

KS

Dr. 13 Book 11

W.P.A. ENGINEERS OFFICE

DIST. No 3

Survey Notes

NEW Brighton

Butcher Street.

Butchers St

New Brighton

(1)

F. B. McDougall	Engg
H. Schrandt	Rd
C. Coe	Rd
M. Flaherty	Rd

Location & Topog Notes
of
Butchers Street
- New Brighton

0+00 = Int of Cleveland Ave.
and
Butchers Street.

Location has followed old
road as far possible

(2)

P.T. 24+84.56 15° 01'

24+50 14° 30'

P.O.C. 24+00 13° 45'

23+50 13° 00'

23+00 12° 15'

22+50 11° 30'

22+00 10° 45'

21+50 10° 00'

P.O.C. 21+00 9° 15'

20+50 8° 30'

20+00 7° 45'

19+50 7° 00'

19+00 6° 15'

P.O.C. 18+50 5° 30'

P.T. 14+12 7° 01" 18+00 4° 45'

14+00 6° 47' 17+50 4° 00'

13+50 5° 47' 17+00 3° 15'

13+00 4° 47' 16+50 2° 30'

12+50 3° 47' 16+00 1° 45'

12+00 2° 47' 15+50 1° 00'

11+50 1° 47' 15+00 0° 15'

11+00 = 0° 47' P.C. 14+83.46 0° 00'

P.C. 10+61.20 = 0° 00'

0+00 = Int. of Cleveland Ave. & Butcher St.

E. B. McDermogh Eng.
 H. Schrandt Rd.
 C. Coe Au.
 M. Flaherty Rd.

△ P.T. 24+84.56

24" Prop. 1926 P.C.C. 24+00 End of Project

Ex. △ 74° 59'
 Ex Dist. to E of Rd 67.6

P.C.C. 21+00

P.I. 19+95.46

△ R 30° 02'
 R 1910 1910.08
 T 512 512.40
 L 1001.10 1001.11
 C 3°

△ P.C.C. 18+50

△ P.C. 14+83.46

54.77
 58.50 Stake
 22.31
 38.24 P.T. 14+12.00 ✓

△ R 14° 02'
 R 1432.69 ✓
 T 176.34 ✓
 L 350.80 ✓
 C 4°

P.I. 12+37.54

Stake 144 ft

△ P.C. 10+61.20

Dutchess St

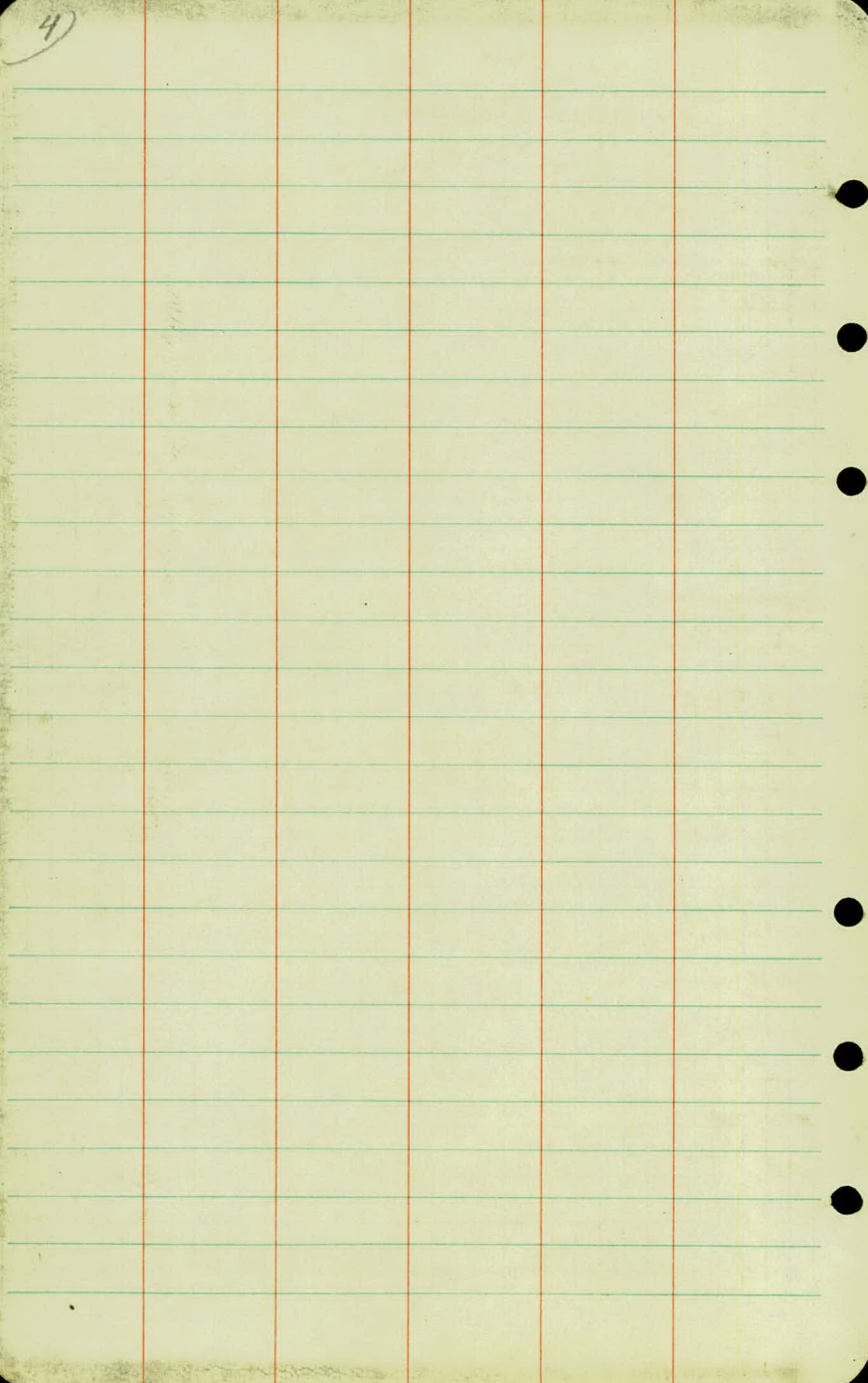
60' Twp
 20' Non
 Water
 Tower

← = ←
 Guy Pole
 4.70
 2.50

△ 4+00 P.C.T.
 △ P.O.T. 3+81.10

32 32
 T. Pole
 35
 33.50
 20.50
 0 P. Pole
 0+00 Cleveland Ave
 End of Street
 1/4 Corn.

+ 5th Street



24+12 R of Drive

24+09 R of Drive

(5)

24+00

23+88 24" C. Horn Wood 15' L 0 ✓

23+77 12" Pop 16' L 0 ✓

23+62 18" " 16' L 0 ✓

23+56 16" " 16' L 0 ✓

23+47 10" " 16' L 0 ✓

23+38 10" " 16' L 0 ✓

23+18 24" Pop 15' L 0 ✓

22+98 24" Pop 14' L 0 ✓

22+88 20" Pop 16' L 0 ✓

22+79 36" " 17' L 0 ✓

22+30 T.P. 18' L 0 ✓

House 33' R ✓



28+56 house 33' R ✓

23+85 0 P Pole

23+34 0 T Pole

0 23+00 4" Elm 17' R ✓

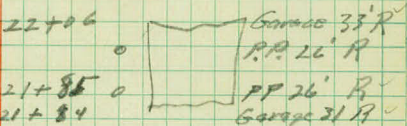
22+92 Fence 30' R ✓

22+77 0 Tree 22' R ✓

22+75 Fence Corn. 31' R ✓

22+98 0 Apple Tree 23' R ✓

22+27 0 Apple tree 24' R ✓



21+50 R of Drive ✓

21+05 24" Pop 18' L 0 ✓

21+00 18" " 14' L 0 ✓

20+74 T.P. 18' L 0 ✓

20+00 RR 22' R ✓

Note No. Topog notes necessary bc for Sta. 20+00

6)

E. B. McDermott, Eng'r

4-19-36

New Brighton
Levels from
5th Ave & 8th St.
to
East End of Butchers St.
along 5th Ave to Butchers St.

B.M. Spike in Aerial Pole
in road of Brick house N.W.
Corn. 8th St. & 5th Ave.

8

Out

Rd. + H.I. Rd. - Elev.

B.M. + 0.11 896.51 896.40

T.P. 8.67 887.84

+ 0.43 888.27

B.M. 1.15 887.12

2.15 889.27

3.79 885.48

In

Rd. + H.I. Rd. - Elev.

B.M. 3.91 889.39 885.48

2.27 887.12

1.20 888.32

0.49 887.83

8.66 896.49

0.09 896.40

Out

Rd. + H.I. Rd. - Elev.

B.M. + 0.11 885.59 885.48

T.P. - 3.29 882.30

+ 2.17 884.47

T.P. - 0.18 884.29

Out

(9)

P.P. S.W. Corn. 5th Ave. & 8th St.

Point on pavement

Top nut of Hydrant across St. from City Hall

Top nut of Hydrant N.E. Corn of Front & 5th

In

Top nut of Hydrant N.E. Corn 5th & Front

Top " " " across St. from City Hall

Point on pavement

Back into B.M.

Top nut of Hydrant N.E. Corn 5th & Front St.

Top of Guard rail post

Top of Guard rail post

10)

Rd + HI Rd - Elev. 884.29
 +6.20 890.49 ✓

T.P. 0.00 890.49 ✓

+8.53 899.02 ✓

T.P. -1.61 897.41 ✓

+4.43 901.84 ✓

T.P. 6.05 895.79 ✓

+2.28 898.07 ✓

B.M. 6.11 891.96 ✓

Checked on run of day before

Out

Hardware store to Sec. 14 corn

B.M. +0.20 892.16 891.96 ✓

T.P. -5.93 886.23 ✓

+5.91 892.14 ✓

T.P. -0.56 891.58 ✓

+8.48 900.06 ✓

T.P. -0.50 899.56 ✓

+7.80 907.36 ✓

T.P. -2.14 905.22 ✓

+3.95 909.17 ✓

B.M. -6.22 902.95 ✓

Top of stake L side of Road

Marker on E of pavement

Marker on E of pavement

Top of 2nd Step S.W. Corn of Hardware Store Corn
Butchers St. & 5th Ave.

Out

Hardware Store to $\frac{1}{4}$ Corn. Cleveland & Butcher_{St.}

Same as above

Top of culvert marker 5-60

Top of rock E of Road

Top of rock E of Road

Top of rock E of Road

Top of $\frac{1}{4}$ Corn Mt. Corn. Cleveland & Butchers St.

12)	Rd +	HI	Rd -	Elev.	checked on old run
B.M.		909.17	3.64	905.53	✓
	+1.62	907.15			
T.P.			-10.24	896.91	✓
	0.57	897.48			
T.P.			-9.80	887.68	✓
	+2.70	890.38			
B.M.			-4.98	885.40	✓
T.P.			-3.12	887.26	✓
	+7.87	895.13			
T.P.			-0.89	894.24	✓
	+10.17	904.41			
B.M.			-5.00	899.41	✓
T.P.		899.58	0.17	904.24	✓
	+10.79	915.03			
T.P.			0.27	914.76	✓
	8.88	923.64			
B.M.			6.98	916.66	✓
T.P.			3.72	919.92	✓
	3.02	922.94			
			-1.89	921.05	✓

Spike in P.P. 15 ft. R of 0+80

Rock on L side of Road

Rock on E of Road

Spike in T.P. 18 ft. L of 6+50

Rock on E of Road

Top of rock E of Road

Top of iron pipe, Lot Corn 30 ft. R of 13+50

Rock on E of Road

Top of rock E of Road

Spike in T.P. 20 ft. L of 19+20

Top of rock E of Road

N.W. Corn. of Top step of house 40 ft. R of 23+64

E. B. McDonough Engr
C. Coe Rd
M. Flaherty Rd
H. Schrandt Rd

Cross Sections of
Butchers Street
New Brighton Minn.

0+00 = Int of Cleveland
Ave. and Butchers St.

Sta.	+	H.I.	-	Elev
B.M.	5.43	910.96		905.53
0+00				04.4 ✓
0+10				04.3 ✓
0+14				04.3 ✓
0+21				04.3 ✓
0+50				04.2 ✓
1+00				04.3 ✓
1+50				03.9 ✓
2+00				02.6 ✓
2+50				900.5 ✓

L

R

(17)

Spillo in P.P. 15 ft. R of 0 + 80

$$\frac{8.2}{50}$$

$$\frac{6.6}{0}$$

$$\frac{6.1}{50}$$

$$\frac{8.2}{50}$$

$$\frac{7.9}{18}$$

$$\frac{6.7}{0}$$

$$\frac{6.2}{50}$$

$$\frac{7.7}{50}$$

$$\frac{6.2}{20}$$

$$\frac{7.8}{15}$$

$$\frac{6.7}{0}$$

$$\frac{6.8}{19}$$

$$\frac{7.1}{50}$$

$$\frac{8.0}{50}$$

$$\frac{6.0}{14}$$

$$\frac{7.6}{9}$$

$$\frac{6.7}{0}$$

$$\frac{6.9}{14}$$

$$\frac{6.3}{18}$$

$$\frac{5.5}{30}$$

$$\frac{5.4}{50}$$

$$\frac{9.4}{50}$$

$$\frac{7.7}{20}$$

$$\frac{6.4}{5}$$

$$\frac{6.8}{4}$$

$$\frac{6.8}{0}$$

$$\frac{6.7}{25}$$

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

$$\frac{5.7}{79}$$

$$\frac{5.1}{50}$$

$$\frac{9.4}{50}$$

$$\frac{7.2}{31}$$

$$\frac{6.0}{10}$$

$$\frac{7.0}{7}$$

$$\frac{6.7}{0}$$

$$\frac{6.4}{14}$$

$$\frac{5.7}{25}$$

$$\frac{4.4}{50}$$

$$\frac{9.9}{50}$$

$$\frac{7.5}{74}$$

$$\frac{5.5}{17}$$

$$\frac{7.3}{7}$$

$$\frac{7.1}{0}$$

$$\frac{7.3}{20}$$

$$\frac{8.2}{35}$$

$$\frac{3.1}{50}$$

$$\frac{8.3}{50}$$

$$\frac{7.3}{78}$$

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

$$\frac{8.9}{9}$$

$$\frac{8.4}{0}$$

$$\frac{8.5}{15}$$

$$\frac{5.2}{25}$$

$$\frac{2.3}{78}$$

$$\frac{1.6}{50}$$

$$\frac{8.2}{50}$$

$$\frac{4.5}{34}$$

$$\frac{6.2}{25}$$

$$\frac{10.6}{10}$$

$$\frac{10.5}{8}$$

$$\frac{10.6}{12}$$

$$\frac{0.6}{35}$$

$$\frac{0.3}{50}$$

Sta	+ HI	- Elev.
3+00		897.9 ✓
TP	1.99	902.30 ✓
3+50		94.8 ✓
4+00		91.7 ✓
B.M.	6.87	892.27 ✓
4+21		90.8 ✓
4+50		89.8 ✓
5+00		88.0 ✓
5+50		86.9 ✓
6+00		84.4 ✓
B.M.	4.34	889.74 ✓

$$\begin{array}{r} 8.0 \\ 50 \end{array} \quad \begin{array}{r} 5.5 \\ 28 \end{array} \quad \begin{array}{r} 5.0 \\ 25 \end{array} \quad \begin{array}{r} 13.1 \\ 0 \end{array} \quad \begin{array}{r} 12.9 \\ 13 \end{array} \quad \begin{array}{r} 1.4 \\ 39 \end{array} \quad \begin{array}{r} 1.7 \\ 50 \end{array} \quad \begin{array}{r} 12.7 \\ 12 \end{array}$$

Top of Rock

$$\begin{array}{r} 1.5 \\ 50 \end{array} \quad \begin{array}{r} 1.0 \\ 24 \end{array} \quad \begin{array}{r} 1.0 \\ 22 \end{array} \quad \begin{array}{r} 7.6 \\ 14 \end{array} \quad \begin{array}{r} 7.5 \\ 0 \end{array} \quad \begin{array}{r} 8.2 \\ 13 \end{array} \quad \begin{array}{r} + 3.0 \\ 30 \end{array} \quad \begin{array}{r} + 2.0 \\ 50 \end{array}$$

$$\begin{array}{r} 12.5 \\ 50 \end{array} \quad \begin{array}{r} 9.8 \\ 20 \end{array} \quad \begin{array}{r} 10.7 \\ 13 \end{array} \quad \begin{array}{r} 10.6 \\ 0 \end{array} \quad \begin{array}{r} 11.0 \\ 9 \end{array} \quad \begin{array}{r} 5.7 \\ 19 \end{array} \quad \begin{array}{r} 6.8 \\ 28 \end{array} \quad \begin{array}{r} 7.9 \\ 50 \end{array}$$

Spike in T.P. 18 ft. L of 6 + 50

$$\begin{array}{r} 5.6 \\ 50 \end{array} \quad \begin{array}{r} 3.6 \\ 28 \end{array} \quad \begin{array}{r} 1.6 \\ 15 \end{array} \quad \begin{array}{r} 1.5 \\ 0 \end{array} \quad \begin{array}{r} 1.5 \\ 6 \end{array} \quad \begin{array}{r} 2.1 \\ 10 \end{array} \quad \begin{array}{r} 1.4 \\ 20 \end{array} \quad \begin{array}{r} 2.7 \\ 50 \end{array}$$

$$\begin{array}{r} 9.0 \\ 50 \end{array} \quad \begin{array}{r} 7.3 \\ 24 \end{array} \quad \begin{array}{r} 2.2 \\ 11 \end{array} \quad \begin{array}{r} 2.5 \\ 0 \end{array} \quad \begin{array}{r} 2.8 \\ 7 \end{array} \quad \begin{array}{r} 6.0 \\ 16 \end{array} \quad \begin{array}{r} 6.1 \\ 50 \end{array}$$

$$\begin{array}{r} 12.0 \\ 50 \end{array} \quad \begin{array}{r} 10.1 \\ 25 \end{array} \quad \begin{array}{r} 4.3 \\ 12 \end{array} \quad \begin{array}{r} 4.3 \\ 0 \end{array} \quad \begin{array}{r} 4.7 \\ 5 \end{array} \quad \begin{array}{r} 10.7 \\ 17 \end{array} \quad \begin{array}{r} 11.6 \\ 50 \end{array}$$

$$\begin{array}{r} 12.6 \\ 50 \end{array} \quad \begin{array}{r} 11.8 \\ 30 \end{array} \quad \begin{array}{r} 6.3 \\ 18 \end{array} \quad \begin{array}{r} 5.4 \\ 0 \end{array} \quad \begin{array}{r} 11.6 \\ 13 \end{array} \quad \begin{array}{r} 13.2 \\ 26 \end{array} \quad \begin{array}{r} 14.0 \\ 50 \end{array}$$

$$\begin{array}{r} 12.8 \\ 50 \end{array} \quad \begin{array}{r} 12.6 \\ 38 \end{array} \quad \begin{array}{r} 8.0 \\ 24 \end{array} \quad \begin{array}{r} 6.0 \\ 3 \end{array} \quad \begin{array}{r} 7.9 \\ 0 \end{array} \quad \begin{array}{r} 13.5 \\ 12 \end{array} \quad \begin{array}{r} 14.4 \\ 50 \end{array}$$

Spike in T.P. 18 ft. L of 6 + 50

20)

Sta.	+	HI ✓	-	Elev
6+50		889.74		83.4 ✓
7+00				82.1 ✓
7+50				82.9 ✓
8+00				82.0 ✓
8+50				85.2 ✓
9+00				86.4 ✓
9+50				88.8 ✓
B.M.	0.60	900.01 ✓		892.41
9+74				89.4 ✓
10+00				89.9 ✓
10+50				90.9 ✓

E

(21)

$$\begin{array}{r} 9.6 \\ 50 \end{array} \quad \begin{array}{r} 9.4 \\ 72 \end{array} \quad \begin{array}{r} 5.0 \\ 22 \end{array} \quad \begin{array}{r} 7.7 \\ 5 \end{array} \quad \begin{array}{r} 6.3 \\ 0 \end{array} \quad \begin{array}{r} 10.4 \\ 15 \end{array} \quad \begin{array}{r} 12.0 \\ 50 \end{array}$$

Rt.

$$\begin{array}{r} 11.1 \\ 50 \end{array} \quad \begin{array}{r} 10.6 \\ 15 \end{array} \quad \begin{array}{r} 12.0 \\ 8 \end{array}$$

Lt.

$$\begin{array}{r} 7.6 \\ 0 \end{array} \quad \begin{array}{r} 7.9 \\ 8 \end{array} \quad \begin{array}{r} 7.9 \\ 22 \end{array} \quad \begin{array}{r} 8.4 \\ 72 \end{array} \quad \begin{array}{r} 8.1 \\ 50 \end{array}$$

$$\begin{array}{r} 6.9 \\ 50 \end{array} \quad \begin{array}{r} 7.1 \\ 75 \end{array} \quad \begin{array}{r} 3.5 \\ 28 \end{array} \quad \begin{array}{r} 3.5 \\ 8 \end{array} \quad \begin{array}{r} 5.7 \\ 4 \end{array} \quad \begin{array}{r} 6.8 \\ 0 \end{array} \quad \begin{array}{r} 10.2 \\ 16 \end{array} \quad \begin{array}{r} 12.5 \\ 43 \end{array} \quad \begin{array}{r} 13.0 \\ 50 \end{array}$$

$$\begin{array}{r} 1.5 \\ 50 \end{array} \quad \begin{array}{r} 2.6 \\ 40 \end{array} \quad \begin{array}{r} 5.6 \\ 32 \end{array} \quad \begin{array}{r} 3.5 \\ 25 \end{array} \quad \begin{array}{r} 3.1 \\ 7 \end{array} \quad \begin{array}{r} 7.7 \\ 0 \end{array} \quad \begin{array}{r} 9.5 \\ 50 \end{array}$$

$$\begin{array}{r} 1.4 \\ 50 \end{array} \quad \begin{array}{r} 2.5 \\ 47 \end{array} \quad \begin{array}{r} 4.8 \\ 32 \end{array} \quad \begin{array}{r} 4.8 \\ 27 \end{array} \quad \begin{array}{r} 2.6 \\ 21 \end{array} \quad \begin{array}{r} 2.5 \\ 5 \end{array} \quad \begin{array}{r} 4.5 \\ 0 \end{array} \quad \begin{array}{r} 6.0 \\ 5 \end{array} \quad \begin{array}{r} 6.7 \\ 23 \end{array} \quad \begin{array}{r} 7.0 \\ 50 \end{array}$$

$$\begin{array}{r} 1.4 \\ 50 \end{array} \quad \begin{array}{r} 4.2 \\ 27 \end{array} \quad \begin{array}{r} 2.0 \\ 18 \end{array} \quad \begin{array}{r} 1.7 \\ 3 \end{array} \quad \begin{array}{r} 3.3 \\ 0 \end{array} \quad \begin{array}{r} 6.0 \\ 6 \end{array} \quad \begin{array}{r} 8.9 \\ 50 \end{array}$$

$$\begin{array}{r} +3.2 \\ 50 \end{array} \quad \begin{array}{r} +1.4 \\ 36 \end{array} \quad \begin{array}{r} 2.8 \\ 23 \end{array} \quad \begin{array}{r} 1.2 \\ 16 \end{array} \quad \begin{array}{r} 0.9 \\ 0 \end{array} \quad \begin{array}{r} 4.1 \\ 8 \end{array} \quad \begin{array}{r} 7.8 \\ 50 \end{array}$$

Top of Iron pipe Let Corn. 30 ft. R. of 13+50

$$\begin{array}{r} 3.5 \\ 50 \end{array} \quad \begin{array}{r} 5.0 \\ 33 \end{array} \quad \begin{array}{r} 11.8 \\ 22 \end{array} \quad \begin{array}{r} 11.1 \\ 16 \end{array} \quad \begin{array}{r} 10.6 \\ 0 \end{array} \quad \begin{array}{r} 13.2 \\ 8 \end{array} \quad \begin{array}{r} 16.5 \\ 36 \end{array} \quad \begin{array}{r} 18.1 \\ 50 \end{array}$$

$$\begin{array}{r} 2.5 \\ 50 \end{array} \quad \begin{array}{r} 3.0 \\ 35 \end{array} \quad \begin{array}{r} 12.1 \\ 21 \end{array} \quad \begin{array}{r} 10.0 \\ 13 \end{array} \quad \begin{array}{r} 10.1 \\ 0 \end{array} \quad \begin{array}{r} 11.8 \\ 10 \end{array} \quad \begin{array}{r} 11.4 \\ 19 \end{array} \quad \begin{array}{r} 16.2 \\ 50 \end{array}$$

$$\begin{array}{r} +1.3 \\ 50 \end{array} \quad \begin{array}{r} 1.8 \\ 32 \end{array} \quad \begin{array}{r} 10.2 \\ 20 \end{array} \quad \begin{array}{r} 10.5 \\ 15 \end{array} \quad \begin{array}{r} 8.8 \\ 11 \end{array} \quad \begin{array}{r} 9.1 \\ 0 \end{array} \quad \begin{array}{r} 9.1 \\ 7 \end{array} \quad \begin{array}{r} 11.0 \\ 15 \end{array} \quad \begin{array}{r} 10.6 \\ 21 \end{array} \quad \begin{array}{r} 14.0 \\ 50 \end{array}$$

22)

Sta	+	HI ✓	-	Elev
11+00		900.01		92.1 ✓
11+50				93.1 ✓
12+00				94.2 ✓
12+50				95.3 ✓
13+00				96.8 ✓
13+50				98.3 ✓
B. M.	10.88	910.29 ✓		999.41
14+00				900.1 ✓
14+50				01.7 ✓
15+00				03.8 ✓
15+50				05.7 ✓

$\frac{6.4}{50}$	$\frac{7.8}{27}$	$\frac{10.1}{19}$	$\frac{9.6}{14}$	$\frac{7.8}{8}$	$\frac{7.9}{0}$	$\frac{7.9}{10}$	$\frac{9.6}{15}$	$\frac{11.0}{29}$	$\frac{11.0}{50}$
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$\frac{10.5}{50}$	$\frac{10.3}{16}$	$\frac{6.7}{7}$	$\frac{6.9}{0}$	$\frac{7.0}{11}$	$\frac{10.0}{19}$	$\frac{9.7}{23}$	$\frac{7.8}{50}$
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$\frac{10.6}{50}$	$\frac{10.4}{17}$	$\frac{5.8}{7}$	$\frac{5.8}{0}$	$\frac{5.8}{8}$	$\frac{9.5}{14}$	$\frac{9.1}{29}$	$\frac{7.4}{50}$
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$\frac{9.4}{50}$	$\frac{9.6}{35}$	$\frac{7.9}{15}$	$\frac{4.5}{8}$	$\frac{4.7}{0}$	$\frac{4.7}{9}$	$\frac{7.7}{14}$	$\frac{8.4}{22}$	$\frac{6.2}{50}$
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$\frac{4.0}{50}$	$\frac{6.2}{29}$	$\frac{5.5}{14}$	$\frac{3.0}{9}$	$\frac{3.2}{0}$	$\frac{3.4}{9}$	$\frac{4.8}{18}$	$\frac{5.7}{25}$	$\frac{4.0}{50}$
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$\frac{0.0}{50}$	$\frac{1.7}{24}$	$\frac{3.3}{16}$	$\frac{1.7}{9}$	$\frac{1.7}{0}$	$\frac{1.8}{9}$	$\frac{3.5}{13}$	$\frac{3.4}{20}$	$\frac{2.7}{50}$
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Top of iron pipe Prop. Corn. 30 Ref 13 + 50

$\frac{7.0}{50}$	$\frac{9.9}{18}$	$\frac{10.8}{13}$	$\frac{9.9}{9}$	$\frac{10.2}{0}$	$\frac{10.1}{10}$	$\frac{12.0}{16}$	$\frac{11.7}{29}$	$\frac{11.9}{50}$
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$\frac{6.2}{50}$	$\frac{7.3}{23}$	$\frac{9.4}{15}$	$\frac{8.6}{10}$	$\frac{8.6}{0}$	$\frac{8.5}{10}$	$\frac{9.4}{13}$	$\frac{10.0}{50}$
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$\frac{2.8}{50}$	$\frac{4.4}{22}$	$\frac{7.7}{14}$	$\frac{6.7}{10}$	$\frac{6.5}{0}$	$\frac{6.7}{9}$	$\frac{6.9}{15}$	$\frac{8.1}{50}$
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$\frac{+0.5}{50}$	$\frac{2.3}{22}$	$\frac{5.6}{14}$	$\frac{4.4}{11}$	$\frac{4.6}{0}$	$\frac{4.5}{15}$	$\frac{7.0}{50}$
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²⁴⁾ Sta		+	HI,	-	Elev.
16+00			910.29 ✓		07.6 ✓
B.M.	0.28		916.94		916.66
16+50					09.2 ✓
17+00					10.5 ✓
17+50					11.7 ✓
18+00					13.3 ✓
B.M.	7.03		923.69 ✓		916.66
18+50					14.3 ✓
19+00					15.4 ✓
19+25					16.0 ✓
19+50					16.5 ✓
19+90					17.5 ✓

2

$\frac{+1.2}{50}$	$\frac{0.0}{20}$	$\frac{7.0}{13}$	$\frac{2.4}{11}$	$\frac{2.7}{0}$	$\frac{2.5}{10}$	$\frac{4.5}{50}$
-------------------	------------------	------------------	------------------	-----------------	------------------	------------------

Sp. Ho in T.P. 20ft. L of 19+20

$\frac{6.3}{50}$	$\frac{6.6}{19}$	$\frac{7.7}{14}$	$\frac{7.4}{13}$	$\frac{7.7}{0}$	$\frac{7.6}{7}$	$\frac{8.0}{15}$	$\frac{9.8}{50}$
------------------	------------------	------------------	------------------	-----------------	-----------------	------------------	------------------

$\frac{5.4}{50}$	$\frac{6.0}{26}$	$\frac{6.8}{16}$	$\frac{6.0}{12}$	$\frac{6.4}{0}$	$\frac{6.6}{7}$	$\frac{7.6}{15}$	$\frac{9.3}{50}$
------------------	------------------	------------------	------------------	-----------------	-----------------	------------------	------------------

$\frac{2.2}{50}$	$\frac{3.7}{22}$	$\frac{4.7}{14}$	$\frac{5.2}{0}$	$\frac{5.3}{7}$	$\frac{6.6}{15}$	$\frac{8.3}{50}$
------------------	------------------	------------------	-----------------	-----------------	------------------	------------------

$\frac{+7.5}{50}$	$\frac{+1.0}{23}$	$\frac{4.0}{15}$	$\frac{3.6}{12}$	$\frac{3.6}{0}$	$\frac{3.4}{8}$	$\frac{4.5}{19}$	$\frac{5.6}{50}$
-------------------	-------------------	------------------	------------------	-----------------	-----------------	------------------	------------------

Same as above

$\frac{7.8}{50}$	$\frac{5.0}{24}$	$\frac{9.8}{14}$	$\frac{9.5}{12}$	$\frac{9.4}{0}$	$\frac{8.7}{10}$	$\frac{9.4}{20}$	$\frac{9.1}{50}$
------------------	------------------	------------------	------------------	-----------------	------------------	------------------	------------------

$\frac{4.2}{50}$	$\frac{5.5}{25}$	$\frac{8.1}{16}$	$\frac{8.2}{11}$	$\frac{8.3}{0}$	$\frac{8.4}{8}$	$\frac{8.7}{17}$	$\frac{8.0}{28}$	$\frac{7.5}{50}$
------------------	------------------	------------------	------------------	-----------------	-----------------	------------------	------------------	------------------

$\frac{5.9}{50}$	$\frac{6.9}{29}$	$\frac{8.3}{22}$	$\frac{8.9}{17}$	$\frac{7.8}{11}$	$\frac{7.7}{0}$	$\frac{7.9}{8}$	$\frac{8.6}{11}$	$\frac{7.8}{16}$	$\frac{7.2}{50}$
------------------	------------------	------------------	------------------	------------------	-----------------	-----------------	------------------	------------------	------------------

$\frac{6.4}{50}$	$\frac{7.2}{40}$	$\frac{10.0}{30}$	$\frac{9.8}{23}$	$\frac{7.3}{12}$	$\frac{7.2}{0}$	$\frac{7.4}{8}$	$\frac{7.0}{11}$	$\frac{7.5}{15}$	$\frac{7.5}{50}$
------------------	------------------	-------------------	------------------	------------------	-----------------	-----------------	------------------	------------------	------------------

$\frac{9.2}{50}$	$\frac{9.7}{28}$	$\frac{7.9}{17}$	$\frac{6.0}{10}$	$\frac{6.2}{0}$	$\frac{6.2}{7}$	$\frac{7.0}{10}$	$\frac{5.8}{16}$	$\frac{6.7}{50}$
------------------	------------------	------------------	------------------	-----------------	-----------------	------------------	------------------	------------------

20)

Sta	+	HI	-	Elev
20+25		923.69		18.6 ✓
20+50				19.2 ✓
21+00				20.3 ✓
21+50				19.9 ✓ E of Road into Plant on R
22+00				19.0 ✓
22+30				18.4 ✓
B.M.	1.14	922.19 ✓		921.05
22+50				18.2 ✓
23+00				17.5 ✓
23+50				16.6 ✓
24+00				15.6 ✓

$$\begin{array}{r} 7.3 \\ \hline 50 \end{array} \quad \begin{array}{r} 6.5 \\ \hline 27 \end{array} \quad \begin{array}{r} 5.3 \\ \hline 16 \end{array} \quad \begin{array}{r} 6.3 \\ \hline 12 \end{array} \quad \begin{array}{r} 4.7 \\ \hline 8 \end{array} \quad \begin{array}{r} 5.1 \\ \hline 0 \end{array} \quad \begin{array}{r} 5.2 \\ \hline 8 \end{array} \quad \begin{array}{r} 6.1 \\ \hline 12 \end{array} \quad \begin{array}{r} 3.8 \\ \hline 18 \end{array} \quad \begin{array}{r} 5.4 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 5.8 \\ \hline 50 \end{array} \quad \begin{array}{r} 5.8 \\ \hline 40 \end{array} \quad \begin{array}{r} 3.8 \\ \hline 19 \end{array} \quad \begin{array}{r} 5.6 \\ \hline 13 \end{array} \quad \begin{array}{r} 4.7 \\ \hline 10 \end{array} \quad \begin{array}{r} 4.5 \\ \hline 0 \end{array} \quad \begin{array}{r} 4.6 \\ \hline 6 \end{array} \quad \begin{array}{r} 5.6 \\ \hline 9 \end{array} \quad \begin{array}{r} 3.5 \\ \hline 14 \end{array} \quad \begin{array}{r} 3.7 \\ \hline 25 \end{array} \quad \begin{array}{r} 5.0 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 4.0 \\ \hline 50 \end{array} \quad \begin{array}{r} 2.4 \\ \hline 43 \end{array} \quad \begin{array}{r} 0.8 \\ \hline 20 \end{array} \quad \begin{array}{r} 3.4 \\ \hline 10 \end{array} \quad \begin{array}{r} 3.4 \\ \hline 0 \end{array} \quad \begin{array}{r} 3.8 \\ \hline 10 \end{array} \quad \begin{array}{r} 3.4 \\ \hline 15 \end{array} \quad \begin{array}{r} 4.1 \\ \hline 35 \end{array} \quad \begin{array}{r} 5.5 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 7.2 \\ \hline 50 \end{array} \quad \begin{array}{r} 2.8 \\ \hline 28 \end{array} \quad \begin{array}{r} 3.4 \\ \hline 10 \end{array} \quad \begin{array}{r} 3.8 \\ \hline 0 \end{array} \quad \begin{array}{r} 4.7 \\ \hline 14 \end{array} \quad \begin{array}{r} 5.9 \\ \hline 75 \end{array} \quad \begin{array}{r} 6.6 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 6.2 \\ \hline 50 \end{array} \quad \begin{array}{r} 5.7 \\ \hline 15 \end{array} \quad \begin{array}{r} 4.5 \\ \hline 10 \end{array} \quad \begin{array}{r} 4.7 \\ \hline 0 \end{array} \quad \begin{array}{r} 5.0 \\ \hline 8 \end{array} \quad \begin{array}{r} 5.6 \\ \hline 14 \end{array} \quad \begin{array}{r} 5.0 \\ \hline 19 \end{array} \quad \begin{array}{r} 3.6 \\ \hline 31 \end{array} \quad \begin{array}{r} 4.4 \\ \hline 32 \end{array} \quad \begin{array}{r} 4.4 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 9.8 \\ \hline 50 \end{array} \quad \begin{array}{r} 7.6 \\ \hline 25 \end{array} \quad \begin{array}{r} 5.2 \\ \hline 11 \end{array} \quad \begin{array}{r} 5.3 \\ \hline 0 \end{array} \quad \begin{array}{r} 5.5 \\ \hline 8 \end{array} \quad \begin{array}{r} 6.1 \\ \hline 13 \end{array} \quad \begin{array}{r} 5.1 \\ \hline 19 \end{array} \quad \begin{array}{r} 5.7 \\ \hline 50 \end{array}$$

N.W. Corn. of Top step to house 40ft + R. of 23+64

$$\begin{array}{r} 9.0 \\ \hline 50 \end{array} \quad \begin{array}{r} 8.1 \\ \hline 28 \end{array} \quad \begin{array}{r} 5.6 \\ \hline 17 \end{array} \quad \begin{array}{r} 3.9 \\ \hline 10 \end{array} \quad \begin{array}{r} 4.0 \\ \hline 0 \end{array} \quad \begin{array}{r} 4.2 \\ \hline 6 \end{array} \quad \begin{array}{r} 5.0 \\ \hline 11 \end{array} \quad \begin{array}{r} 5.7 \\ \hline 22 \end{array} \quad \begin{array}{r} 5.3 \\ \hline 38 \end{array} \quad \begin{array}{r} 4.7 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 9.2 \\ \hline 50 \end{array} \quad \begin{array}{r} 8.8 \\ \hline 31 \end{array} \quad \begin{array}{r} 7.8 \\ \hline 21 \end{array} \quad \begin{array}{r} 4.8 \\ \hline 9 \end{array} \quad \begin{array}{r} 4.7 \\ \hline 0 \end{array} \quad \begin{array}{r} 4.9 \\ \hline 7 \end{array} \quad \begin{array}{r} 5.8 \\ \hline 11 \end{array} \quad \begin{array}{r} 5.0 \\ \hline 15 \end{array} \quad \begin{array}{r} 5.2 \\ \hline 25 \end{array} \quad \begin{array}{r} 3.2 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 8.4 \\ \hline 50 \end{array} \quad \begin{array}{r} 9.7 \\ \hline 42 \end{array} \quad \begin{array}{r} 9.5 \\ \hline 32 \end{array} \quad \begin{array}{r} 7.3 \\ \hline 17 \end{array} \quad \begin{array}{r} 5.4 \\ \hline 8 \end{array} \quad \begin{array}{r} 5.6 \\ \hline 0 \end{array} \quad \begin{array}{r} 5.2 \\ \hline 8 \end{array} \quad \begin{array}{r} 4.3 \\ \hline 17 \end{array} \quad \begin{array}{r} 2.9 \\ \hline 33 \end{array} \quad \begin{array}{r} 1.6 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 5.7 \\ \hline 50 \end{array} \quad \begin{array}{r} 6.1 \\ \hline 41 \end{array} \quad \begin{array}{r} 9.7 \\ \hline 30 \end{array} \quad \begin{array}{r} 7.5 \\ \hline 28 \end{array} \quad \begin{array}{r} 8.0 \\ \hline 20 \end{array} \quad \begin{array}{r} 6.9 \\ \hline 10 \end{array} \quad \begin{array}{r} 6.6 \\ \hline 8 \end{array} \quad \begin{array}{r} 6.0 \\ \hline 10 \end{array} \quad \begin{array}{r} 4.0 \\ \hline 24 \end{array} \quad \begin{array}{r} 3.6 \\ \hline 50 \end{array}$$

1-4-39

(1)

E. B. McDonough	Engr
E. W. Higgins	Ins
M. Flaherty	Rd
C. C. C.	Rd

New Brighton

Slope Stakes

Butchers Street

Sta	+	HI	-	Elev	Grade Rod
B.M.	6.10	911.63		905.53	
0+00				904.40	↑
0+10				904.30	
0+14				904.30	7.30
0+21				904.20	↓ 0.6
0+50				904.10	7.50
1+00				903.80	X 7.80
	6.23	911.76	6.10	905.53	
1+50				903.20	8.6
2+00				901.80	10.00

L

d

R

(3)

Spike in P.P. 15 ft. Ref 0+80

$$\frac{C 0.3}{27}$$

$$\frac{0.0}{0}$$

$$\frac{C 0.0}{26.5}$$

$$\frac{F 0.3}{17.6}$$

$$\frac{0.0}{0}$$

$$\frac{C 1.5}{28.5}$$

$$\frac{C 0.5}{27.2}$$

$$\frac{C 0.6}{0}$$

$$\frac{C 1.8}{29.2}$$

$$\frac{C 1.0}{28}$$

$$\frac{C 0.8}{0}$$

$$\frac{C 4.5}{33.3}$$

$$\frac{C 3.2}{31.3}$$

$$\frac{C 0.8}{0}$$

$$\frac{C 7.0}{36.5}$$

Sta	+	H I	-	Elev	Grade Rad
2+50				899.90	11.9
3+00				897.20	14.6
3+50				894.20	17.6
check B.M.			6.23	905.53	
B.M.	12.34	897.74		885.40	
4+00				891.70	6.0
4+21				890.90	6.8
check B.M.			12.34	885.40	
	4.60	890.00		885.40	
4+50				890.00	0.0
5+00				888.80	1.2
			4.60	885.40	
	5.88	891.28		885.40	
5+50	0.8			887.70	3.60
6+00	2.6			887.00	4.30
6+50	3.1			886.40	4.90
B.M.				885.40	

$$\begin{array}{r} C 5.5 \\ \hline 34.8 \end{array}$$

$$\begin{array}{r} C 0.2 \\ \hline 0 \end{array}$$

$$\begin{array}{r} C 10.5 \\ \hline 42.3 \end{array}$$

$$\begin{array}{r} C 8.0 \\ \hline 38.5 \end{array}$$

$$\begin{array}{r} C 0.5 \\ \hline 0 \end{array}$$

$$\begin{array}{r} C 12.3 \\ \hline 45 \end{array}$$

$$\begin{array}{r} C 6.3 \\ \hline 36 \end{array}$$

$$\begin{array}{r} C 0.5 \\ \hline 0 \end{array}$$

$$\begin{array}{r} C 10.2 \\ \hline 41.8 \end{array}$$

$$\begin{array}{r} C 1.2 \\ \hline 28.3 \end{array}$$

$$\begin{array}{r} 0.0 \\ \hline 0 \end{array}$$

$$\begin{array}{r} C 4.0 \\ \hline 32.5 \end{array}$$

$$\begin{array}{r} 5.0 \\ \hline 27 \end{array}$$

$$\begin{array}{r} F 0.3 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4.4 \\ \hline 25.8 \end{array}$$

$$\begin{array}{r} F 6.9 \\ \hline 30.8 \end{array}$$

$$F 0.6$$

$$\begin{array}{r} F 8.4 \\ \hline 31.8 \end{array}$$

$$\begin{array}{r} 19.6 \\ \hline 113 \end{array}$$

$$\begin{array}{r} 4.3 \\ \hline -0.7 \end{array}$$

$$\begin{array}{r} 34.8 \\ \hline -8.9 \end{array}$$

$$\begin{array}{r} 20.2 \\ \hline -1.6 \end{array}$$

$$\begin{array}{r} 6.3 \\ \hline -2.0 \end{array}$$

$$\begin{array}{r} 33.4 \\ \hline -8.2 \end{array}$$

$$\begin{array}{r} 82.5 \\ \hline -0.4 \end{array}$$

$$\begin{array}{r} 9.0 \\ \hline -2.1 \end{array}$$

$$\begin{array}{r} 33.8 \\ \hline -8.4 \end{array}$$

Spike in T.P. 18 ft. L of 4 + 50

6)

891.28

7+00 4.1

886.2 5.1

7+50 3.3

886.2 5.1

8+00 4.6

886.6 4.7

8+50 1.7

887.1 4.2

9+00 1.6

888.0 3.3

9+50 0.2

889.0 2.3

10+00 0.1

890.0 1.3

10+50 0.1

891.0 0.3

12.02 902.98 0.32 890.96

10

890.0 13.0

10+50

891.0 12.0

8.19 902.48 8.69

894.29

26

$$\begin{array}{r} 17^{\circ} \overline{) 5.2} \\ \underline{-0.1} \end{array}$$

$$\begin{array}{r} 9.1 \\ \underline{-4.0} \end{array}$$

$$\begin{array}{r} 4 \overline{) 12.3} \\ \underline{31} \\ -7.2 \end{array}$$

72

24

$$\begin{array}{r} 17^{\circ} \overline{) 5.1} \\ \underline{-0.0} \end{array}$$

$$\begin{array}{r} 9.0 \\ \underline{-3.9} \end{array}$$

$$\begin{array}{r} 8 \overline{) 2.5} \\ \underline{31} \\ -7.4 \end{array}$$

33

32

$$\begin{array}{r} 17^{\circ} \overline{) 4.5} \\ \underline{-10.2} \end{array}$$

$$\begin{array}{r} 7.8 \\ \underline{-3.1} \end{array}$$

$$\begin{array}{r} 28 \overline{) 10.5} \\ \underline{2} \\ -5.8 \end{array}$$

28

26

$$\begin{array}{r} 17^{\circ} \overline{) 3.9} \\ \underline{-10.3} \end{array}$$

$$\begin{array}{r} 6.2 \\ \underline{-2.0} \end{array}$$

$$\begin{array}{r} 15^{\circ} \overline{) 5.3} \\ \underline{-4.1} \end{array}$$

25

17

$$\begin{array}{r} 17^{\circ} \overline{) 3.3} \\ \underline{-10.0} \end{array}$$

$$\begin{array}{r} 4.9 \\ \underline{-1.6} \end{array}$$

$$\begin{array}{r} 7 \overline{) 8.7} \\ \underline{2} \\ -5.4 \end{array}$$

28

25

$$\begin{array}{r} 17^{\circ} \overline{) 3.4} \\ \underline{-1.1} \end{array}$$

$$\begin{array}{r} 2.3 \\ \underline{-1.0} \end{array}$$

$$\begin{array}{r} 6 \overline{) 7.2} \\ \underline{2} \\ -4.9 \end{array}$$

27

37

$$\begin{array}{r} 1.5 \\ \underline{-0.2} \end{array}$$

$$\begin{array}{r} 6 \overline{) 5.0} \\ \underline{1} \\ -1.7 \end{array}$$

20

00

$$\begin{array}{r} 0.4 \\ \underline{-0.1} \end{array}$$

$$\begin{array}{r} 2 \overline{) 1.9} \\ \underline{2} \\ -1.6 \end{array}$$

20

27

$$\begin{array}{r} 5 \overline{) 5.3} \\ \underline{1} \\ -7.7 \end{array}$$

20

$$\begin{array}{r} 40^{\circ} \overline{) 3.1} \\ \underline{1} \\ -8.9 \end{array}$$

NAIL IN T.P. LT. STH. 11+25

8)

902.48

11+00 C0.1

892.00

10.5

11+50 C0.1

93.00

9.5

12+00 C0.1

94.10

8.4

+50 F0.1

95.40

7.1

13+00 F0.1

96.90

5.5

13+50

+50 F0.3

98.00

3.9

14+00 F0.3

900.40

2.1

11.26

912.13

1.61

900.87

14+50 F0.5

902.20

9.9

15+00 F0.2

04.00

8.1

$$29.5 - \overset{x}{27.5} / \overset{10.0}{10.5}$$

$$\overset{10.1}{10.4}$$

$$\overset{6}{20} / \overset{2.5}{-1.8}$$

20.50

$$23.5 - \overset{1.6}{21.6} / \overset{11.8}{-2.3}$$

$$\overset{9.0}{10.5}$$

$$\overset{0}{21} / \overset{11.5}{-2.0}$$

22

$$26 - \overset{2.8}{23.8} / \overset{11.8}{-3.4}$$

$$\overset{8.0}{10.4}$$

$$\overset{4}{23} / \overset{11.6}{-3.2}$$

23.5

$$25.5 - \overset{2.5}{23.0} / \overset{11.1}{-4.0}$$

$$\overset{6.8}{10.3}$$

$$\overset{4}{23} / \overset{10.4}{-3.3}$$

24

$$22.5 - \overset{2.2}{20.3} / \overset{8.1}{-2.6}$$

$$\overset{5.6}{-0.1}$$

$$\overset{8}{20} / \overset{11.4}{-1.9}$$

21.5

$$26 - \overset{2.1}{23.9} / \overset{5.7}{10.2}$$

$$\overset{4.1}{-0.2}$$

$$\overset{6}{20} / \overset{5.7}{-1.8}$$

21

$$28 - \overset{2}{26} / \overset{0.4}{11.7}$$

$$\overset{2.5}{-0.4}$$

$$\overset{2}{20} / \overset{3.7}{-1.6}$$

21

$$28 - \overset{8.7}{20.3} / \overset{8.6}{11.3}$$

$$\overset{10.4}{-0.5}$$

$$\overset{8}{19} / \overset{11.3}{-1.4}$$

20

$$30 - \overset{31.0}{1.0} / \overset{5.3}{12.8}$$

$$\overset{8.4}{-0.3}$$

$$\overset{1}{25} / \overset{18.8}{-0.7}$$

25.5

10)					
15+50	F0.1	912.13		905.50	6.5
16+00	C0.1			907.50	4.6
16+50	C0.1			909.10	3.0
17+00	C0.0			910.50	1.6
17+50	F0.1	1214 924.00 0.27	911.86	911.80	12.2
18+00	C0.03			913.00	11.0
18+50	C0.1			914.20	9.8
19+00	C0.0			915.40	8.4
B.M.					
+50	F0.1	7.32 923.98 7.32	916.68	916.64	
			916.60	7.4	
20+00	C0.0			917.80	6.2

$$\begin{array}{r}
 31.5 \\
 32^3 / 2.6 \\
 \hline
 73.7
 \end{array}
 \quad
 \begin{array}{r}
 6.3 \\
 2.0
 \end{array}
 \quad
 \begin{array}{r}
 25^8 / 6.9 \\
 \hline
 -0.6
 \end{array}
 \quad
 25.5$$

$$\begin{array}{r}
 31.5 \\
 31^9 / 1.2 \\
 \hline
 73.4
 \end{array}
 \quad
 \begin{array}{r}
 4.5 \\
 70.1
 \end{array}
 \quad
 \begin{array}{r}
 6^3 / 4.9 \\
 \hline
 -0.3
 \end{array}
 \quad
 26$$

$$\begin{array}{r}
 29 \\
 28^5 / 1.2 \\
 \hline
 71.8
 \end{array}
 \quad
 \begin{array}{r}
 5.1 \\
 -0.1
 \end{array}
 \quad
 \begin{array}{r}
 25^8 / 3.6 \\
 \hline
 -0.6
 \end{array}
 \quad
 25.5$$

$$\begin{array}{r}
 29.5 \\
 28^0 / 0.8 \\
 \hline
 70.8
 \end{array}
 \quad
 \begin{array}{r}
 1.7 \\
 -0.1
 \end{array}
 \quad
 \begin{array}{r}
 20^0 / 3.1 \\
 \hline
 -1.5
 \end{array}
 \quad
 20$$

$$\begin{array}{r}
 29 \\
 29^5 / 10.4 \\
 \hline
 71.8
 \end{array}
 \quad
 \begin{array}{r}
 12.2 \\
 0.0
 \end{array}
 \quad
 \begin{array}{r}
 8^0 / 14.1 \\
 \hline
 -1.9
 \end{array}
 \quad
 20.5$$

$$\begin{array}{r}
 35.5 \\
 55^2 / 5.4 \\
 \hline
 73.6
 \end{array}
 \quad
 \begin{array}{r}
 10.9 \\
 70.1
 \end{array}
 \quad
 \begin{array}{r}
 25^2 / 12.0 \\
 \hline
 -1.0
 \end{array}
 \quad
 25.5$$

$$\begin{array}{r}
 34 \\
 55^2 / 4.2 \\
 \hline
 75.6
 \end{array}
 \quad
 \begin{array}{r}
 9.6 \\
 70.2
 \end{array}
 \quad
 \begin{array}{r}
 2^4 / 9.4 \\
 \hline
 70.4
 \end{array}
 \quad
 29$$

$$\begin{array}{r}
 31.5 \\
 31^2 / 5.7 \\
 \hline
 72.9
 \end{array}
 \quad
 \begin{array}{r}
 8.3 \\
 70.3
 \end{array}
 \quad
 \begin{array}{r}
 2^4 / 8.2 \\
 \hline
 70.4
 \end{array}
 \quad
 29.5$$

NAIL IN T.P. 10 LT. STAFF. 19110

$$\begin{array}{r}
 22 \\
 21^6 / 7.8 \\
 \hline
 -2.4
 \end{array}
 \quad
 \begin{array}{r}
 7.4 \\
 0.0
 \end{array}
 \quad
 \begin{array}{r}
 2^6 / 7.8 \\
 \hline
 -0.4
 \end{array}
 \quad
 26$$

$$\begin{array}{r}
 23 \\
 19^4 / 7.5 \\
 \hline
 70.5
 \end{array}
 \quad
 \begin{array}{r}
 6.1 \\
 70.1
 \end{array}
 \quad
 \begin{array}{r}
 1^7 / 5.6 \\
 \hline
 70.6
 \end{array}
 \quad
 29.5$$

12

923.98

20 750

18.7 5.3

21

19.2 4.8

750

19.1 4.9

1.71 923.45 2.24 921.74

22

18.6 4.9

750

17.8 5.7

23

17.0 6.5

750

16.2 7.3

24

15.4 8.1

2.43 921.02

$$\begin{array}{r} 83/4.3 \\ 2 \overline{) 71.0} \end{array}$$

$$\begin{array}{r} 14.7 \\ 70.6 \end{array}$$

$$\begin{array}{r} 80/5.8 \\ 2 \overline{) 11.5} \end{array}$$

$$\begin{array}{r} 51.0/2.0 \\ 2 \overline{) 12.8} \end{array}$$

$$\begin{array}{r} 3.7 \\ 71.1 \end{array}$$

$$\begin{array}{r} 84/4.0 \\ 2 \overline{) 10.8} \end{array}$$

$$\begin{array}{r} 4.0 \\ 70.9 \end{array} \quad \begin{array}{r} 27/5.0 \\ 2 \overline{) 11.9} \end{array}$$

$$\begin{array}{r} C 0.2 \\ 27 \end{array}$$

$$\begin{array}{r} 4.6 \\ 70.3 \end{array}$$

$$\begin{array}{r} 92/3.3 \\ 2 \overline{) 11.6} \end{array}$$

$$\begin{array}{r} F 1.7 \\ 20.4 \end{array}$$

$$\begin{array}{r} C 0.2 \\ 0 \end{array}$$

$$\begin{array}{r} D.C. 0.6 \\ 25.5 \end{array}$$

$$\begin{array}{r} F 2.6 \\ 22.2 \end{array}$$

$$\begin{array}{r} C 0.3 \\ 0 \end{array}$$

$$\begin{array}{r} C 0.3 \\ 27 \end{array}$$

$$\begin{array}{r} F 1.7 \\ 20.4 \end{array}$$

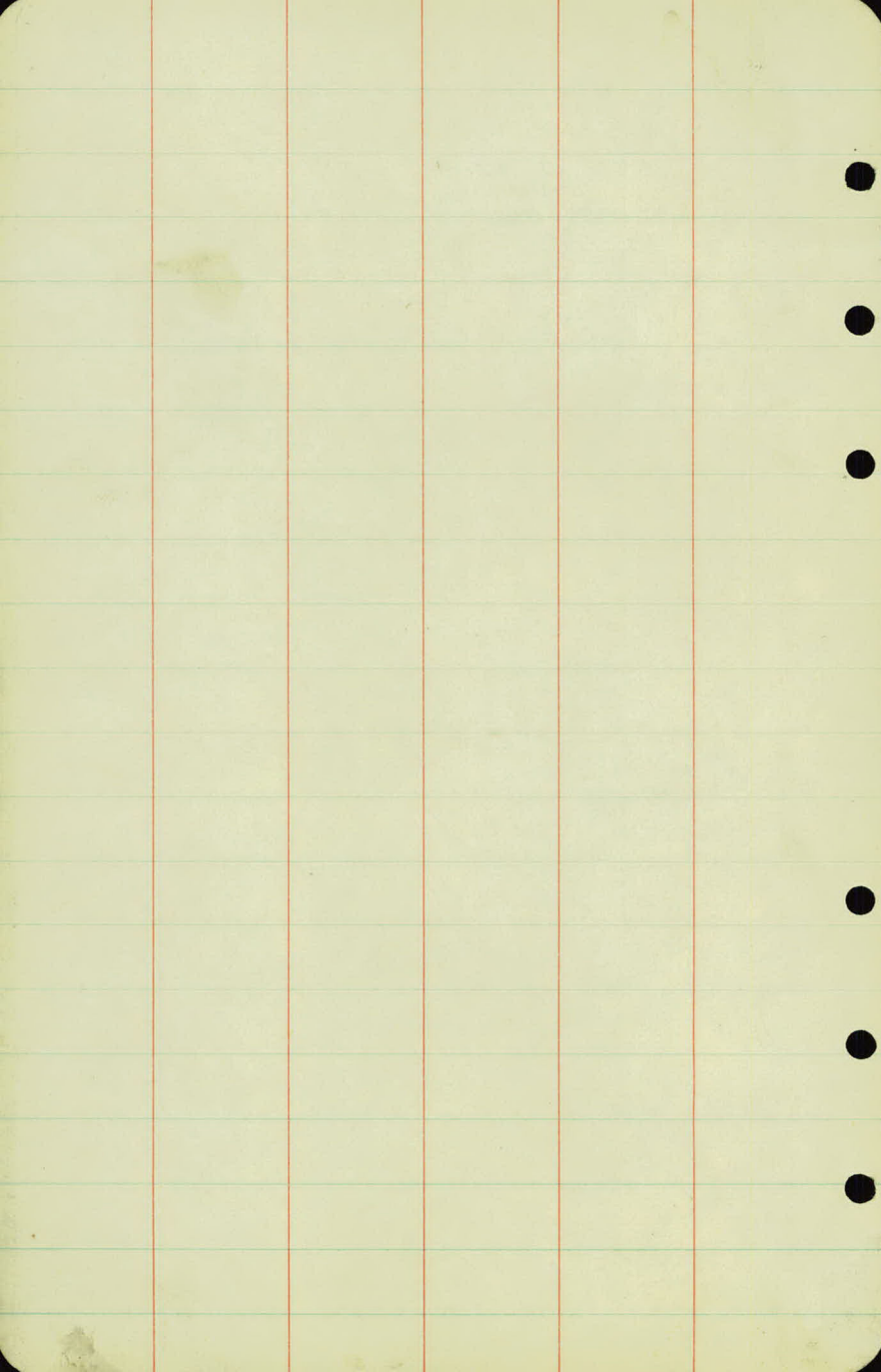
$$\begin{array}{r} 0.6 \\ 0 \end{array}$$

$$\begin{array}{r} C 3.3 \\ 31.8 \end{array}$$

$$\begin{array}{r} D.C. 0.4 \\ 25.1 \end{array}$$

$$\begin{array}{r} C 0.0 \\ 0 \end{array}$$

$$\begin{array}{r} C 3.0 \\ 31.3 \end{array}$$



Butchers St.

4

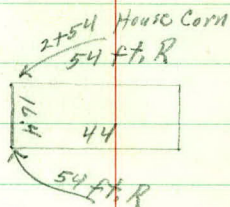
3+00 Δ

2+84 < 33' > 12" Tree

2+56 < 34' > 12" Tree

2+50 Δ

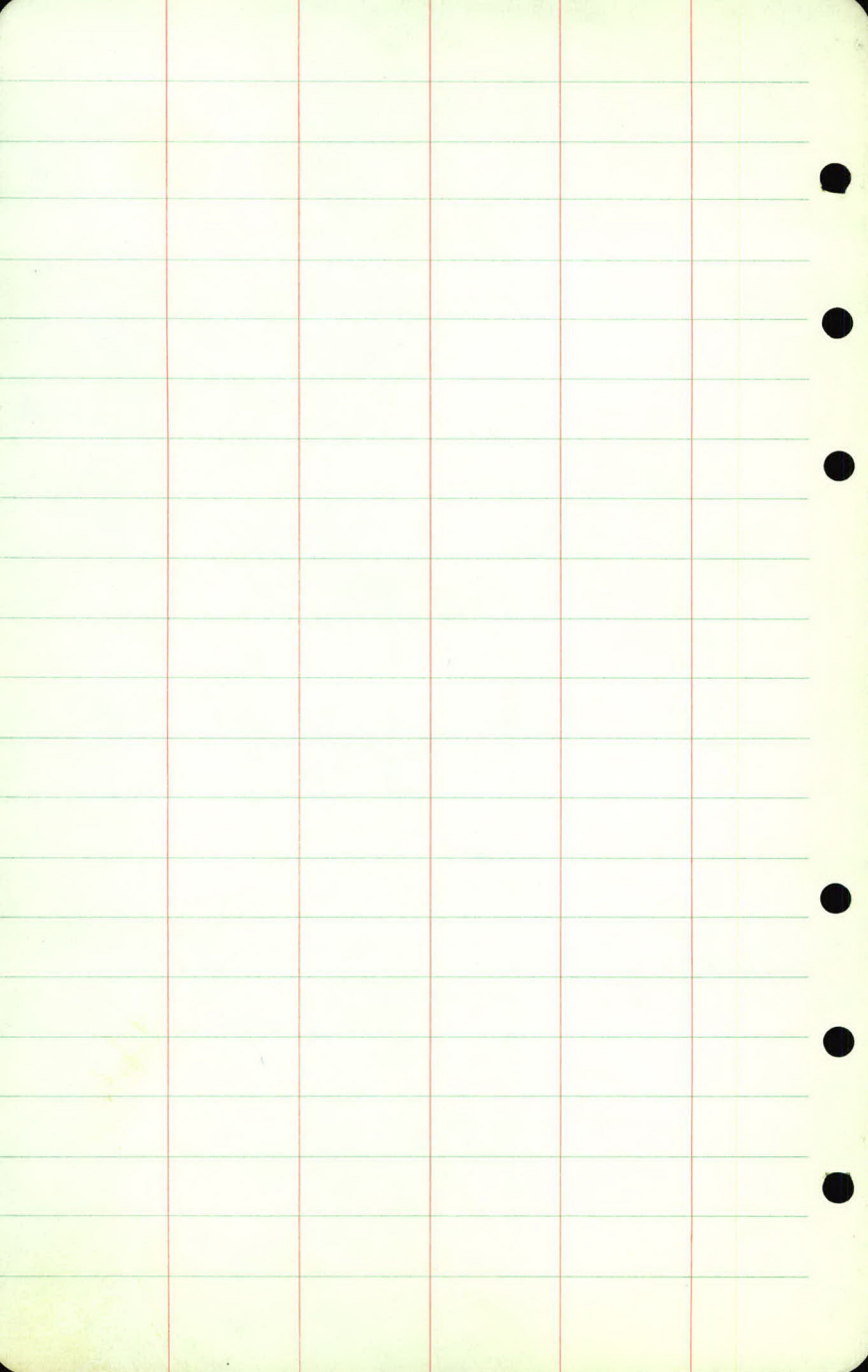
2+35 < 43' >



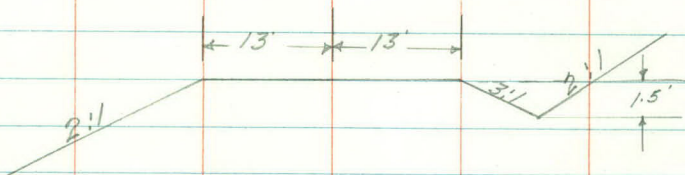
2+00 Δ

1+89 < 34.5' > 14' >

1+50 Δ



X-sections
and
Slope stakes
Butchers St.



Slope and Back slopes to Conform to R/V

Sta.	+	π	-	Grade.	Gr. Rod.
B.M.	3.68	909.21			(905.53)

0	+00			904.40	
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	+21			04.2	5.0
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	+50			04.1	5.1
--	-----	--	--	------	-----

1				03.8	5.4
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	+50			03.2	6.0
--	-----	--	--	------	-----

2				01.8	7.4
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	+50			899.9	9.3
--	-----	--	--	-------	-----

T.P.	4.97	907.78	6.40	902.81	
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3				97.2	10.6
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	+50			94.2	13.6
--	-----	--	--	------	------

T.P.	0.00	894.28	13.50	894.28	
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4				91.7	2.6
---	--	--	--	------	-----

	+21			90.9	3.4
--	-----	--	--	------	-----

5-18-40
Rain

Lt.

R

Rt.

Sph in P.P. 15' Rt 0+80

$\frac{6.3}{50}$ $\frac{6.0}{31}$ $\frac{5.2}{12}$ $\frac{5.0}{14}$ $\frac{4.4}{14}$ $\frac{4.5}{50}$

$\frac{6.8}{50}$ $\frac{5.5}{36}$ $\frac{6.03}{47}$ $\frac{4.3}{10}$ $\frac{5.6}{9}$ $\frac{5.0}{40}$ $\frac{4.9}{7}$ $\frac{5.1}{16}$ $\frac{6.07}{43}$ $\frac{3.8}{31}$ $\frac{3.9}{50}$

$\frac{7.7}{50}$ $\frac{7.0}{39}$ $\frac{R.10}{56}$ $\frac{4.7}{6}$ $\frac{5.1}{0.0}$ $\frac{4.7}{15}$ $\frac{4.7}{21.3}$ $\frac{4.8}{27}$ $\frac{3.6}{29}$ $\frac{3.8}{40}$ $\frac{3.4}{50}$

$\frac{8.6}{50}$ $\frac{6.04}{50}$ $\frac{4.6}{18}$ $\frac{4.1}{5}$ $\frac{4.9}{2}$ $\frac{5.0}{10.4}$ $\frac{4.8}{19}$ $\frac{4.5}{22.3}$ $\frac{4.3}{30}$ $\frac{3.4}{35}$ $\frac{2.9}{50}$

$\frac{8.6}{50}$ $\frac{6.5}{34}$ $\frac{6.08}{52}$ $\frac{3.8}{7}$ $\frac{5.1}{4}$ $\frac{5.4}{10.6}$ $\frac{5.3}{21.9}$ $\frac{5.5}{27}$ $\frac{4.2}{32}$ $\frac{1.7}{37}$ $\frac{1.3}{50}$

$\frac{8.0}{50}$ $\frac{6.1}{36}$ $\frac{6.23}{51}$ $\frac{4.1}{18}$ $\frac{3.2}{10}$ $\frac{6.6}{3}$ $\frac{7.0}{10.4}$ $\frac{6.9}{21.5}$ $\frac{6.5}{24}$ $\frac{3.4}{33}$ $\frac{1.1}{40}$ $\frac{0.7}{50}$

$\frac{7.3}{50}$ $\frac{6.47}{46}$ $\frac{3.7}{23}$ $\frac{4.3}{11}$ $\frac{8.1}{11.2}$ $\frac{8.8}{3}$ $\frac{9.3}{20.5}$ $\frac{9.0}{22}$ $\frac{8.2}{26}$ $\frac{2.5}{38}$ $\frac{1.3}{50}$

Nail in P.P. Rt 2+50

$\frac{5.0}{50}$ $\frac{6.48}{38}$ $\frac{2.7}{25}$ $\frac{1.2}{8}$ $\frac{3.9}{6}$ $\frac{8.7}{11.9}$ $\frac{10.0}{2}$ $\frac{10.5}{20.7}$ $\frac{10.3}{25}$ $\frac{5.1}{36}$ $\frac{1.2}{45}$ L.O.

$\frac{8.3}{50}$ $\frac{6.57}{79}$ $\frac{8.0}{25}$ $\frac{7.4}{12}$ $\frac{12.4}{9}$ $\frac{13.1}{10.5}$ $\frac{13.8}{20.1}$ $\frac{13.4}{28}$ $\frac{3.3}{44}$ $\frac{3.5}{50}$

$\frac{2.2}{50}$ $\frac{2.5}{36}$ $\frac{6.07}{49}$ $\frac{1.5}{10}$ $\frac{0.8}{3}$ $\frac{1.7}{10.9}$ $\frac{2.7}{20.3}$ $\frac{2.3}{24}$ $\frac{2.8}{28}$ $\frac{1.3}{36}$ $\frac{1.2}{50}$

$\frac{6.4}{50}$ $\frac{6.8}{31}$ $\frac{R.23}{97}$ $\frac{5.6}{6}$ $\frac{3.6}{10.2}$ $\frac{3.1}{5}$ $\frac{R.14}{35}$ $\frac{3.4}{25}$ $\frac{4.1}{29}$ $\frac{3.3}{36}$ $\frac{4.1}{50}$

Sta	+	π	-	Grade	Gr. Rod.
		894.28			
4	+50			90.0	4.3
5				88.8	5.5
T.P.	3.92	890.81	7.29	886.99	
	+50			87.7	3.1
6				87.0	3.8
End. 12" Vlt #33' 21".			$\frac{11.60}{12.33' 12.}$		
+29					
	+50			86.4	4.4
B.M.			5.41	885.90	885.40
7				86.2	4.6
	+50			86.2	4.6
T.P.	5.36	893.57	2.56	888.21	
8				86.6	7.0
	+50			87.1	6.5
9				88.0	5.6
T.P.	13.59	903.61	3.55	890.02	
	+50			89.0	14.6

Lt

R

Pt.

$$\begin{array}{r} 10.8 \\ 50 \end{array} \quad \begin{array}{r} F.6.0 \\ 103 \\ 25.0 \end{array} \quad \begin{array}{r} 92 \\ 6 \end{array} \quad \begin{array}{r} 63 \\ -20 \end{array} \quad \begin{array}{r} 45 \\ 6 \end{array} \quad \begin{array}{r} 46 \\ 25 \end{array} \quad \begin{array}{r} R.00 \\ 58 \\ 31.1 \end{array} \quad \begin{array}{r} 80 \\ 35 \end{array} \quad \begin{array}{r} 8.3 \\ 50 \end{array}$$

$$\begin{array}{r} 137 \\ 50 \end{array} \quad \begin{array}{r} F.8.6 \\ 141 \\ 90.2 \end{array} \quad \begin{array}{r} 127 \\ 7 \end{array} \quad \begin{array}{r} 78 \\ -23 \end{array} \quad \begin{array}{r} 65 \\ 9 \end{array} \quad \begin{array}{r} 64 \\ 26 \end{array} \quad \begin{array}{r} R.00 \\ 70 \\ 28.0 \end{array} \quad \begin{array}{r} 130 \\ 38.0 \end{array} \quad \begin{array}{r} 14.3 \\ 50 \end{array}$$

$$L.O. \quad \begin{array}{r} F.7.3 \\ 114 \\ 276 \end{array} \quad \begin{array}{r} 11.2 \\ 15 \end{array} \quad \begin{array}{r} 45 \\ -14 \end{array} \quad \begin{array}{r} 49 \\ 5 \end{array} \quad \begin{array}{r} 38 \\ 25 \end{array} \quad \begin{array}{r} R.00 \\ 46 \\ 27.4 \end{array} \quad \begin{array}{r} 10.3 \\ 37 \end{array} \quad \begin{array}{r} 11.0 \\ 47 \end{array} \quad \begin{array}{r} 11.9 \\ 50 \end{array}$$

$$\begin{array}{r} 10.60 \\ \text{Elev Water} \end{array} \quad L.O. \quad \begin{array}{r} F.7.8 \\ 116 \\ 286 \end{array} \quad \begin{array}{r} 11.1 \\ 8 \end{array} \quad \begin{array}{r} 52 \\ -15 \end{array} \quad \begin{array}{r} 5.1 \\ 10 \end{array} \quad \begin{array}{r} 48 \\ 24 \end{array} \quad \begin{array}{r} R.00 \\ 53 \\ 257 \end{array} \quad \begin{array}{r} 11.7 \\ 35 \end{array} \quad \begin{array}{r} 12.3 \\ 50 \end{array} \quad \begin{array}{r} 11.62 \\ \text{Water Elev.} \end{array}$$

$$L.O. \quad \begin{array}{r} F.6.7 \\ 111 \\ 26.4 \end{array} \quad \begin{array}{r} 10.6 \\ 4 \end{array} \quad \begin{array}{r} 81 \\ -37 \end{array} \quad \begin{array}{r} 50 \\ 11 \end{array} \quad \begin{array}{r} 4.9 \\ 26.0 \end{array} \quad \begin{array}{r} 100 \\ 36 \end{array} \quad \begin{array}{r} 11.8 \\ 50 \end{array} \quad \begin{array}{r} R.00 \\ 59 \\ 282 \end{array}$$

Spk. in T.P. 18' Lt 8+50

$$\begin{array}{r} 87 \\ 50 \end{array} \quad \begin{array}{r} F.5.3 \\ 99 \\ 28.6 \end{array} \quad \begin{array}{r} 101 \\ 17 \end{array} \quad \begin{array}{r} 96 \\ 3 \end{array} \quad \begin{array}{r} 74 \\ -28 \end{array} \quad \begin{array}{r} 47 \\ 11 \end{array} \quad \begin{array}{r} 49 \\ 25 \end{array} \quad \begin{array}{r} R.00 \\ 61 \\ 26.4 \end{array} \quad \begin{array}{r} 126 \\ 38 \end{array} \quad \begin{array}{r} 12.9 \\ 50 \end{array}$$

$$\begin{array}{r} 42 \\ 50 \end{array} \quad \begin{array}{r} 56 \\ 36 \end{array} \quad \begin{array}{r} F.3.2 \\ 78 \\ 19.4 \end{array} \quad \begin{array}{r} 85 \\ 7 \end{array} \quad \begin{array}{r} 78 \\ -32 \end{array} \quad \begin{array}{r} 42 \\ 11 \end{array} \quad \begin{array}{r} 46 \\ 25 \end{array} \quad \begin{array}{r} R.00 \\ 61 \\ 27.5 \end{array} \quad \begin{array}{r} 98 \\ 27 \end{array} \quad \begin{array}{r} 11.0 \\ 50 \end{array}$$

$$\begin{array}{r} 26 \\ 50 \end{array} \quad \begin{array}{r} 29 \\ 25 \end{array} \quad \begin{array}{r} C.24 \\ 46 \\ 25.3 \end{array} \quad \begin{array}{r} 72 \\ 4 \end{array} \quad \begin{array}{r} 89 \\ -17 \end{array} \quad \begin{array}{r} 94 \\ 8 \end{array} \quad \begin{array}{r} 67 \\ 12 \end{array} \quad \begin{array}{r} C.00 \\ 70 \\ 20.5 \end{array} \quad \begin{array}{r} 70 \\ 27 \end{array} \quad \begin{array}{r} 101 \\ 34 \end{array} \quad \begin{array}{r} 11.8 \\ 50 \end{array}$$

$$\begin{array}{r} 19 \\ 50 \end{array} \quad \begin{array}{r} 37 \\ 36 \end{array} \quad \begin{array}{r} C.2.2 \\ 43 \\ 24.9 \end{array} \quad \begin{array}{r} 68 \\ 5 \end{array} \quad \begin{array}{r} 84 \\ 1 \end{array} \quad \begin{array}{r} 86 \\ -21 \end{array} \quad \begin{array}{r} 86 \\ 5 \end{array} \quad \begin{array}{r} 63 \\ 10 \end{array} \quad \begin{array}{r} C.00 \\ 65 \\ 20.5 \end{array} \quad \begin{array}{r} 64 \\ 28 \end{array} \quad \begin{array}{r} 97 \\ 34 \end{array} \quad \begin{array}{r} 10.2 \\ 50 \end{array}$$

$$\begin{array}{r} 15 \\ 50 \end{array} \quad \begin{array}{r} 29 \\ 40 \end{array} \quad \begin{array}{r} C.11 \\ 45 \\ 22.7 \end{array} \quad \begin{array}{r} 53 \\ 19 \end{array} \quad \begin{array}{r} 72 \\ 5 \end{array} \quad \begin{array}{r} 76 \\ -20 \end{array} \quad \begin{array}{r} 76 \\ 8 \end{array} \quad \begin{array}{r} 66 \\ 11 \end{array} \quad \begin{array}{r} R.1.3 \\ 58 \\ 20.4 \end{array} \quad \begin{array}{r} 57 \\ 27 \end{array} \quad \begin{array}{r} 98 \\ 35 \end{array} \quad \begin{array}{r} 10.6 \\ 50 \end{array}$$

$$\begin{array}{r} 98 \\ 50 \end{array} \quad \begin{array}{r} 106 \\ 28.5 \end{array} \quad \begin{array}{r} 130 \\ 6 \end{array} \quad \begin{array}{r} 140 \\ -14 \end{array} \quad \begin{array}{r} 165 \\ 5 \end{array} \quad \begin{array}{r} 143 \\ 11 \end{array} \quad \begin{array}{r} R.1.0 \\ 158 \\ 19.5 \end{array} \quad \begin{array}{r} 149 \\ 28 \end{array} \quad \begin{array}{r} 17.7 \\ 32 \end{array} \quad \begin{array}{r} 190 \\ 42 \end{array} \quad \begin{array}{r} 195 \\ 50 \end{array}$$

Sta	+	X	-	Grade	Gr. Rod.
		903.61			

9	+74			89.5	14.1
---	-----	--	--	------	------

10				90.0	13.6
----	--	--	--	------	------

	+50			91.0	12.6
--	-----	--	--	------	------

11				92.0	11.6
----	--	--	--	------	------

T.P.	10.32	903.90	10.13	893.58	
	+50			93.0	10.9

12				94.1	9.8
----	--	--	--	------	-----

	+50			95.4	8.5
--	-----	--	--	------	-----

13				96.9	7.0
----	--	--	--	------	-----

	+50			98.6	5.3
--	-----	--	--	------	-----

B.M.			6.94	896.96	(899.41)
------	--	--	------	--------	----------

14				900.4	3.5
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	+50			02.2	1.7
--	-----	--	--	------	-----

T.P.	11.10	914.23	0.77	903.13	
------	-------	--------	------	--------	--

$$\frac{73}{50} \quad \frac{74}{32} \quad \frac{8.8}{7} \quad \frac{14.6}{-0.5} \quad \frac{15.4}{1} \quad \frac{15.0}{4} \quad \frac{14.1}{11} \quad \frac{14.2}{19.9} \quad \frac{14.5}{28} \quad \frac{16.8}{32} \quad \frac{18.8}{50}$$

$$\frac{5.6}{50} \quad \frac{5.4}{32} \quad \frac{5.6}{24} \quad \frac{6.2}{10} \quad \frac{13.7}{-0.1} \quad \frac{14.6}{1} \quad \frac{15.3}{3} \quad \frac{15.3}{8} \quad \frac{13.6}{11} \quad \frac{13.8}{2.41} \quad \frac{13.8}{28} \quad \frac{15.1}{32} \quad \frac{15.1}{45} \quad \frac{16}{50}$$

$$\frac{0.0}{50} \quad \frac{1.0}{43} \quad \frac{6.105}{32} \quad \frac{2.1}{14} \quad \frac{4.2}{12} \quad \frac{5.9}{11.3} \quad \frac{11.3}{11.3} \quad \frac{12.2}{3} \quad \frac{13.6}{6} \quad \frac{13.6}{9} \quad \frac{12.3}{11} \quad \frac{13.0}{19.7} \quad \frac{12.8}{29} \quad \frac{14.8}{33} \quad \frac{14.3}{43} \quad \frac{15}{50}$$

$$\frac{9.0}{50} \quad \frac{10.0}{23.7} \quad \frac{11.8}{5} \quad \frac{12.4}{-1.8} \quad \frac{13.2}{8} \quad \frac{11.4}{11} \quad \frac{11.9}{19.9} \quad \frac{11.6}{29} \quad \frac{13.1}{32} \quad \frac{14.6}{50}$$

$$\frac{14.2}{50} \quad \frac{F3.5}{14.4} \quad \frac{14.2}{20.0} \quad \frac{14.2}{-3.3} \quad \frac{14.2}{6} \quad \frac{10.7}{13} \quad \frac{10.9}{20.5} \quad \frac{10.8}{29} \quad \frac{13.5}{35} \quad \frac{12.9}{50}$$

$$\frac{14.2}{50} \quad \frac{F5.1}{14.9} \quad \frac{14.2}{23.2} \quad \frac{14.2}{-4.5} \quad \frac{13.8}{5} \quad \frac{9.4}{11} \quad \frac{9.9}{20.3} \quad \frac{9.8}{27} \quad \frac{13.2}{32} \quad \frac{13.1}{50}$$

$$\frac{12.7}{50} \quad \frac{13.5}{44} \quad \frac{F5.2}{13.7} \quad \frac{13.2}{23.4} \quad \frac{13.2}{9} \quad \frac{12.1}{-3.4} \quad \frac{12.5}{5} \quad \frac{8.1}{11} \quad \frac{8.8}{19.9} \quad \frac{8.6}{27} \quad \frac{10.7}{30} \quad \frac{12.1}{50}$$

$$\frac{9.0}{50} \quad \frac{8.8}{31} \quad \frac{F3.3}{10.3} \quad \frac{10.3}{19.6} \quad \frac{9.9}{-2.9} \quad \frac{9.9}{7} \quad \frac{6.8}{11} \quad \frac{7.4}{19.7} \quad \frac{7.3}{27} \quad \frac{8.5}{30} \quad \frac{9.1}{50}$$

$$\frac{3.4}{50} \quad \frac{4.0}{33} \quad \frac{6.03}{5.1} \quad \frac{5.6}{24.1} \quad \frac{5.8}{14} \quad \frac{4}{4} \quad \frac{7.0}{-1.7} \quad \frac{6.8}{8} \quad \frac{5.6}{12} \quad \frac{6.0}{19.1} \quad \frac{5.6}{28} \quad \frac{7.4}{31} \quad \frac{7.2}{50}$$

Top iron pipe 30' at 131.50 out.

$$\frac{0.0}{50} \quad \frac{0.4}{34} \quad \frac{6.23}{11} \quad \frac{2.3}{25.1} \quad \frac{2.3}{5} \quad \frac{3.1}{10.4} \quad \frac{4.4}{8} \quad \frac{3.5}{12} \quad \frac{4.2}{18.1} \quad \frac{4.0}{30} \quad \frac{5.1}{35} \quad \frac{5.8}{50}$$

$$\frac{10.6}{50} \quad \frac{6.20}{10.3} \quad \frac{10.3}{24.5} \quad \frac{1.0}{10.7} \quad \frac{1.2}{4} \quad \frac{2.9}{8} \quad \frac{3.0}{12} \quad \frac{2.2}{13} \quad \frac{3.2}{18.9} \quad \frac{2.1}{32} \quad \frac{3.0}{36} \quad \frac{3.1}{50}$$

Sto.	+	π	-	Grads	Gr. Rod.
		914.23			
15				04.0	10.2
	+50			05.8	8.4
16				07.5	6.7
	+50			09.1	5.1
17				10.5	3.7
T.P.	1176	924.24	1.75	912.48	
	+50			11.8	12.4
18				13.0	11.2
	+50			14.2	10.0
19				15.4	8.8
	+25			16.0	8.2
	+50			16.6	7.6

L.

R

R.

$$\frac{69}{50} \begin{pmatrix} C.32 \\ 70 \\ 269 \end{pmatrix} \begin{pmatrix} R.4 \\ 84 \\ 418 \end{pmatrix} \frac{90}{4} \frac{114}{8} \frac{116}{12} \frac{105}{13} \begin{pmatrix} R.10 \\ 107 \\ 195 \end{pmatrix} \frac{104}{31} \frac{109}{34} \frac{110}{50}$$

$$\frac{40}{50} \begin{pmatrix} C.44 \\ 40 \\ 293 \end{pmatrix} \frac{45}{14} \begin{pmatrix} R.59 \\ 59 \\ 125 \end{pmatrix} \frac{64}{2} \frac{93}{7} \frac{93}{11} \frac{84}{13} \begin{pmatrix} R.12 \\ 87 \\ 199 \end{pmatrix} \frac{87}{30} \frac{93}{50}$$

$$\frac{34}{50} \begin{pmatrix} C.36 \\ 31 \\ 277 \end{pmatrix} \frac{31}{16} \begin{pmatrix} R.40 \\ 40 \\ 127 \end{pmatrix} \frac{40}{9} \frac{66}{9} \begin{pmatrix} R.12 \\ 70 \\ 199 \end{pmatrix} \frac{72}{28} \frac{65}{30} \frac{66}{36} \frac{72}{50}$$

$$\frac{37}{50} \begin{pmatrix} C.17 \\ 34 \\ 299 \end{pmatrix} \frac{33}{19} \begin{pmatrix} R.35 \\ 35 \\ 116 \end{pmatrix} \frac{39}{8} \frac{48}{12} \begin{pmatrix} R.11 \\ 55 \\ 197 \end{pmatrix} \frac{56}{21} \frac{47}{29} \frac{52}{36} \frac{58}{50}$$

$$\frac{21}{50} \begin{pmatrix} C.06 \\ 31 \\ 217 \end{pmatrix} \frac{36}{101} \frac{40}{8} \frac{34}{10} \begin{pmatrix} R.11 \\ 41 \\ 197 \end{pmatrix} \frac{42}{27} \frac{39}{28} \frac{43}{35} \frac{54}{50}$$

$$\frac{90}{50} \begin{pmatrix} C.24 \\ 100 \\ 253 \end{pmatrix} \frac{103}{18} \begin{pmatrix} R.11 \\ 111 \\ 413 \end{pmatrix} \frac{126}{4} \frac{125}{9} \frac{119}{10} \begin{pmatrix} R.13 \\ 126 \\ 201 \end{pmatrix} \frac{130}{33} \frac{148}{50}$$

$$\frac{43}{50} \begin{pmatrix} C.61 \\ 51 \\ 320 \end{pmatrix} \frac{63}{14} \begin{pmatrix} R.75 \\ 75 \\ 137 \end{pmatrix} \frac{110}{6} \frac{110}{9} \frac{105}{11} \begin{pmatrix} C.00 \\ 112 \\ 205 \end{pmatrix} \frac{113}{33} \frac{131}{50}$$

$$\frac{20}{50} \begin{pmatrix} C.68 \\ 32 \\ 320 \end{pmatrix} \frac{41}{17} \begin{pmatrix} R.57 \\ 57 \\ 143 \end{pmatrix} \frac{95}{6} \frac{94}{11} \begin{pmatrix} R.14 \\ 101 \\ 203 \end{pmatrix} \frac{99}{29} \frac{95}{30} \frac{100}{50}$$

$$\frac{22}{50} \begin{pmatrix} C.47 \\ 41 \\ 279 \end{pmatrix} \frac{53}{3} \begin{pmatrix} R.61 \\ 61 \\ 47 \end{pmatrix} \frac{86}{5} \frac{83}{12} \begin{pmatrix} R.12 \\ 91 \\ 199 \end{pmatrix} \frac{91}{34} \frac{86}{50}$$

$$\frac{96}{14} \frac{96}{6} \frac{75}{11} \frac{80}{11} \begin{pmatrix} C.02 \\ 80 \\ 207 \end{pmatrix} \frac{82}{30} \frac{87}{31} \frac{87}{34} \frac{87}{50}$$

$$\frac{44}{50} \begin{pmatrix} C.08 \\ 68 \\ 281 \end{pmatrix} \frac{76}{11} \frac{91}{6} \begin{pmatrix} R.96 \\ 96 \\ 220 \end{pmatrix} \frac{96}{6} \frac{75}{11} \begin{pmatrix} R.12 \\ 79 \\ 199 \end{pmatrix} \frac{82}{30} \frac{87}{31} \frac{82}{34} \frac{82}{50}$$

Sta.	+	π	-	Grade	Gr. Rod.
		924.24			

19	+90			17.6	6.6
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20				17.9	6.3
----	--	--	--	------	-----

	+25			18.3	5.9
--	-----	--	--	------	-----

	+50			18.7	5.5
--	-----	--	--	------	-----

21				19.2	5.0
----	--	--	--	------	-----

	+50			19.1	5.1
--	-----	--	--	------	-----

22				18.6	5.6
----	--	--	--	------	-----

	+30			18.1	
--	-----	--	--	------	--

	+50			17.8	6.4
--	-----	--	--	------	-----

23				17.0	7.2
----	--	--	--	------	-----

T.P.	2.80	920.23	6.81	917.43	
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	+50			16.2	4.0
--	-----	--	--	------	-----

L.

E

R.

12

$$\begin{array}{r} 72 \\ 50 \end{array} \quad \begin{array}{r} 84 \\ 37 \end{array} \quad \begin{array}{r} F3.7 \\ 10.0 \\ 24.1 \end{array} \quad \begin{array}{r} 101 \\ 76 \end{array} \quad \begin{array}{r} 89 \\ -26 \\ 8 \end{array} \quad \begin{array}{r} 8.2 \\ 6.5 \\ 1.7 \end{array} \quad \begin{array}{r} R.10 \\ 48 \\ 19.4 \end{array} \quad \begin{array}{r} 6.9 \\ 2.9 \end{array} \quad \begin{array}{r} 7.5 \\ 31 \end{array} \quad \begin{array}{r} 6.7 \\ 34 \end{array} \quad \begin{array}{r} 6.5 \\ 50 \end{array}$$

$$\begin{array}{r} 77 \\ 50 \end{array} \quad \begin{array}{r} R.05 \\ 6.5 \\ 18.5 \end{array} \quad \begin{array}{r} 6.4 \\ 16 \end{array} \quad \begin{array}{r} 4.9 \\ 8.6 \end{array} \quad \begin{array}{r} 4.8 \\ 5 \end{array} \quad \begin{array}{r} 6.1 \\ 8 \end{array} \quad \begin{array}{r} 6.1 \\ 10 \end{array} \quad \begin{array}{r} 5.3 \\ 12 \end{array} \quad \begin{array}{r} C.03 \\ 5.2 \\ 21.1 \end{array} \quad \begin{array}{r} 5.4 \\ 29 \end{array} \quad \begin{array}{r} 4.2 \\ 30 \end{array} \quad \begin{array}{r} 6.2 \\ 33 \end{array} \quad \begin{array}{r} 4.2 \\ 36 \end{array} \quad \begin{array}{r} 6.0 \\ 50 \end{array}$$

$$\begin{array}{r} 54 \\ 50 \end{array} \quad \begin{array}{r} C.12 \\ 3.8 \\ 22.9 \end{array} \quad \begin{array}{r} 2.5 \\ 11 \end{array} \quad \begin{array}{r} 1.5 \\ +3.5 \end{array} \quad \begin{array}{r} 16 \\ 2 \end{array} \quad \begin{array}{r} 4.5 \\ 8 \end{array} \quad \begin{array}{r} 4.5 \\ 9 \end{array} \quad \begin{array}{r} 3.8 \\ 12 \end{array} \quad \begin{array}{r} C.08 \\ 4.2 \\ 22.1 \end{array} \quad \begin{array}{r} 4.2 \\ 29 \end{array} \quad \begin{array}{r} 4.7 \\ 32 \end{array} \quad \begin{array}{r} 3.7 \\ 34 \end{array} \quad \begin{array}{r} 4.0 \\ 50 \end{array}$$

$$\begin{array}{r} 4.8 \\ 50 \end{array} \quad \begin{array}{r} C.1.8 \\ 3.3 \\ 24.1 \end{array} \quad \begin{array}{r} 2.8 \\ 17 \end{array} \quad \begin{array}{r} 2.8 \\ +2.3 \end{array} \quad \begin{array}{r} 3.0 \\ 5 \end{array} \quad \begin{array}{r} 3.8 \\ 15 \end{array} \quad \begin{array}{r} 4.2 \\ 22.3 \end{array} \quad \begin{array}{r} 4.4 \\ 28 \end{array} \quad \begin{array}{r} 6.3 \\ 50 \end{array}$$

$$\begin{array}{r} 6.0 \\ 50 \end{array} \quad \begin{array}{r} R.13 \\ 5.8 \\ 20.1 \end{array} \quad \begin{array}{r} 5.3 \\ 14 \end{array} \quad \begin{array}{r} 4.4 \\ 4.2 \end{array} \quad \begin{array}{r} 4.4 \\ 11 \end{array} \quad \begin{array}{r} C.05 \\ 5.1 \\ 21.5 \end{array} \quad \begin{array}{r} 5.0 \\ 32 \end{array} \quad \begin{array}{r} 4.4 \\ 50 \end{array}$$

$$\begin{array}{r} 12.0 \\ 50 \end{array} \quad \begin{array}{r} 10.8 \\ 32 \end{array} \quad \begin{array}{r} F3.2 \\ 9.6 \\ 9.4 \end{array} \quad \begin{array}{r} 8.7 \\ 7 \end{array} \quad \begin{array}{r} 7.4 \\ -1.0 \end{array} \quad \begin{array}{r} 7.2 \\ 2 \end{array} \quad \begin{array}{r} 5.5 \\ 9 \end{array} \quad \begin{array}{r} C.04 \\ 6.0 \\ 21.3 \end{array} \quad \begin{array}{r} 6.2 \\ 29 \end{array} \quad \begin{array}{r} 6.2 \\ 30 \end{array} \quad \begin{array}{r} 6.0 \\ 50 \end{array}$$

$$\begin{array}{r} 11.9 \\ 50 \end{array} \quad \begin{array}{r} 11.5 \\ 34 \end{array} \quad \begin{array}{r} F4.0 \\ 11.2 \\ 21.0 \end{array} \quad \begin{array}{r} 10.7 \\ 15 \end{array} \quad \begin{array}{r} 9.8 \\ -2.6 \end{array} \quad \begin{array}{r} 6.5 \\ 10 \end{array} \quad \begin{array}{r} 6.8 \\ 21.3 \end{array} \quad \begin{array}{r} 7.0 \\ 28 \end{array} \quad \begin{array}{r} 8.4 \\ 32 \end{array} \quad \begin{array}{r} 7.4 \\ 50 \end{array}$$

$$\begin{array}{r} 51 \\ 50 \end{array} \quad \begin{array}{r} 6.7 \\ 34 \end{array} \quad \begin{array}{r} 7.3 \\ 26 \end{array} \quad \begin{array}{r} F3.0 \\ 7.0 \\ 19.0 \end{array} \quad \begin{array}{r} 6.2 \\ 6 \end{array} \quad \begin{array}{r} 5.1 \\ -1.1 \end{array} \quad \begin{array}{r} 4.1 \\ 3 \end{array} \quad \begin{array}{r} 3.0 \\ 10 \end{array} \quad \begin{array}{r} C.09 \\ 3.1 \\ 22.3 \end{array} \quad \begin{array}{r} 2.8 \\ 29 \end{array} \quad \begin{array}{r} 0.9 \\ 50 \end{array}$$

Sta.	+	π	-	Grade	Gr. Rod.
		920.23			
24				15.4	4.8
	+50				
25					
T.P.	6.92	922.87	4.28	915.95	
B.M.			1.74	921.13	(921.05)

Lt.

L

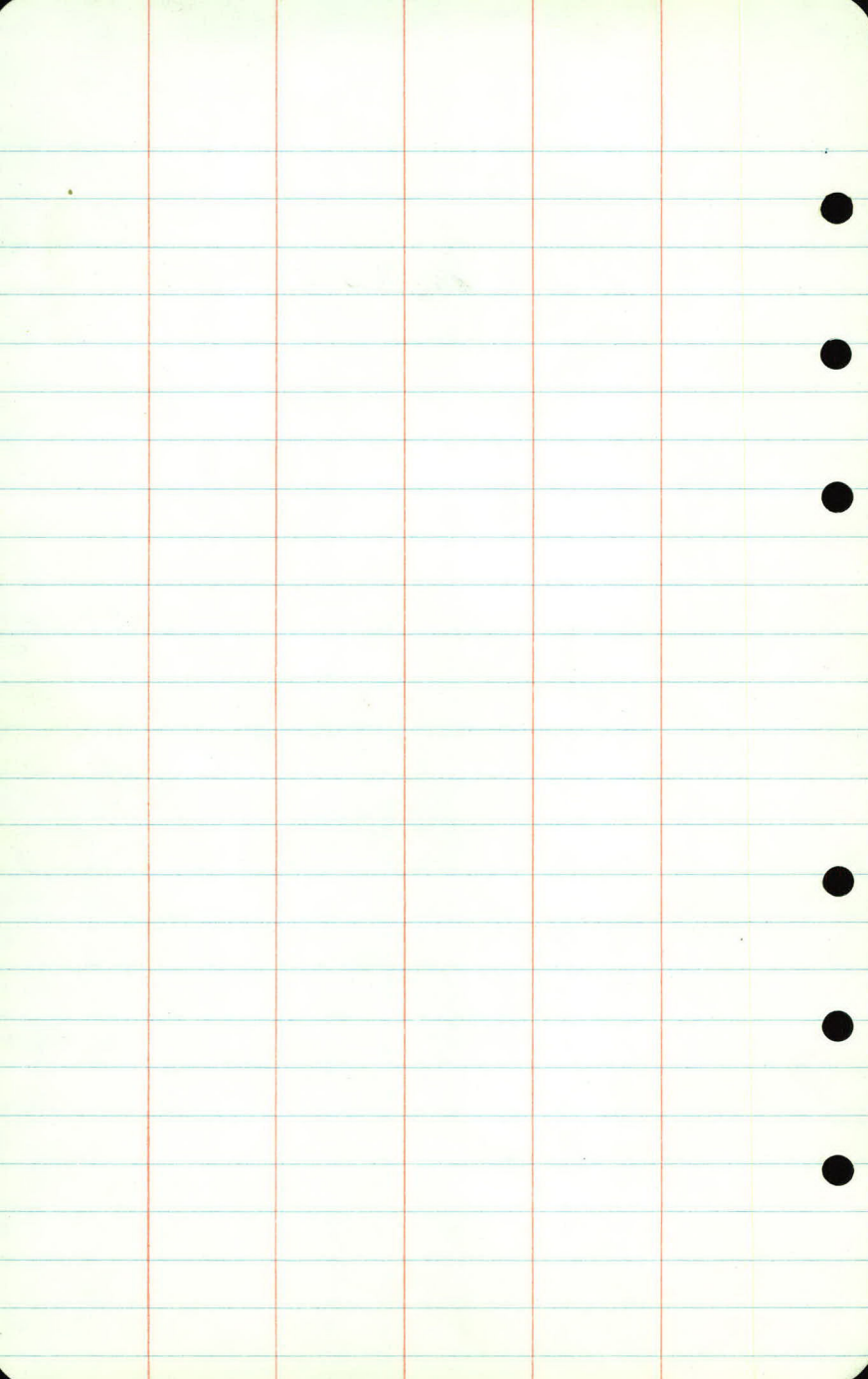
Rt.

$\frac{31}{50}$	$\frac{44}{25}$	$\frac{68}{170}$ (F2.0)	$\frac{62}{18}$	$\frac{76}{16}$	$\frac{76}{14}$	$\frac{65}{12}$	$\frac{65}{5}$	$\frac{60}{-12}$	$\frac{39}{9}$	$\frac{40}{19}$	$\frac{45}{231}$ (C1.3)	$\frac{29}{37}$	$\frac{21}{45}$
-----------------	-----------------	-------------------------	-----------------	-----------------	-----------------	-----------------	----------------	------------------	----------------	-----------------	-------------------------	-----------------	-----------------

$\frac{50}{50}$	$\frac{65}{17}$	$\frac{43}{12}$	$\frac{70}{9}$	$\frac{72}{6}$	$\frac{46}{4}$	$\frac{51}{7}$	$\frac{48}{11}$	$\frac{41}{16}$	$\frac{49}{31}$	$\frac{57}{33}$	$\frac{49}{50}$	$\frac{52}{50}$
-----------------	-----------------	-----------------	----------------	----------------	----------------	----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------

$\frac{47}{50}$	$\frac{48}{29}$	$\frac{56}{9}$	$\frac{58}{12}$	$\frac{83}{14}$	$\frac{84}{16}$	$\frac{66}{19}$	$\frac{72}{25}$	$\frac{74}{50}$	$\frac{79}{50}$
-----------------	-----------------	----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------

(N.W. Cor. Top Step Ho. 40 Rt. 2344
 2



Alignment

Sta	Point	$\Delta Lt.$	$\Delta Rt.$
	+50		9°30.0'
17			8°44.8'
	+50		1°59.6'
16			7°14.4'
	+50		6°29.2'
15			5°44.0' ✓ D-3°00'48'
	+50		4°58.8' ✓ R-19°01.69'
14			4°13.6'
	+50		3°28.4'
13			2°43.2'
	+50		1°58'
12			1°12.8'
	+50		0°27.6'
11	+19.50 P.C.		0°00'
7	+88.86 P.I.		5°33'
0	+00		

Nail and Red.

12" 8.

117.25'

156.65'

Nail and Red.

O.P.P.

2" x 2" Nails

53.04'

Nail and Red.

O.P.P.

W. 1/2 Cor

35'

506.21

Sta.	Point	ΔLt	ΔRt
	+62.07 P.O.C.		29°16.1'
30			28°20'
29			26°49.6'
28			25°19.2' ✓
27			23°48.4' ✓
26			22°15.4' ✓
25			20°48.0'
	+50 P.O.C.		20°02.8'
24			19°17.6'
	+50		18°32.4'
23			17°47.2'
	+50 +25	16°39.4'	17°02.0'
22			16°16.8'
	+50		15°31.6'
21			14°46.4'
	+50		14°01.2'
20			13°16.0' ✓
	+50		12°30.8'
19			11°45.6' ✓
	+50		11°00.4'
18	P.O.C.		10°15.2'
17	+68.14		9°44.0'

5-18-40

