

CROSS-SECTIONS  
CENTREVILLE ROAD (S.C.LINE)

Intersection of  
Centerville Rd & Edgerton Str.

CO. PROJ. N<sup>o</sup> 23-03

RD. % N<sup>o</sup> 2

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

Date Filed 2-24-23

File No. "5"

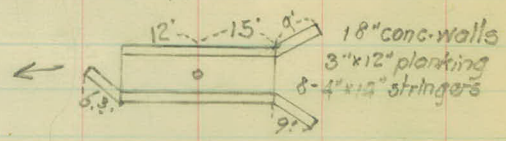
CULVERTS

SC LINE

Job-23-03

L & R

CULVERT & Sta - 10+80 =



OPENING - 6.6 wide in clear  
 14" bottom to top of Plank.

Culvert Sta. 58+70

65'-24" Cor. 1. Pipe set in Conc. on Present Road.

Invert 26' Left Sta. 58+70 on New Line

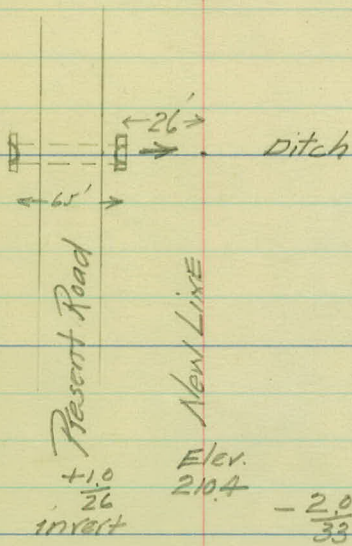
CULVERT. Sta. 101+79

Present Culv.

35'-36" Cor. 1. Pipe set in Conc.

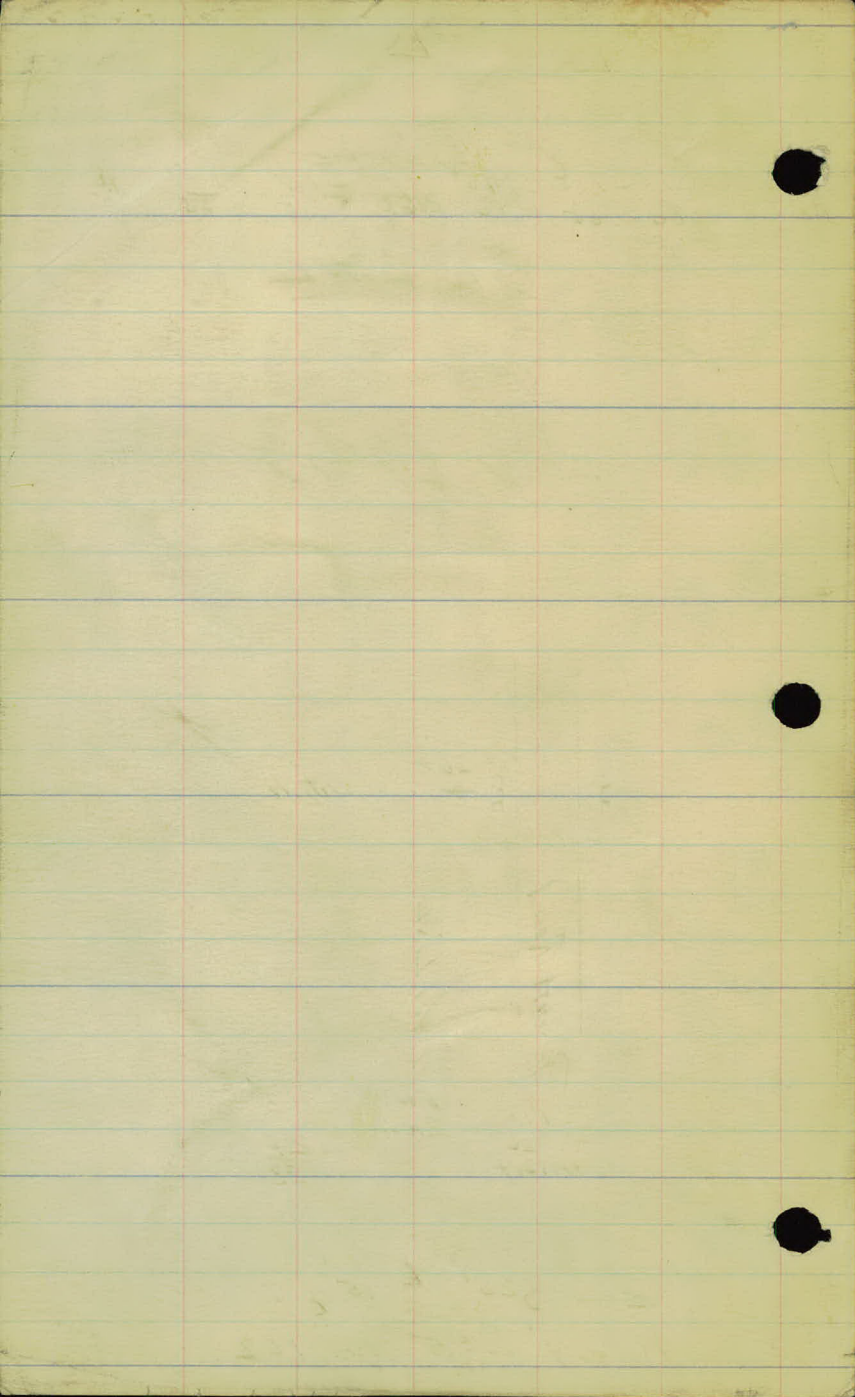
L                      E                      R

$$-\frac{21.8}{80} - \frac{185}{65} - \frac{142}{12} \quad 216.0 \quad -\frac{13.5}{15} - \frac{11.2}{65} - \frac{9.8}{80}$$



Drains ← 20' ⊕ 15'

Invert -3.5 from 102.



SC LINE

CROSS SECTION NOTES

(Complete)

2/21/23

MacDonald Sta. 0+00 to 84 157-160

Carley Sta. 84 to 157.

Sta. &amp; Elev.

## 5C LINE Cross Sections

10+40 216.1

10 217.3

9 219.3

8 219.9

7 220.3

6 220.4

5 220.2

4 220.1

3 219.9

2 219.9

1 219.2

0+00 219.0

L

E

R

SCLINE

$$-\frac{27}{33} \quad -\frac{25}{27} \quad -\frac{18}{25} \quad -\frac{10}{19} \quad -\frac{04}{10} \quad -\frac{02}{5} \quad -\frac{11}{11} \quad +\frac{10}{21} \quad +\frac{15}{23} \quad +\frac{15}{33}$$

$$\frac{00}{33} \quad -\frac{05}{29} \quad +\frac{04}{19} \quad +\frac{05}{10} \quad -\frac{08}{5} \quad -\frac{05}{9} \quad +\frac{10}{13} \quad +\frac{10}{33}$$

$$-\frac{10}{34} \quad -\frac{15}{30} \quad -\frac{10}{24} \quad \frac{00}{18} \quad +\frac{02}{7} \quad -\frac{04}{5} \quad -\frac{03}{11} \quad +\frac{02}{18} \quad +\frac{10}{26} \quad +\frac{10}{33}$$

$$-\frac{09}{33} \quad -\frac{09}{31} \quad -\frac{05}{22} \quad -\frac{01}{18} \quad +\frac{02}{7} \quad \frac{00}{7} \quad -\frac{05}{12} \quad \frac{00}{18} \quad +\frac{12}{20} \quad +\frac{05}{33}$$

$$\frac{00}{33} \quad \frac{00}{28} \quad -\frac{02}{24} \quad -\frac{11}{18} \quad -\frac{03}{14} \quad -\frac{04}{10} \quad -\frac{12}{15} \quad -\frac{05}{21} \quad +\frac{06}{30} \quad +\frac{06}{33}$$

$$-\frac{02}{33} \quad -\frac{11}{21} \quad -\frac{07}{12} \quad -\frac{07}{12} \quad -\frac{17}{17} \quad -\frac{07}{27} \quad -\frac{05}{33}$$

$$-\frac{05}{33} \quad -\frac{07}{21} \quad -\frac{02}{14} \quad -\frac{04}{11} \quad -\frac{20}{18} \quad -\frac{14}{24} \quad -\frac{09}{33}$$

$$-\frac{05}{33} \quad -\frac{05}{25} \quad -\frac{02}{10} \quad -\frac{03}{9} \quad -\frac{18}{18} \quad -\frac{10}{29} \quad -\frac{05}{33}$$

$$-\frac{05}{33} \quad -\frac{10}{19} \quad -\frac{02}{11} \quad -\frac{06}{11} \quad -\frac{10}{15} \quad -\frac{09}{29} \quad -\frac{10}{33}$$

$$\frac{00}{33} \quad -\frac{12}{20} \quad -\frac{05}{17} \quad -\frac{02}{12} \quad -\frac{03}{15} \quad \frac{00}{33}$$

$$-\frac{07}{33} \quad -\frac{02}{19} \quad -\frac{01}{9} \quad \frac{00}{12} \quad -\frac{03}{18} \quad +\frac{05}{33}$$

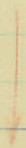
Sta. & Elev

SCLINE

21 223.3 ✓

Begin here

20 222.9



19 222.5

18 221.7

17 221.3

16 221.0

15 220.4

14 219.5

13 218.2

12 217.6

11+10 216.0

11 216.0

10+80 216.0

L  
SCLINE

R  
2/21/23

MacDonald - Note  
Sterk - Hd Level  
Weber - Rod  
Franko - ch.  
Rottenberg -  
McManus

$$- \frac{02}{33} \frac{00}{30} - \frac{05}{19} \frac{00}{8}$$

$$- \frac{1.2}{70} - \frac{05}{72} - \frac{10}{33}$$

$$\frac{00}{33} + \frac{05}{27} - \frac{05}{13} \frac{00}{7}$$

$$- \frac{1.1}{74} - \frac{05}{21} - \frac{10}{33}$$

$$+ \frac{06}{33} - \frac{10}{17} - \frac{02}{8}$$

$$- \frac{12}{74} - \frac{14}{23} - \frac{18}{33}$$

$$+ \frac{10}{33} + \frac{05}{23} \frac{00}{17} - \frac{03}{10}$$

$$- \frac{06}{70} - \frac{13}{79} - \frac{14}{21} - \frac{18}{33}$$

$$+ \frac{10}{33} - \frac{04}{15} - \frac{02}{6}$$

$$- \frac{05}{70} - \frac{18}{19} - \frac{20}{33}$$

$$+ \frac{10}{33} - \frac{08}{18} - \frac{03}{7}$$

$$- \frac{03}{72} - \frac{10}{20} - \frac{15}{33}$$

$$+ \frac{15}{33} + \frac{10}{26} - \frac{05}{16}$$

$$- \frac{05}{72} - \frac{12}{21} - \frac{21}{33}$$

$$+ \frac{10}{33} \frac{00}{25} - \frac{08}{17} \frac{00}{9}$$

$$- \frac{06}{72} - \frac{12}{22} - \frac{22}{42}$$

$$+ \frac{25}{32} + \frac{21}{25} - \frac{07}{17} - \frac{05}{12}$$

$$- \frac{07}{75} - \frac{04}{23} - \frac{01}{34}$$

$$+ \frac{25}{37} - \frac{07}{23} - \frac{05}{12} - \frac{03}{6}$$

$$- \frac{02}{76} \frac{00}{23} - \frac{20}{27} - \frac{09}{35}$$

ETRK

$$- \frac{21}{23} - \frac{05}{16} - \frac{02}{8}$$

$$- \frac{06}{74} - \frac{45}{31} - \frac{30}{50} - \frac{50}{55}$$

$$- \frac{150}{30} - \frac{10}{24}$$

$$- \frac{02}{71} - \frac{55}{25} - \frac{105}{46}$$

$$- \frac{21.8}{80} - \frac{185}{65} - \frac{14.2}{12}$$

$$- \frac{135}{15} - \frac{112}{65} - \frac{58}{80}$$

Sta. Elev.

SC LINE

— end —

34 227.6 ✓

33 227.5 ✓

32 227.2 ✓

31 227.0 ✓

30 226.5 ✓

29 225.9 ✓

28 225.5 ✓

27 225.3 ✓

26 224.9 ✓

25 224.3 ✓

24 224.1 ✓

23 224.0 ✓

22 223.8 ✓

↑  
Begin Here

# SC LINE

$$-\frac{0.3}{33} - \frac{0.1}{33} - \frac{0.8}{11} - \frac{0.4}{11} - \frac{0.5}{13} - \frac{0.2}{16} - \frac{0.0}{33}$$

$$+\frac{0.2}{33} - \frac{0.0}{19} - \frac{0.5}{16} - \frac{0.6}{11} - \frac{0.5}{12} - \frac{0.7}{18} - \frac{0.0}{21} + \frac{0.2}{33}$$

$$+\frac{0.3}{33} - \frac{0.2}{20} - \frac{1.0}{15} - \frac{0.6}{9} - \frac{0.4}{11} - \frac{0.5}{17} - \frac{0.0}{33}$$

$$+\frac{0.3}{33} - \frac{0.4}{22} - \frac{1.0}{16} - \frac{0.3}{12} - \frac{0.7}{18} - \frac{0.0}{33}$$

$$-\frac{0.2}{33} - \frac{0.0}{22} - \frac{0.8}{19} - \frac{0.6}{13} - \frac{0.4}{9} - \frac{0.5}{10} - \frac{1.0}{15} - \frac{0.6}{21} - \frac{0.5}{33}$$

$$+\frac{0.3}{33} - \frac{0.3}{20} - \frac{0.8}{16} - \frac{0.5}{11} - \frac{0.2}{9} - \frac{0.5}{11} - \frac{1.0}{17} - \frac{0.0}{20} - \frac{0.7}{33}$$

$$\frac{0.0}{33} - \frac{0.0}{20} - \frac{0.4}{16} - \frac{0.5}{11} - \frac{0.3}{13} - \frac{0.2}{20} - \frac{0.3}{33}$$

$$\frac{0.0}{33} - \frac{0.5}{20} - \frac{0.6}{11} - \frac{0.7}{21} - \frac{0.5}{33}$$

$$\frac{0.0}{33} - \frac{0.1}{18} - \frac{0.3}{11} - \frac{0.6}{11} - \frac{0.5}{18} - \frac{0.0}{33}$$

$$+\frac{0.3}{33} - \frac{0.0}{18} - \frac{0.2}{11} - \frac{0.7}{13} - \frac{0.5}{18} - \frac{0.0}{33}$$

$$+\frac{0.2}{33} - \frac{0.3}{18} - \frac{0.0}{9} - \frac{0.2}{13} - \frac{0.0}{33}$$

$$+\frac{0.5}{33} - \frac{0.5}{19} - \frac{0.0}{9} - \frac{0.4}{5} - \frac{0.2}{19} - \frac{0.0}{33}$$

$$\frac{0.0}{33} - \frac{0.1}{20} - \frac{0.2}{11} - \frac{0.5}{9} - \frac{1.0}{16} - \frac{0.8}{23} - \frac{0.6}{33}$$

Sta. Elev.

SC LINE

SC LINE

|    |         |
|----|---------|
| 47 | 230.5   |
| 46 | 231.0   |
| 45 | 231.6   |
| 44 | 231.8   |
| 43 | 232.8   |
| 42 | 233.3   |
| 41 | 233.6   |
| 40 | 233.4   |
| 39 | 233.0   |
| 38 | 232.2   |
| 37 | 230.7   |
| 36 | 229.1   |
| 35 | 228.2 ✓ |

L E R

## SCLINE

$$+\frac{20}{33} \quad +\frac{10}{28} \quad -\frac{08}{30} \quad \frac{00}{10} \quad -\frac{08}{73} \quad -\frac{10}{79} \quad -\frac{12}{33}$$

$$+\frac{10}{33} \quad +\frac{10}{28} \quad -\frac{05}{18} \quad -\frac{03}{10} \quad -\frac{04}{12} \quad -\frac{02}{18} \quad -\frac{02}{33}$$

$$+\frac{10}{33} \quad +\frac{12}{30} \quad +\frac{03}{25} \quad -\frac{07}{17} \quad -\frac{03}{15} \quad -\frac{07}{70} \quad -\frac{14}{74} \quad -\frac{15}{20} \quad -\frac{10}{33}$$

$$+\frac{20}{33} \quad +\frac{20}{27} \quad -\frac{02}{21} \quad +\frac{04}{18} \quad -\frac{03}{5} \quad -\frac{05}{12} \quad -\frac{12}{18} \quad -\frac{10}{26} \quad -\frac{15}{33}$$

$$+\frac{30}{33} \quad +\frac{30}{28} \quad +\frac{04}{19} \quad -\frac{02}{10} \quad -\frac{05}{13} \quad -\frac{10}{23} \quad -\frac{10}{33}$$

$$+\frac{40}{33} \quad +\frac{40}{28} \quad +\frac{12}{20} \quad -\frac{04}{10} \quad -\frac{02}{12} \quad +\frac{15}{19} \quad +\frac{16}{26} \quad +\frac{05}{33}$$

$$+\frac{15}{33} \quad +\frac{15}{28} \quad +\frac{10}{20} \quad -\frac{03}{14} \quad -\frac{01}{12} \quad -\frac{02}{15} \quad -\frac{04}{17} \quad +\frac{10}{23} \quad +\frac{12}{33}$$

$$+\frac{17}{33} \quad +\frac{02}{19} \quad -\frac{02}{9} \quad -\frac{04}{13} \quad -\frac{08}{17} \quad +\frac{23}{25} \quad +\frac{30}{33}$$

$$+\frac{10}{33} \quad +\frac{07}{22} \quad -\frac{08}{15} \quad -\frac{03}{9} \quad -\frac{05}{75} \quad -\frac{06}{77} \quad +\frac{23}{23} \quad +\frac{20}{33}$$

$$\frac{00}{33} \quad -\frac{07}{21} \quad -\frac{11}{17} \quad -\frac{05}{10} \quad -\frac{05}{11} \quad -\frac{07}{18} \quad -\frac{06}{33}$$

$$-\frac{12}{33} \quad -\frac{17}{15} \quad -\frac{03}{11} \quad -\frac{04}{13} \quad -\frac{17}{20} \quad -\frac{22}{33}$$

$$-\frac{15}{33} \quad -\frac{07}{11} \quad -\frac{03}{15} \quad -\frac{15}{19} \quad -\frac{15}{33}$$

$$-\frac{18}{33} \quad -\frac{15}{23} \quad -\frac{20}{76} \quad -\frac{06}{11} \quad -\frac{02}{15} \quad -\frac{03}{22} \quad -\frac{05}{33}$$

Sta. ELEV.

SCLINE

|       |       |                                   |
|-------|-------|-----------------------------------|
| 59    | 212.5 |                                   |
| 58+70 | 210.4 | Ditch 65' - 24" pipe set in trees |
| 58    | 212.5 |                                   |
| 57    | 212.8 |                                   |
| 56    | 213.6 |                                   |
| 55    | 221.6 |                                   |
| 54    | 228.6 |                                   |
| 53    | 229.7 |                                   |
| 52    | 229.7 |                                   |
| 51    | 229.4 |                                   |
| 50    | 229.7 |                                   |
| 49    | 230.7 |                                   |
| 48    | 230.4 |                                   |

L

±

R

## S LINE

$$\begin{array}{cccc|cccc}
 +\frac{35}{33} & +\frac{30}{28} & +\frac{30}{21} & +\frac{03}{10} & +\frac{03}{15} & +\frac{06}{20} & -\frac{1.9}{30} & +\frac{05}{35} \\
 \end{array}$$

$$\begin{array}{cc|c}
 \text{err.} & +\frac{1.0}{26} & -\frac{2.0}{33} \\
 24 \text{ col.} & & 
 \end{array}$$

$$\begin{array}{cc|cc}
 +\frac{03}{33} & +\frac{01}{20} & \frac{00}{10} & -\frac{03}{33} \\
 \end{array}$$

$$\begin{array}{cc|cc}
 \frac{00}{33} & +\frac{02}{20} & \frac{00}{10} & -\frac{03}{33} \\
 \end{array}$$

$$\begin{array}{cc|cc}
 +\frac{1.5}{33} & +\frac{05}{23} & \frac{00}{10} & \frac{10}{33} \\
 \end{array}$$

$$\begin{array}{ccc|ccc}
 +\frac{1.5}{33} & +\frac{1.2}{23} & +\frac{0.4}{10} & -\frac{05}{11} & -\frac{1.0}{23} & -\frac{1.2}{33} \\
 \end{array}$$

$$\begin{array}{cc|c}
 +\frac{1.0}{33} & +\frac{05}{20} & -\frac{0.4}{33} \\
 \end{array}$$

$$\begin{array}{cc|c}
 +\frac{0.5}{33} & & \frac{00}{33} \\
 \end{array}$$

$$\begin{array}{cc|cc}
 +\frac{06}{40} & \frac{00}{30} & -\frac{0.3}{25} & -\frac{0.2}{33} \\
 \end{array}$$

$$\begin{array}{cc|cc}
 \text{err} & +\frac{0.4}{17} & -\frac{05}{25} & \frac{00}{33} \\
 +\frac{1.2}{33} & & & 
 \end{array}$$

$$\begin{array}{ccc|ccc}
 +\frac{10}{33} & -\frac{01}{23} & +\frac{05}{15} & -\frac{05}{7} & -\frac{1.0}{14} & -\frac{1.0}{33} \\
 \end{array}$$

$$\begin{array}{cccc|ccc}
 +\frac{0.8}{33} & +\frac{03}{25} & -\frac{1.8}{18} & -\frac{0.3}{9} & -\frac{0.5}{12} & -\frac{1.0}{20} & -\frac{1.3}{33} \\
 \end{array}$$

$$\begin{array}{cccc|ccc}
 +\frac{15}{33} & +\frac{15}{28} & +\frac{1.3}{24} & \frac{00}{17} & -\frac{0.6}{10} & -\frac{0.5}{11} & -\frac{0.6}{20} & -\frac{1.0}{33} \\
 \end{array}$$

Sta. Elev.  
SC LINE

72 219.6

71 218.9

70 218.9

69 218.9

68 218.7

67 219.1

66 218.9

65 218.8

64 218.7

63 218.6

62 218.7

61 218.2

60 215.3



Sta. Elev.  
SCLINE

83 222.4

82 221.9

81 221.1

80 220.4

79 219.8

78 219.4

77 220.0

76 220.5

75 220.7

74 220.4

73 219.9





sheet # 8 of 15

41

5C LINE X-Section 7/16/20

sheet #9 of 15

| Sta   | ± Elev. | H.F. | - | Red | Elev |
|-------|---------|------|---|-----|------|
| 84    | 222.3   |      |   |     | 4.7  |
| 85+00 | 222.3   |      |   |     | 5.0  |
| 86+00 | 222.7   |      |   |     | 4.4  |
| 87+00 | 223.2   |      |   |     | 4.0  |
| 88+00 | 223.8   |      |   |     | 5.4  |
| 89+00 | 224.0   |      |   |     | 5.3  |
| 90+00 | 224.3   |      |   |     | 5.2  |
| 91+00 | 224.0   |      |   |     |      |
| 92+00 | 223.4   |      |   |     |      |
| 93+00 | 223.0   |      |   |     |      |
| 94+00 | 221.9   |      |   |     |      |
| 95+00 | 220.5   |      |   |     |      |
| 96+00 | 218.5   |      |   |     |      |

Sheet #9 of 15

5CLINE

Carley-Notes  
 5th & K-level  
 Krieger-Red  
 McManus shovels

$$\frac{+0.7}{33} \frac{+0.9}{16} \frac{-0.4}{11} \quad \frac{-0.2}{12} \quad \frac{-0.7}{16} \quad \frac{-0.5}{21} \frac{+1.5}{26} \frac{+1.8}{39}$$

$$\frac{+1.4}{28} \frac{-0.6}{11} \frac{-0.1}{9} \quad \frac{-0.1}{12} \quad \frac{-0.4}{19} \quad \frac{-0.5}{23} \quad \frac{+0.6}{26} \quad \frac{-0.4}{39}$$

$$\frac{+1.0}{30} \frac{-0.1}{22} \frac{-1.9}{14} \frac{-0.3}{10} \quad \frac{-0.4}{12} \quad \frac{-1.3}{16} \quad \frac{-1.5}{19} \quad \frac{-4}{22} \quad \frac{-3.4}{38}$$

$$\frac{-1.1}{30} \quad \frac{-2.0}{20} \quad \frac{-0.1}{15} \quad \frac{-0.7}{11} \quad \frac{-0.4}{9} \quad \frac{-0.3}{10} \quad \frac{-1.2}{15} \quad \frac{-2.0}{18} \quad \frac{+0.1}{23} \quad \frac{-0.9}{39}$$

$$\frac{-0.6}{28} \quad \frac{+0.5}{19} \quad \frac{2.2}{13} \quad \frac{-1.0}{10} \quad \frac{-0.6}{6} \quad \frac{-0.2}{12} \quad \frac{-1.2}{18} \quad \frac{+0.6}{24} \quad \frac{+1.1}{39}$$

$$\frac{+2.8}{31} \quad \frac{+0.4}{20} \quad \frac{-1.9}{15} \quad \frac{0.7}{11} \quad \frac{-0.4}{8} \quad \frac{-0.3}{8} \quad \frac{-0.7}{16} \quad \frac{-1.2}{20} \quad \frac{+3.5}{25} \quad \frac{+2.3}{38}$$

$$\frac{+1.4}{34} \quad \frac{+1.2}{24} \quad \frac{-1.9}{18} \quad \frac{-0.8}{13} \quad \frac{-0.4}{10} \quad \frac{-0.2}{10} \quad \frac{-0.8}{15} \quad \frac{-4}{17} \quad \frac{+1.0}{22} \quad \frac{+0.2}{32}$$

$$\frac{-0.2}{37} \quad \frac{-3.0}{20} \quad \frac{-0.5}{13} \quad \frac{-1.0}{13} \quad \frac{-1.5}{15} \quad \frac{-1.4}{17} \quad \frac{0.0}{21} \quad \frac{+0.4}{32}$$

$$\frac{-1.0}{36} \quad \frac{-2.0}{20} \quad \frac{-0.6}{14} \quad \frac{+0.2}{12} \quad \frac{-0.6}{14} \quad \frac{+0.5}{33}$$

$$\frac{+1.5}{40} \quad \frac{+4.0}{31} \quad \frac{+0.5}{23} \quad \frac{-0.8}{15} \quad \frac{-0.5}{13} \quad \frac{-1.2}{16} \quad \frac{-0.8}{22} \quad \frac{+1.5}{26} \quad \frac{+3.1}{33}$$

$$\frac{+3.6}{40} \quad \frac{+3.2}{28} \quad \frac{+1.5}{16} \quad \frac{-0.3}{12} \quad \frac{-0.5}{21} \quad \frac{+3.2}{28} \quad \frac{+3.0}{36}$$

$$\frac{-1.0}{34} \quad \frac{-1.5}{19} \quad \frac{-0.2}{9} \quad \frac{-0.5}{13} \quad \frac{-1.2}{17} \quad \frac{-0.4}{24} \quad \frac{-0.8}{35}$$

$$\frac{-0.2}{38} \quad \frac{-0.6}{19} \quad \frac{-0.9}{17} \quad \frac{-0.3}{18} \quad \frac{-0.5}{12} \quad \frac{-0.6}{18} \quad \frac{+0.6}{21} \quad \frac{-0.2}{32}$$

SC LINE X-Sections

sheet # 10 of 15

| Sta    | ℄ Elev | M.I  | Red Elev |
|--------|--------|------|----------|
| 97+00  | 217.3  |      |          |
| 98+00  | 216.7  | 16.5 |          |
| 99+00  | 215.7  |      |          |
| 100+00 | 214.0  |      |          |
| 101+00 | 213.8  |      |          |
| 102+00 | 217.0  |      |          |
| 103+00 | 220.7  |      |          |
| 104+00 | 223.6  |      |          |
| 105+00 | 226.3  |      |          |
| 106+00 | 229.2  |      |          |
| 107+00 | 232.1  |      |          |
| 108+00 | 233.4  |      |          |
| 109+00 | 234.4  |      |          |

L      E      R      SCLINE

$$\frac{-0.3}{33} \quad \frac{+0.7}{21} \quad \frac{-0.5}{20} \quad \frac{-0.9}{16} \quad \frac{0.0}{10} \quad \frac{-0.1}{8} \quad \frac{0.0}{12} \quad \frac{-1.5}{30}$$

$$\frac{-1.7}{30} \quad \frac{-1.2}{15} \quad \frac{-0.3}{11} \quad \frac{-0.2}{12} \quad \frac{-1.8}{16} \quad \frac{-1.0}{31}$$

$$\frac{-2.1}{30} \quad \frac{-1.9}{21} \quad \frac{-0.6}{14} \quad \frac{-0.8}{12} \quad \frac{-2.1}{19} \quad \frac{-2.5}{20} \quad \frac{-1.8}{30}$$

$$\frac{-2.0}{28} \quad \frac{-3.8}{21} \quad \frac{-2.5}{17} \quad \frac{-0.8}{10} \quad \frac{-0.2}{12} \quad \frac{-1.8}{17} \quad \frac{-2.4}{31} \quad \frac{-2.0}{33}$$

$$\frac{-2.1}{30} \quad \frac{-2.9}{18} \quad \frac{-0.6}{10} \quad \frac{-0.3}{12} \quad \frac{-3.7}{20} \quad \frac{-2.5}{30}$$

$$\frac{-3.5}{29} \quad \frac{-3.2}{15} \quad \frac{-0.5}{9} \quad \frac{-0.2}{15} \quad \frac{-3.0}{16} \quad \frac{-4.0}{32}$$

$$\frac{-1.7}{33} \quad \frac{-1.0}{20} \quad \frac{-0.3}{15} \quad \frac{-0.6}{10} \quad \frac{-1.1}{13} \quad \frac{-2.2}{26} \quad \frac{-0.6}{35}$$

$$\frac{+0.2}{33} \quad \frac{+0.6}{19} \quad \frac{-0.6}{10} \quad \frac{-0.5}{9} \quad \frac{0.0}{12} \quad \frac{-1.5}{18} \quad \frac{-3.2}{40} \quad \frac{-2.4}{50}$$

$$\frac{+3.0}{26} \quad \frac{+3.2}{28} \quad \frac{0.0}{21} \quad \frac{-0.2}{10} \quad \frac{0.0}{11} \quad \frac{-0.5}{14} \quad \frac{-0.8}{24} \quad \frac{+6.0}{28} \quad \frac{+6.0}{33}$$

$$\frac{+1.3}{33} \quad \frac{+1.3}{26} \quad \frac{+0.2}{18} \quad \frac{-0.2}{10} \quad \frac{0.0}{10} \quad \frac{-0.7}{14} \quad \frac{-1.0}{21} \quad \frac{+3.0}{22} \quad \frac{+0.0}{34}$$

$$\frac{+1.0}{34} \quad \frac{+2.0}{23} \quad \frac{+1.5}{16} \quad \frac{-0.5}{11} \quad \frac{-0.2}{12} \quad \frac{-0.8}{14} \quad \frac{-0.6}{17} \quad \frac{+2.0}{21}$$

$$\frac{-0.3}{33} \quad \frac{-0.2}{21} \quad \frac{0.0}{18} \quad \frac{-0.4}{12} \quad \frac{+0.5}{9} \quad \frac{-0.8}{12} \quad \frac{-0.7}{16} \quad \frac{-0.5}{38}$$

$$\frac{-1.1}{34} \quad \frac{-0.7}{23} \quad \frac{-0.6}{13} \quad \frac{0.0}{12} \quad \frac{-1.0}{16} \quad \frac{-0.6}{20} \quad \frac{-0.8}{10}$$

SCLINE X-SECTIONS

Sheet # 11 of 15

| Sta    | Elev. | H.I. | Rad. | Elev. |
|--------|-------|------|------|-------|
| 110+00 | 235.6 |      |      |       |
| 111+00 | 237.6 |      |      |       |
| 112+00 | 238.5 |      |      |       |
| 113+00 | 239.0 |      |      |       |
| 114+00 | 239.2 |      |      |       |
| 115+00 | 239.5 |      |      |       |
| 116+00 | 239.6 |      |      |       |
| 117+00 | 240.0 |      |      |       |
| 118+00 | 240.4 |      |      |       |
| 119+00 | 241.6 |      |      |       |
| 120+00 | 242.9 |      |      |       |
| 121+00 | 244.1 |      |      |       |
| 122+00 | 245.2 |      |      |       |

L  $\neq$  R

SE LINE

$$\frac{-1.9}{33} \quad \frac{-2.0}{28} \quad \frac{-1.0}{18} \quad \frac{-0.5}{13} \quad \frac{-0.1}{9} \quad \frac{-0.7}{12} \quad \frac{-1.0}{20} \quad \frac{-1.0}{27}$$

$$\frac{-1.5}{29} \quad \frac{0.0}{23} \quad \frac{-0.2}{14} \quad \frac{-0.7}{6} \quad \frac{-0.4}{12} \quad \frac{-0.9}{17} \quad \frac{+1.1}{23} \quad \frac{0.0}{39}$$

$$\frac{+0.5}{34} \quad \frac{+1.2}{22} \quad \frac{-0.7}{14} \quad \frac{-0.1}{5} \quad \frac{0.0}{12} \quad \frac{+2.5}{18} \quad \frac{+2.0}{26}$$

$$\frac{+1.5}{34} \quad \frac{+1.7}{21} \quad \frac{0.0}{17} \quad \frac{0.0}{9} \quad \frac{+1.4}{12} \quad \frac{+2.0}{23} \quad \frac{+2.0}{23}$$

$$\frac{+1.0}{32} \quad \frac{+1.5}{23} \quad \frac{-0.5}{15} \quad \frac{0.0}{12} \quad \frac{+2.0}{20} \quad \frac{+2.0}{39}$$

$$\frac{+0.4}{30} \quad \frac{0.0}{26} \quad \frac{+0.6}{18} \quad \frac{-0.3}{11} \quad \frac{-0.3}{12} \quad \frac{+2.8}{19} \quad \frac{+2.0}{38}$$

$$\frac{-0.6}{38} \quad \frac{0.0}{22} \quad \frac{-0.2}{9} \quad \frac{0.0}{12} \quad \frac{+0.5}{22} \quad \frac{+1.0}{34}$$

$$\frac{-3.8}{34} \quad \frac{-2.5}{23} \quad \frac{-0.8}{18} \quad \frac{-0.3}{9} \quad \frac{-0.8}{15} \quad \frac{-0.5}{21} \quad \frac{-0.2}{38}$$

$$\frac{-7.5}{34} \quad \frac{-3.5}{24} \quad \frac{-3.0}{19} \quad \frac{-1.0}{14} \quad \frac{-0.2}{12} \quad \frac{-0.7}{16} \quad \frac{-1.0}{22} \quad \frac{-0.5}{38}$$

$$\frac{-3.0}{37} \quad \frac{-1.7}{24} \quad \frac{-0.8}{15} \quad \frac{-0.2}{12} \quad \frac{-0.3}{16} \quad \frac{+0.2}{20} \quad \frac{+0.3}{33}$$

$$\frac{+0.6}{25} \quad \frac{+0.3}{22} \quad \frac{-0.9}{18} \quad \frac{-0.5}{13} \quad \frac{-0.4}{7} \quad \frac{-0.5}{12} \quad \frac{0.0}{34}$$

$$\frac{0.0}{25} \quad \frac{-0.7}{15} \quad \frac{-0.3}{8} \quad \frac{-0.3}{8} \quad \frac{-0.5}{12} \quad \frac{-1.0}{37}$$

$$\frac{+0.4}{26} \quad \frac{+1.0}{21} \quad \frac{-0.6}{14} \quad \frac{-0.5}{9} \quad \frac{-0.3}{7} \quad \frac{-0.5}{10} \quad \frac{-0.8}{18} \quad \frac{-1.3}{21}$$

5C LINE X-Sections

sheet #12 of 15

| Sta    | Elev. | Hit | Red | Elev |
|--------|-------|-----|-----|------|
| 123+00 | 245.8 |     |     |      |
| 124+00 | 245.6 |     |     |      |
| 125+00 | 247.0 |     |     |      |
| 126+00 | 247.8 |     |     |      |
| 127+00 | 249.2 |     |     |      |
| 128+00 | 250.2 |     |     |      |
| 129+00 | 252.1 |     |     |      |
| 130+00 | 253.1 |     |     |      |
| 131+00 | 254.0 |     |     |      |
| 132+00 | 254.5 |     |     |      |
| 133+00 | 254.6 |     |     |      |
| 134+00 | 255.2 |     |     |      |
| 135+00 | 256.1 |     |     |      |

L.  $\frac{1}{2}$  R.

Sheet # 12 of 15

SC LINE

$$\frac{-0.5}{24} \quad \frac{-1.4}{17} \quad \frac{-0.5}{15} \quad \frac{-0.5}{9} \quad \frac{-0.5}{8} \quad \frac{-0.7}{12} \quad \frac{-1.9}{17} \quad \frac{-1.0}{36}$$

$$\frac{-1.6}{33} \quad \frac{-1.5}{18} \quad \frac{-1.1}{33} \quad \frac{-0.8}{11} \quad \frac{-0.5}{7} \quad \frac{-0.9}{12} \quad \frac{-1.3}{20} \quad \frac{-1.8}{31}$$

$$\frac{-1.6}{33} \quad \frac{-1.5}{18} \quad \frac{-0.6}{12} \quad \frac{-0.4}{5} \quad \frac{-0.4}{12} \quad \frac{-1.2}{18} \quad \frac{-1.4}{36}$$

$$\frac{-2.5}{26} \quad \frac{-2.0}{17} \quad \frac{-0.7}{8} \quad \frac{-0.5}{7} \quad \frac{-0.5}{12} \quad \frac{-1.5}{16} \quad \frac{-1.0}{20} \quad \frac{-1.2}{38}$$

$$\frac{-2.4}{19} \quad \frac{-0.7}{11} \quad \frac{-0.7}{8} \quad \frac{-0.7}{12} \quad \frac{-0.1}{20} \quad \frac{-1.6}{39}$$

$$\frac{-3.8}{29} \quad \frac{-2.5}{21} \quad \frac{-0.2}{11} \quad \frac{-0.5}{7} \quad \frac{-0.7}{12} \quad \frac{-1.3}{20} \quad \frac{-1.0}{40}$$

$$\frac{-1.0}{38} \quad \frac{-1.8}{19} \quad \frac{-1.0}{8} \quad \frac{-0.9}{5} \quad \frac{-1.0}{12} \quad \frac{+1.8}{18} \quad \frac{+1.2}{40}$$

$$\frac{-0.3}{38} \quad \frac{-1.4}{20} \quad \frac{-0.8}{10} \quad \frac{-0.3}{5} \quad \frac{-1.0}{10} \quad \frac{-0.7}{12} \quad \frac{-1.0}{15} \quad \frac{+2.3}{21} \quad \frac{+1.5}{28}$$

$$\frac{-5.9}{23} \quad \frac{-2.0}{19} \quad \frac{-0.4}{10} \quad \frac{-0.1}{12} \quad \frac{+1.0}{40}$$

$$\frac{-1.0}{24} \quad \frac{-1.0}{19} \quad \frac{-0.4}{10} \quad \frac{-0.3}{6} \quad \frac{-0.5}{12} \quad \frac{-1.8}{18} \quad \frac{-0.4}{38}$$

$$\frac{-1.0}{36} \quad \frac{-2.0}{18} \quad \frac{-0.4}{10} \quad \frac{-0.5}{8} \quad \frac{-0.7}{12} \quad \frac{-2.4}{19} \quad \frac{+3.0}{37}$$

$$\frac{-2.5}{34} \quad \frac{-2.1}{20} \quad \frac{0.6}{12} \quad \frac{-0.2}{8} \quad \frac{-0.5}{12} \quad \frac{-1.3}{19} \quad \frac{-1.0}{29}$$

$$\frac{-2.0}{40} \quad \frac{-2.0}{22} \quad \frac{-0.5}{13} \quad \frac{-0.3}{7} \quad \frac{-0.1}{12} \quad \frac{+1.0}{21} \quad \frac{+1.5}{38}$$

SC LINECross Sections

sheet # 13 of 15

L ELEV.

136+00 256.8

137+00 256.8

138+00 257.2

139+00 258.5

140+00 260.1

141+00 261.7

142+00 263.1

143+00 264.0

144+00 264.1

145+00 263.9

146+00 263.9

147+00 266.2

148+00 268.0

$$\frac{-1.2}{19} \quad \frac{-0.7}{15} \quad \frac{+0.3}{9} \quad \frac{0.0}{13} \quad \frac{+2.8}{22} \quad \frac{+3.5}{34}$$

$$\frac{-2.0}{27} \quad \frac{-0.3}{13} \quad \frac{-0.2}{16} \quad \frac{-0.5}{12} \quad \frac{-0.7}{16} \quad \frac{+0.8}{23} \quad \frac{+1.7}{37}$$

$$\frac{3.0}{29} \quad \frac{-3.0}{18} \quad \frac{-0.5}{13} \quad \frac{-0.2}{9} \quad \frac{-2.8}{16} \quad \frac{-2.9}{30}$$

$$\frac{+1.5}{35} \quad \frac{+1.2}{25} \quad \frac{-0.3}{14} \quad \frac{-0.3}{7} \quad \frac{-0.8}{12} \quad \frac{-0.5}{21} \quad \frac{+0.5}{39}$$

$$\frac{+1.8}{36} \quad \frac{+0.4}{28} \quad \frac{0.0}{20} \quad \frac{-0.2}{12} \quad \frac{-0.2}{4} \quad \frac{-0.4}{9} \quad \frac{-1.0}{13} \quad \frac{-1.2}{35}$$

$$\frac{+2.5}{35} \quad \frac{-0.3}{24} \quad \frac{-0.3}{13} \quad \frac{-0.5}{6} \quad \frac{+0.5}{12} \quad \frac{+1.3}{17} \quad \frac{+2.0}{35}$$

$$\frac{+5.0}{34} \quad \frac{-}{22} \quad \frac{-0.2}{12} \quad \frac{-0.3}{6} \quad \frac{-0.8}{12} \quad \frac{-0.2}{17} \quad \frac{+0.3}{36}$$

$$\frac{+2.0}{36} \quad \frac{-0.6}{24} \quad \frac{-0.3}{12} \quad \frac{-0.6}{12} \quad \frac{+1.2}{14} \quad \frac{+1.0}{33}$$

$$\frac{-2.5}{32} \quad \frac{-2.1}{26} \quad \frac{-1.0}{18} \quad \frac{-0.5}{12} \quad \frac{-0.5}{9} \quad \frac{-0.8}{12} \quad \frac{-0.2}{20} \quad \frac{+0.5}{34}$$

$$\frac{-1.3}{34} \quad \frac{-0.2}{24} \quad \frac{-1.0}{15} \quad \frac{0.0}{10} \quad \frac{-0.4}{8} \quad \frac{-1.0}{12} \quad \frac{-0.5}{32}$$

$$\frac{-5.5}{40} \quad \frac{-3.8}{22} \quad \frac{-0.2}{11} \quad \frac{-0.5}{8} \quad \frac{-0.9}{12} \quad \frac{-3.0}{17} \quad \frac{-3.9}{33}$$

$$\frac{+0.7}{42} \quad \frac{0.0}{30} \quad \frac{-0.8}{19} \quad \frac{-0.2}{10} \quad \frac{-0.5}{8} \quad \frac{-0.7}{12} \quad \frac{-1.5}{19} \quad \frac{+2.0}{27}$$

$$\frac{-1.5}{38} \quad \frac{0.0}{23} \quad \frac{-0.5}{15} \quad \frac{-0.8}{9} \quad \frac{-0.7}{8} \quad \frac{-1.0}{12} \quad \frac{-2.5}{21} \quad \frac{-3.0}{25} \quad \frac{-3.2}{33}$$

SC LINE CROSS SECTIONS

sheet # 14 of 15

| Sta      | Elev. | P.I. | Rod | F/lev |
|----------|-------|------|-----|-------|
| 149+00   | 270.2 |      |     |       |
| 150+00   | 270.5 |      |     |       |
| 151+00   | 270.4 |      |     |       |
| 152+00   | 270.7 |      |     |       |
| 153+00   | 271.3 |      |     |       |
| 154+00   | 271.8 |      |     |       |
| 155+00   | 270.8 |      |     |       |
| 156+00   | 268.7 |      |     |       |
| 157+00   | 267.2 |      |     |       |
| 158+00   | 266.2 |      |     |       |
| 159+00   | 266.2 |      |     |       |
| 160+00   | 267.5 |      |     |       |
| 160+13.3 | 267.6 |      |     |       |

271.5

= 251+57.8

L &amp; R

Sheet # 14 of 15  
SCLINE

$$\frac{+1.5}{35} \quad \frac{+0.2}{24} \quad \frac{0.0}{19} \quad \frac{-0.8}{19} \quad \frac{-0.3}{9} \quad \frac{-0.4}{8} \quad \frac{-1.0}{12} \quad \frac{0.0}{21} \quad \frac{+3.8}{30} \quad \frac{+0.8}{40}$$

$$\frac{+1.5}{37} \quad \frac{+0.5}{26} \quad \frac{0.6}{21} \quad \frac{-0.8}{17} \quad \frac{-0.6}{11} \quad \frac{-0.9}{8} \quad \frac{-0.7}{12} \quad \frac{-0.3}{14} \quad \frac{+3.5}{23} \quad \frac{+3.5}{33}$$

$$33 \quad \frac{-3.5}{23} \quad \frac{-3.5}{23} \quad \frac{-0.7}{14} \quad \frac{-0.3}{7} \quad \frac{-1.2}{12} \quad \frac{-2.8}{19} \quad \frac{-3.0}{31} \quad \frac{-3.0}{33}$$

$$\frac{-1.2}{38} \quad \frac{-2.4}{28} \quad \frac{-1.5}{19} \quad \frac{-0.3}{10} \quad \frac{-0.5}{10} \quad \frac{-1.0}{13} \quad \frac{-2.8}{18} \quad \frac{-1.3}{32}$$

$$\frac{+3.0}{33} \quad \frac{+3.0}{27} \quad \frac{+0.1}{21} \quad \frac{-0.9}{10} \quad \frac{-0.9}{7} \quad \frac{-1.2}{12} \quad \frac{-0.8}{22} \quad \frac{+2.2}{32}$$

$$\frac{+3.5}{34} \quad \frac{+3.5}{29} \quad \frac{+2.5}{26} \quad \frac{0.0}{7} \quad \frac{-0.3}{9} \quad \frac{0.0}{14} \quad \frac{+2.7}{23} \quad \frac{+5.0}{26} \quad \frac{+8.0}{34}$$

$$\frac{-2.0}{36} \quad \frac{-0.8}{28} \quad \frac{-0.3}{19} \quad \frac{-0.3}{11} \quad \frac{-0.5}{11} \quad \frac{0.0}{17} \quad \frac{+5.0}{23} \quad \frac{+5.2}{33}$$

$$\frac{-6.2}{33} \quad \frac{-6.0}{23} \quad \frac{-0.5}{13} \quad \frac{-0.8}{13} \quad \frac{-5.3}{22} \quad \frac{-6.5}{31} \quad \frac{-5.7}{33}$$

$$\frac{-3.0}{36} \quad \frac{-2.5}{19} \quad \frac{-0.1}{12} \quad \frac{-0.2}{8} \quad \frac{-0.3}{12} \quad \frac{-2.8}{21} \quad \frac{-1.6}{32} \quad \frac{-1.6}{33}$$

$$\frac{-5.5}{33} \quad \frac{-5.5}{22} \quad \frac{-0.7}{9} \quad \frac{-0.4}{11} \quad \frac{-1.0}{21} \quad \frac{-0.7}{33}$$

$$\frac{-8.0}{40} \quad \frac{-5.2}{23} \quad \frac{-0.7}{12} \quad \frac{0.0}{8} \quad \frac{-0.5}{10} \quad \frac{-5.0}{22} \quad \frac{-3.0}{33}$$

$$\frac{-10.0}{40} \quad \frac{-8.5}{25} \quad \frac{-1.0}{13} \quad \frac{-0.1}{6} \quad \frac{-0.5}{10} \quad \frac{-3.0}{16} \quad \frac{-11.5}{31} \quad \frac{-12.0}{36}$$

END

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sheet # 15 of 15

3C LINE

CROSS SECTION NOTES

(Complete) RB.

5C LINE  
CROSS SECTION NOTES

Complete

02494