4906-15-04 TECHNICAL DATA

(A) ROUTE ALTERNATIVES DATA

This section of the Application provides technical data for the West Milton-Eldean 138 kV Transmission Line Project ("Project"). Information is provided on the location and features surrounding the Preferred and Alternate Routes for the transmission line including highways, existing utility corridors, airports, streams, topography, soil types and slopes, design features, construction methods, and environmental compliance measures.

(1) Geography and Topography

Map figures having a 1:24,000 scale illustrate the Preferred and Alternate Route including the area 1,000 feet on either side of the proposed alignments and are presented in Figure 4-1 (sheets 1 through 5). These maps were developed from the following U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps: Dayton and Piqua, Ohio (1986). Some features on the map figures are based on field reviews to identify wetlands, streams and waterbodies within or near the proposed alignment and a review of aerial imagery and property data. The field review for wetlands, streams and water bodies was conducted during October 2014.

(a) Transmission Line Alignments, Including Proposed Turning Points: The Project proposes a Preferred Route and an Alternate Route, both of which are 16.6miles in length and traverse mostly agricultural fields either adjacent to rural county roads or across fields (following property lines where feasible). The proposed alignments and turning points are illustrated on Figure 4-1 (sheet 1 through 5) along with major roads and land use categories identified. Each route is briefly described below, originating from the West Milton Substation and ending at the Eldean Substation.

Preferred Route

The Preferred Route parallels 9.7 miles of either existing transmission line right-of-way ("ROW") (1.2 miles) or public road ROW (8.5 miles). The remainder of the route (6.9 miles) primarily consists of open agricultural fields. The roads paralleled by the Preferred Route, from south to north, include Davis Road (northerly) located west of the village of West Milton up to the rock

quarry owned by Barrett Paving Materials, Ohio SR 55, Harter Road (northerly), Fenner Road (easterly), and Forest Hill Road (northerly).

Alternate Route

The Alternate Route parallels 10.4 miles of either existing transmission line ROW (3.3 miles) or public road ROW (7.1 miles). The remainder of the route (6.2 miles) primarily consists of open agricultural fields. The roads paralleled by the Alternate Route, from south to north, include Davis Road (northerly) located west of the village of West Milton, Markley Road (easterly) located northwest of West Milton, Ohio SR 55, Forest Hill Road (northerly), Washington Road (northerly), Eldean Road (easterly), and Experiment Farm Road (northerly).

(b) Proposed Substation Site Locations: There are no new substations proposed as part of the Project. The transmission line will terminate at the existing West Milton Substation and the Eldean Substation owned and operated by Dayton Power & Light, Incorporated ("DP&L"). These substations are shown on Figure 4-1 (sheets 1 through 5). The existing West Milton Substation will be expanded in 2017 which will be addressed under a separate application or notification to the Ohio Power Siting Board ("Board"), dependent on the final planned extent of the expansion. In addition, new breaker and relay equipment will be installed within the existing footprint of the Eldean Substation as part of the transmission line construction.

(c) Major Highway and Railroad Routes: The majority of road crossings of the Preferred and Alternate transmission line routes are state and county roads. A major highway within 1,000 feet of both the Preferred and Alternate routes is Interstate I-75 located east of the Eldean Substation.

(d) Air Transportation Facilities: No existing or proposed air transportation facilities are within 1,000 feet of the proposed locations for the Preferred or Alternate route. There are four privately owned, turf-covered air strips or airports, one of which is within 1,300 feet of the Alternate Route (with the Leavelle airstrip runway oriented parallel to the Alternate Route), and the remainder being 2,900 feet or greater in distance. Only the Troy Airpark is open to the public and is located 1.26 miles from the Alternate Route with its runway oriented parallel to the route.

(e) Utility Corridors: Two primary transmission line corridors exist within the study area, both of which are owned and operated by DP&L. Circuit 34590 connects with the existing West Milton Substation and extends to the east to the Miami Substation on structures shared with

circuit 13807. Circuit 34591 runs to the south out of the West Milton Substation. Circuits 6680 & 6640 (West Milton to Covington) exit the West Milton Substation and extend to the north directly through the City of West Milton and Pleasant Hill, Ohio. Circuit 13834 (West Milton to Greenville) extends west along the initial portion of the Alternate Route northwest of the substation. A portion of the Alternate Route, and the Preferred Route to a lesser extent, parallels Circuits 6680 &6640. There are no gas transmission lines within 1,000 feet of either route.

(f) Proposed Permanent Access Roads: No permanent access roads are anticipated to be constructed for the transmission line's construction, operation or maintenance.

(g) Lakes, Ponds, Reservoirs, etc.: A full description of the ponds, streams, and wetlands located within 1,000 feet of the Preferred and Alternate Routes is provided in Section 4906-15-07(B)(3) of this application. Three ephemeral streams, one intermittent stream, one perennial waterbody (Stillwater River), two wetlands and one pond were delineated within the 200-foot study corridor of the Preferred Route. The same results were determined for the Alternate Route; however a portion of the route was evaluated using published data on stream and wetland locations. The centerlines of the route alternatives does not cross any wetlands based on field reviews of the Preferred Route and portions of the Alternate Route that have common segments with the Preferred Route, as well as published wetland data for the Alternate Route. One pond is located within the 200-foot study corridor of the Preferred and Alternate Routes; however, it is located on the opposite side of the highway from the proposed transmission line centerlines.

(h) Topographic Contours: Using USGS topographic source data, maps of existing surface contour intervals (10 feet) of the study area were prepared and are illustrated as Figure 4-1 (sheets 1 through 5). The topographic gradient along the 16.6-mile proposed overhead transmission line alignments is slight with a total elevation change of approximately 130 feet above mean sea level over the entire route length. The steepest gradient is in the vicinity of the Stillwater River crossing at State Route 55 which ranges from approximately 840 feet elevation at the bridge to 900 feet elevation feet further east (3,300 feet east of the bridge) on State Route 55.

(i) *Soil Associations or Series:* Four soil associations will be crossed by the Preferred Route and the Alternate Route. Soil associations within the proposed overhead transmission line

alignments are shown on Figure 7-1. These soil associations in Miami County include Miamian-Crosby-Brookston, Miamian-Losantiville-Crosby-Celina, Sleeth-Ockley-Eldean, and the Randolph-Milton-Millsdale-Miamian (U.S. Department of Agriculture, 1984).

(j) Population centers and Legal Boundaries of Cities, Villages, Townships, and Counties: Population centers and legal boundaries in the project area are depicted in Figure 4-1 (sheets 1 through 5). Both the Preferred and Alternate Routes are located within unincorporated portions of Union Township and Concord Township in Miami County, Ohio. The Alternate Route is positioned along a small portion of the boundary for the Village of West Milton, and a common segment (< 0.3-mile) of both routes runs immediately adjacent to the village boundary. The Alternate Route also lies just within the northwest area of Troy's municipal boundary located along road ROW (a section of Eldean Road and Washington Road).

(2) Slope and Soil Mechanics

(a) Slopes: Very few areas along the Preferred Route and Alternate Route contain soil that has a slope greater than or equal to 12%. In fact soil types with these slope ranges make up 1% of the total acreage within the planned ROW for the two routes, and the soils are primarily limited to the Stillwater River vicinity. The Preferred Route contains the following soil series greater than or equal to 12% slopes; Miamian silt loam (MhC2) 6 to 12%, Miamian silt loam (MhD2) 12 to 18%, Eldean-Casco gravelly loams (EoD2) 12 to 18%, Miamian and Hennepin silt loams (MmF) 25 to 50%, Miamian and Hennepin silt loams (MmE) 18 to 25%, Eldean-Casco gravelly loams (EoC2) 6 to 12%, Milton silt loam (MpC2) 6 to 12% slopes. The Alternate route contains the following soils series greater than or equal to 12% slopes; Miamian silt loam (MhC2) 6 to 12%, Miamian silt loam (MhD2) 12 to 18%, Eldean-Casco gravelly loams (EoD2) 12 to 18%, Miamian and Hennepin silt loams (MmF) 25 to 50%, Miamian and Hennepin silt loams (MmE) 18 to 25%, Eldean-Casco gravelly loams (EoC2) 6 to 12%, Milton silt loam (MpC2) 6 to 12% slopes. A description of these soil types are found below:

i. Miamian silt loam, 6 to 12% slopes (MhC2) and Miamian silt loam, 12 to 18% (MhD2): This soil consists of well drained, level to very steep soils. The native vegetation was mixed hardwoods, but most wooded areas have been cleared. Common trees found here are northern red oaks. These soils are used mainly for field crops. Urban development is currently taking place in some areas. This soil has moderate permeability and the potential for surface runoff ranges from slight to moderate.

ii. Eldean-Casco gravelly loams, 12 to 18% slopes, (EoD2) and Eldean-Casco gravelly loams (EoC2) 6 to 12%: This series consists of well drained nearly level to moderately steep soils. The native vegetation was mixed hardwoods, but most wooded areas have been cleared. Common trees are black oak, northern red oak and white oak. These soils are used mainly for field crops. Some areas, especially the sloping areas, are used for pasture or left wooded. The potential for surface runoff is slight to moderate depending on slope gradient. Permeability is moderately rapid.

iii. Hennepin silt loam 25 to 50% (MmF) and Miamian and Hennepin silt loam, 18 to 25% (MmE): The Hennepin series consists of well drained, steep to very steep soils. The native vegetation was mixed stands of deciduous hardwoods. Common trees are northern red oaks. These soils are used for pasture and woodland. They are too steep to be cultivated. Permeability of this soil is moderate and the potential for surface runoff is moderate to low.

iv. Milton silt loam, 6 to 12% (MpC2)

This series consists of well drained, level to moderately steep soils. The native vegetation was mixed hardwoods, but most wooded areas have been cleared. Common trees found here are northern red oaks and tulip trees. These soils are used mainly for field crops. This soil has moderate permeability and the potential for surface runoff ranges from slight to low.

(b) Soil Suitability: No slope or soil conditions or soil conditions were found that could potentially limit construction feasibility of the proposed Project. Many segments of the Preferred and Alternate Route follow existing transmission ROW and road ROW. It is not anticipated that the steeper slopes would impact the Project. New poles would typically be placed on more gently sloped locations to ease placement and reduce the potential for erosion. Slope mechanics are not expected to cause problems for construction, operation or maintenance of the proposed transmission line due to the relatively flat agricultural setting.

(B) LAYOUT AND CONSTRUCTION

(1) Site Activities

The following paragraphs provide data on the layout, engineering design process, and construction of the Project. Additionally, Section 4906-15-07 (E) provides data relating to the vegetation removal during construction of the proposed transmission line.

(a) Surveying and Soil Testing: The transmission line will be surveyed to establish the centerline location. The topographic surveying will be completed using conventional and/or aerial methods (e.g., LIDAR). The location of significant topographic features and man-made structures along or near the centerline of the transmission line that may affect the design of the transmission line will be identified during the survey. Offsets will be used to survey around large trees and other large obstructions. Structure locations will be staked prior for construction planning.

Soil testing will only be performed for the transmission line and angle structure locations requiring foundations for the new steel pole structures. Wood pole structures are planned for the vast majority of the route. Where necessary, soil tests will be performed using a drop hammer to drive a sampler tube for laboratory analysis of the soil. Soil capacity is determined by the number of blows required to drive the tube 12 inches into the ground. Soil samples taken with a split-spoon will be used to determine soil type. Typically, the testing will be performed to a depth of 20-40 feet. If rock is encountered, a carbide-tipped bit will be drilled 5-10 feet into the rock.

(b) Grading and Excavation: No significant grading is anticipated to construct the transmission line on either route. The existing terrain within the Preferred and Alternate Routes is fairly level, and much of the route distance is adjacent to road ROW (8.5 miles and 7.8 miles of the Preferred and Alternate Route, respectively) which is anticpated to provide a mostly suitable surface for some construction vehicle operations (e.g., from roadway and road shoulder).

Each wood pole installation requires a machine-excavated hole for placement of the structure. The excavation for these poles will average three feet in diameter and nine to 12 feet deep. A portion of the excavated soil will be used for backfill. The excess material will be placed around the structure or hauled off-site.

(c) Access Road Construction: No permanent access roads are anticipated for transmission line construction or maintenance purposes. Temporary access to the construction areas of the Preferred and Alternate Route will occur from existing township, county or state roads adjacent to or crossed by the transmission line ROW. Where possible, existing access routes along the existing ROW used by crews during routine transmission line maintenance of the existing transmission lines will be utilized to construct the proposed line along the Preferred or Alternate Route.

(d) Stringing of Cable: Conductor installation for the proposed line will be accomplished using the tension stringing method. Lightweight guy cables or ropes will be fed through the stringing sheaves of the sections of line that require stringing. Conductors will then be pulled through under sufficient tension to keep the conductor "in the air". This protects the conductor from surface damage.

Temporary guard or clearance poles will be used as a safety precaution at locations where the conductors could create a hazard to either crew members or the general public. The locations and heights of clearance poles will be such that the conductors are held clear of power and communication circuits, vehicular traffic, and other structures. The stringing operation will be under the observation of crew members at all times. The observers will be in radio and/or visual contact with the operator of the stringing equipment.

(e) Post Construction Reclamation: After construction, drainage, fencing and erosion control aspects of the transmission line ROW will be restored to conditions as good as or better than those that existed prior to construction. This includes the restoration of drainage ditches, fencing, field drainage tiles, fertilizing, seeding, and mulching of disturbed non-cultivated areas, and the removal of temporary soil erosion and sedimentation control measures after vegetative cover has been established per the project-specific Stormwater Pollution Prevention Plan (SWPPP). Disturbed areas adjacent to streams and wetlands will be revegetated using methods to minimize soil erosion and degradation of water quality.

(2) Layout for Associated Facilities

(a) Site Map (1:24,000 Scale): Figure 4-1 (sheet 1) shows the Preferred and Alternate Routes relative to the existing West Milton Substation and the Figure 4-1 (sheet 5) shows the routes relative to the existing Eldean Substation.

(i) Final grades after construction, including access roads: Construction will not significantly alter the existing grades along the proposed transmission line routes.

(ii) Proposed location of major structures and buildings: There are no major structures and/or buildings planned along the proposed transmission line routes.

(iii) Fenced-in or secured areas: There will be no fenced-in or secured areas for the proposed transmission line.

(iv) Estimated Overall Dimensions: Neither existing substation will involve expanding the existing fence line.

(b) Reasons for Proposed Layout and Unusual Features: There are no unusual features associated with construction of this project.

(c) Future Modification Plans: DP&L's planning engineers generally forecast future transmission projects in a multi-year planning window. Currently, there are plans to expand the West Milton Substation in 2017. There are no other plans for future modifications to any substation or transmission facilities within the next five years for the facilities discussed in this application.

(C) TRANSMISSION EQUIPMENT

(1) Transmission Line Design Data

The majority of the Project will be installed on single wood pole construction. A few free standing steel pole structures may be required for longer span cross country construction. The exact number and location of these structures along the centerline of the proposed routes will be determined further along during detailed engineering design. A rough approximation of the number of structures is 350 to 370, based solely on an average estimated distance of 250 feet between structures based on the Preferred and Alternate Route both being 16.6 miles.

(a) *Design Voltage:* The transmission line will be designed and constructed to operate at 138 kV with 12.5 kV underbuild for some portions of the line.

(b) Transmission Pole Structures, Conductor Data, and Insulator Configuration: The proposed new transmission line will be supported on multiple structure types. The general features of these structures are described in the following sections. Where new structures are installed, they will be designed to support one 138 kV transmission line. Some portions of the

line will also support 12.5 kV underbuild. Where the route of the transmission line is located along road ROW, the transmission line poles may be designed to support distribution circuits, either on cross arms or on horizontal post insulators, depending on the voltage of the distribution circuit. Additionally, DP&L will coordinate with communication utility companies having existing communication cables on or near the planned transmission route for transfer of such cables to the new transmission line pole structures.

1. For tangent configurations, single wood pole tangent structures, shown conceptually in Figure 4-2, will be utilized. These typical tangent structures will consist of a single wood pole with three horizontal post insulators to support the transmission conductors on each side of the pole.

2. For structures with a light angle configuration, shown conceptually in Figure 4-3, a single wood pole with horizontal line posts on one side of the structure will be utilized. This structure will most likely be guyed.

3. For structures with a major angle configuration, shown conceptually in Figure 4-4, a single wood pole structure, with three strain/suspension insulators, installed in a pull-off configuration, will be utilized. This structure will be guyed.

4. For tangent configurations with long span construction, a single pre-engineered steel pole will be utilized. This structure is shown conceptually in Figure 4-5. These typical tangent structures will consist of three horizontal post insulators to support the transmission conductors in a delta configuration on either side of the pole.

5. Figure 4-6 shows the typical structure details for locations where a self-supported steel structure with a concrete foundation are needed.

Although it is not anticipated, the design or ROW conditions may dictate that other types of structures need to be utilized. If these unanticipated conditions arise, they will be addressed on a case-by-case basis.

The conductor used for the Preferred Route will be designed and constructed for 138 kV operation and will be single 1351.5 kcmil AAC per phase. This conductor has a maximum strength of approximately 23,400 pounds. The overhead ground wire to be installed on the Preferred Route will be 3/8" EHS steel. The conductor used for the 12.5 kV construction will be

477 kcmil ACSR per phase. This conductor has a maximum strength of approximately 11,800 pounds. The neutral wire to be installed on the Preferred Route will be 4/0 AWG ASCR with a maximum strength of approximately 8,350 pounds. The phase conductors for both the 138 kV and 12.5 kV as well as the overhead ground wires and neutral will be installed in accordance with the latest version of the National Electrical Safety Code. The conductors will be supported by aluminum clamps attached to the polymer horizontal post and polymer strain/suspension insulators. Steel clamps will support the overhead ground wire. At deadends, bolted-type dead-end clamps will be used on the conductor and on the ground wire.

(c) Base and Foundation Design: Each wood pole and pre-engineered steel pole will be set in an approximately three-foot diameter hole, nine to 12 feet deep. Crushed rock backfill will be used as backfill for all direct-embed structures. Custom steel poles, if installed, will be supported on reinforced concrete foundations designed for the specific loading conditions of the structure.

(d) *Underground Cable Design:* There are no underground cables associated with the proposed transmission line; therefore, this section does not apply.

(e) *Other Major Equipment or Special Structures:* No other major equipment or special structures are anticipated. Any potential variances will be assessed on a case-by-case basis, and discussed with the Board staff prior to construction.

(2) Electrical Substation Design Data

This Application does not involve the construction of an electrical transmission substation.

(3) Not Applicable (Gas Transmission Lines)

Not Applicable.

(D) ENVIRONMENTAL AND AVIATION COMPLIANCE INFORMATION

(1) List and Discussion of Permits Required

The Applicant anticipates submitting a Notice of Intent for coverage under Ohio Environmental Protection Agency (“OEPA”) General National Pollutant Discharge Elimination System (“NPDES”) Permit for construction stormwater. At most, coverage under U.S. Army Corps of Engineers Nationwide Permit 12 (utility lines) for wetland and stream impacts associated with construction only would apply to this Project. No permanent fill in streams or wetlands should be necessary.

Other agency coordination required as part of the Nationwide Permit coverage will be conducted as necessary (e.g., authorizations from the U.S. Fish & Wildlife Service and/or the Ohio Historic Preservation Office).

(2) Description, Quantification, and Disposal of Construction Debris

As construction work proceeds, the ROW will be kept clean of all rubbish and debris resulting from the work. Debris associated with construction of the proposed transmission line is expected to consist of conductor scrap, construction material packaging including cartons, insulator crates, conductor reels and wrapping, and used storm water erosion control materials. Clearance poles, conductor reels and other materials with salvage value will be removed from the construction area for reuse or salvage. It is estimated that approximately 300 cubic yards of construction debris could be generated from the project. Construction debris will be disposed of in accordance with state and federal requirements for such disposal. Where trees must be cleared from the ROW, which is expected to be minimal, the resulting brush will be either mechanically chipped and hauled off-site, wind-rowed along the edge of the ROW, prepared for fire wood use by the landowner, or handled as the landowner prefers. Grubbing of stumps and roots is not currently planned in these areas.

(3) Storm Water and Erosion Control

A SWPPP document will be prepared and incorporated into the Construction Plans and Specifications, and shall be made available onsite during construction of the Project. The SWPPP will include the following general conditions at a minimum.

Erosion and Sedimentation Controls

Implementation of erosion and sedimentation control practices shall conform to the Ohio Department of Natural Resources Rainwater and Land Development Manual (2006); the OEPA NPDES Permit Program for the discharge of stormwater from construction sites, and any erosion and sediment control practices and standards required by the Miami County Soil and Water Conservation District Office.

Wetlands, streams and other environmentally sensitive areas shall be clearly flagged before commencement of clearing or construction. No construction or access will be permitted in these areas unless clearly specified in the Construction Plans and Specifications. Streams are not expected to be impacted; however if a stream channel (bed or bank) is disturbed during

construction, the area will be stabilized immediately upon completion of the construction task. Grubbing activities are not expected to be required. Where applicable (e.g., steep slopes), perimeter sediment controls shall be implemented for grubbing activities and shall continue to function until disturbed areas are permanently stabilized.

Specific Silt Fence or Filter Sock Inspection Requirements

Silt fencing and/or other appropriate best management practices for erosion control shall be constructed before upslope land disturbance begins. All silt fences, filter socks, etc. shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions which may carry concentrated flows to the silt fence are dissipated along its length. Where possible, vegetation shall be preserved for five feet upslope from the silt fence.

Silt fence shall be placed so that eight inches of cloth are below the ground surface. Excess material shall lay at the bottom of the six-inch deep trench and the trench shall be backfilled and compacted. Silt fence shall allow runoff to pass only as diffuse flow through the geotextile fabric. If runoff overtops the silt fence, flows under or around the ends, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.

Soil Stabilization

As specified in the SWPPP document, disturbed areas that remain un-worked for more than 14 days the area will be stabilized with mulch or other acceptable means no later than seven days after the last construction in that area. For disturbed areas within 50 feet of a surface water of the state, and not at final grade, stabilize the area within two days. Permanent soil stabilization methods and timeframes are similar and will include seeding and mulching of disturbed areas.

Maintenance / Inspection

All erosion and sediment control practices shall be inspected at least once every seven days and within 24 hours after any storm event greater than 0.5-inch of rain per 24-hour period.

All erosion and sedimentation control structures will be maintained in good working order. Straw wattles, straw bales, and silt fence will be inspected for excess sediment accumulation, tears in fabric and to ensure proper staking. Inspections will continue until the site is at least

70% stabilized with newly sown grasses or gravel as appropriate. If a repair is necessary, it will be initiated within 48 hours of the report. Records of the maintenance and inspection must be maintained throughout the construction period. Records shall include, at a minimum, the name of the inspector, major observations, date of inspection, certification of compliance, and corrective measures taken.

Materials Management

All materials stored onsite shall be kept in an orderly manner in their appropriate containers and, if possible, under a roof or other enclosure. Products shall be kept in their original containers with the original manufacturer's label. Manufacturer's recommendations for proper use and disposal will be followed. Material Safety Data Sheets will be retained and available on-site at all times during construction.

(4) Contaminated Soil and Hazardous Materials

The following general conditions will also be included in the SWPPP to address disposition of contaminated soil and hazardous materials generated or encountered during construction:

Spill Prevention

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled. Secondary containment shall be provided for all onsite fuel storage tanks.

All sanitary waste will be collected in portable units and emptied regularly by a licensed sanitary waste management contractor, as required by local regulations.

All spills will be cleaned up immediately after discovery. Manufacturer's recommended methods for spill cleanup will be followed. Materials and equipment necessary for spill cleanup will be kept in a designated storage area on-site.

Spills will be reported to the appropriate government agency as required. Any suspected hazardous materials encountered during construction shall be reported to the DP&L Environmental Department.

(5) Height of Tallest Anticipated Above Ground Structures

The tallest structures associated with the Project will be the transmission line poles, which would be designed with an anticipated maximum height of approximately 90 feet. The typical height of transmission structures will be approximately 70 feet in height. There are four privately owned, turf-covered air strips or airports in the Project vicinity and are not open to the public for aircraft landing with the exception of one air strip. The private Leavelle Air Strip is within 1,300 feet of the Alternate Route (the single grass runway is oriented parallel to the Alternate Route), and the remainder of airports are 2,900 feet or greater in distance from the Preferred or Alternate Route. Only the Troy Airpark, a privately-owned facility, is listed as "open to public" use based on the website www.airnav.com, accessed on December 2, 2014. This airfield is located 1.26 miles from the Alternate Route with its single runway oriented approximately parallel to the route.

The height of construction equipment associated with the Project is expected to be less than that of the transmission line poles except for the use of a crane where steel poles are required. The exact structure locations have not been determined, however all transmission structure locations will be input to the Federal Aviation Association's ("FAA") Notice Criteria Tool website. Additional coordination with the FAA and Ohio Department of Transportation, Office of Aviation may be required, in particular, for the private Troy Airpark facility.

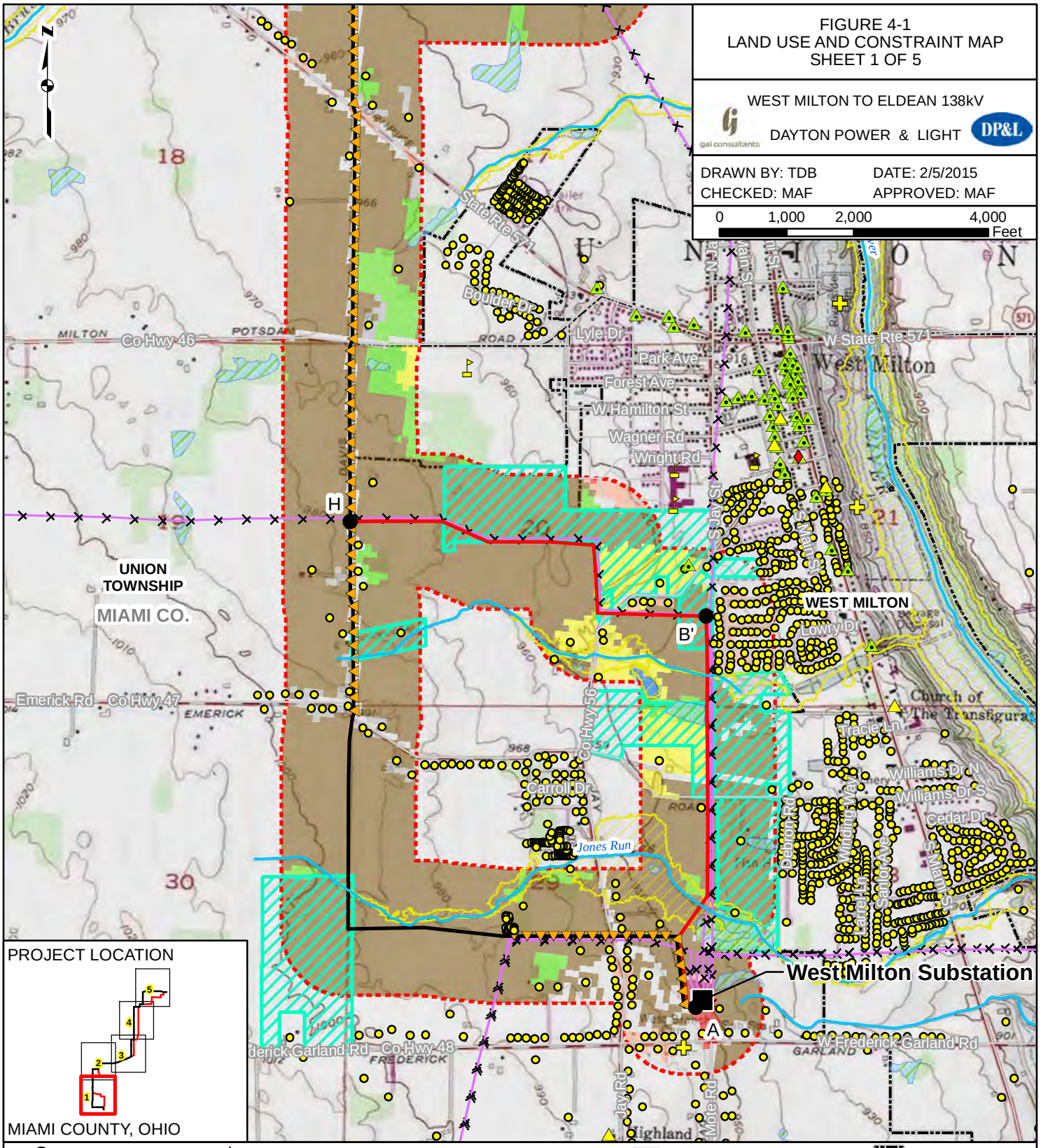
(6) Construction Plans in Poor Soil Conditions:

Dust Control

The Site and surrounding areas will be kept free from dust nuisance resulting from Site activities. During excessively dry periods of active construction, dust suppression will be implemented where necessary through irrigation, mulching, or application of tackifier resins.

Excessive Muddy Soil Conditions

Construction entrances will be established and maintained to a condition which will prevent tracking or flowing of sediment onto public roads. Sediment tracked onto public road ROWs shall be removed as soon as practical and daily at a minimum.



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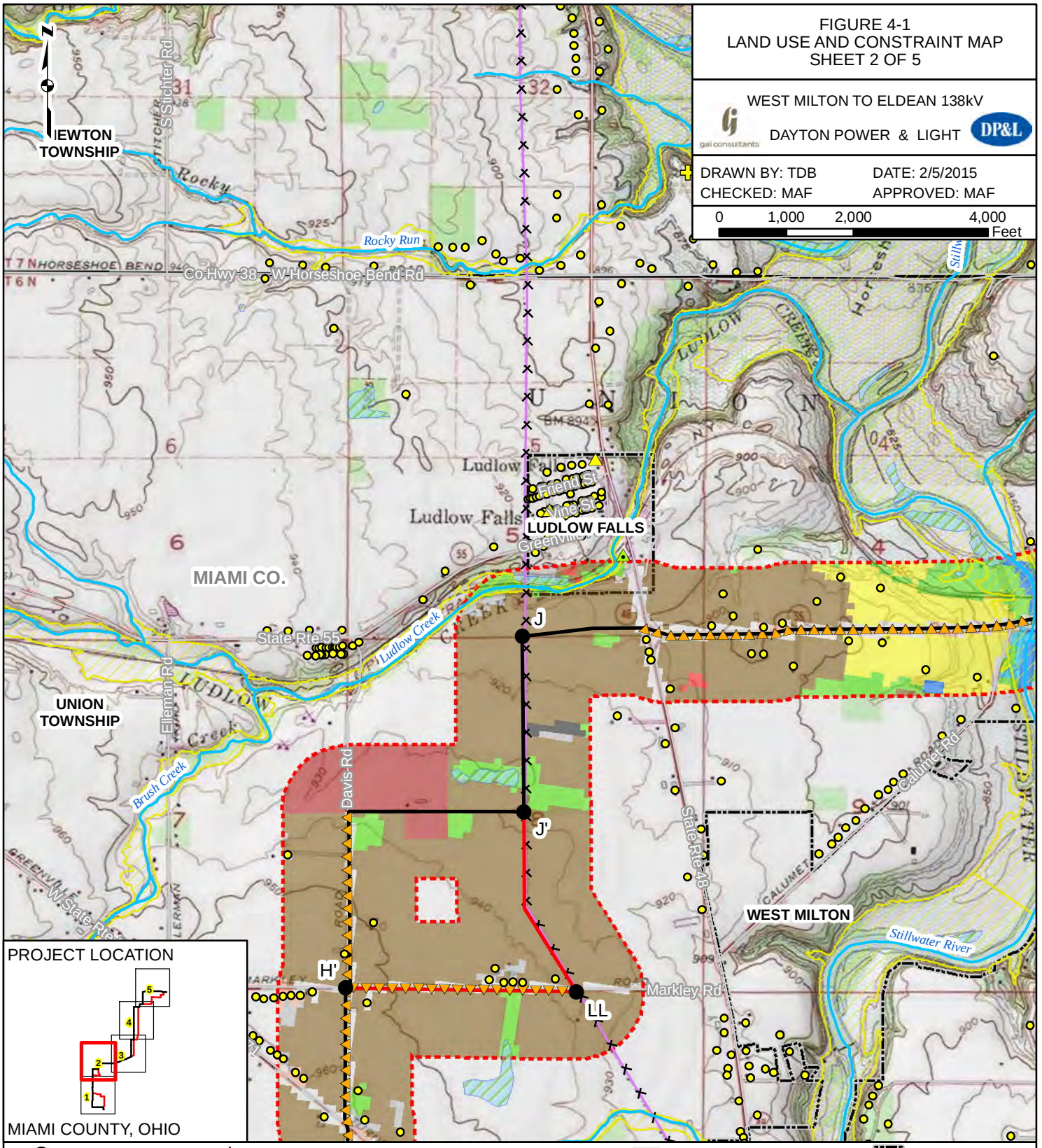

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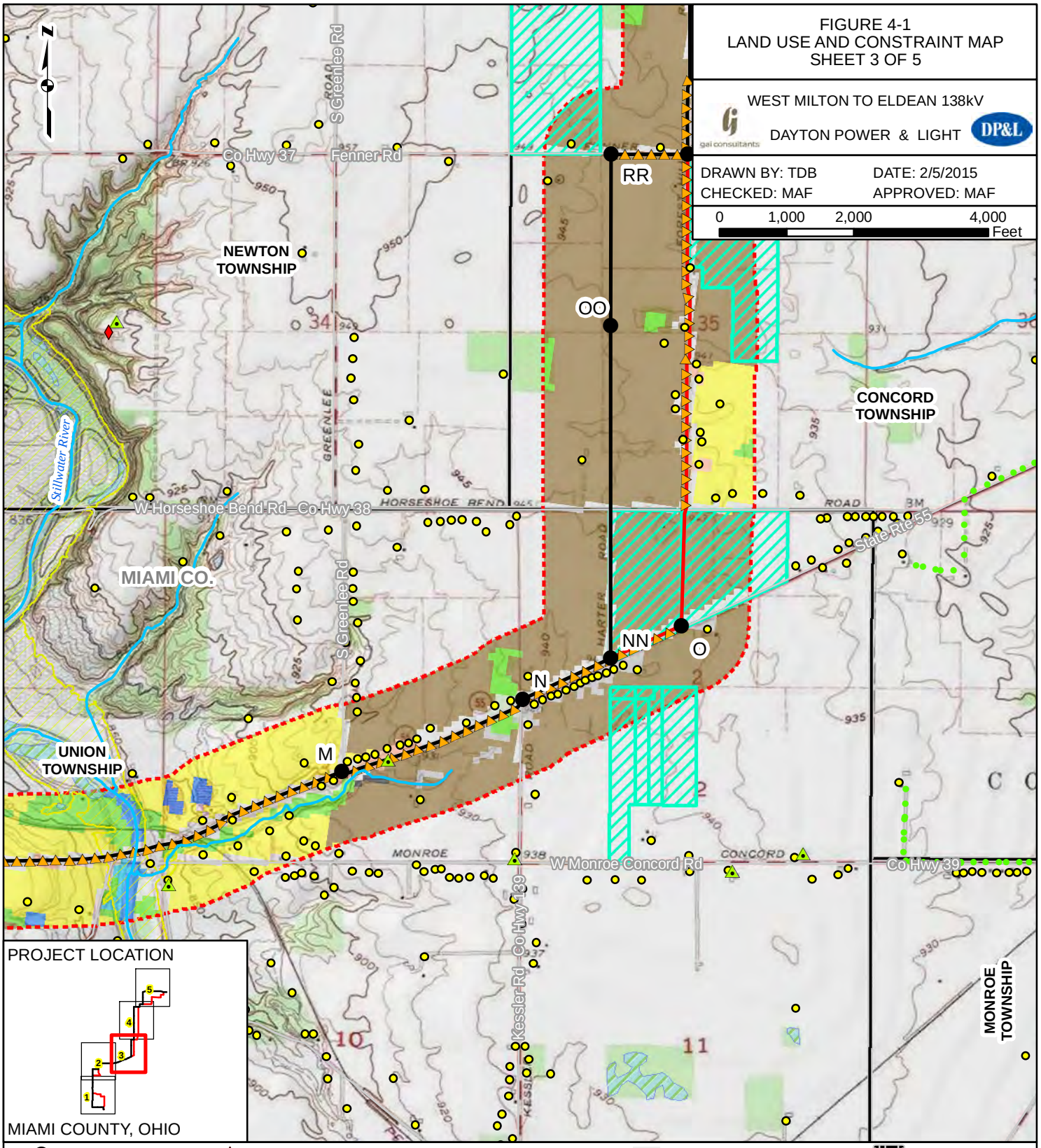

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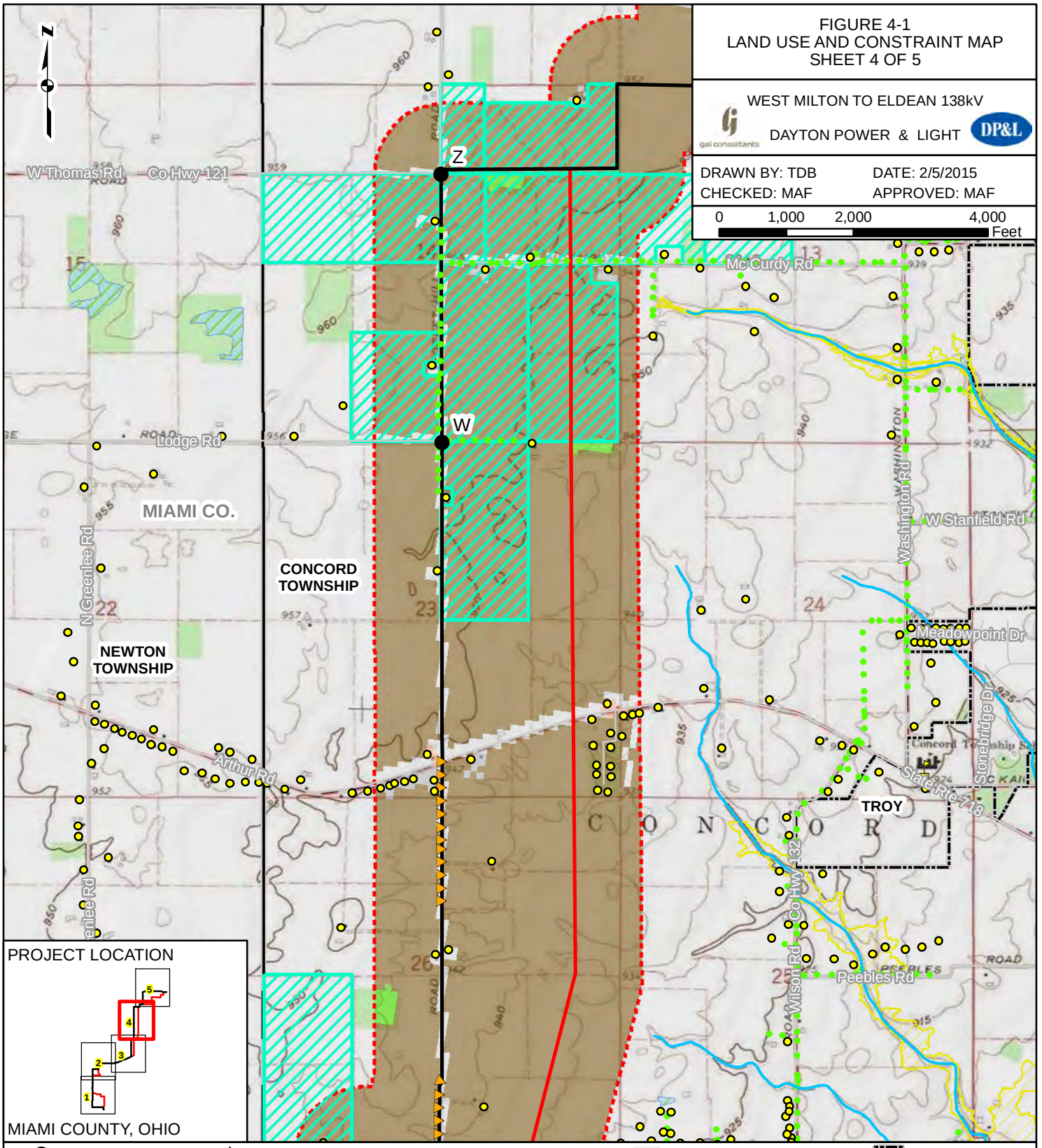

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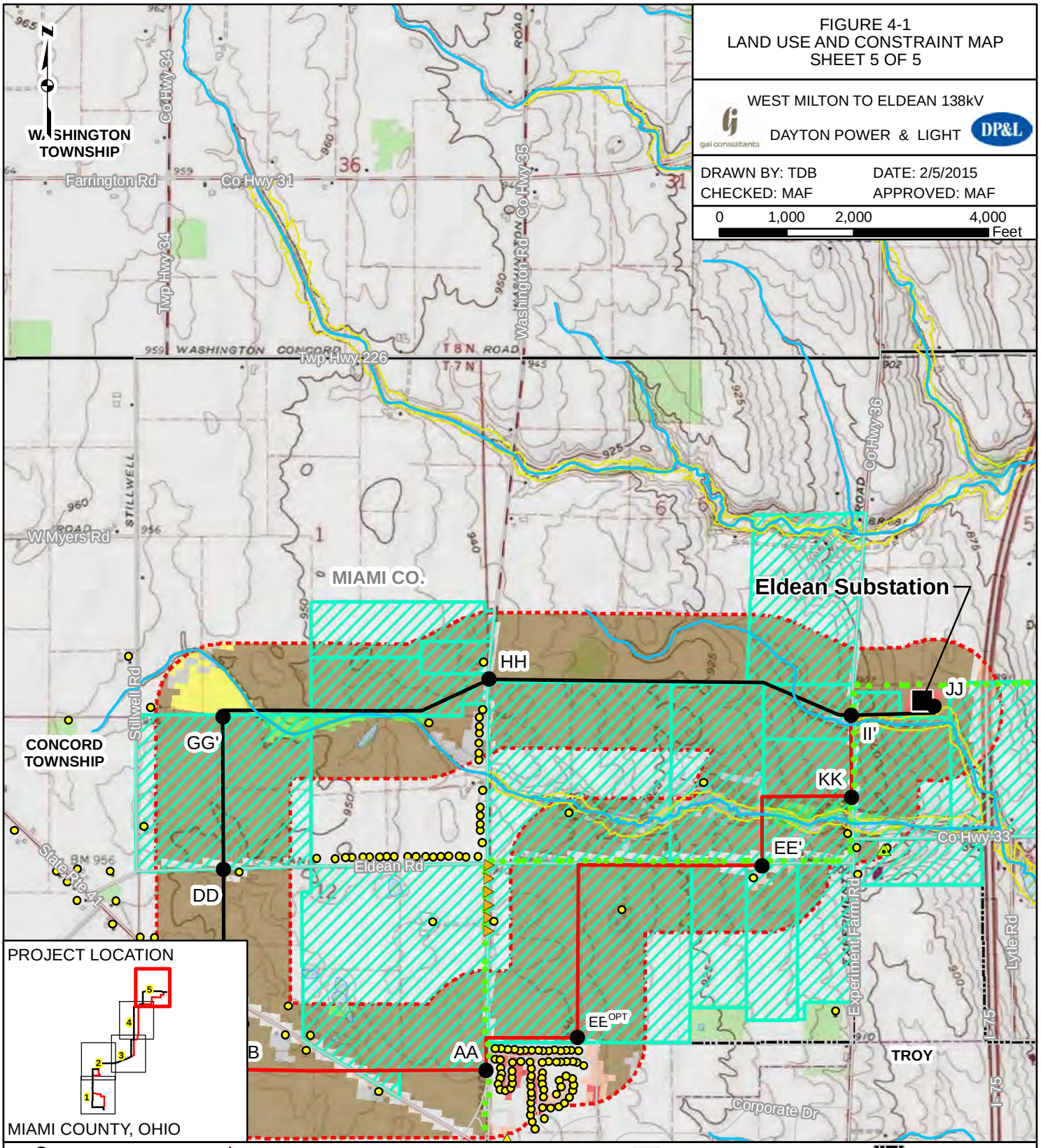

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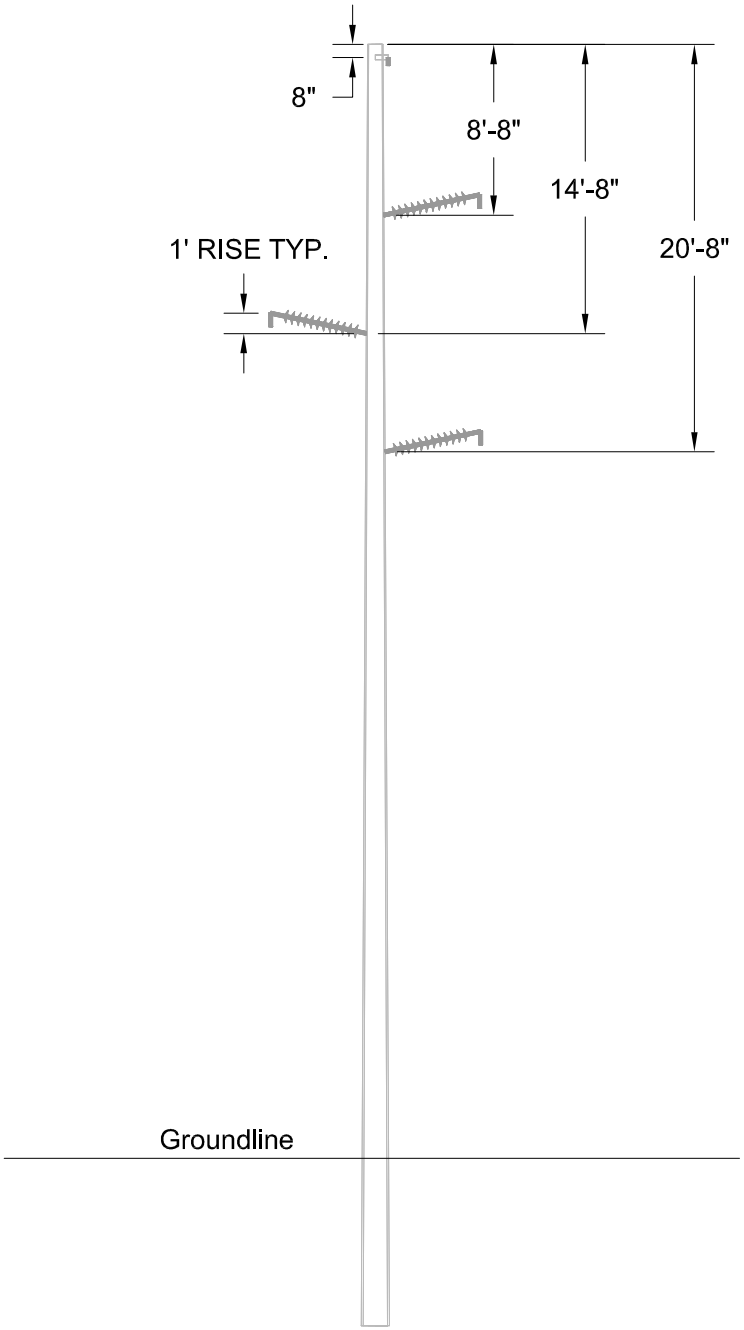

FIGURE 4-2

REVISIONS

TITLE: 138kV Delta Tangent Suspension			DP&L The Dayton Power and Light Company
FOR: West Milton to Eldean 138kV Transmission			
SCALE	PROJECT	FILE $FILE$	
DRAWN		APPROVED	
CHECKED		APPROVED	1 of 1
ENGINEER		PLOT DATE: 12/05/14 HR:	SHEET OF SHEETS

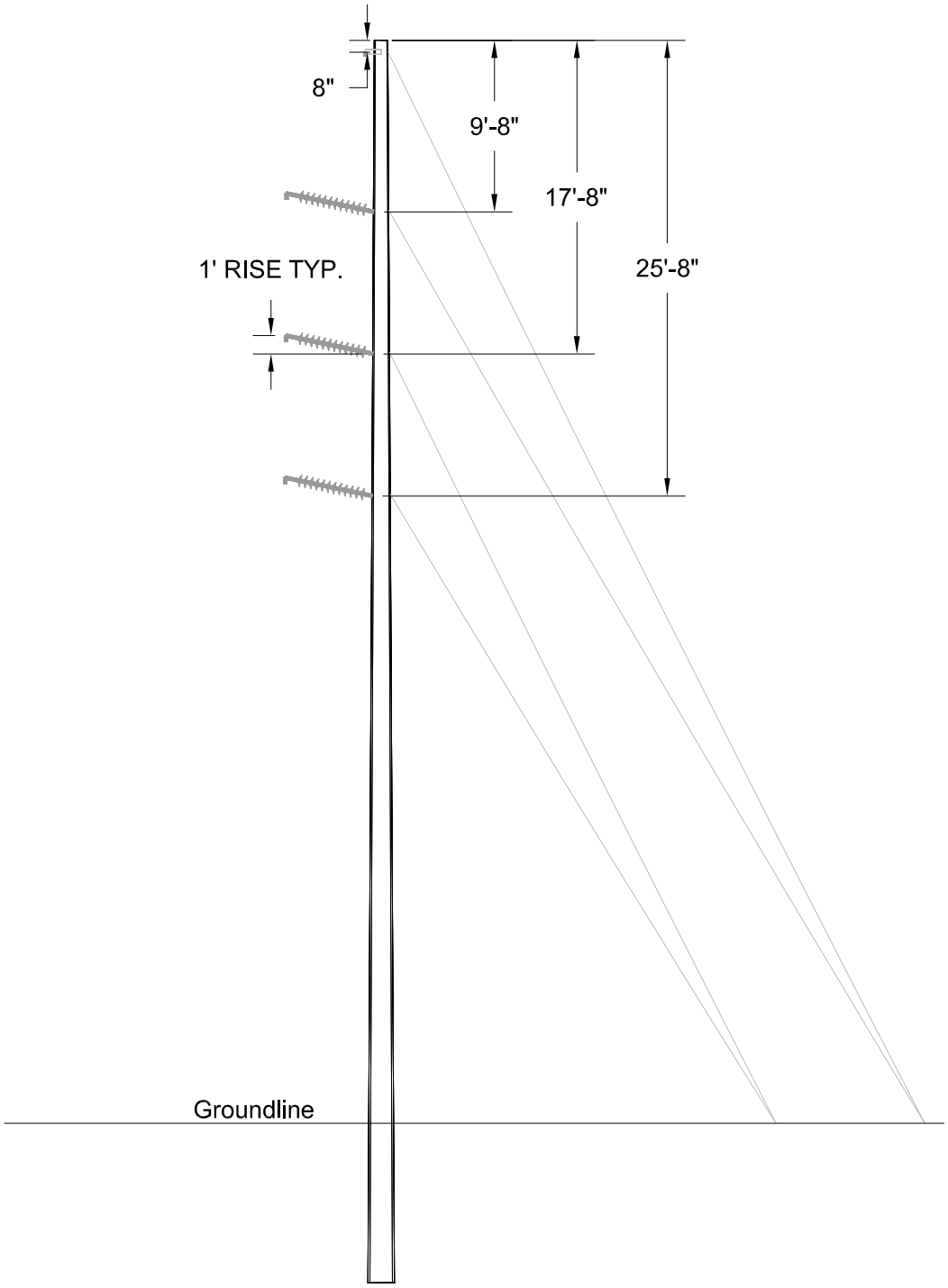

Figure 4-3

REVISIONS

TITLE: 138kV Light Angle Suspension			DP&L The Dayton Power and Light Company
FOR: West Milton to Eldean 138kV Transmission			
SCALE	PROJECT	FILE $FILE$	
DRAWN		APPROVED	
CHECKED		APPROVED	1 of 1
ENGINEER		PLOT DATE: 12/05/14 HR:	SHEET OF SHEETS

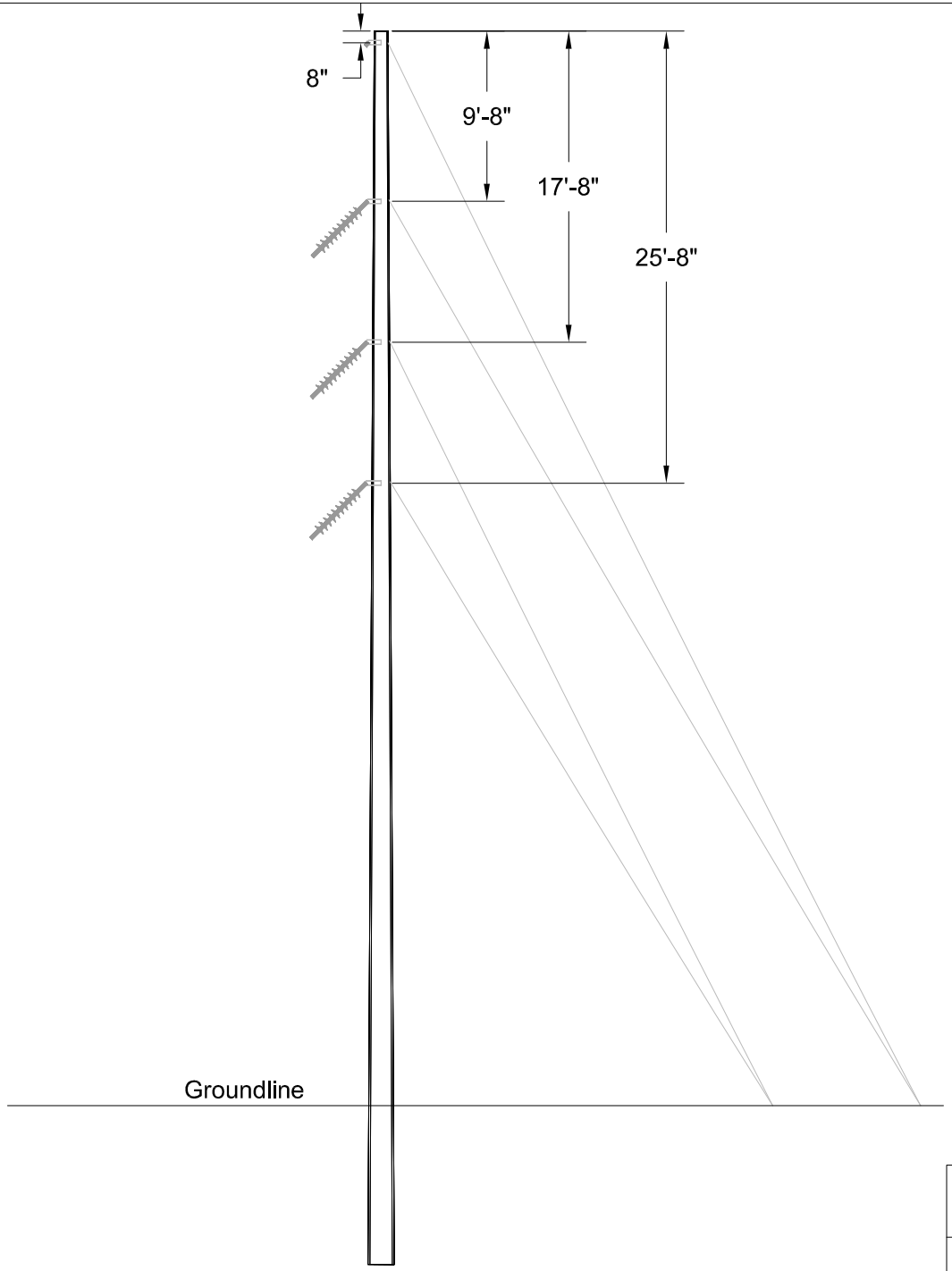

FIGURE 4-4

REVISIONS

TITLE: 138kV Heavy Angle Suspension			DP&L The Dayton Power and Light Company
FOR: West Milton to Eldean 138kV Transmission			
SCALE	PROJECT	FILE $FILE$	
DRAWN		APPROVED	
CHECKED		APPROVED	1 of 1
ENGINEER		PLOT DATE: 12/05/14 HR:	SHEET OF SHEETS

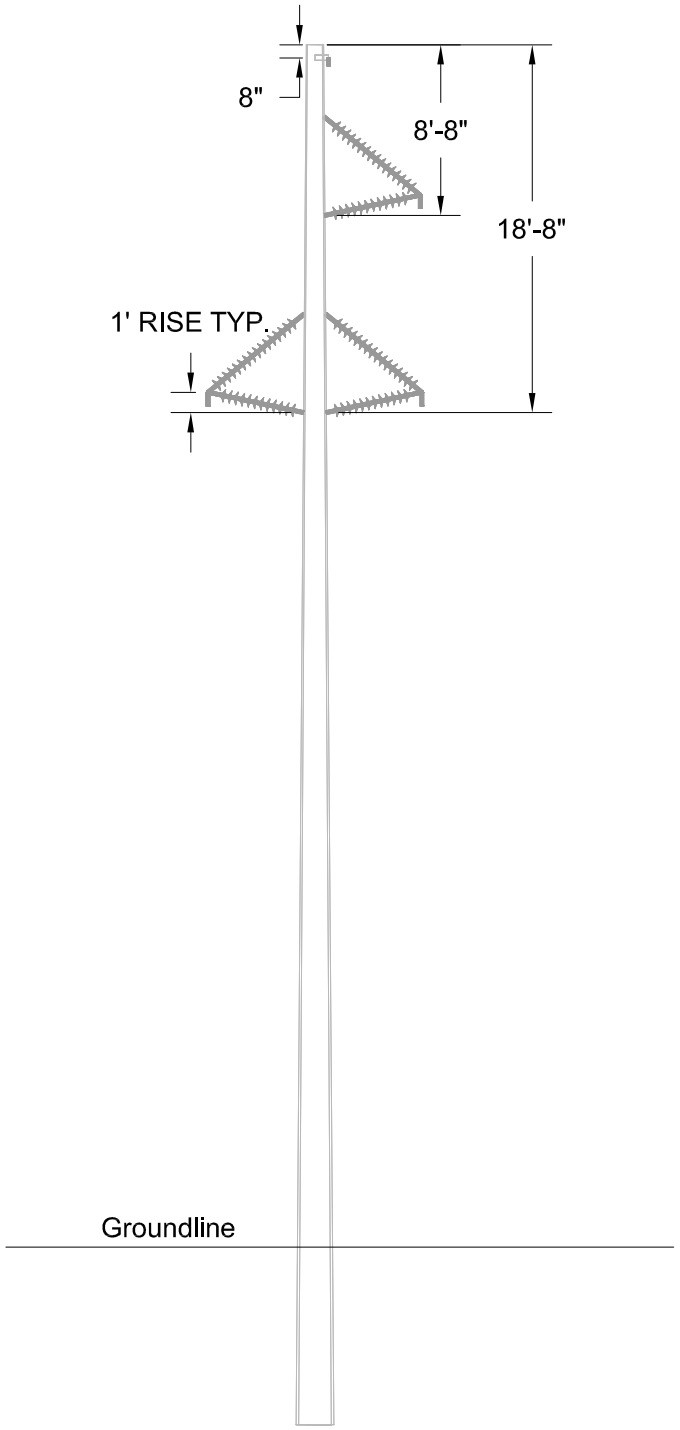

Figure 4-5

REVISIONS

TITLE: 138kV Tangent Suspension - Long Spans			
FOR: West Milton to Eldean 138kV Transmission			
SCALE	PROJECT	FILE $FILE$	
DRAWN		APPROVED	
CHECKED		APPROVED	
ENGINEER		PLOT DATE: 12/05/14 HR:	

DP&L

The Dayton Power and Light Company

1 of 1

SHEET OF SHEETS

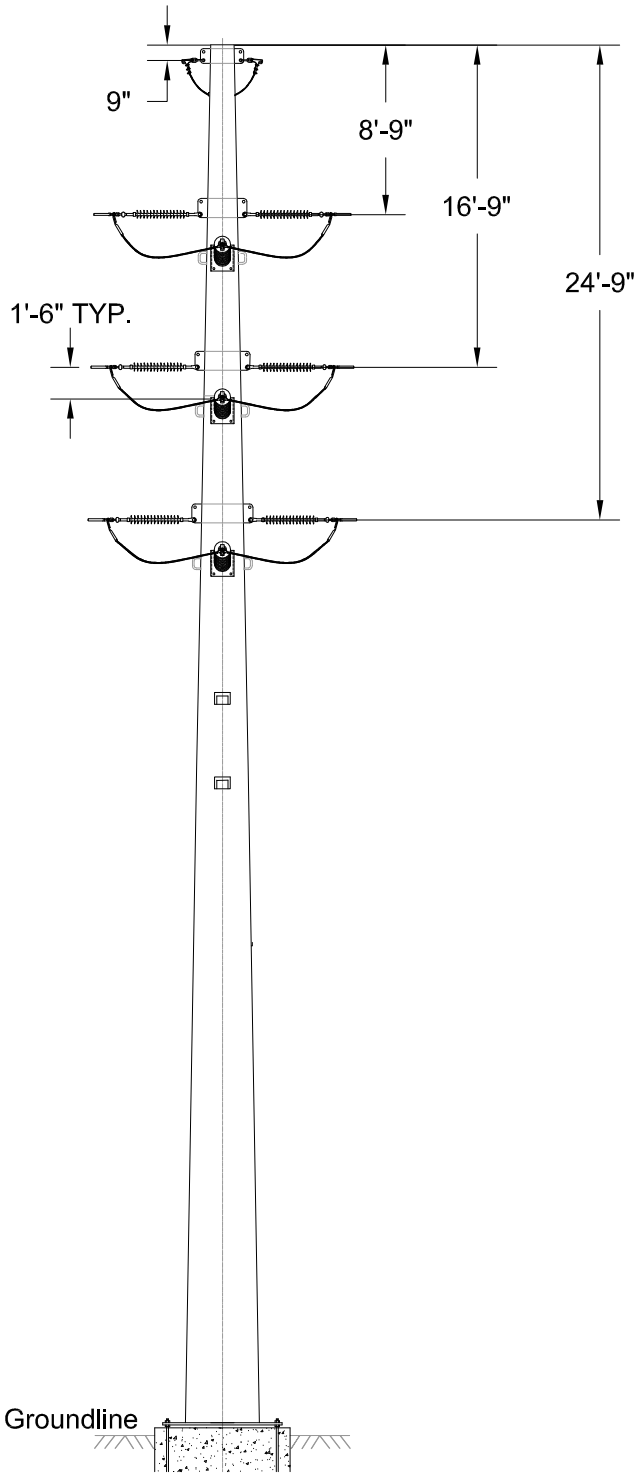

Figure 4-6

REVISIONS

TITLE: 138kV Deadend			
FOR: West Milton to Eldean 138kV Transmission			
SCALE	PROJECT	FILE $FILE$	
DRAWN		APPROVED	
CHECKED		APPROVED	
ENGINEER		PLOT DATE: 12/05/14 HR:	

DP&L

The Dayton Power and Light Company

1 of 1

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4906-15-05 FINANCIAL DATA

(A) OWNERSHIP

Dayton Power & Light, Incorporated ("DP&L") will construct, own, operate, and maintain the proposed West Milton-Eldean 138 kV Transmission Line. Both the Preferred Route and the Alternate Route are 16.6 miles long and will connect the existing West Milton Substation with the Eldean Substation.

Both routes would consist of new construction in mostly new right-of-way or easement corridors. Where the transmission line would be co-located with an existing DP&L transmission line, existing easements would be negotiated with landowners for additional width. DP&L would negotiate for easements for new right-of-way with landowners for the transmission line route that is selected.

The Preferred and Alternate Routes are aligned adjacent to road right-of-way for approximately 8.5 miles and 7.8 miles, respectively, out of the total route length of 16.6 miles. Much of this existing road right-of-way length is occupied by overhead electric distribution lines and communication cables. DP&L plans to transfer the electric distribution lines they own and operate onto the new pole structures being installed for the proposed transmission line. For distribution circuit lines and cables owned and operated by others, DP&L will negotiate with those entities concerning transfer of these utilities to the new transmission poles, where necessary and feasible.

It is possible that some landowners may not agree to easements for right-of-way after negotiation attempts by DP&L. As necessary, where DP&L cannot reach an easement agreement with landowners located on the transmission line route approved by the OPSB, DP&L will evaluate the feasibility and potential for minor route adjustments with landowners in some cases. DP&L may also utilize appropriation to obtain the necessary right-of-way to construct the transmission line.

(B) ELECTRIC CAPITAL COSTS

Estimates of applicable intangible and capital costs for both Preferred and Alternate Routes are identified in Table 5-1.

Table 5-1: Estimates of Applicable Intangible and Capital Costs for the Preferred and Alternate Routes

FERC Account Number	Description	Preferred Route ($)	Alternate Route ($)
350	Land and Land Rights	1,000,000	1,000,000
352	Structures & Improvement	0	0
353	Station Equipment	400,000	400,000
354	Towers & Fixtures	0	0
355	Pole & Fixtures	4,800,000	5,000,000
356	Overhead Conductors & Devices	3,500,000	3,500,000
357	Underground Conductors & Devices	0	0
358	Underground-to-overhead Conversion Equipment	0	0
359	Right-of-way Clearing, Roads, Trails or Other Access	225,000	200,000
	TOTAL	**9,925,000**	**10,200,000**

(C) GAS CAPITAL COST

DP&L does not propose to construct, own or operate any natural gas transmission lines or facilities as part of or in conjunction with the proposed Project.

4906-15-06 SOCIOECONOMIC AND LAND USE IMPACT ANALYSIS

(A) SOCIOECONOMIC CHARACTERISTICS

This section of the Application provides a summary of a literature search and map review for the area within 1,000 feet on each side of both the proposed Preferred and Alternate transmission line centerlines. Onsite investigations were conducted within 100 feet of each side of the Preferred Route where access was granted by property owners. Approximately 29% (4.8 miles) of the Preferred Route (16.6 miles) was not field-investigated due to Dayton Power & Light, Incorporated ("DP&L") not having access agreements from the property owners at the time of the field reviews. Public rights-of-way ("ROW") were utilized to perform onsite investigations on the Alternate Route and for portions of the Preferred Route where property access has not yet been obtained. Data from the desktop analysis and onsite investigations was used to characterize the potential effects of construction, operation, and maintenance of the proposed Project. This section also details aspects of public interaction; health, safety, and aesthetic information; cultural resources, and noise emissions.

On March 27, 2014, DP&L filed a Letter Motion and Memorandum Requesting Limited Waivers regarding the Project and this Application. In this letter DP&L requested a waiver that proposed conducting field studies and investigations for ecological and cultural resources for only the Preferred Route. On May 7, 2014, a letter was issued by an Administrative Law Judge granting DP&L's motion for waiver. Therefore, this application only includes field investigation results for the Preferred Route unless direct observational data could be obtained from public ROWs.

A review of publicly available data for the study area was performed to assess general socioeconomic and land use characteristics. Results of this review are summarized below.

Both routes begin at the West Milton Substation located on West Frederic Garland Road in the Village of West Milton and terminate at the Eldean substation located on Experiment Farm Road on the northwest edge of Troy, Ohio (refer to Figure 4-1). Each route, including the area within 1,000 feet on each side of each proposed transmission line centerline, is located entirely within Miami County. Both routes pass west of the City of Troy, south of the Village of Ludlow Falls, and west of the Village of West Milton. Demographic data compiled from the U.S. Census

Bureau, including population, average household size, and median household size is summarized in Table 6-1.

Table 6-1: Study Area Demographics of the Preferred and Alternate Route

Municipality	2010 Population	2000 Population	Percent Change (%)	Average Household Size (2010)	Median Household Income ($)
Miami County	102,506	98,868	3.7	2.48	52,292
Concord Township	30,353	27,335	11.0	2.53	53,930
Union Township	9,871	10,222	-3.4	2.45	52,076
Ludlow Falls Village	208	210	-1.0	1.9	32,500
West Milton Village	4,630	4,645	-0.3	2.35	50,763
City of Troy Data - Applies to Only the Alternate Route					
City of Troy	25,058	21,999	13.9	2.53	50,403

Source: U.S. Census Bureau, 2014

(B) TRANSMISSION ROUTES, SUBSTATION SITES, AND LAND USE

Figure 4-1 illustrates the area 1,000 feet to all sides of the Preferred and Alternate Transmission Routes at 1:24,000 scale. The land use data was derived from the U.S. Geological Service ("USGS") 2011 Multi-Resolution Land Characteristics Consortium National Land Cover Database 2011 (Jin et al., 2013), and was verified based on field review. Due to siting constraints, the Alternate Route has approximately 34% in common with the Preferred Route. Where these two routes share a common alignment they are referred to as the "common route". Among other information, Figure 4-1 shows the following features enumerated below.

(1) Transmission Line Alignments

The centerlines for both the Preferred and Alternate transmission routes are depicted on Figure 4-1. Both are briefly described in Section 4906-15-04(A)(1)(a) of this application.

(2) Substation Sites

No new substations are proposed. The proposed transmission line will connect the existing West Milton and Eldean Substations.

(3) General Land Use

The land use along the two route alternatives consists largely of agricultural land, road frontage adjacent to public road ROW, and residential lots. No major areas of commercial, industrial, or institutional land use occur within the immediate area with the exception of a rock quarry mining operation located northwest of the village of West Milton. The Stillwater River, designated as a scenic river by the state, is crossed by both route alternatives adjacent to the bridge on State Route 55 where an existing overhead distribution line exists.

A land use constraint map for the Preferred and Alternate Routes is presented on Figure 4-1. Additional details for various land use categories are discussed below.

(a) Residential: Analysis of aerial photographs with field verification indicates that there are 160 residences within 1,000 feet of the Preferred Route, 20 of which are within 100 feet. There are 260 residences within 1,000 feet of the Alternate Route, 13 of which are within 100 feet. Developed land use and residences are depicted on Figure 4-1.

(b) Commercial: There are four commercial land uses within 1,000 feet of both the Preferred Route and Alternate Route. The total number of unique commercial land uses (businesses) is five and includes an agricultural/animal sanctuary, a general contractor business, a fabric crafts business, the Union Township Life Squad, and a catering facility. The Union Township Life Squad is approximately 120 feet west of the Preferred Route. All other identified commercial uses were at least 400 feet away from the Preferred or Alternate Routes.

(c) Industrial: One industrial land use was identified within 1,000 feet of the Preferred Route which consists of the Barrett Paving Materials Ludlow Quarry located northwest of West Milton and the end of Davis Road. The Preferred Route passes over the southeast portion of this quarry. Industrial use is depicted on Figure 4-1.

(d) Cultural: Cemeteries are depicted on Figure 4-1.

(e) Agricultural: Approximately 85% of the land crossed by the Preferred Route and 88% of the Alternate Route are classified as agricultural (cultivated, hay and pasture combined). Agricultural land use, including Agricultural District Land is depicted in Figure 4-1.

(f) Recreational: One recreational use was identified within 1,000 feet of the Preferred Route and Alternate Route. This is the Lowry Complex, adjacent to the Milton-Union High School on Milton-Potsdam Road in West Milton. Specifically, the common route passes within

approximately 980 feet of the Lowry Complex and the Milton-Union High School, depicted on Figure 4-1.

(g) Institutional (e.g., schools, hospitals, churches, government facilities, etc.): The Preferred Route alignment is within approximately 40 feet of a property boundary of land owned by the Great Lakes Conference of the Brethren in Christ Church. The specific portion of this property that is adjacent to the Preferred Route is used for a camp that includes several small summer sleeping quarters. The First Lutheran Church, located on Washington Road just west of the City of Troy municipal limits, is approximately 960 feet southeast of the Alternate Route. These institutional uses are depicted on Figure 4-1. No hospitals, government facilities, or other institutional uses were identified within 1,000 feet of the Preferred or Alternate Routes.

(4) Transportation Corridors

Both the Preferred Route and the Alternate Routes cross State Route 41 within a half-mile of each other west of Troy. The Preferred Route crosses State Route 718 at North Forest Hill Road and the Alternate Route crosses State Route 718 approximate 0.4 miles east of this location. The Preferred Route approaches State Route 55 at Harter Road and the Alternate Route meets State Route 55 approximately 0.2-mile east of this location. The common route follows the State Route 55 southwest on the north-side ROW and then crosses to the south side of State Route 55 approximately 0.4-mile east of State Route 48. The common route then crosses State Route 55 to the north and State Route 48. The common route crosses State Route 571 at Davis Road. The existing roads and highways are further illustrated on Figures 4-1 and 7-1, including county and township roads.

(5) Existing Utility Corridors

Existing electric transmission lines within 1,000 feet of the Preferred and Alternate Routes include the West Milton-Fort Miami 345 kV line, the West Milton-Greenville 138 kV line, the Covington-West Milton 69 kV line, and the West Milton-Miami 138 kV line; all connecting to the West Milton Substation. Numerous distribution lines are also within 1,000 feet of the Preferred and Alternate Routes. No major natural gas or hazardous liquid pipelines were identified within 1,000 feet of the Preferred or Alternate Routes. Existing transmission lines are illustrated on Figure 4-1.

(6) Noise-Sensitive Areas

Noise sensitive areas within the vicinity of the transmission line routes are limited to residences and churches. Noise sensitive areas within the vicinity of the Preferred Route include 160 residences within 1,000 feet of the Preferred Route, 20 of which are within 100 feet; and one church-owned property. There are 260 residences within 1,000 feet of the Alternate Route, 13 of which are within 100 feet; and one church (Brethren in Christ Church). Residences and churches are depicted on Figure 4-1.

(7) Agricultural and Agricultural District Land

On January 26, 2015, the Miami County Auditor provided, via email, a list of parcels enrolled in the Agricultural District Land program. The data provided fulfill the requirement of Ohio Administrative Code 4906-15-06(B)(7) which states that Agricultural District Land must be enrolled at least 60 days prior to submission of the application. Thirty-three Agricultural District Land parcels were identified within 1,000 feet of the Preferred Route and 36 Agricultural District Land parcels were identified within 1,000 feet of the Alternate Route. Twenty Agricultural District Land parcels are located within the proposed Preferred Route 75-foot ROW and 19 Agricultural District Land parcels are located within the proposed Alternate Route 75-foot ROW. Agricultural land and Agricultural District Land are depicted with on Figure 4-1.

(C) LAND USE IMPACTS

Potential land use impacts were evaluated based on review of databases, aerial photography, and site visits. The current land use within 1,000 feet of the proposed transmission lines consists primarily of agricultural production. A description of the impact of the proposed Facility on land use is provided below in Sections 4906-15-06(C)(2) and (3). Mitigation measures are discussed below in Section 4906-15-06(C)(4).

Table 6-2: Land Use within the Preferred and Alternate Route Study Areas (within 1,000 feet)

Land Use Category	Preferred Study Area		Alternate Study Area	
	Acres	% of Study Area	Acres	% of Study Area
Agricultural (Cultivated)	3,252.4	80	3,027.7	76
Developed (Open Space)	287.2	7	339.4	8
Agricultural (Pasture/Hay)	192.4	5	283.4	7
Forested	178.3	4	174.1	4
Grassland/Herbaceous	62.1	2	61.9	2
Developed (Mixed)	51.7	1	97.9	2
Open Water	16.9	<0	17.0	<0
Total	4,041	100	4,002	100

(1) Number of Residential Structures

Residential development within the Preferred Route study area consists primarily of single-family homes along transportation corridors. The Alternate Route study exhibits similar development patterns an additional residences in housing developments in the City of Troy and the Village of West Milton. There are 160 residential structures within 1,000 feet of the Preferred Route and 20 residential structures within 100 feet of the Preferred Route. There are 260 residential structures within 1,000 feet of the Alternate Route and 13 residential structures within 100 feet of the Alternate Route. Table 6-3 lists the parcel numbers, addresses and route information for the residential structures.

Table 6-3: Residential Structures within 100 feet of the Preferred and Alternative Routes

Parcel Number	Address	Route
C06003400	1620 North Forest Hill Road, Troy, OH	Preferred
C06004510	520 North Forest Hill Road, Troy, OH	Preferred
C06005400	72 South Forest Hill Road, Troy, OH	Preferred
C06006250	725 North Forest Hill Road, Troy, OH	Preferred
C06006700	500 South Forest Hill Road, Troy, OH	Preferred
C06006950	4595 West Fenner Road, Troy, OH	Preferred
C06007100	481 South Forest Hill Road, Troy, OH	Preferred
C06007600	1490 South Forest Hill Road, Troy, OH	Alternate
C06007830	1800 South Forest Hill Road, Troy, OH	Alternate
C06008300	4340 West Fenner Road, Troy, OH	Alternate
C06008400	1335 North Forest Hill Road, Troy, OH	Alternate
L32024890	5510 West State Route 55, Ludlow Falls, OH	Common
L32025050	5792 West State Route 55, Ludlow Falls, OH	Common
L32025150	5560 West State Route 55, Ludlow Falls, OH	Common
L32025650	5145 West State Route 55, Troy, OH	Common
L32026450	6853 West State Route 55, Ludlow Falls, OH	Common
L32026460	6775 West State Route 55, Ludlow Falls, OH	Common
L32042200	8010 Emerick Road, West Milton, OH	Preferred
L32043115	6691 South Jay Road, West Milton, OH	Preferred
L32051350	6508 West State Route 55, Ludlow Falls, OH	Common
L32052610	7565 West Markley Road, West Milton, OH	Alternate
L32054710	3914 South Davis Road, Ludlow Falls, OH	Preferred
L32060250	5990 South Davis Road, West Milton, OH	Preferred
L32060900	5635 South Davis Road, West Milton, OH	Preferred
L32066400	4470 South Davis Road, West Milton, OH	Common

(2) Construction Impacts

Project infrastructure within the Preferred Route ROW is anticipated to include approximately 580 standard wood poles (direct imbed) and additional steel pole angle structures with below-grade concrete foundations where an angle in the alignment exists. A 75-foot construction ROW is planned with the final transmission line ROW. Where the transmission line runs parallel with the road ROW, the maintained ROW will be scaled back to 37.5 feet. Existing

public roads and farm field roads will be the primary means to access construction work areas. If temporary access roads are required, a 15-foot wide path will be established from a stabilized construction entrance to the ROW. Results of the ecological investigations will be utilized to minimize impacts to natural resources during construction planning.

(a) Residential Use: Twenty and 13 residences were identified with 100 feet of the Preferred Route and Alternate Route, respectively. No residences would be acquired in order to construct the transmission line as currently planned. Construction impacts to residences are anticipated to include minor increases in noise in certain locations, primarily associated with the limited construction phase. Construction-related noise would be temporary in nature and limited to standard business hours. Additionally, construction noise would be negligible to some extent due to ambient noise levels associated with local roads. Construction would be limited to a few days to one week at any particular location, thus limiting the duration of impacts.

(b) Commercial Use: Five businesses were identified within the study area. These businesses include an agricultural/animal sanctuary, a general contractor, a fabric crafts business, the Union Township Life Squad, and a catering facility. Construction impacts to commercial land use due to the Project would be similar to residential impacts, primarily consisting of short-term construction noise.

(c) Industrial Use: The only identified industrial land use is an active rock quarry within the Preferred Route ROW. No adverse impacts are anticipated to result from construction of the proposed Project.

(d) Cultural Sites and Structures

Preferred Route: One historic structure, no National Register of Historic Places ("NRHP") sites, and no historic districts were identified within 1,000 feet of this Route. Eight archaeological sites were recorded within 1,000 feet of the Preferred Route; three archaeological sites were recorded within 100 feet located within or near the ROW of State Route 55, approximately 0.4-mile east of the Stillwater River. These three small sites would be avoided for pole structure placement during engineering design. Note that State Route 55 itself is recorded as a historic structure (not included in the above count) and the Preferred Route would be located adjacent to the ROW of the road. One cemetery is located within 1,000 feet of the Preferred Route near the West Milton Substation.

Alternate Route: Due to the Alternate Route being common with the Preferred Route along State Route 55, the same results apply to the Alternate Route for the specific State Route 55 section near the Stillwater River. For the entire Alternate Route, three historic structures, no NRHP sites, and no historic districts were identified within 1,000 feet of this Route. Twelve archaeological sites were recorded within 1,000 feet of the Alternate Route; three archaeological sites were recorded within 100 feet located within or near the ROW of State Route 55. These three small sites will be avoided for pole structure placement during engineering design. Note that State Route 55 itself is recorded as a historic structure (not included in the above count) and the Alternate Route would be located adjacent to the ROW of the road. One cemetery is located within 1,000 feet of the Alternate Route near the West Milton Substation.

(e) Agricultural Use: According to NLCD 2011 Land Use Data, cultivated crops were the dominant land use with approximately 3,252 acres (80%) of the Preferred Route and 3,027 acres (76%) of the Alternate Route. The types of crops observed near the proposed routes during the 2014 agricultural season in order of dominance included corn, soybean and wheat. Hayfields and pastures made up an additional 5% of the Preferred Route and 7% of the Alternate Route. The above acreages and percentages are based on the 2,000-foot-wide corridor centered over the route centerline.

Potential impacts to agricultural use resulting from Project construction include temporary damage to crops (one season at most) during the growing season, minor and temporary disturbance of drainage patterns, disruption of plow/harvest patterns, and a reduction of tillable land at the pole structure locations. Crop production would be allowed immediately adjacent to the pole structures and guy wires where applicable.

(f) Recreational Use: No adverse impacts due to construction are anticipated to result from construction of the proposed Project.

(g) Institutional Use (e.g., schools, hospitals, churches, government facilities, etc.): Two institutions were identified within the 1,000 foot review area on either side of the route alignments. These include the First Lutheran Church, adjacent to the Alternate Route; and the property owned by the Great Lakes Conference of the Brethren in Christ Church adjacent to the Preferred Route. Construction impacts to institutional use due the Project would be similar to residential impacts, primarily consisting of short-term construction noise.

(3) Operation and Maintenance Impacts

(a) Residential Use: The most likely operational and maintenance impacts to residential structures are associated with the prohibition of new development within the transmission line ROW and continued vegetation management to meet the North American Electric Reliability Corporation ("NERC") reliability standards. The objective of the NERC vegetation management standard is to prevent vegetation-related outages by maintaining vegetation within acceptable limits under overhead lines. The vegetation management activities typically occur every five years.

(b) Commercial Use: No adverse impacts to commercial land use are anticipated due to operation and maintenance of the proposed transmission line.

(c) Industrial Use: No adverse impacts to industrial land use are anticipated due to operation and maintenance of the proposed transmission line.

(d) Cultural Use: No adverse impacts are expected due to the operation and maintenance of the proposed transmission line.

(e) Agricultural Use: Although there is a high percentage of agricultural activity (primarily crop production) within the study area, maintenance of the Preferred Route or Alternate Route is anticipated to only minimally impact land use within the proposed transmission line ROW. Maintenance will primarily consist of occasional repair activities and vegetation management in a few select areas. Maintenance impacts beyond the ROW are not expected.

(f) Recreational Use: No adverse impacts to recreational land use are anticipated due to operation and maintenance of the proposed transmission line.

(g) Institutional Use (e.g., schools, hospitals, churches, government facilities, etc.): No adverse impacts to institutional land use are anticipated due to operation and maintenance of the proposed transmission line.

(4) Mitigation Procedures

In addition to avoidance of sensitive resources, other procedures will be used to reduce impacts during Project construction. These procedures include the development of a Stormwater Pollution Prevention Plan for the project to reduce the potential for project related erosion and sedimentation to occur; the use of Best Management Practices; and seeding and mulching of

disturbed soils. The proposed Project was sited primarily in agricultural land, which is land that has already been disturbed.

Ongoing operation and maintenance impacts will likely be infrequent; and not require heavy equipment.

(a) Residential Use: Mitigation for impacts to residential use associated with the prohibition of new development within the transmission line ROW and vegetation management will be determined during the easement acquisition process.

(b) Commercial Use: No adverse impacts to commercial land use are anticipated, therefore no mitigation is proposed for commercial properties.

(c) Industrial Use: No adverse impacts to industrial land use are anticipated; therefore, no mitigation is proposed for industrial properties.

(d) Cultural Use: No mitigation measures are anticipated for cultural resources beyond the engineering design to avoid pole structure placement within the vicinity of previously recorded archaeological sites, and new sites that may be located during future field studies if required.

(e) Agricultural Use: DP&L will use existing public roads and farm roads where available to limit the amount of crop area disturbed during construction. Restoration of disturbed agricultural fields will be accomplished by de-compacting the soil, removing rocks, and re-spreading stockpiled topsoil, as necessary. Any drainage ditches, field drainage tiles, or fencing damaged by construction activities will be repaired. Payment to the property owner may also be provided for as part of easement negotiations.

(f) Recreational Use: No adverse impacts to recreational land use are anticipated, therefore no mitigation is proposed for these properties.

(g) Institutional Use (e.g., schools, hospitals, churches, government facilities, etc.): No adverse impacts to institutional land use are anticipated, therefore no mitigation is proposed for these properties.

(D) PUBLIC INTERACTION INFORMATION

(1) Counties, Townships, Villages, and Cities

Miami County and the townships of Concord and Union are located within 1,000 feet of both the Preferred and Alternate Routes. The City of Troy is within 1,000 feet of the Alternate Route.

There are no cities within 1,000 feet of any portion of the Preferred Route. The villages of Ludlow Falls and West Milton are within 1,000 feet of the both the Preferred and Alternate Routes.

(2) Public Officials Contacted

The DP&L public coordination staff has contacted several local officials including the West Milton Mayor, Miami County Commissioners, and township trustees (Concord and Union) to inform them of the Project need and plans. Appendix 6-1 includes the name and addresses of the public officials that have been contacted regarding the application.

(3) Public Information Programs

DP&L held public information meetings on March 25, 2014 at the West Milton-Union High School and July 9, 2014 in the Concord Elementary School located in western Troy. The public was invited to review route maps depicting the Preferred and Alternate Routes as well as information concerning construction and operational requirements. Public notices in local newspapers were developed and published; the notices fully described the Project and met the OPSB regulatory requirements. DP&L and GAI Consultants, Inc. ("GAI") representatives facilitated the informational meetings which were designed in an open house format. The project summary, including a route alternatives map and Project need information, that was made available to the public in the form of handouts are included as Appendix 6-2.

(4) Liability Compensation

DP&L will maintain insurance against claims and liability for personal injury, death, and property damage arising from the operation of the transmission line and facilities. The insurance policy or policies will insure DP&L to the extent of their interests. DP&L maintains excess Commercial General Liability insurance covering indemnity to at least $5,000,000. This insurance is on a per occurrence basis and is established to include automobile and contractual liability.

(5) Public Interest, Convenience, and Necessity

The Project will serve the public interest by helping to ensure that adequate transmission voltages are maintained in the northwest area of the DP&L transmission system under various outage conditions, as required to comply with the mandatory NERC reliability standards. Refer to Section 4906-02 of this Application for a more detailed discussion of the need for the proposed Project.

(6) Tax Revenues

The Preferred and Alternate Routes are located within Miami County and Concord and Union townships and the villages of Ludlow Falls and West Milton. The proposed Project will have a significant positive impact on the local tax base, including local school districts and other taxing districts that service the area where the proposed transmission line will be located. DP&L will pay property taxes on utility facilities in each township.

Based on 2014 tax rates, the estimated property taxes to be distributed by township (a portion of which includes Miami County) over the first year after the Project are as follows:

Preferred Route	
Union Township	$ 330,177
Concord Township	$ 258,069
Total:	$ 588,247
Alternate Route	
Union Township	$ 345,859
Concord Township	$ 247,779
Total:	$ 593,638

(7) Impact on Regional Development

Impacts on regional development are anticipated to be positive as a result of increased transmission line reliability to residential, commercial, institutional, and industrial users throughout the region. No negative impacts to development are foreseen for this project. Refer to Section 4906-15-02 of this Application for a more detailed discussion of the need for the proposed Project.

(E) HEALTH, SAFETY, AND AESTHETIC INFORMATION

(1) Compliance with Safety Regulations

The construction and operation of the Project will comply with the requirements specified in the NERC mandatory Reliability Standards, the National Electrical Safety Code, the Public Utilities Commission of Ohio, and will meet all applicable safety standards established by the Occupational Health and Safety Administration. DP&L's Safety policies comply with federal, state

and local regulations and policies. DP&L's policies are developed by DP&L's management under the guidance of AES Corporation's ("AES") management and board of directors. All parties are responsible to ensure that DP&L's policies meet or exceed the requirements set forth by all of DP&L's regulating entities.

The first priority of all DP&L operating areas is to ensure the safety of all our employees, contractors and the public. Safety takes this priority very seriously and incorporates safety into all aspects of operations. Safety takes precedence over all other utility operations and is listed first amongst the mission and values of AES.

(2) Electric and Magnetic Fields

This section provides electric and magnetic field ("EMF") calculation results for the DP&L West Milton-Eldean 138 kV Transmission Project. Electric and magnetic field magnitudes were calculated for the two representative cross-sections of the transmission line design as shown in the Figure 6A sketch. The first cross-section (left) is the 138 kV circuit in a vertical alternating configuration with 12.47 kV distribution underbuild on a horizontal cross-arm, and the second cross-section (right) is the 138 kV vertical circuit by itself.

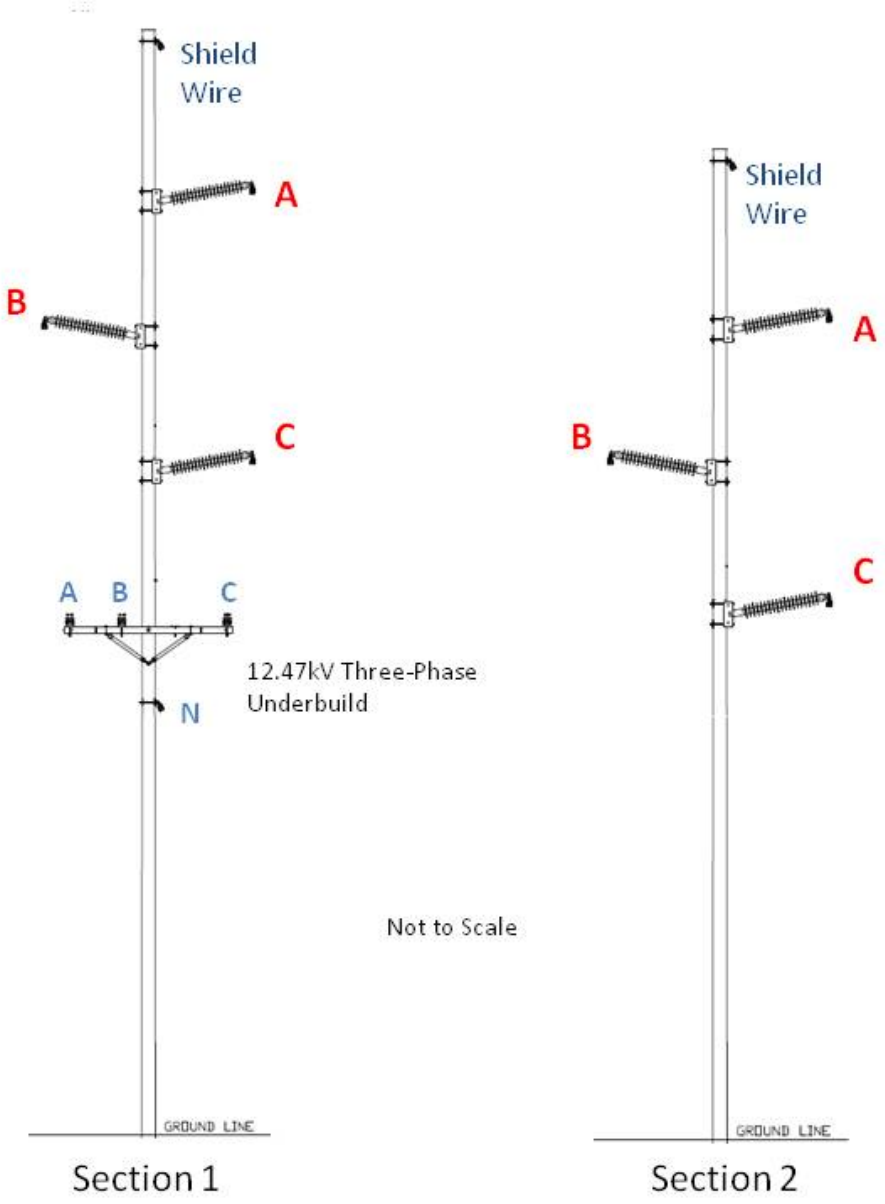


Figure 6A. Two transmission line cross-section models used to calculate electric and magnetic fields.

For both cross-section models, the 138 kV circuit consists of three 1.340 inch diameter 1351.5kcm AAC conductors with a 0.375 inch diameter galvanized steel ground wire at the top of the pole. The 12.47 kV distribution circuit (beneath the 138 kV circuit in the first cross-section only) consists of 0.814 inch diameter 477kcm ACSR conductors—three phase conductors on the cross-arm and a neutral on the steel pole.

The 12.47 kV system is stepped down from 138 kV via delta-wye connected transformers, and thus, the 138 kV circuit is assumed to lead the 12.47 kV circuit by 30 degrees per DP&L.

Calculations described in this report were performed using the Corona and Field Effects program developed by engineers at the Bonneville Power Administration ("BPA"). The BPA program utilizes exact electric and magnetic field solutions for two-dimensional cross-section models that assume infinite straight line conductors at a constant height. The approximate lowest sag height for each cross-section span is used for the calculations to arrive at estimates of worst-case field magnitudes; electric and magnetic field magnitudes generally decrease moving toward the pole structures because of increasing conductor height from the ground.

Table 6-4 lists the coordinates for each of the phase conductors, shield wire, and neutral as modeled in the two representative cross-sections. Dimensions are in feet with horizontal (x) values relative to the pole center line and with conductor heights (y) relative to ground level for the section being modeled based on calculated conductor sag as provided by GAI. Calculations were performed for a 12.47 kV underbuild with a single phase conductor (1A) and also with three phase conductors (1B). Dashes in the table indicate that the conductor is not included in that specific cross-section model.

Table 6-4: Conductor Position Coordinates for each Modeled Cross-Section (Relative to centerline and Ground Level).

Model	138kV Circuit Conductors								12.47kV Underbuild Conductors							
	A phase		B phase		C phase		shield wire		A phase		B phase		C phase		neutral	
	x (ft)	y (ft)	x (ft)	y (ft)	x (ft)	y (ft)	x (ft)	y (ft)	x (ft)	y (ft)	x (ft)	y (ft)	x (ft)	y (ft)	x (ft)	y (ft)
Section 1A	5.33	48.75	-5.33	43.00	5.33	36.83	0.50	63.00	-4.25	26.00	--	--	--	--	0.50	22.17
Section 1B	5.33	48.75	-5.33	43.00	5.33	36.83	0.50	63.00	-4.25	26.00	-1.25	26.00	4.25	26.00	0.50	22.17
Section 2	5.33	39.92	-5.33	34.00	5.33	27.83	0.50	54.42	--	--	--	--	--	--	--	--

Electric and magnetic field magnitudes are calculated for each of the cross-sections at two-foot intervals along paths crossing beneath the line at a height of 3.28 ft (one-meter) aboveground level. The ROW is assumed to be approximately 37.5 feet to either side of the pole center line (x=0); calculations are shown 40 feet to both sides of the center line. Electric and magnetic field results are presented in the next two sections.

(a) Electric Field Strength Results: Electric fields are calculated assuming phase-to-phase voltages at 105% of the 138 kV rating (144.9 kV) for the transmission conductors, and a maximum of 15 kV for distribution circuit. As noted above, the cross-section models use estimated lowest conductor heights for the representative cross-sections as provided by GAI in sag diagrams (attached at the end of this report). Figure 6B shows the calculated root mean

square (*rms)* electric field magnitude as a function of position along paths that cross beneath the lines at a height of 3.28 feet (1m) above ground level.

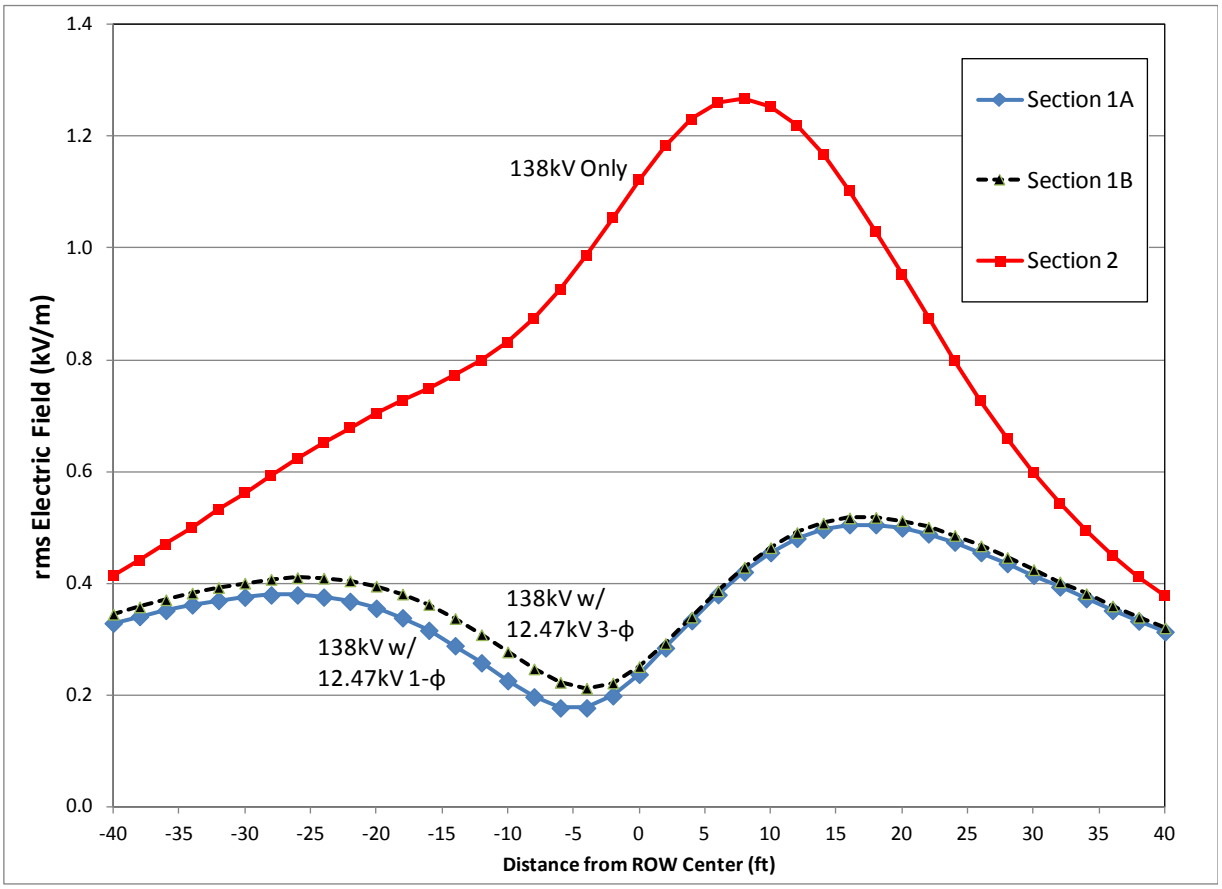


Figure 6B. Calculated rms electric field magnitudes for the three representative cross-sections, at one-meter height.

The largest electric fields occur beneath the 138 kV circuit alone (Section 2 in Figure 6A), with a maximum of 1.3 kV/m. One can see that the electric fields from the 138 kV circuit are shielded to some extent by the underbuild conductors as evidenced by lower electric field peaks with a maximum of approximately 0.5 kilovolts per meter (kV/m) for both the single-phase (1A) and three-phase (1B) underbuild configurations. Electric field calculations results are summarized in Table 6-5 which lists the electric field magnitudes (kV/m) at EROW (both sides) and the maximum beneath the lines.

Table 6-5: Electric and magnetic field results summary listing of the calculated rms field magnitudes; electric fields in kV/m and magnetic fields in units of milligauss (mG) at both sides EROW and maximum beneath the line.

Model		Electric Field (kV/m)	Magnetic Field (mG)		
Cross-Section	Description	105% Nominal Voltage	Summer Normal Load	Short-Term Emergency Load	Winter Normal Load
1A	138kV w/ 1-ph 12.47kV	0.36/0.50/0.33	44/123/54	56/157/67	61/173/74
1B	138kV w/ 3-ph 12.47kV	0.34/0.52/0.34	46/125/57	57/158/71	63/175/78
2	138kV alone	0.44/1.27/0.41	50/138/57	63/171/71	86/234/96
		EROW/MAX/EROW	EROW/MAX/EROW	EROW/MAX/EROW	EROW/MAX/EROW

(b) Magnetic Field Strength Results: Magnetic field calculations were performed for the two cross-sections models under three load scenarios: summer normal, short-term emergency, and winter normal. The power flow ratings for these three load scenarios are listed in Table 6-6. Balanced three-phase currents are assumed for all calculations except for the single-phase underbuild scenario (1A) in which all single-phase current is assumed to return on the neutral conductor.

Table 6-6. Circuit Power Ratings for Three Load Scenarios Used For Magnetic Field Calculations

Load Condition	138kV Circuit	12.47kV Circuit
Summer Normal	307 MVA	13 MVA
Short-Term Emergency	382 MVA	17 MVA
Winter Normal	419 MVA	19 MVA

Figures 6C to 6E show calculated magnetic fields from the two cross-section models for the Table 6-6 load scenarios. Magnetic fields are largest with the 138 kV circuit by itself with the larger phase-to-phase spacing and lower height without the underbuild. The 138 kV circuit load scenarios of 307, 382, and 419 MVA correspond to 1284, 1598, and 1753 amperes of three-phase load current, respectively, while the 13, 17, and 19MVA scenarios at 12.47 kV correspond to 602, 787, and 880 amperes of three-phase load.

Magnetic field results from the two cross-section models for both sides of the ROW (EROW) and maximum values beneath the lines are summarized in Table 6-5 for the three load scenarios.

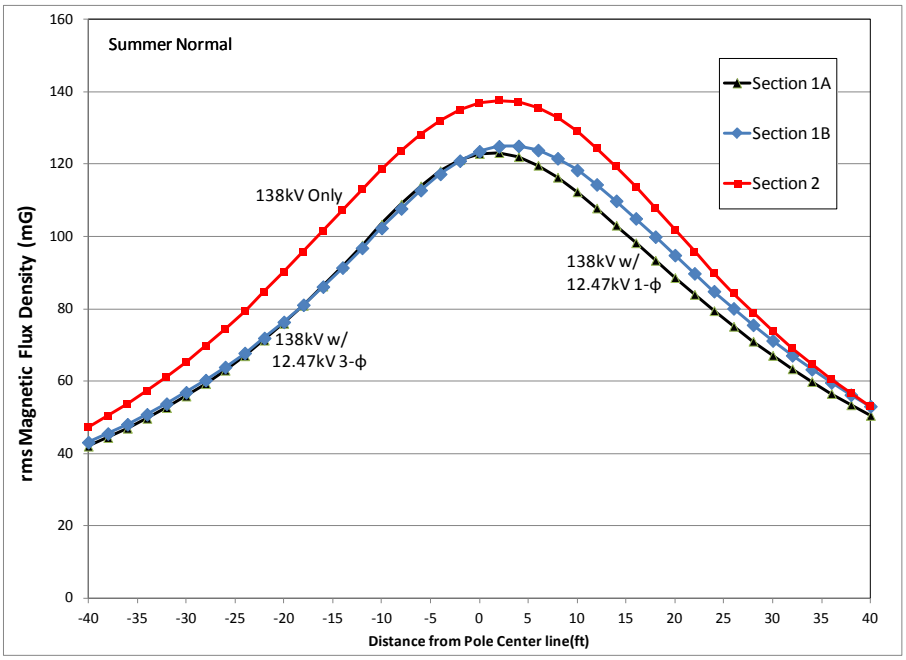


Figure 6C. Calculated magnetic fields from three cross-sections under the summer normal load scenario

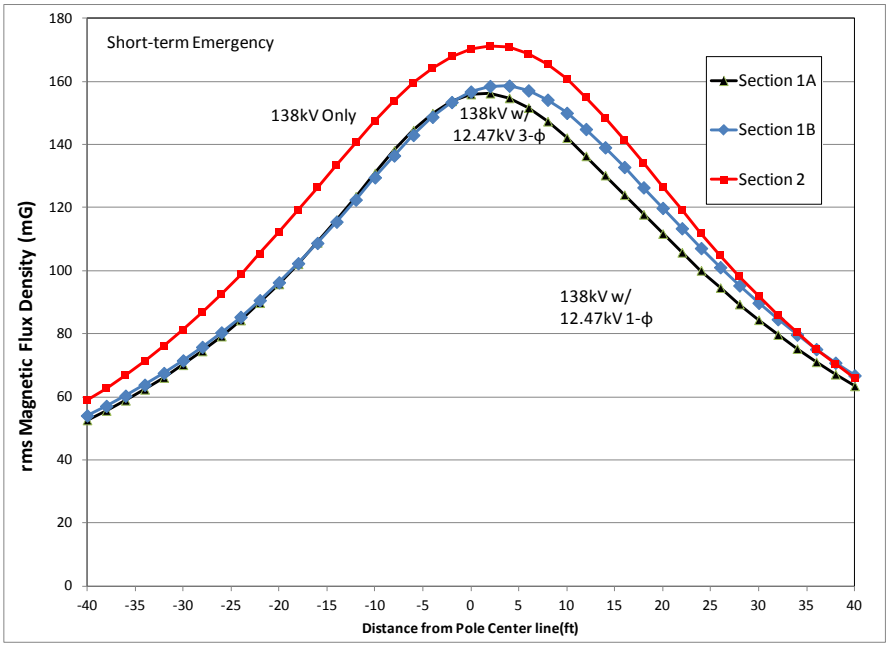


Figure 6D. Calculated magnetic fields from three cross-sections under short-term emergency load scenario

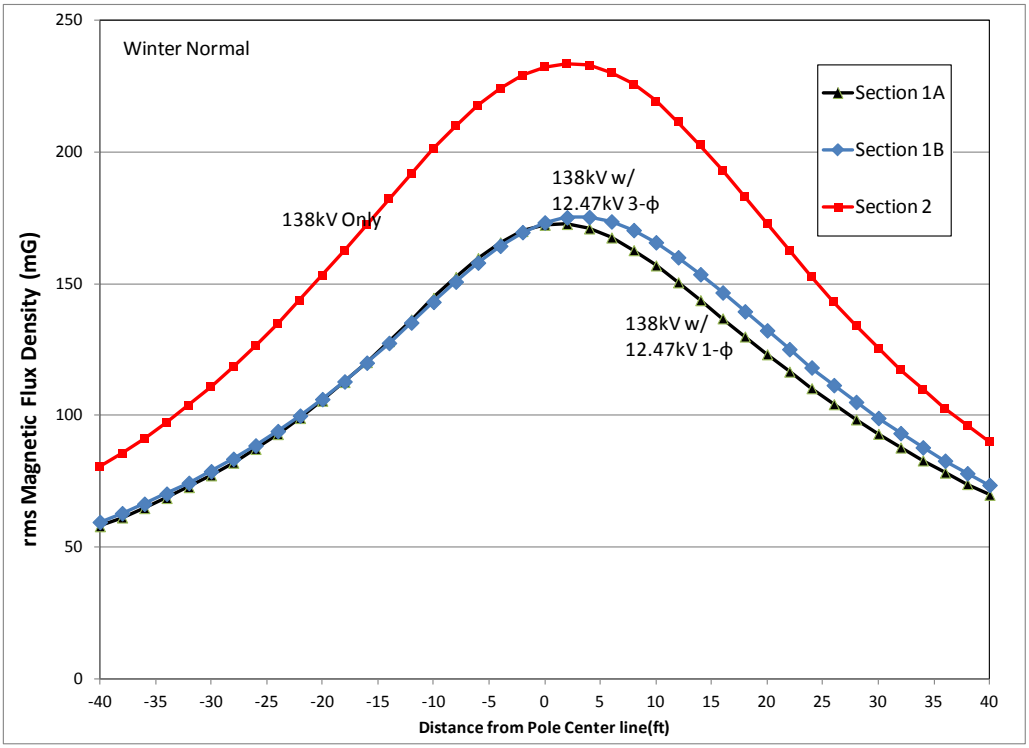


Figure 6E. Calculated magnetic fields from three cross-sections under the winter normal load scenario.

(c) Current State of EMF Knowledge: Humans are all continually exposed to a wide variety of natural and man-made electric and magnetic fields. They are generated anywhere there is a flow of electricity including appliances and power equipment. Electric fields are associated with the voltage of a source. Magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. Electricity is a beneficial part of our daily lives, but whenever electricity is generated, transmitted, or used, electric and magnetic fields are created. A large volume of research and analysis on the question of health effects related to electric and magnetic fields ("EMF") exposure has been generated over many decades (with an increase of interest over the past 25 years).

Developments

In 1992, the U.S. Congress authorized the Electric and Magnetic Fields Research and Public Information Dissemination Program ("EMF-RAPID") in the Energy Policy Act (PL 102-486). In the RAPID program, the National Institute of Environmental Health Sciences ("NIEHS"), National

Institutes of Health ("NIH") and the Department of Energy ("DOE") were designated to fund, direct, and manage research and analysis aimed at providing scientific evidence to clarify the potential for health risks from exposure to power-line EMF.

Solid and relevant EMF results were generally obtained under the research supported by the NIEHS (through the EMF-RAPID program). The NIEHS program supported researchers in the task of determining what, if any, aspects of EMF interactions with biological systems were (1) real and reproducible, and (2) had the potential to increase the risk of cancer. In 1999 the NIEHS submitted its report to the U.S. Congress: "NIEHS Report on Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields." The report concluded the following:

> *"The scientific evidence suggesting that extremely low frequency fields (ELF)-EMF exposures pose any health risk is weak. The strongest evidence for health effects comes from associations observed in human populations with two forms of cancer: childhood leukemia and chronic lymphocytic leukemia in occupationally exposed adults….In contrast, the mechanistic studies and the animal toxicology literature fail to demonstrate any consistent pattern across studies….No indication of increased leukemias in animals have been observed…..virtually all of the laboratory evidence in animals and humans and most of the mechanistic work done in cells fail to support a causal relationship between ELF-EMF at environmental levels and changes in biological function or disease status. The NIEHS concludes that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. In our opinion, this finding is insufficient to warrant aggressive regulatory concern….The NIEHS does not believe that other cancers or non-cancer outcomes provide sufficient evidence of a risk to currently warrant concern."* (NIEHS, 1999, 9-10)

Sources of Additional Information

The following federal government agencies' websites provide additional information on EMF:

1. Centers for Disease Control and Prevention / National Institute of Occupational Safety and Health: http://www.cdc.gov/niosh/topics/emf/
2. National Institute of Environmental Health Sciences / National Institute of Health: http://www.niehs.nih.gov/health/topics/agents/emf/

(d) Company's Line Design Considerations: DP&L designs its transmission line facilities according to National Electrical Safety Code specifications, engineering parameters and cost. DP&L proposes to install the 138 kV transmission line primarily on wood tangent structures supported on horizontal post insulators. Reverse phasing of circuits is not an option for this

Project since it consists of constructing a single circuit. The sections of transmission line that will have distribution lines underbuild is estimated to have lower EMF strengths.

(e) Procedures for Addressing Public Inquiries Regarding EMF: Information on electric and magnetic fields is available on DP&L's website (http://www.dpandl.com/education/electricity-information/electric-and-magnetic-fields/). It describes the basics of electric fields and magnetic fields, scientific research efforts, and DP&L's commitment to safety and sharing information on any new research findings on this topic.

(3) Aesthetic Impacts

Direct and indirect visual resource impacts are difficult to distinguish because the effects occur at the same time and place but simultaneously occur at a further removed distance (e.g., impacts as a result of views from sensitive recreation area and scenic quality impacts on vegetation and landform). Impacts may be considered short-term and long-term.

The proposed Project has the potential to result in three basic types of impacts to visual resources. Construction impacts are considered temporary, and result from the presence of construction vehicles and equipment that cause ground disturbance, equipment structure contrasts, and air emissions. Operations and maintenance impacts may be short-term or long-term. Maintenance activities are also considered short-term (and periodic), and are also related to the presence of construction vehicles and equipment and associated ground and air disturbances. Operations impacts are primarily associated with the long-term use and presence of the Project (transmission lines, structures, and access roads) in the landscape. Visual contrast, including the effects of light and glare, are produced during construction, operations, and maintenance of the Project.

The general types of impacts caused by the construction, operations, and maintenance of the Project include:

- Introduction of visually dominant transmission structures (wood single pole) that contrast with the developed or natural landscape;
- Potential glare created by the presence of the conductors (wires) and associated marker balls (if used for avian mitigation or air traffic safety);

- Landform and vegetation contrasts (grading and vegetation removal) caused by the construction of access roads or road improvements, pulling and tensioning sites, work areas, and laydown areas; and
- Structure contrast caused by construction equipment, helicopter conductor stringing, and staging areas.

(a) Views of the Proposed Facility: The viewsheds of both the Preferred and Alternate Routes from residences, through-travelers, and recreational users may be altered by the transmission line. Local residents and commuters will likely be most sensitive to the visual impacts resulting from the Project. The primary vantage points would be along State Route 55 where the Common Route runs adjacent to the roadway for 2.9 miles and the Alternate Route extends another 0.2 miles beyond Harter Road, in addition to Forest Hill Road and Davis Road. State Route 55 is also where the Common Route crosses the Stillwater River which is part of a registered State Scenic River System (ODNR, 2014). Visual impacts along State Route 55 would be lessened because there are existing distribution lines and communication cables in the road ROW.

The Preferred and Alternate Routes also cross State Route 41, State Route 48, State Route 718, and State Route 571. Visual impacts may be less significant in these locations because the viewer would be crossing under the transmission lines as opposed to traveling parallel to them, thus reducing the overall duration of viewing. Also, existing utility lines are present in many of these locations.

(b) Structure Design Features: The use of a single pole design as opposed to a lattice tower with a larger footprint will reduce visual impacts. Additionally, much of the Proposed and Alternate Routes are conterminous with existing distribution lines and communication cables. DP&L proposes to relocate those distribution lines it owns onto the new transmission line poles to minimize the number of pole structures within the utility ROW. DP&L would coordinate with owners of other distribution lines and communication cables to determine the feasibility of utilizing the same approach where such utility lines are owned and maintained by others.

(c) Facility Effect of the Site and Surrounding Area: As described above, the proposed Project would increase the number of structures and conductors to rural agricultural landscape. It will be visible from public roads and nearby residences. Vegetation management required for

safe operation would likely have minimal impacts on aesthetics because both Routes are only about 4% forested.

(d) Visual Impact Minimization: The degree of visual minimization of the Project is largely limited by engineering constraints and uniform elevations in the area. As discussed above, visual impacts have been minimized through the use of single tangent wooden poles, co-locating with existing transmission line corridors when practical, co-locating adjacent to road ROW and siting the project in open land where the need for vegetation management is minimal. Additionally, angle structures that are required at turns or bends in the transmission line alignment will be single poles with foundations where feasible. Longer spans will be incorporated in the design as well when cost-effective and technically feasible.

(4) Estimate of Radio and Television Interference

Radio interference ("RI") can be experienced in the AM broadcast ban (535-1605 kHz) and FM band (88-108 MHz), caused by transmission line gap-type discharge (1-1000 MHz). Dielectric discharge due to air ionization, known as "corona", is not a concern with 138 kV transmission lines planned for this Project. Gap-type discharge such as emitted by loose or defective transmission hardware typically is localized and can be readily detected and corrected, or additional mitigation measures can be applied to eliminate the interference source.

DPL does not have any formal policy for radio & television interference other than investigation of any complaints. With the advent of digital television broadcasts, complaints of interference from electric lines are very rare.

(F) IMPACT ON CULTURAL RESOURCES

(1) Cultural Resources Studies and Agency Correspondence

POWER Engineers conducted a cultural resources records review of online resources from the Ohio Historic Preservation Office ("OHPO"). The purpose of this review was to identify known cultural resources in the vicinity of the Project so that impacts to these resources can be minimized. Cultural resources include archaeological and historical sites, such as cemeteries, buildings, structures, objects, and districts. The literature review included the following resources consulted online:

1. Archaeological Atlas of Ohio, William C. Mills, 1915
2. United States Geological Survey (USGS) 7.5' series topographic maps

3. Ohio Archaeological Inventory files ("OAI")
4. Ohio Historic Inventory files ("OHI")
5. NRHP on OHI files
6. Determinations of Eligibility files (DOE on OHI)
7. State Historic Preservation Office Cultural Resource Management/contract archaeology files (OHI)

Results of the records review indicate that there are several prehistoric archaeological sites near the project corridor.

Preferred Route: Seven prehistoric archaeological sites and one historical archaeological site are located within 1,000 feet of the Preferred Route. All seven prehistoric sites are near where State Route 55 crosses the Stillwater River (MI0072, MI0073, MI0074, MI0075, MI0076, MI0077, and MI0078). The one historic archaeological site (MI0127) is located near the West Milton Substation.

Two historic structures are listed on the OHI within 1,000 feet of the Preferred Route. One of these structures (MIA0137801) is thought to be State Route 55 itself, or a demolished structure formerly adjacent to the highway, as it is identified as "transportation" for historical use. The other structure (MIA0069201) is located approximately 611 feet south of the Preferred Route near the Stillwater River crossing. This structure was constructed circa 1880 in an Italianate architectural style. No NRHP-listed properties have been recorded within 1,000 feet of the Preferred Route.

Alternate Route: Eleven prehistoric archeological sites are recorded in the OAI within 1,000 feet of the Alternate Route. Seven of these sites are the same as those listed for the Preferred Route as they are located on the common route on State Route 55 east of the Stillwater River. One of the 11 sites is located near Eldean Road (MI0204); two sites are located west of Washington Road (MI0191 and MI0192); one site (MI0014) is near South Jay Road near the village of West Milton. Two OHI prehistoric archaeological sites are recorded within 1,000 feet of the Alternate Route. One of these sites is the same as the OAI site (MI0204) near Eldean Road. The second site (MI0127) is recorded at or near the existing West Milton Substation.

Four historic structures are listed on the OHI within 1,000 feet of the Alternate Route. These include MIA0151905 which is, according to OHPO records, located near Eldean Road as a single

dwelling structure and barn and was constructed circa 1880 in a colonial revival style. The other listing (MIA0026201) on South Jay Road is a single dwelling structure with agricultural buildings and was constructed circa 1815 in a vernacular architectural style. The third is MIA0069201 located 611 feet south of the Alternate Route near the Stillwater River, as described above for the Preferred Route. The fourth is State Route 55 itself as mentioned above (MIA0137801). No NRHP-listed properties have been recorded within 1,000 feet of the Alternate Route.

There is one cemetery listed on the OHI within 1,000 feet of the Project. The West Branch Friends Cemetery is located approximately 654 feet south of the existing West Milton Substation.

Four Phase 1 Cultural Resource Management Surveys are listed within a study area of 0.5-mile around the Project centerline. These surveys were performed for the following projects: the West Milton Substation Upgrade (1990); the Transportation Project No. MIA-55-4.15 (1979); the Proposed 5.67-Mile Eldean 138 kV Transmission Project (1998); and the Proposed West Milton Low-Head Dam Removal and Stillwater River Restoration Project (2011).

Additional details regarding Cultural Resources may be found in the Cultural Resource Management Literature Review Report developed by POWER Engineers and being provided to the Ohio Power Siting Board ("Board") under separate cover.

2) Construction Impacts

No direct impacts to above ground cultural resources (i.e., cemeteries or historic structures) are anticipated from Project construction. Indirect impacts may result from visual effects. These potential effects are described in Section 4906-15-06(E)(3). Most of the Project Study Area lies within previously disturbed contexts including road ROW, existing utility ROW, and cultivated agricultural fields. The proposed Project has the potential to impact unknown prehistoric archaeological sites.

3) Operation and Maintenance Impacts

Impacts resulting from operation and maintenance of the proposed transmission line are not anticipated.

4) Mitigation Procedures

As described above, the proposed Project is not anticipated to directly impact known cultural resources within the study area, and no specific mitigation measures are proposed at this time.

Due to the potential for impacts to unknown prehistoric archaeological sites, POWER Engineers recommends that steps be taken to initiate a Phase 1 level archaeological investigation prior to Project actions when risks cannot be avoided through Project engineering design (pole structure placement to avoid ground disturbance at previously identified archaeological sites). The OHPO will be consulted on the need for a Phase I cultural resources survey.

(G) NOISE EMISSIONS

Noise is generally defined as unwanted sound. Noise can impact the human environment by interfering with speech, interfering with sleep, causing hearing loss, and causing physical or mental stress. Since a person's response to noise is subjective, it can vary from person to person. Levels that are considered acceptable or unacceptable are generally associated with various environments.

(1) Construction

Construction noise can be created from on-site and off-site sources. On-site noise sources would principally consist of the operation of heavy-duty diesel and gasoline-powered construction equipment. Off-site noise sources would include vehicles commuting to and from the job site, as well as from trucks transporting material to the staging areas or construction ROW. The following site and ground disturbing construction activities would be required to construct the new transmission line; 1) centerline surveyed and staked; 2) existing access roads improved only where necessary; 3) work areas cleared as needed; 4) materials distributed along centerline; 5) pole holes and or foundations installed, and poles erected; 6) ground wire, conductors installed; and 7) the site would be cleaned-up and reclaimed.

(a) Dynamiting or Blasting Activities: None anticipated.

(b) Operation of Earth Moving and Excavating Equipment: Noise levels from the equipment at distances of 50 feet are shown in Table 6-7. The maximum intermittent land based construction noise levels would range from approximately 80 to 90 dB(A) at 50 feet for supporting structure assembly and tamping operations. Direct noise impacts would result from construction activities occurring adjacent to sensitive receptors, such as houses and churches. However, this noise would be short-term, occurring mostly during daylight hours. It should be noted that noise levels are calculated based on the assumption that noise from a localized source is reduced by approximately 6 dB(A) with each doubling of distance from the source of noise. Noise impacts resulting from construction will be temporary. The anticipated duration of

the entire project is approximately 14 months, with noise-generating activities during construction limited to one to two weeks maximum at any particular location.

Table 6-7: Typical Construction Noise Sources

Construction Activity	Average Construction Activity Sound Level at 50 Feet from Source (dBA)
Compactors (Rollers)	74
Front Loaders	78
Backhoes	83
Tractors	86
Scrapers, Graders	87
Pavers	87
Trucks	88
Concrete Mixers	81
Concrete Pumps	82
Cranes (Moveable)	81
Cranes (Derrick)	87
Pumps	70
Generators	77
Compressors	81
Pneumatic Wrenches	86
Jack Hammers and Rock Drills	89
Pile Drivers (Peak)	100
Vibrators	75
Saws	77
Compactors (Rollers)	74
Front Loaders	78

Note: Sound level with all pertinent equipment operating (Bolt et al. 1971)

In comparison to these construction noise levels, the following are some typical levels for noise sources (standing adjacent to these sources) in a residential environment[1]:

- Refrigerator 42 dBA
- Microwave 57 dBA
- Kitchen Exhaust Fan 70 dBA
- Hairdryer 87 dBA

[1] Noise Pollution Clearinghouse Online Library, Typical Noise levels, www.nonoise.org.

- Clothes Washer 67 dBA
- Lawnmower 91 dBA
- Circular Saw 102 dBA

(c) Driving of Piles: None anticipated.

(d) Erection of Structures: Structures will be erected by vehicle-mounted cranes.

(e) Truck Traffic: Truck traffic is anticipated to be limited to construction equipment access and material delivery.

(f) Installation of Equipment: The equipment will be installed using standard practices and equipment.

(2) Operation and Maintenance

Power lines can generate a small amount of sound energy. The audible noise from line sources is composed of two components:

1. A broadband (random) component characterized as having high frequency content (different from more common environmental noises).
2. Pure tone (hum) components, most noticeably second and fourth harmonics of the power frequency are superimposed on the broadband noise.

No significant noise impacts are anticipated from the operation of the proposed transmission line. Noise impacts from maintenance operations will primarily related to vegetation management within the ROW and infrequent repairs to the structures, insulators, and conductors. Vegetation management activities will be short in duration and typically occur on a 5-year cycle. Overall, noise impacts generated by operation and maintenance activities are not anticipated to be significant.

(3) Mitigation Procedures

As the primary source of noise for the proposed Project will be a result of construction activities, emphasis will be placed upon maintaining construction equipment in proper working condition with functioning mufflers and performing construction activities during daylight hours. No additional mitigation is planned beyond what is described here.

(H) OTHER SIGNIFICANT ISSUES

There are no other significant socioeconomic or land use impact issues anticipated beyond those addressed elsewhere in this Application.

(I) REFERENCES

Bolt, Beranek & Newman (Prepared under contract for the EPA), Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 31, 1971.

Jin, S., Yang, L., Danielson, P., Homer, C., Fry, J., and Xian, G. 2013. A comprehensive change detection method for updating the National Land Cover Database to circa 2011. *Remote Sensing of Environment*, 132: 159 – 175.

Ohio Department of Natural Resources – Division of Watercraft, 2014. List of Ohio's Scenic Rivers. Available from http://watercraft.ohiodnr.gov/scenicrivers. (accessed 10/22/14)

U.S. Census Bureau; generated by Todd Chadwell; using American FactFinder; http://factfinder2.census.gov; (25 September 2014)

Appendix 6-1
Local Public Officials Served Copy of Certificate Application

APPENDIX 6-1

Public Officials Contacted and Officials to be Served
Copy of Certificate Application

Village of West Milton
Jason Tinnerman
Mayor
701 S. Miami Street
West Milton, OH 45383

Miami County Board of Commissioners

Ron Widener
Commissioner
201 West Main St.
Troy, OH 45373

Jack Evans
Commissioner
201 West Main St.
Troy, OH 45373

John W. O'Brien
Commissioner
201 West Main St.
Troy, OH 45373

Concord Township

Thomas N. Mercer
2625 Seneca Drive
Troy, OH 45373
937-308-2591

Don Pence
2751 Meadowpoint Drive
Troy, Ohio 45373
937-216-4211

William B. Whidden
2365 Black Oak Dr.
Troy, Ohio 45373
937-335-0431

APPENDIX 6-1 (continued)

Union Township

Jim L. Albaugh
Trustee
9497 Markley Road
Laura, Ohio 45337

William G. O'Brien
Trustee
9497 Markley Road
Laura, Ohio 45337

Philip S. Mote
Trustee
9497 Markley Road
Laura, Ohio 45337

Marjorie D. Coate
Trustee
9497 Markley Road
Laura, Ohio 45337

Appendix 6-2
Public Information Meetings

Dayton Power & Light's West Milton to Eldean 138kV Transmission Line Project

The Dayton Power and Light Company (DP&L) has plans to strengthen the transmission system within Miami County by proposing the construction of a new 17-mile, 138,000-volt (138 kV) transmission line from the existing West Milton Substation to the existing Eldean Substation located northwest of Troy, Ohio.

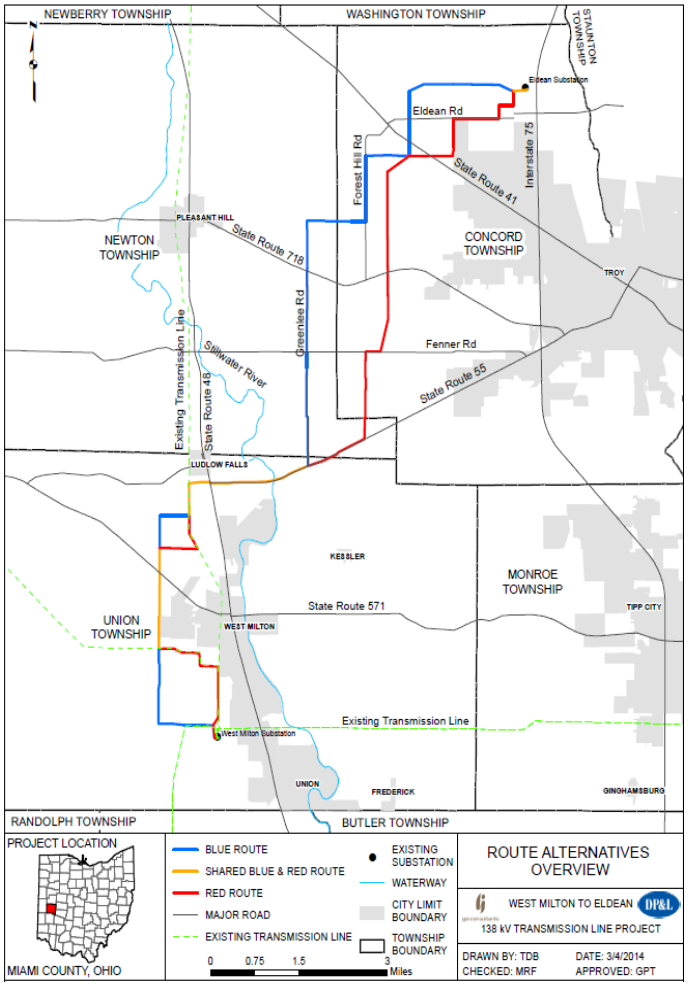
The proposed new 138 kV line will ensure that adequate transmission system voltages are maintained in the northwest area of the DP&L transmission system under various outage conditions, as required to comply with the mandatory Federal Energy Regulatory Commission (FERC)/North American Electric Reliability Corporation (NERC) reliability standards. The new line will improve service reliability to the customers in the area.

DP&L has extensively studied the general area between the two substations to identify multiple route options for the transmission line in an effort to minimize any impacts to sensitive areas and land uses. Based on the study's preliminary results, DP&L has identified the transmission line routes that are shown on the map.

These routes under consideration largely follow road right-of-way (often where electric distribution lines already exist) and DP&L's existing transmission line right-of-way (north and west of West Milton). The proposed routes were also designed to align with property lines. It is anticipated that the new line will be installed on single wood poles, with steel poles at select locations, averaging 65-90 feet in height.

The Ohio Power Siting Board (OPSB) is responsible for reviewing information for the project, including public comments and input, and determining whether to issue a Certificate of Environmental Compatibility and Public Need approving the project. DP&L plans to file an application with the OPSB in mid 2014 for the board's review and approval of the transmission line siting. The application will include a preferred and alternate route for most sections of the project area. If the application is approved by the OPSB, construction of the transmission line could begin in 2017.

Public comments will be accepted and considered by DP&L staff as part of the process of further evaluating the proposed routes. Interested parties may also send written comments or questions to: The Dayton Power and Light Company, ATTN: W. Milton-Eldean Project Team, 1900 Dryden Road, Area 420, Dayton, Ohio 45439, or request information or comment by leaving a message at 937-331-4314.



Estimated Project Schedule

2014	March - Open House Meeting
	April – Field Inspections
	June – OPSB Application
	TBD – OPSB Public Hearings
	TBD – OPSB Approval
2015	Easement Procurement
2016	Engineering & Material Procurement
2017	Construction
2018	Project In-Service

Dayton Power & Light's West Milton to Eldean 138kV Transmission Line Project

Points of Interest

Ohio Power Siting Board (OPSB) Process

The OPSB is a separate entity within the Public Utilities Commission of Ohio, which is authorized to review and approve applications to build major utility facilities. Before filing an application to build a facility, the company is required to hold a public informational meeting, during which company representatives inform stakeholders about the company's plans and gather public input for consideration in developing the application.

Once the company submits its application for the new facility, the OPSB staff reviews it for completeness. After OPSB staff has determined the application to be complete, legal notices will be published in newspapers in those areas impacted by the proposed facility. The legal notices will include a listing of area libraries where a copy of the application may be viewed. The application can also be viewed online by going to the OPSB Web site. Interested persons are encouraged to submit written comments to the Docketing Division, 180 E. Broad Street, 11th floor, Columbus, OH 43215.

OPSB staff will make a formal request for comments from other agencies and parties, and then make a recommendation to the full Board. After the OPSB staff makes its recommendation, formal public hearings are held. These hearings enable citizens, interest groups and governmental entities to present testimony.

The OPSB can be reached at:

- Phone: 1-866-270-6772
- Mailing Address: The Ohio Power Siting Board
  180 East Broad Street
  Columbus, Ohio 43215
- Website: http://www.opsb.ohio.gov/opsb

Field Inspections

Following the informational meeting, field inspections of the corridors will begin. The OPSB application process requires these inspections as part of the research of socioeconomic and ecological land use impacts. Property owners will be contacted before inspections occur to coordinate access where needed. Inspections are performed on foot and are non-invasive; however some minor random soil sampling will be taken.

Easement Procurement

Easement procurement is scheduled to take place in 2015, once a route has been approved. A representative will contact each affected property owner and explain specifically where the line will go and request an easement. Compensation is based on market value of the interest being purchased. In most cases, the landowner will be able to continue to use the property beneath the line in any manner not inconsistent with the operation of the transmission line. The Company will seek the right to trim trees and other vegetation from the area beneath and surrounding the line.

Construction

Interruption of electric service is not anticipated during the construction of the transmission line. In the event an outage is required, it would typically be on an individual basis to transfer facilities from old to new poles and of very short duration. We would notify affected customers beforehand.

Property/Crop Damage

While trees will need to be removed from the easement area, DP&L will work with property owners to restore land and landscaping back to their original condition following construction activities. Compensation will be made for lost crops resulting from related project activities.

Dayton Power & Light's West Milton to Eldean 138kV Transmission Line Project

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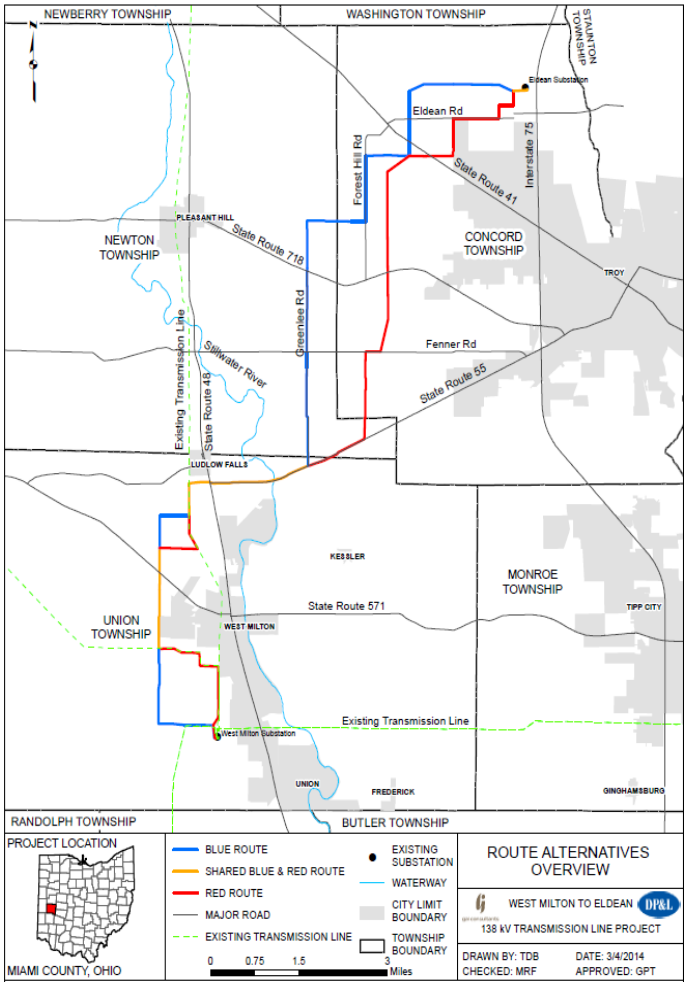

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2017	Construction
2018	Project In-Service

Dayton Power & Light's West Milton to Eldean 138kV Transmission Line Project

Points of Interest

Estimated Project Schedule

2014 July - Open House Meeting
August – Field Inspections
September – OPSB Application
TBD – OPSB Public Hearings
TBD – OPSB Approval
2015 Easement Procurement Start
2016 Engineering & Material Procurement
2017 Construction
2018 Project In-Service

Ohio Power Siting Board (OPSB) Process

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Notice of Public Information Meeting for Proposed Major Utility Facility

The Dayton Power and Light Company (DP&L) invites residents of Miami County and other interested members of the public to attend an informational open house to discuss its proposed West Milton-Eldean Transmission Line Project---a new 17-mile, 138,000-volt (138 kV) transmission line from the existing West Milton Substation to the existing Eldean Substation located northwest of Troy, Ohio.

The public informational open house will be held from 6 to 8 PM, Wednesday, July 9, in the Gymnasium at Concord Elementary School, 3145 State Route 718, Troy, Ohio 45373.

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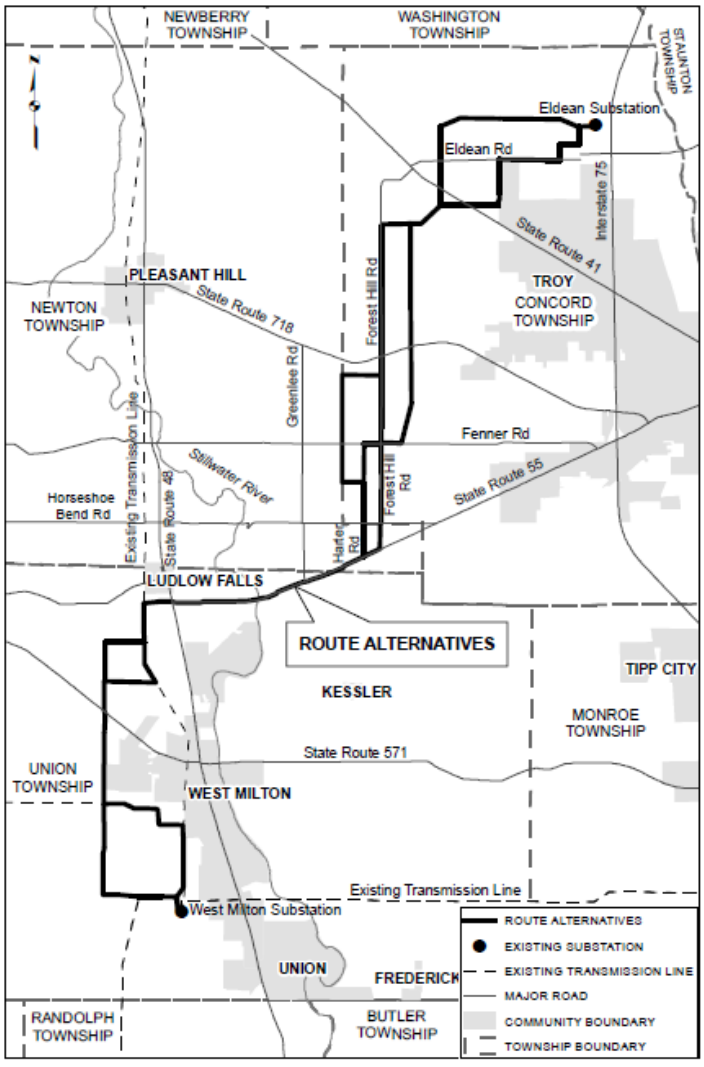
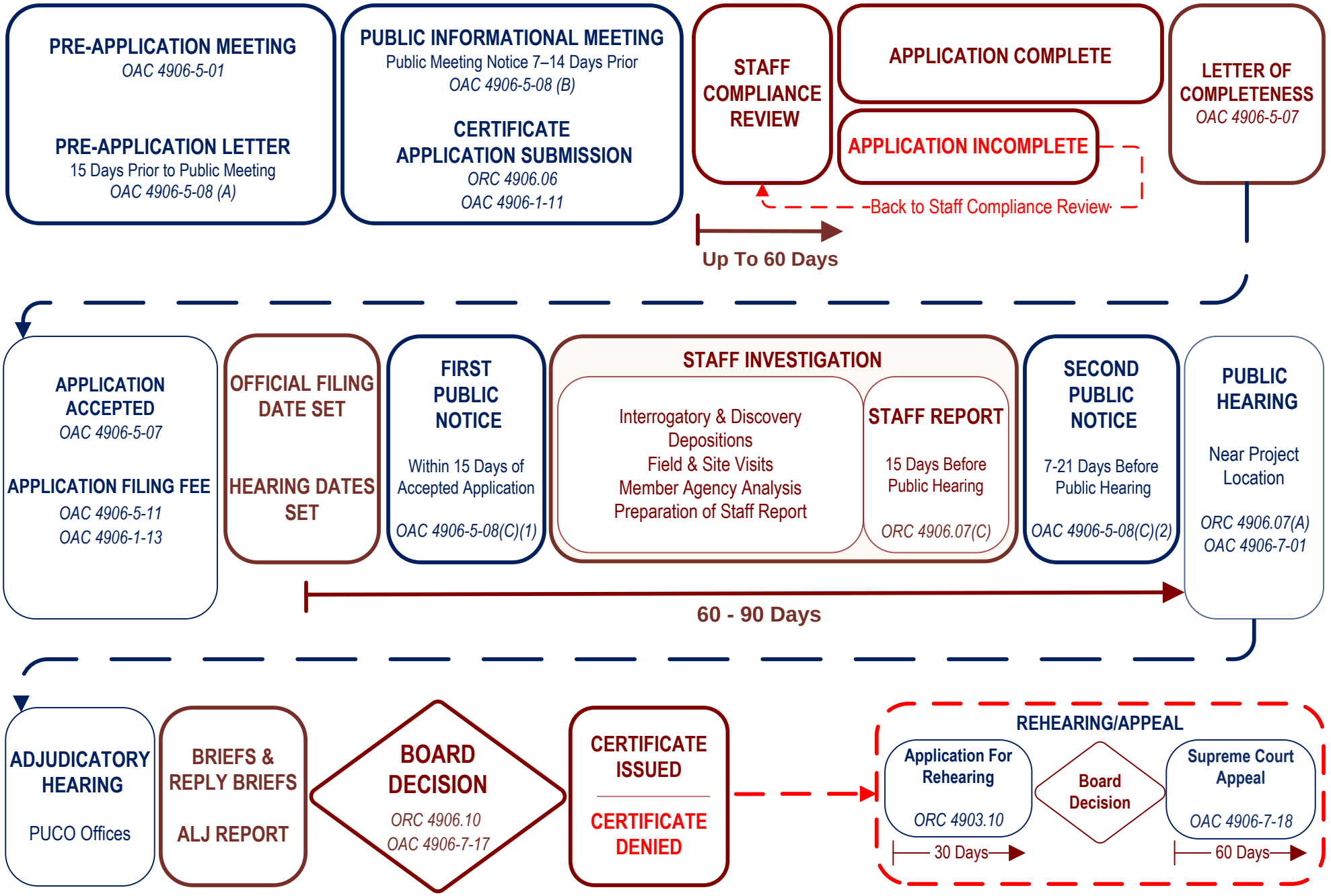


OHIO POWER SITING PROCESS FLOWCHART

(Statute/Rule References and Select Blocks are Clickable Internet Links)



October 2012

Construction and Operation are Monitored by the Board

Conditions of Certificate Apply for the Life of the Facility

Working Draft
Subject to Administrative Review

Summary: Application regarding West Milton - Eldean 138kV Transmission Line Project (Part 7 of 9) electronically filed by Mr. Michael A Hassay on behalf of Shamash, Hertzel Mr.