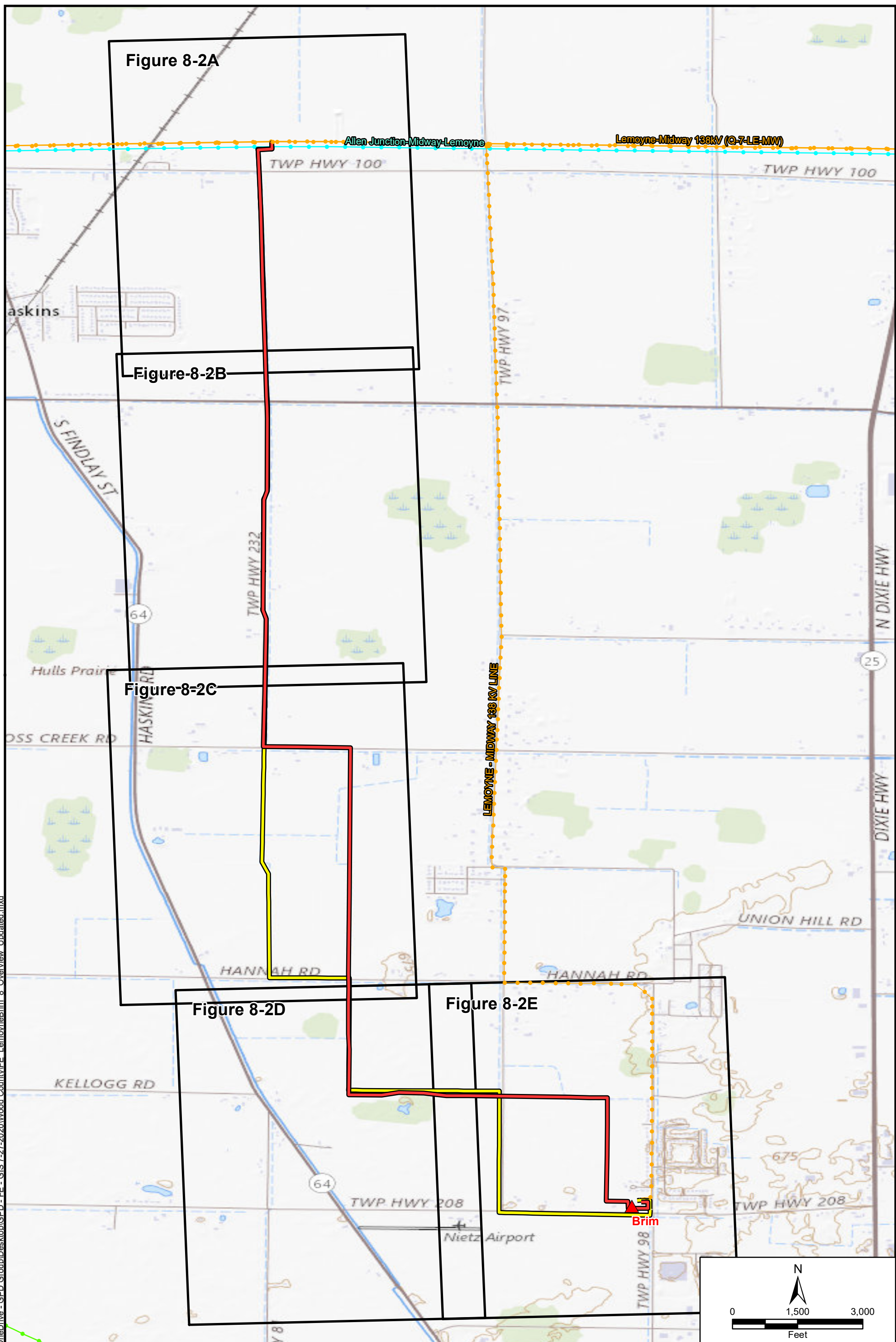


-  Existing Substation
  Existing 69kV Transmission Line
  Figure Key for 8-2 - Revision 1
 Proposed Route Adjustment
  Existing 138kV Transmission Line
 OPSB Approved Route
  Existing 345kV Transmission Line



Figure 8-1 - Revision 1
Overview Map

Wood County 138kV
Reinforcement Project

AGENCY CONSULTATIONS



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

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September 9, 2021

Emily Nagle
GPD Group
5595 Transportation Boulevard, Suite 100
Cleveland, OH 44125

Re: 21-0751; Wood County 138 kv Reinforcement Project

Project: The proposed project involves the construction of the Wood County 138kV Reinforcement Project to enhance electrical service in Wood County, Ohio.

Location: The proposed project is located in Middleton and Plain Townships, Wood County Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data at or within a one mile radius of the project area:

Bushy horseweed (*Conyza ramosissima*), P

The review was performed on the project area specified in the request as well as an additional one mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federal endangered, and FT = federal threatened.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the “OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING”. If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “Range-wide Indiana Bat Survey Guidelines.” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the pondhorn (*Uniomereus tetralasmus*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the western banded killifish (*Fundulus diaphanatus menona*), a state endangered fish, and the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Kirtland’s snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet meadows and other wetlands. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the common tern (*Sterna hirundo*), a state endangered bird. The preferred nesting sites of common terns are natural or man-made islands that are free of mammalian predators and human disturbance. They will also utilize mainland beaches and dredge disposal areas but only when islands are unavailable. The common tern nests in colonies. Their eggs are laid in a grass-lined depression in the sand. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If no wetland habitat will be impacted, the project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the loggerhead shrike (*Lanius ludovicianus*), a state endangered bird. The loggerhead shrike nests in hedgerows, thickets and fencerows. They hunt over hayfields, pastures, and other grasslands. If thickets or other types of dense shrubby habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the trumpeter swan (*Cygnus buccinator*), a state threatened bird. Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. They like shallow wetlands one to three feet deep with a diverse mix of plenty of emergent and submergent vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through June 15. If this habitat will not be impacted, this project is not likely to have an impact on this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

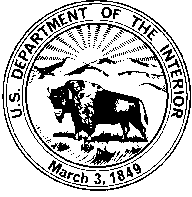
The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994



July 14, 2023

Project Code: 2023-0103786

Dear Alex Latina:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥ 3 inches diameter at breast height between October 1 and March 31) to avoid impacts to the endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), and the proposed endangered tri-colored bat (*Perimyotis subflavus*) we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant

species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Patrice Ashfield
Field Office Supervisor

**Appendix 8-1
Wetland and Waterbody Delineation
Report**

Wetland Delineation and Surface Water Study

Wood County 138kV Reinforcement Project Route Adjustment

Wood County, Ohio

Prepared For:

FirstEnergy West Akron Campus
341 White Pond Drive
Akron, Ohio 44320

October 28, 2022

Prepared By:



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1.0 EXECUTIVE SUMMARY

GPD Group completed a routine survey for wetlands and other “Waters of the United States” on July 21, 2021 for American Transmission System, Incorporated (ATSI), a FirstEnergy company, proposed Wood County 138kV Reinforcement Project (Project). The Project is located within the City of Bowling Green and Middleton, Plain, and Center Townships in Wood County, Ohio.

The survey was completed in support of the Project which involves the construction of the Wood County 138kV Reinforcement Project to enhance electrical service in Wood County, Ohio. The Project includes the expansion of the existing 138/69kV substation in Plain Township and the construction of an approximately 5.5-mile 138kV transmission line connecting the expanded substation to the nearby Lemoyne-Midway 138kV Transmission Line. The Project will require a new 60-foot-wide right-of-way (ROW) and will primarily be supported on wood poles.

The environmental survey area investigated and documented in this report involves two (2) sections of the Western Alternative Route that have been shifted from their original alignment. The survey area consists of a 200-foot-wide corridor (100 buffer) along the new proposed centerline of the western alternative alignment adjustment (environmental survey corridor). The environmental survey corridor is approximately 142 acres in size.

The majority of the environmental survey area is located within the Maumee River Basin and is contained within the Haskins Road Ditch-Maumee River (HUC 12: 04100009-0603) and the Grassy Creek-Maumee River (HUC 12: 04100009-0901) watersheds.

The environmental survey area that was investigated is within the jurisdictional boundary of the USACE Buffalo District Office. **Figure 1** depicts the Project location on the Bowling Green North, Ohio United States Geologic Survey (USGS) 7.5-Minute Topographic Quadrangle Map.

The information in this report has been compiled as documentation of existing aquatic features and represents the professional opinion of GPD Group regarding the boundaries, general characteristics, and classifications of waters within the environmental survey area. This document is intended to establish the on-site extent of jurisdictional freshwater features and can be used to facilitate a Jurisdictional Determination. It is GPD Group’s recommendation that no earthwork be conducted until such time as all appropriate regulatory agency acknowledgements, reviews, and verifications have been completed.

Based on the field investigation, three (3) stream features have been identified within the environmental survey area boundary. No wetland features have been identified within the environmental survey area boundary. The identified aquatic features are depicted on the Aquatic Features Location Map (**Figure 2**). The areal extent of the feature was calculated using a Geographic Information System (GIS) and is presented in **Table 2**. Representative photographs were taken of the features within the environmental survey area boundary and are provided in **Appendix B**.

2.0 INTRODUCTION

The environmental survey area investigated and documented in this report involves two (2) sections of the Western Alternative Route that have been shifted from their original alignment. The survey area consists of a 200-foot-wide corridor along the new proposed centerline of the western alternative alignment reroute (environmental survey corridor). The environmental survey corridor is approximately 142 acres in size and was assessed on July 21, 2021.

In October 2018, GPD Group conducted field studies within an approximately 380-acre environmental survey area. These field studies focused on wetlands and other "Waters of the United States" delineations and habitat assessments within a 260-foot-wide corridor (130-foot buffer) along the proposed centerline of the western alternative alignment and the eastern alternative alignment for the Project (environmental survey corridor).

The proposed project involves the construction of the Wood County 138kV Reinforcement Project to enhance electrical service in Wood County, Ohio. The project includes the expansion of the existing 138/69kV substation in Plain Township and the construction of an approximately 5.5-mile 138kV transmission line connecting the expanded substation to the nearby Lemoyne-Midway 138kV transmission line. The project will require a new 60-foot-wide right-of-way (ROW) and will likely be supported on wood poles.

The majority surrounding land use consisted of actively farmed agricultural fields with scattered residential and commercial development.

On July 21, 2021 a Routine Level On-Site Determination, as outlined in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual, was performed. Additionally, the methods outlined in the April 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) were utilized to further ascertain the presence/absence of the three parameters that define a wetland. The Ohio Rapid Assessment Method for Wetlands (ORAM) Version 5.0 was used to provisionally rate each delineated wetland in accordance with current Ohio Environmental Protection Agency (Ohio EPA) standards, and to determine the appropriate regulatory category in which to place the wetland.

No wetlands were identified; however, in the event of the presence of wetlands, the wetland location would have been flagged in the field, and the identified feature location would have been recorded using a Trimble Geo-XH hand-held Global Positioning System (GPS) unit with sub-meter horizontal accuracy.

Three (3) streams were evaluated using either the Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams or the Methods for Assessing Habitat in Flowing Water: Using the Qualitative Habitat Evaluation Index (QHEI), published by the Ohio EPA. When appropriate, the Headwater Habitat Evaluation Index (HHEI) data sheets, Headwater Macroinvertebrate Field Evaluation Index (HMFEI) data sheets, and QHEI data sheets were completed in the field. Stream locations were flagged in the field, and all identified feature locations were recorded using a Trimble Geo-XH hand-held Global Positioning System (GPS) unit with sub-meter horizontal accuracy.

In addition to wetlands and streams, an investigation for ponds located within the environmental survey area boundary was also conducted. No ponds were identified within the environmental survey area.

3.0 WETLAND DEFINITION

Jurisdictional freshwater wetlands are included as a subset of "Waters of the United States" as defined by 33 CFR Part 328.3. The following definition of a wetland is the regulatory definition used by the USACE for administering Section 404 of the Clean Water Act which limits activities within "Waters of the United States" including wetlands. Wetlands are:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated conditions. Wetlands generally include swamps, marshes, bogs, and similar areas". (EPA, 40 CFR 230.3)

Wetland determinations are based on a three-parameter approach. An area must exhibit these three characteristics to be classified as a wetland:

1. hydrophytic vegetation
2. hydric soils
3. wetland hydrology

Hydrophytic vegetation is defined as macrophytic plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of the presence of water. In the course of developing the wetland determination methodology, the USACE, in cooperation with the U.S. Fish and Wildlife Service (USFWS), Environmental Protection Agency (EPA), and the Natural Resources Conservation Service (NRCS), compiled a comprehensive list of wetland vegetation. A method to quantify what type of vegetation is typical "wetland vegetation" was also developed and certain species of plants were assigned a plant indicator classification/status. The indicator classification/status of a plant species is expressed in terms of the estimated probability of that species occurring in wetland conditions within a given region. The indicator classification/status within this list includes:

1. Obligate Wetland (OBL) – occur almost always in wetlands (estimated probability 99%), under natural conditions.
2. Facultative Wetland (FACW) – usually occur in wetlands (estimated probability 67% to 99%), but occasionally found in non-wetlands.
3. Facultative (FAC) – equally likely to occur in wetlands and non-wetlands (estimated probability 34% to 66%).
4. Facultative Upland (FACU) – usually occurs in non-wetlands, but occasionally found in wetlands (estimated probability 1% to 33%).
5. Upland (UPL) - occur almost always in uplands (estimated probability 1%), under natural conditions.

Plants that are OBL, FACW, and FAC are considered wetland species.

Hydric soils are those soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions within the major portion of the root zone. The National Technical Committee for Hydric Soils has developed criteria for hydric soil determinations in addition to hydric soil types. The USACE criteria for hydric soils specify that the chroma must be /1 if the soil has no mottles (marked with spots of contrasting color), and /2 or /3 if the soil is mottled. Any soil colors described within this report were determined in the field using the Munsell Soil Color Charts Year 2009 Edition.

Wetland hydrology is the permanent or periodic inundation or saturation of soil (within the root zone) for a significant period during the growing season. Many factors influence the hydrology of an area including

precipitation, topography, soil permeability, and plant cover. The frequency and duration of inundation or soil saturation are important factors in the determination of the existence of wetland hydrology. Primary indicators of wetland hydrology are inundation, soil saturation (within the root zone), water marks, sediment deposits, and drainage patterns. Secondary indicators such as oxidized root channels in the upper 12" of soil, water stained leaves, local soil survey data, and FAC-neutral vegetation test are sometimes also used to determine the presence of wetland hydrology. One primary indicator, or two secondary indicators, is required to establish the presence of wetland hydrology.

Summary

In general, an area must meet all three of the aforementioned criteria to be classified as a wetland. In certain problem areas such as seasonal wetlands that are only wet during certain times of the year or in recently disturbed (atypical) situations, areas may be considered a wetland if only two criteria are met. Additionally, in special situations, an area that meets the definition of a wetland may not be within USACE jurisdiction due to a lack of adjacency to another "Water of the United States". These isolated features fall under the jurisdiction of the Ohio EPA.

4.0 METHODS

4.1 Wetlands

Prior to performing any field studies, the Wood County Soil Survey map, the USGS 7.5-Minute Topographic Quadrangle Map, and the National Wetlands Inventory (NWI) map were analyzed in detail to determine the presence of any previously-identified freshwater wetlands within the environmental survey area boundary.

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any wetlands not annotated on the reviewed sources.

For any suspected wetland areas, the wetland determination is performed based upon the Routine Level On-Site method as outlined in the 1987 USACE Manual. This method consists of collecting a data point within an area that exhibits wetland characteristics. Within this area vegetation is identified, hydrology is assessed, and soils to a depth of at least 18 inches are identified and described. This method is accepted by the USACE and takes into consideration the three wetland parameters (1. Vegetation, 2. Soils, 3. Hydrology) covering both normal and atypical situations. Subsequently, an upland data point within an area adjacent to the delineated wetland, which did not exhibit wetland characteristics, is collected in the same manner, to provide contrasting evidence.

4.1.1 Vegetation

All habitat types within the environmental survey area boundary are identified and the distribution of individual plant species is noted. The existing vegetation is analyzed with respect to percentage of cover for each species. This involves estimation of existing plant species composition by direct observation. Wetlands, as stated previously, are usually characterized by the predominance of hydrophytic plant species. Conversely, upland areas would be dominated by more xerophytic species, or plants better adapted to drier soil conditions. A mesic zone, or the transition between wetland and upland habitat, is often comprised of a mixture of FACW, FAC, and FACU species.

With respect to the vegetation, the USACE Manual places great emphasis on the presence of hydrophytic plant species as an indicator of wetland conditions. It is determined which species are dominant within each plant community. The determination of whether or not an herbaceous species is dominant is based on percentage of cover. Vegetative dominance is calculated as described in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands (50/20 method).

The species indicator classification/status is determined and recorded for each dominant plant species found at the site. This information is used in conjunction with their percentage of cover to determine whether a prevalence of wetland species exists in any of the vegetation communities occurring within the environmental survey area boundary. Species indicator classification/status information is obtained from the USACE's The National Wetland Plant List: 2013 wetland ratings for the State of Ohio (Lichvar, 2013).

4.1.2 Soils

During the field investigation of the environmental survey area, a spade shovel is used to dig soil test pits to accurately document the extent of hydric soil conditions. The test pits are dug to a depth of approximately 18 inches and the soil is examined for color, texture, and moisture content.

Soil color is determined in the field using the 2009 Edition of the Munsell Soil Color Charts. Hydric soils are identified by color/chroma. The Munsell designation indicates the soil color as removed from the test pit. Hydric soil determinations are made in strict accordance with USACE criteria.

Weather conditions during the soil identification procedures for this investigation varied during the field investigation from approximately 78°F and sunny to approximately 62°F and sunny.

4.1.3 Hydrology

Hydrology indicators [including inundation, soil saturation (within the root zone), water marks, sediment deposits, etc.] are used in conjunction with vegetation and soil characteristics to establish the presence/absence of freshwater wetlands. The environmental survey area is also evaluated for signs of past human disturbances to determine whether any identified features had been created by man (man-induced wetland) or if the hydrologic regime of the feature had been recently altered. While hydrology is the driving force in wetland creation, it is often the least exact and most difficult to identify in the field. Field indicators are often used to assess the hydrology of an area, especially during times when surface water is not present, or during times of low groundwater, as it might otherwise be difficult to identify.

4.1.4 Wetland Evaluation

ORAM Version 5.0 is used to rate any wetland observed within the environmental survey area boundary in accordance with current Ohio EPA standards, and to determine the appropriate regulatory category in which to place the wetland. This assessment is also used to assess the overall ecological quality and the level of function of a particular wetland. The numeric score obtained from the ORAM field form is not, and should not be considered, an absolute number with intrinsic meaning. The numeric score does, however, allow for relative comparisons between wetlands to be made.

Interim Scoring Break Points for Wetland Regulatory Categories for ORAM

Category	ORAM v5.0 score		
1	0	-	29.9
1 or 2 gray zone	30	-	34.9
Modified 2	35	-	44.9
2	45	-	59.9
2 or 3	60	-	64.9
3	65	-	100

In general, Category 1 wetlands are those wetlands that support minimal wildlife habitat, and minimal hydrological and recreational functions. Category 1 wetlands do not provide critical habitat for threatened or endangered species or contain rare or otherwise sensitive species. Category 2 wetlands support moderate wildlife habitat or hydrological functions. Category 2 wetlands may include the presence of native plant species, but generally do not support threatened or endangered wildlife. Category 3 wetlands support superior wildlife habitat and hydrologic functions. Category 3 wetlands also can have high levels of diversity with a high proportion of native species producing high functional value.

Any wetland observed within the environmental survey area boundary is also identified to their respective Cowardin *et al.* (1979) classification. In brief, this method requires that the delineator classify systems based on the areal extent of vegetative cover. If vegetation covers 30% or more of the substrate, classes are distinguished on the basis of the life form of the plants that constitute the uppermost layer of vegetation and that possess an areal coverage 30% or greater.

The boundary of any wetland identified within the environmental survey area boundary is flagged and recorded in the field with a Trimble Geo-XH hand-held GPS with sub-meter horizontal accuracy. The boundary data that is collected is spatially accurate to <1.0 meter and conforms to the most recent USACE criteria for wetland delineation boundary surveys.

4.2 Streams

Prior to performing any field studies, the Wood County Soil Survey map, the USGS 7.5-Minute Topographic Quadrangle Map, and the NWI map were analyzed in detail to determine the presence of any previously-identified streams within the environmental survey area boundary.

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any streams not annotated on the reviewed sources.

If any streams are identified within the environmental survey area boundary, their drainage area is calculated using the USGS StreamStats for Ohio website (USGS StreamStats Ohio, 2010) to first determine if the stream is considered a Primary Headwater Habitat (PHWH) Stream ($<1.0\text{mi}^2$), or a non PHWH Stream ($>1.0\text{mi}^2$). If the stream is determined to be a PHWH Stream, the Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams is used to assign a Headwater Habitat Evaluation Index (HHEI) score for the stream. The HHEI evaluation requires the examination of three habitat variables (channel substrate composition, bankfull width, and maximum pool depth) to sufficiently separate PHWH streams into Class I, Modified Class I, Class II, Modified Class II, and Class III PHWH streams. Once an HHEI score is established for a stream, the decision making flowchart from the Field Evaluation Manual for Ohio's PHWH streams is reviewed to determine the appropriate designation of stream class. Following the flowchart, where it was warranted, further evaluation for potential Rheocrene Biotic Communities may be required. This evaluation includes conducting a Headwater Macroinvertebrate Field Evaluation Index (HMFIEI) and an investigation of the aquatic vertebrates (fish and amphibians) utilizing the stream. The flow regime of the stream is determined in the field based on stream morphology and site conditions at the time of the investigation.

If a stream is identified as a Non-PHWH Stream (drainage area $>1.0\text{mi}^2$), the stream is characterized by completing a Qualitative Habitat Evaluation Index (QHEI) assessment (Rankin, 1989). The QHEI field method requires the examination of six stream habitat characteristics. The evaluation and rating of these six habitat characteristics can yield a qualitative score from 7-100. A low score is indicative of a stream with relatively low ecological/habitat value for fish or macroinvertebrates, etc. A score near the middle of the range is indicative of moderate habitat, and a score near the high end of the range could indicate an exceptional stream community. The six stream habitat characteristics that are evaluated included substrate quality, in-stream cover, channel morphology, riparian zone quality, pool/glide and riffle/run quality, and stream gradient.

Similar to the wetlands, the centerline of streams within the environmental survey area is recorded in the field with a Trimble Geo-XH hand-held GPS with sub-meter horizontal accuracy.

4.3 Ponds

Prior to performing any field studies, the Wood County Soil Survey map, the USGS 7.5-Minute Topographic Quadrangle Map, and the NWI map were analyzed in detail to determine the presence of any previously-identified ponds within the environmental survey area boundary.

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any ponds not annotated on the reviewed sources.

Ponds were identified as those areas with permanent inundation and lacking hydrophytic vegetation indicators.

5.0 FINDINGS

5.1 Wetlands

5.1.1 Literature Review

Prior to performing field studies, the USGS 7.5-Minute Topographic Quadrangle Map (**Figure 1**), Wood County Soil Survey map (**Figure 3**), and NWI map (**Figure 4**) were analyzed in detail to determine the possible distribution of any previously-identified freshwater wetlands within the environmental survey area. The NWI map depicted several riverine unconsolidated bottom (R5UB) features either crossing or flowing alongside of the proposed alignments. No evidence of freshwater wetland features was depicted within the environmental survey area on the topographic map.

The Wood County, Ohio (USDA-NRCS, 2009) Soil Survey Geographic (SSURGO) database indicates that there are six (6) soil units mapped within the environmental survey area boundary. Of these soil units, five (5) appear on the State Soil Data Access (SDA) Hydric Soil List maintained by the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS, 2018). The soil map is included as **Figure 3**. Additional information pertaining to the soil units identified within the environmental survey area are presented in the table below.

Table 1 – Soil Summary

SYMBOL	MAP UNIT NAME	TAXONOMY	DRAINAGE CLASS	HYDRIC
HoA	Hoytville clay loam, 0-1% slopes	Fine, illitic, mesic Mollic Epiaqualfs	Very poorly drained	Yes
MfA	Mermill-Aurand complex, 0-1% slopes	Fine-loamy, mixed, active, mesic Mollic Epiaqualfs	Very poorly drained	Yes
NmA	Nappanee sandy loam, 0-2% slopes	Fine, illitic, mesic Aeric Epiaqualfs	Somewhat poorly drained	No
RfA	Rimer and Tedrow, till substratum, loamy fine sands, 0-2% slopes	Loamy, mixed, active, mesic Aquic Arenic Hapludalfs	Somewhat poorly drained	Yes
SdA	Seward and Ottokee, till substratum, loamy fine sands, 0-2% slopes	Coarse-loamy over clayey, mixed over illitic, active, mesic Oxyaquic Hapludalfs	Moderately well drained	Yes
SdB	Seward and Ottokee, till substratum, loamy fine sands, 2-6% slopes	Coarse-loamy over clayey, mixed over illitic, active, mesic Oxyaquic Hapludalfs	Moderately well drained	Yes

Notes: State Soil Data Access (SDA) Hydric Soil List (Accessed October 2018)
Soil Designations as seen on **Figure 3**

5.1.2 Field Reconnaissance

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any wetlands not annotated on the reviewed sources. The riverine unconsolidated bottom (R5UB) features identified on the NWI map were determined to be streams (See Section 5.2 for information on identified streams). No evidence of wetland features was identified within the environmental survey area during the field reconnaissance.

5.2 Streams

5.2.1 Literature Review

Prior to performing field studies, the USGS 7.5-Minute Topographic Quadrangle Map (**Figure 1**), Wood County Soil Survey map (**Figure 3**), and NWI map (**Figure 4**) were analyzed in detail to determine the possible distribution of any previously-identified streams within the environmental survey area boundary. Several intermittent streams were shown either crossing or flowing alongside of the proposed alignment.

5.2.2 Field Reconnaissance

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any streams not annotated on the reviewed sources.

Three (3) perennial streams was identified within the environmental survey area boundary during the field reconnaissance activities. These streams are designated Stream 3, Stream 5, and Stream 6. Stream 3 was previously evaluated during the 2018 wetland delineation of the OPSB approved route. The streams are illustrated on the Aquatic Features Location Map (**Figure 2**). **Appendix A** contains the HHEI field forms completed during the investigation and **Appendix B** contains representative photographs of the streams. A detailed summary of the identified streams is presented in the table below.

TABLE 2. STREAM SUMMARY

TOTAL ON-SITE STREAM LENGTH (FT) 3,445

ID	PHOTO	DRAINAGE AREA (MI ²)	USACE FLOW CHARACTERISTICS/HYDROLOGY ^A	HABITAT ASSESSMENT (SCORE)	401 WQC FOR NWP ELIGIBILITY	OEPA AQUATIC LIFE USE DESIGNATION ^B	ON-SITE LENGTH (FT)
Stream 3	1,2	1.0	RPW - Perennial	HHEI (52)	Potentially Eligible	Modified Class II	200
Receiving Waters: Stream 3 enters the environmental survey area from the south and flows north and west before exiting the environmental survey area. Outside of the environmental survey area, Stream 3 continues flowing north approximately 9.7-mile before flowing into the Maumee River. The entire length of Stream 3 within in the survey area is confined within an agricultural and roadside ditches. Adjacent Land Use: The surrounding land use consists of actively farmed agricultural fields.							
Stream 5	3,4	1.0	RPW - Perennial	HHEI (44)	Potentially Eligible	Modified Class II	940
Receiving Waters: Stream 5 enters the environmental survey area from the east and flows west before changing direction north and exiting the environmental survey area. Outside the environmental survey area, stream 5 flows north approximately 900 feet before flowing west into Stream 3. Adjacent Land Use: The surrounding land use consists of actively farmed agricultural fields.							
Stream 6	5,6	2.14	RPW - Perennial	HHEI (47)	Potentially Eligible	Modified Class II	2,305
Receiving Waters: Stream 6 originates in the environmental survey area and flows south to north. The stream exits the survey area and continues to flow north approximately 2,000 feet. The stream turns east and briefly reenters the survey area before exiting once again. Stream 6 continues to flow east before connecting with a roadside ditch along Cross Creek Road. Adjacent Land Use: The surrounding land use consists of actively farmed agricultural fields.							

^A Subject to verification by the USACE (TNW=Traditional Navigable Water, RPW=Relatively Permanent Water)

^B Provisional designations based on habitat assessment forms and/or HMFEL.

5.3 Ponds

5.3.1 Literature Review

Prior to performing field studies, the USGS 7.5-Minute Topographic Quadrangle Map (**Figure 1**), Wood County Soil Survey map (**Figure 3**), and NWI map (**Figure 4**) were analyzed in detail to determine the possible distribution of any previously-identified ponds within the environmental survey area boundary. No pond features were identified within the environmental survey area boundary on the reviewed sources.

5.3.2 Field Reconnaissance

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any ponds not

annotated on the reviewed sources. No natural pond features were identified within the environmental survey area during the field reconnaissance activities.

6.0 CONCLUSIONS

Based upon the field reconnaissance activities, three (3) streams were identified within the environmental survey area. No freshwater wetland features and ponds were identified within the environmental survey area. The streams were designated Stream 3, Stream 5, and Stream 6. Aquatic features are depicted on the Aquatic Features Location Map (**Figure 2**).

Criteria have been evaluated in order to determine whether the aquatic feature located within environmental survey area is "adjacent" or "isolated". Specifically, the definition of "adjacent", as provided in 33 CFR Part 328.4, was used to determine if the aquatic feature was bordering, contiguous, or neighboring ("adjacent") other "Waters of the United States".

Stream 3, Stream 5, and Stream 6 were determined to be contiguous to the Maumee River (OAC 3745-1-11, Table 11-2), and therefore "adjacent".

The USACE will make the final determination of "jurisdiction" in accordance with the Clean Water Act concerning all on-site aquatic features. It is GPD Group's recommendation that no earthwork be conducted until such time as all appropriate regulatory agency acknowledgements, reviews, and verifications have been completed.

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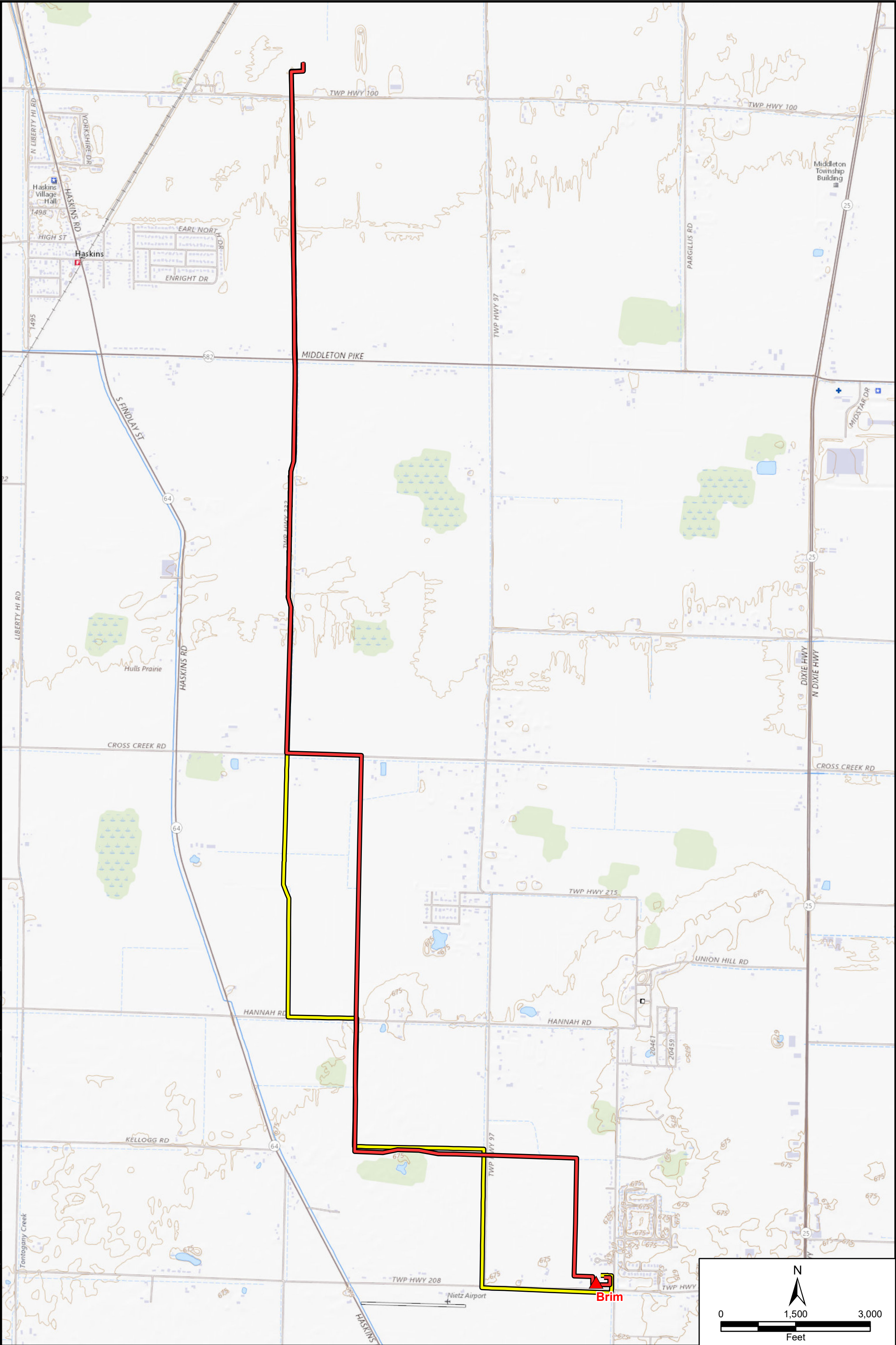
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Figures

- Figure 1 USGS Topographic Map
- Figure 2 Aquatic Features Location Map
- Figure 3 Soils Map
- Figure 4 National Wetlands Inventory Map

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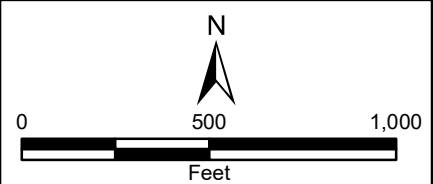
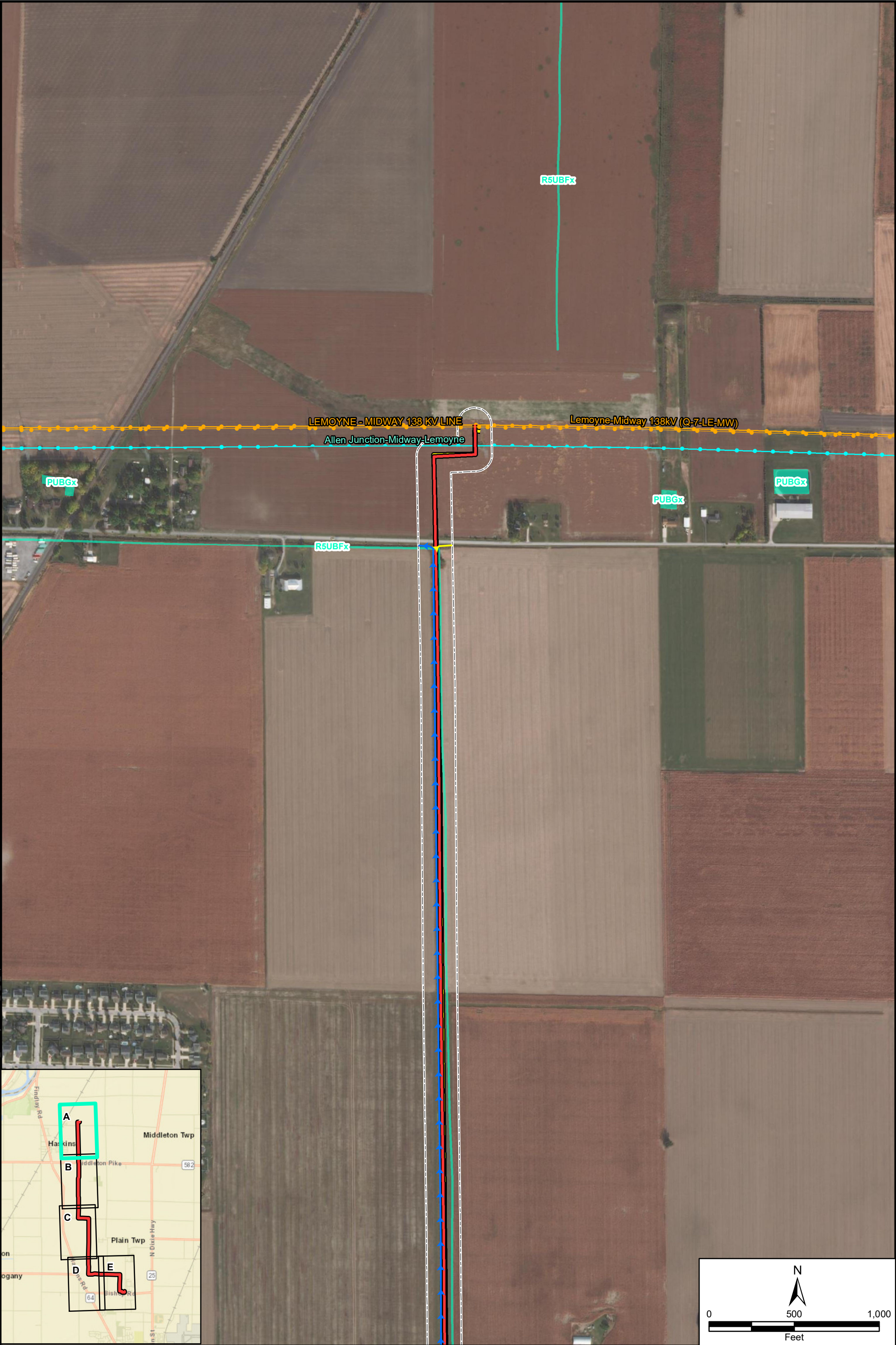
- ▲ Existing Substation
- Proposed Route Adjustment
- OPSB Approved Route

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Figure 1
Topographic Map

Wood County 138kV
Reinforcement Project

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|---------------------------|----------------------------------|--------------------------|
| Proposed Route Adjustment | Existing Substation | Delineated Stream |
| OPSB Approved Route | Existing 69kV Transmission Line | Non-Jurisdictional Ditch |
| Survey Corridor | Existing 138kV Transmission Line | NWI Wetlands |
| | Existing 345kV Transmission Line | |



Figure 2-A
Aquatic Features Location Map

Wood County 138kV
Reinforcement Project

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Case No(s). 18-1335-EL-BTX, 23-0844-EL-BTA

Summary: Application Application to Amend the Certificate of Environmental Compatibility and Public Need Issued for the Wood County 138 kV Reinforcement Project (Part III of V) electronically filed by Mr. Lawrence B. Hughes on behalf of American Transmission Systems, Inc..