Badger Coulee 345 kV Transmission Line Project

Construction and Mitigation Plan (CMP)

Segment 2

CONSTRUCTION and MITIGATION PLAN

Badger Coulee 345 kV Transmission Line Project – Segment 2 (south of CTH U)

American Transmission Company LLC, by its corporate manager, ATC Management Inc. (ATC); Dairyland Power Cooperative (DPC); Northern States Power Company, a Wisconsin corporation (NSPW); SMMPA Wisconsin, LLC (SMMPA Wisconsin), and WPPI Energy (WPPI) (the Applicants) were granted a Ch. 30.025 utility permit by the Wisconsin Department of Natural Resources (WDNR) for work in and adjacent to wetlands and waterways for the Badger Coulee 345 kV Transmission Line Project (Permit #IP-WC/SC-2015-N20001 through N20273)(Attachment 3). This permit requires the Applicants prepare a Construction and Mitigation Plan (CMP) for work in wetlands and waterways for WDNR approval prior to beginning work in these features (General Conditions #9 and 11). As the Project Construction Manager, ATC has prepared this CMP for Segment 2, which outlines construction methods and procedures that will be followed to minimize impacts to these features. For this CMP, Segment 2 includes the portion from CTH U (just north of the Wisconsin River) south to the North Madison substation. The portion of Segment 2 north of CTH U was included in the Segment 3 CMP submitted to WDNR on November 11, 2015. This portion of Segment 2 (hereafter referred to as "Segment 2 south of CTH U") is located in Columbia and Dane Counties and is 15.1 miles long.

The components of this CMP follow those outlined in General Condition #11 of the WDNR utility permit.

A. Environmental Access Plan

An Environmental Access Plan (EAP) for Segment 2 south of CTH U is provided in Appendix A. This EAP shows the location of wetlands and waterways, pole locations, temporary clear span bridge (TCSB) crossings, construction access, and other pertinent information.

Field work was conducted in 2012 to delineate wetlands and characterize other natural resource features along the majority of Segment 2 south of CTH U; however, access to the entire corridor width was not available. The project corridor was subsequently re-evaluated during additional field visits in 2015. Two new wetlands were identified (E-W2a on EAP map page 13 in an area of route realignment, and E-W6a on EAP map page 14), and the following previously identified wetlands were determined to be upland:

- E-W8 and E-W9 - between structures 137691 and 137692;
- E-W12 - between structures 137696 and 137697;
- E-W12b – near structure 137709;
- E-W13 - between structures 137712 and 137713;
- E-W19 – immediately south of structure 137741, and
- E-W20 - immediately south of structure 137743.

Further field evaluation of the previously identified wetlands (listed above), now considered upland, was conducted as access to the ROW for field surveys became available. A more-detailed evaluation in mesic woodlands (E-W8, E-W9 and E-W12) was conducted. Several of these wetland areas are localized at culvert outlets in WisDOT ROW in areas of mapped upland soils (E-W12b, E-W13) or they occur in a non-depressional agricultural field with no evidence of crop stress (E-W19 and E-W20). In addition, wetland G-W3 was merged with wetland G-W4 (now just considered G-W4); and wetlands E-W3a, E-W3b and E-W3c were excluded as they occur along a portion of the route that was ordered to be realigned (area north of CTH CS). The boundaries of several wetlands were also adjusted during these subsequent evaluations. The adjusted boundaries are shown on the EAP and a description summarizing the rationale for the boundary adjustments are provided in Appendix B.

As shown on the EAP, six new structures will be placed in wetlands along Segment 2 south of CTH U, requiring 0.006 acre of wetland fill. The wetlands in which these structures occur and their associated EAP map page are included in Appendix B. Structure placement in these wetlands was approved in the Joint Application. The placement of seventeen structures in wetlands along Segment 2 south of CTH U, requiring 0.042 acre of wetland fill, was approved in the utility permit. This reduction in number of structures in wetlands is primarily due to re-spanning during final design, the alignment shift north of CTH CS, the determination that some previously identified wetlands are upland and because structures occurring within 50 feet of a wetland were included in wetland fill calculations in the Joint Application.

Up to four temporary poles will be placed in wetlands to protect the interstate crossing during construction (EAP map page 28). These temporary poles are needed from a public safety perspective in case the wires fall during stringing. These four poles will be directly embedded into the ground surface which will result in approximately 0.01 acre of temporary wetland fill. The poles will be removed and the area restored to existing grade with topsoil replacement when complete. Revegetation of the disturbed areas will follow the Revegetation and Monitoring Plan (Attachment 2). Attempts to minimize the number of temporary poles in wetlands will be made; however complete avoidance of wetlands is unlikely due to the wetlands position on either side of the interstate in the transmission line ROW.

Up to two TCSBs will be required along Segment 2 south of CTH U (Appendix A). The TCSBs are required over waterways G-R4a and E-R2 (EAP map pages 8 and 14). Both of these TCSBs were approved in the WDNR utility permit. The applicants will attempt to gain alternate access from private property owners to eliminate the need for some of these TCSBs; however at this point it is assumed both TCSBs will be required.

Waterways G-R1 and G-R2 are side channels to the Wisconsin River and a temporary bridge may be required across these features to allow clearing equipment access to the islands (EAP map pages 6 and 7). Due to the waterway widths, the bridges would require the placement of construction matting below the Ordinary High Water Mark (OHWM) of these features as support (refer to Appendix D for a typical plan and profile drawing of these crossings). Alternately, if conditions are favorable (e.g., higher water level) and the amount / size of trees to be removed is small, the trees may be cut by hand and pulled across the two side channels. Although this method would not require bridges, temporary

disturbance to the bed of these waterways may occur. With either method, attempts will be made to minimize impacts to these waterways; however it is expected that disturbance to the channel bed up to a width of 16 feet will occur. Because the method used is dependent upon factors such as the amount and size of trees to be removed and water level at the time of clearing, ATC is requesting approval for both methods at this time. In addition, there are several lower areas on the Wisconsin River islands that have seasonal flooding and are presumed to be below the OWHM of the Wisconsin River (Appendix C Waterway Photographs, Photo 3). Construction matting may be temporarily placed in these areas to facilitate access for clearing equipment. The placement of miscellaneous structures (e.g., construction matting) below the OHWM of the side channels was approved in the WDNR utility permit.

In addition, two barges (approximately 40 ft x 40 ft) will be used to transport equipment and timber to and from the main Wisconsin River island utilizing two landing areas (EAP map pages 6 and 7). One barge will be anchored at the north bank and will be used as a stationary dock for loading equipment and unloading timber. The second barge will travel between the two landing areas to transport crews and equipment to the island as well as to remove timber. The mobile barge will be moved with a push boat powered by an outboard motor. Hollow pipes up to 24 inches in diameter will be driven into the river bed to secure the barges at both landing areas and the barges may scrape the river bottom at the landing areas (the draft of a fully-loaded barge is expected to be 2 feet below the water surface). Operators will attempt to minimize the overall impact to the river bed by landing and anchoring barges in similar locations with each pass. Utilizing barges that may scrape the Wisconsin River bottom was approved in the WDNR utility permit.

Approximately 7.7 acres of forested wetland clearing will be required along Segment 2 south of CTH U. This amount of clearing along this portion of Segment 2 is less than the 9.3 acres assumed in the Joint Application.

Construction access along Segment 2 south of CTH U is presented on the EAP (Appendix A). Access through wetlands has been avoided where feasible (i.e. E-W5 and E-W12a), or minimized by crossing only portions of wetlands (e.g., E-W4). However, access through other wetlands along this segment is necessary due to the configuration of these wetlands. (Note: *While most construction equipment will be limited in wetlands where access is not shown, small-track vehicles or all-terrain vehicles <u>may</u> still be used to pull the conductor through these portions of wetlands).*

Construction matting may be used to facilitate access and minimize impacts in wetlands. The table below identifies the anticipated footprint of matting in each wetland along the proposed ROW.

Wetland Identifier	Square footage of mats
G-W2	3,200
G-W4	46,900
E-W1	2,500
E-W2	14,500
E-W2a	16,500
E-W4	13,100
E-W6	7,400
E-W7	53,700
E-W11	300
E-W14	7,000
E-W15	15,700
E-W16	2,700
E-W17	6,600
E-W18	800

Most off-ROW access paths occur in upland areas however two paths occur in wetlands (EAP map pages 8 and 27). Wetland boundaries in off-ROW areas were determined from aerial photographs and NRCS soil mapping. About 12,000 ft^2 of wetland matting may be required for these off-ROW access paths. The off-ROW access path on page 8 traverses the edge of a forested wetland requiring approximately 0.02 acre of temporary forested wetland clearing. These off-ROW access paths are generally required due to long stretches of project corridor that do not have access to roadways or to provide an alternate path to the ROW. Attempts will be made to find alternate access that does not impact wetlands; however at this point it is assumed these routes will be required.

Additional measures to minimize wetland and waterway impacts along Segment 2 south of CTH U are outlined in other sections of this CMP (e.g. *Invasive Species Management Plan* and *Wetland Restoration and Revegetation Plan*).

B. Photographs of Pre-Construction Site Conditions (Wetlands and Waterways)

Pre-construction photographs of wetlands and waterways along the ROW of Segment 2 south of CTH U are provided in Appendix C.

C. Waterway Impacts

As discussed above, up to two TCSB crossings will be required along Segment 2 south of CTH U. In addition, temporary bridges with support elements (i.e. construction matting) below the OHWM of G-R1 and G-R2 (Wisconsin River side channels) will be required or the bed of these features may be temporarily disturbed if logs are pulled through them. The temporary placement of construction matting in seasonally flooded areas on the Wisconsin River island that are presumed to be below the OHWM of the river will also be required. Final plan and cross-sectional view drawings for each bridge crossing are provided in Appendix D. As required in General Condition #51 of the utility permit, the bridges will incorporate measures to minimize soil reaching the waterways. In addition, hollow pipes up to 24 inches in diameter will be driven into the Wisconsin River bed to secure the barge at both landing areas and the barge may scrape the river bottom at the landing areas.

The approved route and off-ROW access along Segment 2 south of CTH U crosses one waterway identified in the WDNR 24K hydrology layer that does not have defined bed and banks based on field observations from 2015. This feature is shown on the EAP (map page 17) and labelled as "non-regulated-WDNR confirmed (pending)", and a recent photo is presented in Appendix E. We are requesting WDNR concurrence that this feature would not be considered navigable and therefore not subject to provisions of Chapter 30 (Wis. Stats.).

During construction of concrete foundations, water is often pumped into the borehole to maintain the integrity of the excavation. Suitable surface waters adjacent to the ROW may be used as a source of this water. Several waterways along this segment may be utilized for withdrawals; however, a final determination has not been made at this time. If surface water withdrawals are required, they will meet the following conditions outlined in the Utility Structure, Bridge and Wetland General Permit (WDNR-GP3-2013):

- Pump intakes and discharges shall be placed to prevent impacts to fisheries, wildlife, and their habitat; and
- Pump intakes and discharges shall be placed to prevent the disturbance, removal and scour of bed material.

In addition, water withdrawals from public waterways must avoid placement of a structure on the bed of the waterway unless prior authorization under ch. 30.12 (Wis. Stats.) is granted from the WDNR. The WDNR will be notified if surface water withdrawals occur along Segment 2 south of CTH U.

<u>Clearance Waiver</u>

General Condition #46 of the WDNR utility permit indicates: *All bridges across navigable waterways shall either maintain a clearance of not less than 5 feet, or comply with requirements of s. NR 320.04 (Wis. Admin. Code)*. Wis. Admin. Code Chapter NR 320.04(3) indicates the department may allow less than 5 feet of navigation clearance when all of the following apply:

- The waterway is known to have little or no navigation or snowmobile use;
- The waterway is not anticipated to have navigational use by other than lightweight craft;
- The owner provides a portage over or around the bridge or culvert; and
- The reduced clearance would not be detrimental to the public interest.

The Applicants would allow a portage over or around a bridge if necessary; however given the waterway dimensions and other characteristics at these four crossings, these waterways likely have infrequent or no watercraft use. The Applicants believe the other conditions specified in Wis. Admin. Code Chapter NR 320.04(3) are met at each waterway crossing and therefore, a five-foot clearance is not required at any of the four bridge locations.

Fishery Waiver

General Condition #44 of the WDNR utility permit indicates that: *All bridges must be placed and removed in compliance with timing restrictions, unless authorized by the local DNR fisheries biologist. For trout streams and navigable tributaries to those trout streams, placement and removal is prohibited from September 15 through May 15, annually. On all other waterways, placement and removal of the bridges is prohibited from March 1 through June 15, annually*. As discussed above, temporary bridges will be required in four locations (G-R1, G-R2, G-R4a and E-R2) and construction matting will be required below the OHWM of the Wisconsin River on the island in close proximity to G-R1 and G-R2. Waterway E-R2 is a tributary to a trout stream (Rowan Creek) and the other waterways (G-R1, G-R2 and G-R4a) are classified as warm water streams. The Applicants requested a waiver of the September 15 through May 15 timing restriction for E-R2, and the March 1 through June 15 timing restriction for the other waterways from Mr. Nate Nye, the Columbia County Fisheries Manager. His response will be provided to the Office of Energy when it is received and included in Appendix F.

D. Endangered Resources Plan

ATC worked with the WDNR to develop a Certified Endangered Resources (ER) Review as part of the Joint Application. The Certified ER Review identified and summarized endangered resources known to occur along each proposed segment. Upon receiving the ordered route, the Certified ER has been amended in coordination with DNR as construction details have been developed. The amendment table identified which state-listed species have required follow-up actions and the specific areas along Segment 2 south of CTH U where measures are needed to avoid and minimize direct or indirect impacts to state-listed species. Furthermore, the amendment table identified voluntary measures recommended to avoid and minimize impacts to other sensitive state-listed species or resources (e.g. natural communities). The amendment table serves as a communication and coordination tool to be used among the Applicants, WDNR, and construction contractor(s). For federally listed species, the Applicants

are preparing a Biological Evaluation/Assessment in coordination with the USFWS that will outline a determination of affects for federally listed species that may occur along Segment 2 south of CTH U, as well as the necessary conservation measures to protect them. Where necessary, specific areas and protection measures will be documented on the EAP for state- and federally listed species known or assumed to be present along the segment.

E. Invasive Species Management Plan

Plant communities and dominant vegetation within the ROW of Segment 2 south of CTH U were documented during field evaluations in 2012, and additional field visits in 2015. The presence (i.e. general location and density) of Restricted and Prohibited species defined in *Wis. Admin Code* Ch. NR 40 within the ROW were identified during these assessments.

Segment 2 south of CTH U extends from the north side of the Wisconsin River south to the North Madison Substation. Segment 2 crosses the Wisconsin River and associated floodplain at the north end, and then primarily traverses agricultural lands, as well as scattered woodlands, wetlands, some residential and commercial lots, and interstate ROW. The southern portion of Segment 2 is located adjacent to existing transmission line ROW which traverses agricultural fields before ending at the substation.

The following summarizes invasive species observed in vegetative communities along the project corridor. While numerous Restricted species were identified, Prohibited species were not observed. All species identified below in this section are classified as Restricted unless otherwise noted.

In general, the interstate ROW along Segment 2 is regularly mowed and is commonly dominated by invasive species. Eurasian cool season grasses such as smooth brome (*Bromus inermis*), an invasive species not included in NR 40, are common within this area. A variety of other invasive species are also present throughout the interstate ROW and primarily include wild parsnip (*Pastinaca sativa*), Canada thistle (*Cirsium arvense*), spotted knapweed (*Centaurea stoebe*), and scattered locations of crown vetch (*Coronilla varia*), leafy spurge (*Euphorbia esula*), and plumeless thistle (*Carduus acanthoides*) within areas subject to regular mowing. Common shrub species observed within the interstate ROW, typically along fence lines, includes common buckthorn (*Rhamnus cathartica*), invasive honeysuckle shrubs (*Lonicera* spp.), and autumn olive (*Elaeagnus umbellata*). Garlic mustard (*Alliaria petiollata*) was occasionally observed within shrubby areas of the interstate corridor and a small patch of common reed grass (*Phragmites australis*) was observed near wetland E-W14.

Agricultural lands consist primarily of corn and soybean row crops, as well as some winter wheat, oat, and alfalfa fields. Invasive species were commonly observed along the boundaries between fields and the interstate ROW fence line. Invasive species observed along agricultural lands are similar to those observed within the interstate ROW, including species such as common buckthorn, invasive honeysuckle shrubs, wild parsnip, and Canada thistle. Garlic mustard and autumn olive were also observed in scattered populations.

Scattered woodlands are present along the Segment 2 ROW. In general, the woodlands are degraded and have a dense understory of common buckthorn and invasive honeysuckle shrubs. Invasive tree species observed within woodlands and along wooded edges include black locust (*Robinia pseudoacacia*) and Siberian elm (*Ulmus pumila*). Garlic mustard was observed as scattered to common within most of the wooded areas, and dame's rocket (*Hesperis matronalis*) and oriental bittersweet (*Celastrus orbiculatus*) are also present at a few locations.

Intermittently maintained grassland surrounds the North Madison Substation at the south end of Segment 2 and is dominated by weedy species. Within the project corridor, invasive species observed include spotted knapweed with scattered patches of crown vetch and tansy (*Tanacetum vulgare*).

Wetlands observed along Segment 2 include degraded wet meadow, hardwood swamp, floodplain forest, shrub-carr, shallow marsh, sedge meadow, and farmed wetland communities. Reed canary grass (*Phalaris arundinacea*) (not included in NR 40) and narrow-leaf cattail (*Typha angustifolia*) are common invasive species observed within these wetland areas, and garlic mustard and dame's rocket were observed in a few scattered locations. Near the north end of Segment 2, purple loosestrife (*Lythrum salicaria*) and common reed grass were also observed in association with wetland G-W4. Invasive honeysuckle shrubs and common buckthorn, as well as scattered autumn olive were often observed along wetland edges.

<u>Location-Specific BMP's</u>

Location-specific BMP's should be applied to the following locations:

- Two patches of common reed grass and scattered purple loosestrife are present within the south end of wetland G-W4. Vehicles should stay on construction matting, or the vehicles will be inspected and cleaned before leaving this area.
- Garlic mustard is common in the understory of E-W7. Vehicles should stay on construction matting, or the vehicles will be inspected and cleaned before leaving the area. In addition, a layer of wood chips will be left on the ground after clearing activities (if allowed by the landowners) which will act as a barrier between vehicles and the ground surface.
- Black locust is common within the canopy of three small woodlots between structures 137691-137692, 137716-137717, and 137718-137719. Additionally, honeysuckle shrubs, garlic mustard, and dame's rocket are common to dense within these woodlots. A layer of wood chips will be left on the ground after clearing activities (if allowed by the landowners) which will act as a barrier between vehicles and the ground surface. In addition, vehicles will be inspected and cleaned before leaving the area.
- Common reed grass is present within interstate ROW between structures 137727 and 137728. Attempts will be made to avoid this area during work activities. If this area cannot be avoided, vehicles should stay on construction matting, or the vehicles will be inspected and cleaned before leaving the area.

Location-specific BMPs may be implemented elsewhere within Segment 2 south of CTH U if ATC encounters a localized population of an invasive species other than those discussed above during future field visits.

General BMP's

The following general BMPs will be utilized during construction along Segment 2 south of CTH U to comply with *Wis. Admin Code* Ch. NR 40. The intent of these practices is to limit the spread of invasive species.

- Construction equipment and material
    - Minimize soil disturbance and utilize gravel roads or established equipment access paths to the extent practicable.
    - To the extent practicable, avoid localized populations of invasive species through construction timing and alternate access.
    - When working in areas infested with invasive species, clean obvious mud and plant material from construction matting and equipment.
- Managing soil and vegetative material
    - Avoid movement of invasive material to non-infested areas. If possible, invasive material should be left within the ROW. For example, when clearing areas dominated by honeysuckle or buckthorn shrubs, cut material should be left in generally the same place and not spread off-site or to uninfested areas.
    - If infested soil or vegetative material must be transported from the ROW, transport to a designated area for appropriate disposal. Prior to transporting material, manage the load to limit potential spread to uninfested areas.
    - Manage stockpiles onsite to prevent the spread to adjacent areas.
    - In areas requiring clearing, a layer of wood chips should be left on the ground (if approved by the landowner) to act as a barrier between vehicles and the ground surface.
- Restoration and landscaping
    - Seed mixes have been developed for the Project and will be installed in accordance with the Revegetation and Monitoring plan (Attachment 2).
    - Revegetate disturbed soils as soon as possible with an appropriate temporary cover crop to minimize invasive species establishment. As appropriate, a perennial seed mix shall be installed during the appropriate seeding window.
- Aquatic invasive species

- Water may be withdrawn from waterways for foundation construction and materials will be placed below the OHWM of the Wisconsin River. All equipment used for withdrawing water or to facilitate construction access (i.e. mats, pumps, hoses, vehicles, boats/barges, turbidity curtains, machinery, etc.) will be adequately decontaminated/disinfected for aquatic invasives. Decontamination/disinfection can be accomplished by allowing equipment to dry thoroughly for at least 5 days or by utilizing another appropriate method identified in NR 329.04, prior to being used in non-infested waters of the state.

F. Wetland Compensatory Mitigation Plan

As compensation for unavoidable impacts to wetlands as part of the Project, the applicants propose wetland compensatory mitigation. Unavoidable temporary and permanent impacts to wetlands occur within Segment 2 south of CTH U. The majority of the project is located within the Lower Wisconsin Bank Service Area (BSA) and the southern extent is located in the Rock BSA. The total wetland impacts and proposed compensatory mitigation acres for Segment 2 south of CTH U are identified in the Mitigation Summary Table (Appendix G).

Temporary Impacts

Temporary wetland impacts along Segment 2 south of CTH U are associated with temporary matting of sedge meadow, which is identified as a difficult to replace (DTR) wetland community. Temporary matting will impact 1.06 acres of sedge meadow within the ROW. Additional temporary impacts are associated with the temporary clearing of a hardwood swamp wetland along an off-ROW access route (EAP map page 8) where woody vegetation will be allowed to regenerate. Temporary conversion of hardwood swamp wetland along off-ROW access routes accounts for 0.02 acre.

Permanent Impacts

Permanent impacts due to structure placement in wetlands have been minimized to a total of 0.006 acre. The following community types are impacted by structure placement, and acreages of impact by community type are provided in Appendix G: wet meadow (degraded), shallow marsh, shrub-carr, hardwood swamp, and floodplain forest.

Permanent conversion of shrub and forested wetland within the project corridor of Segment 2 south of CTH U totals 9.70 acres, which excludes acreage associated with structure impacts within these communities. Specifically, permanent conversion of shrub-carr wetland is 2.03 acres, hardwood swamp is 3.88 acres, and floodplain forest totals 3.8 acres. Permanent conversion for this portion of the project is limited to the Lower Wisconsin BSA.

Mitigation Credits

The applicants propose the use of the Wisconsin in-lieu fee program, Wisconsin Wetland Conservation Trust (WWCT) to compensate for wetland impacts. Credits required for compensation are available for

this project, as confirmed in a conversation with the in-lieu fee coordinator on August 20, 2015. Mitigation credits are based on mitigation ratios agreed upon by the WDNR and the USACE and are as follows: 1.45:1 for permanent impacts related to structure placement; 0.5:1 for permanent conversion of shrub-carr, hardwood swamp, and floodplain forest; 0.25:1 for temporary matting of sedge meadow; and 0.25:1 for temporary clearing of hardwood swamp along off-ROW access routes. At these ratios, a total of 5.13 credits are required to compensate for the unavoidable wetland impacts to Segment 2 south of CTH U; specifically 5.13 within the Lower Wisconsin BSA and 0.01 credits within the Rock BSA.

G. Wetland Restoration and Revegetation Plan

A general summary of wetland community characteristics within the ROW of Segment 2 south of CTH U is presented in Appendix B. This characterization is based on field observations from 2012 and 2015. In summary, wetland communities present within these segments include degraded wet meadow, floodplain forest, hardwood swamp, sedge meadow, shallow marsh, shrub-carr and farmed wetland. Most wetland communities are degraded to a certain degree with typically one or more invasive species present, although higher quality floodplain forest communities are present within the Wisconsin River corridor. Construction within wetlands shall comply with the project Erosion Control Plan (ECP). Revegetation of wetlands is presented in the project specific Revegetation and Monitoring Plan (Attachment 2). A summary of wetland restoration and revegetation guidelines for Segment 2 south of CTH U is provided below.

<u>Restoration / Revegetation</u>

- Restoration within wetland areas will include removal of all construction-related materials (e.g. timber matting) and the restoration of significant ruts and depressions.
- The ROW will be restored to pre-existing topography as much as practicable.
- Areas with significant rutting in wetlands will be repaired using hand tools, back dragging, or other appropriate means to restore topography while minimizing additional disturbance.
- Wetland areas where disturbance is minimal, as anticipated along matted access routes, will generally be allowed to revegetate naturally. These locations will be monitored to determine if supplemental seeding is necessary.
- A temporary cover crop may be installed over disturbed soils following ground disturbance. A project-specific permanent native wetland seed mix may be installed within disturbed wetland areas that have a native component but are not high quality wetlands (see Revegetation and Monitoring Plan for seed mixes and installation specifications, Attachment 2).
- Farmed wetlands will not be re-seeded due to their current land use.

<u>Other /Miscellaneous</u>

- Fertilizers will not be used within 100 feet of wetlands, streams and rivers.

- Cover such as erosion blankets or other weed-free devices may be applied after seeding and final restoration has occurred in wetland areas disturbed by the construction activities. All erosion control measures utilized will conform to WDNR Technical Standards.
- Soil erosion and sedimentation control measures installed will be maintained until the disturbed areas are permanently stabilized.

H. Wooded Riparian and Wetland Management Plan

Approximately 7.7 acres of wooded wetlands will be impacted by construction along Segment 2 south of CTH U. This primarily includes floodplain forest associated with the Wisconsin River islands and Rowan Creek, and other areas of hardwood swamp. In addition, upland wooded riparian corridors occur on steeper banks associated with the Wisconsin River corridor and along a few narrow waterways along this segment.

General

In general, the entire ROW width will be cleared for safe construction equipment access in wooded areas. In riparian areas, efforts will be made to retain low-growing vegetation on/near stream banks for erosion control, where it currently exists. In areas where a TCSB will be installed, the amount of clearing will be kept to a minimum, which will minimize the impacts to riparian corridors.

Trees cut in wetland areas will generally be removed from the wetland and windrowed or chipped in upland areas. Some of the woody vegetation that is cleared may remain in the wetland areas. This includes lop and scatter of tree limbs and thin scatter of wood chips, and vegetation fragments resulting from mowing the shrub and sapling layer. Wood left in the wetland will be scattered in a manner that it does not impede vegetation growth, water flow or alter the bottom elevation of the wetland.

Wisconsin River

Vegetation will be cleared within the transmission line ROW on islands in the Wisconsin River. As discussed above, access will require barges to transport equipment, crews and timber to and from the islands. Temporary bridges and matting below the OHWM of the river will also be required. As an alternative to the two bridges, trees may be pulled through the side channels (G-R1 and G-R2) depending upon site conditions, and the amount and size of the trees to be removed. An existing access path extending from CTH U to the north barge landing zone (EAP map page 6) will be used to transport equipment, crews, and timber to / from the river. This path will require some grading and matting to provide stable access (refer to the Erosion Control Plan for this segment for more detail).

Trees and tall shrubs will be removed within the transmission line ROW on the islands; however low-growing species will remain where possible. Large timber will be limbed and removed from the island on a barge. The timber will be staged within the ROW north of the river and hauled off to a designated disposal site. Some of the slash may be mowed, chipped and/or burned on the island. Mowed and/or chipped wood debris will be thin spread and left on-site to minimize erosion. Wood chips will be spread

such that they do not inhibit vegetative regeneration (generally less than 2 inches in depth). Burn piles will be thin spread in areas where ash deposition to the river is unlikely to occur or the ash will be removed if necessary.

Equipment that will be used on the islands include a mower(s), skid steer(s), timber pro(s), harvester/processor and hand clearing equipment. A spill kit will be on site or in close proximity to larger equipment in case of a leak or spill. Due to the effort associated with transporting vehicles to/from the island, vehicle refueling on the Wisconsin River islands may occur. A pick-up truck with a bulk fuel tank will be transported daily to the island to re-fuel larger equipment. Refueling crews will be trained to monitor active refueling (i.e. do not rely on the automatic shut-off valve). Smaller fuel tanks which are stored on the island for hand clearing equipment will be placed in secondary containment structures.

Trees and tall shrubs will also be removed from the steeper banks of the Wisconsin River. Equipment and crews will generally access the slopes from the top of the banks at staging areas although the access path on the north bank may also be used. In areas of steeper slopes, woody material will be hand cut and winched up the slope to prevent material from falling into the water. Trees and taller shrubs will be mechanically harvested in areas of more gradual slope (e.g., portions of the north bank). Woody material that inadvertently falls into the river will be removed as soon as practicable.

Erosion control methods for clearing activities on Wisconsin River banks and islands will be addressed in the Erosion Control Plan for this segment. In addition, areas disturbed by construction will be restored as described in the *Wetland Restoration and Re-Vegetation Plan* section

I. Final Sequencing and Scheduling Plan

Clearing along Segment 2 south of CTH U is anticipated to begin as early as January 2016, similar to Segments 1 and 3. The following summarizes the anticipated timing of construction along Segment 2:

- ROW Clearing – Jan. 2016 - May 2016
- Structure Foundations – Aug. 2016 - Sept. 2016
- Install Structures – Sept. 2016 – Feb. 2017
- Install Conductor – Mar. 2017 - June 2017

ROW cleanup and restoration is scheduled to occur in the summer/fall following completion of construction, although actual dates for restoration will be weather dependent. Permanent restoration within any given area will be properly implemented within 30 days of final construction. If restoration is delayed due to weather or soil conditions, the area will be protected until permanent restoration can be completed.

J. Post-Construction Monitoring Plan

Wetland and waterway monitoring will be required for this project. Weekly monitoring will occur during and after construction until disturbed areas are stabilized and annual post-construction monitoring will be conducted as discussed below.

In accordance with Condition #38 of the WDNR utility permit, ATC will conduct frequent monitoring (e.g., weekly and after a significant rainfall event) of erosion and sediment controls during and after construction, which may include areas within and adjacent to wetlands and waterways. This monitoring will occur until the areas are stabilized as defined in Condition #38 of the utility permit.

ATC will also conduct annual post-construction monitoring of the portions of wetlands and waterways impacted by construction, as outlined in Condition #70 of the utility permit. This monitoring shall continue for a minimum of 5 years after construction unless compliance is achieved and documented earlier. Refer to the Revegetation and Monitoring Plan (Attachment 2) for more detail regarding wetland and waterway monitoring, and the associated reporting.

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

Appendix A

Environmental Access Plan

Environmental Access Plan – Segment 2 South of CTH U

Graphic Index
for the Badger Coulee Project

SEGMENT HIGHLIGHTS

- **2 Temporary Clear Span Bridges will be required over waterways**
- **The Wisconsin River crossing is shown on pages 6 and 7 of this plan. Clearing access on the islands requires the use of barges. Two bridges within side channels, and other construction matting, will be installed below the OHWM of the river.**
- **A total of 6 poles will be constructed in the following wetlands (parenthetic value refers to number of structures within the feature):**
  - **G-W4 (2), E-W2 (1), E-W6 (1), E-W15 (1) and E-W17 (1)**
- **A total of 4 temporary poles will be placed in wetlands E-W17 and E-W18 (2 poles in each wetland)**
- **Invasive Species Caution: Invasive species locations are identified on pages 8, 14, 15, 22, 23 and 25 of this plan. Refer to these pages for instructions on how to proceed in these areas.**
- **Rare Species Caution: Rare species locations are identified on pages 6, 7, 8, 11, 12, 14 and 15 of this plan. Refer to these pages for instructions on how to proceed in these areas.**

INDEX TO FEATURES

November 2015

AMERICAN TRANSMISSION COMPANY®

Town of Caledonia

COLUMBIA COUNTY

Town of Dekorra

CDL-BRG20540 - RMT Farms

CDL-BRG20540 - RMT Farms

CDL-BRG20540 - RMT Farms

CDL-BRG20280 - State of Wisconsin

137662

137662

T11N, R6E, S1
T11N, R6E, S12

U

39

G-R1

G-R1

G-W2

G-R2

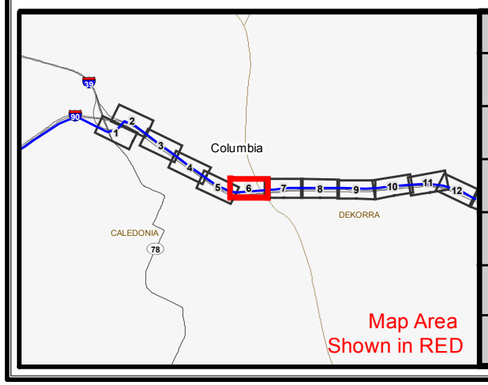
PROTECTED SPECIES:
No activities or access with motorized vehicles from March 1-October 31 unless authorized by Environmental

Temporary matting required below the OHWM of Wisconsin River side channel and on the island

Clearing equipment to access Wisconsin River islands via barge. Approximate barge landing areas.

PROTECTED SPECIES:
No activities or access with motorized vehicles from March 15-October 31 unless exclusion fencing is installed or a qualified species monitor is present

PROTECTED SPECIES:
No work below the Ordinary High Water Mark unless authorized by Environmental



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

COLUMBIA COUNTY

Temporary matting required below the OHWM of Wisconsin River side channel and on the island

PROTECTED SPECIES:
No work below the Ordinary High Water Mark unless authorized by Environmental

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PROTECTED SPECIES:
No activities or access with motorized vehicles from March 15-October 31 unless exclusion fencing is installed or a qualified species monitor is present

PROTECTED SPECIES:
1) No work below the Ordinary High Water Mark.
2) No activities or access with motorized vehicles from March 15-October 31 unless exclusion fencing is installed or a qualified species monitor is present

Town of Dekorra

St Lawrence Bluff Rd

Oak Knoll Rd

CDL-BRG20480 - Brian K. & Katrina B. Doherty

CDL-BRG20440 - Jennifer & Ryan Radewan

CDL-BRG20490 - Rodney D. & Cheryl L. Frautschy

CDL-BRG20460 - Gerald & Barbara Phipps

CDL-BRG20450 - Jerry & Karla Schulz

CDL-BRG20510 - Leah Arndt

CDL-BRG20509 - Steven Oldenburg

CDL-BRG20280 - State of Wisconsin

137664

137665

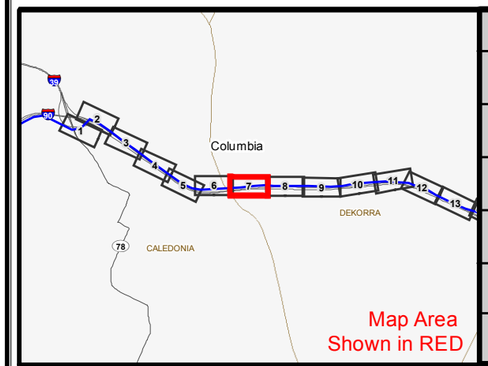
G-W2

G-R2

G-R3

G-W4

T11N, R6E, S12
T11N, R6E, S13



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

PROTECTED SPECIES:
1) No work below the Ordinary High Water Mark.
2) No activities or access with motorized vehicles from March 15-October 31 unless exclusion fencing is installed or a qualified species monitor is present

Use caution near waterway

Invasive Species (Phragmites & Purple Loosestrife): Remain on mats or inspect and clean vehicles before leaving the area

T11N, R9E, S12
T11N, R8E, S13

T11N, R9E, S18
T11N, R8E, S13

CDL-BRG20449 - Jennifer & Ryan Radewan

CDL-BRG20430 - Matthew J & Robyn E Ramberg

CDL-BRG20420 - William & Laurel Ingraham

CDL-BRG20410 - Gram's Stoney Acres LLC

CDL-BRG20280 - State of Wisconsin

137667

137668

137669

G-R4

G-R4a

G-W4

STOP

Town of Dekorra

COLUMBIA COUNTY

39

V

Earnie Rd

St Lawrence Bluff Rd

Oak Knoll Rd

0 750 1,500 Feet

Columbia
DEKORRA
CALEDONIA
78
Map Area Shown in RED

Proposed Centerline
Proposed Pole DIRECT EMBED
Proposed Pole FOUNDATION
Proposed Pole VIBRATORY
Vehicle Construction Access
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Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

COLUMBIA COUNTY

CDL-BRG20420 - William & Laurel Ingraham

CDL-BRG20410 - Gram's Stoney Acres LLC

CDL-BRG20280 - State of Wisconsin

CDL-BRG20280 - State of Wisconsin

CDL-BRG20280 - State of Wisconsin

CDL-BRG20280 - State of Wisconsin

137670

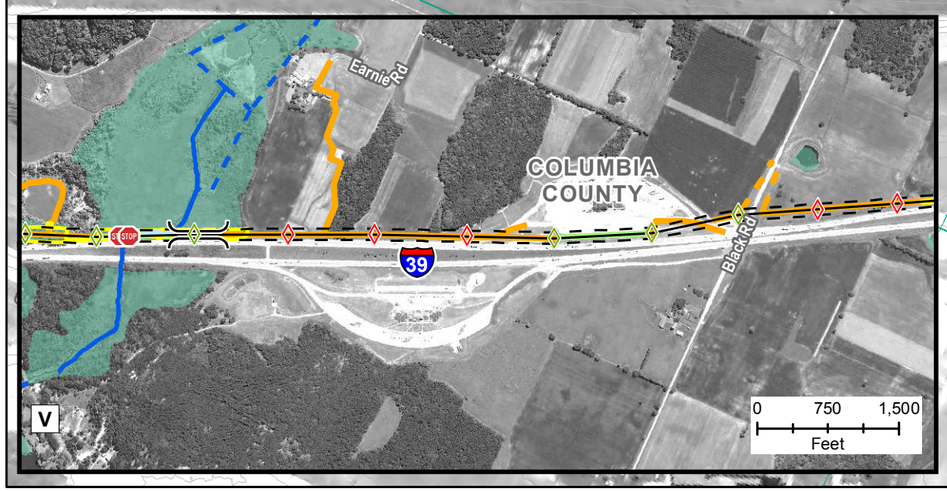
137671

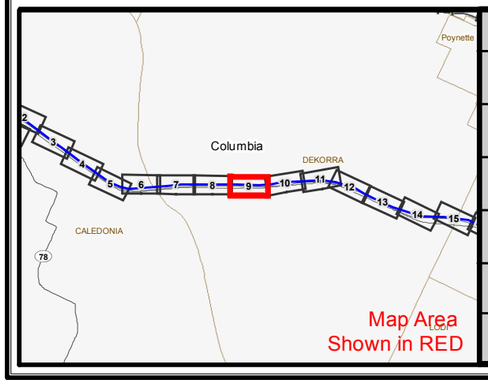
137672

Town of Dekorra

T11N, R9E, S18
T11N, R8E, S13

T11N, R9E, S18
T11N, R8E, S13





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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

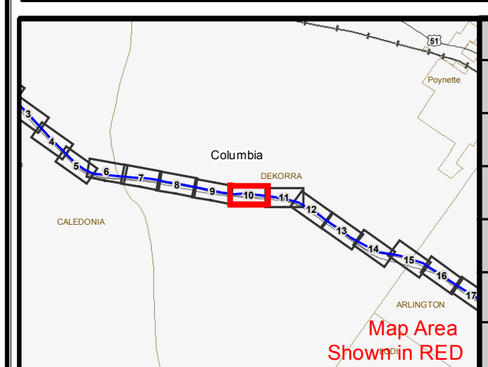
Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200
Feet

11/24/2015



Proposed Centerline

Proposed Pole DIRECT EMBED | Proposed Pole FOUNDATION | Proposed Pole VIBRATORY

Vehicle Construction Access

Potential Vehicle Construction Access

Clearing Access Only

Graded Construction Access and Structure Pads

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Temporary Clear Span Bridge

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Possible Wetland (WDNR Wetland)

Delineated Wetland

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WDNR Perennial Stream

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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

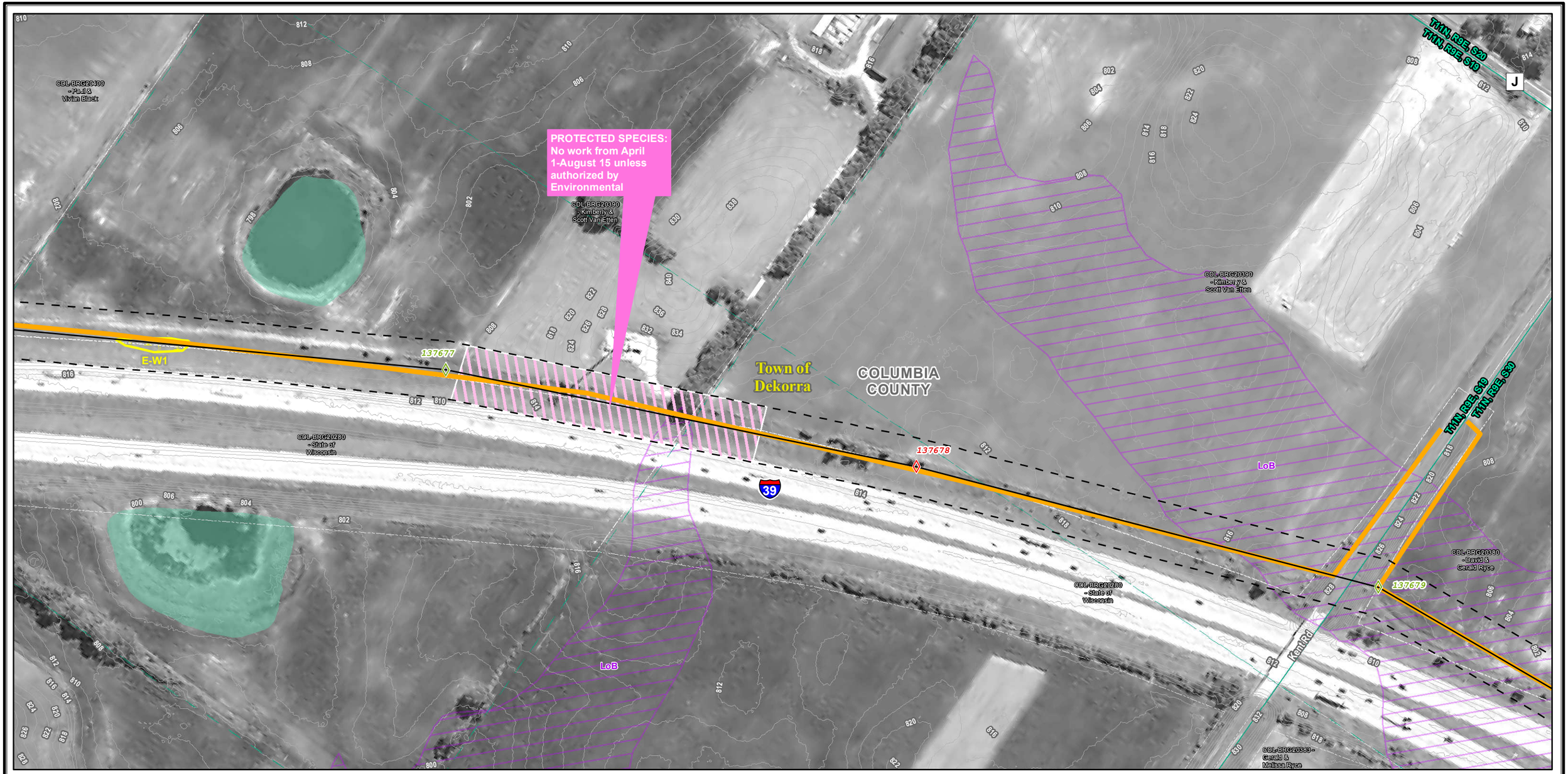
Orthophotography: NAIP 2010

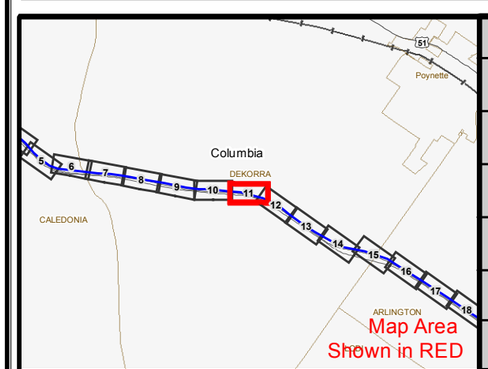
Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200
Feet

11/24/2015





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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

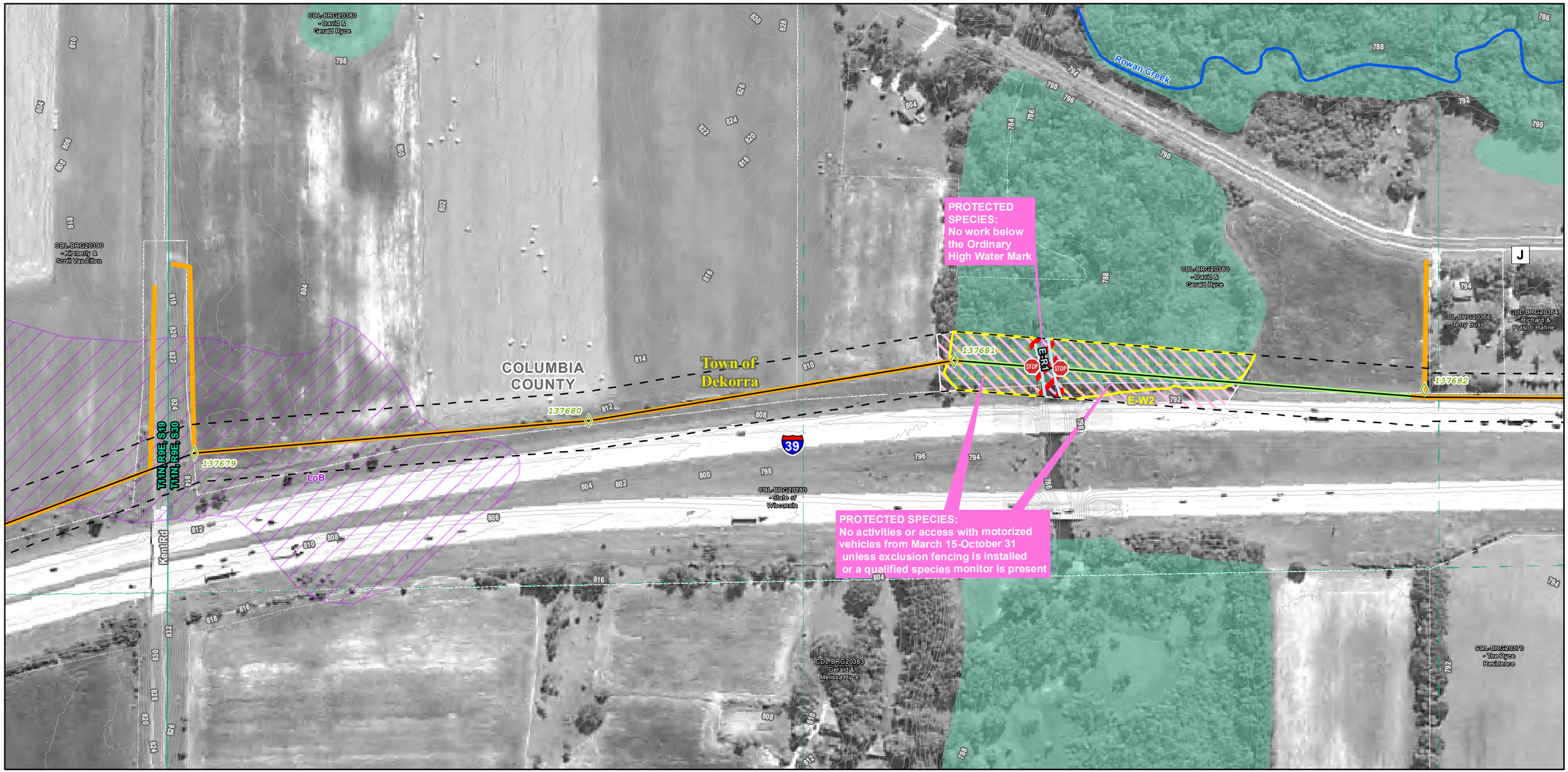
Orthophotography: NAIP 2010

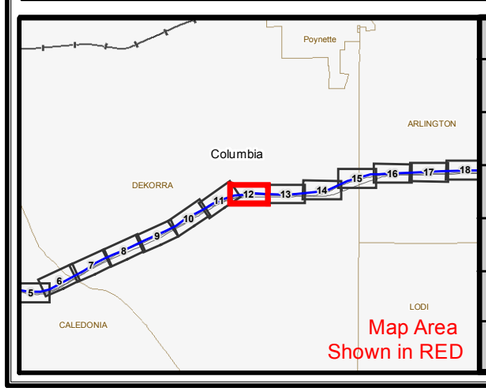
Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015





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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

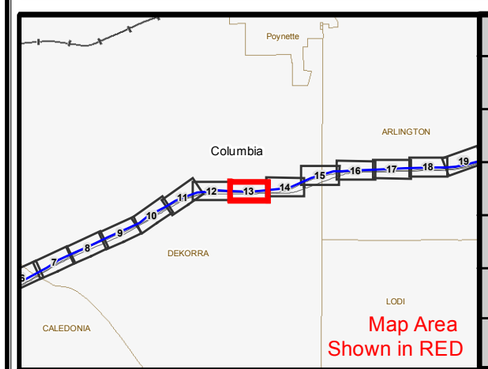
Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015



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ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

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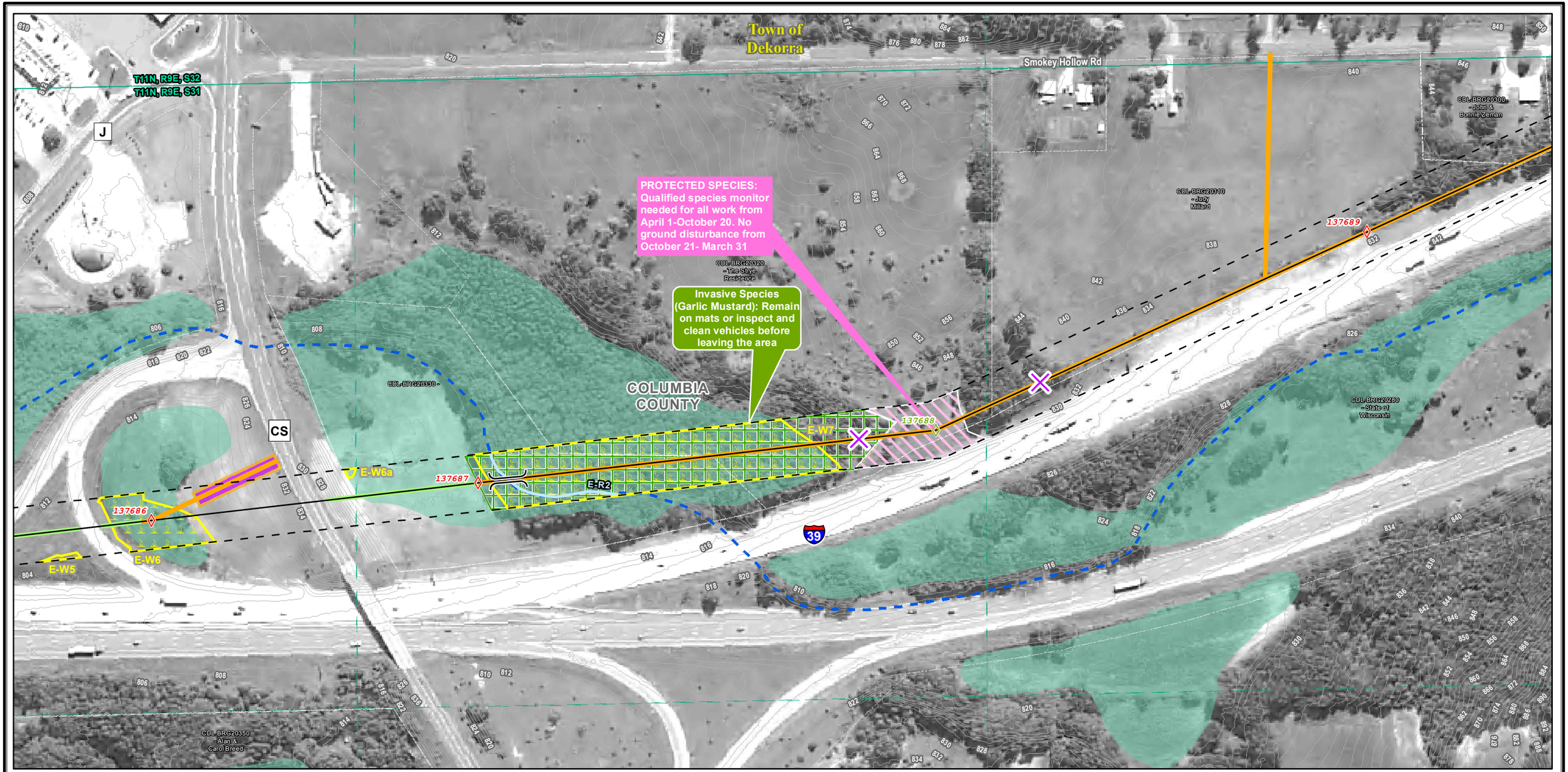

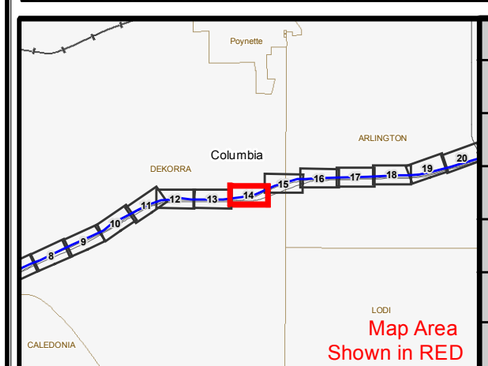

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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

PROTECTED SPECIES: Qualified species monitor needed for all work from April 1-October 20. No ground disturbance from October 21- March 31

Approximate area of grading for access

Hand clear between waterways, foot traffic only

Invasive Species (Several Species): Remain on mats or inspect and clean vehicles before leaving the area

CDL-BRG20285 - Wesley & Joyce Brokopp

CDL-BRG20290 - Curtis & Melissa Allen

CDL-BRG20270 - Nancy Wales

CDL-BRG20260 - Ellen & Vernon Maier

CDL-BRG20253 - Steve & Jeanne Danda

CDL-BRG20309 - John & Bonnie Zeman

CDL-BRG20310 - Judy Millard

Town of Dekorra

Town of Arlington

COLUMBIA COUNTY

Sanderson Rd.

Smokey Hollow Rd

137690

137691

137692

E-R3

E-R4

STOP

39

T11N, R9E, S32
T11N, R9E, S31

T10N, R9E, S5
T10N, R9E, S6

T11N, R9E, S31
T10N, R9E, S6

Map Area Shown in RED

Poynette, ARLINGTON, Columbia, DEKORRA, LODI

Proposed Centerline

Proposed Pole DIRECT EMBED

Proposed Pole FOUNDATION

Proposed Pole VIBRATORY

Vehicle Construction Access

Potential Vehicle Construction Access

Clearing Access Only

Graded Construction Access and Structure Pads

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Existing Pole

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200 Topographic Line
Elevation

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Invasive Species - Construction Technique Protocol Needed

Possible Wetland (WDNR Wetland)

Delineated Wetland

Field Located Waterway

WDNR Perennial Stream

WDNR Intermittent Stream

DATCP Identified Soils - Difficult to Decompact

Property Line
Shown with: Parcel Number and Owner Name

City/Village/Town Boundary

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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200
Feet

11/24/2015

COLUMBIA COUNTY

CDL-BRG20253 - Steve & Jeanne Danda

CDL-BRG20260 - Terry Conklin

CDL-BRG20240 - George Millard Jr & Sherry Millard

CDL-BRG20233 - Alan D Otto

CDL-BRG20230 - David & Rosetta Otto

Sanderson Rd

Town of Arlington

137693

137694

137695

137696

E-RS

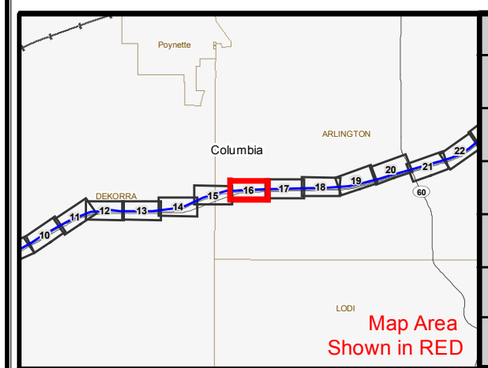
E-W10

E-W11

39

Smokey Hollow Rd

T10N, R9E, S5
T10N, R9E, S6



- Proposed Centerline
- Proposed Pole DIRECT EMBED
- Proposed Pole FOUNDATION
- Proposed Pole VIBRATORY
- Vehicle Construction Access
- Potential Vehicle Construction Access
- Clearing Access Only
- Graded Construction Access and Structure Pads
- Existing Pole to be Removed
- Existing Pole
- Existing Substation
- Existing ATC Transmission Line
- Existing Non-ATC Transmission Line
- Transmission Right-of-ROW* (*Right-of-Way shown on this map is approximate and is shown for guidance only)
- TCSB Temporary Clear Span Bridge
- STOP - NO VEHICLE ACCESS FOOT TRAFFIC ONLY
- Approximate wire set up area (Dimensions: Aprroximately 200' X 400')
- Topographic Line (200 — Elevation)
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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

COLUMBIA COUNTY

Town of Arlington

CDL-BRG20230 - David & Rosetta Otto

CDL-BRG20220 - George & Barbara Plenty

CDL-BRG20220 - George & Barbara Plenty

137696

137697

137698

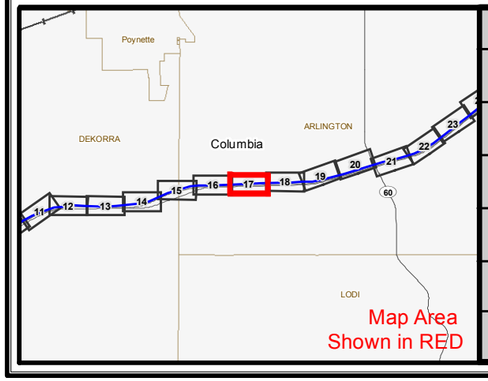
137699

E-W12a

E-R5a

NON-REGULATED - DNR CONFIRMED (PENDING)

SEVERAL STORMWATER DRAINAGE FEATURES PRESENT BETWEEN STRUCTURES 137696 AND 137698



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

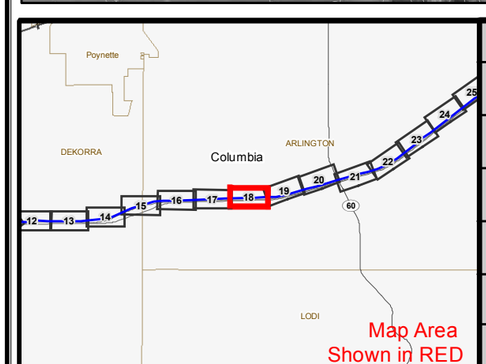
Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

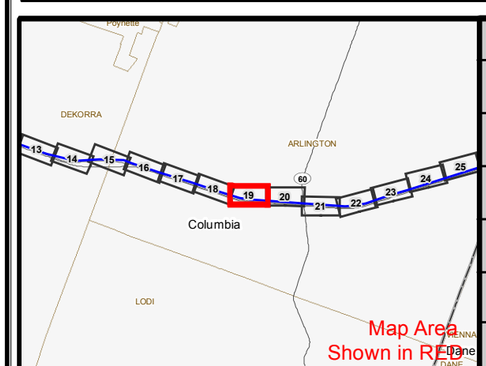
Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200
Feet

11/24/2015



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

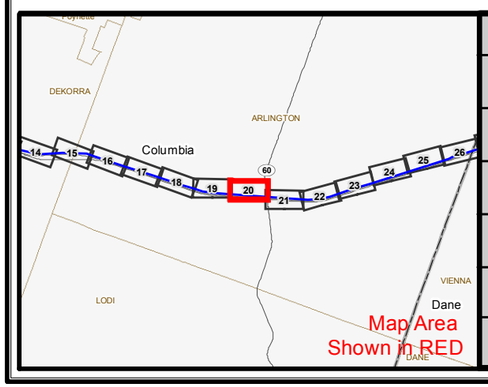
Orthophotography: NAIP 2010

Xcel Energy®

AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

COLUMBIA COUNTY

CDL-BRG20160 - Henry R Nelson Residury Trust

CDL-BRG20160 - Henry R Nelson Residury Trust

CDL-BRG20160 - Henry R Nelson Residury Trust

137710

137711

137712

137713

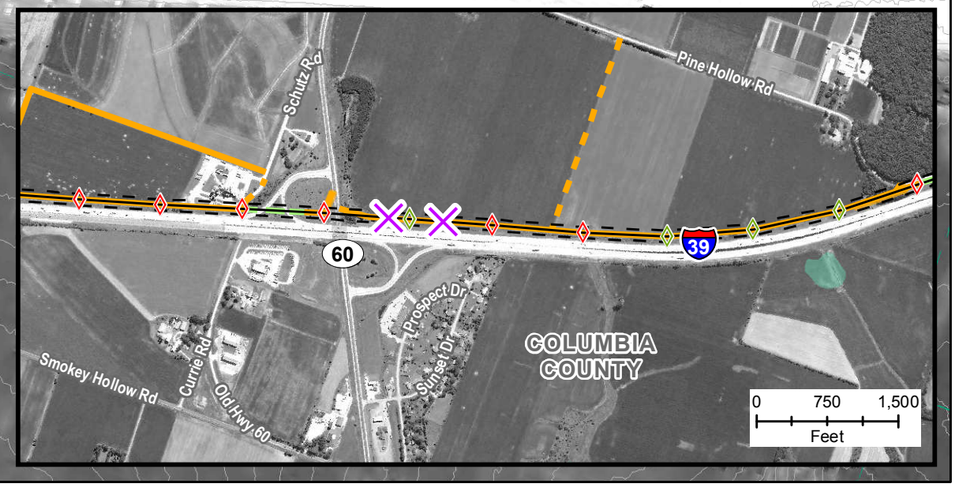
Town of Arlington

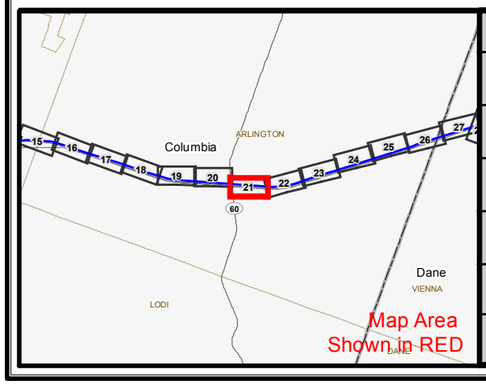
60

39

Prospect Dr

Sunset Dr





Proposed Centerline

Proposed Pole DIRECT EMBED | Proposed Pole FOUNDATION | Proposed Pole VIBRATORY

Vehicle Construction Access

Potential Vehicle Construction Access

Clearing Access Only

Graded Construction Access and Structure Pads

Existing Pole to be Removed

Existing Pole

Existing Substation

Existing ATC Transmission Line

Existing Non-ATC Transmission Line

Transmission Right-of-ROW*

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TCSB Temporary Clear Span Bridge

STOP - NO VEHICLE ACCESS FOOT TRAFFIC ONLY

Approximate wire set up area (Dimensions: Aprroximately 200' X 400')

Topographic Line

Elevation

Protected or Sensitive Resource - Construction Technique Protocol Needed

Invasive Species - Construction Technique Protocol Needed

Possible Wetland (WDNR Wetland)

Delineated Wetland

Field Located Waterway

WDNR Perennial Stream

WDNR Intermittent Stream

DATCP Identified Soils - Difficult to Decompact

Property Line

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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200
Feet

11/24/2015

Town of Arlington

COLUMBIA COUNTY

CDL-BRG20160 - Henry R Nelson Residury Trust

CDL-BRG20150 - Endres Properties, LLC

T10N, R9E, S23

T10N, R9E, S29

T10N, R8E, S20

T10N, R8E, S29

137714

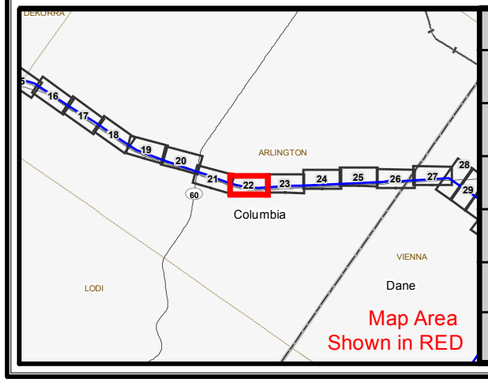
137715

137716

Invasive Species (Several Species): Remain on mats or inspect and clean vehicles before leaving the area.

Pine Hollow Rd

39



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

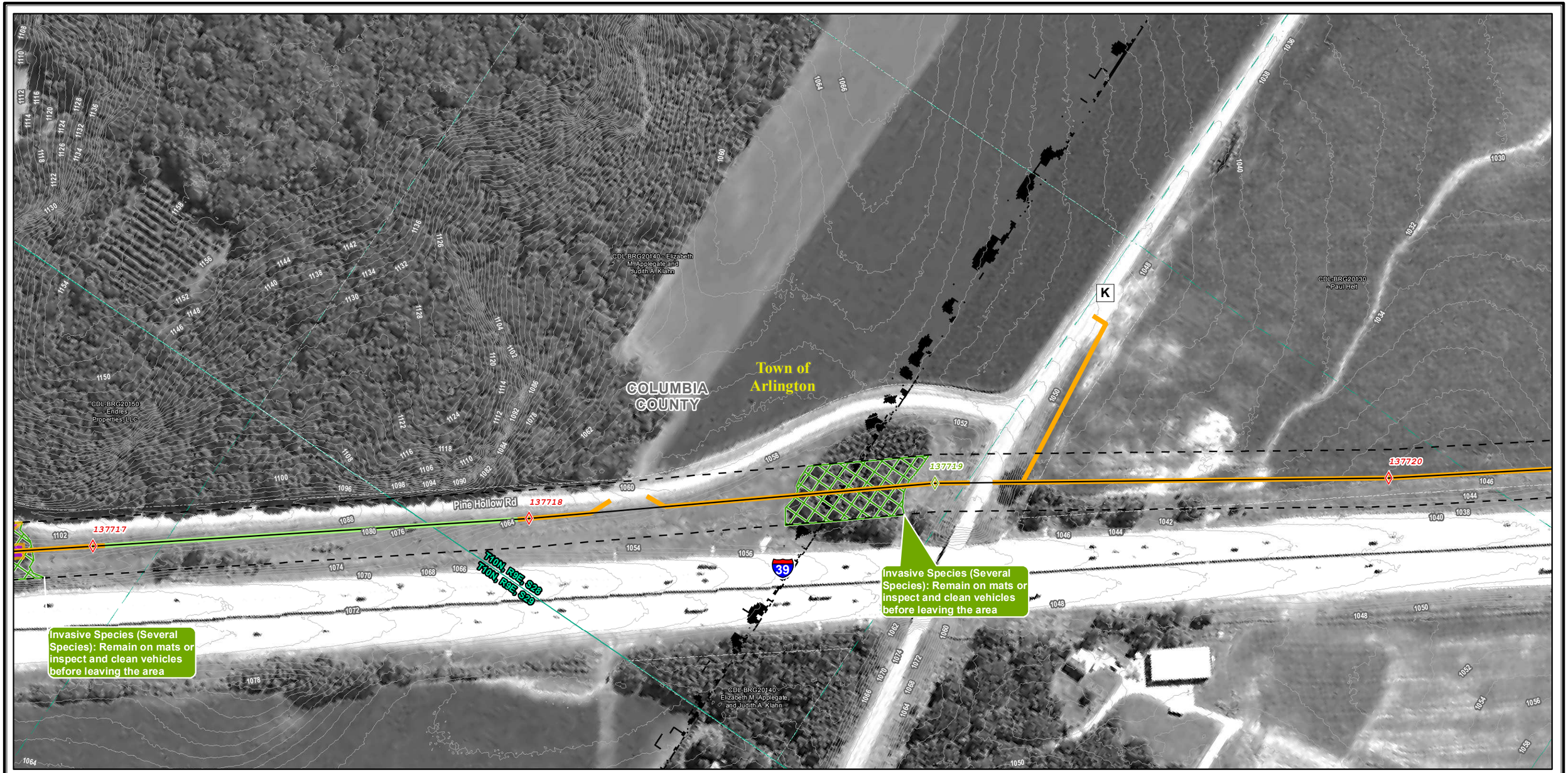
Orthophotography: NAIP 2010

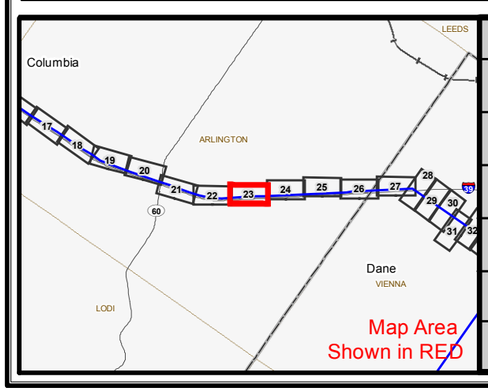
Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015





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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

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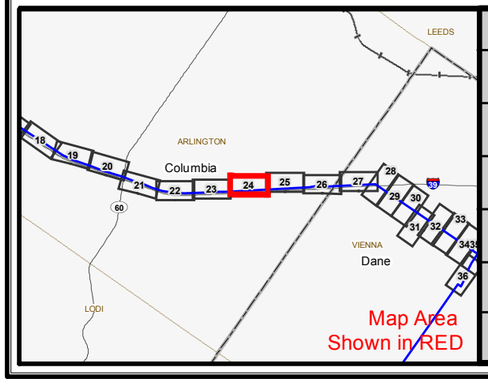
Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015



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ENVIRONMENTAL ACCESS PLAN SEGMENT 2

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Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

COLUMBIA COUNTY

Hill Rd

T10N, R9E, S34
T10N, R9E, S33

Town of Arlington

CDL-BRG20100 - Dale C. & Diane M. Hein

CDL-BRG20090 - Frank W. Kutz Jr. Testamentary Trust

CDL-BRG20110 - Timothy W. & Joan B. Kutz

CDL-BRG20090 - Chad Olsen

CDL-BRG20090 - Chad Olsen

Patton Rd

E-W14

137724

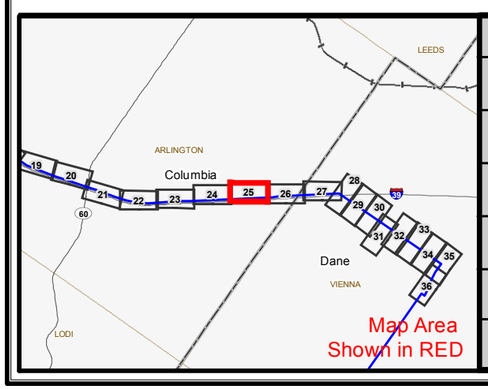
137725

137726

137727

39

Invasive Species (Phragmites): Avoid accessing or clean vehicles before leaving the area



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ATC AMERICAN TRANSMISSION COMPANY®

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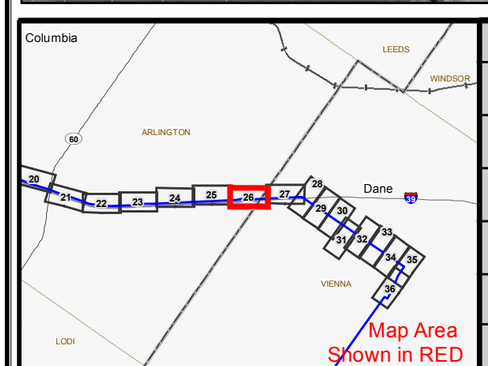

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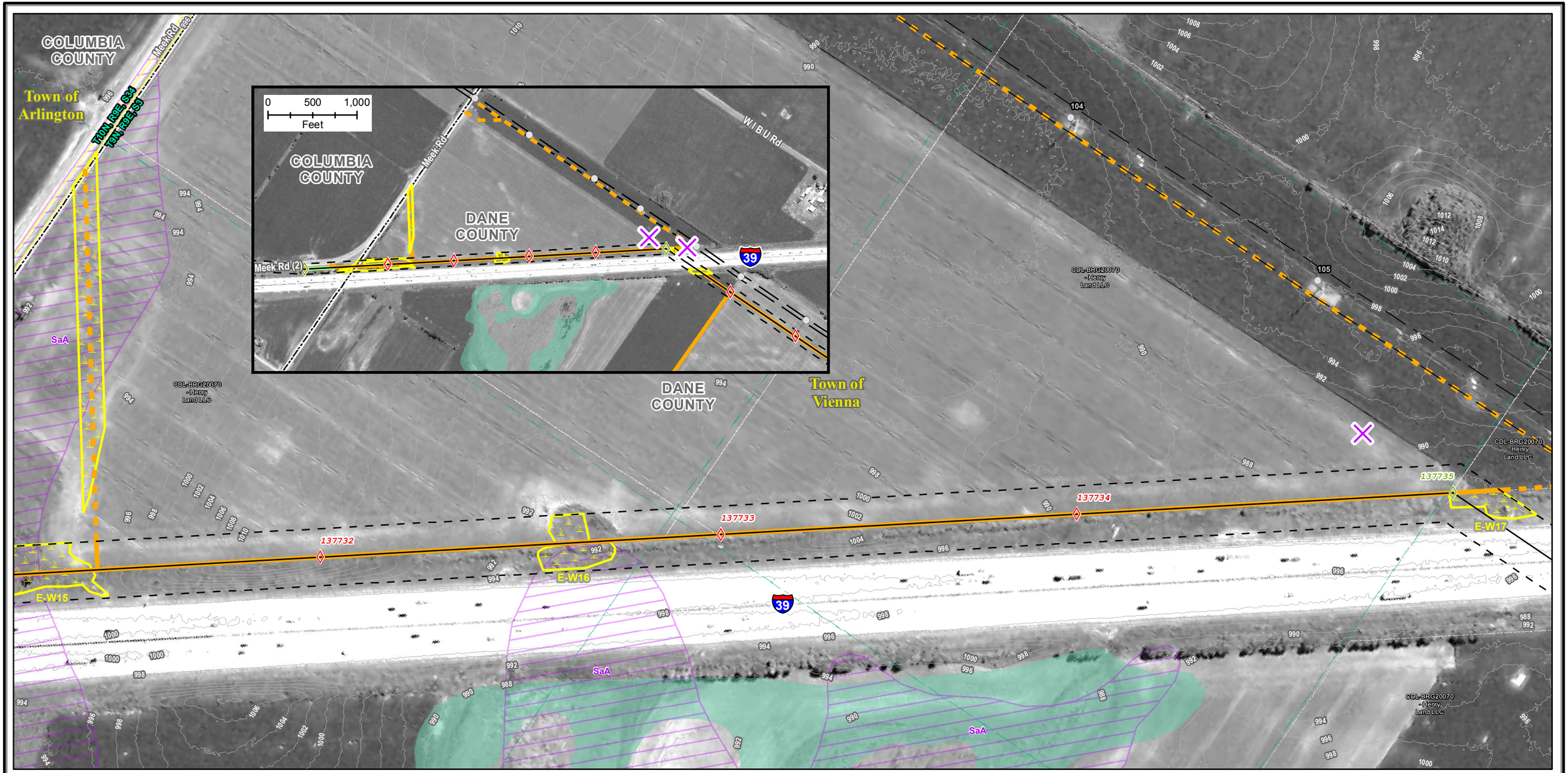
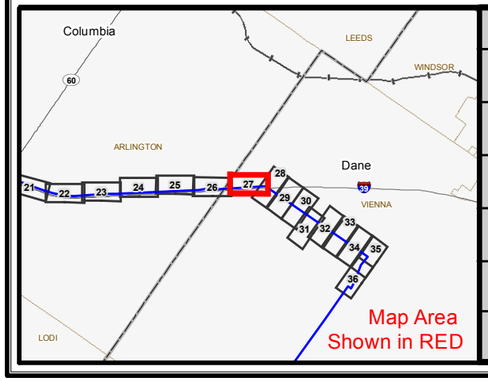
ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015





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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

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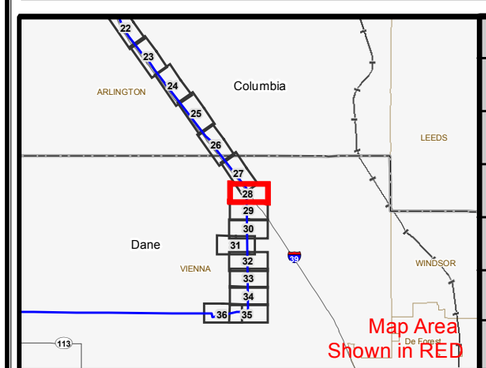
11/24/2015



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

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Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

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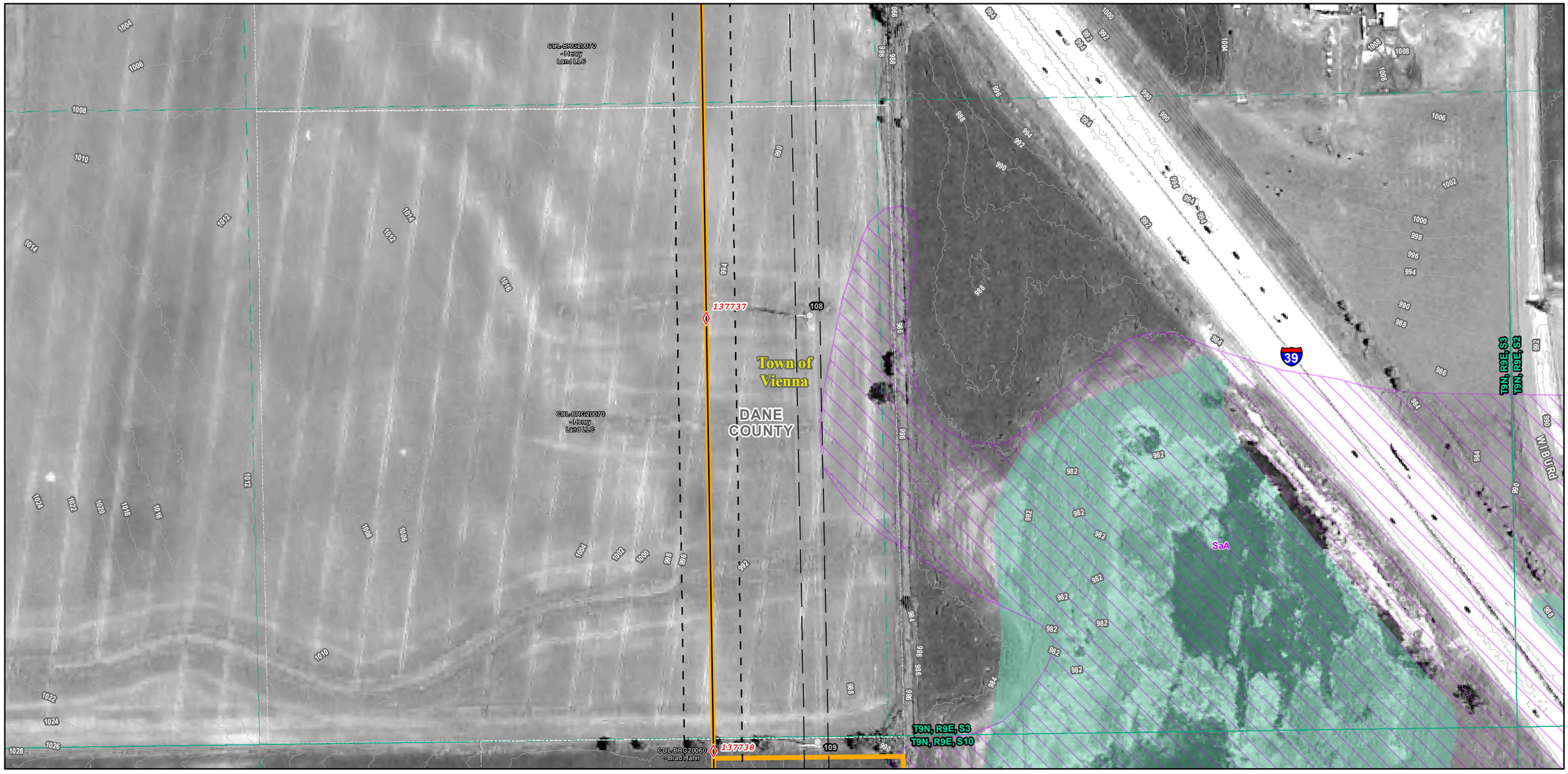

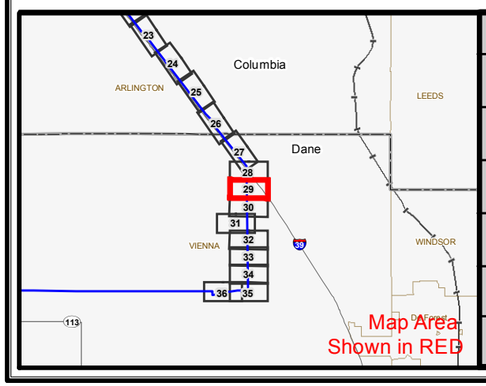

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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

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ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

DANE COUNTY

137738

137739

110

Town of Vienna

DM

SaA

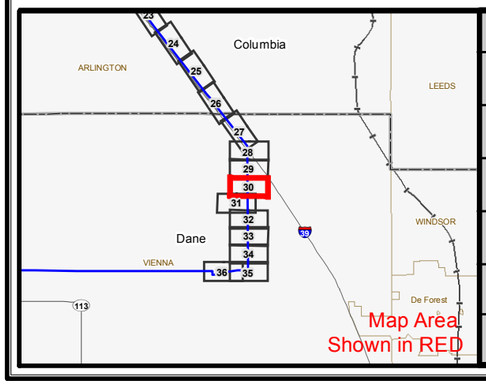
CDL-BRG20060 - Brad Hahn

CDL-BRG20050 - Meinholz Farms Company, LLC

CDL-BRG20050 - Meinholz Farms Company, LLC

CDL-BRG20040 - Dorothy Hahn

T9N, R9E, S10
T9N, R9E, S11



Proposed Centerline

Proposed Pole DIRECT EMBED | Proposed Pole FOUNDATION | Proposed Pole VIBRATORY

Vehicle Construction Access

Potential Vehicle Construction Access

Clearing Access Only

Graded Construction Access and Structure Pads

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Existing ATC Transmission Line

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Transmission Right-of-ROW*

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TCSB
Temporary Clear Span Bridge

STOP - NO VEHICLE ACCESS FOOT TRAFFIC ONLY

Approximate wire set up area
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Topographic Line

Elevation

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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

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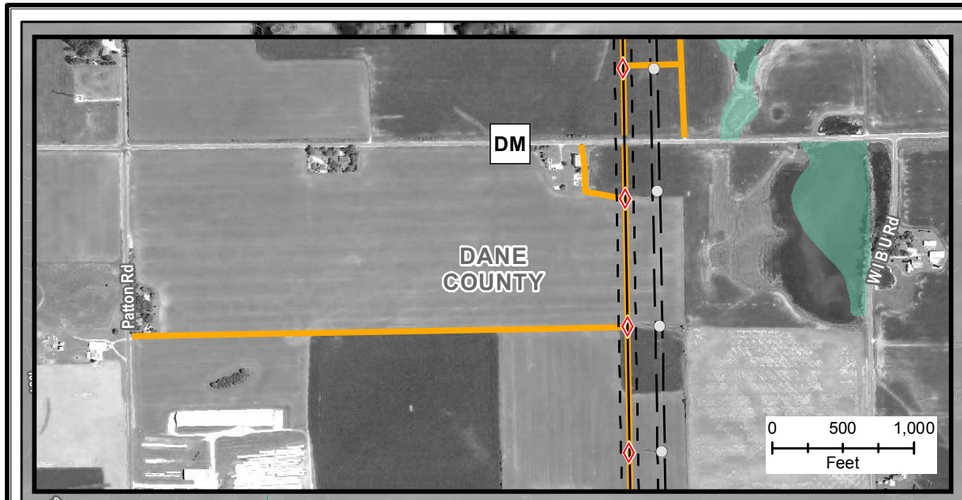


Access from #7580 Patton Rd

137740

137741

111

112

Town of Vienna

DANE COUNTY

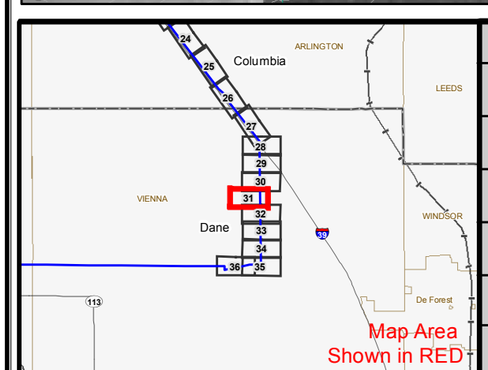
CDL-BRG20050 - Meinholz Farms Company, LLC

CDL-BRG20040 - Dorothy Hahn

CDL-BRG20035 - Theodore & Mary Snyder

SaA

SaA



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

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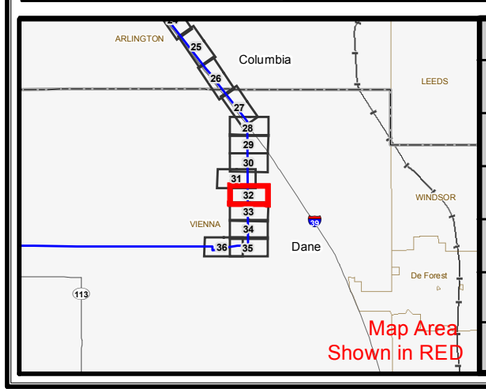

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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

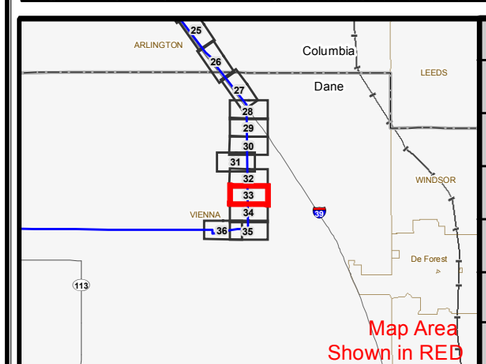
Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015



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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

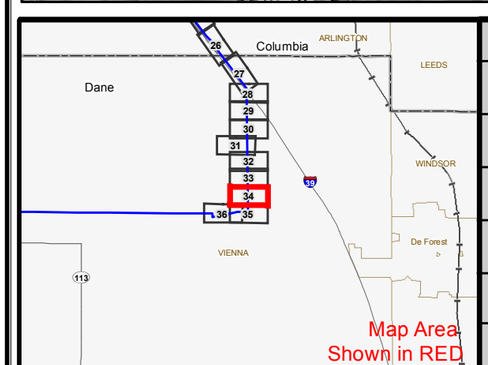
Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015



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Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

0 100 200 Feet

11/24/2015

DANE COUNTY

CDL-BRG20030 - Duane & Jill Grinde and David & Catherine Grinde

CDL-BRG20010 - American Transmission Company LLC

CDL-BRG20020 - 4-D Farms LLC

Town of Vienna

137748

137747

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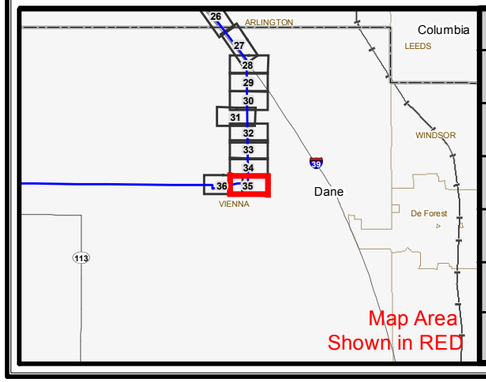
T9N, R9E, S15



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ATC AMERICAN TRANSMISSION COMPANY®

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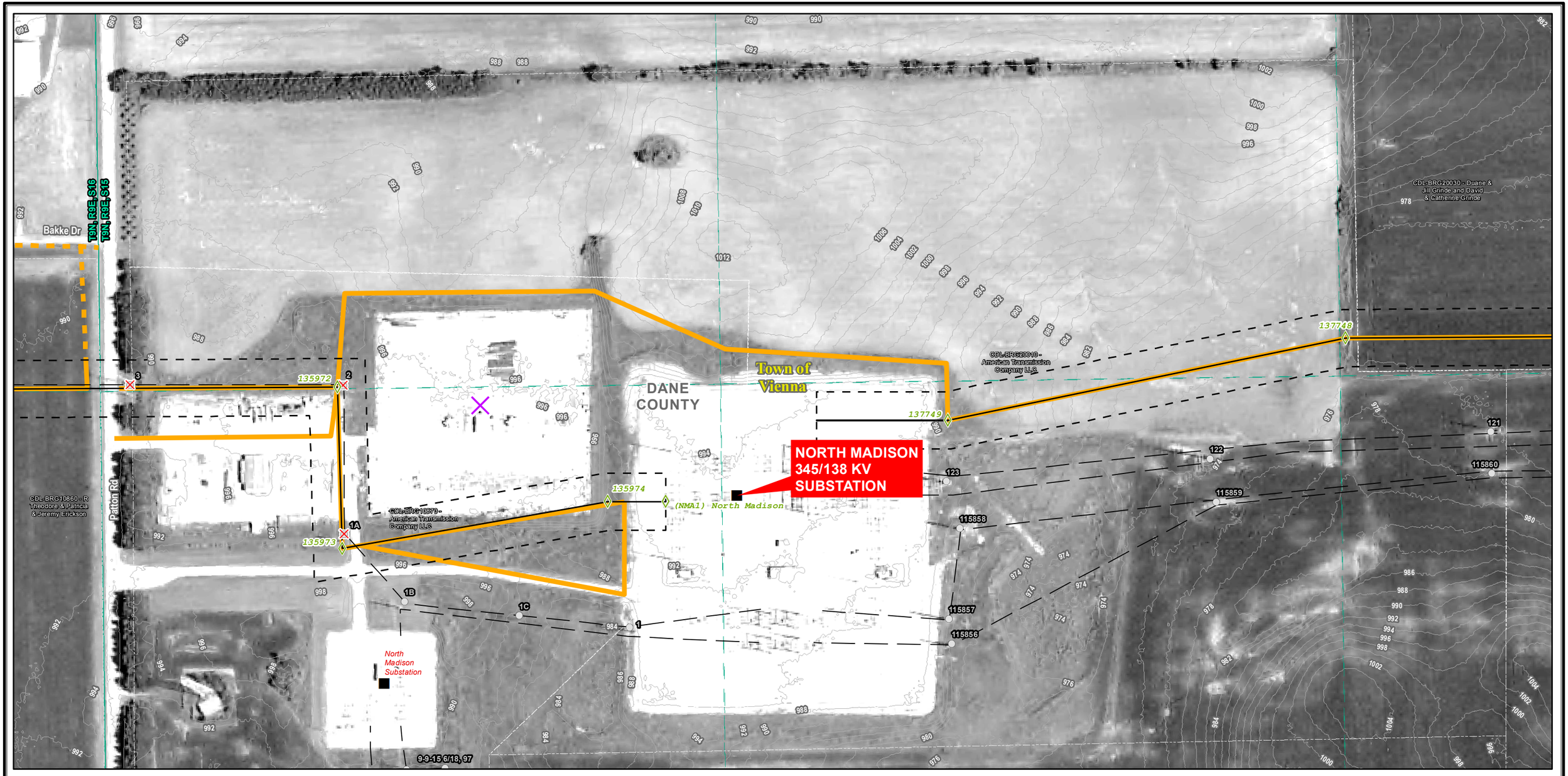

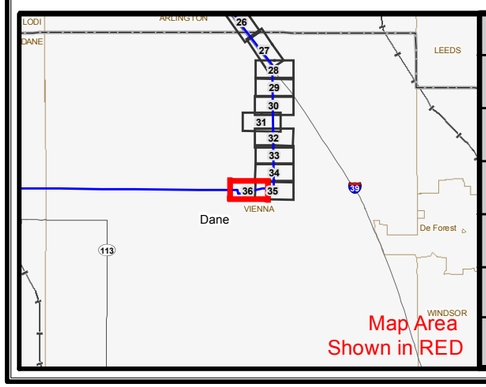

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BADGER COULEE 345 kV TRANSMISSION LINE PROJECT

ENVIRONMENTAL ACCESS PLAN SEGMENT 2

Orthophotography: NAIP 2010

Xcel Energy®

ATC AMERICAN TRANSMISSION COMPANY®

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11/24/2015

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

Appendix B

Wetland Summary Table

Appendix B. Wetland Summary Table
ATC / NSPW - Badger Coulee 345 kV Transmission Line Project

Wetland ID	EAP Map Page	Structures in Wetland	Community Description / Observations	Photo Number
G-W2	6, 7	None	Floodplain forest associated with the Wisconsin River and backwater channels (G-R1, G-R2, G-R3). Majority of feature dominated by silver maple, cottonwood, and willows. Narrow fringe of wetland at northern edge of river reduced due to fill of gravel and cobble at river's edge. Common species in remaining fringe include silver maple, autumn olive, buckthorn, reed canary grass, riverbank grape, and various sedges.	1-3
G-W3	N/A	N/A	**Feature merged with G-W4.**	N/A
G-W4	7, 8	137666, 137668	Large wetland complex associated with waterway G-R4/G-R4a comprised of degraded wet meadow, wet meadow, sedge meadow, shrub-carr, and hardwood swamp. Patches of common reed grass are present at south end and there is scattered (<1% total coverage) purple loosestrife in the southern half of feature. Extends into large expanse of high quality sedge meadow to the east beyond DOT ROW in southern half of feature. Degraded wet meadow portion dominated by common reed grass or reed canary grass with sensitive fern, fox sedge, American manna grass, jewelweed with scattered American elm, honeysuckle and *Rosa* spp. Wet meadow with sensitive fern, giant goldenrod, white meadowsweet, purple meadow-rue, and Bebb's sedge with scattered pussy willow, purple loosestrife, and narrow-leaf cattail. Sedge meadow dominated by tussock sedge with scattered to common narrow-leaf cattail, purple-stem aster, white meadowsweet, spotted joe-pye weed, arrowhead, dark-green bulrush, Canada bluejoint with areas of sphagnum. Shrub-carr dominated by various willow shrubs and red-osier dogwood. Hardwood swamp, primarily in northern portion, dominated by cottonwood and river birch with silver maple and green ash common in the canopy; meadowsweet in the shrub layer with prickly ash and honeysuckle shrubs common near the upland perimeter; reed canary grass, sedges, and jewelweed dominant in the herbaceous layer with scattered rice-cut grass and dark green bulrush. Feature merged with previous G-W3 due to newly identified narrow wet meadow within DOT ROW. Corners of feature adjusted from 2012 within non-DOT ROW to follow wetland topography and plant community boundaries.	4-10

Appendix B. Wetland Summary Table
ATC / NSPW - Badger Coulee 345 kV Transmission Line Project

Wetland ID	EAP Map Page	Structures in Wetland	Community Description / Observations	Photo Number
E-W1	11	None	Small area of degraded wet meadow extending into farmed seasonally flooded basin within shallow depression. Degraded wet meadow primarily within DOT ROW dominated by reed canary grass and spotted lady's-thumb. Beyond DOT fenceline, transitions into narrow extent of farmed wetland planted to corn in 2015 with reed canary grass. Total extent of this feature within the farmed portion was reduced due to lack of hydrophytic weed species, no evidence of crop stress, and rise in topography to the north, east, and south.	11
E-W2	12	137681	Wetland complex associated with Rowan Creek (E-R1) that extends into larger wetland area east of the project corridor. Floodplain forest component dominated by box elder, green ash, and basswood in the canopy with elderberry, skunk cabbage, and reed canary grass. Degraded wet meadow component dominated by reed canary grass, narrow-leaf cattail, jewelweed, giant goldenrod, and skunk cabbage. A small area of shallow marsh dominated by narrow-leaf cattail is present at the north end of the feature.	12-14
E-W2a	13	None	Wetland complex extending across DOT ROW and private properties. Shallow marsh within DOT ROW dominated by narrow-leaf cattail and reed canary grass with degraded wet meadow at northern end dominated by narrow-leaf cattail, giant goldenrod, sensitive fern, and woolly sedge. Feature extends east beyond DOT fenceline to shrub-carr community surrounding an excavated open water pond; common species include black willow, sandbar willow, narrow-leaf cattail, jewelweed, and reed canary grass.	15-19
E-W4	13	None	Wetland complex extending across DOT ROW and private properties. Shrub-carr component dominated by sandbar willow with reed canary grass, giant goldenrod, and meadow rue. Shallow marsh predominant in DOT ROW dominated by narrow-leaf cattail, reed canary grass, jewelweed, and Canada thistle. Extends east of DOT fenceline at north end into shallow marsh surrounded by wet meadow dominated by brown fox sedge, giant goldenrod, jewelweed, and white-panicle aster. Adjusted extent of feature to exclude aerially delineated wetland and include additional wetland area beyond DOT fenceline based on presence/absence of wetland vegetation, hydric soils, topography, and hydrology.	20-23
E-W5	13, 14	None	Degraded wet meadow within highway interchange dominated by narrow-leaf cattail, giant goldenrod, and field horsetail.	24

Appendix B. Wetland Summary Table
ATC / NSPW - Badger Coulee 345 kV Transmission Line Project

Wetland ID	EAP Map Page	Structures in Wetland	Community Description / Observations	Photo Number
E-W6	14	137686	Wetland community within highway interchange. Predominantly shallow marsh dominated by narrow-leaf cattail with a degraded wet meadow component along the southern edge dominated by reed canary grass, Canada goldenrod, giant goldenrod, and sparse silky dogwood.	25
E-W6a	14	None	This feature added in 2015. Degraded wet meadow located in mapped hydric soils within shallow depression near base of adjacent road embankment. Narrow-leaf cattail, Canada bluejoint, red top, and curly dock common.	26
E-W7	14	None	Hardwood swamp associated with E-R2 with a narrow fringe of degraded wet meadow along the waterway. Box elder, cottonwood, and green ash with jewelweed and garlic mustard common in the floodplain forest. Degraded wet meadow dominated by reed canary grass with stinging nettle, jewelweed, white panicle aster, purple meadow-rue, enchanter's nightshade, and garlic mustard common.	27-28
E-W8	N/A	N/A	**Feature no longer considered wetland.** This is a degraded deciduous woodland; common species include box elder, bur oak, black locust, hackbery, and basswood in the canopy with buckthorn dominated shrub layer, and garlic mustard, dame's rocket, Virginia creeper, and wild geranium common in the herb layer. Hydric soils were not observed.	N/A
E-W9	N/A	N/A	**Feature no longer considered wetland.** This is a degraded deciduous woodland with a canopy dominated by basswood with some box elder and oaks, and a buckthorn-dominated shrub layer. The herb layer is sparse but common species observed included buckthorn, white avens, Virginia creeper, and honeysuckle.	N/A
E-W10	16	None	Narrow hardwood swamp fringe along E-R5 with box elder, red elm, riverbank grape, jewelweed, and sawtooth sunflower common. Community relatively degraded with invasive weed species common including garlic mustard, dame's rocket, and honeysuckle shrubs.	29
E-W11	16	None	Narrow, degraded wet meadow community dominated by reed canary grass and poison ivy along drainage swale through degraded mesic woodland.	30
E-W12	N/A	N/A	**Feature no longer considered wetland.** Disturbed mesic woodland located on ridge domianted by hackberry, black walnut, box elder, and prickly ash in the canopy with buckthorn, prickly ash, and gooseberry in the shrub layer. Herb layer dominated by Virginia creeper and jack-in-the-pulpit.	N/A

Appendix B. Wetland Summary Table
ATC / NSPW - Badger Coulee 345 kV Transmission Line Project

Wetland ID	EAP Map Page	Structures in Wetland	Community Description / Observations	Photo Number
E-W12a	17	None	Wetland community associated with E-R5a. Narrow hardwood swamp fringe at north end dominated by box elder, jewelweed, and spotted lady's-thumb before extending out of the project ROW.	31
E-W12b	N/A	N/A	**Feature no longer considered wetland.** Small area of reed canary grass and Canada thistle associated with culvert outlet within mapped non-hydric soils.	N/A
E-W13	N/A	N/A	**Feature no longer considered wetland.** Road ditch dominated by reed canary grass and narrow-leaf cattail associated with culvert outlet within mapped non-hydric soils.	N/A
E-W14	25, 26	None	Degraded wet meadow community dominated by reed canary grass with prairie cordgrass, Canada thistle, and sparse narrow-leaf cattail. Feature also contains an excavated open water pond; pond appears relatively recent with large spoil pile not observed in 2012. Area of feature reduced to remove fallow field areas not dominated by hydrophytes and spoil pile from recently excavated pond.	32-33
E-W15	26, 27	137731	Community complex of shallow marsh, degraded wet meadow, seasonally flooded basin with a portion planted to soybeans in 2015, and an excavated open water pond/ditch. Shallow marsh community adjacent to south end of open water and dominated by narrow-leaf cattail, reed canary grass, and spotted lady's-thumb. The degraded wet meadow is dominated by reed canary grass; and the seasonally flooded basin dominated by blunt spike-rush, water plantain, and purple-leaf willowherb with scattered/stressed soybean crop. A large, 10 to 20-foot high upland berm likely created from the excavated soils from the open water pond/ditch is located near the middle of the feature.	34-36
E-W16	27	None	Feature consists of degraded wet meadow within road ROW that extends into a farmed seasonally flooded basin beyond the DOT fence to the east. The degraded wet meadow is dominated by reed canary grass with grey dogwood common at the DOT fenceline. The farmed portion was planted to soybeans in 2015 with dense field nut sedge and scattered smartweed between the crop rows. Feature extended to the northeast since 2012 investigation to include farmed seasonally flooded basin.	37-38
E-W17	27, 28	137735	Degraded wet meadow community within roadside ditch dominated by reed canary grass. A small shallow marsh component dominated by narrow-leaf cattail is present at culvert outlet.	39

Appendix B. Wetland Summary Table
ATC / NSPW - Badger Coulee 345 kV Transmission Line Project

Wetland ID	EAP Map Page	Structures in Wetland	Community Description / Observations	Photo Number
E-W18	28	None	Feature predominantly degraded wet meadow with a narrow shallow marsh component within low point of roadside ditch. Degraded wet meadow dominated by reed canary grass with grey dogwood, Canada goldenrod, riverbank grape, wild cucumber, and Canada thistle common; shallow marsh community dominated by narrow-leaf cattail.	40
E-W19	N/A	N/A	**No longer considered wetland.** Occurs in an agricultural area planted to soybeans in 2015. No wetness signatures or crop stress observed during 2015 field investigations. No favorable topography for wetland establishment.	N/A
E-W20	N/A	N/A	**No longer considered wetland.** Occurs in an agricultural area planted to soybeans in 2015. No wetness signatures or crop stress observed during 2015 field investigations. No favorable topography for wetland establishment.	N/A

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

Appendix C

Photographs of Wetlands and Waterways

Wetland Photographs

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 01. G-W2; vW of FF fringe on N side of river. June 2015

Photo 02. G-W2; vN of FF on islands within WI River. Aug 2015

Photo 03. G-W2; vE of FF on islands within WI River. Aug 2015

Photo 04. G-W4; vE of DWM at N end in DOT ROW. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 05. G-W4; vE HS beyond DOT ROW at N end of feature. June 2015

Photo 06. G-W4; vE of representative view of HS from DOT ROW. June 2015

Photo 07. G-W4; vESE of SC near center of feature. June 2015

Photo 08. G-W4; vE beyond DOT ROW of SM and SC complex. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 09. G-W4; vNNW of WM in DOT ROW. June 2015

Photo 10. G-W4; vSE towards Phragmites near S end of feature. June 2015

Photo 11. E-W1; vS along DOT ROW fence of farmed SFB and DWM. June 2015

Photo 12. E-W2; vNE of ShM at N end of feature. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 13. E-W2; vSE towards HS from N of waterway. June 2015

Photo 14. E-W2; vESE towards WM beyond DOT ROW. June 2015

Photo 15. E-W2a; vW of SC near N end of feature. Sept 2015

Photo 16. E-W2a; vS of DM at N end of feature beyond DOT ROW. Sept 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 17. E-W2a; vS of WM near N end of feature within DOT ROW. June 2015

Photo 18. E-W2a; vN of ShM near center of feature within DOT ROW. June 2015

Photo 19. E-W2a; vN of WM and SC from S end of feature. Sept 2015

Photo 20. E-W4; vS towards ShM from N end of feature. Sept 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 21. E-W4; vN of WM E of DOT ROW near center of feature. Sept 2015


Photo 22. E-W4; vN of SC community E of DOT ROW. June 2015


Photo 23. E-W4; vN at ShM within DOT ROW near S end of feature. June 2015


Photo 24. E-W5; vS of degraded wet meadow. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 25. E-W6; vS of ShM with DWM in background. June 2015

Photo 26. E-W6a; vNE of DWM. June 2015

Photo 27. E-W7; vN of HS. June 2015

Photo 28. E-W7; vS, of DWM present along waterway. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 29. E-W10; vN of HS bordering waterway. June 2015

Photo 30. E-W11; vNE of narrow HS swale. Sept 2015

Photo 31. E-W12a; vN of DWM towards HS along waterway. June 2015

Photo 32. E-W14; vSE of excavated OW, fill pile to left, DWM to right. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 33. E-W14; vNW of DWM at SE end of feature. June 2015

Photo 34. E-W15; vNW from top of berm; DWM to left, OW to right. June 2015

Photo 35. E-W15; vNW towards farmed SFB with ShM in background. June 2015

Photo 36. E-W15; vSE from top of berm toward OW and farmed SFB. June 2015

Appendix C. Photographs of Wetlands - Chronological from North to South

Photo 37. E-W16; vSE from NW border towards DWM in DOT ROW. June 2015

Photo 38. E-W16; vSE from NW edge of farmed SFB N of DOT ROW. June 2015

Photo 39. E-W17; vSE of DWM from NW edge of feature. June 2015

Photo 40. E-W18; vS of DWM fringe around narrow ShM. June 2015

Waterway Photographs

Appendix C. Photographs of Waterways - Chronological from North to South

Photo 01. G-R1; vS from N bank of river. June 2015

Photo 02. G-R1; vS from near center of channel. Aug 2015

Photo 03. G-R1; vW from island in WI River. Aug 2015

Photo 04. Typical view of areas below OHWM on islands in WI River. Aug 2015

Appendix C. Photographs of Waterways - Chronological from North to South

Photo 05. G-R2; view E from below I-39 bridge. Aug 2015

Photo 06. G-R4; vE before channel flows under I-39. June 2015

Photo 07. G-R4; vNNW of feature away from I-39 crossing. June 2015

Photo 08. G-R4a; vNW from SE end within non-DOT ROW. June 2015

Appendix C. Photographs of Waterways - Chronological from North to South

Photo 09. G-R4a within DOT ROW. June 2015

Photo 10. E-R1; vSE. June 2015

Photo 11. E-R2; vN. June 2015

Photo 12. Representative view of E-R3 and E-R4; vSW. June 2015

Appendix C. Photographs of Waterways - Chronological from North to South

Photo 13. E-R5; vNW. June 2015

Photo 14. E-R5a; vN. June 2015

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

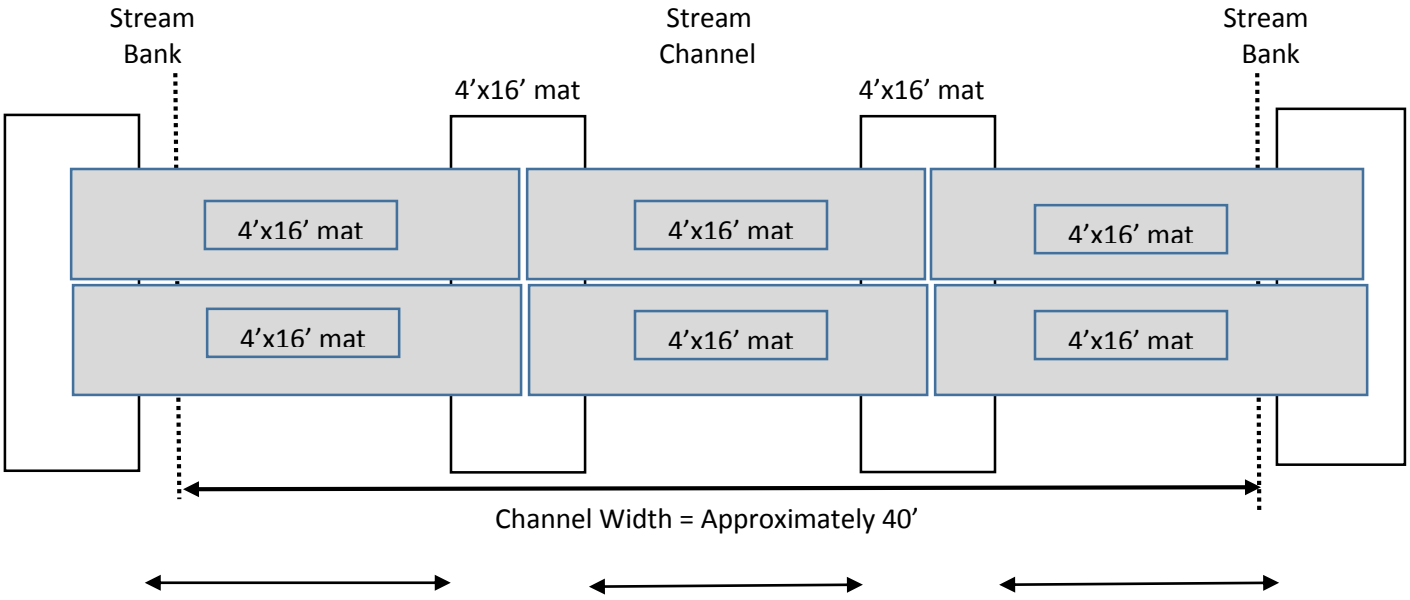
Appendix D

TCSB Plan and Profile Figures

Badger Coulee
Channel Crossing Typical Drawing

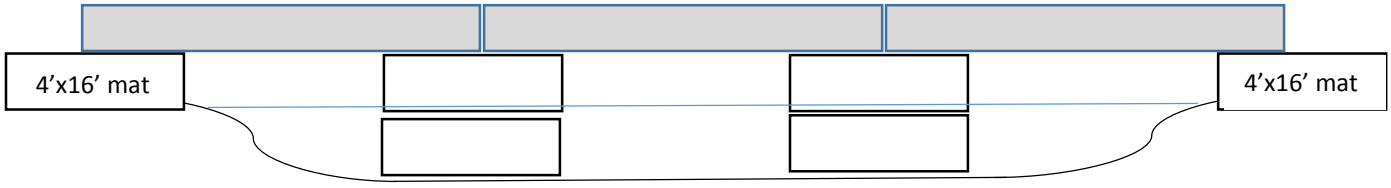
Segment: 2
Waterway: Wisconsin River: G-R1
Nearest Structure: 137663 - 137664

Plan View



Cross Sectional View

Deck: 16' x 4' Mats (2-3 wide)
Supports: 16' x 4' Mats (various depending on water depth)



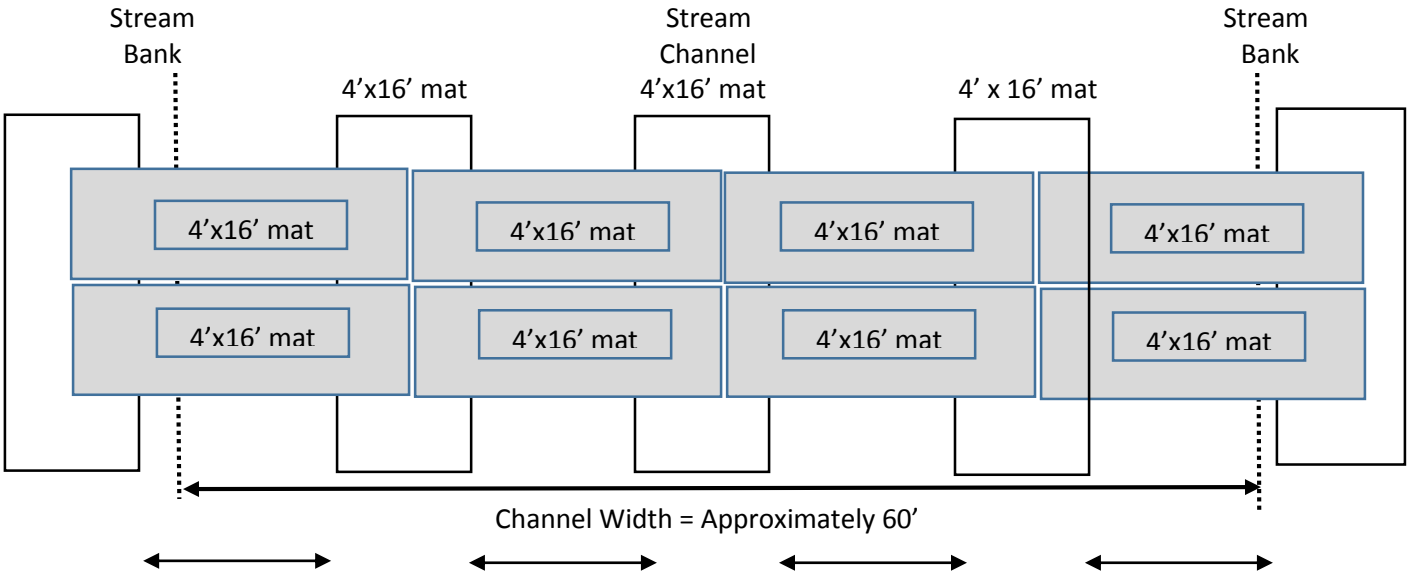
Depth of Water = Unknown
Clearance to Water = 0-1'

- Drawings are not to scale
- Support mats will be beneath the ordinary high water mark and will rest on the channel bed
- The bridge will be secured to a fixed anchor. Each mat will be secured together with eye-bolts and cable and tied off to a fixed object on shore.

Badger Coulee
Channel Crossing Typical Drawing

Segment: 2
Waterway: Wisconsin River: G-R2
Nearest Structure: 137663 - 137664

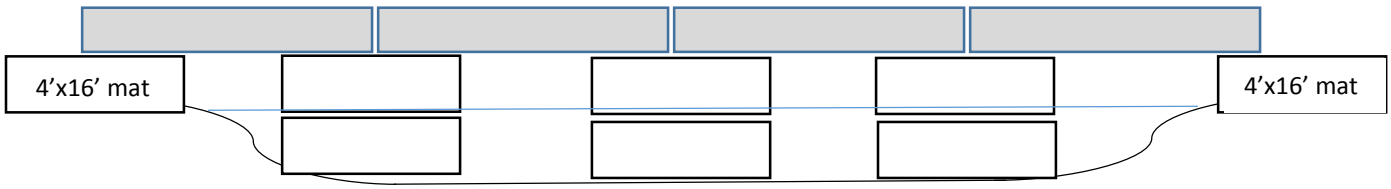
Plan View



Span Width between each of the Support Mats = Approximately 12'

Cross Sectional View

Deck: 16' x 4' Mats (2-3 wide)
Supports: 16' x 4' Mats (various depending on water depth)



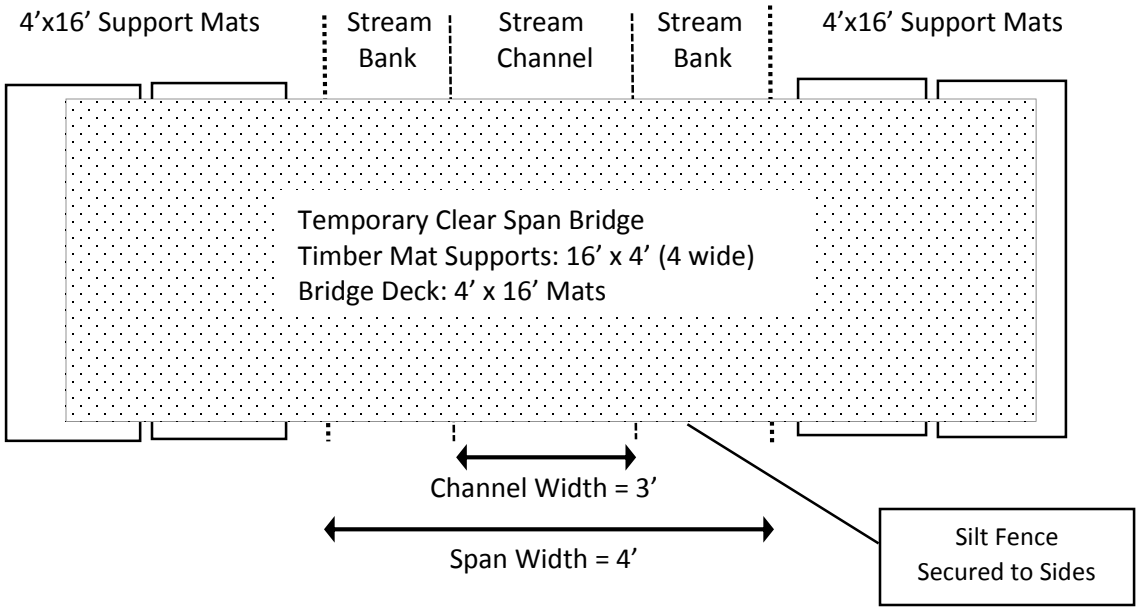
Depth of Water = Unknown
Clearance to Water = 0-1'

- Drawings are not to scale
- Support mats will be beneath the ordinary high water mark and will rest on the channel bed
- The bridge will be secured to a fixed anchor. Each mat will be secured together with eye-bolts and cable and tied off to a fixed object on shore.

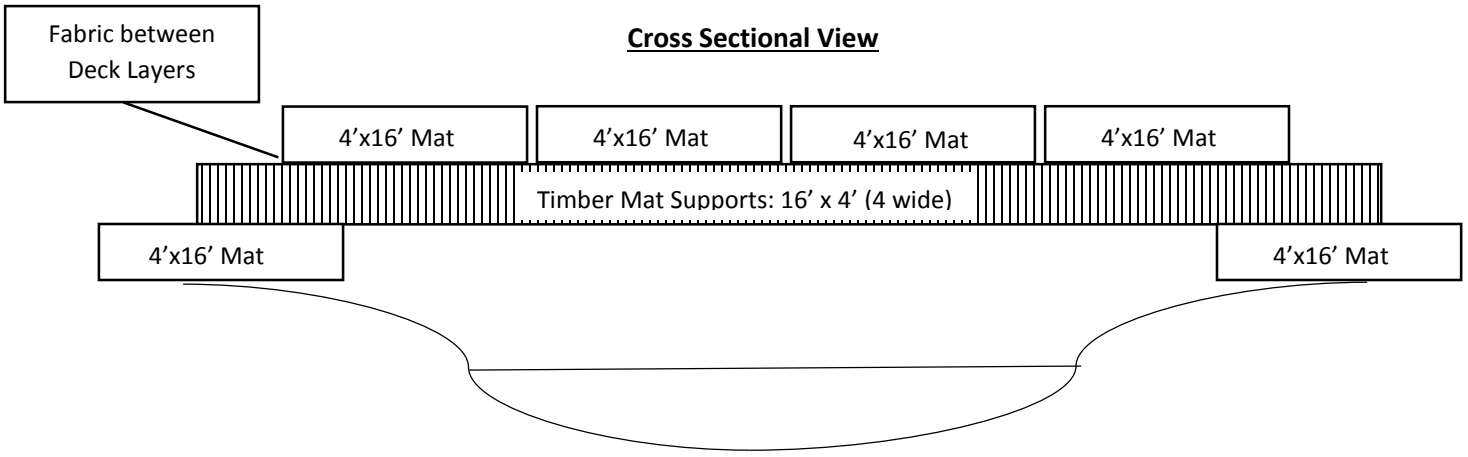
Badger Coulee
Temporary Clear Span Bridge Typical Drawing

Segment: 2
Waterway: G-R4a
Nearest Structure: 137668

Plan View



Cross Sectional View



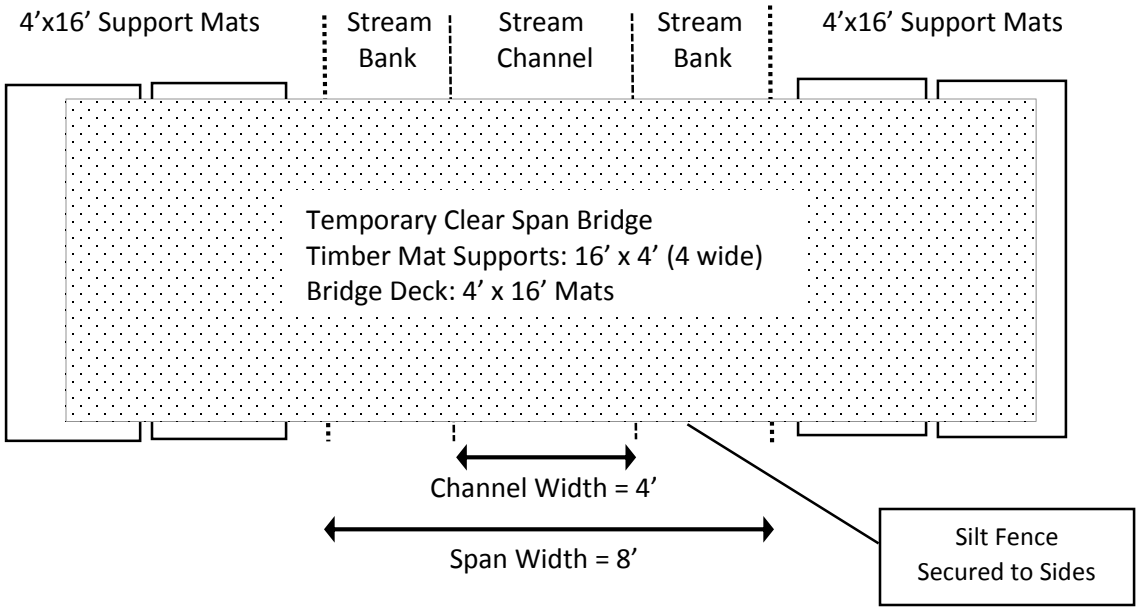
Depth of Water = 3"
Clearance to Water = 2'

- Drawings are not to scale
- TCSB will be secured to a fixed anchor
- Sediment Controls: Silt fence shall be attached to the bridge sides and fabric laid between the deck layers.

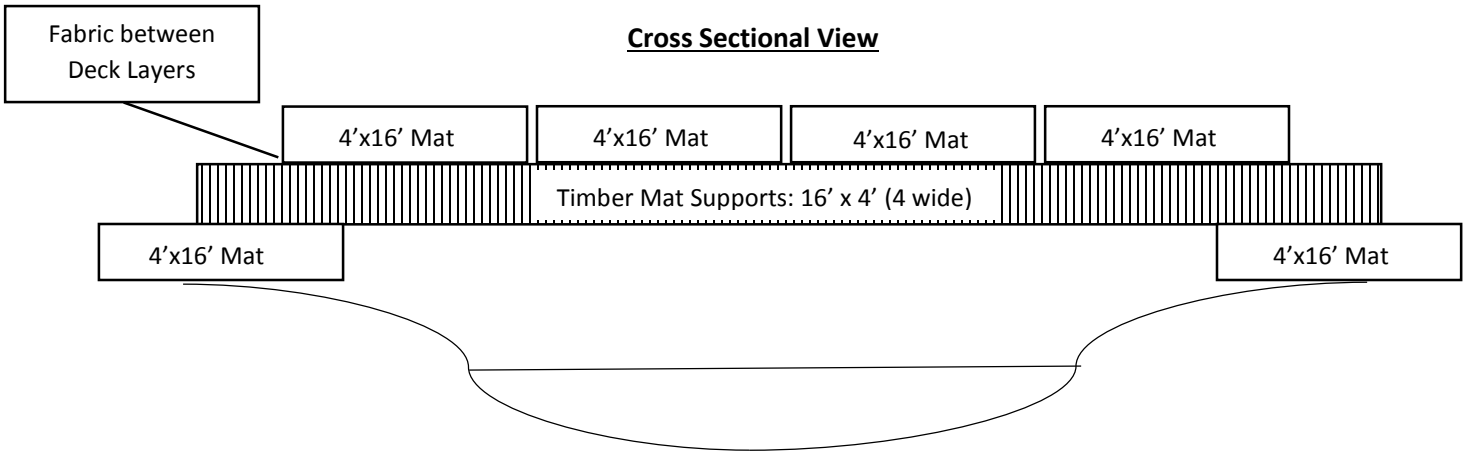
Badger Coulee
Temporary Clear Span Bridge Typical Drawing

Segment: 2
Waterway: E-R2
Nearest Structure: 137687

Plan View



Cross Sectional View



Depth of Water = No Water
Clearance to Water = 4'

- Drawings are not to scale
- TCSB will be secured to a fixed anchor
- Sediment Controls: Silt fence shall be attached to the bridge sides and fabric laid between the deck layers.

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

Appendix E

Photographs of Waterways Requiring a Navigability Concurrence

Appendix E. Photographs of Mapped Waterways Requiring a Navigability Concurrence

Photo 01. Feature E of STR 137697, view south. July 2015

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

Appendix F

Approved Waivers of Seasonal Limitations for TCSBs

AMERICAN TRANSMISSION COMPANY®

MAILING ADDRESS: P.O. BOX 47 ▪ WAUKESHA, WI 53187-0047
STREET ADDRESS: N234 W2000 RIDGEVIEW PARKWAY COURT ▪ WAUKESHA, WI 53188-1022
262-506-6700 ▪ Toll Free: 866-899-3204 ▪ Fax: 262-506-6124 ▪ www.atcllc.com

December 1, 2015

Mr. Nathan Nye
Fisheries Biologist – Columbia and Sauk Counties
Wisconsin Dept. of Natural Resources
N3344 Stebbins Road
Poynette, WI 53955

RE: Request for Seasonal Waivers – Temporary Bridge Construction
Badger Coulee 345 kV Transmission Line Project, Segment 2
Utility Permit #IP-WC/SC-2015-N20001through N20273

Dear Mr. Nye:

American Transmission Company (ATC); Dairyland Power Cooperative (DPC); Northern States Power Company, a Wisconsin corporation (NSPW); SMMPA Wisconsin, LLC (SMMPA Wisconsin), and WPPI Energy (WPPI) were granted a Ch. 30.025 utility permit by the Wisconsin Department of Natural Resources (WDNR) for work in and adjacent to wetlands and waterways for the Badger Coulee 345 kV Transmission Line Project (Permit #IP-WC/SC-2015-N20001 through N20273). ATC, as the project's construction manager, on behalf of itself and its co-permittees respectfully requests your review and consideration of granting waivers for the seasonal restrictions normally associated with construction and removal of 2 temporary clear span bridges (TCSB); and timber construction matting below the OHWM of two side channels and associated wetlands of the Wisconsin River along Segment 2 of the Badger Coulee 345 kV Transmission Line Project. Completed Waiver Request Forms are attached, for your convenience.

Construction activities along Segment 2 of this project are preliminarily scheduled to begin in January 2016 and extend through approximately September 2017, although construction activities in the Wisconsin River area are tentatively planned for the fall of 2016. Restoration will follow during the late summer and fall months, and the bridges and matting will be removed once restoration is complete. During this time, the ATC's contractor will need to construct and utilize 2 TCSBs. Two other crossings (G-R1 and G-R2) will be comprised of timber mat spans and supports below the OHWM of side channels of the Wisconsin River. Additionally some construction matting may be placed within low-lying areas of the wetland adjacent to G-R1 and G-R2, which may be below the OHWM of the Wisconsin River. The crossings are located in Columbia County, as outlined in Table 1.

The bridges and the temporary supports and matting below the OHWM have received a Ch. 30 permit from the Department. Characteristics of these waterways are listed in Table 1 and their locations are indicated on the attached figure. Photographs of each feature are also attached. Waterway E-R2 is an unnamed tributary to Rowan Creek, which is designated as a Class 2 Trout Stream. The other waterways and their tributaries in this submittal are all considered warm water streams or rivers.

Seasonal waivers are being requested to minimize limitations on the contractor and maximize flexibility so the contractor will be able to adequately address construction limitations in the most sensitive areas of the project.

Should you have questions or concerns, please feel free to contact me at (262) 506-6788.

Sincerely,

Nayo Parrett
Sr. Environmental Project Manager

Enclosures
Cc: Ben Callan, WDNR
Matt Langan, Xcel Energy

Table 1. Waterways For Which a Waiver of Seasonal Restrictions is Requested
Segment 2 - Badger Coulee 345 kV Tranmission Line Project

Permit #IP-WC/SC-2015-	Stream Designation	Waterway (UnNamed Tributary)	Appears on WDNR 24K hydro layer? (Y/N)	Location						Morphometry
				County	Town	T / R	QQ	Q	Sect.	
N20241	G-R1	Wisconsin River (side channel)	Y	Columbia	Town of Caledonia	11N, 8E	SE	NW	12	water depth (in channel) = unknown bank height = 1 ft top of bank width = 40 ft
N20242	G-R2	Wisconsin River (side channel)	Y	Columbia	Town of Dekkora	11N, 8E	SW	NE	12	water depth (in channel) = unknown bank height = 1 ft top of bank width = 60 ft
N20247	G-R4a	UNT to Wisconsin River	N	Columbia	Town of Dekkora	11N, 8E	NE	NE	13	water depth (in channel) = 3 inches bank height = 2 ft top of bank width = 4 ft
N20256	E-R2	UNT to Rowan Creek	N	Columbia	Town of Dekkora	11N, 9E	SE	NE	31	water depth = 0 ft bank height = 4 ft top of bank width = 4 ft

WAIVER REQUEST FORMS

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: __SE_ ¼, __NW_ ¼, Section _12__, Town _11_ N, Range_8E__

Name of Waterbody: G-R1 (Wisconsin River - side channel)

County of Waterbody: ___Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☐ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/are not (circle one) necessary to protect fish spawning for the proposed project and I approve/disapprove (circle one) this waiver.

Signed by:

_____ _____

Department Fisheries Biologist Date

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: __SW_ ¼, __NE_ ¼, Section _12__, Town _11_ N, Range_8E__

Name of Waterbody: G-R2 (Wisconsin River - side channel)

County of Waterbody: ___Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☐ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/are not (circle one) necessary to protect fish spawning for the proposed project and I approve/disapprove (circle one) this waiver.

Signed by:

_____ _____

Department Fisheries Biologist Date

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: NE ¼, NE ¼, Section 13, Town 11 N, Range 8E

Name of Waterbody: G-R4a (UNT to Wisconsin River)

County of Waterbody: Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☐ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/are not (circle one) necessary to protect fish spawning for the proposed project and I approve/disapprove (circle one) this waiver.

Signed by:

_____ _____

Department Fisheries Biologist Date

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: SE ¼, NE ¼, Section 31, Town 11 N, Range 9E

Name of Waterbody: E-R2 (UNT to Rowan Creek)

County of Waterbody: Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☐ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/are not (circle one) necessary to protect fish spawning for the proposed project and I approve/disapprove (circle one) this waiver.

Signed by:

_____ _____

Department Fisheries Biologist Date

FIGURES

PHOTO LOG

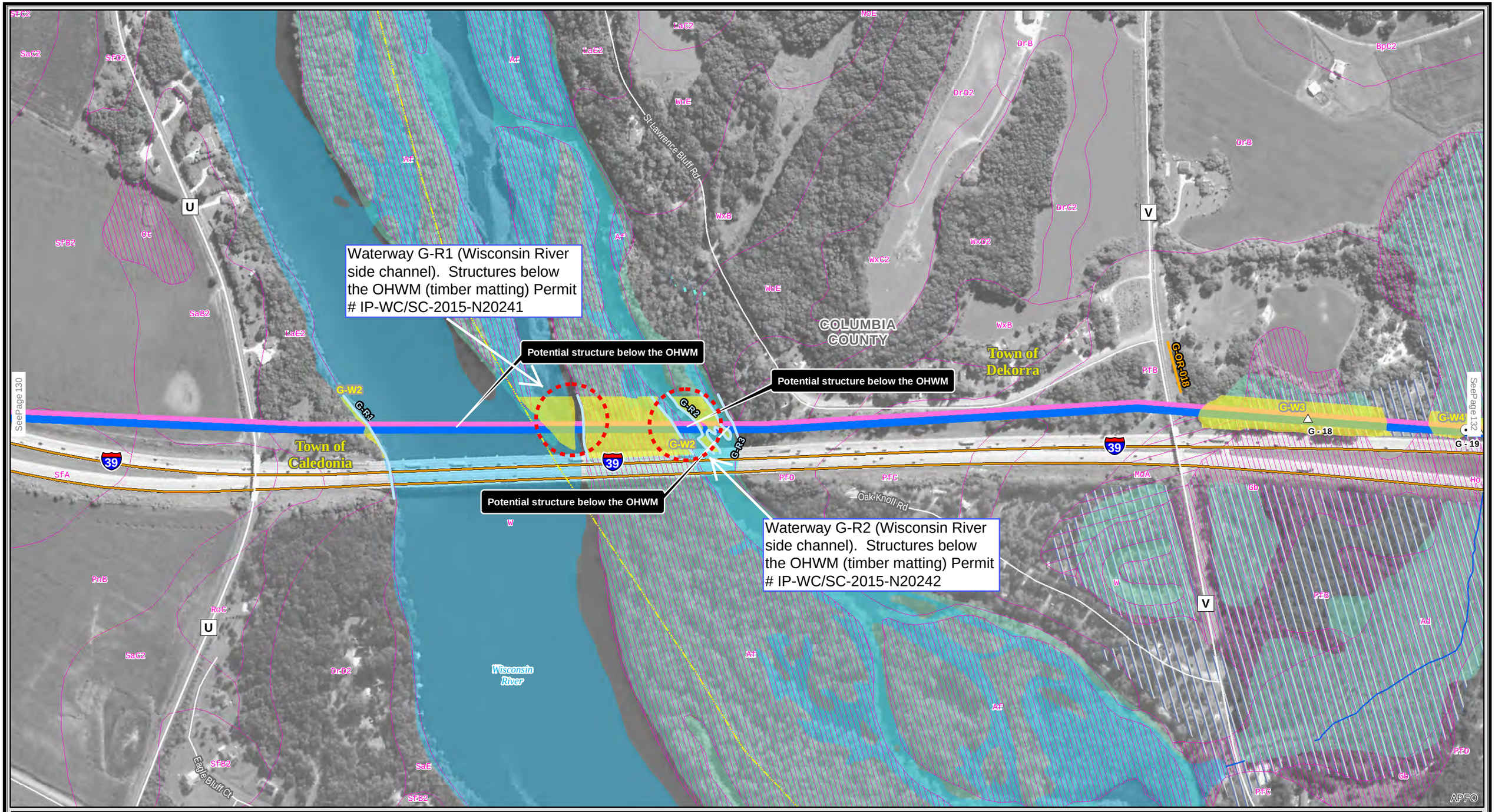
Photo-1
Date: 8/26/2015
Location: G-R1 Wisconsin River side channel facing west toward the interstate.

Photo-2
Date: 8/26/2015
Location: G-R2 Wisconsin River side channel facing east from the interstate.

Photo-3
Date: 8/26/15
Location: Typical low-laying area below the OHWM within the wetland between G-R1 and G-R2.

Photo-4
Date: 7/2/2015
Location: G-R4a facing northwest.

	
Photo-5 **Date:** 6/29/2015 **Location:** E-R2 facing north.	



STATE PRIORITY CORRIDORS

EXISTING ATC OR XCEL TRANSMISSION LINES
- Substation
- 69 kV
- 69 kV Underground
- 138 kV
- 161 kV
- 345 kV

OTHER EXISTING TRANSMISSION LINES
- Substation
- 69 kV
- 161 kV

Approved Hampton-Rochester-La Crosse 345 kV Transmission Project

- Interstate, US or State Highway
- Approximate Gas Pipeline
- Railroad
- State/County Trail

PROJECT RELATED DATA

N1 — Segment N — Northern Route (Segments A, D, E, G, H, J, K, M, N, P, P-East)

Segment O — Southern Route (Segments B-North, B, C, F, G, I, J, L, M, O)

- Sub-Segment Node
- Route Segment ID
- Sub-Segment ID

△ Conceptual Pole Locations in or Within 50' of a Wetland*

* Proposed Poles are APPROXIMATE and are subject to change. Final pole placement will not be determined until detailed engineering is complete for the ordered route.

- Off Right-of-Way Construction Access
- Briggs Road Substation

NRCS SOIL SURVEY DATA
- Non-Hydric Soils
- Hydric Soils
- Possible Hydric Inclusions
- SaA → Soil Mapping Unit

WETLANDS
- Delineated Wetlands
- Area A → Wetland ID
- 100 Year Floodplain
- 500 Year Floodplain
- WI Wetland Inventory
- ElKa → Wetland Code

- Temporary Clear Span Bridge
- Delineated Waterway
- Area A → Waterway ID
- WDNR Stream
- Open Water
- County Boundary
- City/Village/Town Boundary

0 200 400 Feet

The information presented in this map document is advisory and is intended for reference purposes only. Applicants' owned and operated facility locations are approximate. Data Sources: ATC, WDNR, WDOT, PSCW, FAA, Xcel Energy, DPC, County LIOs, MVC, NHLT, NRCS, WI DHS, WI DCF. Imagery along routes: ATC, Spring 2012 and 2013. Outer Imagery NAIP 2010.

APPENDIX A FIGURE 4A
ENVIRONMENTAL FEATURE AND ACCESS PLAN
Northern Route - Segment G
BADGER COULEE TRANSMISSION LINE PROJECT

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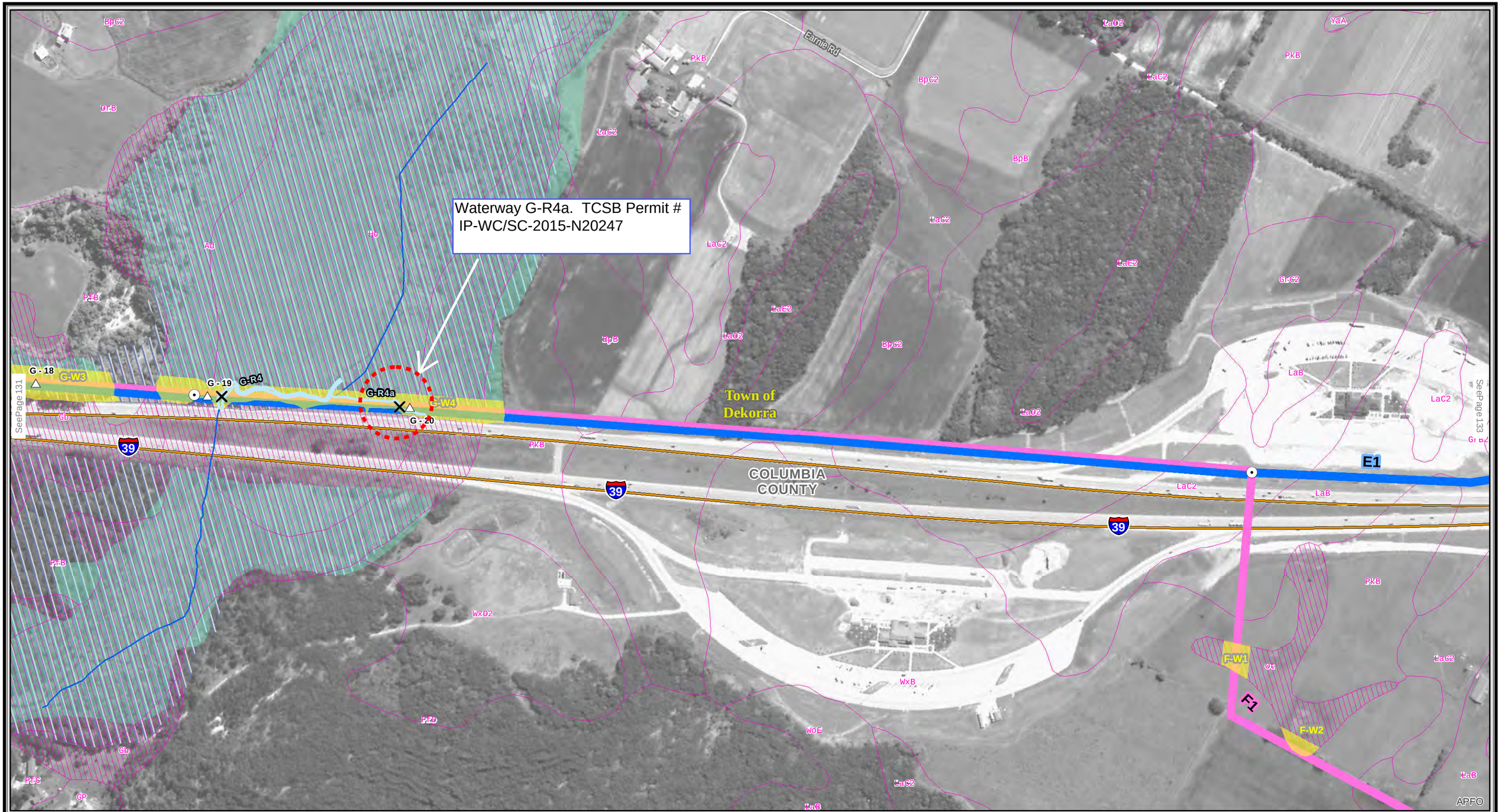
APPENDIX A FIGURE 4A-ENVIRONMENTAL FEATURES AND ACCESS PLAN NORTHERN ROUTE



STATE PRIORITY CORRIDORS

EXISTING ATC OR XCEL TRANSMISSION LINES
- Substation
- 69 kV
- 69 kV Underground
- 138 kV
- 161 kV
- 345 kV

OTHER EXISTING TRANSMISSION LINES
- Substation
- 69 kV
- 161 kV

Approved Hampton-Rochester-La Crosse 345 kV Transmission Project

- Interstate, US or State Highway
- Approximate Gas Pipeline
- Railroad
- State/County Trail

The information presented in this map document is advisory and is intended for reference purposes only. Applicants' owned and operated facility locations are approximate. Data Sources: ATC, WDNR, WDOT, PSCW, FAA, Xcel Energy, DPC, County LIOs, MVC, NHLT, NRCS, WI DHS, WI DCF. Imagery along routes: ATC, Spring 2012 and 2013. Outer Imagery NAIP 2010.

PROJECT RELATED DATA

N1
- Segment N — Northern Route (Segments A, D, E, G, H, J, K, M, N, P, P-East)
- Segment O — Southern Route (Segments B-North, B, C, F, G, I, J, L, M, O)
- Sub-Segment Node
- Route Segment ID
- Sub-Segment ID

△ Conceptual Pole Locations in or Within 50' of a Wetland*

* Proposed Poles are APPROXIMATE and are subject to change. Final pole placement will not be determined until detailed engineering is complete for the ordered route.

- Off Right-of-Way Construction Access
- Briggs Road Substation

NRCS SOIL SURVEY DATA
- Non-Hydric Soils
- Hydric Soils
- Possible Hydric Inclusions
- SaA → Soil Mapping Unit

WETLANDS
- Delineated Wetlands
- Area A → Wetland ID
- 100 Year Floodplain
- 500 Year Floodplain
- WI Wetland Inventory
- ElKa → Wetland Code

- Temporary Clear Span Bridge
- Delineated Waterway
- Area A → Waterway ID
- WDNR Stream
- Open Water
- County Boundary
- City/Village/Town Boundary

0 200 400 Feet

ATC American Transmission Company · Xcel Energy

APPENDIX A FIGURE 4A
ENVIRONMENTAL FEATURE AND ACCESS PLAN
Northern Route - Segment G
BADGER COULEE TRANSMISSION LINE PROJECT

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APPENDIX A FIGURE 4A-ENVIRONMENTAL FEATURES AND ACCESS PLAN NORTHERN ROUTE

Waterway E-R2. TCSB Permit # IP-WC/SC-2015-N20256

COLUMBIA COUNTY

Town of Dekorra

Town of Arlington

CS

J

E1

E-W4 E-W5 E-W6 E-W7 E-W8 E-W9

E-R2 E-R3 E-R4

E-OR-012 E-OR-013

E - 13 E - 14 E - 15 E - 16

Rowan Creek

Smokey Hollow Rd

Heintz Rd

0 1,000 2,000 Feet

SeePage 134

SeePage 136

APFO

STATE PRIORITY CORRIDORS

EXISTING ATC OR XCEL TRANSMISSION LINES
- Substation
- 69 kV
- 69 kV Underground
- 138 kV
- 161 kV
- 345 kV

OTHER EXISTING TRANSMISSION LINES
- Substation
- 69 kV
- 161 kV

Approved Hampton-Rochester-La Crosse 345 kV Transmission Project

- Interstate, US or State Highway
- Approximate Gas Pipeline
- Railroad
- State/County Trail

The information presented in this map document is advisory and is intended for reference purposes only. Applicants' owned and operated facility locations are approximate. Data Sources: ATC, WDNR, WDOT, PSCW, FAA, Xcel Energy, DPC, County LIOs, MVC, NHLT, NRCS, WI DHS, WI DCF. Imagery along routes: ATC, Spring 2012 and 2013. Outer Imagery NAIP 2010.

PROJECT RELATED DATA

- N1 Segment N — Northern Route (Segments A, D, E, G, H, J, K, M, N, P, P-East)
- Segment O — Southern Route (Segments B-North, B, C, F, G, I, J, L, M, O)
- Sub-Segment Node
- Route Segment ID
- Sub-Segment ID
- △ Conceptual Pole Locations in or Within 50' of a Wetland*

* Proposed Poles are APPROXIMATE and are subject to change. Final pole placement will not be determined until detailed engineering is complete for the ordered route.

- Off Right-of-Way Construction Access
- Briggs Road Substation

NRCS SOIL SURVEY DATA
- Non-Hydric Soils
- Hydric Soils
- Possible Hydric Inclusions
- SaA → Soil Mapping Unit

WETLANDS
- Delineated Wetlands
- Area A → Wetland ID
- 100 Year Floodplain
- 500 Year Floodplain
- WI Wetland Inventory
- Elka → Wetland Code

- Temporary Clear Span Bridge
- Delineated Waterway
- Area A → Waterway ID
- WDNR Stream
- Open Water
- County Boundary
- City/Village/Town Boundary

0 200 400 Feet

APPENDIX A FIGURE 4A ENVIRONMENTAL FEATURE AND ACCESS PLAN
Northern Route - Segment E
BADGER COULEE TRANSMISSION LINE PROJECT

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APPENDIX A FIGURE 4A-ENVIRONMENTAL FEATURES AND ACCESS PLAN NORTHERN ROUTE

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: SE ¼, NW ¼, Section 12, Town 11 N, Range 8E

Name of Waterbody: G-R1 (Wisconsin River - side channel)

County of Waterbody: Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☑ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/~~are not~~ (circle one) necessary to protect fish spawning for the proposed project and ~~I approve~~/disapprove (circle one) this waiver.

Signed by: Matt Mga 12-8-2015

Department Fisheries Biologist Date

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: SW ¼, NE ¼, Section 12, Town 11 N, Range 8E

Name of Waterbody: G-R2 (Wisconsin River - side channel)

County of Waterbody: Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☒ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/~~are not~~ (circle one) necessary to protect fish spawning for the proposed project and I ~~approve~~/disapprove (circle one) this waiver.

Signed by: Matthew J Mye

Department Fisheries Biologist

12-02-2015

Date

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: NE ¼, NE ¼, Section 13, Town 11 N, Range 8E

Name of Waterbody: G-R4a (UNT to Wisconsin River)

County of Waterbody: Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☒ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/are not (circle one) necessary to protect fish spawning for the proposed project and I approve/disapprove (circle one) this waiver.

Signed by: Matt J. Mrozinski 12/02/2015

Department Fisheries Biologist — Date

APPENDIX 1

Request for Waiver of Construction Season Limits in Waterway General Permits

This checklist shall be used to request a waiver from the time period restrictions and/or fish passage requirements for applicable projects that qualify for WDNR-GP12-2015. The completed waiver request may be submitted with the application where the applicant seeks a waiver from the applicable statewide general permit conditions that place fisheries based restrictions on the project. The signature of the Department Fisheries Biologist on this checklist only waives the time period and/or fish passage restrictions and does not constitute a permit, approval, or other concurrence with the proposed project.

Applicant Name: ATC; NSPW; DPC; SMMPA WI, LLC and WPPI Energy

Proposed Project: Badger Coulee 345 kV Transmission Line Project

Project Location: SE ¼, NE ¼, Section 31, Town 11 N, Range 9E

Name of Waterbody: E-R2 (UNT to Rowan Creek) Intermittent NJN

County of Waterbody: Columbia

FOR DNR USE ONLY

The applicant listed above has consulted with me about their proposed project in navigable waters. Based on their project description, plans and other existing information available to me, I find that:

- ☐ there is suitable habitat at or near the proposed project, or
- ☐ there may be an impact on spawning fish or spawning activities.

Or

- ☐ there is no suitable habitat at or near the proposed project, or
- ☒ there will be no impact on spawning fish or spawning activities.

Consequently, the time period restrictions of the applicable statewide general permit are/are not (circle one) necessary to protect fish spawning for the proposed project and I approve/disapprove (circle one) this waiver.

Signed by: Matt J Nye 12-02-2015

Department Fisheries Biologist — Date

Badger Coulee 345 kV Transmission Line Project

Segment 2 South of CTH U

Appendix G

Project Wetland Impacts and Compensatory Mitigation Acres

Summary of Wetland Impacts and Compensatory Mitigation Acres - Segment 2 South of CTH U

Badger Coulee 345 kV Transmission Line Project

Watershed (BSA)[1]	Wetland Cover Types[2]	Permanent Impacts (acre)[3]					Temporary Impacts (acre)[4]					Total Credits[5] Permanent + Temporary Impacts
		Structure Impacts [A]	Conversion [A,B]	Mitigation Ratio (structure)	Mitigation Ratio (conversion)	Total Credits Needed	Matting (ROW)	Matting (off-ROW)	Conversion (off-ROW)	Mitigation Ratio	Total Credits Needed	
Lower Wisconsin (LW)	Shallow Marsh	0.001	na	1.45	na	0.002	-	-	na	na	0.000	0.00
	Sedge Meadow	-	na	1.45	na	0.000	1.062	-	na	0.25	0.265	0.27
	Shrub-Carr	0.001	2.032	1.45	0.50	1.018	-	-	-	0.25	0.000	1.02
	Hardwood Swamp	0.001	3.876	1.45	0.50	1.940	-	-	0.018	0.25	0.005	1.94
	Floodplain Forest	0.001	3.793	1.45	0.50	1.898	-	-	-	0.25	0.000	1.90
	SUBTOTAL	**0.004**	**9.701**			**4.857**	**1.062**	**0.000**	**0.018**		**0.270**	**5.13**
Rock	Wet Meadow (Degraded)	0.002	na	1.45	na	0.003	na	na	na	na	0.000	0.00
	SUBTOTAL	**0.002**	**0.000**			**0.003**	**0.000**	**0.000**	**0.000**		**0.000**	**0.00**
	TOTAL	**0.006**	**9.701**			**4.861**	**1.062**	**0.000**	**0.018**		**0.270**	**5.13**

Notes/Assumptions:

1 Bank Service Areas are based on Guidelines for Wetland Compensatory Mitigation in Wisconsin, Version 1, August 2013.

2 Wetland cover types are based on Eggers and Reed, 2011, Wetland Plants and Plant Communities of Minnesota and Wisconsin, Third Edition.

3 Permanent wetland impacts include transmission structure placement in wetlands and permanent conversion of wooded or shrub wetlands.

4 Mitigation is required for temporary matting within high-quality or difficult to replace (DTR) herbaceous wetlands, specifically sedge meadow. In addition, temporary wetland impacts are associated with the temporary clearing of forested wetlands along off-ROW access routes where woody vegetation will be allowed to naturally regenerate.

5 The ILF program will be used for mitigation. Total wetland credits are based on replacement ratios of 0.25:1 for temporary clearing of wooded wetland, 0.25:1 for temporary matting of sedge meadow, 1.45:1 for permanent structure impacts, and 0.5:1 for permanently converted shrub and forested wetlands. Total credits are rounded to the nearest 0.01, as this is the minimum amount of credits that can be purchased.

A Impact acreages provided by Stantec Consulting Services Inc.

B Structure impacts within forested and shrub wetlands additionally account for conversion. Acreage within the structure impacts column was not included within the conversion column so that the impacted acreage was only accounted for once.