US Army Corps of Engineers
St Paul District

APPLICANT: **Enbridge Energy, Limited Partnership**

Public Notice

ISSUED: September 21, 2015
EXPIRES: October 20, 2015

REFER TO: 2014-00914-RMG **SECTION:404 - Clean Water Act**

1. APPLICATION FOR PERMIT TO temporarily discharge fill material into approximately 103.2 acres of wetlands, permanently discharge fill material into 0.2 acres of wetlands, and cross 24 waterways to replace 14 miles of Line 3 (Segment 18) in Wisconsin. Approximately 21.2 acres of wooded wetlands would be permanently converted to an herbaceous wetland cover type. See enclosed drawings 2014-00914-RMG, pages 1 through 41.

2. SPECIFIC INFORMATION.

APPLICANT'S ADDRESS: 1409 Hammond Avenue, 2nd Floor, Superior, WI 54880

AGENT: Fredrickson and Byron, PA AGENT'S ADDRESS: 200 South 6th Street, Suite 4000, Minneapolis, MN 55402

PROJECT LOCATION: The project route for Segment 18 begins just east of the Wisconsin/Minnesota border along the existing pipeline corridor, and runs approximately 14 miles east-northeast to the existing Superior Terminal (see enclosed drawing 2014-00914-RMG, page 1). The project crosses the following townships, ranges, and sections in Douglas County, Wisconsin:

Legal Descriptions the Proposed Project Crosses		
Township	Range	Sections
48N	14W	2, 8, 9, 10, 11, 16, 17, 18, 19, 20
48N	15W	24, 25, 26, 27, 31, 32, 33, 34
49N	14W	35, 36

PROJECT BACKGROUND: The whole of the existing Line 3 is a 34-inch outside diameter, 1,097-mile long pipeline that extends from Alberta, Canada to Superior, Wisconsin. Construction of Line 3 began in 1962 as parallel loops to Enbridge's Line 2 pipeline to create additional capacity. Enbridge constructed additional loops annually until a continuous 34-inch line was completed, referred to as Line 3, and then separated from Line 2 in 1969. The types of crude oil transported on Line 3 have varied significantly over its many years of operation based on type of crude produced, shipper demand, and system operations. When Enbridge originally placed the line into service, it transported only light crude oil, but has been used to transport medium and heavy crudes as well. The line is physically designed to transport all grades of crude oil, and the type of crude oil transported in the future upon replacement will be based on shipper demand.

The annual average capacity of Line 3 has likewise varied greatly over its years of operation. Since it began operating in the late 1960s, the annual average capacity of the line has varied between a low of 390 thousand barrels per day (kbpd), which is the current operating capacity of the line, and a much higher capacity. The capacity is highly dependent on the type of crude oil transported through the line

and the presence or absence of safety-related pressure restrictions on the pipeline. The annual average capacity resulting from full implementation of Line 3 is expected to be approximately 760 kbpd, assuming the pipeline will transport a mixture of heavy and light crude. At various times in the past, including when the Department of State issued the Presidential Permit in 1991 for the international border crossing, the line transported volumes of crude oil in the range of 760 kbpd.

Enbridge has gathered extensive integrity data on Line 3 throughout its years of operation. The integrity data shows a high number of integrity anomalies – specifically, corrosion and long seam cracking. Line 3 has also experienced a number of failures during its more than 50-year history. As a result, Line 3 requires a high level of integrity monitoring and an extensive ongoing integrity dig and repair program to maintain safe operation of the line. For example, Enbridge currently forecasts approximately 4,000 integrity digs in the U.S. alone for Line 3 over the next 15 years to maintain its current level of operation. This would result in year-after-year impacts to landowners and the environment, and would likely result in repeated impacts to the same landowners and environmental features.

Moreover, while Enbridge could continue to operate Line 3 through the current maintenance plan, the integrity repair program will not restore the operating capability of the line. Due to the extent of the integrity digs forecasted, as well as the associated impacts of ongoing integrity digs on landowners and the environment, the applicant has concluded that the replacement of Line 3 is the optimal solution to restore Line 3 to its historical operating capabilities.

DESCRIPTION OF THE APPLICANTS PROPOSED PROJECT: This project would replace 14 miles of the existing 34-inch Line 3, Segment 18 pipeline with a new 36-inch pipeline from the Minnesota/Wisconsin border to Superior, Wisconsin. The applicant identified Segment 18 of Line 3 as a priority for replacement based on the predicted frequency of maintenance activities. Assuming all upstream Line 3 pipe is eventually replaced, the proposed project will also restore operational capabilities and flexibility that will allow the applicant to more efficiently operate the Enbridge mainline system, and optimize its pipeline system.

The applicant has proposed to generally follow and widen the existing pipeline corridor, with three exceptions: A1, B1, and C1 (see drawing 2014-00914-RMG, page 2). Alternative A1 would avoid crossing the Pokegama-Carnegie State Natural Area (SNA). Alternative B1 is preferred by the applicant to avoid legal issues associated with a landowner along the B2 alternative. Alternative C1 is shorter than Alternative C2, and would cross less greenfield land, forest land, and wetlands. Alternative C1 would affect the operation of the Nemadji Golf Course during contruction and restoration. Additional information regarding alternatives A2, B2, and C2 are addressed in the Project Alternatives section below.

The applicant proposes to construct an interconnection in Wisconsin (see drawing 2014-00914-RMG, page 3) between the existing Line 3 pipeline and the new replacement Line 3, Segment 18 pipeline. The applicant proposes to shut down the existing Line 3 pipeline and make a physical connection to the upstream pipeline just east of the state border after the replacement pipeline to Superior is installed. The physical connection will remain in place until the Minnesota portions of the upstream Line 3 replacement are complete.

Operations - Regulatory (2014-00914-RMG)
SUBJECT: Enbridge Energy, Line 3 replacement in Wisconsin

Enbridge will remove the existing Wisconsin portion of Line 3, Segment 18 from active service once the new Segment 18 line goes into service. Enbridge may re-use the old pipeline segment for a short period of time in 2018 when upstream replacement is completed in order to assist in purging and cleaning the oil from the old upstream pipeline segment on its way to tankage at Enbridge's Superior, Wisconsin Terminal. At this time, Enbridge has not identified any work in waters of the United States associated with permanently removing the existing pipeline from service in Wisconsin.

Subject to receipt of required regulatory approvals and permit authorizations, Enbridge proposes to begin construction of the Segment 18 project as early as April 2016. The applicant anticipates Segment 18 mainline pipeline replacement (not including restoration activities in accordance with environmental permitting and as specified in landowner's easements) to be substantially complete by September 2016 with an in-service date of November 2016.

PROJECT ALTERNATIVES: The following alternatives were considered and not selected as preferred by the applicant:

1. Spot replacements: If Line 3, Segment 18 is not replaced, Enbridge would continue to conduct maintenance and integrity digs as needed to safely operate Segment 18 in Wisconsin. The increasing frequency of integrity digs forecasted to maintain Line 3 over the next several years would result in ongoing, year-after-year impacts to landowners and the environment along the existing Line 3.

   Since 2010, Enbridge completed 50 maintenance digs on Line 3 between the Minnesota/Wisconsin border and Superior, Wisconsin. Maintenance digs typically require a work area up to approximately 160 feet long, 75 feet wide, and excavation of 10 feet around the pipeline. The length of the access road to reach each dig site varies depending on proximity to the nearest public road. Enbridge then completes a direct examination and repairs the pipe as needed. The typical repair consists of welding a full encirclement sleeve around and re-coating the existing pipeline. This work typically takes seven to ten days to complete.

   Further, with voluntary pressure restrictions and potential for future outages during maintenance and repair activities, the existing Line 3 will not be able to provide the necessary transportation capacity to serve shipper demands, resulting in increased apportionment on the Enbridge Mainline System. Moreover, at some point continuing the dig and repair program would be impractical and economically infeasible, resulting in Enbridge taking Line 3 out of service, which would further reduce the available capacity and increase apportionment.

2. Same Trench Replacement: The scope of this replacement alternative involves the removal of Line 3 followed by the installation of a new 36-inch pipe in the same pipeline trench (same trench replacement). Line 3 is in the middle of the Enbridge Mainline System right-of-way, which is a multi-pipeline corridor containing six (6) crude oil pipelines (see drawing 2014-00914-RMG, page 4). This replacement alternative does provide an opportunity for Enbridge to use Line 3's existing pipeline right-of-way. However, Enbridge concluded that this alternative is not a viable replacement option due to the following issues:
   a. Increased Human and Environmental Impacts: Same trench construction would require additional time compared to the applicants preferred alternative, and would negatively impact landowners by the prolonged presence of construction crews and construction activity. Landowners would have limited or no access to the construction right-of-way for

the duration of construction. The extended construction operation would also result in more road use and increased traffic throughout the construction process.

b. Workspace Constraints: The same trench alternative may not reduce the overall workspace area required. Depending on the engineering specifications and environmental factors associated with the adjacent pipelines, such as depth of cover, pipe design, operating pressure, soil types, and ground conditions, Enbridge would need to protect the operating pipelines from damage through bridging, additional fill, and hardwood mats. The mitigation measures will require transportation and staging of additional matting or spoil. The applicant esti6mates this could require over 200 additional feet of temporary workspace along the right-of-way, which would increase the proposed wetland and waterway impacts.

c. Extended Open Trenches: The applicant prefers to limit the duration for an open trench to three days of welding production. Replacement in the current location may result in the trench being open for significantly longer than three days, due to in-place pipe removal and replacement. Changing weather conditions, such as frost and rain, can severely weaken the trench wall, increasing the likelihood of a trench caving-in. In the clay soils encountered in Wisconsin, rain will also fill the trench with water. Both circumstances prevent pipe installation. Trench cave-ins result in more time and activity to reconstruct the trench and install the pipe.

d. Safety Risks and Construction Challenges: Within the Enbridge Mainline Corridor, Segment 18 of Line 3 is located in the middle of the multi-pipeline right-of-way with actively operating pipelines located on both sides. Because replacement would take place between and near multiple operating pipelines, and within a very restricted workspace, there is an increased risk of damaging an operating pipeline through accidental contact with equipment, overloads on the surface above the pipelines, cave-ins and adjacent pipe movement due to the varying depths of cover, among other risks. Enbridge could mitigate some of these construction impacts by conducting them off the right-of-way, but increased right-of-way negates some of the anticipated benefit of same location replacement.

e. Increased Operational Impacts: Utilizing the same trench would require taking the existing Line 3, Segment 18 in Wisconsin out of service during removal of the existing pipeline and construction of the new pipeline. This means that Line 3 could be out of service for up to one year, which is not feasible from an Enbridge operational standpoint. Taking Line 3 out of service would significantly reduce the capacity available on the Enbridge Mainline System to meet the needs of shippers transporting crude oil from Western Canada.

3. Route Alternative A2 (see drawing 2014-00914-RMG, page 5): Alternative A2 follows the existing Enbridge corridor through the Pokegama-Carnegie SNA, a large wetland complex that Douglas County currently owns and manages. Although Alternative A1 has a greater wetland impact and contributes to additional forested fragmentation in the area, it avoids the SNA. For this reason, Enbridge prefers Alternative A1.

4. Route Alternative B2 (see drawing 2014-00914-RMG, page 6): Enbridge prepared Alternative B1 due to outstanding legal issues with a landowner. The legal issues include the rights and interests involved in particular real property that ascended to the Wisconsin State Supreme Court and are now on remand to the Circuit Court of Douglas County. Final resolution of the

legal issues is indeterminable at this time. Therefore, the applicant prefers Alternative B1 even though it results in crossing additional greenfield land.

5. Route Alternative C2 (see drawings 2014-00914-RMG, page 7): The applicant proposed route alternatives C1 and C2 due to the Nemadji Golf Course and a recently identified wetland conservation easement. Alternative C2 is longer, and would cross more greenfield land, forest land, and wetlands. Additionally, alternative C2 could affect land with an existing conservation easement which prohibits pipeline construction. Although Enbridge prefers Alternative C2, it did not incorporate it into the proposed Project due to the land use conflicts with the wetland conservation easement.

QUANTITY, TYPE, AND AREA OF FILL: The centerline of the Line 3, Segment 18 project as proposed, crosses 24 waterbodies (0.03 linear miles), including the Pokegama River and an unnamed tributary to the Pokegama River, Little Pokegama River and various unnamed streams and unnamed ditches (see drawings 2014-00914-RMG, pages 8 and 9). The affected waterbodies include perennial, intermittent and ephemeral rivers, streams and ditches. There are no Section 10 navigable waters, Section 303 (d) impaired waters, or cold water designated trout streams crossed by the project. However, several of the affected waterbodies have Wisconsin Area of Special Natural Resource Interest (ASNRI) designations. Proposed crossing methods (dry crossing and wet open cut) and alternative crossing methods (wet open cut, where applicable) are shown on drawings 2014-00914-RMG, pages 8 and 9 for each waterbody crossed. Construction timing for all waterbodies will avoid April 1- June 1.

Enbridge calculated the Project's permanent wetland conversion impacts using a typical 45- to 50-foot-wide new permanent right-of-way. The applicant cannot allow trees and shrubs to fully regenerate within the permanent maintained right-of-way. Therefore, the impacts on forested wetlands will be long-term and impacts within the permanent right-of-way will represent a conversion of forested wetlands to scrub-shrub or emergent wetlands. The applicant has proposed to minimize the fragmentation of habitat and land use by the co-location of the proposed Segment 18 replacement with existing pipelines and/or existing linear features, as much as possible rather than creating a new utility corridor.

Drawings 2014-00914-RMG, pages 10 through 14, are a list of wetlands Segment 18 is proposed to cross. Enbridge obtained data used to calculate impacts primarily from field-delineated wetland surveys. However, Enbridge used WWI and NHD digital data to calculate wetland impacts for two types of affected wetland tracts: 1) tracts where Enbridge did not have landowner permission to conduct surveys in 2013 and or in 2014; and 2) tracts where Enbridge reassessed and realigned the proposed replacement pipeline centerline and survey corridor after the 2014 field season ended. Additional field work addressing these areas has been completed in 2015 by the applicant and will be provided to the Corps for review in late September or October 2015.

Overall, the proposed project would result in temporary impacts to approximately 103.2 acres of wetland (replacement route and access impacts combined), and 0.2 acres of permanent wetland fill. Permanent impacts are proposed to occur within approximately 0.1 acre of palustrine forested wetland and 0.1 acre of palustrine scrub shrub wetland from installation and permanent access to a valve near MP 235.5. Of the 103.2 acres of temporary wetland impact, 21.4 acres of forested and shrub wetland

are anticipated to be permanently converted, the remaining 81.8 acres would be allowed to revegetate. With exception to the permanent fill noted above, Enbridge will restore impacted wetlands to preconstruction elevations and contours.
The following table provides a summary of project wetland impacts associated with the pipeline corridor and related appurtenances. Additional temporary impacts associated with corridor access are described afterward.

Summary of Wetland Types Affected Along the Proposed Replacement Route (acres)			
Wetland Type[a]	Temporary Impact[c]	Permanent Conversion[d]	Permanent Fill[e]
Palustrine Emergent	50.3	--	0.0
Palustrine Forested	--	12.2	0.1
Palustrine Scrub Shrub	17.2	17.2	--
Palustrine Scrub Shrub[b]	22.2	--	0.1
Palustrine Unconsolidated Bottom	0.5	--	--
Project Total[f]	**102.4**	**21.2**	**0.2**

a Cowardin et al, 1979.
b PSS impacts shown are only for the area within the temporary construction workspace where woody vegetation will be allowed to naturally regenerate.
c Includes the area of wetland impact within the construction workspace based typically on a 90-foot-wide workspace.
d Permanent conversion impacts include the area within the new permanent easement where the pipeline corridor will be maintained by periodic clearing activities.
e Permanent wetland fill is associated with a valve including permanent access to the valve near MP 235.5.
f The sum of addends may not total correctly due to rounding

Enbridge typically uses existing public and private roads to access the right-of-way and facilities to the extent practicable to limit impacts on waters of the U.S. However, Enbridge identified areas along the proposed project where new temporary access roads are necessary to access the construction workspace. There will be no loss of waters of the U.S. due to construction of new access roads for the proposed project because Enbridge will restore all affected wetlands to preconstruction conditions. This results in approximately 0.8 acres of temporary wetland impacts, broken down by community in the following table.

Summary of Access Road Wetland Impacts (Acres)			
Wetland Type[a]	Temporary Impact[b]	Permanent Conversion	Permanent Fill
Palustrine Emergent	0.6	--	--
Palustrine Forested	0.2	0.2	--
Palustrine Scrub Shrub	0.0	--	--
Project Total[c]	**0.8**	**0.2**	**0.0**

a Cowardin et al, 1979
b Acreage based on a 30-foot-wide roadway workspace
c The sum of addends may not total correctly due to rounding

Drawing 2014-00914-RMG, page 15 shows the typical construction sequence, and drawings 2014-00914-RMG, pages 16 through 41 show the construction corridors with waters of the U.S. overlaid.

MITIGATION: Enbridge proposes to use the Wisconsin Wetland Conservation Trust In-Lieu Fee Program (ILF) to compensate for temporary and permanent unavoidable wetland impacts. Before deciding to propose use of the ILF, Enbridge reviewed the Corps Regulatory In-Lieu Fee and Bank

Information Tracking System (RIBITS) for available wetland mitigation bank options. Enbridge believes that there are no wetland mitigation bank options available to satisfy anticipated compensatory mitigation requirements.
Enbridge will be expected to provide compensatory mitigation for the 0.2 acre permanent wetland losses associated with the proposed project. Final amounts have not been established or recommended by the applicant, but based on the proposed use of ILF credits the Corps anticipates that a minimum of 0.3 advance ILF credits would be required to offset permanent losses.

Enbridge proposes to restore all temporarily affected wetlands to pre-construction elevations and contours; however, some permanent conversion and temporal loss are anticipated to result. Enbridge proposes to debit ILF credits to compensate for the temporal loss and permanent conversion associated with temporary wetland impacts according to the table below.

Proposed Compensatory Mitigation using the ILF program
For Temporary Wetland Impacts (Roads and Pipeline Right of Way)

Wetland Type[a]	Wetland Impact (acres)[b]	Proposed Compensatory Mitigation Ratio	Proposed Advanced Credits
Palustrine Emergent	50.9	0.03:1	1.5
Palustrine Forested	12.4	0.50:1	6.2
Palustrine Scrub Shrub	22.2	0.10:1	2.2
Palustrine Scrub Shrub[c]	17.2	0.50:1	8.6
Palustrine Unconsolidated Bottom	0.5	0.03:1	0.0
Project Total[d]	*103.2*	--	*19.3*

a Cowardin et al, 1979.
b Acreage based on a 90-foot-wide pipeline corridor and a 30-foot-wide access road corridor.
c The acreage shown in this row will not be allowed to naturally regenerate, and thus a higher compensatory mitigation ratio is proposed.
d The sum of addends may not total correctly due to rounding.

Enbridge will continue to work with the Corps to consider additional factors that may result in adjustments to the credit amounts described above. Pending regulatory approval, Enbridge will work with the Corps and WDNR sponsored ILF program to initiate and finalize the credit purchase.

3. REPLIES/COMMENTS.

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, 180 Fifth Street East, Suite 700, Saint Paul, MN 55101-1678.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Rebecca Graser at the Brookfield, Wisconsin office of the Corps, telephone number (651) 290-5728.

To receive Public Notices by e-mail, go to: http://mvp-extstp/list_server/ and add your information in the New Registration Box.

4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.

Enbridge initiated informal consultation on the project with the U.S. Fish and Wildlife Service (USFWS) Green Bay Field Office in September 2013. Enbridge received concurrence with its determinations of project impacts on federally-listed species in a letter dated October 18, 2013. However, it did not address the northern long-eared bat (NLEB), the rufa red knot, or the gray wolf, as the three species were not listed at the time of the original USFWS decision. Enbridge began conducting acoustic and mist net surveys for the NLEB in 2014 based on recommendations from the USFWS. Prior to any decision issued by the Corps regarding Enbridge's application, the Corps will ensure compliance with Section 7 of the Endangered Species Act for these three species.

5. JURISDICTION.

This application has been reviewed in accordance with the practices for documenting Corps jurisdiction under Section 404 of the Clean Water Act. On June 9, 2015, Enbridge requested the Corps prepare a preliminary jurisdictional determination for the aquatic resources in the project area. We have made an initial determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. The Corps will prepare a preliminary jurisdictional determination prior to making a permit decision.

THE APPLICANT HAS STATED THAT THE FOLLOWING STATE, COUNTY, AND/OR LOCAL PERMITS HAVE BEEN APPLIED FOR/ISSUED:

Name of Agency	**Title of Permit/Approval**
United States Army Corps of Engineers – St. Paul District	Clean Water Act Section 404
United States Fish and Wildlife Service	Endangered Species Act Consultation
Public Utilities Commission of Wisconsin	Public Interest Determination
Wisconsin Department of Natural Resources	Chapter 30 Permit / NR 103 Water Quality Certification
	NR 150 Wisconsin Environmental Policy Act Compliance (joint review with the Sandpiper Pipeline Project)
	State Endangered Resources Review
	Superior Terminal Air Permit

	Temporary Water Use Permit
	Hydrostatic Test Discharge Permit
	WPDES Individual Construction Stormwater Permit – Pipeline Construction
Wisconsin State Historic Preservation Office (Section 106)	Cultural Resources Consultation, NHPA Section 106 Clearance
Wisconsin Department of Agriculture	Agricultural Protection Plan
Wisconsin Department of Transportation	Road Crossing Permits
City of Superior	Erosion Control/Grading Permit

6. STATE SECTION 401 WATER QUALITY CERTIFICATION.

This Public Notice has been sent to the Wisconsin Department of Natural Resources and is considered by the District Engineer to constitute valid notification to that agency for Section 401 water quality certification. A permit will not be granted until the Wisconsin Department of Natural Resources has issued or waived Section 401 certification.

7. HISTORICAL/ARCHAEOLOGICAL.

Enbridge has completed historical and cultural resource surveys for the proposed project in 2013 and 2014. The results of these surveys have been submitted as reports to the Corps.

This public notice is being sent to the National Park Service and the State Archaeologist for their comments. The Corps will review information on known cultural resources and/or historic properties within and adjacent to the project area. The Corps will also consider the potential effects of the project on any properties that have yet to be identified. The results of this review and the Corps' determination of effect will be coordinated with the State Historic Preservation Officer and the appropriate Tribal Historic Preservation Officers independent of this public notice. Any adverse effects on historic properties will be resolved prior to the Corps authorization, or approval, of the work in connection with this project.

8. PUBLIC HEARING REQUESTS.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

9. PUBLIC INTEREST REVIEW.

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. Environmental and other documents will be available for review in the St. Paul District Office.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

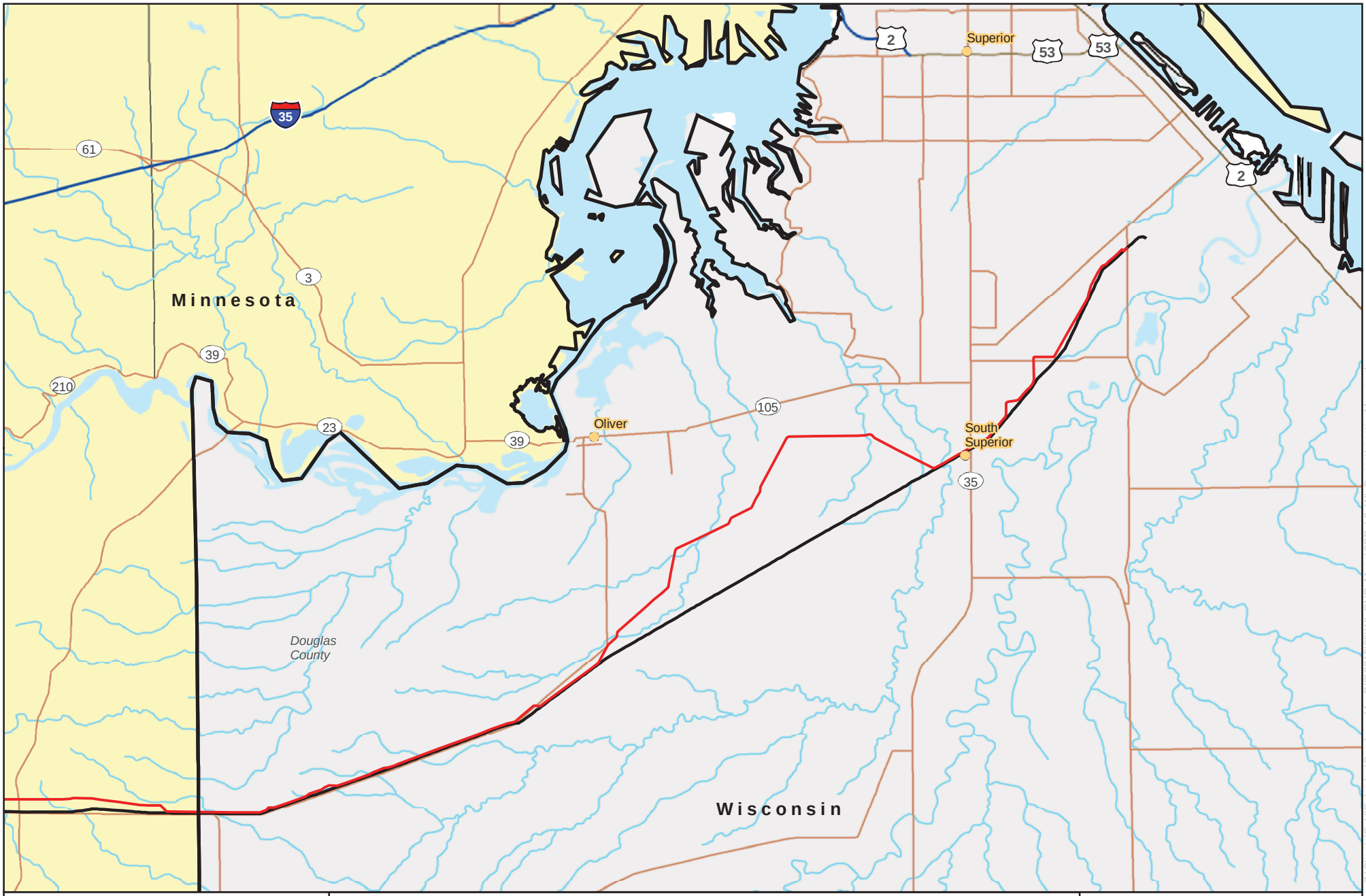
10. COASTAL ZONE MANAGEMENT.

The Wisconsin Coastal Management Program (WCMP) in the Department of Administration is inviting public comment regarding this project. The WCMP may conduct a Federal consistency review to verify that the project will comply with State policies in Wisconsin's coastal zone. Further information may be obtained from the Federal Consistency Coordinator at: Wisconsin Coastal Management Program, P.O. Box 7868, Madison, WI 53707-7868; (608) 267-7982. Any comments on whether or not this proposed project complies with the State enforceable policies should be received within 30 days by the Federal Consistency Coordinator.

Jeff Olson
Chief, Northeast Section

Enclosures

NOTICE TO EDITORS: This public notice is provided as background information and is not a request or contract for publication.



0 0.75 1.5 Miles

1 inch = 1.5 miles

N W E S

ENBRIDGE

For Environmental Review Purposes Only

Segment 18- Line 3 Replacement Program

General Project Location Map

Proposed Project Route

Existing Line 3

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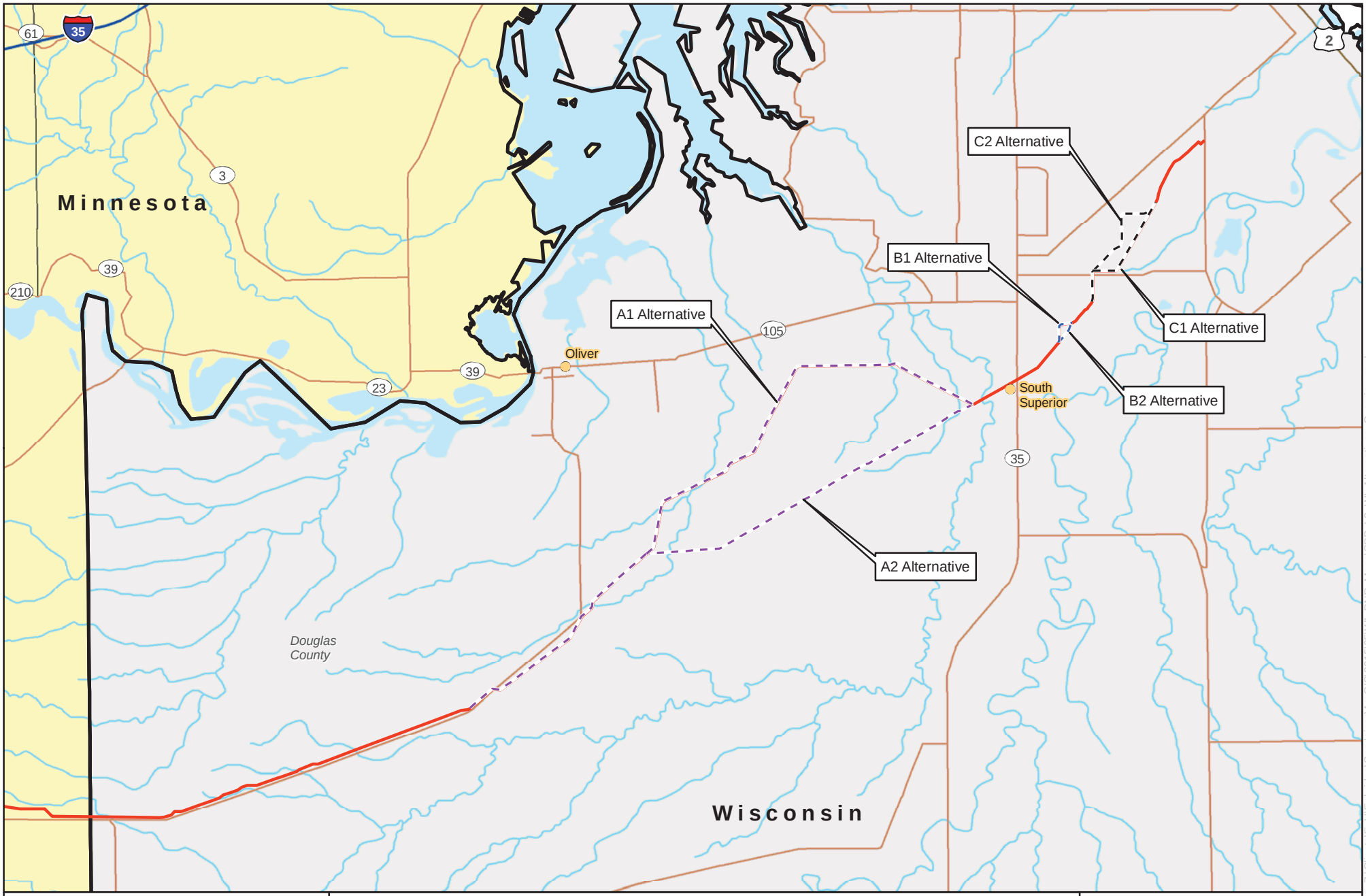
Date: (5/12/2015)



0 0.5 1 Miles

1 inch = 1.3 miles

N W E S

ENBRIDGE

For Environmental Review Purposes Only

Segment 18 - Line 3 Replacement Program

Overview of Alternatives

Proposed Project Route

A1/A2 Route Alternative

B1/B2 Route Alternative

C1/C2 Route Alternative

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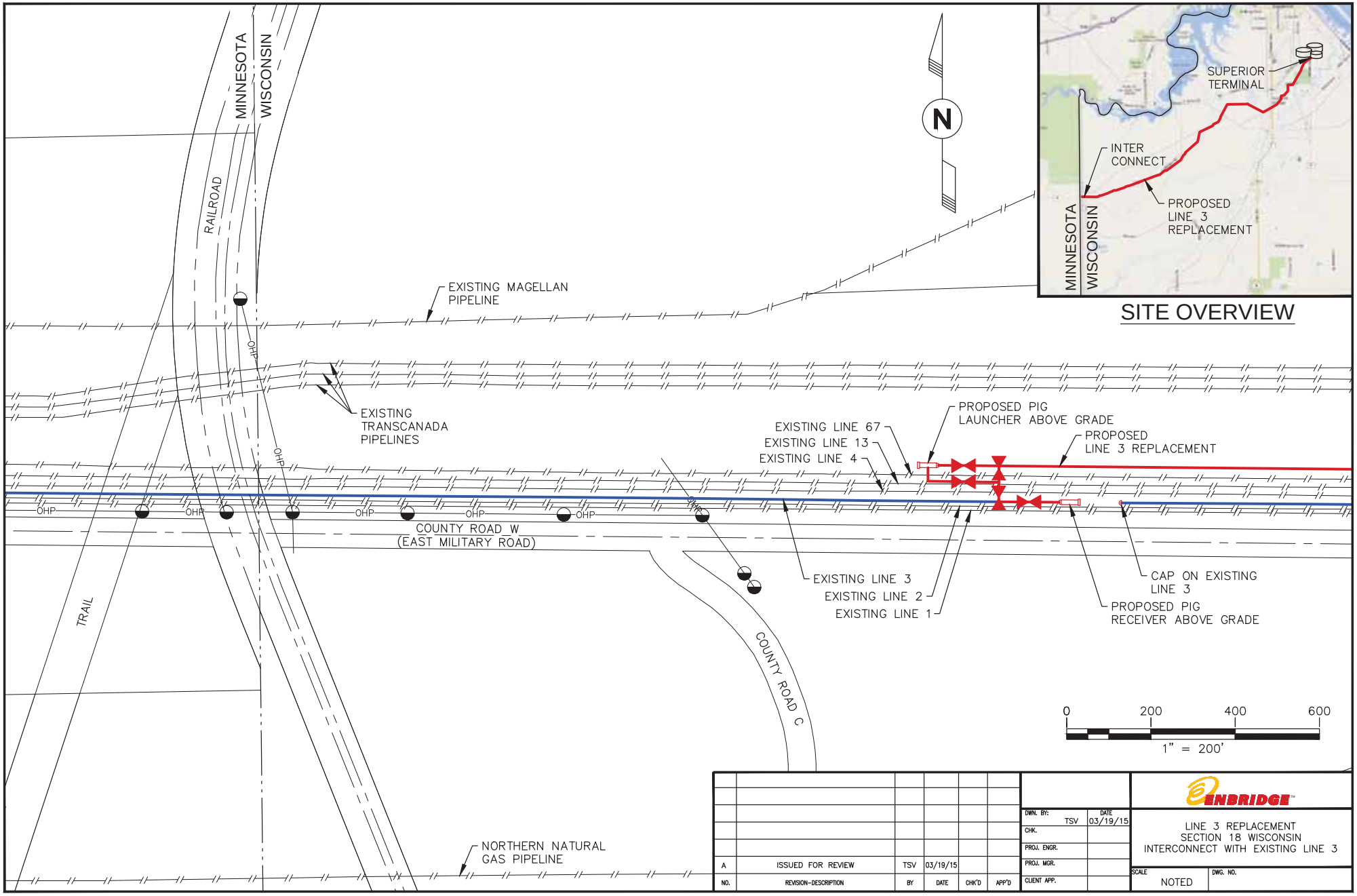
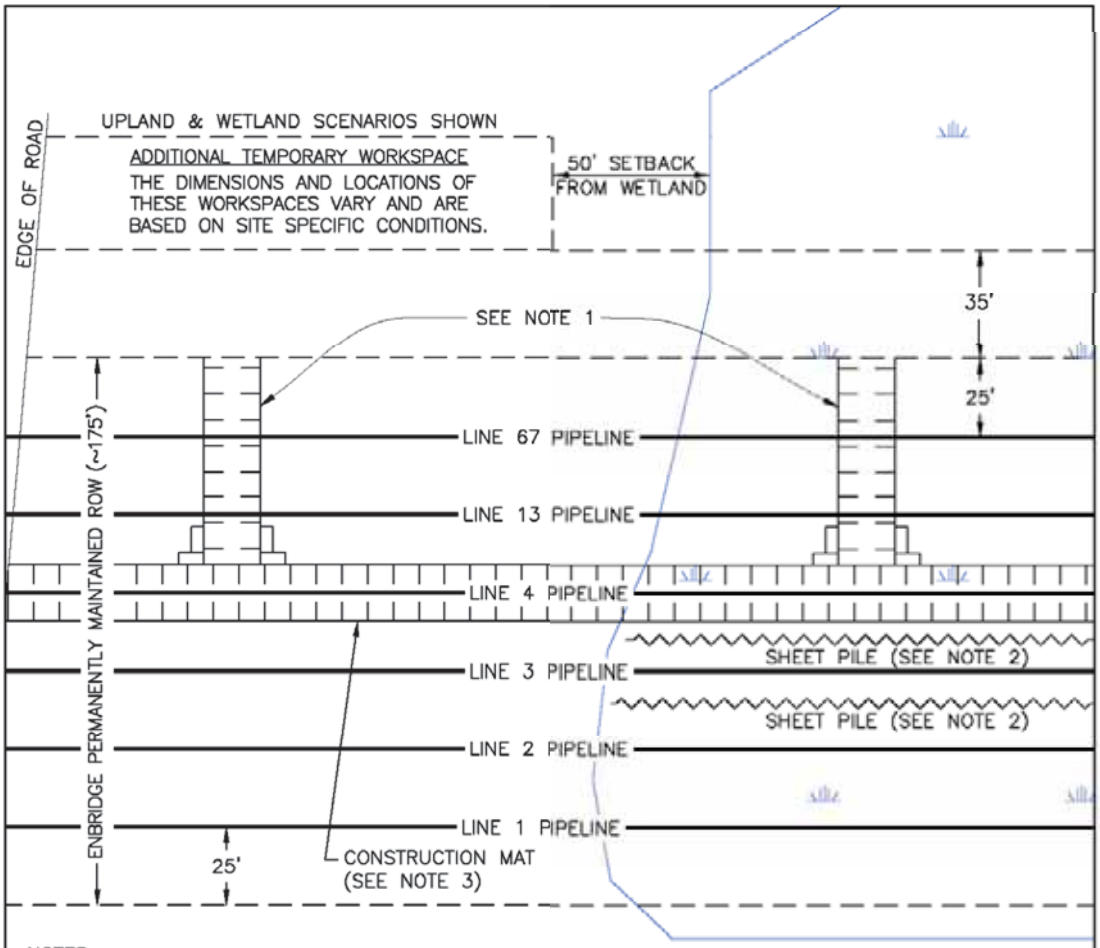
Date: (5/13/2015)


MINNESOTA
WISCONSIN
RAILROAD
TRAIL
N
SITE OVERVIEW
SUPERIOR TERMINAL
INTER CONNECT
PROPOSED LINE 3 REPLACEMENT
MINNESOTA
WISCONSIN
EXISTING MAGELLAN PIPELINE
EXISTING TRANSCANADA PIPELINES
OHP
PROPOSED PIG LAUNCHER ABOVE GRADE
PROPOSED LINE 3 REPLACEMENT
EXISTING LINE 67
EXISTING LINE 13
EXISTING LINE 4
COUNTY ROAD W
(EAST MILITARY ROAD)
EXISTING LINE 3
EXISTING LINE 2
EXISTING LINE 1
CAP ON EXISTING LINE 3
PROPOSED PIG RECEIVER ABOVE GRADE
COUNTY ROAD C
0
200
400
600
1" = 200'
NORTHERN NATURAL GAS PIPELINE
A
ISSUED FOR REVIEW
TSV
03/19/15
NO.
REVISION-DESCRIPTION
BY
DATE
CHK'D
APP'D
DWN. BY: TSV
DATE 03/19/15
CHK.
PROJ. ENGR.
PROJ. MGR.
CLIENT APP.
ENBRIDGE
LINE 3 REPLACEMENT
SECTION 18 WISCONSIN
INTERCONNECT WITH EXISTING LINE 3
SCALE
NOTED
DWG. NO.



NOTES:

1. ACCESS LOCATIONS VARY DEPENDING ON TERRAIN, ENVIRONMENTAL FEATURES, AND SITE SPECIFIC CONDITIONS.
2. SHEET PILE AS NECESSARY FOR THE PROTECTION OF ACTIVE LINES, PIPE REMOVAL, AND INSTALLATION.
3. SITE SPECIFIC REMOVAL/INSTALLATION PLANS MAY BE REQUIRED IN AREAS WITH SATURATED SOILS.
4. EXISTING ROW WIDTH WILL VARY DUE TO NUMBER OF EXISTING PARALLEL PIPELINES.

ENBRIDGE

DWN. BY: TS	DATE 3/22/13	TYPICAL WORKSPACE LINE 3 REPLACEMENT PIPELINE SAME DITCH INSTALLATION SEGMENT 18 WISCONSIN
CHK. NR	5/22/15	
PROJ. MGR. NR	5/22/15	SCALE NO SCALE / DWG. NO.

ENBRIDGE

0 0.25 0.5 Miles

For Environmental Review Purposes Only

Segment 18 - Line 3 Replacement Program

Route Alternatives A1 and A2

Milepost

Proposed Project Route

A1/A2 Route Alternative

SNA Boundary

Source: Z:\Clients\E_H\Enbridge\Sandpiper\ArcGIS\2015\05\WI_DNR_Maps\SPP_WI_Alternatives_A1_A2.mxd

Date: (5/12/2015)

Milepost

Proposed Project Route

B1/B2 Route Alternative

0 0.05 0.1 Miles

Segment 18 - Line 3 Replacement Program

Route Alternatives B1 and B2

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Date: (3/23/2015)

ENBRIDGE

0 0.05 0.1 Miles

For Environmental Review Purposes Only

Segment 18 - Line 3 Replacement Program

Route Alternatives C1 and C2

- Milepost
- Proposed Project Route
- C1/C2 Route Alternative
- Conservation Easement Boundary (Approximate)
- Golf Course

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Date: (5/12/2015)

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Waterbodies the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width	OHWM Width [b]	OHWM Depth [c]	Agency Designation	Proposed Crossing Method [d]	Alternative Crossing Method [e]	Construction Timing Restriction [f]	Bridge Type [g]	Legal Description	Latitude	Longitude	Enbridge Site Specific Plan	Comments
PROPOSED ROUTE																				
Douglas	St. Louis	4010201	226.8	DO002aWB	Pokegama River	P	2014	6	6	1.5	None	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 31	46.595756	-92.287785		
Douglas	St. Louis	4010201	226.8	DO002bWB	Unnamed stream	P	2013	2	2	1.5	None	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 31	46.595749	-92.287261		
Douglas	St. Louis	4010201	227.7	DO007bWB	Unnamed Stream	E	2013	2	2	1	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 32	46.597619	-92.268277		
Douglas	St. Louis	4010201	228.1	DO008aWB	Unnamed Stream	E	2013	2	2	2	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 33	46.599756	-92.261041		The stream splits into 2 parts north of the maintained utility corridor.
Douglas	St. Louis	4010201	229.3	DO020aWB	Unnamed Stream	P	2013	30	25	2	None	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 27	46.604727	-92.238125		River bed currently dry due to upstream beaver dam
Douglas	St. Louis	4010201	230.2	DO025aWB	Unnamed Stream	I	2013	4	4	3	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 26	46.609159	-92.220359		
Douglas	St. Louis	4010201	232.0	DO034_500bWB	Unnamed Stream	E	2013	2.5	1	1	ASNRI Endangered, Threatened or Special Conern Water	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 24	46.623689	-92.190986		
Douglas	St. Louis	4010201	232.0	DO034_500aWB	Little Pokegema River	P	2013	12	12	4	ASNRI Endangered, Threatened or Special Conern Water	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R15W, Sec. 24	46.624618	-92.190256		
Douglas	St. Louis	4010201	233.2	DO041_001bWB	Unnamed Stream	E	2013	1	0.5	0.5	ASNRI Quality Wetland Stream (T48R14W)	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 18	46.637136	-92.176392		Very small ephemeral stream. Dry.
Douglas	St. Louis	4010201	233.2	DO041_500aWB	Unnamed Stream	P	2013	15	40	8	ASNRI Quality Wetland Stream (T48R14W)	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 18	46.637717	-92.176219		Bank full. Beaver impounded.
Douglas	St. Louis	4010201	233.8	WI_NHD_001	Little Pokegema River	P	TBD	TBD	TBD	TBD	ASNRI Quality Wetland Stream (T48R14W)	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 18	46.642293	-92.167321		
Douglas	St. Louis	4010201	236.0	DO041_534aWB	Unnamed Stream	E	2013	3	3	3	ASNRI Quality Wetland Stream (T48R14W), ASNRI Endangered, Threatened or Special Concern Water	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 9	46.657103	-92.131234		The waterbody feeds into a larger perennial waterbody that is impacted by beaver activity
Douglas	St. Louis	4010201	236.1	DO041_534_200aWB	Unnamed Tributary: Pokegema River	P	2013	8	6	2	ASNRI Quality Wetland Stream (T48R14W), ASNRI Endangered, Threatened or Special Concern Water	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 9	46.657185	-92.129422		Perennial waterbody influenced by beaver activity
Douglas	St. Louis	4010201	237.1	DO057aWB	Pokegema River	P	2013	35	30	2.5	ASNRI Quality Wetland Stream (T48R14W), ASNRI Endangered, Threatened or Special Concern Water	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 10	46.65212	-92.111605	Yes	
Douglas	Beartrap-Nemadji	4010301	237.5	DO065_900RDaWB	Unnamed	I	2013	2	1.5	0.4	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 10	46.655456	-92.102836		
Douglas	Beartrap-Nemadji	4010301	237.9	DO074aWB	Unnamed Ditch	I	2014	3.5	3.5	0.75	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 10	46.658492	-92.09765		
Douglas	Beartrap-Nemadji	4010301	237.9	DO074aWB	Unnamed Ditch	I	2013	3.5	3.5	0.75	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 10	46.658416	-92.097746		
Douglas	Beartrap-Nemadji	4010301	237.9	DO075aWB	Unnamed Stream	E	2013	22	1.5	1	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 11	46.65871	-92.097378		No water low at time of sampling.
Douglas	Beartrap-Nemadji	4010301	238.7	DO094_001aWB	Unnamed Stream	P	2013	9	6	1	None	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 2	46.666862	-92.088867		
Douglas	Beartrap-Nemadji	4010301	238.9	DO100_510aWB	Unnamed Ditch	I	2013	7	2	0.3	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 2	46.669764	-92.088614		
Douglas	Beartrap-Nemadji	4010301	238.9	DO106_200bWB	Unnamed Ditch	I	2013	12	5	0.5	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 2	46.669763	-92.087372		
Douglas	Beartrap-Nemadji	4010301	239.1	DO106aWB	Unnamed Ditch	I	2013	9	5.5	0.75	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 2	46.669763	-92.08482		
Douglas	Beartrap-Nemadji	4010301	239.3	DO109bWB	Unnamed Ditch	I	2013	8	8	1	None	HDD	Wet Open Cut	April 1-June 1	NA	T48N, R14W, Sec. 2	46.67381	-92.082242		
Douglas	Beartrap-Nemadji	4010301	240.6	DO122aWB	Unnamed Ditch	I	2013	10	6	0.5	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span - in stream support	T49N, R14W, Sec. 36	46.687398	-92.067078		
ROUTE ALTERNATIVE A2																				
Douglas	St. Louis	4010201	NA	DO041eWB	Little Pokegema River	P	2014	10	10	3	ASNRI Quality Wetland Stream (T48R14W), ASNRI Endangered, Threatened or Special Concern Water	Dry Crossing	Wet Open Cut	April 1-June 1	Span - in stream support	T48N, R14W, Sec. 19	46.631548	-92.174664		

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Waterbodies the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width	OHWM Width [b]	OHWM Depth [c]	Agency Designation	Proposed Crossing Method [d]	Alternative Crossing Method [e]	Construction Timing Restriction [f]	Bridge Type [g]	Legal Description	Latitude	Longitude	Enbridge Site Specific Plan	Comments
Douglas	St. Louis	4010201	NA	DO065aWB	Unnamed Stream	P	2013	12	6	1	ASNRI Quality Wetland Stream (T48R14W), ASNRI Endangered, Threatened or Special Concern Water	Dry Crossing	Wet Open Cut	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 10	46.650558	-92.116161		
ROUTE ALTERNATIVE C2																				
Douglas	Beartrap-Nemadji	4010301	NA	DO100_510aWB	Unnamed Ditch	I	2013	7	2	0.3	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.669764	-92.088614		
Douglas	Beartrap-Nemadji	4010301	NA	DO106_200bWB	Unnamed Ditch	I	2013	12	5	0.5	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.669763	-92.087372		
Douglas	Beartrap-Nemadji	4010301	NA	DO106aWB	Unnamed Ditch	I	2013	9	5.5	0.75	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.669763	-92.08482		
Douglas	Beartrap-Nemadji	4010301	NA	DO106_200aWB	Unnamed Ditch	I	2013	9	4	0.5	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.671567	-92.086065		
Douglas	Beartrap-Nemadji	4010301	NA	DO106bWB	Unnamed Ditch	I	2013	10	8	1	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.673021	-92.083512		
Douglas	Beartrap-Nemadji	4010301	NA	DO106bWB	Unnamed Ditch	I	2013	10	8	1	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.672611	-92.084547		
Douglas	Beartrap-Nemadji	4010301	NA	DO106bWB	Unnamed Ditch	I	2013	10	8	1	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T48N, R14W, Sec. 2	46.672435	-92.084804		
Douglas	Beartrap-Nemadji	4010301	NA	DO130_001aWB	Unnamed Ditch	I	2013	4	4	1.5	None	Wet Open Cut	Dry Crossing	April 1-June 1	Span- in stream support	T49N, R14W, Sec. 35	46.678056	-92.077119		

[a] NA = Not Applicable

[a] P = Perennial flow; I = Intermittent flow; E = Ephemeral flow

[b] Width of the channel in feet between the Ordinary High Water Mark (OHWM) on both channel banks.

[c] Estimated or measured channel depth in feet from the OHWM to the channel bed.

[d] Proposed waterbody crossing methods are based on engineering investigations, constructability, and environmental constraints. Generally if the waterbody has perceptible flow Enbridge will utilize a dry open cut crossing method (i.e., flume or dam and pump), otherwise a wet trench open cut method will be used. Refer to Enbridge's EPP for further detail.

[e] It is possible that an HDD or bore may encounter subsurface objects that prevents the drill from being successfully completed. If this occurs, Enbridge will attempt a slightly adjusted drill path to avoid the object. If boulders or hard bedrock interferes with the adjusted drill path, Enbridge will abandoned the drill after two attempts and cross the waterbody using the alternative method.

[f] Timing restrictions are based on anticipated WDNR permit conditions

[g] Span bridges may consist of timber construction mats, rail car stocks, other bridge decking and may or may not be supported by frames, clean rock or other support in the water column. Sediment control for bridging is described in the EPP.

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Wetlands the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Wetland Unique ID	Survey Date	Cowardin[a]	Approximate MP	Legal Description	Latitude	Longitude	Proposed Crossing Method	Crossing Length (feet)[b]	Temporary Impact (acres)[c]	Operations Impact (acres)[d]	Permanent Conversion Impacts (acres)[e]
PROPOSED ROUTE														
Douglas	St. Louis	4010201	DO002a1W	2013	PSS	226.8	T48N, R15W, Sec. 31	46.595753	-92.287321	Open Cut	13.0	0.0	0.0	0.0
Douglas	St. Louis	4010201	DO002a1W	2013	PEM	226.8	T48N, R15W, Sec. 31	46.595728	-92.287586	Open Cut	126.9	0.2	0.0	-
Douglas	St. Louis	4010201	w-1085ff		PEM	-	T48N, R15W, Sec. 32	46.595642	-92.284867	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO003e1W	2013	PFO	-	T48N, R15W, Sec. 32	46.595857	-92.283525	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO003f1W	2013	PFO	-	T48N, R15W, Sec. 32	46.59582	-92.282989	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO003b1W	2013	PFO	-	T48N, R15W, Sec. 32	46.595828	-92.282394	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO003b1W	2013	PEM	227.0	T48N, R15W, Sec. 32	46.595651	-92.282295	Open Cut	17.3	0.0	0.0	-
Douglas	St. Louis	4010201	w-1085dd		PEM	-	T48N, R15W, Sec. 32	46.595585	-92.28037	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO003h1W	2013	PEM	-	T48N, R15W, Sec. 32	46.595774	-92.28164	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO004a1W	2013	PFO	-	T48N, R15W, Sec. 32	46.595804	-92.280897	Open Cut	-	0.6	-	-
Douglas	St. Louis	4010201	DO004a1W	2013	PEM	227.3	T48N, R15W, Sec. 32	46.595569	-92.278091	Open Cut	534.3	1.4	0.3	-
Douglas	St. Louis	4010201	w-1085cc		PEM	-	T48N, R15W, Sec. 32	46.595555	-92.277824	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO004b1W	2013	PFO	-	T48N, R15W, Sec. 32	46.59577	-92.278516	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO004b1W	2013	PEM	-	T48N, R15W, Sec. 32	46.596068	-92.277753	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	w-1085bb		PEM	-	T48N, R15W, Sec. 32	46.595854	-92.275616	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO005a1W	2013	PSS	227.4	T48N, R15W, Sec. 32	46.596294	-92.274805	Open Cut	57.1	0.1	0.1	0.1
Douglas	St. Louis	4010201	DO005a1W	2013	PEM	227.4	T48N, R15W, Sec. 32	46.596339	-92.273854	Open Cut	292.6	0.5	0.3	-
Douglas	St. Louis	4010201	DO005b1W	2014	PEM	227.5	T48N, R15W, Sec. 32	46.596416	-92.27313	Open Cut	29.2	0.1	0.0	-
Douglas	St. Louis	4010201	DO005c1W	2013	PEM	227.6	T48N, R15W, Sec. 32	46.596848	-92.271437	Open Cut	44.7	0.3	0.1	-
Douglas	St. Louis	4010201	DO005c1W	2013	PFO	-	T48N, R15W, Sec. 32	46.596991	-92.271667	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO006a1W	2013	PEM	-	T48N, R15W, Sec. 32	46.596912	-92.271037	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO007a1W	2013	PEM	227.7	T48N, R15W, Sec. 32	46.597263	-92.269434	Open Cut	66.9	0.1	0.0	-
Douglas	St. Louis	4010201	DO007b1W	2014	PEM	227.9	T48N, R15W, Sec. 32	46.597527	-92.268312	Open Cut	62.8	0.3	0.1	-
Douglas	St. Louis	4010201	DO007b1W	2013	PSS	227.7	T48N, R15W, Sec. 32	46.597579	-92.268305	Open Cut	52.4	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO007c1W	2013	PEM	227.8	T48N, R15W, Sec. 32	46.597836	-92.267423	Open Cut	6.1	0.0	0.0	-
Douglas	St. Louis	4010201	DO007b1W	2013	PUB	227.8	T48N, R15W, Sec. 32	46.598074	-92.266185	Open Cut	89.7	0.1	0.0	-
Douglas	St. Louis	4010201	DO008a1W	2013	PSS	-	T48N, R15W, Sec. 33	46.598673	-92.265237	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO008a1W	2013	PEM	228.0	T48N, R15W, Sec. 33	46.598621	-92.264664	Open Cut	319.6	1.3	0.3	-
Douglas	St. Louis	4010201	DO008a1W	2013	PFO	-	T48N, R15W, Sec. 33	46.598959	-92.264229	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO008b1W	2013	PSS	-	T48N, R15W, Sec. 33	46.599881	-92.261204	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO008b1W	2013	PEM	228.1	T48N, R15W, Sec. 33	46.599696	-92.260978	Open Cut	19.3	0.0	0.0	-
Douglas	St. Louis	4010201	DO008d1W	2013	PEM	228.2	T48N, R15W, Sec. 33	46.599881	-92.259879	Open Cut	106.6	0.4	0.1	-
Douglas	St. Louis	4010201	DO008d1W	2013	PFO	-	T48N, R15W, Sec. 33	46.600093	-92.260241	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO009a1W	2013	PFO	-	T48N, R15W, Sec. 33	46.600357	-92.25701	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO009a1W	2013	PSS	-	T48N, R15W, Sec. 33	46.600462	-92.256568	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO009a1W	2014	PEM	228.6	T48N, R15W, Sec. 33	46.600409	-92.25572	Open Cut	1,538.5	3.2	0.8	-
Douglas	St. Louis	4010201	DO012a1W	2013	PEM	228.6	T48N, R15W, Sec. 33	46.601575	-92.250699	Open Cut	113.2	0.2	0.0	-
Douglas	St. Louis	4010201	DO012a1W	2013	PFO	-	T48N, R15W, Sec. 33	46.601755	-92.250921	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO012a1W	2013	PUB	-	T48N, R15W, Sec. 33	46.602022	-92.249447	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO018b1W	2013	PFO	228.8	T48N, R15W, Sec. 33	46.602488	-92.248136	Open Cut	181.0	0.6	0.2	0.2
Douglas	St. Louis	4010201	DO018b1W	2013	PSS	-	T48N, R15W, Sec. 33	46.602752	-92.247309	Open Cut	-	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO018b1W	2013	PEM	229.1	T48N, R15W, Sec. 34	46.602989	-92.244798	Open Cut	1,144.9	2.3	0.9	-
Douglas	St. Louis	4010201	DO018c1W	2014	PEM	-	T48N, R15W, Sec. 34	46.603785	-92.241648	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO018a1W	2013	PEM	229.1	T48N, R15W, Sec. 34	46.603994	-92.240729	Open Cut	41.3	0.1	0.0	-
Douglas	St. Louis	4010201	DO020d1W	2013	PEM	229.2	T48N, R15W, Sec. 34	46.604213	-92.239849	Open Cut	109.8	0.2	0.0	-
Douglas	St. Louis	4010201	DO020c1W	2013	PEM	229.3	T48N, R15W, Sec. 27	46.604708	-92.23806	Open Cut	110.6	0.3	0.1	-
Douglas	St. Louis	4010201	DO020b1W	2013	PEM	229.3	T48N, R15W, Sec. 27	46.604881	-92.237374	Open Cut	78.6	0.3	0.1	-
Douglas	St. Louis	4010201	DO020a1W	2013	PEM	229.3	T48N, R15W, Sec. 27	46.605061	-92.236463	Open Cut	34.5	0.0	0.0	-

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Wetlands the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Wetland Unique ID	Survey Date	Cowardin[a]	Approximate MP	Legal Description	Latitude	Longitude	Proposed Crossing Method	Crossing Length (feet)[b]	Temporary Impact (acres)[c]	Operations Impact (acres)[d]	Permanent Conversion Impacts (acres)[e]
Douglas	St. Louis	4010201	DO021a1W	2013	PEM	229.5	T48N, R15W, Sec. 27	46.605453	-92.23506	Open Cut	282.4	0.8	0.1	-
Douglas	St. Louis	4010201	DO021a1W	2013	PSS	-	T48N, R15W, Sec. 27	46.605746	-92.234678	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO022a1W	2013	PSS	-	T48N, R15W, Sec. 27	46.606075	-92.233332	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO022a1W	2013	PFO	-	T48N, R15W, Sec. 27	46.606222	-92.232764	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO022a1W	2014	PEM	229.6	T48N, R15W, Sec. 27	46.606019	-92.232569	Open Cut	1,067.9	2.3	0.5	-
Douglas	St. Louis	4010201	DO025c1W	2013	PFO	-	T48N, R15W, Sec. 27	46.60805	-92.225319	Open Cut	-	0.2	-	-
Douglas	St. Louis	4010201	DO025c1W	2014	PEM	230.1	T48N, R15W, Sec. 27	46.608017	-92.224523	Open Cut	1,007.3	2.1	0.5	-
Douglas	St. Louis	4010201	DO025b1W	2013	PEM	230.2	T48N, R15W, Sec. 26	46.609112	-92.220199	Open Cut	43.2	0.1	0.0	-
Douglas	St. Louis	4010201	DO025a1W	2013	PEM	230.4	T48N, R15W, Sec. 26	46.609308	-92.219778	Open Cut	647.8	1.4	0.3	-
Douglas	St. Louis	4010201	DO025a1W	2013	PSS	-	T48N, R15W, Sec. 26	46.609484	-92.219696	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO025a1W	2013	PFO	-	T48N, R15W, Sec. 26	46.610161	-92.216727	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO025a1W	2013	PEM	230.7	T48N, R15W, Sec. 26	46.609308	-92.219778	Open Cut	152.0	0.2	0.2	-
Douglas	St. Louis	4010201	DO025a1W	2013	PSS	230.6	T48N, R15W, Sec. 26	46.609484	-92.219696	Open Cut	418.5	1.2	0.5	0.5
Douglas	St. Louis	4010201	DO025a1W	2013	PFO	230.6	T48N, R15W, Sec. 26	46.610161	-92.216727	Open Cut	44.8	0.4	0.1	0.1
Douglas	St. Louis	4010201	DO029a1W	2013	PEM	230.7	T48N, R15W, Sec. 26	46.612411	-92.211248	Open Cut	110.8	0.1	0.1	-
Douglas	St. Louis	4010201	DO029b1W	2014	PEM	230.7	T48N, R15W, Sec. 26	46.612556	-92.209574	Open Cut	3,251.1	4.2	1.2	-
Douglas	St. Louis	4010201	DO029b1W	2014	PSS	230.8	T48N, R15W, Sec. 26	46.612624	-92.209548	Open Cut	137.1	2.5	0.4	0.4
Douglas	St. Louis	4010201	DO029b1W	2013	PFO	-	T48N, R15W, Sec. 25	46.617004	-92.200616	Open Cut	-	0.0	0.0	0.0
Douglas	St. Louis	4010201	DO034a1W	2013	PSS	231.6	T48N, R15W, Sec. 25	46.618498	-92.19785	Open Cut	809.8	2.3	1.0	1.0
Douglas	St. Louis	4010201	DO034a1W	2013	PFO	231.8	T48N, R15W, Sec. 25	46.618863	-92.19688	Open Cut	47.4	0.3	0.1	0.1
Douglas	St. Louis	4010201	DO034a1W	2013	PEM	231.8	T48N, R15W, Sec. 25	46.619032	-92.196581	Open Cut	842.6	1.2	0.4	-
Douglas	St. Louis	4010201	DO035_300a1W	2013	PEM	-	T48N, R15W, Sec. 24	46.622779	-92.192343	Open Cut	-	0.0	0.0	-
Douglas	St. Louis	4010201	DO035_200a1W	2013	PFO	231.9	T48N, R15W, Sec. 24	46.622921	-92.192118	Open Cut	79.3	0.1	0.1	0.1
Douglas	St. Louis	4010201	DO034_500a1W	2014	PFO	232.0	T48N, R15W, Sec. 24	46.623606	-92.190958	Open Cut	97.0	0.2	0.1	0.1
Douglas	St. Louis	4010201	DO034_505a1W	2013	PFO	-	T48N, R15W, Sec. 24	46.624062	-92.190621	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO034_510b1W	2013	PEM	-	T48N, R15W, Sec. 24	46.625324	-92.189347	Open Cut	-	0.0	0.0	-
Douglas	St. Louis	4010201	DO034_510b1W	2013	PFO	232.1	T48N, R15W, Sec. 24	46.625401	-92.189221	Open Cut	36.4	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO034_510a1W	2013	PFO	232.1	T48N, R15W, Sec. 24	46.625549	-92.188976	Open Cut	85.4	0.1	0.1	0.1
Douglas	St. Louis	4010201	DO034_510a1W	2013	PEM	-	T48N, R15W, Sec. 24	46.625593	-92.188896	Open Cut	-	0.0	0.0	-
Douglas	St. Louis	4010201	DO034_515a1W	2013	PSS	232.1	T48N, R15W, Sec. 24	46.62584	-92.188486	Open Cut	86.3	0.1	0.1	0.1
Douglas	St. Louis	4010201	DO034_515a1W	2013	PEM	-	T48N, R15W, Sec. 24	46.625859	-92.188447	Open Cut	-	0.0	0.0	-
Douglas	St. Louis	4010201	DO034_520b1W	2013	PFO	-	T48N, R15W, Sec. 24	46.626355	-92.188119	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO034_520a1W	2013	PEM	232.2	T48N, R15W, Sec. 24	46.626636	-92.187272	Open Cut	197.5	0.3	0.2	-
Douglas	St. Louis	4010201	DO034_520a1W	2013	PSS	232.3	T48N, R15W, Sec. 24	46.62704	-92.186649	Open Cut	99.0	0.4	0.1	0.1
Douglas	St. Louis	4010201	DO034_520a1W	2013	PFO	232.3	T48N, R15W, Sec. 24	46.627385	-92.185882	Open Cut	65.1	0.1	0.1	0.1
Douglas	St. Louis	4010201	DO034_525a1W	2013	PFO	232.4	T48N, R15W, Sec. 24	46.627779	-92.18522	Open Cut	89.2	0.2	0.1	0.1
Douglas	St. Louis	4010201	DO034_525a1W	2013	PEM	232.4	T48N, R15W, Sec. 24	46.627988	-92.185034	Open Cut	74.1	0.2	0.1	-
Douglas	St. Louis	4010201	DO034_525a1W	2013	PSS	232.4	T48N, R15W, Sec. 24	46.628312	-92.184329	Open Cut	52.6	0.0	0.0	0.0
Douglas	St. Louis	4010201	DO034_535a1W	2013	PSS	232.5	T48N, R15W, Sec. 24	46.628477	-92.18454	Open Cut	922.5	2.0	1.0	1.0
Douglas	St. Louis	4010201	DO034_535a1W	2013	PEM	-	T48N, R15W, Sec. 24	46.629163	-92.182914	Open Cut	-	0.1	0.0	-
Douglas	St. Louis	4010201	DO034_535a1W	2013	PFO	232.7	T48N, R14W, Sec. 19	46.630957	-92.180395	Open Cut	25.0	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO041b1W	2013	PEM	232.7	T48N, R14W, Sec. 19	46.63128	-92.178881	Open Cut	199.9	0.3	0.2	-
Douglas	St. Louis	4010201	DO041b1W	2013	PSS	232.9	T48N, R14W, Sec. 19	46.631295	-92.17881	Open Cut	699.3	1.8	0.8	0.8
Douglas	St. Louis	4010201	DO041_500_310a1W	2013	PSS	233.0	T48N, R14W, Sec. 18	46.63475	-92.176991	Open Cut	35.4	0.1	0.1	0.1
Douglas	St. Louis	4010201	DO041_500a1W	2013	PSS	233.1	T48N, R14W, Sec. 18	46.635762	-92.17669	Open Cut	499.4	1.4	0.6	0.6
Douglas	St. Louis	4010201	DO041_001a1W	2013	PFO	233.2	T48N, R14W, Sec. 18	46.637704	-92.176111	Open Cut	64.4	0.2	0.1	0.1
Douglas	St. Louis	4010201	DO041_506a1W	2013	PFO	-	T48N, R14W, Sec. 18	46.638872	-92.176153	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO041_506b1W	2013	PFO	233.3	T48N, R14W, Sec. 18	46.638544	-92.175677	Open Cut	48.6	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO041_508a1W	2013	PSS	234.3	T48N, R14W, Sec. 18	46.642194	-92.163333	Open Cut	2,798.4	6.7	3.1	3.1

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Wetlands the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Wetland Unique ID	Survey Date	Cowardin[a]	Approximate MP	Legal Description	Latitude	Longitude	Proposed Crossing Method	Crossing Length (feet)[b]	Temporary Impact (acres)[c]	Operations Impact (acres)[d]	Permanent Conversion Impacts (acres)[e]
Douglas	St. Louis	4010201	DO041_508a1W	2013	PEM	234.1	T48N, R14W, Sec. 18	46.6431	-92.162771	Open Cut	80.8	0.1	0.1	-
Douglas	St. Louis	4010201	WWI_017		PFO	-	T48N, R14W, Sec. 18	46.640214	-92.173529	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	WWI_016		PSS	-	T48N, R14W, Sec. 8	46.650165	-92.154745	Open Cut	-	0.2	-	-
Douglas	St. Louis	4010201	DO041_520_200a1W	2014	PFO	234.8	T48N, R14W, Sec. 8	46.652034	-92.152804	Open Cut	425.4	0.8	0.4	0.4
Douglas	St. Louis	4010201	DO041_520_200a1W	2013	PSS	235.3	T48N, R14W, Sec. 8	46.652185	-92.152909	Open Cut	2,450.9	6.8	2.8	2.8
Douglas	St. Louis	4010201	DO041_520_200a1W	2013	PEM	-	T48N, R14W, Sec. 8	46.657012	-92.146387	Open Cut	-	0.0	0.0	-
Douglas	St. Louis	4010201	DO041_522a1W	2014	PEM	235.3	T48N, R14W, Sec. 8	46.657014	-92.145267	Open Cut	108.8	0.6	0.4	-
Douglas	St. Louis	4010201	DO041_522a1W	2014	PFO	235.3	T48N, R14W, Sec. 8	46.65702	-92.143749	Open Cut	1,207.6	2.6	1.3	1.3
Douglas	St. Louis	4010201	DO041_522a1W	2013	PSS	235.5	T48N, R14W, Sec. 8	46.657015	-92.144318	Open Cut	2,054.0	3.9	2.1	2.1
Douglas	St. Louis	4010201	DO041_534_200a1W	2013	PEM	236.1	T48N, R14W, Sec. 9	46.657103	-92.129432	Open Cut	54.6	0.1	0.1	-
Douglas	St. Louis	4010201	DO041_536a1W	2013	PFO	236.1	T48N, R14W, Sec. 9	46.655816	-92.125083	Open Cut	225.8	0.7	0.3	0.3
Douglas	St. Louis	4010201	DO041_536a1W	2013	PSS	236.2	T48N, R14W, Sec. 9	46.656208	-92.126481	Open Cut	609.2	1.1	0.7	0.7
Douglas	St. Louis	4010201	DO041_538a1W	2013	PFO	236.4	T48N, R14W, Sec. 9	46.655523	-92.124622	Open Cut	154.2	0.3	0.2	0.2
Douglas	St. Louis	4010201	DO041_538a1W	2013	PEM	236.4	T48N, R14W, Sec. 9	46.653781	-92.11913	Open Cut	748.5	1.9	0.9	-
Douglas	St. Louis	4010201	DO041_538a1W	2013	PSS	236.4	T48N, R14W, Sec. 9	46.654203	-92.121022	Open Cut	537.9	0.8	0.6	0.6
Douglas	St. Louis	4010201	DO041_542_300a1W	2013	PEM	-	T48N, R14W, Sec. 9	46.653462	-92.119021	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	DO041_544a1W	2013	PSS	236.7	T48N, R14W, Sec. 10	46.650161	-92.118263	Open Cut	803.2	1.7	0.9	0.9
Douglas	St. Louis	4010201	DO041_544a1W	2013	PEM	236.8	T48N, R14W, Sec. 10	46.649946	-92.117917	Open Cut	113.9	0.2	0.1	-
Douglas	St. Louis	4010201	DO041_544a1W	2013	PFO	237.0	T48N, R14W, Sec. 10	46.650098	-92.118049	Open Cut	34.1	0.1	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO057a1W	2013	PFO	237.1	T48N, R14W, Sec. 10	46.652135	-92.11148	Open Cut	221.9	0.4	0.1	0.1
Douglas	Beartrap-Nemadji	4010301	DO057a1W	2014	PEM	-	T48N, R14W, Sec. 10	46.65209	-92.111454	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO057b1W	2013	PEM	-	T48N, R14W, Sec. 10	46.653406	-92.108871	Open Cut	-	0.1	-	-
Douglas	Beartrap-Nemadji	4010301	DO059a1W	2014	PEM	237.3	T48N, R14W, Sec. 10	46.653733	-92.107151	Open Cut	65.6	0.1	0.0	-
Douglas	Beartrap-Nemadji	4010301	DO059a1W	2013	PFO	-	T48N, R14W, Sec. 10	46.65386	-92.107068	Open Cut	-	0.1	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO060a1W	2013	PEM	237.4	T48N, R14W, Sec. 10	46.654176	-92.10634	HDD	47.5	0.0	0.0	-
Douglas	Beartrap-Nemadji	4010301	DO060_220a1W	2014	PEM	237.4	T48N, R14W, Sec. 10	46.654339	-92.105899	HDD	12.4	0.0	0.0	-
Douglas	Beartrap-Nemadji	4010301	DO060_220a1W	2014	PSS	237.4	T48N, R14W, Sec. 10	46.654386	-92.105788	HDD	1.2	0.0	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO063a1W	2013	PSS	237.4	T48N, R14W, Sec. 10	46.654543	-92.105362	HDD	25.7	0.0	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO063a1W	2013	PEM	237.4	T48N, R14W, Sec. 10	46.654715	-92.1049	HDD	216.9	0.1	0.1	-
Douglas	Beartrap-Nemadji	4010301	DO064a1W	2014	PEM	237.5	T48N, R14W, Sec. 10	46.654951	-92.104299	HDD	377.5	0.3	0.3	-
Douglas	Beartrap-Nemadji	4010301	DO066_001a1W	2013	PEM	237.5	T48N, R14W, Sec. 10	46.65553	-92.10261	HDD	103.1	0.1	0.1	-
Douglas	Beartrap-Nemadji	4010301	DO066_001a1W	2013	PFO	237.6	T48N, R14W, Sec. 10	46.655683	-92.102277	HDD	122.1	0.1	0.1	0.1
Douglas	Beartrap-Nemadji	4010301	DO066_001a1W	2013	PSS	-	T48N, R14W, Sec. 10	46.655826	-92.102	HDD	-	0.0	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO071a1W	2013	PSS	237.6	T48N, R14W, Sec. 10	46.656066	-92.101219	HDD/Open Cut	242.7	0.3	0.3	0.3
Douglas	Beartrap-Nemadji	4010301	DO071a1W	2013	PFO	-	T48N, R14W, Sec. 10	46.656299	-92.100756	HDD/Open Cut	-	0.5	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO071a1W	2013	PEM	237.7	T48N, R14W, Sec. 10	46.656683	-92.100034	HDD/Open Cut	594.1	1.4	0.3	-
Douglas	Beartrap-Nemadji	4010301	w-1094ws4		PEM	-	T48N, R14W, Sec. 10	46.656599	-92.099614	Open Cut	-	0.9	-	-
Douglas	Beartrap-Nemadji	4010301	DO071_001a1W	2014	PEM	237.8	T48N, R14W, Sec. 10	46.657649	-92.098487	Open Cut	86.9	0.2	0.1	-
Douglas	Beartrap-Nemadji	4010301	DO073_001a1W	2014	PEM	-	T48N, R14W, Sec. 10	46.658288	-92.09821	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	w-1095ws1		PSS	-	T48N, R14W, Sec. 11	46.658086	-92.09769	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	w-1095ws4		PEM	-	T48N, R14W, Sec. 11	46.658441	-92.097368	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	w-1095ws2		PEM	-	T48N, R14W, Sec. 11	46.659126	-92.096425	Open Cut	-	0.2	-	-
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2014	PEM	237.9	T48N, R14W, Sec. 10	46.658275	-92.097897	Open Cut	510.5	0.9	0.2	-
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2013	PSS	237.9	T48N, R14W, Sec. 11	46.658461	-92.097703	Open Cut	5.1	0.1	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2013	PFO	-	T48N, R14W, Sec. 11	46.659194	-92.097062	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2014	PEM	238.3	T48N, R14W, Sec. 10	46.658275	-92.097897	Open Cut	470.2	1.0	0.5	-
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2013	PSS	238.2	T48N, R14W, Sec. 11	46.658461	-92.097703	Open Cut	737.2	2.3	0.9	0.9
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2013	PFO	238.2	T48N, R14W, Sec. 11	46.659194	-92.097062	Open Cut	314.3	0.6	0.3	0.3
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2014	PEM	238.5	T48N, R14W, Sec. 10	46.658275	-92.097897	Open Cut	1,267.9	2.5	0.6	-

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Wetlands the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Wetland Unique ID	Survey Date	Cowardin[a]	Approximate MP	Legal Description	Latitude	Longitude	Proposed Crossing Method	Crossing Length (feet)[b]	Temporary Impact (acres)[c]	Operations Impact (acres)[d]	Permanent Conversion Impacts (acres)[e]
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2013	PSS	-	T48N, R14W, Sec. 11	46.658461	-92.097703	Open Cut	-	0.1	-	-
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2013	PFO	-	T48N, R14W, Sec. 11	46.659194	-92.097062	Open Cut	-	0.1	-	-
Douglas	Beartrap-Nemadji	4010301	DO091a1W	2014	PEM	238.5	T48N, R14W, Sec. 2	46.665307	-92.089201	Open Cut	120.7	0.2	0.0	-
Douglas	Beartrap-Nemadji	4010301	w-1095ws3		PSS	-	T48N, R14W, Sec. 2	46.665591	-92.089258	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO091a1W	2013	PEM	238.6	T48N, R14W, Sec. 2	46.665307	-92.089201	Open Cut	16.1	0.0	0.0	-
Douglas	Beartrap-Nemadji	4010301	w-1095ws3		PSS	238.6	T48N, R14W, Sec. 2	46.665591	-92.089258	Open Cut	41.4	0.1	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	w-1095ws3		PEM	-	T48N, R14W, Sec. 2	46.665621	-92.088923	Open Cut	-	0.0	0.0	-
Douglas	Beartrap-Nemadji	4010301	DO093_200a1W	2013	PFO	238.6	T48N, R14W, Sec. 2	46.666634	-92.089038	Open Cut	172.6	0.4	0.2	0.2
Douglas	Beartrap-Nemadji	4010301	DO094_001a1W	2013	PEM	-	T48N, R14W, Sec. 2	46.669203	-92.089348	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO100_510a1W	2013	PSS	238.9	T48N, R14W, Sec. 2	46.669586	-92.088616	Open Cut	14.5	0.1	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO100_510a1W	2013	PSS	238.9	T48N, R14W, Sec. 2	46.669586	-92.088616	Open Cut	731.5	1.6	0.8	0.8
Douglas	Beartrap-Nemadji	4010301	DO100_510a1W	2014	PEM	239.1	T48N, R14W, Sec. 2	46.669491	-92.084119	Open Cut	978.6	3.9	1.1	-
Douglas	Beartrap-Nemadji	4010301	DO103_900STb1W	2014	PEM	-	T48N, R14W, Sec. 2	46.669485	-92.083973	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO109g1W	2013	PEM	239.3	T48N, R14W, Sec. 2	46.671799	-92.08224	HDD	42.6	0.0	0.0	-
Douglas	Beartrap-Nemadji	4010301	w-8r1096w		PUB	239.3	T48N, R14W, Sec. 2	46.673055	-92.081211	HDD	26.0	0.1	0.1	-
Douglas	Beartrap-Nemadji	4010301	w-gcpond2		PUB	-	T48N, R14W, Sec. 2	46.673632	-92.08058	HDD	-	0.0	0.0	-
Douglas	Beartrap-Nemadji	4010301	w-gcpond3		PUB	239.5	T48N, R14W, Sec. 2	46.675626	-92.078971	HDD	88.9	0.1	0.1	-
Douglas	Beartrap-Nemadji	4010301	w-8r1096d		PUB	239.7	T49N, R14W, Sec. 35	46.677264	-92.077561	HDD	188.0	0.2	0.2	-
Douglas	Beartrap-Nemadji	4010301	w-8r1096d		PSS	239.7	T49N, R14W, Sec. 35	46.677729	-92.077159	HDD	96.7	0.1	0.1	0.1
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2014	PEM	239.7	T49N, R14W, Sec. 35	46.677635	-92.078105	Open Cut	378.2	0.5	0.4	-
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PFO	-	T49N, R14W, Sec. 35	46.677525	-92.081615	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PEM	240.5	T49N, R14W, Sec. 35	46.677635	-92.078105	Open Cut	3,633.6	4.4	1.5	-
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PFO	-	T49N, R14W, Sec. 35	46.677525	-92.081615	Open Cut	-	1.7	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PSS	-	T49N, R14W, Sec. 35	46.677525	-92.081732	Open Cut	-	1.0	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	w-1097a		PSS	-	T49N, R14W, Sec. 36	46.681004	-92.074603	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	w-1097a		PEM	-	T49N, R14W, Sec. 36	46.68258	-92.073244	Open Cut	-	3.3	-	-
Douglas	Beartrap-Nemadji	4010301	DO122a1W	2013	PEM	240.6	T49N, R14W, Sec. 36	46.687434	-92.067041	Open Cut	23.5	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	DO123_300a1w	2013	PEM	-	T49N, R14W, Sec. 36	46.687722	-92.06622	Open Cut	-	0.0	-	-
Douglas	St. Louis	4010201	w-1085gg		PEM	-	T48N, R15W, Sec. 31	46.595645	-92.287453	Open Cut	-	0.1	-	-
											41,781.8	**102.4**	**35.4**	**21.2**
											(7.9 miles)			
ROUTE ALTERNATIVE A2														
Douglas	St. Louis	4010201	DO053a1W	2014	PEM	N/A	T48N, R14W, Sec. 16	46.646292	-92.126778	Open Cut	3,976.6	4.3	0.4	-
Douglas	St. Louis	4010201	DO041o1W	2014	PSS	N/A	T48N, R14W, Sec. 19	46.631495	-92.17352	Open Cut	86.5	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO041p1W	2014	PEM	N/A	T48N, R14W, Sec. 19	46.631448	-92.17475	Open Cut	150.9	0.3	0.0	-
Douglas	St. Louis	4010201	DO041s1W	2014	PEM	N/A	T48N, R14W, Sec. 19	46.631614	-92.177053	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	DO041b1W	2014	PEM	N/A	T48N, R14W, Sec. 19	46.63128	-92.178881	Open Cut	108.2	0.4	0.1	-
Douglas	St. Louis	4010201	DO041b1W	2014	PSS	N/A	T48N, R14W, Sec. 19	46.631295	-92.17881	Open Cut	42.7	0.1	0.0	0.0
Douglas	St. Louis	4010201	DO041s1W	2014	PSS	N/A	T48N, R14W, Sec. 19	46.631366	-92.176932	Open Cut	87.9	0.2	0.0	0.0
Douglas	St. Louis	4010201	DO041k1W	2014	PSS	N/A	T48N, R14W, Sec. 19	46.631637	-92.169755	Open Cut	7,288.6	15.5	3.1	3.1
Douglas	St. Louis	4010201	DO041l1W	2014	PSS	N/A	T48N, R14W, Sec. 19	46.63154	-92.172324	Open Cut	228.5	0.3	0.0	0.0
Douglas	St. Louis	4010201	DO041k1W	2013	PFO	N/A	T48N, R14W, Sec. 20	46.633231	-92.16139	Open Cut	86.0	0.7	0.2	0.2
Douglas	St. Louis	4010201	DO053a1W	2013	PSS	N/A	T48N, R14W, Sec. 16	46.645618	-92.128923	Open Cut	-	4.5	1.5	1.5
Douglas	St. Louis	4010201	DO041k1W	2013	PEM	N/A	T48N, R14W, Sec. 19	46.63257	-92.162728	Open Cut	475.5	1.1	0.2	-
Douglas	St. Louis	4010201	DO041_544a1W	2013	PFO	N/A	T48N, R14W, Sec. 10	46.650098	-92.118049	Open Cut	-	0.2	0.0	0.0
Douglas	St. Louis	4010201	DO041_544a1W	2013	PEM	N/A	T48N, R14W, Sec. 10	46.649946	-92.117917	Open Cut	151.1	0.3	0.1	-
Douglas	St. Louis	4010201	DO041_544a1W	2013	PSS	N/A	T48N, R14W, Sec. 10	46.650161	-92.118263	Open Cut	500.2	1.2	0.3	0.3
Douglas	St. Louis	4010201	WWI_004		PSS	N/A	T48N, R14W, Sec. 17	46.641165	-92.140655	Open Cut	172.3	0.6	0.1	0.1
Douglas	St. Louis	4010201	WWI_005		PFO	N/A	T48N, R14W, Sec. 16	46.641558	-92.139633	Open Cut	435.7	1.5	0.2	0.2

Enbridge Energy, Limited Partnership
Segment 18 - Line 3 Replacement Program
Wetlands the Pipeline Centerline Crosses

County	Watershed Name	Hydrologic Unit Code (HUC) 8	Wetland Unique ID	Survey Date	Cowardin[a]	Approximate MP	Legal Description	Latitude	Longitude	Proposed Crossing Method	Crossing Length (feet)[b]	Temporary Impact (acres)[c]	Operations Impact (acres)[d]	Permanent Conversion Impacts (acres)[e]
Douglas	St. Louis	4010201	w-1092ws5		PEM	N/A	T48N, R14W, Sec. 16	46.641962	-92.138753	Open Cut	222.9	0.1	-	-
Douglas	St. Louis	4010201	w-1093ws1		PEM	N/A	T48N, R14W, Sec. 16	46.643445	-92.135166	Open Cut	522.7	0.9	0.1	-
Douglas	St. Louis	4010201	w-1092ws5		PSS	N/A	T48N, R14W, Sec. 17	46.641061	-92.141563	Open Cut	175.5	0.6	0.2	0.2
Douglas	St. Louis	4010201	w-1093ws1		PSS	N/A	T48N, R14W, Sec. 16	46.643659	-92.134215	Open Cut	-	0.4	0.1	0.1
Douglas	St. Louis	4010201	WWI_008		PSS	N/A	T48N, R14W, Sec. 16	46.643834	-92.134928	Open Cut	-	0.1	-	-
Douglas	St. Louis	4010201	ar1093.3		PEM	N/A	T48N, R14W, Sec. 16	46.643663	-92.135359	Open Cut	-	0.0	-	-
											14,711.6	**33.2**	**6.7**	**5.8**
											(2.8 miles)			
ROUTE ALTERNATIVE B2														
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2014	PEM	N/A	T48N, R14W, Sec. 10	46.658275	-92.097897	Open Cut	303.0	0.6	0.2	-
Douglas	Beartrap-Nemadji	4010301	DO075_200a1W	2014	PSS	N/A	T48N, R14W, Sec. 11	46.658461	-92.097703	Open Cut	-	0.3	0.0	0.0
Douglas	Beartrap-Nemadji	4010301	w-1095ws2		PSS	N/A	T48N, R14W, Sec. 11	46.660202	-92.095524	Open Cut	735.9	1.7	0.4	0.4
Douglas	Beartrap-Nemadji	4010301	w-1095ws2		PEM	N/A	T48N, R14W, Sec. 11	46.659126	-92.096425	Open Cut	197.1	0.2	-	-
											1,236.1	**2.7**	**0.6**	**0.4**
											(0.2 miles)			
ROUTE ALTERNATIVE C2														
Douglas	Beartrap-Nemadji	4010301	DO109_204a1W	2014	PSS	N/A	T49N, R14W, Sec. 35	46.677313	-92.082698	Open Cut	205.9	0.7	0.1	0.1
Douglas	Beartrap-Nemadji	4010301	DO100_510a1W	2014	PSS	N/A	T48N, R14W, Sec. 2	46.669586	-92.088616	Open Cut	1,949.7	4.4	0.9	0.9
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PEM	N/A	T49N, R14W, Sec. 35	46.677635	-92.078105	Open Cut	599.2	1.0	0.2	-
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PSS	N/A	T49N, R14W, Sec. 35	46.677525	-92.081732	Open Cut	599.4	1.6	0.3	0.3
Douglas	Beartrap-Nemadji	4010301	DO121a1W	2013	PFO	N/A	T49N, R14W, Sec. 35	46.677525	-92.081615	Open Cut	235.4	0.5	0.2	0.2
Douglas	Beartrap-Nemadji	4010301	DO100_510a1W	2013	PEM	N/A	T48N, R14W, Sec. 2	46.669401	-92.084110	Open Cut	-	0.0	-	-
Douglas	Beartrap-Nemadji	4010301	w-8r1096c		PEM	N/A	T48N, R14W, Sec. 2	46.674945	-92.083119	Open Cut	1,117.8	2.2	0.5	-
Douglas	Beartrap-Nemadji	4010301	WWI_011		PSS	N/A	T48N, R14W, Sec. 2	46.674945	-92.083269	Open Cut	-	0.2	-	-
											4,707.4	**10.6**	**2.2**	**1.5**
											(0.9 miles)			

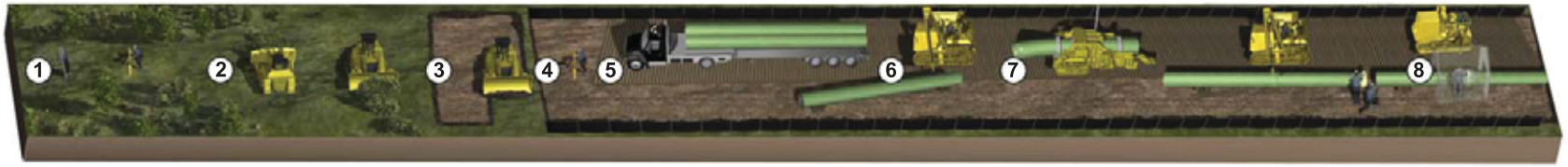
[a] PEM = Palustrine Emergent; PSS=Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979).

[b] Crossing length of proposed pipeline centerline across wetlands. No crossing length indicates the wetland is within the construction workspace, but is not crossed by the proposed pipeline

[c] Area of wetland impact within the construction workspace based typically on a 90-foot-wide workspace, including temporary dredge and fill areas, travel lanes, and staging areas.

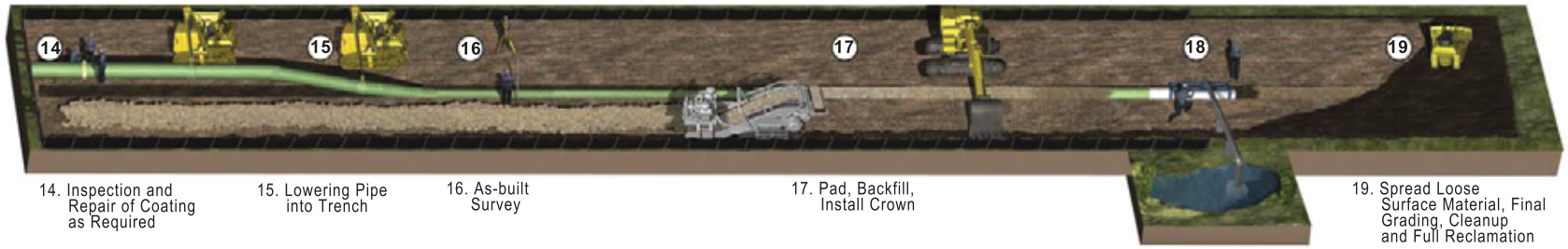
[d] Area affected by operation including the area within the permanent easement where the pipeline corridor will be maintained by periodic clearing activities.

[e] Permanent wetland type conversion impacts include the area in PSS and PFO wetlands within the permanent easement where the pipeline corridor will be maintained by periodic clearing activities.



1. Survey and Staking
2. Clearing/Front-end Grading
3. Loose Surface Material Moved
4. Re-staking Centerline of Trench on ROW
5. Installation of Erosion Control and Stabilization Mats
6. Stringing Pipe
7. Field-bending Pipe
8. Production Welding

9. Non-destructive Testing and Repair as Required
10. Coating Field Welds
11. Trenching: Wheel Ditcher
12. Trenching: Backhoe
13. Trenching: Rock



14. Inspection and Repair of Coating as Required
15. Lowering Pipe into Trench
16. As-built Survey
17. Pad, Backfill, Install Crown
18. Hydrostatic Testing, Final Tie-in
19. Spread Loose Surface Material, Final Grading, Cleanup and Full Reclamation

Segment 18 - Line 3 Replacement Program
Typical Construction Sequence

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0 150 300 Feet

1 inch = 300 feet

- Milepost
- Valve Location
- Centerline
- Alternative
- Access Road
- Construction Workspace
- Survey Corridor
- 2014 Field Survey Not Complete
- Field Delineated Waterbody
- Section Boundary

Wetlands

2013/2014 Field Delineated Wetlands, Alberta Clipper Wetlands, and WWI

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National Hydrography Dataset

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Detailed Route Map

Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Detailed Route Map

Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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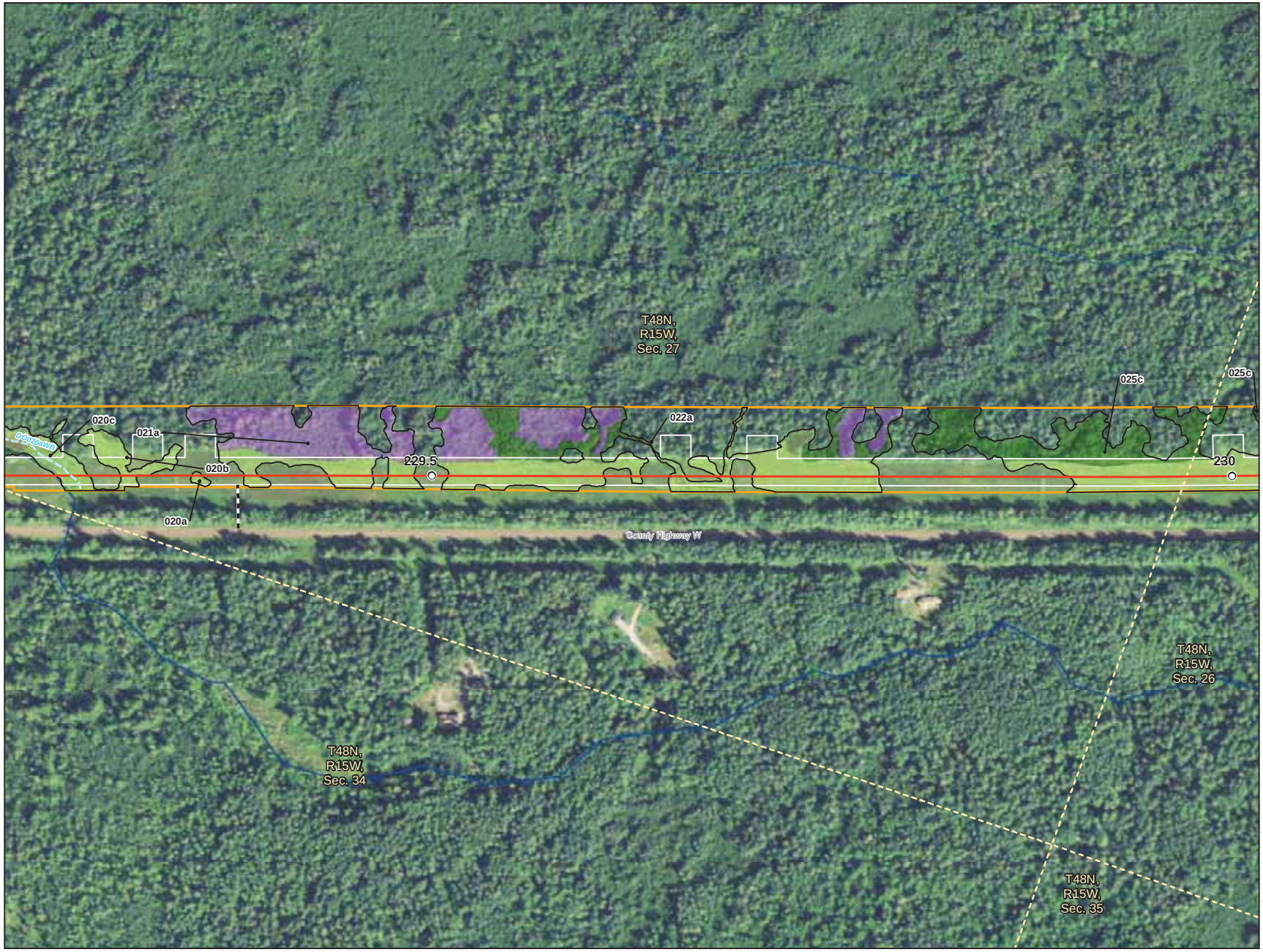

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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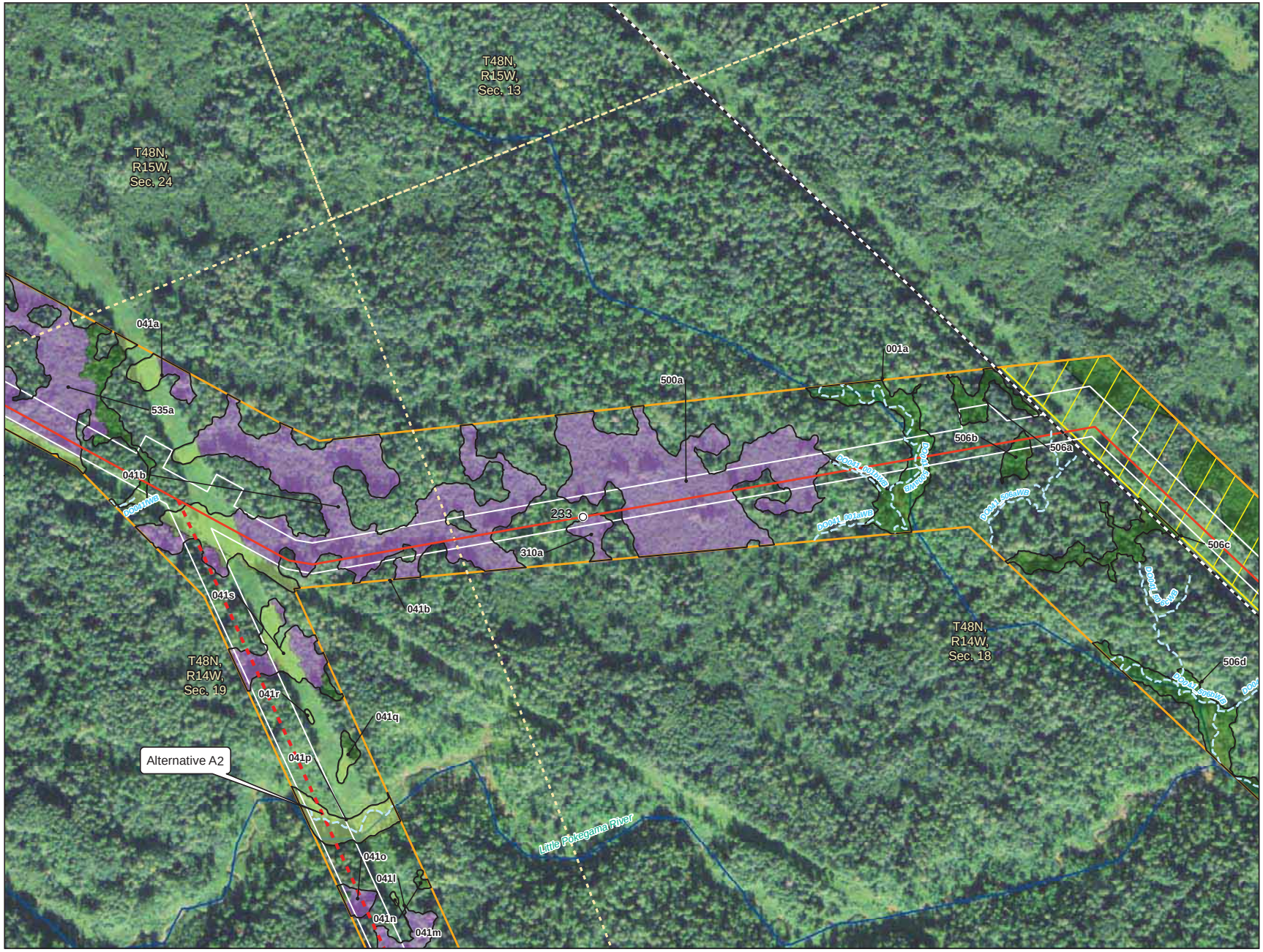

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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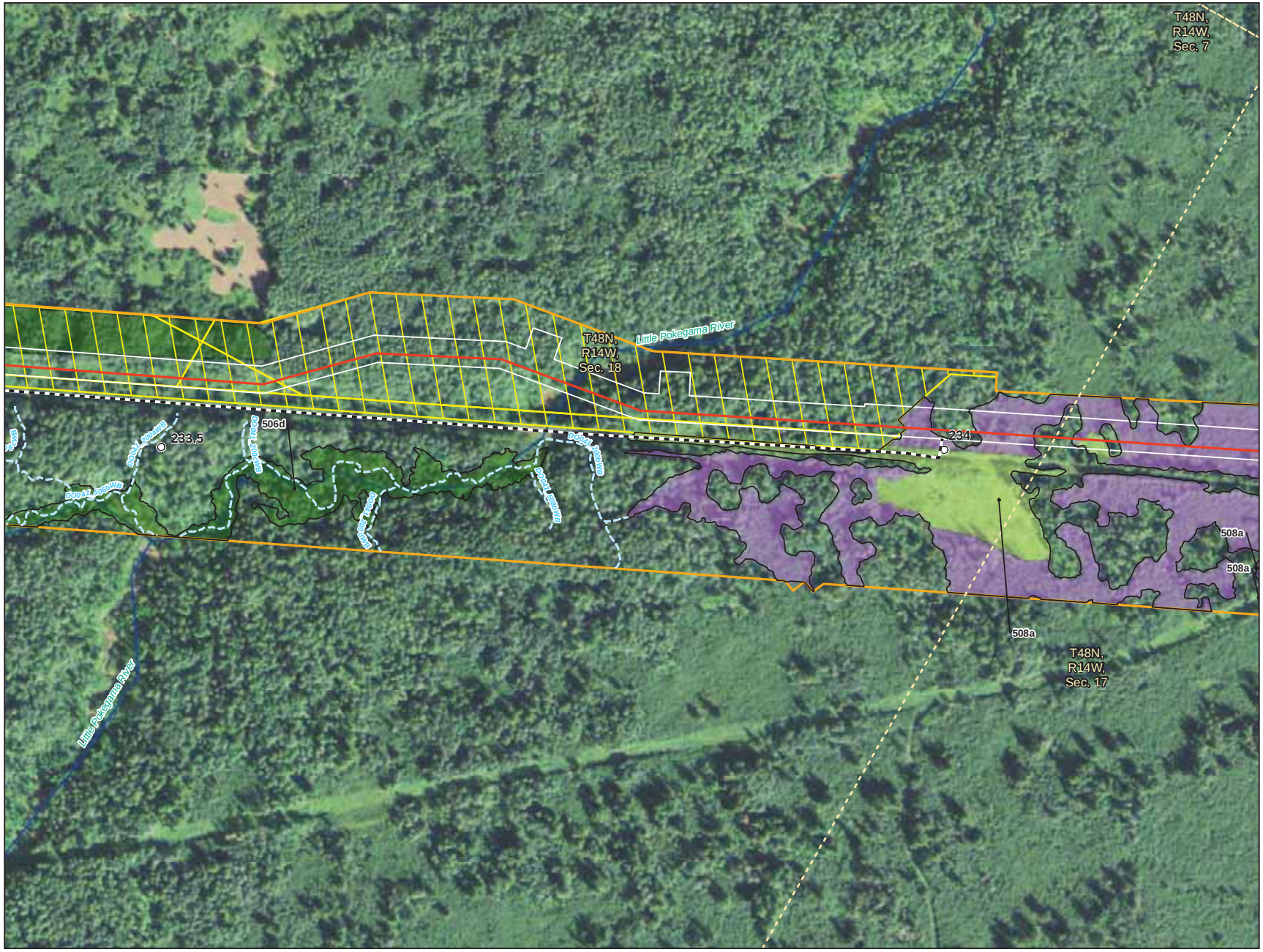

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(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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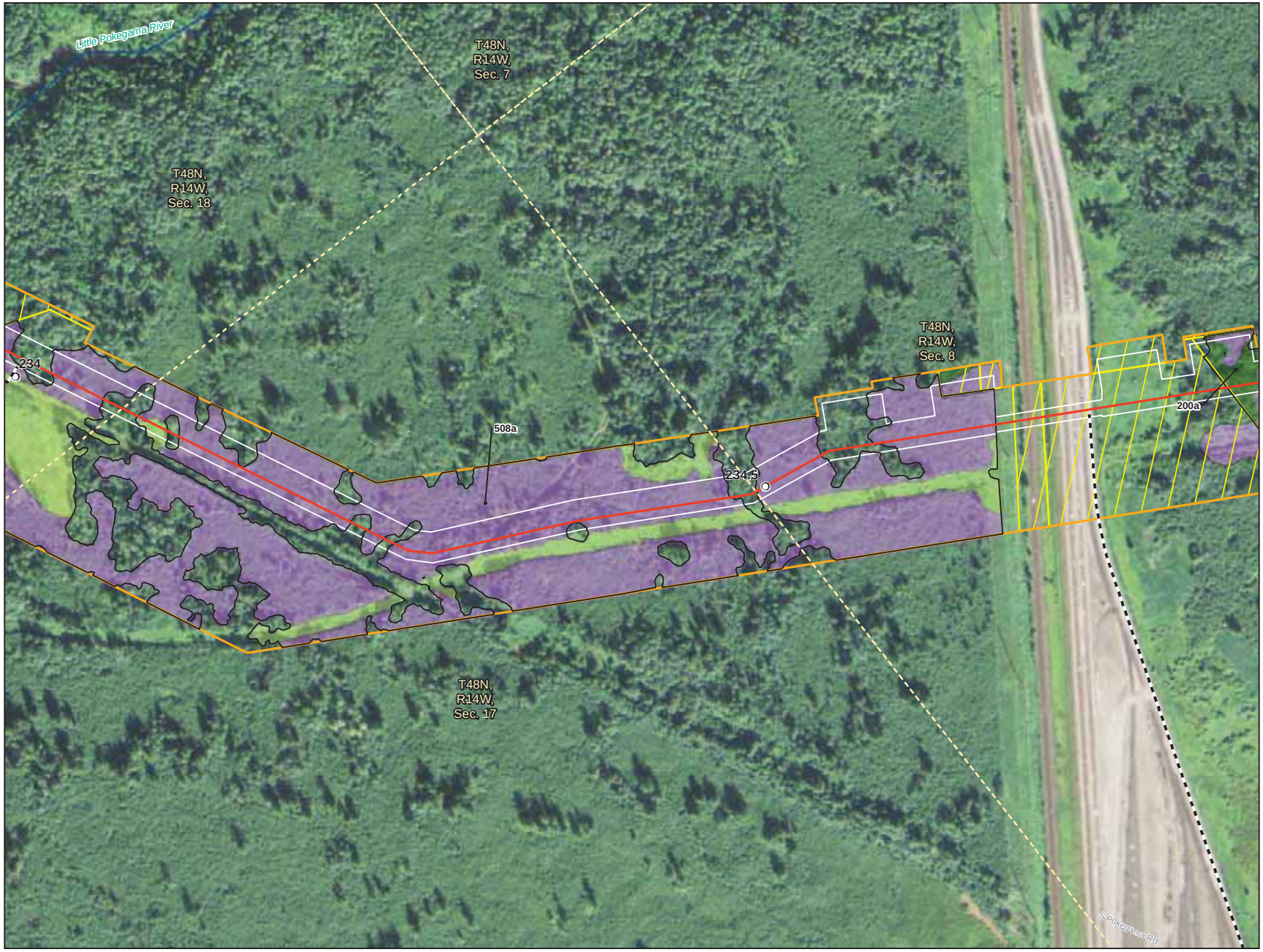

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Detailed Route Map

Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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0 150 300 Feet

1 inch = 300 feet

- Milepost
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2013/2014 Field Delineated Wetlands, Alberta Clipper Wetlands, and WWI

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Detailed Route Map

Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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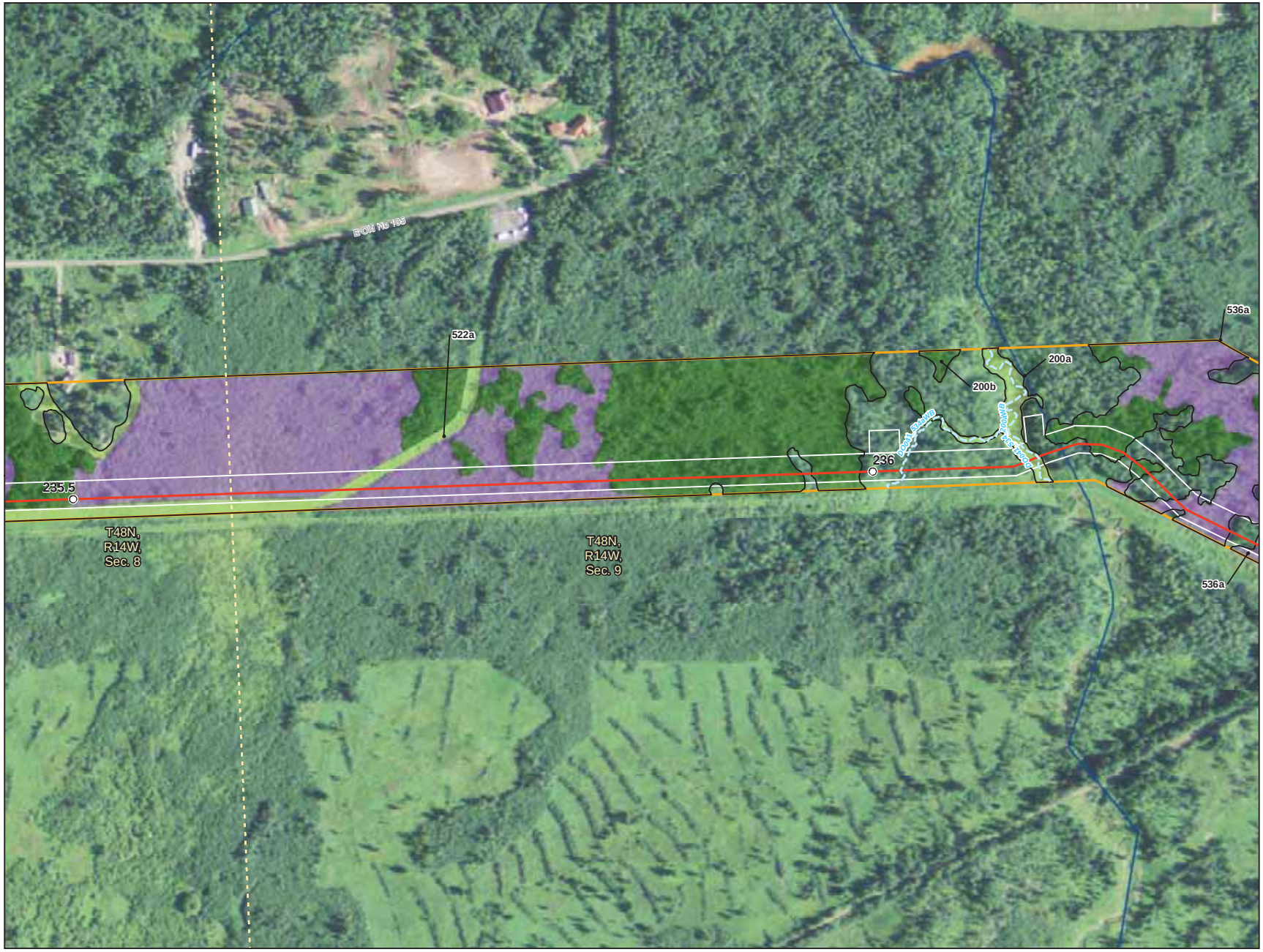

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(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Segment 18-Line 3 Replacement Project

(Field Delineated and WWI Wetlands and Waterbodies)

Douglas County, Wisconsin

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Detailed Route Map

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0 150 300 Feet

1 inch = 300 feet

- Milepost
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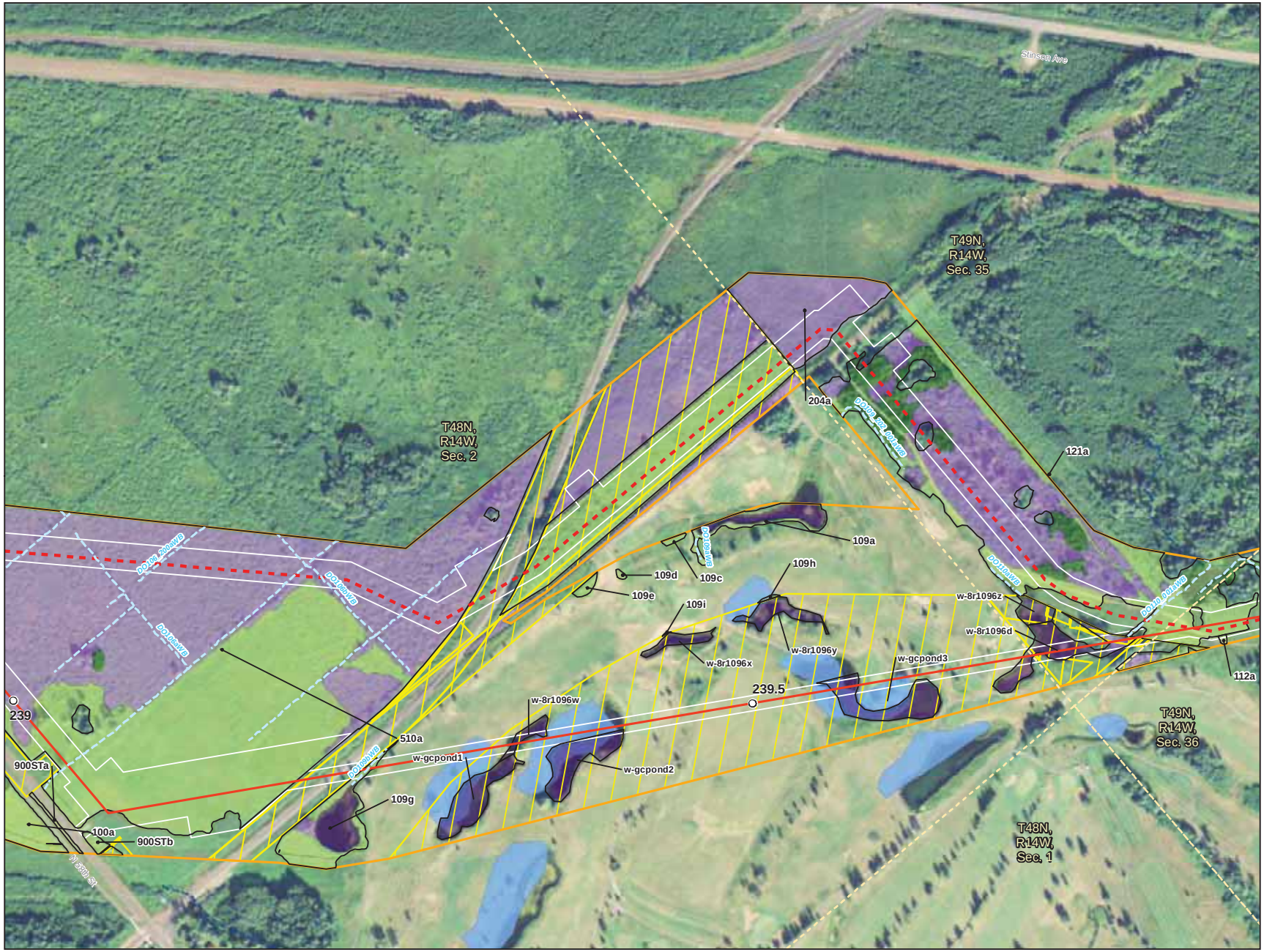

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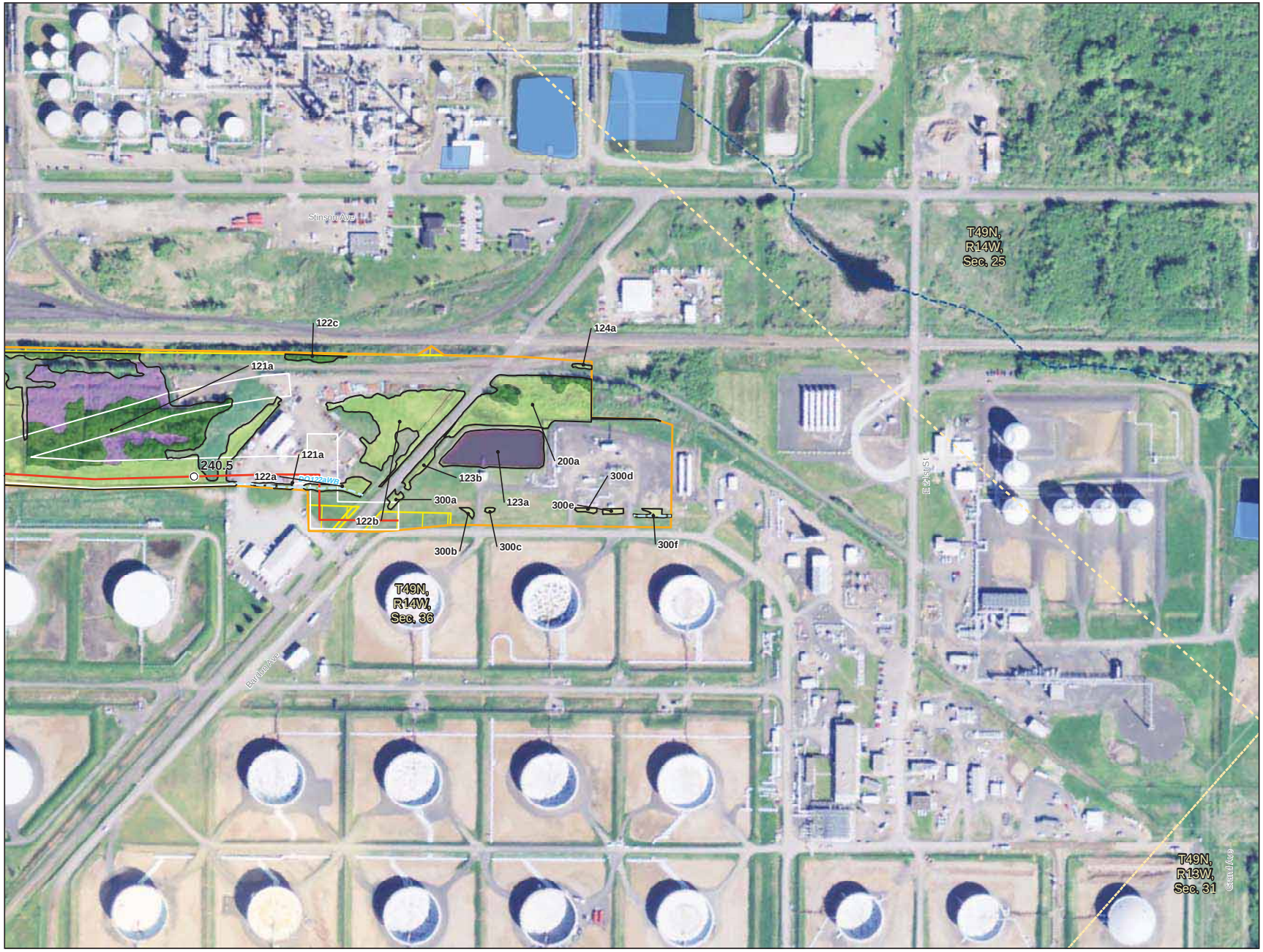

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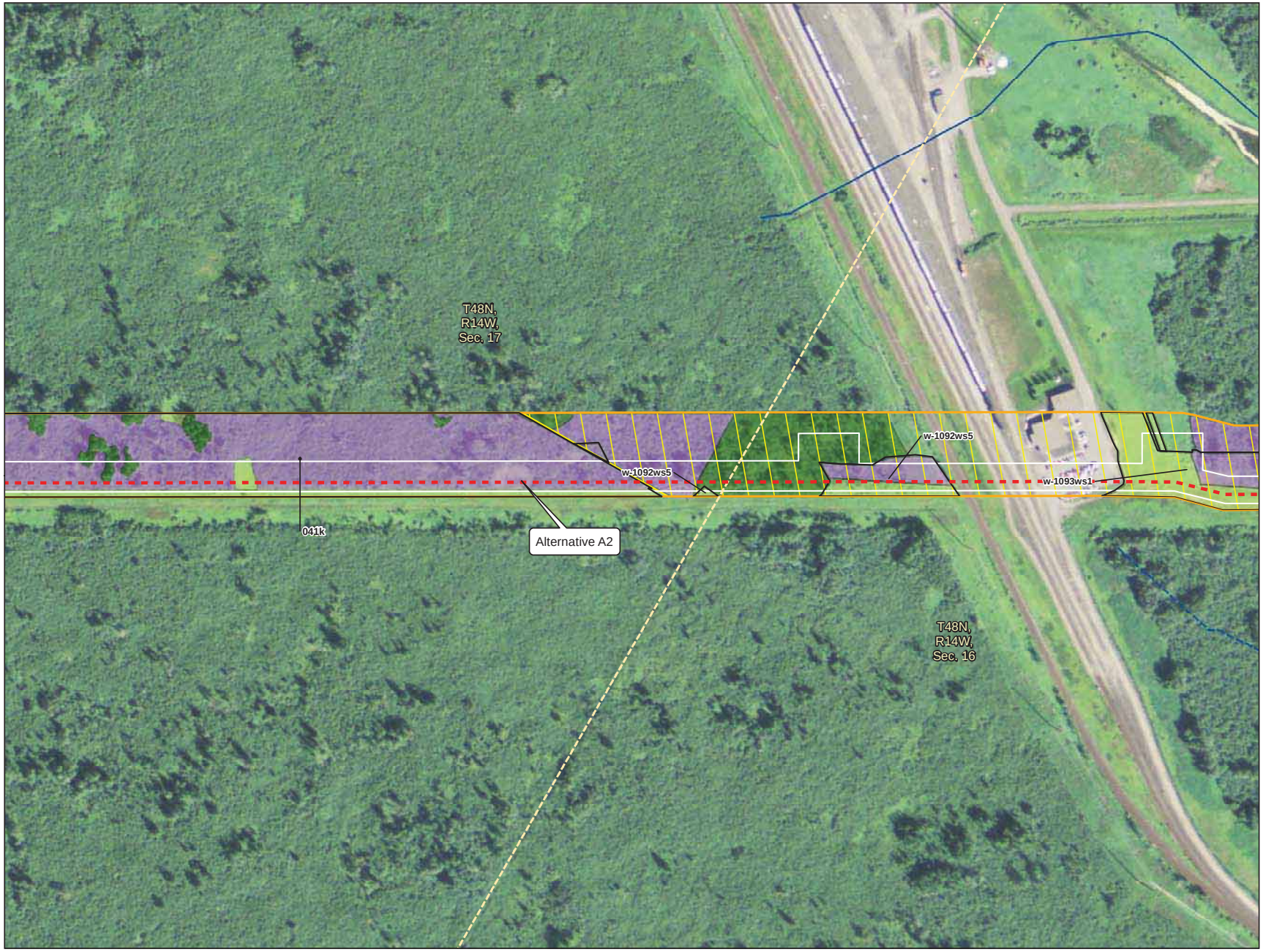

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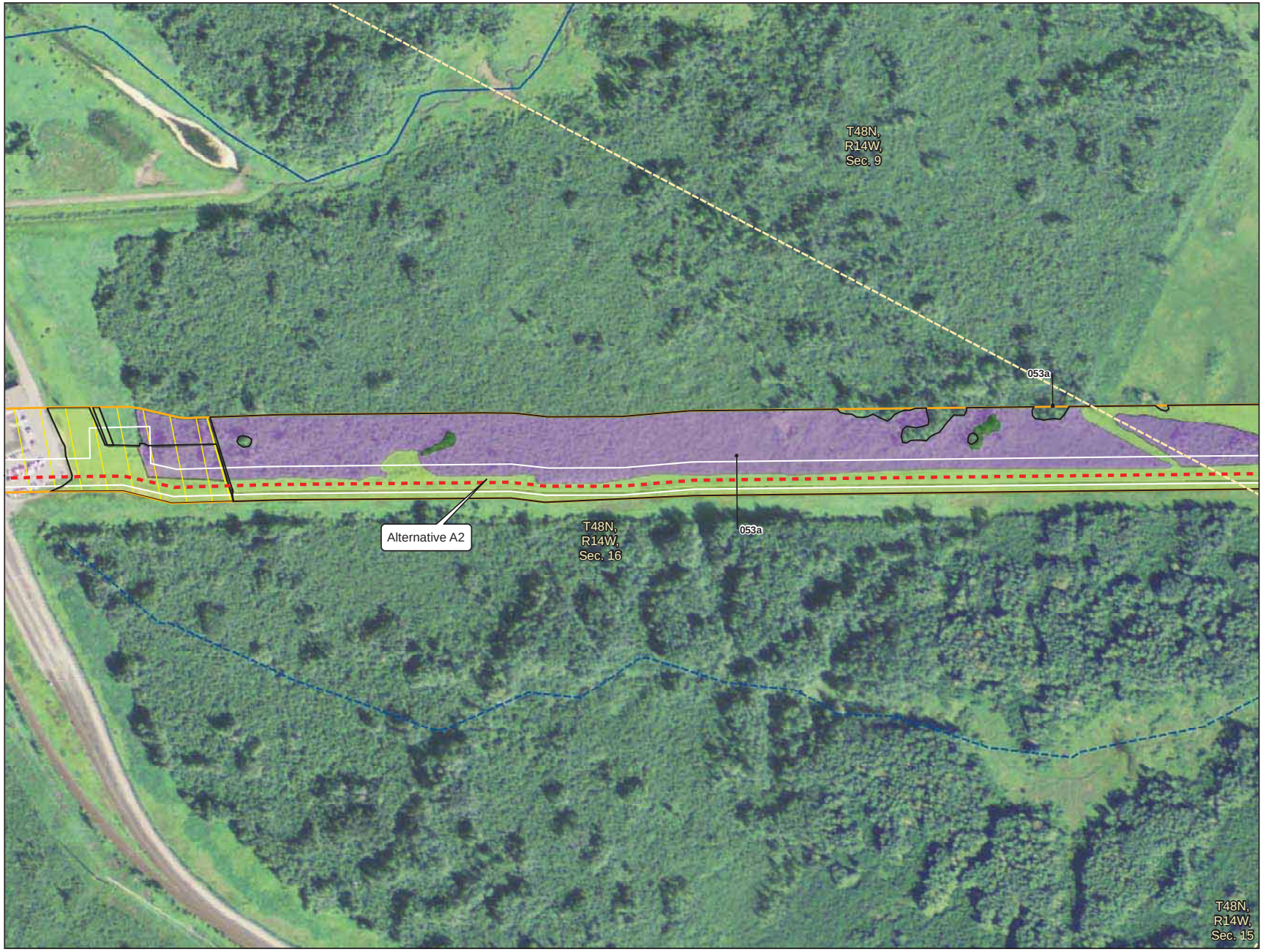

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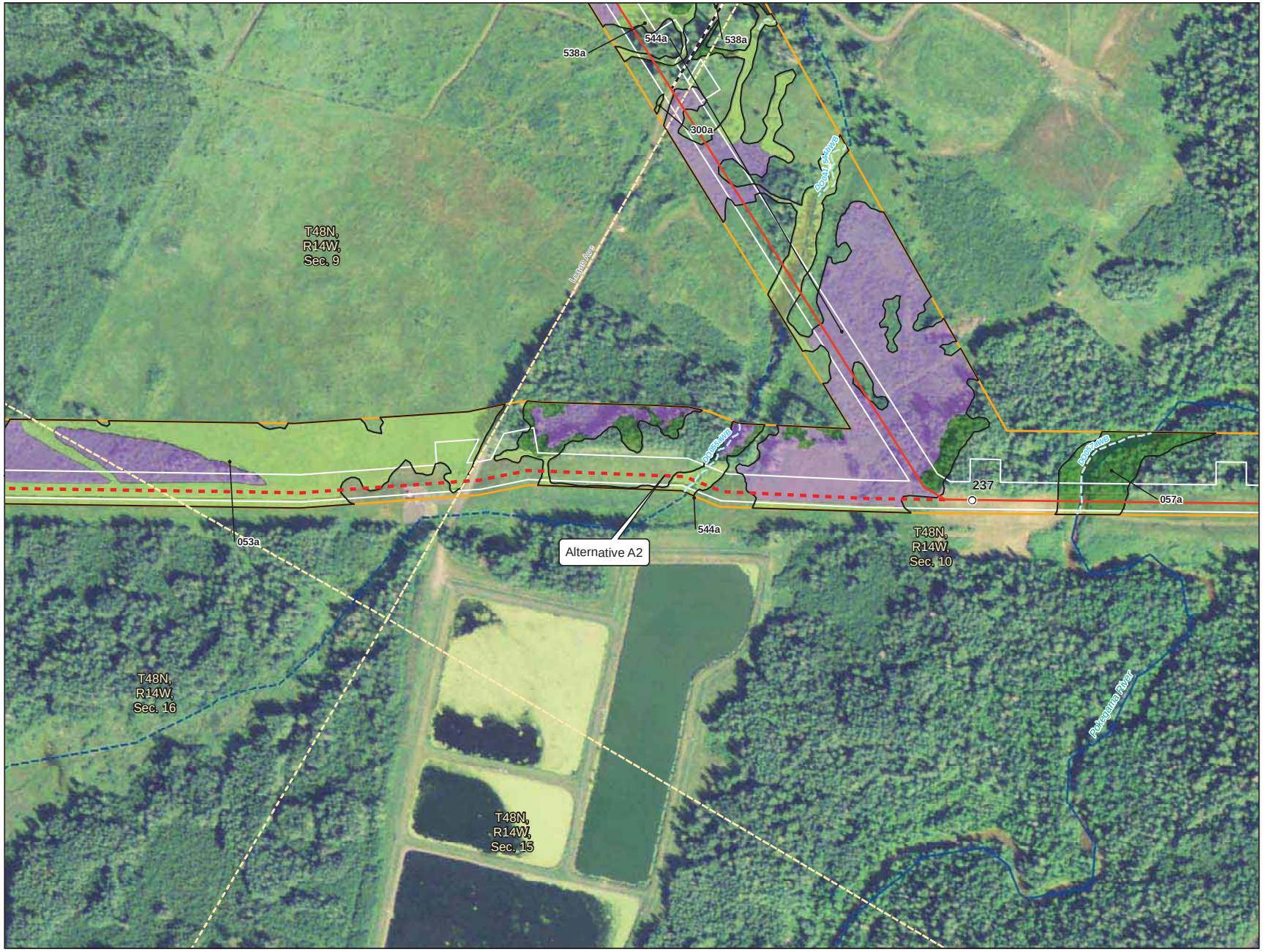

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