

**OHIO POWER SITING BOARD
STAFF REPORT OF INVESTIGATION**

Case Number: 14-1717-GA-BLN
Project Name: Avon Lake Gas Addition Project
Project Location: Lorain County
Applicant: NRG Ohio Pipeline Company, LLC
Application Filing Date: December 19, 2014 (supplemented March 19 and 20, 2015)
Filing Type: Letter of Notification
Inspection Dates: February 3 and 27, 2015
Report Date: March 27, 2015
Automatic Approval Date: Case suspended March 9, 2015
Applicant's Waiver Requests: none
Staff Assigned: J. O'Dell, A. Holderbaum, J. Pawley, E. Steele, M. Butler

Summary of Staff Recommendations (see discussion below):

Application: ☐ Approval ☐ Disapproval ☒ Approval with Conditions
Waiver: ☐ Approval ☐ Disapproval ☒ Not Applicable

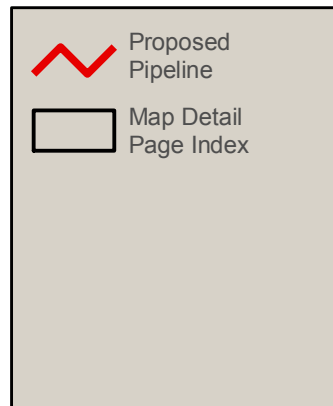
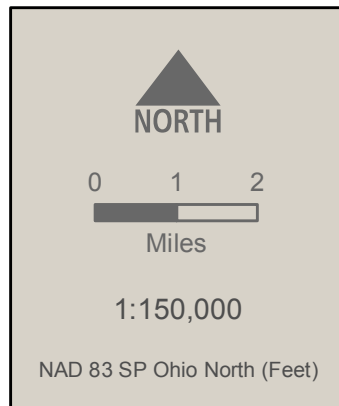
Project Description

NRG Ohio Pipeline Company (NRG/Applicant) proposes to construct a 24-inch, high-grade steel natural gas pipeline from the existing Avon Lake Power Plant in the city of Avon Lake, extending approximately 20 miles to the south, and terminating in the village of Grafton. The entire pipeline would be located within Lorain County.

The pipeline is needed to provide a natural gas fuel source to the 734 megawatt Avon Lake Power Plant. The plant, which currently generates electricity using coal, is slated for deactivation due to increasing environmental requirements. The proposed pipeline would allow the plant to generate electricity using natural gas and help maintain a reliable supply to the electric grid.

The typical permanent right-of way width for the proposed pipeline would be 50 feet. A temporary 100-foot right-of way would also be needed for construction. Laydown areas would be needed on a temporary basis for equipment and material storage and pipeline preparation.

Approximately one acre would be needed for the metering station at the tap in the village of Grafton. A secondary tap is proposed for potential interconnection in the city of North Ridgeville. The secondary tap could be used to increase supply reliability. A regulating station would also be needed at the Avon Lake Power Plant.

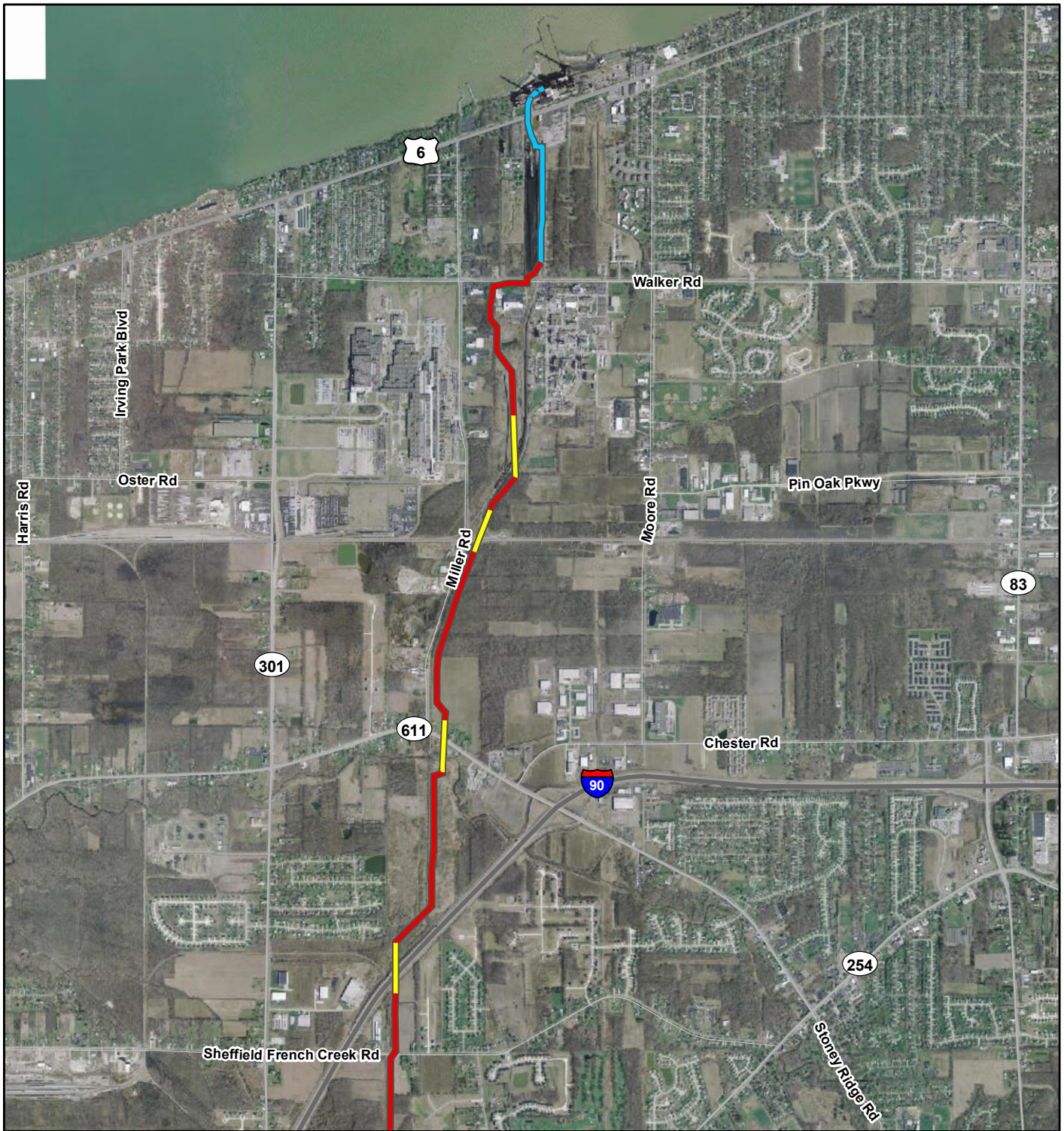


Overview Map

14-1717-GA-BLN

**NRG Avon Lake
24" Natural Gas
Pipeline**

Maps are presented solely for the purpose of providing a visual representation of the project in the staff report, and are not intended to modify the project as presented by the Applicant in its certificate application and supplemental materials.



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NAD 83 SP Ohio North (Feet)

Proposed Route:

 Underground:
Open Cut

 Underground:
Horizontal
Directional Drill

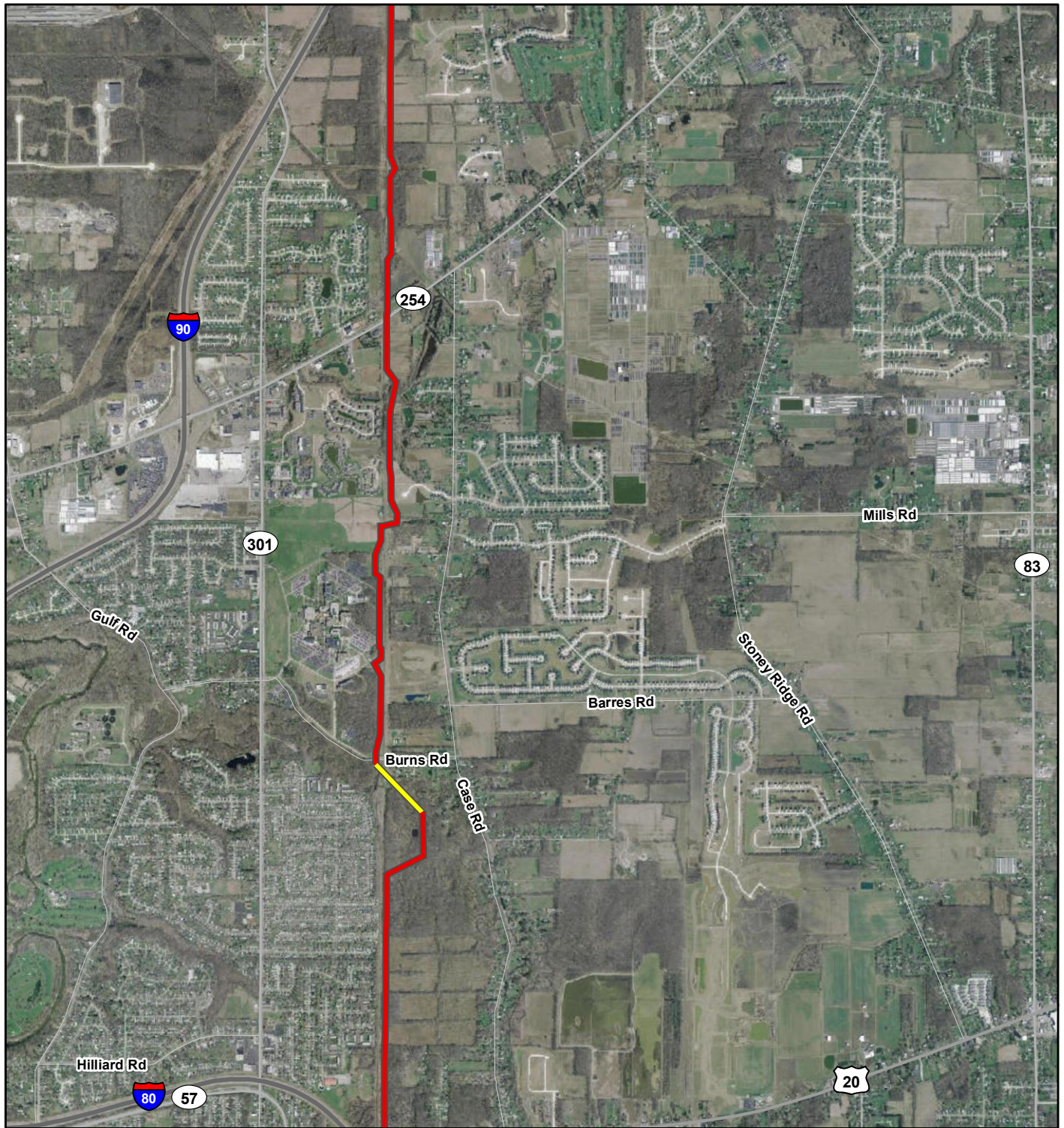
 Above Ground

Map Page 1

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NRG Avon Lake 24" Natural Gas Pipeline

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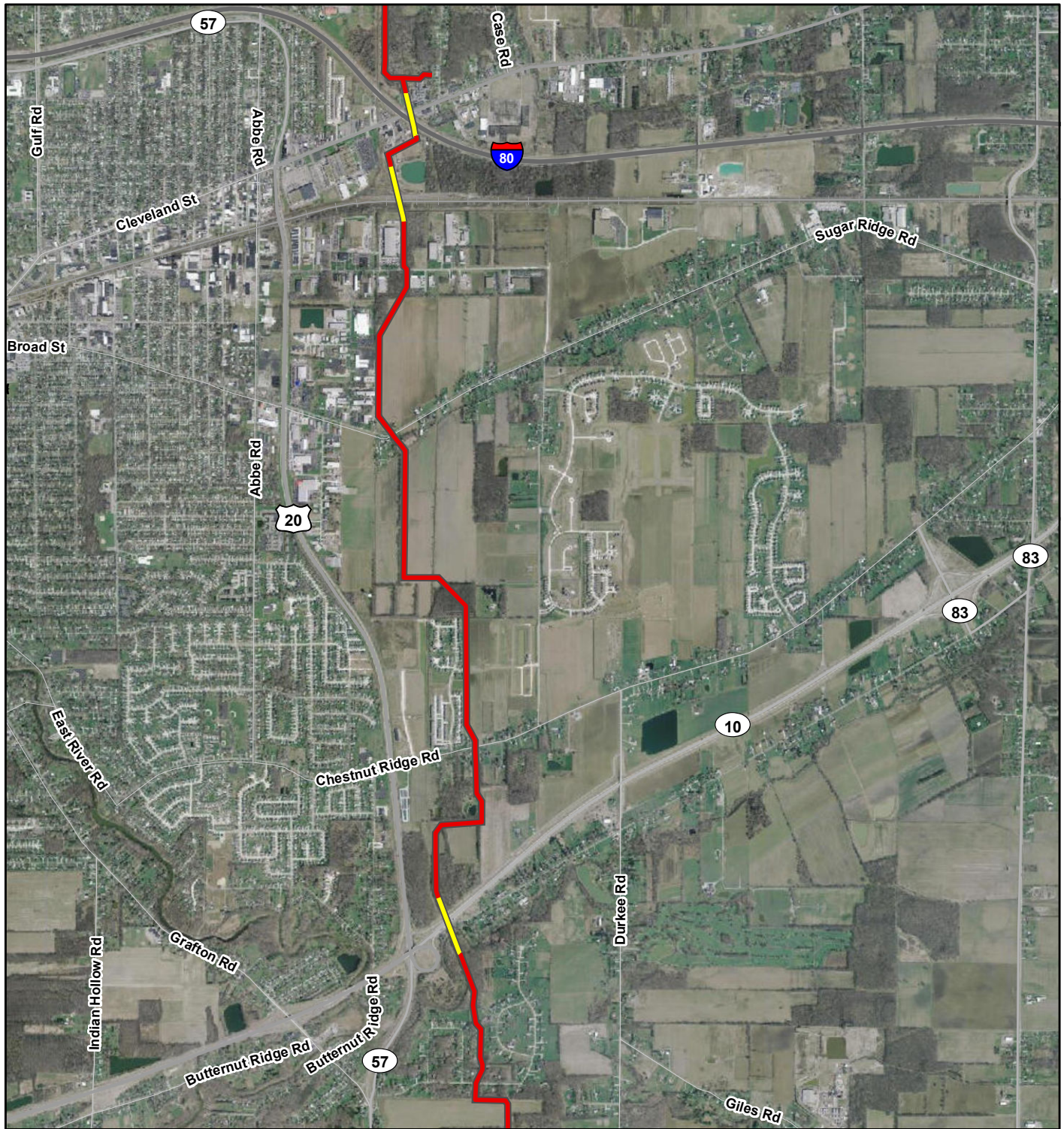
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Map Page 2

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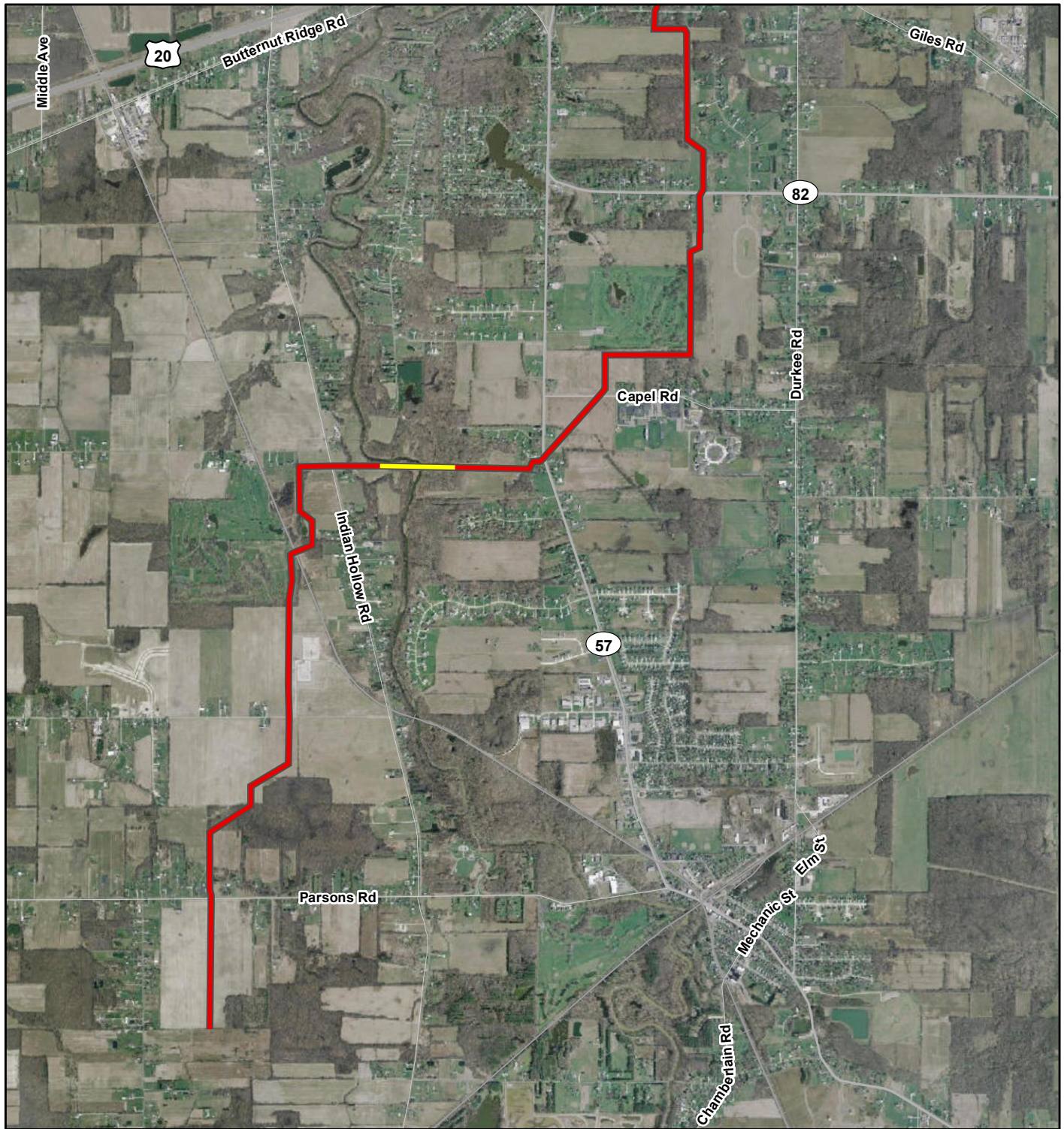
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Map Page 3

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Route Selection

In preparation of the application, the Applicant conducted an exhaustive route selection study. Although not required for submittal of a Letter of Notification filing, the Applicant evaluated and weighed two final potential routes before selecting the proposed route.

Key components of the route selection survey included engineering concerns, right-of way constraints, environmental factors, and regulatory permits. Overall length, potential for co-location with existing utilities, and avoidance of highly populated areas were central engineering concerns. Landowner right-of way constraints and avoidance of public lands were given high importance. Wetlands, waterbodies, and the minimization of tree clearing were critical to weighing ecological constraints. Regulatory permitting included the need to evaluate sensitive locations and avoid threatened or endangered species. Water quality and use, wildlife, cultural resources, geology, and soils were evaluated as well. Land use and costs also factored into the Applicant's feasibility and route selection studies.

Once feasibility studies were complete, the Applicant refined potential "pinch points" and landowner concerns. Finally, re-routes were then incorporated in conjunction with landowner negotiations.

Socioeconomic Impacts

Land Use

Land use in proximity to the amendment is comprised of multiple uses, including a large segment of transitional area between more dense population centers. Commercial, industrial, undeveloped, and agricultural areas are also present, as well as varying densities of residential uses. This project would not significantly alter existing land use. No recreational or public parkland would be crossed and no residences would need to be removed in order to accommodate the project.

Cultural and Archaeological Resources

The Applicant conducted a literature/desktop review and phase I archaeological surveys for the project area. The literature/desktop review defined a 500-acre project area, consisting of a 200-foot wide pipeline corridor centered on the centerline and areas beyond for temporary workspace or access roads. Subsequent phase I field archaeology survey work was conducted within portions of the project area that were assumed to have a high potential to encounter significant, intact archaeological resources. This area, defined as the survey area, encompasses approximately 203 acres. Archaeological fieldwork of the survey area was conducted in May 2014, with additional testing conducted for route adjustments in September and October 2014.

The records review revealed one archaeological site previously recorded within the project area (Site 33LN0076). An additional 16 archaeological sites were recorded beyond the project area but within one mile of the centerline of the proposed pipeline. The Phase I fieldwork identified five newly recorded archaeological sites within the survey area, each of which was recommended as not eligible for listing in the National Register of Historic Places (NRHP). As such, no further archaeological survey work was recommended for these sites. The Ohio Historic Preservation Office (OHPO) has concurred with the recommendation that the project would not affect historic properties, as outlined in May 2014.

In December 2014, the Applicant submitted additional information to the OHPO pertaining to route adjustments for the proposed pipeline (Addendum I). This additional information included results from an updated Phase I analysis. The updated Phase I fieldwork included a 124-acre survey area that identified one newly recorded archaeological site. This site was recommended as not eligible for listing in the NRHP, and no further archaeological work was recommended prior to construction of the project. As of the writing of this report, the OHPO was still reviewing the material provided in the Addendum I survey area results.

Public Interaction

NRG caused public notice of this Letter of Notification to be published in The Morning Journal on December 22, 2014 and The Chronicle Telegram on December 29, 2014. NRG also delivered a copy of the application to local governments and agencies that represent Lorain County, including the cities of Avon, Avon Lake, Elyria, and North Ridgeville; Carlisle, Eaton, and LaGrange townships; the Lorain County Soil and Water Conservation District; the North Ridgeville Planning Commission; and public libraries in Avon, Avon Lake, Elyria, and North Ridgeville.

Although not required to do so under the Letter of Notification process, NRG held two public meetings for this project. The first was held on August 27, 2014 in the village of Grafton, and the second was held on August 28, 2014 in the city of Avon. During these meetings, NRG distributed information describing the project and the proposed pipeline corridor. NRG states that it has contacted all affected landowners and plans to send notification letters to landowners informing them of the timeline for construction and providing a point of contact for questions about the project.

On January 9, 2015, a group of affected landowners, collectively known as the Lorain County Property Owners, filed a Petition for Leave to Intervene in this proceeding. The Ohio Power Siting Board's (Board) administrative law judge granted this request on March 3, 2015.

Additionally, the Board has received informal written comments in opposition to the proposed pipeline from seven affected landowners. The comments express concerns with property devaluation and damage, loss of use of property, and pipeline safety. Matt Lundy, as then State Representative for the 55th Ohio House District, also sent a letter to the Board outlining his concerns with portions of the proposed pipeline route.

The Board will hold a local public hearing in this proceeding at 6:00 p.m. on April 8, 2015 at the Spitzer Conference Center, Room 117, Lorain County Community College, 1005 North Abbe Road, Elyria, Ohio 44035. The adjudicatory hearing will commence on April 23, 2015, at 10:00 a.m. at the offices of the PUCO, Hearing Room 11-A, 11th Floor, 180 East Broad Street, Columbus, Ohio 43215.

Ecological Impacts

Surface Waters

The proposed pipeline would cross 24 streams and ditches. No high quality streams would be impacted. Approximately 1,248 linear feet of intermittent streams would be impacted, and 79 feet of perennial streams would be crossed via horizontal directional drilling (HDD). As a result, the applicant has developed a frac-out plan for this project.

The project area contains 58 wetlands, of which 39 would be impacted. A total impacted wetland area of 59.4 acres is anticipated. Approximately 42 acres of this total would consist of forested wetland impacts. All wetlands delineated were category 1 and 2 wetlands. No high quality wetlands would be impacted.

Compensatory mitigation would be required for this project. The Applicant would mitigate for wetland impacts by purchasing credits from mitigation banks and permittee-responsible sites. The Applicant has committed to working with the Ohio Environmental Protection Agency (Ohio EPA) to satisfy all mitigation requirements as a function of obtaining the required approvals from the U.S. Army Corps of Engineers (USACE) and the Ohio EPA.

The Applicant requested a preliminary jurisdictional determination from the USACE. The USACE consented to the preliminary jurisdictional determination request on July 21, 2014. Due to this determination, a separate isolated wetlands permit from the Ohio EPA would not be anticipated.

The Applicant would utilize best management practices (BMP) to minimize impacts to surface waters. The proposed BMPs are outlined in the Stormwater Pollution Prevention Plan, and a copy has been provided to Staff. Staff also recommends that the Applicant be required to provide a construction access plan for review prior to the preconstruction conference. The plan would consider the location of streams, wetlands, wooded areas, and park lands, and explain how impacts to sensitive resources would be avoided or minimized.

The Applicant has submitted or will submit applications for the following surface water permits:

- Ohio EPA, General National Pollutant Discharge Elimination System
- Ohio EPA, General Permit for Discharges of Hydrostatic Test Water
- Ohio EPA, Stormwater Pollution Prevention Plan
- Ohio EPA, Section 401 Certification
- USACE, Nationwide Permit 12

The Applicant has sited the route and proposed BMPs to avoid impacts to surface water resources to the greatest extent practical. By applying for all the applicable surface water permits, the Applicant would be bound to restrictions specified by the permits. These steps would ensure that impacts to surface water resources would be minimized.

Threatened and Endangered Species

The Applicant requested information from the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) regarding state and federally listed threatened and endangered plant and animal species. Additional information was provided through field assessments and review of published ecological information.

The state and federally listed species with ranges in the project area include the state and federally endangered Indiana bat (*Myotis sodalis*), the federally protected bald eagle (*Haliaeetus leucocephalus*), the state and federally endangered piping plover (*Charadrius melodus*), the state

endangered lake sturgeon (*Acipenser fulvescens*), the state and federally endangered Kirkland's warbler (*Setophaga kirtlandi*), and the state threatened spotted turtle (*Clemmys guttata*).

In order to reduce or avoid impacts to the Indiana bat, the Applicant has committed to adherence to seasonal tree cutting dates of October 1 through March 31 for the clearing of the riparian foraging habitat and potential roost trees.

Bald eagles are protected under the Migratory Bird Treaty Act and are afforded additional legal protection under the Bald and Golden Eagle Protection Act. The USFWS recommends that no tree clearing occur within 660 feet of a bald eagle nest or within any woodlot supporting a nest tree. The USFWS further requests that work within 660 feet of a nest or within the direct line-of-site of a nest be restricted from January 15 through July 31. This will prevent disturbance of the eagles from the egg-laying period until the young fledge, which encompasses their most vulnerable times.

The Applicant identified Kirkland's warbler habitat consisting of scrub/shrub area within three miles of the Lake Erie shoreline along the project corridor. This habitat could be utilized as stopover habitat during migration. In order to avoid impacts, clearing of this habitat must not occur from April 22 through June 1 or from August 15 through October 15.

The project is within one mile of a great blue heron rookery. Due to the distance between the proposed facility site and the nesting location, this project is not likely to impact great blue herons.

All mussels are protected in Ohio. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol, Group 1 streams and unlisted streams with a watershed of 10 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels to determine if mussels are present. This is further explained within the Ohio Mussel Survey Protocol.

Therefore, if in-water work is planned in any stream that meets any of the above criteria, the ODNR Division of Wildlife (DOW) recommends the Applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The DOW also recommends no in-water work occur in perennial streams from April 15 to June 30 to reduce impacts to other indigenous aquatic species and their habitat.

The East Branch of the Black River would be the only waterway subject to the protocol that the Applicant proposes to cross. Since the Applicant would install the proposed pipeline beneath the waterway via HDD, no impacts to mussels are anticipated.

No additional wildlife impacts are anticipated for the project. Through coordination with wildlife agencies, the Applicant, the agencies, and Staff have determined that the species listed above could be impacted by the project. With the specified precautions, adverse impacts are not expected. In order to provide additional assurance that impacts to listed species do not occur,

Staff recommends that the Applicant have an environmental specialist on site when working in potential listed species habitats. Staff also recommends that the Applicant ensure that construction personnel are able to identify listed species if encountered and cease construction activities immediately to ensure that listed species are not impacted.

No national or state parks or forests, wilderness areas, wildlife refuges, wildlife management areas or wildlife sanctuaries are located in the immediate vicinity of the project.

Engineering and Safety

The Applicant has designed the proposed pipeline to meet or exceed Class 3 specifications. Class 3 is a U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) designation utilized in high-density, residential land use areas. The only higher class designation is Class 4, where buildings with four or more stories above ground are prevalent.

The pipeline would have a maximum pipeline delivery pressure of 539 pounds per square inch gauge (PSIG) and a minimum pipeline delivery pressure of 100 PSIG. The pipeline has been designed for a maximum allowable operating pressure of 676 PSIG.

The pipeline would be constructed of high-grade steel with a wall thickness of 0.312 inches and a yield strength of 52,000 pounds per square inch. Sections of the pipeline that would be installed via boring or horizontal directional drilling, as well as sections near the housing development immediately west of the Mile Post 12 area and the Chestnut Ridge Road crossing, would have a wall thickness of 0.5 inches. The pipeline would be cathodically protected by a rectifier and externally coated with 14-16 mils of fusion bonded epoxy (FBE). In areas where the pipeline would be installed via boring or horizontal directional drilling, an abrasion resistant overcoat of Powercrete, or an equivalent, would be used to protect the FBE from damage during construction.

The proposed pipeline would require a new permanent right-of-way, typically 50 feet in width, during operation and maintenance and a temporary right-of-way of 100 feet during construction. In some areas, the permanent and/or temporary right-of-way width would be narrowed to reduce the potential for environmental impacts and/or in response to landowner requests.

The proposed metering station, up to one acre in size, would be located at the proposed supply tap southwest of the village of Grafton where the pipeline would tap into an existing natural gas pipeline owned and operated by Dominion East Ohio. This location would serve as the custody transfer point between Dominion East Ohio and the proposed pipeline. The proposed metering station is currently planned to be designed, built, owned, and operated by Dominion East Ohio.

The proposed regulating station, up to one acre in size, would be located at the Avon Lake Power Plant. The regulating station would reduce the pressure of the gas to 50 PSIG, as required by the boiler facilities at the plant.

Conclusion

The Applicant conducted a thorough route selection analysis in preparation of the application. Existing land uses are not expected to be significantly altered as a result of construction and operation of the proposed facility. The Applicant will not need to acquire any inhabited dwellings to construct the pipeline. The Applicant has sited the proposed alignment to avoid

potential impacts to sensitive institutional land uses, such as schools and park lands. The Applicant has coordinated extensively with affected landowners to avoid or minimize impacts where practicable.

Overall expected impacts to cultural resources are expected to be minimal. Staff recommends that the Applicant finalize coordination of the assessment of potential effects of the proposed pipeline on cultural resources, if any, with Staff and the OHPO prior to construction.

Impacts to water resources and wetlands have been addressed by the Applicant through their acquisition of required permits, wetland banking mitigation plans, the utilization of directional drilling to avoid impacts and the employment of BMPs. Staff recommends several conditions to address and minimize potential ecological impacts in this report.

The project is not expected to impact parks, forests, wilderness areas, or wildlife preserves. The Applicant has coordinated with appropriate federal and state agencies to address potential impacts to threatened and endangered species. Additionally, Staff recommends several conditions designed to avoid, minimize, or mitigate potential impacts to ecological resources.

The Applicant has designed the proposed pipeline to meet or exceed PHMSA Class 3 specifications. In the vicinity of the Mile Post 12 area and the Chestnut Ridge Road crossing, the Applicant would increase the pipeline wall thickness beyond the mandated federal safety requirements.

Recommended Findings

Staff recommends that the Board find that the proposed facility represents minimal social and environmental impacts.

Conditions:

- (1) Prior to construction, the Applicant shall obtain and comply with all applicable permits and authorizations required by federal and state entities for any activities where such permit or authorization is required. Copies of such permits and authorizations, including all supporting documentation shall be provided to Staff.
- (2) The Applicant shall conduct a preconstruction conference prior to the start of any construction activities. Staff, the Applicant, and representatives of the prime contractor and all subcontractors for the project shall attend the preconstruction conference. The conference shall include a presentation of the measures to be taken by the Applicant and contractors to ensure compliance with all conditions of the certificate, and discussion of the procedures for on site investigations by Staff during construction. Prior to the conference, the Applicant shall provide a proposed conference agenda for Staff review. The Applicant may conduct separate preconstruction meetings for each stage of construction.
- (3) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of suitable Indiana bat habitat trees, unless coordination efforts with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) reflects a different course of action.

- (4) The Applicant shall not clear Kirkland's warbler migration stopover habitat from April 22 through June 1 or from August 15 through October 15.
- (5) The Applicant shall contact Staff, the ODNR, and the USFWS within 24 hours if state or federally listed species are encountered during construction activities. Construction activities that could adversely impact the identified plants or animals shall be halted until an appropriate course of action has been agreed upon by the Applicant, Staff, and the ODNR, in coordination with the USFWS. Nothing in this condition shall preclude agencies having jurisdiction over the facility with respect to wildlife from exercising their legal authority over the facility consistent with law. The Applicant shall provide a reference of listed species described by the USFWS and the ODNR in coordination letters that shall be available on site and provided to all construction personnel. The reference shall include pictures, along with descriptions of identifying characteristics.
- (6) The Applicant shall have a Staff-approved environmental specialist on site during construction activities that may affect sensitive areas, as mutually agreed upon between the Applicant and Staff, and as shown on the Applicant's final approved construction plan. Sensitive areas include, but are not limited to, areas of vegetation clearing, designated wetlands and streams, and locations of threatened or endangered species or their identified habitat. The environmental specialist shall be familiar with water quality protection issues and potential threatened or endangered species of plants and animals that may be encountered during project construction.
- (7) Prior to construction, the Applicant shall finalize coordination of the assessment of potential effects of the proposed pipeline on cultural resources, if any, with Staff and the Ohio Historic Preservation Office. If the resulting coordination discloses a find of cultural significance, or inclusion in the National Register of Historic Places (NRHP), then the Applicant shall submit an amendment, modification, or mitigation plan to Staff to ensure compliance with this condition. Any such mitigation effort shall be developed in coordination with the Ohio Historic Preservation Office (OHPO) and submitted to Staff for review.
- (8) If an alternate route is certificated by the Board, the Applicant shall be required to conduct a phase I archaeological survey and an assessment of potential impacts to historical and architectural resources prior to construction. If the phase I alternate route survey discloses a find of cultural or architectural significance, or a structure that could be eligible for inclusion in the NRHP, then the Applicant shall submit an amendment, modification, or mitigation plan. Any such mitigation effort, if needed, shall be developed in coordination with the OHPO and submitted to Staff to ensure compliance with this condition.

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Case No(s). 14-1717-GA-BLN

Summary: Staff Report of Investigation electronically filed by Mr. Matt Butler on behalf of Staff of OPSB