

PLANS SURVEY
BALD EAGLE AVENUE

From Goose Lake
To Old S.T.H. No. 1
CO. PROJ. NO. 24-51

3-26-24

11"

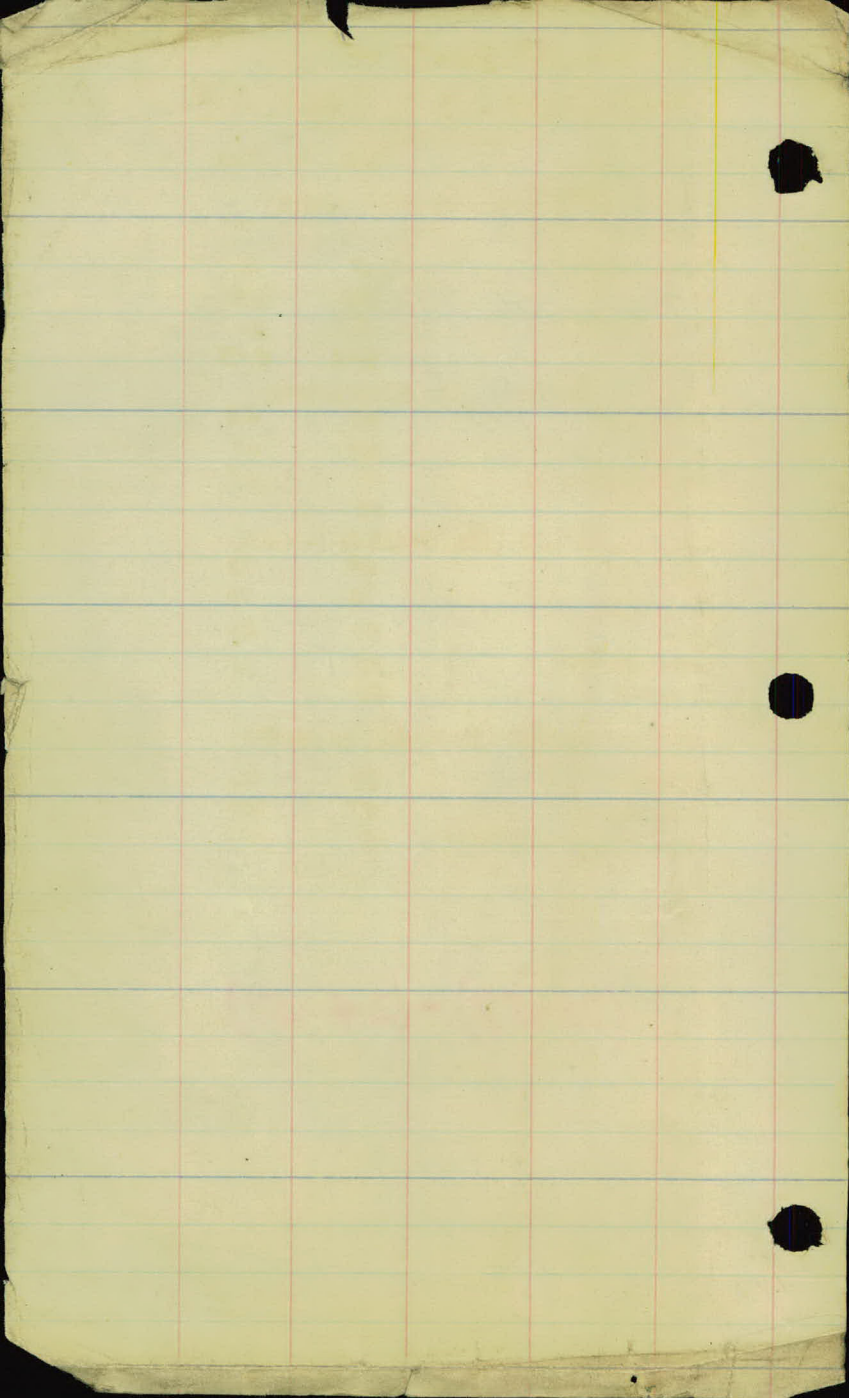
Bald Eagle Ave. -
24-51

Office of Ramsey Co. Engineer
ST. PAUL, MINN.

Date Filed 3-26-24

File No. "11" (24-51)

(23-57) - (24-51)



— C.P. 24-51 —

BALD EAGLE AVE ^{9th} PARK AVE

PAGE TO PAGE

~~~~~ "B.E." Line (Sta. 0+00 to 136+41.8)

|                |      |      |
|----------------|------|------|
| Alignment      | 1    | 7    |
| Topography     | 8    | 31   |
| Levels         | 32   | 45   |
| Cross-Sections | 46   | 61   |
| Culverts       | 61-A | 61-B |

~~~~~ Revision (Sta. 87+00 to 90+30)

| | | |
|----------------|----|----|
| Alignment | 62 | 63 |
| Levels | 64 | 65 |
| Cross-Sections | 66 | 67 |
| Culverts | 68 | |

~~~~~ "A" Line (Sta. 113+42.4 to 145+16.15)

|                |    |    |
|----------------|----|----|
| Alignment      | 69 | 73 |
| Topography     | 74 | 79 |
| Levels         | 80 | 84 |
| Cross-Sections | 85 | 90 |
| Culverts       | 90 |    |

~~~~~ Revision (Sta. 97+85.1 to 118+27.0)

| | | |
|-------------------------|-----|-----|
| Alignment | 94 | 96 |
| Topography | 97 | 100 |
| Levels & Cross-Sections | 101 | 103 |

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ST. PAUL, MINN.

Date Filed

File No.

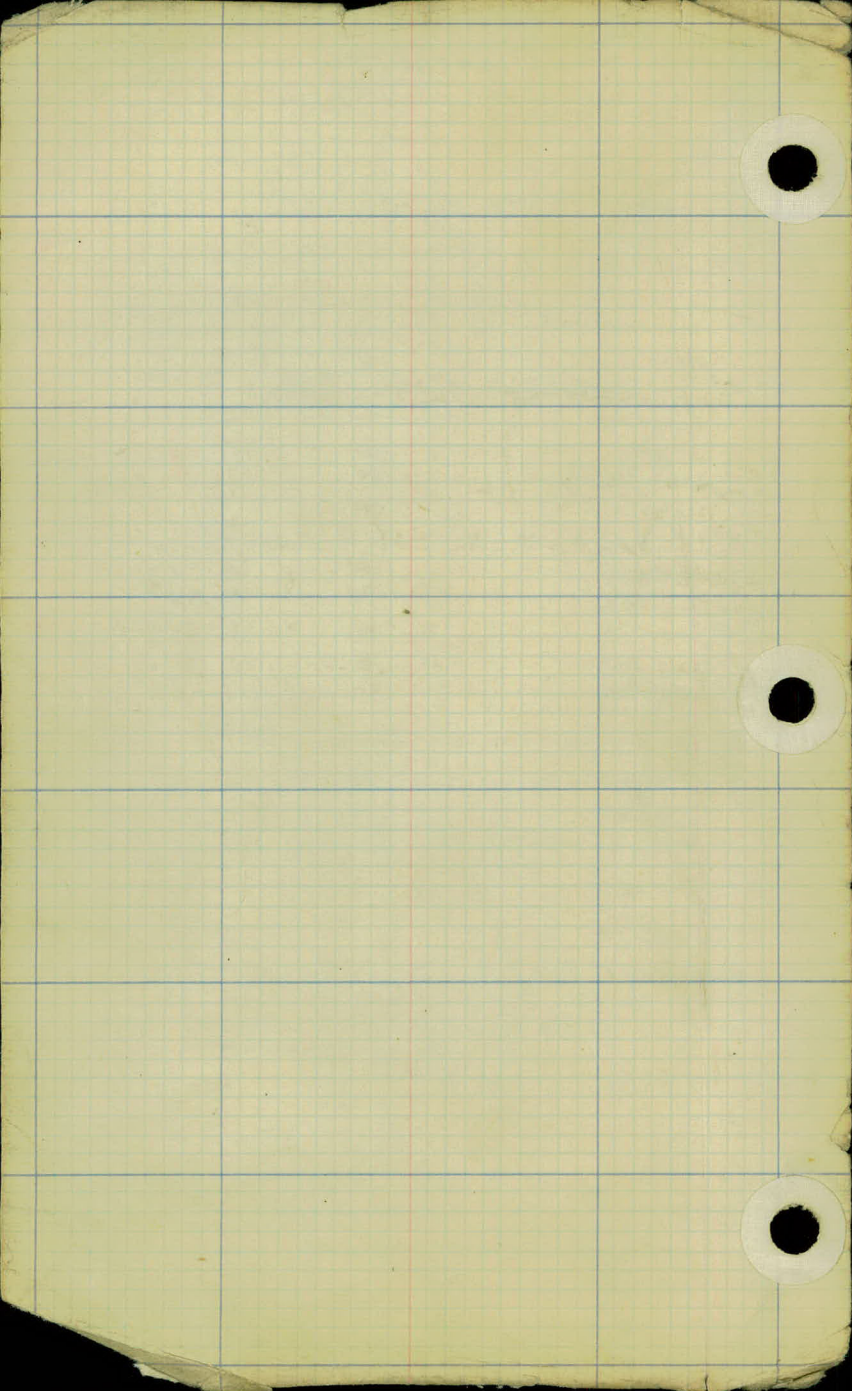
12-28-23

ST. PAUL, MINN.

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ST. PAUL, MINN.

Date Filed

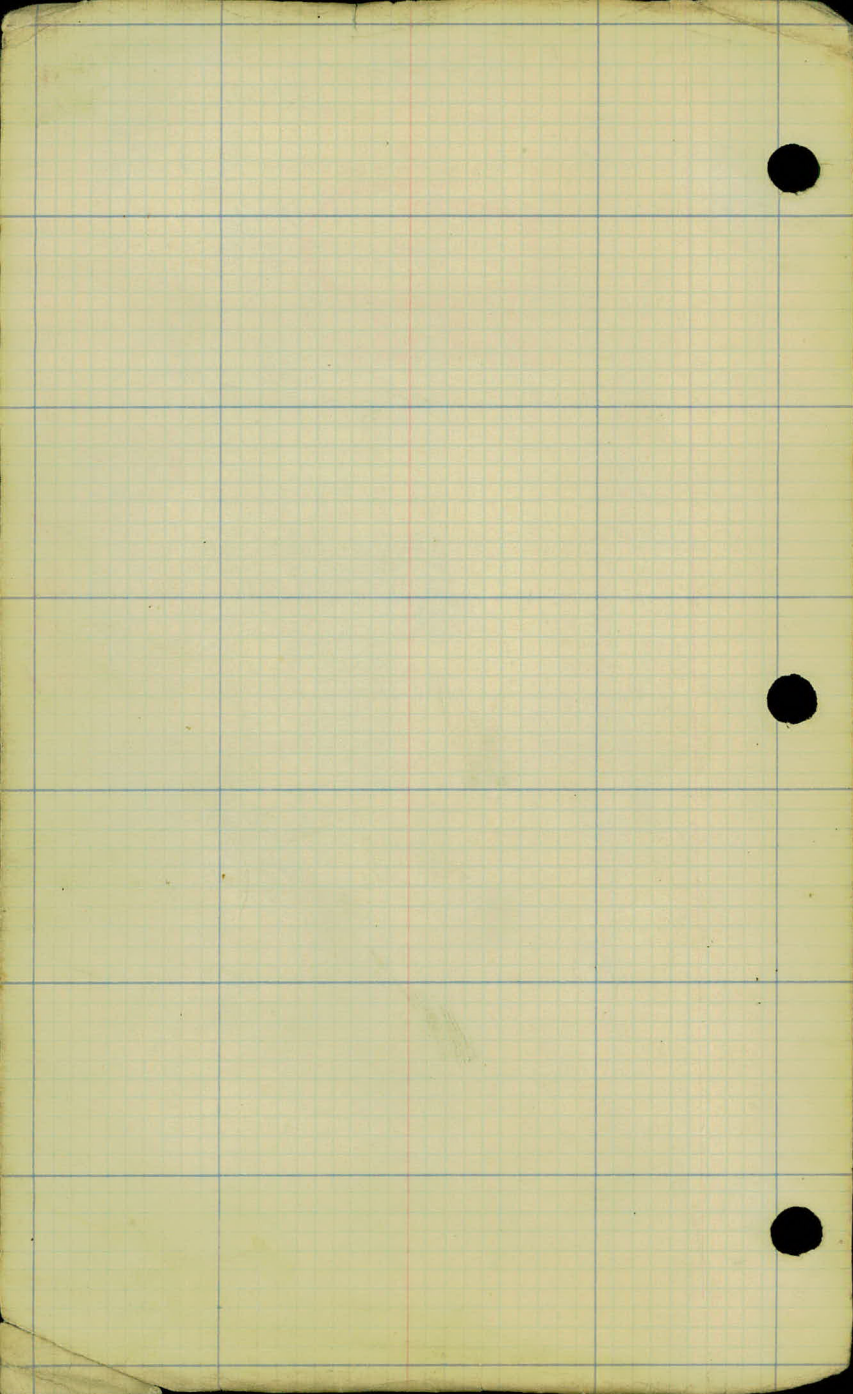
File No.



Notes used for Plans. -

| | | | |
|-----------------------|-----------------------------|--------------|----|
| Original Line (23-52) | Sta. 277+68 | to 324+56.67 | |
| "B.E." Line | Sta. ^{1+39.1} 0700 | to 87+00 | 1 |
| Revision | " 87+00 | to 90+30 | 62 |
| "B.E." Line | " 90+30 | to 97+85' | 4 |
| Revision | " 97+85' | to 118+27' | 94 |

See Notes on 23-52
Page 2

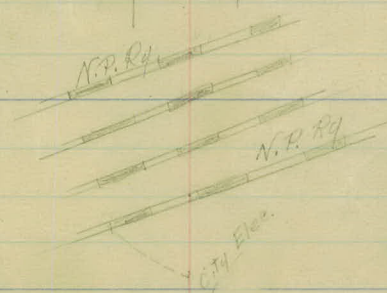


B. F. Line

5th St.

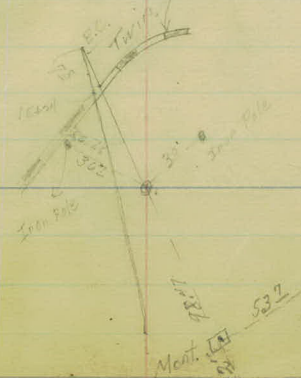
Bald Eagle Ave

Birch Lake Ave



Sta. Def

- 14+392 - 0°00'
- +50 - 1030'
- 15+00 - 8045'
- 15+382 - 13035'



27° Curve, L
 $\Delta = 27010'$
 S.T. = 45.25 ✓
 14+392 = B.C.
 98.2' Length
 15+382 = E.C.

Mont. L.R.
 532
 0 Hwy
 East Trolley Rd

B.F. line

Sta

Ang. h. & Ang. R

99+244 ✓ E.O.

N66°30'E.

77+264 P.I.

66°25'

N00°05'E.

85+954 ✓ B.C.

See Page 63
for Revision

79+553 P.O.T.

74+654 & 500 Track.

N00°05'E

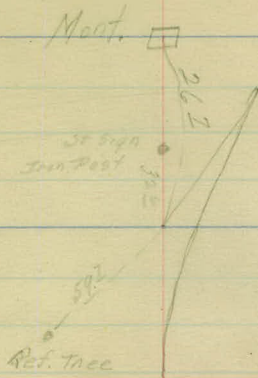
66+734 } P.O.T. Mont. 0°06'

N00°01'W

B. E. Hine

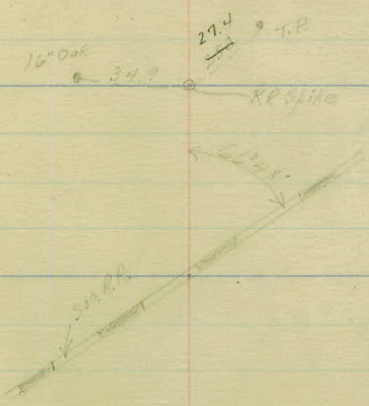
⊥

| Sta | Def |
|---------|---------------|
| 85+95.4 | - 00°00' |
| 96+00 | - 00°40' |
| +50 | - 70°55' |
| 87+00 | - 15°10' |
| +50 | - 220°25' |
| 88+00 | - 290°40' |
| +24.4 | - 330°12 1/2' |



290° Curve R.
 $\Delta = 66^{\circ}25'$
 S.T. = 130.72 ✓
 P.C. = 85+95.4 ✓
 Length 229.02 ✓
 E.C. 88+24.4 ✓

To Page 63



27.4
 60' RR
 50' RR

50' RR con Sec. 11

B.G. line

Sta

Ang. hⁿ Ang. R.

111+39[±] ↓ E.C.

110+66L P.I

10° 15'

109+92[±] ↓ B.C.

108+48[±] ↓ E.C.

107+78L P.I

7° 12'

106+08[±] ↓ B.C.

N 24° 28' E

99+78[±] ↓ E.C.

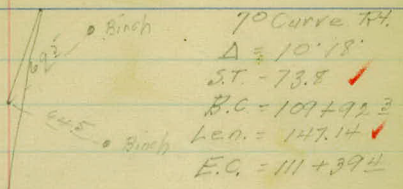
99+10L P.I 42° 02'

98+33[±] ↓ B.C.

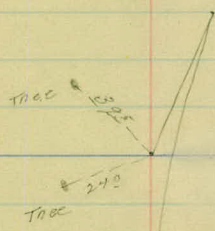
N 66° 30' E

B.F. line

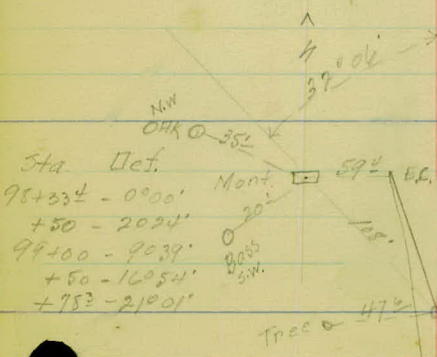
Sta. Def
 109+92.3 - 0°00'
 110+00 - 0°16'
 111+00 - 3°46'
 111+39.4 - 5°09'



Sta. Def
 106+08.2 - 0°00'
 107+00 - 1°23'
 108+00 - 2°53'
 108+48.2 - 3°36'



3° Curve RT.
 $\Delta = 7°12'$
 S.T. = 120.16 ✓
 B.C. = 106+08.2
 Length = 240.0 ✓
 E.C. = 108+48.2



29° Curve Left
 $\Delta = 42°00'$
 S.T. = 76.72 ✓
 B.C. = 98+33.4
 Len. = 144.4 ✓
 E.C. = 99+78.3

Sta.

Ang. h. Fr. Ang. R.

123+46 E P.O.T

119+88 E E.C.

119+42 E P.I. 27°07'

119+946 B.C.

117+87 E E.C.

117+43 E P.I. 91°10'

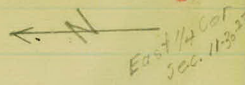
116+63 E B.C.

115+23 E E.C.

|

114+34 E P.I. 14°17'

113+44 E B.C.



123+46.5

13592

Mont

Sta. Def

- 118+94.6 - 00°00' B.F. tree
- 119+00 - 00°47'
- +50 - 80°02'
- 119+88.2 - 130°33 1/2' B.F. tree

290 Curve left
 $\Delta = 27007'$
 S.T. = 48.16
 B.C. = 118+94.6
 length = 93.5
 E.C. = 119+88.2

Sta. Def

- 116+632 = 00°00'
- +75 - 40°10'
- 117+00 - 130°22.5' B.F. tree
- +25 - 220°35'
- +50 - 310°47.5'
- +75 - 410°00'
- +87.4 - 480°34'

80° Curve R.
 $\Delta = 91010'$
 S.T. = 77.38
 B.C. = 116+632
 length 123.76
 E.C. = 117+87.2

Chord = 24.85 for 25' Arc.
 length 123.76 = Actual Arc.
 Rad = 77.78

Chord = 24.85

Sta. Def

- 113+448 - 00°00'
- 114+00 - 20°12 1/2'
- 115+00 - 60°12 1/2'
- 115+233 - 70°08 1/2'

80° Curve L.
 $\Delta = 14011'$
 S.T. = 89.8
 B.C. = 113+448
 length 178.5
 E.C. = 115+233

399 - tree

432 - tree

Sta

Ang. h.

Ang. TR

136+41.8 End B.R. line

125+515 $\frac{1}{2}$ track

130+775 E.C.

129+30 P.I 2057'

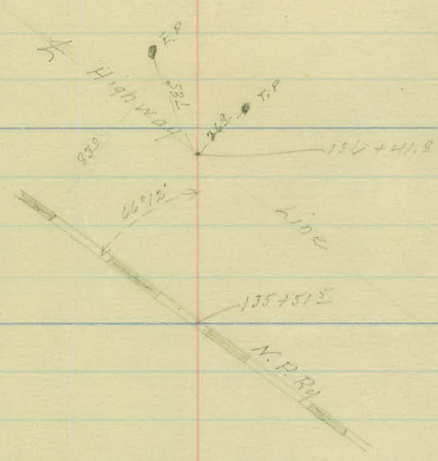
127+825 B.C.

3-6-28

B. F. line

R. F. Austin - transit
Skoglin } chain
Reiling }
Wals h. Stake Artist
Johnson Rear flag

7



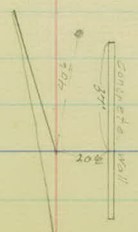
Sta. Def

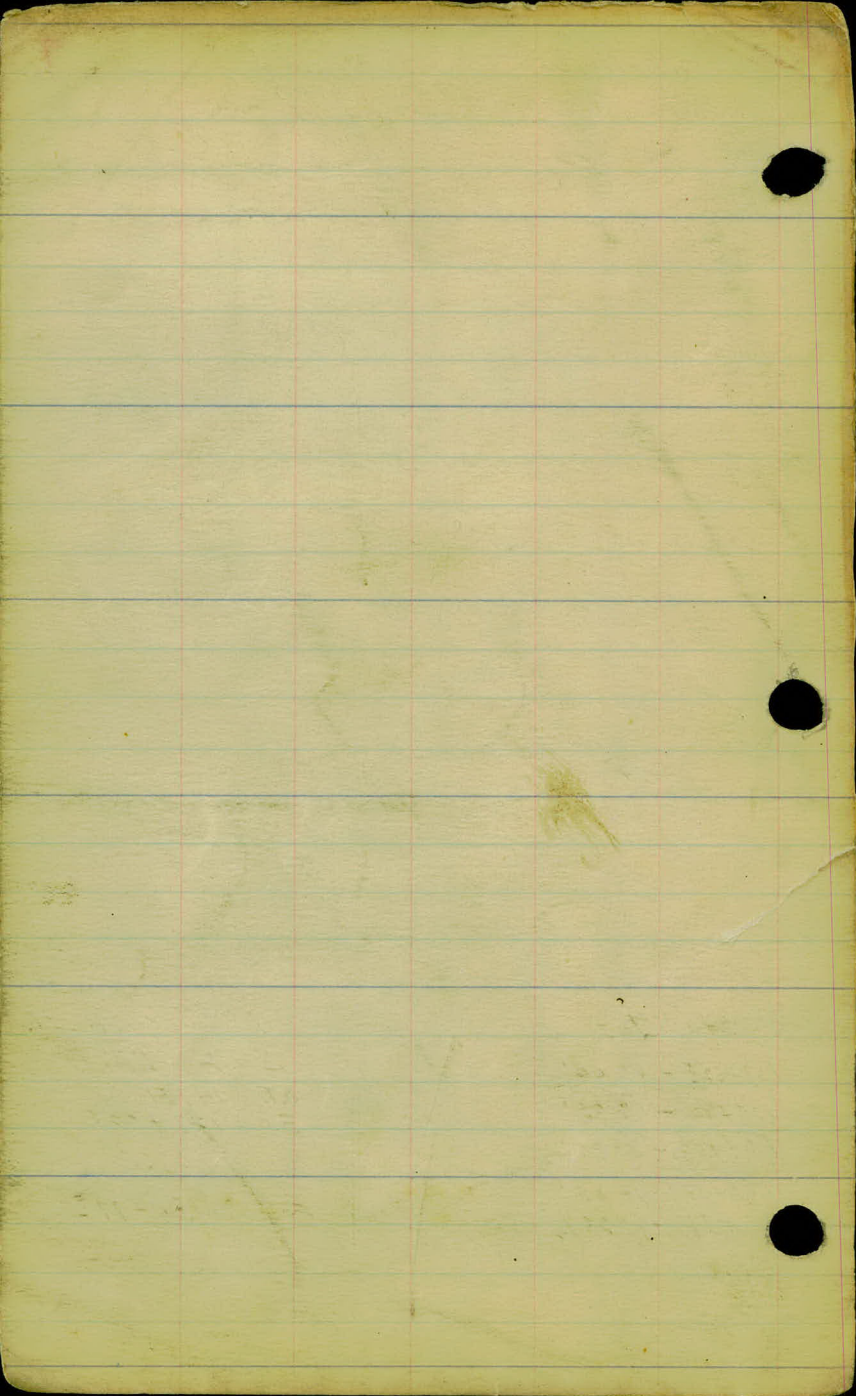
- 127+82.5 - 0° 00'
- 128+00 - 0° 05'
- 129+00 - 0° 35'
- 130+00 - 1° 05'
- +775 - 1° 28 1/2'

1° Curve left.

$\Delta = 2^\circ 57'$

- S.T. = 147.51
- B.C. = 127+82.5
- Length 295.0
- E.C. = 130+77.5





B. F. Line

2

R. F. Huston, Texas
Shoaling chain
Railroad
Waltz state
Tennessee River line

Job 23-57
24-51

Merrimack St.

1752



Whitaker St.

0+00

R.M. spike

St. Sign
Post

282

M²

T.P.

B. E. 1110

to

Ang. E. Hwy R.

N27°10'E

7+325 ✓ E.C.

8+61.2 P.I.

29°20'

↓

7+859 B.C. ✓

7+350 & Track

N2°-10'W

7+191 ✓ E.C.

5+300 P.I. 3°47'

3+408 ✓ B.C.

1+391 = 324 + 56.67 of (23-52)

0+00 South Line Whitaker St.

B. E. line

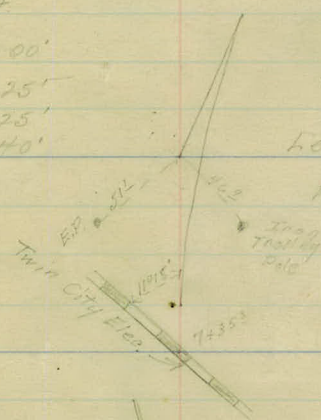
£

Sta. Def.

B.C. 7+859 - 0° 00'
 8+00 - 10 25'
 9+00 - 110 25'
 E.C. 9+323 - 140 40'

20° Curve Right

$\Delta = 29^{\circ} 20'$
 S.T. = 75.31 ✓
 B.C. = 7+859
 Length = 146.5 ✓
 E.C. = 9+323

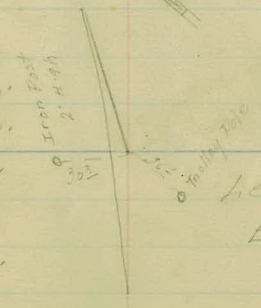


Sta. Def.

B.C. 3+400 ✓ - 0° 00'
 4+00 - 0° 18'
 5+00 - 00 48'
 6+00 - 10 14'
 7+00 - 10 48'
 E.C. 7+192 ✓ - 10 53 1/2'

10 Curve Left

Ang. - 3° 47'
 S.T. - 199.2 ✓
 B.C. = 3+400 ✓
 Length = 378.3 ✓
 E.C. = 7+192 ✓



T.P.
 124
 331
 332

B. B. Line

Sta.

Ang. h. & Ang. R.

N00°-01' W

40+30⁸² ^{Mont.} P.O.T. 0° 01'

27+08¹⁵ ^{Sp. 12} P.O.T.

North

16+72⁴ E Track

16+64² E Track

16+48⁵ E Track

16+17⁰ E Track

15+23⁴ ✓ E.C.

15+14⁰ E Track

14+87⁹⁵ P.T. 27° 10'

14+57⁷ ✓ B.C.

N27°-10' E.

24-57

8

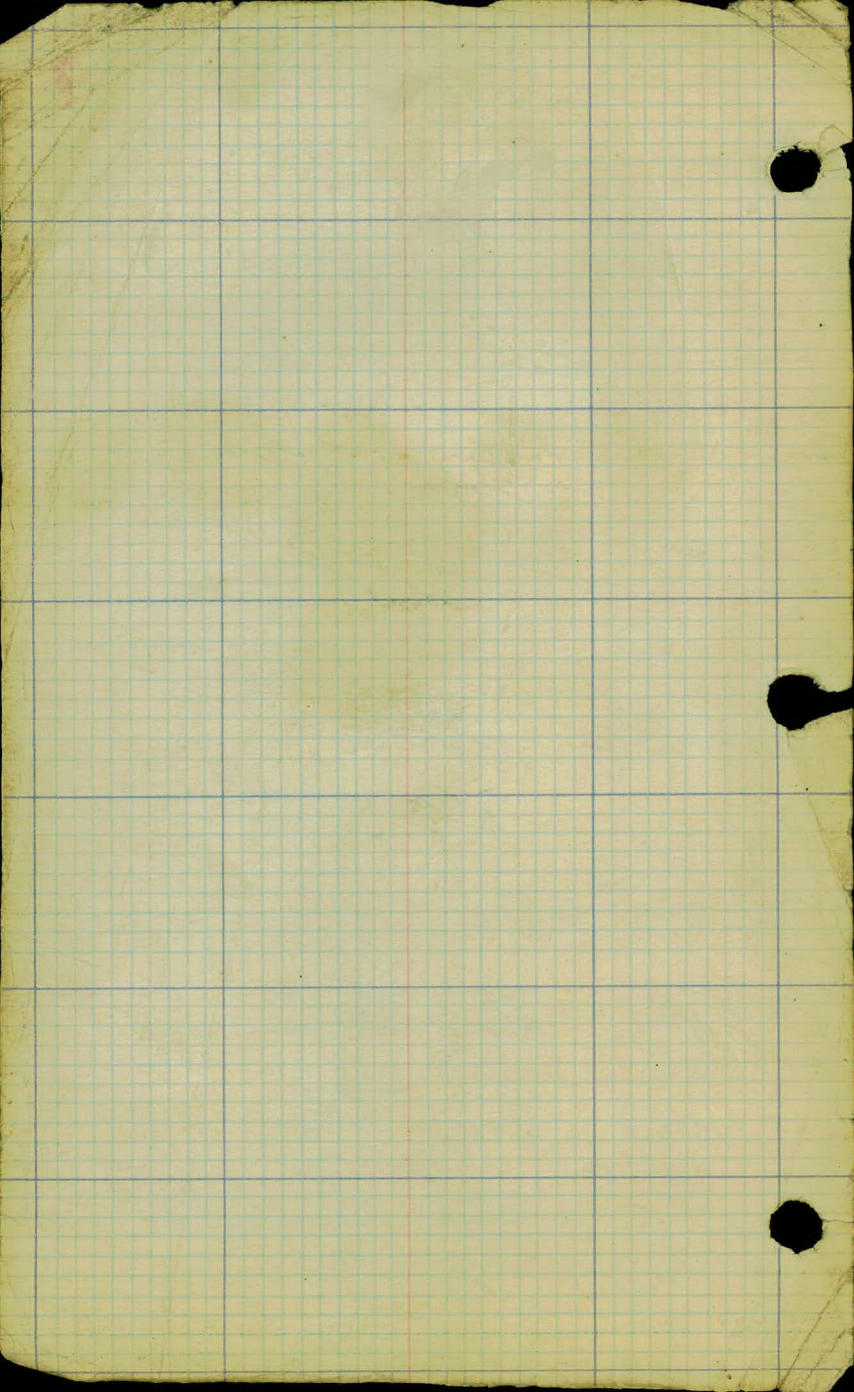
B.E. Ramsey Artificial Topography

Proj. 23-57

File these Bill

| | |
|-------------------------------|-----------|
| Office of Ramsey Co. Engineer | |
| ST. PAUL, MINN. | |
| Date Filed | 7/9/23 |
| File No. | "2" 23-57 |

B.E. Ramsey Artificial Topography



9

Iron Pipe

Merrimack St.

Center of Sideroad C. Road

End of Road

White Bear Lake

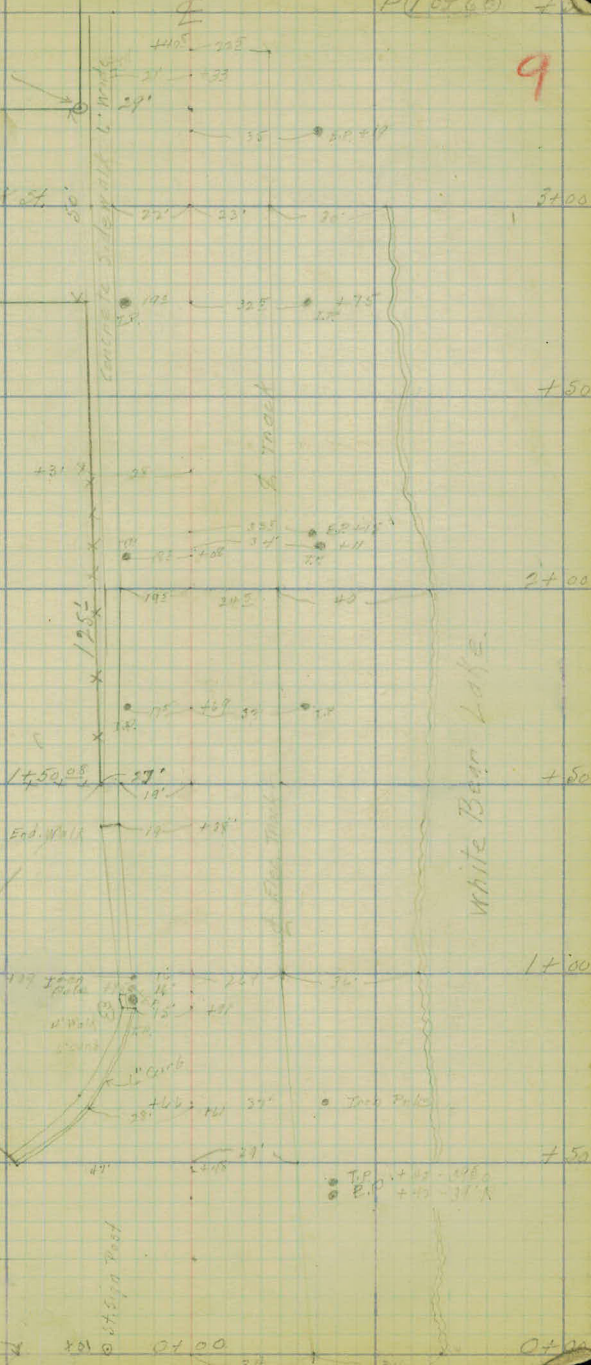
159-5'

End Walk

End Curve

Whilaker St.

So Line St.



• T.P. +55-08'
 • E.P. +55-31'

0+00

20760

B. F. Hine

10

235 63

Track

+50

410 182

I.P. + 30 150

341

• Sup. P. + 30

I.P. + 15 20

310

• F.P. + 15

305

• I.P. + 11

32

• I.P. + 15

6+00

Concrete Subway
LIMITS

192

22

115

467

23

33

• F.P. + 37

+50

← Twin City Elec. Rd.

445

155

I.P. + 107

15

31

• I.P. + 05

5+00

222

25

33

• 455
• F.P.

35

• 475
• S.P.

+50

157

215

Private
S. S. 1/2
E. 1/2
S. 1/2
E. 1/2

199

214

92

+9138

105

383

• I.P. + 97

+8076

195

322

• G.C. 2
• + 77

4+00

+57

217

325

• 48
• 187

3+50

(3 of 60)

B. E. Line Antitical Topography

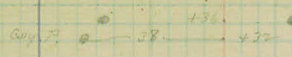
E

7 + 353



(30 of 60) +50
11

T.R. 34' L

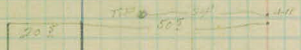


T.R. 22' R

E.D. +11-195 R

10400

408



Non. Pac. Depot.

Track

1' Concrete Walk

+50

+19

406 I.R. 345 L

+14 I.R. 225 R

9+00

T.R. +69



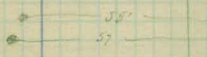
U.S. Mail Post

E.R. +08-225 R

+50

E.R. +35

+21 T.O.
+16 I.R.



+17
E.R. +07-114

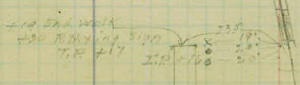
8+00

Road

1' Concrete Walk

+50

7+35 1/2 Track



+10 End Walk
+20 Bldg. 5170
T.R. +17

I.P. +100

E.R. +12
E.R. +05

+10 End Walk

7+00

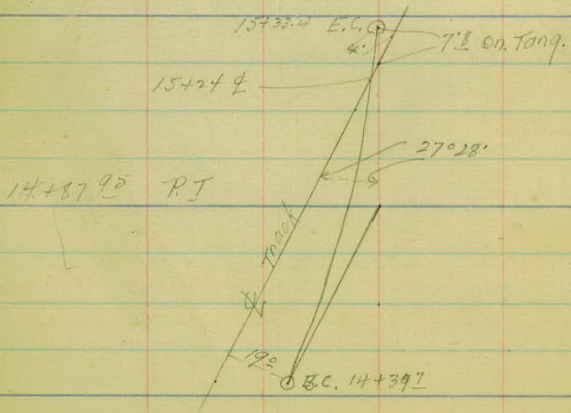
Hot 60

B. K. hine

50760

B. F. Hine

±



+152 Road

+93 Xing P 7 L
+95 E.P. 9 L

4 Track +72 L
5 Track +64 L

194 00

+95 R.P. 6 L

M.P. 11.5
M.P. 11.8
M.P. 12.1
6+53 L
50+00
On Base Line
see Page B

+54 R.P. 20 R +50

+43 1/2 Track

+40 I.P. 55 R

Tralley Mine

+172 Track

J.P. 10

14+00

+96 E.P. 12 L

M.P. 12.5

ON ROAD

+50

+44 R.P. 10 L

+34 Xing Post 83 L

+15 I.P. 18 L

EL 333

34
+24 1/2 Track

+26 A.V. 10 R

15400

49

27 1/2

+49 I.P. 24 R

P.I. 14 +49 1/2

Iron 7000 L

+70 Xing Post 24 R

+71 R.A. Xing Post 24 R

+50

143 +34 1/2

+15 I.P. 22 L

+16 R.P. 10 L

+22 R.P. 10 R

14+00

172

6

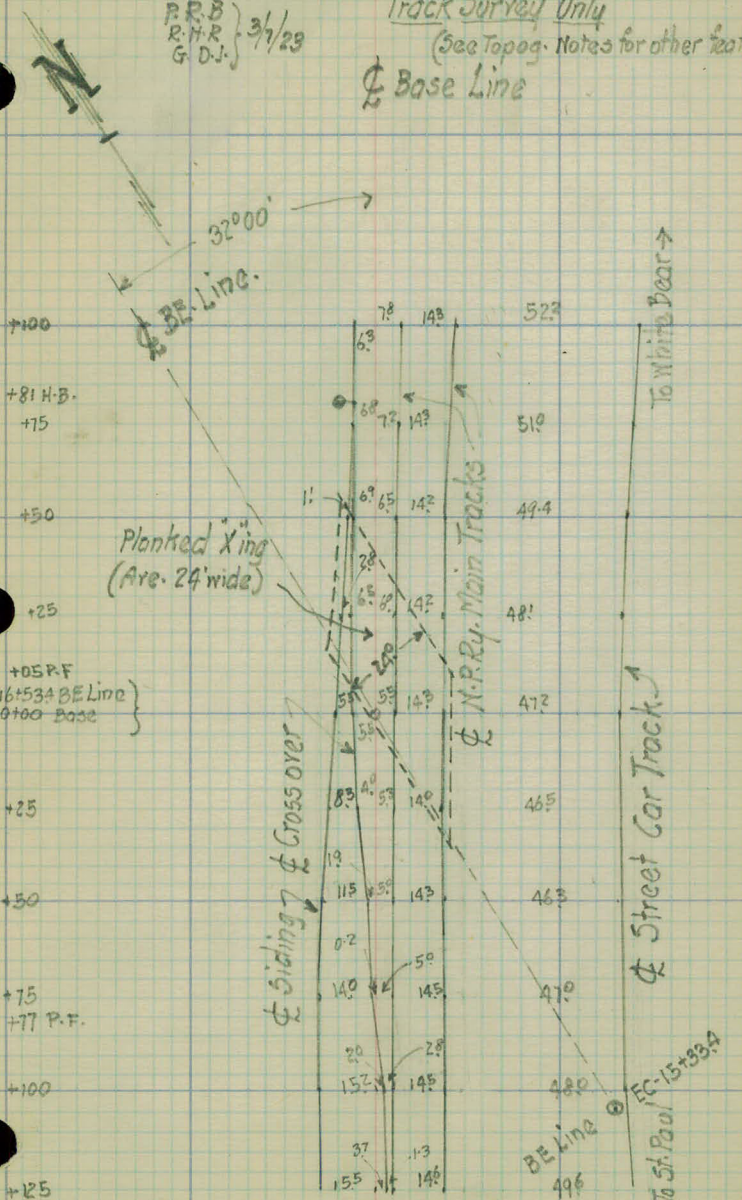
B. F. hinc

P.R.B.
R.H.R.
G.D.J. } 3/1/29

Track Survey Only

(See Topog. Notes for other features)

Base Line



Scale 1 square = 5'

7 B.F. Hine

3-8-23

+24 T.P. 20' L

254.00

12

20'

19'

18'

17'

16'

15'

14'

13'

12'

11'

10'

9'

8'

7'

6'

5'

4'

3'

2'

1'

0'

1'

2'

3'

4'

5'

6'

7'

8'

9'

10'

11'

12'

13'

14'

15'

16'

17'

18'

19'

20'

21'

22'

23'

24'

25'

26'

27'

+26 T.P. 21' R

+27 T.P. 22' R

+28 T.P. 23' R

+29 T.P. 24' R

+30 T.P. 25' R 241.00

+31 T.P. 26' R

+32 T.P. 27' R

+33 T.P. 28' R

+34 T.P. 29' R

+35 T.P. 30' R 231.00

+36 T.P. 31' R

+37 T.P. 32' R

+38 T.P. 33' R

+39 T.P. 34' R

+40 T.P. 35' R

+41 T.P. 36' R

+42 T.P. 37' R

+43 T.P. 38' R

+44 T.P. 39' R

+45 T.P. 40' R

+46 T.P. 41' R

+47 T.P. 42' R

+48 T.P. 43' R

+49 T.P. 44' R

+50 T.P. 45' R

+51 T.P. 46' R

+52 T.P. 47' R

+53 T.P. 48' R

+54 T.P. 49' R

+55 T.P. 50' R

+56 T.P. 51' R

+57 T.P. 52' R

+58 T.P. 53' R

+59 T.P. 54' R

+60 T.P. 55' R

+61 T.P. 56' R

+62 T.P. 57' R

+63 T.P. 58' R

187.00

Concrete
Subway

Concrete
Subway

Concrete
Subway

+10 T.P. 20' L

+22 T.P. 24'

+60 T.P. 20' L

+15 T.P. 20' L

+35 T.P. 24'

+10 T.P. 20' L
+70 R.R. x Sign 9' L

+83 E.P. 20' L

+25 T.P. 20' L

1.59 = 10'

8

B. E. Line

+177 T.P. 28' L

+178 T.P. 28' L

+180 T.P. 24' R 314 02

+175 T.P. 23' L

+180 T.P. 20' R 303 01

+174 T.P. 26' L

+172 S.P. 20' R 292 00

+173 E.P. 20' L

4.5 Concrete Walk

26' 3" white + 92' d St
+ 67' End Walk
+ 46' End Walk

+187 E.P. 20' R
+188 T.P. 20' R

+173 T.P. 25' L

+146 10' 5" x 10' 27' 00

+172 T.P. 27' L

+150



+172 G.P. 18' R

+171 N.W. 1/4 Sec 20' L

+140

Concrete
5' 6" wide

+171 E.P. 11' R

+ Birch Lake Ave +0875

+171 S.P. 5' x 27' 00
+171 S.P. 27' 00

+171 T.P. 21' L



475

Concrete
5' 6" wide

General Stop 200

265 00

+170 T.P. 20' L

+170 G.P. 22' R

+170 End of Walk 20' L

+170 G.P. 21' R

+170 E.P. 21' R

+170 S.P.

9

B. F. Hine

+112 E.P. 1

45 Conc. Walk

45 concrete Walk

+124 T.P. 14' R

357.00

+69 Beg Conc Walk. 28.4 L.

+117 E.P. 2

+117
+116
+115

+66 End of Radius

+110 T.P. 30' R

374.00

+22 Beg Conc Walk

+20 End of Conc Walk - 23.7 L.

+115
+114

+114

+109 T.P. 30' R

367.00

+102 T.P. 30' R

357.00

+81 Beg Conc Walk

+111 T.P. 30' R

+38 T.P. 26' R

45 Conc. Walk

+104 T.P. 30' R

+103 T.P. 30' R

+103 Sand Pit
+102 Sand Pit

342.00

+80 Beg Conc Walk

+64 Beg Conc Walk

+46 Beg Conc Walk

+42 Beg Conc Walk

+35 T.P. 30' R

+38 End Conc. Walk

+43
+42
+41

+108 T.P. 30' R

332.00

+107 T.P. 30' R

+106 T.P. 30' R

324.00

10

B. F. line

B.E. hnd

4100
18

Curt. Field

+70 Trec 24' R
+71 Trec 24' R
+72 Trec 24' R
+73 Trec 24' R

+74 Trec 24' R

+74 Trec 24' R
+75 Trec 24' R

Concrete
sidewalk
4 1/2' wide

+76 Trec 24' R
+77 Trec 24' R
+78 Trec 24' R

+79 Trec 24' R

+75 End Conc Walk

+79 Trec 24' R

+81 E.P. 24' L

+80 Trec 24' R
+81 Trec 24' R
+82 Trec 24' R

4 1/2' wide

+83 Trec 24' R
+84 Trec 24' R 42+10

+84 Trec 24' R

+85 End Sidewalk

+85 Trec 24' R

+87 E.P. 24' L

4 1/2' Conc. Walk

+86 Trec 24' R 42+10

4 1/2' Conc. Walk

41+00

+89 E.P. 24' L

+39

+85

+72 Trec 24' R
+49 Beg of Conc. Walk

+32 E 5'
+75 End of Conc. Walk

40+00

+54 T.P. 14' R

+53 E.P. 24' L

Scale 1/32" = 10'

39+00

7-8-23

11

B. E. Hine

534.00

470 T.P. 17' R

19

524.00

472 T.P. 18' R

480 E.P. 26' L

514.00

474 T.P. 18' R

482 E.P. 26' L

504.00

476 T.P. 18' R

455 Corp. N.W. H.

478 T.P. 18' R

494.00

478 E.P. 27' L

480 T.P. 18' R 484.00

477 E.P. 27' L

474.00

474 T.P.

472 T.P. 24' R

484 T.P. 24' R

480 T.P. 24' R

478 T.P. 24' R

464.00

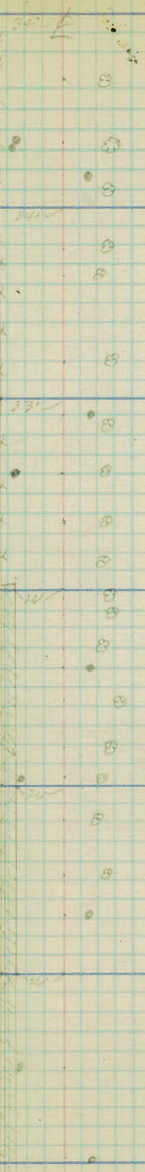
486 E.P. 28' L

12

3-9-23

B. K. Pine

+36 E.R. 25' L
+37 E.R. 26' L



+40 Tree 21' R
+41 Camp Tree 22' R
+45 Tree 17' R
+49 Tree 21' R 594.00

+75 Tree 20' R
+64 Tree 22' R

+30 Tree 25' R
+38 Tree 17' R
+37 Tree 27' R 592.00

+47 E.R. 20' L

+40 E.R. 20' L

+41 Tree 20' R

+36 Tree 26' R

+44 Tree 23' R 574.00

+04 End Side Walk
C' Walk

Concrete
Pit Walk

+41 Tree 25' R
+48 Tree 24' R
+39 Tree 24' R
+40 Tree 17' R

+43 Tree 31' R

+48-20 Tree 27' R

+02 E.R. 28' L

+44 Tree 20' R 584.00

+50 Tree 30' R

+52 Tree 21' R

+35 Tree 17' R

584.00

+50 E.R. 20' L

+02 E.R. 17' R 544.00

+52 End sidewalk

+52 E. Road

21

+23 End Concrete Walk

+10 E.R. 20' L

534.00

13

3-8-23

B. F. Hine

+86 End Fence

36'

+92 T.R. 17' R

21

66100

+87 Tree 35'L
+88 Tree 25'L

35'

35'

+61 T.R. 165' R

65000

+67 E.P. 20'

Substation

34'

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

+82 T.R. 17' R

64000

+91 E.P. 20' L
+92 End Fence

34'

+83 T.R. 17' R

63000

+71 Tree 20' R

+28 E.P. 26' L

34'

+74 T.R. 17' R

62000

61000

+74 E.P. 26' L

+35 End Fence

34'

x

x

x

x

x

x

+55 Tree 26' R

+47 T.R. 17' R

+05 Tree 24' E 60000

34'

14

B. F. Hine

3-8-23

74120
22

29'

+77 T.F. 11'

+77 T.F. 11'

End of Rail 9' R 73432

+9'
Guard Rail

+21 T.F. 30' L
+22 T.F. 30' L

68

+25 G.S. Rail 9' R
+26 End of Rail 14' R

+25 G.S. Rail 9' R
+26 End of Rail 14' R
73120
1936 34

+27 T.F. 30' L
+28 T.F. 30' L

69

+

+28 Xing Supp 14' R

+29 T.F. 17' R
71120

+29 T.F. 30' L
+30 T.F. 30' L

End of E.F.

70

+

+31 Xing 17' R

+32 T.F. 30' L

40

70400

+33 Jump T.F. 30' L

71

+31 X.P. 17' R

End of Fence

72

68400

+34 R.I.

End of Fence

34'

+32 T.F. 30' L

+30 T.F. 17' R

62400

38'

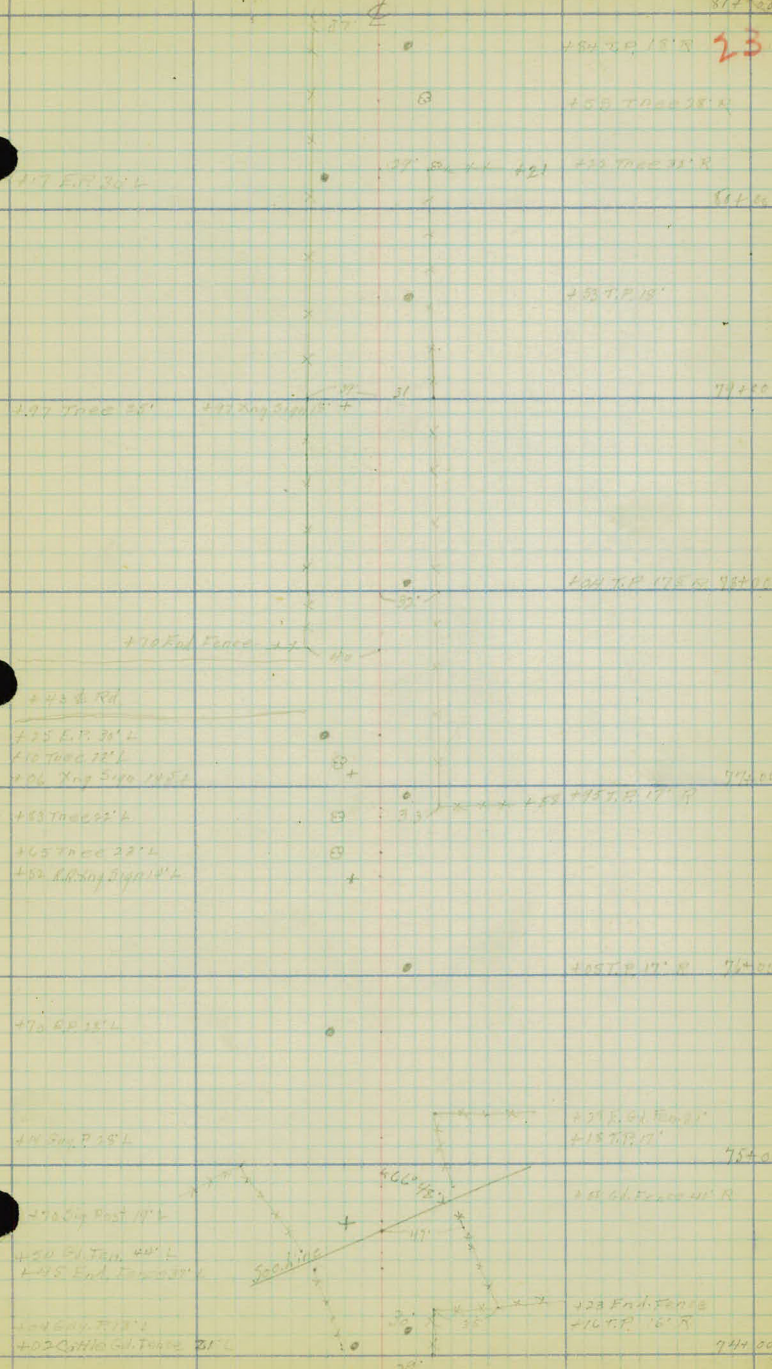
67400

34'

15

B. F. Hine

3-8-23

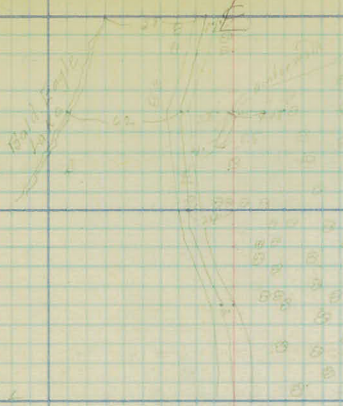


16

8-8-23

B. F. Hine

100 Trace 10' L



105 Trace 20' L

See Page 4 for
old Alignment

+62 T.P. 19' R

107 T.P. 20' L

+63 T.P. 15' R

110 T.P. 20' L

114 T.P. 20' L

+64 T.P. 10' R

116 T.P. 30' L

+27 Trace 30' L

L Rd

L Rd

+70 End Fence

+72 T.P. 15' R

119 T.P. 30' L



3-8-23

17

B. F. Hine

95+00
25

121 Trench 15' R
122 Trench 15' R
123 Trench 15' R

91+00

124 Trench 15' R

125 Trench 15' R

92+00

Bald Eagle Lake

126 Trench 15' R

93+00

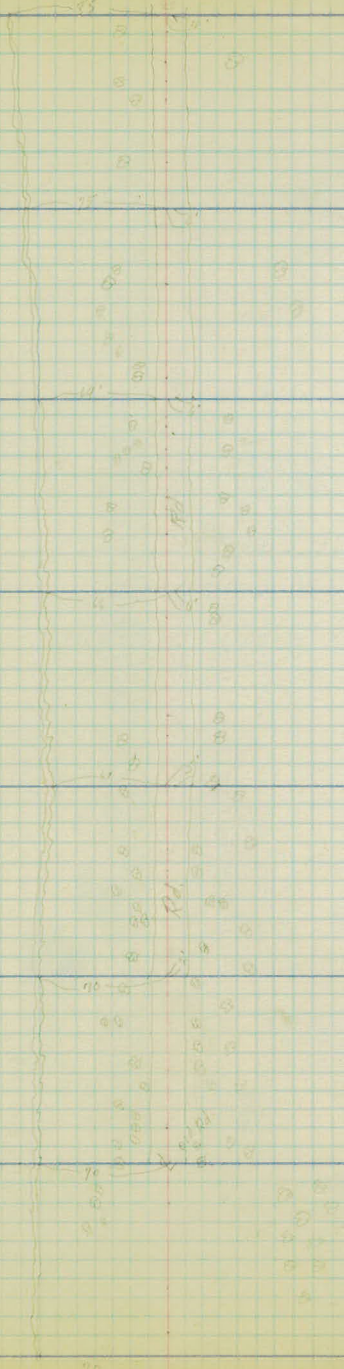
127 Trench 15' R
128 Trench 15' R

129 Trench 15' R
130 Trench 15' R

94+00

+36 Trench 14' R
+42 Trench 15' R
+30 Trench 15' R
+24 Trench 15' R
+11 Trench 15' R

95+00



18

B.F. Fine

3-9-23

19

B. F. hinc

3-9-23

20 B. F. Hine

5-9-23

+65 Tree 10' L
 +66 Tree 10' L
 +68 Tree 20' L
 +72 Tree 17' L
 +61 Tree 25' L
 +69 Tree 18' L
 +74 Tree 17' L
 +74 Tree 17' L
 +71 Tree 31' L
 +77 Tree 17' L
 +74 Tree 25' L

+65 Tree 10' L
 +71 clump / Tree 25' L
 +19 Tree 19+27' L
 +74 Tree 18' L

28

115400

+60 Tree 25' L
 +65 Tree 23' L
 +60 Tree 21' L

+14 End Hedge
 114400

+79 (3 trees) 21' L
 +60 Tree 10' L
 +60 Tree 15' L
 +63 Tree 10' L
 +69 Tree 15' L

+78 Tree 10' L
 113400

+66 Tree 10' L
 +74 Tree 21' L
 +69 Tree 17' L
 +60 Tree 15' L
 +69 Tree 12' L

+60 Tree 10' L
 Hedge
 Lawn
 112400

+62 Tree 10' L
 +63 Tree 10' L
 +62 Tree 10' L
 +63 Tree 10' L
 +65 Clump (3 trees) 25' L

+60 Tree 10' L
 Hedge
 111400

+68 Tree 17' L
 +64 Tree 21' L

+60 Tree 10' L
 110400

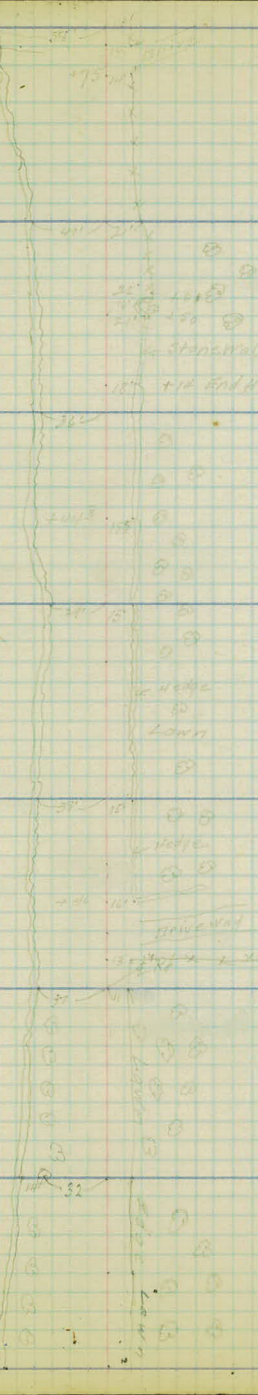
+61 Tree 17' L
 +51 Tree 17' L
 +62 Tree 17' L

+67 Tree 10' L
 +71 Tree 20' L
 +63 Tree 10' L

+64 Tree 15' L
 +60 Tree 17' L

+67 Tree 10' L
 +71 Tree 20' L
 +63 Tree 10' L
 +69 Tree 15' L
 +71 Tree 15' L
 109400

Bald Eagle Lake



21 B.F. hinc

3-10-23

29

+57 TACE 18' R
+57 TACE 18' R
+58 TACE 12' R
+58 TACE 12' R

+44 TACE 20' L

+54 TACE 18' R

+45 TACE 20' L

+55 TACE 18' R / 121.00

+46 TACE 20' L

+56 TACE 17' R

+59 TACE 20' L

+66 TACE 18' R

+34 TACE 20' L

+36 TACE 18' R

+49 TACE 18

+56 (TACE) 18' / 121.00

+54 TACE 19' L

+54

+57 TACE 18

+46 TACE 20' L

+20 TACE 20

+40 TACE 20' L

+55 T.P. 18' R / 120.00

+51 (3 TACE) 20' L

+45 TACE 20' L

+83 T.H. 20' L

+87 TACE 20' L

+87 TACE 20' L

+12 TACE 21

+10 TACE 20'

+24 TACE 21' R

+43 TACE 21' / 118.00

+73 TACE 20' L

+81 clamp TACE 20' L

+26 R/L 18' L

+75 TACE 20' 30' R
+68 TACE 20' 30' R

+66 End fence 5' R

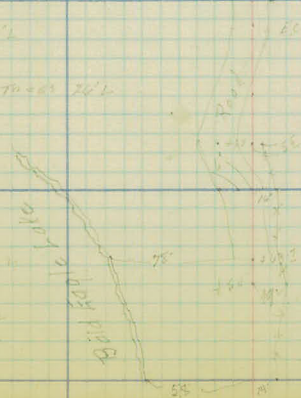
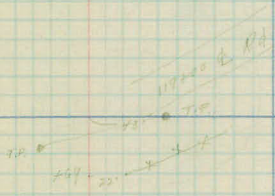
+41 TACE 18' R

+41 TACE 18' L

+38 TACE 21'

119.00

116.00



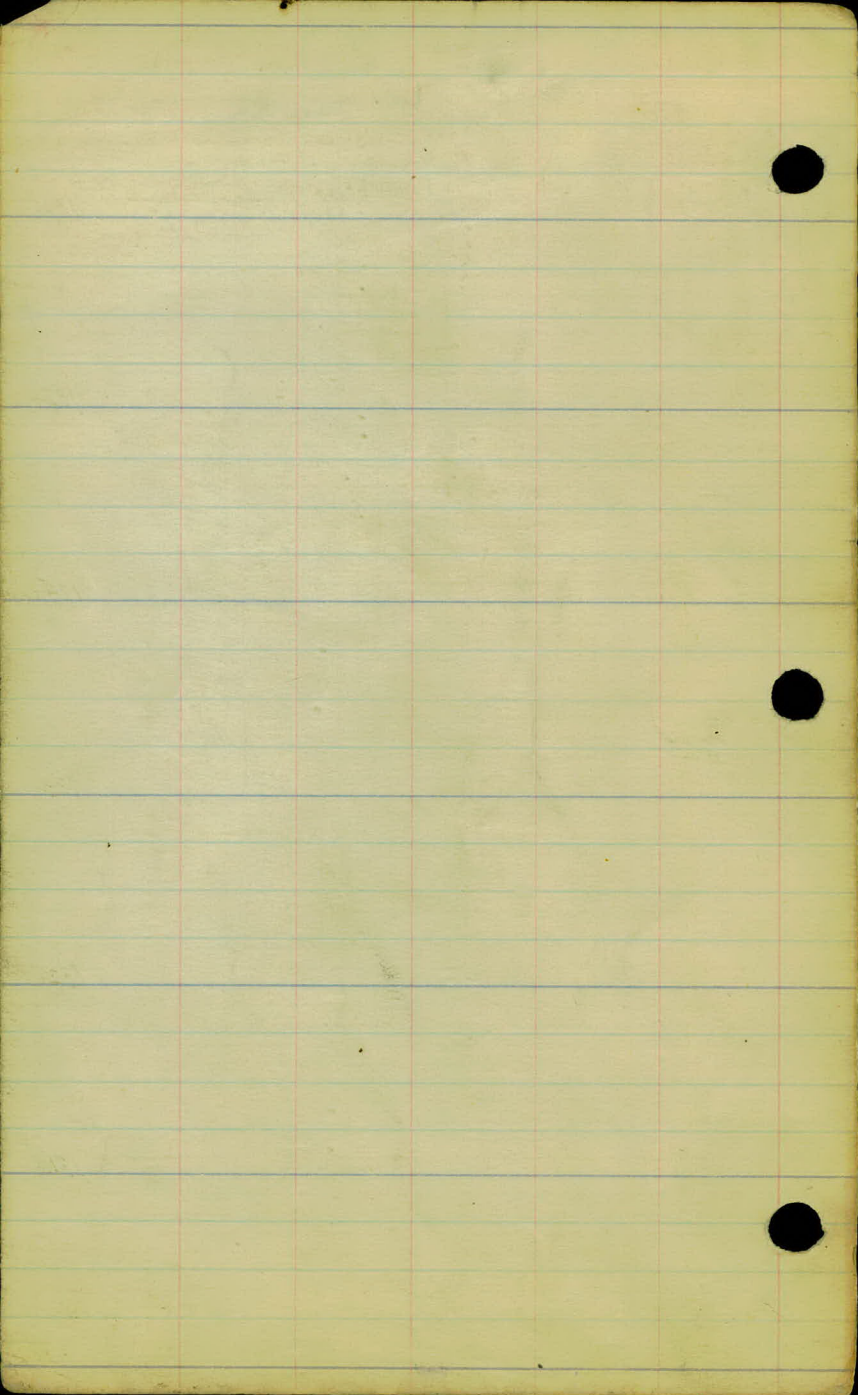
3-10-23

22

B. F. Pine

3-10-23

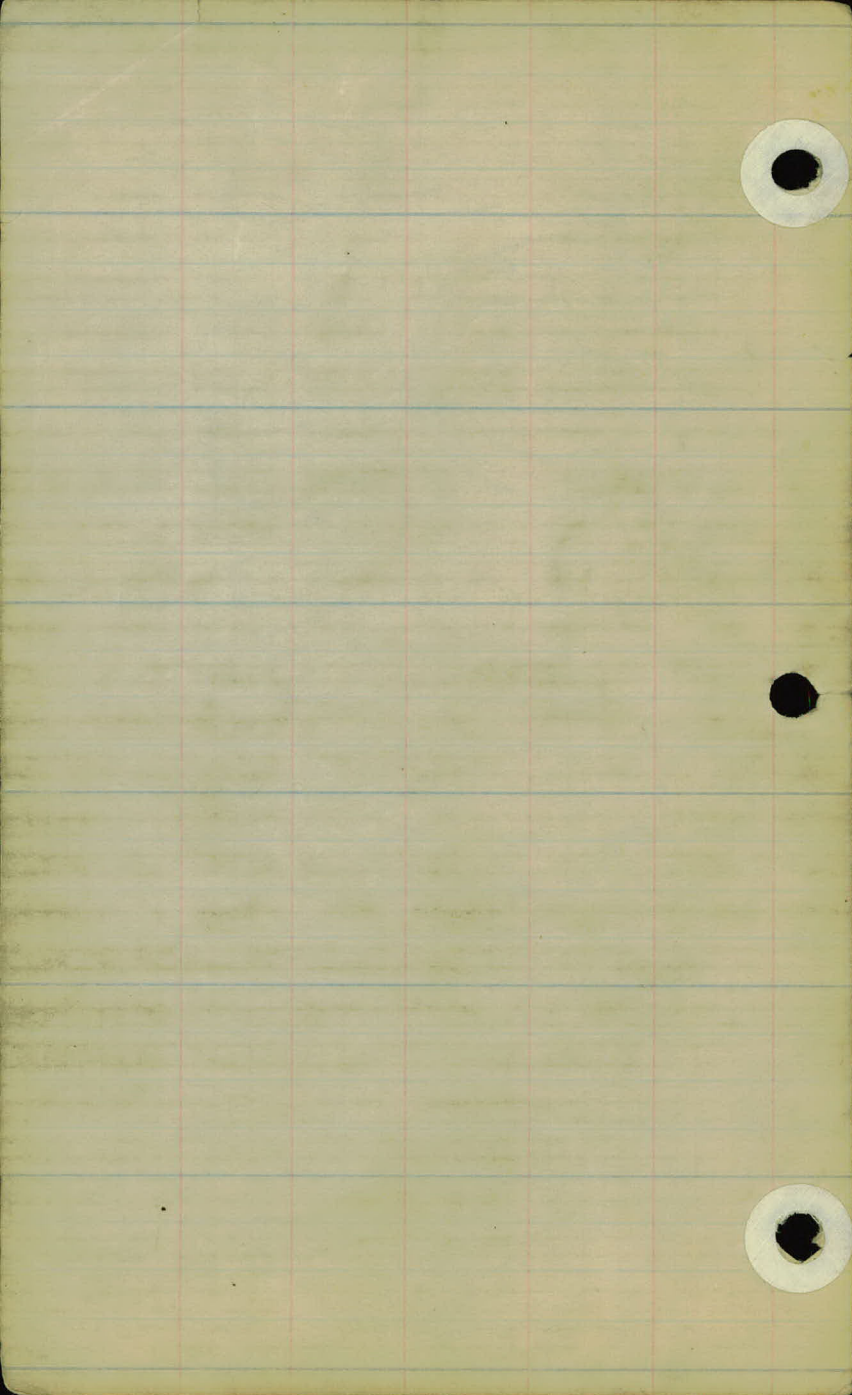
23 - B. F. Hine Artificial Topography



Nail in T.P. S.W. Cor. of Intersection
of T.H. #1 & Lake Ave.

Nail in Elec. Pole 30' R. of Sta. 2+14.
Elev. 237.37 Was Marked on Pole.

On U. S. G. S.
Elev. 239.02 Was Marked on B.M.



BALD EAGLE LINE

LEVEL NOTES

JOB NO-

PR. Benito
ENGR in charge

Rt. Long. Levelman.

| |
|-------|
| 45.14 |
| 47.8 |
| 40.36 |
| 6.21 |
| 46.57 |

check By E.H.
To Sta. 115+00

DATE 2-28-23 B.E. Line Stat #1 of 13

| Sta | BS | HI | FS | Rod | Elev |
|-------|------|--------|--------|------|--------|
| | 269 | 245.14 | 4.78 | | 241.15 |
| | 6.21 | 246.57 | | | 240.3 |
| | | | 2.38 | | 244.19 |
| | 398 | 248.17 | | | |
| | | | 8.12 | | 240.05 |
| | 3.11 | 243.16 | | | |
| | | | 4.14 | | 239.02 |
| | | | 5.79 | | 237.37 |
| 0+00 | | | | 6.6 | 236.6 |
| 1+00 | | | | 6.9 | 236.3 |
| 2+00 | | | | 6.1 | 237.1 |
| 3+00 | | | | 6.2 | 237.0 |
| 4+00 | | | | 6.1 | 237.1 |
| 5+00 | | | | 5.9 | 237.3 |
| | | | 3-1-23 | | |
| +30 | 515 | 244.17 | | | 239.02 |
| 6+00 | | | | 6.9 | 237.3 |
| 7+00 | | | 6.60 | 6.60 | 237.57 |
| 7+00 | | | | 6.6 | 237.6 |
| +19.1 | | | | 6.6 | 237.6 |
| +85.9 | | | | 6.7 | 237.5 |
| 85.9 | | | | 6.5 | 237.7 |
| 8+00 | | | | 6.7 | 237.5 |

B.M. Elec Pole 117+12 "B.L."

RIL
WM 2-21-23

T.P.

B.M. Tele Pole 17+04 31' Left

T.P.

B.M. 5+27 28' L U.S. Geo survey Iron post

B.M. Elec Pole 2+16 30' R ✓

B.M. Iron Post 5+2728' L Elev 239.02

Top. Road
So rail, Twin City Elec street railway

E.C.

P.C.

9' Right No rail street railway

B.E. Line

Date 3-1-23

Sheet # 2 of 13

| Sta | + | H.I. | - | Rod | Elev |
|-------|-----|--------|------|------|--------|
| | | 244.17 | | | |
| 9+00 | | | | 5.9 | 238.3 |
| +325 | | | | 5.4 | 238.8 |
| 10+00 | | | | 4.7 | 239.5 |
| 11+00 | | | | 3.2 | 241.0 |
| 12+00 | | | | 2.2 | 242.0 |
| 13+00 | | | | 1.5 | 242.7 |
| | | | 167 | | 242.50 |
| | 584 | 245.34 | | | |
| 14+00 | | | | 5.2 | 243.14 |
| +392 | | | | 5.4 | 242.94 |
| | | check | 4.11 | | 244.23 |
| +50 | | | | 5.4 | 242.9 |
| 15+00 | | | | 5.4 | 242.9 |
| +332 | | | | 5.0 | 243.3 |
| +334 | | | | 5.11 | 243.23 |
| 16+00 | | | | 5.2 | 243.14 |
| | 360 | 247.79 | | BM | 244.19 |
| +22 | | | | 3.48 | 244.31 |
| +46 | | | | 2.35 | 244.44 |
| +67 | | | | 3.24 | 244.55 |
| +75 | | | | 3.60 | 244.19 |
| 17+00 | | | | 3.6 | 244.2 |
| 18+00 | | | | 5.3 | 242.5 |
| 19+00 | | | | 6.1 | 241.7 |
| 20+00 | | | | 6.4 | 241.4 |

B.E. Line

R.I.L. 3-1-23
W.M.S

TR

BC

B.M. 17+04 21' Left Tele Pole (244.19)

EC

Top Rail

No rail street railway 1' R

B.M.

West Rail of N.P. Ry

Main Line Double Track

" " " " " "

" " " "

" " " " " "

Passing Track

" " " " " "

Side "

B.E. Line

3-2-23

Shot #3 of 13

| Sto | + | Hl. | - | Rod | Elev |
|-------|------|--------|------|------|--------|
| 21+00 | | 247.79 | | | 240.9 |
| 21+00 | | | 6.9 | | 240.7 |
| | | | 6.99 | | 240.80 |
| | 3.90 | 244.70 | | | |
| 22+00 | | | | 3.90 | 240.8 |
| 23+00 | | | | 4.1 | 240.6 |
| 24+00 | | | | 4.1 | 240.6 |
| 25+00 | | | | 4.1 | 240.6 |
| + 36 | | | | 4.1 | 240.6 |
| 26+00 | | | | 4.0 | 240.7 |
| | | | 3.27 | | 241.43 |

3-2-23

365 245.08

| | | | | | |
|-------|--|--|--|------|--------|
| 27+00 | | | | 4.3 | 240.8 |
| + 08 | | | | 4.32 | 240.76 |
| 28+00 | | | | 4.5 | 240.6 |
| + 88 | | | | 4.4 | 240.7 |
| 29+00 | | | | 4.4 | 240.7 |
| 30+00 | | | | 4.6 | 240.5 |
| 31+00 | | | | 4.5 | 240.6 |
| 32+00 | | | | 4.4 | 240.7 |
| + 60 | | | | 4.4 | 240.7 |
| 33+00 | | | | 4.4 | 240.7 |
| 34+00 | | | | 4.3 | 240.8 |
| 35+00 | | | | 4.1 | 241.00 |

B.E. Line

TP

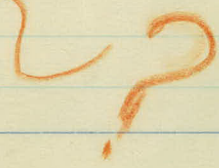
R.I.L } 3-2-23
W.M }

Center of W 1st St

B.M. Elec Pole 117+12 B.L Rd Elev 241.45

C.L. B.L

Center of W 2nd St



Center of W 3rd St

Date 3-7-23

Sheet #4 of 13

| Sto | B.S. | H.I. | F.S. | Prod | Ele |
|-------|------|--------|------|------|--------|
| | | 245.08 | | | |
| 36+00 | | | | 4.4 | 240.7 |
| +45 | | | | 4.6 | 240.5 |
| +55 | | | 3.74 | | 241.34 |
| | 4.83 | 246.17 | | | |
| 37+00 | | | | 5.8 | 240.5 |
| 38+00 | | | | 5.7 | 240.4 |
| 39+00 | | | | 5.7 | 240.4 |
| 40+00 | | | | 5.6 | 240.5 |
| +30.8 | | | | 5.6 | 240.5 |
| 41+00 | | | | 5.6 | 240.5 |
| 42+00 | | | | 5.2 | 240.9 |
| 43+00 | | | | 5.1 | 241.1 |
| 44+00 | | | | 5.0 | 241.2 |
| 45+00 | | | | 5.1 | 241.1 |
| 46+00 | | | | 5.0 | 241.2 |
| 47+00 | | | | 4.8 | 241.4 |
| 48+00 | | | | 4.7 | 241.5 |
| 49+00 | | | | 4.7 | 241.5 |
| 50+00 | | | | 4.5 | 241.7 |
| 51+00 | | | | 4.4 | 241.8 |
| 52+00 | | | | 4.1 | 242.1 |
| 53+00 | | | | 3.8 | 242.4 |
| | | | 3.18 | | 242.99 |
| 1363 | | | | | |
| 1110 | | | | | |
| 253 | | | | | |
| | 5.15 | 248.14 | | | |

4

5

5

6

6

6

41.0

BE Line

R.I.L } 3-2-23
W.M. }

Center of W 4th St

B.M. Elec Pole 30' Left ✓

Center of W 5th St

223.98
221.45

25.53

B.M. Elec Pole 53+10 30' Left

Date 3-2-23

Sheet #5 of 13

| Sta | B.S. | I.I. | F.S. | Rod | Elev |
|---------|------|--------|------|-----|--------|
| | | 248.14 | | | |
| 54+00 | | | | 5.1 | 243.0 |
| 55+00 | | | | 4.8 | 243.3 |
| 56+00 | | | | 4.4 | 243.7 |
| 57+00 | | | | 4.5 | 243.6 |
| 58+00 | | | | 4.7 | 243.4 |
| 59+00 | | | | 4.9 | 243.2 |
| 60+00 | | | | 5.1 | 243.0 |
| 61+00 | | | | 5.2 | 242.9 |
| 62+00 | | | | 4.6 | 243.5 |
| 63+00 | | | | 4.4 | 243.7 |
| 64+00 | | | | 4.2 | 243.9 |
| 65+00 | | | | 3.9 | 244.2 |
| 66+00 | | | | 3.9 | 244.2 |
| | | | 4.6 | | 243.98 |
| | 2.70 | 246.68 | | | |
| 66+73.4 | | | | 2.6 | 244.1 |
| 67+00 | | | | 2.7 | 244.0 |
| 68+00 | | | | 3.0 | 243.7 |
| 69+00 | | | | 3.4 | 243.3 |
| 70+00 | | | | 4.2 | 242.5 |
| 71+00 | | | | 5.1 | 241.6 |
| +68 | | | 2.95 | | 243.73 |

B.E. Line

R.I.L
W.M. 3-2-23

879
2 3 518
1507
539
20709
123
74
2154
104
2007A

TP on paving 66+75

BM 24" Oak 50' R

BE Line

Date 3-2-23

Wat # 6040

| Sta | B.S. | I.I. | F.S. | Prod | Elev |
|-------|------|--------|-------|------|-------------------------|
| | | 246.68 | | | |
| 72+00 | | | | 6.2 | 240.5 |
| 73+00 | | | | 7.6 | 239.1 |
| 74+00 | | | | 8.2 | 238.5 |
| +63.2 | | | | 7.15 | 239.3 239.53 |
| 75+00 | | | | 7.5 | 239.2 |
| 76+00 | | | | 6.4 | 240.3 |
| 77+00 | | | | 5.1 | 241.6 |
| | | | 5.13 | | 241.55 |
| | 5.54 | 247.07 | | | |
| 78+00 | | | | 5.1 | 242.0 |
| 79+00 | | | | 4.9 | 242.2 |
| +48.2 | | | | 5.1 | 242.0 |
| 80+00 | | | | 5.6 | 241.5 |
| 81+00 | | | | 6.7 | 240.4 |
| 82+00 | | | | 9.4 | 237.7 |
| 83+00 | | | | 12.6 | 234.5 |
| | | | 12.34 | | 234.75 |
| | 0.67 | 235.44 | | | |
| 84+00 | 6.23 | | | 4.4 | 231.0 |
| | 2.70 | | | | |
| | 8.93 | | | | |
| 85+00 | | | | 7.3 | 228.1 |
| 86+00 | | | | 9.8 | 225.6 |
| | | | | 11.5 | |
| | | | 10.08 | | 225.42 |
| | 2.49 | 227.91 | | | |

B.E. Lisc

R.I.L. } 3-2-23
W.M.S }

Top
So Rail of 500 Line Ry

TD

Center of Stillwater Ave East

B.C. 85795.4

B.M. White Oak 30' L 86480

BE. Line

Date 3-2-23

Sheet #7 of 13

Sta B.S. H.I. F.S. Rod Elev

227.91

To Page 65

| | | | | | |
|-------|--|--|--|-----|--------|
| 86+50 | | | | 32 | 224.7 |
| 87+00 | | | | 51 | 222.8 |
| +50 | | | | 46 | 223.3 |
| 88+00 | | | | 40 | 223.9 |
| +244 | | | | 47 | 223.2 |
| 89+00 | | | | 43 | 223.6 |
| 90+00 | | | | 37 | 224.2 |
| 91+00 | | | | 33 | 224.6 |
| 92+00 | | | | 30 | 224.9 |
| | | | | 313 | 224.78 |

4.89 229.67

| | | | | | |
|-------|--|--|--|------|--------|
| 93+00 | | | | 56 | 224.1 |
| 94+00 | | | | 60 | 223.7 |
| 95+00 | | | | 61 | 223.6 |
| 96+00 | | | | 48 | 224.9 |
| 97+00 | | | | 31 | 226.6 |
| 98+00 | | | | 15 | 228.2 |
| | | | | 0.05 | 229.62 |

To Page 102

5.69 235.31

3-3-23

| | | | | | |
|--------|--|--|--|----|-------|
| 98+33A | | | | 68 | 228.6 |
| 99+50 | | | | 64 | 228.9 |
| 09+00 | | | | 69 | 228.4 |

B.E. Line

R.I.L 3-2-23.
W.M.

29.02
2.1

TP

TP

TP on stump 20' L 96+12

13C

BE Line

| Date | B.S. | I.I. | F.S. | Rod | Elev |
|--------|-------|--------|-------|------|--------|
| Sta | 5.69 | 235.31 | | | |
| 99+50 | | | | 7.2 | 228.1 |
| +783 | | | | 7.7 | 227.6 |
| +88 | | | | 6.0 | 229.3 |
| 100+00 | | | | 5.9 | 229.4 |
| 101+00 | | | | 1.5 | 226.8 |
| 102+00 | | | | 8.6 | 226.7 |
| 103+00 | | | | 5.5 | 226.8 |
| 104+00 | | | | 7.5 | 227.8 |
| 105+00 | | | | 5.3 | 230.0 |
| | | | 5.08 | | 230.23 |
| | 11.08 | 241.31 | | | |
| 106+00 | | | | 8.1 | 233.2 |
| -102 | | | | 7.7 | 233.6 |
| 107+00 | | | | 5.2 | 236.1 |
| | | | 3.07 | | 238.24 |
| 108+00 | | | | 3.6 | 237.7 |
| +483 | | | | 3.0 | 238.3 |
| 109+00 | | | | 8.9 | 238.4 |
| +823 | | | | 5.8 | 235.5 |
| 110+00 | | | | 6.1 | 235.2 |
| 111+00 | | | | 7.47 | 233.82 |
| | 1.42 | 235.24 | | | |
| 111+00 | 18.19 | | 15.97 | | |
| +75+00 | 15.97 | | 8.26 | 4.6 | 230.6 |
| | 2.22 | | 24.23 | 7.0 | 228.2 |

B.E. Line

R.I. 3-3-23
W.M.

E.C.

2132
3113
-3
2110
2132
-11
2121

T.P.

B.C.

3M 30' Block ^{Oak} stump 107+50 15' Left
Elev 238.24

E.C.

20972

20708

264

B.C.

T.P.

2423

2013

1817

264

BE Line

3-3-23

Sheet #9 of 13

| Sta | B.S. | H.I. | F.S. | Red | Elev |
|----------|--------|--------|--------|-----|--------|
| | | 235.24 | | | |
| 112+00 | | | | 7.6 | 227.6 |
| 113+00 | | | | 9.1 | 226.1 |
| | | | 8.26 | | 226.98 |
| 382 | 230.80 | | 3-5-23 | | |
| 113+44.8 | | | | 5.0 | 225.8 |
| 114+00 | | | | 5.0 | 225.8 |
| 115+00 | | | | 4.7 | 226.1 |
| +065 | | | | 4.6 | 226.2 |
| +233 | | | | 4.6 | 226.2 |
| 116+00 | | | | 3.2 | 227.6 |
| +632 | | | 0.98 | | 229.82 |
| | 213 | 237.95 | | | |
| +75 | 11.95 | | | 7.8 | 230.2 |
| 117+00 | | | | 7.2 | 230.78 |
| +85 | | | | 6.6 | 231.4 |
| | | | 5.21 | | 232.74 |
| +50 | | | | 5.5 | 232.4 |
| +75 | | | | 4.1 | 233.8 |
| +87.5 | | | | 3.8 | 234.1 |
| 118+00 | | | | 3.6 | 234.3 |
| | | | 3.22 | | 234.67 |
| | | | 4.26 | | |

use "A" Line

B.E. Line

Sheet # 7 of 13 41
206.91
382

P.I.L 3-3-23 210.80
W.M.

1
T.P. 112+36 on 14" Black oak 25' L

B.C.

215.24
8.26
206.98

Culvert 4x6

210.80
8.13
202.67

E.C.

8.13
217.95

B.C. T.P. on spike

115+06.5 Concret Culvert
L 15.1 R 15.1

10"
B.M. White Oak 117+00 L 63'

E.C.

T.P. Top of stake 118+00

B.E. Line

Date 3-6-23

Lat 410 of 13

| Sto | BS | HI. | F.S. | Pod | Elev |
|----------|-----|--------|------|-----|--------|
| | 382 | 238.49 | | | 234.67 |
| 118+94.6 | | | | 3.0 | 235.5 |
| 119+00 | | | | | |
| +50 | | | | 3.9 | 234.6 |
| +88.1 | | | | 4.4 | 234.9 |
| 120+00 | | | | | |
| 121+00 | | | | 5.6 | 232.9 |
| 122+00 | | | | 6.5 | 232.0 |
| 123+00 | | | | 5.3 | 233.2 |
| +21 | | | | 4.8 | 233.7 |
| 124+00 | | | | 3.7 | 234.8 |

332 235.17

10.92 246.09

| | | | | | |
|--------|-------|--|--|------|-------|
| 125+00 | 14.72 | | | 10.1 | 246.0 |
| 126+00 | | | | 2.3 | 248.8 |
| 127+00 | | | | 4.4 | 241.7 |
| +82.5 | | | | 2.1 | 244.0 |
| 128+00 | | | | 1.4 | 244.7 |

0.89 245.20

2.45 248.65 4.21

| | | | | | |
|--------|--|--|--|-----|--------|
| 129+00 | | | | 0.9 | 247.75 |
| +30 | | | | 0.6 | 248.05 |
| 130+00 | | | | 1.6 | 247.05 |
| +77.5 | | | | 3.5 | 245.15 |
| 131+00 | | | | 4.1 | 244.55 |
| 132+00 | | | | 6.9 | 241.7 |

BE Line

R.I.L 3-6-23

W.M.

B.C.

E.C.

Center of Eagle Ave

T.P.

| |
|-------------|
| 215.17 |
| <u>1092</u> |
| 226.09 |
| <u>089</u> |
| 225.20 |
| <u>345</u> |
| 228.65 |

B.C.

| |
|-------------|
| 215.27 |
| <u>1092</u> |
| 226.19 |

T.P. on rock B.O.R 128400

E.C.

BE. Line

Date 3-6-23

Sheet # 114/13

| Sta | B.S. | H.I. | F.S. | Rod | Elev |
|--------|------|--------|------|-------|--------|
| | | 248.65 | | | |
| 132+33 | | | | 7.4 | 241.25 |
| 133+00 | | | | 7.8 | 240.85 |
| 134+00 | | | | 8.1 | 239.85 |
| 135+00 | | | | 7.6 | 239.0 |
| +29.15 | | | | 10.19 | 237.46 |
| 136+00 | | | | 8.0 | 240.6 |
| +41.9 | | | | 6.2 | 242.4 |
| | | | 7.97 | | 240.68 |

BE Line

West Rail N.P. Ry

R.I.L 3-6-23
W.M

EL.

B.M. Elec Pole 134+15. 20' R

36-23

Sheet #12 of 13

Check Levets

245.20

062 245.82

11.90

233.92

612 240.04

7.36

232.68

087 233.55

7.30

226.25

1192 238.17

0.46

237.71

516 242.87

4.73

238.14

226.98

1192 238.90

0.90

238.00

149 237.47

1.23

238.26

11.86

227.63

785 235.47

5.92

229.56

103 230.57

6.42

224.17

9.55 233.72

8.35

225.37

0.32

233.40

12.50 245.90

4.91

240.99

5.23 246.22

2.55

243.67

Part #1 of Sheet #12 B.E. Line

TP

R.L. 3-6-23
W.M.

B.M. Elev 232.14

TP

B.M. Elev 238.24

1 55
2 0 72
R.L. 3-7-23
W.M.O

B.M. 86180

Part #2 of Sheet #12 B.E. Line
B.M. 71+66 243.73

sheet #13 of 13

246.22

161

244.61

322 247.84

272

245.12

145 246.57

359 242.98

492

241.65

367 245.32

398 221.34

374 245.08

364

3

241.44

Part #1 of Sheet #13 B.E. Live

R.I.L. 3-7-23
W.M.O.D.

B.M. 58+10

B.M. 36+55

B.M. 25+80 45' Left Elec Pole
Elev 241.45

123+20 2 Corrugated Iron Pipes Culverts

$$\frac{-20}{55}$$

$$\frac{-16}{165}$$

$$\frac{\phi}{218.99}$$

$$\frac{-13}{325}$$

Length 490 Flows Right

Recopied 3/11/23
PRB.

BALD EAGLE LINE

46

CROSS SECTION NOTES

JOB NO.

P.R. Baniates
Eng. in charge

R.I. Long-Recorder

Proj. 23-57

See spec 412023

| B.E. Line Station | Cross Sections Elev | RIL
W.M.C.D
J.J
F.P. |
|-------------------|---------------------|-------------------------------|
| 0+00 | 236.6 | } 3-7-23 |
| 1+00 | 236.3 | |
| 2+00 ✓ | 237.1 ✓ | |
| 3+00 | 237.0 ✓ | |
| 4+00 | 237.1 ✓ | |
| 5+00 | 237.3 ✓ | |
| 6+00 | 237.3 ✓ | |
| 7+00 | 237.6 ✓ | |
| +19' | 237.6 ✓ | |
| +859 | 237.5 ✓ | |
| 8+00 | 237.5 ✓ | |
| 9+00 | 238.3 ✓ | |
| +32.5 | 238.8 ✓ | |

239.02
226
1.42

$$\begin{array}{cccccc} L & & & & R & \\ \frac{.23}{33} & -\frac{.01}{16} & \frac{.00}{12} & -\frac{.02}{26} & -\frac{.05}{35} & \leftarrow \text{Center of 5th Ry} \end{array}$$

$$\begin{array}{cccccc} & +\frac{.25}{32} & -\frac{.03}{18} & -\frac{.04}{18} & \frac{.00}{266} & \frac{.00}{36} \end{array}$$

$$\begin{array}{cccccc} & \frac{.05}{33} & -\frac{.01}{28} & \frac{.00}{15} & -\frac{.09}{12} & -\frac{.05}{244} & -\frac{.10}{33} \end{array}$$

Center of
Merrimack Ave

$$\begin{array}{cccccc} & \frac{.00}{33} & +\frac{.45}{24} & \frac{.00}{12} & -\frac{.01}{12} & -\frac{.05}{227} & -\frac{.06}{30} & -\frac{.20}{33} \end{array}$$

$$\begin{array}{cccccc} & \frac{.00}{33} & +\frac{.05}{23} & +\frac{.01}{15} & -\frac{.01}{11} & -\frac{.06}{22} & -\frac{.06}{27} & -\frac{.40}{33} \end{array}$$

$$\begin{array}{cccccc} & \frac{.03}{33} & +\frac{.45}{21} & \frac{.02}{11} & -\frac{.01}{7} & -\frac{.05}{22} & -\frac{.05}{28} & -\frac{.40}{33} \end{array}$$

$$\begin{array}{cccccc} & -\frac{.20}{33} & +\frac{.07}{23} & \frac{.00}{15} & -\frac{.10}{14} & +\frac{.07}{23} & \frac{.00}{19} & -\frac{.25}{33} \end{array}$$

$$\begin{array}{cccccc} & -\frac{.07}{33} & +\frac{.05}{26} & -\frac{.06}{16} & -\frac{.01}{7} & \frac{.02}{22} & -\frac{.15}{33} \end{array}$$

$$\begin{array}{cccccc} & -\frac{.03}{33} & \frac{.00}{26} & -\frac{.05}{15} & -\frac{.03}{15} & -\frac{.06}{19} & -\frac{.01}{33} \end{array}$$

$$\begin{array}{cccccc} & -\frac{.04}{33} & -\frac{.02}{25} & +\frac{.01}{15} & -\frac{.05}{16} & \frac{.00}{25} & \frac{.00}{33} \end{array}$$

$$\begin{array}{cccccc} & -\frac{.01}{32} & -\frac{.03}{26} & +\frac{.02}{11} & -\frac{.04}{12} & -\frac{.00}{32} & -\frac{.04}{33} \end{array}$$

$$\begin{array}{cccccc} & -\frac{.01}{33} & \frac{.00}{18} & -\frac{.01}{12} & -\frac{.02}{20} & -\frac{.15}{11} & -\frac{.02}{33} \end{array}$$

$$\begin{array}{cccccc} & \frac{.06}{33} & +\frac{.02}{207} & -\frac{.08}{11} & -\frac{.05}{25} & -\frac{.04}{33} \end{array}$$

B.E. Line Cross Sections

| Station | Elev | R/R
W.M.C.D.
J.V.
R.R. } 3-7-23 |
|---------|-------------------------|--|
| 10+00 | 239.5 ✓ | |
| 11+00 | ^b
341.0 ✓ | |
| 12+00 | 242.0 ✓ | |
| 13+00 | 242.7 ✓ | |
| 14+00 | 243.1 ✓ | |
| +39.7 | 242.9 ✓ | |
| 1 | | |
| +50 | 242.9 ✓ | |
| 15+00 | 242.9 ✓ | |
| +33.4 | 243.3 ✓ | |
| 16+00 | 243.1 ✓ | |
| +46 | 244.4 ✓ | |
| 17+00 | 244.2 ✓ | |
| 1 | | |

Part #2 of Sheet #2 of 15

ONLINE
R

$$\frac{+05}{33} + \frac{+03}{21} - \frac{04}{14} - \frac{05}{14} - \frac{01}{14} - \frac{00}{25} - \frac{00}{33}$$

↙ C of STRY

$$\frac{+07}{33} - \frac{04}{20.5} - \frac{09}{18} - \frac{05}{11} + \frac{01}{14} + \frac{05}{28} + \frac{07}{33}$$

C

$$\frac{-03}{33} - \frac{+04}{20} - \frac{+06}{18} - \frac{05}{11} + \frac{+05}{16} + \frac{+07}{29} + \frac{+10}{33}$$

↙ C of STRY

$$\frac{+01}{33} - \frac{00}{19.6} - \frac{09}{14} - \frac{05}{16} + \frac{05}{24} + \frac{05}{30} + \frac{07}{33} \text{ Drive way}$$

↙ C of STRY

$$\frac{-04}{33} - \frac{00}{19} - \frac{06}{14} - \frac{05}{9} - \frac{01}{14} - \frac{03}{33}$$

↙ Center of STRY

$$\frac{-10}{33} - \frac{-10}{30} - \frac{00}{27} - \frac{00}{19} - \frac{02}{14} + \frac{04}{20} + \frac{01}{33}$$

↙ C of STRY

$$\frac{-09}{33} - \frac{04}{20} - \frac{+02}{17} + \frac{03}{10} - \frac{03}{9} + \frac{01}{9} - \frac{02}{8} - \frac{03}{25} - \frac{00}{33}$$

↙ C of STRY

$$\frac{-10}{33} - \frac{-15}{29} - \frac{09}{23} - \frac{-10}{16} - \frac{00}{7} - \frac{02}{28} - \frac{02}{14} - \frac{08}{26} - \frac{05}{33}$$

N.P.R.Y

$$\left(\frac{06}{33} + \frac{05}{24.5} + \frac{04}{19} + \frac{03}{14} \right) + \frac{05}{6} + \frac{02}{15} - \frac{00}{33}$$

N.P.R.Y

$$\left(\frac{-10}{33} - \frac{03}{19} - \frac{5}{11.0} - \frac{01}{15.0} - \frac{00}{29} \right) - \frac{13}{33}$$

N.P.R.Y

$$\left(\frac{20}{33} - \frac{23}{25} - \frac{11}{17} - \frac{03}{8} + \frac{01}{6} \right) - \frac{00}{21} - \frac{00}{37}$$

All Headings Taken on center of Track

B.E. Line Cross Sections

| Station | Elev. | R/L
W.M.C.D.
J.J.
R.R. |
|---------|----------|---------------------------------|
| 18+00 | 242.5 ✓ | } 3-7-8 |
| 19+00 | 241.9 ✓ | |
| 20+00 | 241.4 ✓ | |
| 21+00 | 240.9 ✓ | |
| 22+00 | 240.8 ✓ | |
| 23+00 | 240.6 ✓ | |
| 24+00 | 240.6 ✓ | |
| 25+00 | 240.6 ✓ | |
| + 36 | 240.6 ✓ | |
| 26+00 | 240.7 ✓ | |
| 27+00 | 240.8 ✓ | |
| + 08 | 240.76 ✓ | |

Part #2 of Sheet 3 of 15

$$\frac{18}{33} - \frac{18}{26} - \frac{15}{16} - \frac{08}{8} - \frac{04}{7} - \frac{05}{17} - \frac{00}{24} - \frac{05}{33}$$

$$\frac{15}{33} - \frac{20}{25} - \frac{22}{31} - \frac{17}{16} - \frac{12}{15} - \frac{06}{6} - \frac{03}{7} - \frac{10}{17} - \frac{02}{25} - \frac{05}{31} - \frac{10}{33}$$

$$\frac{11}{33} - \frac{15}{25} - \frac{13}{31} - \frac{13}{13} - \frac{06}{6} - \frac{04}{7} - \frac{08}{18} - \frac{12}{20} - \frac{07}{25} - \frac{08}{30} - \frac{04}{33}$$

$$\frac{10}{33} - \frac{20}{27} - \frac{13}{13} - \frac{07}{5} - \frac{05}{7} - \frac{10}{16} - \frac{07}{25} - \frac{08}{29} - \frac{10}{33}$$

$$\frac{06}{33} - \frac{26}{27} - \frac{22}{18} - \frac{10}{11} - \frac{06}{5} - \frac{05}{7} - \frac{10}{16} - \frac{17}{17} - \frac{10}{25} - \frac{11}{33}$$

$$\frac{14}{33} - \frac{22}{25} - \frac{20}{17} - \frac{07}{10} - \frac{05}{5} - \frac{05}{10} - \frac{10}{20} - \frac{10}{25} - \frac{11}{33}$$

$$\frac{12}{33} - \frac{20}{24} - \frac{16}{22} - \frac{13}{14} - \frac{06}{6} - \frac{05}{7} - \frac{10}{16} - \frac{12}{19} - \frac{10}{26} - \frac{12}{33}$$

$$\frac{14}{33} - \frac{15}{25} - \frac{11}{14} - \frac{05}{4} - \frac{04}{7} - \frac{07}{11} - \frac{09}{33}$$

$$\frac{10}{33} - \frac{11}{25} - \frac{20}{19} - \frac{13}{15} - \frac{03}{7} - \frac{05}{7} - \frac{08}{33}$$

$$\frac{10}{33} - \frac{10}{20} - \frac{11}{14} - \frac{04}{6} - \frac{07}{7} - \frac{13}{17} - \frac{10}{23} - \frac{10}{33}$$

Center of Birch Lake Ave

$$= \frac{04}{33} - \frac{04}{7} - \frac{05}{16} - \frac{05}{33}$$

B.E. Line Cross Sections

| Station | Elev | R/L
W/MCD
W/M
R/R | 3-8-26 |
|---------|---------|----------------------------|--------------------------------|
| 28+00 | 240.6 ✓ | | |
| +88 | 240.7 ✓ | | Center W 2 nd St |
| 29+00 | 240.7 ✓ | | |
| 30+00 | 240.5 ✓ | | |
| 31+00 | 240.6 ✓ | | |
| 32+00 | 240.7 ✓ | | |
| +60 | 240.7 ✓ | | Center of W 3 rd St |
| 33+00 | 240.7 ✓ | | |
| 34+00 | 240.8 ✓ | | |
| 35+00 | 241.0 ✓ | | |
| 36+00 | 240.7 ✓ | | |
| +45 | 240.5 ✓ | | Center of W 4 th St |

Part #1 of sheet #4 of 15
L C R

$$\frac{00}{33} - \frac{03}{25} - \frac{23}{21} - \frac{16}{18} - \frac{04}{15} - \frac{02}{7} - \frac{01}{7} - \frac{07}{17} - \frac{03}{16} - \frac{00}{33} + \frac{02}{33}$$

$$\frac{00}{33} + \frac{03}{25} - \frac{13}{23} - \frac{15}{20} - \frac{05}{15} - \frac{03}{7} - \frac{01}{7} = \frac{00}{33}$$

$$\frac{00}{33} - \frac{02}{25} - \frac{20}{21} - \frac{20}{18} - \frac{06}{16} - \frac{03}{6} - \frac{03}{9} - \frac{03}{14} - \frac{15}{16} - \frac{19}{17} + \frac{03}{20} + \frac{01}{33}$$

$$+ \frac{03}{33} - \frac{01}{27} - \frac{17}{24} - \frac{20}{26} - \frac{05}{17} - \frac{02}{7} - \frac{00}{6} - \frac{02}{12} - \frac{12}{15} - \frac{15}{17} + \frac{03}{19} + \frac{02}{33}$$

$$- \frac{07}{33} - \frac{10}{27} - \frac{22}{24} - \frac{22}{14} - \frac{03}{13} - \frac{02}{6} - \frac{02}{8} - \frac{07}{14} - \frac{20}{16} - \frac{22}{18} - \frac{04}{20} - \frac{02}{33}$$

$$- \frac{03}{33} - \frac{05}{20} - \frac{02}{6} - \frac{03}{11} - \frac{02}{33}$$

$$- \frac{15}{33} - \frac{17}{26} - \frac{25}{24} - \frac{21}{20} - \frac{02}{13} - \frac{02}{7} - \frac{02}{7} - \frac{07}{14} - \frac{19}{16} - \frac{23}{18} - \frac{11}{20} - \frac{11}{25} - \frac{10}{33}$$

$$\frac{00}{33} - \frac{13}{26} - \frac{20}{23} - \frac{02}{19} - \frac{02}{14} - \frac{02}{8} - \frac{02}{9} - \frac{02}{16} + \frac{05}{33}$$

$$- \frac{02}{33} - \frac{05}{26} - \frac{02}{9} - \frac{03}{6} - \frac{06}{15} - \frac{19}{17} - \frac{22}{18} - \frac{10}{20} - \frac{02}{33}$$

$$- \frac{11}{27} - \frac{20}{25} - \frac{19}{17} - \frac{05}{12} - \frac{01}{7} - \frac{02}{10} - \frac{12}{17} - \frac{13}{14} - \frac{02}{20} - \frac{00}{33}$$

$$- \frac{04}{33} - \frac{02}{5} + \frac{01}{33}$$

"B.E. Line" Cross Sections.

| Station | Elev | Remarks |
|---------|-------|---|
| 37+00 | 240.3 | 4 ✓
R/L
W.M.C.D.
W.M.
RR } 3-8-29 |
| 38+00 | 240.4 | 5 ✓ |
| 39+00 | 240.4 | 5 ✓ |
| 40+00 | 240.5 | 6 ✓ |
| +308 | 240.5 | 6 ✓ Center of W 5 th St |
| 41+00 | 240.5 | 6 ✓ |
| 42+00 | 240.9 | 41.0 ✓ |
| 43+00 | 241.0 | 1 ✓ |
| 44+00 | 241.0 | ~ ✓ Center of road on left |
| 45+00 | 241.0 | 1 ✓ |
| 46+00 | 241.0 | ~ ✓ |
| 47+00 | 241.3 | 4 ✓ |

Part 2 of Sheet #5 of 15

51

R

$$\frac{06}{33} - \frac{11}{23} - \frac{20}{22} - \frac{29}{19} - \frac{04}{15} - \frac{03}{10} - \frac{00}{8} - \frac{00}{15} - \frac{14}{16} - \frac{16}{8} - \frac{00}{22} - \frac{06}{33}$$

$$\frac{08}{33} - \frac{08}{20} - \frac{05}{16} - \frac{03}{6} - \frac{02}{6} - \frac{04}{13} - \frac{20}{16} - \frac{17}{17} - \frac{14}{18} - \frac{06}{33}$$

$$\frac{02}{33} - \frac{00}{25} - \frac{16}{20} - \frac{14}{19} - \frac{10}{19} - \frac{01}{14} - \frac{03}{8} - \frac{01}{6} - \frac{00}{12} - \frac{16}{15} - \frac{16}{17} - \frac{07}{19} - \frac{05}{33}$$

$$\frac{11}{33} - \frac{07}{25} - \frac{15}{19} - \frac{03}{13} - \frac{02}{8} - \frac{01}{5} - \frac{03}{18} - \frac{14}{10} - \frac{15}{18} - \frac{06}{19} - \frac{05}{33}$$

$$\frac{10}{33} - \frac{10}{25} - \frac{20}{18} - \frac{05}{14} - \frac{07}{9} - \frac{01}{6} - \frac{00}{33}$$

$$\frac{02}{33} - \frac{01}{17} - \frac{12}{22} - \frac{12}{16} - \frac{05}{14} - \frac{02}{8} - \frac{01}{7} - \frac{03}{14} - \frac{10}{15} - \frac{11}{16} - \frac{05}{19} - \frac{02}{33}$$

$$\frac{03}{33} - \frac{18}{24} - \frac{10}{17} - \frac{05}{13} - \frac{02}{8} - \frac{01}{5} - \frac{03}{13} - \frac{11}{15} - \frac{00}{18} - \frac{04}{28} - \frac{10}{33}$$

$$\frac{02}{33} - \frac{09}{25} - \frac{05}{22} - \frac{05}{15} - \frac{01}{7} - \frac{02}{6} - \frac{03}{12} - \frac{00}{19} - \frac{04}{33}$$

$$\frac{00}{33} - \frac{02}{16} - \frac{00}{7} - \frac{00}{6} - \frac{00}{12} - \frac{05}{33}$$

$$\frac{02}{33} - \frac{03}{27} - \frac{01}{23} - \frac{02}{20} - \frac{04}{19} - \frac{01}{10} - \frac{02}{12} - \frac{02}{17} - \frac{00}{25} - \frac{00}{33}$$

$$\frac{00}{33} - \frac{01}{27} - \frac{09}{21} - \frac{05}{16} - \frac{02}{10} - \frac{00}{7} - \frac{13}{15} - \frac{08}{23} - \frac{12}{25} - \frac{04}{33}$$

$$\frac{02}{33} - \frac{04}{27} - \frac{08}{23} - \frac{10}{20} - \frac{04}{16} - \frac{03}{8} - \frac{00}{8} - \frac{08}{12} - \frac{05}{15} - \frac{00}{19} - \frac{00}{26} - \frac{07}{33}$$

BE Line Cross Sections

| Station | Elev | R/L
W/MCD
W/M
RR | 3-8-23 |
|---------|-------|---------------------------|--------|
| 48+00 | 241.4 | 5 ✓ | |
| 49+00 | 241.4 | 5 ✓ | |
| 50+00 | 241.6 | 7 ✓ | |
| 51+00 | 241.7 | 8 ✓ | |
| 52+00 | 242.0 | 1 ✓ | |
| 53+00 | 242.3 | 4 ✓ | |
| +45 | 243.2 | Center of road on Left ✓ | |
| 54+00 | 243.0 | ✓ | |
| 55+00 | 243.3 | ✓ | |
| 56+00 | 243.7 | ✓ | |
| 57+00 | 243.6 | ✓ | |
| 58+00 | 243.4 | ✓ | |
| 59+00 | 243.2 | ✓ | |

Part 2 of sheet 6 of 15

5 ✓

$$L \quad C \quad R$$

$$-\frac{10}{33} - \frac{01}{25} - \frac{10}{23} - \frac{07}{18} - \frac{03}{8} - \frac{01}{7} - \frac{04}{12} - \frac{01}{14} - \frac{10}{16} - \frac{05}{20} - \frac{00}{33}$$

$$-\frac{06}{38} - \frac{10}{28} - \frac{10}{24} - \frac{05}{21} - \frac{02}{9} - \frac{02}{6} - \frac{03}{12} - \frac{05}{13} - \frac{06}{16} - \frac{00}{23} - \frac{03}{33}$$

$$-\frac{03}{33} - \frac{11}{27} - \frac{11}{23} - \frac{07}{21} - \frac{03}{8} - \frac{02}{7} - \frac{04}{15} - \frac{00}{33}$$

$$-\frac{20}{33} - \frac{04}{30} - \frac{06}{20} - \frac{01}{7} - \frac{01}{7} - \frac{06}{15} - \frac{00}{33}$$

$$\frac{10}{33} - \frac{02}{27} - \frac{07}{23} - \frac{08}{18} + \frac{03}{9} + \frac{02}{6} - \frac{02}{15} - \frac{00}{21} + \frac{06}{25} + \frac{10}{33}$$

$$\frac{00}{33} - \frac{05}{26} - \frac{10}{24} - \frac{10}{20} - \frac{05}{6} - \frac{01}{6} - \frac{07}{15} - \frac{02}{20} - \frac{00}{33}$$

$$\frac{03}{33} - \frac{07}{18} - \frac{01}{7} - \frac{04}{15}$$

$$\frac{02}{33} - \frac{00}{8} - \frac{02}{6} - \frac{08}{15} - \frac{02}{33}$$

$$+\frac{00}{33} - \frac{00}{23} - \frac{08}{15} + \frac{10}{19} + \frac{17}{22}$$

$$-\frac{04}{33} - \frac{00}{26} - \frac{03}{20} + \frac{22}{10} + \frac{28}{14} + \frac{30}{33}$$

$$\frac{02}{33} + \frac{02}{13} - \frac{10}{17} + \frac{17}{33}$$

$$-\frac{15}{23} - \frac{10}{20} - \frac{03}{19} - \frac{02}{2} - \frac{00}{6} - \frac{00}{11} - \frac{03}{13} - \frac{02}{12} + \frac{10}{33}$$

$$-\frac{03}{33} - \frac{05}{22} - \frac{02}{6} - \frac{01}{5} - \frac{04}{12} - \frac{04}{13} - \frac{12}{17} - \frac{01}{18} - \frac{02}{33}$$

BE Line Cross Sections

| Station | Elev | P.L.
W.M.C.D.
W.M.
R.R. | 3-8-23 |
|---------|---------|----------------------------------|--------|
| 60+00 | 243.0 ✓ | | |
| 61+00 | 242.9 ✓ | | |
| 62+00 | 243.5 ✓ | | |
| 63+00 | 243.7 ✓ | | |
| 64+00 | 243.9 ✓ | | |
| 65+00 | 244.2 ✓ | | |
| 66+00 | 244.2 ✓ | | |
| 67+00 | 244.0 ✓ | | |
| 68+00 | 243.7 ✓ | | |
| 69+00 | 243.3 ✓ | | |
| 70+00 | 242.5 ✓ | | |
| 71+00 | 241.6 ✓ | | |
| 72+00 | 240.5 ✓ | | |

$$\frac{00}{33} \quad \frac{01}{12} \quad \frac{00}{12} \quad \frac{01}{15} \quad \frac{04}{33} \quad R$$

$$\frac{01}{33} \quad \frac{01}{13} \quad \frac{00}{7} \quad \frac{01}{6} \quad \frac{00}{13} \quad \frac{01}{33}$$

$$\frac{01}{33} \quad \frac{04}{25} \quad \frac{02}{5} \quad \frac{01}{6} \quad \frac{02}{12} \quad \frac{06}{16} \quad \frac{00}{21} \quad \frac{10}{33}$$

$$\frac{00}{33} \quad \frac{02}{24} \quad \frac{00}{13} \quad \frac{00}{7} \quad \frac{00}{15} \quad \frac{00}{33}$$

$$\frac{04}{33} \quad \frac{01}{33} \quad \frac{02}{8} \quad \frac{00}{5} \quad \frac{03}{16} \quad \frac{00}{21} \quad \frac{02}{33}$$

$$\frac{10}{33} \quad \frac{10}{32} \quad \frac{05}{19} \quad \frac{02}{8} \quad \frac{00}{6} \quad \frac{01}{14} \quad \frac{11}{18} \quad \frac{05}{33}$$

$$\frac{10}{33} \quad \frac{11}{26} \quad \frac{05}{20} \quad \frac{04}{8} \quad \frac{02}{6} \quad \frac{10}{14} \quad \frac{08}{18} \quad \frac{15}{33}$$

$$\frac{10}{33} \quad \frac{04}{21} \quad \frac{12}{18} \quad \frac{05}{14} \quad \frac{02}{9} \quad \frac{05}{11} \quad \frac{20}{16} \quad \frac{21}{20} \quad \frac{04}{24} \quad \frac{07}{33}$$

$$\frac{16}{33} \quad \frac{19}{22} \quad \frac{13}{19} \quad \frac{05}{14} \quad \frac{02}{16} \quad \frac{03}{9} \quad \frac{06}{12} \quad \frac{14}{13} \quad \frac{22}{19} \quad \frac{10}{21} \quad \frac{06}{33}$$

$$\frac{00}{33} \quad \frac{00}{25} \quad \frac{03}{21} \quad \frac{03}{8} \quad \frac{02}{7} \quad \frac{04}{12} \quad \frac{15}{10} \quad \frac{15}{19} \quad \frac{08}{21} \quad \frac{00}{33}$$

$$\frac{10}{33} \quad \frac{12}{22} \quad \frac{05}{21} \quad \frac{01}{11} \quad \frac{10}{15} \quad \frac{10}{11} \quad \frac{10}{17} \quad \frac{10}{20} \quad \frac{10}{20} \quad \frac{10}{33}$$

$$\frac{10}{33} \quad \frac{21}{27} \quad \frac{03}{21} \quad \frac{03}{8} \quad \frac{02}{5} \quad \frac{03}{12} \quad \frac{10}{14} \quad \frac{06}{17} \quad \frac{12}{22} \quad \frac{07}{33}$$

$$\frac{01}{33} \quad \frac{00}{20} \quad \frac{06}{21} \quad \frac{06}{18} \quad \frac{01}{15} \quad \frac{00}{16} \quad \frac{00}{7} \quad \frac{05}{16} \quad \frac{10}{33}$$

BE Line Cross Sections

| Station | Elev | RIL
W.M.C.D.
N.V.M.
R.R. | 3-8-23 |
|---------|---------|-----------------------------------|----------------------------|
| 73+00 | 239.1 ✓ | | |
| 74+00 | 238.5 ✓ | | |
| +60.85 | 239.4 ✓ | 53 | 4500 Line Ry |
| 75+00 | 239.2 ✓ | | |
| 76+00 | 240.3 ✓ | | |
| 77+00 | 241.6 ✓ | | |
| 78+00 | 242.0 ✓ | | |
| 79+00 | 242.2 ✓ | | |
| 80+00 | 241.5 ✓ | | |
| 81+00 | 240.4 ✓ | | |
| 82+00 | 237.7 ✓ | | Center of Stillwater Ave E |
| 83+00 | 234.5 ✓ | | |

$$-\frac{70}{33} - \frac{13}{21} - \frac{03}{8} - \frac{02}{7} - \frac{72}{22} - \frac{80}{33}$$

$$\frac{75}{33} - \frac{10}{17} - \frac{03}{7} - \frac{02}{8} - \frac{72}{24} - \frac{81}{33}$$

$$-\frac{15}{45} - \frac{04}{33} - \frac{04}{17} - \frac{06}{12} - \frac{03}{14} - \frac{05}{17} - \frac{35}{25} - \frac{70}{33}$$

$$-\frac{65}{33} - \frac{50}{33} - \frac{03}{12} - \frac{01}{7} - \frac{02}{5} - \frac{04}{10} - \frac{22}{17} - \frac{13}{22} - \frac{07}{33}$$

$$+\frac{15}{33} + \frac{15}{31} + \frac{03}{26} - \frac{03}{19} - \frac{04}{13} - \frac{02}{6} - \frac{02}{5} - \frac{03}{7} - \frac{05}{14} - \frac{10}{19} - \frac{05}{33}$$

$$+\frac{24}{33} + \frac{23}{33} + \frac{04}{16} - \frac{02}{7} - \frac{02}{7} - \frac{01}{12} - \frac{04}{14} - \frac{00}{27} - \frac{20}{33}$$

$$+\frac{21}{33} + \frac{20}{21} - \frac{00}{19} - \frac{02}{15} + \frac{01}{11} - \frac{02}{7} - \frac{02}{7} - \frac{02}{12} - \frac{03}{12} - \frac{03}{18} - \frac{10}{22} - \frac{11}{33}$$

$$+\frac{15}{33} + \frac{15}{25} + \frac{05}{28} - \frac{01}{15} - \frac{00}{7} + \frac{01}{10} + \frac{02}{10} + \frac{00}{20} + \frac{20}{24} - \frac{12}{33}$$

$$+\frac{12}{33} + \frac{07}{17} + \frac{01}{14} - \frac{02}{6} - \frac{00}{5} + \frac{01}{10} + \frac{04}{33}$$

$$-\frac{05}{33} - \frac{06}{17} - \frac{06}{7} - \frac{04}{7} - \frac{00}{4} - \frac{04}{10} - \frac{05}{21} - \frac{12}{33}$$

$$+\frac{01}{33} + \frac{03}{33}$$

$$+\frac{13}{33} + \frac{06}{23} - \frac{02}{12} - \frac{02}{7} - \frac{00}{7} - \frac{04}{18} - \frac{04}{17} - \frac{00}{21} + \frac{03}{25} + \frac{24}{33}$$

BE LINE

CROSS SECTIONS

RIL
WMSD
NL
RR } 3/3/23

| Station | Elev |
|---------|---------|
| 84+00 | 231.0 ✓ |
| 85+00 | 228.1 ✓ |
| 86+00 | 225.6 ✓ |
| +50 | 224.7 ✓ |
| 87+00 | 222.8 |
| +50 | 223.3 |
| 88+00 | 223.9 |
| +24.4 | 223.2 |
| 89+00 | 223.6 |
| 90+00 | 224.2 |
| 91+00 | 224.6 ✓ |
| 92+00 | 224.9 ✓ |

Part #1 of Sheet
9 of 15

End New To Page 6.7

Revision

Start New To Page 102

Part # 2 of Sheet # 9 of 15

55

$$-\frac{12}{33} - \frac{12}{14} - \frac{09}{13} - \frac{03}{7} - \frac{01}{6} - \frac{02}{12} - \frac{01}{33} \text{ Driveway}$$

$$-\frac{07}{33} - \frac{07}{26} - \frac{17}{24} - \frac{12}{15} - \frac{03}{13} - \frac{03}{8} - \frac{04}{5} - \frac{09}{12} - \frac{24}{15} - \frac{41}{33}$$

$$-\frac{06}{33} - \frac{10}{25} - \frac{10}{16} - \frac{04}{12} - \frac{00}{5} - \frac{03}{16} - \frac{07}{12} - \frac{23}{17} - \frac{23}{33}$$

$$-\frac{05}{33} + \frac{01}{25} + \frac{01}{7} - \frac{03}{5} - \frac{11}{8} - \frac{13}{12} - \frac{09}{16} - \frac{05}{33}$$

C of Bald Eagle Arc

$$+\frac{13}{35} + \frac{12}{26} + \frac{07}{17} + \frac{03}{12} - \frac{01}{9} + \frac{02}{7} + \frac{06}{12} + \frac{12}{33}$$

Edge of Lake Arc East

$$-\frac{03}{45} - \frac{00}{25} - \frac{00}{23} + \frac{05}{17} - \frac{03}{4} - \frac{12}{3} - \frac{09}{9} - \frac{07}{16} - \frac{07}{16} - \frac{20}{18} - \frac{20}{21} - \frac{26}{33}$$

$$-\frac{03}{33} - \frac{06}{14} - \frac{07}{9} - \frac{06}{3} + \frac{02}{9} - \frac{10}{11} + \frac{01}{13} - \frac{01}{14} - \frac{01}{20} - \frac{01}{33}$$

$$-\frac{05}{33} - \frac{00}{30} - \frac{00}{18} + \frac{03}{8} + \frac{07}{7} + \frac{10}{9} + \frac{14}{18} + \frac{14}{22} + \frac{12}{25} + \frac{09}{33}$$

$$-\frac{10}{33} - \frac{10}{24} - \frac{01}{18} + \frac{05}{8} - \frac{03}{7} - \frac{03}{14} + \frac{18}{16} + \frac{20}{20} + \frac{18}{33}$$

$$-\frac{12}{33} - \frac{09}{17} - \frac{09}{13} + \frac{03}{16} + \frac{10}{26} + \frac{09}{33}$$

$$-\frac{16}{33} - \frac{07}{14} - \frac{06}{12} - \frac{05}{7} - \frac{00}{12} + \frac{03}{14} + \frac{01}{25} + \frac{18}{28} + \frac{24}{33}$$

$$-\frac{11}{33} - \frac{05}{15} - \frac{09}{7} - \frac{02}{14} + \frac{04}{21} + \frac{35}{25} + \frac{32}{33}$$

B.E. Line Cross Sections

| Station | Elev | R/L
WMCD
WM
RR | 3-
23 |
|---------|----------------------|-------------------------|----------|
| 93+00 | 224.1 ✓ | | |
| 94+00 | 223.7 ✓ | | |
| +57 | W 22' COLvert | | |
| 95+00 | 223.6 ✓ | | |
| 96+00 | 224.9 ✓ | | |
| 97+00 | 226.6 ✓ | | |
| | End Here To Page 102 | | |
| 98+00 | 228.2 | | |
| +50 | 228.9 | | |
| 99+00 | 228.4 | | |
| +50 | 228.1 | | |
| +78.3 | 227.6 | | |
| +88 | 228.3 | | |

29.3

$$\begin{array}{ccccccc} & L & & E & & & R \\ -\frac{10}{33} + \frac{20}{25} + \frac{36}{20} & -\frac{05}{10} & -\frac{01}{11} & -\frac{03}{15} & -\frac{05}{25} & \frac{00}{33} \end{array}$$

$$-\frac{14}{33} - \frac{15}{25} - \frac{06}{11} - \frac{00}{8} + \frac{01}{14} - \frac{10}{17} - \frac{14}{33}$$

$$-\frac{06}{33} - \frac{00}{21} - \frac{10}{18} - \frac{07}{12} - \frac{01}{6} - \frac{00}{12} - \frac{06}{17} - \frac{13}{33}$$

$$-\frac{15}{33} - \frac{07}{27} - \frac{13}{21} - \frac{11}{16} - \frac{02}{7} - \frac{00}{11} + \frac{01}{20} + \frac{05}{33}$$

$$-\frac{15}{33} - \frac{10}{27} - \frac{00}{21} - \frac{04}{13} - \frac{02}{9} - \frac{05}{13} + \frac{09}{16} + \frac{22}{17} + \frac{30}{23}$$

$$-\frac{11}{33} - \frac{03}{25} - \frac{00}{16} - \frac{05}{14} - \frac{05}{8} - \frac{00}{8} + \frac{03}{15} + \frac{17}{17} + \frac{22}{33}$$

$$-\frac{10}{33} + \frac{03}{11} - \frac{05}{10} - \frac{04}{16} + \frac{12}{26} + \frac{23}{33}$$

$$-\frac{07}{33} - \frac{03}{14} - \frac{07}{18} + \frac{04}{12} + \frac{01}{15} + \frac{22}{18} + \frac{26}{29}$$

$$-\frac{11}{33} - \frac{01}{7} - \frac{02}{7} + \frac{03}{5} + \frac{02}{17} + \frac{07}{21} + \frac{30}{23} + \frac{22}{33}$$

$$-\frac{05}{33} - \frac{11}{7} + \frac{05}{11} + \frac{05}{25} + \frac{30}{30} + \frac{26}{33}$$

BE Line Cross Line

R/L
W.M. } 3-23
RR

Station Elev
100+00 229.4

101+00 226.5

+ 55 Recommended 12" Corrugated Iron Pipe

102+00 226.7

103+00 226.8

104+00 227.8

105+00 230.0

106+00 233.2

107+00 236.1

108+00 237.7

+ 482 239.3

109+00 238.4

+ 823 235.5

Part #2 of sheet #11 of 15

57

L

E

R

$$-\frac{13}{33} - \frac{07}{2} - \frac{06}{16} - \frac{01}{30} + \frac{17}{33}$$

$$-\frac{35}{37} - \frac{23}{37} + \frac{04}{5} - \frac{09}{8} + \frac{10}{21} + \frac{15}{33} + \frac{30}{36}$$

$$-\frac{43}{33} - \frac{15}{7} + \frac{01}{5} + \frac{07}{11} + \frac{04}{14} + \frac{04}{26} - \frac{15}{22} + \frac{15}{33}$$

$$-\frac{55}{33} - \frac{13}{20} - \frac{00}{13} - \frac{03}{5} - \frac{07}{16} + \frac{07}{21} + \frac{60}{33}$$

$$-\frac{61}{33} - \frac{57}{25} - \frac{05}{10} - \frac{07}{13} + \frac{04}{19} + \frac{50}{33}$$

$$-\frac{72}{33} - \frac{55}{27} - \frac{02}{16} + \frac{07}{6} - \frac{03}{7} - \frac{05}{7} - \frac{03}{13} + \frac{05}{15} + \frac{25}{33}$$

$$-\frac{45}{33} - \frac{03}{23} - \frac{05}{2} + \frac{01}{7} + \frac{50}{15} + \frac{90}{33}$$

$$-\frac{05}{33} - \frac{42}{16} - \frac{04}{8} + \frac{07}{15} + \frac{50}{20} + \frac{14}{33}$$

$$-\frac{40}{33} - \frac{22}{27} + \frac{04}{11} - \frac{07}{13} - \frac{08}{10} + \frac{08}{19} - \frac{50}{25} + \frac{55}{33}$$

$$-\frac{25}{33} + \frac{05}{21} + \frac{15}{16} - \frac{08}{14} - \frac{00}{10} + \frac{07}{16} + \frac{42}{25} + \frac{60}{33}$$

$$-\frac{50}{33} + \frac{12}{74} - \frac{03}{14} + \frac{08}{14} + \frac{35}{28} + \frac{45}{32}$$

← Lamin

BE Line Cross Sections

| Station | Elev |
|---------|-------|
| 110+00 | 235.2 |
| 111+00 | 230.6 |
| +75 | 228.2 |
| 112+00 | 227.6 |
| 113+00 | 226.1 |
| +448 | 225.8 |
| 114+00 | 225.8 |
| 115+00 | 226.1 |
| +233 | 226.2 |
| 116+00 | 227.6 |
| +633 | 229.8 |
| +75 | 230.1 |

RIL
 WMCD
 WM
 RR } 3-23

K

WAT A Line

$$L \quad \Phi \quad R$$

$$-\frac{85}{33} - \frac{03}{14} - \frac{03}{17} - \frac{02}{8} - \frac{04}{9} - \frac{03}{14} + \frac{15}{14} + \frac{32}{21} + \frac{15}{33}$$

$$-\frac{28}{33} - \frac{31}{16} - \frac{05}{11} - \frac{04}{11} + \frac{11}{14} + \frac{32}{33}$$

$$-\frac{70}{33} - \frac{55}{27} - \frac{05}{12} - \frac{05}{17} + \frac{12}{33}$$

$$-\frac{70}{33} - \frac{50}{21} - \frac{05}{16} - \frac{05}{15} + \frac{32}{33}$$

$$-\frac{60}{33} - \frac{45}{22} - \frac{10}{10} - \frac{04}{10} - \frac{00}{18} + \frac{30}{33}$$

$$-\frac{50}{33} - \frac{43}{33} - \frac{06}{13} + \frac{02}{11} + \frac{28}{17} + \frac{50}{33}$$

$$\frac{65}{33} - \frac{50}{19} - \frac{05}{10} - \frac{02}{7} - \frac{05}{11} - \frac{53}{33}$$

$$-\frac{25}{33} - \frac{12}{21} - \frac{13}{13} - \frac{07}{11} - \frac{05}{7} - \frac{10}{15} + \frac{16}{22} + \frac{36}{33}$$

$$-\frac{09}{33} + \frac{16}{16} - \frac{11}{12} - \frac{01}{10} - \frac{03}{17} - \frac{00}{17} + \frac{35}{20} + \frac{90}{32} + \frac{100}{45}$$

$$\frac{12}{33} + \frac{30}{20} - \frac{10}{13} - \frac{04}{11} - \frac{22}{65} - \frac{06}{16} - \frac{02}{17} + \frac{95}{30} + \frac{103}{45}$$

B.E. Line Cross Sections

| Station | Elev | R/L
W.M.C.D.
W.M.
R.R. | 3-
-23 |
|---------|-------|---------------------------------|-----------|
| 117+00 | 230.7 | | |
| +25 | 231.3 | | |
| +50 | 232.4 | | |
| +75 | 233.8 | | |
| +87.4 | 234.1 | | |
| 118+00 | 234.3 | | |
| +50 | 235.3 | | |
| +94.6 | 235.5 | | |
| 119+50 | 234.6 | | |
| +88.2 | 234.9 | | |
| 120+0.0 | 234.2 | | |
| 121+00 | 232.9 | | |
| 122+00 | 232.0 | | |

Part #2 of Sheet #3 of 15

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$$\begin{array}{cccccccc} L & & E & & R & & & \\ \frac{35}{33} & \frac{30}{30} & \frac{23}{26} & \frac{11}{7} & \frac{01}{11} & \frac{00}{12} & \frac{50}{21} & \frac{11}{31} & \frac{11.5}{45} \end{array}$$

$$\frac{+1.0}{55} \frac{+1.2}{33} \frac{+1.5}{20} \frac{+0.1}{6} \frac{+1.1}{2} \frac{+3.5}{5} \quad \frac{+10.7}{33} \frac{+11.4}{45}$$

$$\frac{+7.5}{33} \frac{+0.1}{25} \frac{+0.0}{10} \frac{0.0}{6}$$

$$\frac{+9.3}{20} \frac{11.6}{45}$$

$$\frac{+5.1}{33} \frac{+5.0}{24} \frac{0.5}{14} \frac{-0.1}{11} \frac{0.0}{16}$$

$$\frac{+8.4}{25} \frac{+8.9}{45}$$

$$\frac{-0.6}{10} \frac{0.0}{16}$$

$$\frac{+7.4}{26} \frac{8.6}{45}$$

$$\frac{+4.8}{53} \frac{+4.5}{25} \frac{0.0}{16} \frac{-0.6}{7} \frac{-0.6}{12} \frac{-0.6}{16} \frac{+6.5}{25} \frac{+7.5}{45}$$

$$\frac{+5.0}{35} \frac{+5.0}{22} \frac{-0.6}{14} \frac{0.5}{8} \frac{-0.5}{15} \frac{+3.5}{25} \frac{+3.5}{33}$$

$$\frac{+1.5}{23} \frac{+1.6}{18} \frac{-0.5}{13} \frac{-0.5}{6} \frac{-0.6}{11} \frac{-0.4}{14} \frac{+0.5}{33}$$

$$\frac{-1.0}{33} \frac{-1.0}{15} \frac{0.6}{8} \frac{0.0}{8} \frac{0.2}{13} \frac{-1.0}{16} \frac{-1.0}{21} \frac{-0.4}{33}$$

$$\frac{-1.5}{33} \frac{-1.7}{21} \frac{-1.5}{19} \frac{-0.6}{11} \frac{-0.2}{8} \frac{-0.5}{12} \frac{-1.1}{17} \frac{+3.0}{33}$$

$$\frac{-1.0}{33} \frac{-1.6}{14} \frac{-0.6}{12} \frac{-0.2}{8} \frac{0.0}{7} \frac{-0.3}{13} \frac{-1.3}{17} \frac{2.0}{27} \frac{-3.2}{33}$$

$$\frac{0.2}{33} \frac{0.0}{20} \frac{-0.4}{8} \frac{-0.4}{7} \frac{-0.4}{14} \frac{-0.0}{25} \frac{-0.4}{33}$$

B.E. Line Cross Sections

| Station | Elev | RIL
WMCD
WM
RR | } 3- -23 |
|---------|-------|-------------------------|----------|
| 123+00 | 233.2 | | |
| +21 | 233.7 | Center of Eagle Ave | |
| 124+00 | 234.8 | | |
| 125+00 | 246.0 | | |
| 126+00 | 249.8 | | |
| 127+00 | 241.7 | | |
| +1 | | | |
| +82.5 | 244.0 | | |
| 128+00 | 244.7 | | |
| 129+00 | 247.7 | | |
| +30 | 248.0 | | |
| 130+00 | 247.0 | | |
| +77.5 | 245.1 | | |

R

$$\frac{+03}{33}$$

$$\frac{00}{33}$$

$$\frac{-07}{33} \quad \frac{-10}{17} \quad \frac{-15}{15} \quad \frac{-05}{11} \quad \frac{-03}{7} \quad \frac{-03}{10} \quad \frac{-10}{14} \quad \frac{-10}{33}$$

$$\frac{-10}{33} \quad \frac{-13}{15} \quad \frac{-07}{12} \quad \frac{-03}{7} \quad \frac{-02}{8} \quad \frac{-04}{11} \quad \frac{-14}{16} \quad \frac{-10}{33}$$

$$\frac{-05}{33} \quad \frac{-04}{14} \quad \frac{-04}{9} \quad \frac{-03}{8} \quad \frac{-03}{12} \quad \frac{-13}{17} \quad \frac{-10}{33}$$

$$\frac{-10}{33} \quad \frac{-10}{14} \quad \frac{-05}{11} \quad \frac{-02}{10} \quad \frac{-05}{16} \quad \frac{-08}{22} \quad \frac{-03}{33}$$

$$\frac{+11}{33} \quad \frac{-04}{21} \quad \frac{-07}{14} \quad \frac{-07}{14} \quad \frac{-02}{10} \quad \frac{-02}{25} \quad \frac{-00}{33}$$

$$\frac{+9.5}{33} \quad \frac{+9.5}{31} \quad \frac{+5.0}{27} \quad \frac{00}{18} \quad \frac{-02}{5} \quad \frac{01}{7} \quad \frac{-03}{14} \quad \frac{+06}{22} \quad \frac{+5.3}{22} \quad \frac{+5.7}{33}$$

Drive Way

$$\frac{+20}{33} \quad \frac{-00}{10}$$

$$\frac{+6.8}{33} \quad \frac{00}{22} \quad \frac{07}{15} \quad \frac{-02}{10} \quad \frac{+01}{10} \quad \frac{-02}{18} \quad \frac{+5.0}{25} \quad \frac{+7.5}{33}$$

$$\frac{-15}{33} \quad \frac{-06}{21} \quad \frac{-10}{16} \quad \frac{-04}{11} \quad \frac{+02}{10} \quad \frac{+02}{16} \quad \frac{+08}{20} \quad \frac{+2.5}{33}$$

B.E Line Cross Section

| Station | Elev | R.I.L
W.M=D
W.M
RR | |
|-------------------|-------|-----------------------------|----------------------------|
| 131+00 | 244.5 | } 3- -23 | |
| 132+00 | 241.7 | | |
| +33 | 241.2 | | Culvert |
| 133+00 | 240.8 | | |
| 134+00 | 239.8 | | |
| 135+00 | 239.0 | | |
| +29 ¹⁵ | 237.5 | | End of N.P. Ry |
| 136+00 | 240.6 | | |
| +418 | 242.4 | | End of Line Into of Hwy #1 |

Part #2 of Sheet #15 of 15

61

$$L \quad \Phi \quad R$$

$$-\frac{27}{33} - \frac{10}{14} - \frac{05}{9} - \frac{02}{8} - \frac{02}{15} - \frac{03}{20} + \frac{09}{33}$$

$$-\frac{45}{33} - \frac{43}{20} - \frac{00}{10} - \frac{02}{12} - \frac{30}{20} - \frac{32}{33}$$

$$-\frac{25}{33} - \frac{35}{14} - \frac{00}{10} - \frac{03}{7} - \frac{04}{11} - \frac{60}{21} - \frac{40}{33} - \frac{32}{33}$$

$$+\frac{10}{33} + \frac{07}{23} - \frac{03}{17} - \frac{03}{11} - \frac{07}{14} - \frac{07}{14} - \frac{25}{24} - \frac{30}{33} - \frac{05}{50}$$

$$-\frac{34}{33} + \frac{50}{20} - \frac{10}{17} - \frac{00}{12} - \frac{04}{10} - \frac{05}{11} - \frac{10}{14} + \frac{10}{24} + \frac{14}{33}$$

$$+\frac{33}{33} + \frac{35}{26} - \frac{10}{14} - \frac{10}{11} - \frac{02}{8} - \frac{02}{10} - \frac{06}{12} - \frac{06}{16} + \frac{15}{20} + \frac{20}{33}$$

$$\frac{36}{33} + \frac{24}{24} + \frac{20}{14} - \frac{10}{10} - \frac{00}{10} - \frac{00}{8} - \frac{06}{13} - \frac{06}{16} + \frac{20}{20} + \frac{23}{33}$$

Station

B.E. Line Cross Section of Culverts

36+00 18" Corrugated Iron Pipe Length 40'

$$\begin{array}{r} - 23 \\ 20 \end{array} \begin{array}{l} L \\ \end{array} \quad \begin{array}{c} \Phi \\ 220.70 \end{array} \quad \begin{array}{r} R \\ - 13 \\ 20 \end{array}$$

 Flows Left and Parallels Φ

74+27 15" Vitrified Pipe Length 48'

$$\begin{array}{r} - 52 \\ 24 \end{array} \begin{array}{l} L \\ \end{array} \quad \begin{array}{c} \Phi \\ 218.98 \end{array} \quad \begin{array}{r} R \\ - 67 \\ 24 \end{array} \quad \begin{array}{r} - 75 \\ 50 \end{array}$$

 Flows Right

87+25 24" Vitrified Pipe 17' Left of Φ
 to intake of Culvert Length 62'

$$\begin{array}{r} 52 \\ 107 \end{array} \begin{array}{r} - 35 \\ 74 \end{array} \begin{array}{l} L \\ \end{array} \quad \begin{array}{c} \Phi \\ 202.61 \end{array} \quad \begin{array}{r} R \\ - 22 \\ 25 \end{array}$$

 Flows Left

94+57 Decomposed W.C. Culvert

$$\begin{array}{r} - 56 \\ 58 \end{array} \begin{array}{l} L \\ \end{array} \quad \begin{array}{c} \Phi \\ 203.77 \end{array} \quad \begin{array}{r} R \\ - 13 \\ 24 \end{array}$$

115+06.5 4'x6' Concrete Arch Length 30.2'

$$\begin{array}{r} - 81 \\ 50 \end{array} \begin{array}{r} - 79 \\ 15.1 \end{array} \begin{array}{l} L \\ \end{array} \quad \begin{array}{c} \Phi \\ 206.30 \end{array} \quad \begin{array}{r} R \\ - 76 \\ 15.1 \end{array}$$

 Flows Left

132+33 12" Vitrified Pipe Length 44'

$$\begin{array}{r} - 48 \\ 19 \end{array} \begin{array}{l} L \\ \end{array} \quad \begin{array}{c} \Phi \\ 221.35 \end{array} \quad \begin{array}{r} R \\ - 62 \\ 25 \end{array}$$

 Flows Right and Parallels Φ

Received 3/11/23
 PRB

BE LINE

CULVERT NOTES

JOB NO -

61A

R. I. Long - Recorder

P. R. Amster
Engr in Charge

Inv. El. 218.4

Flows Left

$$\begin{array}{r} \text{\$} \\ -23 \\ \hline 20' \text{ h. Road} \end{array} \quad \begin{array}{r} 24.70 \\ \text{Road} \end{array} \quad \begin{array}{r} -15 \\ \hline 20' \text{ R} \end{array}$$

Inv. El. 212.28

Flows Rt.

$$\begin{array}{r} \text{\$} \\ -52L \\ \hline 24 \end{array} \quad \begin{array}{r} 238.98 \\ \text{Road} \end{array} \quad \begin{array}{r} -67R \\ \hline 24' \end{array} \quad \begin{array}{r} -9.5R \\ \hline 50 \end{array}$$

Inv. El. 197.1

Flows Left.

$$\begin{array}{r} \text{\$} \\ -5.4L \\ \hline 109. \end{array} \quad \begin{array}{r} -5.5L \\ \hline 79 \end{array} \quad \begin{array}{r} -4.4L \\ \hline 17 \end{array} \quad \begin{array}{r} 2426 \\ \text{Road} \end{array} \quad \begin{array}{r} +0.2R \\ \hline 25 \end{array}$$

← 62' 11"

\\$ not on old Road (curve)

$$\begin{array}{r} \text{\$} \\ -5.6L \\ \hline 58 \end{array} \quad \begin{array}{r} -0.5L \\ \hline 28 \end{array} \quad \begin{array}{r} 27387 \\ \text{Road} \end{array} \quad \begin{array}{r} -2.3R \\ \hline 24 \end{array} \quad \begin{array}{r} -2.6R \\ \hline 30 \end{array}$$

Flows Left.

Inv. El. 198.4

Flows Left.

$$\begin{array}{r} \text{\$} \\ -8.1 \\ \hline 5.0 \end{array} \quad \begin{array}{r} -7.9 \\ \hline 15.1 \end{array} \quad \begin{array}{r} 2263 \\ \text{Road} \end{array} \quad \begin{array}{r} -7.6R \\ \hline 15.1 \end{array}$$

Inv. El. 211.4

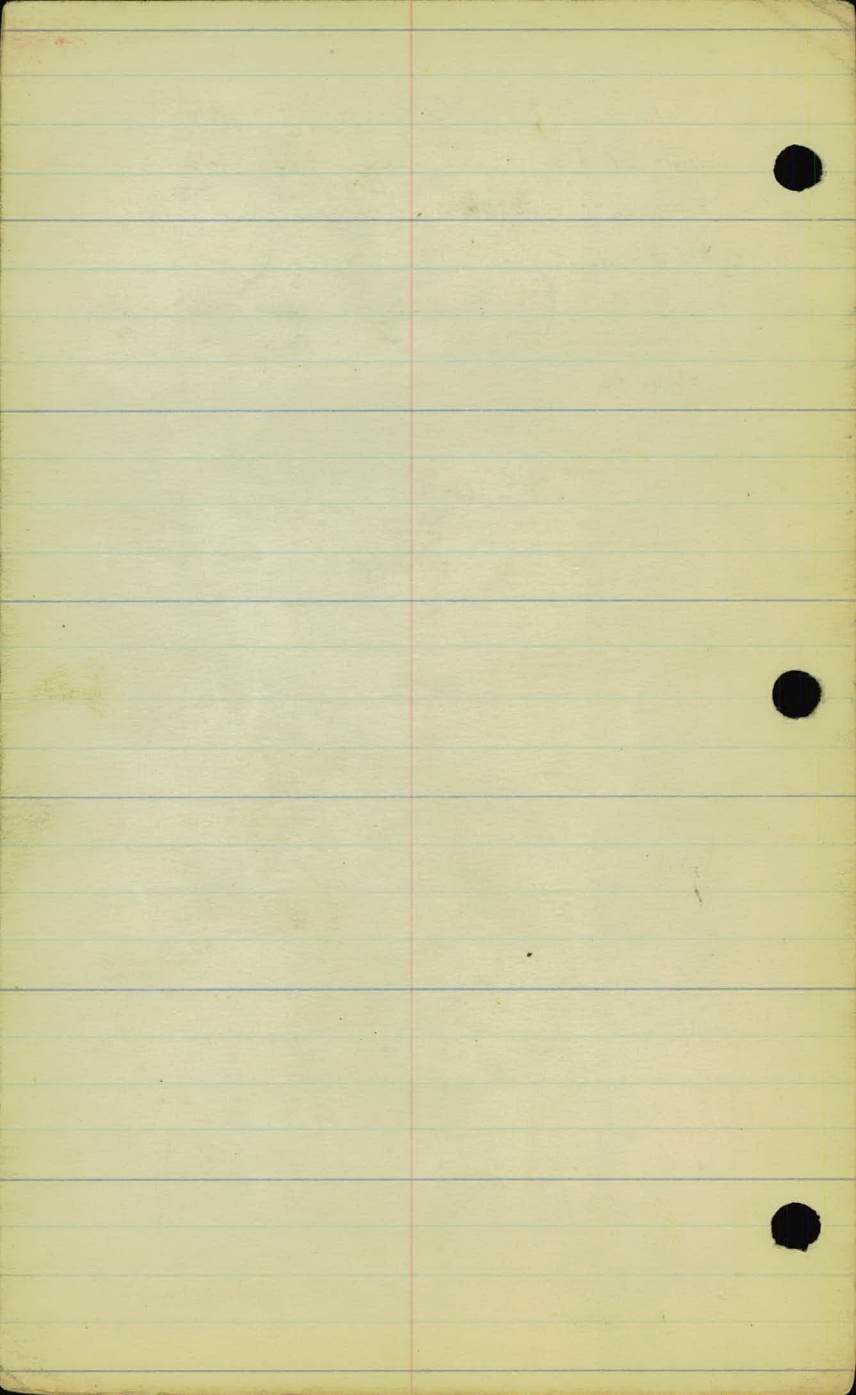
Flows Left.

$$\begin{array}{r} \text{\$} \\ -2.0 \\ \hline 55 \end{array} \quad \begin{array}{r} -1.6 \\ \hline 16.5L \end{array} \quad \begin{array}{r} 233.5 \\ \text{Road} \end{array} \quad \begin{array}{r} -1.3 \\ \hline 32.5R \end{array}$$

Inv. El. 215.2

Flows Right.

$$\begin{array}{r} \text{\$} \\ -4.8 \\ \hline 19 L. \end{array} \quad \begin{array}{r} 241.5 \\ \text{Road} \end{array} \quad \begin{array}{r} -6.2R \\ \hline 25 \end{array}$$



Prop. 23-57

Revised Curves
at
Sta. 87+00 ✓

|

Ang. h. Ang. R

B.E. hinc.
Equation

To page 95

(90+30' ✓ E.C. = 89+94')

N66°28'E

89+32' P.I. 5°51'

88+35' ✓ B.C.

87+853' ✓ E.C.
= +82,37

N72°19'E

87+47' P.I.

72°14'

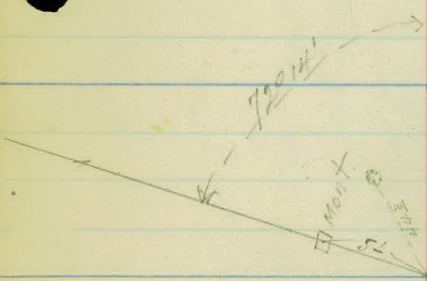
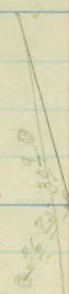
87+00' ✓ B.C.

From Page 4 N00°05'E

76 Page 95

Sta. - Def
 88+35' - 0°00'
 89+00 - 0°58 1/2'
 90+00 - 2°28 1/2'
 +30' - 7°55 1/2'

3° Curve left.
 $\Delta = 50.51'$
 S.T. = 97.6 ✓
 B.C. = 88+35'
 length = 195.0 ✓
 E.C. = 90+30'



100° Curve
 $\Delta = 72.014'$
 B.C. = 87+00.00
 E.C. = 87+85.21

Radius = 6527 ✓

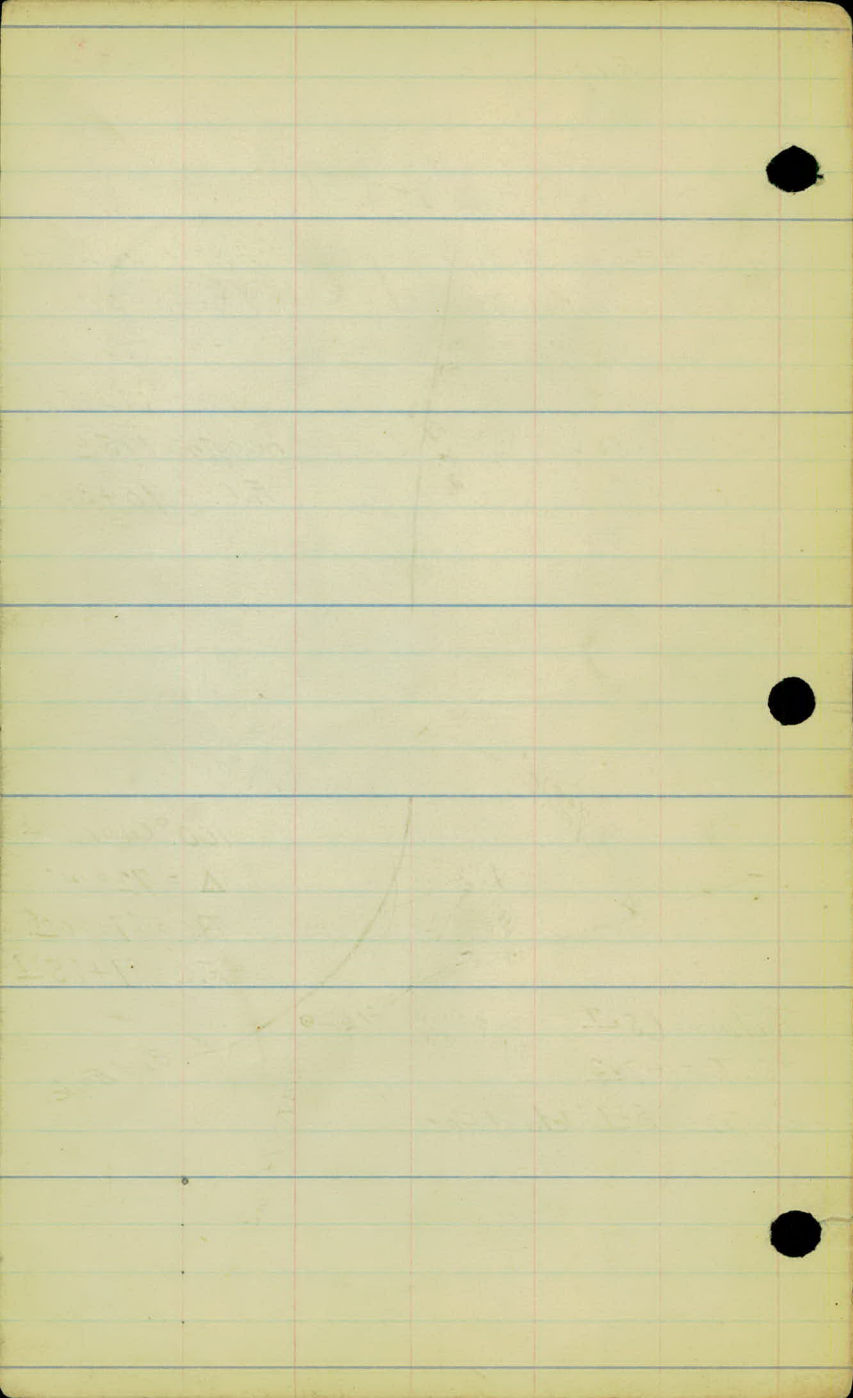
S.T. = 4762 ✓

Length = 8529 "Actual Arc"

4229

old P.I. 97+20'

Bald Eagle



Bald Eagle Ave Revision From 64
Station 87+00 To Station 90+30'
Levels

R.I.L.) 4-21-23
W.M.)

Proj. 23-57

| Station | B.S. | H.I. | F.S. | Rod | Elev |
|-----------|------|----------|------|-----|----------------------|
| | | 226.81 | | | 225.42 ✓
(228.42) |
| | 139 | (229.81) | | | 217.28
(220.28) |
| From Page | | 39 | 953 | | 225.42
(228.42) |
| | | 227.79 | 139 | | |
| | 237 | 230.79 | | | 2239 |
| 87+00 | | | | 3.9 | (226.9) |
| +50 | | | | 4.7 | (226.1) 223.1 |
| 88+00 | | | | 4.7 | (226.1) 223.1 |
| 7352 | | | | 4.5 | (226.3) 223.3 |
| 89+00 | | | | 4.2 | (226.6) 223.6 |
| 90+00 | | | | 3.6 | (227.2) 224.2 |
| +302 | | | | 3.6 | (227.2) 224.2 |
| | | | 237 | | (228.42) |

To page 39

225.42 ✓

B.M. 18" White Oak 86+77 60' L Elev 828.42

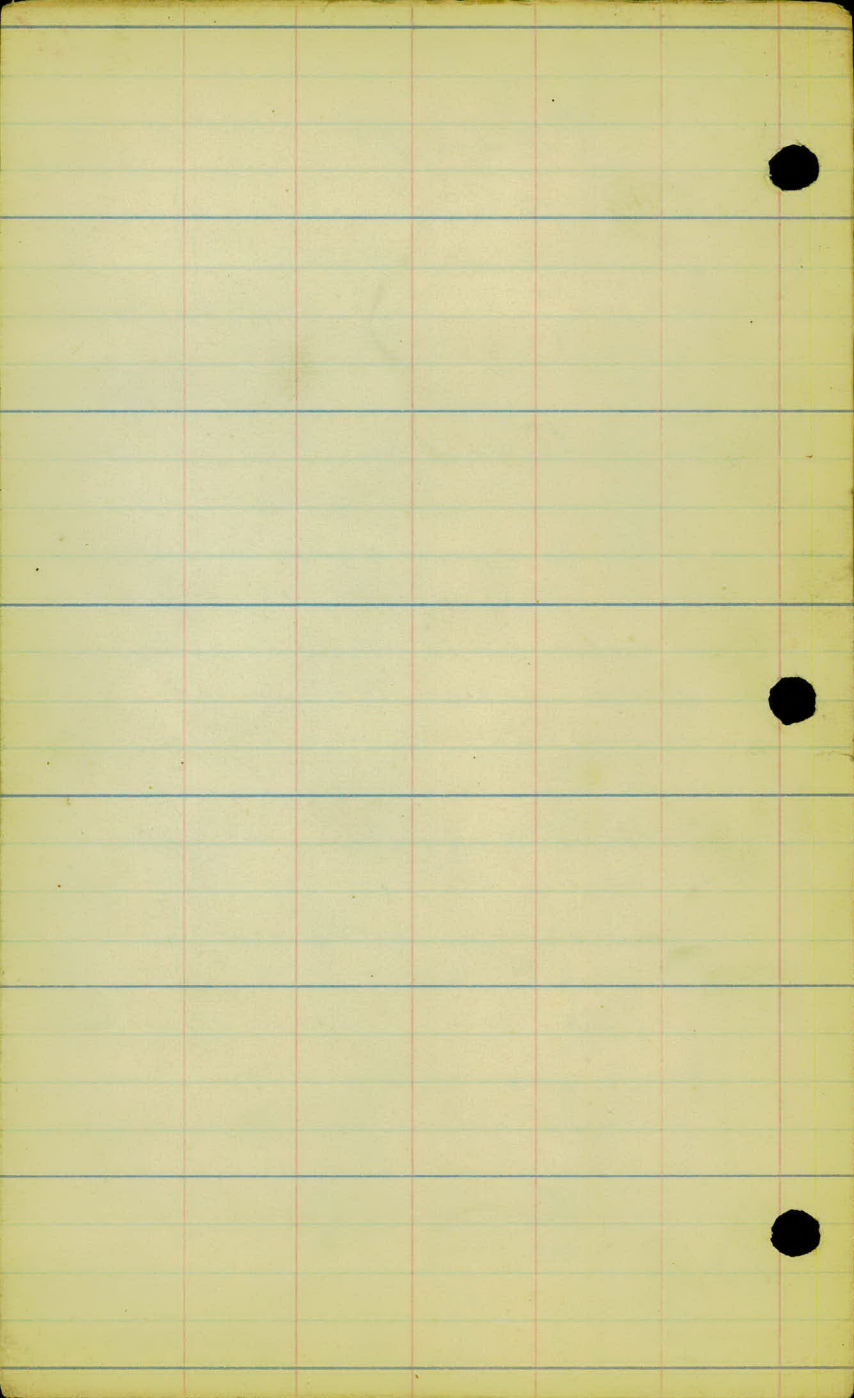
64'

Elev Water - Bald Eagle Lake

BC.

BC.

EC.



Bald Eagle Ave Revision From
Station 87+00 To Station 90+30'

66

Cross Sections

R(L)
WM } 4-21-23
J.G }

Proj. 23-57

Bald Eagle Ave Revision Cross Section

| Station | | Elev. | |
|---------|-----|------------------|--------|
| 87+00 | 3.9 | 226.4 | 23.9 ✓ |
| | 4.7 | 226.1 | |
| +50 | 4.7 | 226.1 | 23.1 ✓ |
| 88+00 | 4.7 | 226.1 | 23.1 ✓ |
| +35 | 4.5 | 226.3 | 23.3 ✓ |
| 89+00 | 4.2 | 226.5 | 23.6 ✓ |
| 90+00 | 3.6 | 227.2 | 24.2 ✓ |
| +30 | 3.6 | 227.2 | 24.2 ✓ |

To Page 55

L

Q

R

67

$$-\frac{0.8}{33} - \frac{0.6}{22} + \frac{0.1}{12} - \frac{0.8}{14} - \frac{1.8}{16} - \frac{1.8}{20} - \frac{1.0}{21} - \frac{1.0}{33}$$

$$-\frac{2.8}{33} - \frac{1.5}{25} - \frac{0.8}{20} - \frac{0.4}{17} - \frac{0.4}{11} + \frac{0.1}{15} + \frac{0.8}{22} + \frac{0.8}{30} + \frac{0.6}{33}$$

$$-\frac{0.5}{33} - \frac{1.6}{24} - \frac{1.6}{21} - \frac{0.1}{15} - \frac{0.3}{9} + \frac{0.1}{12} + \frac{0.6}{13} + \frac{0.5}{16} + \frac{0.5}{20} - \frac{0.6}{22} - \frac{0.6}{24}$$

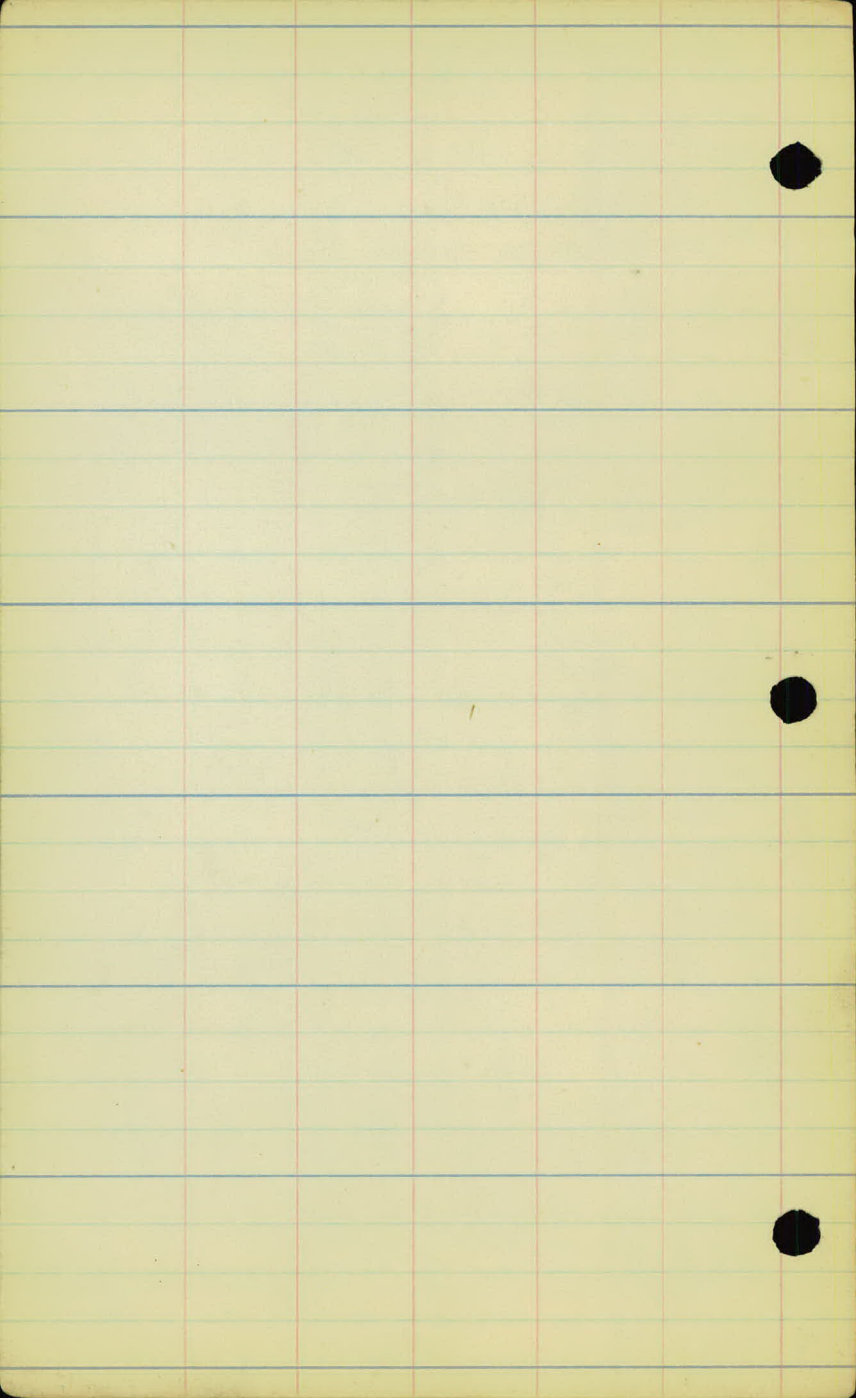
$$-\frac{0.9}{33} - \frac{0.7}{31} - \frac{1.3}{20} - \frac{0.0}{15} - \frac{0.1}{11} + \frac{0.7}{13} + \frac{0.8}{21} - \frac{0.6}{22} - \frac{0.6}{23} + \frac{0.7}{26} + \frac{0.4}{31}$$

$$\frac{0.0}{33}$$

$$-\frac{1.5}{33} - \frac{1.5}{26} - \frac{0.4}{16} - \frac{0.4}{15} + \frac{2.4}{20} + \frac{2.6}{29} + \frac{1.8}{33}$$

$$-\frac{1.3}{33} - \frac{0.9}{14} - \frac{0.3}{16} + \frac{0.7}{18} + \frac{0.5}{33}$$

$$-\frac{1.9}{33} - \frac{1.3}{21} - \frac{0.8}{13} - \frac{0.1}{12} - \frac{0.4}{17} + \frac{0.2}{18} + \frac{0.4}{24} + \frac{0.7}{33}$$



Bald Eagle Ave Revision From
Station 87+00 To Station 90+30

68

Culvert

R.I.L.
W.M.
J.C. } 4-21-23

18" Vitrified Pipe Culvert

Station

87+66

$\frac{41}{220.5}$

226.1

$\frac{21.6}{222.7}$

Flows Left Length 62.6'

Bald Eagle.

69

"A" line -

45 sheets.

Sta. 113 + 42⁴ to 145 + 16¹⁵

R. E. Hustin Transit
Spiegel } chain
Reiling }
Maloney - Rear Flag
Walsh } State Artist

Transit Notes.

Job. 23-57 (Revision)

Bald Eagle
"A" hinc

Ang. h ^h Ang. R.

119 + 67⁷ E.C.

119 + 142 P.I

17°20'

118 + 59⁷ B.C.

115 + 32² ✓ E.C.

114 + 37⁸ P.I 15°10'

113 + 42² ✓ B.C. = Beginning "A" hinc

Bald Eagle
"A" line

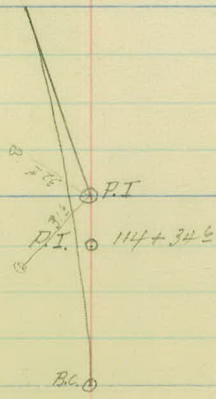
E

Sta. Def.
118+59.6 - 0°00'
119+00 - 3°14'
+67.9 - 8°40'



16° Curve R.H.
 $\Delta = 170.20'$
S.T. = 54.76 ✓
B.C. = 118+59.6
length = 1+08.3 ✓
E.C. = 119+67.9

Sta. Def.
113+42.2 - 0°00'
114+00 - 20°R'
115+00 - 6°R'
+32 - 7°35'



8° Curve Left
 $\Delta = 150.10'$
S.T. = 95.42 ✓
B.C. = 113+42.2 ✓
length = 189.55 ✓
E.C. = 115+32.0

P.I. = 110+66'

(2) of 4

3-26-23.

Ang. h. $\frac{1}{2}$ Ang. R.

129+163 P.O.T

128+30 ✓ F.C.

126+153 P.I 21042'

123+960 ✓ B.C.

123+196 ✓ F.C.

122+028 P.I

28°42'

120+804 ✓ B.C.

Bald Eagle
"A" line

71

274 B

252 C

Sta. Def.

123+96 - 0°00'

124+00 - 0°06'

125+00 - 2°36'

126+00 - 5°06'

127+00 - 7°36'

128+00 - 10°06'

+30 - 10°51'

5° Curve Left.

 $\Delta = 21042'$

S.T. = 219.69 ✓

B.C. = 123+96.0

length = 434.0 ✓

E.C. = 128+30.0

Sta. - Def.

120+80 - 0°00'

121+00 - 1°11'

122+00 - 7°11'

123+00 - 13°11'

+196 - 14°21'

12° Curve Rt.

 $\Delta = 28042'$

S.T. = 122.36 ✓

B.C. = 120+80.0

length = 239.17 ✓

E.C. = 123+196

242.5

B.C.

Ang. h Ang R

139+2676 ✓ F.C.

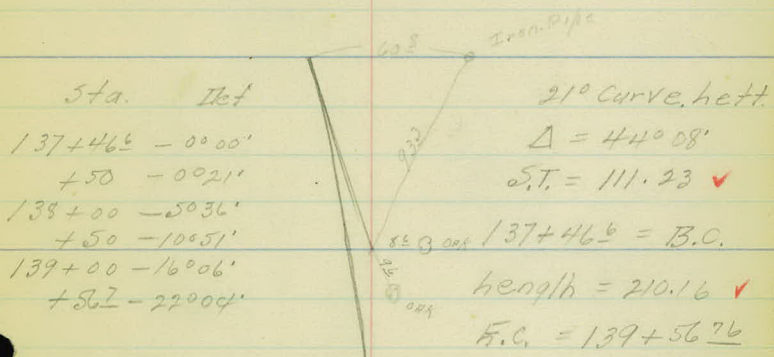
138+5783 P.I 44° 08'

137+465 ✓ B.C.

135+850 ✓ F.C.

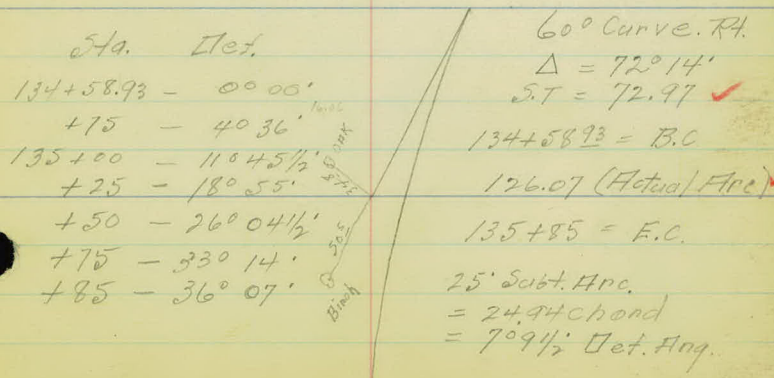
135+312 P.I 72° 14'

134+5893 ✓ B.C.



| Sta. | Det. |
|----------|-----------|
| 137+46.5 | - 00° 00' |
| + 50 | - 00° 21' |
| 138+00 | - 50° 36' |
| + 50 | - 10° 51' |
| 139+00 | - 16° 06' |
| + 56.76 | - 22° 04' |

21° Curve, left.
 $\Delta = 44^\circ 08'$
 S.T. = 111.23 ✓
 137+46.5 = B.C.
 length = 210.16 ✓
 E.C. = 139+56.76



| Sta. | Det. |
|-----------|---------------|
| 134+58.93 | - 00° 00' |
| + 75 | - 40° 36' |
| 135+00 | - 11° 45 1/2' |
| + 25 | - 18° 55' |
| + 50 | - 26° 04 1/2' |
| + 75 | - 33° 14' |
| + 85 | - 36° 07' |

60° Curve, R.H.
 $\Delta = 72^\circ 14'$
 S.T. = 72.97 ✓
 134+58.93 = B.C.
 126.07 (Actual Arc) ✓
 135+85 = E.C.
 25' Subt. Arc.
 = 24.94 chord
 = 7° 9 1/2' Det. Ang.

Ang. R Ang. L.

Bald Eagle
"A" line

145+16.15 End line Intersect Sam. Trac. St. Highway line

143+66⁴⁵ E N.P. Track

142+58² P.O.T.

142+29⁶ ✓ F.C.

141+40⁴³ P.I. 10°44'

140+50⁷ ✓ B.C.

N 1/4 Sec. 12 Meet

350'

P.I.

67° 21'

255.7'

145+16.15

Taylor Ave

S.T. St. Highway Line

81° 24'

Tang. Pt Intersection

3° 20' Curve

Lot-8, BIX-1 Iron Pipe
Shadyside Add #2

30' 25° 0' E.P.

To White Bear

Sta. Met

- 140+50.1 - 0° 00'
- 141+00 - 10° 29'
- 142+00 - 40° 29'
- +296 - 50° 22'

31° 25'

6° Curve, R.H.

$\Delta = 100$ W.H.

S.T. = 89.75 ✓

B.C. = 140+50.1

length = 178.9 ✓

F.C. = 142+296

4-2-23

~~4~~

Ang. h. Ang. R

Bald Eagle "A" line
Artificial Topography
Sta. 117+00 - 145+00

74

5.5 sheets

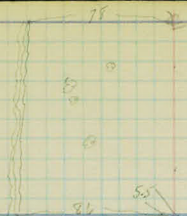
R. E. Austin, Recorder
Sheepskin } chain
Walsh }

0 of 5

+97 Trace 31'
+93 Trace 30'
+10 Trace 21'

+41 Trace 25'

+54 Trace 24'



0 of 5

+98 Trace 24' 11700
+91 Trace 22' R
+82 Trace 20'
+57 Trace 22'

75

+24 Trace 23'
+07 Trace 21' 11800
+59 Trace 19'

11700

11600

11500

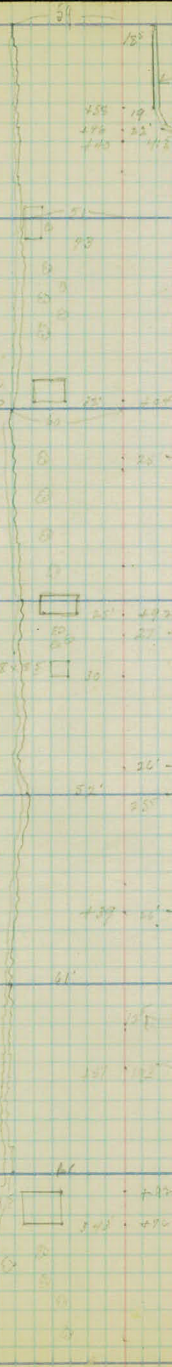
11400

11300

11200

See Old Notes for Topography
Std. 112 to 118

Bald Eagle
"A" line



concrete wall
12 wide - 4' high

Map No. 5117

125.00

418 Tree 25'

14x10
Shore Ho

124.00

428 Tree 25'
467 Tree 25'

20' →

478 tree 25'

Barrel 12 x 10

25' 49.2
50' 27' →

123.00

483 Tree 25'
484 Tree 25'
485 Tree 24'

Barrel No. 8 x 10

50' 27' →

488 tree 17'

20' →

52' 25' →

122.00

495 Tree 25'
496 Tree 25'

150' tree 15'

497 Tree 17'
498 Tree 23'
499 Tree 23'
500 Tree 23'
501 Tree 23'

57' 26' →

121.00

502 tree 25'
503 tree 25'
504 tree 25'
505 tree 25'

55' concrete wall

57' 26' →

506 tree 25'
507 tree 27'

61' 70.2
62' 70.2

120.00

Shore Ho 16x10

508 Tree 25'
509 Tree 27'

510
511
512
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601 Tree 25'

119.00

Bald. Eagle
"A" line

E
Wedge
+31
27 x x x +56

+22 Root No 12x16

132+00

+25 tree 24'

+42 ~~tree~~ +91 wooden steps
4' wide

Water top +56
+76 ~~tree~~ Grand Step 13'

+33 tree 23'

+42 tree 25'

131+00

+47 tree 25'
+55 tree 24'

+61 ~~tree~~ +11 concrete steps
2' wide

130+00

+48 tree 24'

+48 tree 17'
+38 tree 17'

+55 @ tree 16'

+70 tree 24'
+61 step 15'

129+00

Bald Eagle Lake

+70 +30

128+00

+83 tree 31'

+82 tree 24'

+18 tree 27' L

+57 ~~tree~~

+14
concrete wall 12' wide 4' high

127+00

+97 +11

126+00

4055

Bald Eagle
"A" line

+17 Trace 25'L
+18 Trace 25'L
+19 Trace 30'L

+15 Trace 30'L

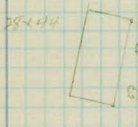
+22 A.T. 16'L
+23 T.P. 15'L
+24 Trace 21'L

+100 Trace 18'L

+78 Trace 15'

+71 Trace 25'

+30 Trace 23'L



20' E.P. 200 40' S 140.00
78

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+96 Fence 10' W
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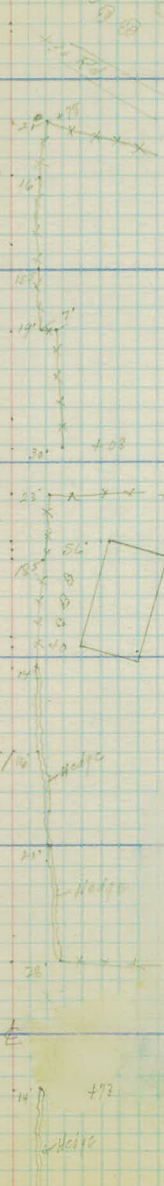
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+71 Trace 25'
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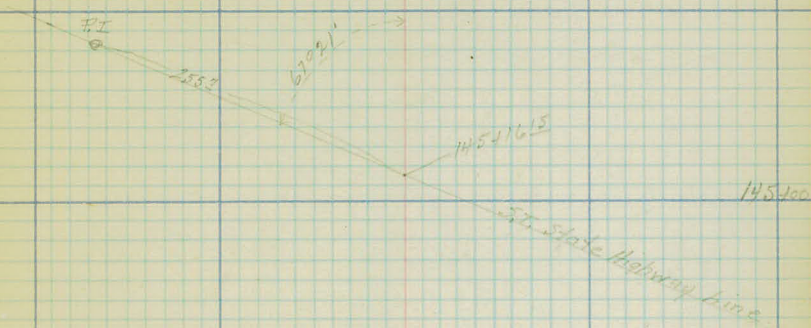
+140 Trace 26'
+141 Trace 26'
+142 Trace 26'
+143 Trace 26'
+144 Trace 26'
133.00

Ball Field Lake

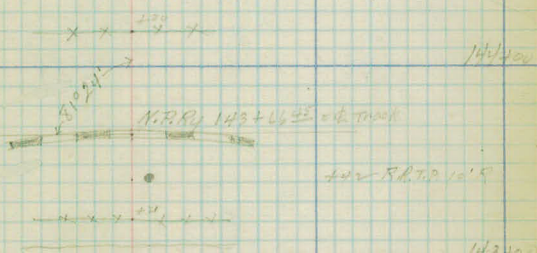


Oct 5

Bald Eagle
"H" line

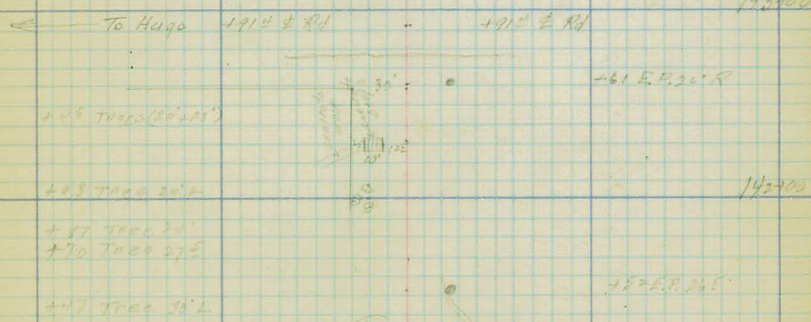


145.00



144.00

143.00



+61 E.E. 20' R

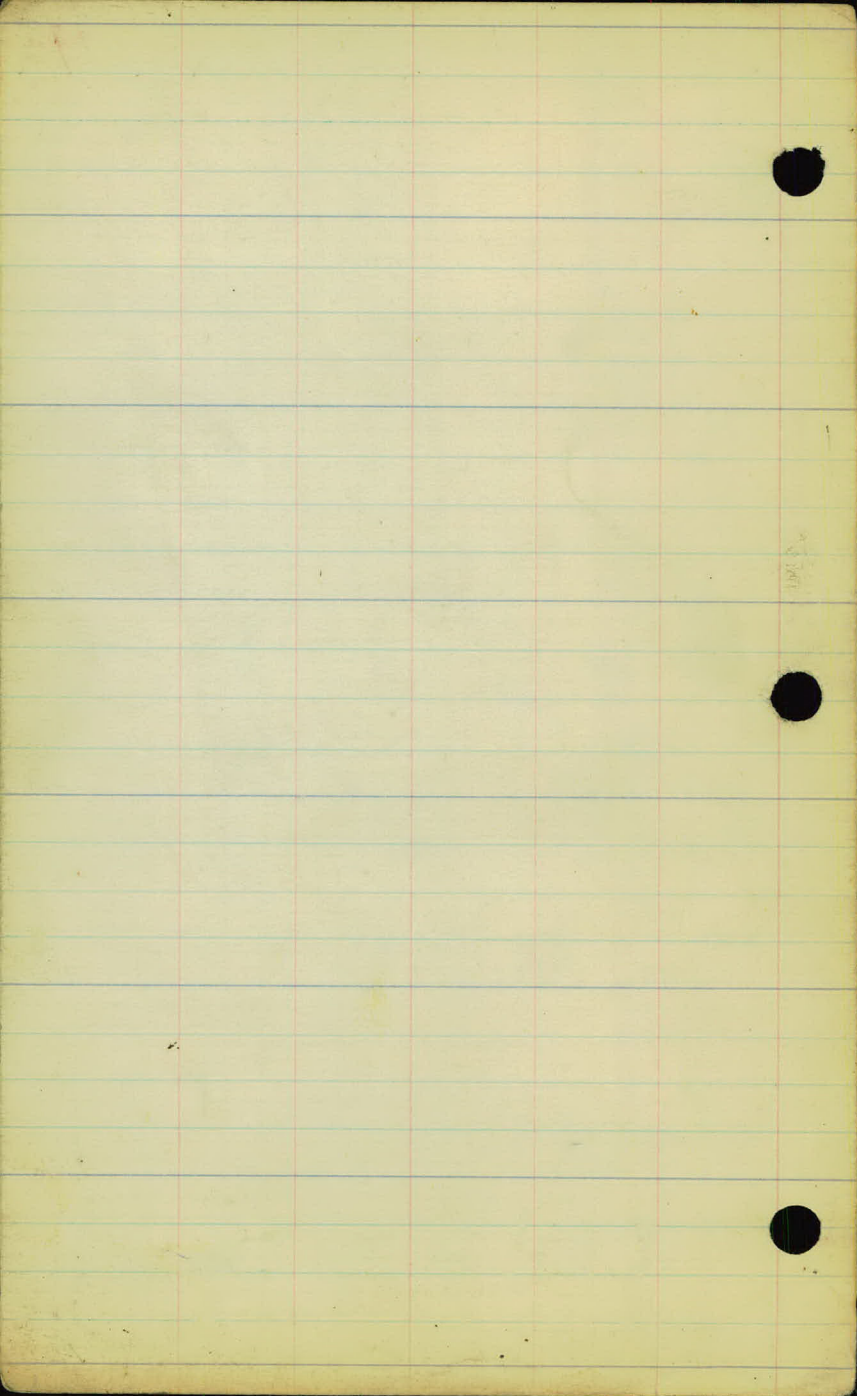
142.00

+12 R.R. 145

141.00



140.00



BALD EAGLE "A" LINE LEVELS

80

5 SHEETS

R.I.L
W.M.C.D

check over

4/20/23

Sheet # 1 of 5

| Station | B.S. | H.I. | F.S. | Rod | Elev |
|---------|------|--------|------|------|--------|
| | 451 | 237.25 | | | |
| 115+00 | | | | 11 | 226.1 |
| +32 | | | | 10.7 | 226.6 |
| 116+00 | | | | 9.7 | 227.6 |
| 117+00 | | | | 6.5 | 230.8 |
| +45 | | | | 4.9 | 232.4 |
| 118+00 | | | | 4.7 | 232.6 |
| +59.6 | | | | 4.9 | 232.4 |
| 119+00 | | | | 5.2 | 232.1 |
| +67.9 | | | | 6.2 | 231.1 |
| | | | 6.13 | | 231.12 |
| | 192 | 233.04 | | | |
| 120+00 | 643 | | | 2.2 | 230.6 |
| +80.9 | | | | .30 | 230.0 |
| 121+00 | | | | 3.3 | 229.7 |
| 122+00 | | | | 5.5 | 227.5 |
| 123+00 | | | | 5.1 | 227.9 |
| +19.6 | | | | 4.5 | 228.5 |
| +96.0 | | | | 1.6 | 231.4 |
| | | | 0.85 | | 232.19 |
| | 1235 | 244.54 | 6.9 | | |

B.M. White Oak 117+00 75' L Elev 232.74 81

EC.

R.I.L. } 3-27-23
W.M.C.D.)

BC.

EC.

T.P. on spike 117+67.9

BC.

EC.

BC.

T.P. Top of spike 124+00

Sheet # 2 of 5

| Station | B.S. | H.I. | F.S. | Rod | Elev |
|---------|-------|--------|--------|------|--------|
| | 12.35 | 244.54 | | | 241.5 |
| 124+00 | | | | 130 | 231.5 |
| 125+00 | | | | 7.9 | 236.6 |
| +30 | | | | 6.8 | 237.7 |
| 126+00 | | | | 2.7 | 241.8 |
| | | | 0.30 | | 244.24 |
| | 7.18 | 251.42 | | | |
| 127+00 | 59.53 | | | 5.4 | 246.0 |
| +35 | 8.89 | | | 4.4 | 247.0 |
| | 10.64 | | | | |
| 128+00 | | | | 3.4 | 248.0 |
| +30.0 | | | | 3.1 | 248.3 |
| 129+00 | | | | 2.7 | 248.7 |
| +16.7 | | | | 2.7 | 248.7 |
| 130+00 | | | | 3.7 | 247.7 |
| 131+00 | | | | 5.9 | 245.5 |
| 132+00 | | | | 8.9 | 242.5 |
| 133+00 | | | | 10.4 | 241.0 |
| 134+00 | | | | 9.9 | 241.5 |
| +58.9 | | | | 9.3 | 242.1 |
| | | | 8.59 | | 242.83 |
| | 7.50 | 252.33 | 8.89 | | |
| 135+00 | | | | 10.2 | 242.1 |
| +8.5 | | | | 6.9 | 245.4 |
| 136+00 | | | | 6.0 | 246.3 |
| | | | 242.83 | | |
| | | | 232.19 | | |
| | | | 10.64 | | |

R.I.L. } 3-28-23
 W.M.C.D. }

Street

T.P. on top of Wall 126+00 30' R

Center of Williams St

E.C.

P.O.T

B.C.

T.P. on spike at P.I. 135+31.9

| Station | B.S. | I.I. | F.S. | Rod | Elev |
|---------|------|--------|-------|------|--------|
| | | 252.33 | | | |
| 137+00 | | | | 4.0 | 248.3 |
| | | | (179) | | 250.54 |
| +46.2 | | | | 5.0 | 247.3 |
| 138+00 | | | | 5.9 | 246.4 |
| +5.0 | | | | 6.4 | 245.9 |
| 139+00 | | | | 7.4 | 244.9 |
| +56.8 | | | | 8.6 | 243.7 |
| | | | 8.54 | | 243.79 |
| | 0.54 | 244.33 | | | |
| 140+00 | | | | 1.5 | 242.8 |
| +50.7 | | | | 3.0 | 241.3 |
| 141+00 | | | | 3.6 | 240.7 |
| 142+00 | | | | 4.7 | 239.6 |
| +29.6 | | | | 5.5 | 238.8 |
| +58.4 | | | | 6.9 | 237.4 |
| +91.4 | | | | 8.4 | 235.9 |
| 143+00 | | | | 9.1 | 235.2 |
| | | | 5.16 | | 238.37 |
| +12 | | | | 9.0 | 235.3 |
| +19 | | | | 5.1 | 239.2 |
| +37 | | | | 12.5 | 231.8 |
| +52 | | | | 13.5 | 230.8 |
| +68.8 | | | | 9.50 | 235.83 |
| +77.8 | | | | 12.0 | 232.3 |
| +79.8 | | | | 12.0 | 232.3 |
| +9.0 | | | | 6.6 | 237.7 |

BM Elec Pole 137+30 16' L

BC,

RIL } 3-28-23
W McD

3-28-23

EC,

TP on spike of EC,

X

BC,

EC,

RIL
W McD

Φ of Hugo Road

3-29-23

BM Tele Pole 143+00 40' L

Top of E Rail N.P. Ry

Sheet # 4 of 5 Check Levels

| Station | B.S. | H.I. | F.S. | Rod | Elev |
|---------|---------------------|--------|----------------------|-----|--------|
| | 054 | 244.33 | | | |
| 144+00 | | | | 7.0 | 237.3 |
| | | | 12.65 | | 231.68 |
| | $\frac{7.47}{79.0}$ | 239.09 | $\frac{0.54}{12.11}$ | | |
| 145+00 | | | | 8.3 | 230.8 |
| T161 | | | | 9.1 | 220.0 |

20379
23168
12.11

Check Levels

| | | | | | |
|--------------------|--------|--|------|--------------------|--------|
| 412 | 239.95 | | | | 235.83 |
| | | | 2.30 | | 237.65 |
| 5.47 | 243.12 | | | 2.4055 | |
| $\frac{9.54}{487}$ | | | 2.57 | $\frac{3583}{472}$ | 240.55 |
| $\frac{487}{472}$ | | | 487 | | 240.61 |
| 9.16 | 249.84 | | | | |
| | | | 7.02 | | 242.82 |
| 5.32 | 249.04 | | | | |
| | | | 9.68 | | 238.36 |

T.P. Top of stake 145+00

R.I.L. } 3-29-23
W.M.C.D. }

Intersection of Highway #1

Top of East Rail N.P. Ry

B.M. Elec Pole 134+ B.E. Line Elev 240.68

B.M. Elec Pole 134+ B.E. Line Elev 240.68

B.M. Tele Pole 143+00 "A" Line Elev 238.37

Station BS. H.I. F.S. Rod Elev

BALD EAGLE "A" LINE
CROSS SECTIONS

85

6 SHEETS

ck.

ck.

4/20/23

"A" LINE CROSS SECTIONS

| Station | Elev | R.I.L.
W.M.C.D.
W.M.
R.R. |
|---------|---------|------------------------------------|
| 115+00 | 226.1 ✓ | } 3-21-23 |
| +32 | 226.6 ✓ | |
| 116+00 | 227.5 ✓ | |
| +33 | 228.8 | |
| 117+00 | 230.7 ✓ | |
| +15 | 231.6 | |
| +25 | 232.0 | |
| +45 | 232.6 ✓ | |
| +55 | 232.5 | |
| +67 | 232.6 | |
| 118+00 | 232.6 ✓ | |
| +59.6 | 232.3 ✓ | |
| 119+00 | 232.0 ✓ | |
| +67.9 | 231.0 ✓ | |
| 120+00 | 230.8 | |
| +80.4 | 230.0 | |
| 121+00 | 229.7 | |

L

Q

R

$$\frac{50}{33} - \frac{47}{27} - \frac{47}{16} - \frac{03}{10}$$

$$\frac{06}{11} - \frac{65}{17} - \frac{64}{33}$$

$$\frac{-40}{33} - \frac{45}{28} - \frac{08}{9}$$

$$\frac{-05}{15} + \frac{17}{21} + \frac{35}{33}$$

$$\frac{-20}{33} \frac{00}{15} \frac{-10}{14}$$

$$\frac{00}{16} - \frac{64}{21} + \frac{68}{33}$$

$$+ \frac{18}{33} + \frac{39}{21} + \frac{32}{16} - \frac{02}{12}$$

$$+ \frac{00}{20} + \frac{40}{26} + \frac{100}{38}$$

$$\frac{+25}{33} + \frac{20}{19} - \frac{05}{15}$$

$$\frac{-00}{22} + \frac{30}{25} + \frac{97}{400}$$

$$\frac{+30}{33} \frac{20}{19} - \frac{07}{15}$$

$$+ \frac{07}{9} \frac{00}{33}$$

+05 Buffalo Ave

$$\frac{-02}{20} - \frac{02}{33}$$

$$\frac{+38}{33} + \frac{31}{28} - \frac{07}{16}$$

$$\frac{-03}{16} + \frac{30}{20} + \frac{55}{23} + \frac{70}{33}$$

$$\frac{-06}{33} + \frac{15}{23} - \frac{05}{20} + \frac{03}{50}$$

$$\frac{-03}{12} + \frac{50}{19} + \frac{43}{33}$$

$$+ \frac{05}{33} + \frac{10}{27} - \frac{08}{19} \frac{00}{11} + \frac{13}{5}$$

$$\frac{-04}{16} + \frac{07}{21} + \frac{12}{33}$$

$$\frac{-35}{33} - \frac{30}{21} - \frac{10}{15} \frac{00}{6}$$

$$\frac{-05}{13} - \frac{12}{14} - \frac{16}{20} \frac{00}{21} + \frac{12}{33}$$

$$\frac{-55}{33} - \frac{45}{20} - \frac{10}{11}$$

$$\frac{10}{11} - \frac{10}{33}$$

$$\frac{-31}{33} - \frac{37}{17} - \frac{06}{10}$$

$$\frac{-05}{11} - \frac{10}{17} - \frac{06}{33}$$

$$\frac{-40}{33} - \frac{20}{28} - \frac{06}{16} - \frac{10}{15}$$

$$\frac{-05}{12} - \frac{06}{16} \frac{00}{20} \frac{00}{33}$$

$$\frac{-80}{42} - \frac{18}{24} - \frac{06}{10}$$

$$\frac{-92}{13} - \frac{06}{15} - \frac{06}{18} \frac{00}{20} + \frac{07}{33}$$

"A" LINE CROSS SECTIONS

| Station | Elev | |
|---------|-------|--|
| 122+00 | 227.5 | P.I.
W.M.C.D.
W.N.
RR } 3-31-23 |
| 123+00 | 227.9 | |
| +19.6 | 228.5 | |
| +96° | 231.4 | |
| 124+00 | 231.5 | |
| 125+00 | 236.6 | |
| +30 | 237.7 | |
| +53 | 239.4 | |
| 126+00 | 241.8 | |
| 127+00 | 246.0 | |
| +15 | 246.6 | |
| +2.5 | 246.8 | |
| +35 | 247.0 | |
| +54 | 247.9 | |
| +66 | 248.0 | |
| 128+00 | 248.0 | |
| +30 | 248.3 | |

L

C

R

87

$$\frac{9.5}{50} - \frac{47}{31} - \frac{2.2}{17} - \frac{0.5}{10} - \frac{0.5}{12} - \frac{0.8}{33}$$

$$-\frac{4.5}{40} - \frac{3.5}{17} - \frac{0.5}{11} - \frac{0.7}{12} - \frac{1.0}{29} - \frac{1.0}{33}$$

$$\frac{11.2}{50} - \frac{6.0}{33} - \frac{3.5}{20} - \frac{0.4}{11} - \frac{0.3}{10} - \frac{1.0}{13} - \frac{1.0}{33}$$

$$-\frac{19.0}{56} - \frac{10.0}{31} - \frac{0.5}{10} + \frac{1.0}{33}$$

$$\frac{0.0}{23} - \frac{0.4}{28} + \frac{1.0}{33}$$

$$\frac{0.0}{17} + \frac{2.7}{16} + \frac{6.5}{33}$$

$$-\frac{8.0}{33} - \frac{0.4}{28} + \frac{0.0}{18} + \frac{8.2}{19} + \frac{8.0}{33}$$

$$-\frac{3.5}{33} - \frac{0.0}{30} - \frac{0.0}{20} - \frac{0.5}{16} - \frac{0.5}{15} - \frac{0.1}{8} - \frac{1.0}{15} + \frac{2.0}{16} + \frac{7.5}{33}$$

$$+ \frac{0.5}{10} - \frac{1.0}{16} + \frac{6.5}{17} + \frac{6.0}{33}$$

$$+ \frac{0.4}{10} + \frac{3.0}{33}$$

30

33

STREET

$$+ \frac{1.0}{21} - \frac{2.0}{33}$$

$$\frac{4.0}{33} - \frac{1.0}{25} - \frac{0.4}{12} + \frac{0.4}{20} + \frac{9.2}{33} - \frac{4.8}{33}$$

$$-\frac{6.0}{33} - \frac{0.6}{19} - \frac{0.0}{6} + \frac{0.0}{7} - \frac{0.5}{8} - \frac{0.5}{13} + \frac{1.5}{15} + \frac{4.5}{33}$$

"A" LINE CROSS SECTIONS

| Station | Elev |
|---------|-------|
| 129+00 | 248.7 |
| + 16.7 | 248.7 |
| + 22.7 | 248.7 |
| + 48.5 | 248.0 |
| + 95 | 247.9 |
| 130+00 | 247.7 |
| 131+00 | 245.5 |
| 132+00 | 242.5 |
| + 30 | 242.1 |
| + 50 | 241.8 |
| 133+00 | 241.0 |
| 134+00 | 241.5 |
| + 58.9 | 242.1 |
| 135+00 | 242.1 |
| + 50 | 244.2 |
| + 85 | 245.4 |
| 136+00 | 246.3 |
| 137+00 | 248.3 |

RIL
WM
RW } 4-2-23

L

C

R

$$-\frac{10.0}{33} - \frac{0.5}{14} - \frac{0.2}{9} - \frac{0.7}{11} + \frac{0.7}{33}$$

$$-\frac{0.2}{12} + \frac{1.0}{33}$$

$$-\frac{0.3}{12} + \frac{3.0}{19} + \frac{3.7}{33}$$

$$-\frac{0.2}{14} + \frac{4.7}{20} + \frac{5.0}{33}$$

$$-\frac{6.5}{33} - \frac{0.6}{25} - \frac{0.4}{17} - \frac{0.9}{15}$$

$$\frac{0.0}{11} + \frac{5.0}{20} + \frac{10.0}{33}$$

$$-\frac{6.7}{33} \frac{1.0}{24} \frac{0.7}{20} - \frac{1.1}{16} - \frac{0.3}{12}$$

$$-\frac{16.0}{33} - \frac{0.1}{15}$$

$$\frac{0.0}{13} + \frac{8.0}{26} + \frac{8.1}{33}$$

$$\frac{0.0}{11} + \frac{10.5}{29} + \frac{10.5}{33}$$

$$-\frac{0.3}{14} \frac{0.0}{20} + \frac{8.0}{33}$$

$$\frac{0.0}{19} + \frac{0.6}{33}$$

$$-\frac{11.0}{33} - \frac{0.9}{15}$$

$$-\frac{12.5}{33} - \frac{0.5}{13}$$

$$-\frac{0.2}{8} - \frac{0.7}{10} - \frac{0.4}{28} + \frac{0.3}{33}$$

$$-\frac{0.5}{9} - \frac{0.8}{11} - \frac{0.9}{13} - \frac{0.6}{14} + \frac{8.7}{33}$$

$$-\frac{2.0}{33} - \frac{0.4}{14}$$

$$-\frac{0.5}{13} - \frac{1.1}{15} - \frac{1.1}{19} - \frac{0.7}{22} + \frac{0.5}{33}$$

$$-\frac{4.3}{33} - \frac{0.3}{19}$$

$$-\frac{0.3}{12} - \frac{0.2}{14} - \frac{0.6}{16} \frac{0.8}{16} + \frac{0.2}{20} + \frac{1.4}{33}$$

$$+\frac{2.0}{33} + \frac{1.0}{22} - \frac{0.8}{19} - \frac{0.8}{18} \frac{0.8}{16}$$

$$+\frac{0.3}{5} - \frac{0.7}{8} - \frac{0.7}{13} + \frac{0.1}{14} + \frac{1.6}{33}$$

$$+\frac{1.4}{33} + \frac{0.6}{14} - \frac{0.5}{12} - \frac{0.5}{14} \frac{0.3}{10}$$

$$-\frac{0.4}{7} - \frac{0.7}{8} - \frac{0.7}{10} - \frac{1.0}{12} + \frac{3.0}{33}$$

$$+\frac{2.2}{33} + \frac{2.2}{15} + \frac{0.2}{10}$$

$$+\frac{0.3}{17} + \frac{0.5}{23} + \frac{0.8}{25} + \frac{1.2}{33}$$

"A" LINE CROSS SECTIONS

| Station | Elev |
|----------|-------|
| 137+46.6 | 247.3 |
| 138+00 | 246.4 |
| +50 | 245.9 |
| 139+00 | 244.9 |
| +56.8 | 243.7 |
| 140+00 | 242.8 |
| +50.7 | 241.3 |
| 141+00 | 240.7 |
| +40 | 240.8 |
| 142+00 | 239.6 |
| +29.6 | 238.8 |
| +58.4 | 237.4 |
| +65 | 237.2 |
| +91.4 | 235.9 |

RIL

WMCD

NM

RR

} 3-29-23

L

E

R

89

$$+ \frac{23}{33} + \frac{17}{18} + \frac{09}{13} - \frac{02}{11} - \frac{00}{13} - \frac{00}{16} + \frac{02}{27} - \frac{00}{33}$$

$$- \frac{15}{33} - \frac{15}{11} - \frac{05}{7} - \frac{02}{9} - \frac{04}{12} - \frac{10}{15} - \frac{05}{33}$$

$$- \frac{16}{33} - \frac{20}{20} - \frac{15}{11} - \frac{04}{9} - \frac{05}{12} - \frac{10}{14} - \frac{10}{17} - \frac{12}{33}$$

K ϕ of 5t

$$- \frac{10}{33} - \frac{10}{18} - \frac{01}{9} - \frac{00}{24} - \frac{06}{31} - \frac{10}{33}$$

$$+ \frac{08}{33} + \frac{04}{12} - \frac{04}{11} - \frac{04}{12} - \frac{10}{15} - \frac{10}{16} + \frac{10}{20} + \frac{05}{33}$$

$$+ \frac{16}{33} + \frac{14}{13} - \frac{03}{11} - \frac{05}{10} - \frac{10}{17} - \frac{10}{18} + \frac{05}{25} + \frac{15}{29} + \frac{10}{33}$$

$$- \frac{11}{33} - \frac{08}{13} - \frac{03}{7}$$

$$- \frac{03}{11} - \frac{08}{19} - \frac{00}{33}$$

$$- \frac{04}{33} - \frac{14}{10} - \frac{02}{8} - \frac{02}{13} - \frac{20}{17} - \frac{20}{33}$$

$$+ \frac{10}{33} - \frac{08}{16} - \frac{10}{15} - \frac{10}{14} - \frac{02}{11} - \frac{02}{10} - \frac{20}{14} - \frac{20}{23} + \frac{04}{33}$$

$$+ \frac{35}{33} + \frac{20}{17} - \frac{12}{12} - \frac{12}{11} - \frac{05}{10}$$

$$\frac{00}{12} + \frac{07}{15} + \frac{07}{33}$$

$$+ \frac{53}{33} + \frac{50}{45} - \frac{10}{14} - \frac{05}{10} - \frac{04}{15} - \frac{00}{21} - \frac{05}{25} - \frac{05}{26} - \frac{00}{28} - \frac{00}{30} + \frac{35}{34}$$

$$- \frac{45}{33} - \frac{05}{12} - \frac{02}{15} - \frac{05}{28} - \frac{05}{33}$$

$$\frac{00}{33}$$

$$+ \frac{06}{33}$$

"A" LINE CROSS SECTIONS

| Station | Elev | R.I.L
W.M.C.D
W.M.
R.R. | 3-29-23 |
|---------|-------|----------------------------------|---------|
| 143+00 | 235.2 | | |
| +12 | 235.3 | | |
| +19 | 239.2 | | |
| +37 | 231.8 | | |
| +52 | 230.8 | | |
| +66.4 | 235.0 | 4 of N.P. R.R. | |
| +77.8 | 232.3 | | |
| +79.8 | 232.3 | | |
| +90 | 237.7 | | |
| 144+00 | 237.3 | | |
| 145+00 | 230.8 | | |
| +162 | 230.0 | | |

L

E

R

90

$$\frac{00}{33}$$

$$\frac{00}{12} + \frac{05}{33}$$

$$- \frac{07}{33}$$

$$- \frac{01}{10} + \frac{15}{22} + \frac{12}{25} + \frac{22}{33}$$

$$+ \frac{04}{23}$$

$$- \frac{16}{33}$$

$$- \frac{01}{33}$$

$$+ \frac{02}{33}$$

$$+ \frac{02}{33}$$

$$- \frac{02}{33}$$

$$\frac{00}{33}$$

$$+ \frac{03}{33}$$

$$+ \frac{02}{33}$$

$$+ \frac{04}{33}$$

$$+ \frac{06}{33}$$

$$- \frac{00}{33}$$

$$+ \frac{20}{33}$$

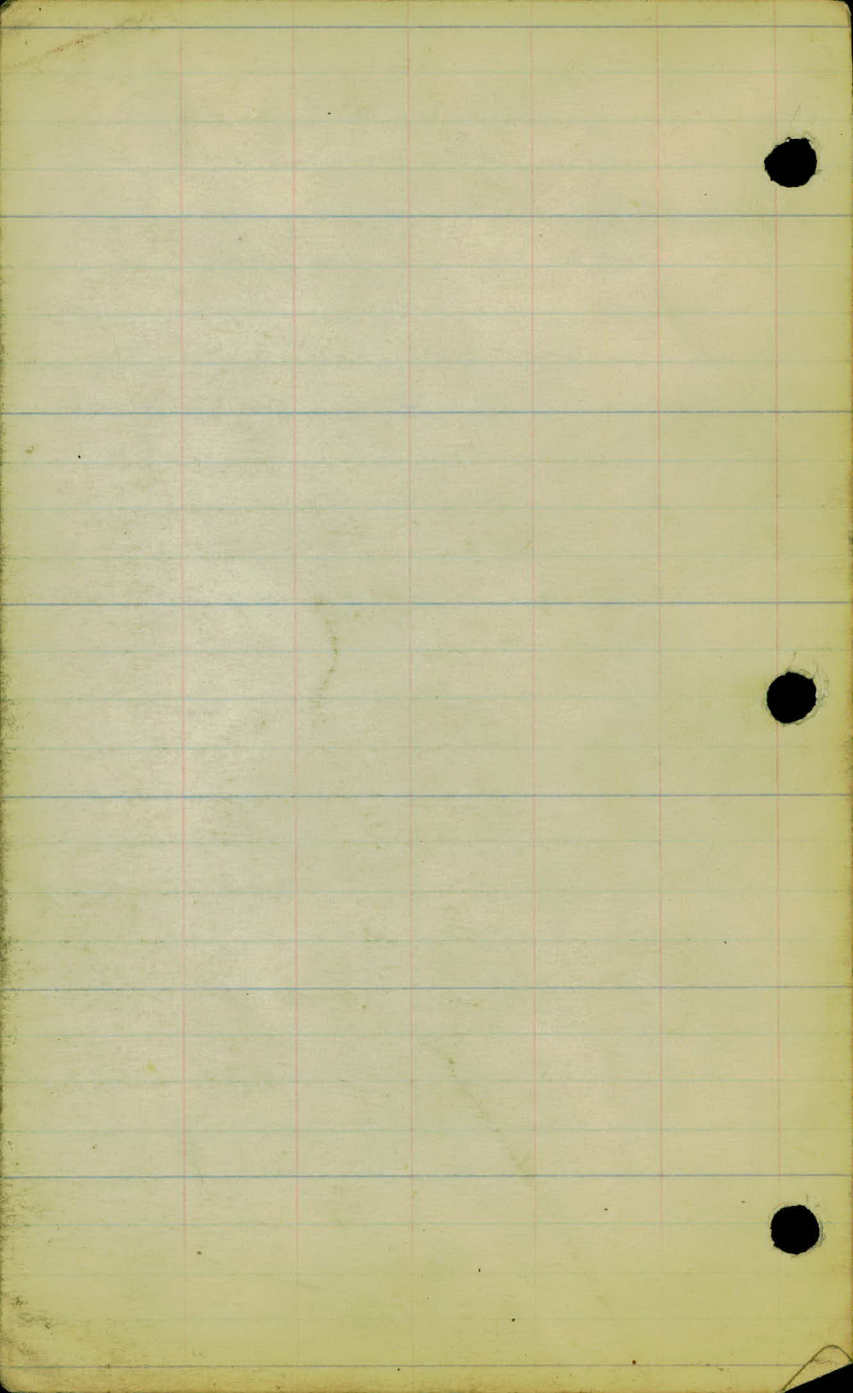
$$- \frac{05}{33}$$

$$+ \frac{04}{33}$$

$$+ \frac{15}{33}$$

$$\frac{00}{33}$$

$$+ \frac{20}{33}$$



BALD EAGLE "A" LINE
CULVERTS

91

Station C R

12246 22' Trip Bag

$\frac{40}{22}$ $\frac{11}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{30}{22}$

142469 18" 50' 36'

$\frac{50}{22}$ $\frac{36}{22}$

Flows 35'

Flows 35'

16" Corrugated Iron Pipe

$\frac{50}{22}$ $\frac{36}{22}$

Project 24-51 (Revision on Proj 23-57)

Transit Notes

Sta. 97+85' to 118+27'

| | |
|---------------|---------|
| R.F. Austin | } Party |
| H.N. Skooglen | |
| W. Maloney | |
| M. Golvin | |

72-14-23

4

Height. Height.

107+930 P.O.T

102+655 P.O.T

99+11.3 P.O.T

98+69⁵ ↓ E.C.

589°-03'E

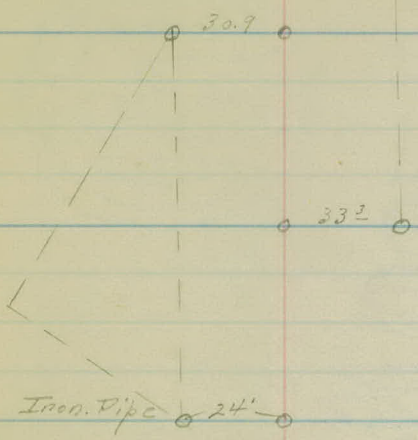
98+28⁴ P.I.

24°29'

97+85¹ ↓ B.C.

N66°-28'E

From Page 63



Iron Pipe S.E. Cor.
Pank and White Bear

Iron Pipe 24'

Old P.I.
Bald Eagle
Survey

99+10.1

18" Elm.

51.7

397.4

400.81

22.25

29° Curve R

$\Delta = 24029'$

S.T. = 43.3 ✓

Length = 84.4 ✓

Rad. = 199.7

- Sta - Def
- 97+85' - 0000'
- 98+00 - 2°09 1/2'
- +25 - 5°47'
- +695 - 12°14 1/2'

From Page 63

±
Anght. Ang PT

↓
118+27⁰ B.C. End. of Survey 12/14/23

117+42⁰ P.I. 54°30'

589°03'E.

↓
116+39¹ B.C.

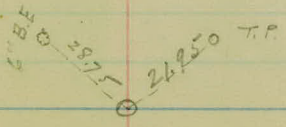
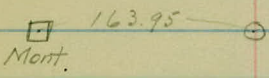
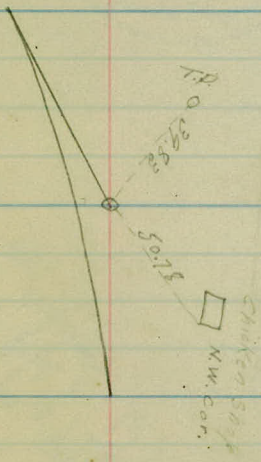
114+24⁰ P.O.T

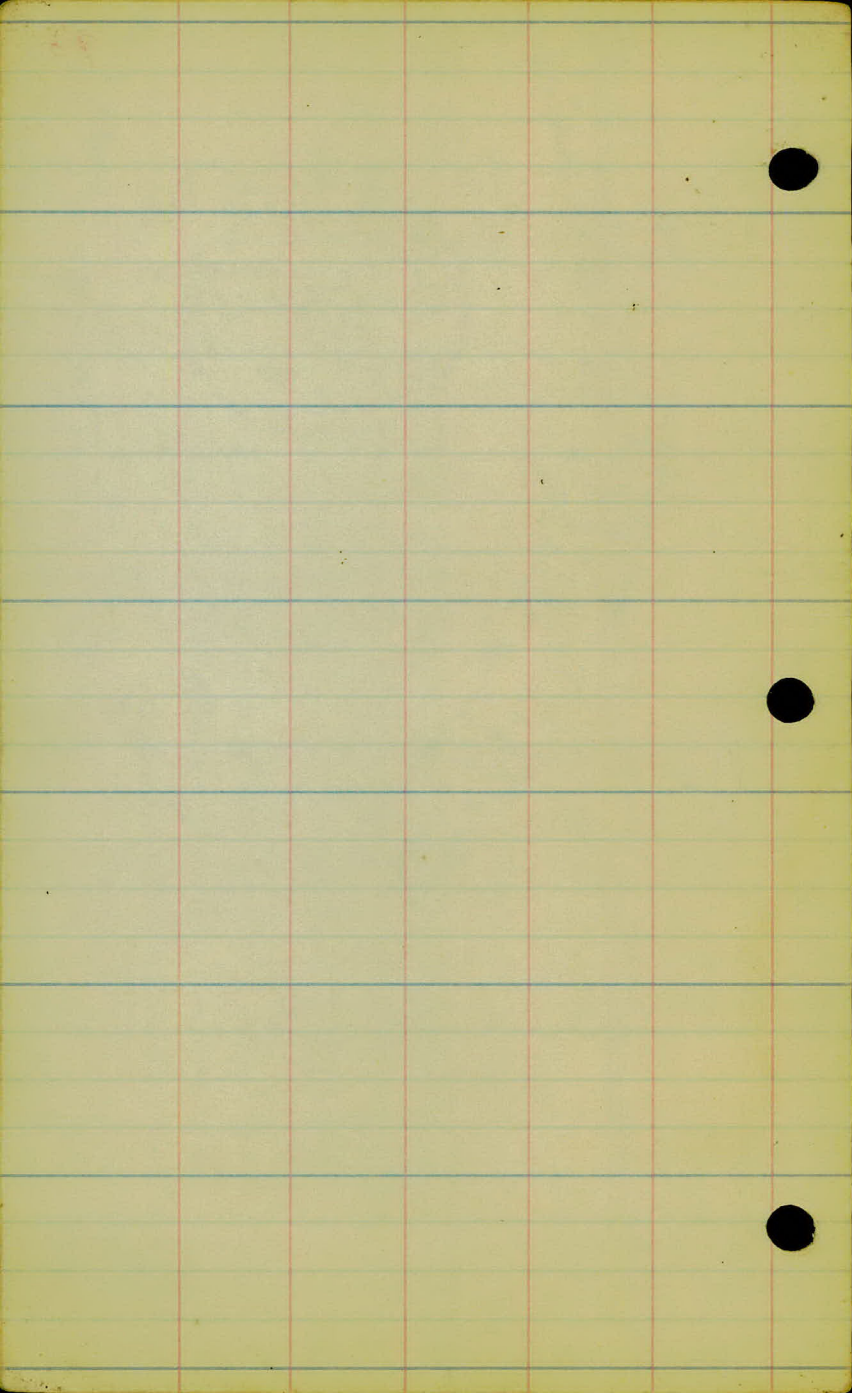
110+11³ P.O.T

±

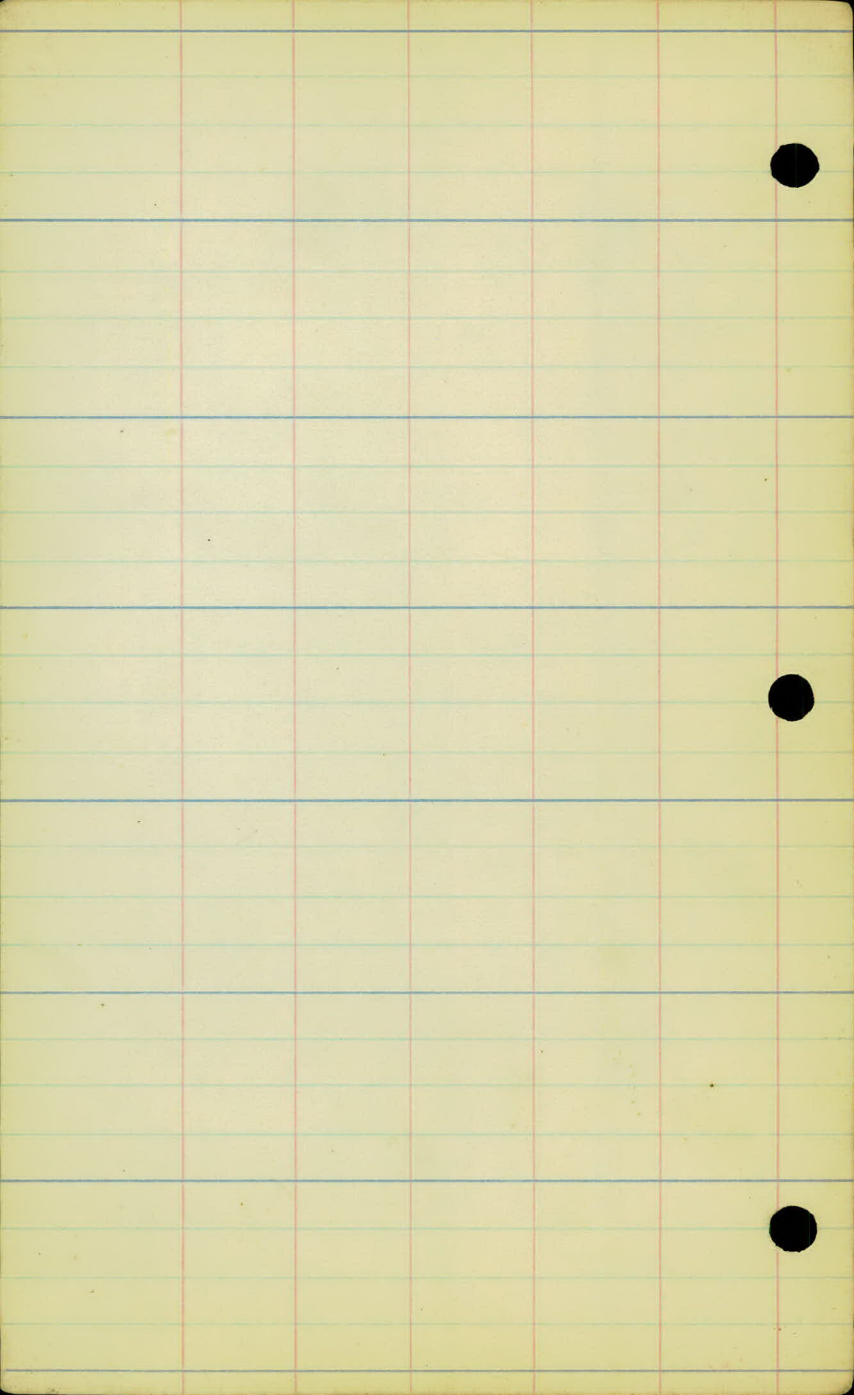
Sta. - Def
 116+39.1 - 0°00'
 +50 - 10°35'
 117+00 - 8°50'
 +50 - 16°05'
 118+00 - 23°20'
 +270 - 27°15'

290 Curve ht.
 $\Delta = 54^{\circ}30'$
 S.T. = 102.85
 length = 187.93
 Rad = 199.7





Topography (Revised Line)



Project 24-51

0 of 3 104 to 1

+72 Bay. Fence



156 E.P. 16.5 R
170 R

98

+33 Tree 21'h
+27 Tree 23'h
+25 Tree 13.5'h

Tennis Court

36' 112'

103 to 1

+95 Tree 19'h
+78 Tree 17.5'h
+62 Tree 19'h

157 Tree 27' R
167 T.P. 17' R

+33 Tree 27'
+

+28 E White Bear Av

+07 Tree 17'h

102 to 1

+86 Tree 17'h

+97 34' 153 T.P. 15.5 R

+44 Tree 27.5'h

+29 Tree 24' R

+17 Tree 16'
+1 Tree 22'



101 to 1

+70 Tree 16'h
+67 Tree 19'h
+57 Tree 26.5'h

+27 Tree 32.5 R

+07 Tree 30'
+97 Tree 19'h

100 to 1

+39 Tree 21'h
+28 Tree 32'h

118 Con. Steps 2.5 x 4.5
116 Tree 23' R
175 Tree 24'

+08 Tree 22'h
+99 Tree 19'h

99 to 1

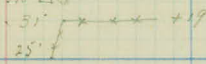
+50 Tree 31'h

12' Calc. +19 Tree 25' R
+64 E Beaver Av

+36 Rd. Sign 20'h

118' Foot Bridge 4x14

+18 Tree 32'h
+05 Tree 21'h
+92 Tree 21'h



99 to 1

197 E Concrete steps 4x14

Project 24-51

3-Page

From Page 26

Austin
Skoglund
Malbret
Galvin

Party.

12-21-28

Project - 24-51

② 0 of 3 111-411
159 R.P. 15' R
+ 80 Tree 23' R
+ 71 Tree 21' R 99

15' 1/2

+ 38 T.R. E.R. 15' R
+ 11 Foot. Box. 20' R 4 x 12
4' End Pipe. 30' long
Head Walls 1 x 9' x 9'



110+00

+ 71 E. East Ave

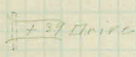
+ 64 E.R. 15.5' R 107+00

+ 84 Drive

108+00

+ 70 Tree 21' h
+ 66 Tree 16.5 h

+ 70 E.R. 15.5' R



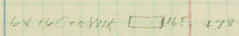
+ 20 Tree 15.5' R

107+00

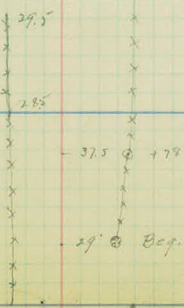
+ 54 Tree 32' R
+ 44 E.R. 15.5' R

+ 10 Tree 24' R 106+00

+ 75 Tree 18.5 L
+ 71 Tree 19 1/2
+ 67 Tree 27' h
+ 52 End Fence



+ 79 Wood Sept. 44.5-14' R
+ 77 End Fence



+ 35 Tree 28.5' R

+ 19 E.R. 16' R

105+00

+ 29' Beg. Fence + 31

+ 07 Tree 25' R / 104+00

Project 24-51

ht.

RT ③ of 3

18+00

100

+95 T.P. 16'h

17+00

+77 Tace 23' R
+57 Tace 20.5' R
+50 Tace 21' R

+90 T.P. 22.5h

16+00

+87 Tace 30' R
+80 Tace 17' R
+69 E.P. 12' R

+89 T.P. 21'h

15+00

+22 E.P. 25' R
+21 End. Culv. 27' R
+19 Rd. 3' 40.3' R

14+00

+68 T.P. 17.5h

L.V.P. End. Force

+90 4' Road

+60 E.P. 15' R
+47 Tace 15' R
+40 Tace 15' R
+32 End. Culv. 12' 0" 4' R
27.5' R

13+00

+78 Tace 20'h
+76 T.P. 18.5h

+83 Tace 37.5' R

DRIVE

+12 E.P. 14.5' R
+00 Drive

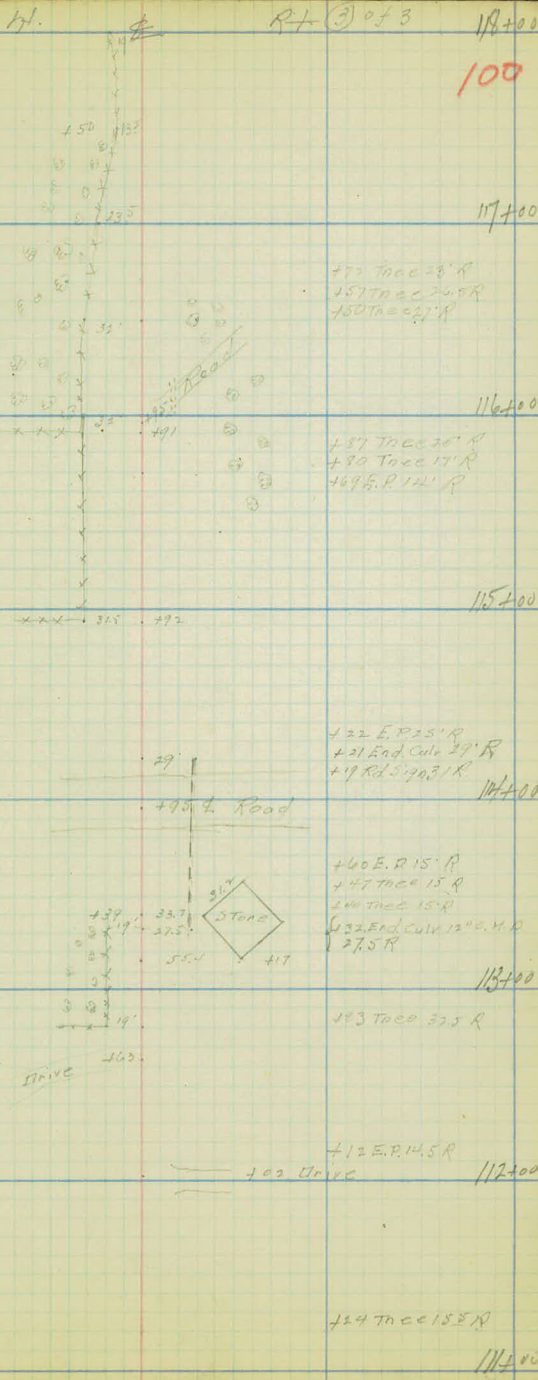
12+00

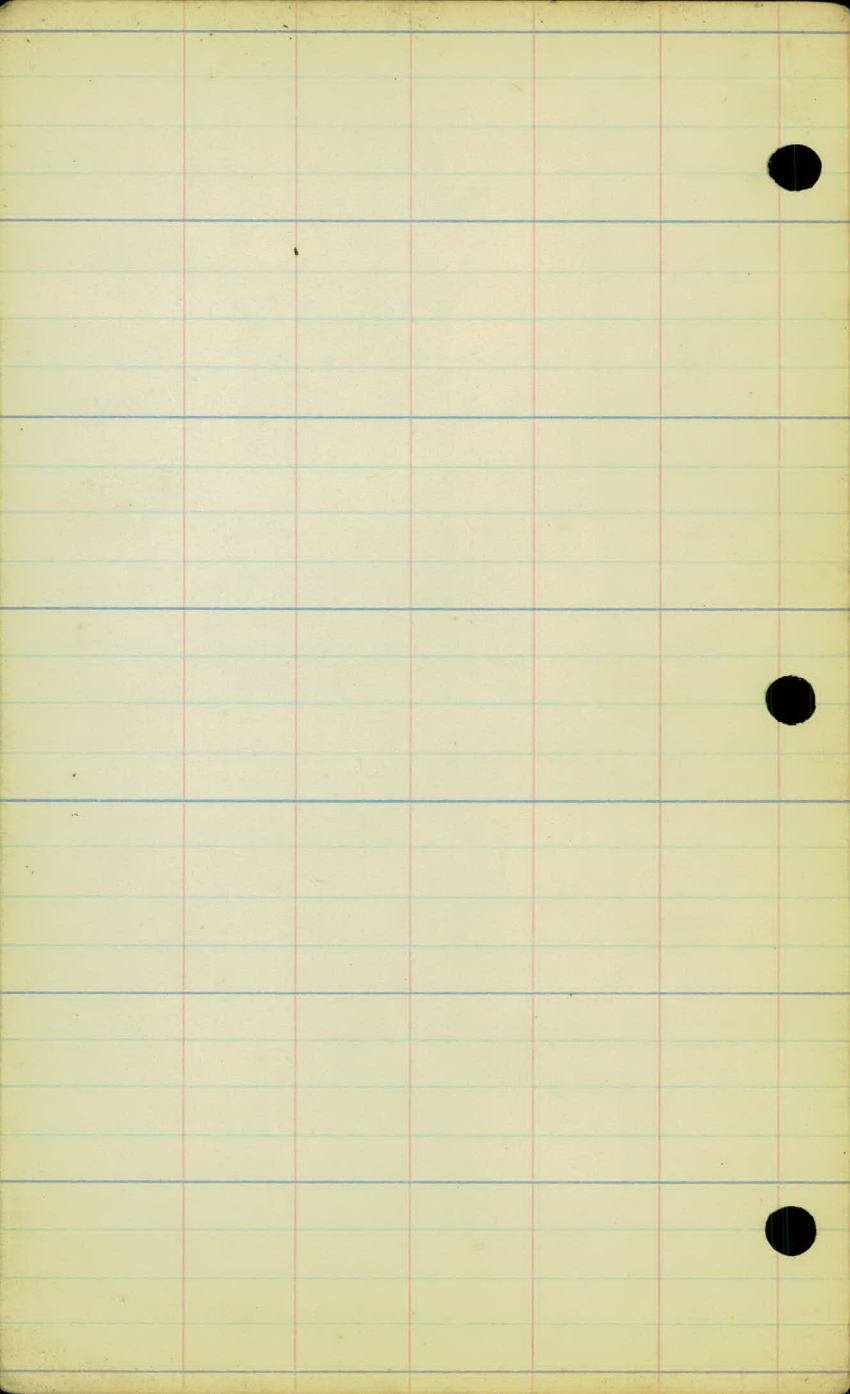
+85 Tace 15'h

+29 T.P. 19'h

+24 Tace 15.5' R

11+00





Project 24-51

Levels and X-Sections

Sta. 97+85' to 118+27'

2-Pages

R. E. Austin }
D. N. Skoglund } Party.
W. Maloney }
M. Golvin }

12-20-23

| Station | + | H.I | - | Rot. | Elev. |
|---------|--------------|----------|-------|----------|----------|
| B.M. | 2.05 | 240.29 ✓ | | | 238.24 ✓ |
| T.P. | 1.45 | 231.86 ✓ | 12.88 | 227.41 ✓ | |
| T.P. | 6.27 | 234.85 ✓ | 3.28 | 228.58 ✓ | |
| B.M. | From Page 39 | | | 6.77 | 228.08 ✓ |
| 97+95.1 | 3.0 | | | 6.9 | 228.0 ✓ |
| 98+00 | | | | 6.6 | 228.3 ✓ |
| +25 | | | | 6.2 | 228.7 ✓ |
| +69.5 | | | | 5.3 | 229.6 ✓ |
| 99+00 | | | | 5.0 | 229.9 ✓ |
| 100+00 | | | | 3.9 | 231.0 ✓ |
| 101+00 | | | | 3.3 | 231.6 ✓ |
| 102+00 | | | | 3.1 | 231.8 ✓ |
| T.P. | 4.66 | 236.46 ✓ | 3.05 | 231.80 ✓ | |
| 103+00 | | | | 4.9 | 231.6 ✓ |
| 104+00 | | | | 4.7 | 231.8 ✓ |
| 105+00 | | | | 4.7 | 231.8 ✓ |
| 106+00 | | | | 4.6 | 231.9 ✓ |

Lt

±

Rt.

① of 2

102

30" Stamp 15' height. 109+50 (B.F. line)

Nail in 18" Oak. 40' height Sta. 98+55

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| -0.7 | +0.3 | +0.5 | -0.1 | +0.2 | -0.1 | +1.0 | +2.0 | +2.6 |
| 33.0 | 23.0 | 16.0 | 14.0 | 10.0 | 10.0 | 18.0 | 15.0 | 33.0 |

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| -0.5 | -0.2 | +0.5 | -0.2 | -0.2 | +0.9 | +2.3 | +2.5 |
| 33.0 | 24.0 | 16.0 | 14.0 | 12.0 | 14.0 | 17.0 | 33.0 |

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| -0.5 | +0.4 | +0.4 | -0.2 | -0.2 | +0.8 | +2.2 | +3.0 |
| 33.0 | 24.0 | 15.0 | 12.0 | 13.0 | 16.0 | 19.0 | 33.0 |

| | | | | | | |
|------|------|------|------|------|------|------|
| -0.7 | -0.2 | +0.2 | +0.7 | +0.7 | +1.7 | +2.2 |
| 33.0 | 24.0 | 11.0 | 9.0 | 14.0 | 21.0 | 33.0 |

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| -0.8 | +1.0 | +1.4 | 0.0 | 0.0 | +0.8 | +1.5 | +2.1 |
| 33.0 | 29.0 | 16.0 | 13.0 | 11.0 | 13.0 | 15.0 | 33.0 |

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| +1.4 | +1.6 | +1.4 | -0.8 | -0.1 | +0.2 | -0.2 | +1.0 | +1.3 | +2.2 |
| 33.0 | 21.0 | 16.0 | 12.0 | 15.0 | 9.0 | 12.0 | 15.0 | 21.0 | 33.0 |

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| -0.7 | -0.4 | -0.4 | -0.7 | -0.2 | 0.0 | -0.2 | 0.0 | +0.9 |
| 33.0 | 26.0 | 19.0 | 16.0 | 18.0 | 11.0 | 14.0 | 15.0 | 33.0 |

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| -0.9 | +0.0 | -0.4 | 0.0 | +0.3 | -0.1 | +0.3 | -0.2 |
| 33.0 | 19.0 | 13.0 | 12.0 | 11.0 | 14.0 | 22.0 | 33.0 |

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| -0.5 | -0.4 | -0.3 | 0.0 | +0.2 | -0.1 | +0.6 | +0.5 | +0.3 |
| 33.0 | 20.0 | 12.0 | 10.0 | 11.0 | 15.0 | 18.0 | 28.0 | 33.0 |

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| -0.9 | -0.7 | -0.3 | +0.1 | +0.2 | 0.0 | +0.4 | +0.5 | +0.5 | 0.0 |
| 33.0 | 19.0 | 13.0 | 10.0 | 11.0 | 14.0 | 15.0 | 18.0 | 23.0 | 33.0 |

| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| +2.9 | +3.0 | +1.4 | +0.5 | -0.1 | +0.1 | +0.1 | 0.0 | +0.5 | +1.4 | 1.7 | + |
| 33.0 | 29.0 | 23.0 | 17.0 | 13.0 | 10.0 | 10.0 | 15.0 | 15.0 | 17.0 | 23.0 | 33.0 |

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| +1.5 | +0.7 | 0.0 | +0.3 | +0.1 | 0.0 | +1.7 | +1.7 | +1.2 | +1.6 |
| 33.0 | 19.0 | 13.0 | 9.0 | 11.0 | 13.0 | 18.0 | 22.0 | 25.0 | 33.0 |

| Station | + | H.I. | - | Rod. | Elev. |
|---------|------|----------|------|----------|----------|
| | | 236.46 | | | |
| 107+00 | | | | 4.8 | 231.7 ✓ |
| +50 | | | | 4.8 | 231.7 ✓ |
| 108+00 | | | | 4.9 | 231.6 ✓ |
| T.P. | 3.87 | 235.50 ✓ | 4.83 | 231.65 ✓ | |
| 109+00 | | | | 4.5 | 231.0 ✓ |
| 110+00 | | | | 4.9 | 230.6 ✓ |
| +11.3 | | | | 4.9 | 230.6 ✓ |
| 110+22 | | | | 4.9 | 230.6 ✓ |
| 111+00 | | | | 5.0 | 230.5 ✓ |
| 112+00 | | | | 4.8 | 230.7 ✓ |
| 113+00 | | | | 4.6 | 230.9 ✓ |
| 114+00 | | | | 4.4 | 231.1 ✓ |
| B.M. | 7.17 | 237.86 ✓ | 4.81 | 230.69 ✓ | 230.69 ✓ |
| 115+00 | | | | 6.6 | 231.3 ✓ |
| 116+00 | | | | 6.1 | 231.8 ✓ |
| +50 | | | | 5.7 | 232.2 ✓ |
| 117+00 | | | | 5.0 | 232.9 ✓ |
| +50 | | | | 4.6 | 233.3 ✓ |
| 118+00 | | | | 4.0 | 233.9 ✓ |
| +27 | | | | 4.0 | 233.9 ✓ |

Project 67
24-51

2 of 2
A.

103

| | | | |
|------|------|------|------|
| 0.0 | +0.4 | -0.1 | +0.1 |
| 33.0 | 27.0 | 14.0 | 10.0 |
| 28.6 | 24.1 | -0.5 | -0.3 |
| 33.0 | 23.0 | 16.0 | 13.0 |
| 0.0 | -0.7 | -0.2 | +0.1 |
| 33.0 | 20.0 | 11.0 | 10.0 |

| | | | | | | |
|------|------|------|------|------|------|------|
| 0.0 | -0.3 | -0.3 | +0.9 | +1.1 | +5.0 | +5.7 |
| 10.0 | 12.0 | 14.0 | 17.0 | 26.0 | 30.0 | 33.0 |
| 10.1 | -0.3 | -1.4 | +0.7 | +1.0 | 12.1 | 12.0 |
| 7.0 | 11.0 | 13.0 | 16.0 | 20.0 | 24.0 | 33.0 |
| 0.0 | -0.5 | -1.8 | +0.4 | +0.3 | +0.9 | +1.0 |
| 12.0 | 15.0 | 14.0 | 19.0 | 25.0 | 27.0 | 33.0 |

| | | | |
|------|------|------|-----|
| -3.0 | -2.6 | -0.5 | 0.0 |
| 33.0 | 17.0 | 12.0 | 7.0 |

| | | | | | | |
|------|------|------|------|------|------|------|
| 10.1 | -0.6 | -1.6 | -1.7 | -1.0 | -1.5 | -1.5 |
| 12.0 | 15.0 | 16.0 | 19.0 | 21.0 | 24.0 | 33.0 |

| | | | | | | |
|------|------|------|------|------|------|-----|
| -2.4 | -2.2 | -1.9 | -0.6 | -0.1 | | |
| 33.0 | 28.0 | 16.0 | 12.0 | 10.0 | | |
| -2.4 | -6.3 | -6.2 | -0.4 | 0.0 | | |
| 33.0 | 25.0 | 15.0 | 13.0 | 9.0 | | |
| -6.8 | -5.0 | -3.8 | -1.1 | -1.4 | -0.6 | 0.0 |
| 33.0 | 32.0 | 29.0 | 20.0 | 15.0 | 12.0 | 7.0 |

| | | | | | | |
|------|------|------|------|------|------|------|
| 10.1 | -2.0 | -2.0 | -1.1 | -1.5 | -3.0 | -1.5 |
| 11.0 | 15.0 | 15.0 | 10.0 | 25.0 | 30.0 | 33.0 |
| 10.1 | -0.3 | -6.0 | -6.0 | | | |
| 12.0 | 14.0 | 15.0 | 33.0 | | | |
| 10.2 | -2.2 | -2.2 | -1.0 | -1.0 | -2.2 | -0.9 |
| 11.0 | 16.0 | 18.0 | 21.0 | 25.0 | 27.0 | 33.0 |

| | | | | |
|------|------|------|------|------|
| -4.5 | -3.0 | -2.5 | -2.5 | 0.0 |
| 33.0 | 27.0 | 24.0 | 18.0 | 11.0 |
| -2.0 | -1.7 | -0.6 | +0.2 | |
| 33.0 | 17.0 | 13.0 | 10.0 | |

| | | | | | | |
|------|------|------|------|------|------|------|
| 10.2 | -0.6 | -2.2 | -1.2 | -1.0 | -2.1 | -0.8 |
| 10.0 | 13.0 | 17.0 | 20.0 | 25.0 | 27.0 | 30.0 |
| 0.0 | -0.8 | -1.1 | -1.5 | | | |
| 11.0 | 12.0 | 24.0 | 33.0 | | | |

| | | | | |
|------|------|------|------|------|
| -0.8 | -0.6 | -0.8 | +0.4 | +0.1 |
| 33.0 | 23.0 | 17.0 | 13.0 | 10.0 |

| | | | | | |
|------|------|------|------|------|------|
| 0.0 | -0.3 | -1.9 | -1.1 | -1.2 | -1.7 |
| 10.0 | 12.0 | 16.0 | 17.0 | 24.0 | 33.0 |

| | | |
|------|------|------|
| -0.2 | 0.0 | +0.2 |
| 33.0 | 25.0 | 10.0 |

| | | |
|------|------|------|
| +0.2 | +0.5 | 0.0 |
| 10.1 | 22.0 | 33.0 |

Nail in T.P. 24 Right Sta 114+20

| | | | | |
|------|------|------|------|------|
| -2.2 | -3.1 | -1.7 | -0.5 | -0.1 |
| 33.0 | 25.0 | 16.0 | 13.0 | 10.0 |

| | | | | | |
|------|------|------|------|------|------|
| 10.2 | -0.3 | -0.9 | -0.9 | -1.6 | -2.0 |
| 10.0 | 12.0 | 14.0 | 23.0 | 27.0 | 33.0 |

| | | | | |
|------|------|------|------|------|
| +1.3 | 0.0 | +0.1 | -0.3 | 0.0 |
| 33.0 | 25.0 | 20.0 | 17.0 | 13.0 |
| -0.7 | -0.7 | -0.3 | 0.0 | |
| 33.0 | 17.0 | 15.0 | 7.0 | |
| +1.2 | +1.4 | +0.4 | -0.4 | |
| 33.0 | 16.0 | 13.0 | 10.0 | |
| +2.0 | +2.0 | +1.4 | -0.1 | -0.3 |
| 33.0 | 18.0 | 12.0 | 8.0 | 6.0 |
| +1.6 | +1.3 | 0.0 | -0.5 | |
| 33.0 | 17.0 | 15.0 | 13.0 | |

| | | | | |
|------|------|------|------|------|
| +0.3 | 0.0 | 0.0 | +0.9 | +1.2 |
| 8.0 | 12.0 | 7.0 | 25.0 | 33.0 |
| +0.2 | -0.3 | 0.0 | +1.0 | +1.8 |
| 7.0 | 12.0 | 20.0 | 31.0 | 33.0 |
| +0.7 | 0.0 | +0.8 | +2.5 | +3.0 |
| 11.0 | 16.0 | 22.0 | 27.0 | 33.0 |
| +0.4 | +0.6 | +0.6 | +0.5 | |
| 10.0 | 17.0 | 25.0 | 33.0 | |
| 0.0 | -0.2 | +0.5 | | |
| 10.0 | 17.0 | 33.0 | | |

check levels

H.I. 23786

T.P. 5.18 235.39 7.65 230.21

114+22
B.M.

4.70 230.69
O.K.

T.P. 5.12 236.66 3.85 231.54

78+55
B.M.

3.91 236.02 4.55 232.11

7.92 226.10

Project 24-51

Revision
Sta. 7+90.2 to 15+33.4

1-14-24

R. E. Austin }
D. N. Skooglen } Party.
W. Maloney }
M. Galvin }

2
Ang. ht. Ang. Rt.

9+40.7 F.C. = 18+07.8 of state

8+66.8 P.I. 30°28'

7+88.4 B.C.

⁴
Anght. Ang. Rt.

Elev 246.98 County = Elev 940.72 plate

15+34.5 = 15+33.4 Old. F.C.

15+33.8 F.C.

14+88.3 P.I.

27°12'

14+40.0 B.C.

15 8°42'

13°36'

check data

29° Curve left.

$\Delta = 27^\circ 12'$

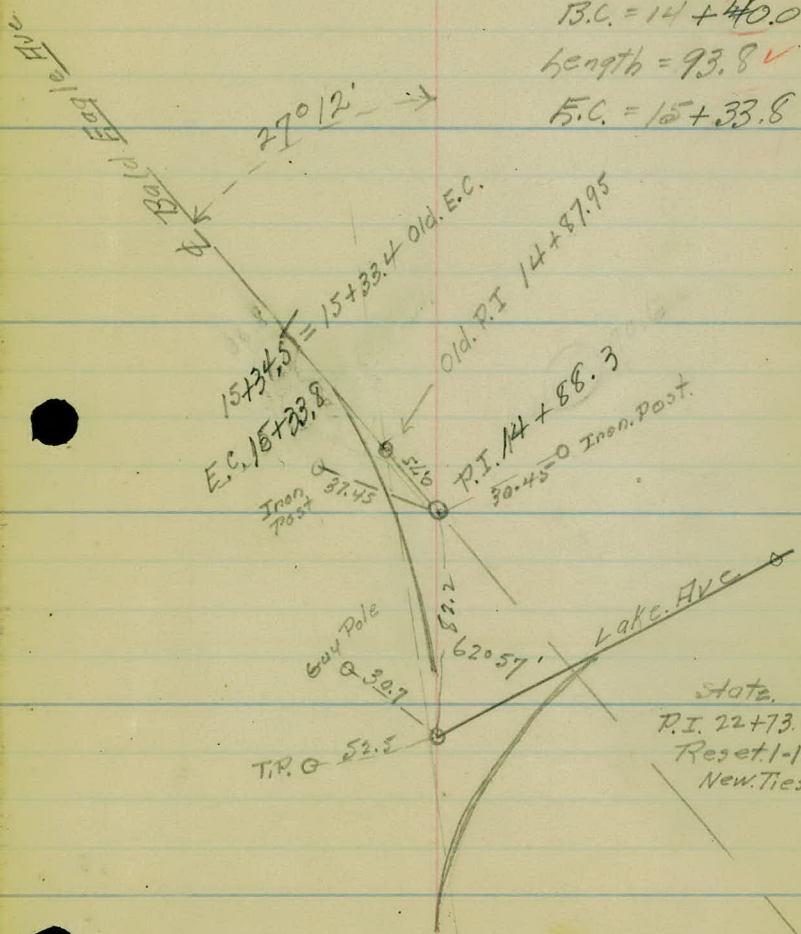
S.T. = 48.3 ✓

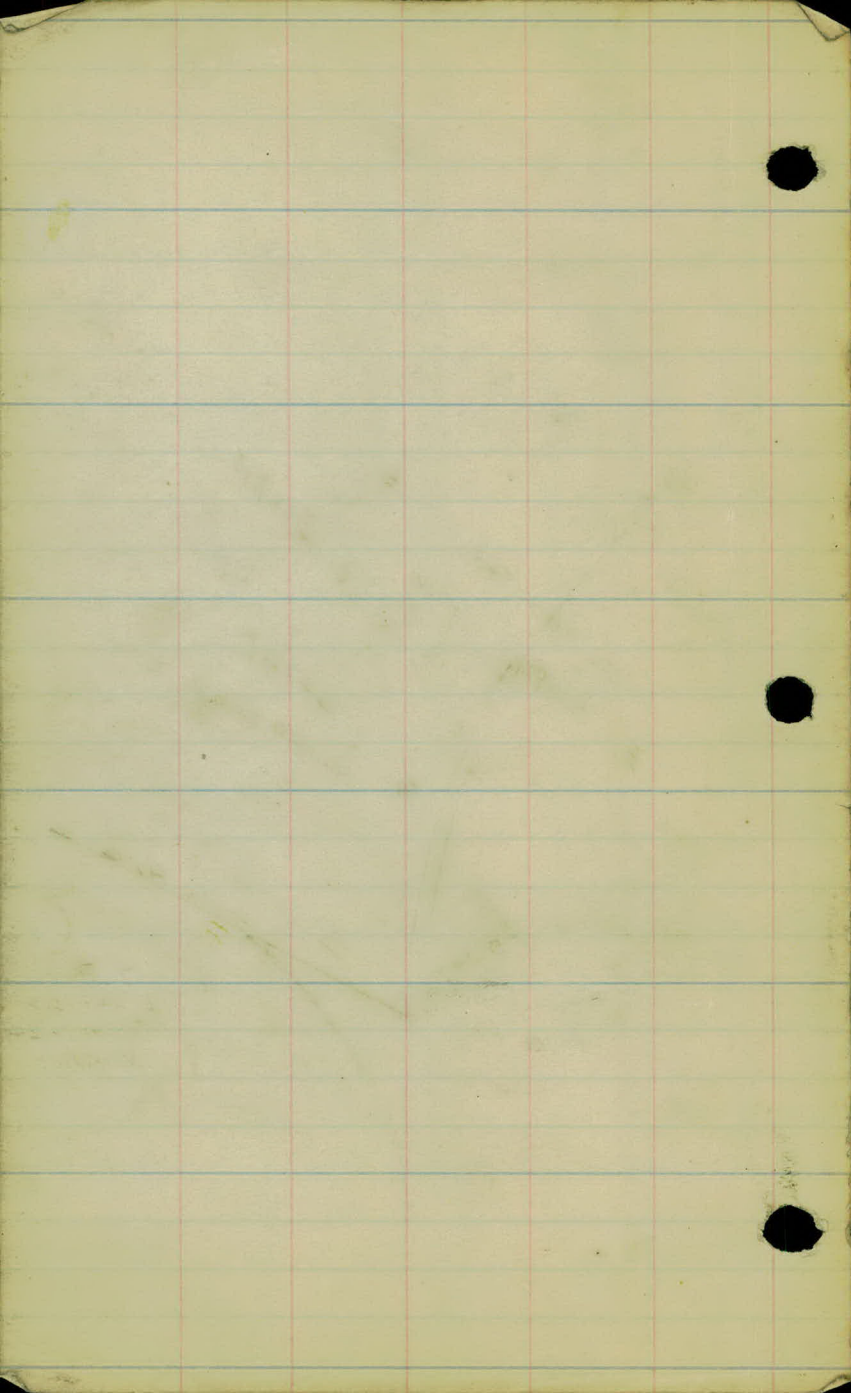
P.I. = 14 + 58.3

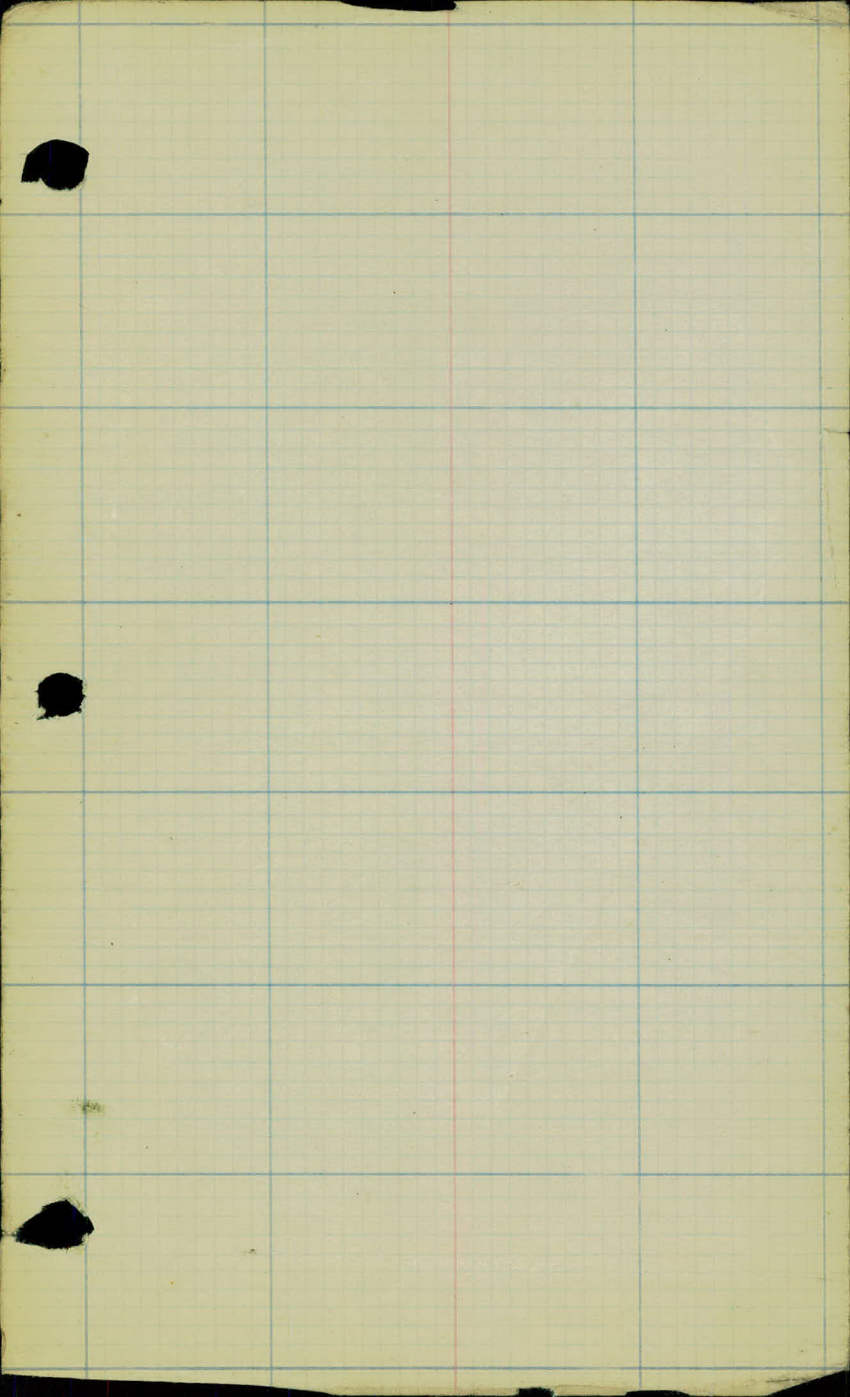
B.C. = 14 + 40.0

length = 93.8 ✓

E.C. = 15 + 33.8







Sta. + H.I. - Elev.

B.M. 5.44 246.11 235.67

B.M. 4.37 236.74 =

B.M. 2.70 233.91

Project 24-51

Alignment.

File No.
Date Filed

Office of Ramsey Co. Engineer
ST. PAUL, MINN.

Office of Ramsey Co. Engineer
ST. PAUL, MINN.

Date Filed 3-26-24
File No. "11" (24-51)

Whittaker Str. Conn. -

Station . Pt. L R.

2481 F.O.T.

1441.8 P.T. 21°-58½'

1700 15°-30' 31° C.R.

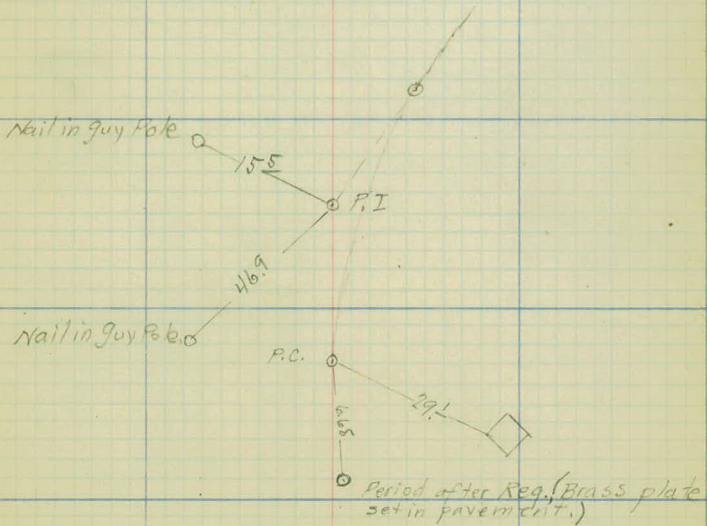
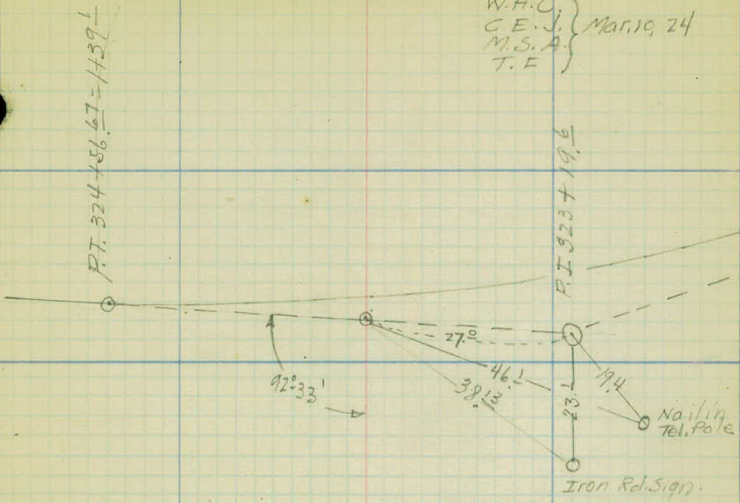
Δ 43°-57'

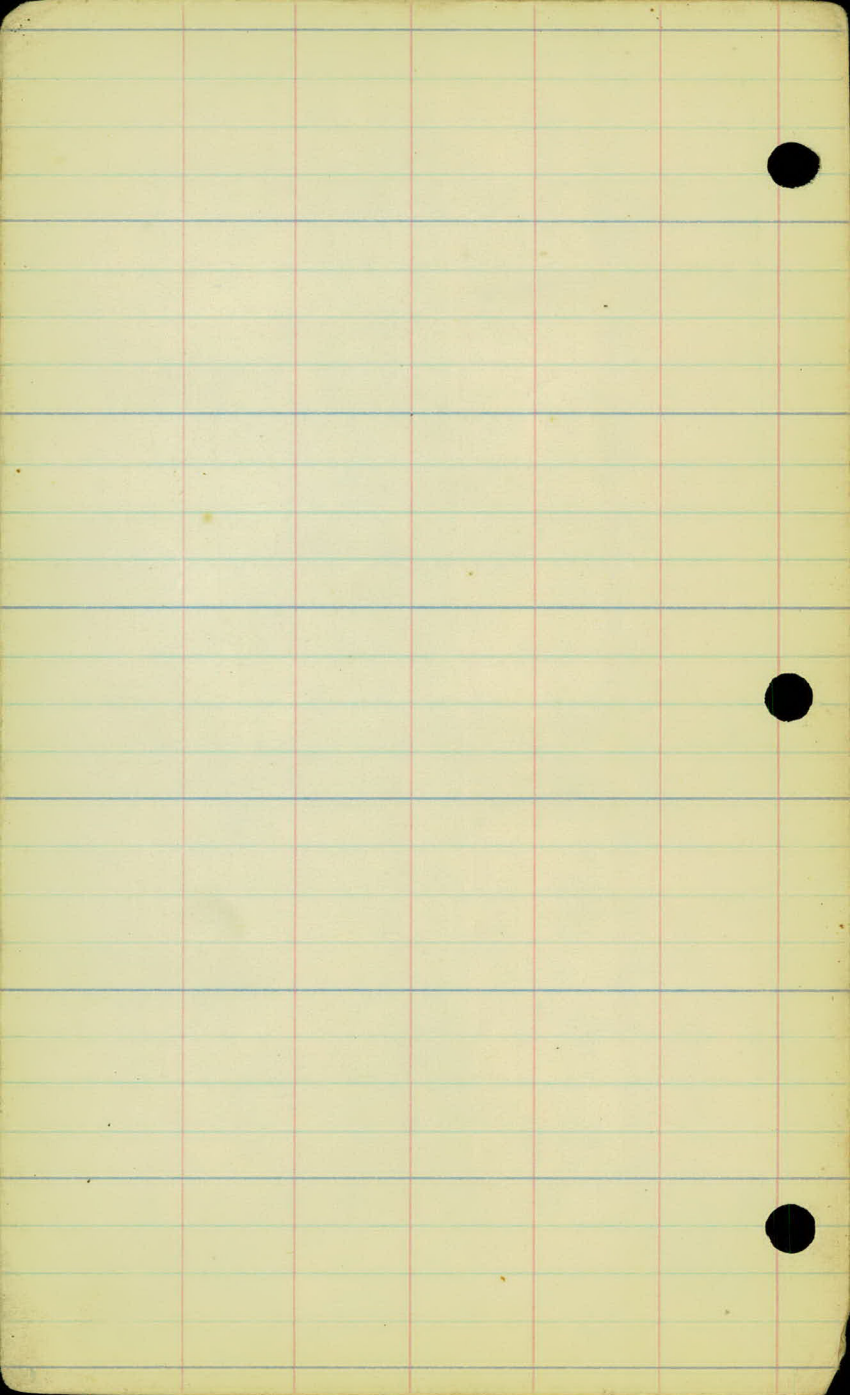
0+50 7245' P.I 0+75.49

750 4029' S.T. 75.49

0+00 P.C. 0°-00' C.L 141.8

W.H.C. }
 C.E.J. } Mar. 19 24
 M.S.A. }
 T.E. }





Project 24-51

Art. Topography.

station

1450

1700

0450

+12 End of Run off.

0400

P.C.

-0450

-1700

+87 E. Fence 24'L.
 +86-10" Elm 36'L.
 +70 P. P. 16'L.
 +65-2-8" Tree 32'L.
 +64 Bx El. 76'L.

+42 Cor. House.

+33-10" Bx El.

+16 Cor. Ho.

+99-18 Cot. 32'L.

+74 Guy Pole 24'L.
 +69 Guy P. 30'L.
 +67 Bag of Picket F. 45'L.

+56-12" Oak 32'L.
 +54 Red Sign 24'L.
 +47-12" Oak 31'L.

+27 guy pole 17'L.
 +25 P. Pole 17'L.

Small Trees.

-+42 10" Wil -29'
 -+44 10" Wil -29'
 -+55 6" Wil -29'
 -+57 6" Wil -29'

+83-5 Will. 30'L.

52'
 44'
 44'
 31'
 25'
 +74
 +75 End of Hedge
 +76 concrete Post o Walls.
 Drive.

1+50

1+60

8" C-I Flag Pole
 +90-62'R.

0+50

+39 Jr. High Sign

28' 1+25

Run off

Drive

0+100

26'
 44'
 +14
 -+27
 (2) 2.5x2.5 concrete Posts.

-+65

Hedge.

Concrete Headers

24"-Bit. Pavement

3+00

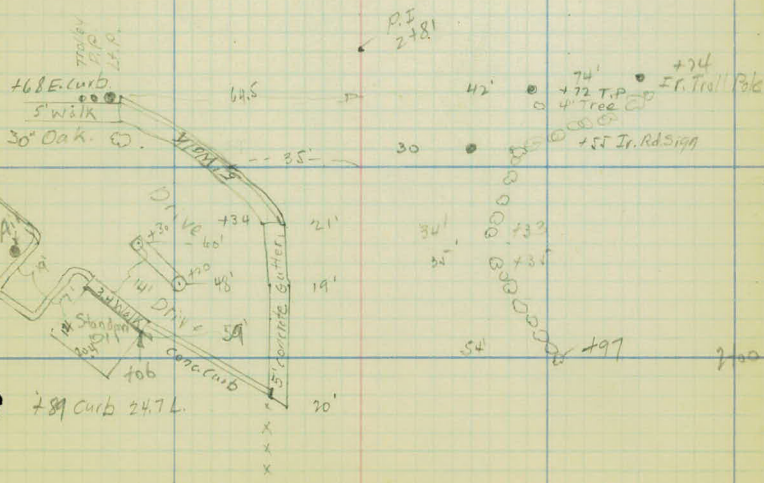
2+50

2+00

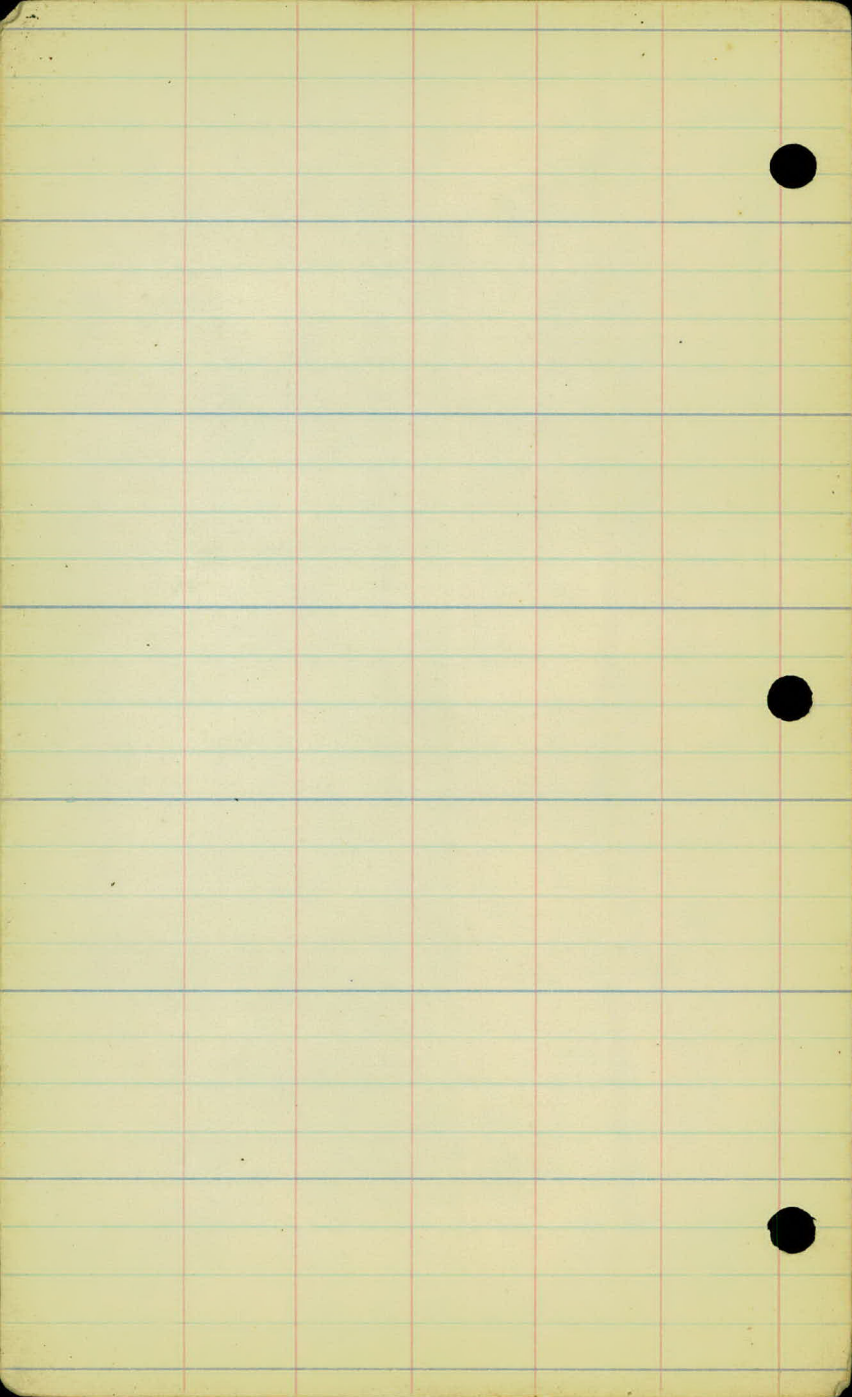
1+50

St. R.R. → To St. P.
 (3419 Near Mill)

3400



2400



Proj 24-51

Levels + Cross Sections

| Station | + | H.I | - | Elev. |
|---------|------------------------|--------|------|-------------------|
| B.M. | 5.21 | 238.99 | | 233.78 ✓ |
| T.P. | 6.27 | 241.03 | 4.23 | 234.76 ✓ |
| B.M. | | | 4.27 | 236.76 = 236.74 = |
| | | | | 737.37 |
| T.P. | 4.27 | 241.01 | | 236.74 ✓ |
| T.P. | 4.72 | 239.60 | 6.13 | 234.88 ✓ |
| - 2+00 | | | 4.40 | 234.20 |
| - 1+00 | | | 4.55 | 235.15 |
| 0+00 | End of Ave. | | 4.35 | 235.2 |
| 0+16 | Approx End of Run off. | | 4.85 | 234.7 |
| 0+50 | | | 4.7 | 234.9 |
| 1+00 | | | 4.2 | 235.4 |
| +42 | | | 4.4 | 235.2 |
| +75 | | | 4.1 | 235.5 |
| T.P. | 5.15 | 240.91 | 3.84 | 235.76 ✓ |
| 1+87 | | | 5.4 | 235.5 |
| 2+25 | | | 5.5 | 235.4 |

L Z R

W.H.C.
C.E.J. } 3/10/24
M.S.P.
T.F.

R.R. spike in T.P., Rt. Sta 312+85

Nail in Elec. Pole 30' Rt. 2+16

$\frac{4.54}{12}$ $\frac{4.40}{12}$ $\frac{4.56}{12}$

$\frac{8.8}{33}$ $\frac{5.5}{19}$ $\frac{4.78}{12}$ $\frac{4.55}{12}$ $\frac{4.64}{12}$ $\frac{4.7}{17}$ $\frac{5.8}{21}$ $\frac{4.7}{29}$ $\frac{3.9}{33}$

$\frac{10.3}{36}$ $\frac{9.5}{28}$ $\frac{4.7}{18}$ $\frac{4.58}{12}$ $\frac{4.35}{12}$ $\frac{4.66}{12}$ $\frac{4.9}{23}$ $\frac{3.4}{28}$ $\frac{2.7}{33}$

$\frac{8.3}{33}$ $\frac{8.0}{28}$ $\frac{4.5}{19}$ $\frac{4.8}{8}$ $\frac{4.85}{12}$ $\frac{5.1}{23}$ $\frac{3.8}{27}$ $\frac{2.8}{33}$

$\frac{7.1}{33}$ $\frac{6.9}{29}$ $\frac{5.1}{21}$ $\frac{4.6}{8}$ $\frac{4.7}{12}$ $\frac{5.3}{9}$ $\frac{4.6}{24}$ $\frac{3.6}{27}$ $\frac{2.8}{33}$

$\frac{4.8}{33}$ $\frac{4.9}{26}$ $\frac{5.4}{17}$ $\frac{4.2}{7}$ $\frac{4.5}{8}$ $\frac{4.2}{12}$ $\frac{5.1}{11}$ $\frac{4.8}{23}$ $\frac{3.4}{26}$ $\frac{2.8}{33}$

$\frac{5.0}{33}$ $\frac{4.8}{18}$ $\frac{5.2}{17}$ $\frac{4.7}{7}$ $\frac{4.4}{12}$ $\frac{4.8}{11}$ $\frac{5.0}{21}$ $\frac{4.5}{25}$ $\frac{2.2}{33}$

$\frac{4.7}{33}$ $\frac{4.6}{20}$ $\frac{5.2}{19}$ $\frac{4.6}{8}$ $\frac{4.1}{12}$ $\frac{4.6}{9}$ $\frac{4.6}{17}$ $\frac{3.3}{24}$ $\frac{3.0}{33}$

$\frac{5.3}{33}$ $\frac{5.88}{24}$ $\frac{6.52}{19}$ $\frac{5.8}{8}$ $\frac{5.4}{12}$ $\frac{5.7}{7}$ $\frac{5.5}{19}$ $\frac{4.2}{33}$

2 Gut.

$\frac{5.3}{33}$ $\frac{5.92}{24}$ $\frac{6.16}{19}$ $\frac{6.0}{9}$ $\frac{5.5}{12}$ $\frac{5.6}{7}$ $\frac{5.3}{20}$ $\frac{4.8}{33}$

Gut.

Station + H.I - Elev.

240.91

2+50 5.2 235.7

+68 End of Road curb 4.87 236.04

2+81 5.0 235.9

B.M. for check.

5.161 236.75

= 237.37

good

~~PM~~

→ Opt check on this elev from original notes.

240.91
+68
+35.75

L. E R

| | | | | | |
|-------------------|------------------|-----------------|-----------------|------------------|------------------|
| $\frac{5.55}{34}$ | $\frac{6.3}{34}$ | $\frac{5.7}{8}$ | $\frac{5.2}{-}$ | $\frac{5.3}{13}$ | $\frac{5.3}{33}$ |
| Curb | Gut. | | | | |

$\frac{5.3}{50}$

$\frac{5.0}{-}$

$\frac{5.5}{50}$

30' R. Sta 2+16

85
60
25.04

27E

Proj-24-51

Lebeck Levels

E

Top of Rail Elev.

Office of Ramsey Co. Engineer
ST. PAUL, MINN.
Date Filed 6-16-24
File No. "11" (24-51)

| Sta. | + | H.I. | - | Elev. |
|------|------|----------|------|----------|
| B.M. | 4.02 | 252.45 ✓ | | 248.43 |
| 277 | | | 3.87 | 48.58 ✓ |
| +68 | | | 4.02 | 48.43 ✓ |
| 278 | | | 4.8 | 47.7 ✓ |
| 279 | | | 4.8 | 47.7 |
| 280 | | | 4.6 | 47.9 |
| +22 | | | 4.6 | 47.9 |
| 281 | | | 5.1 | 47.4 |
| +25 | | | 5.3 | 47.2 |
| +40 | | | 7.7 | 44.8 |
| +50 | | | 8.0 | 44.5 |
| +63 | | | 5.7 | 46.8 |
| 282 | | | 5.9 | 46.6 |
| +50 | | | 6.0 | 46.5 |
| 283 | | | 5.8 | 46.7 |
| +25 | | | 5.2 | 47.3 |
| 284 | | | 4.4 | 48.1 |
| 285 | | | 4.0 | 48.5 |
| T.P. | 4.37 | 252.66 ✓ | 4.16 | 248.29 ✓ |
| 286 | | | 3.8 | 48.9 |
| 287 | | | 3.7 | 49.0 |
| 288 | | | 4.0 | 48.7 |
| 289 | | | 5.0 | 47.7 |
| +40 | | | 5.7 | 47.0 |
| 290 | | | 6.9 | 45.8 |
| +50 | | | 8.4 | 44.3 |

R. R. spike in tree at Sta 278435

top of pavement

top & End of Present PAVE.

P. C.

25266

| | | | | |
|--------|------|----------|-------|----------|
| 291 | | | 9.6 | 243.1 ✓ |
| +50 | | | 9.0 | 43.7 ✓ |
| +65 | | | 9.9 | 42.8 ✓ |
| +70 | | | 11.4 | 41.3 ✓ |
| B.M. | 168 | 243.10 ✓ | 10.94 | 241.72 ✓ |
| 292 | | | 2.4 | 41.0 ✓ |
| +50 | | | 4.1 | 39.0 ✓ |
| 293 | | | 5.5 | 37.9 ✓ |
| 294 | | | 7.3 | 36.1 ✓ |
| 295 | | | 8.4 | 35.0 ✓ |
| 296 | | | 9.4 | 34.0 ✓ |
| T.P. | 4.30 | 238.10 ✓ | 9.60 | 233.80 ✓ |
| 297 | | | 4.9 | 33.2 ✓ |
| +77.6 | | | 4.26 | 33.84 ✓ |
| +84.5 | | | 4.57 | 33.53 ✓ |
| +90.8 | | | 4.34 | 33.76 ✓ |
| 298 | | | 4.64 | 33.46 ✓ |
| +105 | | | 4.41 | 33.69 ✓ |
| +114.4 | | | 4.77 | 33.33 ✓ |
| +60 | | | 4.8 | 33.3 ✓ |
| 299 | | | 4.8 | 33.3 ✓ |
| +50 | | | 4.5 | 33.6 ✓ |
| 300 | | | 4.5 | 33.6 ✓ |
| +50 | | | 4.5 | 33.6 ✓ |
| 301 | | | 4.8 | 33.3 ✓ |

R.R. Sp. P. Rt. 291480

Top High Rail 10' Rt.

" Low " 10' Rt.

" High " £

" Low " £

" High " 10' Lt.

" Low " 10' Lt.

Twin City Lines

| Sta. | + | 11. I | - | Elev. |
|--------|------|----------|--------------|-------------------------------|
| | | 238.10 | | |
| 301+50 | | | 4.7 | 233.4 ✓ |
| T.P. | 4.85 | 238.25 ✓ | 4.70 | 233.40 ✓ |
| 302 | | | 4.9 | 33.4 ✓ |
| 303 | | | 5.0 | 33.3 ✓ |
| 304 | | | 4.7 | 33.6 ✓ |
| 305 | | | 4.6 | 33.7 ✓ |
| 306 | | | 4.6 | 33.7 ✓ |
| 307 | | | 4.5 | 33.8 ✓ |
| 308 | | | 4.4 | 33.9 ✓ |
| 309 | | | 4.5 | 33.8 ✓ |
| +50 | | | 4.3 | 34.0 ✓ |
| 310 | | | 4.1 | 34.2 ✓ |
| T.P. | 4.25 | 238.28 ✓ | 4.22
3.19 | 234.03 ✓
24.64 ✓ to check. |
| B.M. | 3.59 | 238.29 ✓ | | 234.70 ✓ |
| 10+50 | | | 4.1 | 34.2 ✓ |
| 311 | | | 4.2 | 34.1 ✓ |
| 312 | | | 4.4 | 33.9 ✓ |
| 313 | | | 4.4 | 33.9 ✓ |
| 314 | | | 4.6 | 33.7 ✓ |
| +15 | | | 4.75 | 33.54 ✓ |
| +47 | | | 4.29 | 34.00 ✓ |
| +47 | | | 4.61 | 33.68 ✓ |
| +72 | | | 4.64 | 33.65 ✓ |
| +72 | | | 4.25 | 34.04 ✓ |
| +95 | | | 4.25 | 34.04 ✓ |
| +95 | | | 4.56 | 33.73 ✓ |

Nail in 14" Tree Rt. 310 + 40

| | | | |
|-----|------|------|---------|
| Top | Low | Rail | 10' Lt. |
| " | High | " | 10' Lt. |
| " | Low | " | 5' Lt. |
| " | " | " | Q |
| " | High | " | 5' Lt. |
| " | " | " | Q |
| " | Low | " | 5' Rt. |

238.29

| | | | | |
|-------|--|--|------|--------|
| 315 | | | 42 | 234.1' |
| +145 | | | 460 | 33.69' |
| +14.5 | | | 425 | 34.04' |
| +38 | | | 417 | 34.12' |
| +38 | | | 4.07 | 33.78' |
| +50 | | | 4.3 | 34.0' |

| | | | | |
|------|------|---------|-----|---------|
| 316 | | | 4.1 | 34.2' |
| T.P. | 6.44 | 240.47' | 426 | 234.03' |

| | | | | |
|-----|--|--|----|-------|
| 317 | | | 60 | 34.5' |
|-----|--|--|----|-------|

| | | | | |
|-----|--|--|----|-------|
| 318 | | | 53 | 35.2' |
|-----|--|--|----|-------|

| | | | | |
|-----|--|--|----|-------|
| 319 | | | 49 | 35.6' |
|-----|--|--|----|-------|

| | | | | |
|-----|--|--|----|-------|
| 320 | | | 47 | 35.8' |
|-----|--|--|----|-------|

| | | | | |
|-----|--|--|----|-------|
| 321 | | | 47 | 35.8' |
|-----|--|--|----|-------|

| | | | | |
|-----|--|--|----|-------|
| 322 | | | 48 | 35.7' |
|-----|--|--|----|-------|

| | | | | |
|-----|--|--|----|-------|
| 323 | | | 47 | 35.8' |
|-----|--|--|----|-------|

| | | | | |
|------|------|---------|-------|---------|
| T.P. | 5.20 | 240.85' | - 482 | 235.65' |
|------|------|---------|-------|---------|

| | | | | |
|-----|--|--|-----|-------|
| 324 | | | 5.0 | 35.9' |
|-----|--|--|-----|-------|

174.4 = 1484.1

4.5 36.2
34.3

B.M. *Equation in Luels.* 4.11 236.74' ✓

| | | | | |
|------|------|---------|--|--------|
| B.M. | 4.96 | 242.33' | | 237.37 |
|------|------|---------|--|--------|

| | | | | |
|-------|--|--|-----|------|
| 17841 | | | 5.5 | 36.8 |
|-------|--|--|-----|------|

| | | | | |
|---|--|--|-----|------|
| 2 | | | 5.3 | 37.0 |
|---|--|--|-----|------|

| | | | | |
|---|--|--|-----|------|
| 3 | | | 5.2 | 37.1 |
|---|--|--|-----|------|

| | | | | |
|---|--|--|-----|------|
| 4 | | | 5.0 | 37.3 |
|---|--|--|-----|------|

| | | | | |
|---|--|--|-----|------|
| 5 | | | 5.1 | 37.2 |
|---|--|--|-----|------|

Top Low Rail 10' RT.

" High " 5' RT.

" High " 10' RT.

" Low " 15' RT.

23737

242.33

| | | | | |
|-------|--------|--------|------|--------|
| 6 | | | 5.2 | 37.1 |
| B.M. | 0.52 | 242.02 | 0.83 | 241.50 |
| 6+73 | | | 4.53 | 37.49 |
| +98 | | | 4.46 | 37.56 |
| 7+22 | | | 4.44 | 37.58 |
| +47.5 | | | 4.46 | 37.56 |
| +80 | | | 4.30 | 37.72 |
| 18+30 | Approl | | 4.24 | 37.78 |

Top Fire Hyd. 735 Rt.

Top of Lowy Rail 10' Rt.

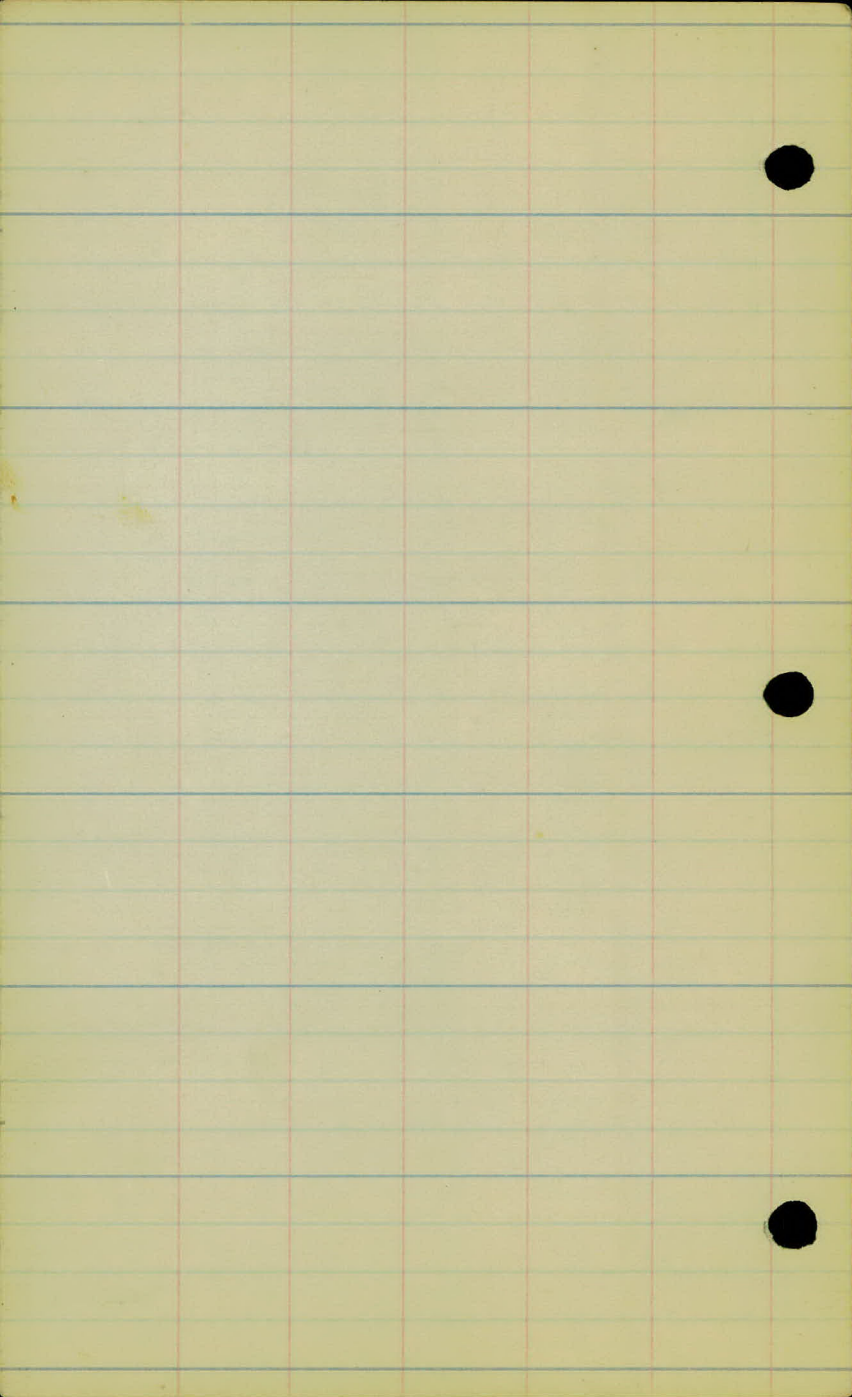
" " High " 10' Rt.

" " " " £

" " Low " £

" " High " 10' Lt.

" " Low " 10' Lt.



Proj- 24-51

Top of Rail Elev.

Twin City Elec. Ry. Xing's

@ Sta. 297+95 *

@ Sta. 314+84

Elev. - White Bear Lake &
Goose Lake

Elev. from 294+00 to 314+?

W.H.G.
M.C.E.
M.A.G.
T.F.

June 24-24

| Station | + | H.I | - | E/ev. |
|----------|-------|--------|------|---------|
| B.M. | 5.16 | 238.07 | | 232.91 |
| 298+17 | | | 4.75 | 33.32 |
| 298+06 | | | 4.39 | 33.68 |
| 298+00 | | | 4.61 | 33.46 |
| 297+91 | | | 4.31 | 33.96 ✓ |
| 297+8 | | | 4.55 | 33.52 ✓ |
| 297+77.7 | | | 4.24 | 33.83 ✓ |
| T.P. | 10.72 | 247.35 | 1.41 | 236.63 |
| B.M. | | | 5.62 | 241.73 |

| | | | | |
|------|------|--------|------|--------|
| B.M. | 3.49 | 240.73 | | 236.74 |
| T.P. | 3.72 | 238.23 | 5.72 | 234.51 |

| | | | | |
|---------|------|--------|-------|--------|
| 15+38 | | | 4.10 | 33.413 |
| 15+16.5 | | | 4.52 | 33.71 |
| 15+00 | | | | |
| 14+94.8 | | | 4.18 | 34.05 |
| +72.5 | | | 4.56 | 33.69 |
| +46 | | | 4.22 | 34.01 |
| 314+18 | | | 4.67 | 33.56 |
| | | | 10.31 | 227.90 |
| | | | 12.1 | 226.10 |
| T.P. | 6.00 | 239.09 | 5.14 | 233.09 |
| B.M. | | | 4.39 | 234.70 |

Spike in 6" Maple 65' Rt. 299+20

Low Rail 10' Lt.

High " 10' Lt.

Low " 2

High " 2

Low " 10' Rt.

High " 10' Rt.

Spike in P.S. Rt. 291+80

Nail in Pole Rt. Sta 2+16

High Rail 10' Rt.

Low " 10' Rt.

High Rail 2

Low " 2

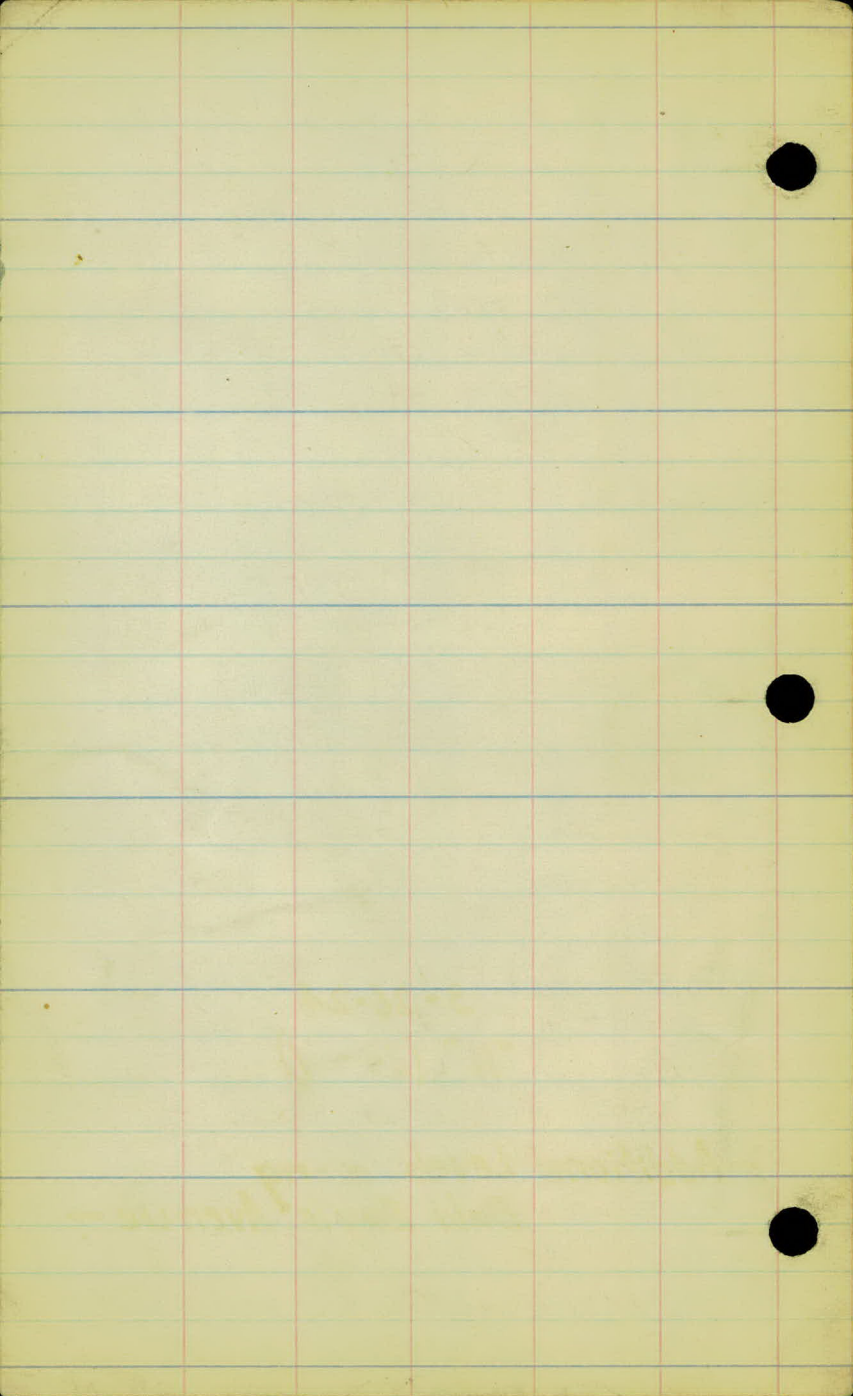
High " 10' Lt.

Low " 10' Lt.

Water Elev. White Bear Lake

" " Goose Lake

Nail in 14" Tree Rt. Sta. 310+40



Proj. 24-51
~~Proj. 23-57~~

Elev. for drainage

M.P. Tracks on Bald Eagle Ave.

F.M.C. 2-16-24

Office of Ramsey Co. Engineer
ST. PAUL, MINN.

Date Filed 3-26-24

File No. "11" (24-51)

- Additional Levels along
Bald Eagle Avenue -

'A' Line

| Sta | + | HI | → | El. |
|--------|-----|--------|------|----------|
| B.M. | 463 | 248.82 | ✓ | 244.19 ✓ |
| 0+10 | | | | |
| 0+84.1 | | | 4.93 | 243.89 ✓ |
| 0+93.6 | | | 4.75 | 243.07 ✓ |
| 1+10.9 | | | 4.65 | 243.17 ✓ |
| 1+20.2 | | | 4.60 | 244.22 ✓ |
| 1+23.5 | | | 4.56 | 244.26 ✓ |
| +34.4 | | | 4.48 | 244.34 ✓ |
| +44.1 | | | 4.58 | 244.22 ✓ |
| +52.8 | | | 4.48 | 244.34 ✓ |

309.9

B Line

| | | | | |
|--------|--|--------|------|----------|
| 0+06.3 | | 248.82 | 5.85 | 242.97 ✓ |
| 0+17.1 | | | 5.71 | 243.11 ✓ |
| 1+03.1 | | | 4.80 | 244.02 ✓ |
| 1+12.5 | | | 4.66 | 244.16 ✓ |
| 1+29.8 | | | 4.60 | 244.22 ✓ |
| 1+39.0 | | | 4.50 | 244.32 ✓ |
| 1+46.4 | | | 4.45 | 244.37 ✓ |
| 1+56.9 | | | 4.40 | 244.42 ✓ |
| 1+61.2 | | | 4.45 | 244.37 ✓ |
| 1+69.9 | | | 4.39 | 244.43 ✓ |

Electric pole 21 ft. ht. Sta 17+04

Proj-2357
FMC 2-16-24

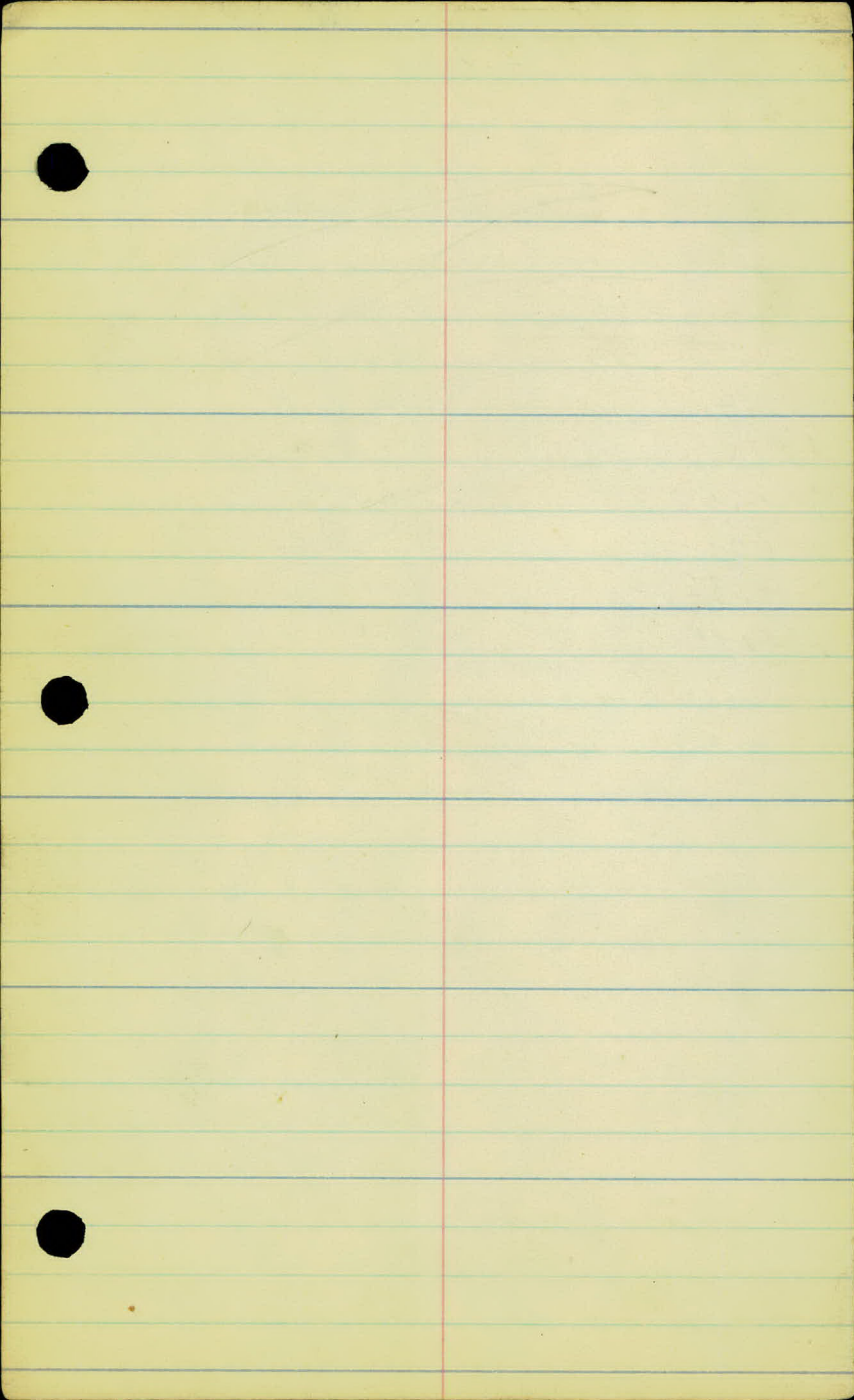
C line

sta + MI - El.

| | | | |
|--------|--------|------|----------|
| 0+25.1 | 248.82 | 5.84 | 242.98 ✓ |
| 0+45.6 | | 5.61 | 243.21 ✓ |
| 1+27 | | 4.65 | 244.17 ✓ |
| 1+36 | | 4.57 | 244.25 ✓ |
| 1+53 | | 4.51 | 244.31 ✓ |
| 1+62.5 | | 4.42 | 244.40 ✓ |
| 1+73.8 | | 4.21 | 244.51 ✓ |
| 1+82.1 | | 4.32 | 244.47 ✓ |
| 1+83.9 | | 4.32 | 244.50 ✓ |
| 1+90.7 | | 4.31 | 244.51 ✓ |

D line

| | | | |
|--------|--------|------|----------|
| 0+62.6 | 248.82 | 5.81 | 243.01 ✓ |
| 0+72.5 | | 5.59 | 243.23 ✓ |
| 1+50.3 | | 4.55 | 244.27 ✓ |
| 1+59.5 | | 4.48 | 244.34 ✓ |
| 1+76.3 | | 4.39 | 244.45 ✓ |
| 1+85.5 | | 4.25 | 244.47 ✓ |
| 1+99.5 | | 4.21 | 244.61 ✓ |
| 2+03.1 | | 4.30 | 244.52 ✓ |
| 2+09.3 | | 4.22 | 244.60 ✓ |
| 2+12.0 | | 4.23 | 244.59 ✓ |

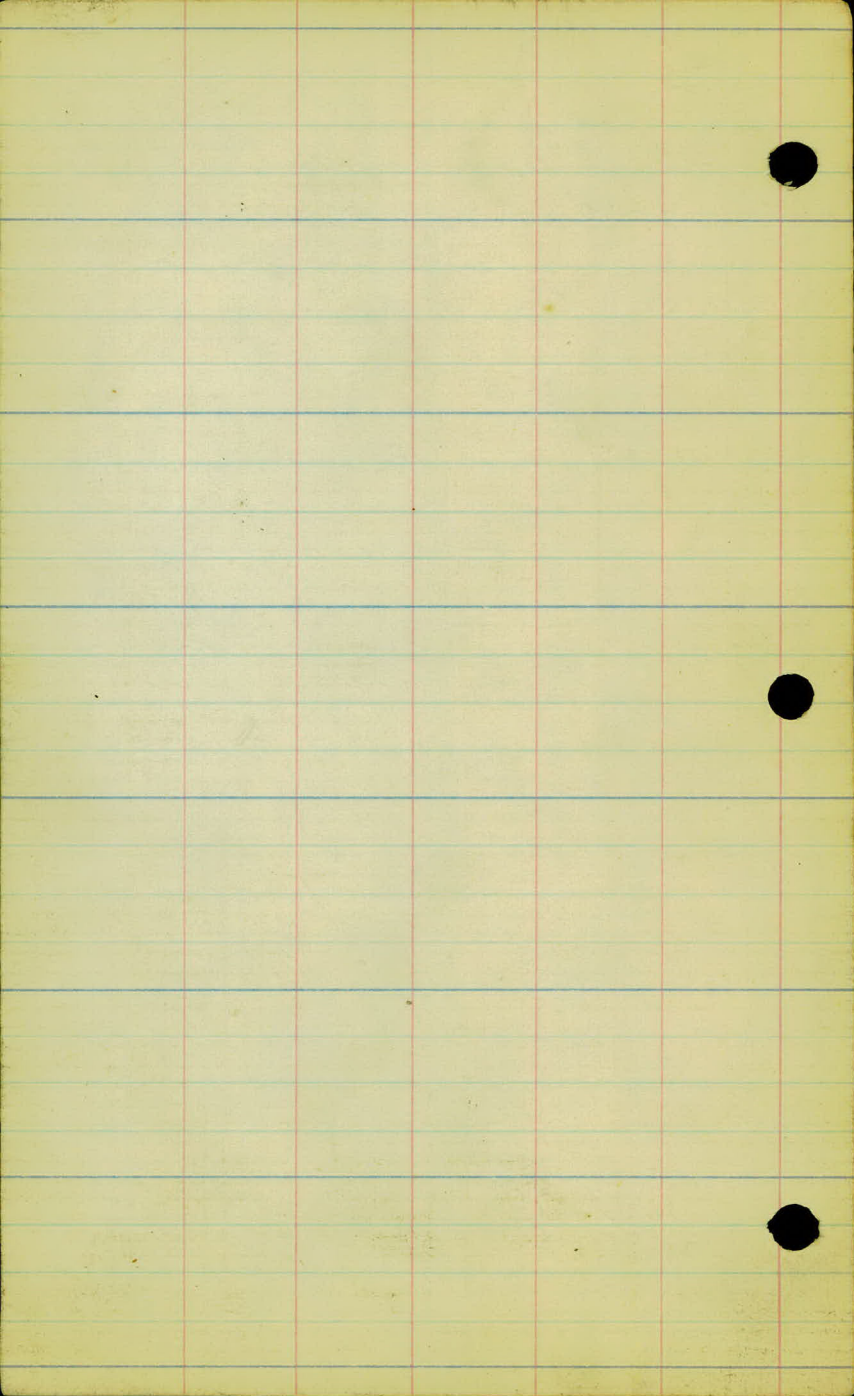


Proj. 23-57
FMC 2-16-24

E line

HJ - E1

| | ✓ | | |
|-------------------|--------|------|----------|
| 0+83 | 248.82 | 5.83 | 242.99 ✓ |
| 0+92 ³ | | 5.61 | 243.21 ✓ |
| 1+68 ⁸ | | 4.45 | 244.37 ✓ |
| 1+77 ⁹ | | 4.40 | 244.42 ✓ |
| 1+94 ⁷ | | 4.32 | 244.50 ✓ |
| 2+04 ⁸ | | 4.26 | 244.56 ✓ |
| 2+19 ² | | 4.13 | 244.69 ✓ |
| 2+20 ⁴ | | 4.20 | 244.62 ✓ |
| 2+28 ⁵ | | 4.17 | 244.65 ✓ |
| 2+29 ⁴ | | 4.19 | 244.63 ✓ |



Proj 24-51

Additional Elevations.
for Side Walks.

Bald Eagle Avenue

Sta. 1+480 to 5+04 and,
Intersection Birch Lake Ave.
4th St.

W.H.C.
G.E.V. } Feb 8, 24
E.H.R.
T.F.

Station + H. I - Elev.

1.09 245.28 ✓ 244.19 ✓

18+80

20+00

22+00

25+00

T.P. 494 ✓ 245.15 ✓ 5.07 240.21 ✓

25+76 100' S. of S. Prop. Line Birch Lake Ave.

26+76 S. Prop. Line Birch Lake Ave.

27+09 (E. Birch Lake Ave)

27+42 N. Prop. Line Birch Lake Ave.

27+32 Man hole - 24' Left

27+78 End of 10" Culvert 21' Left. 8.5 236.7 - F. Line
I. 10' S. of S. Prop. Line @ 27+32

28+42 100' N. of N. Prop. Line

L. = West
R. = East
Tel. Polo 21 L. 1744

| | | | | | | |
|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|
| 40.28 | 40.08 | 39.48 | 40.78 | 41.78 | 41.58 | 41.58 |
| $\frac{50}{33}$ | $\frac{52}{33}$ | $\frac{52}{25}$ | $\frac{45}{13}$ | $\frac{55}{0}$ | $\frac{37}{25}$ | $\frac{37}{31}$ |

L.S.W. ↑

| | | | | |
|-----------------|-----------------|----------------|-----------------|-----------------|
| 40.28 | 39.68 | 41.28 | 40.68 | 40.68 |
| $\frac{50}{33}$ | $\frac{56}{25}$ | $\frac{40}{0}$ | $\frac{46}{25}$ | $\frac{46}{31}$ |

L.S.W. ↑

| | | | | |
|-----------------|-----------------|----------------|-----------------|-----------------|
| 38.28 | 38.08 | 40.78 | 39.68 | 39.68 |
| $\frac{70}{31}$ | $\frac{72}{25}$ | $\frac{45}{0}$ | $\frac{56}{25}$ | $\frac{56}{31}$ |

L.S.W. ↑

| | | | | |
|-----------------|-----------------|----------------|-----------------|-----------------|
| 39.18 | 38.68 | 40.48 | 39.68 | 39.68 |
| $\frac{61}{31}$ | $\frac{56}{25}$ | $\frac{48}{0}$ | $\frac{56}{25}$ | $\frac{56}{31}$ |

L.S.W. ↑

T.R. Top of rock SE. cor. N. 57.

| | | | | | | | | |
|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-------------------|-------------------|
| 39.45 | 39.75 | 38.95 | 39.65 | 40.65 | 39.65 | 39.05 | 39.65 | 39.85 |
| $\frac{54}{31}$ | $\frac{54}{26}$ | $\frac{62}{20}$ | $\frac{55}{13}$ | $\frac{45}{0}$ | $\frac{55}{13}$ | $\frac{61}{20}$ | $\frac{55}{26.5}$ | $\frac{53}{32.5}$ |

L.S.W. ↑ L. gutter. L. gutter L.S.W. ↑

| | | | | | |
|-----------------|-----------------|-----------------|----------------|-------------------|-----------------|
| 39.95 | 39.95 | 40.25 | 40.45 | 39.90 | 39.95 |
| $\frac{52}{30}$ | $\frac{52}{27}$ | $\frac{44}{11}$ | $\frac{47}{0}$ | $\frac{52.5}{26}$ | $\frac{52}{32}$ |

L.S.W. ↑ L.S.W. ↑

| | | | | | |
|-----------------|-------------------|-----------------|----------------|-----------------|-----------------|
| 40.85 | 40.59 | 39.95 | 40.25 | 39.75 | 39.75 |
| $\frac{43}{33}$ | $\frac{45.5}{27}$ | $\frac{52}{27}$ | $\frac{49}{0}$ | $\frac{54}{27}$ | $\frac{54}{33}$ |

L.S.W. ↑ L. gutter. L.S.W. ↑

| | | | | | | | |
|---------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|
| 40.65 | 40.55 | 37.05 | 37.05 | 39.85 | 40.35 | 40.05 | 40.05 |
| $\frac{48.0}{32.5}$ | $\frac{46}{28}$ | $\frac{81}{22}$ | $\frac{81}{30}$ | $\frac{53}{17}$ | $\frac{48}{0}$ | $\frac{51}{27}$ | $\frac{51}{33}$ |

L.S.W. ↑ L.S.W. ↑

Station + H. I. - Elev.
245.15 ✓

West on Birch Lake Ave.

0+00 = E Bald Eagle Ave

0+33 W Prop line " "

1+33 100' W of W Prop line

T.P. 5.04 245.40 ✓ 4.79 240.36 ✓ old T.P. ✓

Along Bald Eagle Ave.

2+20 N Prop Line 2nd St.

2+00

3+00

T.P. 4.68 245.24 ✓ 4.84 240.56 ✓

3+12 100' S of S Prop Line 4th St.

3+12 S Prop line 4th St.

3+42 (E 4th St.)

L.
South

R.
North

| | | | |
|-----------------|-------------------|-----------------|----------------|
| 39.95 | 39.95 | 39.75 | 40.05 |
| $\frac{52}{33}$ | $\frac{52}{28.5}$ | $\frac{54}{21}$ | $\frac{51}{0}$ |
| L SW | | gut | |

| | | | |
|-----------------|-----------------|------------------|-----------------|
| 39.85 | 40.15 | 40.69 | 40.85 |
| $\frac{53}{21}$ | $\frac{50}{28}$ | $\frac{416}{28}$ | $\frac{43}{33}$ |
| L SW | | L SW | |

| | | | |
|-------------------|-------------------|-----------------|-----------------|
| 39.80 | 39.75 | 38.95 | 40.15 |
| $\frac{53.5}{33}$ | $\frac{54}{28.5}$ | $\frac{62}{21}$ | $\frac{5.0}{0}$ |
| L SW | | gut | |

| | | |
|------------------|--------------------|------------------|
| 39.35 | 40.05 | 40.05 |
| $\frac{5.8}{18}$ | $\frac{5.1}{28.5}$ | $\frac{5.1}{33}$ |
| gut | L SW | |

West = L.

R = East

| | | | | | |
|-----------------|-------------------|-----------------|------------------|------------------|-----------------|
| 40.60 | 40.6 | 37.6 | 37.6 | 39.9 | 40.5 |
| $\frac{48}{33}$ | $\frac{48}{28.5}$ | $\frac{78}{22}$ | $\frac{7.8}{20}$ | $\frac{5.5}{16}$ | $\frac{4.9}{0}$ |
| L SW | | gut | | | |

| | | | | | |
|-----------------|------------------|------------------|-----------------|------------------|------------------|
| 39.8 | 38.6 | 38.6 | 40.6 | 40.7 | 39.6 |
| $\frac{56}{13}$ | $\frac{6.8}{16}$ | $\frac{6.8}{18}$ | $\frac{48}{28}$ | $\frac{4.7}{31}$ | $\frac{5.8}{33}$ |
| out | | | | | |

| | | | | | |
|-------------------|---------------------|------------------|------------------|------------------|------------------|
| 40.56 | 40.57 | 37.4 | 37.4 | 39.9 | 40.5 |
| $\frac{48.4}{33}$ | $\frac{48.3}{28.5}$ | $\frac{8.0}{22}$ | $\frac{8.0}{20}$ | $\frac{5.5}{14}$ | $\frac{4.9}{21}$ |
| L SW | | L SW | | | |

| | | | | |
|------------------|------------------|------------------|------------------|------------------|
| 39.9 | 37.9 | 37.9 | 40.3 | 40.4 |
| $\frac{5.5}{13}$ | $\frac{7.5}{16}$ | $\frac{7.5}{18}$ | $\frac{5.1}{25}$ | $\frac{5.0}{31}$ |
| (gut) | | | | |

| | | | | | |
|------------------|--------------------|------------------|------------------|------------------|-----------------|
| 40.5 | 40.4 | 37.5 | 37.5 | 40.0 | 40.5 |
| $\frac{4.9}{33}$ | $\frac{5.0}{28.5}$ | $\frac{7.9}{22}$ | $\frac{7.9}{20}$ | $\frac{5.4}{14}$ | $\frac{4.9}{0}$ |
| L SW | | gut | | | |

| | | | | |
|------------------|------------------|------------------|------------------|------------------|
| 40.0 | 37.7 | 37.7 | 40.4 | 40.4 |
| $\frac{5.4}{12}$ | $\frac{7.7}{17}$ | $\frac{7.7}{19}$ | $\frac{5.0}{27}$ | $\frac{5.0}{33}$ |

| | | | | |
|------------------|--------------------|------------------|------------------|-----------------|
| 40.54 | 40.54 | 39.44 | 39.84 | 40.44 |
| $\frac{4.7}{33}$ | $\frac{4.7}{28.5}$ | $\frac{5.4}{20}$ | $\frac{5.4}{13}$ | $\frac{4.8}{0}$ |
| L SW | | | | |

| | | | | |
|------------------|------------------|------------------|------------------|------------------|
| 40.04 | 38.44 | 38.44 | 40.34 | 40.34 |
| $\frac{5.2}{12}$ | $\frac{6.8}{17}$ | $\frac{6.8}{19}$ | $\frac{4.7}{25}$ | $\frac{4.7}{31}$ |

| | | | | | |
|-------------------|---------------------|------------------|------------------|------------------|-----------------|
| 40.39 | 40.39 | 37.4 | 37.4 | 39.84 | 40.24 |
| $\frac{4.85}{33}$ | $\frac{4.85}{28.5}$ | $\frac{7.5}{22}$ | $\frac{7.5}{20}$ | $\frac{5.4}{14}$ | $\frac{5.0}{0}$ |
| L SW | | gut | | | |

| | | | |
|------------------|-------------------|------------------|------------------|
| 39.24 | 40.04 | 40.14 | 40.14 |
| $\frac{6.0}{19}$ | $\frac{5.20}{19}$ | $\frac{5.4}{27}$ | $\frac{5.1}{33}$ |
| Top of cut | | | |

Station + H.I. - Elev.
245.24 ✓

36+72 N. Prop line 4th St.

37+72 100' N. of N. Prop line

Going West on 4th St.

0+00 = E Bald Eagle Ave.

0+10 End of Pavement

6+33 W Prop line B. E. Ave.

1+00 100' W. Prop line

Going East on 4th St.

0+00 E Bald Eagle Ave.

0+39 End of curb

0+33 E Prop line Bald Eagle Ave.

0+49 Beg of curb

1+23

B.M. for check.

3.95 241.29 ✓

L I R

| | | | | | | | |
|-------------------|---------------------|------------------|------------------|------------------|-------------------|------------------|-------------------|
| 40.42 | 40.40 | 38.54 | 40.27 | 39.44 | 40.04 | 40.04 | 39.09 |
| $\frac{4.82}{32}$ | $\frac{4.84}{28.5}$ | $\frac{6.9}{19}$ | $\frac{5.0}{19}$ | $\frac{5.8}{19}$ | $\frac{5.20}{19}$ | $\frac{5.2}{25}$ | $\frac{5.15}{30}$ |
| L.S.W. ↘ | | G. | | ↑ Top curb. | | | |

| | | | | | | | | |
|-------------------|---------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| 40.52 | 40.22 | 39.24 | 39.24 | 40.37 | 38.64 | 38.64 | 40.48 | 40.48 |
| $\frac{4.72}{32}$ | $\frac{4.72}{28.5}$ | $\frac{6.0}{22}$ | $\frac{6.0}{20}$ | $\frac{4.9}{19}$ | $\frac{6.6}{17}$ | $\frac{6.6}{19}$ | $\frac{4.76}{26}$ | $\frac{4.76}{31}$ |
| ↑ S.W. | | | | | | ↑ S.W. | | |

| | |
|----------------------|-------------------|
| South | North |
| 40.16 | 40.22 |
| $\frac{4.16}{29.16}$ | $\frac{3.02}{19}$ |
| $\frac{5.08}{19}$ | $\frac{5.08}{19}$ |
| ↑ Top of pavement ↗ | |

| | | | | | | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|
| 40.40 | 40.39 | 40.04 | 39.09 | 40.20 | 40.08 | 40.42 |
| $\frac{4.34}{30}$ | $\frac{4.35}{23}$ | $\frac{5.15}{10}$ | $\frac{5.04}{19}$ | $\frac{5.16}{19}$ | $\frac{4.82}{29}$ | |
| L.S.W. ↘ | | E. pavement | | Low | | |

| | | | | | | |
|------------------|------------------|-------------------|-------------------|-------------------|------------------|-------------------|
| 40.04 | 40.34 | 40.04 | 40.14 | 40.04 | 39.64 | 39.69 |
| $\frac{5.2}{30}$ | $\frac{4.9}{28}$ | $\frac{5.20}{19}$ | $\frac{5.10}{19}$ | $\frac{5.20}{19}$ | $\frac{5.4}{25}$ | $\frac{5.25}{30}$ |
| | | | | E. pavement | | ↑ S.W. |

South North

| | | | | | | |
|-------------------|------------------|----------------------------|------------------|-------------------|-------------------|-------------------|
| 40.03 | 40.04 | 40.04 | 39.64 | 39.99 | 39.99 | 40.4 |
| $\frac{5.21}{17}$ | $\frac{5.2}{30}$ | $\frac{5.2}{30}$ | $\frac{5.2}{15}$ | $\frac{5.25}{15}$ | $\frac{5.25}{15}$ | $\frac{5.20}{30}$ |
| Top of Rad. curb | | G. Top of curb L.S.W. | | | | |

| | | | | | | | |
|------------------|------------------|-------------------|------------------|--------------------------|-------------------|-------------------|-------------------|
| 40.24 | 40.24 | 39.74 | 40.34 | 39.84 | 39.22 | 40.26 | 40.26 |
| $\frac{5.0}{30}$ | $\frac{5.0}{25}$ | $\frac{5.05}{15}$ | $\frac{4.9}{15}$ | $\frac{5.4}{15}$ | $\frac{5.02}{15}$ | $\frac{4.98}{25}$ | $\frac{4.98}{30}$ |
| | | Top curb | | G. Top of curb S.W. | | | |

| Station | + | H I | - | Elev. |
|---------|------|----------|------|----------|
| | | 245.24 ✓ | | |
| T.P. | 2.15 | 245.80 ✓ | 1.59 | 243.65 ✓ |

Along Bald Eagle Ave

44725

46400

| | | | | |
|------|------|----------|------|----------|
| T.P. | 5.24 | 246.83 ✓ | 4.21 | 241.59 ✓ |
|------|------|----------|------|----------|

50400

53723

55765

57704

B.M. for check.

3.88 242.95 ✓

Waste L

R = East

Top of Pipe Hyd. A. Cor. 5th + Bald E. Ave

| | | | | |
|------------------|------------------|------|------------------|--------------------|
| 40.4 | 40.3 | 41.1 | 41.4 | 41.4 |
| $\frac{5.4}{33}$ | $\frac{5.5}{25}$ | 47 | $\frac{4.6}{20}$ | $\frac{4.6}{20.5}$ |

SW

| | | | | |
|------------------|------------------|------|-------------------|---------------------|
| 40.9 | 40.0 | 41.1 | 41.25 | 41.30 |
| $\frac{4.9}{33}$ | $\frac{5.8}{25}$ | 47 | $\frac{4.55}{26}$ | $\frac{4.50}{20.5}$ |

SW

| | | | | |
|------------------|------------------|-------|------------------|---------------------|
| 40.63 | 40.33 | 41.73 | 41.83 | 41.88 |
| $\frac{6.0}{33}$ | $\frac{6.5}{25}$ | 51 | $\frac{5.0}{27}$ | $\frac{4.95}{21.5}$ |

SW

| | | | | |
|------------------|------------------|-------|-------------------|---------------------|
| 41.53 | 41.03 | 42.43 | 42.48 | 42.53 |
| $\frac{5.3}{33}$ | $\frac{5.8}{25}$ | 44 | $\frac{4.35}{27}$ | $\frac{4.20}{20.5}$ |

SW

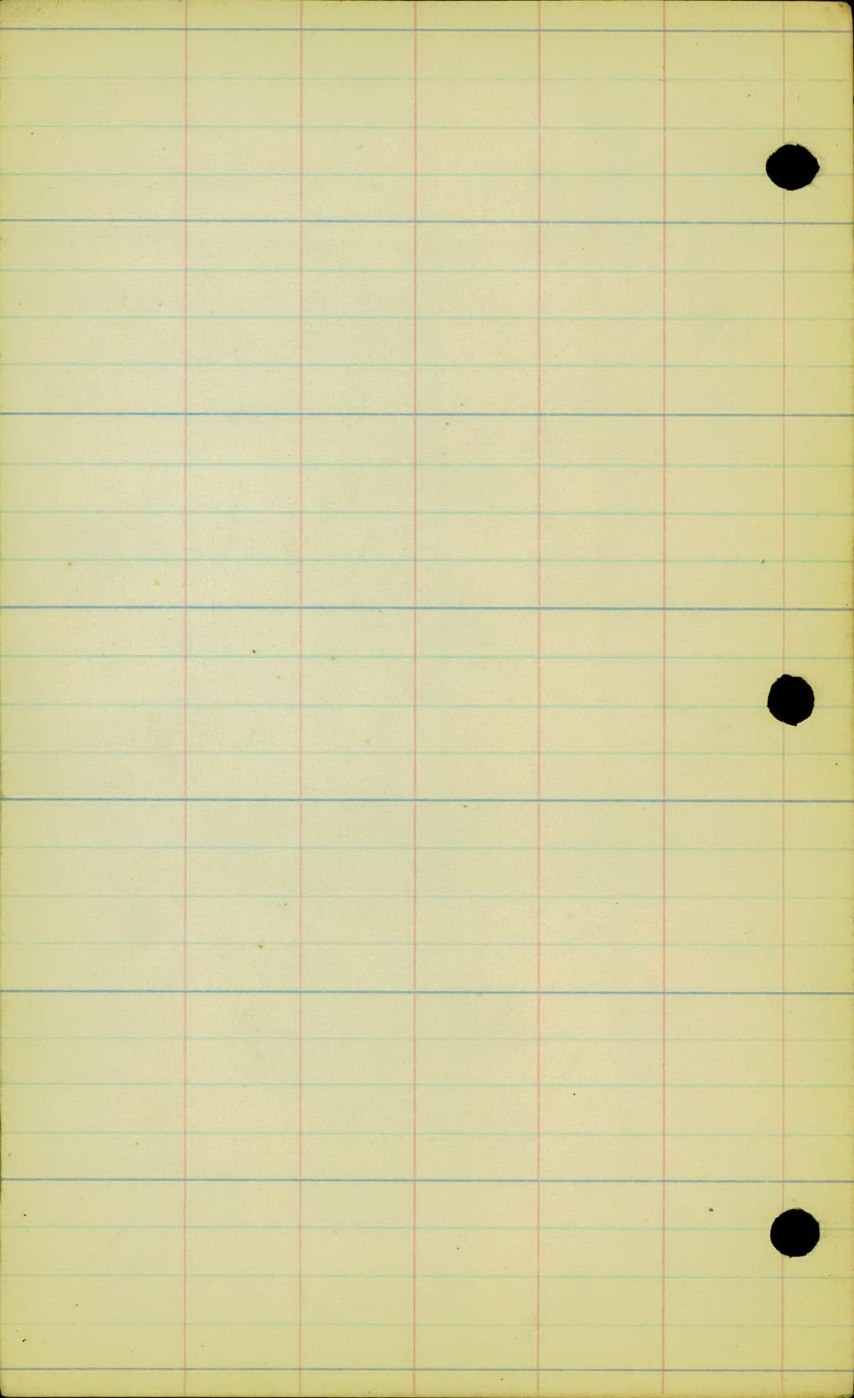
| | | | | | | |
|-------------------|------------------|-------|------------------|-------|------------------|------------------|
| 43.08 | 43.43 | 43.33 | 43.53 | 45.73 | 45.13 | 45.73 |
| $\frac{3.25}{33}$ | $\frac{3.4}{26}$ | 35 | $\frac{2.2}{17}$ | 1.1 | $\frac{1.7}{25}$ | $\frac{1.1}{32}$ |

SW

| | | | | | |
|-------------------|-------------------|-------|------------------|------------------|------------------|
| 43.08 | 43.08 | 43.53 | 43.93 | 44.83 | 45.03 |
| $\frac{3.25}{31}$ | $\frac{3.25}{26}$ | 3.3 | $\frac{2.9}{17}$ | $\frac{2.0}{25}$ | $\frac{1.2}{33}$ |

SW

242.49 Nardia E.P. 53710



1
Project 24-51

Sidewalk Elevations
On Bald Eagle Ave from Sta 18-57

Note:

For location of Sidewalks
see original topography.

8-Pages

W.H.C.
O.E.J.
F.H.R. } Feb 6, 1924.
T.F.

| Station | + | H. I | - | Elev. |
|----------------|------|----------|------|----------------------|
| B.M. | 1.52 | 245.71 ✓ | | 244.19 ✓ |
| 18+80 | | | 4.10 | 241.61 ✓ |
| 21+50 | | | 5.20 | 239.91 ✓ |
| T.P. | 4.34 | 244.90 ✓ | 5.15 | 240.56 ✓ |
| 25+00 | | | 5.22 | 239.68 ✓ |
| 25+65 | | | 5.18 | 239.72 ✓ |
| 26+75 | | | 4.90 | 240.00 ✓ |
| 27+43 | | | 4.30 | 240.60 ✓ |
| 27+43 | | | 5.10 | 239.80 ✓ |
| T.P. | 4.77 | 245.15 ✓ | 4.54 | 240.36 ✓ |
| 28+67 | | | 4.55 | 240.58 ✓ |
| 28+67 | | | 4.96 | 240.17 ✓ |
| 32+38 | | | 4.63 | 240.50 ✓ |
| 32+64 | | | 4.75 | 240.28 ✓ |
| T.P. | 4.65 | 245.76 ✓ | 4.62 | 240.51 ✓ |
| B.M. for check | | | 3.86 | 241.30 ✓ 241.34 orig |
| 36+20 | | | 4.76 | 240.40 ✓ |
| 36+09 | | | 5.11 | 240.05 ✓ |
| 36+66 | | | 5.11 | 240.05 ✓ |
| 36+70 | | | 4.66 | 240.30 ✓ |
| 36+69 | | | 4.77 | 240.39 ✓ |

Tel pole 21 Left Sta. 17+04

Top of concrete walk Right (end)
" " " " Right

Top of concrete walk Right.

" " " " Left (end)
" " " " Left (end)
" " " " Left (end)
" " " " Right.

Top of concrete walk Left

" " " " Right (end)
" " " " Left (end)
" " " " Left (end)

B.M. 36+55-30 L.

Top of concrete walk Left (end)
" " " ^{Radius} Curb Right.
" " " ^{Radius} Curb Right.
" " " Walk Right.
" " " Walk Left (end.)

| Station | + | H. I | - | Elev. |
|----------------|------|----------|------|--------------------------|
| | | 245.16 ✓ | | |
| 40+15 | | | 4.40 | 240.76 ✓ |
| 40+32 | | | 4.43 | 240.73 ✓ |
| 40+49 | | | 4.51 | 240.65 ✓ |
| T.P. | 5.01 | 245.90 ✓ | 4.27 | 240.89 ✓ |
| 43+00 | | | 4.75 | 241.15 ✓ |
| 43+75 | | | 4.42 | 241.48 ✓ |
| 43+75 | | | 4.71 | 241.19 ✓ |
| 46+00 | | | 4.68 | 241.22 ✓ |
| T.P. | 4.66 | 246.97 ✓ | 3.59 | 242.31 ✓ |
| 50+00 | | | 5.14 | 241.83 ✓ |
| 53+23 | | | 4.56 | 242.41 ✓ |
| 53+82 | | | 4.95 | 242.02 ✓ |
| 57+04 | | | 3.92 | 243.05 ✓ |
| B.M. for check | | | 4.07 | 242.90 ✓
242.99 Orig. |

Top of concrete Walk Right (end)

" " " " Left

" " " " Right (end)

Top of concrete Walk Right

" " " " Right

" " " " Left (end)

" " " " Right

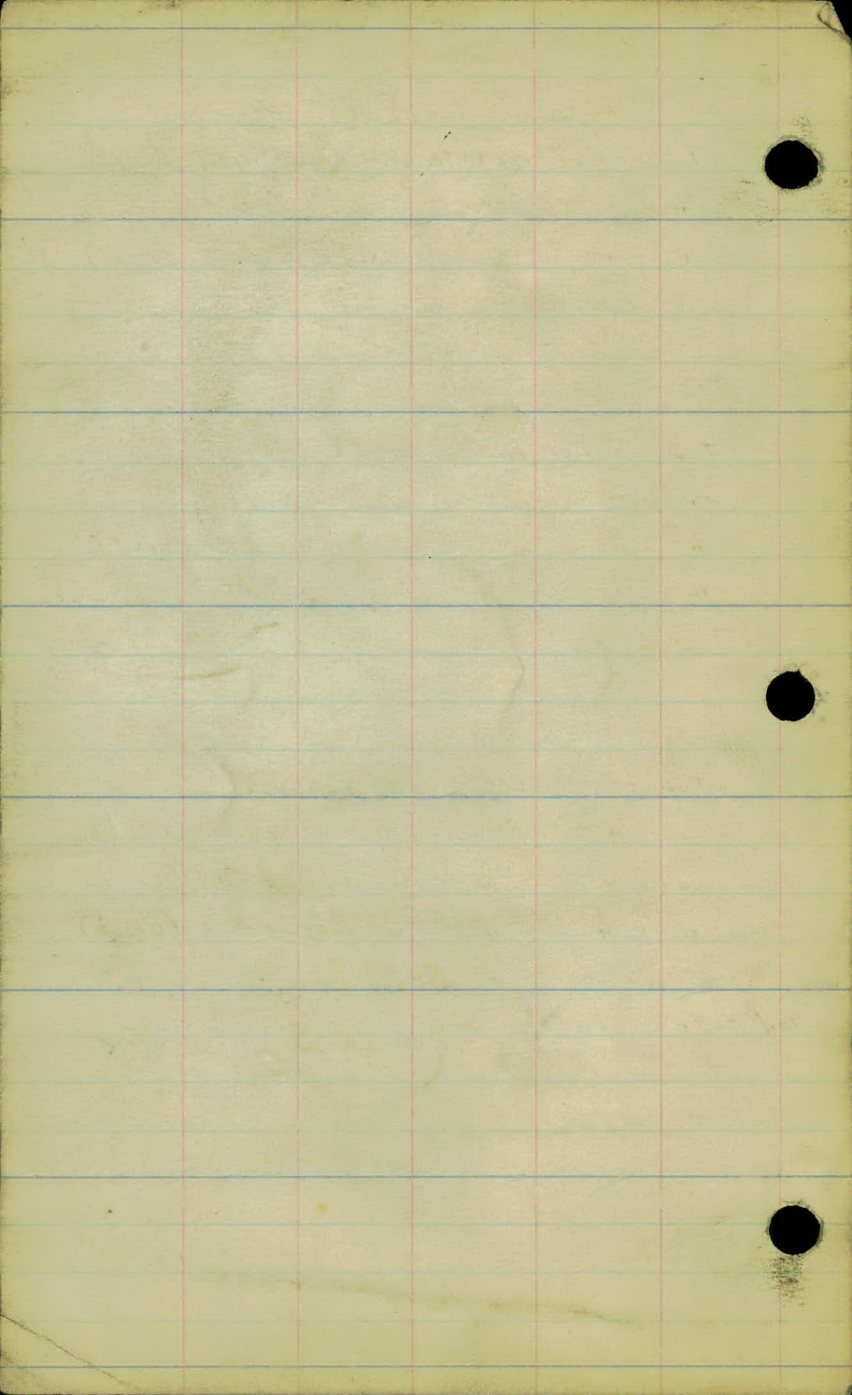
Top of concrete Walk Right

" " " " Right (end)

" " " " Left (end)

" " " " Left (end)

Mail E. Pole Left 53+10
as been disturbed.



Proj. - 24-51.

Line Revision

Sta. 87+01.86 to 101+84.8

Transit Notes.

5-16-24

Austin }
Skoglund } Party
Maloney }
Galvin }

Office of Ramsey Co. Engineer
ST. PAUL, MINN.

Date Filed 5-17-24

File No. "11" (24-51)

\pm
Ang. ht. Ang. R.

93+98.5 ✓ P.T.

91+57.0 P.I. 4°50'

89+15.2 ✓ P.C.

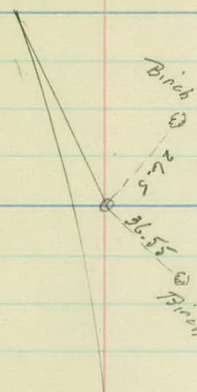
87+81.79 ✓ P.T.

87+47.7 P.I. 7°0'10'

87+01.86 ✓ P.C.

Sta - Def

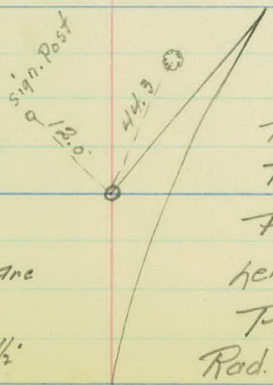
- 89+15.2 - 0°00'
- 90+00 - 0°25'
- 91+00 - 0°55'
- 92+00 - 1°25'
- 93+00 - 1°55'
- 93+98.5 - 2°25'



- 1° Curve. Lt.
- $\Delta = 4^\circ 50'$
- Rad = 5729.65 ✓
- Tang = 241.8 ✓
- P.C. = 89+15.2
- length = 483.3 ✓
- P.T. = 93+98.5

Sta - Def

- 87+01.86 = 0°00'
- +26.86 = 10°58 1/2'
- +41.82 = 17°32 1/2'
- +56.79 = 24°06 1/2'
- 87+81.79 = 35°05'
- Chord for 25' of Arc = 24.85
- Def. for 25' = 10°58 1/2'



- 100° Curve. Rt.
- $\Delta = 70^\circ 10'$
- Rad = 65.27 ✓
- Tang = 45.84 ✓
- P.C. = 87+01.86
- length = 79.93 (Arc)
- P.T. = 87+81.79
- Rad. Hub Set.

\pm
Ang ht Ang. Rt.

Equation $101 + 84.8 = 101 + 50.0$

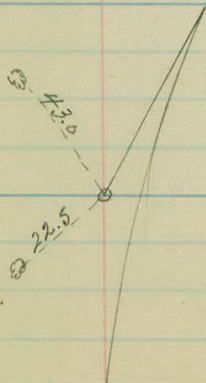
$98 + 94.1$ ✓ P.T.

$98 + 51.2$ P.I

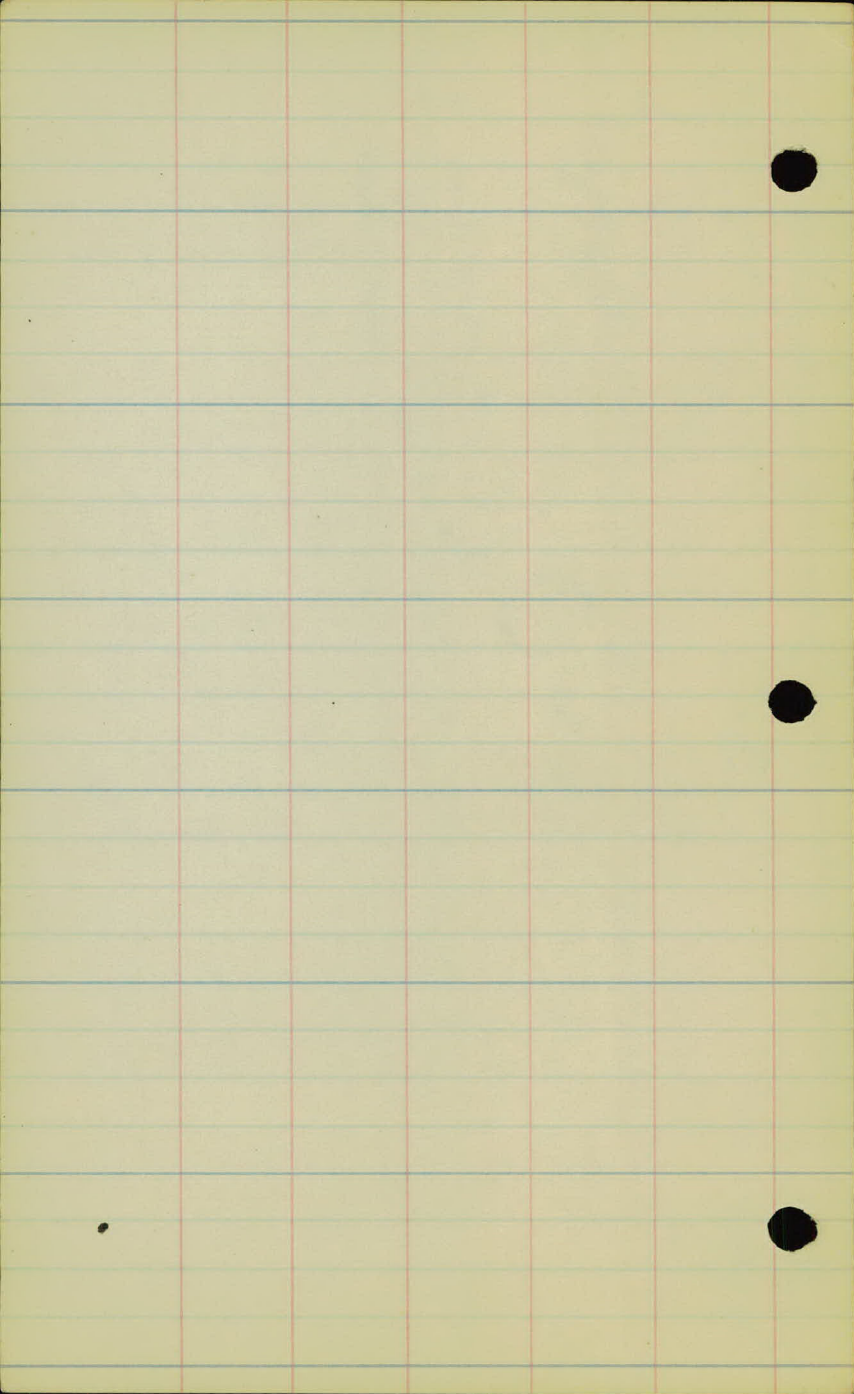
$25^{\circ} 34'$

$98 + 05.9$ ✓ P.C.

Sta. - Def
 $98+05.9 = 0^{\circ}00'$
 $+50 = 6^{\circ}23\frac{1}{2}'$
 $98+94.1 = 12^{\circ}47'$



29° Curve R.
 $\Delta = 25^{\circ}34'$
 $Rod = 199.70 \checkmark$
 $Tang = 45.32 \checkmark$
 $P.C. = 98+05.9$
 $length = 88.16 \checkmark$
 $P.T. = 98+94.1$



Proj. - 24-51

Line Revision

Sta 87+01.86 to 101+84.8

Levels.

5-16-24

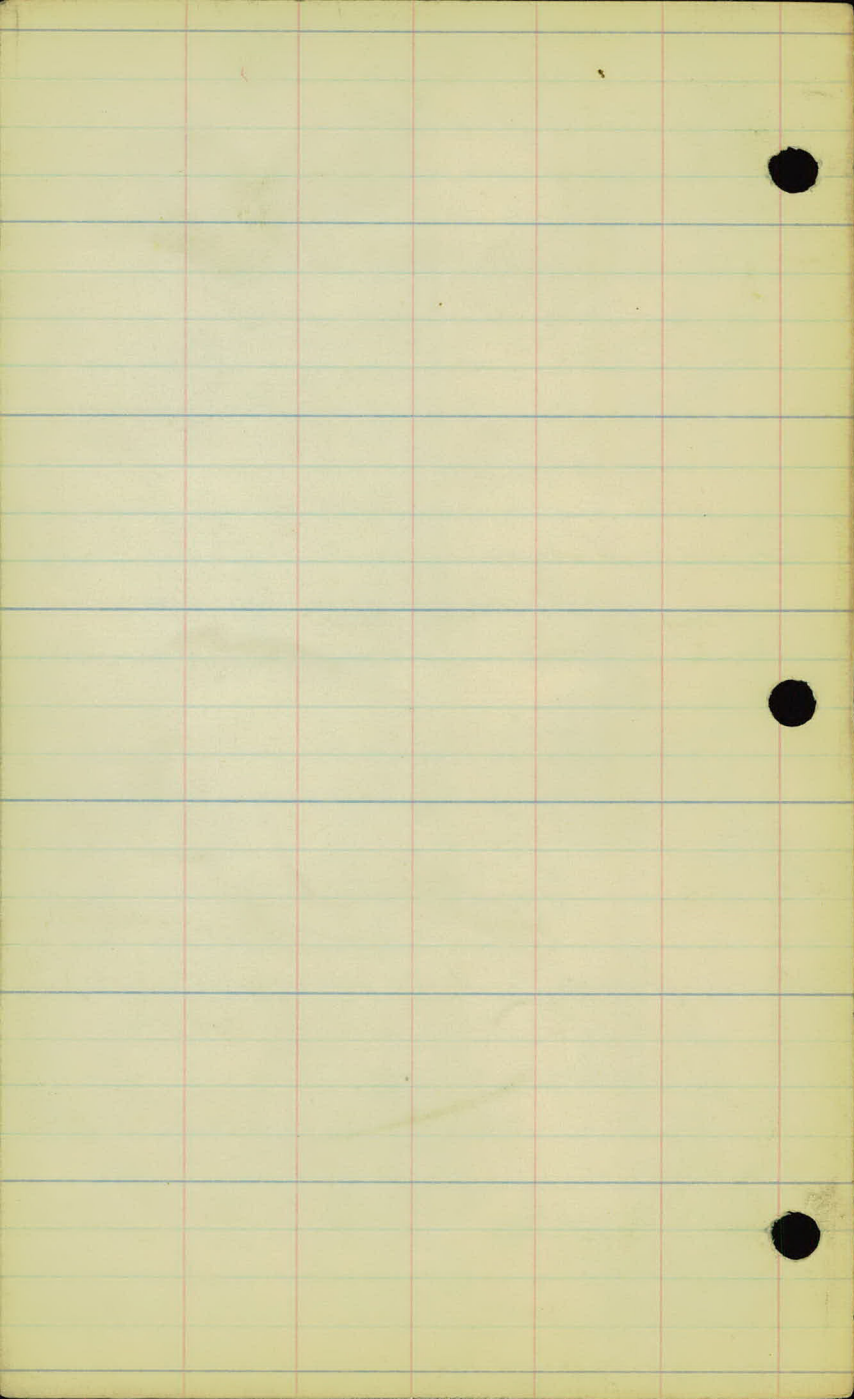
Austin }
S Kooglan } Party
Maloney }
Galvin }

| Station | + | HI | - | Rod. | Elev. |
|-----------------------|------|----------|------|----------|----------|
| B.M. | 2.67 | 228.12 ✓ | | | 225.45 |
| 87 + 00 | | | | 4.2 | 223.9. |
| + 42 | | | | 4.7 | 23.4. |
| + 81.79 | | | | 4.9 | 23.2. |
| 88 + 00 | | | | 4.8 | 23.3. |
| 89 + 00 | | | | 4.6 | 23.5. |
| 90 + 00 | | | | 4.2 | 23.9. |
| 91 + 00 | | | | 3.8 | 24.3. |
| T.P. | 4.21 | 228.80 ✓ | 3.53 | 214.59 ✓ | |
| 92 + 00 | | | | 4.2 | 24.6. |
| 93 + 00 | | | | 4.5 | 24.3. |
| 94 + 00 | | | | 5.0 | 23.8. |
| 95 + 00 | | | | 5.3 | 23.5. |
| 96 + 00 | | | | 4.7 | 24.1. |
| T.P. | 6.92 | 233.29 ✓ | 4.43 | 224.37 ✓ | |
| 97 + 00 | | | | 7.4 | 25.9. |
| 98 + 00 | | | | 5.6 | 27.7. |
| + 50 | | | | 5.0 | 28.3. |
| B.M. | | | | 5.21 | 228.08 ✓ |
| 99 + 00 | | | | 3.9 | 29.4. |
| 100 + 00 | | | | 2.8 | 30.5. |
| 101 + 00 | | | | 2.1 | 31.2. |
| 101 + 84.2 = 101 + 50 | | | | 1.6 | 31.7. |

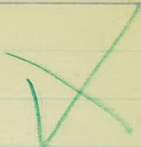
Proj - 24 - 51

Nail in Oak 30' ht. Sta 86+80

Nail in 18" Oak 40' ht. Sta. 98+80 (Old Sta. 98+35)



Proj - 24-51
Line Revision
Sta 297+51.4 to 311+39.8



Transit Notes.

Austin
Skoglund
Maloney
Calvin

} Randy

7/3/24

| | |
|-------------------------------|--------------|
| Office of Ramsey Co. Engineer | |
| ST. PAUL, MINN. | |
| Date Filed | 6-3-24 |
| File No. | "11" (24-51) |

Ang ht. Ang Rt.

307 + 20.9 P.T.

305 + 12.6 P.T

4° 10'

303 + 04.2 P.C

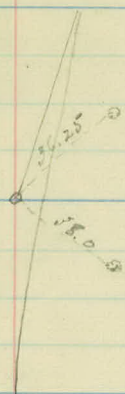
301 + 96.4 P.T.

299 + 80.2 P.I 43° 30'

116

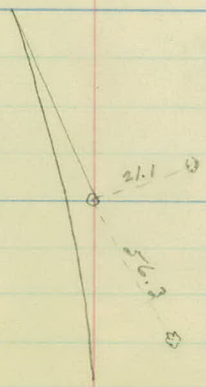
297 + 51.4 P.C

Sta. - Def
 303+04.2 - 0°00'
 304+00 - 0°29'
 305+00 - 0°59'
 306+00 - 1°29'
 307+00 - 1°59'
 307+20.9 - 2°05'



10° Curve RT
 $\Delta = 4°10'$
 Rad = 5729.65
 Tang = 208.4
 P.C. = 303+04.2
 length = 416.7
 P.T. = 307+20.9

Sta. - Def.
 297+51.4 - 0°00'
 298+00 - 2°26'
 +50 - 5°56'
 299+00 - 7°26'
 +50 - 9°56'
 300+00 - 12°26'
 +50 - 14°56'
 301+00 - 17°26'
 +50 - 19°56'
 301+86.4 - 21°45'



10° Curve LT.
 $\Delta = 43°30'$
 Rad = 573.7
 Tang = 228.9
 P.C. = 297+51.4
 length = 435.0
 P.T. = 301+86.4

~~2~~
Anght. Ang. R.

$$311 + 39.8 = 311 + 38.2$$

$$311 + 20.4$$

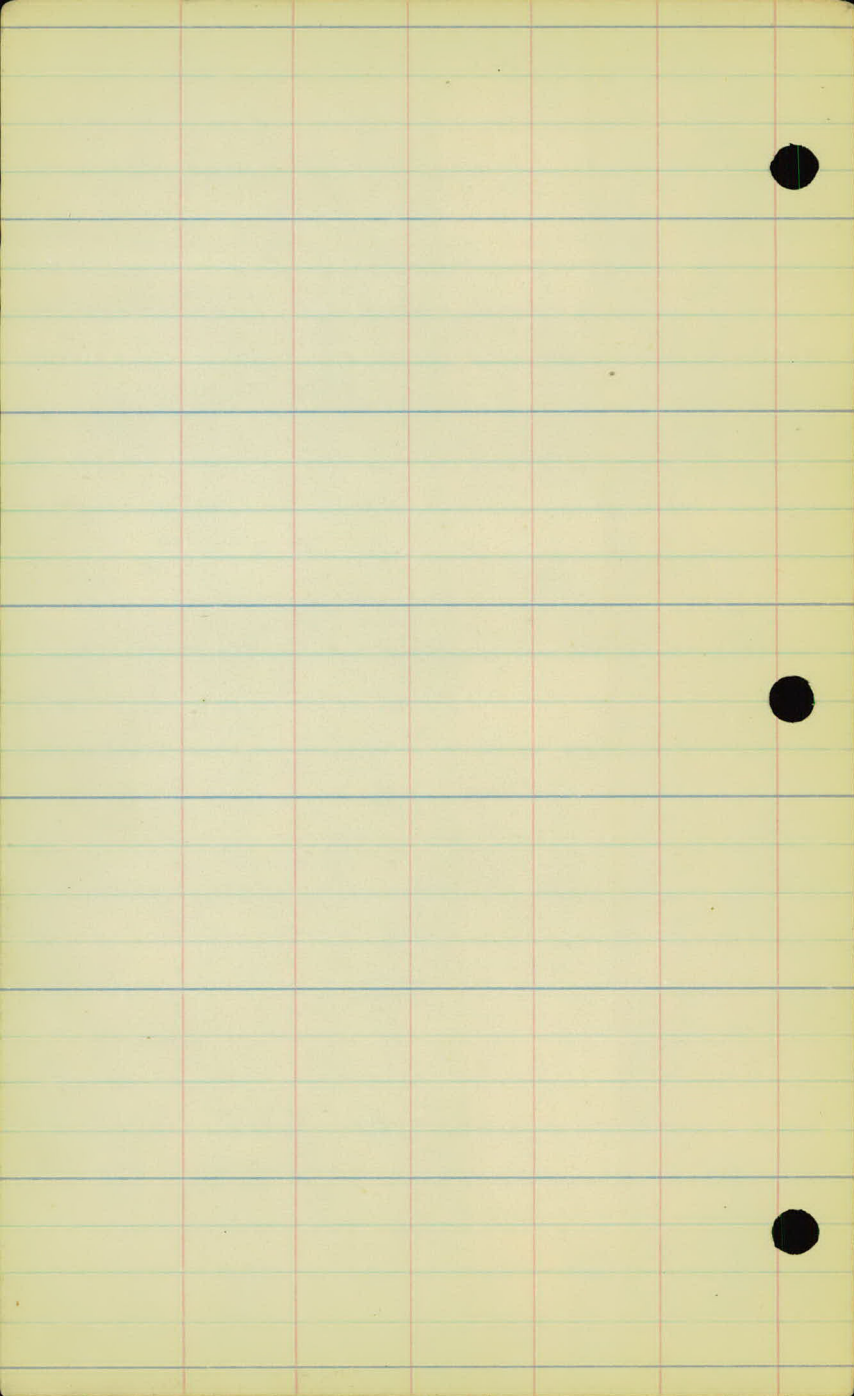
$$310 + 14.9 \text{ P.I. } 25049'$$

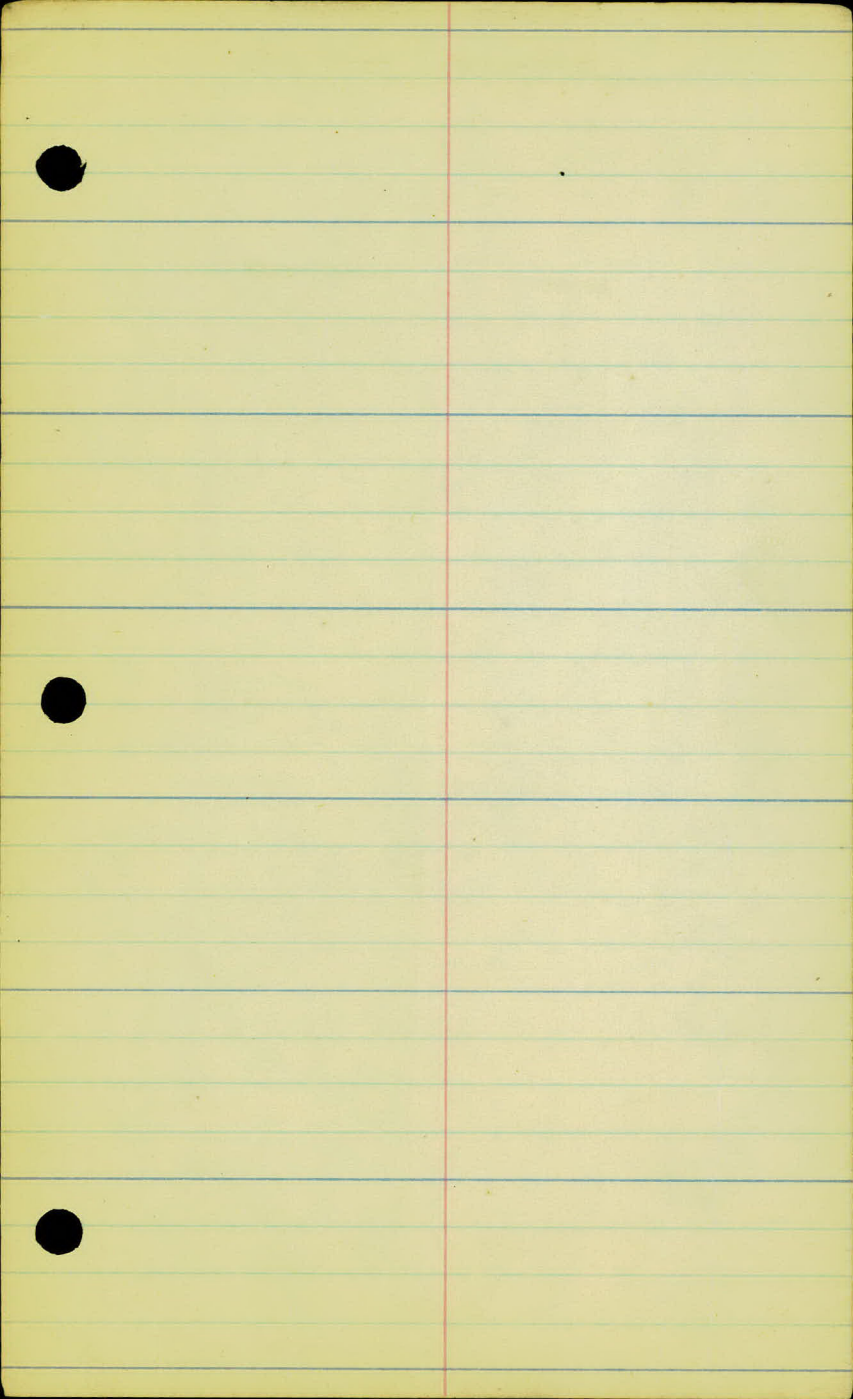
$$309 + 053$$

Sta. - Def.
 309+05.3 - 0° 00'
 +50 - 2° 41'
 310+00 - 5° 41'
 +50 - 8° 41'
 311+00 - 11° 41'
 +20.4 - 12° 54 1/2'



12° Curve ht
 $\Delta = 25049'$
 Rod = 478.3
 Tang = 109.6 ✓
 P.C. = 309+05.3
 length = ~~107.2~~ 215.14
 P.T. = 311+22.4 ✓



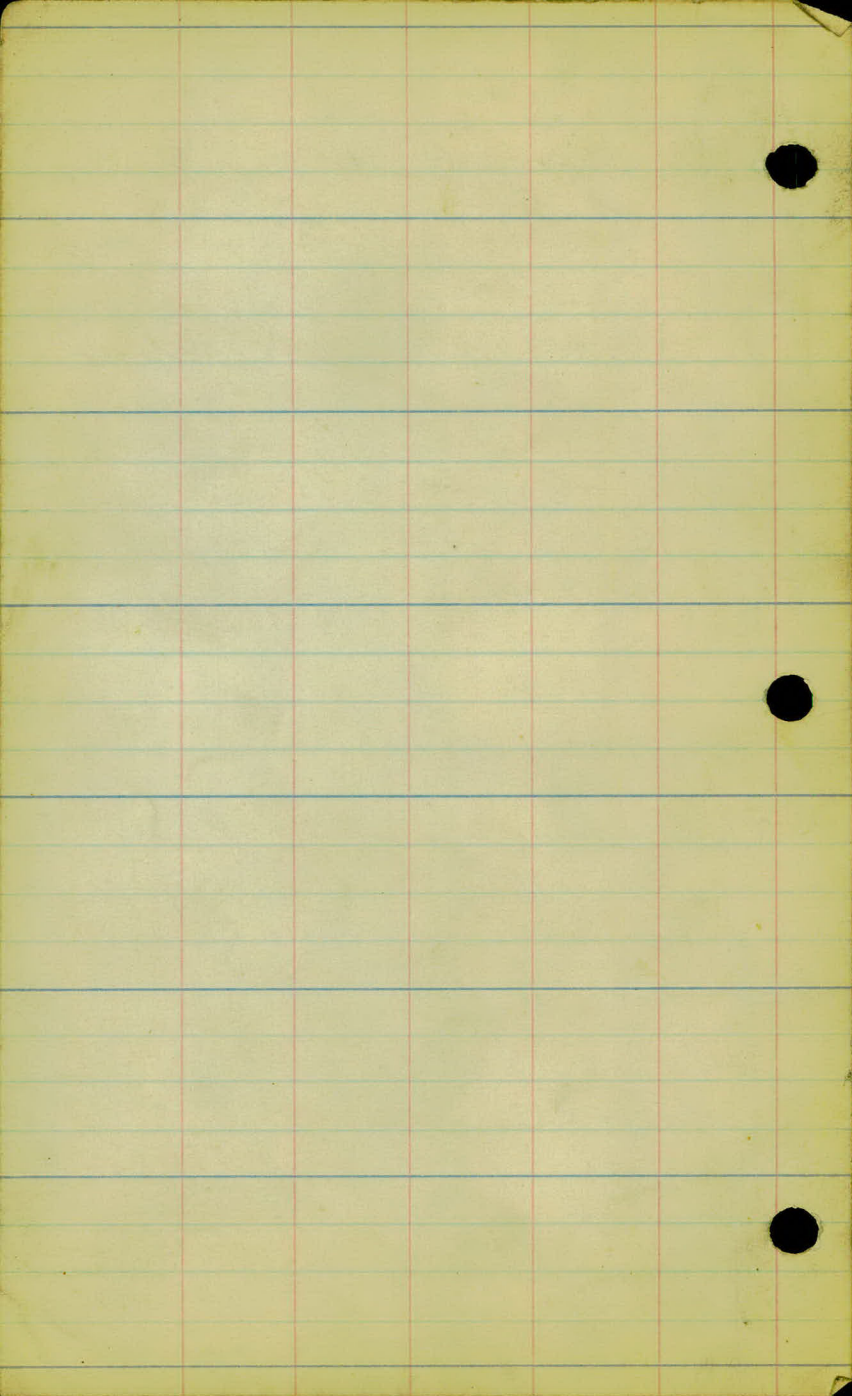


| Station | + | #I. | — | Red. |
|----------|----------|--------|------|-------------|
| B.M. | 5.47 | 238.55 | | 233.08 |
| 297+51.4 | | | | 5.3 33.3 |
| 297+90.7 | Top Rail | | | 4.61 33.94 |
| +99.7 | " " | | | 4.93 33.62 |
| 298+00 | | | | 4.9 33.7 |
| +60 | | | | 5.1 33.1 |
| 299+00 | | | | 5.1 33.1 |
| +50 | | | | 4.8 33.8 |
| 300+00 | | | | 4.8 33.8 |
| +50 | | | | 4.8 33.8 |
| 301+00 | | | | 5.1 33.5 |
| +50 | | | | 5.0 33.6 |
| 302+00 | | | | 5.1 33.5 |
| 303+00 | | | | 5.2 33.4 |
| T.P. | 4.67 | 238.45 | 4.77 | 233.78 |
| 304+00 | | | | 4.7 33.8 |
| 305+00 | | | | 4.6 33.9 |
| 306+00 | | | | 4.6 33.9 |
| B.M. | | | | 4.14 234.31 |
| 307+00 | | | | 4.5 34.0 |
| 308+00 | | | | 4.4 34.1 |
| 309+00 | | | | 4.5 34.0 |
| T.P. | 5.02 | 238.84 | 4.63 | 233.82 |
| 310+00 | | | | 4.5 34.3 |
| 311+00 | | | | 4.6 34.2 |

5-30-24

Nail in Tree 80' Rt Sta. 299+30

5/11 in T.P. left Sta 306+75



Proj - 24-51

Revision Sta 315+12.84 to 7+84-

Transit Notes

5-19-24

Austin }
Skoglund } Party
Maloney }
Galvin }

| |
|--|
| Office of Ramsey Co. Engineer
ST. PAUL, MINN. |
| Date Filed <u>5-20-24</u> |
| File No. <u>"11"</u> |

"Bald Eagle Ave"

±
Ang ht. Ang. RA

319+58.7 P.T.

318+74.1 P.I.

11°53'

4.5

317+88.9 P.C.

316+95.75 P.T.

316+06.64 P.I.

29°16'

12'

315+12.84 P.C.

Sta. - Def.

$$317+88.9 = 0^{\circ}00'$$

$$318+00 = 0^{\circ}23\frac{1}{2}'$$

$$+50 = 2^{\circ}08\frac{1}{2}'$$

$$319+00 = 3^{\circ}53\frac{1}{2}'$$

$$+58.7 = 5^{\circ}56\frac{1}{2}'$$



70° Curve RT.

$$\Delta = 11^{\circ}53'$$

$$\text{Rad} = 819.02$$

$$\text{Tang} = 85.23$$

$$\text{P.C.} = 317+88.9$$

$$\text{Length} = 169.76$$

$$\text{P.T.} = 319+58.7$$

Sta - Def

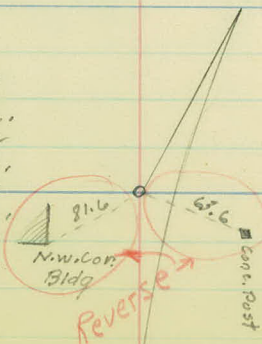
$$315+12.84 = 0^{\circ}00'$$

$$+50 = 2^{\circ}58\frac{1}{2}'$$

$$316+00 = 6^{\circ}58\frac{1}{2}'$$

$$+50 = 10^{\circ}58\frac{1}{2}'$$

$$+95.75 = 14^{\circ}38'$$



16° Curve. RT.

$$\Delta = 29^{\circ}16'$$

$$\text{Rad} = 359.27$$

$$\text{Tang} = 93.8$$

$$\text{P.C.} = 315+12.84$$

$$\text{Length} = 182.91$$

$$\text{P.T.} = 316+95.75$$

±

Ang ht. Ang. RT.

Equation $324 + 74.4 = 1 + 84.1$

$324 + 74.4$ P.T.

$322 + 93.5$ P.I.

18015

$322 + 93.5$

$321 + 09.4$ P.C.

Sta - Def.

321+09.4 - 0°00'

322+00 - 2°16'

323+00 - 4°46'

324+00 - 7°16'

324+74.4 - 9°07 1/2'

22.8
19.4
T.P.

5° Curve RT.

$\Delta = 18^{\circ}15'$

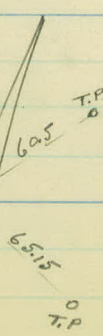
Rad = 1146.28

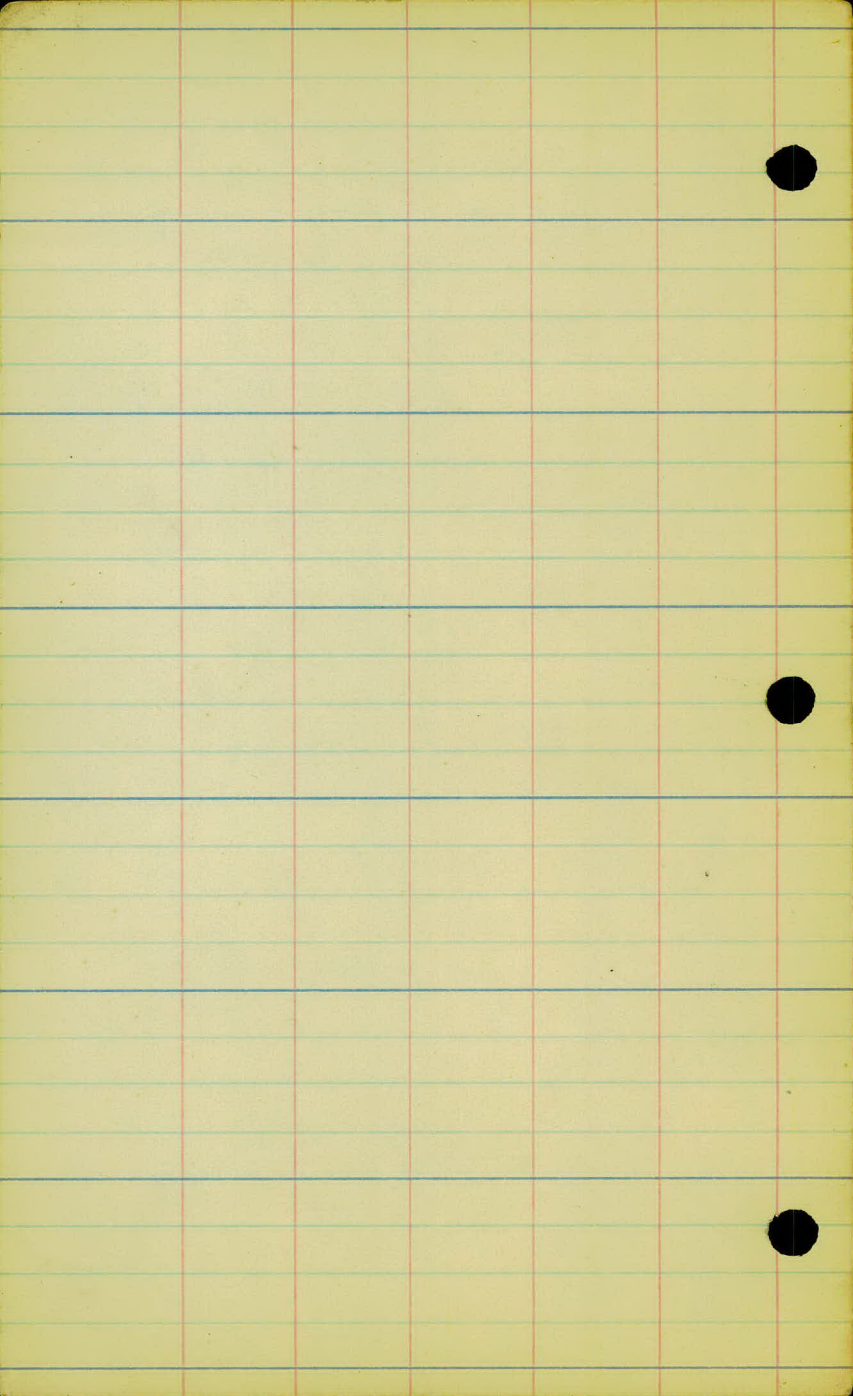
Tang = 184.1

P.C. = 321+09.4

Length = 365.0

P.T. = 324+74.4





Proj - 24-51

Revision - Sta 515+12.84 to 1+84'

Level Notes

5-19-24

Austin }
Skoglund } Party
Maloney }
Galvin }

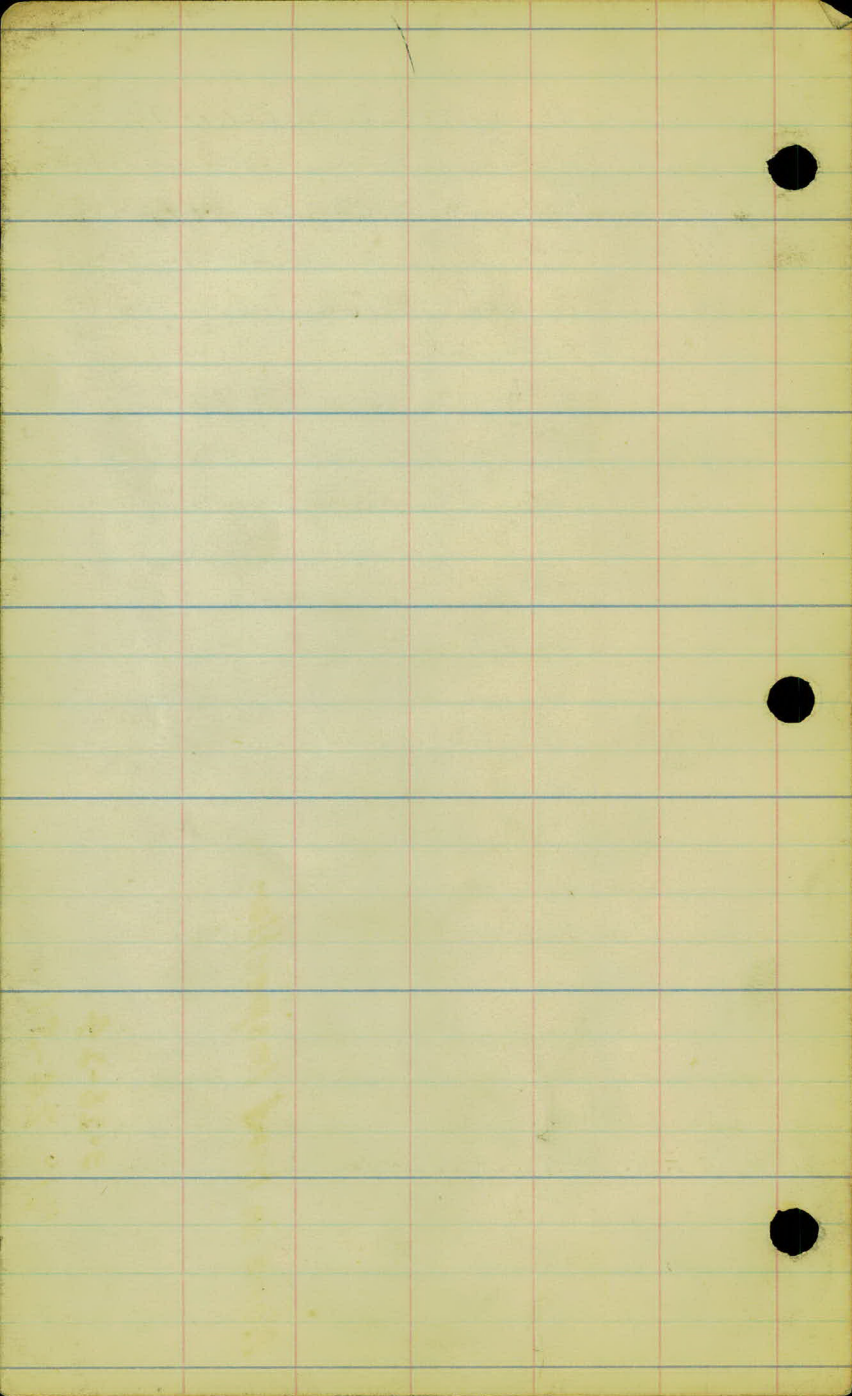
| | + | H.I. | - | Red | Fier |
|-----------------|------|--------|------|-----------------|--------|
| B.M. | 4.46 | 238.35 | | | 233.89 |
| 314 + 00 | | | | 4.5 | 233.9 |
| + 72.5 | | | | 4.53 | 233.82 |
| + 95.0 | | | | 4.16 | 234.19 |
| 315 + 00 | | | | 4.2 | 34.2 |
| + 50 | | | | 4.2 | 34.2 |
| 316 + 00 | | | | 4.0 | 34.4 |
| + 50 | | | | 3.9 | 34.5 |
| 317 + 00 | | | | 3.7 | 34.7 |
| 318 + 00 | | | | 3.0 | 35.4 |
| + 50 | | | | 3.0 | 35.4 |
| 319 + 00 | | | | 2.6 | 35.8 |
| + 50 | | | | 2.5 | 35.9 |
| T.P. | 6.25 | 240.57 | 4.03 | 234.32 | |
| 320 + 00 | | | | 4.6 | 36.0 |
| 321 + 00 | | | | 4.7 | 35.9 |
| 322 + 00 | | | | 4.7 | 35.9 |
| 323 + 00 | | | | 4.7 | 35.9 |
| + 50 | | | | 4.5 | 36.1 |
| + 75 | | | | 4.9 | 35.7 |
| 324 + 00 | | | | 4.6 | 36.0 |
| + 74.4 = 1484.1 | | | | 4.2 | 36.4 |
| B.M. | | | 3.68 | 236.89 = 237.37 | |

S/p. in T.P. R.R. Sta 812+85 (old. Elev. 233.78)

Top. E. Rail T.C. Ry

vv W vv vv

Nail in E.P. 30' R Sta. 2+16



288+42 - F.E.R.

12" X 20' C.M. Pipe, Cond OK.
replace \rightarrow

291+30 F.E.R.
P. 15" X 24'

292+00 F.E.R.
P. 15" X 24'

292 - 294+00
P. 15" C.M. Pipe R, underground
along cemetery fence
eliminate ditch right

296+00 P. 24" X P3

Raise grade 296+00 ahead

310+50 Road Int. Inspection
P. 12" X 40' C.M.

Proj. 24-51

Plans in hand inspection

Mar. 7, 1924

W. L. Lo
6/96

Plans in hand Inspection

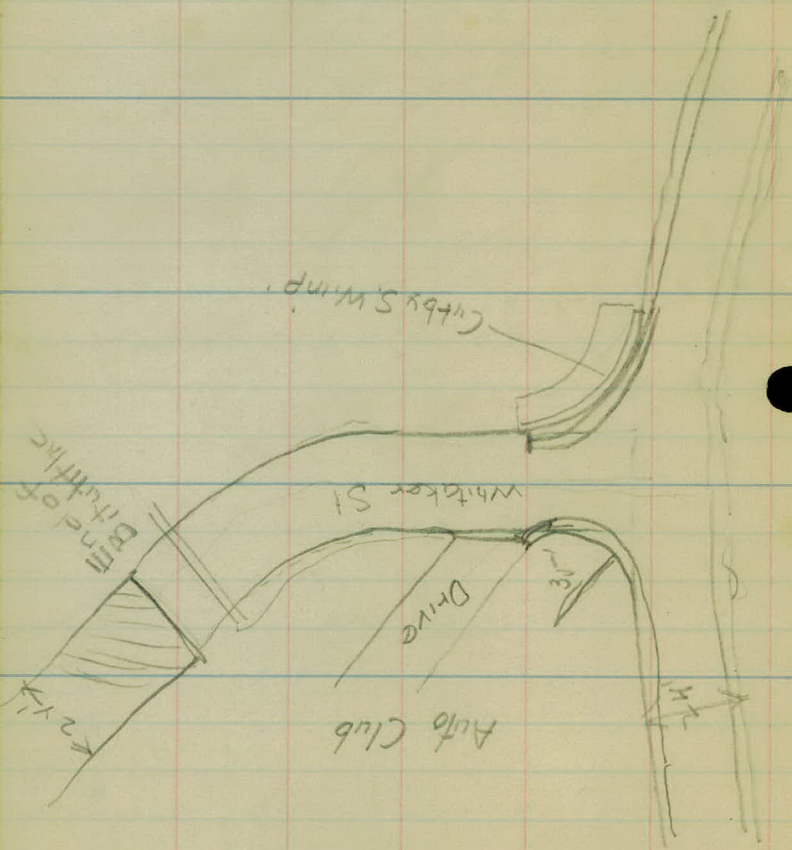
Office of Ramsey Co. Engineer

ST. PAUL, MINN.

Date Filed 3-26-24

File No. "11" 24-51

Get data



310+90 T. 12" X 24"
Ent. L.

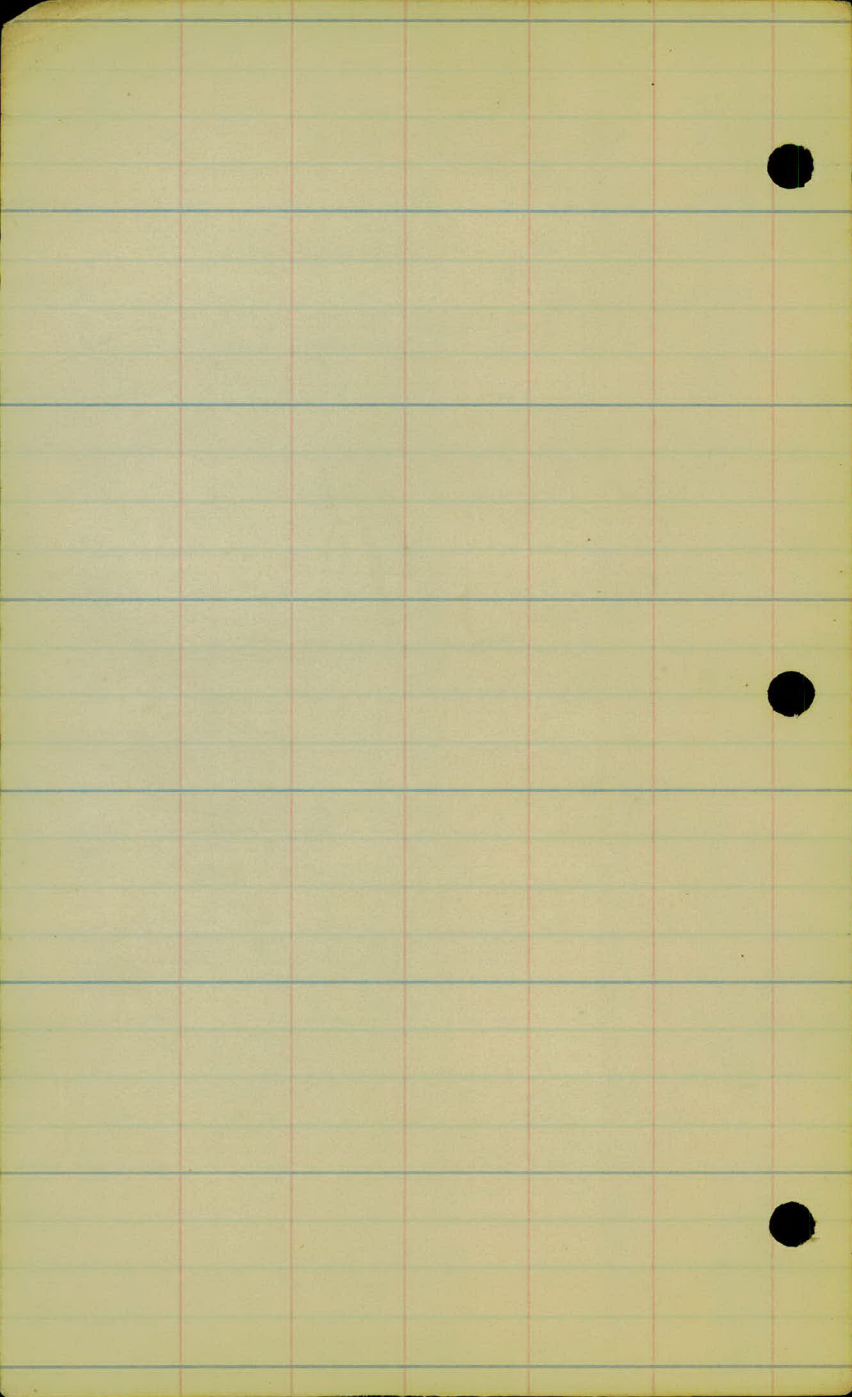
314+50 eliminate
P. 24" X 60' culvert.

Lower grade in vicinity
of Xing

Sta 3-7 eliminate
0.0 grade

6+10 drop inlets both
sides - 18" X C.I.P.

Water St. int. 32'-8" C.I.P.
imp-remove pl. 12"-36'



~~30+00~~

29+8.0

Ent. R. L
P. 12" X 24'

30+30 Ent. R

P. 12" X 24'

28+90

30+55 Ent. L

12" X 24'

28+90

31+00 Ent. L

12" X 24'

16.5

32+50 Int. 3rd St

10" X 34' L

12" X 30' R } imp.

36+20

cut out curb into

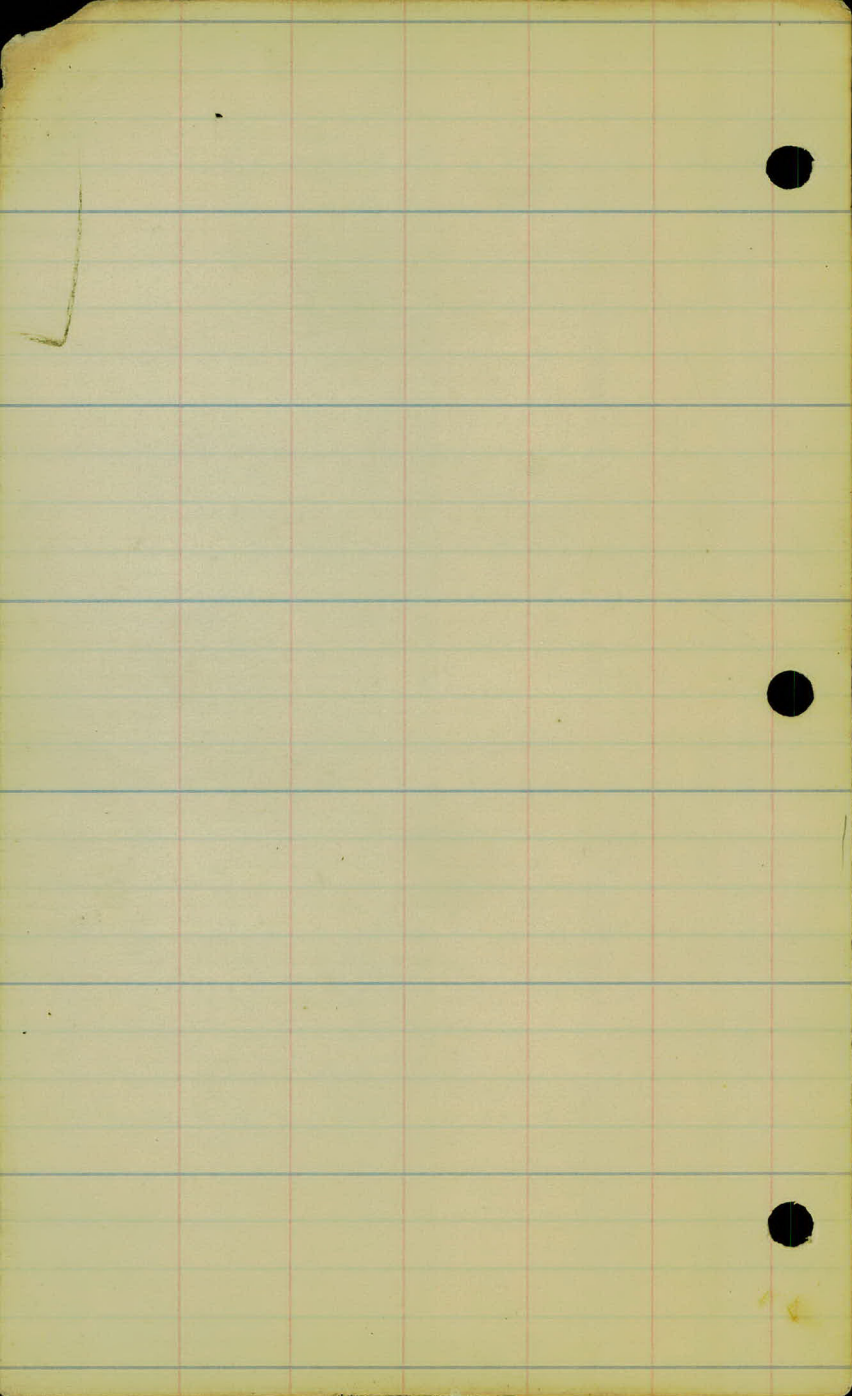
P. 46' X 15" C.M.P.

36+75 P. 60' X 15" C.M.P.

Diagonally x-t. P. 10'

37+08 Remove old 18" C.M.P. 30'

40+30 Imp 12' X 34' C.M.P.



3/

71+50 P.1 12" x 24 C.M.P. on L.
71+60 to 74+30 Guard Rail R+L.

67+50 P.1 24" x 46 P.3.

15+00 24" x 46 P.3. Hand ditch 20 C.Y.

87+50 to 98 Approx) no ditch on L. P.
98+00 to 108+00 " " " R+L.

110+10 Extend 8' and Re build H. Walls
(4' on each end) Reconstruct Head Walls

299+71.00
2 2790

297+4210

179-60.
25-49

154° 11'

179-60
43-30

13630

568'

85.31'

2942'

13240

B.D.

2080.0'

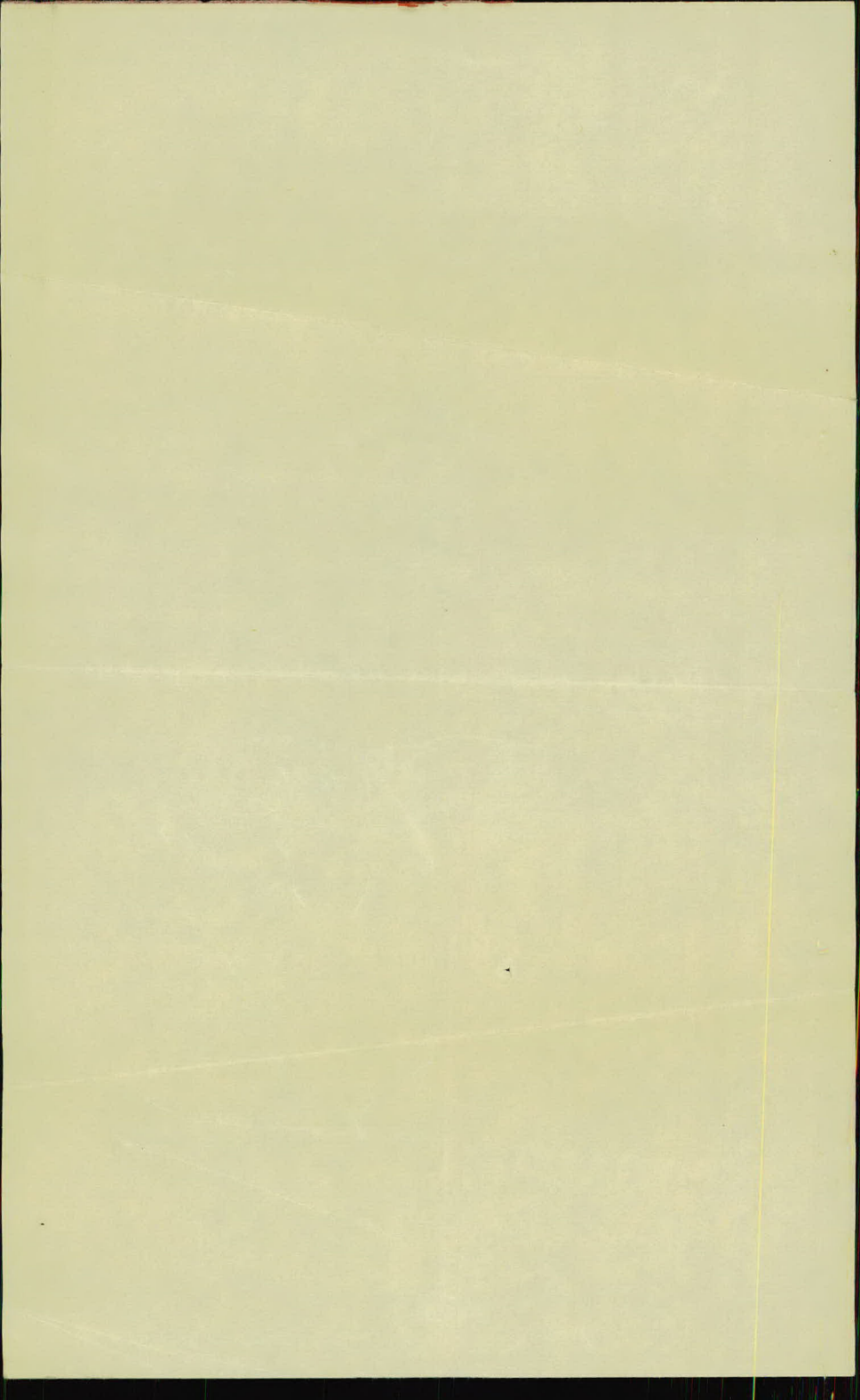
34.42'

44.90'

Gar.

1329.0





This is old
copy -
Wilke

U 2465

