

Erosion Control  
NHSN-061-2(109)--2R-29

**LETTING DATE**  
**June 16, 2026**



S of 210th St to N of Mediapolis

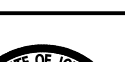
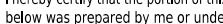
Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



| INDEX OF SHEETS |   |
|-----------------|---|
| No.             | DESCRIPTION   |
| <b>A Sheets</b> | <b>Title Sheets</b>                                 |
| A.1             | Title Sheet   |
| <b>J Sheets</b> | <b>Traffic Control and Staging Sheets</b>           |
| J.1 - 3         | Traffic Control Plan                                |
| <b>R Sheets</b> | <b>Erosion Control Sheets</b>                       |
| RC.1 - 14       | Est. Quantities, PPP, General Notes and Tabulations |
| RC.15           | Seeding List  |
| * RR.1          | Erosion Control Legend and Symbol Information Sheet |
| * RR.2 - 20     | Erosion Control Device and Seeding Maps             |
|                 | * Color Plan Sheets                                 |

| INDEX OF SEALS |               |                         |                     |
|----------------|---------------|-------------------------|---------------------|
| SHEET NO.      | NAME          | TYPE                    | BID QUANTITY SHEETS |
| A.1            | Rachel Harris | Primary Signature Block |                     |
| J.1 - J.3      | Rachel Harris |                         |                     |
| RC.1 - RC.15   | Rachel Harris |                         | X                   |
| RR.1 - RR.20   | Rachel Harris |                         |                     |
|                |               |                         |                     |
|                |               |                         |                     |
|                |               |                         |                     |

| LANDSCAPE DESIGN  |   |
|---|---|
|    | I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed professional landscape architect under the laws of the state of Iowa. |
|   |    |
|   | Signature _____ Date <u>04-06-2026</u>  |
|   | Rachel A. Harris<br>Printed or Typed Name   |
| My license renewal date is June 30, 2026  |   |
| Pages or sheets covered by this seal: <u>A.1; J.1 - J.3; RC.1 - RC.15; RR.1 - RR.20</u> |   |

|                |         |                                    |            |        |                                       |                  |
|----------------|---------|------------------------------------|------------|--------|---------------------------------------|------------------|
| FILE NO. 29225 | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Des Moines | COUNTY | PROJECT NUMBER NHSN-061-2(109)--2R-29 | SHEET NUMBER A.1 |
|----------------|---------|------------------------------------|------------|--------|---------------------------------------|------------------|

12:02:22 AM 4/7/2026 npohlen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2906101097\Roadside\E01(109)\29061109\_TitleSHT\_RC01.dgn

108\_23A  
8/15/22

TRAFFIC CONTROL PLAN

Traffic on US 61 shall be maintained at all times



|   |                              |
|---|------------------------------|
| <div>111_01<br/>10/14/22</div> <div>COORDINATED OPERATIONS</div> <div>Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.</div> |                              |
| Project   | Type of Work                 |
| NHSX-061-2(106)--3H-29  | PCC Pavement - Grade and New |
|   |                              |



ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadside Items : Roadside Items

| Item no. | Item Code    | Item                  | Unit | Quantities     | Estimate Reference Notes   |
|----------|--------------|-----------------------|------|----------------|--|
|          |              |                       |      | Estimated      |  |
|          |              |                       |      | Roadside Items |  |
| 1        | 2101-0850001 | CLEARING AND GRUBBING | ACRE | 1.2            | <p>Bid item has been included to clear Willow trees from the bottom of the ditch to restore proper drainage. See sheets RR.12 - RR.14 for location.</p> <p>Clear all trees and brush within designated areas, including minimum of 3 inches below ground line.</p> <p>All material for disposal must be stockpiled a minimum of 30 feet from the shoulder until removal from the right-of-way.</p> <p>All material generated as a result of Clearing and Grubbing shall become the property of the contractor and must be disposed of offsite.</p>                                   |
| 2        | 2125-2225050 | RESHAPING DITCHES     | STA  | 27             | <p>Bid item has been included for reshaping areas of clearing and grubbing between stations 1813 and 1841. Review locations with the Engineer prior to reshaping.</p>  |
| 3        | 2507-3250005 | ENGINEERING FABRIC    | SY   | 957.3          | <p>Refer to Tab. 100-23 for locations.</p> <p>Refer to Standard Road Plan EC-301.</p> <p>Use material specified for embankment erosion control according to Article 4196.01, B, 3. of the Standard Specifications. Material will be measured in sq. yds. of actual area covered. Refer to details.</p> <p>The tabulation includes estimated locations for placement of "Engineering Fabric" to address erosion at the project site. The bid quantity includes an additional 30% for other locations as needed. Verify additional locations with the Engineer prior to placement.</p> |
| 4        | 2507-6800061 | REVETMENT, CLASS E    | TON  | 653.3          | <p>Refer to Tab. 100-23 for locations.</p> <p>Refer to Standard Road Plan EC-301.</p> <p>The tabulation includes estimated locations for placement of "Revetment, Class E" to address erosion to be encountered during construction. The bid quantity includes an additional 30% for other locations as needed. Verify additional locations with the Engineer prior to placement.</p> <p>Estimated at 1.5 ton/cu yd. Class E revetment shall meet requirements of Article 4130 of the Standard Specifications.</p>   |
| 5        | 2528-8445110 | TRAFFIC CONTROL       | LS   | 1              | <p>Refer to Traffic Control Plan on Sheet J.1.</p>   |
| 6        | 2533-4980005 | MOBILIZATION          | LS   | 1              |  |

| Item no. | Item Code    | Item                          | Unit | Quantities     | Estimate Reference Notes  |
|----------|--------------|-------------------------------|------|----------------|---|
|          |              |                               |      | Estimated      |   |
|          |              |                               |      | Roadside Items |   |
| 7        | 2601-2633100 | MOWING                        | ACRE | 540.8          | <p>Estimate based on three mowings of all native grass areas per year for 2 years.</p> <p>Mowings shall take place when the vegetation is between 12 and 18 inches tall and mowed between four and eight inches in height.</p> <p>Areas inaccessible to field equipment shall be cut with appropriate hand equipment and kept current with the mowing of adjacent areas.</p> <p>Year 1: 270.4 ac.</p> <p>Year 2: 270.4 ac.</p> <p>Total: 540.8 ac.</p>  |
| 8        | 2601-2634100 | MULCHING                      | ACRE | 134            | <p>Mulching has been included for all areas of the project except those that have been designated for "Urban " seeding. Mulch should be applied to all areas that do not have adequate vegetative stubble to preclude soil erosion. The areas to be mulched will be determined by the Engineer or Iowa DOT representative.</p> <p>Perform mulching according to Article 2601.03, E, 2, of the Standard Specifications. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes and at a minimum of two inches deep.</p> <p>Item is included for areas requiring reshaping and seedbed preparation. Use mulch that is Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Association.</p> <p>Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre. MULCHING</p> |
| 9        | 2601-2634105 | MULCHING, BONDED FIBER MATRIX | ACRE | 6.2            | <p>Apply Bonded Fiber Matrix as the mulch for all areas designated as "Seeding and Fertilizing (Urban)".</p> <p>Apply seed and fertilizer for the area to be covered before applying Bonded Fiber Matrix Mulch.</p> <p>Apply Bonded Fiber Matrix Mulch at a rate of a minimum of 3000 pounds per acre.</p>  |

| Item no. | Item Code    | Item                                | Unit | Quantities     | Estimate Reference Notes   |
|----------|--------------|-------------------------------------|------|----------------|--|
|          |              |                                     |      | Estimated      |  |
|          |              |                                     |      | Roadside Items |  |
| 10       | 2601-2636017 | NATIVE GRASS SEEDING (INSTALL ONLY) | ACRE | 67.6           | <p>Refer to pages RR.2 - RR.20 for seeding locations.</p> <p>Verify seeding locations with the Engineer or IA DOT representative prior to placement.</p> <p>Seeding will be done into standing stubble with no prior tillage.</p> <p>Seed all areas outside eight feet adjacent to outside shoulder along mainline, side roads, and infield areas at interchanges with "Native Grass Seeding" unless otherwise specified in the plans.</p> <p>Prepare seedbed, fertilize, and seed according to Article 2601.03, C, 5, of the Standard Specifications.</p> <p>The contracting authority will furnish seed. Refer to the RC sheets for seed mix information.</p> <p>Apply all forb seed through the native grass drill wildflower or small seed box.</p> <p>Do not mix and apply Forb seed with the native grass seed.</p> <p>Apply cover crop through the cool season or through cover crop seed box.<br/>Do not mix and apply cover crop seed with the native grass seed.</p> <p>Remove seed remaining in the drill at the end of each day. At the completion of all seeding, remove remaining seed from the drill by vacuum or other means and broadcast on the project.</p> |
| 11       | 2601-2636018 | WETLAND GRASS SEEDING               | ACRE | 4.4            | <p>See pages RR.2 - RR.20 for locations.</p> <p>Seeding and seed bed preparation shall be as described in accordance with Article 2601.03, B,6, of the Standard Specifications.</p> <p>Review seeding areas with Engineer or Iowa DOT representative prior to seeding.</p>   |
| 12       | 2601-2636043 | SEEDING AND FERTILIZING (RURAL)     | ACRE | 47             | <p>Refer to pages RR.2 - RR.20 for seeding locations.</p> <p>Seed and fertilize all areas in accordance with Article 2601.03, C, 3, of the Standard Specifications.</p> <p>Rural seed will be interseeded into existing vegetation if present. Areas where no vegetation is present should have seedbed preparation in accordance with Article 2601.03, B, 4, a, of the standard specifications.</p> <p>Areas where vegetative cover is not sufficient to preclude erosion will be mulched in accordance with Article 2601.03, E, 2, a, of the standard specifications.</p> <p>Review seeding areas with Engineer or Iowa DOT representative prior to seeding.</p>   |
| 13       | 2601-2636044 | SEEDING AND FERTILIZING (URBAN)     | ACRE | 6.2            | <p>Prepare seedbed, fertilize, and seed according to Article 2601.03, C, 4, of the Standard Specifications.</p> <p>Review seeding areas with Engineer or Iowa DOT representative prior to seeding.</p>   |

| Item no. | Item Code    | Item   | Unit | Quantities     | Estimate Reference Notes   |
|----------|--------------|--|------|----------------|--|
|          |              |  |      | Estimated      |  |
|          |              |  |      | Roadside Items |  |
| 14       | 2601-2636060 | SALT TOLERANT SEEDING  | ACRE | 15             | <p>Bid item "Salt Tolerant Seeding " has been included for the 8-foot adjacent to the mainline shoulders in areas designated on pages RR.2 - RR.20.</p> <p>Salt Tolerant seed will be interseeded into existing vegetation if present. Areas where no vegetation is present should have seedbed preparation in accordance with Article 2601.03, B, 4, a, of the standard specifications.</p> <p>Areas where vegetative cover is not sufficient to preclude erosion will be mulched in accordance with Article 2601.03, E, 2, a, of the standard specifications.</p> <p>Review seeding areas with Engineer or Iowa DOT representative prior to seeding.</p> |
| 15       | 2601-2643110 | WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION | MGAL | 15.4           | <p>Estimate for watering Special Ditch Control, Slope Protection Areas, Turf Reinforcement Mat, or Transition Mat is based on a total of four waterings at a rate of 50 gallons maximum per square, per watering.</p> <p>The first watering should be done no later than the day following placement of the materials with 3 additional watering at intervals of 5 to 8 calendar days.</p> <p>The amount of water used should be sufficient to saturate the seedbed to a depth of approximately 2 inches.</p>  |
| 16       | 2601-2643411 | TURF REINFORCEMENT MAT, TYPE 1                               | SQ   | 77             | <p>Refer to Tab 100-22 for locations.</p> <p>Refer to Standard Road Plan EC-104.</p>   |
| 17       | 2602-0000160 | ROCK CHECK DAM   | LF   | 40             | <p>Refer to Tab. 100-32 for locations.</p> <p>Refer to Standard Road Plan EC-302.</p> <p>Rock check dams are bid by linear feet. The bid item includes the revetment, Class 10 excavation, and engineering fabric required to construct rock check dams.</p> <p>Use Class D Revetment to construct Rock Check Dam. Use fabric for Embankment Erosion Control complying with Section 4196 of the Standard Specifications.</p>   |

| Item no. | Item Code    | Item              | Unit | Quantities     | Estimate Reference Notes   |
|----------|--------------|-------------------|------|----------------|--|
|          |              |                   |      | Estimated      |  |
|          |              |                   |      | Roadside Items |  |
| 18       | 2612-0000500 | ROADSIDE SPRAYING | ACRE | 236            | <p><b><u>General</u></b></p> <p>Herbicide applicators shall have a current pesticide applicators license through the State of Iowa with the proper endorsements for spraying in the right-of-way.</p> <p>Follow all label directions. All chemicals must be labeled for use in the right-of -way.</p> <p>All efforts should be made to reduce offsite drift of herbicides being used.</p> <p><b><u>Burn-Down</u></b></p> <p>Engineer or IA DOT representative will evaluate vegetation status and decide whether burn down applications are warranted.</p> <p>Do not apply herbicide to areas designated “Urban” or “Salt Tolerant” seeding, and/or areas that require seedbed preparation.</p> <p>After mowing of the entire project site, allow 3 weeks for regrowth and then make the first burn down application.</p> <p>Engineer or IA DOT representative will evaluate the kill from the first herbicide application to determine if a second application is warranted. If necessary, the second burn down application should be made no sooner than 10 days after the first application.</p> <p>Use glyphosate for both applications at a rate labeled for burndown with water conditioner, proper adjuvants, and drift control. If heavy broadleaf pressure is present, glufosinate may be added to the mix at a rate labeled for burndown with water conditioner, proper adjuvants, and drift control</p> <p>“Burndown” spraying application 1: 118 acres<br/>“Burndown” spraying application 2: 118 acres.</p> |

281\_01  
9/28/22

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide, Permit No. 14. A copy of this permit is available from the Iowa DOT website (<http://www.envpermits.iowadot.gov/>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

281\_03  
11/9/23

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: Perimeter and Slope Sediment Control Devices, Turf Reinforcement Mat - Type 1, Rock Ditch, Rock Splash Basins, Rock Check Dam and Seeding.

| INDEX OF TABULATIONS |                           |              | 111_25<br>4/21/26 |
|----------------------|---------------------------|--------------|-------------------|
| Tabulation           | Tabulation Title          | Sheet No.    |                   |
| 111_25               | INDEX OF TABULATIONS      | RC.7         |                   |
| 105_04               | STANDARD ROAD PLANS       | RC.8         |                   |
| 100_22               | ROLLED EROSION CONTROL    | RC.9         |                   |
| 100_23               | ROCK EROSION CONTROL      | RC.10        |                   |
| 100_32               | ROCK CHECK DAM            | RC.11        |                   |
| 110_17               | CLEARING AND GRUBBING     | RC.12        |                   |
| 110_12               | POLLUTION PREVENTION PLAN | RC.13- RC.14 |                   |

| <div>105_04<br/>4/21/26</div> <div>STANDARDS</div> <div>The following Standards apply to construction work on this project.</div> |          |   |
|---|----------|---|
| Number  | Date     | Title   |
| EC-104  | 04-17-18 | Turf Reinforced Mat (TRM)                           |
| EC-301  | 10-18-22 | Rock Erosion Control (REC)                          |
| EC-302  | 10-18-22 | Rock Check Dam                                      |
| EC-502  | 04-21-15 | Seeding in Rural Areas                              |
| EW-105  | 04-21-15 | Reshaping Slopes and Ditches                        |
| TC-1  | 10-15-19 | Work Not Affecting Traffic (Two-Lane or Multi-Lane) |
| TC-202  | 04-18-23 | Work Within 15 ft of Traveled Way                   |
| TC-402  | 04-18-23 | Work Within 15 ft of Traveled Way                   |



| <div>ROLLED EROSION CONTROL</div> <div>Refer to EC-101, EC-103 and EC-104.</div> |              |            |        |             |            |                   |                        |                                     |  | 100.22<br>8/15/22 |
|--|--------------|------------|--------|-------------|------------|-------------------|------------------------|-------------------------------------|--|-------------------|
| Road Identification  | Station From | Station To | Side   | Length (FT) | Width (FT) | TRM Type (EC-104) | TRM Quantity (Squares) | Slope Protection (EC-103) (Squares) | Special Ditch Control (EC-101) (Squares) | Remarks           |
| US 61  | 1784+38.00   | 1785+28.00 | Median | 90.0        | 42.0       | Type 1            | 38.0                   |                                     |  |                   |
| US 61  | 1786+23.00   | 1787+15.00 | Median | 92.0        | 42.0       | Type 1            | 39.0                   |                                     |  |                   |

Total:

77

| <div>100_23<br/>8/15/22</div> <div>ROCK EROSION CONTROL</div> <div>Refer to EC-301 and Detail 570-8</div> |              |            |       |             |            |                            |                         |                         |                     |         |
|---|--------------|------------|-------|-------------|------------|----------------------------|-------------------------|-------------------------|---------------------|---------|
| Road Identification   | Station From | Station To | Side  | Length (FT) | Width (FT) | Rock Erosion Control Type  | Engineering Fabric (SY) | Class E Revetment (TON) | Erosion Stone (TON) | Remarks |
| US 61   | 1673+86.00   |            | Right | 22.00       | 13.0       | Type 4 - Rock Splash Basin | 49.2                    | 31.800                  |                     |         |
| US 61   | 1679+00.00   |            | Right | 12.00       | 12.0       | Type 4 - Rock Splash Basin | 28.5                    | 16.000                  |                     |         |
| US 61   | 1717+06.00   |            | Right | 15.00       | 15.0       | Type 4 - Rock Splash Basin | 40.2                    | 25.000                  |                     |         |
| US 61   | 1720+45.00   |            | Right | 20.50       | 20.5       | Type 4 - Rock Splash Basin | 66.7                    | 46.700                  |                     |         |
| Hawk Rd.  | 11730+70.00  |            | Right | 12.00       | 12.0       | Type 4 - Rock Splash Basin | 28.5                    | 16.000                  |                     |         |
| US 61   | 1740+40.00   |            | Left  | 46.00       | 22.0       | Type 4 - Rock Splash Basin | 144.5                   | 112.500                 |                     |         |
| US 61   | 1740+40.00   |            | Right | 17.00       | 17.0       | Type 4 - Rock Splash Basin | 49.0                    | 32.200                  |                     |         |
| Ramp B  | 31783+36.00  |            | Left  | 90.00       | 7.5        | Type 2 - Rock Ditch        | 120.2                   | 75.000                  |                     |         |
| US 61   | 1806+00.00   |            | Right | 13.00       | 13.0       | Type 4 - Rock Splash Basin | 32.2                    | 18.800                  |                     |         |
| US 61   | 1813+06.00   |            | Left  | 13.00       | 17.0       | Type 4 - Rock Splash Basin | 39.7                    | 24.600                  |                     |         |
| US 61   | 1813+57.00   |            | Right | 55.00       | 17.0       | Type 4 - Rock Splash Basin | 137.7                   | 103.900                 |                     |         |
| Total:  |              |            |       |             |            |                            | 736.4                   | 502.5                   |                     |         |

100\_32  
8/15/22

ROCK CHECK DAM

Possible Standard: EC-302

Functional Height

FS:1

Ditch Width

BS:1

Functional Height

Slope Length

Storage Volume

Average Percent Slope

Upstream device or ground

\* The functional height used in the volume equation is 90% of effective height. Effective height is 2 feet as shown in EC-302.

\* Volume equation:  $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

| Basin No. | Station    | Side | Offset | Installation (LF) | Maintenance (Each) | Removal (Each) | Foreslope (FS:1) | Backslope (BS:1) | Ditch Width (FT) | Avg. % Slope | Volume (CF) | Remarks |
|-----------|------------|------|--------|-------------------|--------------------|----------------|------------------|------------------|------------------|--------------|-------------|---------|
| 11        | 1740+40.00 | Left | 160.0  | 40.0              |                    |                | 4.0              | 4.0              | 20.0             | 0.5          | 9792.00     |         |
| Total:    |            |      |        | 40                |                    |                |                  |                  |                  |              |             |         |

| CLEARING AND GRUBBING |            |                      |                               |        |        |         |          |          |          |          |          |          |          |          |          |      |                             |                            |                 |                        |                                      | 110_17<br>1/27/25 |
|-----------------------|------------|----------------------|-------------------------------|--------|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|-----------------------------|----------------------------|-----------------|------------------------|--------------------------------------|-------------------|
| Station From          | Station To | Direction of Traffic | Work and Material Type        | >3"-6" | >6"-9" | >9"-12" | >12"-15" | >15"-18" | >18"-24" | >24"-30" | >30"-36" | >36"-42" | >42"-48" | >48"-60" | >60"-72" | >72" | Other Materials Length (FT) | Other Materials Width (FT) | Estimated Units | Estimated Area (Acres) | Estimated Herbicide Application (EA) | Remarks           |
| 1813+35.00            | 1840+10.00 | SB                   | Trees - Clearing and Grubbing |        |        |         |          |          |          |          |          |          |          |          |          |      |                             |                            |                 | 1.200                  |                                      |                   |

Note 1:Clear and grub willow trees in the ditch bottom

|  |         |             |                        |  |                |                        |              |       |  |
|--|---------|-------------|------------------------|--|----------------|------------------------|--------------|-------|--|
| <div>110_12<br/>1/13/23</div> <div>POLLUTION PREVENTION PLAN</div> <div><p>This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).</p><p>This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.</p><p>All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.</p><p>I. ROLES AND RESPONSIBILITES</p><p>A. Designer:</p><ol style="list-style-type: none"><li>Prepares Base PPP included in the project plan.</li><li>Prepares Notice of Intent (NOI) submitted to Iowa DNR.</li><li>Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.</li></ol><p>B. Contractor:</p><ol style="list-style-type: none"><li>Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.</li><li>Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.</li><li>Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.</li><li>Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).</li><li>Supervises and implements good housekeeping practices according to Paragraph III, C, 2.</li><li>Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.</li><li>Complies with training and certification requirements of Section 2602 of the Standard Specifications.</li><li>Submits amended PPP site map according to Section 2602 of the Standard Specifications.</li></ol><p>C. Subcontractors:</p><ol style="list-style-type: none"><li>Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or perorming work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.</li><li>Implement good housekeeping practices according to Paragraph III, C, 2.</li></ol><p>D. RCE/Project Engineer:</p><ol style="list-style-type: none"><li>Is Project Storm Water Manager.</li><li>On projects where DOT is the Contracting Authority, is current with erosion control training or certification.</li><li>Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.</li><li>Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.</li><li>Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.</li><li>Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.</li><li>Is familiar with the Project PPP and storm water site map.</li><li>On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.</li><li>Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.</li><li>Is signature authority on Notice of Discontinuation.</li><li>Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).</li><li>Makes information to determine permit compliance available to the DNR upon their request.</li></ol></div> |         |             |                        | <div>110_12<br/>1/13/23</div> <div>POLLUTION PREVENTION PLAN</div> <div><p>E. Inspector:</p><ol style="list-style-type: none"><li>Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.</li><li>Makes information to determine permit compliance available to the DNR upon their request.</li><li>Conducts joint required inspections of the site with the contractor/subcontractor.</li><li>Completes an inspection report after each inspection.</li><li>Is signature authority on storm water inspection reports.</li></ol><p>II. PROJECT SITE DESCRIPTION</p><p>A. This Pollution Prevention Plan (PPP) is for Final Erosion Control in Des Moines County.</p><p>B. This PPP covers approximately 465.0 acres with an estimated 445.0 acres being disturbed. The portion of the PPP covered by this contract has 140 acres disturbed.</p><p>C. The PPP is located in an area of Otley - Ladoga soil association.</p><p>The estimated weighted average runoff coefficient number for this PPP after completion will be 0.40.</p><p>D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets.</p><p>E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.</p><p>F. Runoff from this work will flow into Waterways and ditches to the Mississippi River</p><p>III. CONTROLS</p><p>A. The Contractor’s ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.</p><p>B. Preserve vegetation in areas not needed for construction.</p><p>C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.</p><p>1. EROSION AND SEDIMENT CONTROLS</p><p>a. Stabilization Practices</p><ol style="list-style-type: none"><li>Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.</li><li>Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:<ol style="list-style-type: none"><li>Permanently ceased on any portion of the site, or</li><li>Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.</li></ol></li><li>Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.</li><li>Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets.</li><li>Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.</li><li>Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications.</li></ol><p>b. Structural Practices</p><ol style="list-style-type: none"><li>Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.</li><li>Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets.</li></ol></div> |                |                        |              |       |  |
| FILE NO.   | ENGLISH | DESIGN TEAM | Harris/Pohlen/McDonald | DES MOINES COUNTY  | PROJECT NUMBER | NHSN-061-2(109)--2R-29 | SHEET NUMBER | RC.13 |  |

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u@hanapehlen@iowadot.us

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

- During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:

1. Date of the inspection.
2. Summary of the scope of the inspection.
3. Name and qualifications of the personnel making the inspection.
5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
6. Major observations related to the implementation of the PPP.
7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

|          |         |             |                               |
|----------|---------|-------------|-------------------------------|
| FILE NO. | ENGLISH | DESIGN TEAM | <b>Harris/Pohlen/McDonald</b> |
|----------|---------|-------------|-------------------------------|

silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
- C. Fieldbook Entries - This contains the inspector's daily diary and bid item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority - Representative authorized to sign various storm water documents.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.






Nathan J. Pohlen  
Print Name




| RATE PER ACRE | TOTAL ACRES/ MIX<br>67.6 ACRES | TOTAL LBS. | GRASS SPECIES  |
|---------------|--------------------------------|------------|--|
|               | TOTAL LBS. PER MIX             |            |  |
| 3 lbs.        | 202.8                          | 202.8      | Big bluestem (Andropogon gerardii)                                   |
| 4 lbs.        | 270.4                          | 270.4      | Side-oats grama (Bouteloua curtipendula)                             |
| 1 lbs.        | 67.6                           | 67.6       | Blue grama (Bouteloua gracilis)                                      |
| 1 lbs.        | 67.6                           | 67.6       | Canada wildrye (Elymus canadensis)                                   |
| 1 lbs.        | 67.6                           | 67.6       | Virginia wildrye (Elymus virginicus)                                 |
| 4 lbs.        | 270.4                          | 270.4      | Little bluestem ( Schizachyrium scoparium)                           |
| 3 lbs.        | 202.8                          | 202.8      | Indiangrass (Sorghastrum nutans)                                     |
| 1 lbs.        | 67.6                           | 67.6       | Rough dropseed (Sporobolus compositus (Poir.) Merr. var. compositus) |
| 4 oz.         | 16.9                           | 16.9       | Prairie dropseed (Sporobolus heterolepis)                            |








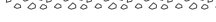
LISTING OF SEED MIXES  
PROVIDED FOR  
MIXING AND APPLICATION PURPOSES  
SEED FURNISHED BY THE CONTRACTING AUTHORITY  
RATES AND SPECIES SUBJECT TO CHANGE








| RATE PER ACRE | TOTAL ACRES/ MIX<br>67.6 ACRES | TOTAL LBS. | WILDFLOWERS SPECIES   |
|---------------|--------------------------------|------------|---|
|               | TOTAL LBS. PER MIX             |            |   |
| 1/4 oz.       | 1.1                            | 1.1        | Canada anemone (Anemone canadensis)                               |
| 1/2 oz.       | 2.1                            | 2.1        | Pale indian plantain (Arnoglossum atriplicifolium)                |
| 1/2 oz.       | 2.1                            | 2.1        | White Sage (Artemisia ludovicianap)                               |
| 1 oz.         | 4.2                            | 4.2        | Swamp Milkweed (Asclepias incarnata)                              |
| 1 oz.         | 4.2                            | 4.2        | Common Milkweed (Asclepias syriaca)                               |
| 2 oz.         | 8.5                            | 8.5        | Butterfly Milkweed (Asclepias tuberosa)                           |
| 2 oz.         | 8.5                            | 8.5        | Canadian milkvetch (Astragalus canadensis)                        |
| 1 oz.         | 4.2                            | 4.2        | White Wild Indigo (Baptisia alba (L.) Vent. var. macrophylla)     |
| 1/8 oz.       | 0.5                            | 0.5        | Blue Wild Indigo (Baptisia australis)                             |
| 1/4 oz.       | 1.1                            | 1.1        | False boneset (Kuhnia eupatorioide)                               |
| 8 oz.         | 33.8                           | 33.8       | Partridge pea (Chamaecrista fasciculata)                          |
| 2 oz.         | 8.5                            | 8.5        | Purple prairie clover (Dalea purpurea)                            |
| 2 oz.         | 8.5                            | 8.5        | Illinois bundle flower (Desmanthus illinoensis)                   |
| 1 oz.         | 4.2                            | 4.2        | Showy tick trefoil (Desmodium canadense)                          |
| 2 oz.         | 8.5                            | 8.5        | Pale purple coneflower (Echinacea pallida)                        |
| 2 oz.         | 8.5                            | 8.5        | Rattlesnake master (Eryngium yuccifolium)                         |
| 1/4 oz.       | 1.1                            | 1.1        | Tall boneset (Eupatorium altissimum)                              |
| 1/2 oz.       | 2.1                            | 2.1        | Sneezeweed (Helenium autumnale)                                   |
| 1/2 oz.       | 2.1                            | 2.1        | Prairie sunflower (Helianthus pauciflorus)                        |
| 1 oz.         | 4.2                            | 4.2        | Oxeye / False-sunflower (Heliopsis helianthoides)                 |
| 1/8 oz.       | 0.5                            | 0.5        | Rough blazing-star (Liatris aspera)                               |
| 1/2 oz.       | 2.1                            | 2.1        | Prairie blazing star (Liatris pycnostachya)                       |
| 1/2 oz.       | 2.1                            | 2.1        | Wild bergamot (Monarda fistulosa)                                 |
| 1/2 oz.       | 2.1                            | 2.1        | Stiff goldenrod (Oligoneuron rigidum)                             |
| 1 oz.         | 4.2                            | 4.2        | Foxglove beardtongue (Penstemon digitalis)                        |
| 1 oz.         | 4.2                            | 4.2        | Large-flowered beardtongue (Penstemon grandiflorus)               |
| 1/4 oz.       | 1.1                            | 1.1        | Prairie cinquefoil (Potentilla arguta)                            |
| 1/4 oz.       | 1.1                            | 1.1        | Mountain mint / Virginia mountain mint (Pycnanthemum virginianum) |
| 2 oz.         | 8.5                            | 8.5        | Gray-headed coneflower (Ratibida pinnata)                         |
| 3 oz.         | 12.7                           | 12.7       | Black-eyed susan (Rudbeckia hirta)                                |
| 1 oz.         | 4.2                            | 4.2        | Sweet Coneflower (Rudbeckia subtomentosa)                         |
| 2 oz.         | 8.5                            | 8.5        | Compass plant (Silphium laciniatum)                               |
| 1/2 oz.       | 2.1                            | 2.1        | Showy goldenrod (Solidago speciosa)                               |
| 1 oz.         | 4.2                            | 4.2        | Smooth blue aster (Symphyotrichum laevis)                         |
| 1/2 oz.       | 2.1                            | 2.1        | New England aster (Symphyotrichum novae-angliae)                  |
| 1/2 oz.       | 2.1                            | 2.1        | Prairie spiderwort (Tradescantia bracteata)                       |
| 1/2 oz.       | 2.1                            | 2.1        | Ohio spiderwort (Tradescantia ohioensis)                          |
| 1/2 oz.       | 2.1                            | 2.1        | Blue vervain (Verbena hastata)                                    |
| 1/2 oz.       | 2.1                            | 2.1        | Ironweed (Vernonia fasciculata)                                   |
| 1/8 oz.       | 0.5                            | 0.5        | Culver's root (Veronicastrum virginicum)                          |
| 3 oz.         | 12.7                           | 12.7       | Golden Alexander (Zizia aurea)                                    |










| LINE STYLE LEGEND OF LANDSCAPE SHEETS |                              |
|---------------------------------------|------------------------------|
| LINESTYLE                             | Design Element               |
| -----                                 | Living Snow Fence Single Row |
| -----                                 | Living Snow Fence Double Row |
| -----                                 | Mechanical Edge              |

















| CELL LEGEND OF LANDSCAPE SHEETS   |                          |                |
|---|--------------------------|----------------|
| CELL  | Design Element           | Plant Diameter |
|  | Clearing                 |                |
|  | Proposed Shrub           | 6 FT           |
|  | Proposed Understory Tree | 12 FT          |
|  | Proposed Conifer Tree    | 18 FT          |
|  | Proposed Overstory Tree  | 30 FT          |

| PATTERN LEGEND OF LANDSCAPE SHEETS   |                     |
|--|---------------------|
|   | Brush Clearing      |
|  | Clearing & Grubbing |
|   | Spray Area          |

| LINE STYLE LEGEND OF EROSION CONTROL SHEETS   |   |
|---|---|
| LINESTYLE   | Design Element                                    |
|  | Silt Fence  |
|  | Perimeter and Slope Sediment Control Device (9")  |
|  | Perimeter and Slope Sediment Control Device (12") |
|  | Perimeter and Slope Sediment Control Device (20") |
|  | Open-Throat Curb Intake Sediment Filter           |
|  | Concentrated Flow                                 |
|  | Rock Check and Rock Check Dam                     |
|  | Sheet Flow  |

| CELL LEGEND OF EROSION CONTROL SHEETS   |  |
|---|--|
| CELL  | Design Element   |
|  | Temporary Sediment Control basin                       |
|  | Erosion Control for Circular Intake or Manhole Well    |
|  | Erosion Control for Rectangular Intake or Manhole Well |
|  | Grate Intake Sediment Filter Bag                       |
|  | Silt Basin   |
|  | Silt Fence Tail  |
|  | Stormwater Drainage Basin Discharge Point              |

| PLAN VIEW COLOR LEGEND OF EROSION CONTROL SHEETS |                  |   |
|--|------------------|---|
| LINEWORK   | Design Color No. |   |
| Green  | (2)              |  Existing Topographic Features and Labels                            |
| Blue   | (1)              |  Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation |
| Magenta  | (5)              |  Existing Utilities  |
| Black  | (0)              |  Permanent Erosion Control Features                                  |
| Blaze Orange                                     | (222)            |  Temporary Erosion Control Features                                  |
| SHADING  | Design Color No. | Transparency  |
| Citron   | (234)            |  Mulching, All Types 50%   |
| Light Brown                                      | (238)            |  Special Ditch Control, Wood Excelsior Mat 0%                        |
| Grass Green                                      | (233)            |  8FT Mow Strip 50%   |
| Red  | (3)              |  Delineates Restricted Areas 0%                                      |

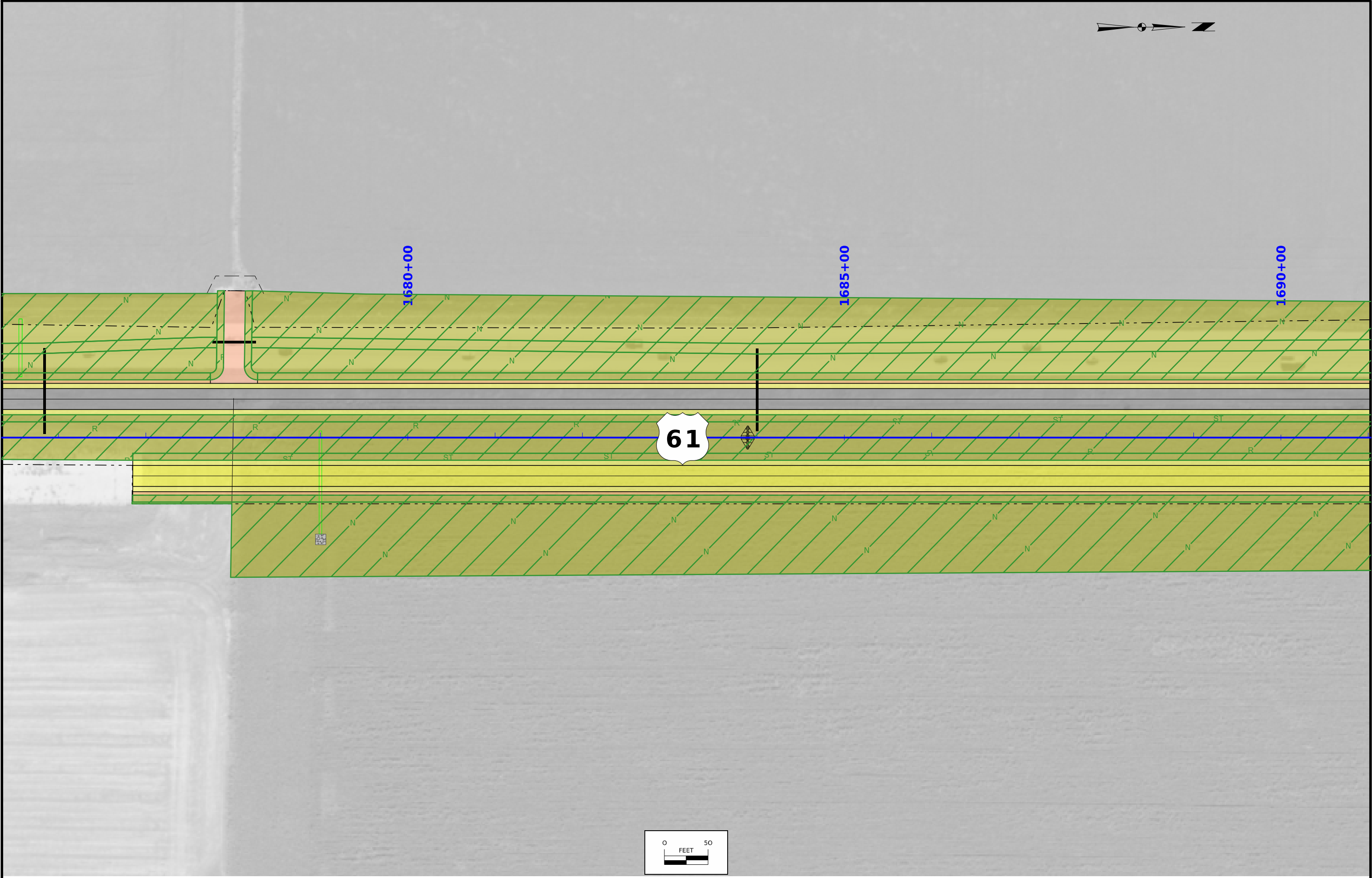
| PATTERN LEGEND OF EROSION CONTROL SHEETS  |                                      |
|---|--------------------------------------|
|    | Seeding and Fertilizing              |
|    | Seeding and Fertilizing (Rural)      |
|    | Seeding and Fertilizing (Urban)      |
|    | Native Grass Seeding                 |
|    | Salt Tolerant Seeding                |
|   | Wetland Grass Seeding                |
|  | Wildflower Seeding                   |
|  | Sodding                              |
|    | Turf Reinforcement Mat Type 1        |
|    | Turf Reinforcement Mat Type 2        |
|    | Turf Reinforcement Mat Type 3        |
|    | Turf Reinforcement Mat Type 4        |
|    | Slope Protection, Wood Excelsior Mat |
|   | Transition Mat                       |
|  | Rock Features, Permanent             |
|  | Rock Features, Temporary             |

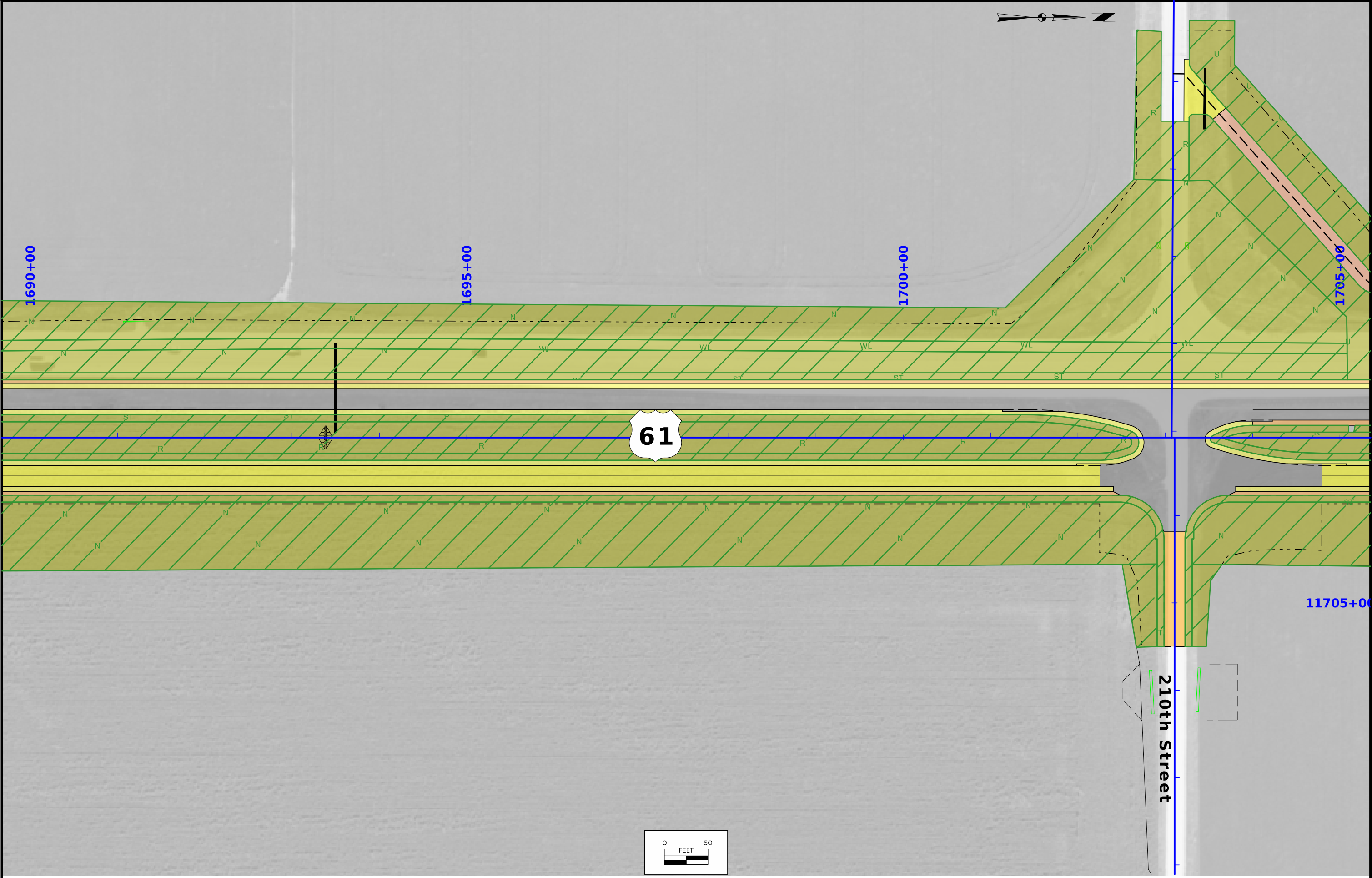
EROSION CONTROL  
LEGEND AND SYMBOL  
INFORMATION SHEET

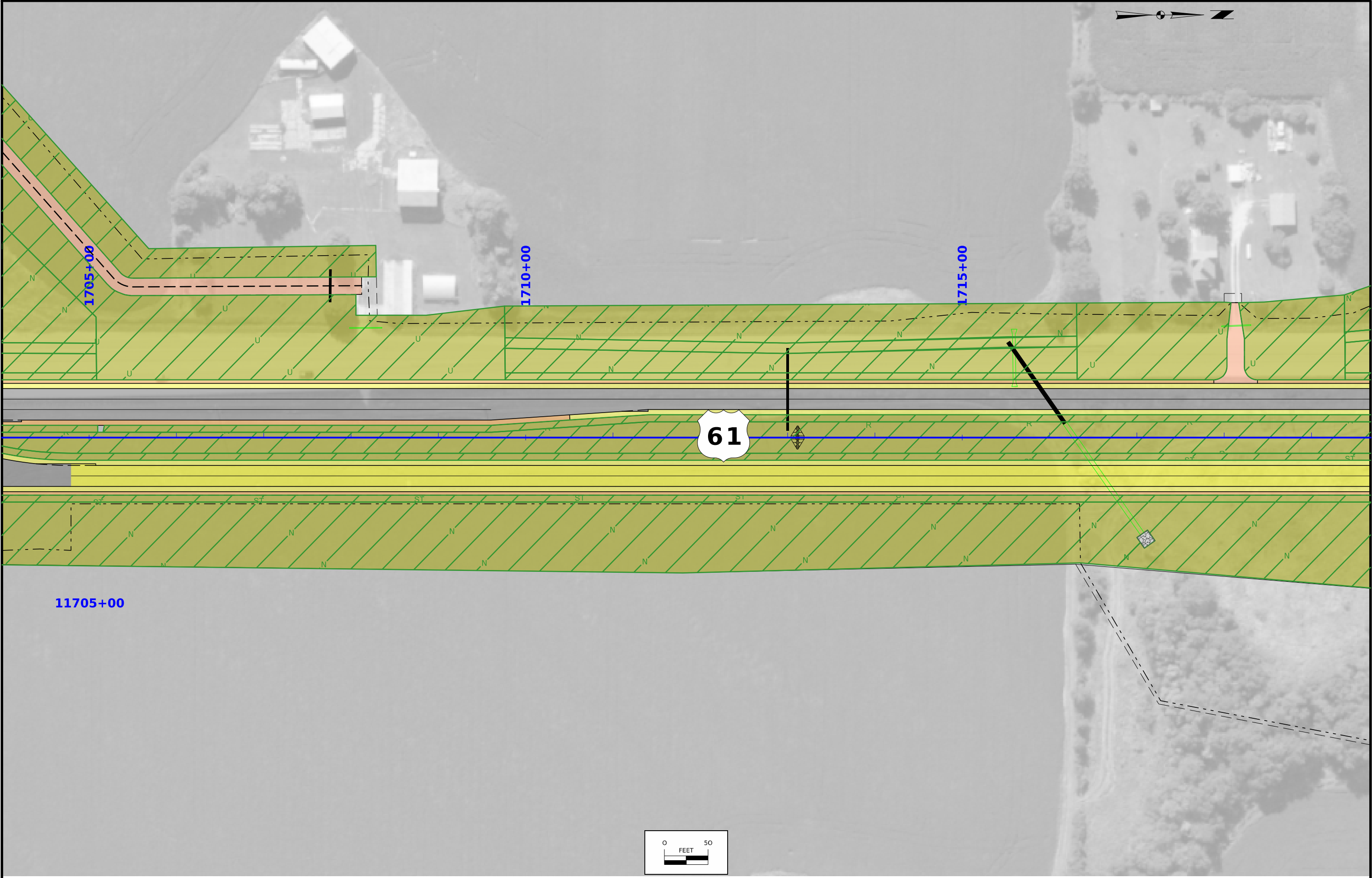
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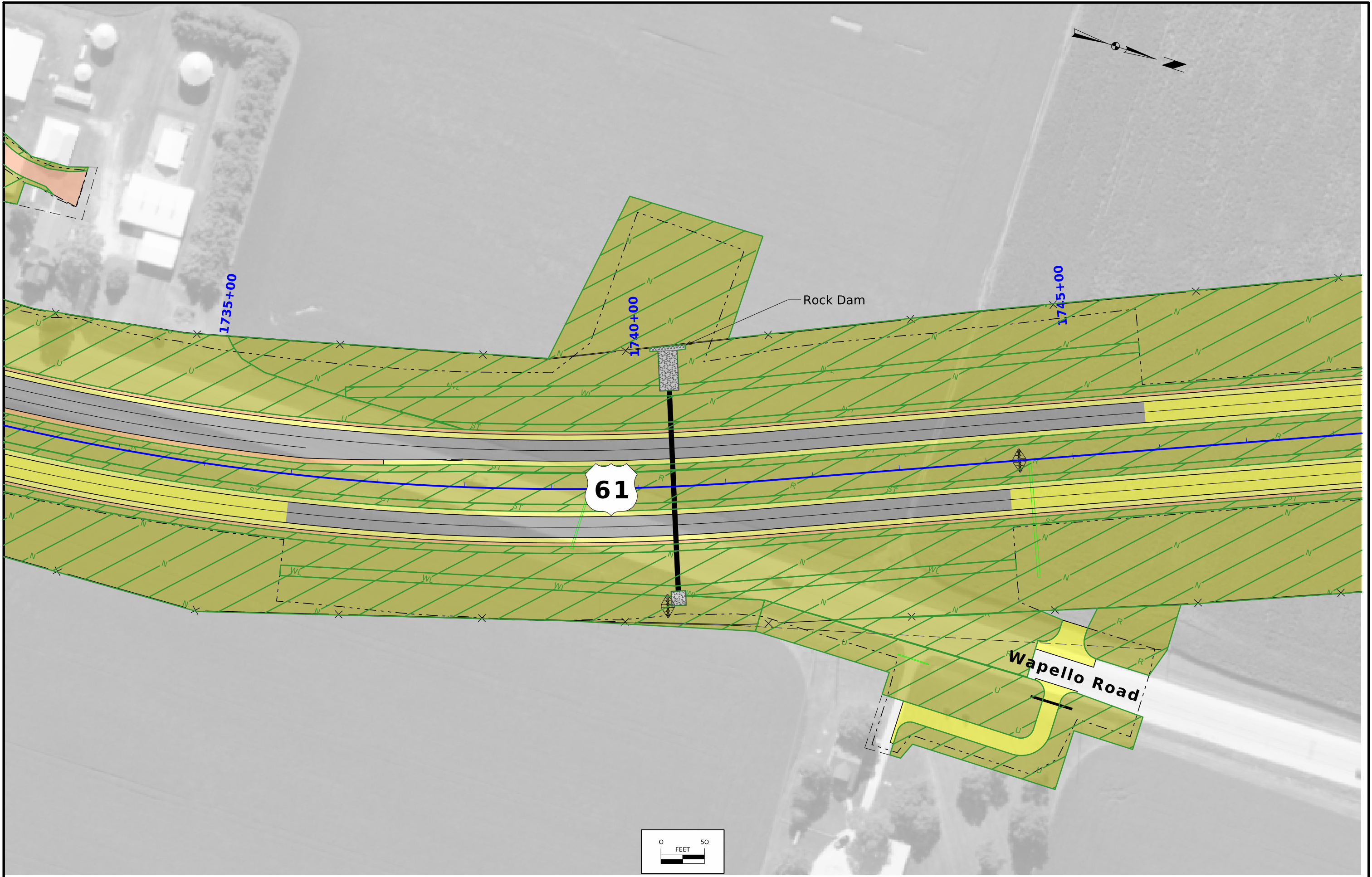






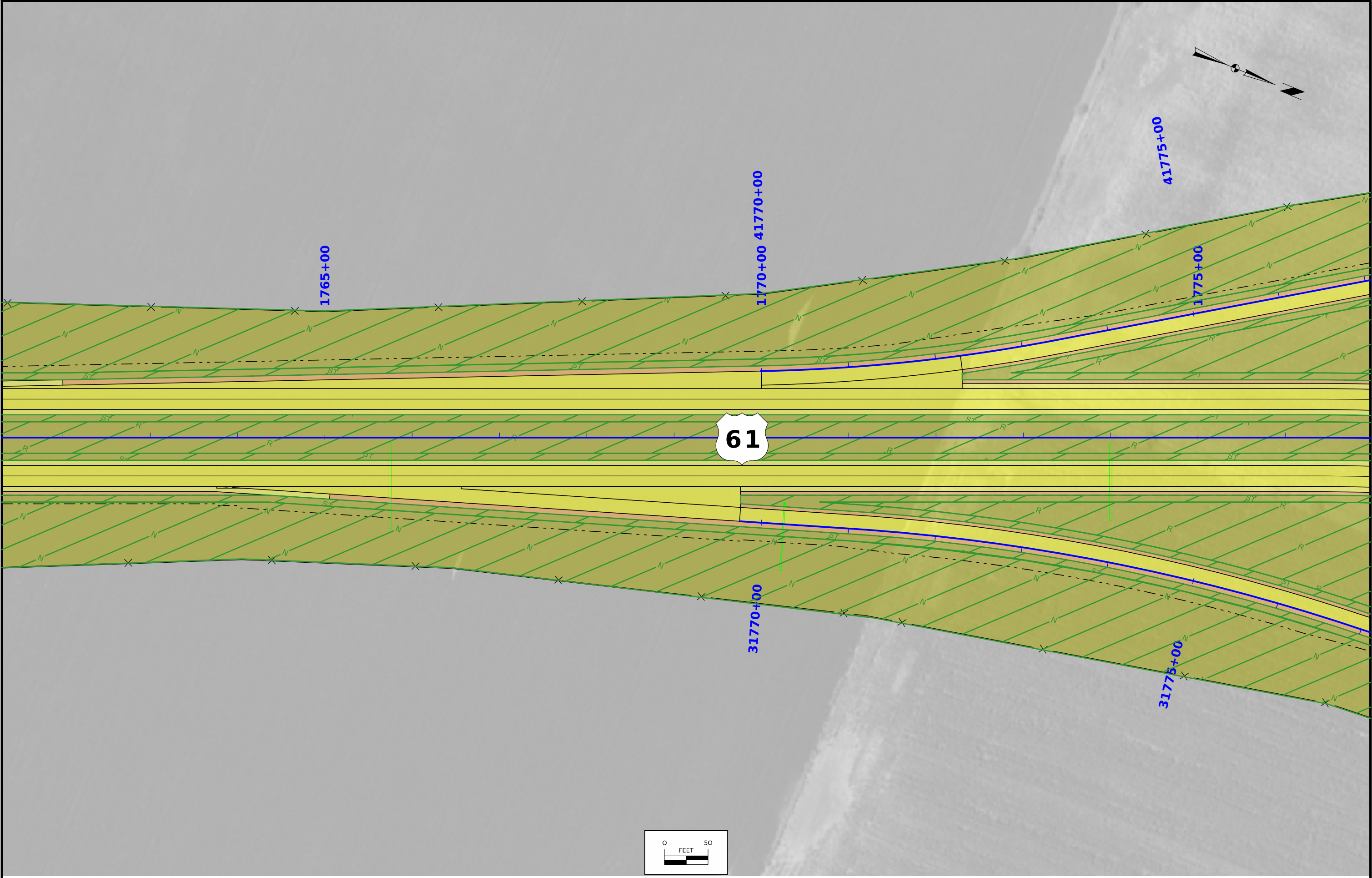




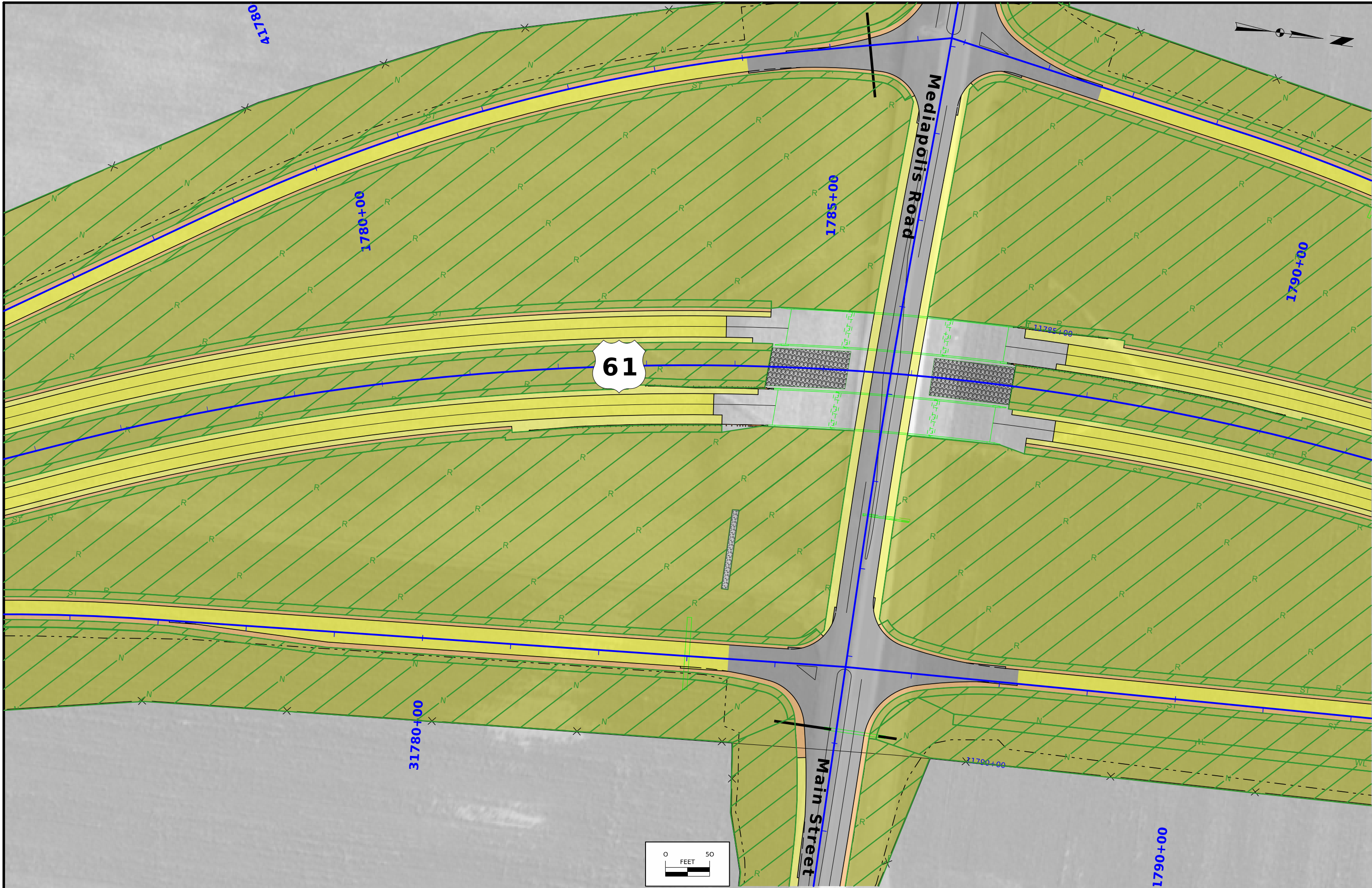






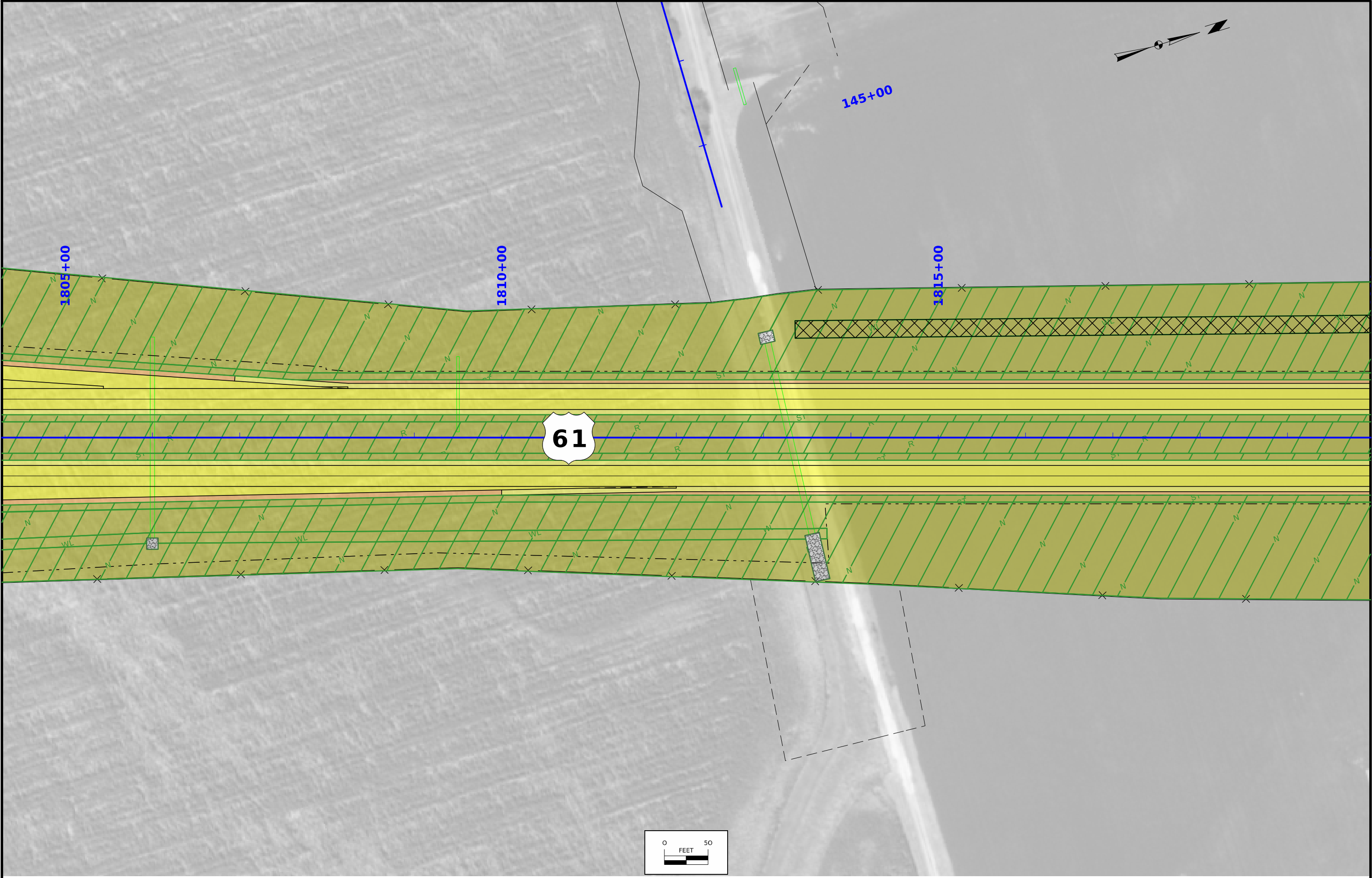




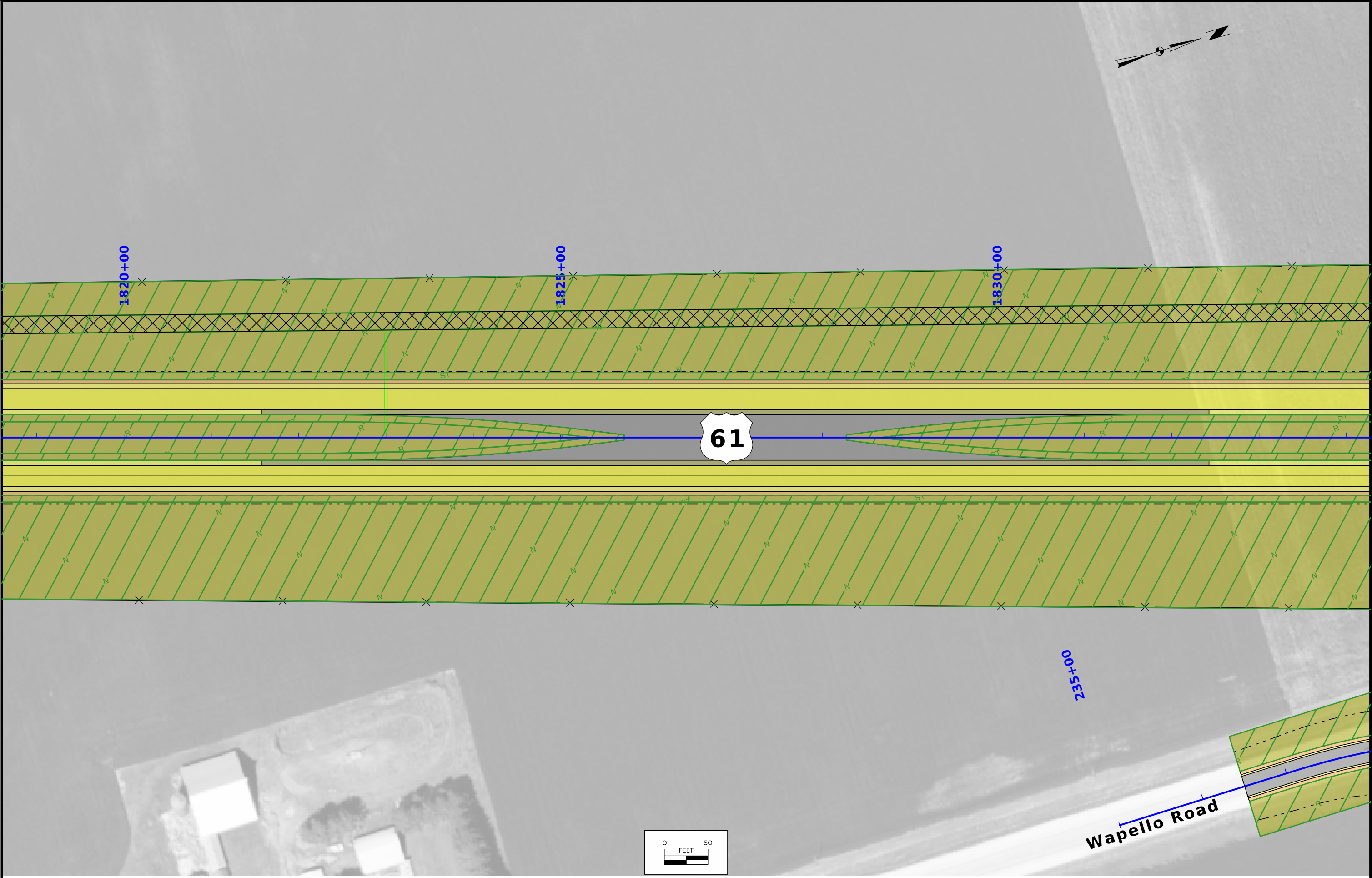












|                |         |                                    |                   |                                       |                    |
|----------------|---------|------------------------------------|-------------------|---------------------------------------|--------------------|
| FILE NO. 29225 | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Des Moines COUNTY | PROJECT NUMBER NHSN-061-2(109)--2R-29 | SHEET NUMBER RR.13 |
|----------------|---------|------------------------------------|-------------------|---------------------------------------|--------------------|

