Book #9 Dr. 12-A

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Plan ..... Survey

DEEBACH ROAD

From Relocation of 84" C.M. Culvert Co.

Road Acc't. No. .....

Date Filed 6-11-35 Fil

Plan Survey

DEEBACH ROAD CULVERT

34-N-22

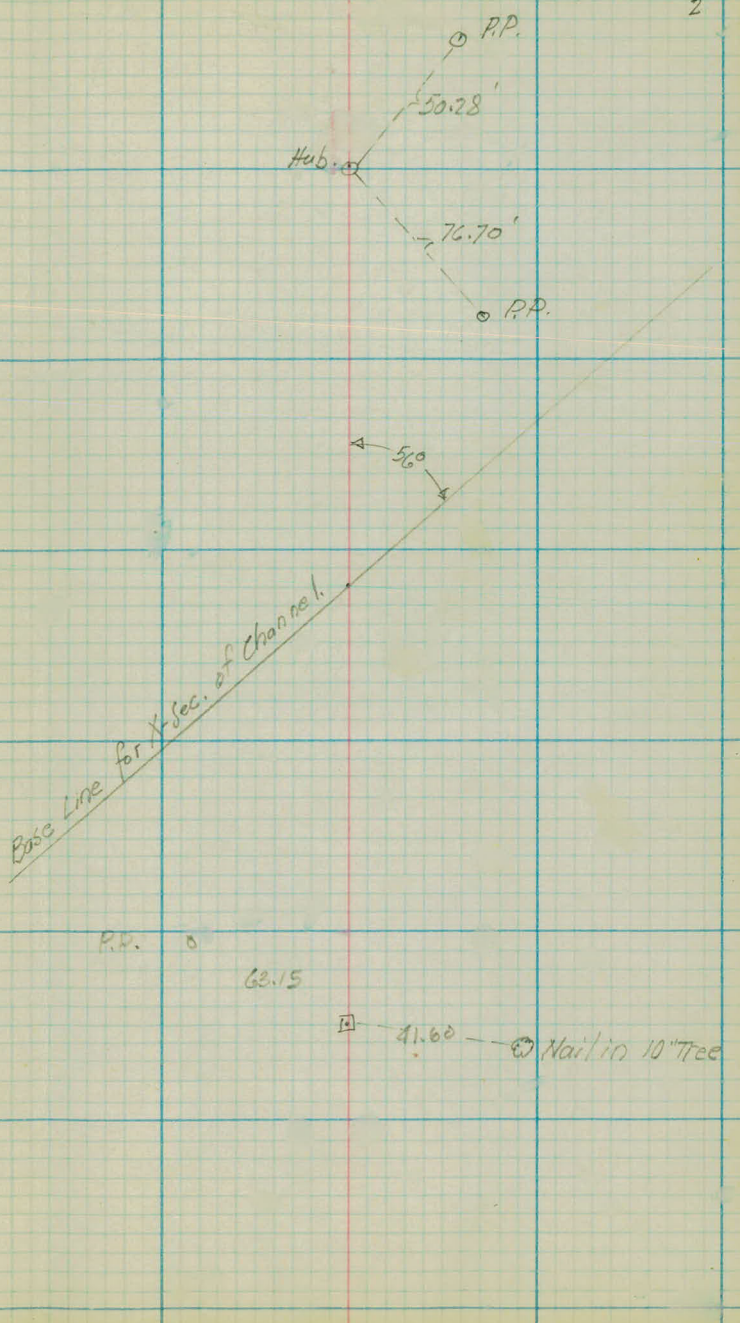
INDEX

May 29, 1935

W. H. Carlson
A. D. Cramato
L. D. Goldberg

Alignment

Sta.	Point.
13+22.35	P.O.T
7+00	P.O.T.
4+00	Mon. P.O.T.


P.P.
50.28'
Hub.
76.70'
P.P.
560
Base Line for ½ sec. of Channel
P.P.
62.15
41.60
Marlin 10" Tree

Topography
Deebach Road
Culvert.

8+0

7+50

7+0

84"x 70.6' c.M. Culv. Sag 66 STA. 7.0

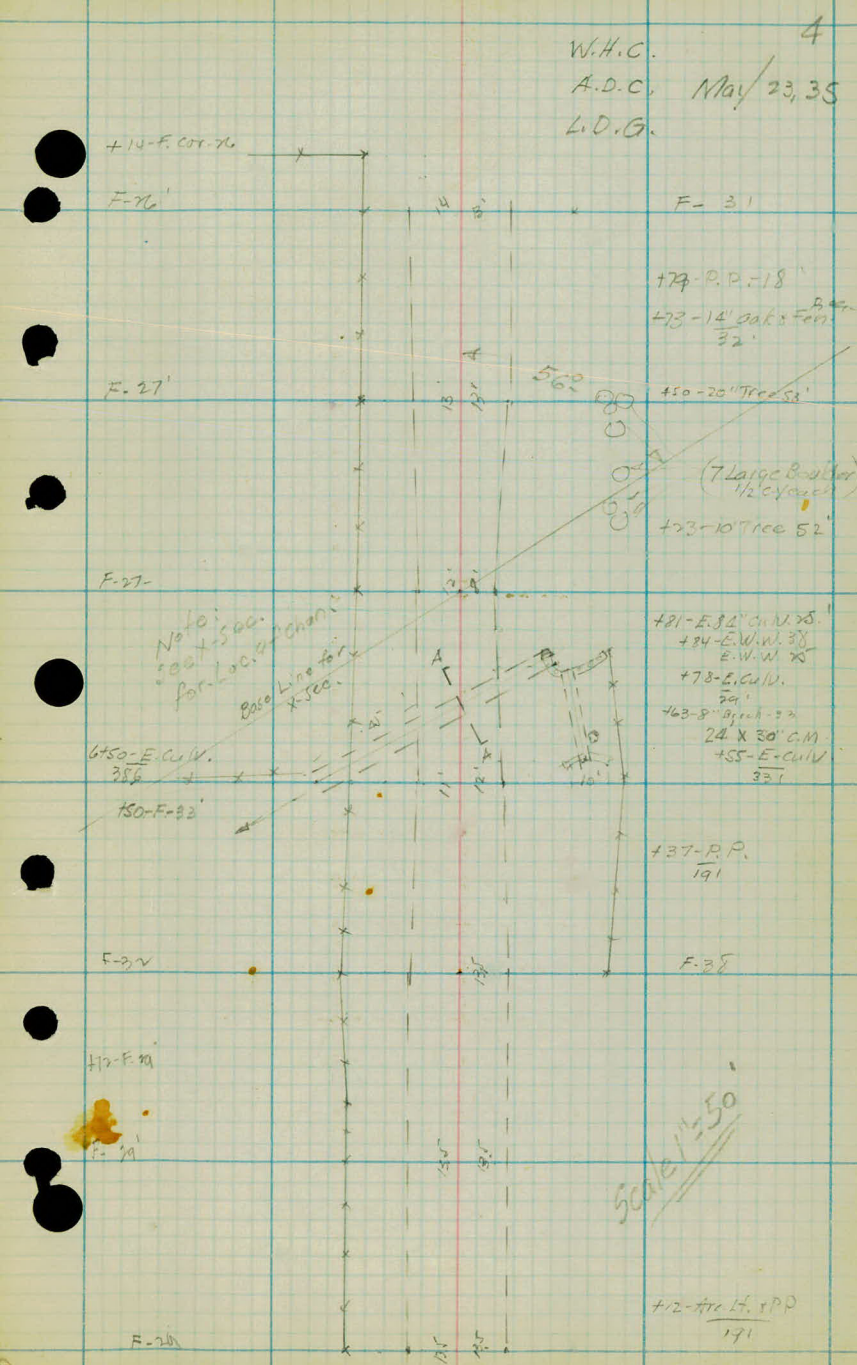
6+50 Sec. A-A

6+0

5+50

5+0

W.H.C.
A.D.C. May 23, 35
L.D.G.



& Levels +
Cross - Sections.

Sta.	+	H	−	Elev.
	0.68	894.94		894.26
5+50				94.0
+77				91.9
6+0				90.3
+22				89.1
+50				87.9
+65				87.4
7+0				88.5
+25				88.9
+50				90.2
+65				91.1
8+0				93.5
T.P.	2.89	884.16	13.67	881.27

Lt. ℄ Rt.

Spike in 15" Oak 30' Rt. Sta. 7+70

+0.6	+0.6	3.3	3.2	1.4	0.9	1.0	2.5	2.5	
33	26	21	17	13	—	13	17	21	
95.5	95.5	91.6	91.7	93.5	94.1	93.9	92.4	92.4	
3.9	3.9	5.8	5.3	3.3	3.0	2.8	4.2	4.1	1.6
40	28	23	19	13		12	17	22	25
91.0	91.0	89.1	89.6	91.6	91.9	92.1	90.7	90.8	93.3
—	—	—	4.7	4.6		4.5	6.2	6.4	4.2	1.0	+3.0	+3.0
			12	—		13	18	23	26	33	46	50
			90.2	90.3	90.4	88.7	88.5	90.7	93.9	97.9	97.9
			6.2	5.8	6.4	8.4	8.9	+3.9			
			11	—	12	13	26	34			
			88.7	89.1	88.8	86.5	86.0	88.8			
			7.7	7.0	7.0						
			12	—	12	—	—	—			
			87.2	87.9	87.9						
			7.9	7.5	7.6						
			11	—	12	—	—	—			
			89.0	87.4	87.3						
12.9	12.9	13.8	13.7	7.1	6.4	6.6			
40	29	27	23	13	—	8	—	—	—
82.0	82.0	81.1	81.2	87.8	88.5	88.3			
11.5	11.5	10.6	9.7	6.2	6.0	6.0			
40	28	24	19	13		9	—	—	—
83.4	83.4	84.3	85.2	88.7	88.9	88.9			
8.7	7.6	7.0	7.1	5.0	4.7	4.9	6.6		
40	27	22	18	14		12	17	—	—	—
86.2	87.3	87.9	87.8	89.9	90.2	90.0	88.3			
7.6	6.4	5.5	6.2	6.2	4.4	3.8	4.0	4.4	5.0	5.7	4.9	5.2	=TOP
40	27	23	22	18	14		13	16	17	24	29	38	Rock
87.3	88.5	89.4	88.7	88.7	90.5	91.1	90.9	90.5	89.9	89.2	90.2	91.7	
2.0	2.0	1.4	3.4	3.4	1.8	1.4	2.1	3.2	3.4	0.4	0.0		
40	29	25	22	18	14		13	16	20	26	33		
92.9	92.9	93.5	91.5	91.5	93.1	93.5	92.8	91.7	91.5	94.5	94.9		

Sta.	+	π	-	Elev.
		884.16		
6+50				
6+65				
7+0				
+25				
+50				
T.P.	8.38	881.81	10.73	873.43

0+00 = 56° Rt. of Sta. 7+00

1+00				
1+50				
T.P.	2.05	871.01	12.55	868.96

Lt. ℄ Rt.

-3.7 2.5/25 6.3/33 6.0/36 0.0/43

81.7 77.9 78.2 84.2

Inlet of 30" Culv. 7.70 76.5

-3.2 4.0/25 5.0/29 5.4/39 0.0/49

80.7 79.2 78.8 84.2

Outlet 30" Culv. 10.70 72.5

Inlet 84" Culv. 15.2

69.0

-4.3 7.1/25 10.8/34 11.2/38 6.5/47 1.5/55

77.1 73.4 73.0 77.7 82.7

-4.7 6.1/25 13.0/37 13.6=Chan=13.5/39 8.2/44 5.1/70.7 76.0

78.1 71.2 70.6 0.0/72 4.0/62

84.2 80.2

-6.0 1.0/25 8.0/37 10.2/46 12.7=chan=13.0/54 5.9/74.0 71.5 71.2

83.2 76.2 0.0/82 4.0/75 6.5/70 8.7/67

84.2 80.2 77.7 75.5

Lt. ℄ Rt.

S.S. 1.8/33 5.4/27 9.4/19 ℄chan 10.1/13 9.4/7 5.7/0

80.0 72.4 72.4 71.7 72.4 76.1

S.S 0.0/42 3.6/40 8.7/33 ℄chan 7.0/27 6.6/5 5

81.8 78.2 73.1 72.8 75.2

Sta.	+	IA	−	Elev.
		871.01		
0+0 = 124° - Lt. of Sta. 7+0				
1+0				
1+50				
Flow Line 84" Culvert Outlet			4.08	
6+22				
6+50				
6+65				
T.P.	12 24	881.14	2.11	868.90
6+0				
T.P.	13.18	894.11	0.21	880.93
B.M.			+0.13	894.24

Lt. ℄ Rt.

0

4.5° Slope 0.8/32 2.8/27 5.4/22 ℄chan 5.8/18 4.7/10 1.5/0

70.4 68.6 65.6 65.2 66.3 69.5

4.2° Slope 1.7/16 5.8/11 5.9/0 = ℄chan. 6.4/11 3.5/15 3.0/35

69.3 65.2 65.1 64.6 67.5 68.0

66.9

1.0/60 0.0/48 1.3/44 0.2/40 -18.1

70.0 71.0 69.7 70.8

℄-Chan → 5.0/65 4.1/39 -16.9

66.0 66.8

+3.0/60 0.0/52 1.7/43 0.3/40 -16.4

74.0 71.0 69.3 70.7

-9.2

6.0/52 4.7/44 3.0/33 0.5/28

75.1 76.4 78.1 80.6

Check on
Proposed Location
of Culvert
Deebach Road.

B.M.	0.60	894.86		894.26	
6+50					
6+65					
6+80					
0+00 = 6+92			6.5		88.4
0+11 - Rt.			6.4		88.5
0+16 Lt.			7.5		87.4
T.R.	1.59	884.25	12.20	882.66	
0+50 Rt. = Toe of Slope.			12.3		72.0
6'-Rt. of 0+50 Rt. = ℄ channel.			14.0		70.3
0+59 - Rt.			13.0		71.3
4'-Rt. of 0+59 Rt. = ℄ Channel			13.6		70.7
0+70 Rt.			12.8		71.5
3'-Rt. of 0+70 = ℄ channel			13.3		71.0
T.P.	0.36	871.34	13.27	870.98	
0+55 Lt. = Toe Slope			3.8		67.5
0+61 - Lt.			4.7		66.6
0+70 - Lt.			4.6		66.7
4' N. of 0+70 Lt. = ℄ channel			5.0		66.3
T.P.	12.01	882.88	0.47	870.87	
B.M.			11.42		
T.P.	12.73	894.91	0.70	882.18	
B.M.			0.66	894.25	

(201)

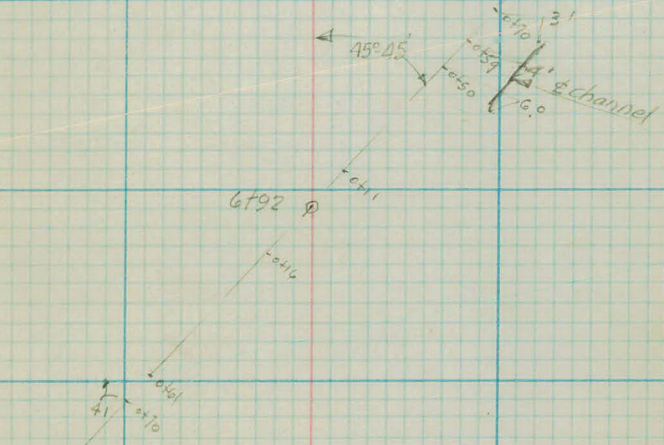
U. R. C.

May 31, 1935

Levels over culvert to show settlement since May 12

7.9 / 12	7.0	7.1 / 12
8.1 / 12	7.7	7.7 / 12
7.6 / 11	7.2	7.8 / 12

℄ 81.4



Tip large Rock Lt. 6+30

Deebach Road

Extension to Culvert

W. H. Carlson

April 20, 1937

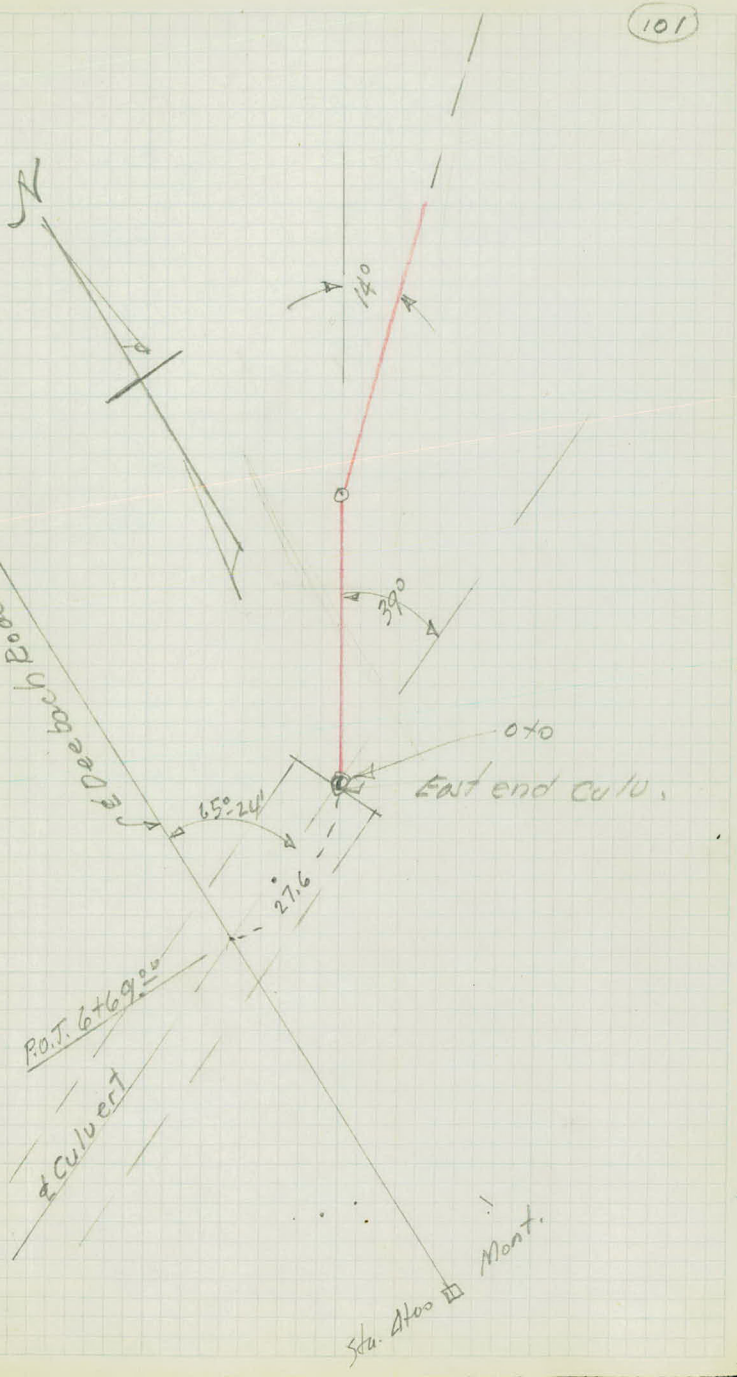
Lt Rt.

2 to ± than angle to Left.

0+75 14°00' Rt

{0+00
0+27.6 39°00' Rt.

0+0 = 6+69.5 65° 24'


N
14°
39°
0+0
East end Culv.
65°-24'
27.6
Beech Road
P.O.T. 6+69.2
℄ Culvert
Sta. 4+00
Mont.

Levels &
Cross Sections

Deebach Rd.

Culv. Extension.

W. H. Carlson
April 20, 1937

Sta.	+	℄	−	Elev.	
	0.67	894.93			894.26

E Levels Over Culv.

0			4.4	90.5	
0+35			6.3	88.6	
0+69 ℄ Culv.			8.1	86.5	
7+0		✓	6.3	88.6	✓
T.P.	0.97	882.18	13.72		881.21

0+69 $\frac{27.6}{Rt}$ Flow Line 13.3 0 868.88

0+00 = End Culv.

0+15				71.5	
0+30				71.0	
0+53				71.5	
0+75 = (P1)	X-Sec. Turn ahead.			71.8	

Spike in 15" oak 30' Rt. Sta. 7+70

Lt. ℄ Rt.

13.30 = Flow 84" Cu/U.

6.5 / 7	9.2 / 6	10.7	12.3 / 4	12.8 / 9	7.4 / 19	+2.0 / 21	+5.0 / 26	+13.0 / 39	+17 / 47	
5.2 / 14	9.4 / 9	11.4 / 5	11.2	11.2 / 2	8.2 / 5	0.5 / 17	+8.0 / 35	+18.3 / 49		Lo.
3.5 / 24	7.0 / 18	10.1 / 10	10.7	10.7 / 2	5.6 / 7	2.8 / 15	0.0 / 22	+10.0 / 35	+17.0 / 49	L.J
6.9 / 20	8.2 / 10	10.4 / 6	10.4	10.4 / 4	5.3 / 9	0.0 / 20	+10.5 / 37	+16.0 / 50		

Sta.	+	H	−	Elev.
		882.18		
1+00				72.5
1+25				72.5
1+50				72.8
1+75				73.0
		✓		✓
	13.62	894.83	0.97	881.21
B.M.			0.59	(893.24)
				894.24

Lt ℄ Rt.

Up

0.0 / 22	6.1 / 12	9.6 / 6	9.7 / 1	9.5 / 5	6.5 / 11	4.1 / 18

Up

4.0 / 17	3.8 / 7	9.3 / 2	9.7 / 1	9.4 / 9	2.5 / 17

Up

0.0 / 18	7.0 / 11	9.5 / 6	9.4 / 1	9.0 / 5	7.5 / 8	6.8 / 13	1.7 / 20

9.2

0+72 - 30" CW. 1/0 W
0' Lt.

0+48 - 18" Oak Top off.
7' Rt.

B.M.	1.54	895.80		894.26
Sub Grade			9.2	86.6
	7.7	5.1	12.6	83.2
			18.8	77.0
			23.8	72.0
	1.02	883.54	13.28	882.52
	1.23	872.60	12.17	871.37
			0.6	720
	7.17	873.57	6.20	866.40
			1.6	720