APPENDICES

DATCP 4653

ANR Heartland Project

Brown, Racine, Sheboygan, Waukesha, and Winnebago Counties

**WISCONSIN DEPARTMENT OF AGRICULTURE,
TRADE AND CONSUMER PROTECTION**

PUBLISHED AUGUST 25, 2025

APPENDIX A: ADDITIONAL TABLES AND FIGURES

Table 1: List of Agricultural Landowners Contacted by the Department for the Pre-construction Questionnaire.

See the next page for attachment

Agricultural Landowner	Impacted Agricultural Land (acres)				
	Existing Easement	Permanent Easement	Temporary Easement	Fee-Simple	Total
ANTHONY SCHAUBLE	0.35	1.51	1.04	0.00	2.90
BRIAN A KLUGE	0.06	0.48	0.00	0.00	0.54
CALVIN J SCHWABENLENDER	0.12	1.23	0.61	0.00	1.96
CHRISTOPHER C TRAPP	0.14	1.44	0.77	0.00	2.35
DANIEL E MEIER	0.00	0.00	1.23	0.92	2.15
DANIEL KRAEMER	0.18	1.81	1.02	0.00	3.01
DARYL L LEHMAN	0.00	1.15	0.65	0.00	1.80
DAVID I FORD	1.41	1.79	1.98	0.00	5.18
DAVID L SHAVER	0.19	1.81	1.01	0.00	3.01
DIRK E DENZIN	0.04	0.67	0.66	0.00	1.37
DONALD V SCHNEIDER	0.19	1.94	1.03	0.00	3.16
GERALD RENTMEESTER	0.13	1.25	0.73	0.00	2.11
GERLACH TRUST	0.00	2.47	2.24	0.00	4.71
HEIDI M MEIER	0.00	0.00	0.90	0.02	0.92
HICKORY LAWN DAIRY FARM INC	0.69	6.19	3.20	0.00	10.08
JACOB D RENTMEESTER	0.26	1.74	0.23	0.00	2.23
JAMES A CURTES	0.61	2.81	1.67	0.00	5.09
JAMES J EFFERTZ	0.04	0.34	0.14	0.00	0.52
JOHN W SUKOWATY		0.02	0.12	0.00	0.14
JOLENE D GREMMINGER	0.02	0.10	0.01	0.00	0.13
KRYSTAL K SCHMIDT	0.11	1.07	0.49	0.00	1.67
KURT R MARQUARDT	0.32	1.49	1.14	0.00	2.95
LARDINOIS FARMS I INC	0.00	0.00	0.00	3.65	3.65
MICHAEL & JAMES CURTES	0.02	0.03	0.02	0.00	0.07
MICHAEL J WISTL	2.16	0.23	3.35	0.00	5.74
MICKEY B DOHERTY	0.07	0.64	0.27	0.00	0.98
NEUMANN TRUST	0.18	0.47	0.33	0.00	0.98
NICHOLAS W KLEIBER	0.12	1.19	0.60	0.00	1.91
P&Q EAST OF WINNEBAGO LLC	0.19	1.96	1.26	0.00	3.41
ROBERT K BLAIR	0.05	0.39	0.20	0.00	0.64
ROBERT W SCHULTZ	0.08	0.76	0.33	0.00	1.17
RONALD E BECKER LIVING TRUST OF 1997	0.20	1.73	1.05	0.00	2.98
SCHLADWEILER PROPERTIES LLC	0.31	0.02	11.05	0.00	11.38
SCHRAUFNAGEL IRREVOCABLE TRUST 08-29-2023	0.10	0.91	0.52	0.00	1.53
SHAWN THOMAS	0.14	0.56	0.35	0.00	1.05
TERRY A OREILLY	0.02	0.07	0.04	0.00	0.13
WAYNE J AND SUSAN L GERLACH LIVING TRUST DTD 3-8-2006	0.38	2.90	1.98	0.00	5.26
WILLIAM A & PATRICIA M LARDINOIS, ETAL	0.00	0.00	0.00	19.37	19.37
WILLIAM G O'REILLY	0.46	2.43	1.41	0.00	4.30
Project Totals	9.34	45.60	43.63	23.96	122.53

* **Fee-simple purchase**: to transfer full ownership of property, including the underlying title, to another party

Figure 1: ANR Heartland Project route in Brown, Racine, Sheboygan, Waukesha, and Winnebago Counties, WI, pg 1-26 (DATCP, 2025a).

See next page for attachment

Appendix C

Figure 2: Proposed Project Layout

0 100 200 Feet

- Mile Posts
- Pipe Centerline
- New Impervious Surface Pad
- Construction ROW
- Temporary Workspace (TWS)
- Additional TWS (ATWS)
- Staging Area (SA)
- Temporary Access Road (TAR)
- Construction Work Area (CWA)*
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Figure 2.
Proposed Project Layout
Heartland Project:
Segment PL-3
ANR Pipeline Company
Waukesha County, Wisconsin

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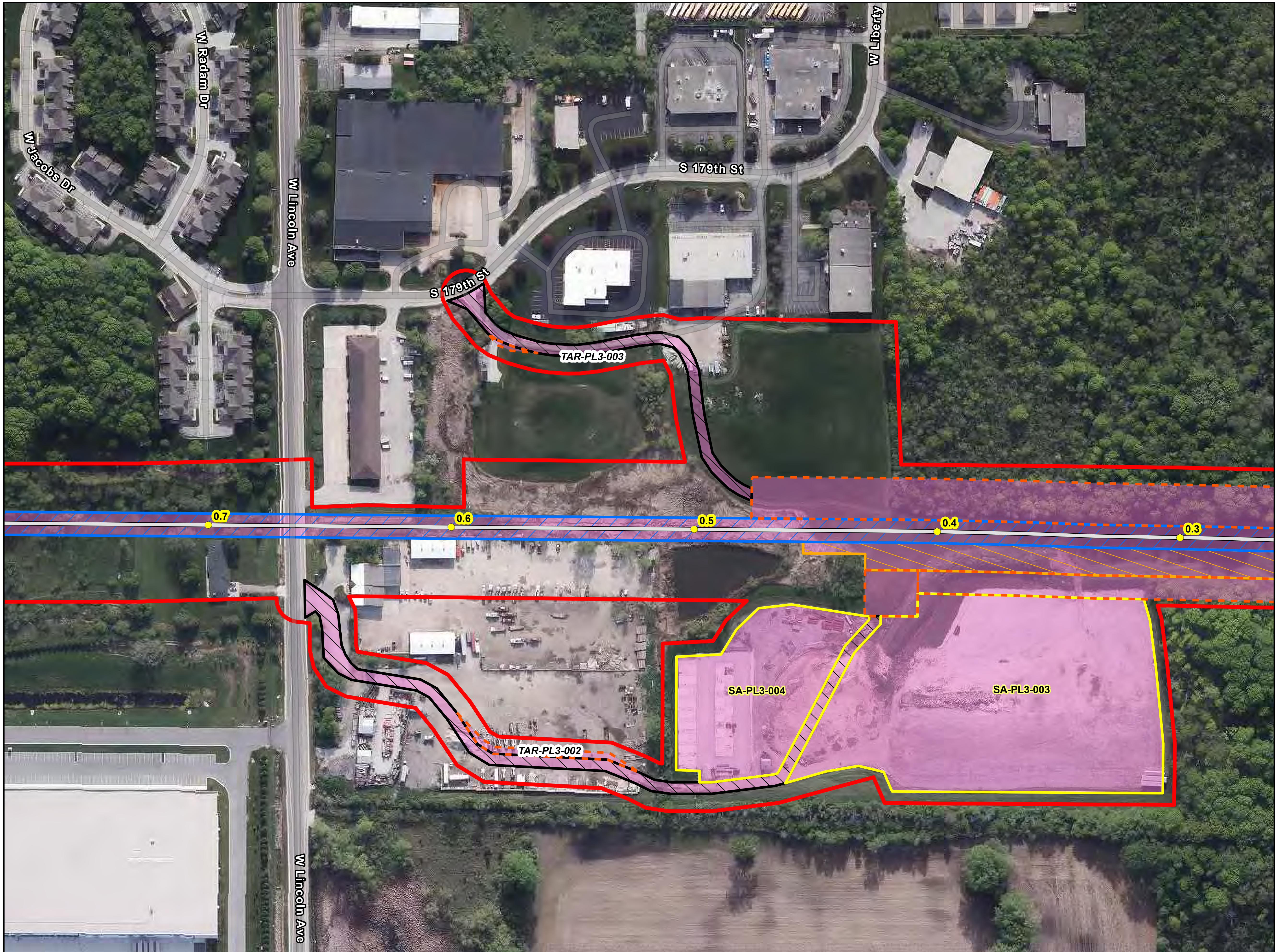
For Environmental Review Purposes Only

Source: [illegible] (10/10/2024)



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Proposed Project Layout
Heartland Project: Segment PL-3 ANR Pipeline Company Waukesha County, Wisconsin

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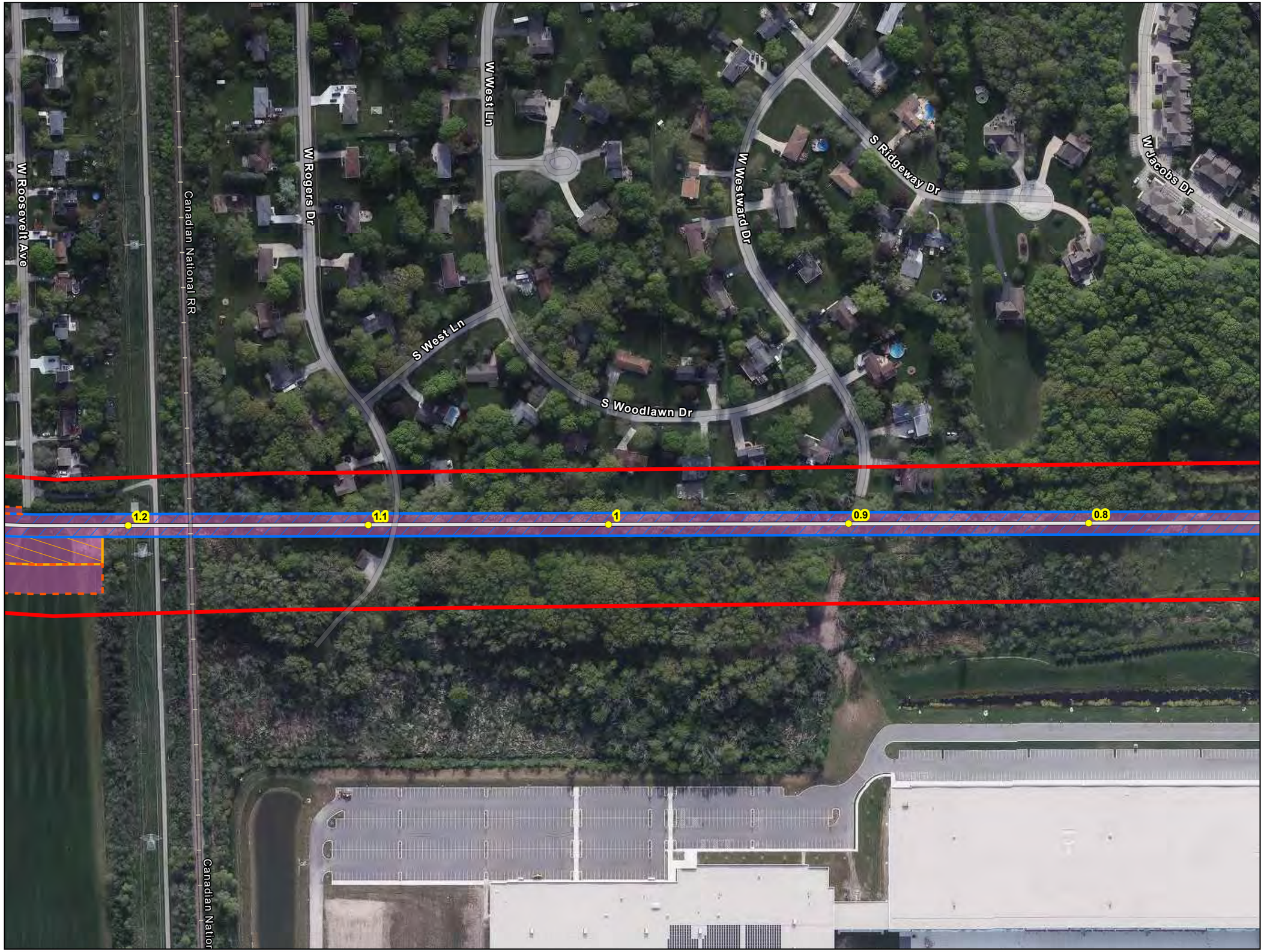

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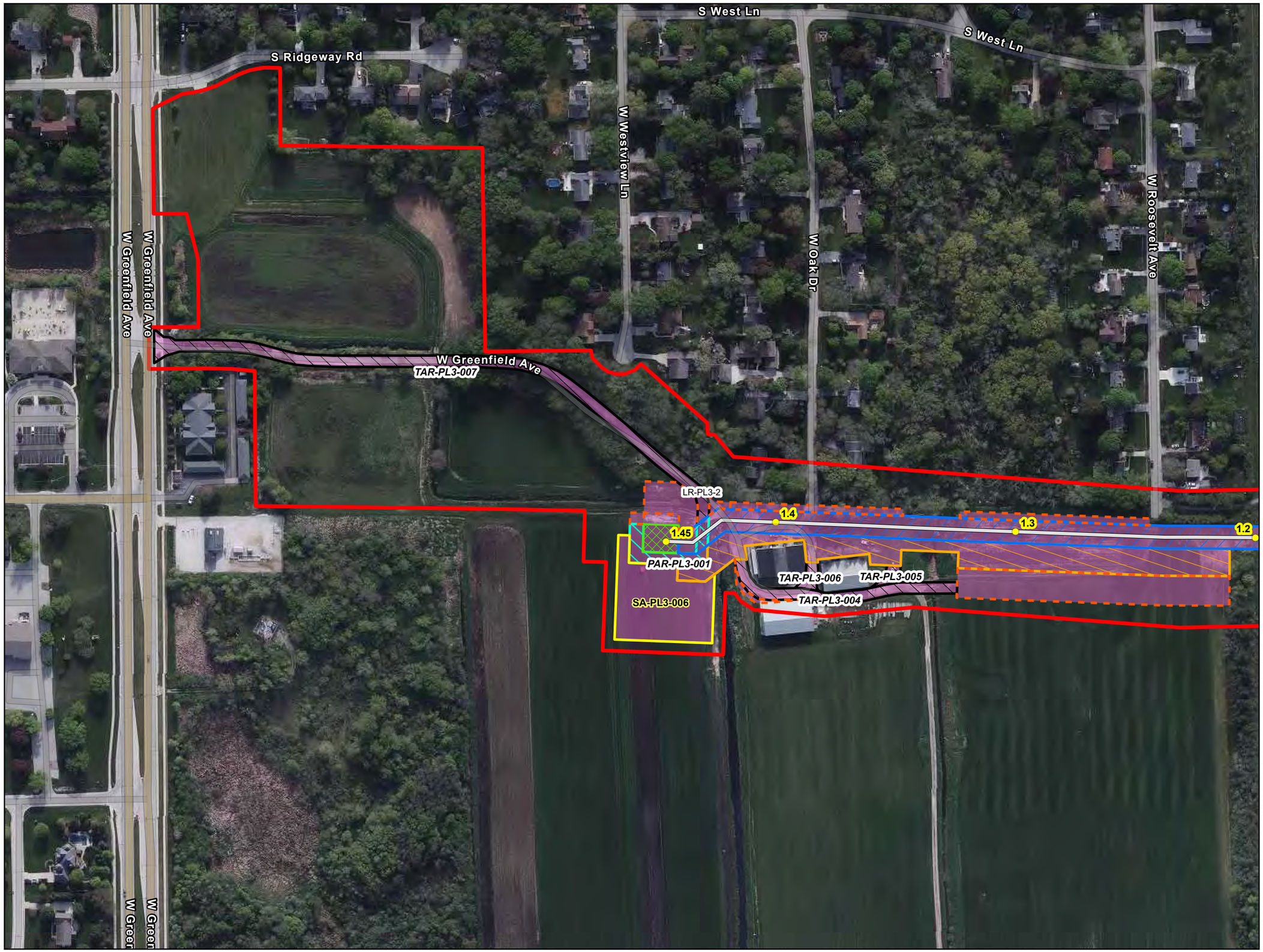

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N E S W

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ANR Pipeline Company
Waukesha County, Wisconsin

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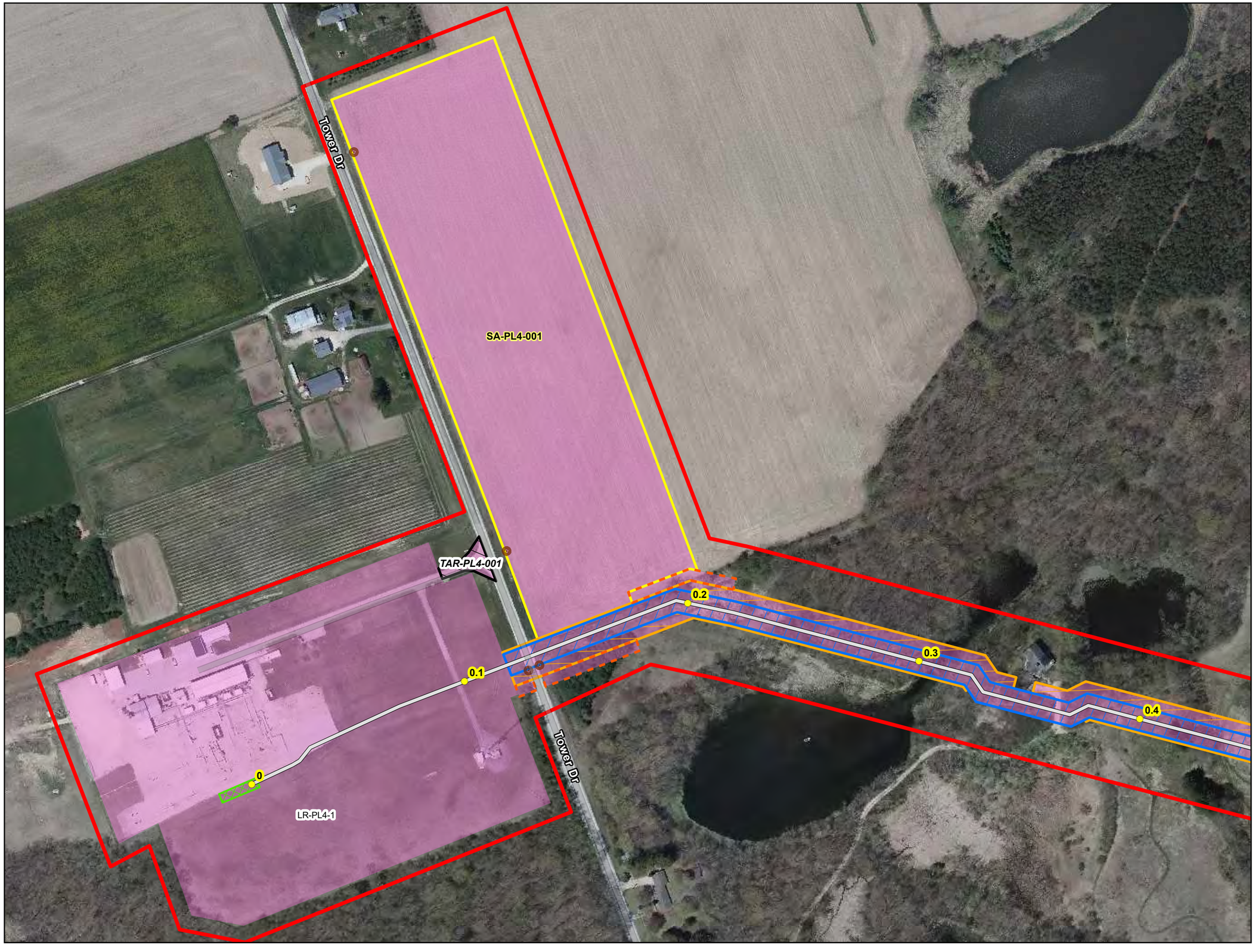

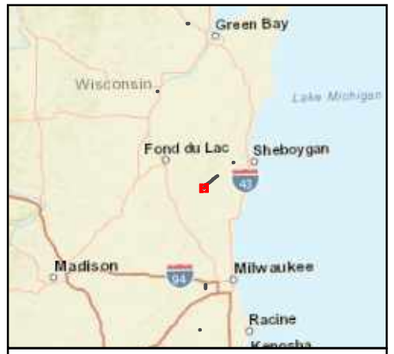

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Figure 2.
Proposed Project Layout
Heartland Project:
Segment PL-4
ANR Pipeline Company
Sheboygan County, Wisconsin

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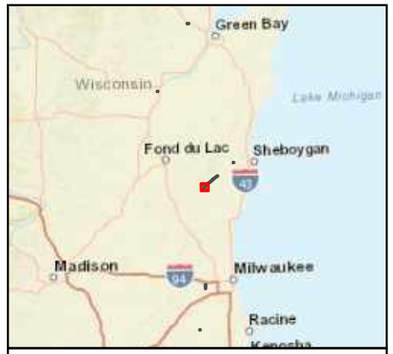

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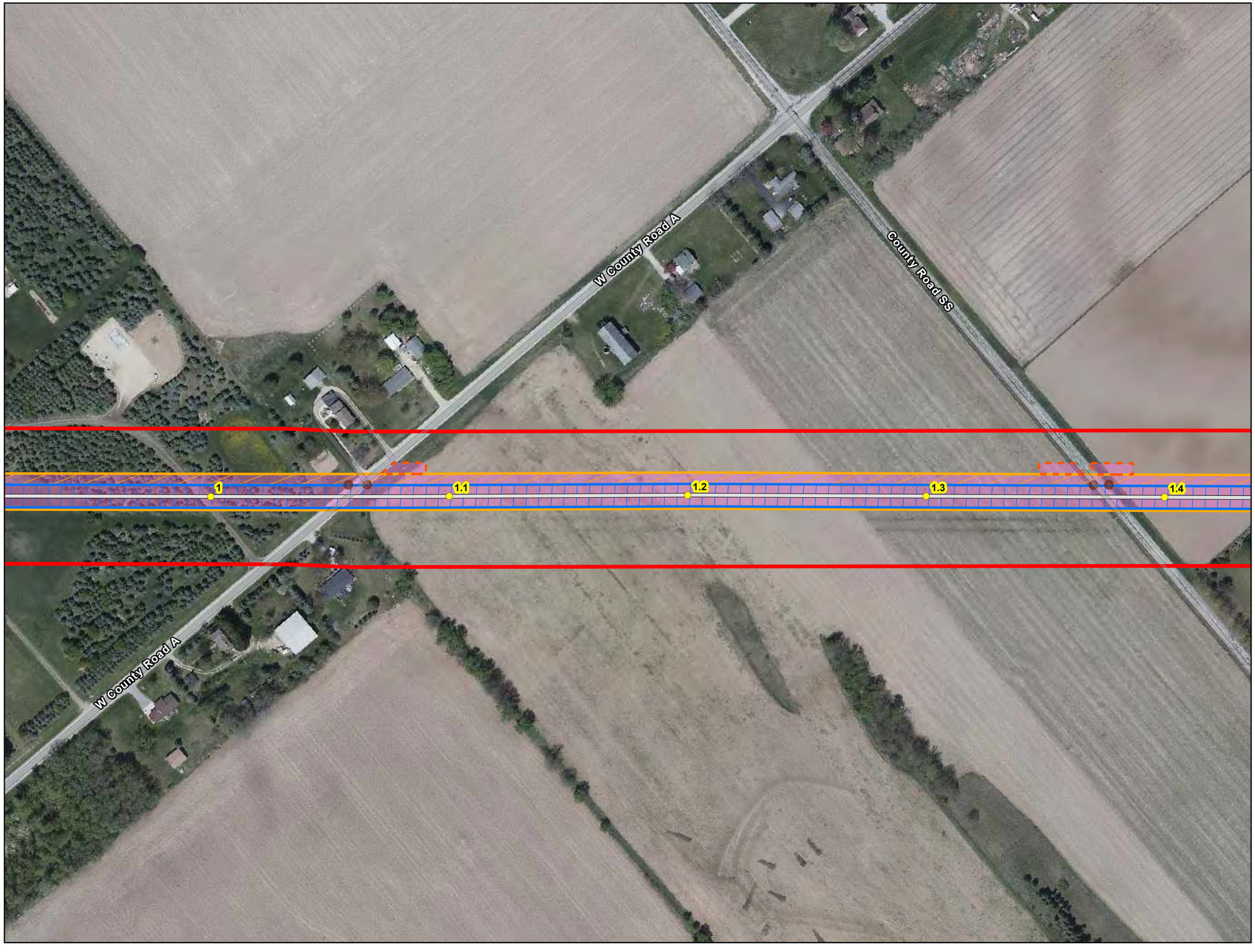

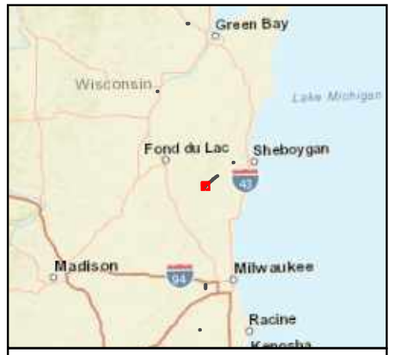

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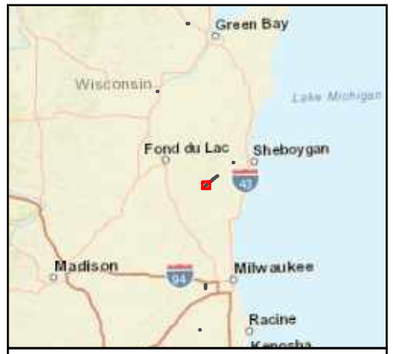

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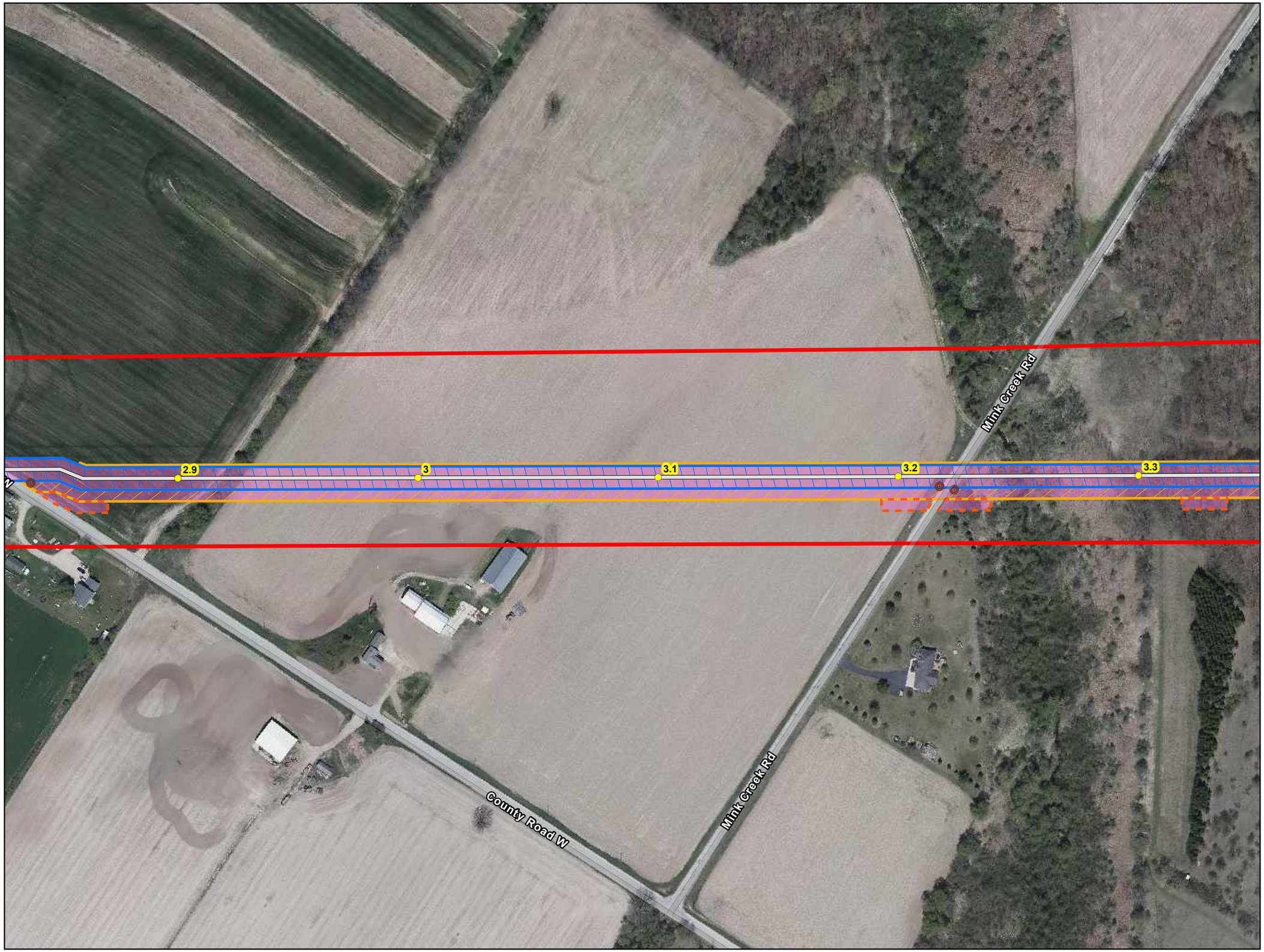

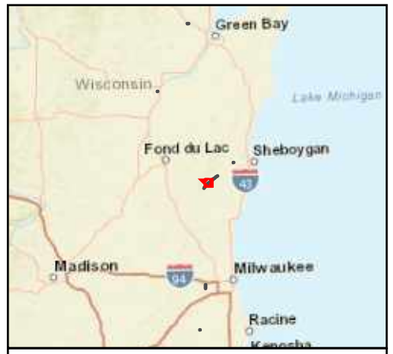

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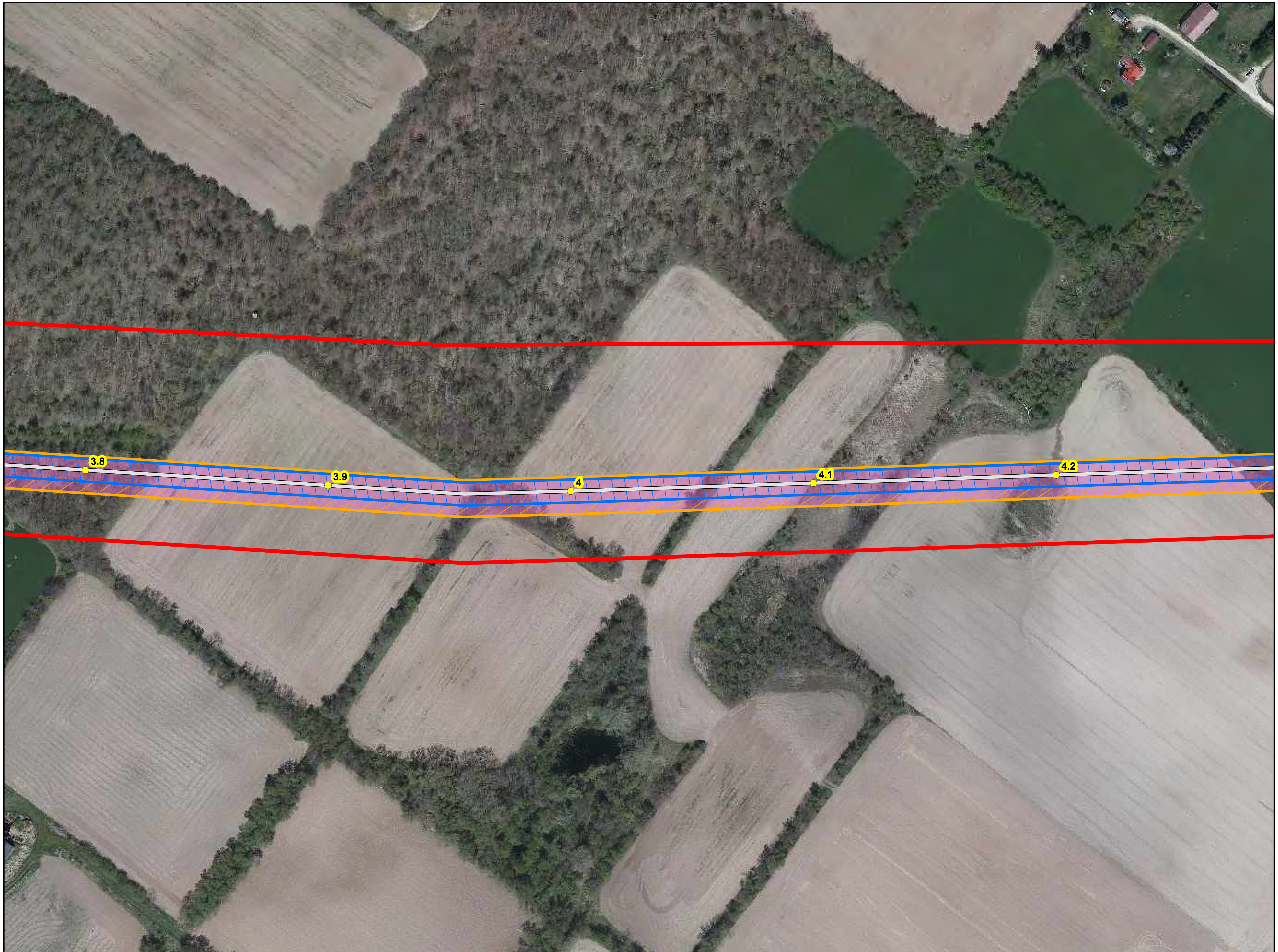

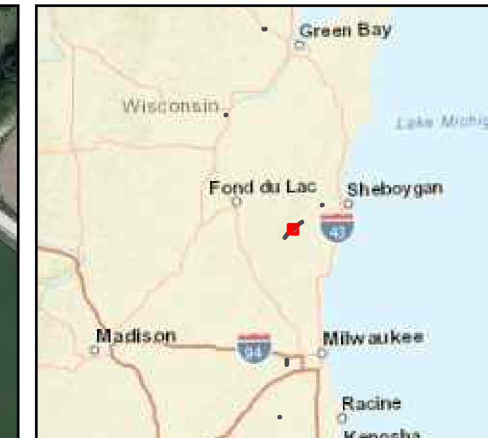

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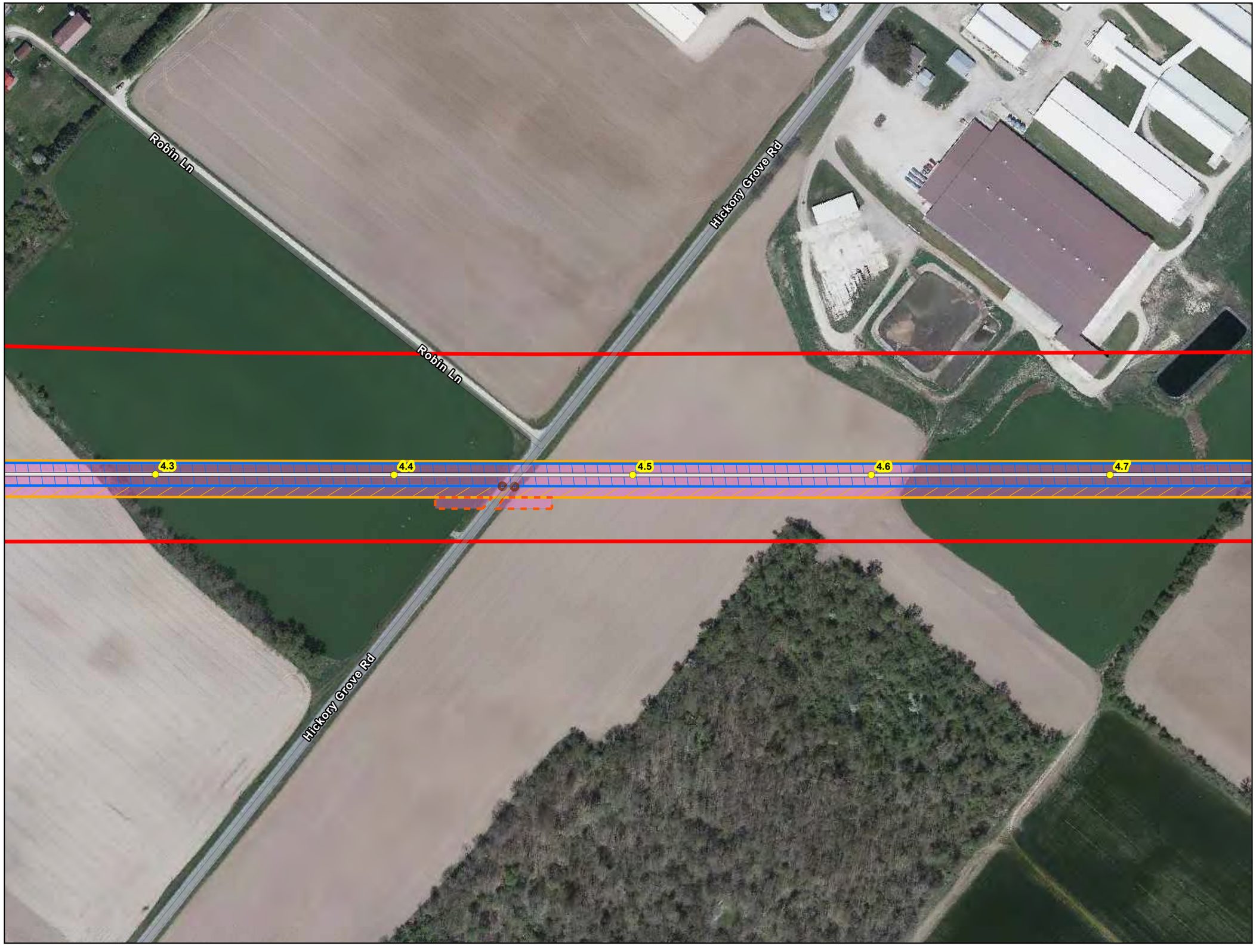

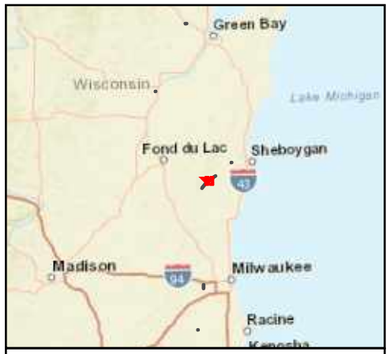

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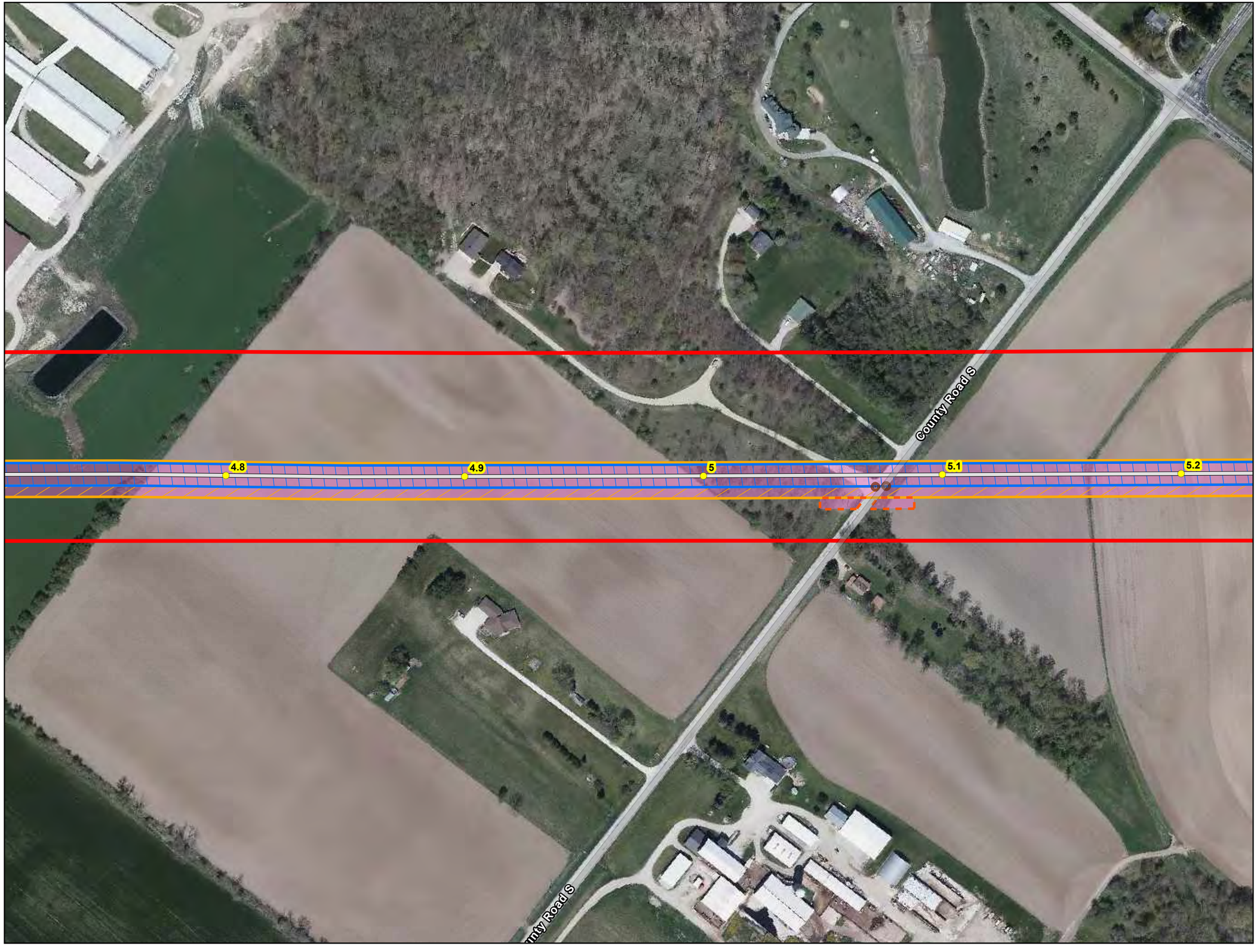

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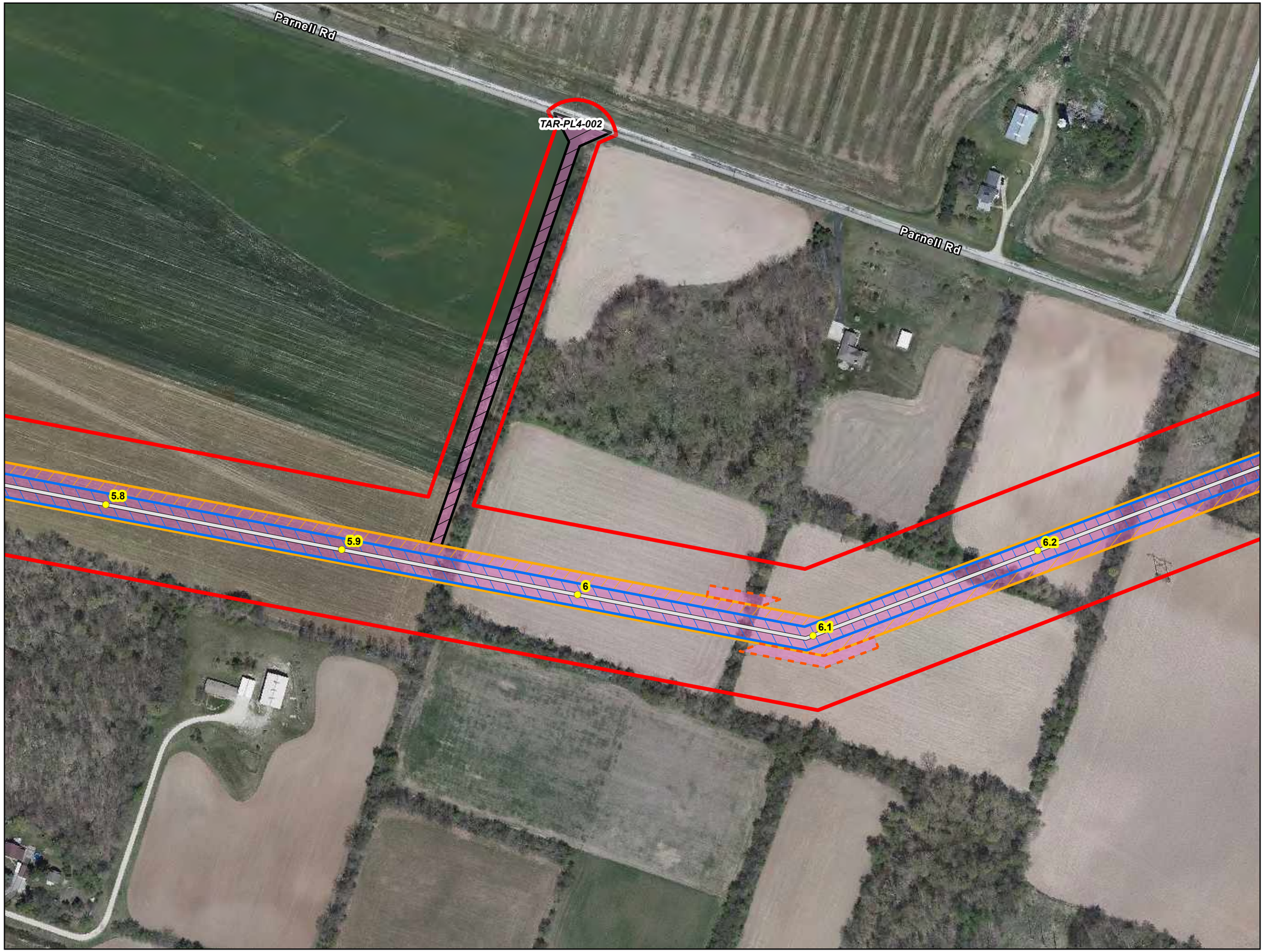

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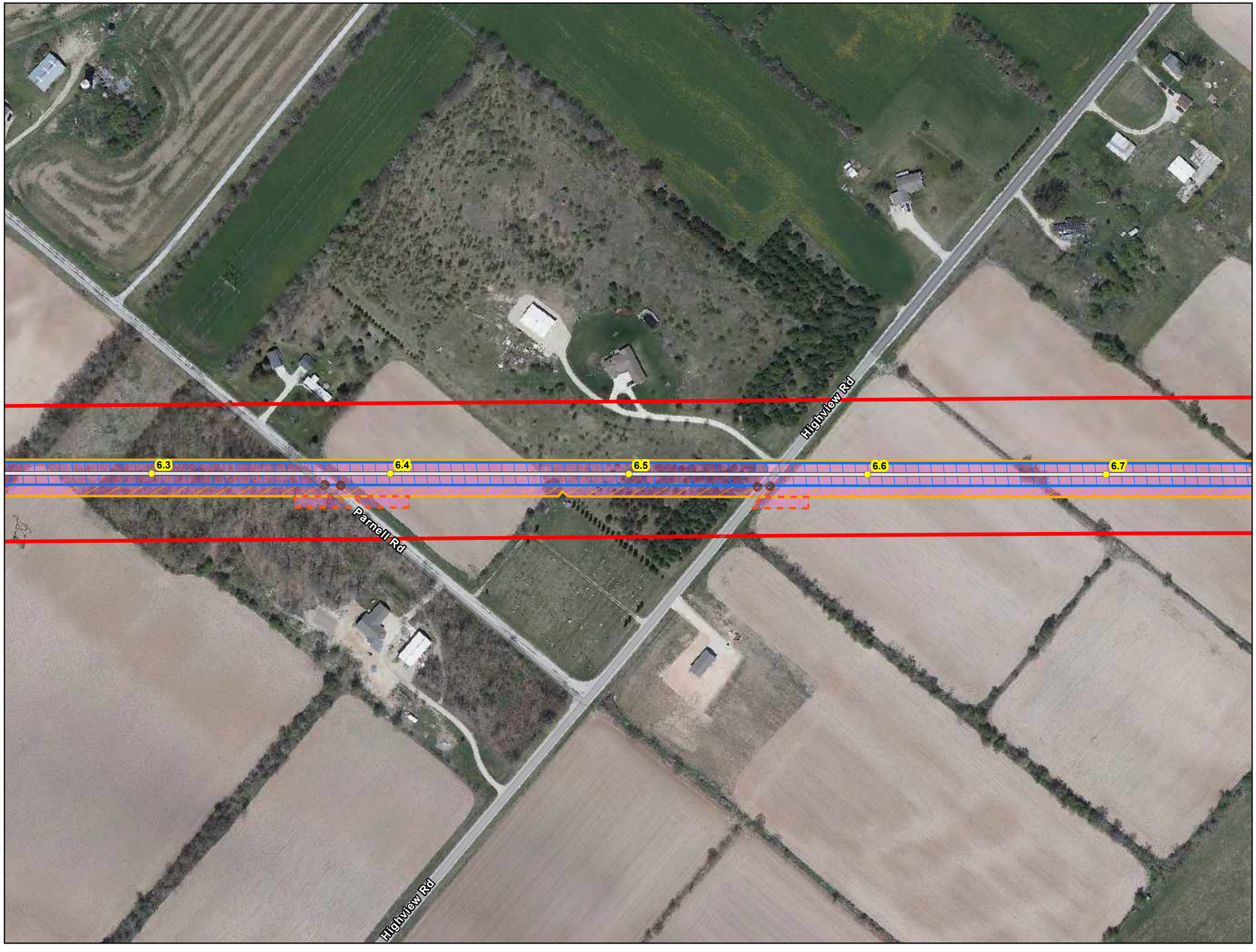

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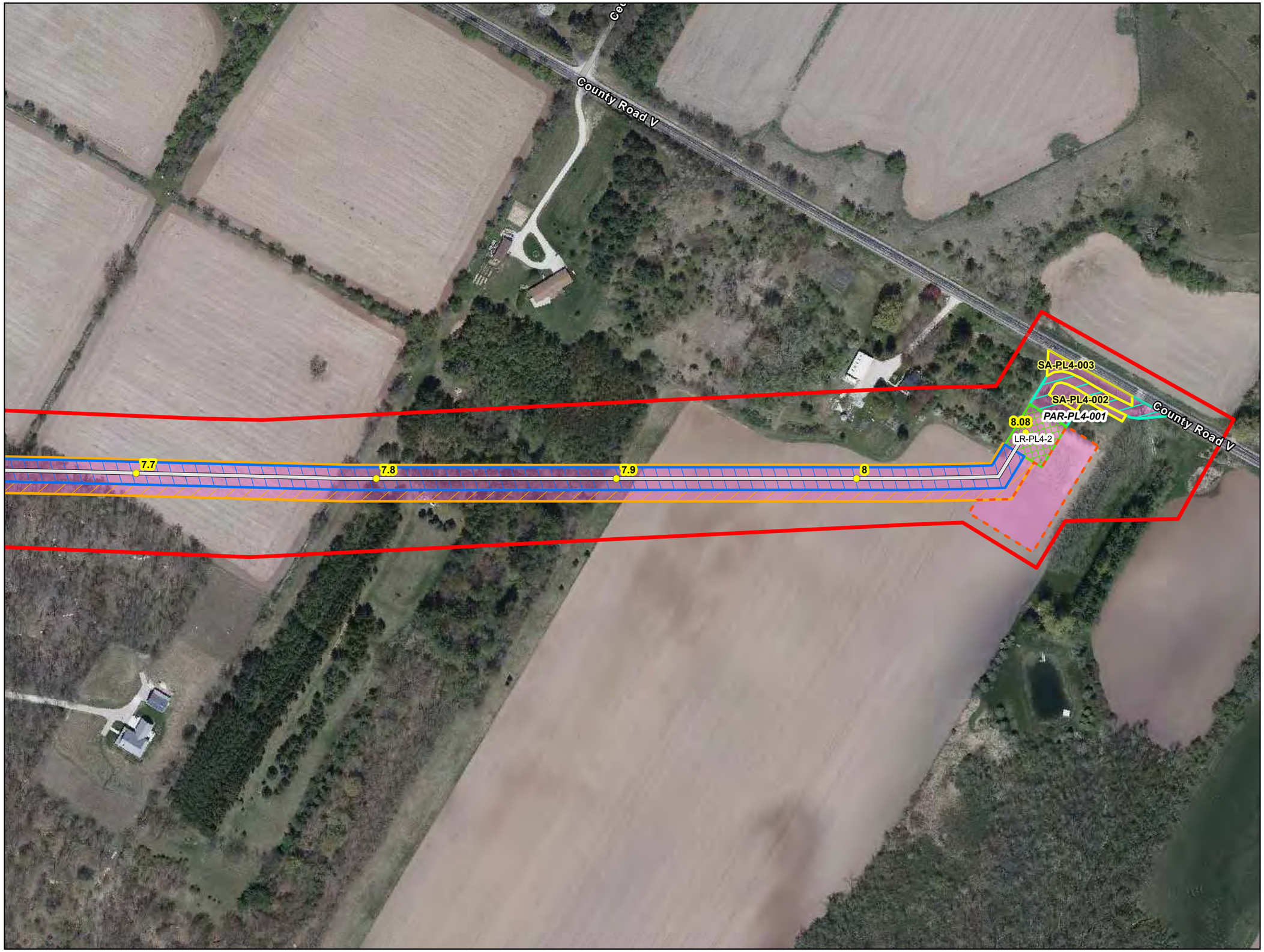

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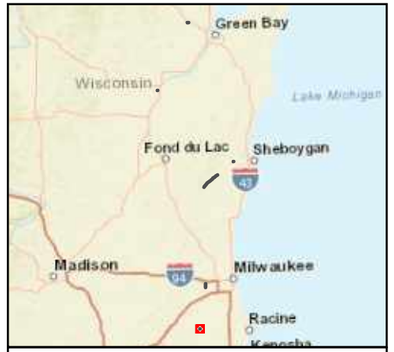

0 100 200 Feet

N W E S

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- Construction Work Area (CWA)*
- Environmental Review Corridor

*The CWA represents the limits of disturbance and is the summation of the Construction ROW, Temporary Workspace, Staging Areas, Temporary off-ROW Access Roads, Permanent Access Roads, Permanent Facility Pad, and RCE.

Figure 2.
Proposed Project Layout
Heartland Project:
Rochester MS
ANR Pipeline Company
Racine County, Wisconsin

Source: [illegible] (12/12/2024)

merjent

0 100 200 Feet

N
W E
S

- New Impervious Surface Pad
- Construction ROW
- Temporary Workspace (TWS)
- Construction Work Area (CWA)*
- Environmental Review Corridor

*The CWA represents the limits of disturbance and is the summation of the Construction ROW, Temporary Workspace, Staging Areas, Temporary off-ROW Access Roads, Permanent Access Roads, Permanent Facility Pad, and RCE.

Figure 2.
Proposed Project Layout
Heartland Project:
Sheboygan Falls MS
ANR Pipeline Company
Sheboygan County, Wisconsin

merjent

For Environmental Review Purposes Only

Source: [illegible] (10/10/2024)

0 100 200 Feet

N W E S

New Impervious Surface Pad

Construction ROW

Temporary Workspace (TWS)

Construction Work Area (CWA)*

Environmental Review Corridor

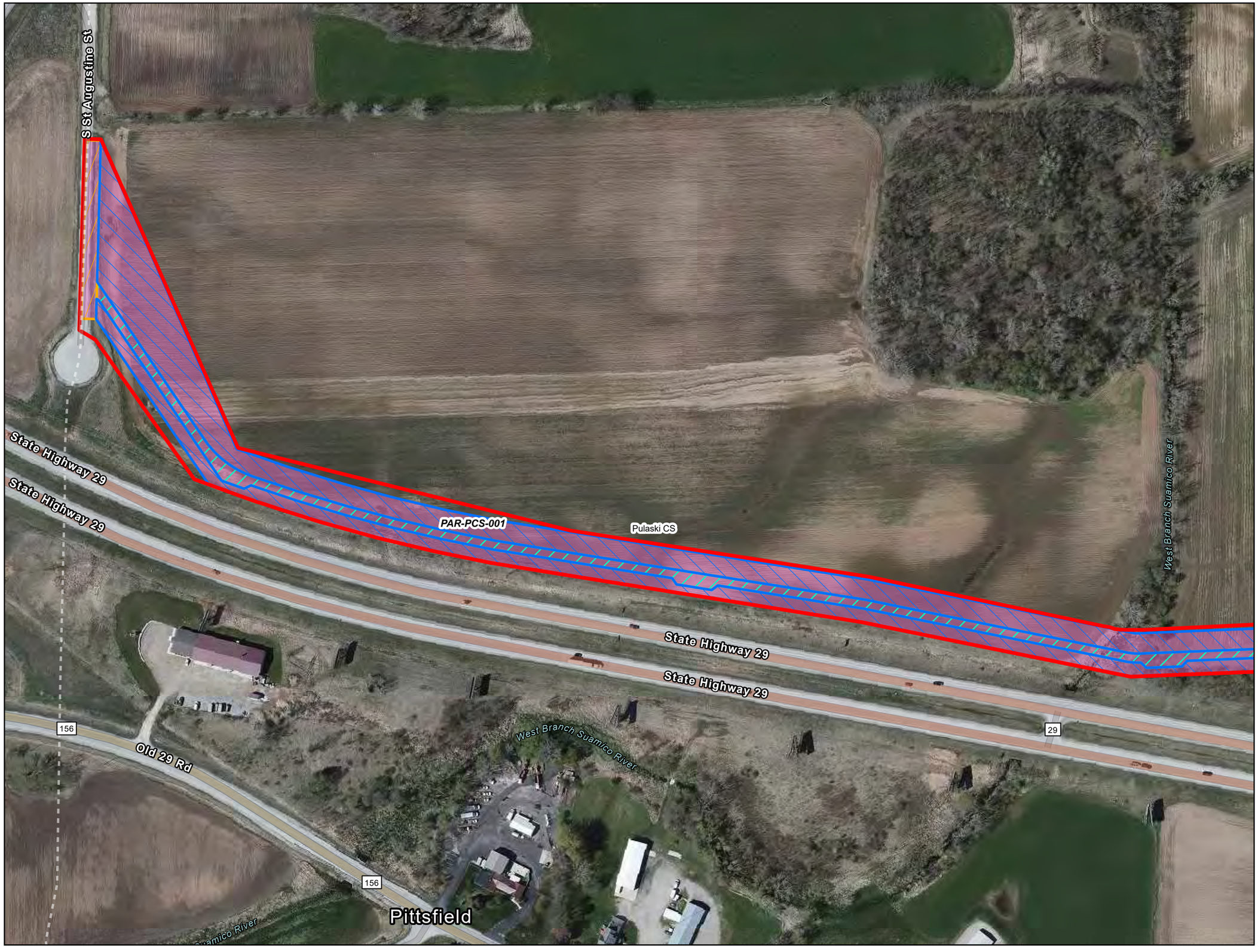
*The CWA represents the limits of disturbance and is the summation of the Construction ROW, Temporary Workspace, Staging Areas, Temporary off-ROW Access Roads, Permanent Access Roads, Permanent Facility Pad, and RCE.

Figure 2.
Proposed Project Layout
Heartland Project:
Menasha MS
ANR Pipeline Company
Winnebago County, Wisconsin

merjent

For Environmental Review Purposes Only

Source: , 12/12/2024



0 100 200 Feet

N W E S

- Construction ROW
- Temporary Workspace (TWS)
- Permanent Access Road (PAR)
- Construction Work Area (CWA)*
- Environmental Review Corridor

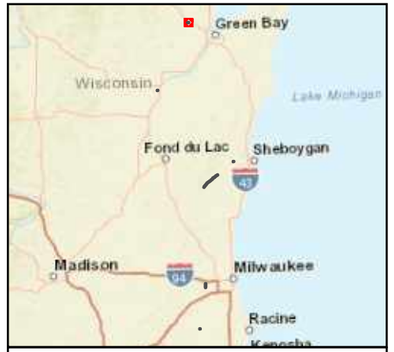
*The CWA represents the limits of disturbance and is the summation of the Construction ROW, Temporary Workspace, Staging Areas, Temporary off-ROW Access Roads, Permanent Access Roads, Permanent Facility Pad, and RCE.

Figure 2.
Proposed Project Layout
Heartland Project:
Pulaski CS
ANR Pipeline Company
Brown County, Wisconsin

merjent

For Environmental Review Purposes Only

Source: [illegible] (10/10/2024)



0 100 200 Feet

N W E S

- New Impervious Surface Pad
- Construction ROW
- Permanent Access Road (PAR)
- Construction Work Area (CWA)*
- Environmental Review Corridor

*The CWA represents the limits of disturbance and is the summation of the Construction ROW, Temporary Workspace, Staging Areas, Temporary off-ROW Access Roads, Permanent Access Roads, Permanent Facility Pad, and RCE.

Figure 2.
Proposed Project Layout
Heartland Project:
Pulaski CS
ANR Pipeline Company
Brown County, Wisconsin

merjent

For Environmental Review Purposes Only

Source: 10/10/2024

APPENDIX B: ANR HEARTLAND PROJECT AGRICULTURAL MITIGATION PLAN

ANR Heartland Project Agricultural Mitigation Plan (DATCP, 2025a).

See attachment on the next page

ANR Pipeline Company

Heartland Project

Wisconsin Agricultural Mitigation Plan

Prepared for the Wisconsin Department of Agriculture, Trade, and Consumer Protection

Prepared by:

May 2025

TABLE OF CONTENTS

Attachments

ACRONYMS AND ABBREVIATIONS

AEA	Agricultural Enterprise Area
ANR	ANR Pipeline Company
BMP	Best Management Practice
CS	Compressor Station
CWA	construction work area
DATCP	Department of Agriculture, Trade, and Consumer Protection
EI	Environmental Inspector
FPP	Farmland Preservation Program
Merjent	Merjent, Inc.
MFL	Managed Forest Law
MP	Milepost
MS	Meter Station
Plan	Wisconsin Agricultural Impact Mitigation Plan
Project	Heartland Project

1.0 INTRODUCTION

On behalf of ANR Pipeline Company (ANR), Merjent, Inc. (Merjent) has prepared this Wisconsin Agricultural Impact Mitigation Plan (Plan) for the Heartland Project (Project). This Plan has been prepared for the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and will be implemented for the Project.

1.1 PURPOSE AND SCOPE

The purpose of this Plan is to provide a description of agricultural minimization, mitigation, and restoration methods to be used for Project construction.

This Plan applies to all construction activities occurring within areas of agricultural use in Wisconsin. Agricultural use includes, but is not limited to, activities conducted for the purpose of producing an income or livelihood, such as crop or forage production, keeping livestock, beekeeping, nursey, sod, or Christmas tree production, floriculture, aquaculture, fur farming, forest management, and land enrolling in a federal agricultural commodity payment program or a federal or state agricultural land conservation payment program.

Project construction activities will occur within the Construction Work Area (CWA). The CWA represents the total limit of potential ground disturbance for the Project.

In the event of condemnation on any property statements reflecting a mutually agreeable situation are rescinded in liu of court opinion.

2.0 PROJECT OVERVIEW

The Project is located within both Illinois and Wisconsin and proposes: the installation of approximately 70.4 miles of new loop pipeline at four distinct locations (PL-1, PL-2, PL-3, and PL-4); the replacement and upsizing of approximately 1.5 miles of existing pipeline; the construction of three new compressor stations (CSs); the modification of one existing CS; the construction of two new meter stations (MSs); the modification of three existing MSs; and, the construction or modification of associated aboveground appurtenance facilities.

Within Wisconsin, the following work is proposed. These locations are shown on figures included as **Attachment A**.

- **Pipeline facilities:**
  - Mainline 301 (referred to as Segment PL-3) – Replacement and upsizing of approximately 1.5 miles of the existing ANR Line 301. This portion of Line 301 is partially 18-inch- and partially 22-inch-diameter and will be replaced with a 30-inch-diameter pipeline in Waukesha County.
  - Two River Lateral Loop (referred to as Segment PL-4) – Installation of approximately 8.1 miles of new 12-inch-diameter pipeline loop next to the existing ANR Line 380 in Sheboygan County.
  - Associated, minor aboveground appurtenance facilities:
    - The installation of a new launcher/receiver (LR) at the exiting Milwaukee MS, along Segment PL-3 near Milepost (MP) 0.0, to be called LR-PL3-1.
    - Modifications to an existing mainline valve (MLV) located at the existing Milwaukee point of delivery along Segment PL-3 near MP 0.1.
    - The installation of a new LR at the existing Sod Farm LR site, along Segment PL-3 near MP 1.5, to be called LR-PL3-2.
    - The installation of a new LR at the existing Kewaskum CS, along Segment PL-4 near MP 0.0, to be called LR-PL4-1.
    - The installation of a new LR at a greenfield site, along Segment PL-4 near MP 8.08, to be called LR-PL4-2.
- **Aboveground station facilities**:
  - CS facilities:
    - Construction of the new Pulaski CS in Brown County.
  - MS facilities:
    - Modifications at the existing Menasha MS in Winnebago County.
    - Modifications at the existing Sheboygan Falls MS in Sheboygan County.
    - Modifications at the existing Rochester MS in Racine County.

The construction of Segments PL-1 and PL-2, the construction of the other two new CSs, the modification of one existing CS, and the construction of two new MSs are located within Illinois.

3.0 AGRICULTURAL RESOURCES

3.1 AGRICULTURAL BUILDINGS

The presence of agricultural buildings was evaluated within the CWA for Segments PL-3 and PL-4. This evaluation was broken into two categories: *agricultural residences* (homesteads) and *agricultural buildings* (non-residential buildings or structures such as barns sheds, silos, and trailers).

Along Segment PL-3, there are 3 known agricultural buildings within the CWA. These are all located within temporary easement areas and will not be relocated or acquired for construction. There are no known agricultural residences within the CWA for Segment PL-3.

Along Segment PL-4, there are 5 known agricultural buildings within the CWA. Two of the 5 buildings are located within temporary easement areas and will not be relocated or acquired for construction. Three of the 5 buildings are located within the new permanent easement for Segment PL-4 and include a garage near Milepost (MP) 0.35, located approximately 27 feet from the proposed centerline; a horse stall near MP 1.58, located on the proposed centerline; and a barn near MP 2.82, located approximately 32 feet from the proposed centerline. For the garage near MP 0.35, the CWA was configured to minimize impact, and this garage will not be acquired or relocated. This portion of the route was requested by the landowner. For the horse stall near MP 1.58, ANR would remove the structure for safety. For the barn located near MP 2.82, the CWA was configured to minimize impact and there will be a road bore in this location, also minimizing impacts. Additionally, two known agricultural residences are located within the CWA, within temporary easement, and as such will not be acquired or relocated.

3.2 MANAGED FOREST LAW

According to the most recent Managed Forest Law (MFL) data from the Wisconsin Department of Natural Resources, there is one MFL parcel located within the Project, at the Pulaski CS. The MFL parcel is located within the northernmost portion of the Pulaski CS and is approximately 0.04 acres in size in the Project. It would be part of the property to be purchased for the construction of the Pulaski CS. As the entire MFL parcel is almost 16 acres in size, is not anticipated that the portion of the MFL parcel to be purchased would reduce the amount of productive forest below program's the 80 percent threshold.

3.3 SPECIALTY FARMS

According to the U.S. Department of Agriculture's Cropland Data Layer, there are no known specialty farms within the Project.

Prior to construction, ANR will work with landowners to identify any specialty crops or operations. Minimization and mitigation measures will be implemented on specialty farms as described within this Plan.

3.4 ORGANIC FARMS

No organic farms have been identified within the CWA in Wisconsin. In the event an organic farm is identified ANR will work with landowners to identify any farm operations or agricultural use currently certified as organic, or in the process of certification. ANR will work with the landowner

and/or the landowner's certifying agent to identify site-specific construction practices that will minimize the potential for decertification as a result of construction activities. Minimization and mitigation measures will be implemented on organic farms, and/or farms with other certifications (e.g., pesticide-free, herbicide-free). ANR will adhere to the following measures during construction, as necessary:

- Identify the locations of these operations within the CWA. A list of these operations will be provided to the contractor.
- Install signage at the boundaries of organic or other certified farms within the CWA to alert construction crews to requirements on these properties.
- Consult with landowners of these operations prior to construction to reach agreement on appropriate and feasible methods required to avoid unintentional applications of prohibited chemicals or materials.
- Do not apply herbicides, pesticides, dust control, or other chemicals to organic or other certified farms that preclude the use of these chemicals.
- Clean construction equipment and materials, including construction mats, prior to entering the CWA within the organic farm. Prior to delivery to the site, EIs will inspect and document compliance in the Contractor Yard or other designated staging area.

3.1 LIVESTOCK PARCELS

Based on aerial imagery and communication with landowners, four properties along the route are confirmed to have horses and/or sheep. These landowners are included in the table below.

Segment / Milepost	Tract	Landowner Address	Notes
Segment 4, MP 0.75	59-022-312-050	N1902 W County Road A Adell, WI 53001	Horses present
Segment 4, MP 0.75	59-022-312-051	N1920 W County Road A Adell, WI 53001	Horses present
Segment 4, MP 1.5	59-022-311-053	W8374 County Road SS Adell, WI 53001	Horses present Equine facility
Segment 4, MP 2.5	59-022-310-900 59022-310-940	W8123 County Road W Adell, WI 53001	Horses and sheep present

The landowner located at Milepost 1.5 owns and operates a commercial equine facility. The other landowners do not appear to use their horses or property for commercial purposes. ANR has contacted each landowner to arrange compensation for the relocation of horses and/or sheep to alternative boarding facilities, if needed, as well as for other associated disruptions.

Prior to construction, ANR will consult with landowners to identify any livestock operations and grazing areas that could be affected by construction, and implement measures to minimize these impacts.

4.0 IMPACT MINIMIZATION AND MITIGATION MEASURES

ANR will implement the minimization and mitigation measures and practices as described in the following sections.

4.1 LANDOWNER COMMUNICATIONS

ANR will communicate with affected landowners of agricultural land to keep them informed of overall progress, explain mitigation actions, and learn of any additional issues noted by landowners. ANR will provide the anticipated construction schedule to landowners in advance of construction. Additional communications will also be completed prior to mobilization as the construction schedule is more refined, in order to provide landowners at least 30 days notice of mobilization. Prior to the mobilization, ANR will also provide the landowner with a number to contact ANR should the landowner observe unsatisfactory agricultural work. In the event there is a disagreement between landowner tenant with regard to a decision, ANR's obligation will be satisfied by securing an agreement with the landowner.

Prior to construction, ANR will coordinate with each affected agricultural landowner, as applicable, regarding their farm operation. This will include obtaining details on and locations of their current practices, equipment, and improvements used, including but not limited to crop production, access routes, conservation easements, conservation practices, above- and below-ground structures or obstructions (e.g., drain tile, irrigation systems, fencing, etc.), livestock, certified organic lands, manure spreading practices, or other farm practices and technology. Attempts will be made to schedule construction during periods when agricultural activities will be minimally affected to the extent possible, or the landowner will be compensated accordingly.

4.2 CROP LOSS AND FEED PAYMENTS

Crop loss will occur during the construction of the Project, which, depending on the timing of Crop loss will occur during the construction of the Project, which, depending on the timing of construction activities, may include one or two growing seasons. ANR will work with landowners to accept a mutually agreeable crop damage payment to account for crop losses during construction. The value of the crop(s) will be determined by the calculation sheet included within the easement. Crop compensation will be based on the market value at the time of the easement agreement and will be increased if crop prices increase at the time of construction but will not be decreased if crop prices decline at the time of construction.

During construction, dairy farm or livestock operations could be affected by the removal of feed supply within the construction area, resulting in the need to purchase feed off-farm for the animals. ANR will work with each landowner to address and mitigate their concerns and come to an agreement. ANR will compensate any impacted dairy farm or livestock operations for the increased costs associated with the purchase of forage resulting from the reduction of forage from within the Project's construction area.

Other compensation measures could include ANR compensating for the cost of boarding an animal off-farm, such as for stabling horses.

4.3 CONSTRUCTION MEASURES

Potential impact on agricultural operations will be identified and appropriate construction impact minimization measures will be implemented. Site-specific practices will vary according to the activities of the farm operator, the type of agricultural operation, the susceptibility of site-specific soils to compaction, the degree of construction occurring on the parcel, and the ability to avoid areas of potential concern.

4.3.1 Clearing

ANR will work with each landowner for the cutting of merchantable timber necessary for construction of the Project. ANR will consult with the landowner, and through mutual agreement, determine the disposition of trees prior to tree clearing unless otherwise restricted by local, state, or federal regulations. ANR shall allow the landowner the right to retain ownership of any felled timber that is of commercial or other value to the landowner. ANR shall compensate the landowner for timber that is removed from the property.

ANR will limit clearing of windbreaks to the extent possible without interfering with the safe construction and operation of the pipeline. At no point should felled tree stumps, mulch, or tree debris be used to backfill the trench, buried in the CWA, or mulched to stabilize any portion of the CWA. Timber may be cut and left along the outer edge of the CWA for the landowner's use (if requested), and appropriate space is available, or disposed of. Disposal methods for trees, brush, and stumps include chipping or removal from the CWA. Chipping or mulching will not occur in agricultural areas, unless approved by landowners.

4.3.2 Access

ANR and the affected landowners shall reach a mutually acceptable agreement on the location of any temporary access roads when needed, including entrance and exit locations, on the respective landowner's property to be used for access to or along the CWA throughout the construction phases of the Project. ANR will attempt to utilize existing farm roads for access to and from the CWA where possible.

In places where temporary access roads are constructed over agricultural land action will be taken to limit compaction, this includes but is not limited to using construction matting, temporarily stripping topsoil, or using geotechnical fabric and rock. However, wetlands located in agricultural lands will not be stripped of topsoil per wetland permit conditions, and construction matting will be used instead, as needed per site conditions.

If temporary roads are constructed on agricultural land and require gravel stabilization, geotextile construction fabric will be installed beneath the imported rock to enhance stability and create a clear separation between the rock and the subsoil. All temporary roads will be designed by ANR to avoid disrupting surface drainage and will be built in a way that minimizes soil erosion. No fill material may be placed in wetlands or streams without first obtaining the necessary approvals or permits from the appropriate local, state, and/or federal authorities. Once construction is complete, temporary roads may remain in place if mutually agreed upon by the landowner and ANR, unless restricted by applicable regulations. If the roads are to be removed, the CWAs where the roads were built will be returned to their original use and restored to preconstruction conditions.

At construction entrances, larger stone or gravel may be used as tracking control. Gravel will be placed atop geotextile fabric for effective removal of the gravel. With these measures, it is not anticipated that topsoil intermixing will occur at construction entrances.

4.3.3 Grading and Trenching

During construction, topsoil up to 12 inches in depth will be segregated and stored in such a manner that it shall not become intermixed with subsoil. Appropriate BMPs will be utilized to ensure that soil mixing of the segregated topsoil does not occur. Topsoil that will be or is expected to be stockpiled in areas where earth-disturbing work has temporarily ceased shall be protected from erosion and weed infestation by applying a stabilization measure such as temporary seeding per regulatory requirements.

Following the removal of topsoil, the subsoil will be removed from the trench. In some areas, only one layer of subsoil may be present in the trench, resulting in a two-lift soil handling method (i.e., topsoil as the first lift and the one layer of subsoil as the second lift). However, in some areas, two layers of subsoil may be present in the trench, resulting in a three-lift soil handling method (i.e., topsoil as the first lift, the upper subsoil layer as the second lift, and the lower subsoil layer as the third lift). With either soil handling method, subsoil material that is removed from the trench will be placed parallel to the pipeline trench that is separated from the topsoil spoils and separated by the different subsoil layers (when the three-lift method is applied).

Prior to the start of construction, ANR will prepare a list of locations of agricultural soils that are a candidate for the three-lift soil handling method. ANR will create this list utilizing the Three Lift Soil Handling Decision Key, provided as **Attachment B**, and will provide the list of candidate soils locations to the EI and Contractor prior to construction. Conducting this evaluation will assist with preconstruction planning to ensure adequate CWA is made available for necessary spoil storage. ANR will implement the three-lift method when determined to be required per site specific conditions and landowner requests.

Where evidence that weed growth on stockpiled topsoil could present a problem to adjacent cultivated fields is observed, herbicide may be necessary prior to topsoil replacement. ANR will obtain permission from landowners prior to the use of herbicides. If ANR is permitted to spray the topsoil pile with herbicide, the landowner will be consulted in regard to the choice of herbicide to be used, taking into account their preference for cover crop and plans for the next year's crop. If any herbicide spraying is completed, it will be done by a state-licensed applicator.

Unless otherwise arranged with or agreed to by a landowner, the trench shall be backfilled in an order and manner that corresponds to the original profile; that is, subsoil (lower layer first followed by upper layer when the three-lift method is applied), followed by the segregated topsoil. When backfilling the trench, respective soil material (subsoil layer[s] and topsoil) shall be returned to the trench such that it matches that of the adjacent, original, soil profile.

On agricultural land where the materials excavated during trenching are insufficient to meet backfill requirements, no soil from adjacent agricultural land outside of the CWA shall be used as either backfill or surface cover material. Under no circumstances will any topsoil materials sourced from the CWA be used for pipe padding material or trench backfill below the topsoil horizon. In situations where imported soil materials are employed for backfill on agricultural lands, such material shall be of similar soil type, texture, and quality to the existing soils on site. Imported soils should be free from noxious weeds and other pests to the extent possible.

4.3.4 Crowning

Trench crowning up to 12 inches shall occur during backfilling operations to allow for trench settling. Due to the increased elevation of the crown compared to the rest of the CWA, surface drainage across the trench may be hindered until the crown has settled completely, anticipated after one freeze/thaw cycle; however, surface drainage should not be permanently blocked or hindered in any way. Adding additional soil to the crown over the trench in excess of that required for settlement will not be permitted. Temporary BMPs will be installed to manage any erosional issues caused by crowning.

In areas where minor trench settling occurs after topsoil spreading, land leveling or imported topsoil may be used to fill each depression, except in wetland areas. Subsoil is not rooting material and should never be spread over the CWA. Any excess subsoil that exceeds the level of the adjacent soil profile after backfilling shall be hauled off the CWA and disposed of properly.

The purpose of soil restoration is to ensure that soil strata are replaced in the proper order, de-compacted, and that rock content of at least the top 12 inches of soil is not increased. Excess subsoil and rock will be hauled off-site or left on site, if preferred by the landowner. ANR will discuss rock and excess soil disposal with the landowner and obtain their permission for it to be left on their property. If left on their property, ANR will consult with the landowner to determine acceptable disposal location(s) on the property. Heavy equipment will not be allowed to cross those agricultural areas that have been de-compacted and restored.

4.3.5 Dewatering

Groundwater or stormwater runoff may accumulate in the trench during construction activities. If trench dewatering is necessary to complete the installation of the pipe, the Contractor will pump the discharge through a sediment filter bag or a straw bale dewatering structure in such a manner that prevents the flow of heavily silt laden water into wetlands or waterbodies. The contractor and/or EI will identify dewatering discharge areas that minimize impacts to sensitive resources, including agricultural land.

The Contractor will use a floating suction hose, or other similar measures, to elevate the intake from the bottom of the trench and reduce the potential for capturing heavy sediment-laden trench water to be discharged. The Contractor will direct water to well-vegetated upland areas when available, and discharge at a rate to promote filtering and infiltration into the ground. The EI will work with the Contractor to select suitable dewatering operation discharge sites that minimize runoff into waterbodies or wetlands. The Contractor may use multiple filtering mechanisms (e.g., geotextile bag within a straw bale dewatering structure), where necessary to achieve appropriate discharge water treatment.

Dewatering operations will be monitored to ensure that discharge rates and sediment loads do not exceed the capacity of the dewatering device. Dewatering activities will not deposit gravel, sediment, or other debris into fields, pastures, wetlands, waterways, or sensitive resources. Where conditions necessitate dewatering outside of the CWA, landowner concurrence will be attained.

4.3.6 Decompaction

Decompaction of the subsoil will only be done when the subsoil condition is friable/tillable in approximately the top 18 inches of the subsoil profile, using the Atterberg Field Test as guidance, provided as **Attachment C**. The EI may recommend to ANR specific locations for the decompaction of the subsoil in locations where soils appear to be either predominantly wet or in low lying areas where water ponding has occurred due to the “trench effect” as a result of topsoil removal. In these cases, ANR may consult with the landowner to determine the appropriate decompaction needs.

Equipment that can be used for soil decompaction may include a v-ripper, chisel plow, paraplow, or equivalent. Typical spacing of the shanks varies with equipment but is typically in the 8- to 24-inch range. The normal depth of tillage is approximately18 inches. The type of equipment used and the depth of rip may be adjusted as appropriate for different soil types or for a deeply and severely compacted area.

Subsoil compaction will normally be alleviated with three passes of the decompaction equipment. Multiple passes refers to the implement passing over the same soil band; that is, three passes of a 10-foot-wide implement will treat a 10-foot-wide band of soil, not a 30-foot-wide band. Passes will be made in multiple directions. This can be achieved in the narrow areas by having the implement weave back and forth across the area being ripped.

The segregated topsoil will be replaced and should be uniform across the CWA width. Rubber-tired motor graders may be used to spread and level topsoil to address unevenness in the field. In areas where minimal tillage, no-till, or level-land farming practices are employed, a tracked machine will be required to establish final grades.

Decompaction through the topsoil may be necessary if the subsoil and/or topsoil are compacted during topsoil replacement activities. A penetrometer will be used to determine if additional decompaction is necessary through the topsoil. Replacing the topsoil or de-compacting through the topsoil may free some rocks and bring them to the surface. The size, density, and distribution of rock remaining on the construction area should be the same as adjacent areas not disturbed by construction. Excessive amounts of rock and oversized stone material shall be determined by a visual inspection of the CWA. Results shall be compared to portions of the same field located immediately adjacent the CWA. Included in the determination of relative rock and large stone content is the CWA's condition subsequent to tillage and the relative concentration of such materials within the CWA as compared to off the CWA.

If previous decompaction efforts create an uneven surface prior to topsoil replacement, the subgrade may be leveled utilizing low ground pressure equipment to ensure topsoil is spread uniformly over the CWA.

4.3.7 Final Grade

Agricultural land impacted by the Project will be restored to preconstruction conditions and left in a condition that will facilitate future agricultural use, provide for proper drainage, and prevent erosion. Ruts will be repaired, or compensation will be provided as an alternative if the landowner desires. Damage to existing agricultural facilities, such as diversion terraces, grassed waterways, swales, outlet ditches, water and sediment control basins, vegetated filter strips, ditches, roads, and other features of the land, will be restored to pre-construction conditions.

4.3.8 Clean Up

Once restored, construction areas should not be traversed by unnecessary equipment traffic. All construction related debris, including waste generated by the construction crews, will be removed from the landowner's property and disposed of appropriately. Final cleanup includes installation of permanent erosion control measures, if necessary, and disposal of construction debris and will be completed as soon as practicably possible (weather permitting). If final cleanup is delayed, temporary erosion controls will be installed as necessary.

4.3.9 Revegetation and Seeding

Seeding will not be completed in cultivated croplands unless requested by the landowner. In the event ANR completes the seeding activity, the application will be completed in accordance with FERC Plan and Procedures and applicable permits and approvals. Seeding will occur following final cleanup, weather permitting.

4.3.10 Wet Conditions

Except as provided below or as otherwise expressly permitted by the landowner, construction activities are not allowed on agricultural land when wet conditions exist and normal farming operations, such as plowing, discing, planting, or harvesting, cannot take place due to the increased risks for erosion, rutting, and compaction. Wet conditions are to be determined at the time the planned construction activity is to take place on a field-by-field basis and not for the Project as a whole. In the event topsoil is stripped, work may continue during wet conditions. The following are activities that may occur in wet conditions:

- Construction activities may occur on existing stabilized surfaces that are not at risk for rutting or compaction (e.g., rocked, paved surface or where topsoil has been removed) at the discretion of ANR.

- Construction activities on unprepared surfaces will be done only when work will not result in rutting, erosion, or compaction. If low ground pressure equipment or weight dispersion material such as construction mats are used, they must also not cause rutting, erosion, or compaction. Determination as to the acceptable work activities and the potential impacts on the agricultural land will be made in consultation with the Environmental Inspector (EI).

- The EI has the authority to stop work on any and all spreads experiencing wet conditions.

4.3.11 Winter Conditions

If work is conducted during winter conditions, ANR will follow the practices and procedures outlined in the Winter Construction Plan included as Attachment D.

4.4 AGRICULTURAL PRACTICES AND IMPROVEMENTS

Existing agricultural facilities, such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, and vegetated filter strips, damaged due to construction activities will be restored to preconstruction conditions. Photographs and elevation

surveys will be taken as necessary prior to construction activities at the site to ensure final restoration is satisfactory.

4.4.1 Livestock, Fencing, and Cattle Passes

Prior to construction, ANR will consult with landowners to identify any livestock operations and grazing areas that could be affected by construction, and implement measures to minimize these impacts.

Prior to construction, ANR will work with landowners to determine if fences may be in the way of access for construction equipment. If necessary, existing fences may be removed and temporary fencing will be installed, in consultation with the landowner.

Where temporary fencing is used, ANR's contractors will be responsible for closing any necessary gates they open throughout the workday. If livestock enter the CWA, the landowner will be notified. ANR, their EIs, and their contractors will work with the landowner to remove the animal.

Existing fence crossings removed due to construction activities will be repaired. Following construction, any temporary gates and fences installed for use by construction crews will be removed, unless the landowner approves otherwise. Permanent fences will be restored per consultation with landowners.

4.4.2 Manure Management (Biosecurity)

Biosecurity refers to the implementation of measures to protect a farm operation from the introduction and spread of disease and pests. Manure may be present in pasture areas and/or spread in cultivated fields. Prior to construction, ANR will work with landowners to identify pastureland and cultivated fields that utilize manure fertilization. ANR may implement the following measures during construction:

- Negotiate with the farmland owner/operators to avoid the spreading manure over all areas within the proposed construction area prior to construction.
- Attempt to identify the locations of these operations where livestock and/or manure may be present within the CWA before work starts so arrangements can be made for them to be moved. Landowners will be compensated as needed if accommodations need to be made to relocate the livestock.
- If manure is encountered the contractor should remove as much manure as possible from construction equipment and materials, including construction mats, after leaving an area with manure present, before entering another property or wetlands or waterbodies.
- Construction staff should avoid contacting manure by utilizing the proper personal protective equipment and other hygiene methods.

4.4.3 Irrigation Systems

If the CWA intersects an operational (or soon to be operational) irrigation system, ANR and the landowner will establish a mutually acceptable amount of time that the affected irrigation systems

may be taken out of service during construction. If, as a result of pipeline construction activities, an irrigation system interruption results in crop damages, either on the CWA or off the CWA within the irrigation system's range, ANR shall reasonably compensate the landowner for all such crop damages. If practical, temporary measures may be implemented to allow an irrigation system to continue to operate across land on which the pipeline is also being constructed, so long as the irrigation system does not create drainage, erosion, or pollutant discharge issues in or across the CWA. Any damage to an irrigation system caused by construction will be repaired as soon as reasonably possible, or compensation provided.

If the Project were to result in the need for reconfiguration of the system and/or equipment (e.g., the need for permanent relocation, disruption of a well, disruption of the connection from a well to the center pivot), ANR will work with the landowner to provide reasonable compensation.

4.4.4 Drain Tile

Prior to construction, ANR will request details of the location of drain tiles from each landowner. ANR shall record the GPS location of all identified drain tile lines, including those identified by the landowner and those identified or damaged and repaired during construction or other phases of the Project. ANR shall also mark the physical locations of the identified drain tile lines with stakes or flags prior to construction to alert construction crews of their presence. Markers identifying drain tile locations are to remain in place until restoration is complete or the tile lines are repaired.

If a drain tile is damaged or severed during construction, it will be repaired to ensure it functions properly at the point of repair and maintains long-term usability. Temporary repairs using solid tubing may be installed to allow for continued drainage during construction, or a permanent repair may be made immediately.

Prior to backfilling, the drain tile will be temporarily or permanently repaired, as the backfill schedule allows. Permanent repair will occur as soon as possible, based weather, soil conditions, and drain tile contractor availability permitting. Typical figures depicting drain-tile repair are also provided as **Attachment C.**

If water is flowing through damaged tile line, ANR shall use best efforts to immediately temporarily repair the damage tile until such time that permanent repairs can be made by a local, licensed, contractor. If the damaged drain tile-lines are dry and water is not flowing, temporary repairs are not required, if the permanent repairs can be made within 30 days of the time damage occurred or before the next forecasted rain event, whichever is sooner. These exposed tile lines shall be screened or otherwise protected to prevent the entry of foreign materials, small mammals, etc. into the tile lines until permanent repairs are made.

All permanent drain-tile line repairs will be made within 30 days of the pipeline being laid in the trench on the landowner's property, weather, soil conditions, and drain tile contractor availability permitting. ANR shall notify the landowner in writing if permanent repairs to drain-tiles are expected to deviate from the 30 days. Alternatively, ANR may compensate the landowner to complete the permanent repair themselves or with their preferred drain-tile contractor.

Before completing permanent drain-tile repairs, all tile lines shall be probed or examined by other suitable means on both sides of the trench for their entire length within any work areas to check for tile that might have been damaged by vehicular traffic or construction equipment. If tile lines

are found to be damaged, they will be repaired so they operate as well after construction as before the construction began.

Following completion of the Project, ANR shall be responsible for correcting all drain-tile line repairs that fail due to pipeline construction, provided those repairs were made by ANR. ANR will not be responsible for tile line repairs that ANR pays the landowner to perform.

If there is a concern for damages to the drain tile as a result of equipment and vehicle traffic along temporary access roads, weight dispersion equipment and/or material such as mats should be used.

5.0 INSPECTION

To support on-site inspection and monitoring of agricultural areas, ANR will assign one or more Environmental Inspectors (EIs) to the Project. These individuals will work closely with ANR's Construction Manager to address any issues that arise during construction.

EIs will be qualified professionals with expertise in both biological and agricultural resources. Their knowledge of agronomy and soil conservation will enable them to serve in a dual role, also acting as agricultural inspectors throughout the duration of the Project.

The EI will be thoroughly familiar with the following:

- This Plan;
- All other ANR and Project Plans and Procedures;
- Pipeline construction sequences and processes;
- Midwest soils agricultural operations and activities;
- Midwest drain-tile operations;
- Effects of construction on agricultural soils as they relate to crop yields
- BMPs for erosion and sediment control; and
- Erosion control permits obtained for the Project.

The EI shall also possess the following:

- Good oral and written communication skills, and the ability to work closely with ANR construction management and Project contractor(s); and
- At least 2 years of experience in an agricultural setting, working in some aspect of production agriculture or farm operations.

6.0 MONITORING

ANR shall be responsible for monitoring the Project from mobilization through final stabilization and restoration. During construction and restoration, the EI's role is to monitor the implementation of this Plan to avoid negative impacts on agricultural lands by advising the Construction Manager or appropriate ANR representative, in the event unsatisfactory construction methods are being used. The EI will have access to all work areas in agricultural lands, and will travel between various construction activities in agricultural lands and spot-check construction operations. If the EI discovers actions that do not appear to meet the Plan requirements, they will advise the contractor to make corrective actions, and may stop work at that location if necessary and will immediately contact the Construction Manager to remediate the site-specific restoration action, if needed.

EI's shall conduct inspections per the FERC Plan and Procedures, this includes inspecting and ensuring the maintenance of temporary erosion control measures at least:

a. on a daily basis in areas of active construction or equipment operation;
b. on a weekly basis in areas with no construction or equipment operation; and
c. within 24 hours of each 0.5 inch of rainfall;

These inspections will be completed until restoration is complete. General site conditions to be monitored during this period include but are not limited to topsoil thickness, relative content of rock and large stones, trench settling, crop condition, surface and subsurface drainage (observation of sinkholes or tile effluent), erosion, and repair of severed fences.

Following construction, ANR shall conduct bi-annual inspections for up to three years or until final stabilization and restoration are achieved. ANR shall maintain an EI on at least a part-time basis through this period. During this phase, the EI shall identify any remaining impacts associated with the pipeline construction that need to be addressed to return the CWA to preconstruction conditions and achieve final stabilization and restoration. Areas exhibiting significant crop growth differences on the CWA compared to that immediately off-CWA will be logged. Any problems or concerns shall be identified through monitoring of all areas along the CWA via onsite and/or drone inspections and through information received from respective landowners.

After completion of the monitoring phase, ANR shall continue to respond to the reasonable requests of the landowner to correct project related impacts on the agricultural resources.

6.1 MONITORING DURING OPERATION

Maintenance of TC Energy's ROWs is an ongoing process, which is governed by TC Energy Policy, certificate and permit conditions, as well as landowner agreements. ROWs are generally maintained by mowing or other mechanical means. On FERC-certificated pipelines, vegetation maintenance or clearing in upland areas within the full width of the permanent easement will not be done more frequently than every 3 years. However, to facilitate periodic corrosion and leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be maintained annually in an herbaceous state. TC will also monitor the easement for signs or subsidence.

After final restoration is complete and while the pipeline is in operation ANR shall patrol the pipeline per regulatory requirements to detect erosion of the top cover. Whenever the loss of

cover due to erosion creates a safety issue or whenever the amount of top cover is less than the preconstruction depth, ANR shall take corrective action.

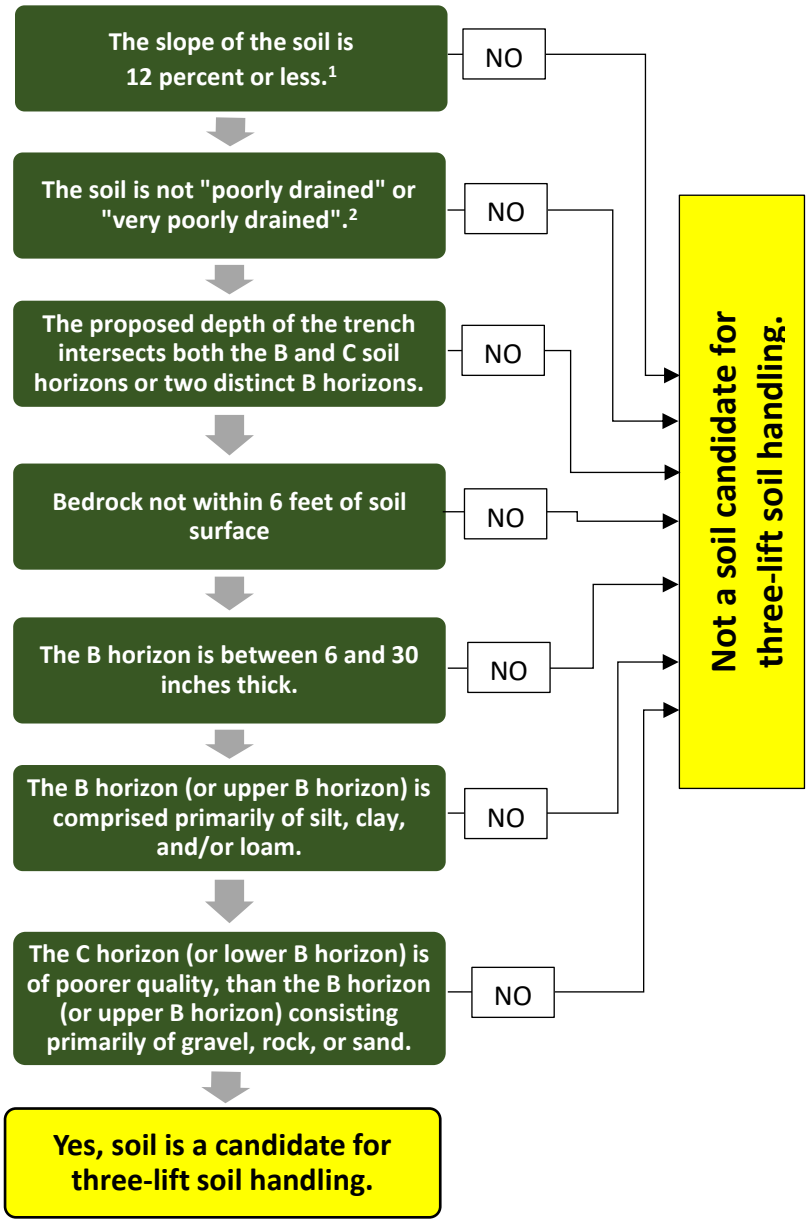
Attachment A

Project Map

Attachment B

Three Lift Soil Handling Decision Key

This key is applicable to soil profiles with distinct B and C horizons or alternatively to soil profiles with distinct upper and lower B horizons.



1. Soils with a slope greater than 12 percent are Class IV soils, likely to be eroded with shallow topsoil, and marginally suited for crop production. As such, they are unlikely to meet the criteria for soils that would benefit from three-lift soil handling.
2. Poorly drained soils tend to be too wet to use three-lift soil handling successfully. They are also likely to be deep soils.

Attachment C

Atterberg Field Test

Atterberg Field Test

Purpose: To determine when soil is suitable for tillage operations.

Process: The Agricultural Inspector will determine the soil's consistency using the following:

1. Pull a sample soil plug at the maximum depth to be tilled, or from within the topsoil pile.

2. Roll a portion of the sample between the palms of the hands to form a wire with a diameter of one-eighth inch.

3. The soil consistency is:
    a. Tillable if the soil wire breaks into segments not exceeding 3/8 of an inch in length.
    b. Plastic (not tillable) if the segments are longer than 3/8 of an inch before breaking.

4. This procedure is to be used prior to decompacting the subsoil; on the topsoil pile prior to stripping and stockpiling; on the topsoil prior to replacement; and prior to decompacting through the topsoil.

5. One determination of soil consistency is adequate until the next rain event.

Attachment D

Winter Construction Plan

ANR PIPELINE COMPANY

Heartland Project

Winter Construction Plan

Prepared by:

February 2025

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

ANR	ANR Pipeline Company
BMP	best management practice
CS	compressor station
CWA	construction work area
EI	environmental inspector
FERC	Federal Energy Regulatory Commission
FERC Plan	FERC Upland Erosion Control, Revegetation, and Maintenance Plan
FERC Procedures	FERC Wetland and Waterbody Construction Mitigation Procedures
HDD	horizontal directional drill
MS	meter station
PL	pipeline
Plan	Winter Construction Plan
Project	Heartland Project
TCSB	temporary clear span bridge

1.0 INTRODUCTION

ANR Pipeline Company (ANR) is seeking a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC) under Sections 7(b) and 7(c) of the Natural Gas Act, as amended, for its Heartland Project (Project). ANR is proposing to loop or replace existing pipeline at four distinct locations with 70.4 miles of new pipeline, construct or install new compressor units at four compressor stations (CS), construct and/or modify five meter stations (MS), and construct and/or modify other minor appurtenant facilities in Illinois and Wisconsin.

Site Names

- Wisconsin Loop Line 3-301 (Segment PL-1)
- Southwest Loop Line 2-100 (Segment PL-2)
- Segment PL-3
- Two River Lateral Loop 2-380 (Segment PL-4)
- Work at the following four CSs:
  - Laraway CS
  - Westfield CS
  - Sandwich CS
  - Pulaski CS
- Work at the following five MSs:
  - Laraway MS (within footprint of the Laraway CS)
  - Westfield MS (within footprint of the Westfield CS)
  - Menasha MS
  - Rochester MS
  - Sheboygan Falls MS
- Work at other minor appurtenant facilities, such as mainline valves and pig launchers/receivers.

In addition to the facilities described above, ANR will also utilize several pipe/contractor yards to support construction activities.

1.1 PLAN DESCRIPTION

This Winter Construction Plan (Plan) provides specialized work procedures to be implemented by ANR Pipeline Company (ANR) for the Heartland Project (Project) during frozen wintertime conditions.

Project construction is expected to commence in the second half of 2026, with a target in-service date of November 1, 2027. ANR anticipates active construction will occur over a 9- to 12-month period for pipeline segments and a 15-month construction period for compressor station (CS) and meter station (MS) facilities. For pipeline construction it is anticipated that work would begin in the summer or fall and continue until consistently frozen ground conditions occur, then be suspended until the ground thaws again. Work that may occur during winter months includes construction of the CS and MS facilities and tree felling associated with the pipeline segments.

This Plan shall be implemented in areas where winter is occuring for the Project. Wintertime conditions may include fluctuations of frozen soils, snow and ice, and freezing temperatures. ANR's onsite Environmental Inspector (EI) will review site conditions and historical

trending regional conditions to determine when wintertime weather conditions prevail, and implementation of this Plan is required.

2.0 SNOW REMOVAL

Snow that is removed to maintain suitable working conditions will be limited to the construction work area (CWA) and construction entrances. During wintertime months of active construction, certain portions of the CWA may need to be kept clear of snow to provide safe and efficient working conditions. Snow removal equipment will be contained to the approved CWA and will be stored outside of wetlands when not in use. Private access roads will be maintained in accordance with applicable permit requirements and landowner agreements. ANR will not be responsible for snow plowing or removal on publicly maintained roads.

Measurable snow may be plowed or blown from the CWA using suitable snow-clearing equipment, contingent on ANR obtaining proper landowner consent. In wetlands and other environmentally sensitive areas, the snow will be removed at grade to make the CWA passable. Snow removal may result in minor, incidental surficial scraping of the top layer vegetation. Following snow removal, construction mats may be placed in wetlands to reduce the risk for soil compaction, soil rutting, and the mixing of topsoil with subsoil.

Large accumulations of snow intermixed with excavated spoil piles will be removed to the extent practicable prior to backfilling. Generally, snow will be allowed to melt in place during the spring thaw. Erosion and sediment control best management practices (BMP) will be installed and maintained if appropriate at snow stockpile areas to minimize offsite erosion during snowmelt in accordance with permits and approvals issued for the Project.

3.0 GENERAL MITIGATION MEASURES

3.1 ENVIRONMENTALLY SENSITIVE AREAS

During winter weather conditions, the Contractor and EI will maintain permanent and temporary protective measures (e.g., flagging, fencing, barriers) to designate environmentally sensitive areas. Environmentally sensitive areas may include designated areas such as cultural resource sites, protected species habitat, wetlands, or waterbodies. The EI will confirm these measures have been installed correctly and perform routine inspections as well as inspections prior to and following inclement weather events.

3.2 WET WEATHER SHUTDOWN

Wet weather conditions may be present during the winter construction season as temperatures and precipitation fluctuate. The transitional periods between fall and winter and winter and spring are often characterized by saturated or inundated soils that are susceptible to rutting and soil mixing. Damage to temporary erosion controls may also occur during wet weather conditions. The EI and labor crew will monitor soil conditions and erosion controls. Construction activities will be temporarily suspended if there is potential for significant soil mixing or other damages related to wet weather conditions.

Temporary suspension of activities would be warranted if conditions have a high potential in certain locations to result in soil mixing and/or result in substantial sedimentation or erosion. Construction activities may occur on existing stabilized surfaces that are not at risk for soil compaction, soil rutting, and soil mixing at the discretion of ANR during wet conditions.

The EI in coordination with ANR construction management will have the authority to stop work on spreads experiencing wet conditions, pursuant to protocols to be agreed to in advance of construction by ANR and the EI. In the event topsoil is stripped and rutting does not risk mixing soil horizons that need to be segregated (e.g., topsoil) and work would not result in substantial sedimentation or erosion, work may continue during wet conditions.

3.3 SEDIMENT AND EROSION CONTROL MEASURES

Temporary sediment and erosion control measures will be implemented in accordance with the Federal Energy Regulatory Commission's (FERC) *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures) and permit conditions. Winter weather conditions may prevent installation and use of certain erosion and sediment control BMPs. In situations where snow and/or frozen conditions prevent the use of standard BMPs, alternative BMPs may be implemented to mitigate erosion and sediment migration. For example, compost filter socks or erosion control blankets may be installed on bare frozen ground or snow less than 2 inches deep.

Installed BMPs will be inspected by the EI daily in active construction areas, weekly in areas with no active construction, and all areas within 24 hours of a rain or snowmelt event. Additional BMPs may need to be installed for brief periods of thaw or warmer temperatures if they occur during winter months. The EI will review weather forecasts to anticipate if any brief periods of thawing or snow melt could occur during the winter.

4.0 UPLANDS

In non-frozen conditions, construction activities will be conducted in accordance with the FERC Plan and Procedures and applicable permit requirements. The following alternative methods will be implemented in frozen soil conditions.

Topsoil will be stripped according to the FERC Plan and Procedures, permit conditions, and other construction plans and agreements. Alternatively, ANR may strip topsoil in frozen conditions by ripping with a grader or heavy disc or by using a pavement excavator to pulverize the topsoil and allow for conventional removal. The method of topsoil stripping will be based on site-specific conditions, including depth and extent of frost penetration into the soil, and methods selected will be based on identifying appropriate methods of topsoil removal. The method selected will be the best available for retaining soil and root structure within the excavated topsoil to the extent practicable given the soil conditions. Subsoil excavated from the trench line will be stockpiled separately from the topsoil in the area adjacent to the trench.

Trenching, lowering-in, and backfill operations will be scheduled to minimize the exposure time of excavated spoil material to freezing conditions and to reduce the potential for snow accumulation in the trench. The pipe will be strung, bent, and welded prior to excavation of the trench. Any appreciable accumulations of snow in the trench (generally greater than 6 inches in depth) will be removed prior to installation of the pipeline. Backfilling will occur as soon as practicable after the pipeline is installed in the trench.

In upland areas, the trench will be backfilled with subsoil as described below, and if frozen topsoil cannot effectively be replaced without leaving large voids or an excessively rough soil surface, the frozen topsoil will be stockpiled over the winter for replacement during the following spring or summer.

Stockpiled subsoil will develop a layer of frost penetration, the thickness of which will be dependent on water content, temperature, wind, and snow cover conditions. Prior to backfilling, frozen material will be skimmed off the top of the subsoil pile to provide access to underlying, unfrozen subsoil for backfilling. The unfrozen subsoil material will be backfilled over the pipeline first, followed by the frozen subsoil material. If frozen subsoil exhibits lumps or sharp edges that could damage the coating on the pipeline, ANR construction management in coordination with the Contractor will determine appropriate backfill measures to be implemented. Such measures may include the use of mechanical shakers or grinders to break up frozen subsoil prior to backfilling or, in extreme cases, the use of sand padding around the pipe. If sand padding is used, it will be obtained from an upland or commercial source and used in upland areas only. Sand padding will not be used to backfill within wetlands or waterbodies.

Where topsoil is stockpiled over winter, ANR will stabilize the pile using mulch or other suitable stabilization methods to prevent loss of topsoil during the winter and throughout the spring melt. All mulch will conform to standards set in the FERC Plan and Procedures and applicable permits. Where final grading and restoration cannot be completed due to frozen conditions, the CWA will be left in a roughened condition or equivalent erosion control measures will be employed to reduce the potential for erosion during the spring melt. In upland areas, a slight subsoil crown may be left over the pipeline to account for settling as backfilled soils thaw. If a crown is left over the pipeline, breaks will be installed to allow water to drain across the CWA during the spring melt.

Cleanup activities will be performed once the ground is fully thawed in the spring or summer and the topsoil (and subsoil, if applicable) stockpiled over winter has dried sufficiently to allow it to be worked without causing excessive compaction and/or rutting. The schedule for final cleanup will be determined by ANR based on ground conditions. Cleanup and restoration activities (e.g., final grading, topsoil replacement, and re-seeding) will be conducted in accordance with the FERC Plan and Procedures and applicable permits and approvals.

The potential for soil compaction is minimal under frozen soil conditions; however, ANR will implement measures identified in the FERC Plan and Procedures and applicable permit conditions, where necessary, during final cleanup and restoration activities.

Upland restoration within the CWA may be delayed due to winter weather conditions. If permanent restoration is postponed until after spring thaw, ANR will leave exposed subsoil in a roughened condition to slow the flow of surface water runoff. All excavated areas will be backfilled or protected with safety fencing. ANR will apply mulch or install soil tackifiers to disturbed areas. If seeding occurs, ANR may use higher seeding rates and cold weather and/or dormant seed mixes.

5.0 WATERWAY AND WATERBODY IMPACTS

The following sections include details of waterways and waterbodies located within the Project and the anticipated crossings and impacts to these resources for Project construction. Waterway and waterbody crossings will be completed in accordance with local, state, and federal permits and follow the measures described in ANR's construction plans.

5.1 DREDGING

ANR proposes to use the open-cut trench installation method across waterways and waterbodies (referred to as dredging) for installation of the new and replacement pipe. For

waterbodies and waterways with perceptible flow, this will be accomplished via dam-and-pump or flume crossing methods.

The dam-and-pump crossing method involves installation of temporary dams upstream and downstream of the proposed waterbody crossing location. ANR will typically use sandbags and plastic sheeting to construct temporary dams. Following dam installation, ANR will use appropriately sized pumps to dewater the upstream impoundment and transport the stream flow around the CWA and trench to the downstream side of the work area. Intake screens will be installed at the pump inlets to prevent entrapment of aquatic life, and energy dissipating devices will be installed at the pump discharge point to minimize erosion and streambed scour. Trench excavation and pipeline installation will then commence through the dewatered portion of the waterbody channel. Following completion of pipeline installation, backfill of the trench, and restoration of waterbody banks, ANR will remove the temporary dams and restore flow through the CWA. This method is appropriate for those waterbody crossings where pumps can adequately transfer the stream flow volume around the work area and there are no concerns about the temporary passage of sensitive species.

The flume crossing method consists of temporarily directing the flow of water through one or more flume pipes over the area to be excavated. This method allows excavation of the pipe trench to occur completely underneath the flume pipes without disruption of water flow in the stream. Stream flow will be diverted through the flumes by constructing two bulkheads, using sandbags or plastic dams. Following completion of pipeline installation, backfill of the trench, and restoration of waterbody banks, ANR will remove the bulkheads and flume pipes. This crossing method generally minimizes the duration of downstream turbidity by allowing excavation of the pipeline trench under relatively dry conditions.

Following completion of pipeline installation, excavated bed material will be replaced in its original stratum and elevation upon backfilling, and the bed restored to pre-existing conditions. Larger rocks or boulders moved prior to construction will be replaced in the stream channel within the construction area following backfill of the trench. The banks will be restored to pre-existing conditions and will be stabilized with seed and erosion control blankets. Final grading, seeding, and bank stabilization will be completed no later than 24 hours after backfilling the in-stream trench, weather and soil conditions permitting. Additional details can be found in the Wetland and Waterway Restoration Plan developed for the Project. Following backfill and restoration, the bypass system will be removed and flow through the waterway channel will be restored.

5.2 TRENCHLESS CROSSINGS

In the event trenchless crossing methods, such as horizontal directional drill (HDD) or conventional bore, are used for pipe installation at waterbodies, impacts to waterways and waterbodies are not anticipated. ANR has prepared and will implement a Project-specific HDD Inadvertent Returns and Contingency Plan that describes the procedures to follow in the event of an inadvertent return.

5.3 DRIVING ON THE BED

ANR proposes to complete a one-pass-access through select waterways (referred to as driving on the bed) to facilitate clearing activities. The crossings will be completed during low or no-flow conditions.

5.4 ACCESS ACROSS WATERWAYS AND WATERBODIES

ANR will install temporary bridges to facilitate construction access across waterways and waterbodies. Flume supports are not proposed for the Project. In Wisconsin, all temporary bridges will be clear-span, spanning from bank to bank, with no center-support pilings in the channel. These temporary clear span bridges (TCSBs) will typically consist of a construction mat placed across the feature above the ordinary high-water mark. Wide crossings may require a metal bridge with wood or manufactured decking attached (e.g., use of a railcar, semitrailer, mobile home frame). TCSBs will be placed from the waterbody banks and equipment will not need to work in the waterbody channel to install or remove the TCSBs.

In Illinois, equipment crossings may consist of prefabricated construction mats, rail flat cars, flexi-float or other temporary bridges (prefabricated bridges), or flume installations. At equipment bridge locations, care will be taken to minimize disturbance of the bank and bottom. Typically, equipment crossings are installed during clearing and grading operations and removed after final cleanup and restoration activities.

Bridges will be removed after final cleanup and restoration activities have been conducted. Appropriate sediment and erosion control devices will be installed along the sides and bottom of the bridges, as necessary, to prevent sediment from entering the channel during use. The bridges will be inspected on a regular basis and anchored to prevent movement. Upon bridge removal, waterway and waterbody banks will be restored to pre-existing conditions.

One permanent culvert installation is proposed at the Pulaski CS. All in-stream work will occur during no or low flow conditions to minimize erosion and downstream impacts, and stream diversion techniques such as dam and pump will be used to prevent downstream sediment transport. Culvert design will be certified by an engineer registered in the state of Wisconsin, and culvert sizing will be designed to allow passage of 100-year storm stream flows and align with the natural stream channel. The culvert will be appropriately embedded within the stream channel, and the bed of the culvert shall mimic the upstream and downstream natural streambed.

6.0 WETLANDS

Construction in fall and winter months generally helps to minimize impacts to wetlands because construction will occur outside of the wet (spring and summer) seasons. In winter conditions, frozen soils will provide stability for construction equipment working in the CWA and help prevent sloughing of the pipe trench that could occur in the spring and summer seasons due to saturated conditions. Erosion and sediment control BMPs will be extended across the CWA on the approaches to wetlands prior to the spring runoff; these may consist of silt fence, hay bales, drivable berms, or other equally protective measures.

Summer construction of large diameter pipelines in saturated/standing water wetlands with unconsolidated soils can be difficult and potentially result in greater wetland disturbance, including wider trench widths and extensive rutting/surface disturbance. Constructing across these types of wetlands in the winter can result in fewer impacts. Winter wetland construction is not a common practice in most parts of the United States; however, winter construction is used in northern areas of the United States when site conditions make this the preferred technique for the installation of pipelines in expansive, unconsolidated wetland areas. Heavy construction equipment use and travel within the CWA, which may not be possible in summer conditions due to saturated, unstable soil conditions, can be accomplished in the winter by establishing temporary winter frost/ice roads. These frost/ice roads help provide a safe, stable work surface

for pipeline construction, while helping protect underlying vegetation and upper layers of wetland surfaces from disturbance potentially created during summer construction.

6.1 WETLAND CONSTRUCTION

ANR will use trenchless methods and open-cut trenching methods for wetland crossings. Wetland crossings will be completed in accordance with the measures described in ANR's construction plans and in accordance with federal, state, and local permits.

Wetland crossings will occur in the same manner during winter and non-winter seasons. ANR will minimize the extent and duration of Project-related disturbance on wetlands. Wetland markings will be maintained throughout the winter season. Construction equipment working in wetlands will be limited to that essential for clearing, excavating the trench, removing the existing pipe (abandonment only), fabricating and installing the new pipe, backfilling the trench, and restoration. Equipment will work from construction mats, when needed per site conditions, to reduce the risk for soil compaction, soil rutting, and the mixing of topsoil with subsoil.

If the ground of wetlands is stable and/or frozen, the wetland(s) may be crossed without matting under the discretion of the EI. Ground disturbance will be limited to the areas of excavation for pipe installation. Temporary stabilization, backfilling, and permanent restoration will be completed as soon as practicable and take the least number of days possible. The EI will evaluate site conditions and determine if wetland crossing activities must be delayed due to winter conditions.

Crossing of wetlands will occur in the same manner during winter and non-winter seasons. ANR will minimize the extent and duration of Project-related disturbance on wetlands. Impact minimization and restoration measures have been developed pursuant to requirements of the state and federal wetland and waterbody permit requirements. Throughout the construction process, ANR will follow the FERC Plan and Procedures, construction typical drawings, the Project's Stormwater Pollution Prevention Plan, and stormwater construction permit conditions to avoid or minimize impacts on water quality. Preconstruction grade and vegetative cover will be restored as soon as feasible following construction activities. Post-construction wetland and waterbody restoration will be monitored until preconstruction conditions are restored.

7.0 WETLAND AND WATERWAY RESTORATION

ANR has prepared a Wetland and Waterway Restoration Plan in coordination with applicable agencies. Preconstruction grade and vegetative cover will be restored as soon as feasible following construction activities.

Depending on site conditions, some measures identified in the Wetland and Waterway Restoration Plan may not be feasible during winter conditions. In these cases, ANR will temporarily stabilize all exposed areas, including spoil piles, until site conditions are such that restoration measures can be fully implemented.

If final grading can be completed during winter conditions, ANR will seed the exposed soils of wetlands and waterway banks using dormant/winter seed mixes and seeding procedures described below. Additional final grading may be performed once soils have thawed and conditions allow. BMPs will be maintained until permanent cover has been established.

8.0 CONSTRUCTION DEWATERING

8.1 TRENCH DEWATERING

Trench dewatering in both non-frozen and frozen conditions will be conducted in accordance with applicable dewatering permits. Under frozen conditions, dewatering structures may need to be larger and located further away from the construction area to avoid trench water moving back into the CWA due to low infiltration rates.

8.2 HYDROSTATIC TESTING

ANR will obtain appropriate permits and authorizations prior to discharging hydrostatic test water. ANR will adhere to all permit conditions. Depending on water availability and permit conditions, test water may be drawn from local sources such as waterways, waterbodies, or public water supplies. If test water is sourced locally during winter conditions, ANR will closely monitor test water withdrawal and discharge to minimize impacts to resource quality and waterway flow. Frozen conditions may prevent withdrawal of test water from local sources. If conditions are not favorable for local water withdrawal and/or discharge, ANR may supplementally acquire test water from a municipal source.

9.0 SPRING THAW CONDITIONS

If changes in the Project schedule or ground conditions require construction activities in early spring, the following measures, in accordance with the FERC Plan and Procedures and other applicable permitting requirements, will be implemented to prevent soil mixing, rutting, and compaction:

- The Contractor will work only in well-drained, dry sites and/or frozen areas until conditions improve.
- The Contractor will use equipment best suited to existing ground conditions (e.g., low ground pressure equipment).
- The Contractor will install mats along the travel lane in wetlands where there is potential for rutting to occur to prevent mixing of topsoil and subsoil.
- The Contractor may use frost driving measures, such as snow packing, to increase the load bearing capacity of the ground where necessary to remove equipment from the CWA, but not as a condition to allow construction to continue. The frost driving measures may be implemented in the early morning or evening to take advantage of colder temperatures.
- When ground conditions begin to thaw and only allow for frozen soil conditions early and late in the day, to the extent practicable construction activities will be postponed until evening or early morning to prevent rutting thawing soils.
- If muddy conditions are severe and rutting occurs, work will be suspended until conditions improve. A “rut” is considered a depression that results in topsoil and subsoil mixing. In the event soil mixing is observed from rutting, ANR will stop work and install construction matting or wait until soils dry and allow for work to proceed without rutting.

- In the CWA within wetlands (including cultivated wetlands), construction equipment will work from construction mats to reduce the risk for soil compaction, soil rutting, and the mixing of topsoil with subsoil.

- Work suspension and initiating work again will be coordinated with the Wisconsin Department of Natural Resources' third-party monitor.

10.0 FINAL CLEANUP AND RESTORATION

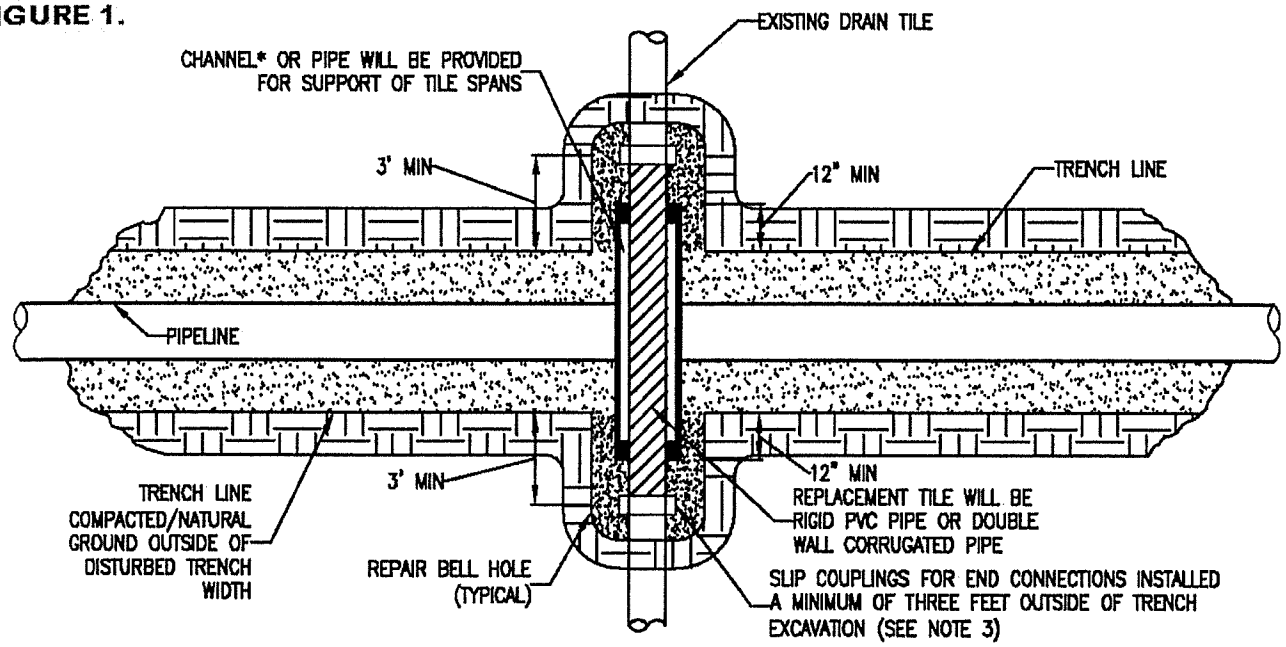
In frozen conditions, final cleanup and restoration (including weed treatments where required, final grading, and seeding) will be deferred to the spring and summer. These activities will be conducted in accordance with the FERC Plan and Procedures and permit approvals.

Special measures will be implemented during final cleanup and restoration if subsidence is identified along the trench line. In areas where topsoil is stockpiled over the winter, the CWA will be re-graded prior to topsoil replacement. Additional subsoil will be placed over the trench line during grading to restore preconstruction contours to the extent practicable. If subsidence has occurred in areas where topsoil is replaced prior to the end of active construction (e.g., in wetlands or in areas where construction occurred during non-frozen conditions), the topsoil will be removed, and the CWA regraded as described above to restore preconstruction contours to the extent practicable.

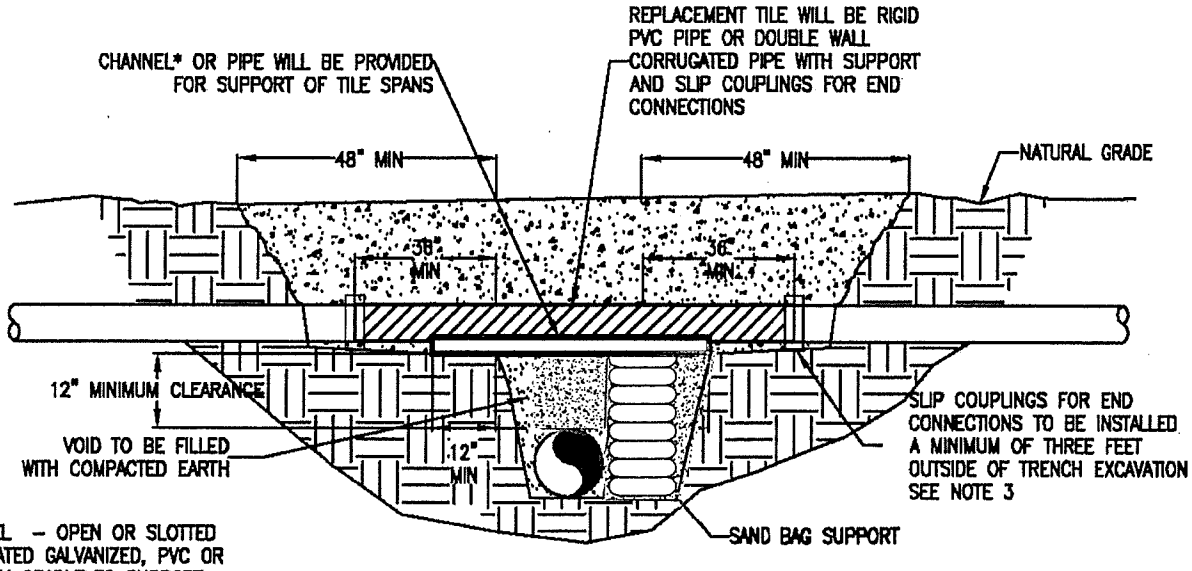
Attachment E

Drain Tile Repair Typical Figures

FIGURE 1.



PLAN
N.T.S.



*CHANNEL – OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE TO SUPPORT DRAIN TILE.

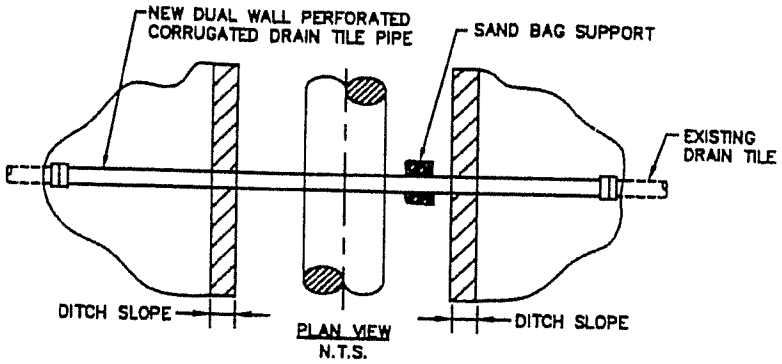
CROSS SECTION
N.T.S.

NOTE:

1. IMMEDIATELY REPAIR TILE IF WATER IS FLOWING THROUGH TILE AT TIME OF TRENCHING. IF NO WATER IS FLOWING AND TEMPORARY REPAIR IS DELAYED, OR NOT MADE BY THE END OF THE WORK DAY, A SCREEN OR APPROPRIATE 'NIGHT CAP' SHALL BE PLACED ON OPEN ENDS OF TILE TO PREVENT ENTRAPMENT OF ANIMALS ETC.
2. CHANNEL OR PIPE (OPEN OR SLOTTED) MADE OF CORRUGATED GALVANIZED PIPE, PVC OR ALUMINUM WILL BE USED FOR SUPPORT OF DRAIN TILE SPANS.
3. INDUSTRY STANDARDS SHALL BE FOLLOWED TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES.

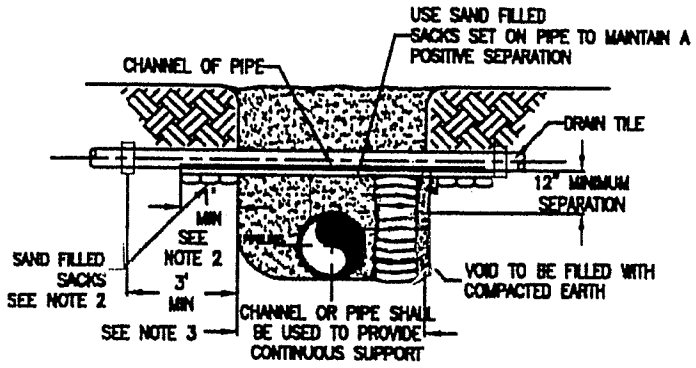
TEMPORARY DRAIN TILE REPAIR

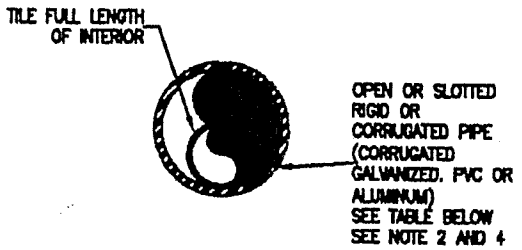
FIGURE 2.



PLAN VIEW
N.T.S.

PLAN VIEW





SECTION "A-A"
RIGID OR DOUBLE WALL CORRUGATED PIPE

END VIEWS

MINIMUM SUPPORT TABLE				
TILE SIZE	CHANNEL SIZE		PIPE SIZE	
3"	4" @ 5.4	#/ft	4"	STD. WT.
4"-5"	5" @ 6.7	#/ft	6"	STD. WT.
6"-9"	7" @ 9.8	#/ft	9"-10"	STD. WT.
10"	10" @ 15.3	#/ft	12"	STD. WT.

NOTE:

1. TILE REPAIR AND REPLACEMENT SHALL MAINTAIN ORIGINAL ALIGNMENT GRADIENT AND WATER FLOW TO THE GREATEST EXTENT POSSIBLE. IF THE TILE NEEDS TO BE RELOCATED, THE INSTALLATION ANGLE MAY VARY DUE TO SITE SPECIFIC CONDITIONS AND LANDOWNER RECOMMENDATIONS.

2. 1'-0" MINIMUM LENGTH OF CHANNEL OR RIGID PIPE (OPEN OR SLOTTED CORRUGATED GALVANIZED. PVC OR ALUMINUM CRADLE) SHALL BE SUPPORTED BY UNDISTURBED SOIL, OR IF CROSSING IS NOT AT RIGHT ANGLES TO PIPELINE, EQUIVALENT LENGTH PERPENDICULAR TO TRENCH. SHIM WITH SAND BAGS TO UNDISTURBED SOIL FOR SUPPORT AND DRAINAGE GRADIENT MAINTENANCE (TYPICAL BOTH SIDES).

3. DRAIN TILES WILL BE PERMANENTLY CONNECTED TO EXISTING DRAIN TILES A MINIMUM OF THREE FEET OUTSIDE OF EXCAVATED TRENCH LINE USING INDUSTRY STANDARDS TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES INCLUDING SLIP COUPLINGS.

4. DIAMETER OF RIGID PIPE SHALL BE OF ADEQUATE SIZE TO ALLOW FOR THE INSTALLATION OF THE TILE FOR THE FULL LENGTH OF THE RIGID PIPE.

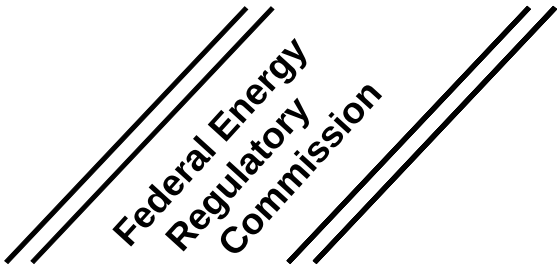
5. OTHER METHODS OF SUPPORTING DRAIN TILE MAY BE USED IF ALTERNATE PROPOSED IS EQUIVALENT IN STRENGTH TO THE CHANNEL/PIPE SECTIONS SHOWN AND IF APPROVED BY COMPANY REPRESENTATIVES AND LANDOWNER IN ADVANCE. SITE SPECIFIC ALTERNATE SUPPORT SYSTEM TO BE DEVELOPED BY COMPANY REPRESENTATIVES AND FURNISHED TO CONTRACTOR FOR SPANS IN EXCESS OF 20', TILE GREATER THEN 10" DIAMETER, AND FOR "HEADER" SYSTEMS.

6. ALL MATERIAL TO BE FURNISHED BY CONTRACTOR.

7. PRIOR TO REPAIRING TILE, CONTRACTOR SHALL PROBE LATERALLY INTO THE EXISTING TILE TO FULL WIDTH OF THE RIGHTS OF WAY TO DETERMINE IF ADDITIONAL DAMAGE HAS OCCURRED. ALL DAMAGED/DISTURBED TILE SHALL BE REPAIRED AS NEAR AS PRACTICABLE TO ITS ORIGINAL OR BETTER CONDITION.

APPENDIX C: FERC UPLAND EROSION CONTROL, REVEGETATION AND MAINTENANCE PLAN

See attachment on the next page



Office of
Energy Projects

May 2013

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

Washington, DC 20426

MAY 2013 VERSION

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

TABLE OF CONTENTS

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN (PLAN)

I. APPLICABILITY

A. The intent of this Plan is to assist project sponsors by identifying baseline mitigation measures for minimizing erosion and enhancing revegetation. Project sponsors shall specify in their applications for a new FERC authorization and in prior notice and advance notice filings, any individual measures in this Plan they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is authorized, project sponsors can request further changes as variances to the measures in this Plan (or the applicant's approved plan). The Director of the Office of Energy Projects (Director) will consider approval of variances upon the project sponsor's written request, if the Director agrees that a variance:

1. provides equal or better environmental protection;

2. is necessary because a portion of this Plan is infeasible or unworkable based on project-specific conditions; or

3. is specifically required in writing by another federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Sponsors of projects planned for construction under the automatic authorization provisions in the FERC's regulations must receive written approval for any variances in advance of construction.

Project-related impacts on wetland and waterbody systems are addressed in the staff's Wetland and Waterbody Construction and Mitigation Procedures (Procedures).

II. SUPERVISION AND INSPECTION

A. ENVIRONMENTAL INSPECTION

1. At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.

2. Environmental Inspectors shall have peer status with all other activity inspectors.

3. Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.

B. RESPONSIBILITIES OF ENVIRONMENTAL INSPECTORS

At a minimum, the Environmental Inspector(s) shall be responsible for:

1. Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.

2. Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;

3. Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;

4. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;

5. Identifying erosion/sediment control and soil stabilization needs in all areas;

6. Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;

7. Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;

8. Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action;

9. Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;

10. Ensuring restoration of contours and topsoil;

11. Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;

12. Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;

13. Inspecting and ensuring the maintenance of temporary erosion control measures at least:

    a. on a daily basis in areas of active construction or equipment operation;

    b. on a weekly basis in areas with no construction or equipment operation; and

    c. within 24 hours of each 0.5 inch of rainfall;

14. Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;

15. Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;

16. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and

17. Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.

III. PRECONSTRUCTION PLANNING

The project sponsor shall do the following before construction:

A. CONSTRUCTION WORK AREAS

1. Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.

2. Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.

3. Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.

B. DRAIN TILE AND IRRIGATION SYSTEMS

1. Attempt to locate existing drain tiles and irrigation systems.

2. Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.

3. Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.

4. Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.

C. GRAZING DEFERMENT

Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.

D. ROAD CROSSINGS AND ACCESS POINTS

Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.

E. DISPOSAL PLANNING

Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.

F. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in this Plan and/or required by the FERC's Orders.

1. Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.

2. Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.

3. Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.

4. Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.

G. SPILL PREVENTION AND RESPONSE PROCEDURES

The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

H. RESIDENTIAL CONSTRUCTION

For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.

I. WINTER CONSTRUCTION PLANS

If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

The plan shall address:

1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping);

2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and

3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).

IV. INSTALLATION

A. APPROVED AREAS OF DISTURBANCE

1. Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.

2. The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists.

   Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports:

   a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas;

   b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and

c. a statement that landowner approval has been obtained and is available in project files.

Prior written approval of the Director is required when the authorized construction right-of-way width would be expanded by more than 25 feet.

B. TOPSOIL SEGREGATION

1. Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in:

   a. cultivated or rotated croplands, and managed pastures;

   b. residential areas;

   c. hayfields; and

   d. other areas at the landowner's or land managing agency's request.

2. In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.

3. Where topsoil segregation is required, the project sponsor must:

   a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and

   b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.

4. Maintain separation of salvaged topsoil and subsoil throughout all construction activities.

5. Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.

6. Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.

C. DRAIN TILES

1. Mark locations of drain tiles damaged during construction.

2. Probe all drainage tile systems within the area of disturbance to check for damage.

3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs.

4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).

D. IRRIGATION

Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.

E. ROAD CROSSINGS AND ACCESS POINTS

1. Maintain safe and accessible conditions at all road crossings and access points during construction.

2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal.

3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.

F. TEMPORARY EROSION CONTROL

Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.

1. Temporary Slope Breakers

   a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope

breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.

b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary):

Slope (%)	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.

d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.

2. Temporary Trench Plugs

Temporary trench plugs are intended to segment a continuous open trench prior to backfill.

a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent.

b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.

3. Sediment Barriers

Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources.

a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials.

b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.

c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.

4. Mulch

a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.

b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.

c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if:

(1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or

(2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.

d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.

e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).

f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.

g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization.

h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.

V. RESTORATION

A. CLEANUP

1. Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup.

   If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

2. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.

3. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.

4. Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.

5. Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.

6. Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.

7. Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.

B. PERMANENT EROSION CONTROL DEVICES

1. Trench Breakers

a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers.

b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers.

c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.

d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.

2. Permanent Slope Breakers

a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent.

b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency.

In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:

Slope (%)	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.

d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.

C. SOIL COMPACTION MITIGATION

1. Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.

2. Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.

If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.

3. Perform appropriate soil compaction mitigation in severely compacted residential areas.

D. REVEGETATION

1. General

a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.

b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.

2. Soil Additives

Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.

3. Seeding Requirements

a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.

b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner.

c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary

seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner.

d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.

e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.

f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).

g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.

Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.

VI. OFF-ROAD VEHICLE CONTROL

To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include:

A. signs;

B. fences with locking gates;

C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and

D. conifers or other appropriate trees or shrubs across the right-of-way.

VII. POST-CONSTRUCTION ACTIVITIES AND REPORTING

A. MONITORING AND MAINTENANCE

1. Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.

2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise.

   Continue revegetation efforts until revegetation is successful.

3. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.

4. Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.

5. Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.

6. Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.

B. REPORTING

1. The project sponsor shall maintain records that identify by milepost:

   a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used;

   b. acreage treated;

   c. dates of backfilling and seeding;

   d. names of landowners requesting special seeding treatment and a description of the follow-up actions;

   e. the location of any subsurface drainage repairs or improvements made during restoration; and

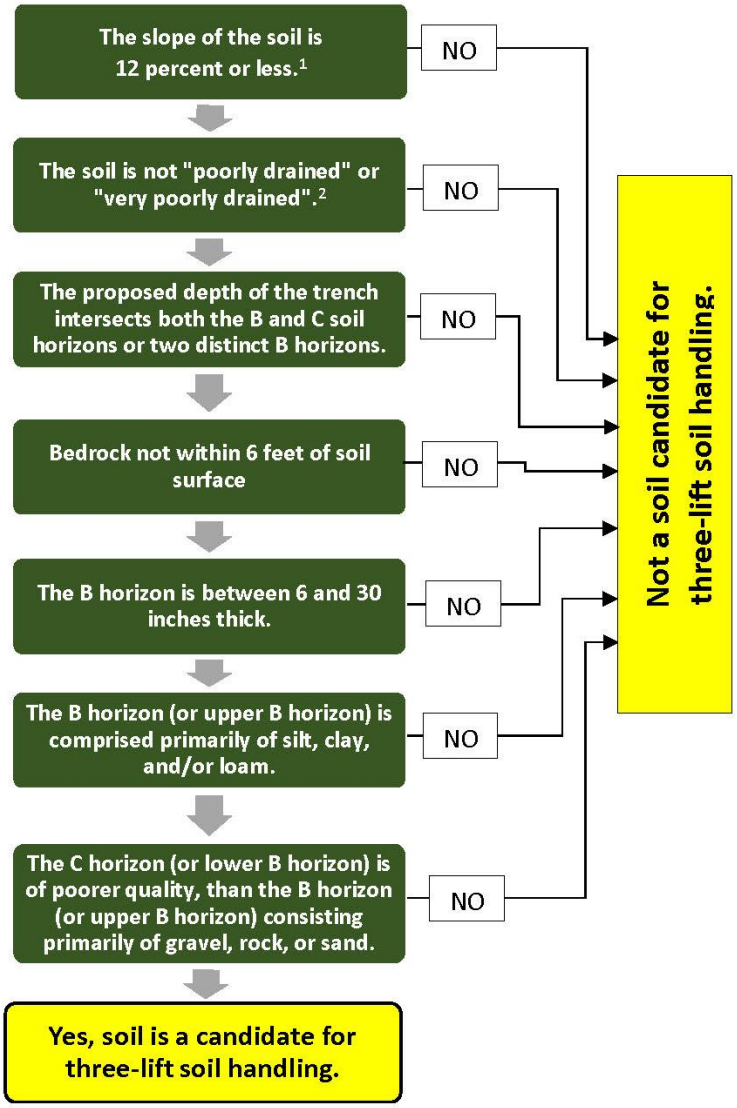
   f. any problem areas and how they were addressed.

2. The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction.

   The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.

APPENDIX D: THREE-LIFT SOIL CANDIDATE KEY

This key is applicable to soil profiles with distinct B and C horizons or alternatively to soil profiles with distinct upper and lower B horizons.



1. Soils with a slope greater than 12 percent are Class IV soils, likely to be eroded with shallow topsoil, and marginally suited for crop production. As such, they are unlikely to meet the criteria for soils that would benefit from three-lift soil handling.
2. Poorly drained soils tend to be too wet to use three-lift soil handling successfully. They are also likely to be deep soils.

APPENDIX E: APPRAISAL AND COMPENSATION PROCESS

The acquisition of land by entities including but not limited to departments, municipalities, boards, commissions, public officers, and business with eminent domain authority in Wisconsin, is stipulated under Wis. Stat. §32.06. If the entity (the condemnor) actualizes their powers of eminent domain by exercising condemnation, the condemnor shall first provide an appraisal of the affected property to each landowner prior to the start of land acquisition negotiations. An appraisal is an estimate of fair market value, additional information about the appraisal process and landowners rights can be found in the Wisconsin Department of Administration publication, "The Rights of Landowners under Wisconsin Eminent Domain Law," also listed in Appendix E.

The condemnor may conduct a market study to determine current area property values of affected property. If the landowner signs an appraisal waiver form, the market study will be the basis for the condemnor's offer of compensation and no individual property appraisal will be conducted. The condemnor may also offer additional compensation to landowners who choose to sign the appraisal waiver form.

Landowners have the right to obtain their own appraisal of their property under Wisconsin's eminent domain law (Wis. Stat. §32.06) and will be compensated for the cost of this appraisal if the following conditions are met:

- The appraisal must be submitted to the condemnor or its designated real estate contractor within 60 days after the landowner receives the initial appraisal
- The appraisal fee must be reasonable
- The appraisal must be a full, narrative appraisal
- The appraisal must be completed by a qualified appraiser

Through the process of condemnation, a jurisdictional offer made to the landowner in accordance with Wis. Stat. §32.06(3) will include an appraisal of the fair market value for the land acquisition or easement and any anticipated damages to the property. The fair market value means the price that a willing buyer would pay to a willing seller in the market. This will be based on at least one full narrative appraisal for each property the condemnor intends to acquire. The appraisal must be presented to the landowner. The amount of compensation is based on the appraisal(s) and is established during the negotiation process between condemnor and the individual landowners.

The condemnor is required to provide landowners with information about their rights in this process before negotiations begin. Wis. Stat. § 32.035(4)(d) additionally stipulates that if the condemnor actualizes their condemnation authority, the condemnor cannot negotiate with a landowner or make a jurisdictional offer until 30 days after the AIS is published.

APPENDIX F: WISCONSIN STATUTES

The Department of Agriculture, Trade and Consumer Protection (the Department) is required to prepare an AIS whenever more than five acres of land from at least one farm operation will be acquired for a public project if the agency/company acquiring the land has the authority to use eminent domain for property acquisitions. The Department has the option to prepare an AIS for projects affecting five or fewer acres from each farm if the proposed project would have significant effects on a farm operation. The entity proposing a Project is required to provide the Department with the necessary details of the project so that the potential impacts and effects of the project on farm operations can be analyzed. DATCP has 60 days to make recommendations and prepare the AIS. DATCP shall publish the AIS upon receipt of the fee required to prepare the AIS. The Department provides the AIS to affected farmland owners, various state and local officials, local media and libraries, and any other individual or group who requests a copy. Thirty days after the date of publication, the ANR may begin negotiating with the landowner(s) for the property.

I. AGRICULTURAL IMPACT STATEMENT STATUTE

Wisconsin Statute § 32.035 is provided below and describes the Wisconsin Agricultural Impact Statement procedure and content.

(1) DEFINITIONS. In this section:

(a) "Department" means department of agriculture, trade, and consumer protection.

(b) "Farm operation" means any activity conducted solely or primarily for the production of one or more agricultural commodities resulting from an agricultural use, as defined in s. 91.01 (2), for sale and home use, and customarily producing the commodities in sufficient quantity to be capable of contributing materially to the operator's support.

(2) EXCEPTION. This section shall not apply if an environmental impact statement under s. 1.11 is prepared for the proposed project and if the department submits the information required under this section as part of such statement or if the condemnation is for an easement for the purpose of constructing or operating an electric transmission line, except a high voltage transmission line as defined in s. 196.491(1) (f).

(3) PROCEDURE. The condemnor shall notify the department of any project involving the actual or potential exercise of the powers of eminent domain affecting a farm operation. If the condemnor is the department of natural

resources, the notice required by this subsection shall be given at the time that permission of the senate and assembly committees on natural resources is sought under s. 23.09(2)(d) or 27.01(2)(a). To prepare an agricultural impact statement under this section, the department may require the condemnor to compile and submit information about an affected farm operation. The department shall charge the condemnor a fee approximating the actual costs of preparing the statement. The department may not publish the statement if the fee is not paid.

(4) IMPACT STATEMENT.

(a) *When an impact statement is required*; *permitted*. The department shall prepare an agricultural impact statement for each project, except a project under Ch. 82 or a project located entirely within the boundaries of a city or village, if the project involves the actual or potential exercise of the powers of eminent domain and if any interest in more than 5 acres from any farm operation may be taken. The department may prepare an agricultural impact statement on a project located entirely within the boundaries of a city or village or involving any interest in 5 or fewer acres of any farm operation if the condemnation would have a significant effect on any farm operation as a whole.

(b) *Contents*. The agricultural impact statement shall include:

1. A list of the acreage and description of all land lost to agricultural production and all other land with reduced productive capacity, whether or not the land is taken.

2. The department's analyses, conclusions, and recommendations concerning the agricultural impact of the project.

(c) *Preparation time; publicatio*n. The department shall prepare the impact statement within 60 days of receiving the information requested from the condemnor under sub. (3). The department shall publish the statement upon receipt of the fee required under sub. (3).

(d) *Waiting period*. The condemnor may not negotiate with an owner or make a jurisdictional offer under this subchapter until 30 days after the impact statement is published.

(5) PUBLICATION. Upon completing the impact statement, the department shall distribute the impact statement to the following:

(a) The governor's office.

(b) The senate and assembly committees on agriculture and transportation.

(c) All local and regional units of government that have jurisdiction over the area affected by the project. The department shall request that each unit post the statement at the place normally used for public notice.

(d) Local and regional news media in the area affected.

(e) Public libraries in the area affected.

(f) Any individual, group, club, or committee that has demonstrated an interest and has requested receipt of such information.

(g) The condemnor.

II. Statutes Governing Eminent Domain

The details governing eminent domain as it relates to WisDOT projects are included in Wis. Stat. Ch. 32 (http://docs.legis.wisconsin.gov/statutes/statutes/32.pdf).

The Department recommends that farmland owners concerned about eminent domain powers and the acquisition of land should review this statute in its entirety. Landowners may also wish to consult with an attorney who should have expertise in eminent domain proceedings. In addition, any Wisconsin licensed appraiser that landowners employ regarding a project where eminent domain could be used should be knowledgeable in partial takings.

***Section 32.09 of the* Wisconsin Statutes describes the compensation provided for property acquisition and certain damages:**

(6) In the case of a partial taking of property other than an easement, the compensation to be paid by the condemnor shall be the greater of either the fair market value of the property taken as of the date of evaluation or the sum determined by deducting from the fair market value of the whole property immediately before the date of evaluation, the fair market value of the remainder immediately after the date of evaluation, assuming the completion of the public improvement and giving effect, without allowance of offset for general benefits, and without restriction because of enumeration but without duplication, to the following items of loss or damage to the property where shown to exist:

(a) Loss of land including improvements and fixtures actually taken.

(b) Deprivation or restriction of existing right of access to highway from abutting land, provided that nothing herein shall operate to restrict the power of the state or any of its

subdivisions or any municipality to deprive or restrict such access without compensation under any duly authorized exercise of the police power.

(c) Loss of air rights.

(d) Loss of a legal nonconforming use.

(e) Damages resulting from actual severance of land including damages resulting from severance of improvements or fixtures and proximity damage to improvements remaining on condemnee's land. In determining severance damages under this paragraph, the condemnor may consider damages which may arise during construction of the public improvement, including damages from noise, dirt, temporary interference with vehicular or pedestrian access to the property and limitations on use of the property. The condemnor may also consider costs of extra travel made necessary by the public improvement based on the increased distance after construction of the public improvement necessary to reach any point on the property from any other point on the property.

(f) Damages to property abutting on a highway right of way due to change of grade where accompanied by a taking of land.

(g) Cost of fencing reasonably necessary to separate land taken from remainder of condemnee's land, less the amount allowed for fencing taken under par. (a), but no such damage shall be allowed where the public improvement includes fencing of right of way without cost to abutting lands.

Section 32.19 of the *Wisconsin Statutes* outlines payments to be made to displaced tenant occupied businesses and farm operations.

(4m) BUSINESS OR FARM REPLACEMENT PAYMENT. **(a)** Owner-occupied business or farm operation. In addition to amounts otherwise authorized by this subchapter, the condemnor shall make a payment, not to exceed $50,000, to any owner displaced person who has owned and occupied the business operation, or owned the farm operation, for not less than one year prior to the initiation of negotiations for the acquisition of the real property on which the business or farm operation lies, and who actually purchases a comparable replacement business or farm operation for the acquired property within two years after the date the person vacates the acquired property or receives payment from the condemnor, whichever is later. An owner displaced person who has owned and occupied the business operation, or owned the farm operation, for not less than one year prior to the initiation of negotiations for the acquisition of the real property on which the business or farm operation lies may elect to receive the payment under par. (b) 1. in lieu of the payment under this paragraph, but the amount of payment under par. (b) 1. to such an owner displaced person may not exceed the amount the owner displaced person is eligible to

receive under this paragraph. The additional payment under this paragraph shall include the following amounts:

1. The amount, if any, which when added to the acquisition cost of the property, other than any dwelling on the property, equals the reasonable cost of a comparable replacement business or farm operation for the acquired property, as determined by the condemnor.

2. The amount, if any, which will compensate such owner displaced person for any increased interest and other debt service costs which such person is required to pay for financing the acquisitions of any replacement property, if the property acquired was encumbered by a bona fide mortgage or land contract which was a valid lien on the property for at least one year prior to the initiation of negotiations for its acquisition. The amount under this subdivision shall be determined according to rules promulgated by the department of administration.

3. Reasonable expenses incurred by the displaced person for evidence of title, recording fees and other closing costs incident to the purchase of the replacement property, but not including prepaid expenses.

4. Any reasonable project costs incurred or to be incurred by the displaced person.

(b) Tenant-occupied business or farm operation. In addition to amounts otherwise authorized by this subchapter, the condemnor shall make a payment to any tenant displaced person who has owned and occupied the business operation, or owned the farm operation, for not less than one year prior to initiation of negotiations for the acquisition of the real property on which the business or operation lies or, if displacement is not a direct result of acquisition, such other event as determined by the department of commerce, and who actually rents or purchases a comparable replacement business or farm operation within 2 years after the date the person vacates the property. At the option of the tenant displaced person, such payment shall be either:

1. The amount, not to exceed $30,000, which is necessary to lease or rent a comparable replacement business or farm operation for a period of 4 years. The payment shall be computed by determining the average monthly rent paid for the property from which the person was displaced for the 12 months prior to the initiation of negotiations or, if displacement is not a direct result of acquisition, such other event as determined by the department of administration and the monthly rent of a comparable replacement business or farm operation and multiply the difference by 48; or

2. If the tenant displaced person elects to purchase a comparable replacement business or farm operation, the amount determined under subd. 1 plus expenses under par. (a) 3.

(5) EMINENT DOMAIN. Nothing in this section or ss. 32.25 to 32.27 shall be construed as creating in any condemnation proceedings brought under the power of eminent domain, any element of damages.

Section 32.25 of the *Wisconsin Statutes* delineates steps to be followed when displacing persons, businesses, and farm operations.

(1) Except as provided under sub.(3) and s. 85.09 (4m), no condemnor may proceed with any activity that may involve the displacement of persons, business concerns or farm operations until the condemnor has filed in writing a relocation payment plan and relocation assistance service plan and has had both plans approved in writing by the department of administration.

(2) The relocation assistance service plan shall contain evidence that the condemnor has taken reasonable and appropriate steps to:

(a) Determine the cost of any relocation payments and services or the methods that are going to be used to determine such costs.

(b) Assist owners of displaced business concerns and farm operations in obtaining and becoming established in suitable business locations or replacement farms.

(c) Assist displaced owners or renters in the location of comparable dwellings.

(d) Supply information concerning programs of federal, state and local governments which offer assistance to displaced persons and business concerns.

(e) Assist in minimizing hardships to displaced persons in adjusting to relocation.

(f) Secure, to the greatest extent practicable, the coordination of relocation activities with other project activities and other planned or proposed governmental actions in the community or nearby areas which may affect the implementation of the relocation program.

(g) Determine the approximate number of persons, farms or businesses that will be displaced and the availability of decent, safe and sanitary replacement housing.

(h) Assure that, within a reasonable time prior to displacement, there will be available, to the extent that may reasonably be accomplished, housing meeting the standards established by the department of administration for decent, safe and sanitary dwellings. The housing, so far as practicable, shall be in areas not generally less desirable in regard to public utilities, public and commercial facilities and at rents or prices within the financial means of the families and individuals displaced and equal in number to the number of such displaced families or individuals and reasonably accessible to their places of employment.

(i) Assure that a person shall not be required to move from a dwelling unless the person has had a reasonable opportunity to relocate to a comparable dwelling.

(3) (a) Subsection (1) does not apply to any of the following activities engaged in by a condemnor:

1. Obtaining an appraisal of property.

2. Obtaining an option to purchase property, regardless of whether the option specifies the purchase price, if the property is not part of a program or project receiving federal financial assistance.

III. Statutes Governing Access

Section 86.05 of the *Wisconsin Statutes* states that access shall be provided to land which abuts a highway:

Entrances to highway restored. Whenever it is necessary, in making any highway improvement to cut or fill or otherwise grade the highway in front of any entrance to abutting premises, a suitable entrance to the premises shall be constructed as a part of the improvements, and if the premises are divided by the highway, then one such entrance shall be constructed on each side of the highway. Thereafter, each entrance shall be maintained by the owner of the premises. During the time the highway is under construction, the state, county, city, village or town shall not be responsible for any damage that may be sustained through the absence of an entrance to any such premises.

Section 84.25 of the *Wisconsin Statutes* describes access restrictions concerning a controlled-access highway.

(3) CONSTRUCTION; OTHER POWERS OF DEPARTMENT. In order to provide for the public safety, convenience and the general welfare, the department may use an existing highway or provide new and additional facilities for a controlled-access highway and so design the same and its appurtenances, and so regulate, restrict or prohibit access to or departure from it as the department deems necessary or desirable. The department may eliminate intersections at grade of controlled-access highways with existing highways or streets, by grade separation or service road, or by closing off such roads and streets at the right-of-way boundary line of such controlled-access highway and may divide and separate any controlled-access highway into separate roadways or lanes by raised curbings, dividing sections or other physical separations or by signs, markers, stripes or other suitable devices, and may execute any construction necessary in the development of a controlled-access highway including service roads or separation of grade structures.

(4) CONNECTIONS BY OTHER HIGHWAYS. After the establishment of any controlled-access highway, no street or highway or private driveway, shall be opened into or connected with any controlled-access highway without the previous consent and approval of the department in writing, which shall be given only if the public interest shall be served thereby and shall specify the terms and conditions on which such consent and approval is given.

(5) USE OF HIGHWAY. No person shall have any right of entrance upon or departure from or travel across any controlled-access highway, or to or from abutting lands except at places designated and provided for such purposes, and on such terms and conditions as may be specified from time to time by the department.

(6) ABUTTING OWNERS. After the designation of a controlled-access highway, the owners or occupants of abutting lands shall have no right or easement of access, by reason of the fact that their property abuts on the controlled-access highway or for other reason, except only the controlled right of access and of light, air or view.

(7) SPECIAL CROSSING PERMITS. Whenever property held under one ownership is severed by a controlled-access highway, the department may permit a crossing at a designated location, to be used solely for travel between the severed parcels, and such use shall cease if such parcels pass into separate ownership.

IV. Statutes Governing Drainage

Section 88.87(2) of the *Wisconsin Statutes* describes regulations concerning rights of drainage:

> (a) Whenever any county, town, city, village, railroad company or the department of transportation has heretofore constructed and now maintains or hereafter constructs and maintains any highway or railroad grade in or across any marsh, lowland, natural depression, natural watercourse, natural or man-made channel or drainage course, it shall not impede the general flow of surface water or stream water in any unreasonable manner so as to cause either an unnecessary accumulation of waters flooding or water-soaking uplands or an unreasonable accumulation and discharge of surface water flooding or water-soaking lowlands. All such highways and railroad grades shall be constructed with adequate ditches, culverts, and other facilities as may be feasible, consonant with sound engineering practices, to the end of maintaining as far as practicable the original flow lines of drainage. This paragraph does not apply to highways or railroad grades used to hold and retain water for cranberry or conservation management purposes.
>
> (b) Drainage rights and easements may be purchased or condemned by the public authority or railroad company having control of the highway or railroad grade to aid in the

prevention of damage to property owners which might otherwise occur as a result of failure to comply with par. (a).

(c) If a city, village, town, county, or railroad company or the department of transportation constructs and maintains a highway or railroad grade not in accordance with par. (a), any property owner damaged by the highway or railroad grade may, within 3 years after the alleged damage occurred, file a claim with the appropriate governmental agency or railroad company. The claim shall consist of a sworn statement of the alleged faulty construction and a description, sufficient to determine the location of the lands, of the lands alleged to have been damaged by flooding or water-soaking. Within 90 days after the filing of that claim, the governmental agency or railroad company shall either correct the cause of the water damage, acquire rights to use the land for drainage or overflow purposes, or deny the claim. If the agency or company denies the claim or fails to take any action within 90 days after the filing of the claim, the property owner may bring an action in inverse condemnation under ch. 32 or sue for such other relief, other than damages, as may be just and equitable.

WisDOT specification 205.3.3 further describes its policies concerning drainage:

(1) During construction, maintain roadway, ditches, and channels in a well-drained condition at all times by keeping the excavation areas and embankments sloped to the approximate section of the ultimate earth grade. Perform blading or leveling operations when placing embankments and during the process of excavation except if the excavation is in ledge rock or areas where leveling is not practical or necessary. If it is necessary in the prosecution of the work to interrupt existing surface drainage, sewers, or under drainage, provide temporary drainage until completing permanent drainage work.

(2) If storing salvaged topsoil on the right-of-way during construction operations, stockpile it to preclude interference with or obstruction of surface drainage.

(3) Seal subgrade surfaces as specified for subgrade intermediate consolidation and trimming in 207.3.9.

(4) Preserve, protect, and maintain all existing tile drains, sewers, and other subsurface drains, or parts thereof that the engineer judges should continue in service without change. Repair, at no expense to the department, all damage to these facilities resulting from negligence or carelessness of the contractor's operations.

APPENDIX G: ADDITIONAL INFORMATION SOURCES

Wisconsin State Statutes

- Wisconsin Statute Chapter 91: Farmland Preservation
  - Subchapter 91.46(4): Conditional Uses
- Wisconsin Statute Chapter 32: Eminent Domain
  - Subchapter 32.035: Agricultural Impact Statement

Department of Agriculture, Trade and Consumer Protection Website Links

- DATCP (datcp.wi.gov)
- Farmland Preservation
- Agricultural Impact Statements
- Wisconsin Farm Center (Information on services provided to Wisconsin farmers including financial mediation, stray voltage, legal, vocational, and farm transfers)
- Drainage Districts

Department of Administration (DOA) Website Links

- DOA (doa.wi.gov)
- Relocation Assistance (Publications on landowner rights under Wisconsin's eminent domain law)
- Wisconsin Relocation Rights Residential
- Wisconsin Relocation Rights for Businesses, Farm and Nonprofit Organizations
- The Rights of Landowners under Wisconsin Eminent Domain Law, Procedures under sec. 32.06 Wis. Stats. (Condemnation procedures in matters other than highways, streets, storm & sanitary sewers, watercourses, alleys, airports and mass transit facilities)

Department of Natural Resources (facility plan) Website Links

- DNR (dnr.wi.gov)
- Managed Forest Law

U.S. Department of Agriculture (USDA)

- USDA (usda.gov)
- National Agricultural Statistics Service
- Web Soil Survey
- Soil Quality – Urban Technical Note No. 1, Erosion and Sedimentation on Construction Sites

Wisconsin Department of Safety and Professional Services (DSPS)

- DSPS (dsps.wi.gov)
- Real Estate Appraisers (Look-up for state certification status of different types of real estate appraisers)

State Bar of Wisconsin

- State Bar of Wisconsin (www.wisbar.org)
- For general legal information and assistance in finding a lawyer

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

DIVISION OF

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