4906-5-07 HEALTH AND SAFETY, LAND USE, AND REGIONAL DEVELOPMENT

(A) HEALTH AND SAFETY

(1) Compliance with Safety Regulations

Duke Energy Ohio is committed to ensuring the safety and well-being of all workers involved with the construction of the proposed natural gas pipeline and members of the communities living or working nearby to the proposed centerline. The construction, operation, and maintenance of the Project will comply with or exceed specifications in all applicable safety regulations. These may include, but are not limited to, Code of Federal Regulations (CFR) Title 49, Part 191, "Transportation of Natural and Other Gas by Pipeline: Annual reports, Incident Reports, and Safety Related Condition Reports", Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards," and Part 199, "Drug and Alcohol Testing," Ohio Administrative Code Rule 4901:1-16. The Project will also comply all applicable safety standards established by Occupational Safety and Health Administration (OSHA).

(a) Construction

The pipeline will be installed to meet or exceed the specifications in the Title 49 CFR Part 192, OSHA, the Pipeline and Hazardous Materials Safety Administration (PHMSA), the National Electrical Safety Code, and Duke Energy Gas Engineering Specifications. "Class locations" are defined in 49 CFR 192.5, with Class 1 and Class 2 are defined as having lower density of dwellings or buildings within a specified distance and Class 3 and 4 having a higher density of dwellings and outdoor public areas. Class 4 locations comprise less than 20 percent of the Preferred Route and Alternate Route. Duke Energy plans to design and build the entire pipeline to design specifications and requirements for Class 4 locations, which specifications and requirements are the most stringent that apply to natural gas pipelines.

The Project will be designed and constructed in accordance with the following standards and procedures:

- Pipe will be inspected to ensure that it is constructed to CFR 192 standards.

- Each length of fusion-bonded epoxy coated pipe and other components will be visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage that could compromise the integrity of the pipe.

- Imperfections and damages, which impair serviceability of pipe, will be repaired or removed according to CFR 192.

- Pipe will be installed in trench on solid soil (firm support under pipe).

- Pipe will be backfilled in manner that will prevent damage to pipe and pipe coating from equipment or backfill.

- Minimum depth of cover for this project will be 4 feet for typical installation or depth listed in 192.327, which is greater than the required 3 feet of cover.

- Less than 50 feet from railroads the depth of cover will be a minimum of 6 feet, per AREMA Guidelines.

- The construction of the pipeline segment will be done under a quality assurance plan addressing pipe inspection, hauling and stringing, field bending, welding, non-destructive examination of girth welds, applying and testing the field applied coating, lowering of the pipeline into the trench, padding and backfilling, and hydrostatic testing.

- The quality assurance plan for applying and testing field applied coating to girth welds will be: (i) equivalent to that required under Part 192.112(f)(3) for pipe; and (ii) performed by an individual with the knowledge, skills, and ability to assure effective coating application.

- All girth welds on a new pipeline segment must be non-destructively examined in accordance with Part 192.243(b) and (c).

- The pipeline segment must not have experienced failures indicative of systemic material defects during strength testing, including initial hydrostatic testing. A root cause analysis, including metallurgical examination of the failed pipe, will be performed for any failure experienced to verify that it is not indicative of a systemic concern. The

results of this root cause analysis will be reported to each PHMSA pipeline safety regional office where the pipe is in service at least 60 days prior to operating at the alternative maximum allowable operating pressure. In the state of Ohio, an operator must also notify the State of Ohio pipeline safety authority as the natural gas pipeline is regulated by the OPSB.

- Induced current and corrosion will be addressed with anti-corrosion mitigation measures and corrosion protection.

- Welding will be performed by qualified welder or welding operator according to CFR 192 and American Petroleum Institute (API) 1104.

- Each welding procedure will be recorded in detail including the results of the qualifying tests. Records will be retained as required per applicable regulations.

- The welding operation will be protected from weather conditions that would impair the quality of the completed weld.

- Welding surfaces will be clean and free of any material that may be detrimental to the weld before welding.

- Welds will be visually inspected by qualified person.

- Nondestructive testing will be performed by qualified person on 100 percent of all welds.

- Welds that are unacceptable under the CFR 192.241(c) must be removed or repaired.

- Pipeline will be strength tested in accordance with CFR 192.

(b) Maintenance

The pipeline will be operated in accordance with CFR 192 and Duke Energy's Procedures Manual. Requirements include but are not limited to:

- No person may operate a segment of pipeline, unless it is maintained in accordance with this subpart.

- Each segment of pipeline that does not meet inspection standards must be replaced, repaired, or removed from service.
- Patrol program to observe surface conditions on and adjacent to the pipeline ROW for indications of leaks, construction activity, and other factors affecting safety and operation.
- Patrol in accordance with CFR 192.
- Perform leak surveys in accordance with CFR 192.
- Place line marker at crossings and where required in accordance with CFR 192.
- Keep and retain records for pipe repairs, inspections, and patrols in accordance with CFR 192.
- Repair in accordance with CFR 192.
- Inspect and test regulating station in accordance with CFR 192.
- Inspect valves in intervals specified by CFR 192.

(c) Operation

The pipeline will be operated in accordance with CFR 192 and Duke Energy's Procedure Manual. Requirements include but are not limited to:

- Prepare and follow procedural manual for operations maintenance and emergencies in accordance with CFR 192.
- Follow procedure for continuing surveillance of its facilities.
- Carry out a written program to prevent damage to the pipe from excavation activities.
- Establish written procedures to minimize the hazard resulting from a natural gas pipeline emergency in accordance with CFR 192.

- Develop and implement a written continuing public education program that follows the guidance provided in API 1162.

- Establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

- Not operate pipeline at a pressure that exceeds the maximum allowable operating pressure determine under CFR 192.

- Contain mercaptan odorant in accordance with CFR 192.

- Tap and purge in accordance with CFR 192.

- Have and follow written control room management procedures that implement requirements of CFR 192.

(2) Electric and Magnetic Fields

As a natural gas facility Application this is not applicable.

(3) Communication System Interference

As a natural gas facility Application this is not applicable.

(4) Noise from Construction, Operation, and Maintenance

(a) Blasting Activities

Blasting activities are not expected to be necessary during construction of the Project.

(b) Operation of Earth Moving and Excavating Equipment

During the construction phase of the Project, a temporary increase in noise will result from the equipment used for vegetation clearing, soil excavation, pipeline installation, and backfilling. Standard pipeline construction techniques will be used, equipment will be properly maintained, equipment operation will be confined to daytime hours, with the exception of specific instances where night construction is required to minimize impact to local businesses and/or traffic patterns, and noise-generating activities will be in compliance with applicable noise ordinances

and OSHA standards. The potential construction noise impact on nearby sensitive areas will be controlled and minimized to the greatest extent possible. The total duration of construction of the proposed natural gas pipeline is estimated at 12 to 16 months. Construction at any location near a given residential, commercial and other noise sensitive area is expected to require not more than a one-month duration. The preferred time of day restrictions for each type of area are listed below:

- Commercial Areas – outside of business hours to the extent possible.
- Industrial Areas – Dependent on facility schedule and requirements, preferred hours of operation are generally during the day but may require exceptions to work around specific loading and unloading times.
- Residential and Institutional Areas – activities will generally be restricted to daytime construction roughly between the hours of 8 a.m. and 4 p.m. Monday through Friday. Any weekend work will be planned to avoid interfering with the hours of any nearby houses of worship.
- With the exception of the regulating stations at either end of the Project, operation of the proposed natural gas pipeline will not produce any audible noise.

Routine maintenance of the pipeline may result in temporary noise impacts form earth disturbance and equipment. These activities will be limited to normal business hours and will continue only as long as the maintenance activity is necessary to ensure that the pipeline is operating safely and effectively.

(c) Driving of Piles, Rock Breaking or Hammering, and Horizontal Directional Drilling

Driving of piles is not anticipated during construction of the Project. Trenchless construction methods, including both horizontal directional drilling (HDD) and horizontal boring (*e.g.*, jack and bore), will be used in multiple locations as summarized in Tables 7-1 and 7-2. Trenchless construction will allow drilling or boring under sensitive areas such as streams and will also be used for installing pipe under roads and drives or where there is insufficient room to excavate the trench and install the pipe using side booms and/or where traffic patterns must be maintained. As mentioned previously, standard pipeline construction techniques will be used in

other areas, equipment will be properly maintained, equipment operation will generally be confined to daytime hours, with the exception of specific instances where night construction is required to minimize impact to local businesses and/or traffic patterns, and noise-generating activities will comply with applicable noise ordinances and OSHA standards.

TABLE 7-1
Preferred Route Proposed Trenchless Construction Locations

Trenchless Bore Number	Location/Name	Proposed Crossing Type	Reason
TB-1	Conrey Road	Bore	Avoid open cut of road
TB-2 (HDD)	Kemper Road	HDD	Unable to bore drainage swale with elevation differences and space constraints on south side
TB-3	Railroad Near Deerfield Road	Bore	Railroad (required)
TB-4	Deerfield Road at Fire Station	Bore	Avoid road disruption at fire station
TB-5	I-275	Bore	Trenchless construction required
TB-6	Cornell Road	Bore	Avoid open cut of road
TB-7	Millington Court	Bore	Avoid open cut of road
TB-8 (HDD)	Pfeiffer Road	HDD	Unable to bore box channel due to elevation differences and space constraints; avoid three stream crossings
TB-9	Ursuline Drive	Bore	Avoid open cutting school drive
TB-10	Kenwood Road at Pfeiffer Road	Bore	Avoid open cut of road
TB-11	Railroad at Glendale Milford Road	Bore	Railroad (required)
TB-12	Double railroad spurs	Bore	Railroad (required); avoid open cut of two streams
TB-13	Rail at Catalpa Creek Drive	Bore	Railroad (required)
TB-14	Rail at Cooper Road	Bore	Railroad (required)
TB-15	Cooper Road	Bore	Avoid open cut of road
TB-16	Hunt Road	Bore	Avoid open cut of road
TB-17	Highway 126	Bore	Trenchless construction required; limited space for HDD
TB-18	Alpine Avenue	Bore	Avoid open cut of road
TB-19	Rail Spur near Emerald Avenue	Bore	Railroad (required)
TB-20	Sycamore Road	Bore	Avoid open cut of road
TB-21	Kugler Mill Road	Bore	Avoid open cut of road

TABLE 7-1
Preferred Route Proposed Trenchless Construction Locations

Trenchless Bore Number	Location/Name	Proposed Crossing Type	Reason
TB-22	Railroad and Blue Ash Road	Bore	Railroad (required)
TB-23	Kenwood Road at Mall	Bore	Avoid open cut of road
TB-24	Montgomery Road	Bore	Avoid open cut of road
TB-25	Kenwood Road at South Mall	Bore	Avoid open cut of road
TB-26 (HDD)	Interstate 71	HDD	Trenchless construction required; elevation differences between road and banks require HDD
TB-27	Stewart Road	Bore	Avoid open cut of road
TB-28	Madison Avenue	Bore	Avoid open cut of road
TB-29	Hetzel Road	Bore	Avoid open cut of road
TB-30	Railroad at Red Bank Expressway	Bore	Railroad (required)
TB-31	Brotherton Road	Bore	Avoid open cut of road
TB-32	Erie Avenue	Bore	Avoid open cut of road
TB-33	Drive to Red Bank Village	Bore	Avoid open cut of road
TB-34	Cul-de sac at Red Bank	Bore	Avoid blocking drive to businesses
TB-35	Fair Lane	Bore	Avoid blocking drive to businesses
TB-36	Duck Creek	Bore	Cross stream - avoid open cut

TABLE 7-2
Alternate Route Proposed Trenchless Construction Locations

Trenchless Bore Number	Location/Name	Proposed Crossing Type	Reason
TB-1	Conrey Road	Bore	Avoid open cut of road
TB-2 (HDD)	Kemper Road	HDD	Unable to bore drainage swale with elevation differences and space constraints on South side
TB-3	Interstate 275	Bore	Trenchless construction required
TB-4	Grooms Road	Bore	Avoid open cut of road
TB-5	Reed Hartman Highway at P&G	Bore	Avoid open cut of road
TB-6	Cornell Road	Bore	Avoid open cut of road
TB-7	Reed Hartman Highway at Cornell	Bore	Avoid open cut of road
TB-8	Osborne Boulevard	Bore	Avoid open cut of road

TABLE 7-2
Alternate Route Proposed Trenchless Construction Locations

Trenchless Bore Number	Location/Name	Proposed Crossing Type	Reason
TB-9	Drive South of Osborn	Bore	Avoid open cut of road
TB-10	Reed Hartman Highway at Creek Road	Bore	Avoid open cut of road
TB-11	Creek Road	Bore	Avoid open cut of road
TB-12	Lake Forest Drive	Bore	Avoid open cut of road
TB-13	Glendale Milford	Bore	Avoid open cut of road
TB-14	Plainfield Road	Bore	Avoid open cut of road
TB-15	Glendale Milford at Plainfield	Bore	Avoid open cut of road
TB-16	Woodleigh Lane	Bore	Avoid open cutting road and restricting access
TB-17	Sharondale Road	Bore	Avoid open cut of road
TB-18	Wyscarver Road	Bore	Avoid open cut of road
TB-19	Reading Road	Bore	Avoid open cut of road
TB-20	Mill Creek (at Glendale Milford)	Bore	Avoid open cut of Mill Creek
TB-21	Glendale Milford at Mill Creek	Bore	Avoid open cut of road
TB-22	Railroad at Formica	Bore	Railroad (required)
TB-23	Formica Plant 1	Bore	Avoid risk of damage to overhead structures with open cut construction equipment.
TB-24	Formica Plant 2	Bore	Avoid risk of damage to overhead structures with open cut construction equipment.
TB-25 (HDD)	Mill Creek	Bore	Trenchless construction required. Wide and probably deep crossing with room for HDD; avoid open cut of stream.
TB-26	Bore Between Silo	HDD	No space for traditional open cut construction
TB-27	Railroad at Reading	Bore	Railroad (required)
TB-28	Railroad at East Mechanic	Bore	Railroad (required)
TB-29	Railroad at Merill Lane	Bore	Railroad (required)
TB-30	East Galbraith and Rail	Bore	Railroad (required)
TB-31	Sunnybrook Drive	Bore	Avoid open cut of road
TB-32	Section Road	Bore	Avoid open cut of road
TB-33	Rail Spur	Bore	Railroad (required)
TB-34	Railroad at Losantiville Avenue	Bore	Railroad (required)

TABLE 7-2
Alternate Route Proposed Trenchless Construction Locations

Trenchless Bore Number	Location/Name	Proposed Crossing Type	Reason
TB-35	Losantiville Avenue	Bore	Avoid open cut of road
TB-36	Langdon Farm Road	Bore	Avoid open cut of road

Rock breaking and hammering activities will occur at all locations where pavement installation is required and appropriate time of day restrictions will be in place to limit the noise disturbance to the public.

The preliminary HDD locations are limited to industrial areas, commercial areas, and the I-71 vicinity. HDD requires a continuous drilling process to ensure the hole does not collapse or cave in. Once drilling commences, it will not end until complete. HDD installation is not currently proposed beneath any wetlands along either proposed route but will be used to traverse under roads, railroads, and some surface waters. During HDD installation, there is a chance of frac-out where the drilling mud comes to the surface. Frac-out chances depend on soil type and other subsurface conditions. Frac-out contingency plans will be in-place for Duke Energy Ohio personnel and contractors to respond if a frac-out occurs. Space constraints near most of the wetlands limit the ability to install pipe by the HDD method since more space for drill rigs and pipe pull-back is required. All proposed HDD and other trenchless construction (bores beneath roads, streams, etc.) locations are presented in Table 7-1 and 7-2 for the Preferred Route and Alternate Route, respectively. The location of each HDD and bore is depicted on Figure 7-2.

(d) Erection of Structures

Temporary noise impacts will result from the construction or expansion of two structures and at least two valve stations. All associated structures will be pre-manufactured. Erections of structures will merely be bolting. Excess noise is not anticipated at these locations during construction. Standard construction techniques will be used, equipment will be properly maintained, equipment operation will be confined to daytime hours, with the exception of specific instances where night construction is required to minimize impact to local businesses and/or traffic patterns, and noise-generating activities will be in compliance with applicable noise ordinances and OSHA standards.

A new station (Highpoint Regulation Station) will be constructed adjacent to the existing Duke Energy Ohio WW Feed Station that will serve to regulate the pressure down to below 400 PSIG from the existing C314 line pressure and provide additional odorization of pipeline natural gas. The proposed C314V pipeline will tie into Duke Energy Ohio's existing C314 natural gas pipeline at this point, with the Highpoint Station serving as the beginning of the proposed Project. A new pig launcher will be built to serve the new C314V line and will be located behind the former Green Bay Packaging facility at 7660 School Road at the northern terminus of the Project.

A second regulating station (Fairfax Station) will be located at the southern end of the proposed C314V pipeline, approximately 13 miles southwest of the existing WW Feed Station. This station will serve to reduce pressures to less than 200 PSIG before outletting to Line V and will include the installation of a pig receiver. Along the Preferred Route, this station is tentatively planned to be located along Red Bank Road. The proposed C314V pipeline will tie into Duke Energy Ohio 's existing Line V at this location. If the Alternate Route is selected, any additional required equipment is planned to be an expansion to the existing Norwood Station located on Seymour Road.

In addition to the two aforementioned regulation stations for the Preferred Route or station expansion for the Alternate Route, a minimum of two above-ground mainline valve stations will be installed along the proposed C314V pipeline. In accordance with 49 CFR 192, these mainline valve stations will be located no greater than five miles apart. The exact locations of mainline valve stations will be determined in the detailed engineering design phase.

(e) Truck Traffic

A temporary increase in noise due to truck traffic is anticipated during the construction phase of the Project. The temporary increase in traffic will be related to movement and delivery of construction equipment and materials. Some nighttime work and lane closures will likely be required for Project construction to help minimize overall construction impacts. No other additional traffic-related noise impacts are anticipated during operation of the pipeline, beyond periodic mowing or vegetation removal from the ROW where required.

(f) Installation of Equipment

Installation of equipment will be limited to the stations at the north and south of the pipeline and at the two valve stations along the route. All stations are located in commercial/industrial areas. Installation of equipment will have minimal noise and will be primarily skid mounted. Any construction noise generated by these activities will be temporary and limited to normal business hours.

(B) LAND USE

(1) Map of the Site and Route Alternatives

An applicant for a Certificate of Environmental Compatibility and Public Need is required to evaluate both the Preferred and Alternate Routes within the Application. Maps at 1:24,000-scale, including the area 1,000 feet on either side of the centerline are presented as Figures 7-1A through 7-1F and include the following information:

- Centerline and right-of-way for each pipeline route alternative;
- Proposed location of new structures (regulation stations and valve stations);
- Land use types;
- Road names;
- Structures; and
- Incorporated areas and population centers.

(2) Impact on Identified Land Uses

Land use in the area crossed by the proposed route alternatives is generally a mix of commercial, industrial, residential, and minimal undeveloped forested and open land typical of suburban metropolitan areas. As both route alternatives move generally from north to south, the topography becomes more varied with hills, ridgetops and valleys, adding challenges to the construction of these sections of the pipeline.

Comparisons of the various land use types and land use features for both route alternatives are included in Tables 7-3 through 7-5. The calculations (*e.g.*, linear feet, acreage, and percentages) of each land use type crossed by the proposed route alternatives (including land uses within the 80-foot-wide construction work area [CWA] and the 30-foot-wide permanent ROW) were

determined using GIS software applications and land use data provided by the Cincinnati Area Geographic Information System. The potential disturbance area during construction activities (*e.g.*, vegetation clearing, pipeline trenching, etc.) consists of the maximum 80-foot-wide construction ROW. The CWA will be re-graded to pre-construction conditions and seeded.

The 80-foot wide maximum CWA along the pipeline is preliminary and conceptual as of this Application submittal. The CWA will be refined once the final route is approved and detailed engineering design and construction plans commence. The use of the 80-foot CWA for purposes of this Application allows for a relative comparison of the various types of land use settings that are present and the approximate extent of areas that may be disturbed during construction of either the Preferred or Alternate Route.

TABLE 7-3
Length and Percent of Land Uses Crossed by Centerline of Route Alternatives

Land Use	Preferred Route		Alternate Route	
	Linear Feet	Percent	Linear Feet	Percent
Delineated Pond	-	-	-	-
Delineated Stream	191	0.3%	288	0.4%
Delineated Wetland	657	0.9%	806	1.2%
Educational	2,459	3.5%	1,420	2.1%
Industrial/Commercial	30,811	43.6%	31,330	45.6%
Institutional	-	-	11	0%
Parks and Recreation	6,305	8.9%	3,171	4.6%
Pavement[a]	19,868	28.1%	17,275	25.1%
Residential	1,871	2.7%	3,516	5.1%
Undefined	437	0.6%	777	1.1%
Woodlots	8,060	11.4%	10,196	14.8%
Total	70,659	100%	68,790	100%

[a] Pavement represents road ROW

TABLE 7-4
Acreage and Percent of Land Uses Crossed by Route Alternatives

Land Use	Preferred Route				Alternate Route			
	CWA[b] Acres	CWA Percent	ROW Acres	ROW Percent	CWA Acres	CWA Percent	ROW Acres	ROW Percent
Delineated Pond	0.06	0.05%	0.01	0%	0.13	0.1%	0.01	0.0%

TABLE 7-4
Acreage and Percent of Land Uses Crossed by Route Alternatives

Land Use	Preferred Route				Alternate Route			
	CWA[b] Acres	CWA Percent	ROW Acres	ROW Percent	CWA Acres	CWA Percent	ROW Acres	ROW Percent
Delineated Stream	0.62	0.5%	0.13	0.3%	0.45	0.4%	0.20	0.4%
Delineated Wetland	1.51	1.2%	0.51	1.0%	1.06	0.8%	0.45	1.0%
Educational	4.15	3.2%	1.72	3.6%	2.39	1.9%	0.91	1.9%
Industrial/Commercial	51.63	39.9%	21.01	43.2%	51.86	40.7%	21.16	44.7%
Institutional	0.18	0.1%	0.001	0.0%	0.66	0.5%	0.11	0.2%
Parks and Recreation	11.08	8.6%	4.29	8.8%	5.01	3.9%	2.13	4.5%
Pavement[a]	35.35	27.3%	13.55	27.9%	34.57	27.1%	12.11	25.6%
Residential	7.01	5.4%	1.47	3.0%	7.25	5.7%	2.53	5.3%
Undefined	0.29	0.2%	0.18	0.4%	3.44	2.7%	0.44	0.9%
Woodlots	17.62	13.6%	5.75	11.8%	20.66	16.2%	7.35	15.5%
Total	**129.51**	**100%**	**48.63**	**100%**	**127.48**	**100%**	**47.40**	**100%**

[a] Pavement represents road ROW

[b] CWA – Construction Work Area (80-foot wide construction area corridor)

TABLE 7-5
Number of Land Use Features Near the Route Alternatives

	Route Alternatives	
	Preferred	Alternate
Length (in miles)	13.4	13.0
Features within 100 feet of Route Alternatives (centerline)		
Historic Structures (Ohio Historic Structures)	2	N/A
National Register of Historic Places	N/A	N/A
Previously Identified Archaeological Sites	0	0
Residences	157	198
Other Sensitive Land Uses[a]	6	4
Features within 1,000 feet of Route Alternatives (centerline)		
Historic Structures (Ohio Historic Structures)	42	12
National Register of Historic Places	N/A	1
Previously Identified Archaeological Sites	0	5
Residences	3,749	2,625

TABLE 7-5
Number of Land Use Features Near the Route Alternatives

	Route Alternatives	
	Preferred	**Alternate**
Other Sensitive Land Uses[a]	44	34
Structures within 200 feet of the Edge of Preliminary Permanent ROW (preliminary ROW is 30-feet wide)	633	694

[a] Other sensitive land uses include airports, parks, state forests, schools, hospitals, churches, and cemeteries.

Because the Project consists primarily of a buried pipeline, land uses within the CWA and ROW will generally remain unchanged. The majority of land use impacts are temporary and consist of surface disturbance during construction. Some permanent land use impacts will occur in selected areas due to of vegetation clearing within the ROW and conversion of wooded or shrub habitat to herbaceous ground cover. However, in most cases property owners may continue to utilize most of the ROW area for general uses that will not affect the safe and reliable operation of the pipeline.

(a) Residential

Preferred Route: The Preferred Route centerline is located within 1,000 feet of 3,749 residences and within 100 feet of 157 residences. As shown in Table 7-4, residential areas make up approximately 3.0 percent of the Preferred Route permanent ROW (30-foot width) acreage.

Alternate Route: The Alternate Route centerline is located within 1,000 feet of 2,625 residences and within 100 feet of 198 residences. As shown in Table 7-4, residential areas make up approximately 5.3 percent of the Alternate Route permanent ROW acreage.

Although the Preferred Route is within 1,000 feet of more residences than the Alternate Route, the Preferred Route directly affects less residential land than the Alternate Route. Only 1,871 linear feet of pipeline would be located on residential land under the Preferred Route scenario, compared to 3,516 linear feet of the Alternate Route located on residential land. This is largely due to the fact that residential land use along the Alternate Route is in older, denser communities leaving less options of avoiding direct impacts to residential properties.

(b) Industrial/Commercial

Preferred Route: Industrial or commercial land uses make up approximately 43.2 percent of the Preferred Route permanent ROW acreage. This represents the largest proportion of land use within the Preferred Route ROW. The Preferred Route centerline crosses 30,811 feet (43.6 percent of the total length) of land classified as industrial or commercial.

Alternate Route: Industrial or commercial land uses make up approximately 44.7 percent of the Alternate Route permanent ROW acreage. The Alternate Route centerline crosses 31,330 feet (45.6 percent of the total length) of land classified as industrial or commercial.

(c) Educational

Preferred Route: Educational land uses make up approximately 3.6 percent of the Preferred Route permanent ROW acreage

Alternate Route: Educational land uses make up approximately 1.9 percent of the Alternate Route permanent ROW acreage

(d) Institutional

Preferred Route: Institutional land uses make up approximately 0.0 percent of the Preferred Route ROW acreage.

Alternate Route: Institutional land uses make up approximately 0.2 percent of the Alternate Route ROW acreage.

(e) Parks and Recreation

Preferred Route: Parks and recreational land uses make up approximately 8.8 percent of the Preferred Route permanent ROW acreage.

Alternate Route: Parks and recreational land uses make up approximately 4.5 percent of the Alternate Route permanent ROW acreage.

(f) Pavement

Preferred Route: Paved areas (*e.g.*, road ROW) make up approximately 27.9 percent of the Preferred Route permanent ROW acreage.

Alternate Route: Paved areas (*e.g.*, road ROW) make up approximately 25.6 percent of the Alternate Route permanent ROW acreage.

(g) Woodlots

Preferred Route: Woodlots make up approximately 11.8 percent of the Preferred Route permanent ROW acreage.

Alternate Route: Woodlots make up approximately 15.5 percent of the Alternate Route permanent ROW acreage.

(3) Impact on Identified Nearby Structures

(a) Structures Within 200 Feet of Proposed Right-of-Way

There are 633 structures (residences, commercial businesses, etc.) within 200 feet of the proposed permanent ROW (30-foot width of the Preferred Route). There are 694 structures within 200 feet of the proposed permanent ROW of Alternate Route. The individual structures and their distances from the proposed permanent ROW boundary are listed in Appendix 7-1 (Table 7-1A and Table 7-1B for the Preferred Route and Alternate Route, respectively) and are illustrated on Figure 7-2. The Figure 7-2 map also indicates the preliminary and temporary construction work areas along the corridors, temporary staging areas, temporary access roads, valve stations, and regulation stations. These facilities and construction areas, which is required to be shown on a map by O.A.C. 4906-5-05(B)(2)(a), are based on preliminary engineering and are best illustrated on this Figure 7-2 map.

(b) Destroyed, Acquired, or Removed Buildings

The potential removal of structures within the proposed ROW was mitigated during the route selection studies of the Preferred and Alternate Routes through the placement of route centerlines. It is unlikely that construction of the Preferred or Alternate Routes will require the removal of any residential or commercial structures.

(c) Mitigation Procedures

Duke Energy Ohio's acquisition of both the temporary construction easement and permanent easement for the Project's facilities (pipeline, valve stations, regulation stations) will be sufficient to avoid or minimize impacts to structures near the planned facilities.

(C) AGRICULTURAL LAND IMPACTS

Neither route alternative crosses any agricultural land or Agricultural Districts. Hence, neither will result in any impacts to such areas.

(1) Agricultural Land Map

Not applicable as there are no Agricultural District Lands affected by the Project.

(2) Impacts to Agricultural Lands and Agricultural Districts

CH2M, as an agent of Duke Energy Ohio, contacted the Hamilton County Auditor to obtain information on the location and ownership of any current Agricultural District lands. The centerline of the Preferred Route crosses no Agricultural District parcels. The Preferred Route is not within 1,000 feet of any Agricultural District parcels in Hamilton County. The centerline of the Alternate Route crosses no Agricultural District parcels. The Alternate Route is not within 1,000 feet of any Agricultural District Parcels. The provided data fulfills the requirement of OAC 4906-5-07 (C)(1)(b), which states this data must be collected not more than 60 days prior to submittal.

(a) Acreage Impacted

Neither route alternative crosses any agricultural land or agricultural districts and, therefore, neither will result in any impacts to such areas. The assessment of agricultural land use was based on available GIS data, aerial imagery, and field observations. The assessment of agricultural districts is based on direct communication with the Hamilton County Auditor's office.

(b) Evaluation of Construction, Operation, and Maintenance Impacts

Not applicable as there are no Agricultural District Lands affected by the Project.

(c) Mitigation Procedures

Not applicable as there are no Agricultural District Lands affected by the Project.

(D) LAND USE PLANS AND REGIONAL DEVELOPMENT

This section of the Application provides information regarding land use plans and regional development.

(1) Impacts to Regional Development

The Project will help ensure the long-term reliability of the Duke Energy Ohio natural gas system. This will benefit all customers in the southwest Ohio area by helping to maintain pipeline pressures and natural gas supplies.

The Project is likely to have a small but positive impact on regional development within southwest Ohio through the increased reliability and availability of natural gas throughout the region. The proposed Project will help secure current and future natural gas supplies for customers in the southwest Ohio region. Duke Energy Ohio's projections indicate that the existing distribution system, which includes the propane-air peaking plants, may not be able to meet the increased demand for natural gas in the long-term planning horizon, and without this Project additional natural gas services curtailments would be expected in the future. No long-term negative impacts to regional development are foreseen for the Project, although there are expected to be short-term construction impacts to local residents and businesses due to the highly developed nature of the Project area.

In the 2012 document, "Plan Cincinnati: A Comprehensive Plan for the Future (Plan Cincinnati)," utilities and infrastructure are cited as one of the 12 basic building-blocks of Cincinnati's future. Three initiatives to "Connect", "Sustain", and "Collaborate" are specifically called-out in Plan Cincinnati as they pertain to utilities and infrastructure. Under the "Sustain" initiative, Plan Cincinnati's stated goal is to "Steward resources and ensure long-term vitality" (City of Cincinnati, 2012). This goal is consistent with the Project objective to design and construct the pipeline in a way that minimizes impacts to resources and provides sustainable natural gas infrastructure for southwest Ohio, including Cincinnati, into the future.

The 2004 Hamilton County "2030 Plan and Implementation Framework" identified strategies for implementing major initiatives recommended to achieve a shared vision for the County. Under Initiative 30 (Coordinated Planning and Infrastructure), Strategy 30.1 states:

> *Work with local jurisdictions and support efforts to coordinate infrastructure projects such as sewers, road paving, bridge replacement, and utility improvements.*

As described in the ”2030 Plan and Implementation Framework, Strategy 30.1” addresses the two goals of building collaborative decision-making and balancing development and the environment (Hamilton County, 2004).

(2) Compatibility of Proposed Facility with Current Regional Land Use Plans

Utility projects generally do not significantly impact land use plans. The Project area is highly developed and generally built out. The Project will not change land uses or prevent development of areas within the Project area. In fact, the continued reliable natural gas supply provided as part of the Project will benefit the existing and future customers in the area.

Town and city land use planning documents were reviewed when analyzing the potential impacts of the route alternatives. The majority of land use documents available were zoning regulations. As shown in Tables 7-3 and 7-4, the majority of both the Preferred and Alternative Routes is proposed within industrial or commercial areas. In general, the route alternatives were designed to avoid sensitive areas and maintain consistency with applicable land use plans and zoning regulations. For example, within the City of Blue Ash, Duke Energy Ohio has sited portions of the Alternate Route along Reed Hartman Highway; an area identified in the 2003 Blue Ash Comprehensive Plan as an "Urban Design Corridor" where commercial, office, and light industrial uses are appropriate. Buildings located in the Reed Hartman Highway Urban Design Corridor require a minimum front setback of 50 feet, which provides a wide undeveloped area that may be utilized for siting of a pipeline. By siting portions of the Alternate along the Reed Hartman Highway Urban Design Corridor, dense residential areas and other sensitive land uses are avoided to the extent possible.

(E) CULTURAL AND ARCHAEOLOGICAL RESOURCES

CH2M, as an agent of Duke Energy Ohio, conducted a literature review of known cultural resources, which included data from the Ohio State Historic Preservation Office (OHPO)’s online mapping system.

(1) Cultural Resources Map

Within Section 4906-5-05 of this Application, Figure 5-1 consists of a map of 1:24,000 scale which illustrates, among other features, the previously recorded cultural resource sites within 1,000 feet of the proposed centerline of both the Preferred and Alternate Route. Based on the

cultural resources desktop study, there are no scenic rivers or scenic routes/byways (as defined by the Ohio Department of Natural Resources and/or the Ohio Department of Transportation) within 1,000 feet of the proposed routes). There is one National Register of Historic Places (NRHP) district and one Determination of Eligibility (DOE) structure (based on OHPO files) within 1,000 feet of the Alternate Route. The NRHP district, the Cincinnati Street Gas Lamps, contains 1,109 street lamps at various locations throughout Cincinnati. Near the Alternate Route, portions of this NRHP district occur approximately 600 to 700 feet west of the alignment in Roselawn. One DOE structure is located 530 feet east of the Alternate Route, along Wiehe Road.

The proposed permanent ROWs of the Preferred Route and Alternate Route cross 4.29 acres and 2.13 acres of recreational areas (parks, golf courses, etc.), respectively. Construction in these areas will be planned to occur outside of the seasonal use windows. These recreational areas will also be fully restored once construction is complete so that long-term use of these areas is unaffected by the Project.

Although not listed in the NRHP, it is important to note that two cemeteries are located within 1,000 feet of the Preferred Route, and one cemetery is located within 1,000 feet of the Alternate Route.

(2) Cultural Resources in Study Corridor

Cultural resources investigations to date have involved background research utilizing data files from the OHPO online mapping system for both the Preferred and Alternate Routes. This data was used to construct a consultation letter to the OHPO.

For the background research, a one-mile buffer was used around both the Preferred and Alternate Routes to identify these previously known cultural resources and to provide information on the probability of identifying cultural resources within the Project footprint. The OHPO online mapping database included a review of the Ohio Archaeological Inventory (OAI), the Ohio Historic Inventory (OHI), DOE files, NRHP properties, historic cemeteries, historic bridges, National Historic Landmarks (NHL), and previous cultural resources surveys.

For the Preferred Route, within one mile, there were 20 OAI sites, 147 OHI resources, four DOE files, five NRHP properties, 15 cemeteries, four historic districts and one NHL. Of these, ten

resources are in close proximity to the Preferred Route. CH2M closely examined the resources' mapped locations against modern street photography and discovered the following anomalies:

- The EB Thompson House (OHI #HAM0501550) at 11802 Conrey Road in Sharonville is no longer standing. Modern office buildings now stand at this location.

- The Sara Keeler House (OHI # HAM0412050) at 7360 East Kemper Road in Sycamore Township dates from 1875 according to OHI information; however, the house that currently stands at this location dates from the late 20th century.

- The Thomas Stewart House (OHI # HAM0412250) at 7387 East Kemper Road in Sycamore Township is no longer extant, having been replaced by a modern professional services complex.

- The Thomas Stewart Store (OHI # HAM0412550) at 7475 East Kemper Road in Sycamore Township has been demolished. It is now an empty lot.

- The Ferris House (OHI #HAM0282750) at 4710 Cooper Road in Blue Ash has been demolished. It is now an empty lot.

- The Stephenson House (OHI # HAM0283850) at 4654 Hunt Road in Blue Ash dates from 1900, according to OHI data. The house at this location dates from circa 1960s.

- OHI # HAM0414750 at 4458 Sycamore Avenue in Rossmoyne is described as a 1910 dwelling based on OHI data. The building that stands at this location is a possible c1930s garage.

- The William Morrison House (OHI # HAM0398457) at 5573 Red Bank Road in Columbia Township has been demolished. It is currently an empty lot.

- The Usual Ward Methodist Churchyard (OGSID # 4583) along Red Bank Road is now a modern development.

- Dedrick Farm, just south of Usual Ward Methodist Churchyard, is a modern industrial facility.

The review of modern street photography indicates that the closest known cultural resources appear to have been destroyed and/or replaced by modern development. As a result, no known cultural resources were identified within the Project footprint of the Preferred Route.

For the Alternate Route, within one mile, there were 13 OAI sites, 431 OHI resources, 15 DOE files, four NRHP properties, ten cemeteries, and two historic districts. While none of the aforementioned cultural resources was within the Project footprint, two OHI structures are near (within 200 feet) the Alternate Route. HAM0522550 is a Vernacular style residence with a date of circa 1860. It is located along Market Street, and still appears to be extant. HAM0525050 (the Nevison-Weiskopf Company) is recorded as a Mill/Processing/Manufacturing Facility circa 1906. Its location on aerial mapping is just west of Third Street, in an empty field, implying that it is no longer extant. However, the OHI form lists the address for this facility as Reading Road, which is further to the west farther away from the Alternate Route, so it is possible that this resource is mapped incorrectly in the OHPO database.

Based on the background research, no known cultural resources were identified within the Project footprint of the Alternate Route.

A cover letter and an OHPO Section 106 Review – Project Summary Form will be submitted by late September 2016 to the OHPO requesting preliminary comments on additional cultural resources work for the Project. This initial consultation will include project information along with maps of the Preferred and Alternate Route, and a summary of the known cultural resources within 1 mile of the routes. Any additional cultural resource work as required by the OHPO is planned to only be conducted on the approved route, either Preferred or Alternate.

(3) Construction, Operation, and Maintenance Impacts on Cultural Resources

Based on the results of the background research, impacts to known cultural resources associated with the construction, operation and maintenance of the proposed Project are not anticipated. The applicant will consult with the OHPO to determine the need for additional studies, if any.

(4) Mitigation Procedures

Based on the results of the background research, no impacts to historic properties are anticipated as a result of the Project; therefore, no mitigation is proposed.

(5) Aesthetic Impact

(a) Visibility of the Proposed Facility

The Project is a buried pipeline, so visibility will be limited to the cleared ROW and pipeline markers. In the urban portions of the Project area, once installed the pipeline will not be otherwise visible with the exception of the occasional pipeline marker. The valve stations and regulating stations will be visible including a security fence surrounding each facility.

(b) Facility Effect on Site and Surrounding Area

The construction of the Project will be visible, as the trenching, welding and installation activities are out of the ordinary for many areas. Trees and woody vegetation will be removed where they occur within the permanent ROW (a planned width of 30 feet). The degree of visual impact will vary with the viewer and is largely dependent on the degree of natural and built environment existing before construction, and the general existing and final landscape. Once construction is complete, the trench will be backfilled and seeded, or recovered with concrete/asphalt (as appropriate based on pre-construction conditions).

(c) Visual Impact Minimization

Duke Energy Ohio does not anticipate significant long-term visual impacts from the proposed Project. The ROW will be restored and re-seeded using accepted pipeline industry standards and as required by property owners. Once vegetation is re-established in natural areas, and asphalt/concrete is restored in built areas, the pipeline corridor will blend in with its surroundings to varying extents. Marker poles are required to identify the line location, which would otherwise be largely undetectable.

(F) REFERENCES

City of Blue Ash. 2003. City of Blue Ash Comprehensive Plan. http://www.blueash.com/document_center/2003_Comprehensive_Plan.pdf. Accessed May 2, 2016.

City of Cincinnati. 2012. Plan Cincinnati: A Comprehensive Plan for the Future. http://www.cincinnati-oh.gov/planning/plan-cincinnati/. Accessed May 2, 2016.

Hamilton County. 2004. 2030 Plan and Implementation Framework. http://www.hamiltoncountyohio.gov/pd/planning/pdf/compass/17es.pdf. Accessed May 2, 2016.

APPENDIX 7-1

List of Structures Within 200 Feet of Preliminary Right of Way of Preferred and Alternate Routes

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1	Residence	170
2	Industrial	160
3	Commercial	123
5	Manufacturing	140
6	Residence	70
7	Commercial	18
8	Manufacturing	84
9	Commercial	108
10	Manufacturing	41
11	Manufacturing	0
12	Residence	0
13	Commercial	51
14	Commercial	50
15	Commercial	83
16	Commercial	105
17	Commercial	141
18	Commercial	135
19	Commercial	192
20	Commercial	120
21	Residence	119
22	Commercial	108
23	Commercial	109
24	Commercial	14
25	Commercial	118
26	Commercial	57
27	Industrial	25
28	Commercial	98
29	Commercial	25
30	Commercial	26
31	Commercial	72
32	Commercial	120
33	Commercial	71
34	Commercial	150
35	Commercial	142
36	Commercial	78
37	Commercial	19
38	Commercial	58
39	Commercial	0
40	Industrial	0
41	Commercial	103
42	Manufacturing	70
43	Commercial	33
44	Industrial	72
45	Industrial	72
46	Industrial	32
47	Industrial	77
48	Industrial	173
49	Commercial	107
50	Industrial	75
51	Commercial	29
52	Industrial	108
53	Industrial	154
54	Industrial	8
55	Industrial	69
56	Commercial	37
57	Commercial	65
58	Commercial	115
59	Commercial	164
60	Manufacturing	36
61	Commercial	39
62	Residence	64
63	Commercial	13
64	Manufacturing	143
65	Industrial	13
66	Commercial	127
67	Commercial	2
68	Industrial	194
69	Industrial	148
70	Commercial	99
71	Manufacturing	41
72	Commercial	48
73	Commercial	180
74	Manufacturing	63
75	Manufacturing	114
76	Commercial	80
77	Commercial	134

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
78	Commercial	45
79	Commercial	173
80	Industrial	59
81	Commercial	46
82	Commercial	132
83	Commercial	47
84	Commercial	174
85	Commercial	75
86	Manufacturing	0
87	Industrial	0
88	Industrial	56
89	Industrial	91
90	Industrial	38
91	Industrial	95
92	Manufacturing	71
93	Industrial	106
94	Commercial	74
95	Industrial	145
96	Commercial	62
97	Commercial	63
98	Commercial	25
99	Industrial	117
100	Residence	195
101	Residence	81
102	Residence	135
103	Commercial	88
104	Residence	133
105	Commercial	47
106	Residence	122
107	Residence	134
108	Residence	131
109	Residence	134
110	Commercial	142
111	Residence	162
112	Commercial	100
113	Residence	155
114	Residence	171
115	Residence	162
116	Residence	161
117	Commercial	46
118	Commercial	159
119	Residence	119
120	Commercial	149
121	Commercial	190
122	Commercial	62
123	Commercial	33
124	Commercial	114
125	Commercial	58
126	Commercial	114
127	Commercial	36
128	Commercial	49
129	Commercial	180
130	Commercial	43
131	Commercial	22
132	Commercial	63
133	Residence	171
134	Commercial	183
135	Commercial	48
136	Commercial	80
137	Commercial	75
138	Commercial	93
139	Manufacturing	21
140	Residence	191
143	Residence	200
144	Commercial	72
145	Commercial	30
146	Manufacturing	27
147	Commercial	92
148	Commercial	106
149	Commercial	106
150	Commercial	66
151	Medical/Hospital	112
152	Commercial	66
153	Commercial	136
154	Residence	91
155	Commercial	14

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
156	Commercial	105
157	Commercial	198
158	Commercial	134
160	Residence	198
161	Residence	97
162	Residence	179
164	Commercial	94
165	Residence	97
166	Residence	152
167	Commercial	26
168	Residence	74
169	Residence	161
171	Residence	120
172	Residence	85
174	Residence	74
175	Apartments	193
177	Commercial	39
178	Commercial	109
179	Commercial	156
180	Residence	157
181	Commercial	17
182	Commercial	60
183	Residence	32
186	Residence	36
188	Residence	54
190	Residence	52
191	Commercial	118
192	Commercial	180
193	Residence	57
195	Residence	25
197	Residence	155
198	Residence	35
199	Residence	40
200	Residence	151
201	Residence	178
202	Residence	152
203	Residence	34
204	Residence	151
205	Residence	147
207	Residence	145
208	Residence	22
209	Residence	151
210	Residence	79
211	Residence	145
212	Commercial	30
213	Residence	151
214	Residence	188
215	Residence	155
216	Residence	154
217	Residence	141
218	Residence	183
219	Residence	55
220	Residence	95
222	Residence	152
226	Residence	138
227	Residence	131
228	Residence	130
229	Commercial	176
230	Residence	125
231	Commercial	14
232	Commercial	157
233	Residence	135
234	Commercial	155
235	Commercial	152
236	Residence	128
237	Residence	195
238	Residence	175
239	Residence	129
240	Residence	154
241	Residence	133
242	Residence	113
243	Residence	138
244	Residence	58
245	Residence	185
246	Residence	131
247	Residence	73

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
249	Residence	177
250	Residence	1
252	Residence	173
253	Residence	179
254	Industrial	2
255	Commercial	0
256	Residence	129
257	Residence	174
258	Residence	70
259	Residence	27
260	Residence	121
263	Commercial	79
264	Commercial	88
265	Residence	140
266	Residence	32
268	Residence	168
269	Residence	121
270	Residence	32
271	Residence	171
272	Residence	44
273	Residence	74
274	Residence	22
275	Residence	0
276	Commercial	34
277	Residence	173
278	Residence	30
279	Residence	0
280	Commercial	40
281	Residence	69
282	Commercial	45
285	Commercial	41
287	Commercial	29
288	Residence	192
289	Residence	110
290	Commercial	18
291	Residence	45
292	Commercial	12
293	Commercial	67
294	Residence	170
295	Residence	138
296	Commercial	200
297	Residence	136
298	Manufacturing	17
299	Commercial	107
300	Commercial	20
301	Commercial	32
302	Commercial	109
303	Commercial	182
304	Commercial	110
305	Commercial	119
306	Commercial	111
307	Manufacturing	95
308	Commercial	107
309	Residence	134
310	Apartments	137
311	Apartments	134
312	Residence	138
313	Commercial	126
314	Manufacturing	106
315	Commercial	123
316	Residence	131
318	Residence	155
319	Residence	152
320	Residence	153
321	Residence	153
322	Industrial	108
323	Residence	153
324	Residence	144
325	Industrial	40
326	Residence	151
327	Residence	147
328	Residence	147
329	Residence	152
330	Residence	194
331	Residence	136
332	Residence	131

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
333	Industrial	55
334	Residence	132
338	Residence	184
339	Residence	133
340	Residence	49
341	Residence	133
342	Residence	131
343	Residence	28
344	Residence	153
346	Residence	176
347	Residence	26
349	Residence	132
350	Residence	31
352	Residence	139
354	Commercial	38
355	Residence	136
356	Residence	173
357	Commercial	81
358	Residence	142
359	Residence	189
360	Residence	53
361	Residence	142
362	Residence	132
363	Residence	139
364	Residence	139
365	Residence	28
366	Commercial	122
367	Residence	28
368	Medical/Hospital	128
369	Residence	28
370	Commercial	127
371	Commercial	120
372	Residence	142
373	Commercial	175
374	Commercial	16
375	Commercial	127
376	Commercial	110
377	Commercial	173
378	Commercial	97
379	Commercial	21
380	Residence	132
381	Commercial	148
382	Residence	192
383	Commercial	22
384	Commercial	129
385	Commercial	16
386	Residence	197
387	Residence	160
388	Commercial	58
389	Commercial	92
390	Residence	108
391	Commercial	61
392	Commercial	17
393	Residence	120
394	Commercial	177
395	Residence	27
397	Apartments	168
398	Government	192
399	Residence	175
400	Industrial	0
402	Residence	81
403	Residence	36
405	Multifamily	36
407	Residence	32
408	Residence	35
414	Commercial	163
415	Residence	197
416	Residence	147
417	Residence	107
418	Residence	73
419	Residence	59
420	Residence	54
421	Residence	61
422	Residence	14
423	Residence	50
424	Commercial	132

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
425	Commercial	195
426	Residence	173
427	Residence	13
428	Residence	99
429	Residence	49
430	Day Care	0
431	Commercial	168
434	Commercial	18
436	Commercial	194
437	Residence	160
438	Residence	96
439	Residence	194
440	Residence	55
441	Residence	79
442	Industrial	5
443	Industrial	63
444	Residence	98
448	Industrial	12
452	Residence	149
453	Residence	0
454	Residence	123
455	Residence	99
456	Residence	48
457	Residence	80
459	Commercial	69
460	Residence	194
461	Residence	156
462	Residence	32
463	Residence	112
465	Industrial	62
466	Commercial	119
467	Commercial	0
468	Commercial	41
469	Residence	164
470	Manufacturing	29
471	Multifamily	17
472	Commercial	99
473	Commercial	80
474	Commercial	191
475	Commercial	27
476	Industrial	9
477	Industrial/Manufacturing	78
478	Residence	165
480	Commercial	20
481	Commercial	52
482	Commercial	132
483	Commercial	132
485	Residence	116
486	Medical/Hospital	159
489	Residence	0
490	Residence	31
491	Commercial	27
492	Residence	24
493	Residence	19
494	Residence	22
496	Residence	25
497	Residence	25
498	Residence	32
499	Residence	35
500	Commercial	138
501	Residence	35
502	Residence	31
503	Residence	28
504	Residence	30
505	Residence	28
506	Commercial	45
507	Commercial	31
508	Commercial	55
509	Commercial	34
510	Commercial	115
511	Residence	53
512	Residence	53
513	Residence	57
514	Residence	56
515	Commercial	100
516	Residence	55

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
518	Commercial	115
521	Government	75
522	Residence	76
523	Residence	67
524	Residence	55
525	Residence	56
527	Residence	107
529	Commercial	52
530	Residence	55
531	Residence	163
532	Residence	152
533	Residence	192
534	Residence	55
535	Residence	195
536	Residence	168
537	Residence	136
538	Residence	129
539	Residence	149
540	Residence	177
541	Residence	192
542	Commercial	115
543	Residence	177
544	Residence	198
545	Residence	42
546	Residence	45
547	Commercial	47
548	Residence	42
549	Residence	47
550	Residence	47
551	Residence	46
553	Residence	46
555	Residence	44
558	Residence	47
560	Commercial	65
563	Residence	58
564	Residence	21
565	Apartments	23
566	Apartments	21
567	Commercial	13
568	Apartments	17
569	Residence	96
570	Residence	77
571	Apartments	70
572	Apartments	82
573	Commercial	74
574	Apartments	39
575	Residence	158
576	Residence	152
577	Apartments	139
578	Apartments	139
579	Apartments	44
580	Apartments	37
581	Apartments	33
582	Apartments	75
583	Apartments	135
584	Apartments	137
585	Commercial	14
586	Commercial	34
587	Commercial	125
588	Commercial	138
589	Commercial	145
590	Commercial	151
591	Commercial	126
592	Commercial	193
593	Commercial	131
594	Commercial	12
595	Commercial	133
596	Commercial	113
597	Commercial	6
598	Commercial	182
599	Commercial	27
600	Commercial	127
601	Commercial	133
602	Commercial	106
603	Commercial	43
604	Commercial	52

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
605	Church	10
606	Commercial	69
607	Commercial	56
608	Commercial	115
609	Commercial	6
610	Residence	106
611	Residence	8
612	Residence	193
615	Residence	45
616	Residence	199
617	Residence	139
618	Residence	3
620	Residence	67
621	Residence	141
622	Commercial	0
623	Commercial	121
624	Commercial	92
625	Commercial	162
626	Commercial	31
628	Residence	90
629	Residence	140
630	Residence	101
631	Commercial	0
632	Commercial	132
633	Residence	138
634	Residence	124
635	Residence	171
636	Commercial	6
637	Residence	181
638	Residence	82
639	Residence	99
640	Residence	144
641	Residence	100
642	Residence	94
643	Residence	65
644	Residence	159
645	Commercial	99
646	Residence	111
647	Residence	62
648	Residence	59
649	Residence	49
651	Residence	98
653	Residence	115
654	Residence	143
655	Residence	162
657	Residence	183
658	Residence	170
662	Residence	115
664	Residence	133
665	Residence	162
666	Commercial	63
667	Commercial	28
668	Commercial	133
669	Commercial	4
670	Commercial	171
671	Commercial	0
672	Commercial	193
673	Commercial	114
674	Commercial	40
675	Commercial	98
676	Commercial	99
677	Commercial	61
678	Commercial	117
679	Commercial	118
680	Commercial	114
681	Commercial	107
682	Commercial	108
683	Commercial	114
684	Commercial	132
685	Commercial	85
686	Commercial	41
687	Industrial	18
688	Commercial	14
689	Industrial	17
690	Commercial	150
691	Commercial	75

TABLE 7-1A

Structures Within 200 feet of Preliminary ROW of the Preferred Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
692	Industrial	112			
693	Commercial	176			
694	Commercial	162			
695	Commercial	125			
696	Commercial	191			
697	Commercial	115			
698	Commercial	184			
699	Commercial	116			
700	Residence	140			
701	Residence	137			
702	Commercial	0			
703	Medical/Hospital	96			
704	Commercial	11			
705	Industrial	0			
706	Industrial	76			
707	Commercial	46			
708	Commercial	4			
709	Industrial	12			
710	Commercial	146			
711	Commercial	105			
712	Commercial	0			
713	Commercial	20			
714	Commercial	0			
1425	Commercial	50			
1425	Commercial	50			

[a] Structures listed as "0 feet" may be at the edge of or within the nominal preliminary ROW. Note that the preliminary ROW used in this analysis is not final. Duke Energy Ohio understands that the ROW may have to be reduced and modified in places during the development of the final ROW and engineering design.

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1	Residence	170	736	Commercial	80
2	Industrial	160	737	Commercial	112
3	Commercial	123	738	Commercial	124
5	Manufacturing	140	739	Commercial	121
6	Residence	70	740	Commercial	122
9	Commercial	108	741	Commercial	124
17	Commercial	141	742	Commercial	0
18	Commercial	135	743	Commercial	117
19	Commercial	192	744	Commercial	138
20	Commercial	120	745	Commercial	156
21	Residence	119	746	Industrial	2
22	Commercial	108	747	Residence	36
23	Commercial	109	748	Commercial	22
24	Commercial	14	749	Commercial	52
25	Commercial	118	750	Commercial	181
27	Industrial	25	751	Industrial	23
715	Residence	139	752	Commercial	182
716	Residence	117	753	Commercial	147
717	Residence	116	754	Manufacturing	0
718	Residence	114	755	Commercial	144
719	Residence	162	756	Commercial	185
720	Residence	106	757	Industrial	102
721	Residence	93	758	Commercial	7
722	Commercial	143	759	Government	22
723	Residence	111	760	Commercial	49
724	Residence	90	761	Commercial	113
725	Commercial	86	762	Commercial	34
726	Residence	81	763	Commercial	70
727	Residence	86	764	Commercial	176
728	Commercial	117	765	Commercial	127
729	Residence	118	766	Commercial	62
730	Commercial	106	767	Commercial	127
731	Commercial	25	768	Commercial	35
732	Commercial	151	769	Commercial	19
733	Commercial	29	770	Commercial	173
734	Commercial	63	771	Commercial	166
735	Commercial	31	772	Industrial	12

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
773	Commercial	188	820	Residence	54
775	Commercial	136	822	Residence	70
776	Commercial	89	823	Residence	100
777	Condominium	50	825	Residence	74
778	Commercial	70	826	Residence	197
779	Commercial	181	827	Commercial	192
780	Industrial	106	828	Residence	184
781	Commercial	32	831	Residence	65
782	Commercial	189	833	Commercial	196
783	Commercial	99	836	Commercial	190
784	Commercial	48	837	Residence	31
785	Manufacturing	92	838	Residence	46
786	Commercial	115	840	Residence	46
787	Commercial	138	841	Residence	162
788	Commercial	0	843	Residence	43
789	Commercial	133	845	Residence	40
790	Commercial	90	846	Residence	99
791	Commercial	77	847	Residence	41
792	Government	22	848	Residence	43
793	Government	9	849	Residence	53
795	Residence	194	850	Residence	44
796	Residence	0	851	Residence	43
798	Residence	172	852	Residence	42
799	Residence	151	855	Residence	36
802	Residence	30	856	Residence	123
803	Residence	101	857	Residence	123
804	Residence	126	858	Residence	27
806	Residence	99	859	Residence	23
808	Residence	33	860	Residence	81
811	Residence	30	861	Residence	121
812	Residence	31	862	Residence	24
813	Residence	27	864	Residence	23
814	Residence	28	865	Residence	20
815	Residence	67	868	Residence	28
816	Residence	27	869	Residence	37
817	Residence	27	870	Commercial	102
818	Residence	26	871	Residence	19
819	Residence	37	872	Residence	39

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
873	Residence	20	916	Residence	131
875	Residence	175	917	Government	99
876	Residence	103	918	Residence	91
877	Residence	30	919	Residence	98
878	Residence	19	920	Government	96
879	Residence	51	921	Residence	145
880	Residence	130	922	Residence	83
881	Residence	25	923	Residence	98
882	Residence	128	924	Residence	98
883	Residence	51	925	Residence	99
884	Residence	103	926	Residence	101
885	Residence	114	927	Residence	90
886	Residence	37	928	Residence	89
887	Residence	26	929	Residence	97
888	Commercial	126	930	Residence	106
889	Commercial	96	932	Residence	99
893	Residence	200	933	Residence	96
894	Commercial	87	934	Residence	97
895	Commercial	196	936	Residence	97
896	Residence	92	937	Government	104
897	Residence	146	938	Residence	99
898	Residence	99	939	Residence	96
899	Residence	167	940	Residence	98
900	Residence	134	942	Residence	109
901	Residence	84	943	Residence	97
902	Residence	100	944	Residence	197
903	Commercial	117	945	Residence	97
904	Residence	99	946	Residence	95
906	Residence	138	947	Commercial	101
907	Residence	88	953	Residence	85
908	Residence	99	954	Commercial	189
909	Residence	173	955	Government	0
910	Residence	88	956	Commercial	81
911	Residence	98	957	Industrial	35
912	Residence	152	958	Industrial	0
913	Residence	100	959	Commercial	134
914	Residence	96	960	Commercial	45
915	Residence	84	961	Commercial	99

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
962	Commercial	63	1000	Residence	20
963	Manufacturing	151	1001	Residence	23
964	Commercial	97	1002	Residence	182
965	Commercial	0	1003	Residence	22
966	Commercial	135	1004	Residence	131
967	Commercial	200	1005	Residence	82
968	Commercial	20	1006	Residence	34
969	Commercial	188	1007	Residence	172
970	Commercial	9	1008	Residence	120
971	Commercial	69	1009	Residence	68
972	Commercial	8	1010	Residence	26
973	Commercial	42	1011	Residence	26
974	Commercial	164	1012	Residence	124
975	Commercial	4	1013	Residence	41
976	Commercial	198	1014	Residence	127
977	Commercial	0	1015	Residence	44
978	Commercial	190	1016	Residence	133
979	Commercial	114	1017	Residence	61
980	Commercial	80	1018	Residence	144
981	Commercial	159	1019	Residence	94
982	Commercial	0	1020	Residence	49
983	Commercial	0	1021	Residence	88
984	Commercial	146	1022	Residence	145
985	Commercial	131	1023	Residence	125
986	Commercial	133	1024	Residence	169
987	Commercial	0	1025	Residence	64
988	Commercial	46	1026	Residence	118
989	Commercial	111	1027	Residence	26
990	Commercial	69	1028	Residence	162
991	Commercial	55	1029	Residence	12
992	Government	23	1030	Residence	53
993	Residence	175	1031	Residence	26
994	Residence	97	1032	Commercial	36
995	Residence	181	1033	Residence	27
996	Residence	32	1034	Commercial	35
997	Residence	141	1035	Commercial	94
998	Residence	101	1036	Commercial	153
999	Residence	50	1037	Commercial	34

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1038	Commercial	125	1076	Commercial	115
1039	Residence	49	1077	Residence	139
1040	Commercial	115	1078	Residence	179
1041	Commercial	17	1079	Commercial	34
1042	Residence	39	1080	Commercial	166
1043	Residence	176	1081	Commercial	110
1044	Residence	101	1082	Residence	99
1045	Residence	195	1083	Commercial	34
1046	Residence	144	1084	Residence	188
1047	Residence	178	1085	Residence	35
1048	Residence	24	1086	Residence	66
1049	Residence	136	1087	Commercial	110
1050	Residence	21	1088	Residence	25
1051	Residence	126	1089	Residence	23
1052	Residence	18	1090	Residence	19
1053	Residence	76	1091	Residence	59
1054	Residence	190	1092	Residence	99
1055	Residence	111	1093	Residence	140
1056	Commercial	76	1094	Residence	40
1057	Residence	19	1095	Residence	181
1058	Residence	88	1096	Commercial	197
1059	Residence	122	1097	Residence	25
1060	Residence	18	1098	Residence	27
1061	Residence	182	1099	Residence	88
1062	Residence	65	1100	Residence	167
1063	Commercial	22	1101	Residence	62
1064	Residence	158	1102	Residence	138
1065	Residence	104	1103	Residence	18
1066	Residence	31	1104	Residence	19
1067	Residence	134	1105	Residence	148
1068	Commercial	26	1106	Residence	194
1069	Commercial	32	1107	Residence	198
1070	Residence	85	1108	Residence	106
1071	Commercial	8	1109	Residence	96
1072	Commercial	32	1110	Residence	26
1073	Residence	193	1111	Residence	142
1074	Residence	110	1112	Residence	111
1075	Residence	183	1113	Residence	143

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1114	Residence	200	1152	Residence	17
1115	Residence	27	1153	Residence	28
1116	Residence	155	1154	Residence	96
1117	Residence	182	1155	Residence	3
1118	Residence	16	1156	Residence	193
1119	Residence	26	1157	Residence	26
1120	Residence	112	1158	Residence	89
1121	Residence	186	1159	Residence	169
1122	Residence	23	1160	Residence	50
1123	Residence	25	1161	Residence	137
1124	Residence	93	1162	Residence	83
1125	Residence	21	1163	Residence	20
1126	Residence	163	1164	Residence	21
1127	Residence	22	1165	Residence	98
1128	Residence	190	1166	Residence	176
1129	Residence	96	1167	Residence	179
1130	Residence	139	1168	Residence	134
1131	Residence	183	1169	Residence	5
1132	Residence	184	1170	Residence	141
1133	Residence	24	1171	Residence	85
1134	Residence	21	1172	Residence	85
1135	Residence	112	1173	Residence	131
1136	Residence	151	1174	Residence	18
1137	Residence	182	1175	Residence	187
1138	Residence	28	1176	Residence	195
1139	Residence	27	1177	Residence	1
1140	Residence	101	1178	Residence	152
1141	Residence	188	1179	Residence	26
1142	Residence	183	1180	Residence	193
1143	Residence	28	1181	Residence	84
1144	Residence	104	1182	Residence	64
1145	Residence	6	1183	Residence	22
1146	Residence	142	1184	Residence	193
1147	Residence	26	1185	Residence	142
1148	Residence	102	1186	Residence	18
1149	Residence	191	1187	Residence	127
1150	Residence	183	1188	Residence	154
1151	Residence	141	1189	Residence	23

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1190	Residence	14	1228	Residence	34
1191	Residence	90	1229	Residence	85
1192	Residence	149	1230	Residence	125
1193	Residence	100	1231	Residence	21
1194	Residence	30	1232	Residence	131
1195	Residence	126	1233	Residence	166
1196	Residence	15	1234	Residence	121
1197	Residence	90	1235	Residence	163
1198	Residence	182	1236	Commercial	106
1199	Residence	55	1237	Residence	14
1200	Residence	5	1238	Residence	76
1201	Residence	121	1239	Residence	122
1202	Residence	175	1240	Residence	178
1203	Residence	134	1241	Commercial	76
1204	Residence	17	1242	Residence	67
1205	Residence	37	1243	Commercial	135
1206	Residence	96	1244	Residence	2
1207	Residence	178	1245	Residence	64
1208	Residence	164	1246	Commercial	148
1209	Residence	12	1247	Commercial	82
1210	Residence	159	1248	Residence	4
1211	Residence	16	1249	Residence	69
1212	Residence	28	1250	Residence	80
1213	Residence	69	1251	Residence	166
1214	Residence	20	1252	Residence	3
1215	Residence	40	1253	Residence	81
1216	Residence	151	1254	Residence	77
1217	Residence	11	1255	Residence	167
1218	Residence	28	1256	Residence	0
1219	Residence	122	1257	Residence	178
1220	Residence	84	1258	Residence	126
1221	Residence	10	1259	Residence	156
1222	Residence	168	1260	Residence	0
1223	Residence	51	1261	Residence	200
1224	Residence	79	1262	Residence	171
1225	Residence	11	1263	Residence	72
1226	Residence	86	1264	Residence	0
1227	Residence	131	1265	Residence	177

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1266	Residence	162	1304	Commercial	159
1267	Residence	0	1305	Commercial	76
1268	Residence	148	1306	Commercial	113
1269	Residence	84	1307	Commercial	185
1270	Residence	198	1308	Commercial	129
1271	Residence	1	1309	Commercial	149
1272	Residence	85	1310	Commercial	86
1273	Residence	144	1311	Commercial	162
1274	Residence	173	1312	Commercial	112
1275	Residence	181	1313	Commercial	183
1276	Residence	3	1314	Residence	168
1277	Residence	142	1315	Residence	59
1278	Residence	185	1316	Residence	156
1279	Residence	81	1317	Residence	96
1280	Residence	172	1318	Residence	92
1281	Residence	141	1319	Residence	150
1282	Residence	118	1320	Commercial	89
1283	Residence	81	1321	Commercial	102
1284	Residence	4	1322	Residence	83
1285	Residence	171	1323	Residence	33
1286	Residence	60	1324	Commercial	96
1287	Residence	2	1325	Commercial	110
1288	Residence	0	1326	Residence	113
1289	Residence	29	1327	Commercial	21
1290	Commercial	39	1328	Residence	123
1291	Commercial	38	1329	Residence	57
1292	Commercial	40	1330	Residence	129
1293	Commercial	41	1331	Residence	67
1294	Commercial	197	1332	Commercial	64
1295	Commercial	161	1333	Commercial	143
1296	Commercial	136	1334	Commercial	128
1297	Commercial	160	1335	Commercial	31
1298	Commercial	137	1336	Commercial	137
1299	Commercial	177	1337	Industrial	133
1300	Commercial	104	1338	Commercial	56
1301	Commercial	78	1339	Manufacturing	192
1302	Commercial	181	1340	Commercial	170
1303	Commercial	134	1341	Commercial	157

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]	Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1342	Commercial	161	1380	Commercial	85
1343	Commercial	170	1381	Commercial	31
1344	Commercial	172	1382	Commercial	91
1345	Industrial	91	1383	Commercial	153
1346	Industrial	166	1384	Commercial	82
1347	Industrial	129	1385	Industrial	91
1348	Manufacturing	131	1386	Commercial	89
1349	Commercial	111	1387	Commercial	151
1350	Commercial	143	1388	Commercial	180
1351	Commercial	121	1389	Commercial	174
1352	Commercial	0	1390	Commercial	175
1353	Commercial	0	1391	Government	31
1354	Commercial	14	1392	Manufacturing	75
1355	Commercial	122	1393	Manufacturing	90
1356	Commercial	122	1394	Commercial	83
1357	Commercial	144	1395	Industrial	115
1358	Industrial	156	1396	Commercial	155
1359	Industrial	99	1397	Industrial	176
1360	Commercial	107	1398	Industrial	0
1361	Commercial	95	1399	Industrial	22
1362	Manufacturing	79	1400	Commercial	40
1363	Commercial	193	1401	Commercial	12
1364	Commercial	91	1402	Commercial	63
1365	Industrial	0	1403	Commercial	95
1366	Commercial	122	1404	Commercial	4
1367	Commercial	159	1405	Commercial	14
1368	Industrial	117	1406	Industrial	20
1369	Manufacturing	19	1407	Commercial	24
1370	Commercial	107	1408	Residence	39
1371	Commercial	140	1409	Residence	45
1372	Commercial	19	1410	Commercial	42
1373	Commercial	194	1411	Residence	47
1374	Commercial	94	1412	Commercial	100
1375	Commercial	188	1413	Commercial	40
1376	Manufacturing	55	1414	Commercial	22
1377	Commercial	155	1415	Industrial	124
1378	Industrial	61	1416	Commercial	18
1379	Commercial	115	1417	Commercial	112

TABLE 7-1B

Structures within 200 feet of Preliminary ROW of the Alternate Route

Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet)[a]		Structure ID #	Structure Type	Distance from Edge of Preliminary ROW (feet) [a]
1418	Commercial	8				
1419	Commercial	157				
1420	Commercial	66				
1421	Commercial	100				
1422	Commercial	166				
1423	Commercial	162				
1424	Commercial	76				
1426	Commercial	193				
1427	Commercial	45				
1428	Commercial	42				
1429	Commercial	65				

[a] Structures listed as "0 feet" may be at the edge of or within the nominal preliminary ROW. Note that the preliminary ROW used in this analysis is not final. Duke Energy Ohio understands that the ROW may have to be reduced and modified in places during the development of the final ROW and engineering design.

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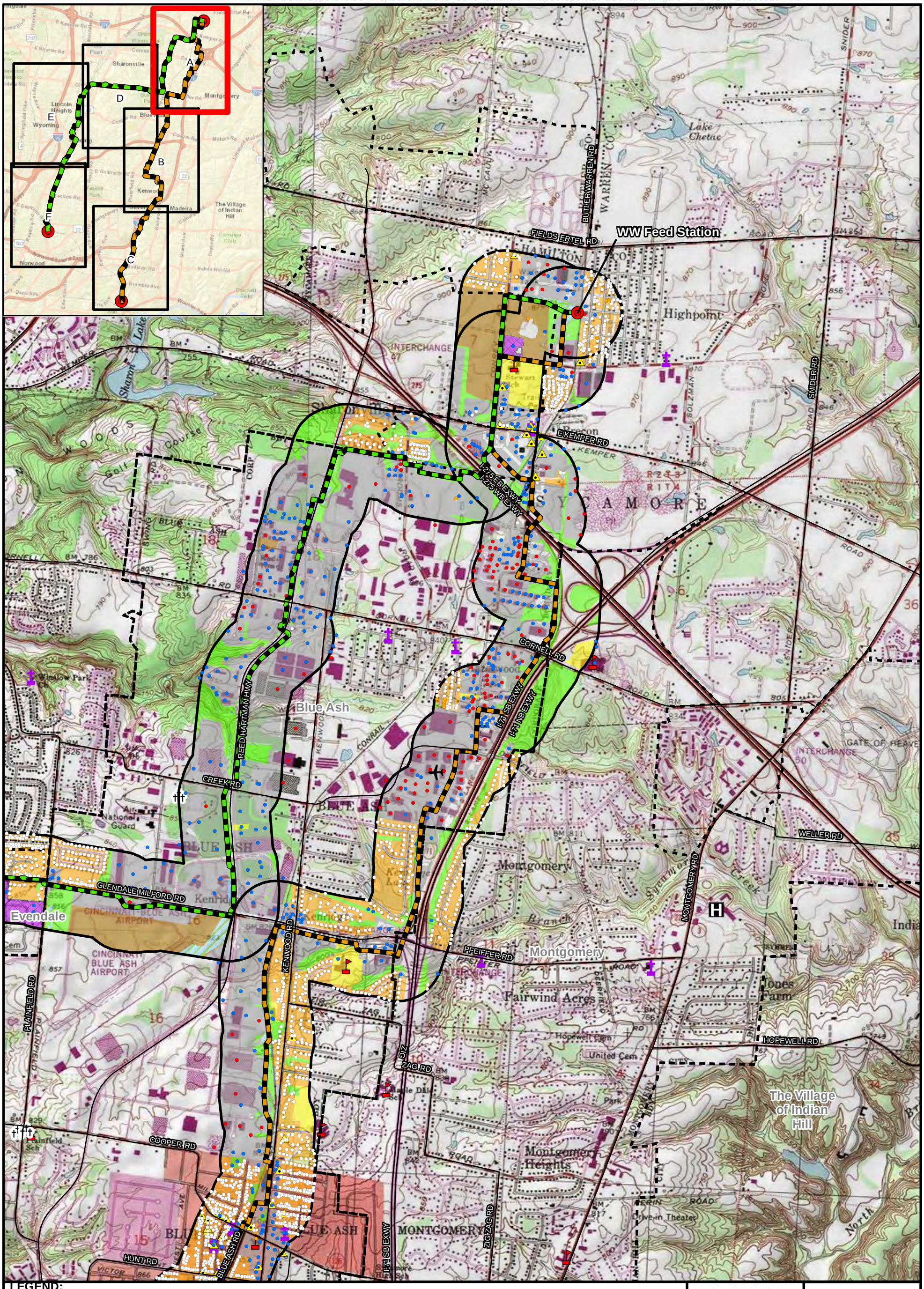

LEGEND:

- Stations (Existing and Proposed)
- Preferred Route
- Alternate Route
- Municipal Boundary
- Road
- 1,000 Foot Buffer Around Preferred and Alternate Route
- Airports
- Cemeteries
- Church
- Hospitals
- Schools
- Historic Structures

Landuse

- Delineated Stream
- Delineated Wetland
- Delineated Pond
- Commercial/Industrial
- Education
- Institutional
- Mixed Use
- Parks and recreation
- Residential
- Undefined
- Woodlots

Structures

- Commercial
- Residential
- Civic Building
- Industrial

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle Cincinnati East 1982, Glendale 1982 Madeira 1983, Mason 1982

N

0 2,000 4,000

Scale In Feet

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 7-1A
LAND USE MAP

PN: 672247

CREATED BY: TH

REVIEWED BY:MF

ch2m.

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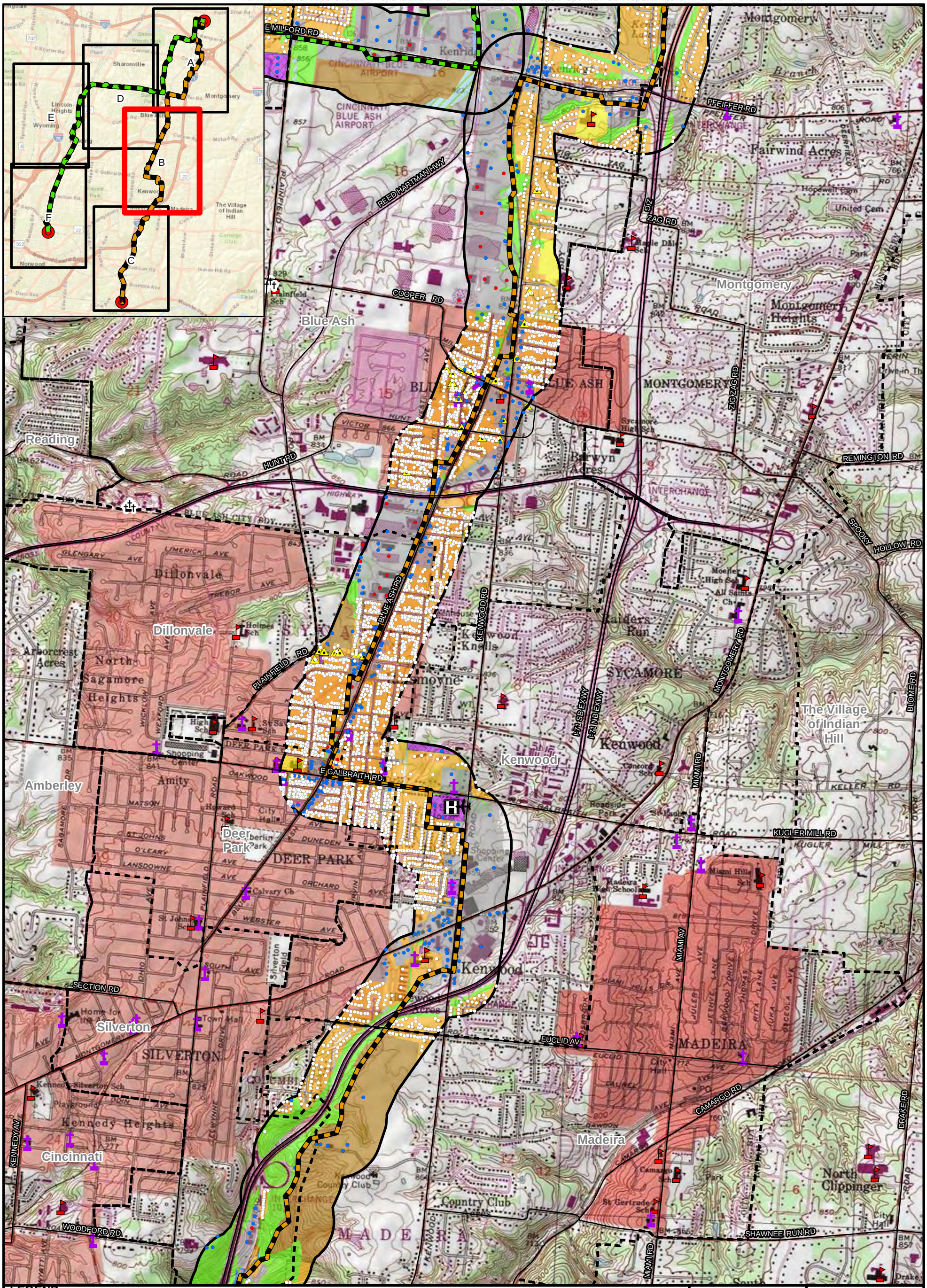

LEGEND:

- Stations (Existing and Proposed)
- Preferred Route
- Alternate Route
- Municipal Boundary
- Road
- 1,000 Foot Buffer Around Preferred and Alternate Route
- Airports
- Cemeteries
- Church
- Hospitals
- Schools
- Historic Structures

Landuse

- Delineated Stream
- Delineated Wetland
- Delineated Pond
- Commercial/Industrial
- Education
- Institutional
- Mixed Use
- Parks and recreation
- Residential
- Undefined
- Woodlots

Structures

- Commercial
- Residential
- Civic Building
- Industrial

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

N

0 2,000 4,000

Scale In Feet

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 7-1B
LAND USE MAP

PN: 672247
CREATED BY: TH
REVIEWED BY:MF

ch2m.

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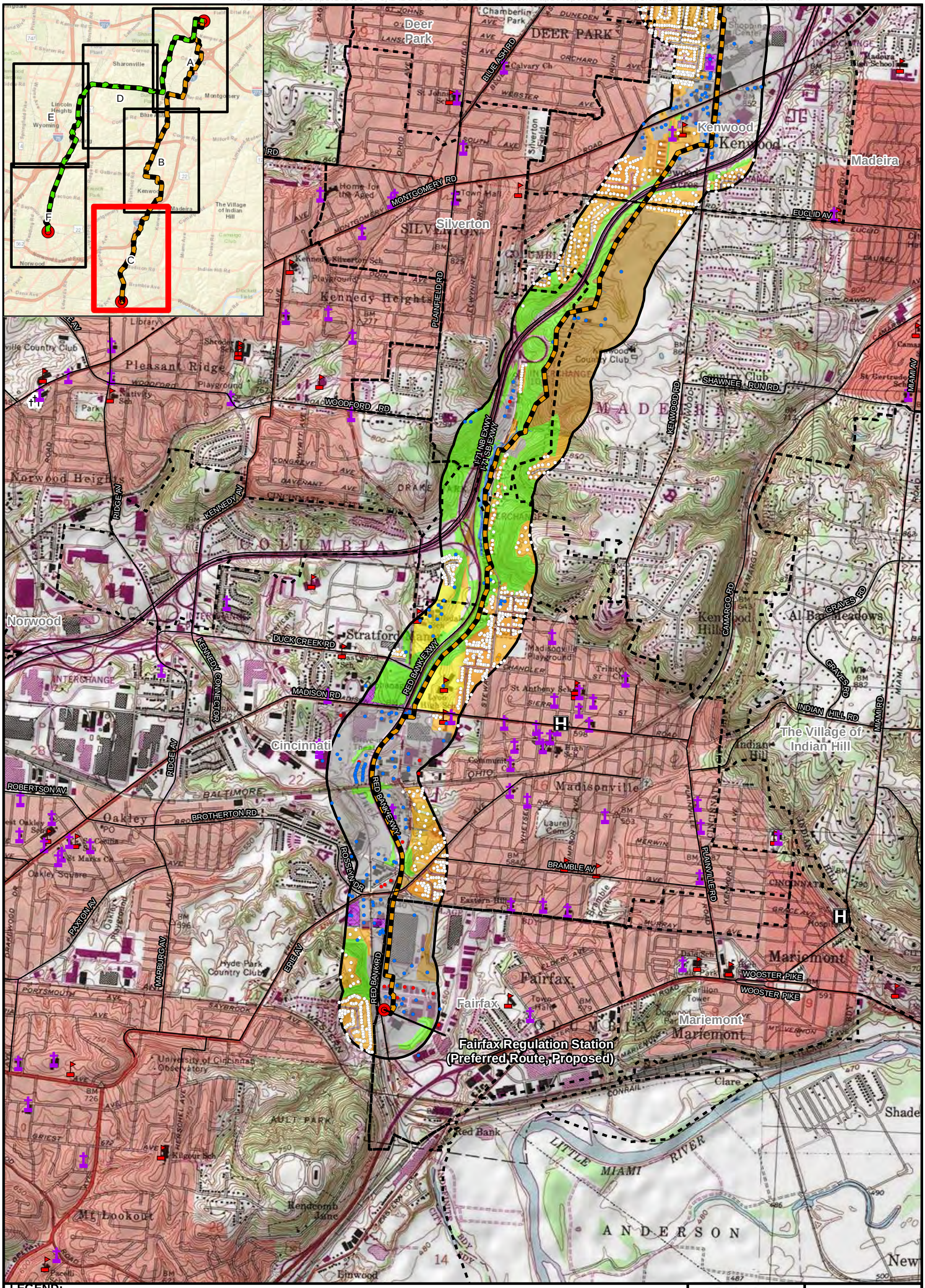


LEGEND:

Landuse

Structures

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

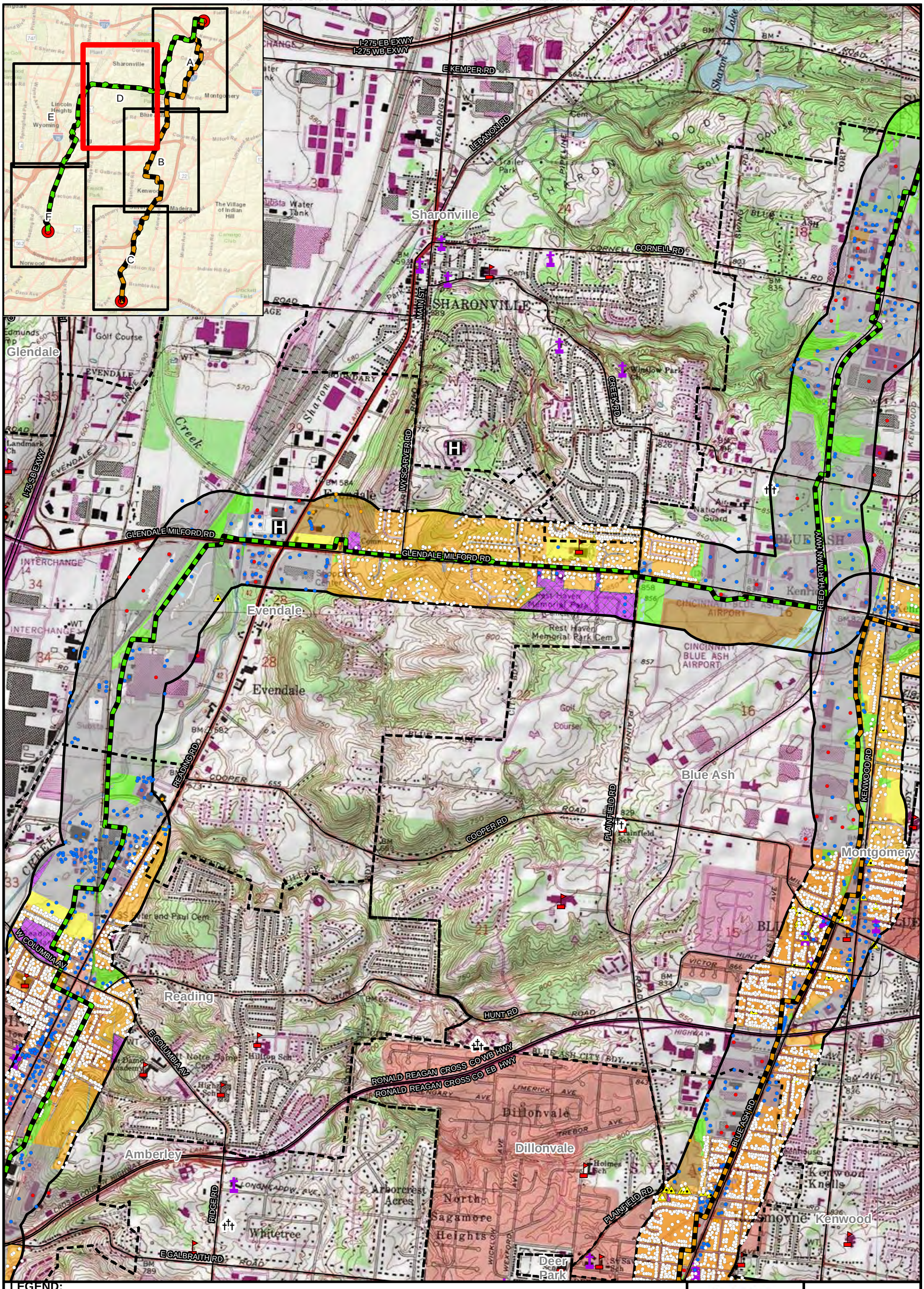
DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 7-1C
LAND USE MAP

PN: 672247
CREATED BY: TH
REVIEWED BY:MF

ch2m.



LEGEND:

- Stations (Existing and Proposed)
- Preferred Route
- Alternate Route
- Municipal Boundary
- Road
- 1,000 Foot Buffer Around Preferred and Alternate Route
- Airports
- Cemeteries
- Church
- Hospitals
- Schools
- Historic Structures

Landuse

- Delineated Stream
- Delineated Wetland
- Delineated Pond
- Commercial/Industrial
- Education
- Institutional
- Mixed Use
- Parks and recreation
- Residential
- Undefined
- Woodlots

Structures

- Commercial
- Residential
- Civic Building
- Industrial

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

N

0 2,000 4,000

Scale In Feet

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

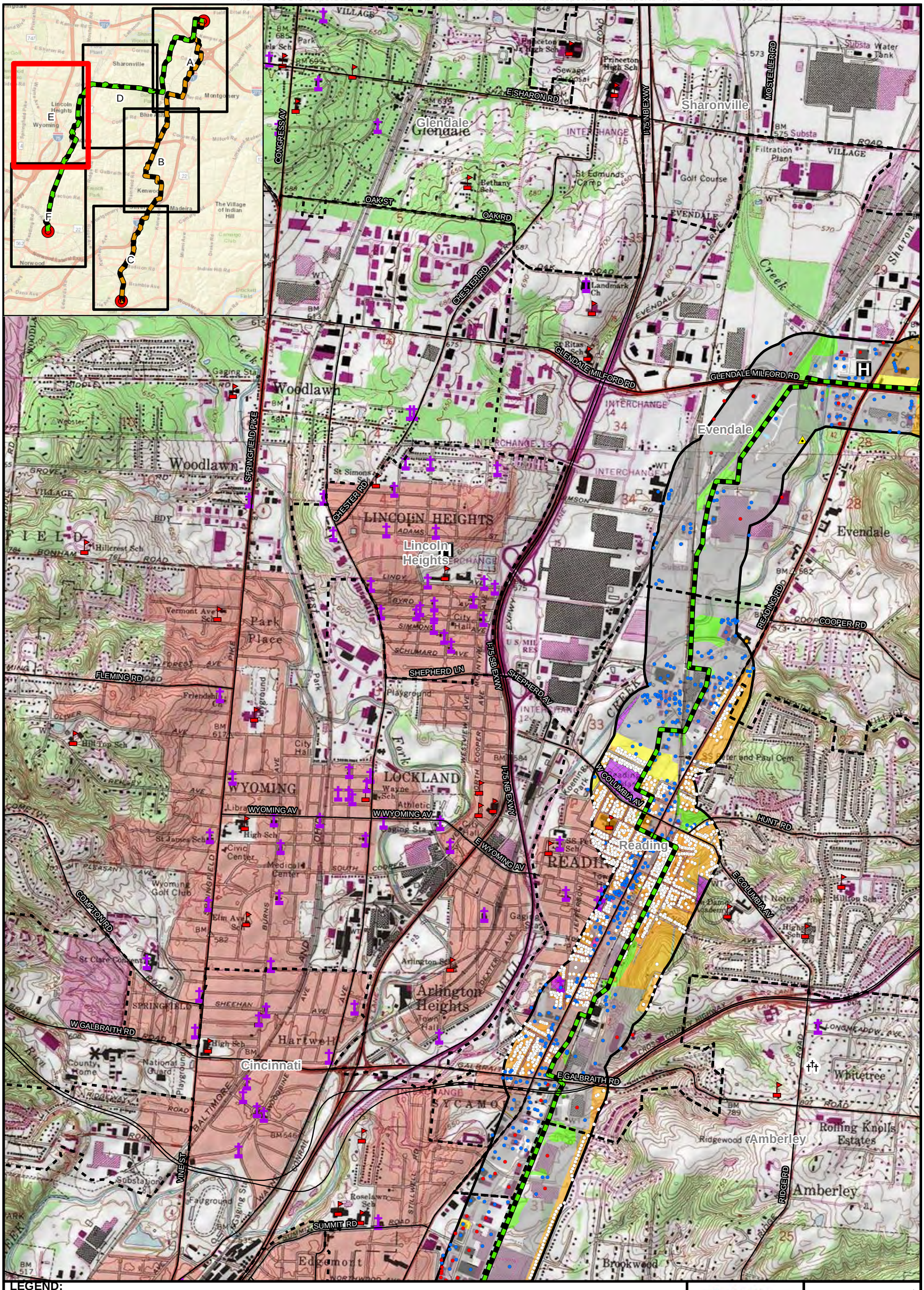
FIGURE 7-1D
LAND USE MAP

PN: 672247

CREATED BY: TH

REVIEWED BY:MF

ch2m:



LEGEND:

- Stations (Existing and Proposed)
- Preferred Route
- Alternate Route
- Municipal Boundary
- Road
- 1,000 Foot Buffer Around Preferred and Alternate Route
- Airports
- Cemeteries
- Church
- Hospitals
- Schools
- Historic Structures

Landuse

- Delineated Stream
- Delineated Wetland
- Delineated Pond
- Commercial/Industrial
- Education
- Institutional
- Mixed Use
- Parks and recreation
- Residential
- Undefined
- Woodlots

Structures

- Commercial
- Residential
- Civic Building
- Industrial

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982,
Glendale 1982
Madeira 1983, Mason 1982

N

0 2,000 4,000

Scale In Feet

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 7-1E
LAND USE MAP

PN: 672247

CREATED BY: TH

REVIEWED BY:MF

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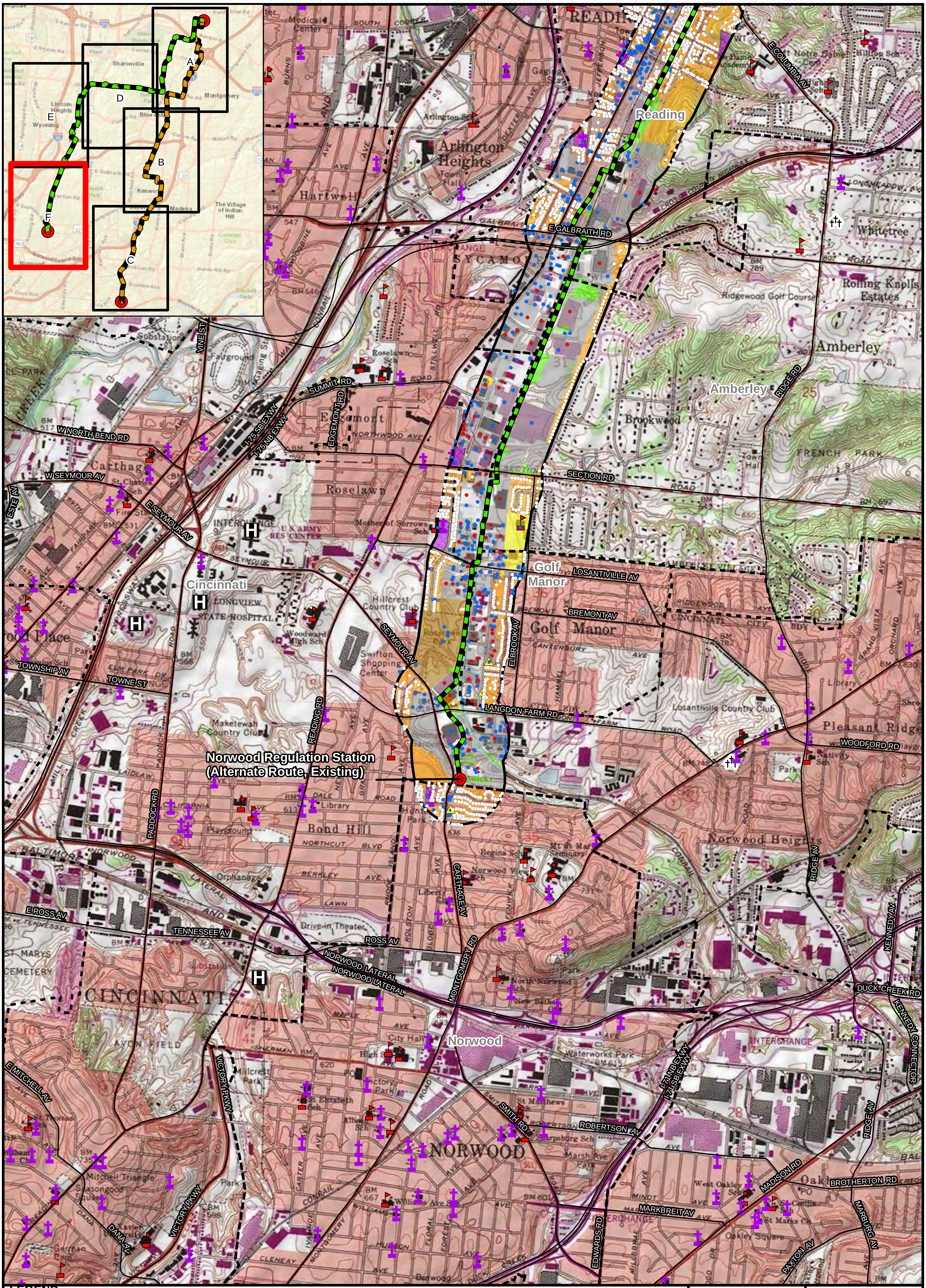
\\CANOPUS\Groups\GIS\00_Proj\D\Duke\Duke_C143_extension\Maps\Report\OPSB\Report\Figure_7_1_TDH_20160826.mxd



LEGEND:

- Stations (Existing and Proposed)
- Preferred Route
- Alternate Route
- Municipal Boundary
- Road
- 1,000 Foot Buffer Around Preferred and Alternate Route
- Airports
- Cemeteries
- Church
- Hospitals
- Schools
- Historic Structures

Landuse

- Delineated Stream
- Delineated Wetland
- Delineated Pond
- Commercial/Industrial
- Education
- Institutional
- Mixed Use
- Parks and recreation
- Residential
- Undefined
- Woodlots

Structures

- Commercial
- Residential
- Civic Building
- Industrial

N

0 2,000 4,000
Scale In Feet

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle
Cincinnati East 1982, Glendale 1982
Madeira 1983, Mason 1982

DUKE ENERGY.

C314V Central Corridor Pipeline Extension Project

FIGURE 7-1F
LAND USE MAP

PN: 672247
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