

Book # 17 DA 14

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

PLAN Survey

DIVISION ST.

From 4TH ST. To N. LINE SEC. 14

Road Acc't. No.

Date Filed. 1935

File. 14

Plan Survey
Division Street

From 4th St. to N. Line Sec. 14

T. 30 - R. 22

White Bear Village

Index.

Alignment

P. 3 - 4

Cross Sections

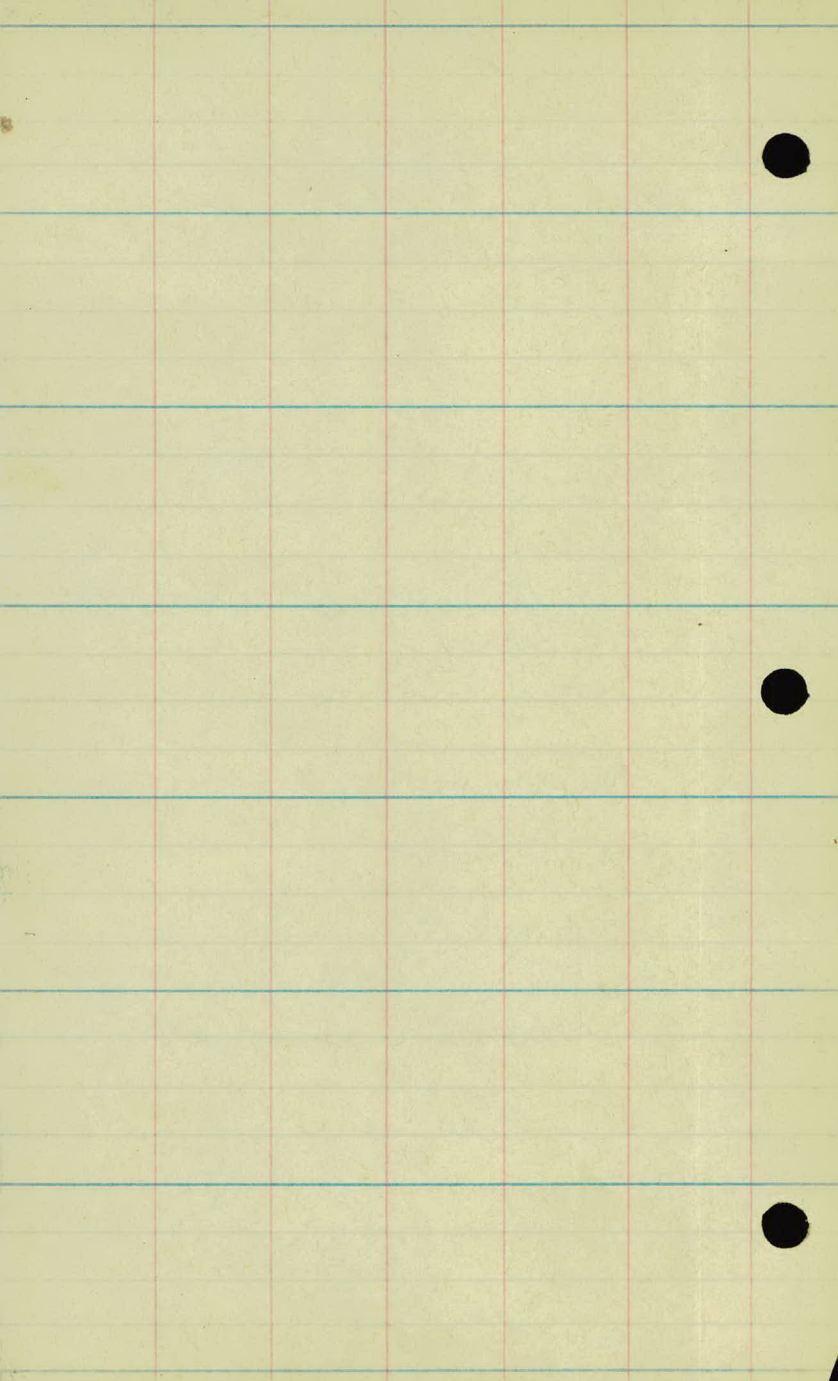
P. 5 - 13

Topography

P. 14 - 19

Plant Complete
July 6, 1935

Carlson



Alignment

Sta.	Point	Angle	
		Lt.	Rt.

4+34.05	P.I.	0°-10'-Rt.	
---------	------	------------	--

3+44	P.T.	17°-38'	
------	------	---------	--

+25		15°-15.4'	P.I. 2+76.37
-----	--	-----------	--------------

3+00		12°-07.9'	Δ 35°-16' Lt.
------	--	-----------	---------------

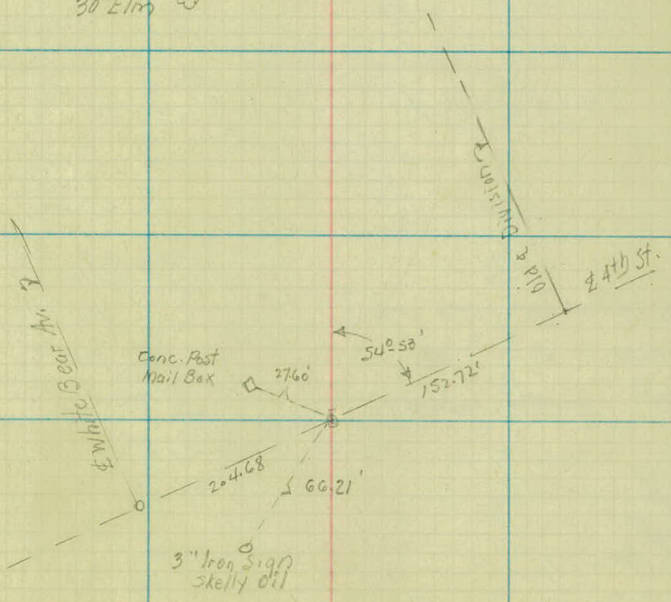
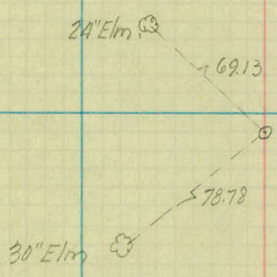
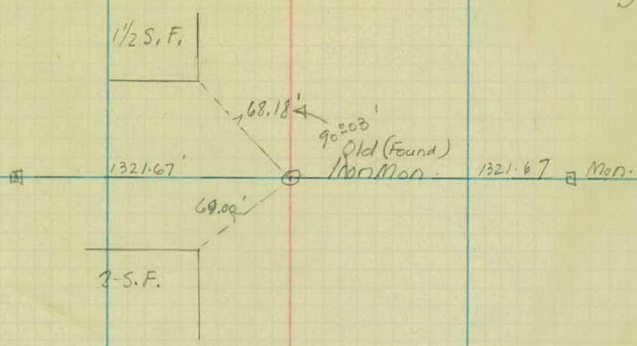
+75		9°-00.4'	D- 25°
-----	--	----------	--------

+50		5°-52.9'	T. 73.43
-----	--	----------	----------

+25		2°-45.4'	L. 141.06
-----	--	----------	-----------

2+02.95	P.C.	0°-00'	P= 231.01
---------	------	--------	-----------

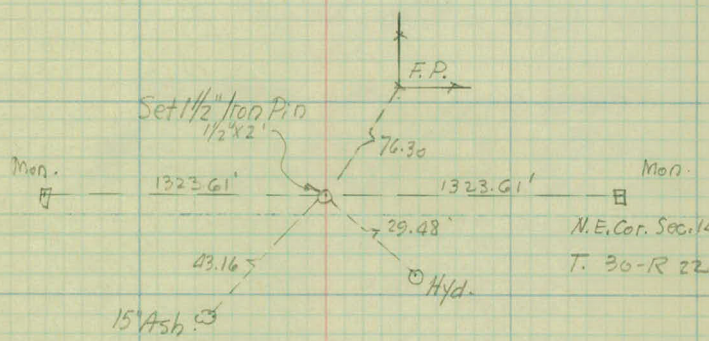
0+00 = 4th St.

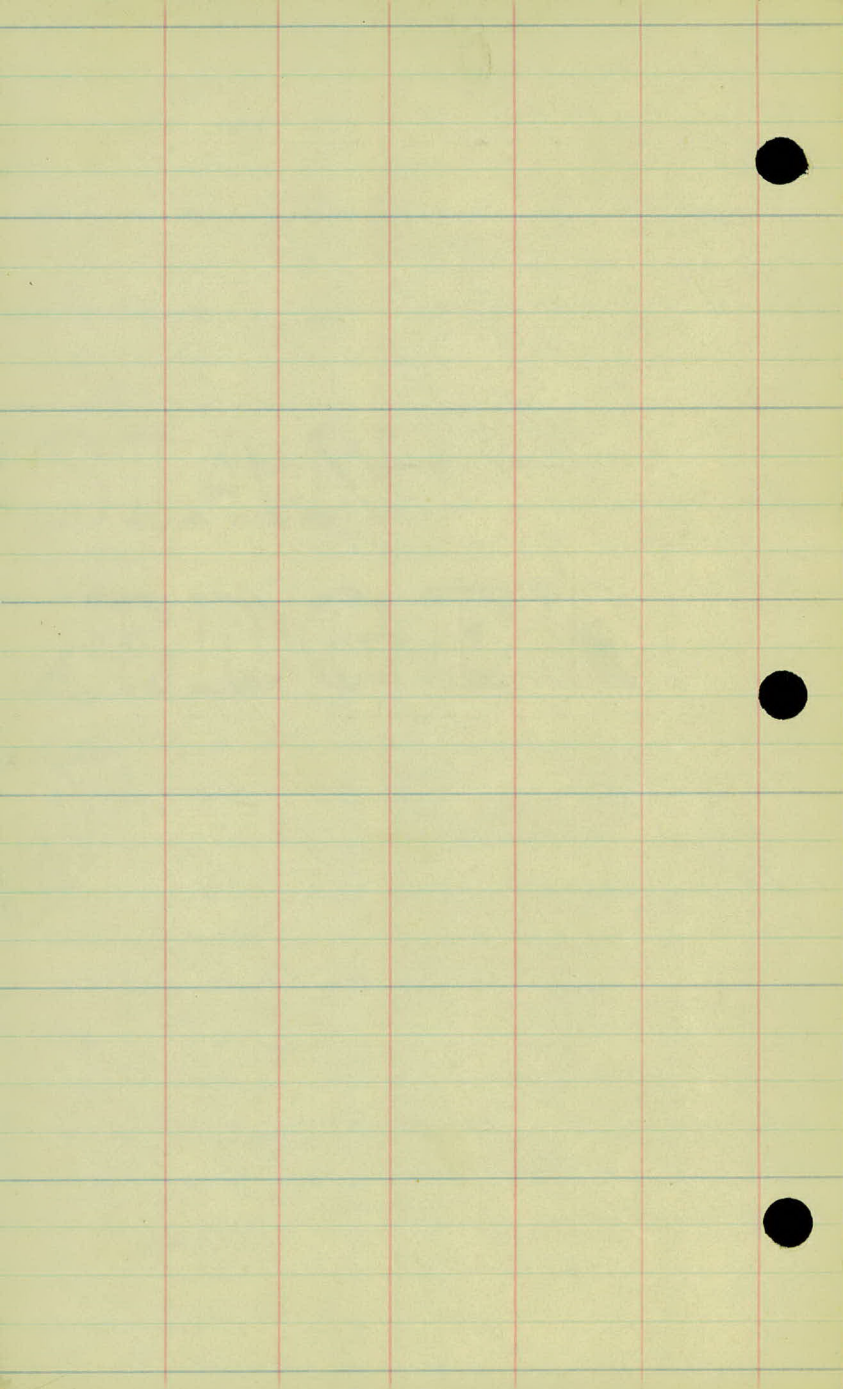


Sta.	Point	Angle	
		Lt	Rt.

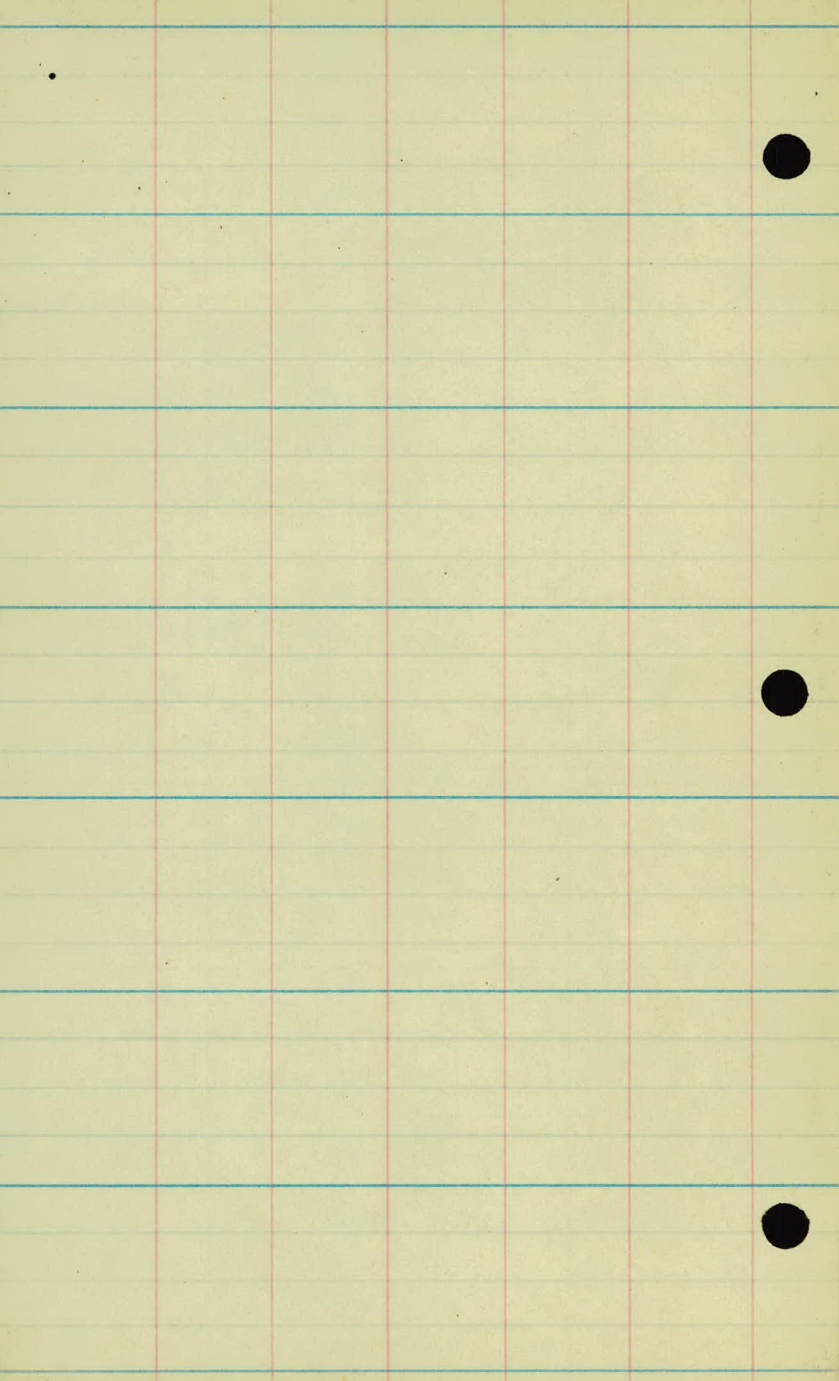
30+79.35	N. Line Sec. 14		
----------	-----------------	--	--

H.T.P.
D.N.S.
D.S.
J.B





Topography



S.W. 22.6

RD. 10'

RD. 10'

15

+95-T.R. 22'

19' ————— 2'

+74-Ent. Walk 2' - 19'

+48-10" oak-20'

+62-RR 19'

+12-Ent.

+99-E. Walk 31'

RD. 9'

5 S.W. 22.4 RD. 110'

+65-T.R. 21'

+35-E. M.H. 3.2'

+38-E. Walk 22.6

+49-E. Walk 22.6

+18-C. Walk 22.5

+18-E. Walk 22.5

+18-E. Walk 22.8

Ditch

+33-App 25th

+62-E. Walk 21'

+58-RR 18'

+18-0'

+30-B. (C.M. 12) Pool

+18-15" C.M. 9.8-Pool

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

+18-15" C.M. 9.8-20'

4 B.I. T. 10

S.W. 22.6

+66-T.R. 21'

+44-S.W. 22.8

+75-S.W. 22.0-28.0

+40-Ent. R.I.

+28-P.P. 18'

+20-18" oak-31'

+08-18" oak-30'

+06-8" oak-18'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

+01-8" oak-16'

3 B.I. Top. 11' S.W. 18.8-24.8

+75-S.W. 22.3-28.3

+74-F.L. line 22.3

+75-T.R. 13.5

+50-S.W. 14.5-22.5

+42-T.R. 16'

+25-S.W. 17.7-23.7

+13-2 ENT.

+04-F. Cor. 24'

B.I. Top 7'

+91-Cor. B.I. Top 41'

+46-12" oak-21'

4 Tanks.

+39-F. Cor. 3'

+39-Gup. P. 22'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

+14-P.P. 32'

2 Black Top 1 ✓

S.W. 18-24'

+52-T.R. 17'

+02-F. Cor. 24'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

Black Top 14'

1 S.W. 18-24'

Black Top 9'

+85-E. Drive Lt.

+61-P.P. 18'

+29-Cor. B.I. Top 22'

+24-Δ in S.W. 14'

+19-E. Rock. Cor. B. P.

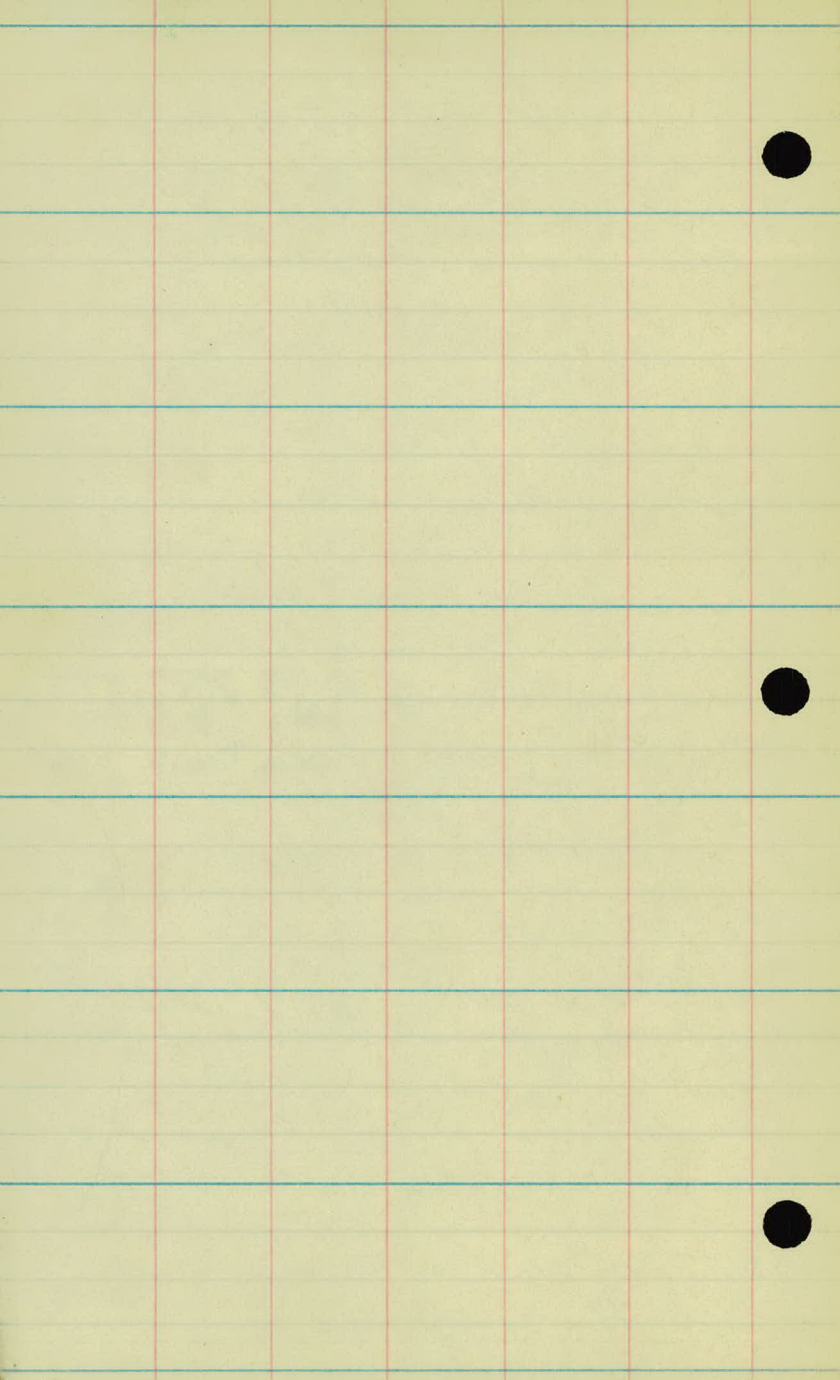
+15-Beg. Rock. Cor. B. 20

+16-P.D. 20

2 Track 244'

Black Top 14'

+63-Cor. Walk 36'



S.W. 23.1 - 24.1 Rd. 11'

Rd. 10' 14

+50-T.P. 21'

+47-P.P. 19'
+35-Ent.
+25-E. Hedge 18.4

12

+01-8" Silver R.P. 18"
S.W. 22.0 Rd. 10'

Rd. 10'
+30-Cor. Hedge 18.4
+14-N.P.L. S.W. Cor. 25.4

+74-N.P.L. S.W. Cor. 29'
+82-M.P. 22'
+55-E.N.H. 43'
+36-B.X. Walk 22.9
+35-E. Walk 22.9
+25-S.P.L. S.W. Cor. 29'
+19-P.P. 21'

+67-B.S.W. 23'
+66-E.X.W. 23.0

45 S.W.

45 S.W.

45 Walk

+25-S.P.L. S.W. 26.7
+30-P.P. 21
+24-File Hedge 19

11

S.W. 23.0
Rd. 10

Rd. 10'

10

+ S.W. 22.7
Rd. 12'

Rd. 9'

+80-T.P. 21'

+95-P.P. 21

+10-Ent.

9

S.W. 22.6

+30 Ent.

+52-T.P. 21'

+99-Ent.
+72-P.P. 20'

+05-B. Walk 22.6
+04-E.X. Walk 22.6

8

+35-Approx. 64th St.
+22-E.N.H. 3.8'
+24-B.X. Walk 22.5
+23-E. Walk 22.5

+42 15' Oak - 20'

+20-P.P. 21'

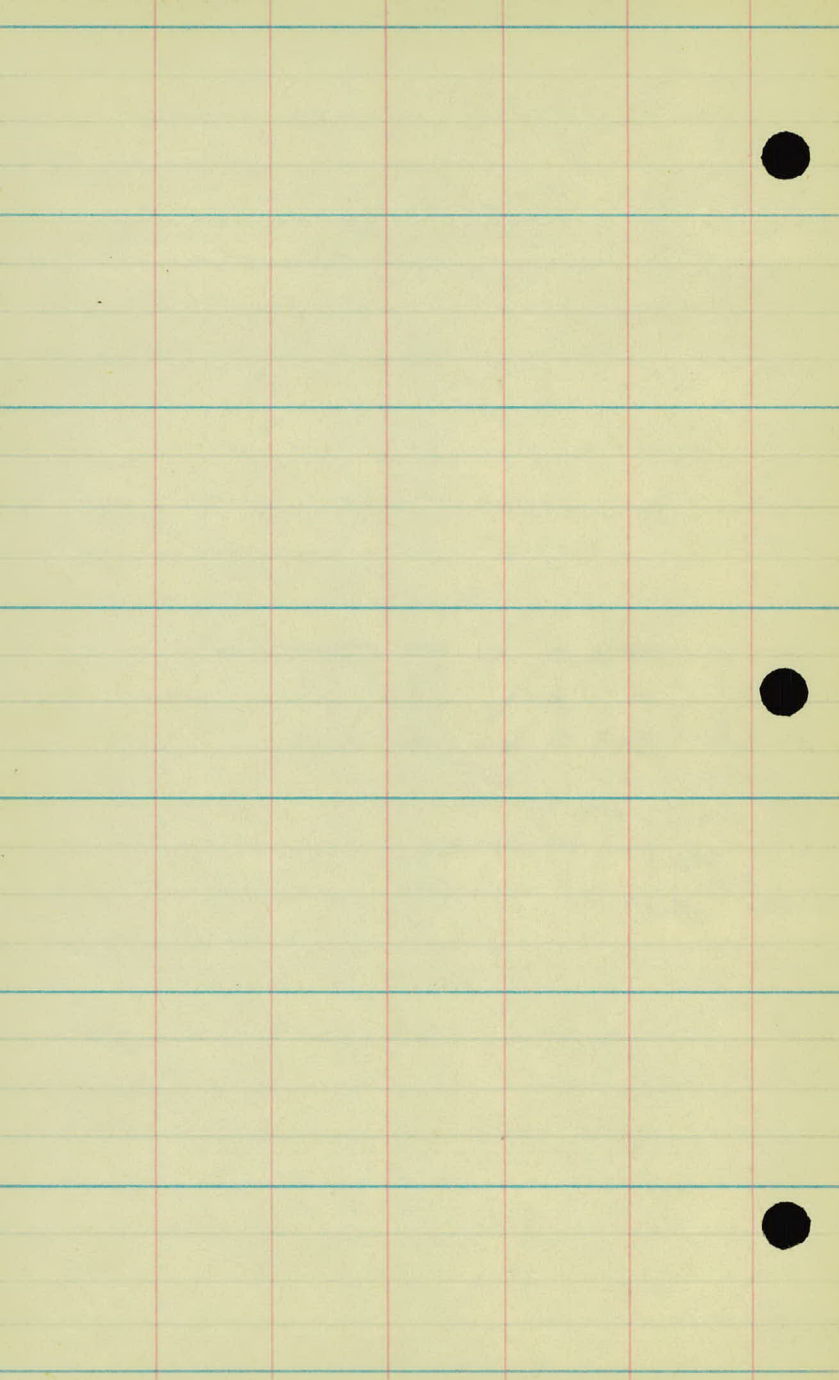
7

S.W. 22.7
Rd. 10'

+68-P.P. 20'
+27-24' Oak 27'
Rd. 9'

+68-P.P. 20'
+42 Ent.

6



Rd. 11'

Rd. 11' 17
+78-T.P. 22'

+70-P.P. 21'
+61-Ent

+18-Ent.
Rd. 10'

19 Rd. 12'

+58-Ent
+46-P.P. 21'

+68-T.P. 21'

18 Rd. 11'

Rd. 8

+61-Ent. SW. 73.9-76.7

+89-Fire Hydr. 20'

+27-P.P. 21'

+54-Ent.

+36-T.P. 20'

17 SW. 73.6-74.6 Rd. 12'

Rd. 9

+04-AR 21'

+73-T.P. 20'

16 (S.W. 73.3-74.3) Rd. 11'

Rd. 8'

+76-B. Walk 73.5
+78-E. X Walk 73.5
+145 E. N. H. 5.7

+41-T.P. 18'

15

+95-B. X Walk 73.5
+94-E. Walk 73.5
+61-T.P. 21'

+93-AR 17'
+84-Fire Hydr. 20'
+75-Guy Pole 17

14 S.W. 73.3

Rd. 10'

Rd. 12'

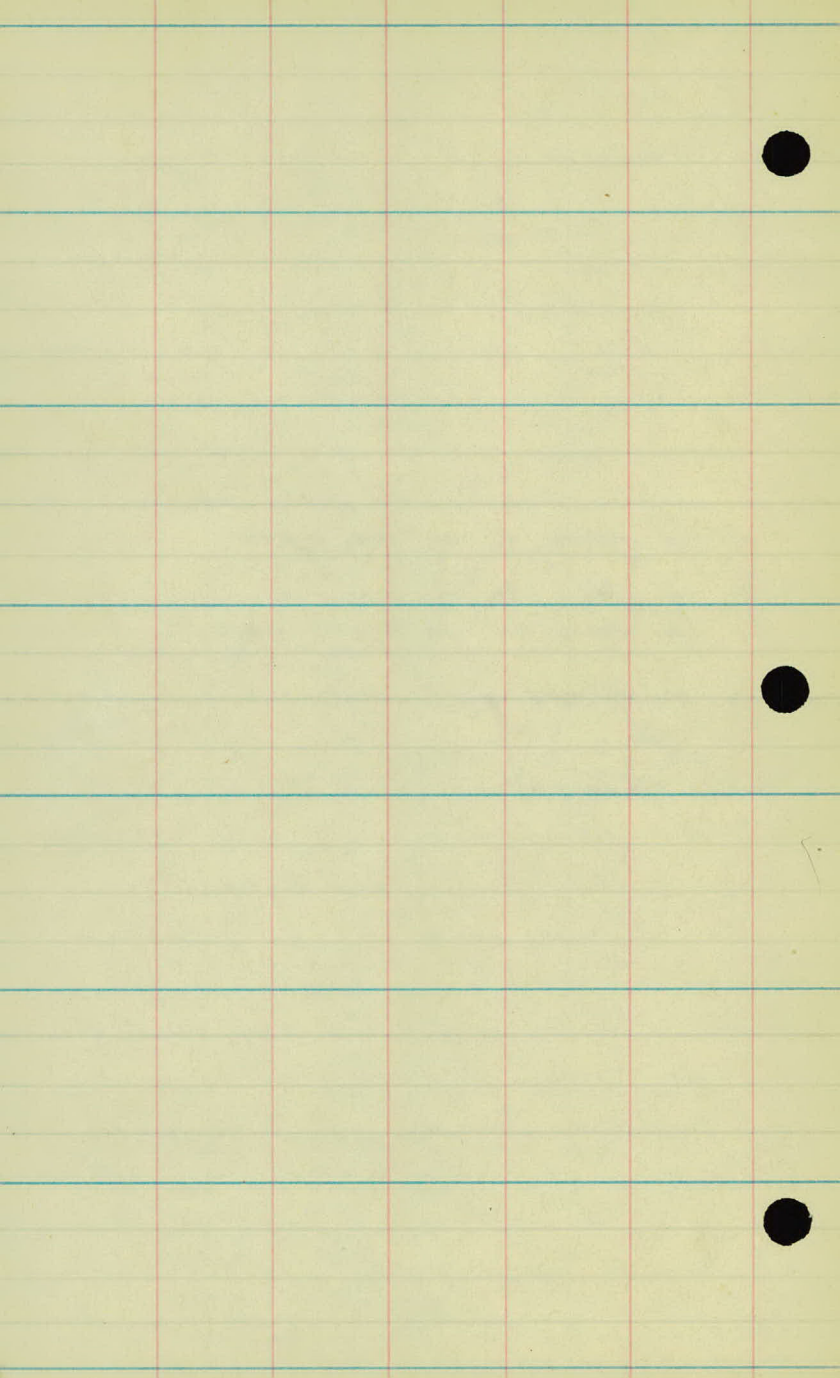
+76-T.P. 22'

+63-P.P. 18'

+76-Ent.

13





Rd. 8'

Rd. 10'

18

+44- Fire Hydr. 20.3
+40-T.P. 26'

16

Rd. 9'

Rd. 9'

+64-P.R. 18'

15

Rd. 9'

+91-Ent. L.T.

+17-T.P. 25'
R.A. 9'

+74.7 E.M.H. 0.6
+58-Ent.

24

Rd. 9'

Rd. 9'

+76-P.R. 18'

+86-T.P. 24'

+58-18" Bx. 25'

+74-End Trees 29'

+23-12" Bx. Et. 25'

23

Rd. 9'

Rd. 11'

+94-18" Bx. Et. 25'
+83- Fire Hydr. 20.3
+64-Ent.
+54-T.P. 24'
+42-12" Bx. Et. L.T.
+32-Ent.
+24
+20-6" Bx. Et. 24'

+44-Grass Tree 29'
+34.5 E.M.H. 0.5 - Level with
+11-P.R. 19' Ground bld.

22

Rd. 9'

Rd. 12'

+43- 10" Bx. 23'
+28-T.P. 23'
+25 10" Bx. 23'
+06- 14" Bx. Et. 23'

21

Rd. 11'

Rd. 11'

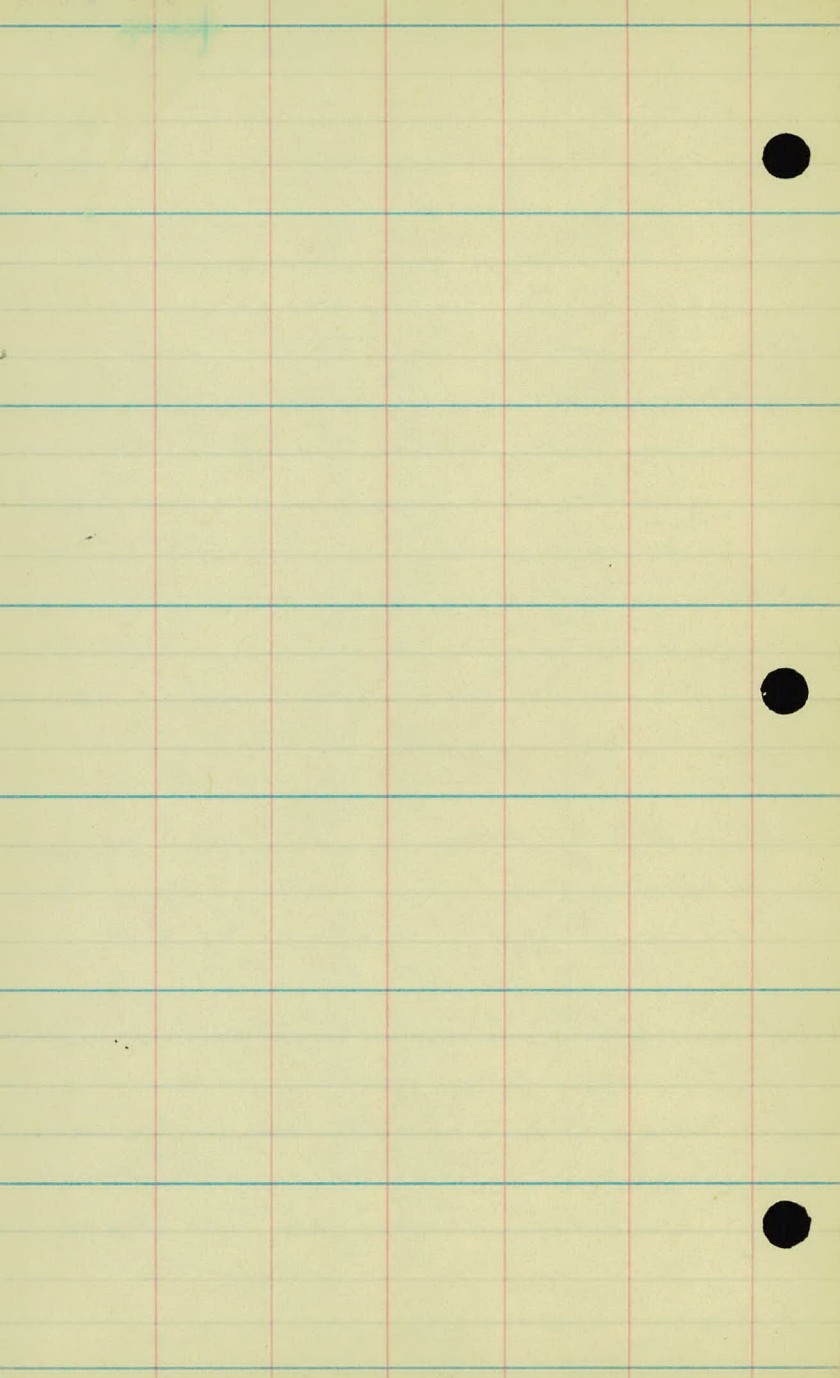
+92-P.R. 20'

+92-Ent.

+27-Ent.

+44-Ent.

20



#32-P.R. 14'

~~781~~-484-Tree 28
+79-Rd. 6'

30

Rd. 5

432-RA 17'

76

Rd. 6'

+31 E. Ties 31'

26

Rd. 8'

750. Bay Trees 28'

+30 P.D. 18'

27

Exhibitor

+29-Rd. 19

+58-File Hyd. 20,6

435-T.P. 29'

Rd. 13'

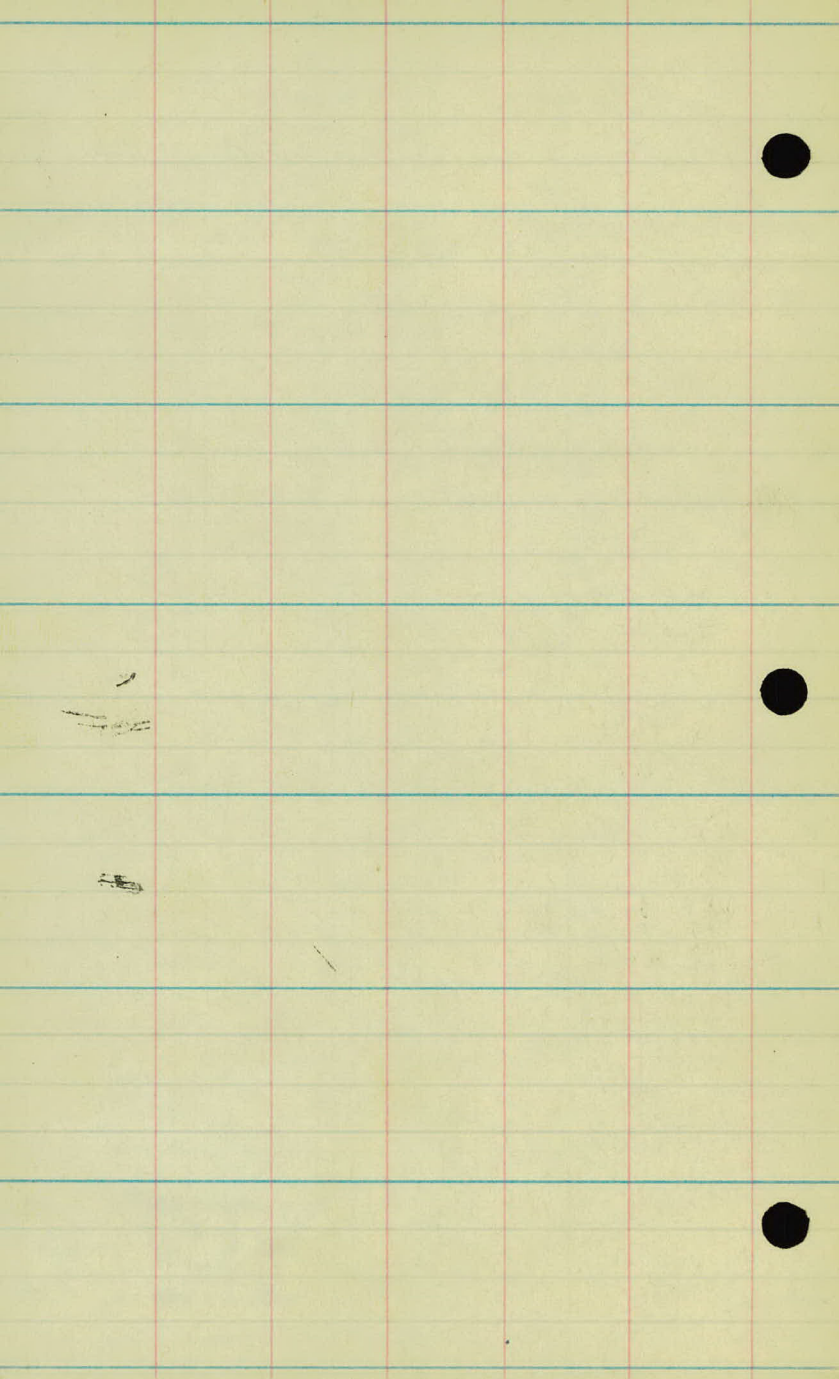
408-T.P. 28'

Ed. 12'

483-Ent.

2d. 11'

474 J.P. 20'



Cross sections

Division - street.

(4th st to N. City Limits.)

Sta.	+	π	-	Elev.
B.M.	5.12	938.41		932.26 ²⁹ ?
	6.42	939.69	5.14	933.27
	6.79	943.67	2.81	936.88
			3.02	
			1.46	942.23 (942.18)
	3.15	941.99	4.83	938.24

0+0 ± 4th St. 38.8

0+18 38.5

0+38 38.7

0+67 38.9

1+0 38.4

+50 38.0

2+0 37.6

+75 37.5

+50 37.3

St. Marys School Yard. U.S.G.S.

Top Fire Hyd. Miller Av. & 4th St.

Top Fire Hyd. White Bear Ave. & 4th St.

Top & W. N.W. Cor. 37' Rt. of Sta. 0+65

4th

3.20
31

3.20

3.30
50

(1st Rail)
75

Curb.

3.00
18

3.30
18

3.60
10

3.5

Black Top

38.77

3.22
29.5

Walk

3.22
19.3

3.5
10

3.30

3.70
20

3.50
32

38.39

3.56
29.4

Walk

3.60
19.2

3.7
12

3.1

3.4
18

3.15
36

- N.E. End Walk

38.07

3.88
29.4

Walk

3.92
19

4.2
11

3.6

3.6
7

4.3
18

4.4
24

4.0
30

37.58

4.39
24

Walk

4.41
18

4.8
12

4.0

4.2
10

4.8
18

4.9
30

37.33

4.65
24

Walk

4.66
18

5.0
14

4.4

4.6
10

5.1
15

5.1
30

37.28

4.65
23.7

Walk

4.71
17.7

5.0
14

4.5

4.6
9

4.9
14

5.2
30

37.40

4.55
22.4

Walk

4.59
16.4

5.2
11

4.7

4.9
12

4.7
30

Sta.	δ	π	-	Elev.
		941.99		37.2
2775				
T.P.	3.90	941.44	4.45	937.54
340				37.1
475				37.0
444				37.0
440				37.1
418				37.2
432	Iron Man -			37.3
456	App. P/L.			37.1
540				36.8
450				36.9
640				36.9
450				37.0

$$\begin{array}{r}
 4.48 \\
 22.2 - \text{Walk} - 16.2 \\
 \hline
 37.54 \\
 4.45 \quad 5.3 \\
 10
 \end{array}
 \quad
 \begin{array}{r}
 48 \\
 5.2 \\
 12
 \end{array}
 \quad
 \begin{array}{r}
 4.9 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.57 \\
 3.85 \\
 24.8 \text{ Walk} \\
 \hline
 3.87 \quad 4.7 \\
 18.8 \quad 11
 \end{array}
 \quad
 \begin{array}{r}
 4.3 \\
 4.7 \\
 10
 \end{array}
 \quad
 \begin{array}{r}
 4.6 \\
 15 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 4.6 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.59 \\
 3.79 \\
 28 \text{ Walk} \\
 \hline
 3.85 \quad 4.0 \\
 22 \quad 19
 \end{array}
 \quad
 \begin{array}{r}
 4.7 \\
 12
 \end{array}
 \quad
 \begin{array}{r}
 4.4 \\
 4.9 \\
 11
 \end{array}
 \quad
 \begin{array}{r}
 4.4 \\
 20 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 4.3 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.60 \\
 3.80 \\
 29 \text{ " } 23. \\
 \hline
 3.84 \quad 4.0 \quad 4.8 \\
 20 \quad 15
 \end{array}
 \quad
 \begin{array}{r}
 4.4 \\
 4.7 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.47 \\
 3.93 \\
 28.5 \\
 \hline
 3.97 \quad 4.1 \quad 5.0 \\
 19 \quad 14 \quad 10
 \end{array}
 \quad
 \begin{array}{r}
 4.6 \\
 4.8 \\
 10
 \end{array}
 \quad
 \begin{array}{r}
 5.0 \\
 12 \\
 17
 \end{array}
 \quad
 \begin{array}{r}
 4.4 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 4.3 \\
 30
 \end{array}$$

X Drains Lt. 7

$$\begin{array}{r}
 6.0 \\
 50 \\
 \hline
 4.08 \\
 18.5 \text{ Walk} \\
 \hline
 37.42 \\
 4.02 \quad 5.8 \\
 22 \quad 18.5
 \end{array}
 \quad
 \begin{array}{r}
 5.7 \\
 17 \\
 13
 \end{array}
 \quad
 \begin{array}{r}
 4.2 \\
 4.5 \\
 4.2
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 4.5 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 5.5 \\
 10 \\
 12
 \end{array}
 \quad
 \begin{array}{r}
 5.5 \\
 17 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 3.2 \\
 17 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 3.9 \\
 30
 \end{array}$$

train Lt.

$$\begin{array}{r}
 4.6 \\
 50 \\
 \hline
 4.3 \\
 21
 \end{array}
 \quad
 \begin{array}{r}
 4.2 \\
 11
 \end{array}
 \quad
 \begin{array}{r}
 4.1 \\
 5.0 \\
 11
 \end{array}
 \quad
 \begin{array}{r}
 4.3 \\
 22 \\
 30
 \end{array}$$

+ 34 = Top of Manhole

$$\begin{array}{r}
 4.02 \\
 28.5 \text{ Walk} \\
 \hline
 37.38 \\
 4.06 \quad 4.1 \\
 18 \quad 14
 \end{array}
 \quad
 \begin{array}{r}
 5.1 \\
 14
 \end{array}
 \quad
 \begin{array}{r}
 4.3 \\
 4.9 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 5.3 \\
 11 \\
 17
 \end{array}
 \quad
 \begin{array}{r}
 3.8 \\
 17 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 3.8 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.43 \\
 3.91 \\
 28.5 \text{ Walk} \\
 \hline
 4.01 \quad 4.1 \quad 5.2 \\
 22.5 \quad 18 \quad 13
 \end{array}
 \quad
 \begin{array}{r}
 4.9 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 4.6 \\
 5.2 \\
 12.5
 \end{array}
 \quad
 \begin{array}{r}
 4.3 \\
 15.5 \\
 29
 \end{array}
 \quad
 \begin{array}{r}
 4.0 \\
 29
 \end{array}$$

$$\begin{array}{r}
 37.41 \\
 4.05 \\
 28.5 - W - \\
 \hline
 4.03 \quad 4.2 \quad 5.3 \\
 22.5 \quad 18 \quad 14
 \end{array}
 \quad
 \begin{array}{r}
 4.9 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 5.0 \\
 12
 \end{array}
 \quad
 \begin{array}{r}
 4.8 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.49 \\
 3.95 \\
 28.5 - W - \\
 \hline
 3.95 \quad 4.2 \quad 5.2 \\
 22.5 \quad 18 \quad 14
 \end{array}
 \quad
 \begin{array}{r}
 4.7 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 5.1 \\
 14
 \end{array}
 \quad
 \begin{array}{r}
 4.7 \\
 16 \\
 30
 \end{array}
 \quad
 \begin{array}{r}
 4.6 \\
 30
 \end{array}$$

$$\begin{array}{r}
 37.53 \\
 3.83 \\
 28.5 - W - \\
 \hline
 3.91 \quad 4.0 \quad 5.0 \\
 22.5 \quad 19 \quad 14
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 4.4 \\
 4.9 \\
 14
 \end{array}
 \quad
 \begin{array}{r}
 4.6 \\
 19 \\
 30
 \end{array}$$

Sta.	+	π	-	Elev.
		941.44		
7+0				37.2
T.P.	3.84	941.76	3.52	937.92
+65				37.6
7+96				
7+96				37.8
8+23				37.9
9+0				38.0
10+0				37.5
11+0				37.2
+24.4	S. P/L. 7th			37.1
B.M.	0.86	941.76	0.86	940.90
+48.7	± Manhole			
+49	App. ± 7th			37.1
+79	N/P. p Line			37.0
12+0				36.8

$$\begin{array}{r} 37.65 \\ 3.70 \quad 3.79 \quad 3.8 \quad 4.9 \quad 4.5 \\ 285 - W - 225 \quad 19 \quad 15 \quad 9 \end{array} \quad 4.2 \quad \begin{array}{r} 4.8 \\ 13 \end{array} \quad \begin{array}{r} 4.2 \\ 19 \end{array} \quad \begin{array}{r} 4.0 \\ 30 \end{array}$$

$$\begin{array}{r} 37.75 \\ 3.91 \quad 4.01 \quad 4.1 \quad 4.9 \quad 4.4 \\ 285 - W - 225 \quad 19 \quad 14 \quad 9 \end{array} \quad 4.2 \quad \begin{array}{r} 4.8 \\ 13 \end{array} \quad \begin{array}{r} 3.9 \\ 19 \end{array} \quad \begin{array}{r} 3.9 \\ 30 \end{array}$$

$$7+96 \text{ Top } \pm 1160/\text{hole} \quad \begin{array}{r} 3.95 \\ 3.1 \end{array}$$

$$\begin{array}{r} 37.91 \\ 4.4 \quad 3.85 \quad 3.9 \quad 4.1 \quad 4.0 \\ 50 \quad X-W - 24 \quad 19 \quad 13 \end{array} \quad \begin{array}{r} 4.4 \\ 12 \end{array} \quad \begin{array}{r} 4.0 \\ 35 \end{array} = \text{Appr. } \pm 6\text{th}$$

$$\begin{array}{r} 37.76 \\ 3.89 \quad 4.00 \quad 3.9 \quad 4.3 \quad 3.9 \\ 285 - W - 225 \quad 18 \quad 13 \end{array} \quad \begin{array}{r} 4.2 \\ 12 \end{array} \quad \begin{array}{r} 3.0 \\ 19 \end{array} \quad \begin{array}{r} 2.9 \\ 30 \end{array}$$

$$\begin{array}{r} 37.96 \\ 3.65 \quad 3.80 \quad 3.8 \quad 4.5 \quad 3.8 \\ 285 - W - 225 \quad 18 \quad 14 \end{array} \quad \begin{array}{r} 4.1 \\ 12 \end{array} \quad \begin{array}{r} 3.1 \\ 18 \end{array} \quad \begin{array}{r} 2.9 \\ 30 \end{array}$$

$$\begin{array}{r} 37.74 \\ 4.29 \quad 4.02 \quad 4.0 \quad 5.0 \quad 4.6 \quad 4.3 \\ 289 - W - 229 \quad 19 \quad 15 \quad 10 \end{array} \quad \begin{array}{r} 5.0 \\ 12 \end{array} \quad \begin{array}{r} 3.8 \\ 19 \end{array} \quad \begin{array}{r} 3.6 \\ 30 \end{array}$$

$$\begin{array}{r} 37.34 \\ 4.35 \quad 4.42 \quad 4.4 \quad 4.9 \quad 4.6 \\ 291 - W - 231 \quad 20 \quad 16 \end{array} \quad \begin{array}{r} 5.0 \\ 14 \end{array} \quad \begin{array}{r} 4.2 \\ 19 \end{array} \quad \begin{array}{r} 4.0 \\ 30 \end{array}$$

$$\begin{array}{r} 37.16 \\ 4.50 \quad 4.60 \quad 4.5 \quad 5.0 \quad 4.7 \\ 287 - W - 221 \quad 18 \quad 15 \end{array} \quad \begin{array}{r} 5.2 \\ 13 \end{array} \quad \begin{array}{r} 4.5 \\ 26.7 - S.W. \end{array}$$

Top Fire Hyd. S. E. Cor. 6th & Div.

$$\begin{array}{r} 4.487 = 70 \pm N.H. \rightarrow 4.69 \\ 4.9 \quad 37.32 \quad 4.44 \quad 37.17 \\ 50 \quad 27 = \text{dx Walk} \end{array} \quad \begin{array}{r} 4.7 \\ 50 \end{array}$$

$$\begin{array}{r} 37.22 \\ 4.47 \quad 4.54 \quad 5.0 \quad 5.4 \quad 4.8 \quad 4.8 \\ 290 - W - 230 \quad 16 \quad 12 \quad 8 \end{array} \quad \begin{array}{r} 5.4 \\ 12 \end{array} \quad \begin{array}{r} 4.54 \\ 25.4 \end{array} = \text{Walk - East}$$

$$\begin{array}{r} 37.15 \\ 4.51 \quad 4.61 \quad 4.8 \quad 5.5 \quad 5.0 \quad 5.0 \\ 290 - W - 230 \quad 19 \quad 13 \quad 8 \end{array} \quad \begin{array}{r} 5.6 \\ 12 \end{array} \quad \begin{array}{r} 5.5 \\ 16 \end{array} \quad \begin{array}{r} 4.5 \\ 18 \end{array} \quad \begin{array}{r} 4.4 \\ 30 \end{array}$$

Sta.	+	π	-	Elev.
		941.76		
12+50				36.6
13				36.6
14				36.3
+86	App. R/L. 8th			36.5
15+08.5	= E Manhole			
T.P.	3.86	940.65	4.97	936.79
15+08.5	App. R/L			36.8
+46				36.4
16				36.3
17				36.3
+60.5	End Walk. Lt.			36.2
18				36.3
19				36.5

37.10

$$\begin{array}{r} 4.57 \\ 79.10 - 73 \\ \hline 4.66 \end{array} \quad \begin{array}{r} 4.8 \\ 19 \\ \hline 5.8 \\ 14 \\ \hline 5.5 \\ 11 \\ \hline 5.2 \end{array} \quad \begin{array}{r} 5.8 \\ 13 \\ \hline 5.5 \\ 16 \\ \hline 5.4 \\ 30 \end{array}$$

37.02

$$\begin{array}{r} 4.70 \\ 79.2 - 73.2 \\ \hline 4.74 \end{array} \quad \begin{array}{r} 4.9 \\ 19 \\ \hline 5.9 \\ 15 \\ \hline 5.5 \\ 10 \\ \hline 5.2 \end{array} \quad \begin{array}{r} 6.1 \\ 14 \\ \hline 5.6 \\ 18 \\ \hline 5.5 \\ 30 \end{array}$$

36.84

$$\begin{array}{r} 4.96 \\ 79.2 - 73.2 \\ \hline 4.92 \end{array} \quad \begin{array}{r} 5.1 \\ 20 \\ \hline 5.7 \\ 14 \\ \hline 5.4 \\ 9 \\ \hline 5.5 \end{array} \quad \begin{array}{r} 6.0 \\ 8 \\ \hline 6.3 \\ 12 \\ \hline 5.8 \\ 18 \\ \hline 5.5 \\ 30 \end{array}$$

36.76

$$\begin{array}{r} 5.05 \\ 79.2 - 73.2 \\ \hline 5.00 \end{array} \quad \begin{array}{r} 4.9 \\ 19 \\ \hline 5.8 \\ 13 \\ \hline 5.3 \\ 10 \\ \hline 5.3 \end{array} \quad \begin{array}{r} 6.0 \\ 8 \\ \hline 6.1 \\ 12 \\ \hline 5.6 \\ 17 \\ \hline 5.6 \\ 30 \end{array}$$

$$\begin{array}{r} 4.97 \\ 70.6 \text{ } \Phi \text{ M.H.} \\ \hline 5.0 \end{array}$$

36.79

36.75

$$\begin{array}{r} 4.5 \\ 50 \\ \hline 3.90 \end{array} \quad \begin{array}{r} 3.90 \\ 76 \\ \hline 4.5 \end{array} = 4 \times 4.64 \quad \begin{array}{r} 3.9 \\ 50 \\ \hline 4.5 \end{array}$$

36.72

$$\begin{array}{r} 3.92 \\ 79.3 - 73.3 \\ \hline 3.93 \end{array} \quad \begin{array}{r} 4.2 \\ 18 \\ \hline 4.8 \\ 14 \\ \hline 4.3 \\ 8 \\ \hline 4.3 \end{array} \quad \begin{array}{r} 4.6 \\ 8 \\ \hline 3.9 \\ 18 \\ \hline 4.2 \\ 30 \end{array}$$

36.85

$$\begin{array}{r} 3.76 \\ 79.4 - 73.4 \\ \hline 3.80 \end{array} \quad \begin{array}{r} 3.9 \\ 19 \\ \hline 5.0 \\ 14 \\ \hline 4.1 \\ 6 \\ \hline 4.4 \end{array} \quad \begin{array}{r} 5.0 \\ 9 \\ \hline 3.9 \\ 18 \\ \hline 4.1 \\ 30 \end{array}$$

37.08

$$\begin{array}{r} 3.54 \\ 79.7 - 72.7 \\ \hline 3.57 \end{array} \quad \begin{array}{r} 3.9 \\ 20 \\ \hline 5.0 \\ 14 \\ \hline 4.1 \\ 7 \\ \hline 4.4 \end{array} \quad \begin{array}{r} 5.0 \\ 10 \\ \hline 4.4 \\ 18 \\ \hline 4.8 \\ 30 \end{array}$$

37.22

$$\begin{array}{r} 3.26 \\ 79.7 - 73.7 \\ \hline 3.43 \end{array} \quad \begin{array}{r} 3.7 \\ 19 \\ \hline 5.0 \\ 11 \\ \hline 4.2 \\ 6 \\ \hline 4.5 \end{array} \quad \begin{array}{r} 4.8 \\ 10 \\ \hline 4.4 \\ 20 \\ \hline 4.1 \\ 30 \end{array}$$

$$\begin{array}{r} 3.5 \\ 30 \\ \hline 3.7 \\ 22 \\ \hline 4.8 \\ 13 \\ \hline 4.1 \\ 4 \\ \hline 4.4 \end{array} \quad \begin{array}{r} 4.8 \\ 10 \\ \hline 4.4 \\ 17 \\ \hline 4.4 \\ 30 \end{array}$$

$$\begin{array}{r} 4.9 \\ 30 \\ \hline 4.3 \\ 22 \\ \hline 4.7 \\ 13 \\ \hline 4.2 \end{array} \quad \begin{array}{r} 4.7 \\ 14 \\ \hline 4.4 \\ 26 \\ \hline 4.4 \\ 30 \end{array}$$

940.65

19+50

36.7

20+0

37.1

T.P.

5.79

942.98

3.46

937.19

+50

37.4

21

37.9

+50

38.1

22

38.2

+50

38.1

3.46

939.52

Lt.

2

Rt.

10

$$\frac{4.4}{30}$$

$$\frac{4.1}{23}$$

$$\frac{4.5}{15}$$

$$\frac{36.7}{40}$$

$$\frac{4.5}{11}$$

$$\frac{4.5}{30}$$

$$\frac{3.2}{30}$$

$$\frac{4.1}{13}$$

$$\frac{3.6}{11}$$

$$\frac{3.9}{11}$$

$$\frac{3.8}{30}$$

$$\frac{4.5}{30}$$

$$\frac{6.0}{13}$$

$$\frac{5.6}{11}$$

$$\frac{6.1}{9}$$

$$\frac{5.8}{30}$$

$$\frac{3.2}{30}$$

$$\frac{4.1}{19}$$

$$\frac{5.7}{11}$$

$$\frac{5.1}{11}$$

$$\frac{5.7}{12}$$

$$\frac{5.8}{30}$$

$$\frac{2.6}{30}$$

$$\frac{3.8}{18}$$

$$\frac{5.6}{11}$$

$$\frac{4.9}{11}$$

$$\frac{5.4}{12}$$

$$\frac{5.1}{17}$$

$$\frac{5.7}{30}$$

$$\frac{3.1}{30}$$

$$\frac{3.9}{19}$$

$$\frac{5.3}{11}$$

$$\frac{4.8}{11}$$

$$\frac{5.3}{15}$$

$$\frac{5.0}{20}$$

$$\frac{5.4}{30}$$

$$\frac{2.0}{30}$$

$$\frac{4.5}{19}$$

$$\frac{5.4}{10}$$

$$\frac{4.9}{11}$$

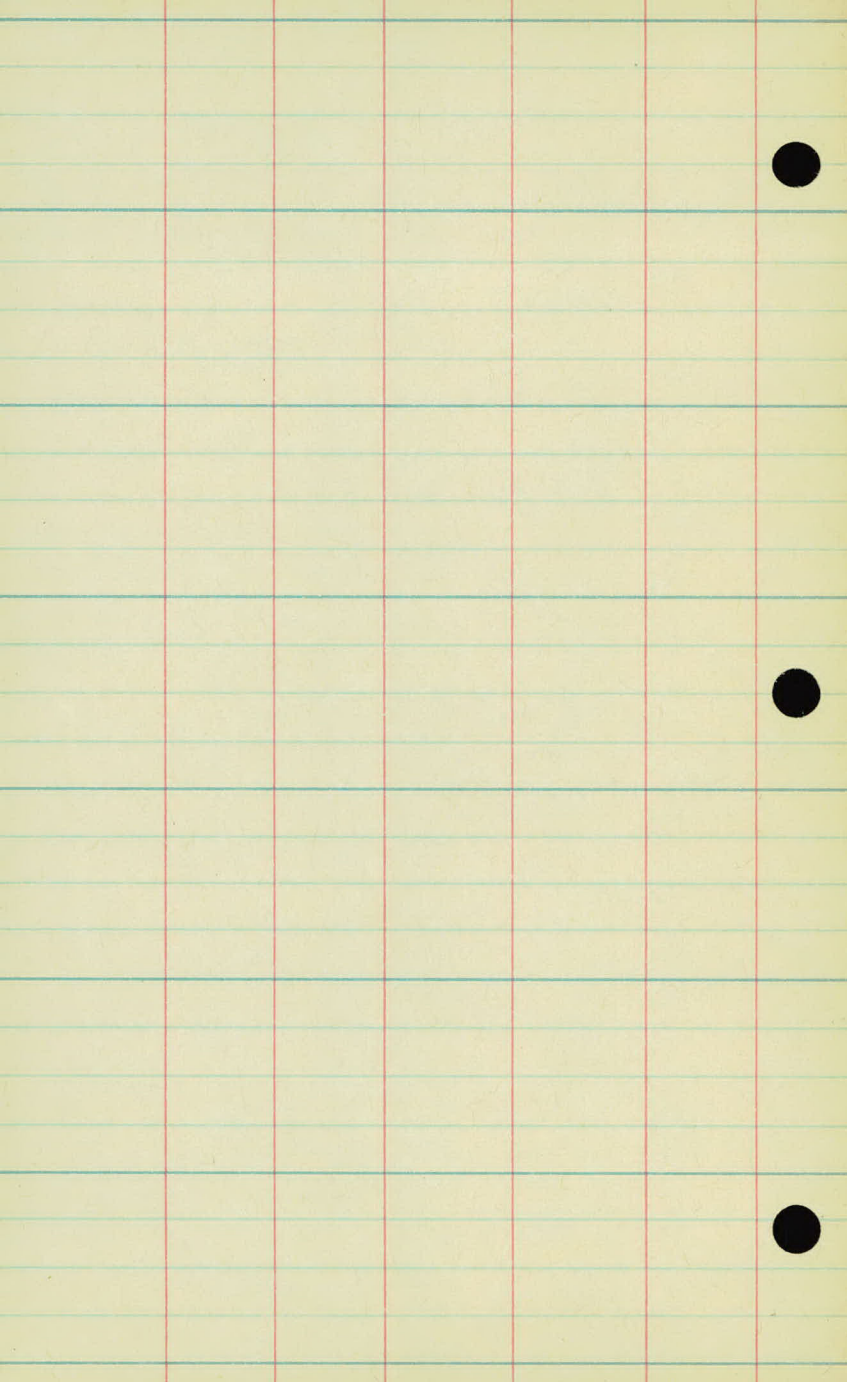
$$\frac{5.5}{14}$$

$$\frac{5.2}{21}$$

$$\frac{5.4}{30}$$

Top Hyd.

Rt. 22 + 34



Sta.	+	$\bar{x}$	-	Elev.
	2.28	941.80		939.52
73+0				37.5
73+50				37.3
24+0				37.2
24+50				37.0
24+75		M. H.		
25+0				36.7
+50				36.5
26+0				36.3
+50				36.2
T.P	2.95	941.30	3.45	938.35
27+0				36.4
+50				36.4
28+0				36.6
+50				36.6
29+00				36.6

Top Hyd. Rt. 22+83

$$\frac{4.0}{30} \quad \frac{4.6}{22} \quad \frac{4.7}{11} \quad 4.3 \quad \frac{4.8}{15} \quad \frac{5.5}{30}$$

$$\frac{4.4}{30} \quad \frac{5.2}{12} \quad \frac{4.6}{6} \quad 4.5 \quad \frac{5.2}{14} \quad \frac{5.6}{30}$$

$$\frac{4.4}{30} \quad \frac{5.0}{29} \quad \frac{5.3}{12} \quad \frac{4.8}{6} \quad 4.6 \quad \frac{5.2}{12} \quad \frac{4.6}{17} \quad \frac{4.3}{30}$$

$$\frac{5.2}{30} \quad \frac{5.6}{22} \quad \frac{5.5}{12} \quad \frac{5.2}{9} \quad \frac{4.8}{6} \quad 4.8 \quad \frac{5.0}{13} \quad \frac{4.2}{27} \quad \frac{4.1}{30}$$

$$\frac{5.0}{30} \quad \frac{5.4}{25} \quad \frac{5.7}{12} \quad \frac{5.3}{7} \quad 4.9 \quad 36.90 \quad 5.1 \quad \frac{5.4}{11} \quad \frac{4.1}{20} \quad \frac{3.9}{30}$$

$$\frac{5.2}{30} \quad \frac{5.8}{23} \quad \frac{6.0}{11} \quad 5.3 \quad \frac{5.8}{12} \quad \frac{4.7}{21} \quad \frac{4.6}{30}$$

$$\frac{6.3}{30} \quad \frac{5.8}{23} \quad \frac{6.3}{11} \quad 5.5 \quad \frac{6.0}{13} \quad \frac{6.2}{30}$$

$$\frac{6.3}{30} \quad \frac{5.7}{19} \quad \frac{6.2}{10} \quad 5.6 \quad \frac{6.1}{12} \quad \frac{6.7}{30}$$

$$\frac{5.1}{30} \quad \frac{5.1}{27} \quad \frac{5.8}{12} \quad \frac{5.3}{8} \quad 4.9 \quad \frac{5.4}{12} \quad \frac{5.8}{19} \quad \frac{6.0}{30}$$

$$\frac{5.3}{30} \quad \frac{5.0}{19} \quad \frac{5.8}{11} \quad \frac{5.2}{6} \quad 4.9 \quad \frac{5.0}{12} \quad \frac{5.8}{18} \quad \frac{5.6}{30}$$

$$\frac{4.9}{30} \quad \frac{5.0}{23} \quad \frac{5.4}{13} \quad \frac{5.1}{7} \quad 4.7 \quad \frac{4.8}{12} \quad \frac{5.7}{19} \quad \frac{5.6}{30}$$

$$\frac{4.8}{30} \quad \frac{4.8}{18} \quad \frac{5.8}{12} \quad \frac{5.2}{6} \quad 4.7 \quad \frac{4.9}{12} \quad \frac{5.4}{21} \quad \frac{5.6}{30}$$

$$\frac{5.0}{30} \quad \frac{4.9}{19} \quad \frac{5.8}{13} \quad \frac{5.6}{9} \quad \frac{4.8}{2} \quad 4.7 \quad \frac{4.7}{12} \quad \frac{5.5}{20} \quad \frac{5.0}{24} \quad \frac{4.8}{30}$$

Sta + H.I. — Elev.

941.20

29+50

36.9

30+0

37.2

+50

37.2

B.M

0.91 940.39

30+78³⁰

End Proj 37.3

31+0

37.4

+50

32

+50

33+0

Ck. Levels

3.05 942.40 2.95 938.35

2.24 941.76 1.88 939.52

3.34 941.75 3.35 938.41

1.90 942.72 0.93 940.82

5.12 942.09 5.75 936.97

4.59 943.36 3.32 938.77 B.M

1.22 942.14 B.M

Lt

2

Rt

13

$\frac{4.9}{30}$	$\frac{4.8}{17}$	$\frac{5.8}{11}$	$\frac{5.1}{8}$	$\frac{4.5}{2}$	4.4	$\frac{4.4}{12}$	$\frac{5.5}{21}$	$\frac{5.0}{30}$
------------------	------------------	------------------	-----------------	-----------------	-----	------------------	------------------	------------------

$\frac{4.6}{30}$	$\frac{4.8}{15}$	$\frac{5.4}{10}$	$\frac{5.0}{8}$	$\frac{4.3}{3}$	4.1	$\frac{4.1}{12}$	$\frac{5.2}{21}$	$\frac{4.3}{30}$
------------------	------------------	------------------	-----------------	-----------------	-----	------------------	------------------	------------------

$\frac{3.0}{30}$	$\frac{4.4}{21}$	$\frac{4.3}{13}$	$\frac{4.9}{8}$	$\frac{4.5}{4}$	4.1	$\frac{4.1}{15}$	$\frac{3.9}{23}$	$\frac{4.6}{26}$	$\frac{4.5}{30}$
------------------	------------------	------------------	-----------------	-----------------	-----	------------------	------------------	------------------	------------------

Hvd 21' Rt 30+55

$\frac{3.1}{30}$	$\frac{3.5}{25}$	$\frac{4.1}{12}$	$\frac{5.0}{9}$	$\frac{4.2}{3}$	4.0	$\frac{3.8}{14}$	$\frac{3.7}{23}$	$\frac{3.7}{30}$	$\frac{4.2}{50}$
------------------	------------------	------------------	-----------------	-----------------	-----	------------------	------------------	------------------	------------------

$\frac{3.4}{35}$	$\frac{3.8}{25}$	$\frac{4.1}{12}$	$\frac{5.0}{8}$	$\frac{3.9}{3}$	3.9	$\frac{4.0}{25}$	$\frac{4.4}{50}$
------------------	------------------	------------------	-----------------	-----------------	-----	------------------	------------------

3.7 37.6

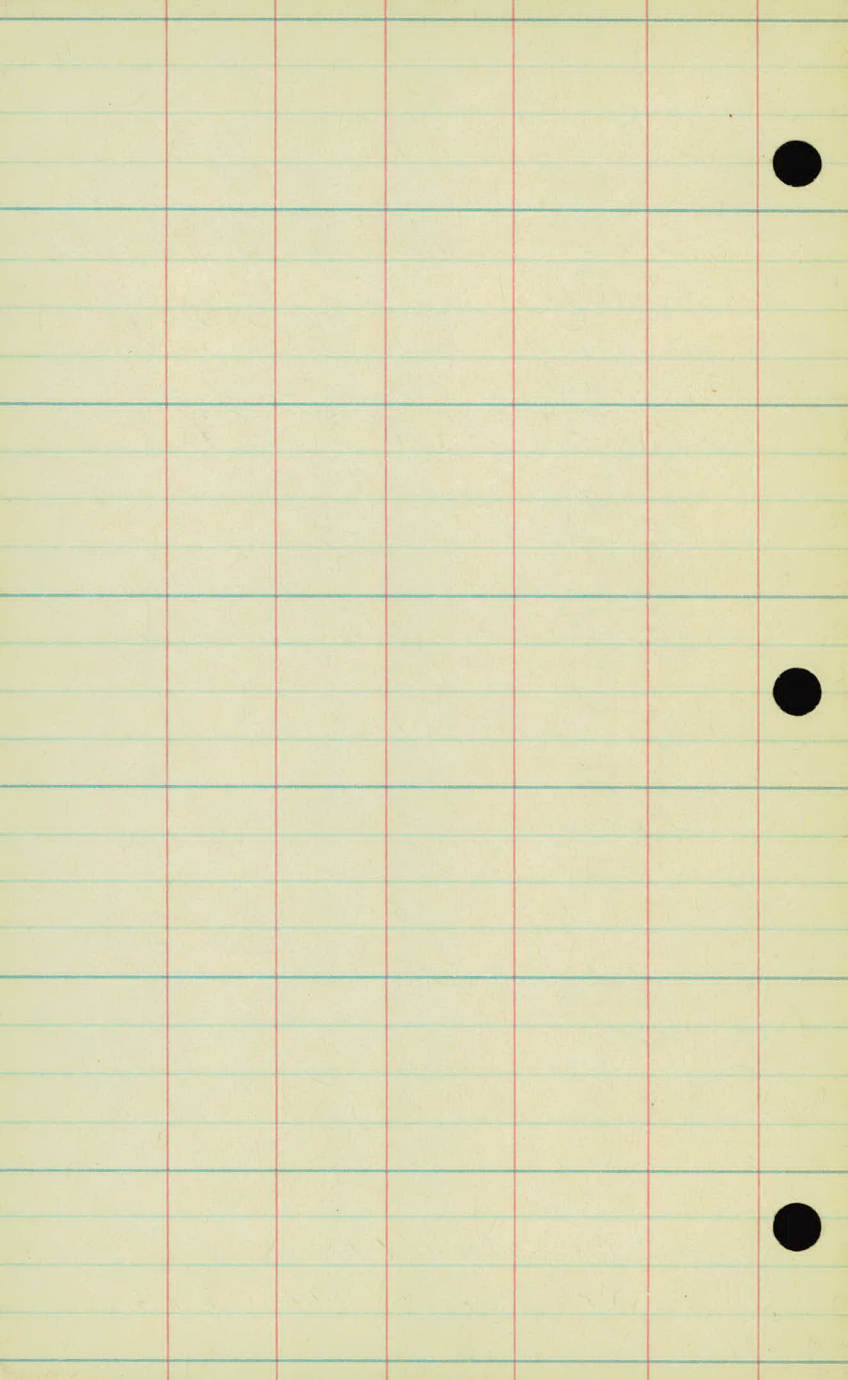
4.2 37.1

5.0 36.3

5.9 35.4

No West Cor Sidewalk 0165

Hvd. Nor. East Cor. 4th & White Bear Ave



1

Levels & Cross Sections

5th - 6th - 7th & 8th Streets.

From Division St. to White Bear Av.

W. H. Carlson

June 22, 1935

Sta.	+	π	-	Elev.
B.M.	0.25	942.43		942.18
T.P.	4.98	940.56	6.85	935.58

X-Sections Fifth St. Div. to White Bear Av.

0+0 = 2 Div.

1+0 36.3

2+0 36.1

3+0 35.6

3+22

3+44 1/2 - E. Curb Line

3+64 1/2 White Bear 5.0

T.P. 5.15 941.19 4.62 935.94

South = Lt.

±

Rt. = North

2

Top Hyd. 4th & White Bear Av.

M. H. Ring - 5th & Wh. Bear.

$\frac{4.2}{21}$ $\frac{5.4}{19}$ $\frac{5.4}{18}$ $\frac{4.4}{15}$ 43

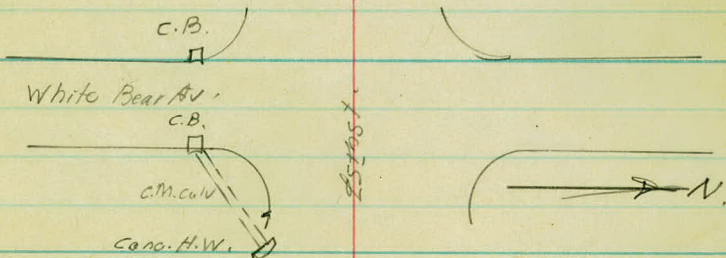
No Ditch on North
Side.

$\frac{5.0}{19}$ $\frac{5.9}{17}$ $\frac{5.9}{16}$ $\frac{5.5}{14}$ 45

$\frac{5.0}{20}$ $\frac{5.9}{19}$ $\frac{6.0}{18}$ $\frac{5.3}{14}$ 50

Flow Line = 12" C.M. = $\frac{34.28}{6.28} = 17$

C.B. $\frac{33.07}{7.49} = 30$ = Flow Line C.M. culv.



top M. H. Ring 6th & Wh. Bear.

Sta.	+	π	-	Elev.
		941.19		

X Sections - 6th St. Div. to Wh. Bear.

0+0 = 4 Div.

1+0

2+0

3+0

3+48 = Gutter Line Wh. Bear. Cr.

T.P.

5.23

941.01

5.41

935.78

0.08

941.01

0.08

940.93

7th Hyd. Dior
7th

South = Lt.

Z

Rt. = North

3

$\frac{4.4}{19}$

$\frac{2.9}{-}$

$\frac{4.3}{9}$

$\frac{3.9}{20}$

$\frac{4.5}{21}$

$\frac{4.9}{16}$

$\frac{4.5}{-}$

$\frac{5.0}{10}$

$\frac{4.1}{15}$

No Ditches

Lt. or Rt

$\frac{4.1}{21}$

$\frac{4.9}{16}$

$\frac{4.5}{10}$

$\frac{4.6}{-}$

$\frac{5.1}{8}$

$\frac{5.4}{12}$

$\frac{4.6}{19}$

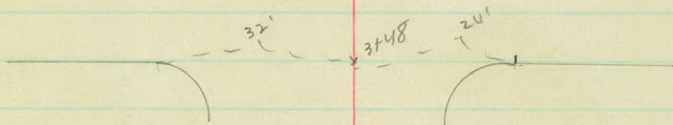
Rd. Pk. Curb } $\frac{5.7}{-}$
Gutter Elev } $\frac{3.2}{-}$

$\frac{5.7}{-}$
Gutter Elev.

$\frac{5.7}{24} = \int$ Rad. Pt. curd
Gutter Elev

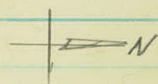
Wh Bear Ave.

M.H.



Top M.H. Ring 7th Wh Bear.

6th St.



Sta. + * - Elev.

941.01

Cross section 5. 7th St. Div. to Wh. Bear.

0+0 = 4 Div.

1+0

2+0

3+0

+38

3+47 Gutter & Curb Lion

3+80 Storm Sewer M.H. 48' Lt.

T.P. 4.72 ✓ 939.93 5.80 935.21

South = 4.

±

Pl. = North

4

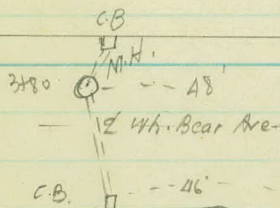
$$\begin{array}{r} 275 \text{ S.Walk} \quad \frac{4.1}{23} \quad \frac{3.8}{16} \quad \frac{4.6}{10} \quad 4.0 \quad \frac{4.8}{12} \quad \frac{4.2}{19} \quad \frac{4.1 \text{ SW}}{23} - 27.5 \end{array}$$

$$\begin{array}{r} 275 \text{ S.W} \quad \frac{4.8}{23} \quad \frac{4.2}{18} \quad \frac{4.9}{14} \quad 4.1 \quad \frac{4.8}{12} \quad \frac{4.4}{18} \quad \frac{4.6}{23} \text{ S.W. } 27.5 \end{array}$$

$$\begin{array}{r} 275 \text{ S.W} \quad \frac{5.0}{23} \quad \frac{4.8}{18} \quad \frac{5.3}{15} \quad \frac{5.2}{11} \quad 4.8 \quad \frac{5.3}{12} \quad \frac{4.7}{19} \quad \frac{5.0}{23} \text{ S.W. } 27.5 \end{array}$$

$$\begin{array}{r} \text{Top Curb.} \quad \frac{5.06}{13} \quad \frac{5.1}{13} \quad 5.3 \quad \frac{5.4}{12} \quad \frac{5.0}{13} = \text{Top Curb.} \end{array}$$

$$\begin{array}{r} \text{Fl. curb. } 8.24 \\ \text{in C.B. } \frac{46}{46} \quad \frac{5.79}{46} \quad 5.7. \\ \text{Gutter} \end{array}$$



Top M.H. Ring
8th & 4h. Bear.

Side Walk

± 7.4

Side Walk

3447 7

Sta.	+	π	-	$t/ev.$
------	---	-------	---	---------

939.93

0.07	939.93	0.07	939.86
------	--------	------	--------

Cross Sections 8th St. Div. to Wh. Bear.

$$\partial_t \phi = \mathcal{L} \phi$$

140				36.1
-----	--	--	--	------

240				36.0
-----	--	--	--	------

340				354
-----	--	--	--	-----

737					35.4
-----	--	--	--	--	------

$$+s1 = \text{Curb + Gutter Line} \quad 34.6$$

B.M.

3.50

936.43

Top M. H. Ring
Near end of
Pavement.
see Race Track
Survey.

South = Lt

2

Rt = North

5

Fire Hyd. 8th & Div.

$$\frac{39}{20}$$

$$\frac{41}{9}$$

$$\frac{38}{9}$$

$$\frac{40}{15}$$

$$\frac{38}{20}$$

$$\frac{40}{20}$$

$$\frac{39}{9}$$

$$\frac{45}{16}$$

$$\frac{38}{18}$$

$$\frac{39}{20}$$

$$\frac{41}{20}$$

$$\frac{49}{12}$$

$$4.5$$

$$\frac{4.5}{50}$$

$$\frac{4.9}{15}$$

$$\frac{4.7}{17}$$

$$\frac{4.4}{22}$$

Top Curb $\frac{4.5}{18}$

45

50

$\frac{4.5}{18}$

18 = top curb

Gutter Elev. $\frac{5.3}{34}$
Rad. Pt.

$\frac{5.3}{34}$

74.6

5.3 = Gutter Elev.
33 = Rad. Pt.

32.32

74 C. Box
35 Fl. Line
Curb

Storm Sewer

2 W. Bear N.

7512

4172

M.H.

□

○ M.H.

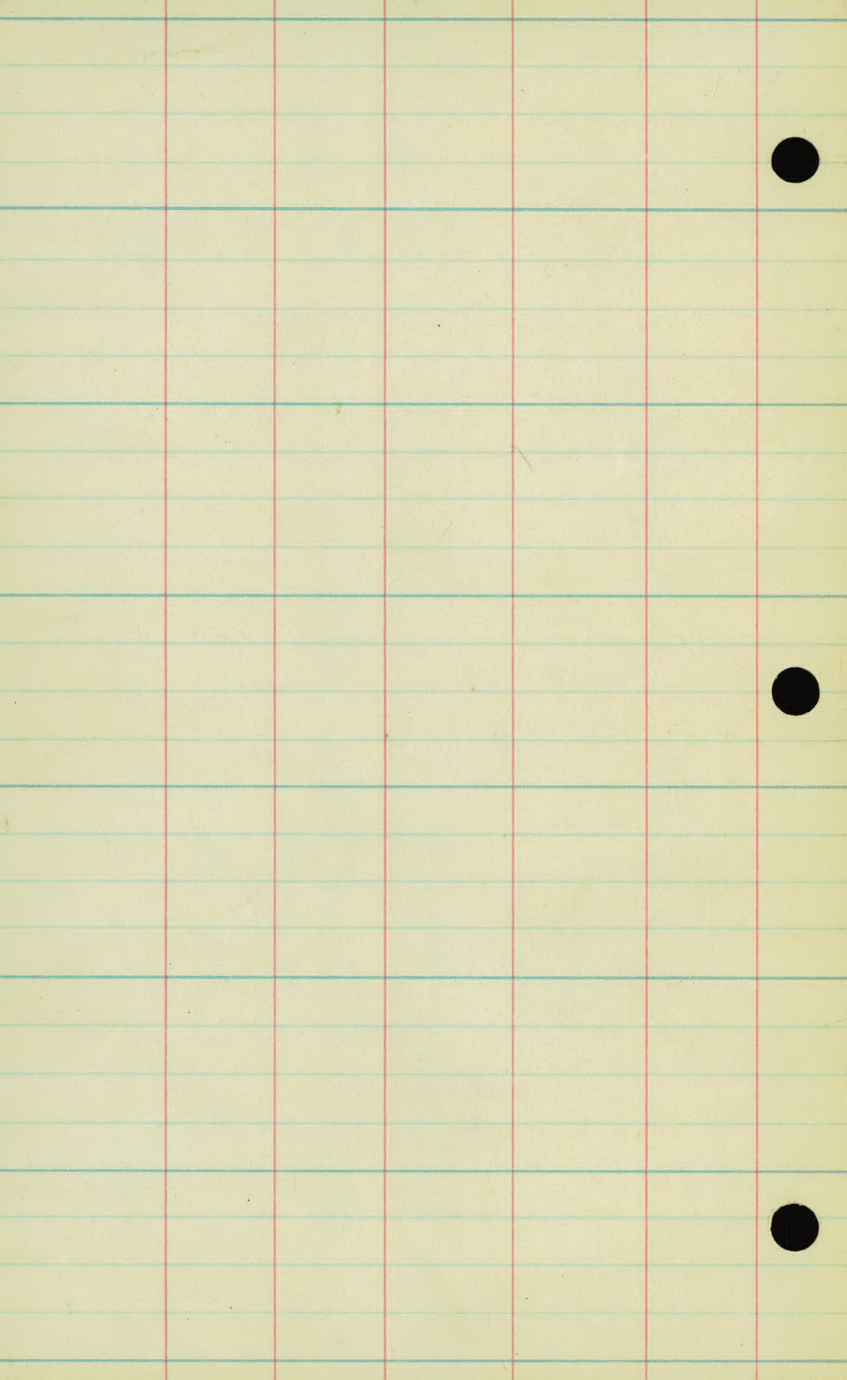
3.50
M.H. ○

C.B.

35'

N

8th St.

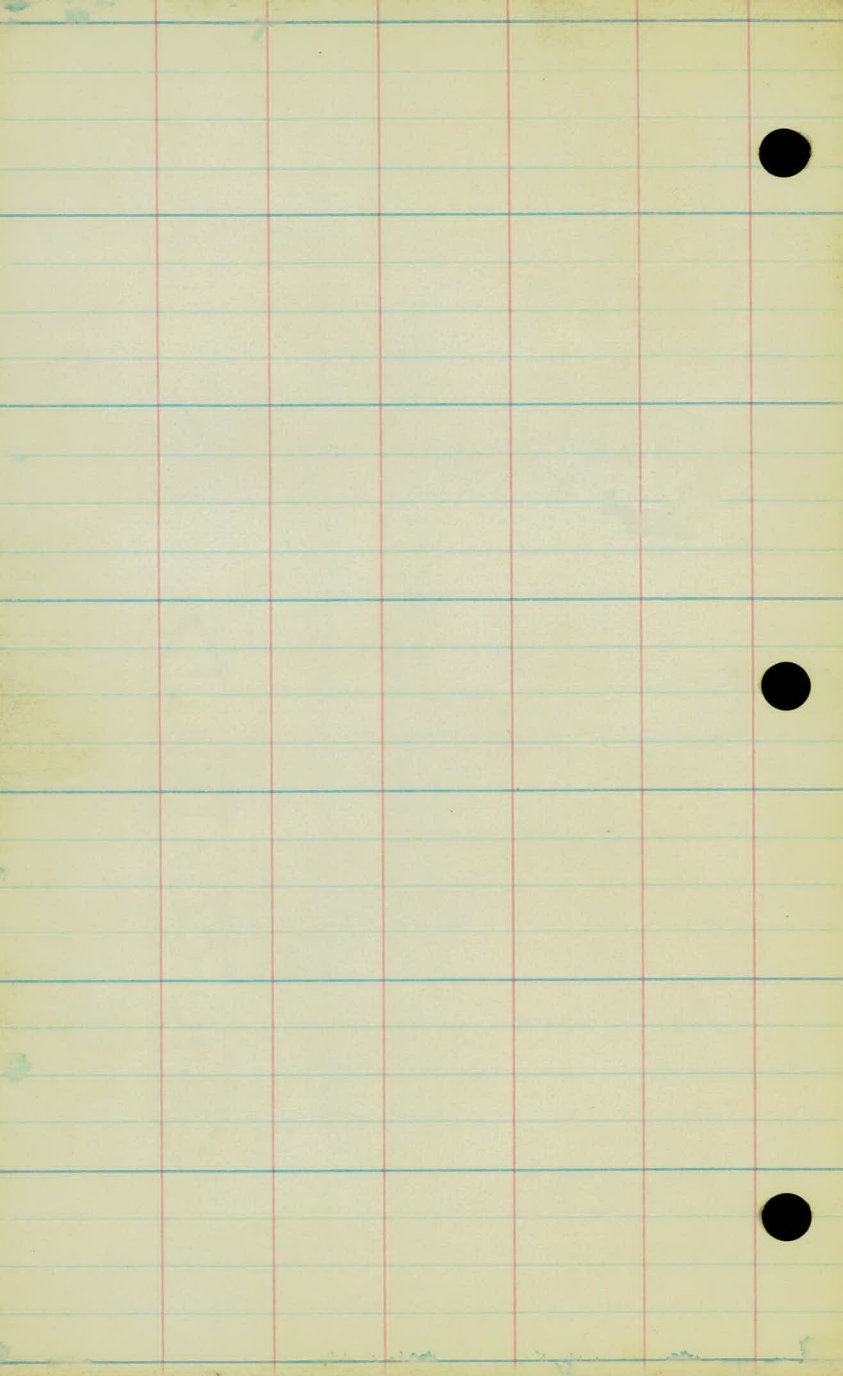


4- 35

H.T.P.
D.N.S.
D.S.
J.B.

SURVEY NE $\frac{1}{4}$
SEC. 14-T30 R22

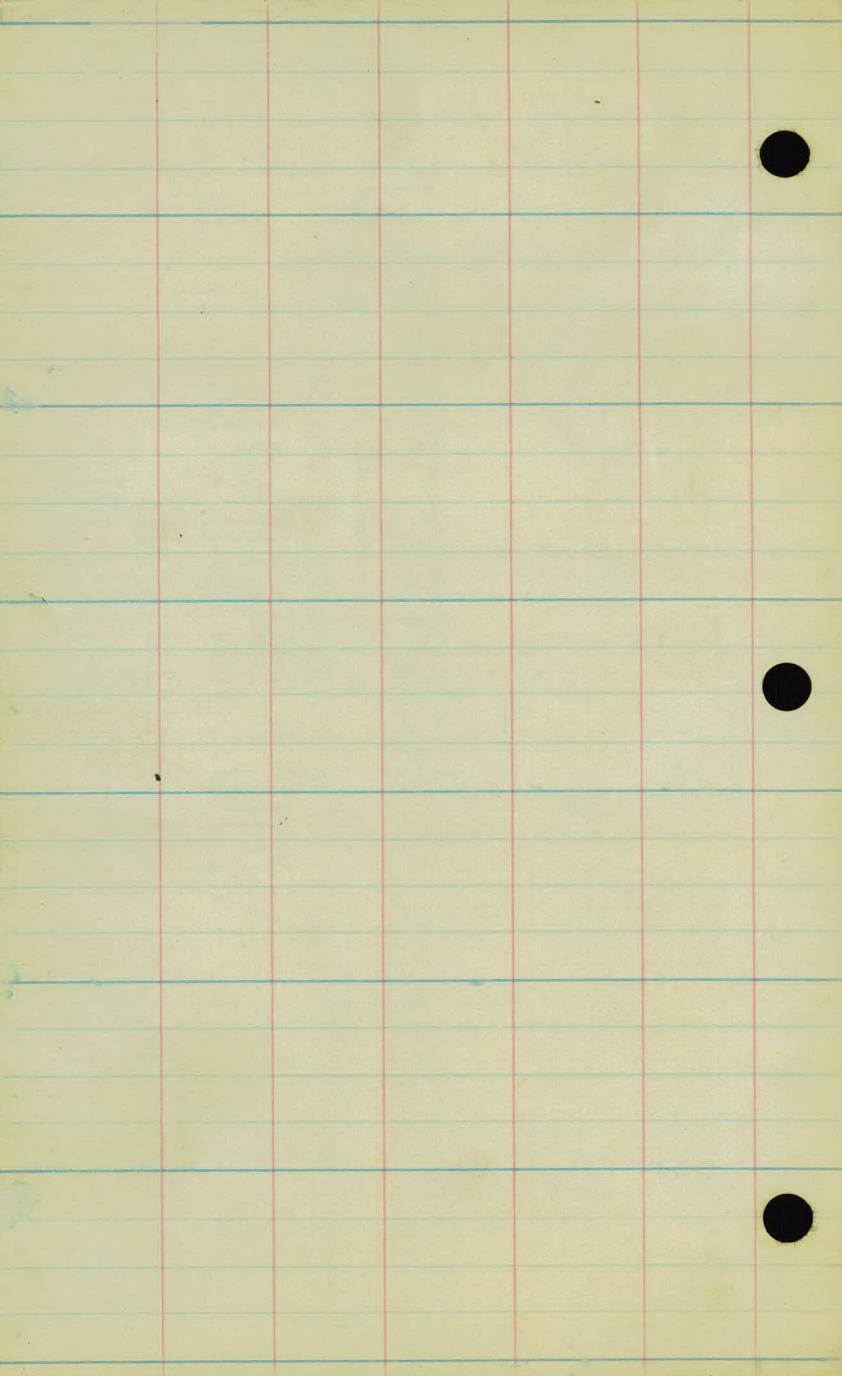
WHITE BEAR VILLAGE



Set $1\frac{1}{2}$ " Iron Pin
 $1\frac{1}{2} \times 2'$
 Mon $\square$ 1323.61 - 4 1323.61 - $\square$ Mon
 2647.22 NE Cor. Sec 14
 43.16 29.48
 E.S. O Hud
 15" Ash

$1\frac{1}{2}$ ST.
 Fr
 Mon $\square$ 1321.67 1321.67 $\square$ Mon
 2643.34
 68.18 90° 03'
 19.00 Found old
 Iron Pin
 2 ST.
 Fr Ho
 Cor. Bld.
 89° 51' 30"

1/2" Iron @ Intersection of
 W. Prop Line Clark + E. N.P. R/W



Gutter stakes

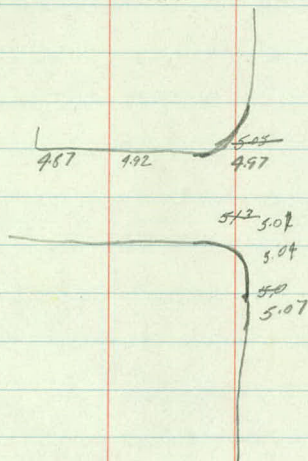
Division St.

East side North from 7th St.

W. Bear.

		Top Curb. = 4.47 ✓	
0	+00 = No. End Curb.	Gutter = 5.07	
	+25	5.13 ✓	
	+50	5.19 ✓	
	+75	5.25 ✓	
1		5.25	5.30 ✓
	+25		5.36 ✓
	+50		5.42 ✓
	+75		5.48 ✓
2		5.5	5.53 ✓ Last Stake.
	+25		5.59
	+50		5.65
	+75		5.71
3			5.76
	+10	5.8	5.80
		5.8	

5-12-40



$$\begin{array}{r} 5.80 \\ 5.07 \\ \hline .72 \end{array}$$

$$\begin{array}{r} .232 \\ 31 \overline{) 1.72} \\ \underline{62} \\ 100 \\ \underline{93} \\ 70 \end{array}$$

