

4906-15-07 ECOLOGICAL IMPACT ANALYSIS

This section of the Application summarizes the results of a desktop assessment and onsite investigations of ecological resources within the study area of the proposed West Milton – Eldean 138 kV transmission line project. A map and literature search was conducted for a corridor 1,000 feet on either side of the Preferred and Alternate Route centerlines. A field study was conducted for a 200-foot corridor (100 feet of within either side of the centerline) for the Preferred Route. The sections below provide ecological information for the Preferred Route and the Alternate Route separately unless the two routes share a common segment.

On March 27, 2014, DP&L filed a letter motion and memorandum requesting limited waivers regarding the project and this Application. In this letter Dayton Power & Light, Incorporated (“DP&L”) requested a waiver for reporting the results of field studies and investigations for ecological and cultural resources for only the Preferred Route in this Application. On May 7, 2014, a letter was issued by an Administrative Law Judge granting DP&L’s motion for waiver. As a result, this Application includes field investigation results for the majority of the Preferred Route and limited portions of the Alternate Route – the 34 percent of the Alternate Route that is common with the Preferred Route.

(A) SUMMARY OF ECOLOGICAL IMPACT STUDIES

In support of preparation of this Application, a thorough desktop review of published mapping, aerial photography, and ecological information within 1,000 feet of either side of the Preferred and Alternate Route centerlines was conducted prior to the field studies. Mapping sources included USGS 7.5-minute topographic quadrangle maps, U.S. Fish and Wildlife Service (“USFWS”) National Wetland Inventory (“NWI”) maps, and U.S. Department of Agriculture (“USDA”) Natural Resource Conservation Service (“NRCS”) soil survey maps.

In October 2014, POWER Engineers, Inc. ecologists, at the request of DP&L, conducted an ecological field study to quantify the occurrence and quality of wetlands and streams and document vegetation and wildlife within 100 feet of the Preferred Route. Results and findings from this field study are described in greater detail in the sections below.

Due to some landowners along the Preferred Route study area not yet granting access for ecological field investigations, not all parcels along the route were surveyed for environmental

features. When feasible, the study area on these parcels was surveyed from road right-of-way ("ROW"), however, some areas could not be surveyed due to the lack of permission from the landowner at the time of the field review. Approximately 29% (4.8 miles) of the Preferred Route (16.6 miles) was not field surveyed. Nearly all of this area consisted of agricultural fields. Desktop analysis was performed on these areas using aerial imagery and remote sensing data, which is reported in the following sections.

(B) ECOLOGICAL FEATURES

An aerial imagery map at a scale of 1:24,000 illustrating areas within 1,000 feet of the Preferred and Alternate Route centerlines can be found in Figure 7-1. Mapped features within 1,000 feet of the proposed routes were reviewed using desktop map resources and digital published data. Field-delineated streams and wetlands, the 200-foot survey corridor boundary, and soil associations are provided in Figure 7-1. Representative photographs of the delineated aquatic resource features can be found in Appendix 7-1.

(1) Transmission Line Alignments

The Proposed Preferred and Alternate Route alignments including the area 1,000 feet on either side of the Routes and the proposed turning points are included on Figure 7-1. In the discussion below, the term "survey corridor" refers to the corridor 100 feet either side of the Preferred Route centerline, which was surveyed by the field crew. "Construction corridor" refers to the area 37.5 feet either side of the Preferred Route centerline that will be used during construction. The construction corridor is the same width (75 feet) as the proposed permanent ROW easement that would be acquired from landowners.

(2) Substation Locations

No new transmission substations are proposed for this Project.

(3) All Areas Currently Not Developed for Agricultural, Residential, Commercial, Industrial, Institutional, or Cultural Purposes

(a) Streams and Drainage Channels: Stream evaluations were conducted for the survey corridor of the Preferred Route. Streams that drain areas greater than one square mile were assessed using Ohio EPA's ("OEPA") Qualitative Habitat Evaluation Index ("QHEI") method. Within the QHEI scoring convention, streams are classified based on their drainage area. QHEI streams that drain an area greater than 20 square miles are classified as "large streams", and

streams that drain an area less than 20 square miles are classified as "headwater streams." QHEI-classified streams are assigned a narrative rating based upon their score. The narrative rating gives a general indication of aquatic assemblages that may be found at any given site. Five narrative ratings scale the 100 point scoring system. Very poor streams have a QHEI score of less than 30. Poor streams have a QHEI score between 30 and 42. Fair streams have a QHEI score between 43 and 54. Good streams have a QHEI score between 55 and 69. Streams that have a QHEI score greater than or equal to 70 are classified as excellent (OEPA, 2006).

QHEI evaluations were conducted on one stream (Stillwater River) in the Preferred and Alternate Route survey corridor. The evaluation was conducted at or near the proposed transmission line crossing of the stream. According to the Ohio Administrative Code ("OAC") rule 3745-1-21 (OEPA Beneficial Use Designations for streams), the QHEI stream surveyed was classified as exceptional warm water habitat ("EWH"), with a QHEI score of 69.

Streams with a drainage basin less than one square mile were evaluated using the OEPA's Headwater Habitat Evaluation Index ("HHEI") method. The HHEI is a rapid field assessment method for physical habitat that can be used to appraise the biological potential of most Primary Headwater Habitat ("PHWH") streams. Headwater streams are typically considered to be first and second-order streams, meaning streams that have no upstream tributaries and those that have only first-order tributaries, respectively. Headwater streams are scored on the basis of channel substrate composition, bank full width, and maximum pool depth. Assessed areas result in a score (0 to 100) that is converted to a specific PHWH stream class. Streams that are scored from 0 to 29.9 are typically grouped into "Class I PHWH Streams", 30 to 69.9 are "Class II PHWH Streams", and 70 to 100 are "Class III PHWH Streams". Evidence of anthropogenic alterations to the natural channel resulted in a "Modified" qualifier for the stream (OEPA, 2012).

HHEI evaluations were conducted on four streams in the Preferred Route survey corridor. The evaluations were conducted at or near the proposed transmission line crossing of each stream.

Locations of delineated streams within the survey corridor can be found on Figure 7-1. Copies of the QHEI and HHEI forms for the streams delineated within 100 feet of the Preferred Route are included in Appendix 7-2. Table 7-1 lists specific details of each delineated stream, including HHEI or QHEI score, rating, flow regime, stream length within the survey corridor, and stream length within the proposed construction corridor. Aquatic life beneficial use designations within

the Great Miami River drainage basin are also provided and were obtained from OAC 3745-1-21.

The Preferred Route crosses five streams, with a total of 714 linear feet of stream within the survey corridor, and 314 linear feet within the proposed construction and permanent easement ROW. Based on both field and desktop review, the Alternate Route crosses an estimated seven streams with a total of approximately 1,186 linear feet of streams within the survey corridor, and approximately 568 linear feet within the proposed construction and ROW. Both the Preferred and Alternate Route cross the Stillwater River (Stream 5), which is part of a registered State Scenic River System (ODNR, 2014). In addition to the five delineated streams, an ephemeral or intermittent stream is crossed by the Preferred Route near node GG' based on a review of aerial photography and National Hydrography Data. This location was not available for a field review at the time of this report, but will be evaluated once access permission is granted.

Table 7-1: Delineated Streams within 100 Feet of the Preferred Route

Stream ID	Flow Regime	Form	Score	Narrative Rating	Length (ft) within Survey Corridor	Length (ft) within Construction Corridor
Stream 1	Ephemeral	HHEI	36	Modified Class II	126.8	45.5
Stream 2	Ephemeral	HHEI	50	Modified Class II	107.0	57.0
Stream 3	Ephemeral	HHEI	45	Modified Class II	245.0	104.2
Stream 4	Intermittent	HHEI	70	Class III	20.1	0.0
Stream 5 (Stillwater R.)	Perennial	QHEI	69	Good	214.8	107.4

(b) *Lakes, Ponds, and Reservoirs:* No major lakes or reservoirs were observed within the proposed ROW of the Preferred, or Alternate Routes. Aerial photography and NWI map references indicate that 11 ponds are located within 1,000 feet of the Preferred Route, and 13 ponds are located within 1,000 feet of the Alternate Route. Locations of ponds within 1,000 feet of both routes are shown on Figure 7-1. Along the Preferred Route, one pond is within 100 feet of the centerline. This pond (Pond 1) has a total estimated acreage of 0.26 acres, with a 0.08-acre portion within the survey corridor and is identified on Figure 7-1. Pond 1 is not within the construction corridor. Impacts to ponds and lakes are not anticipated by the construction, operation or maintenance of the proposed transmission line. Best Management Practices ("BMPs")

including utilization of silt fencing and straw bales, will be used where appropriate during construction to minimize runoff siltation.

(c) *Marshes, Swamps and Other Wetlands:* The United States Army Corps of Engineers ("USACE") defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytic) typically adapted for life in saturated (hydric) soil conditions (Environmental Laboratory, 1987). To identify whether wetlands exist on the Preferred and Alternate Routes, wetland criteria, as established by the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), environmental scientists performed a desktop review of available resources prior to the field wetland delineation of the Project area. Desktop analysis also included review of USFWS NWI maps and the NRCS soil survey and hydric soil list for Miami County, Ohio for areas within 1,000 feet of the Preferred and Alternate Routes. NWI areas are shown on Figure 7-1.

In addition to the ponds discussed above, other NWI features mapped within 1,000 feet of the Preferred and Alternate Routes include twelve NWI features in the vicinity of the southern portion of the Preferred and Alternate Routes, and eight NWI features in the vicinity of the Alternate Route in the northern portion. Two NWI features were mapped within 100 feet of the centerline for the Preferred Route and four NWI features were mapped within 100 feet of the centerline for the Alternate Route.

The Ohio Rapid Assessment Method ("ORAM") was developed to determine the relative ecological quality and level of disturbance of a particular wetland. Wetlands are scored on the basis of hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories under ORAM v5.0 resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1", 30 to 59.9 are "Category 2" and 60 to 100 are "Category 3". Transitional zones exist between "Categories 1 and 2" from 30 to 34.9 and between "Categories 2 and 3" from 60 to 64.9. However, according to the OEPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower category (Mack, 2001).

The Preferred Route crosses two wetlands, with 0.16 acres of wetland within the survey corridor. No portions of these wetlands are located within the proposed construction ROW. Corresponding USACE and ORAM forms completed during the wetland delineation are included in Appendix 7-3. Field delineated wetlands within the survey corridor are mapped on Figure 7-1 and are summarized in Table 7-2.

Table 7-2: Delineated Wetlands within 100 Feet of the Preferred Route

Wetland ID	Cowardin Wetland Type ¹	ORAM Score	ORAM Category	Acreage within Survey Corridor	Acreage within Construction Corridor
Wetland A	PEM/PSS	42.5	Category 2	0.11	0.00
Wetland B	PEM	38	Category 2	0.05	0.00

¹ Cowardin et al., 1979

(d) *Woody and Herbaceous Vegetation Land:* Although the landscape within the study area is dominated by cultivated crops, woody and herbaceous plants, typical of agricultural and developed areas are interspersed within the construction corridor of the proposed routes. Habitat descriptions applicable to both proposed routes are provided in section 4906-15-07(E).

(e) *Locations of Threatened and Endangered Species:* Coordination with the USFWS and Ohio Department of Natural Resources ("ODNR") was initiated during preliminary planning of the Project. Consultation letters were sent to each agency on February 15, 2013. The response received from ODNR's Division of Wildlife on February 15, 2013, indicated that the Natural Heritage Database contained records for two state-listed species within one mile of the proposed Project area. The USFWS response, dated March 11, 2013, indicated that the proposed Project is within the range of three federally protected species in Miami County, Ohio. Correspondence letters from the USFWS and ODNR are included as Appendix 7-4. Table 7-3 identifies state and federally listed species that may occur within the proposed Project area.

Table 7-3: ODNR and USFWS Listed Species within the Project Area

Common Name	Scientific Name	Animal or Plant	State Status	Federal Status
Indiana Bat	<i>Myotis sodalis</i>	Animal	Endangered	Endangered
Snuffbox Mussel	<i>Epioblasma triquetra</i>	Animal	Endangered	Endangered
Rayed Bean Mussel	<i>Villosa fabalis</i>	Animal	Endangered	Endangered
Creek Heelsplitter	<i>Lasmigona compressa</i>	Animal	Species of Concern	None
Wood's Hellebore	<i>Melanthium woodii</i>	Plant	Threatened	None

The Project corridor lies within the range of the Indiana bat (*Myotis sodalis*) which is a federally-listed endangered species. Aerial photos of the Project area show that habitat availability for the Indiana bat along the proposed Project is limited. It was recommended by the USFWS that any trees exhibiting habitat characteristics (such as dead or live trees and snags with peeling or exfoliating bark, and split tree trunk and/or branches and cavities), as well as other surrounding trees, remain uncut wherever possible. USFWS stated that if these trees cannot be avoided, then further coordination with USFWS would be required. Potential Roost Trees were marked and global positioning system points were taken along the Preferred Route during field survey.

According to the USFWS, the proposed Project also lies within the range of the rayed bean (*Villosa fabalis*) and the snuffbox (*Epioblasma triquetra*), both freshwater mussels that are currently listed as federally endangered. The snuffbox occurs in swift currents of riffles and shoals over gravel and sand with occasional cobble and boulders. The rayed bean is generally known from smaller, headwater creeks, but records exist in larger rivers. They are usually found in or near shoal or riffle areas, and in the shallow, wave-washed areas of lakes. Substrates typically include gravel and sand, and they are often associated with, and buried under the roots of, vegetation, including water willow (*Justicia americana*) and water milfoil (*Myriophyllum* sp.). Should the proposed Project directly or indirectly impact any of the habitat types as described above, USFWS recommends that a survey be conducted to determine the presence or probable absence of the snuffbox in the vicinity of the proposed Project site. Impacts to these endangered mussel species are not anticipated due to the limited impacts to streams proposed by this Project.

Wood's hellebore (*Melanthium woodii*; synonym *Veratrum woodii*) is a state-listed threatened species in Ohio. ODNR's Division of Natural Areas and Preserves describes this species as being

restricted to a few river systems and mature, undisturbed habitats (ODNR, 1984). The mature plant is described as having large, corrugated leaves that are distinct from other native Ohio plants. Wood's hellebore grows on shaded stream terraces and mesic slopes that may be irregularly inundated. This species has been recorded within approximately 0.3-mile of the construction corridor. Alignments for the Preferred and Alternate Routes near the one riparian corridor are proposed to be constructed within existing utility and transportation ROW where habitat is already disturbed. Impacts to Wood's hellebore are not anticipated.

Creek heelsplitter (*Lasmigona compressa*) is listed as a species of special concern in Ohio due to low abundance. This species of freshwater mussel most frequently occurs in headwater streams (Krebs, 2009). The creek heelsplitter grows to about four inches (10 cm) and is elongate to oval in shape with a distinctly compressed shell. Preferred substrates for this mussel include sand, fine gravel and mud. Impacts to this species are not anticipated due to the limited impacts to streams proposed by this Project.

(4) Soil Associations

The soil associations crossed by the Preferred and Alternate Routes include the Miamian-Crosby-Brookston (s6046), Randolph-Milton-Millsdale-Miamian (s6054), Miamian-Losantville-Crosby-Celina (s6051), and Sleeth-Ockley-Eldean (s6047) soil associations (USDA, 2013). Figure 7-1 shows the soil associations in the study area. Based on soils data, areas with slopes greater than 12% or highly erodible soils are generally limited stream corridors in the study area. No soil conditions were found that would potentially limit construction of the proposed Project.

(C) STREAMS AND BODIES OF WATER

(1) Construction Impact

The Preferred Route crosses five streams, with a total of 714 linear feet of stream within the survey corridor, and 314 linear feet within the proposed construction and corridor. Based on desktop review, the Alternate Route crosses seven streams, with a total of approximately 1,186 linear feet of stream within the survey corridor, and 568 linear feet within the proposed construction corridor. The locations and approximate extents of these streams are shown on Figure 7-1.

DP&L will not perform mechanized clearing within 25 feet of any stream, and will hand cut only trees in these areas that could potentially interfere with safe construction and operation of the line.

Field investigations indicated that no streams would need to be filled or permanently impacted and no streams would need to be crossed by construction vehicles. Construction crews will access pole installation locations by utilizing existing farm roads and fields. Should a stream crossing need to occur, construction crews will utilize a temporary access bridge. Additional details related to any necessary temporary access bridges will be detailed in the Project's Stormwater Pollution Prevention Plan ("SWPPP").

(2) Operation and Maintenance Impact

No impacts to streams are anticipated once the transmission line is in operation. As part of maintenance activities, only selective clearing of vegetation interfering with the operation of the transmission line will be needed. No lakes, ponds, or other waterbodies will be affected by the operation or maintenance of the Preferred or Alternate Routes.

(3) Mitigation Procedures

The Project's SWPPP and BMPs will be implemented during all construction stages in order to reduce sediment runoff and soil erosion. Seeding and mulching will occur in disturbed areas, and be monitored until restoration is complete.

(D) WETLAND IMPACTS

(1) Construction Impacts

Preferred Route: The Preferred Route does not cross any wetlands. Two ORAM Category 2 wetlands totaling 0.16-acre were identified within the survey corridor. No portions of these wetlands are located within the proposed construction ROW. No Category 1 or Category 3 wetlands were delineated along the Preferred Route. The locations and extent of these wetlands within the survey corridor are shown on Figure 7-1. Table 7-2 provides detailed information on wetlands delineated within the Preferred Route survey corridor.

Alternate Route: Through desktop review, it was estimated that the centerline of the Alternate Route crosses one wetland for a total of approximately 328 feet. Additionally, two potential wetlands totaling 1.3 acres were identified within the proposed construction ROW. The locations and extents of these wetlands are shown on Figure 7-1.

No direct impacts to wetlands are anticipated. BMP measures will be used near wetlands to prevent filling and sedimentation as a result of nearby construction activities. There are no

wetlands within the Preferred Route construction corridor. Wetlands along the Alternate Route are expected to be spanned by the transmission line with the new structures installed outside of wetland boundaries. In order to reduce potential sedimentation impacts to nearby wetlands, BMPs such as silt fences and construction matting will be implemented. Due to the nature of the topography along the routes, sedimentation potential at wetlands will be minimal. Construction equipment will only cross wetlands using construction matting, if necessary.

Soil disturbance within wetlands during construction is not anticipated. No fill material will be placed in any wetland areas along the routes. No structures would be placed in wetlands along the Preferred or Alternate Routes. Wetlands will be marked with stakes before any clearing activities occur in order to avoid incidental vehicle impacts.

(2) Operation and Maintenance Impact

Wetland areas will not be impacted by the operation or maintenance of the transmission line, considering that no wetlands were identified in the construction corridors. If wetlands are identified within the construction corridors at a future date, vegetation within these areas may require periodic cutting. It is anticipated that such activities would not result in erosion or water quality degradation. As part of maintenance activities, only selective clearing of vegetation (using hand cutting techniques) interfering with the operation of the transmission line will be needed.

(3) Mitigation Procedures

No construction activities will occur within wetlands. Natural re-vegetation in any incidentally disturbed wetland areas will begin after construction crews have completed the installation activities. Wetland mitigation, to the extent necessary, will be addressed by obtaining any necessary wetland permits.

(E) VEGETATION IMPACTS

(1) Construction Impacts

This section describes the potential impacts on vegetation community types along the proposed routes during construction. The Preferred and Alternate Routes are dominated by agricultural cropland interspersed with young to mature oak-hickory mixed mesophytic forests and grassland pasture. Habitat descriptions, applicable to both the Preferred and Alternate Routes, and details on the anticipated impacts of construction are provided below.

Oak-Hickory Mixed Mesophytic Forest: Oak-Hickory mixed mesophytic forest and woodlands are present along a very small portion of the Preferred and Alternate Routes. Woody species dominating these areas include red oak (*Quercus rubra*), shagbark hickory (*Carya ovata*), sugar maple (*Acer saccharum*), black walnut (*Juglans nigra*), green ash (*Fraxinus pennsylvanica*), and black locust (*Robinia pseudoacacia*). The dominant shrub-layer species included sugar maple, invasive Amur honeysuckle (*Lonicera mackii*), American elm (*Ulmus Americana*), and invasive garlic mustard (*Alliaria petioiata*).

The Preferred Route crosses approximately 0.15-mile of oak-mixed mesophytic forest. The Alternate Route passes through approximately 0.19-mile of oak-mixed mesophytic forest along the route. The proposed ROW is 75 feet (37.5 feet on either side), with overlap of the highway ROW where it is adjacent. Approximately 2.6 acres of this forest would be cleared if the Preferred Route is constructed, while 2.7 acres would be cleared if the Alternate Route is constructed. The potential impacts on woody and herbaceous vegetation along the Preferred and Alternate Routes will be limited to the clearing of woody vegetation within the proposed new transmission line ROW, where required. Tree limbs and trunks removed during construction will be wind-rowed or chipped and disposed of appropriately.

Pasture and grassland: Pastures and hay fields containing various grasses and forbs, as well as residential lawns, were observed within the study area. Pasture areas may be grazed continually or on rotation and are periodically managed by mowing. The Preferred and Alternate Routes cross approximately 0.08-mile and 0.29-mile of pasture and grasslands, respectively.

Agricultural Cropland: Agricultural cropland identified along the proposed Preferred and Alternate Route is predominantly used for corn and soybean cultivation. Approximately 82 acres of agricultural cropland is located within the 100-foot construction ROW of the Preferred Route, while approximately 84 acres of cropland is located within the Alternate Route. Potential impacts to agricultural use resulting from Project construction include damage to crops during the growing season, disturbance of drainage patterns, disruption of plow/harvest patterns, and a reduction of tillable land at the utility pole locations.

(2) Operation and Maintenance Impacts

Vegetation impacts within either operational transmission line route will be minimal. Any undeveloped land that remains undisturbed by construction will be maintained in its current

early-successional state. Any routine mowing or cutting along the Preferred or Alternate Routes is not expected to result in a significant environmental impact to the vegetation.

(3) Mitigation Procedures

Soils in upland and non-agricultural areas that are disturbed by construction will be seeded and mulched in accordance with the SWPPP once it is approved. It is not anticipated that any disturbance will occur in wetland areas. If any unanticipated significant disturbance occurs within wetlands, top soil will be segregated and replaced so that the existing seed bank will naturally recolonize these areas. Additional seeding in these areas may be necessary if the existing seed bank proves to be deficient. These measures should preserve the aesthetic qualities along the route, prevent erosion, and promote habitat diversity.

(F) COMMERCIAL, RECREATIONAL, AND THREATENED/ENDANGERED SPECIES IMPACTS

The Project is located in both suburban and rural landscapes. Land use within the Preferred and Alternate Route study areas consists of cultivated crops, pastures, residential lawns, and infrequent wood lots. Potential habitat for various wildlife species exists within the study areas for both routes. Lists of commercial and recreational wildlife species were obtained from the ODNR-DOW annual hunting and trapping regulations, and listed below. Lists of protected species were obtained from USFWS and ODNR correspondence and based on their reported range within Miami County and the ODNR Natural Heritage Database. Details on the expected impacts of construction, operation and maintenance, and mitigation procedures can be found below.

(1) Construction Impacts

(a) Commercial Species: The commercially important species along the proposed routes consist of those hunted or trapped for fur or other byproducts, including the following:

- Coyote (*Canis latrans*): Historically coyotes prefer open territory, but in Ohio they have adapted to various habitat types. Coyotes are a very adaptable species that has prospered despite the expanding presence of human impact. This species is expected to inhabit the proposed routes and indications of this species in the area were observed during field surveys.

- Gray Fox (*Urocyon cinereogenteus*): Gray fox habitat is generally dominated by wooded areas with some partially open brush land with little human presence. This species is expected to inhabit the proposed routes, but was not observed.
- Long-tailed weasel (*Mustela frenata*): The long-tailed weasel is found throughout the state of Ohio in areas adjacent to rivers, lakes, streams, or marshes, where they feed on small mammals. This species is expected to inhabit the proposed routes, but was not observed.
- Mink (*Mustela vison*): The mink is almost invariably found near water, both running water of streams and rivers and the standing waters of marshes and lakes. This animal is drawn to areas of cluttered vegetation or wooded banks that offer protection and is expected to inhabit the proposed routes, but was not observed.
- Muskrat (*Ondatra zibethicus*): The muskrat is abundant throughout Ohio and prefers areas near intermittent streams, drainage courses, and farm ponds. It is the most extensively trapped furbearer in the State of Ohio. This species is likely to inhabit aquatic habitats within the proposed routes, but was not observed.
- Red fox (*Vulpes vulpes*): The red fox occurs throughout Ohio and is most prevalent in areas of maximum interspersed of woodland, cropland, brush, pastures, and edges of open areas that provide suitable hunting ground. It is likely that the species inhabits the proposed routes, but was not observed.
- Raccoon (*Procyon lotor*): The raccoon is abundant and widespread in Ohio, even in many suburban areas. Raccoons are found principally around aquatic and woodland habitats, with occasional forages into croplands. This species is expected to inhabit the proposed routes near wooded and residential areas. Indications of this species were observed during field surveys.
- Striped skunk (*Mephitis mephitis*): The skunk prefers a semi-open habitat of mixed woods, brush, farmland, open grassland, and small caves in proximity to water. These mammals are common statewide. This species is expected to inhabit the proposed routes, but was not observed.
- Virginia opossum (*Didelphis virginiana*): The opossum's preferred habitat is an area interspersed with woods, wetlands, and farmland. This species is expected to inhabit the proposed routes but was not observed.

(b) *Recreational Species*: Recreational terrestrial species consist of those hunted as game. Recreational species expected to inhabit areas along the proposed routes include the following:

- American woodcock (*Scolopax minor*): Woodcock are native Ohio shorebirds that prefer a combination of wet, early successional understory and drier uplands. They prefer to nest in northeast and northwest Ohio along Lake Erie, or wherever habitat is suitable. Typical nests in Ohio are found in reverting brushy fields or in young, second growth woods.
- Eastern cottontail rabbit (*Sylvilagus floridanus*): it is abundant in both rural and urban areas and prefers field borders, brushy areas, and thickets that occur along the proposed routes.
- Gray, red, and fox squirrels (*Sciurus carolinensis*, *Tamiasciurus hudsonicus* and *S. niger*): These tree squirrel species occur throughout the State of Ohio. The fox squirrel is primarily an inhabitant of small, typically isolated woodlots. Indications of this species were observed along the proposed routes. The gray squirrel and red squirrel prefer more extensive woodland areas. Gray squirrels were observed during field surveys.
- White-tailed deer (*Odocoileus virginianus*): White-tailed deer occur throughout Ohio. Deer are a very adaptable animal that can be found in almost all habitats in the region. Signs and several sightings of this species were observed along the proposed routes.
- Wild turkey (*Meleagris gallopavo*): Wild turkeys are very adaptable animals. Although they prefer mature forests, with substantial cover and suitable food sources, they can live successfully in areas with as little as 15 percent forest cover.
- Woodchuck (*Marmota monax*): The woodchuck or groundhog is a common rodent found throughout Ohio. It prefers sloped areas at the fringe of wooded and open areas.
- Wood duck (*Aix sponsa*): The wood duck prefers mature riparian corridors along streams, quiet backwaters of lakes and ponds bordered by large trees, and secluded wooded swamps as ample areas to raise young. They feed on acorns, berries, and grapes on the forest floor. This species was not observed, but the quality of the riparian corridor along the Still Water River or nearby ponds could support wood ducks.
- Game Fish: Based upon the nature of the surface waters crossed, various game fish are anticipated to inhabit the streams that are crossed by the proposed routes.

- Bluegill sunfish (*Lepomis macrochirus*): Bluegill sunfish are found throughout the state in nearly every stream and water body. Their preferred habitat is clear, warm lakes with some rooted vegetation. This species is likely to occur in the Stillwater River and ponds along the routes.
- Green sunfish (*Lepomis cyanellus*): Green sunfish are present in most lakes, reservoirs, and streams. They are tolerant of turbid water unlike most other sunfish species. They appear to have no preference for a particular bottom type, but are usually associated with some type of structure such as brush, vegetation, or rocks. This species is likely to occur in perennial streams and ponds along the routes.
- Longear sunfish (*Lepomis megalotis*): Longear sunfish favor sluggish, clear streams of moderate size with beds of aquatic vegetation to seek shelter in. This species is likely to occur in perennial streams and ponds along the routes.
- Smallmouth bass (*Micropterus dolomieu*): Smallmouth bass are native to Ohio and are found in every county of the state. Smallmouth bass thrives in streams with gravel or rock bottoms with a visible current. This species is likely to occur in larger perennial streams and possibly ponds along the routes.

(c) *Protected Species:* The USFWS and ODNR were contacted regarding the potential for occurrence of threatened and endangered species in the Project vicinity. Five species of concern are listed within the Project range in Miami County, Ohio and are presented in Table 7-3. The ODNR Natural Heritage Database did not identify any species of concern within 1,000 feet of the Preferred or Alternate Routes. None of these species were observed at the time of the field reconnaissance. Some low quality habitat for Indiana bats was identified within woodlots at the time of the field reconnaissance. To avoid direct impacts to Indiana bat roosting and foraging habitat, USFWS typically recommends that tree clearing be performed between November 15 and March 31 or that field data be collected to substantiate that Indiana bats are not using the area for summer roosting and foraging. DP&L will propose to limit tree removal activities to those times outside of the summer roosting months for this species. In the event tree removal must occur during the seasonal restriction, DP&L will coordinate with the USFWS and conduct the necessary surveys to establish Indiana bat presence or probable absence if required.

Based on the nature of the proposed Project activities and habitat characteristics of the surrounding vicinity, construction impacts to protected species are not anticipated.

(2) Operation and Maintenance Impacts

During operation of the transmission line along the proposed routes, any impacts on protected wildlife that may be present should be minor. While portions of the transmission line corridors will need to be cleared, the undeveloped land not disturbed by construction will retain its current vegetation composition. Periodic maintenance along the transmission line corridors is not expected to result in a significant impact to the local wildlife. Given the quantity of comparable habitat throughout the Project area, impacts to local wildlife from transmission line operations are also expected to be negligible.

(3) Mitigation Procedures

Approximately 71% of the Preferred Route and 34% of the Alternate Route by virtue of the common route sections were examined in the field and both routes were reviewed using aerial photographs by experienced biologists. No significant problem areas that would require the use of special mitigation measures for wildlife have been identified. If, however, such conditions are recognized at a later date, the condition should be mitigated appropriately on an individual basis.

(G) SLOPES AND ERODIBLE SOILS

(1) Construction Impact

Based on the Miami County soil survey and field reconnaissance, slopes that exceed 12 percent or highly erodible soils were identified only in limited areas, generally adjacent to streams (Stillwater River), along the Preferred or Alternate Routes. A SWPPP will be implemented during construction to control erosion.

(2) Operation and Maintenance Impact

Once the transmission line is in place, no impacts or erosion hazards are expected.

(3) Mitigation Procedures

No special mitigation procedures are anticipated beyond those required as part of the stormwater permit and SWPPP. Sediment fence, straw bales and other BMPs will be implemented when construction takes place adjacent to storm water or sewer inlets.

(H) SITE-SPECIFIC INFORMATION

This section is not applicable as the site characteristics and potential impacts are adequately covered above.

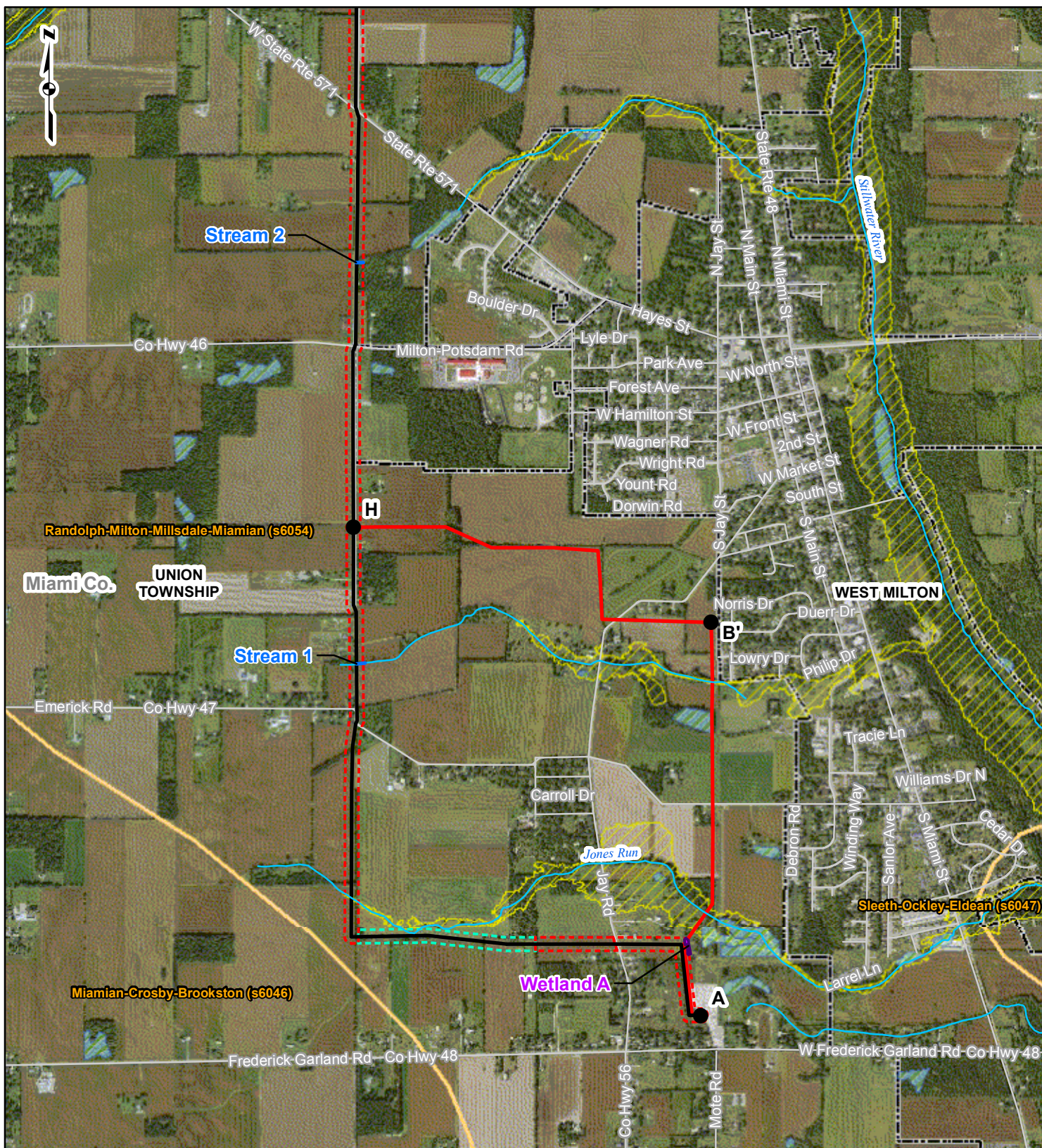
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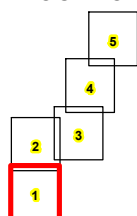
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PROJECT LOCATION



MIAMI COUNTY, OHIO

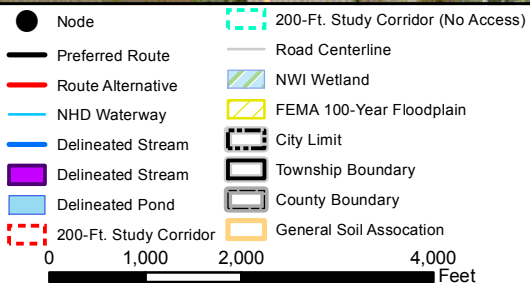
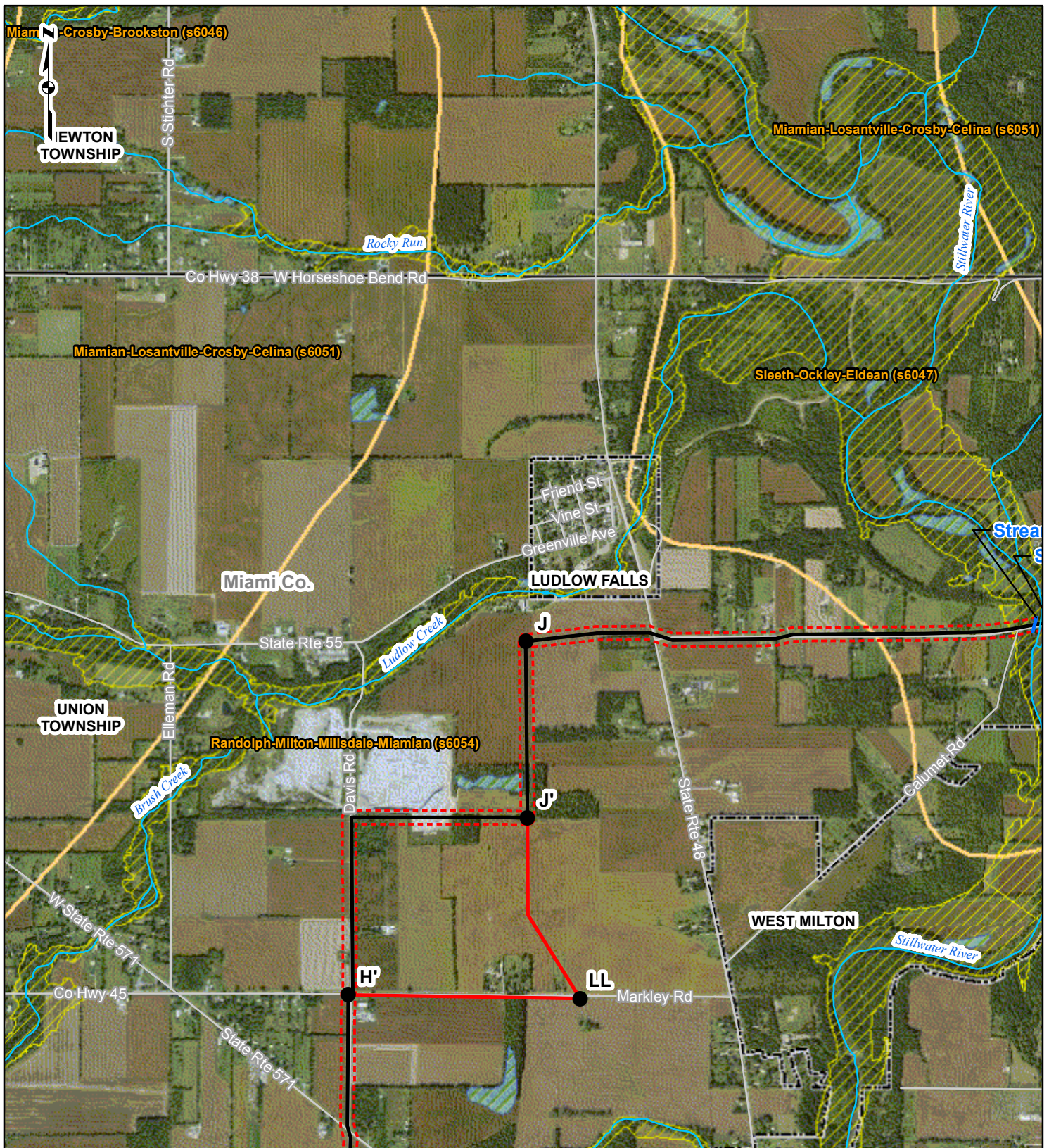


FIGURE 7-1 WETLAND DELINEATION AND STREAM ASSESSMENT MAP SHEET 1 OF 5

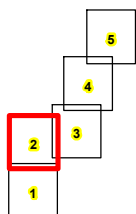
WEST MILTON TO ELDEAN 138kV
DAYTON POWER & LIGHT 

DRAWN BY: TDB DATE: 1/22/2015
CHECKED: MAF APPROVED: MAF

REFERENCE: USDA NRCS NAIP, 2013; NRCS, 2006; MIAMI COUNTY, 2013; FEMA NFHL, 2012; USGS NHD, 2014; POWER ENGINEERS, 2014. USFWS, 2014.



PROJECT LOCATION



MIAMI COUNTY, OHIO

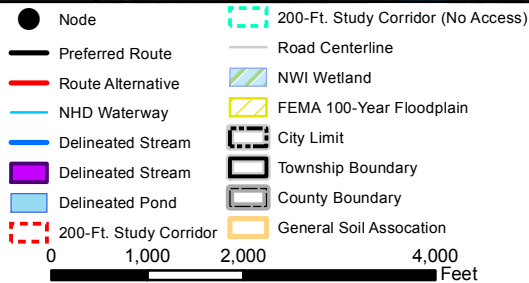
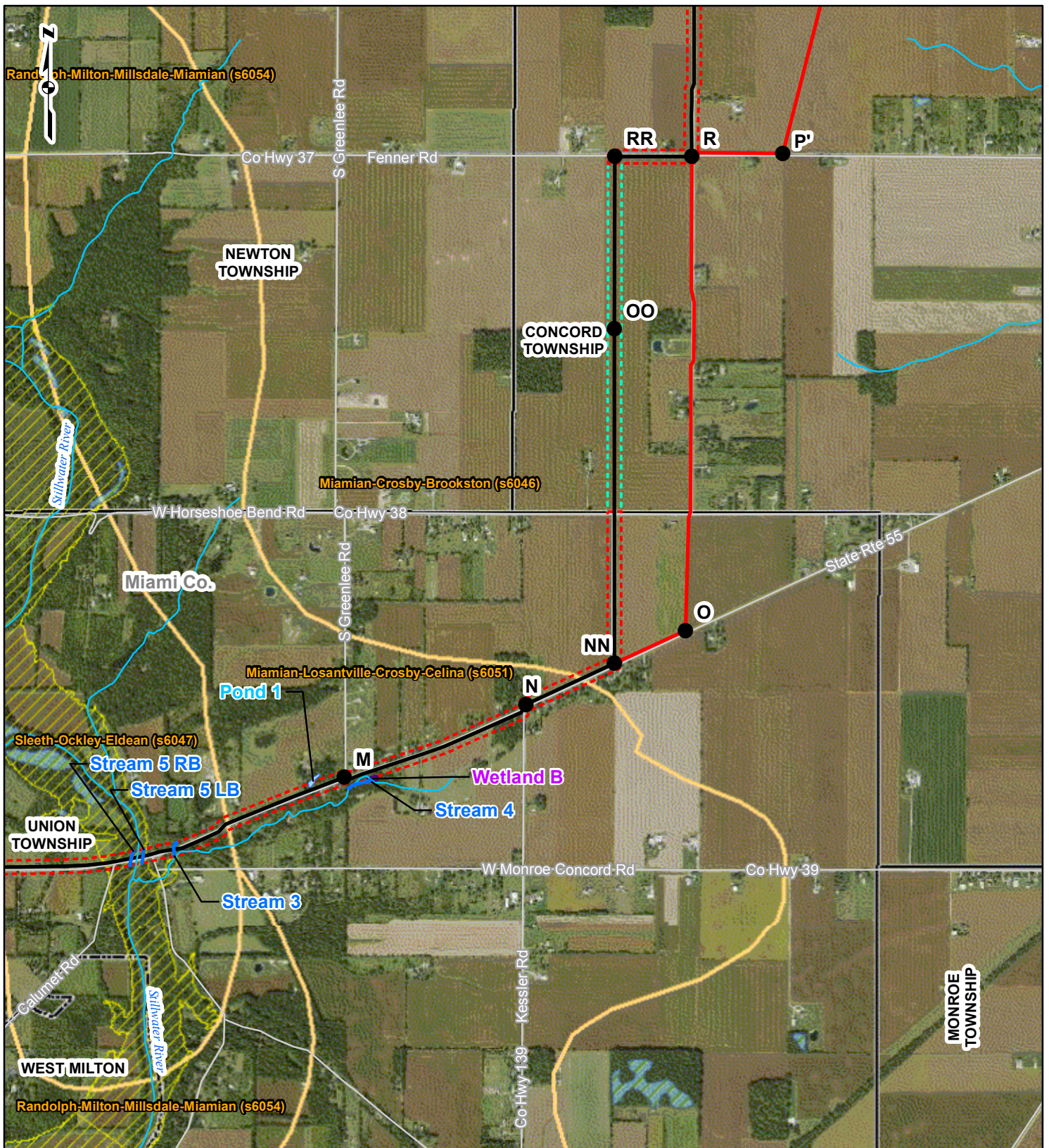


FIGURE 7-1 WETLAND DELINEATION AND STREAM ASSESSMENT MAP SHEET 2 OF 5

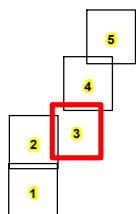
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DAYTON POWER & LIGHT

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PROJECT LOCATION



MIAMI COUNTY, OHIO

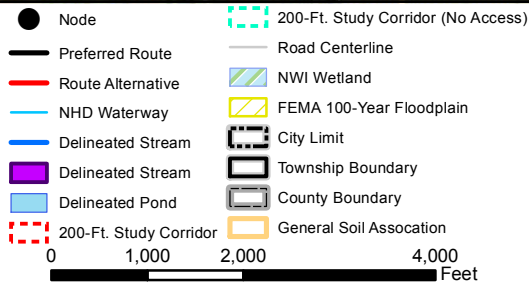
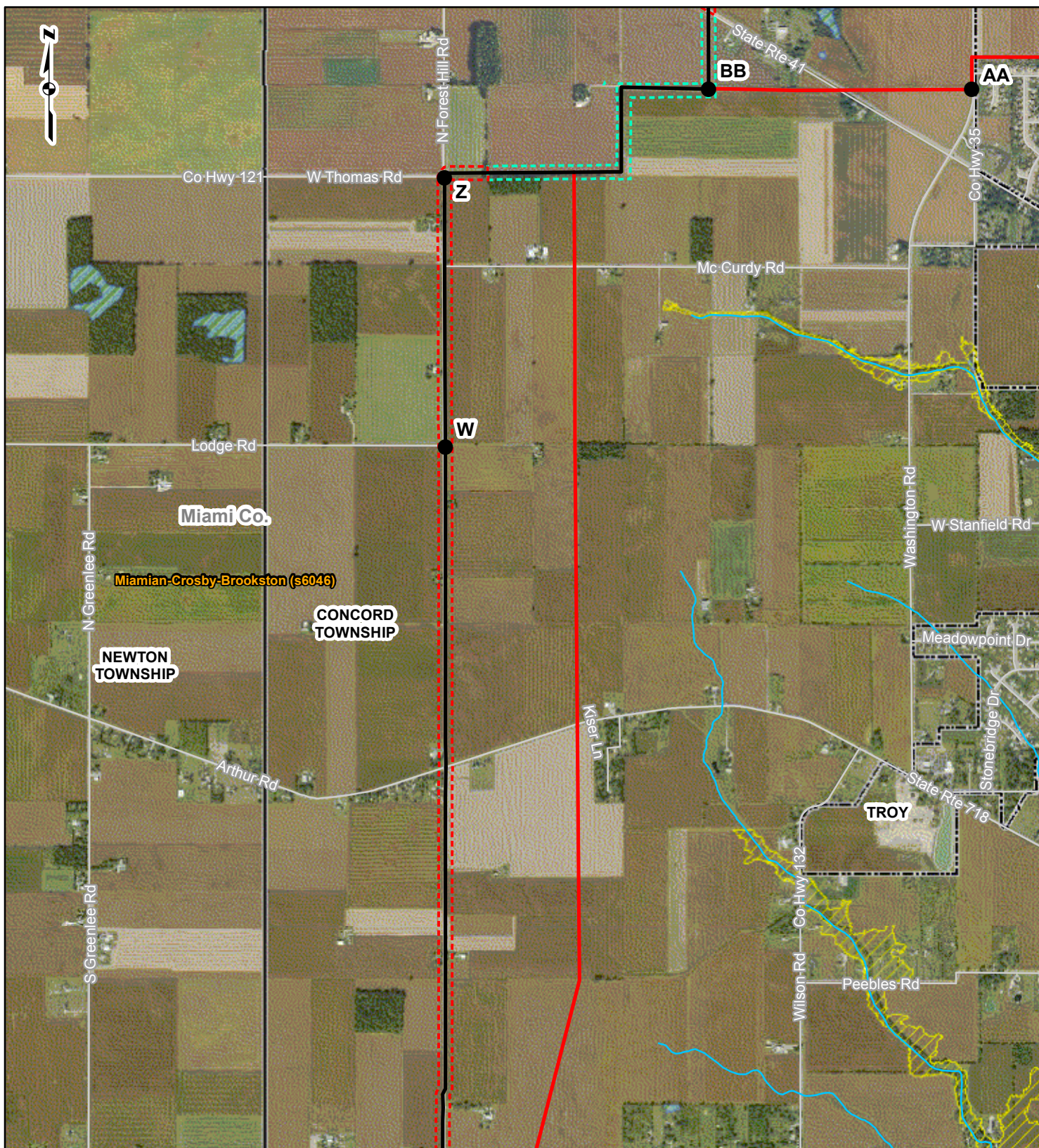


FIGURE 7-1 WETLAND DELINEATION AND STREAM ASSESSMENT MAP SHEET 3 OF 5

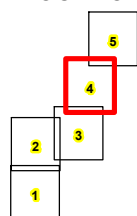
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DAYTON POWER & LIGHT

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PROJECT LOCATION



MIAMI COUNTY, OHIO

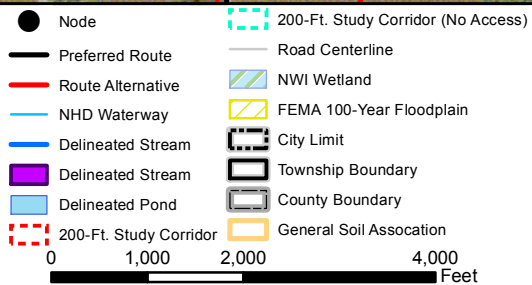
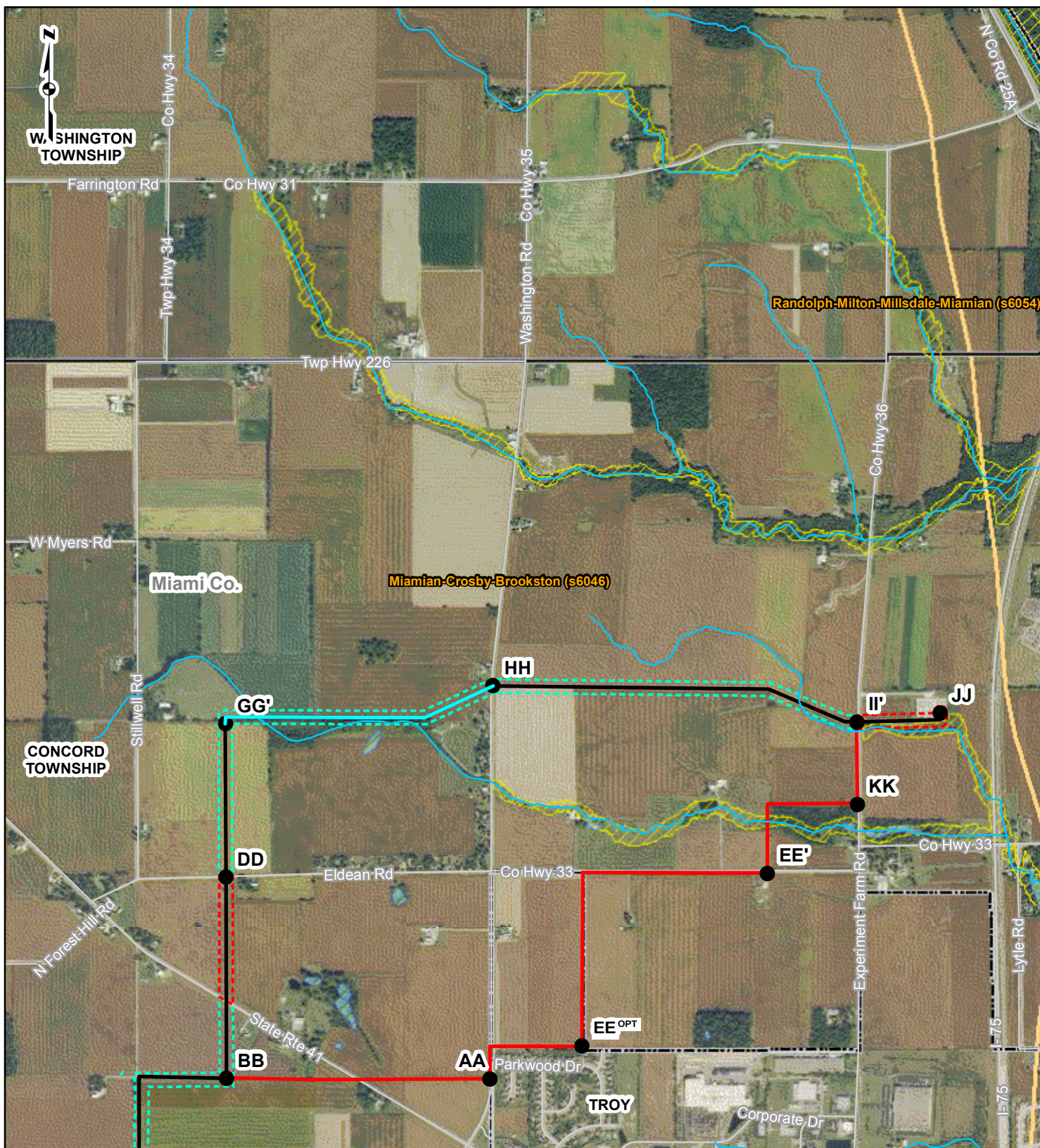


FIGURE 7-1 WETLAND DELINEATION AND STREAM ASSESSMENT MAP SHEET 4 OF 5

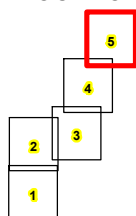
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DAYTON POWER & LIGHT 

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PROJECT LOCATION



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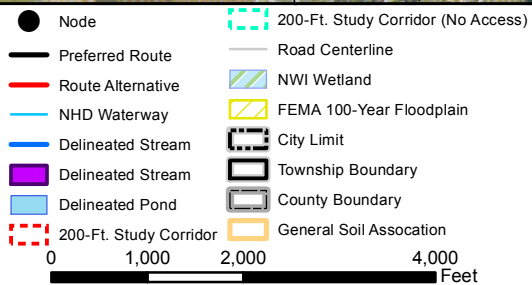


FIGURE 7-1 WETLAND DELINEATION AND STREAM ASSESSMENT MAP SHEET 5 OF 5

WEST MILTON TO ELDEAN 138kV
DAYTON POWER & LIGHT **DP&L**
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in

Case No(s). 14-0469-EL-BTX

Summary: Application regarding West Milton - Eldean 138kV Transmission Line Project (Part 8 of 9) electronically filed by Mr. Michael A Hassay on behalf of Shamash, Hertzels Mr.