

Legend

Segments Not Requiring New Construction

- Segment A
- Segment D

Proposed Route

Segments Requiring New Construction

- Segment B
- Segment C
- Segment E
- Previously Permitted Route in Minnesota

Historic Structures

Existing Transmission Line Voltage

- 69 kV
- 115 kV
- 161 kV
- 230 kV
- 345 kV

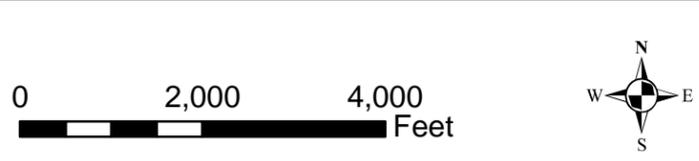


Exhibit C.1b - Project Route Segments
Split Rock to Lakefield Junction 345kV Line
Xcel Energy
Minnehaha County, South Dakota





NORTHERN STATES POWER CO.
75 KV TRANSMISSION LINE
CEMENT MISC BOOK 49.
PAGE 74

STA=46+28.81
1-155' / STEEL
L&D NH-211245-1
F&D NH-211243
STL NO-211242
2 NL-211241-1
3 NL-211241-1
2 NL-211241-17
2 NL-211241-21
2 NL-211241-22
NL-211241-19

6/E-4
STA-39+12.76
1-145' / STEEL

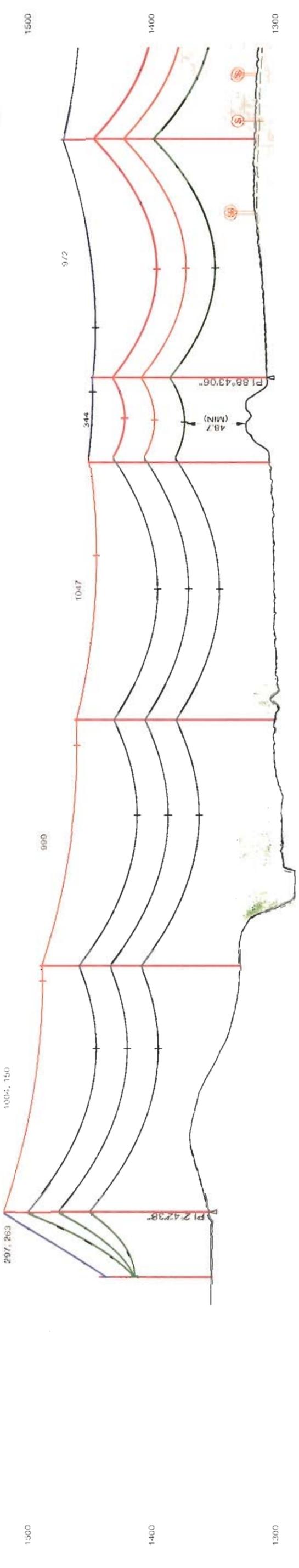
7
STA-36+56.66
1-140' / STEEL

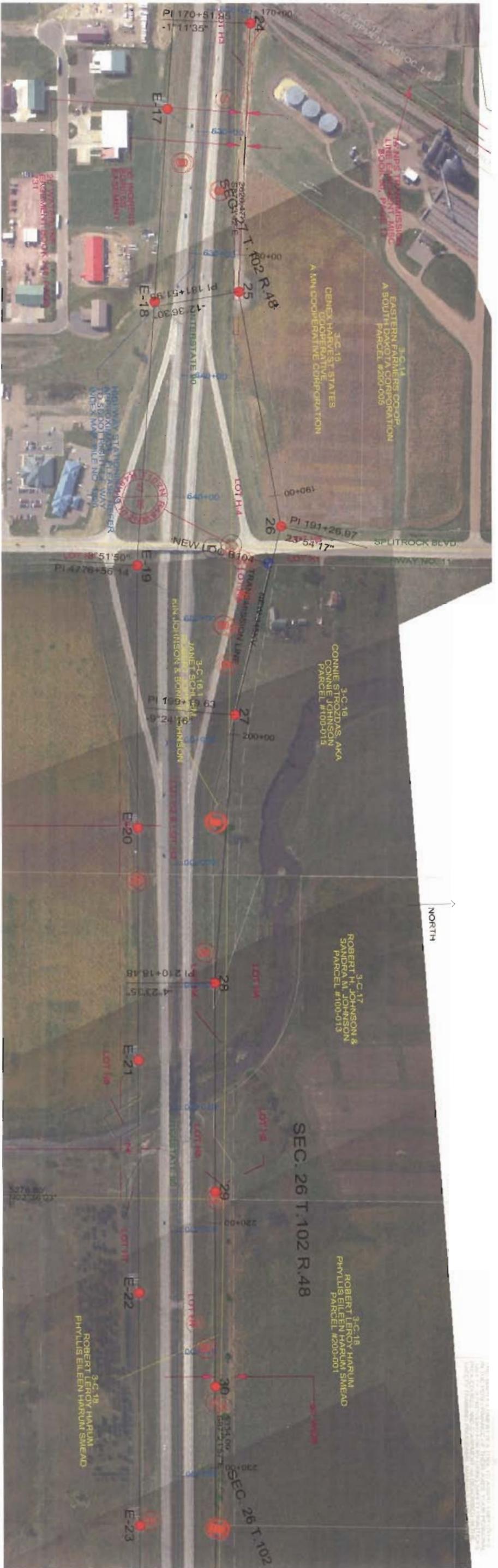
4/E-3
STA-22+65.86
1-160' / STEEL

3/E-2
STA-12+60.01
1-160' / STEEL

1/E-1
STA-2+62.71
1-165' / STEEL

SUBDE
STA=0+00.00





24
 STA=170+51.95
 1-160' / STEEL
 L&D NH-211246-1
 FDN NH-211243
 STL ND-211242
 3 NL-211241-3
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19

25
 STA=181+51.95
 1-155' / STEEL
 L&D NH-211246-3
 FDN NH-211243
 STL ND-211242
 3 NL-211241-3
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19

26
 STA=191+26.97
 1-145' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

27
 STA=199+19.63
 1-160' / STEEL
 L&D NH-211246-3
 FDN NH-211243
 STL ND-211242
 3 NL-211241-3
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19

28
 STA=210+18.48
 1-155' / STEEL
 L&D NH-211246-2
 FDN NH-211243
 STL ND-211242
 3 NL-211241-3
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19

29
 STA=218+71.15
 1-125' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

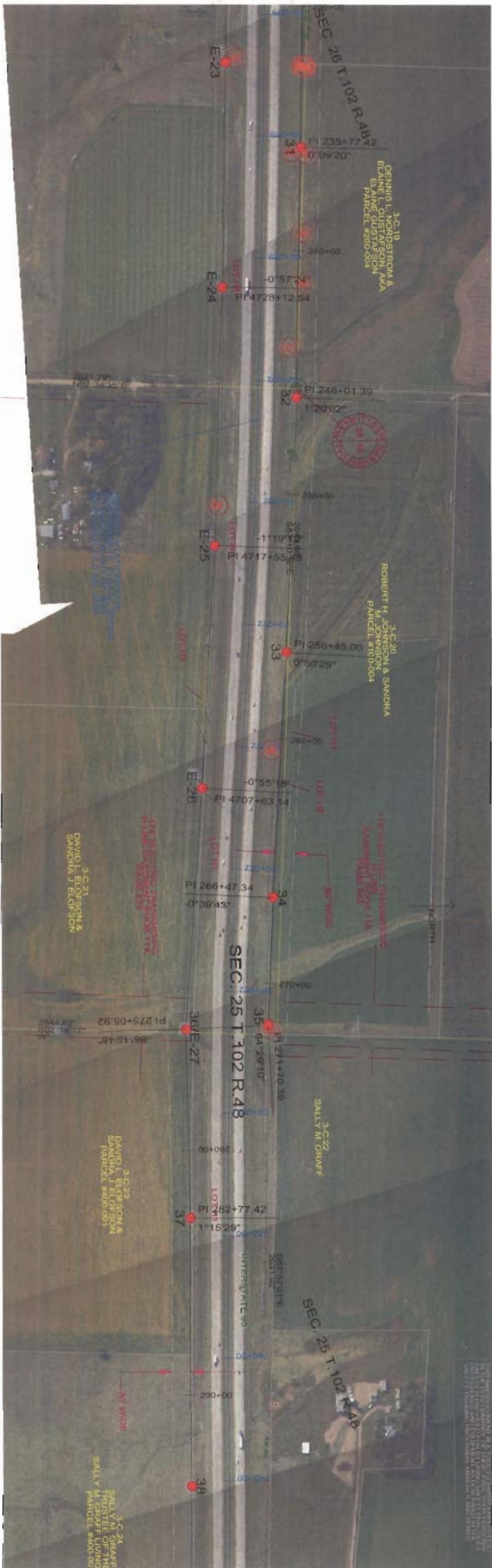
30
 STA=226+67.42
 1-120' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242



1300 170+00 180+00 190+00 200+00 210+00 220+00 1400 1500



0953 NH 211240-4



31
 STA=235+77.42
 1-135' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

32
 STA=246+01.39
 1-155' / STEEL
 L&D NH-211246-1
 FDN NH-211243
 STL ND-211242
 3 NL-211241-3
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19

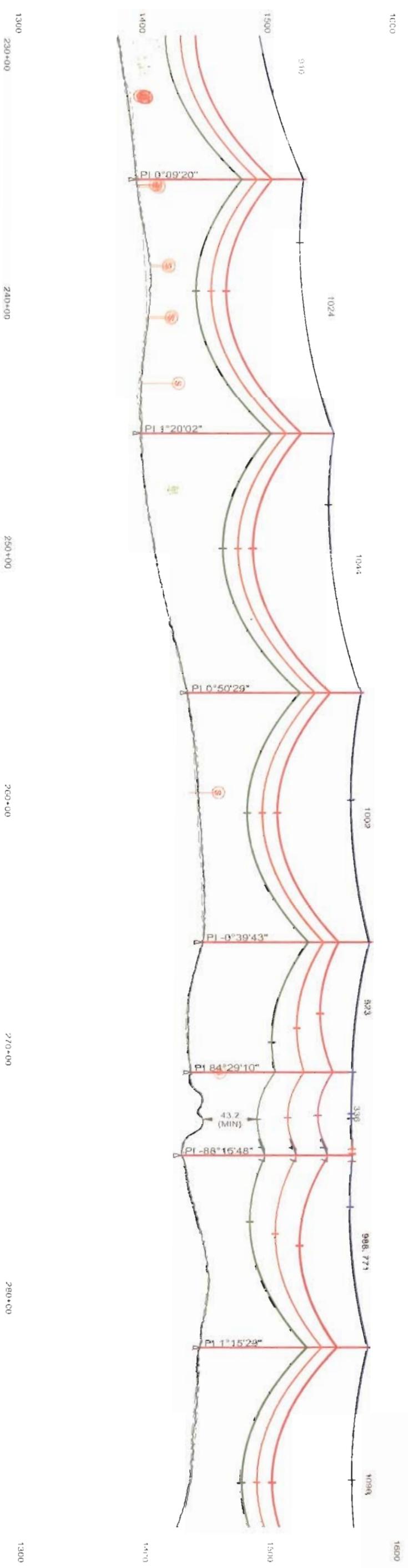
33
 STA=256+45.00
 1-140' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

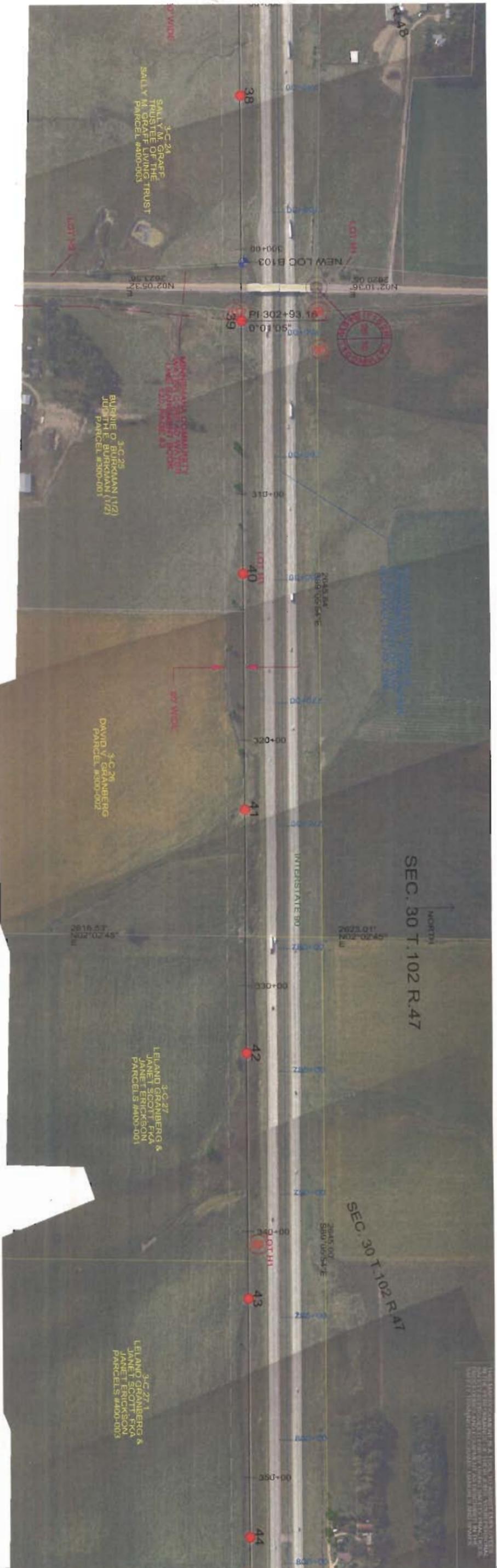
34
 STA=266+47.34
 1-135' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

35
 STA=271+70.39
 1-130' / STEEL

36/E-27
 STA=275+05.92
 1-135' / STEEL

37
 STA=282+77.42
 1-135' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242





38
 STA=293+73.14
 1-460' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 2 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

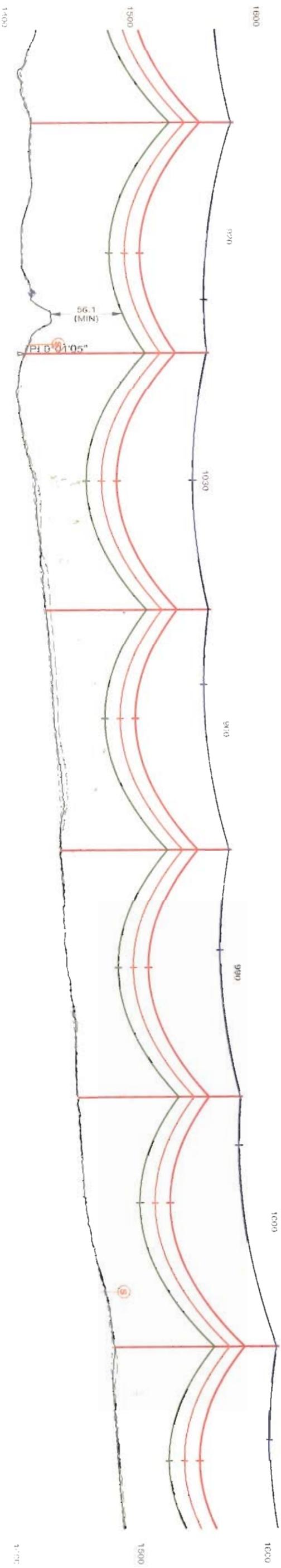
39
 STA=302+93.16
 1-145' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 2 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

40
 STA=313+23.17
 1-130' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 2 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

41
 STA=322+83.17
 1-135' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 2 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

42
 STA=332+73.18
 1-130' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

43
 STA=342+73.18
 1-130' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 2 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242



1300
 290+00
 300+00
 310+00
 320+00
 330+00
 340+00
 1300

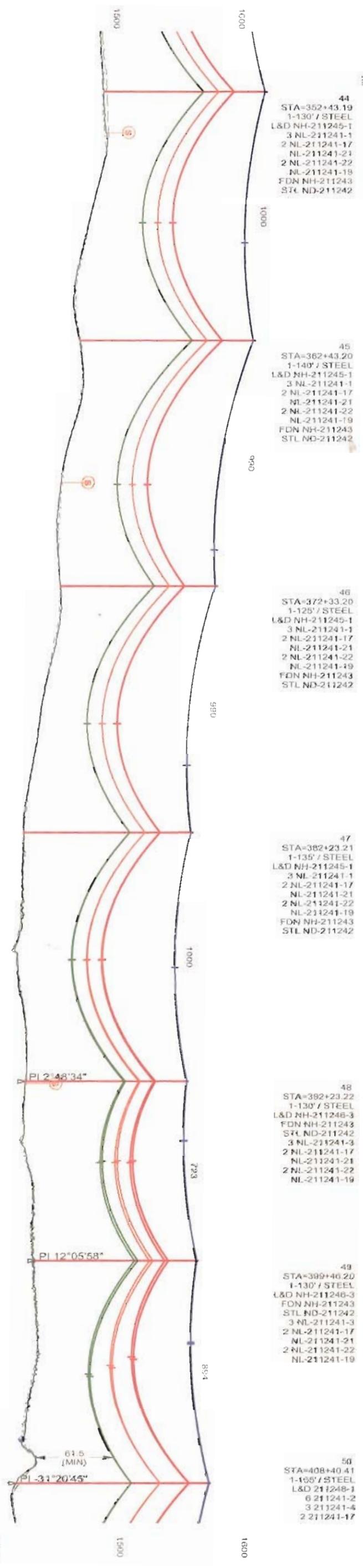
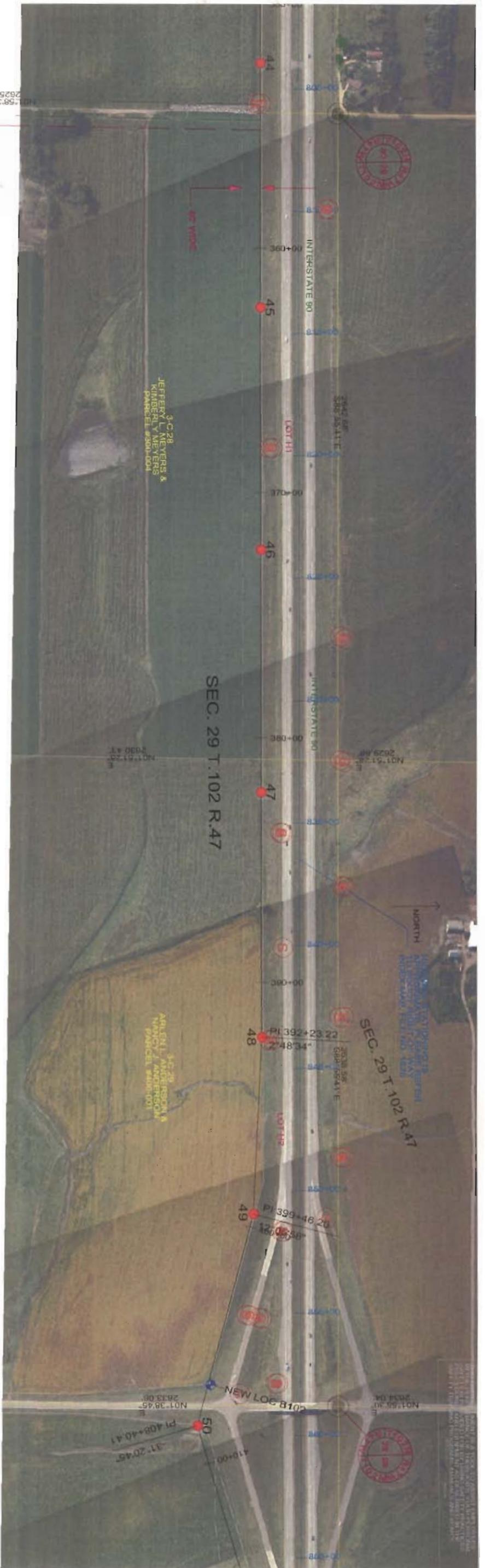
1400
 1500
 1600
 1700

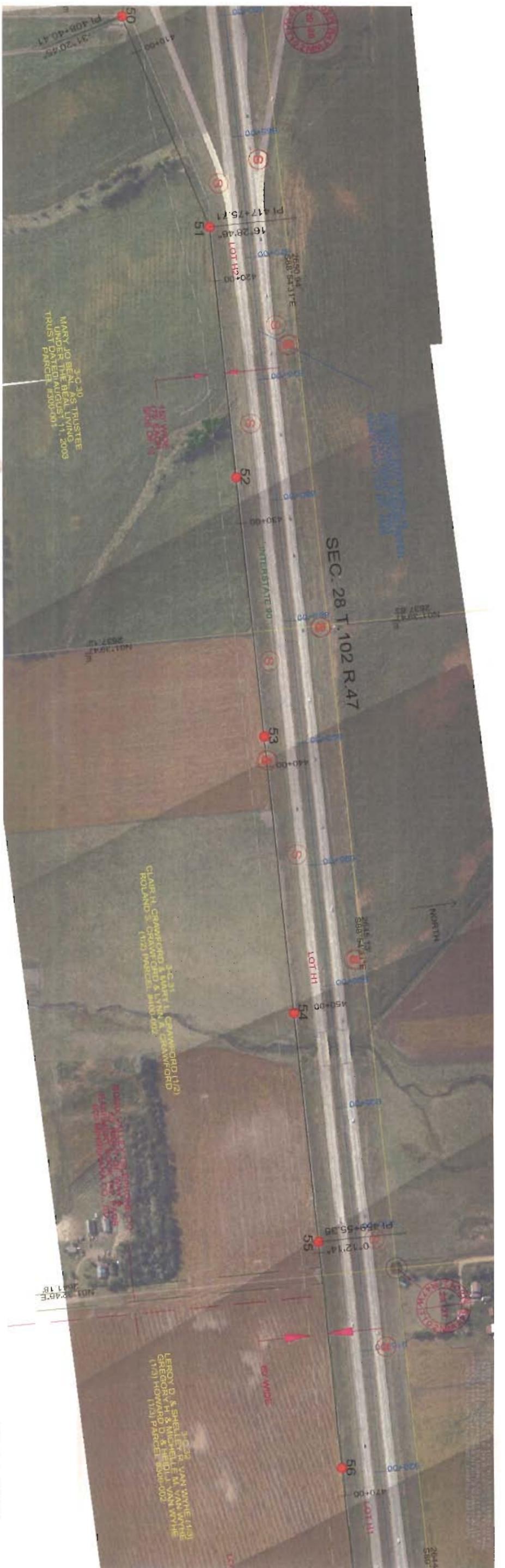
3770
 1030
 910
 990
 1000
 970

56.1 (MIN)
 PI B 302+93.16

1:100

0953
 211240-6





51
 STA=417+75.71
 1-135' / STEEL
 L&D NH-211246-4
 FDN NH-211243
 STL ND-211242
 3 NL-211241-3
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19

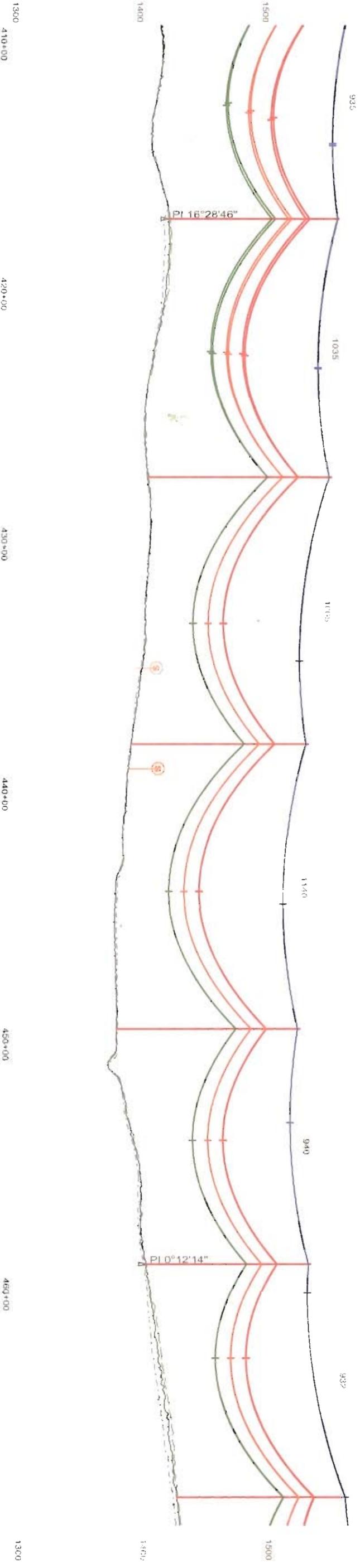
52
 STA=428+10.71
 1-145' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

53
 STA=438+75.71
 1-140' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-10
 FDN NH-211243
 STL ND-211242

54
 STA=450+15.71
 1-145' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

55
 STA=459+55.35
 1-130' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-18
 FDN NH-211243
 STL ND-211242

56
 STA=468+87.44
 1-135' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242



0953

211240-8



57
 STA=477+49.38
 1-170' / STEEL
 L&D NH-211248-1
 FDN NH-211243
 STL ND-211242
 6 NL-211241-2
 3 NL-211241-4
 4 NL-211241-18
 NL-211241-21
 4 NL-211241-22
 NL-211241-19

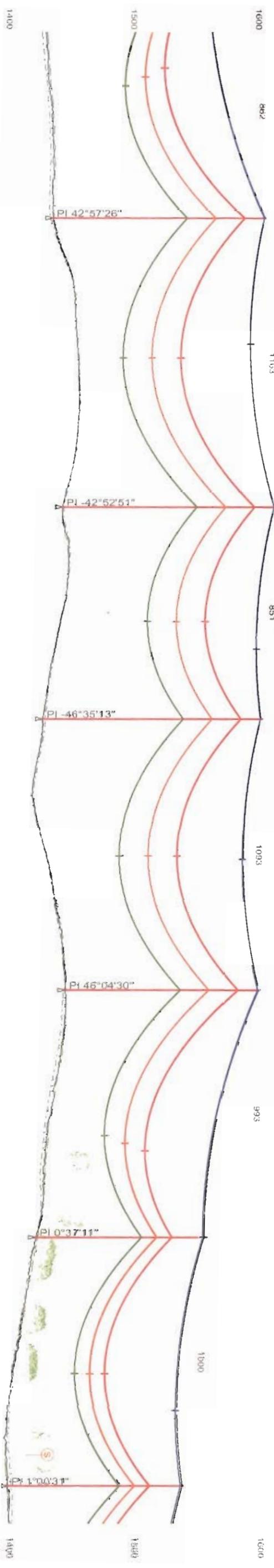
58
 STA=489+12.21
 1-170' / STEEL
 L&D NH-211248-1
 FDN NH-211243
 STL ND-211242
 6 NL-211241-2
 3 NL-211241-4
 4 NL-211241-18
 NL-211241-21
 4 NL-211241-22
 NL-211241-19

59
 STA=497+62.75
 1-175' / STEEL
 L&D NH-211248-3
 FDN NH-211243
 STL ND-211242
 6 NL-211241-2
 3 NL-211241-4
 4 NL-211241-18
 NL-211241-21
 4 NL-211241-22
 NL-211241-19

60
 STA=508+55.53
 1-155' / STEEL
 L&D NH-211248-3
 FDN NH-211243
 STL ND-211242
 6 NL-211241-2
 3 NL-211241-4
 4 NL-211241-18
 NL-211241-21
 4 NL-211241-22
 NL-211241-19

61
 STA=518+48.85
 1-135' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242

62
 STA=528+48.87
 1-140' / STEEL
 L&D NH-211245-1
 3 NL-211241-1
 2 NL-211241-17
 NL-211241-21
 2 NL-211241-22
 NL-211241-19
 FDN NH-211243
 STL ND-211242



1:300 470+00 480+00 490+00 500+00 510+00 520+00 530+00 1:300



0953

211240-9



414 Nicollet Mall
Minneapolis, Minnesota 55401-1993

November 1, 2006

Mr. Craig Smith
Sioux Falls Area Engineer
South Dakota Department of Transportation
5316 West 60th Street North
Sioux Falls, SD 57107

Re: Split Rock – Lakefield Junction 345 kV
Interstate 90 Utility Permit

Dear Mr. Smith:

Thank you for meeting on October 26th with Mark Anderson, Xcel Energy's Project Manager, regarding its proposed 345 kV transmission line that would parallel and overhang Interstate 90 (I-90) between its Split Rock Substation located west of Brandon, South Dakota and the Minnesota border. We were encouraged that the meeting identified potential solutions to issues raised in SDDOT's letter of June 9, 2006 that could allow the South Dakota Department of Transportation (SDDOT) to reconsider our project for approval.

Similar resolution discussions have taken place with the Minnesota Department of Transportation (Mn/DOT) regarding the same issues on the portion of the transmission line along I-90 in Minnesota. There were also discussions with Mn/DOT regarding the transmission line route around Minnesota's Beaver Creek Rest Area located in South Dakota. This letter summarizes Xcel Energy's position in regard to implementing the identified solutions in order to receive the necessary permits from SDDOT. You have requested copies of correspondence between Mn/DOT and Xcel relating to settlement discussions involving our Minnesota permit application for the proposed 345 kV line. Without Mn/DOT approval, we are unable to provide you with such documents due to our agreement with Mn/DOT to not disclose the content of settlement negotiations in order to facilitate and encourage frank and free discussions.

The project located parallel and overhanging Interstate 90 between Brandon and the Minnesota border covers the following line sections:

- Crossing of I-90 west of Brandon, north of the Split Rock Substation.
- Parallel and overhang on north side of I-90 from west of Brandon to Western Area Power Administration (Western) Tap.
- Crossing of I-90 at Western Tap.
- Parallel and overhang on south side of I-90 from Western Tap to Minnesota Border.
- Parallel of the south border (5-foot separation) of Beaver Creek Rest Area crossing the scenic easement.

Mr. Craig Smith
November 1, 2006
Page 2 of 5

Enclosed is a route map showing the locations of the parallel installation and crossings of SDDOT highways for your reference.

The new line will be constructed on private easements obtained from private landowners. No structures are planned to be located within Interstate 90 right of way. However, Xcel Energy asks SDDOT to consider exceptions similar to the existing Xcel Energy line located on the south side of I-90, which does have structures within interchanges in order to facilitate tangent alignment of the transmission structures. The structures will have a delta configuration; that is, two davit arms will be on one side facing away from Interstate 90 and one davit arm on the other side, towards Interstate 90. For the parallel installation along Interstate 90, a portion of the single davit arm will overhang the SDDOT right of way. The new line will be constructed using self-supporting steel structures supported by cast-in-place drilled pier foundations. No guys, anchors, or anchor poles will be required to support the structures.

Overhead Crossings of Interstate 90

The minimum clearance to the roadway shown on the drawings is at the maximum sag of the conductor under extreme loading conditions, which in this case is a conductor temperature of 392° F, and an ambient temperature of 104° F. The minimum clearances shown exceed the minimum clearance requirements specified by the National Electrical Safety Code (NESC), and the SDDOT.

Overhead Parallel and Overhanging Installation

For the portion of the line paralleling Interstate 90, Xcel Energy respectfully requests an exemption from certain criteria regarding a longitudinal installation of an electric transmission line adjacent to and overhanging Interstate 90 right of way. In order to secure an exemption for a longitudinal installation overhanging the interstate right of way, Xcel Energy will agree to relocate this line in the future if the overhang occupation conflicts with SDDOT's use of the interstate right of way, and there is no reasonable alternative to relocation. This condition would eliminate unreasonable restriction of the interstate right of way and protect SDDOT from future costs arising from conflicts between highway use and the transmission line.

SDDOT's previously identified conflicts created by the overhang of Interstate 90 in its letter of June 9, 2006, should no longer be a concern as they are addressed by and resolved by this condition. These identified conflicts included: bridge repair, sign maintenance and installations, ditch cleaning, interchange lighting. In addition, SDDOT expressed concern that highway and traffic safety and the design, construction, operation, maintenance or stability of the highway will be adversely affected.

With Xcel Energy agreeing to relocate the line if the overhang of I-90 causes a future conflict and there is no reasonable alternative, the transmission line design is consistent with the exception criteria in the American Association of State Highway and Transportation Officials (AASHTO) Accommodation Policy. Specifically, the proposed line meets AASHTO's conditions required to allow longitudinal installation (overhang) within freeway right of way as follows:

Mr. Craig Smith
November 1, 2006
Page 3 of 5

Highway and Traffic Safety:

- Xcel Energy's installation will not adversely affect highway and traffic safety, as the longitudinal installation will not overhang the traveled interstate roadway.
- No poles will be located within the interstate right of way unless SDDOT specifically authorizes this, as previously described. All structures will be placed on private easements obtained from private landowners. All structures will be placed 5 feet outside the interstate right of way.
- The minimum height of the conductors above the interstate right of way for the longitudinal installation is 48 feet at the maximum sag of the conductor (392° F conductor temperature and 104° F ambient temperature).

Alternate Locations Not Reasonably Available:

- The route reviewed by the South Dakota Public Utilities Commission (PUC) requires the longitudinal installation immediately adjacent to Interstate 90, with crossarm and conductor overhang of the interstate right of way. "Immediately adjacent" means the pole centerline will be located 5-feet from the edge of the interstate right of way on private property. Although other route locations were considered during the review by the PUC staff, this route parallel with and overhanging the Interstate right of way was deemed the economic and preferred route choice to reduce impacts to productive agricultural and other lands through multiple use of existing interstate right of way. Xcel Energy currently has a draft stipulation with the PUC staff where all parties have agreed that a route parallel and overhanging I-90 should be approved by the PUC.
- A design of the line that would avoid overhang of the interstate right of way would add significant cost to the project. This cost would be incurred by Xcel Energy's ratepayers.
- The overhang of the interstate right of way by the new transmission line will not adversely affect the design, construction, operation, maintenance and stability nor interfere with or impair the present or future expansion of the interstate.

Impacts to Agricultural Land if Overhang Exemption is Denied:

- Denial of this overhang exemption would require poles to be placed approximately 75-feet into farm fields. Moving 75 feet further into cultivated lands would adversely impact farm operations by creating mid-field obstacles, which reduces agricultural productivity. A redesign and refabrication of the line to maintain the alignment 5 feet off of the interstate without overhanging the right of way would add significant cost to the project. Moving the line 75 feet from the I-90 right of way line would also impact the use of commercial property near the Brandon intersection. Landowner input throughout the permitting process has indicated to the PUC and Xcel Energy that placing poles approximately 75 feet into the fields would not be acceptable to the landowners.

Construction and Maintenance Access:

- The construction and maintenance of this line will be in conformance with the AASHTO policy regarding access and servicing utilities. Xcel Energy will access its private easements from non-interstate roadways to construct and maintain the line.

Mr. Craig Smith
November 1, 2006
Page 4 of 5

which will be constructed 5 feet off of the interstate right of way. Interstate right of way gates will be used for access to the right of way for vegetation maintenance.

Scenic Easement Crossing at Beaver Creek Rest Area

After discussions with Mn/DOT, it was determined that the line should be located 5 feet south of the south boundary of the Beaver Creek Rest Area. The supporting structures of the transmission line would be designed to have all its arms on the side of the pole away from the rest area. Xcel Energy is also requesting a permit from SDDOT to cross its scenic easement south of the Beaver Creek Rest Area in order to accommodate this alignment of the transmission line.

Transmission Line Vegetation Management within I-90 Right-of-Way

Installation of the new transmission line will require trimming and/or removal of planted trees along the interstate corridor. The tree trimming and removal will be limited as much as possible, however in order to maintain minimum clearance from the conductors to trees growing beneath the transmission line and to avoid future trimming, it is advisable to replace tall growing trees with appropriate shorter mature height species. Tree trimming, removal or replacement will be performed in a manner to meet safety and reliability requirements. Xcel Energy is requesting that as a part of the review of the application for Utility Permit, a meeting between SDDOT and Xcel Energy be held to discuss, identify and mark trees for trimming, removal or replacement. Please contact Mark Anderson, Project Manager, Xcel Energy at 612/940-2056 for questions regarding technical or construction issues or for a meeting to discuss tree issues.

Xcel Energy greatly appreciates the South Dakota Department of Transportation's willingness to consider this reapplication. We recognize that both Xcel Energy and the SDDOT have important interests relating to our permit application for the 345 kV transmission line along I-90. Xcel Energy has an important interest in completing these facilities as promptly as possible to allow for the increased transmission of energy in the region, and to satisfy our regulatory commitments to facilitate additional wind energy in eastern South Dakota and southwestern Minnesota. The SDDOT has an important interest in maintaining meaningful use of its rights-of-way in the State. In addition, because of the need to provide the upgraded transmission facilities identified by the South Dakota Public Utilities Commission, it is necessary to expedite completion of the permitting process so that the construction work can proceed promptly and in a manner to avoid additional cost impacts to electric ratepayers.

Please review our proposal and provide guidance in regard to acquiring the necessary permits from SDDOT for the transmission line. If you have any questions or comments regarding this proposal, do not hesitate to call me at 612/330-5951.

Sincerely,



David G. Callahan
Senior Team Lead
Siting & Land Rights

Mr. Craig Smith
November 1, 2006
Page 5 of 5

Enclosures

cc: Tom Weeks - SDDOT
Burns & McDonnell
Greg Chamberlain - Xcel Energy
Mark Anderson - Xcel Energy

