3.1 \end{array}$$

97.5

$$4.5$$

95.0

In

$$\begin{array}{r} 7.0 \\ 3.3 \end{array}$$

96.4

$$\begin{array}{r} 5.6 \\ 1.0 \end{array}$$

91.8

Ditch

$$\begin{array}{r} 10.2 \\ 5.0 \end{array}$$

97.3

$$4.7$$

92.1

Ditch

$$\begin{array}{r} 7.9 \\ 4.3 \end{array}$$

97.0

$$5.0$$

94.6

In

$$\begin{array}{r} 7.4 \\ 3.3 \end{array}$$

95.8

6.2

$$\begin{array}{r} 5.0 \end{array}$$

95.6

92.1

Ditch

$$\begin{array}{r} 6.4 \\ 5.0 \end{array} \quad \begin{array}{r} 9.9 \\ 4.1 \end{array}$$

97.0

$$5.0$$

94.8

Ditch

$$\begin{array}{r} 7.2 \\ 3.0 \end{array}$$

96.2

5.8

$$\begin{array}{r} 3.5 \end{array}$$

Sta	+	π	-	Elev
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6+00		901.98		
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7				
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8				
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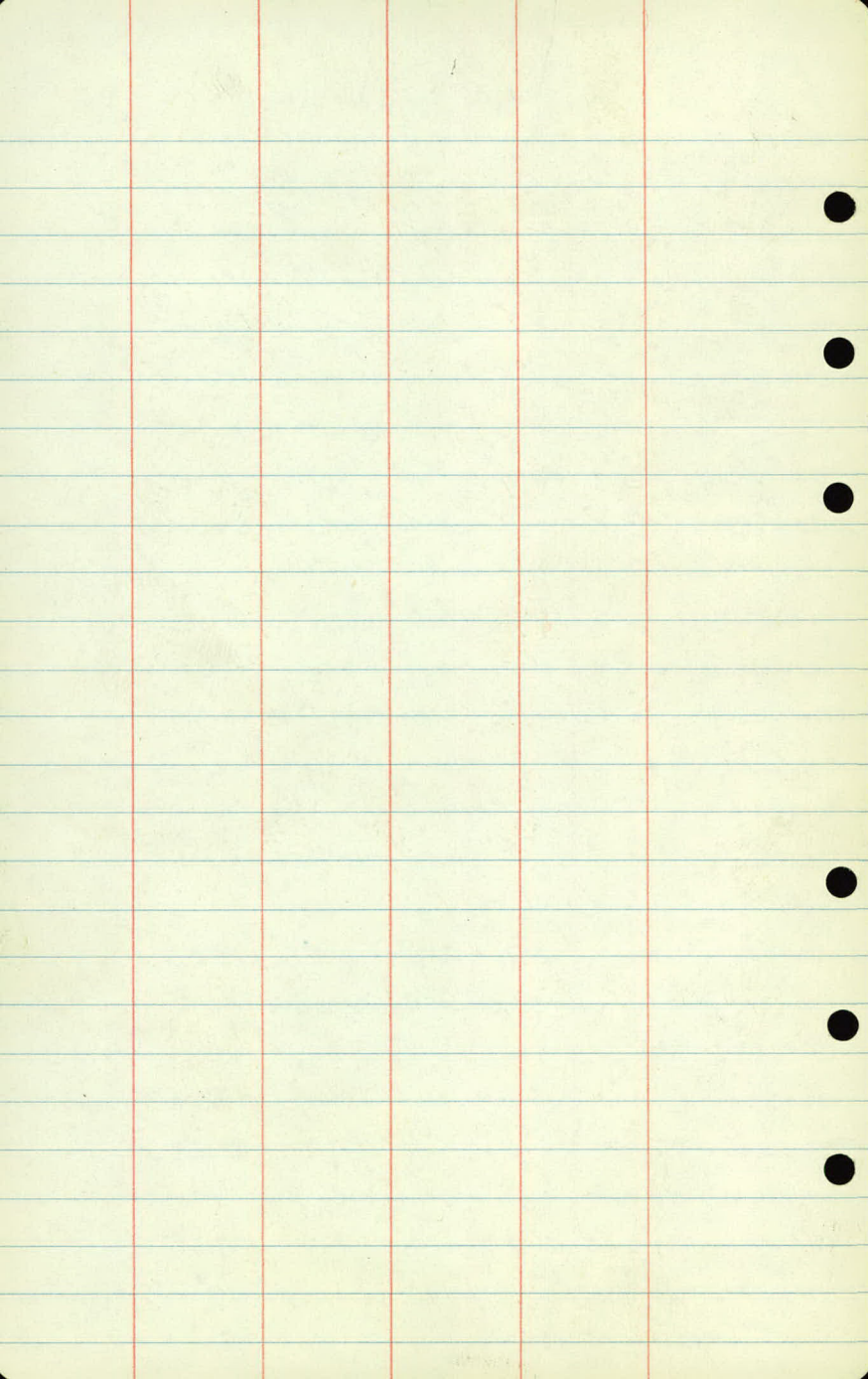
117	24" X 46' C.M. X Drain			
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9				
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T.P.	6 45	905.86	2.57	899.41
			5.86	900.00

Lt		R	Rt	
95.6	91.7		94.9	96.1
Ditch	Ditch	96.9	Ditch	
$\frac{64}{50}$	$\frac{103}{42}$	5.1	$\frac{71}{30}$	$\frac{59}{35}$
96.3	91.8		95.0	95.8
Ditch	Ditch	96.3	Ditch	
$\frac{5.7}{50}$	$\frac{10.2}{42}$	5.7	$\frac{70}{30}$	$\frac{6.2}{35}$
96.7	92.1		94.3	95.9
Ditch	Ditch	96.5	Ditch	
$\frac{5.3}{50}$	$\frac{9.9}{40}$	5.5	$\frac{77}{30}$	$\frac{6.1}{35}$
94.1			94.4	95.5
Inr		96.7	Inr	
$\frac{7.90}{23}$		5.3	$\frac{7.6}{23}$	$\frac{6.4}{50}$
95.8	98.1		96.1	
$\frac{6.2}{26}$	3.8		$\frac{5.9}{27}$	

SpK in P.P Rt.



For
Carlay
6/18/45
no imp. reqd.

Drainage situation

Otter Lake Rd

For Relocation of X Culvert

Approx 400' N. of Hammond Rd

6-18-45

HAW
AM
G.F.

+38 Into of Main Ditch 42'

7

+100 Beg 2' Btm Ditch 42' Proposed Relocation Swp 66'

+50 Swp 75'

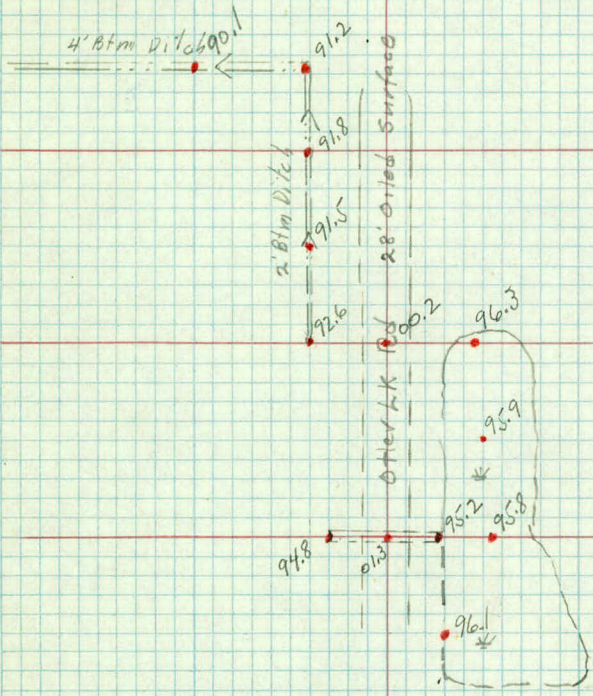
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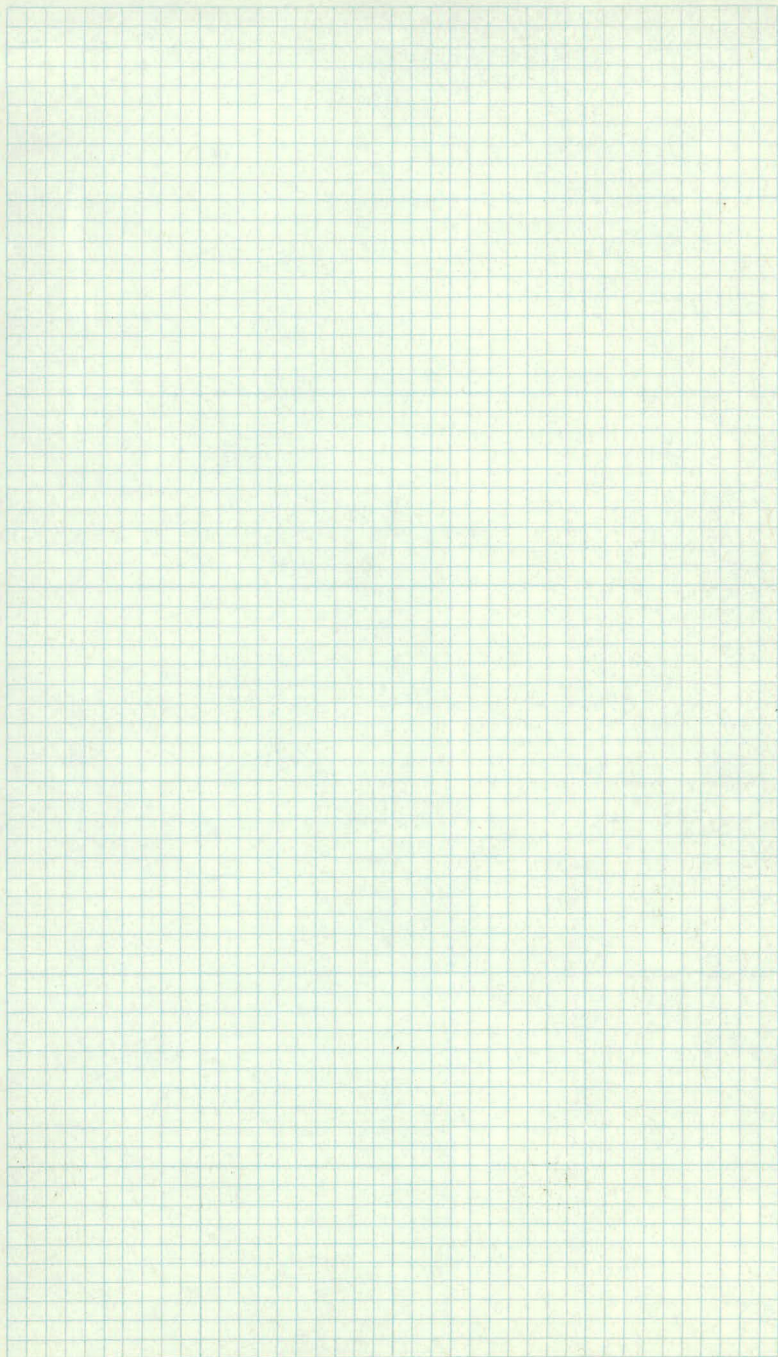
24" X 56 CM X Drain

Swp, 78'

4

+25 Beg Swp 27'-100'





Elevation Over Lake Rd
Pothole

Sta	+	π	-	Elev	
	5.38	905.38		900.00	Assumed

4+50

5+00 Present Loc 24x56 CM x Drain

+50

6 Proposed Location

+50

7

+38 Int of Main Ditch

5.38 900.00

*

Spk in P.P. 25' RT Lx40

96.1

$$\frac{9.3}{20}$$

$$\frac{9.0}{50}$$

94.8

$$\frac{10.61}{28}$$

01.3

95.2

Inv

$$\frac{10.19}{28}$$

95.8

$$\frac{9.6}{42}$$

$$\frac{9.6}{54}$$

$$\frac{9.4}{68}$$

$$\frac{9.2}{72}$$

95.9

$$\frac{9.2}{35}$$

$$\frac{9.5}{40}$$

$$\frac{9.5}{60}$$

$$\frac{9.2}{75}$$

92.6

Btm Ditch

$$\frac{10.8}{45}$$

$$\frac{12.8}{44-40}$$

$$\frac{10.8}{39}$$

$$\frac{10.3}{33}$$

$$\frac{6.4}{21}$$

00.2

$$5.2$$

$$\frac{6.0}{16}$$

$$\frac{8.9}{27}$$

$$\frac{9.1}{34}$$

$$\frac{9.0}{43}$$

$$\frac{8.9}{50}$$

$$\frac{8.8}{66}$$

91.5

$$\frac{13.7}{42}$$

91.8

$$\frac{13.6}{42}$$

90.1

$$\frac{15.3}{100}$$

91.2

$$\frac{14.2}{42}$$

