

BK 47 Dr 16

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Drainage Survey

New Brighton Rd

From 1000' S. of To C. Ditch
Co Rd "B" # 4

Road Acc't. No. 16

Date Filed

File

BK 47 - Dr 16

Stadia

Limits of Water Holes

Sta	Azimuth	Stadia	Rod Reading	
B.M.	3.61	977.48		973.87
T.P.	5.24	977.80	4.92	972.56
At Sta. B + 100				
North =	0°00'			
W.E.	47°15'		8.05	69.75
W.E.	47°15'	1.00		
N.G.	47°00'	1.70	10.2	67.6
W.E.	76°40'	1.18		
N.G.	62°15'	2.58	10.5	67.3
W.E.	109°40'	1.65		
"	133°50'	2.00		
"	148°45'	3.36		
N.G.	72°45'	2.0	11.1	66.7
W.E.	150°15'	4.30		
N.G.	104°30'	2.09	9.7	68.1
W.E.	153°10'	5.32		
"	148°10'	5.34		
N.G.	90°45'	2.72	10.5	67.3
W.E.	147°15'	5.75		
N.G.	82°15'	3.35	11.1	66.7
W.E.	140°20'	5.72		
N.G.	92°15'	4.05	9.3	68.5
W.E.	128°30'	5.25		
"	103°00'	5.78		
"	110°00'	7.13		

Description

Top Mont. New Brighton Rd & Co. Rd. B.

W.E. = Water Edge

N.G. = Natural Ground.

Elev. Water.

Sta	Azimuth	Stadia	Red Reading	
H.I. = 977.80				
N.G.	108°15'	3.52	10.6	67.2
W.E.	102°15'	6.00		
"	100°30'	6.00		
N.G.	116°30'	2.90	11.1	66.7
W.E.	98°00'	6.58		
"	90°00'	6.60		
N.G.	136°00'	3.22	10.1	67.7
W.E.	84°30'	6.35		
"	81°00'	5.97		
N.G.	127°45'	3.65	11.1	66.7
W.E.	75°30'	4.34		
"	63°30'	3.82		
N.G.	116°00'	3.90	10.6	67.2
W.E.	54°45'	3.70		
N.G.	105°00'	4.47	10.6	67.2
W.E.	46°15'	3.28		
"	38°00'	2.58		
N.G.	115°00'	4.35	10.1	67.7
W.E.	30°30'	1.88		
"	18°00'	1.52		
N.G.	126°10'	4.35	10.6	67.2
"	143°00'	4.73	10.2	67.6
"	137°30'	3.40	9.9	67.9
"	110°00'	5.32	9.9	67.9

Description

W.E. = Water Edge

N.G. = Natural Ground.

Sta.	Azimuth	Stadia	Red Reading	
	H.I. = 977.80			
N.G.	106°15'	6.00	9.6	68.2
	W. side of Road			
	200°00'		7.4	70.4
W.E.	253°30'	0.68		
"	264°00'	1.63		
N.G.	221°00'	1.65	11.1	66.7
"	254°30'	2.05	10.0	67.8
W.E.	278°00'	2.32		
"	268°00'	2.80		
N.G.	237°00'	1.87	10.4	67.4
W.E.	257°00'	2.80		
"	230°30'	2.58		
"	217°15'	2.60		
"	207°30'	2.44		
N.G.	223°15'	2.05	10.4	67.4
W.E.	199°45'	2.65		
N.G.	203°00'	1.60	10.4	67.4
"	212°30'	1.42	12.2	65.6

At Sta. 2+00

B.M.	6.31	978.01		977.70
North =	0°00'			
			7.68	70.33
W.E.	241°30'	1.12		
W.E.	220°30'	1.34		

Description

W. E. = Water Edge

N. G. = Natural Ground.

= Elev. water 5-7-40

Spt. in 18" Willow 48' 1473

Elev. Water

Sta.	Azimuth	Stadia	rod reading	
	H.I. = 978.01			
W. E.	217° 00'	1.72		
W. E.	336° 30'	1.38		
W. E.	326° 15'	1.77		
W. E.	222° 00'	2.58		
W. E.	327° 30'	2.30		
W. E.	322° 45'	2.70		
W. E.	226° 30'	3.16		
W. E.	322° 45'	2.75		
W. E.	315° 00'	2.00		
W. E.	300° 15'	1.32		
W. E.	238° 45'	4.20		
N. G.	311° 45'	1.05	9.1	68.9
W. E.	252° 40'	5.06		
W. E.	272° 00'	4.82		
W. E.	276° 10'	5.30		
W. E.	276° 30'	4.70		
W. E.	281° 40'	1.18		
W. E.	273° 30'	4.48		
W. E.	271° 15'	3.52		
W. E.	269° 40'	1.87		
W. E.	266° 30'	2.82		
N. G.	257° 15'	1.50	8.7	69.3
N. G.	257° 00'	3.58	8.6	69.4
N. G.	247° 30'	1.44	8.6	69.4

Sta	Azimuth	Stadia	Rod Reading	
H.I. = 978.01				
N. G.	248°30'	3.42	8.7	69.3
N. G.	232°00'	1.55	9.3	68.7
N. G.	242°30'	3.34	8.2	69.8
N. G.	229°10'	2.84	8.3	69.7
N. G.	239°15'	2.58	8.5	69.5
N. G.	246°30'	2.55	9.4	68.6
N. G.	253°30'	2.52	8.2	69.8

At Sta. 5+00

H.I. = 977.57

North = 0°00'				
	264°00'	2.25	7.2	
N. G.	251°10'	1.85	7.0	70.6
N. G.	266°30'	2.26	7.2	68.4
"	247°30'	2.33	5.3	72.3
"	267°15'	2.64	9.4	68.2
"	257°30'	1.30	4.6	73.0
W. E.	256°00'	1.95		
"	257°45'	2.72		
"	264°30'	3.60		
N. G.	269°00'	3.0	8.8	68.8
W. E.	269°30'	4.10		
"	277°15'	3.90		
"	278°45'	3.12		

Elev. water. 5-8-40

971.70
5.41
977.51

Sta.	Azimuth	Stadia	Red Reading	
H.I. =				
W.E	269°00'	2.27		
"	275°30'	1.86		
"	264°30'	1.78		
N.G.	275°00'	1.28	4.3'	73.3
N.G.	286°50'	1.83	5.8	71.8
N.G.	291°30'	2.35	4.2	73.4

At Sta. 14+00

H.I. = 978.02

North = 0°00'				
	80°00'	1.00	8.26	69.74
W.E	52°30'	0.53		
"	67°30'	0.83		
"	63°30'	1.18		
"	79°30'	1.83		
"	86°45'	1.48		
"	93°15'	1.06		
"	103°15'	0.68		
N.G.	82°00'	0.70	9.0	69.0
"	76°45'	1.15	8.9	69.1

At Sta. 18+00

H.I. = 976.67

North = 0°00' to Sta. 20+00

$$\begin{array}{r} 978.52 \\ \underline{8.50} \\ 978.02 \end{array}$$

Elek Water 5-8-40

$$\begin{array}{r} 978.87 \\ \underline{2.80} \\ 976.67 \end{array}$$

Sta. Azimuth Stadia ^{Red} Reading

H.I. = 976.67

W.E.	11° 40'	1.38
W.E.	28° 30'	1.95
W.E.	37° 00'	1.82
W.E.	41° 40'	1.66
W.E.	51° 00'	1.78
W.E.	76° 15'	1.60
W.E.	90° 15'	1.49
W.E.	105° 15'	1.25
W.E.	128° 40'	0.90
W.E.	142° 30'	0.78
W.E.	151° 15'	0.59
W.E.	60° 45'	0.28
W.E.	14° 50'	0.90

12.40

64.27

N.G.	46° 45'	1.07	13.9
N.G.	77° 15'	0.73	13.8

62.8

62.9

W. Side of Road

W.E.	207° 15'	0.60
W.E.	218° 40'	0.68
W.E.	270° 30'	0.82
W.E.	279° 30'	1.11
W.E.	276° 00'	1.45
W.E.	268° 00'	1.68
W.E.	256° 30'	1.80

Elev. Water. 5-8-40

Sta	Azimuth	Stadia	Red. Reading
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H.I. = 976.67

W.E.	242°00'	1.62	
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W.E.	235°15'	1.66	
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W.E.	242°00'	1.93	
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W.E.	254°45'	1.90	
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W.E.	260°40'	2.00	
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W.E.	275°00'	1.88	
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W.E.	289°30'	1.52	
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W.E.	306°00'	1.11	
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W.E.	331°00'	1.21	
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W.E.	344°45'	1.30	
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W.E.	348°40'	1.28	
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W.E.	330°30'	0.44	
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W.E.	244°30'	0.22	
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xsections

Sta.	+	π	-	Elev.	
B.M.	3.69	977.56			(973.87)
I.P.	4.82	977.25	5.13	972.43	
I.P.	5.10	977.54	4.81	972.44	
B.M.	5.45	977.15	5.84	971.70	
0	+00			76.6	
	+50			75.4	
1				74.3	
	+50			73.2	
2				72.7	
	+18			72.5	
	+51			72.4	
	+73			72.4	
3				72.4	
	+41			72.2	

Lt.

R.

Rt.

High Point on Mont. New Brighton Rd. + Co. Rd. "B"

Spike in 18" Willow 48 Lt. sta. 1773

$$\begin{array}{r} 17 \\ 50 \end{array} \quad \begin{array}{r} 18 \\ 44 \end{array} \quad \begin{array}{r} 26 \\ 28 \end{array} \quad \begin{array}{r} 09 \\ 19 \end{array} \quad \begin{array}{r} 06 \\ 9 \end{array} \quad \begin{array}{r} 06 \\ 8 \end{array} \quad \begin{array}{r} 08 \\ 19 \end{array} \quad \begin{array}{r} 10 \\ 28 \end{array} \quad \begin{array}{r} 43 \\ 40 \end{array} \quad \begin{array}{r} 46 \\ 50 \end{array} \quad \begin{array}{r} 37 \\ 50 \end{array}$$

$$\begin{array}{r} 55 \\ 50 \end{array} \quad \begin{array}{r} 59 \\ 46 \end{array} \quad \begin{array}{r} 56 \\ 29 \end{array} \quad \begin{array}{r} 24 \\ 19 \end{array} \quad \begin{array}{r} 20 \\ 10 \end{array} \quad \begin{array}{r} 18 \\ 9 \end{array} \quad \begin{array}{r} 20 \\ 19 \end{array} \quad \begin{array}{r} 24 \\ 29 \end{array} \quad \begin{array}{r} 53 \\ 38 \end{array} \quad \begin{array}{r} 67 \\ 50 \end{array} \quad \begin{array}{r} 66 \\ 50 \end{array}$$

$$\begin{array}{r} 6.2 \\ 50 \end{array} \quad \begin{array}{r} 6.3 \\ 43 \end{array} \quad \begin{array}{r} 7.3 \\ 42 \end{array} \quad \begin{array}{r} 7.0 \\ 31 \end{array} \quad \begin{array}{r} 3.4 \\ 19 \end{array} \quad \begin{array}{r} 3.2 \\ 10 \end{array} \quad \begin{array}{r} 2.9 \\ 9 \end{array} \quad \begin{array}{r} 3.1 \\ 20 \end{array} \quad \begin{array}{r} 3.4 \\ 32 \end{array} \quad \begin{array}{r} 6.9 \\ 38 \end{array} \quad \begin{array}{r} 7.4 \\ 38 \end{array} \quad \begin{array}{r} 8.2 \\ 50 \end{array}$$

$$\begin{array}{r} 7.0 \\ 50 \end{array} \quad \begin{array}{r} 7.9 \\ 35 \end{array} \quad \begin{array}{r} 6.9 \\ 30 \end{array} \quad \begin{array}{r} 4.1 \\ 20 \end{array} \quad \begin{array}{r} 4.1 \\ 12 \end{array} \quad \begin{array}{r} 4.0 \\ 10 \end{array} \quad \begin{array}{r} 4.0 \\ 10 \end{array} \quad \begin{array}{r} 4.2 \\ 19 \end{array} \quad \begin{array}{r} 7.2 \\ 28 \end{array} \quad \begin{array}{r} 8.3 \\ 36 \end{array} \quad \begin{array}{r} 8.7 \\ 50 \end{array}$$

69.1

$$\begin{array}{r} 7.4 \\ 50 \end{array} \quad \begin{array}{r} 7.0 \\ 27 \end{array} \quad \begin{array}{r} 5.0 \\ 21 \end{array} \quad \begin{array}{r} 4.6 \\ 16 \end{array} \quad \begin{array}{r} 4.5 \\ 13 \end{array} \quad \begin{array}{r} 4.7 \\ 20 \end{array} \quad \begin{array}{r} 5.1 \\ 27 \end{array} \quad \begin{array}{r} 6.8 \\ 29 \end{array} \quad \begin{array}{r} 6.8 \\ 37 \end{array} \quad \begin{array}{r} 7.1 \\ 37 \end{array} \quad \begin{array}{r} 6.8 \\ 50 \end{array}$$

69.05

(Culv.)

(R.L. Culv.) 69.15

$$\begin{array}{r} 8.0 \\ 50 \end{array} \quad \begin{array}{r} 8.1 \\ 24 \end{array} \quad \begin{array}{r} 5.2 \\ 22 \end{array} \quad \begin{array}{r} 4.7 \\ 16 \end{array} \quad \begin{array}{r} 4.7 \\ 14 \end{array} \quad \begin{array}{r} 4.8 \\ 20 \end{array} \quad \begin{array}{r} 5.0 \\ 25 \end{array} \quad \begin{array}{r} 8.0 \\ 29 \end{array} \quad \begin{array}{r} 7.3 \\ 36 \end{array} \quad \begin{array}{r} 4.7 \\ 36 \end{array} \quad \begin{array}{r} 4.8 \\ 50 \end{array}$$

$$\begin{array}{r} 8.1 \\ 50 \end{array} \quad \begin{array}{r} 7.8 \\ 32 \end{array} \quad \begin{array}{r} 2.0 \\ 26 \end{array} \quad \begin{array}{r} 4.9 \\ 15 \end{array} \quad \begin{array}{r} 4.8 \\ 14 \end{array} \quad \begin{array}{r} 5.0 \\ 19 \end{array} \quad \begin{array}{r} 5.4 \\ 20 \end{array} \quad \begin{array}{r} 6.8 \\ 24 \end{array} \quad \begin{array}{r} 7.1 \\ 28 \end{array} \quad \begin{array}{r} 6.8 \\ 34 \end{array} \quad \begin{array}{r} 4.7 \\ 39 \end{array} \quad \begin{array}{r} 4.8 \\ 50 \end{array}$$

$$\begin{array}{r} 7.7 \\ 50 \end{array} \quad \begin{array}{r} 7.5 \\ 37 \end{array} \quad \begin{array}{r} 7.0 \\ 28 \end{array} \quad \begin{array}{r} 5.2 \\ 17 \end{array} \quad \begin{array}{r} 5.0 \\ 12 \end{array} \quad \begin{array}{r} 4.8 \\ 14 \end{array} \quad \begin{array}{r} 5.2 \\ 19 \end{array} \quad \begin{array}{r} 5.4 \\ 17 \end{array} \quad \begin{array}{r} 6.7 \\ 24 \end{array} \quad \begin{array}{r} 6.9 \\ 29 \end{array} \quad \begin{array}{r} 6.7 \\ 34 \end{array} \quad \begin{array}{r} 5.4 \\ 39 \end{array} \quad \begin{array}{r} 5.4 \\ 50 \end{array}$$

69.5

$$\begin{array}{r} 7.7 \\ 50 \end{array} \quad \begin{array}{r} 6.8 \\ 27 \end{array} \quad \begin{array}{r} 5.4 \\ 21 \end{array} \quad \begin{array}{r} 5.2 \\ 15 \end{array} \quad \begin{array}{r} 4.8 \\ 14 \end{array} \quad \begin{array}{r} 5.1 \\ 19 \end{array} \quad \begin{array}{r} 5.2 \\ 25 \end{array} \quad \begin{array}{r} 6.7 \\ 29 \end{array} \quad \begin{array}{r} 7.1 \\ 33 \end{array} \quad \begin{array}{r} 6.8 \\ 40 \end{array} \quad \begin{array}{r} 4.8 \\ 40 \end{array} \quad \begin{array}{r} 5.0 \\ 50 \end{array}$$

$$\begin{array}{r} 6.5 \\ 50 \end{array} \quad \begin{array}{r} 6.3 \\ 40 \end{array} \quad \begin{array}{r} 6.7 \\ 38 \end{array} \quad \begin{array}{r} 7.1 \\ 30 \end{array} \quad \begin{array}{r} 6.8 \\ 28 \end{array} \quad \begin{array}{r} 5.5 \\ 19 \end{array} \quad \begin{array}{r} 5.2 \\ 14 \end{array} \quad \begin{array}{r} 5.0 \\ 12 \end{array} \quad \begin{array}{r} 5.2 \\ 19 \end{array} \quad \begin{array}{r} 5.3 \\ 23 \end{array} \quad \begin{array}{r} 6.6 \\ 28 \end{array} \quad \begin{array}{r} 6.9 \\ 32 \end{array} \quad \begin{array}{r} 6.7 \\ 41 \end{array} \quad \begin{array}{r} 3.4 \\ 50 \end{array}$$

Sta	+	π	-	Elev
		977.15		
3	+74			72.1
4				72.0
	+50			72.6
5				72.4
T.P.	4.90	977.28	477	972.38
	+50			72.2
6				72.2
	+50			72.3
7				72.2
	+50			72.2
8				72.5

410 Fl. S. End of Ent. Cul. vs.

Lt

K

Rt

$$\begin{array}{cccccccccccccccc} \frac{46}{50} & \frac{46}{42} & \frac{70}{35} & \frac{72}{30} & \frac{68}{24} & \frac{55}{20} & \frac{52}{14} & \frac{51}{13} & \frac{54}{19} & \frac{57}{23} & \frac{68}{28} & \frac{70}{32} & \frac{69}{41} & \frac{40}{50} & \frac{38}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{44}{50} & \frac{45}{42} & \frac{70}{34} & \frac{73}{30} & \frac{69}{26} & \frac{55}{22} & \frac{53}{18} & \frac{52}{13} & \frac{54}{19} & \frac{58}{23} & \frac{68}{28} & \frac{70}{34} & \frac{68}{41} & \frac{40}{50} & \frac{40}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{38}{50} & \frac{35}{41} & \frac{70}{32} & \frac{72}{28} & \frac{69}{25} & \frac{53}{18} & \frac{50}{12} & \frac{48}{12} & \frac{51}{20} & \frac{54}{24} & \frac{69}{28} & \frac{71}{32} & \frac{69}{41} & \frac{37}{50} & \frac{39}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{40}{50} & \frac{38}{42} & \frac{67}{34} & \frac{72}{29} & \frac{69}{25} & \frac{54}{20} & \frac{50}{14} & \frac{48}{13} & \frac{52}{19} & \frac{55}{23} & \frac{69}{28} & \frac{70}{34} & \frac{69}{41} & \frac{45}{50} & \frac{50}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{64}{50} & \frac{59}{42} & \frac{69}{37} & \frac{73}{31} & \frac{70}{25} & \frac{55}{18} & \frac{53}{13} & \frac{51}{12} & \frac{53}{20} & \frac{57}{23} & \frac{69}{29} & \frac{72}{34} & \frac{71}{42} & \frac{49}{50} & \frac{55}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{80}{50} & & \frac{69}{26} & \frac{54}{20} & \frac{52}{13} & \frac{51}{12} & \frac{53}{19} & \frac{56}{23} & \frac{71}{28} & \frac{74}{35} & \frac{73}{42} & \frac{44}{50} & \frac{46}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{89}{50} & \frac{81}{29} & \frac{70}{25} & \frac{55}{19} & \frac{51}{12} & \frac{50}{13} & \frac{52}{18} & \frac{55}{22} & \frac{71}{28} & \frac{74}{35} & \frac{73}{41} & \frac{50}{50} & \frac{52}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{93}{37} & \frac{88}{31} & \frac{65}{23} & \frac{54}{17} & \frac{52}{11} & \frac{51}{12} & \frac{53}{19} & \frac{58}{24} & \frac{74}{30} & \frac{75}{37} & \frac{74}{42} & \frac{60}{50} & \frac{58}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{88}{50} & \frac{78}{28} & \frac{71}{24} & \frac{53}{17} & \frac{51}{17} & \frac{51}{11} & \frac{53}{19} & \frac{56}{24} & \frac{73}{30} & \frac{75}{37} & \frac{74}{42} & \frac{66}{50} & \frac{54}{50} \end{array}$$

$$\begin{array}{cccccccccccccccc} \frac{57}{50} & \frac{61}{41} & \frac{70}{35} & \frac{75}{29} & \frac{71}{26} & \frac{52}{19} & \frac{49}{9} & \frac{48}{12} & \frac{51}{19} & \frac{55}{24} & \frac{74}{30} & \frac{72}{35} & \frac{46}{42} & \frac{43}{50} \end{array}$$

$$\frac{7.50}{69.78}$$

$$\frac{7.50}{69.78}$$

Sta + π - Elev

977.28.

8 +30 E.L. N. End of Ent. Culv.

+50

72.5

9

72.5

+25

72.5

+70

72.5

10

72.4

T.P.

4.73

977.16

4.85

972.43

+50

72.5

11

72.5

+50

72.4

12

72.6

+50

72.7

Lt

A

Rt

$$\begin{array}{r} 770 \\ 69.58 \end{array}$$

$$\begin{array}{r} 770 \\ 69.58 \end{array}$$

$$\begin{array}{r} 11 \quad 18 \quad 27 \quad 70 \quad 74 \quad 70 \quad 53 \quad 49 \quad 48 \quad 50 \quad 54 \quad 75 \quad 77 \quad 76 \quad 45 \quad 64 \\ 60 \quad 50 \quad 42 \quad 31 \quad 29 \quad 26 \quad 18 \quad 9 \quad 12 \quad 20 \quad 25 \quad 32 \quad 38 \quad 42 \quad 50 \end{array}$$

$$\begin{array}{r} 107 \quad 0.3 \quad 13 \quad 60 \quad 45 \quad 71 \quad 54 \quad 50 \quad 48 \quad 50 \quad 57 \quad 75 \quad 78 \quad 78 \\ 60 \quad 50 \quad 42 \quad 32 \quad 29 \quad 25 \quad 18 \quad 10 \quad 11 \quad 20 \quad 24 \quad 33 \quad 50 \end{array}$$

$$\begin{array}{r} 103 \quad 0.2 \quad 14 \quad 65 \quad 70 \quad 69 \quad 54 \quad 50 \quad 48 \quad 50 \quad 58 \quad 73 \quad 78 \quad 75 \quad 75 \quad 80 \\ 60 \quad 50 \quad 40 \quad 31 \quad 27 \quad 23 \quad 19 \quad 10 \quad 11 \quad 20 \quad 24 \quad 31 \quad 36 \quad 43 \quad 50 \end{array}$$

$$\begin{array}{r} 42 \quad 42 \quad 67 \quad 74 \quad 69 \quad 53 \quad 49 \quad 48 \quad 50 \quad 56 \quad 73 \quad 81 \quad 78 \quad 74 \quad 74 \\ 50 \quad 43 \quad 35 \quad 30 \quad 24 \quad 18 \quad 10 \quad 11 \quad 20 \quad 25 \quad 32 \quad 35 \quad 38 \quad 50 \end{array}$$

$$\begin{array}{r} 58 \quad 63 \quad 73 \quad 76 \quad 73 \quad 55 \quad 50 \quad 49 \quad 50 \quad 57 \quad 66 \quad 86 \quad 82 \quad 79 \quad 77 \\ 50 \quad 41 \quad 37 \quad 31 \quad 26 \quad 20 \quad 10 \quad 10 \quad 20 \quad 25 \quad 31 \quad 36 \quad 43 \quad 50 \end{array}$$

$$\begin{array}{r} 72 \quad 75 \quad 77 \quad 77 \quad 57 \quad 51 \quad 47 \quad 47 \quad 54 \quad 78 \quad 88 \quad 89 \quad 79 \quad 79 \\ 50 \quad 36 \quad 31 \quad 26 \quad 21 \quad 12 \quad 10 \quad 20 \quad 25 \quad 33 \quad 37 \quad 41 \quad 50 \end{array}$$

$$\begin{array}{r} 81 \quad 84 \quad 83 \quad 79 \quad 56 \quad 49 \quad 47 \quad 49 \quad 54 \quad 77 \quad 87 \quad 88 \quad 74 \quad 74 \\ 50 \quad 44 \quad 33 \quad 27 \quad 21 \quad 14 \quad 11 \quad 19 \quad 25 \quad 31 \quad 36 \quad 42 \quad 50 \end{array}$$

$$\begin{array}{r} 78 \quad 79 \quad 74 \quad 51 \quad 48 \quad 46 \quad 50 \quad 55 \quad 79 \quad 90 \quad 86 \quad 68 \quad 67 \\ 50 \quad 34 \quad 29 \quad 21 \quad 14 \quad 11 \quad 20 \quad 26 \quad 33 \quad 37 \quad 42 \quad 50 \end{array}$$

$$\begin{array}{r} 72 \quad 79 \quad 73 \quad 56 \quad 49 \quad 46 \quad 49 \quad 53 \quad 78 \quad 85 \quad 85 \quad 54 \quad 51 \\ 50 \quad 36 \quad 27 \quad 22 \quad 13 \quad 12 \quad 19 \quad 24 \quad 28 \quad 33 \quad 42 \quad 50 \end{array}$$

$$\begin{array}{r} 72 \quad 78 \quad 76 \quad 50 \quad 46 \quad 45 \quad 47 \quad 52 \quad 75 \quad 84 \quad 81 \quad 47 \quad 45 \\ 50 \quad 35 \quad 28 \quad 21 \quad 12 \quad 12 \quad 20 \quad 24 \quad 29 \quad 34 \quad 43 \quad 50 \end{array}$$

Sta	+	π	-	Elev
		977.16		
13				72.5
	+50			72.5
14	+69	F.L. 18" Conc. & Culv.		
				72.7
	+50			72.8
	+76			73.0
15				73.1
J.R.	5.11	978.26	4.01	973.15
	+31			73.4
	+45			73.7
	+50			73.7
	+56			73.8

H.

L.

Rt.

19.76

$\frac{7.40}{50}$ $\frac{7.7}{50}$ $\frac{8.2}{35}$ $\frac{7.7}{30}$ $\frac{5.2}{20}$ $\frac{4.9}{11}$ $\frac{4.6}{12}$ $\frac{4.9}{21}$ $\frac{5.3}{26}$ $\frac{7.7}{32}$ $\frac{8.3}{37}$ $\frac{8.3}{42}$ $\frac{6.3}{50}$ $\frac{6.0}{50}$ $\frac{7.40}{50}$ Top Water.

69.76

$\frac{8.4}{50}$ $\frac{8.5}{39}$ $\frac{7.2}{28}$ $\frac{5.5}{22}$ $\frac{4.9}{13}$ $\frac{4.7}{12}$ $\frac{4.8}{19}$ $\frac{5.2}{27}$ $\frac{8.1}{33}$ $\frac{8.9}{38}$ $\frac{8.9}{42}$ $\frac{7.3}{50}$

$\frac{8.61}{68.55}$

$\frac{8.65}{68.51}$

$\frac{7.6}{50}$ $\frac{8.1}{32}$ $\frac{7.1}{25}$ $\frac{5.2}{20}$ $\frac{4.8}{12}$ $\frac{4.5}{12}$ $\frac{4.7}{19}$ $\frac{4.9}{27}$ $\frac{7.5}{35}$ $\frac{7.8}{43}$ $\frac{7.8}{50}$

$\frac{6.1}{50}$ $\frac{6.8}{32}$ $\frac{6.5}{25}$ $\frac{4.7}{18}$ $\frac{4.4}{12}$ $\frac{4.4}{12}$ $\frac{4.7}{19}$ $\frac{5.0}{25}$ $\frac{7.2}{32}$ $\frac{7.5}{38}$ $\frac{7.3}{43}$ $\frac{6.6}{50}$

$\frac{4.4}{50}$ $\frac{4.2}{43}$ $\frac{6.1}{35}$ $\frac{6.3}{32}$ $\frac{6.1}{25}$ $\frac{4.5}{21}$ $\frac{4.3}{12}$ $\frac{4.2}{12}$ $\frac{4.4}{18}$ $\frac{4.7}{23}$ $\frac{6.2}{31}$ $\frac{6.6}{39}$ $\frac{6.4}{42}$ $\frac{4.9}{50}$

$\frac{3.2}{50}$ $\frac{3.0}{43}$ $\frac{5.6}{34}$ $\frac{5.9}{29}$ $\frac{5.7}{24}$ $\frac{4.4}{19}$ $\frac{4.1}{13}$ $\frac{4.1}{12}$ $\frac{4.3}{19}$ $\frac{4.5}{23}$ $\frac{5.7}{31}$ $\frac{6.0}{39}$ $\frac{5.8}{42}$ $\frac{4.6}{50}$

$\frac{4.7}{50}$ $\frac{4.4}{43}$ $\frac{6.1}{35}$ $\frac{6.3}{29}$ $\frac{6.1}{23}$ $\frac{5.0}{18}$ $\frac{4.9}{12}$ $\frac{4.7}{12}$ $\frac{4.9}{19}$ $\frac{5.1}{22}$ $\frac{6.2}{32}$ $\frac{6.5}{40}$ $\frac{6.5}{42}$ $\frac{5.9}{50}$

$\frac{4.8}{50}$ $\frac{4.5}{43}$ $\frac{5.8}{35}$ $\frac{5.5}{30}$ $\frac{4.7}{21}$ $\frac{4.6}{17}$ $\frac{4.8}{26}$ $\frac{5.1}{30}$ $\frac{6.0}{50}$

$\frac{5.0}{50}$ $\frac{5.4}{42}$ $\frac{5.5}{32}$ $\frac{4.5}{28}$ $\frac{4.6}{19}$ $\frac{4.6}{17}$ $\frac{4.7}{32}$ $\frac{4.8}{40}$ $\frac{5.8}{50}$

$\frac{3.9}{50}$ $\frac{4.5}{33}$ $\frac{4.5}{26}$ $\frac{4.5}{50}$

Sta	+	π	-	Elev
		978.26		
15	+61.78 = Edge Pav.			73.83
B.M.			4.38	973.88 (973.87)
	+81.78			73.9
	+88			73.81
16				73.57
	+50			73.04
17				72.44
B.M.	1.72	975.59	4.38	973.88 (973.87)
	+50			71.86
18				71.30
	+06 F.L. 12" C.M. Lt.			
	+50			70.99
19				70.92

Lt.

R.

Rt.

$$\begin{array}{r} 413 \\ 50 \end{array} \quad \begin{array}{r} 430 \\ 25 \end{array} \quad \begin{array}{r} 443 \\ \hline \end{array} \quad \begin{array}{r} 442 \\ 22 \end{array} \quad \begin{array}{r} 430 \\ 50 \end{array}$$

Top Mont. Co. Rd. "B" + New Brighton Rd.

$$\begin{array}{r} 422 \\ 50 \end{array} \quad \begin{array}{r} 439 \\ 22 \end{array} \quad \begin{array}{r} 436 \\ \hline \end{array} \quad \begin{array}{r} 458 \\ 24 \end{array} \quad \begin{array}{r} 436 \\ 50 \end{array}$$

$$\begin{array}{r} 46 \\ 50 \end{array} \quad \begin{array}{r} 473 \\ 34 \end{array} \quad \begin{array}{r} 462 \\ 25 \end{array} \quad \begin{array}{r} 445 \\ \hline \end{array} \quad \begin{array}{r} 486 \\ 25 \end{array} \quad \begin{array}{r} 462 \\ 50 \end{array}$$

$$\begin{array}{r} 56 \\ 50 \end{array} \quad \begin{array}{r} 46 \\ 35 \end{array} \quad \begin{array}{r} 49 \\ 27 \end{array} \quad \begin{array}{r} 511 \\ 19 \end{array} \quad \begin{array}{r} 469 \\ 18 \end{array} \quad \begin{array}{r} 517 \\ 33 \end{array} \quad \begin{array}{r} 546 \\ 50 \end{array} \quad \begin{array}{r} 54 \\ 50 \end{array}$$

$$\begin{array}{r} 88 \\ 50 \end{array} \quad \begin{array}{r} 80 \\ 30 \end{array} \quad \begin{array}{r} 86 \\ 28 \end{array} \quad \begin{array}{r} 82 \\ 20 \end{array} \quad \begin{array}{r} 52 \\ 15 \end{array} \quad \begin{array}{r} 533 \\ 10 \end{array} \quad \begin{array}{r} 522 \\ \hline \end{array} \quad \begin{array}{r} 541 \\ 10 \end{array} \quad \begin{array}{r} 54 \\ 15 \end{array} \quad \begin{array}{r} 64 \\ 25 \end{array} \quad \begin{array}{r} 80 \\ 30 \end{array} \quad \begin{array}{r} 78 \\ 50 \end{array}$$

$$\begin{array}{r} 120 \\ 50 \end{array} \quad \begin{array}{r} 117 \\ 30 \end{array} \quad \begin{array}{r} 112 \\ 28 \end{array} \quad \begin{array}{r} 111 \\ 24 \end{array} \quad \begin{array}{r} 59 \\ 16 \end{array} \quad \begin{array}{r} 603 \\ 108 \end{array} \quad \begin{array}{r} 582 \\ \hline \end{array} \quad \begin{array}{r} 595 \\ 93 \end{array} \quad \begin{array}{r} 58 \\ 13 \end{array} \quad \begin{array}{r} 75 \\ 18 \end{array} \quad \begin{array}{r} 81 \\ 24 \end{array} \quad \begin{array}{r} 113 \\ 30 \end{array} \quad \begin{array}{r} 110 \\ 50 \end{array}$$

$$\begin{array}{r} 96 \\ 50 \end{array} \quad \begin{array}{r} 103 \\ 44 \end{array} \quad \begin{array}{r} 99 \\ 35 \end{array} \quad \begin{array}{r} 100 \\ 26 \end{array} \quad \begin{array}{r} 96 \\ 23 \end{array} \quad \begin{array}{r} 41 \\ 14 \end{array} \quad \begin{array}{r} 401 \\ 106 \end{array} \quad \begin{array}{r} 373 \\ \hline \end{array} \quad \begin{array}{r} 390 \\ 95 \end{array} \quad \begin{array}{r} 41 \\ 14 \end{array} \quad \begin{array}{r} 110 \\ 23 \end{array} \quad \begin{array}{r} 114 \\ 35 \end{array} \quad \begin{array}{r} 95 \\ 40 \end{array} \quad \begin{array}{r} 95 \\ 41 \end{array} \quad \begin{array}{r} 115 \\ 97 \end{array} \quad \text{L.O.}$$

$$\begin{array}{r} 118 \\ 50 \end{array} \quad \begin{array}{r} 119 \\ 36 \end{array} \quad \begin{array}{r} 115 \\ 33 \end{array} \quad \begin{array}{r} 103 \\ 23 \end{array} \quad \begin{array}{r} 45 \\ 15 \end{array} \quad \begin{array}{r} 450 \\ 104 \end{array} \quad \begin{array}{r} 429 \\ \hline \end{array} \quad \begin{array}{r} 450 \\ 98 \end{array} \quad \begin{array}{r} 52 \\ 15 \end{array} \quad \begin{array}{r} 118 \\ 25 \end{array} \quad \begin{array}{r} 124 \\ 32 \end{array} \quad \begin{array}{r} 118 \\ 36 \end{array} \quad \begin{array}{r} 98 \\ 40 \end{array} \quad \begin{array}{r} 98 \\ 42 \end{array} \quad \begin{array}{r} 116 \\ 45 \end{array} \quad \begin{array}{r} 125 \\ 50 \end{array}$$

$$\begin{array}{r} 11.25 \\ \hline \end{array} \quad 64.34$$

$$\begin{array}{r} 10.07 \\ \text{Elec. Water} \end{array} \quad \begin{array}{r} 120 \\ 50 \end{array} \quad \begin{array}{r} 122 \\ 39 \end{array} \quad \begin{array}{r} 116 \\ 33 \end{array} \quad \begin{array}{r} 103 \\ 23 \end{array} \quad \begin{array}{r} 52 \\ 16 \end{array} \quad \begin{array}{r} 481 \\ 103 \end{array} \quad \begin{array}{r} 460 \\ \hline \end{array} \quad \begin{array}{r} 477 \\ 98 \end{array} \quad \begin{array}{r} 52 \\ 16 \end{array} \quad \begin{array}{r} 120 \\ 24 \end{array} \quad \begin{array}{r} 125 \\ 31 \end{array} \quad \begin{array}{r} 124 \\ 37 \end{array} \quad \begin{array}{r} 100 \\ 41 \end{array} \quad \begin{array}{r} 100 \\ 43 \end{array} \quad \begin{array}{r} 119 \\ 46 \end{array} \quad \begin{array}{r} 129 \\ 50 \end{array}$$

$$\begin{array}{r} 113 \\ 50 \end{array} \quad \begin{array}{r} 115 \\ 42 \end{array} \quad \begin{array}{r} 113 \\ 32 \end{array} \quad \begin{array}{r} 102 \\ 23 \end{array} \quad \begin{array}{r} 50 \\ 16 \end{array} \quad \begin{array}{r} 482 \\ 101 \end{array} \quad \begin{array}{r} 467 \\ \hline \end{array} \quad \begin{array}{r} 481 \\ 98 \end{array} \quad \begin{array}{r} 52 \\ 16 \end{array} \quad \begin{array}{r} 115 \\ 24 \end{array} \quad \begin{array}{r} 120 \\ 32 \end{array} \quad \begin{array}{r} 119 \\ 36 \end{array} \quad \begin{array}{r} 98 \\ 40 \end{array} \quad \begin{array}{r} 98 \\ 42 \end{array} \quad \begin{array}{r} 117 \\ 46 \end{array} \quad \begin{array}{r} 123 \\ 50 \end{array}$$

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

		975.59	
--	--	--------	--

19	+35		
----	-----	--	--

			70.82
--	--	--	-------

	+78		
--	-----	--	--

			70.79
--	--	--	-------

B.M.			
------	--	--	--

		1.72	
--	--	------	--

			973.87
--	--	--	--------

			(973.87)
--	--	--	----------

Lt.

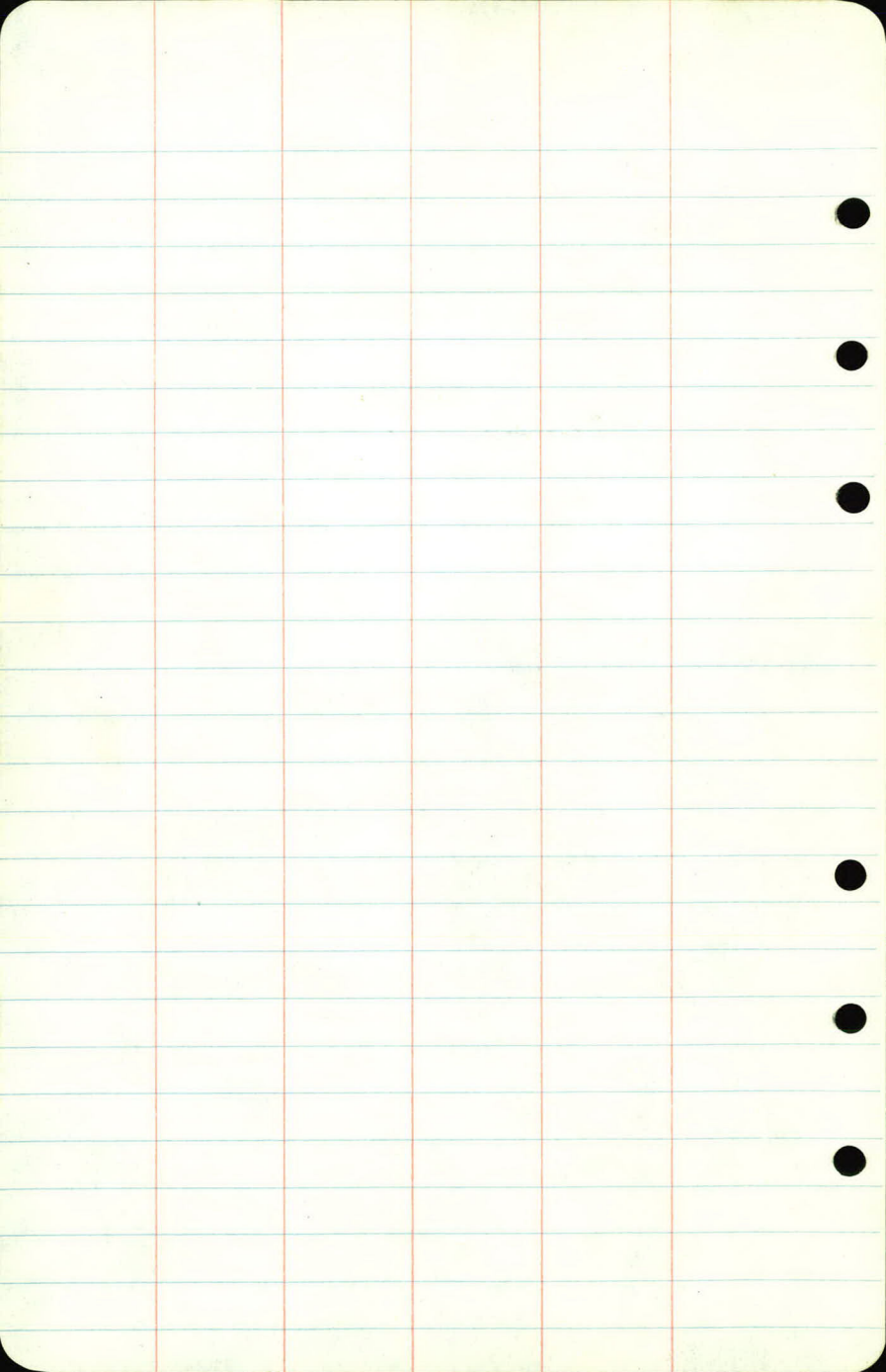
R.

Rt.

$\frac{65}{50}$	$\frac{85}{32}$	$\frac{90}{27}$	$\frac{89}{23}$	$\frac{51}{16}$	$\frac{50}{10}$	$\frac{417}{10}$	$\frac{492}{16}$	$\frac{52}{24}$	$\frac{108}{30}$	$\frac{114}{35}$	$\frac{114}{59}$	$\frac{95}{41}$	$\frac{113}{44}$	$\frac{114}{50}$
-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	------------------	------------------	-----------------	------------------	------------------	------------------	-----------------	------------------	------------------

$\frac{13}{50}$	$\frac{103}{30}$	$\frac{70}{22}$	$\frac{75}{20}$	$\frac{49}{15}$	$\frac{490}{10}$	$\frac{480}{10}$	$\frac{50}{17}$	$\frac{52}{21}$	$\frac{76}{21}$	$\frac{89}{50}$
-----------------	------------------	-----------------	-----------------	-----------------	------------------	------------------	-----------------	-----------------	-----------------	-----------------

Top Mont. Co. Rd. "B" & New Brighton Rd.



Alignment
Ditch

Sta	Point	$\Delta Lt.$	$\Delta Rt.$
-----	-------	--------------	--------------

	R. Co. Ditch #4		
13	+59.05 P.I. =		59°43'

1	+39.26 P.I.		40°34'
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4	+57.30 P.I.		10°39'
---	-------------	--	--------

1	+90.65 P.I.		33°24'
---	-------------	--	--------

0	+00 = Sta 18+68.90 New Brighton Rd.		
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1"X2" Hub

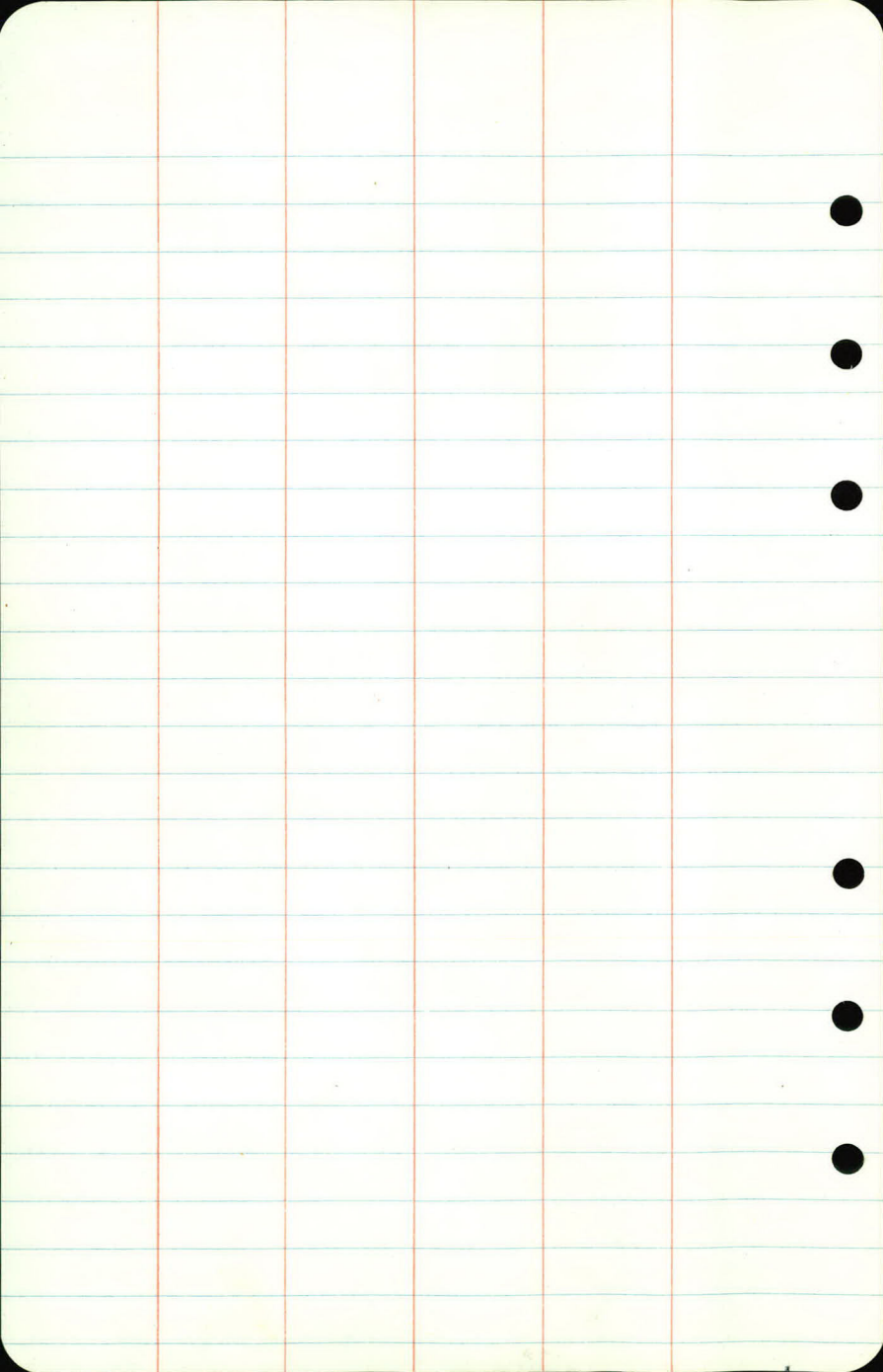
1"X2" Hub

2"X2" Hub

24'0.0 — 25.26' — 16.00' — 18"0.
2"X2" Hub

Mont
5.146 or 566.9

104°54'



Topography
Ditch

5 Swamp. 140'

Swamp. - 92'

+65-Swamp-0.0

4

3
+27-12" Stp-6'
+13-12" O.-17'
Fe.-28'
+92-10" O.-17'
+84-10" O.-18'
+85-Stp-10'
+79-Stp-13'
+60-12" O.-13'
+58-12" O.-11'
+41-Stp-13'
2 +12-24" O.-15'

+33-Fe x 5 ft +38'-12" O.-4'
+23-Stp-5'
+22-12" O.-17' +12-10" O.-19'
+19-12" O.-6'
+95-Stp-12'
+88-10" O.-7'
+79-10" O.-12'
+59-15" O.-13'
+46-Stp-15'
+44-15" O.-11'
+43-Stp-17'
+42-Stp-13'
+10-15" O.-12'
+04-18" O.-11'

1

0+00

Swamp.

Hayfield

Tic O O Tic

Wooded

See studio notes

For outline of Pothelec.

Wooded

12

11

10

9

100' +30-Beg. Swamp. 21'

8 Swamp 90'

Swamp. 28'

7 Swamp 70'

Swamp - 50'

6 Swamp - 140'

Swamp

53'

51'

71'

88'

Hayfield

Lowland.

Lowland.

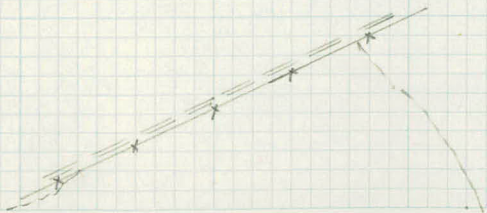
120

Hayfield

Swamp.

+59.05 to 3' Bottom Ditch
+53. Fe. X² to Parrocell to Fe.

110°





X sections

ditch

Sta.	t	π	-	Elev.
B.M.	0.57	974.44	-	(973.87)

0	+50			63.40
---	-----	--	--	-------

1				64.4
---	--	--	--	------

	+50			64.9
--	-----	--	--	------

2				65.8
---	--	--	--	------

	+30			67.8
--	-----	--	--	------

	+46			67.1
--	-----	--	--	------

	+55			67.3
--	-----	--	--	------

3				65.4
---	--	--	--	------

T.P.	0.31	966.41	8.34	966.10
------	------	--------	------	--------

	+50			63.6
--	-----	--	--	------

4				60.2
---	--	--	--	------

	+25			58.9
--	-----	--	--	------

Lt

E

Rt

Top Mont Co. Rd. 8" + New Brighton Rd.

11.0

$$\frac{9.6}{20} \quad \frac{10.0}{20} \quad \frac{8.9}{20}$$

$$\frac{8.6}{20} \quad \frac{9.2}{11} \quad \frac{9.5}{20} \quad \frac{9.5}{10} \quad \frac{8.8}{20}$$

$$\frac{8.4}{20} \quad \frac{8.6}{10} \quad \frac{8.6}{20} \quad \frac{8.0}{20}$$

$$\frac{6.2}{20} \quad \frac{6.7}{14} \quad \frac{6.6}{13} \quad \frac{6.4}{13} \quad \frac{6.0}{20}$$

$$\frac{6.1}{20} \quad \frac{6.6}{12} \quad \frac{7.3}{12} \quad \frac{6.6}{12} \quad \frac{5.9}{20}$$

$$\frac{5.7}{20} \quad \frac{6.7}{13} \quad \frac{7.1}{13} \quad \frac{6.6}{20}$$

$$\frac{7.5}{20} \quad \frac{8.8}{11} \quad \frac{9.0}{9} \quad \frac{8.3}{9} \quad \frac{6.9}{20}$$

$$\frac{2.3}{20} \quad \frac{2.6}{13} \quad \frac{2.8}{9} \quad \frac{2.8}{9} \quad \frac{1.6}{20}$$

$$\frac{5.3}{20} \quad \frac{5.8}{12} \quad \frac{6.2}{11} \quad \frac{6.3}{11} \quad \frac{6.0}{20}$$

$$\frac{7.2}{20} \quad \frac{7.5}{20} \quad \frac{7.5}{20}$$

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

966.41

4	+37			56.9
---	-----	--	--	------

	+67			55.9
--	-----	--	--	------

5				55.3
---	--	--	--	------

	+50			55.3
--	-----	--	--	------

6				55.3
---	--	--	--	------

+32

	+50			55.1
--	-----	--	--	------

7				55.6
---	--	--	--	------

T.P.	5.34	962.60	9.15	957.26
------	------	--------	------	--------

	+50			55.6
--	-----	--	--	------

8				56.0
---	--	--	--	------

	+50			55.4
--	-----	--	--	------

Lt

L

Rt

$$\frac{93}{20} \quad \frac{95}{20} \quad \frac{92}{20}$$

$$\frac{105}{20} \quad \frac{105}{20} \quad \frac{104}{20}$$

$$\frac{110}{20} \quad \frac{111}{20} \quad \frac{107}{20}$$

$$\frac{10.63}{\text{Elev Water}}$$

$$\frac{110}{20} \quad \frac{111}{20} \quad \frac{111}{20}$$

$$\frac{112}{20} \quad \frac{111}{20} \quad \frac{110}{20}$$

$$\frac{115}{4}$$

$$\frac{110}{20} \quad \frac{113}{20} \quad \frac{110}{20}$$

$$\frac{107}{20} \quad \frac{108}{20} \quad \frac{110}{20}$$

$$\frac{69}{20} \quad \frac{70}{20} \quad \frac{70}{20}$$

$$\frac{69}{20} \quad \frac{66}{20} \quad \frac{67}{20}$$

$$\frac{70}{20} \quad \frac{72}{12} \quad \frac{70}{12} \quad \frac{63}{20}$$

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

		962.60		
--	--	--------	--	--

9				55.3
---	--	--	--	------

	+50			55.2
--	-----	--	--	------

10				55.1
----	--	--	--	------

	+35			54.5
--	-----	--	--	------

	+65			55.6
--	-----	--	--	------

11				55.3
----	--	--	--	------

	+50			55.6
--	-----	--	--	------

12				55.2
----	--	--	--	------

	+50			55.0
--	-----	--	--	------

13				54.7
----	--	--	--	------

	+50			54.5
--	-----	--	--	------

T.P.	803	962.56	807	964.53
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Lt.

C

Rt.

$$\frac{70}{20} \quad \frac{73}{20} \quad \frac{75}{20} \quad \cancel{78}$$

$$\frac{68}{20} \quad \frac{67}{13} \quad \frac{74}{9} \quad \frac{72}{9} \quad \frac{76}{20}$$

$$\frac{73}{20} \quad \frac{75}{20} \quad \frac{75}{20}$$

$$\frac{74}{20} \quad \frac{75}{8} \quad \frac{81}{7} \quad \frac{76}{7} \quad \frac{77}{20}$$

$$\frac{73}{20} \quad \frac{70}{20} \quad \frac{71}{20}$$

$$\frac{73}{20} \quad \frac{73}{20} \quad \frac{70}{20}$$

$$\frac{72}{20} \quad \frac{70}{20} \quad \frac{75}{20}$$

$$\frac{74}{20} \quad \frac{74}{20} \quad \frac{76}{20}$$

$$\frac{75}{20} \quad \frac{76}{20} \quad \frac{78}{20}$$

$$\frac{75}{20} \quad \frac{79}{20} \quad \frac{78}{20}$$

$$\frac{81}{20} \quad \frac{96}{18} \quad \frac{96}{13} \quad \frac{78}{9} \quad \frac{81}{9} \quad \frac{78}{20}$$

Sta.	+	π	-	Elev.
		962.56		

13	+59			53.1
----	-----	--	--	------

	+70			52.9
--	-----	--	--	------

14				52.9
----	--	--	--	------

	+50			52.8
--	-----	--	--	------

15				52.8
----	--	--	--	------

	+50			52.4
--	-----	--	--	------

16				51.7
----	--	--	--	------

	+26			51.3
--	-----	--	--	------

	+50			51.2
--	-----	--	--	------

	+79			50.7
--	-----	--	--	------

17				50.6
----	--	--	--	------

Lt.

E

Rt.

9.5

5243
913
 Everwater in ditch

$$L.O. \quad \frac{8.2}{2.5} \quad \frac{9.4}{1.5} \quad \frac{9.7}{1.5} \quad \frac{9.6}{1.5} \quad \frac{7.8}{2.5} \quad L.O.$$

$$L.O. \quad \frac{7.7}{3.0} \quad \frac{9.4}{1.4} \quad \frac{9.7}{1.3} \quad \frac{9.4}{1.3} \quad \frac{7.8}{2.7} \quad L.O.$$

$$L.O. \quad \frac{6.8}{4.5} \quad \frac{9.3}{1.6} \quad \frac{9.8}{1.3} \quad \frac{9.7}{4.5} \quad \frac{7.2}{4.5} \quad L.O.$$

$$L.O. \quad \frac{4.7}{6.5} \quad \frac{6.6}{3.5} \quad \frac{9.6}{1.3} \quad \frac{9.8}{1.3} \quad \frac{9.5}{5.0} \quad \frac{5.1}{5.0} \quad L.O.$$

$$L.O. \quad \frac{4.7}{8.3} \quad \frac{7.3}{4} \quad \frac{9.9}{2.2} \quad \frac{10.2}{2.0} \quad \frac{10.1}{2.5} \quad \frac{8.0}{6.0} \quad \frac{5.9}{6.0} \quad L.O.$$

$$L.O. \quad \frac{6.0}{7.5} \quad \frac{7.4}{4.5} \quad \frac{10.8}{1.0} \quad \frac{10.9}{1.3} \quad \frac{10.7}{3.4} \quad \frac{8.0}{5.0} \quad \frac{6.7}{5.0} \quad L.O.$$

11.3 /11.411.9 -12.0

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

		962.56.		
--	--	---------	--	--

17	+36		12.3	50.3
----	-----	--	------	------

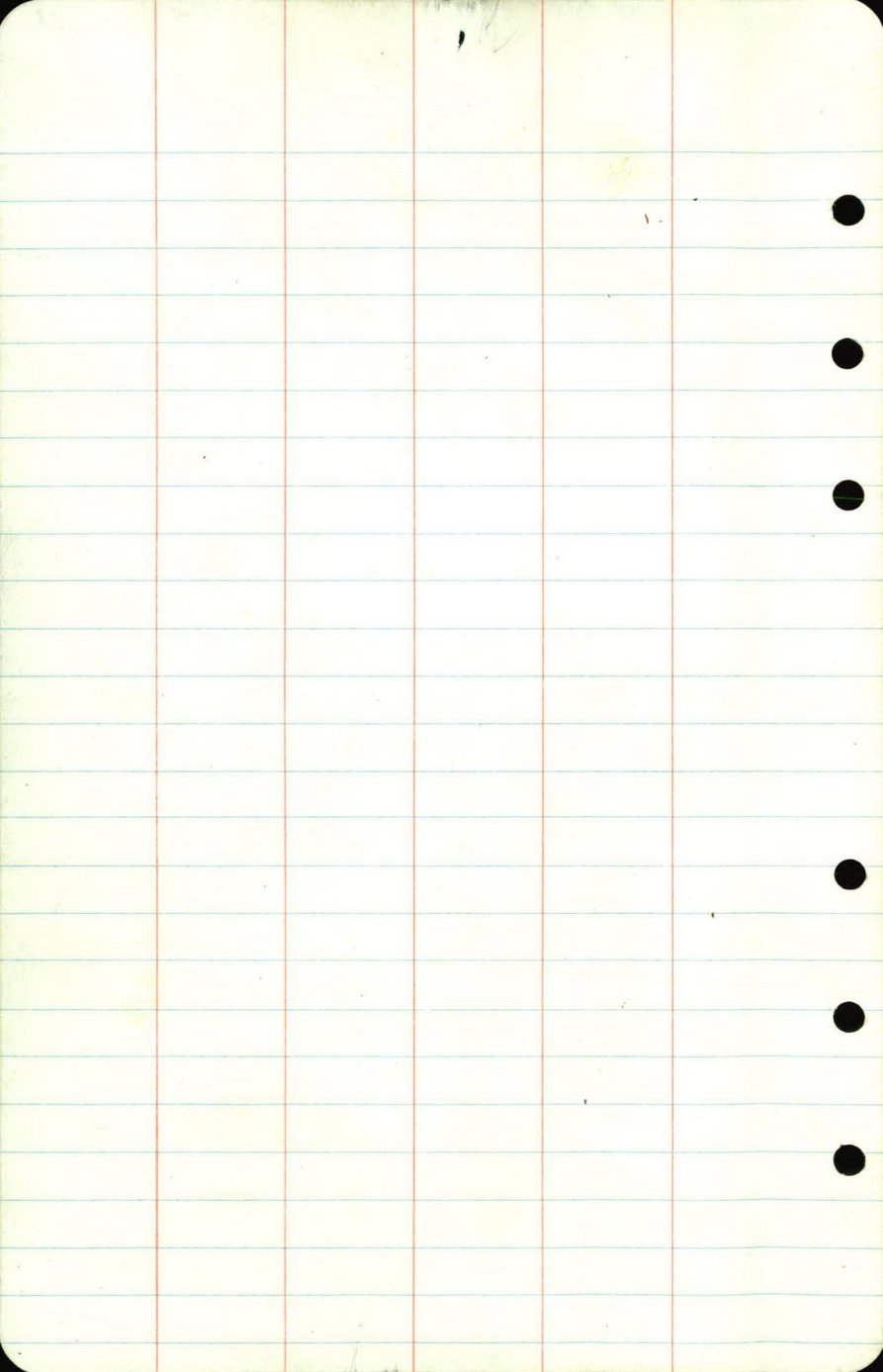
	+50		12.5	50.1
--	-----	--	------	------

	+61		12.9	49.7
--	-----	--	------	------

	+61.5		12.61	949.95.
--	-------	--	-------	---------

Flow Line 36" Gorg. Culv. Under S.T.H. #36

Check Elev. with 1940 Stadia Survey of Ditch



26 June 1952

1

Hridera
Clark
Benson

Fairview

Baselawn to "B"

Paving Survey

7 pages

Drawn up

Sta

0+00 Φ Rose lawn

+10 End of Bl. Top

+10 Beg 25' Rad R+L

+35 End of Rad R+L

2

4

+75 Ent Right 15' Wide

5+53 Ent Rt 7' at 33'

6

+45 Beg 10' Rad.

+65 Φ Ryan Ave

+85 End 10' Radius

E

2

13'

12

12'

12

12'

12'

12'

12'

Sta

7+84 Ent 8' @ 33' Right

8

9+22 Ent Right 10'

10

10+4 Ent Rt 9' @ 43

11+15 Beg 15' Rad

+43 $\angle$ Street Right (Shryer)

11+75 End 20' Rad

12

14

16

~~2~~

3

• 13

13

• 14

14

• 14

14

• 14

14

• 14

14

Sta

18

+69 Ent Left 10'w.

+69 Ent Right 14'w

20

22

24

+75 Beg 35' Rad Left 25+75

+85 Beg 25' Rad, Rt 25+85

26+10 Beg of Pavement End of Rad R/L

+20.5 P B

2

4

14'

14'

14'

14'

14'

14'

14'

14'

Profile

973.51

Sta

BM

1.84 981.08

979.24

0+00

0.4

80.7

+50

1.5

79.6

1

2.6

78.5

2

4.8

76.3

3

6.0

75.1

4

5.7

75.4

5

4.5

76.6

6

3.7

77.4

7

2.8

78.3

8

2.0

79.1

9

2.0

79.1

10

3.6

77.5

Top Mon

5

Top Conc. Hq. End of Fe SE Cor N.B. Rd + Rose lawn

Sta	+	A	-	Elev
		981.08		.
11			5.8	75.3
12			2.4	73.7
TP	5.12	977.59	8.61	972.47
13			4.7	72.9 3.9
14			5.1	72.5 3.5
15			5.0	72.6
16			5.1	72.5
17			5.0	72.6
18			5.1	72.5
19			5.3	72.3
20			5.2	72.4
21			5.1	72.5

Sta

+

A

-

Elev

977.59

22

5.0

72.6

23

5.0

72.6

24

5.2

72.4

25

4.8

72.8

26

4.0

73.6

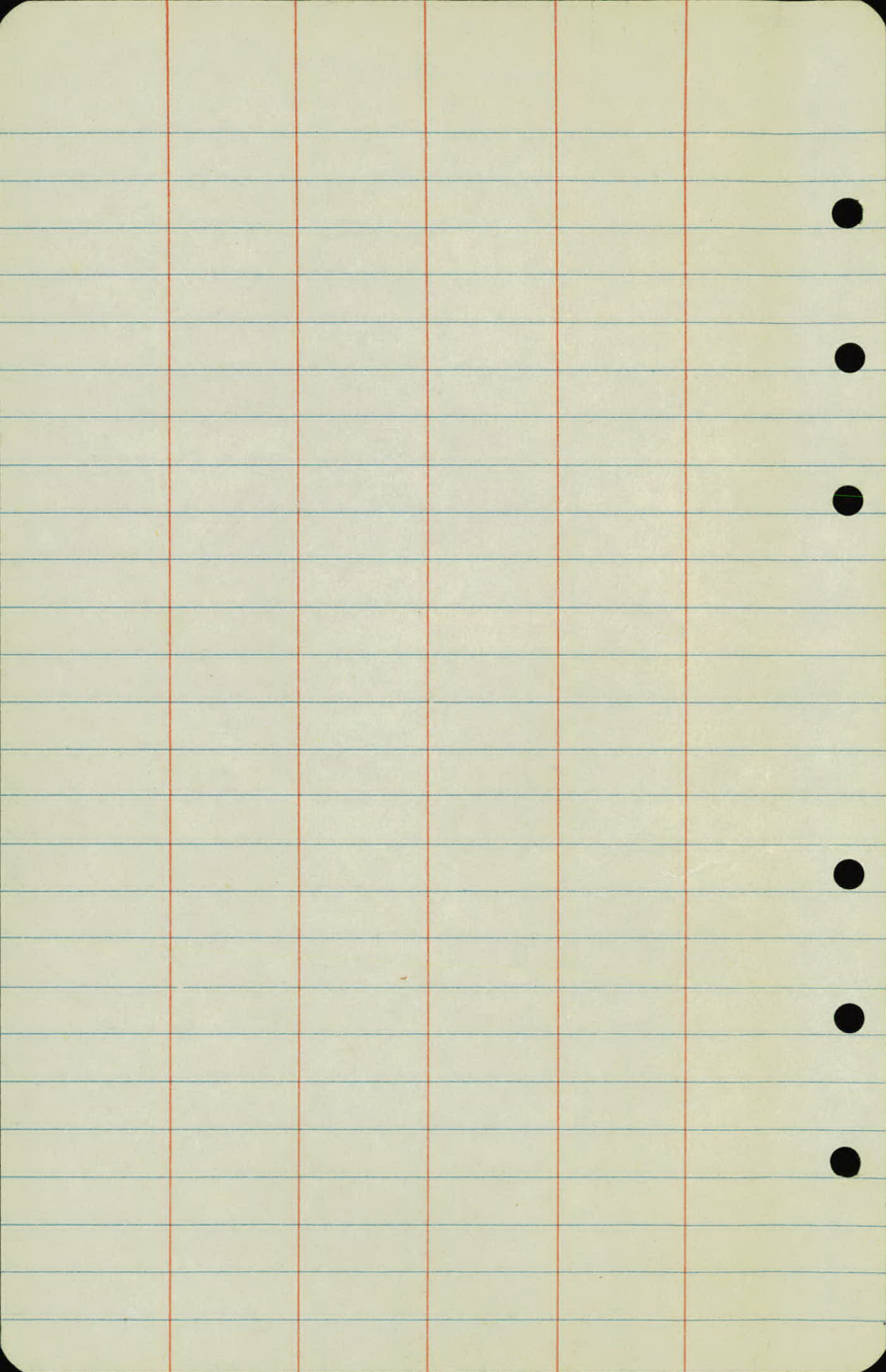
+20.5

3.96

973.63

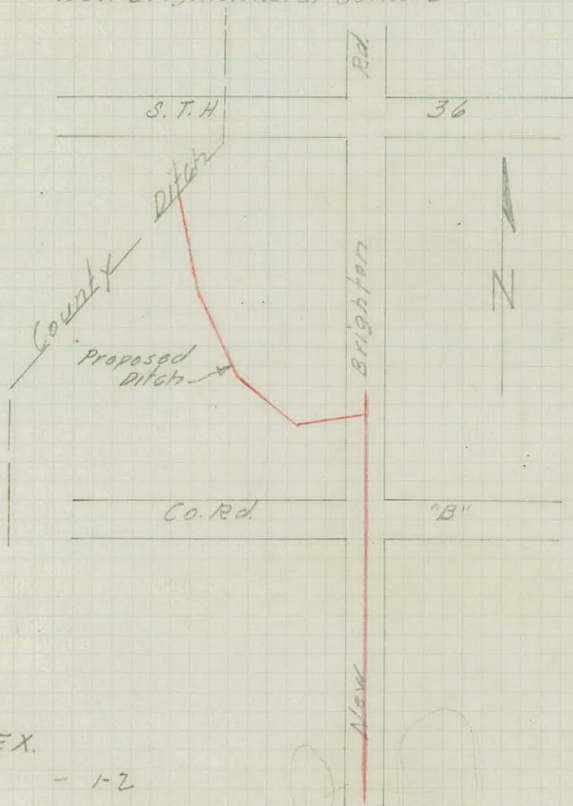
973.51

Tap Monument NB Rd & Co Rd B'



DRAINAGE SURVEY

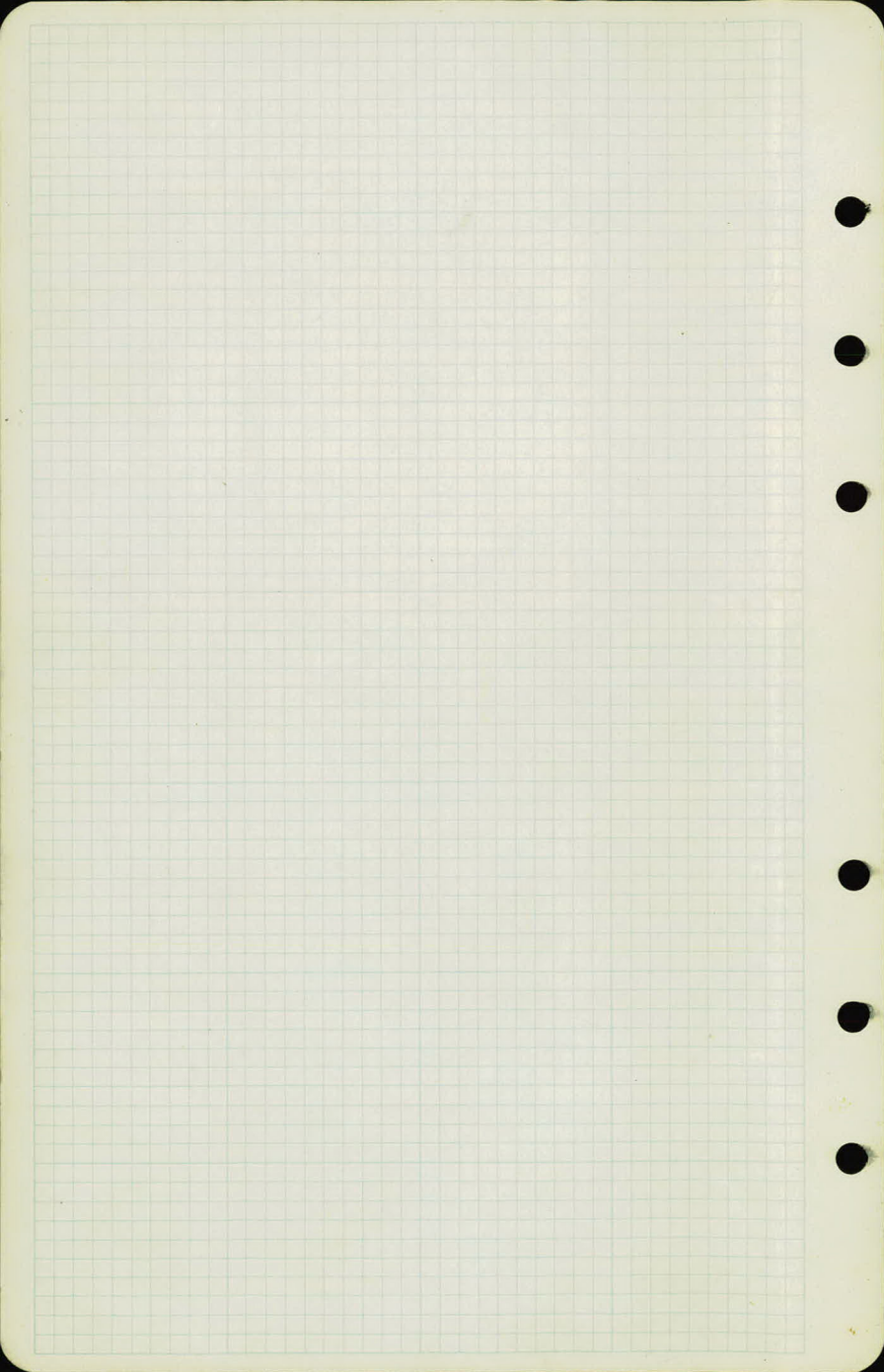
New Brighton Rd. at Co. Rd. "B"



INDEX.

- Align - 1-2
- Topog. - 3-6
- Stadia notes - 7-14
- X sections - 15-21
- Ditch Survey - 22-33

Drawing { 6/3/40
 Plan # 3102
 Hous. w. 8-ADE



Alignment

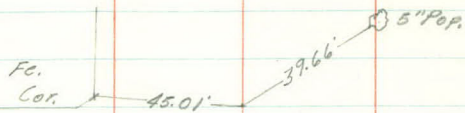
Sta.	Point	ΔL	ΔR
------	-------	------------	------------

20	100	P.O.T.	on Sec. Line
----	-----	--------	--------------

15	171.78	P.I.	$0^{\circ}35'$
----	--------	------	----------------

0	100	P.O.T.	on Sec. Line
---	-----	--------	--------------

Mont.
N. 1/4 Cor Sec. 16



Sta.

Point

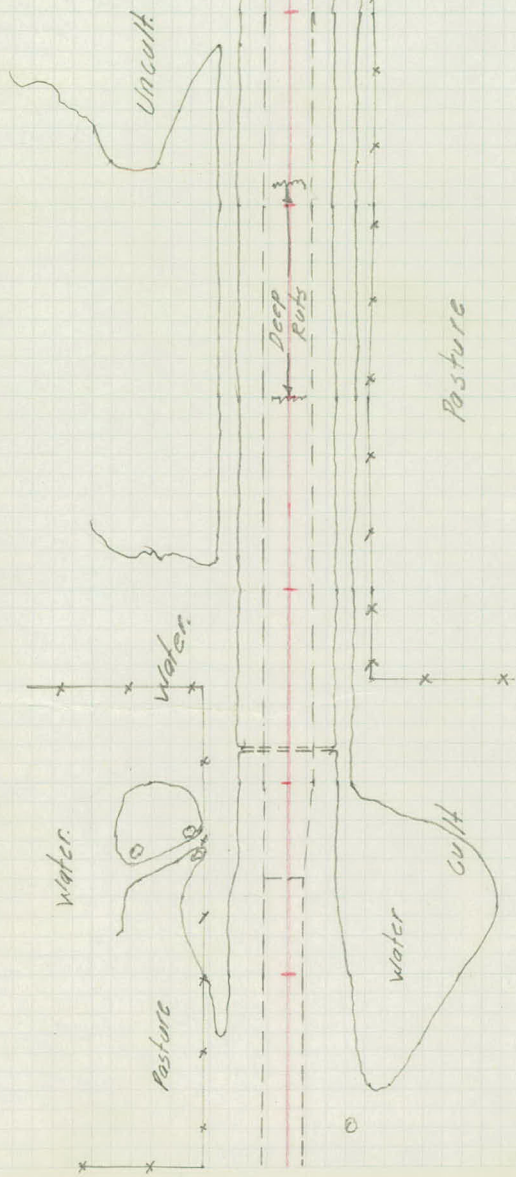
ΔL

ΔR

Topography

Note: For limits of water holes
see stadia notes.

- 6 13' 13' Water-23'-36' Fe-43'
 +84-Water-36'-26'
 +50-Water- -57'
 +21-Water-90'-67'
- 5 +10-End Ruffed Rd. 14' 13' Water-23'-34' Fe-43'
 Water-34'-24'
- 4 Beg. Ruffed Road 14' 14' Water-24'-34' Fe-42'
 Water-35'-25'
- 3 +18-Water-37'-26' 14' 13' Water- -26'-32'
 +50-Fe.Cor-43' +54-Fe.Cor-42'
- 2 +18-End 24" Long. Colv.-24' +18-End 24" Long. Colv.-24'
 Fe-43' Water-70'-26' 13' 13' Water-26'-32'
 +75-Water-45'
 +13-18" Willow-48'
 30" Willow-78'
 +62-15" Willow-44' +50-End Black Top
 +65-Water-42'
 +90-Water-54'
- 1 +35-Water-107'
 Fe-44' Water-48'-30' 11' 9' Water-33'-87'
 +70-Water Edge-37'-33'
 +55-Stp-31'
 +37-Stp-33'
 +31-Stp-34'
- +44-Edge Water 44'-51'
 +22-6' Pp-32'
- 0+00 Fe.Cor-44' 11' 9'



460 - water - 67'

469-18" X 48" Long.
24' 24'

451-Walfer-45

13 Water - 30' - 50' 13' 12' Water - 27' - 38' Fe - 43'

12 Water - 47'-28' 12' 12' Water - 34'-36' - Fe. - 43'

+78-Water - 57'-48'

400-walser-51'

+30-Water-73'

11 Water - 80' - 26' 13' 10' Water - 25' - 41' - 56' Fe-43

460-Walfer-79

153-Water - 27'-37'

469-Water-85

+36 - Bcg. water - 31

10

End Bl. Top.

End Bl. Top.
12' 10' Water-26'-48" PG-43'

180-Water-37'

120-Water-34'-43'

9

10' 11' Water - 25' PE - 43'

175-Water-43'

750-Water-26-38'

+42- Water Bog. - 32'

120 Ent. $\frac{12 \times 20 \text{ C.M.}}{28}$

$$+20 \text{ Ent.} - \frac{12' \times 20' \times 4 \times 7}{27'}$$

8

water - 36' - 26'

Reg. 81. Top.

Bcg Bl. Top.
13' 13' Water - 25'-34" FC - 43'

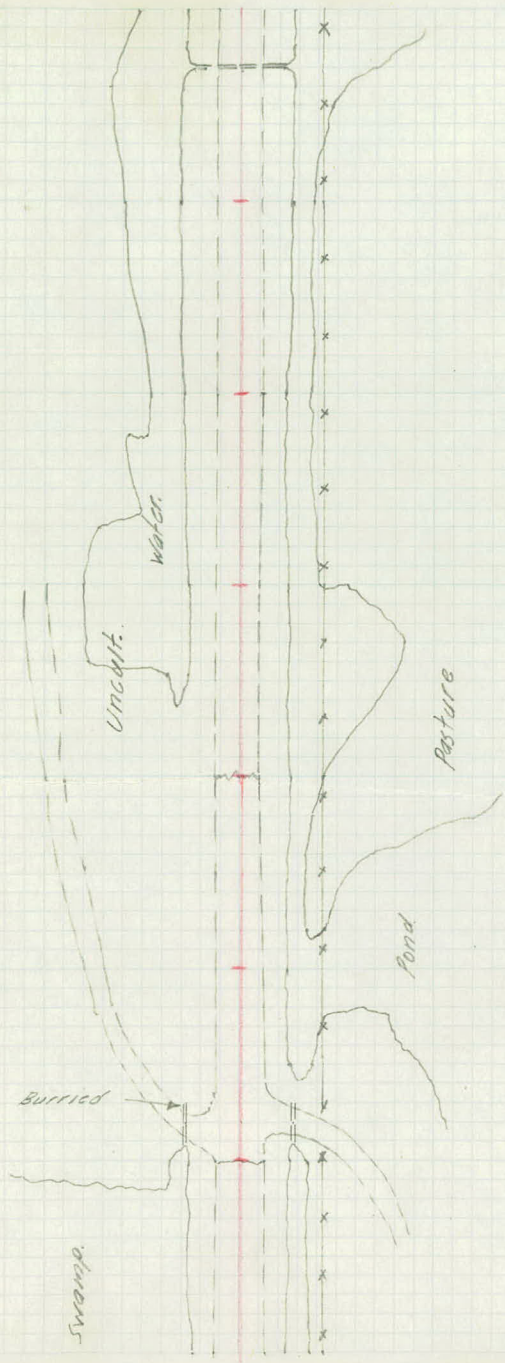
487. water - 37'

7

Water - 24"

13' 13'

13' 13' Water - 24' - 37' Fig. - 43'



20 Fe-32'

10' 10'

19 Fe-33'

10.2' 9.8'

18 Fe-33' +06-^{22'} Culv.-12" X 8' C.M.A.
10.3' 9.7'

+73-Spillway 10" X 8' C.M.A.-12.8' } +77-Spillway 12" X 8' C.M.A.-11.5'-12.0'
20.6' }

17 Fe-37'

10.7' 9.3'

+49-Pav. 9.2'-11.2' Rad. Pt.-77'

16 +02-Fe. Cor-37'

+11.78-Pav. X 5 ft

+31-Bag. Rad.

+33-Fe. Cor-43'

15

10' 11'

+30-Water-29'

+27-Water-53'

+47-Water-30'-35'
+30-Bag. Pl. top

14 Water-63'-27'

11' 11'

Water-28'

Fe-43'

