

Book-12- Dr. 6

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

P.M.A. PLAN Survey

LAKE STREET

From Co. Rd. "A" To Frost Ave.

Road Acc't. No. 81

Date Filed.....

File 12-6

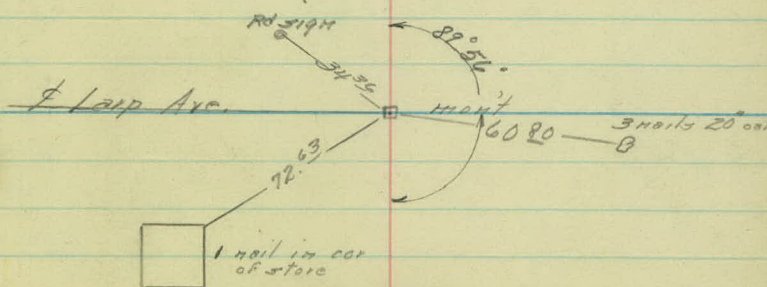
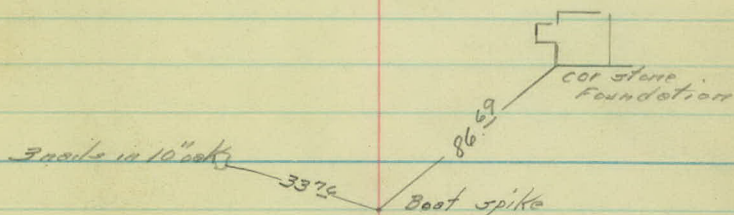
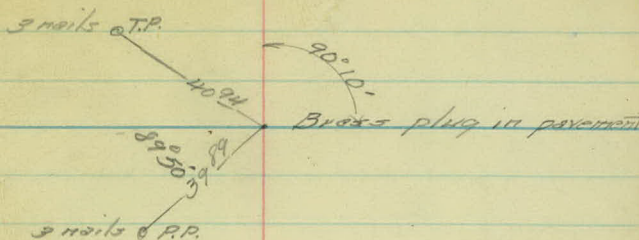
LAKE ST.

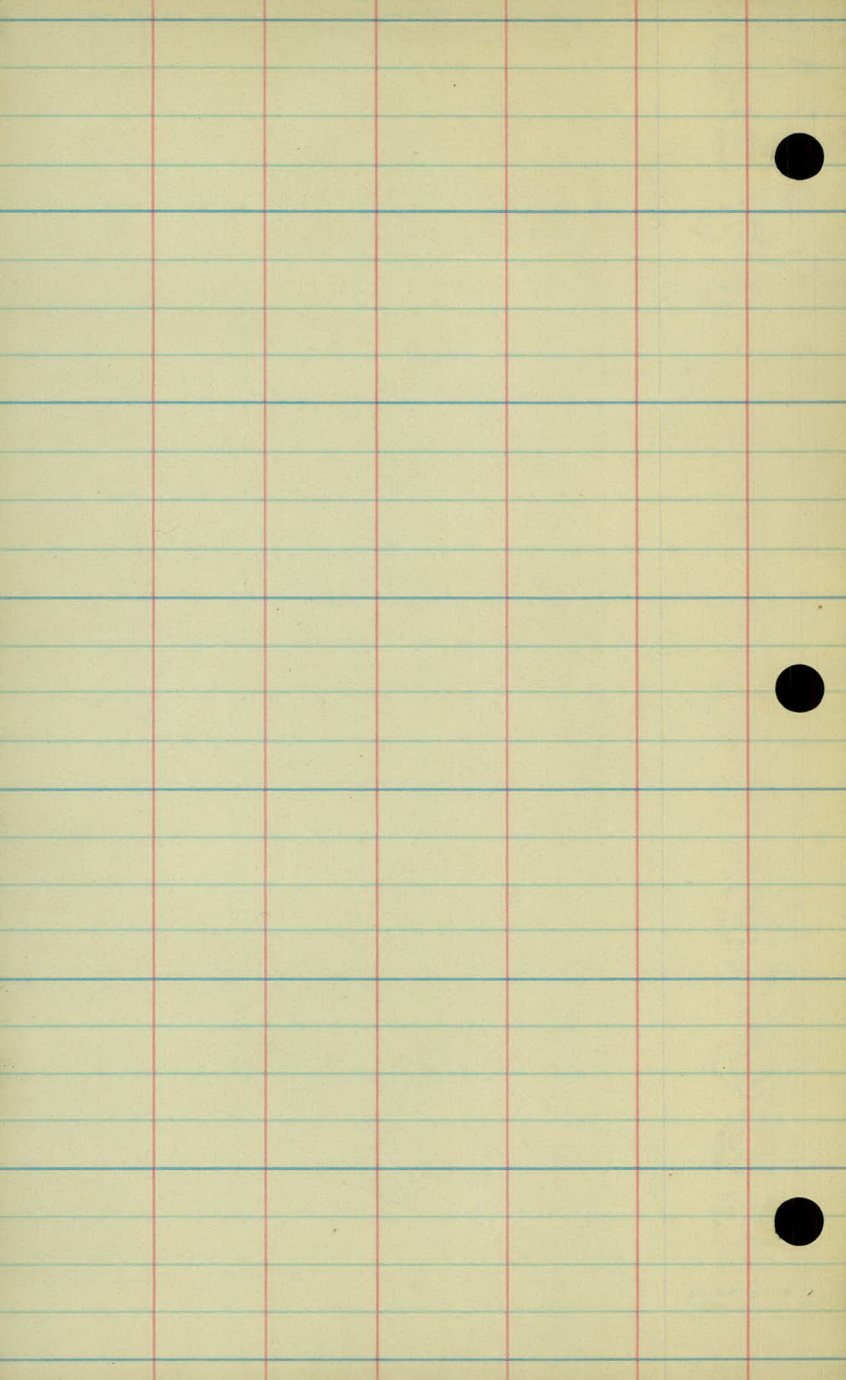
33-81

2639¹²

8-67⁶⁵ P.O.T.

0+00





33-81

Topography

9-14-33

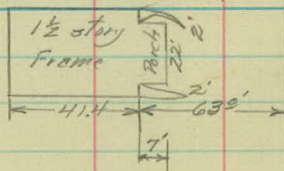
3

2

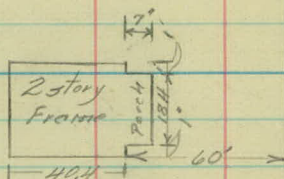
1

2-3' tracks with 2' grass bet.
 CONC. 35'
 CONC.

1+97



1+64



0+86

0+00

+96 PP 4' 4"
 +84 4" locust 36' RH 15
 +84 5" elm 34'
 +78 4" locust 32'
 +60 end cult 40' begin yard

Cult 13'
 edge rd 3'

edge rd 14'

edge cult 14'
 edge rd 3'

Cultivated

+70 PP 34'
 +59 4" elm 36'
 +21 4" elm 36'
 +03 begin cult 40'
 edge Rd 13'

edge cult 14'
 edge Rd. 5'

Yard

+97 E conc drive 35'
 +95 12" x 20" CM 19'
 +90 end curb 21.5'
 +89 4" elm 36'
 +75 10" x 4" vit 19'
 +75 E sidewalk 21.5' (1/2 walk)
 +68 5" elm 36'
 +64 SE cor 1 1/2 story frame 63'
 +40 PP 24'
 +39 Begin 3" x 15" curb 21.5'
 +37 20" elm 34'
 +32 RH drive 12" x 16" CM 20'
 +22 15" elm 34'
 edge rd 13'

Cultivated
 (Truck garden)

edge cult 13'
 edge rd 6'

Yard

+87 12" tree 34'
 +86 SE cor 2 story frame 60'
 +81 2' sidewalk 32'
 +81 12" x 4" vit 19'
 +75 12" border 34'
 +62 15" elm 50'

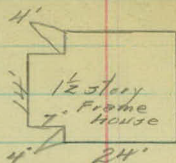
Yard

XXXXXX

+36 end fence 30'
 +26 Rd sign 29'
 +25 PP 26'

+29 begin cult 15'
 +26 Rd sign 34'
 +24 TP 45'

9+35 (S.W. cor.)



+79 8" stump 26'
 +71 6" oak 24'
 +65 10" oak 30'
 +66 10" oak 31'
 +53 10" oak 30'
 +37 PP 25'
 +34 12" oak 31'
 +07 10" oak 30'
 edge rd 11

+82 10" oak 30'

+24 6" oak 29'
 +19 12" stump 31'
 +02 PP 24'
 edge rd. 13'
 +97 8" oak 31'

+30 begin hay field
 +49 6" oak 29'
 +35 8" oak 30'
 +08 10" oak 30'
 edge rd 15'

+93 SE corner old Foundation 53'
 +71 12" stump 31'
 +68 PP 24'
 +57 8" WO 28'

+24 12" WO 28'
 edge rd 15'

+96 end yard begin cult. 31'

+33 PP 24'
 +25 Pri Drive
 +20 end cult. begin yard
 edge rd 14'

+52 begin cult. 29' end yard

+34 Pri Drive
 +10 Apple tree 46'

+95 10" oak 24'
 +80 4" oak 29'
 +64 Pri drive
 +57 4" elm 29'
 +51 2 3' sidewalk 19'
 +41 4" elm 28'
 +35 5W car here 54'
 +22 begin yard
 +22 end garden 20'
 +22 5" oak 20'
 edge rd 8'

+13 4" oak 16'
 edge rd. 5'

+77 beg. garden 15'

0 0 0 +53 end orchard 30'
 0 0 0
 0 0 0
 0 0 0
 0 0 0 edge rd. 14'

0 0 0 +90 begin orchard 30'
 +70 Pri Drive
 +62 end cult.

edge cult 11.5'
 edge rd 23'

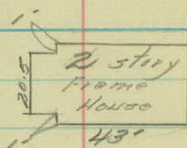
edge cult. 12.5'
 edge rd 3'

£

+33 £ Ripley Ave

13

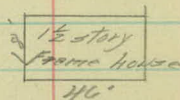
13.51



12

11

10+20 SW corner



10

+ 60 begin waste land
+ 58 PP 25'

+ 63 TP 25
+ 50 begin garden 32'

+ 55 E Ripley Ave (15' Rd.)

+ 97 end hay field
+ 97 T.P. 24'

+ 14 PP 35'
edge rd 6'

edge rd 6'

+ 75 PP 24
+ 64 Twin 8" oak 31

+ 15 12" oak 30'
edge rd 7 1/2'

Yard
Garden

+ 94 Rd sign 34 1/2
+ 94 end hedge 24 1/2
+ 87 6" maple 47
+ 86 15" elm 26
+ 59 15" elm 26
+ 51 SW cor hse 63'

+ 30 end garden 29'
+ 19 4" elm 26
edge rd 13'

+ 69 begin garden 29'
+ 69 cor hen yard fence
+ 66 TP 26
+ 54 12" oak 50'
+ 49 15" elm 26
+ 43 15" stump 45'
+ 58 cor hen yard fence 37
+ 38 end garden 25'

edge rd 13'
+ 90 begin garden 25
+ 90 end yard
+ 78 Bridge 12" x 20" CMH 15

+ 26 SW cor hse 41'
+ 09 PP 26
edge rd 12 1/2'

Hay Field

19

18

17

16

15

50'
Abandoned
House
Foundation 25'

\$

14-43 S.E. COR.

14

Fence 34 edge Rd 10

edge Rd 8

edge Rd 9

+84 SE cor barn 48'

edge rd 9' Fence 34'

+77 Fence cor 35'

+48 E side rd (60' rd)

+18 end Fence 33

+06 end garden

edge rd. 9

edge rd. 9'

+85 Fence cor 33'

+82 PP 24

+43 SE cor old foundation 47'

+28 12" oak 27

edge rd 9'

Waste land

+58 TP 26

edge Rd 9

+43 T.P. 26

edge rd 9'

+65 begin waste
+65 end garden

edge rd 9

+98 TP 25

edge rd 10'

+83 TP 25

+23 10" oak 25'

edge rd 9'

25

24

23

22

21

20

edge Rd 12'

edge Rd 6'

edge Rd 12'

edge Rd 6'

+50-15" poplar 45'

+21-6" poplar 18'

edge Rd 10

Waste land

edge Rd 7

edge Rd 9

edge Rd 9

Guthrie Yard

edge Rd 9

edge Rd 10

Ferris 34 edge Rd 10

edge Rd 8'

+39'¹² End Proj

+29'¹² To edge Frost Ave

24

Beaton
Wilke
Topley
Steindman

20' conc pavement + 16-12" x 40' CM9 X drain

+09 P.P. 27'

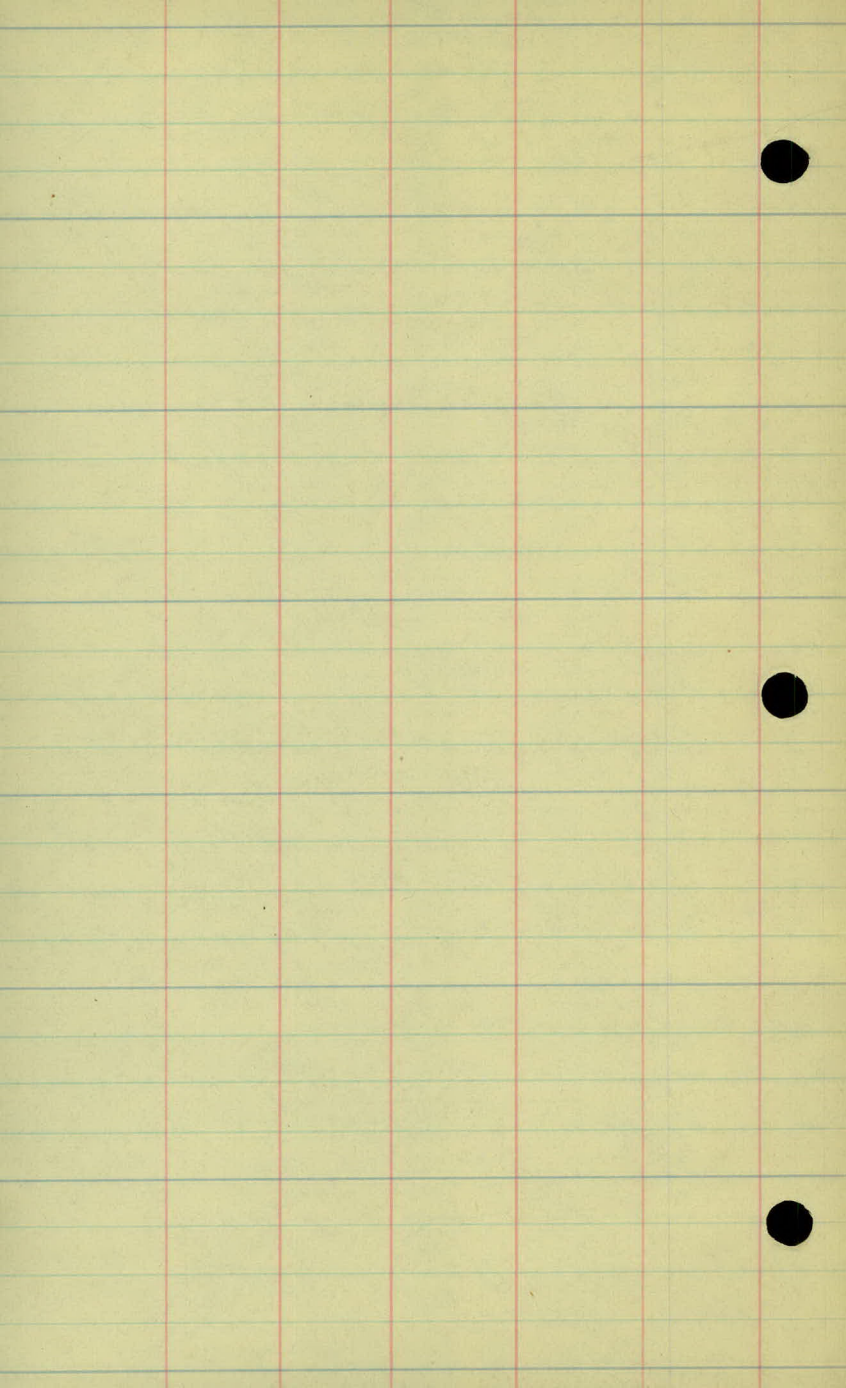
+06 Fence cor 33E



+24 Warning blinker 33

+16 Stop sign 145

+13 Ad sign 18



33-81

Track Topography on
Spurs to Guthrie Const
Co Shops

21+15² To rail spur to Guthrie shop

20+10⁵ To rail spur to Guthrie shop

19+83⁷⁰ To rail spur to Guthrie shop

19+65¹⁵ To rail spur to Guthrie shop

19

18+91¹⁰ To rail spur to Guthrie shop

18

11

RT

deflections to 50 rail

134°03' at 25'
133°38' at 50'
132°47' at 75'

43°07' at 25'
41°27' at 50'
39°50' at 75'



deflections to 50 rail

45°08' def to tangent



deflections to 50 rail

112°40' at 25'
110°42' at 50'
109°10' at 75'

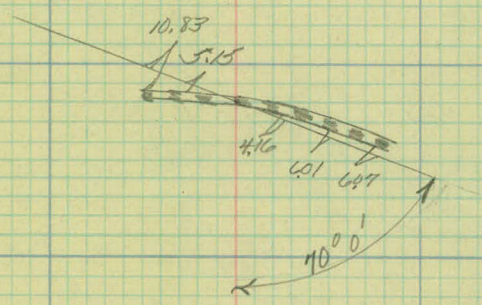
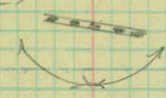
62°10' at 25'
59°41' at 50'
57°25' at 75'

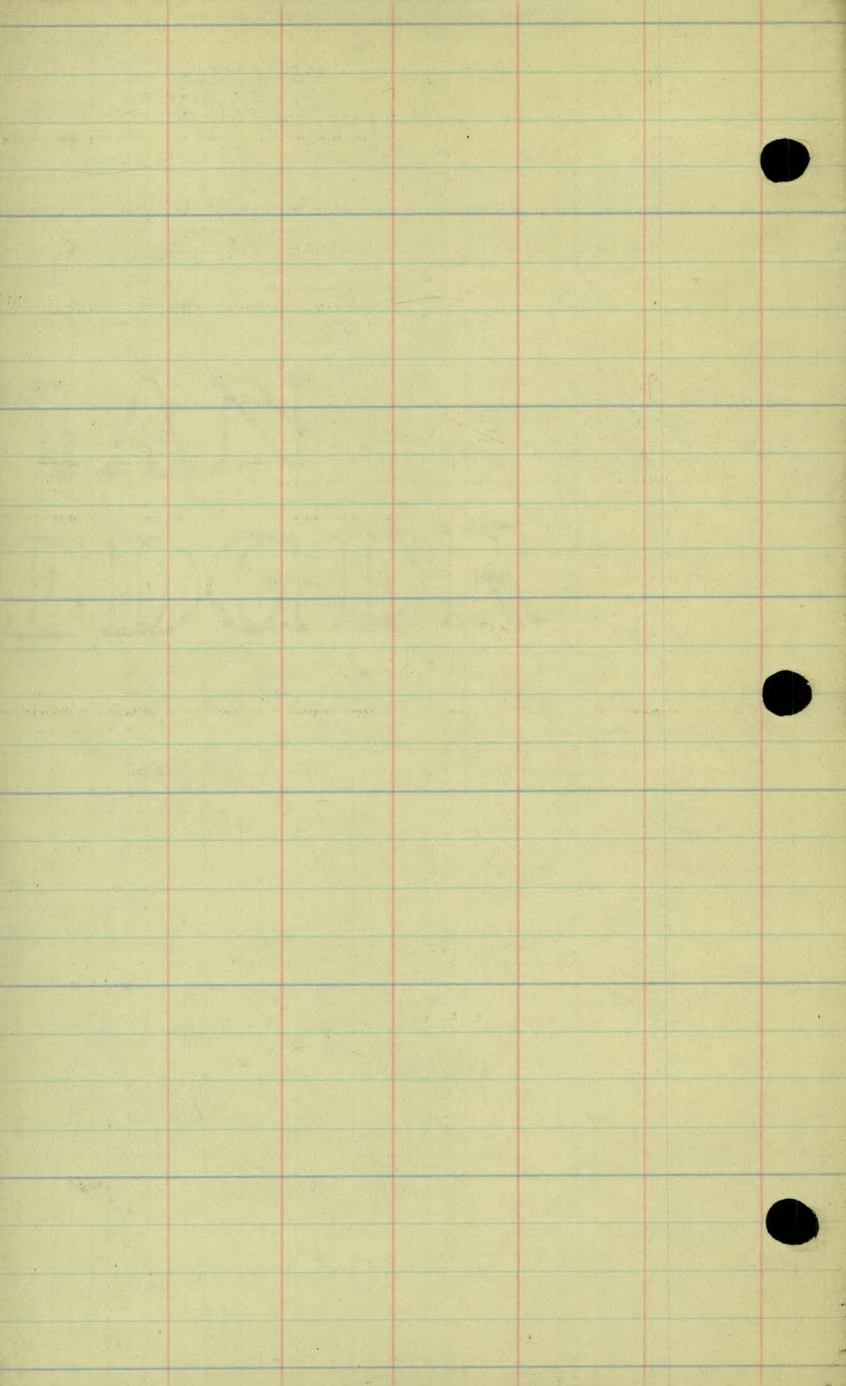


deflections to 50 Rail

112°09' at 25'
110°43' at 50'
109°09' at 75'

64°43' at 25'
63°06' at 50'
61°30' at 75'





Cross Sections
Proj 33-81

LAKE ST.

B.M. 1.70 890.58 ✓ 888.88

+00 86.1 ✓

+15 85.8 ✓

+21 85.8 ✓

+50 85.6 ✓

1 85.5 ✓

+50 85.6 ✓

2 85.7 ✓

+50 86.0 ✓

3 86.4 ✓

+50 86.8 ✓

T.P. 10.14 900.04 ✓ 0.70 889.88 ✓

4 87.4 ✓

+50 88.3 ✓

Left

9

Right

9-14-33

Wilk-
Steinman
topley
Beeton

6.4	4.9	4.8	5.0	4.5	3.6	3.7
50	33	4.5	20	35	30	33
50						

7.5	6.6	4.8	5.1	5.5
50	34	8	4.8	17
50				

3.7	4.5	6.1	6.3	5.0	5.5
50	34	30	31	4.8	19
50					

3.8	4.3	5.3	5.5	6.4	4.1	5.6	5.1	5.6	5.6
50	33	30	21	20	15	13	50	13	14
50									

4.1	4.4	5.7	6.0	6.5	6.0	5.4	5.2	6.0	5.3
50	34	30	30	19	18	14	51	12	13
50									

4.9	5.3	6.5	6.3	5.3	5.2	4.6	5.0	4.3
50	32	31	18	17	50	7	11	13
50								

5.4	5.3	5.7	5.9	5.3	4.8	5.3	4.0	4.6	4.6
50	24	23	19	17	4	4.9	7	12	14
50									

5.9	4.0	5.3	4.8	4.5	4.6	5.1	5.3
50	35	20	14	7	4.6	13	14
50							

4.6	3.9	4.4	4.1	4.4	4.8	4.3	4.6	5.4
50	24	22	7	4.2	6	7	11	15
50								

3.9	3.5	3.8	3.7	4.2	4.4	4.1	5.1
50	34	14	6	3.8	5	6	13
50							

11.6	11.5	13.0	12.5	12.8	12.3	13.8	13.1	13.7
50	23	19	7	12.6	5	11	14	35
50								

11.5	11.6	12.1	12.0	11.5	11.9	13.4	13.3	13.4
50	28	35	14	6	11.7	3	13	43
50								

900.04

5

88.9 ✓

+50

90.0 ✓

6

91.2 ✓

+50

92.4 ✓

7

94.1 ✓

+50

96.1 ✓

8

98.2 ✓

T.P.

3.70

902.82 ✓

0.91

899.13 ✓

+50

99.1 ✓

9

98.6 ✓

+50

98.2 ✓

10

97.8 ✓

+50

97.6 ✓

11

97.8 ✓

Left

2

Right

11.0 11.2 10.9 11.1 11.5 10.7 11.3 11.1 11.6
50 38 8 11.1 3 5 9 13 26 50

10.3 9.7 10.3 9.8 10.0 9.6 10.2 10.3 10.7
50 34 20 8 10.0 5 8 13 29 50

10.4 9.2 10.0 10.0 8.7 9.5 8.9 9.2 8.6 9.3 8.8 9.0
50 31 27 21 17 7 8.8 4 6 9 13 28 50

8.1 7.4 8.1 8.7 8.4 7.6 7.4 7.6 8.1 7.3 7.0
50 33 25 33 20 16 7 7.6 10 13 26 50

4.4 4.4 5.1 6.6 6.6 6.0 5.7 6.0 5.1 5.9 5.6 5.5
50 34 25 22 20 15 6 5.9 5 8 11 34 50

4.5 4.2 3.3 3.1 4.1 3.7 4.0 3.6 3.9 3.0
50 34 32 24 18 6 3.9 4 5 26 50

3.9 3.0
50 35

2.3 2.4 3.2 3.1 2.3 1.9 2.0 2.1 3.9
33 22 20 17 15 6 1.8 5 25 50

6.8 5.3 5.6 4.3 3.8 3.6 4.8
50 28 19 12 5 3.7 16 50

6.4 6.1 5.4 5.2 6.0 5.5 5.0 4.3 4.0 3.9
50 34 33 25 22 15 13 4.2 11 16 50

7.0 6.4 5.8 5.5 5.0 4.5 4.0 3.8
50 35 29 12 9 4.6 19 21 50

7.6 7.4 6.6 6.0 6.9 7.0 5.9 6.0 5.3 5.3 4.3 3.9
50 34 33 25 22 18 14 11 7 5.0 19 22 50

7.3 7.6 6.6 6.3 6.9 7.0 6.4 5.4 5.1 5.6 5.9 5.8 5.9 4.2
50 37 33 26 24 18 16 7 5.2 5 14 16 22 26 50

6.9 7.5 6.9 6.8 7.2 6.6 5.3 5.0 5.4 6.2 6.1
50 35 33 24 15 14 4 5.0 5 13 16 50

902.83

11+50

98.0 ✓

12

98.6 ✓

+50

99.7 ✓

+94

99.1 ✓

4.94 903.80 ✓ 3.99 898.84 ✓

13

99.1 ✓

+53 E Ripley Ave (98.9 ✓ traveled rd.)

+41

98.8 ✓

+47

98.8 ✓

14

98.6 ✓

+19

98.7 ✓

+43

98.7 ✓

B.M.

903.78 ✓ 4.88 898.92 (898.90)

15

98.4 ✓

+50

98.5 ✓

Left

2

Right

5.5 6.0 6.9 5.0

50 35 18 7 4.8

4.8 5.1 6.1 6.3 5.7 5.8

5 13 16 22 24 50

3.4 3.7 2.6 4.4 5.2 4.6

50 35 30 18 16 9 4.2

4.3 4.0 4.6 4.4 3.2 3.4

13 17 20 23 26 50

3.6 3.5 2.5 2.7 3.4 4.4 3.7

50 34 32 26 18 15 11 3.1

3.0 3.0 3.5 2.6 3.0

5 16 22 25 50

3.9 3.7 3.0 3.2 4.2 4.4

50 31 30 25 21 16 3.7

4.2 3.3 3.8

22 26 50

6.0 5.2 5.6 5.2

50 39 37 18 4.7

4.6 5.1 6.0

13 27 50

4.5 4.6

50 34 49

4.8 4.8

27 50

6.3 6.2 5.4

50 31 27 5.0

5.6 6.5 6.7

20 28 50

4.4 4.9 5.7 5.3

50 38 21 17 5.0

5.5 6.1 5.7 5.9

14 21 25 50

6.8 6.7 5.9 6.2 5.5

50 21 16 13 9 5.2

5.4 6.3 6.3 4.7 5.6

13 15 22 28 50

7.9 6.7 6.0 6.2 5.5

50 21 16 13 9 5.1

5.2 6.4 6.4 4.5 5.3

11 15 21 29 50

5.7 6.7 6.1 6.1 5.4

50 20 17 12 10 5.1

5.3 6.4 6.3 4.2 4.8

11 15 20 28 50

6.9 6.4 5.7 6.5 6.5 5.6

50 37 31 30 15 10 5.4

5.7 6.5 6.5 4.2 3.3 3.9

11 16 23 26 28 50

4.7 5.2 4.7 6.3 6.4 5.6

50 36 31 29 14 11 5.3

5.6 6.5 5.9 2.3 2.3

11 15 23 26 50

903.78

16

98.5 ✓

+18

98.4 ✓

+45

98.3 ✓

+53

98.3 ✓

+68

98.4 ✓

+78

98.4 ✓

17

98.2 ✓

+50

98.1 ✓

5.07 903.40' 5.45 898.33 ✓

18

98.0 ✓

+50

98.0 ✓

+91¹⁰ Elev Jo. rail

97.85 ✓

19

98.0 ✓

+50

98.4 ✓

5.43 897.97 ✓

Left

2

Right

<u>5.2</u>	<u>5.6</u>	<u>4.6</u>	<u>6.5</u>	<u>5.8</u>	<u>5.6</u>	<u>6.7</u>	<u>6.6</u>	<u>3.4</u>	<u>3.9</u>	<u>3.9</u>
50	31	29	14	11	5.3	11	14	22	25	29

<u>5.8</u>	<u>5.6</u>	<u>6.5</u>	<u>5.3</u>	<u>5.8</u>	<u>5.6</u>	<u>6.7</u>	<u>6.7</u>	<u>3.0</u>	<u>3.4</u>
50	32	31	23	14	5.4	10	15	23	27

<u>5.7</u>	<u>5.8</u>	<u>5.5</u>	<u>5.7</u>	<u>6.9</u>	<u>6.7</u>	<u>3.5</u>	<u>3.9</u>
50	37	15	5.5	11	15	23	37

<u>7.4</u>	<u>7.2</u>	<u>6.1</u>	<u>5.7</u>	<u>5.8</u>	<u>6.8</u>	<u>6.8</u>	<u>3.7</u>	<u>3.8</u>
50	37	22	8	5.5	11	14	22	26

<u>7.4</u>	<u>7.1</u>	<u>6.6</u>	<u>5.9</u>	<u>5.6</u>	<u>6.8</u>	<u>6.9</u>	<u>4.5</u>	<u>3.5</u>
50	29	14	10	5.4	10	14	21	26

<u>7.4</u>	<u>7.0</u>	<u>6.8</u>	<u>5.8</u>	<u>5.7</u>	<u>7.1</u>	<u>6.9</u>	<u>6.6</u>
50	30	14	10	5.4	10	14	24

<u>7.4</u>	<u>7.0</u>	<u>7.1</u>	<u>5.8</u>	<u>5.9</u>	<u>7.5</u>	<u>7.2</u>	<u>7.5</u>
50	29	13	9	5.6	11	16	20

<u>7.3</u>	<u>7.1</u>	<u>7.4</u>	<u>6.0</u>	<u>6.0</u>	<u>7.2</u>	<u>7.4</u>	<u>7.3</u>
50	26	14	10	5.7	12	15	35

<u>6.9</u>	<u>4.4</u>	<u>6.0</u>	<u>5.8</u>	<u>5.6</u>	<u>6.7</u>	<u>6.2</u>	<u>6.6</u>	<u>6.5</u>
50	34	23	9	5.4	12	15	20	26

<u>7.0</u>	<u>6.7</u>	<u>6.8</u>	<u>5.8</u>	<u>5.8</u>	<u>6.8</u>	<u>6.7</u>
50	24	15	12	5.4	11	13

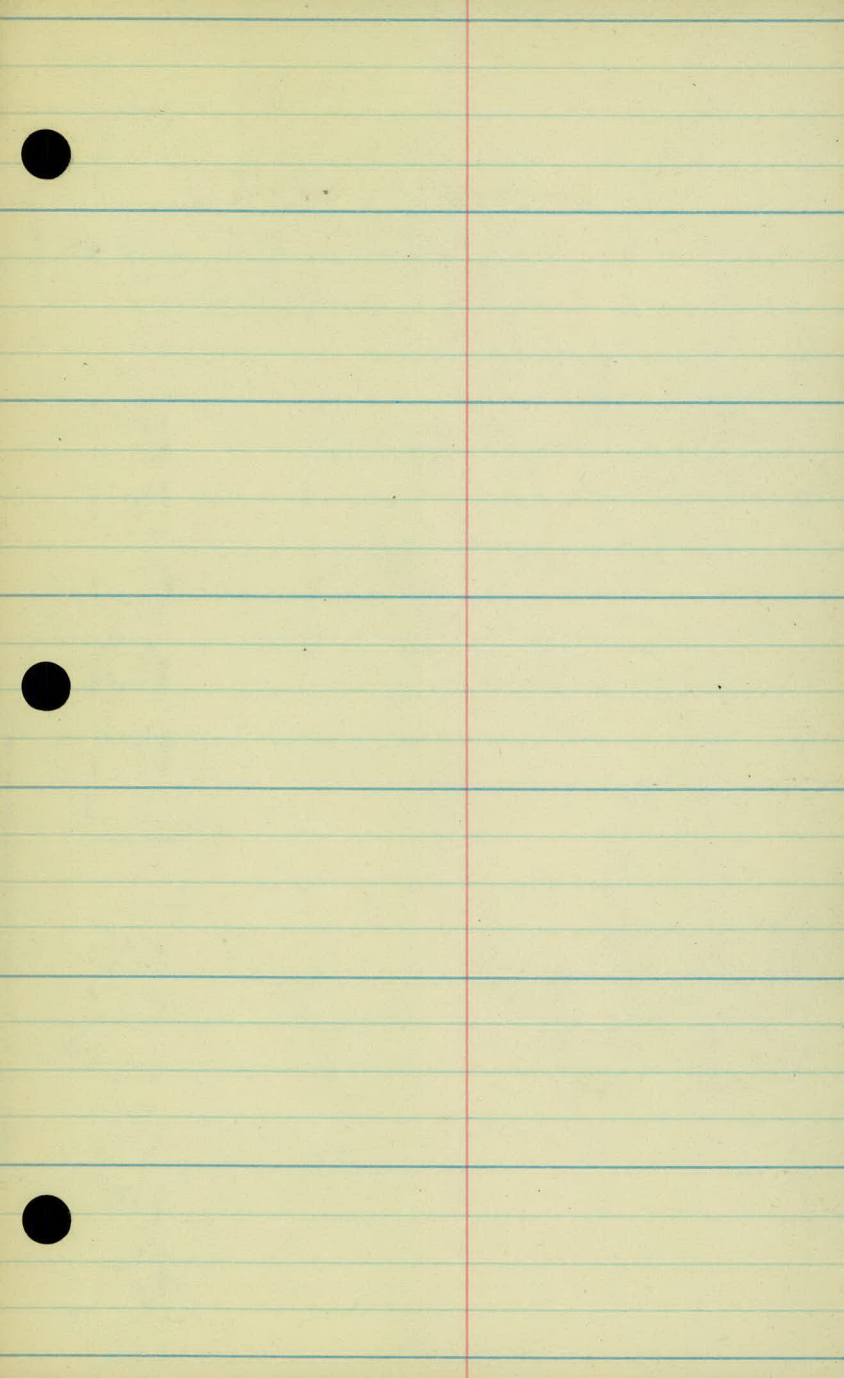
5.55

<u>6.3</u>	<u>5.5</u>	<u>5.5</u>	<u>5.3</u>	<u>6.1</u>	<u>6.2</u>
50	34	11	5.4	12	15

<u>6.7</u>	<u>6.4</u>	<u>5.9</u>	<u>5.2</u>	<u>5.1</u>	<u>6.1</u>	<u>5.9</u>	<u>5.5</u>	<u>5.4</u>
50	34	14	11	5.0	10	14	14	18

522.22





T.P. 6.35 904.32 5.43 897.97 ✓
 19+65¹⁵ Top 50 rail spur to Guthrie's 98.3 ✓
 19+83⁷⁰ top 50 rail 98.27 ✓
 20 98.0 ✓
 40⁵⁰ Top 50 rail spur to Guthrie's shop 98.1 ✓
 +50 97.7 ✓
 21 97.9 ✓
 +15³⁰ Top 50 rail spur to Guthrie's shop 98.0 ✓
 +50 98.4 ✓
 22 98.8 ✓
 +50 99.1 ✓
 23 99.2 ✓
 +50 98.9 ✓
 24 98.2 ✓
 +50 97.2 ✓

Left 2 Right

6.2

6.05

$\frac{7.6}{50} \frac{7.0}{33} \frac{6.4}{11} \frac{6.2}{6.3} \frac{6.8}{9} \frac{7.7}{58} \frac{7.7}{50}$

6.2

$\frac{7.7}{50} \frac{7.3}{33} \frac{6.4}{11} \frac{6.7}{6.6} \frac{7.2}{12} \frac{7.5}{28} \frac{7.5}{50}$

$\frac{7.8}{50} \frac{7.5}{33} \frac{7.5}{22} \frac{7.8}{15} \frac{6.5}{11} \frac{6.4}{6.4} \frac{7.0}{11} \frac{7.7}{24} \frac{7.2}{39} \frac{7.2}{50}$

6.31

$\frac{7.0}{50} \frac{6.5}{34} \frac{6.2}{11} \frac{6.7}{5.9} \frac{7.0}{13} \frac{6.9}{26} \frac{6.9}{50}$

$\frac{7.5}{50} \frac{7.3}{33} \frac{6.9}{14} \frac{6.0}{10} \frac{5.8}{5.5} \frac{6.7}{14} \frac{6.9}{29} \frac{6.9}{50}$

$\frac{7.0}{50} \frac{6.9}{33} \frac{6.9}{15} \frac{5.5}{11} \frac{5.3}{5.2} \frac{5.1}{8} \frac{6.5}{9} \frac{7.1}{15} \frac{7.1}{50}$

$\frac{7.4}{50} \frac{6.9}{33} \frac{6.6}{21} \frac{7.1}{17} \frac{5.5}{14} \frac{5.3}{5.1} \frac{6.7}{9} \frac{6.9}{15} \frac{8.1}{34} \frac{8.1}{50}$

$\frac{7.0}{50} \frac{7.3}{33} \frac{6.7}{15} \frac{6.0}{13} \frac{5.6}{5.4} \frac{6.9}{8} \frac{7.6}{15} \frac{9.0}{33} \frac{9.0}{50}$

$\frac{7.7}{50} \frac{7.0}{33} \frac{7.0}{21} \frac{7.2}{17} \frac{6.4}{14} \frac{6.3}{6.1} \frac{8.5}{8} \frac{10.8}{19} \frac{10.8}{50}$

$\frac{7.8}{50} \frac{8.5}{33} \frac{8.6}{18} \frac{7.4}{14} \frac{7.5}{7.1} \frac{8.8}{7} \frac{11.7}{11} \frac{11.7}{50}$

904.32 ✓

25

96.6 ✓

+31

96.4 ✓

+65

96.3 ✓

26

96.0 ✓

+18

96.1 ✓

+23 So shoulder Frost Ave

96.10 ✓

+39¹² ~~E~~ Frost Ave (end proj)

96.0 ✓

BN

825 896.07 896.04 ✓

Left Σ Right

$\frac{84}{50}$ $\frac{84}{33}$ $\frac{9.0}{14}$ $\frac{8.1}{14}$ $\frac{8.0}{7}$ $\frac{10.0}{11}$ $\frac{10.4}{25}$ $\frac{11.5}{50}$

$\frac{7.6}{50}$ $\frac{8.4}{32}$ $\frac{8.3}{14}$ $\frac{7.9}{5}$ $\frac{8.1}{7}$ $\frac{9.1}{10}$ $\frac{10.4}{23}$ $\frac{11.5}{50}$ $\frac{11.8}{50}$

$\frac{8.3}{50}$ $\frac{8.5}{32}$ $\frac{8.7}{14}$ $\frac{8.1}{5}$ $\frac{8.5}{6}$ $\frac{8.7}{9}$ $\frac{8.8}{29}$ $\frac{9.0}{50}$

$\frac{8.4}{50}$ $\frac{10.4}{41}$ $\frac{9.4}{34}$ $\frac{10.9}{32}$ $\frac{10.0}{19}$ $\frac{8.9}{14}$ $\frac{8.2}{5}$ $\frac{8.7}{4}$ $\frac{10.5}{13}$ $\frac{11.9}{29}$ $\frac{10.4}{50}$

$\frac{11.0}{50}$ $\frac{10.3}{25}$ $\frac{9.0}{21}$ $\frac{8.2}{7}$ $\frac{9.0}{13}$ $\frac{10.4}{19}$ $\frac{11.2}{32}$ $\frac{10.4}{50}$

$\frac{8.5}{50}$ $\frac{8.9}{29}$ $\frac{8.2}{13}$ $\frac{8.3}{8.3}$ $\frac{8.4}{19}$ $\frac{8.0}{37}$ $\frac{7.6}{50}$

$\frac{8.8}{50}$ $\frac{8.4}{25}$ $\frac{8.2}{8.2}$ $\frac{8.0}{25}$ $\frac{7.8}{50}$

