

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

**In the Matter of the Letter of Notification Application by)
American Electric Power Ohio Transmission Company)
for a Certificate of Environmental Compatibility and) Case Number
Public Need for the Trent-Delaware 138 kV Line) 13-0171-EL-BLN
Improvement Project in Delaware County, Ohio.)**

Members of the Board:

Todd Snitchler, Chairman, PUCO
Christiane Schmenk, Director, ODSA
Dr. Ted Wymyslo, Director, ODH
David Daniels, Director, ODA
Scott Nally, Director, Ohio EPA
Jim Zehringer, Director, ODNR
Jeffery J. Lechak, PE, Public Member

Peter Stautberg, State Representative
Sandra Williams, State Representative
Tom Sawyer, State Senator
Shannon Jones, State Senator

To the Honorable Power Siting Board:

Please review the attached Staff Report of Investigation, which has been filed in accordance with the Board's rules.

The applicant's accelerated certificate application in this case is subject to an automatic approval process as required by Section 4906.03 of the Ohio Revised Code.

The application will be automatically approved on February 20, 2013, unless suspended by the Board's chairperson, the executive director, or an administrative law judge. If suspended, the Board must render a decision on the application within 90 days.

Any concerns you or your representative may have with this case must be presented to the Executive Director of the Power Siting Board at least four business days prior to February 20, 2013, which is the automatic approval date. To contact the Executive Director with concerns, you can reply to the email to which this document was attached, or use the ContactOPSB email address listed below.

Sincerely,



Kim Wissman
Executive Director
Ohio Power Siting Board
(614) 466-6692
ContactOPSB@puc.state.oh.us

OPSB STAFF REPORT OF INVESTIGATION

Case Number: 13-0171-EL-BLN
Project Name: Trent-Delaware 138 kV Line Improvement Project
Project Location: Delaware County, Ohio
Applicant: American Electric Power Ohio Transmission Company
Application Filing Date: January 22, 2013
Filing Type: **(Expedited)** Letter of Notification
Inspection Dates: February 5, 2013 and February 11, 2013
Report Date: February 11, 2013
Automatic Approval Date: February 20, 2013
Projected Docket Closure Date: November 1, 2015
(if approved by the Board)
Waiver Requests: None
Staff Assigned: J. Pawley, D. Rostofer, J. Cross, C. Burri, G. Zeto

Summary of Staff Recommendations (see discussion below):

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

Project Description

The purpose of this project is to install a second 138 kV circuit to the existing lattice steel tower structures between the Delaware and Trent substations. There is a vacant open arm position on these existing structures that will be utilized for the new circuit, and an optical ground line will be added for the newly constructed Vassell Substation in Sunbury, OH. The total length of the new 138 kV conductor circuit is approximately 13.5 miles. The open arm position is sufficient for 60 of 64 existing structures. Due to loading/engineering constraints, the Applicant will replace four tower structures with tubular steel double circuit pole structures. One new structure will be added at the Trent Substation takeoff point. The cost of the overall project is estimated at \$5.1 million. Construction is expected to commence March 1, 2013, and be completed by November 1, 2013 due to outage restrictions.

Site Description

The new 138 kV conductor circuit is proposed entirely within existing AEP easements located in Delaware County, Ohio. Some landowner permissions and roadway permits will be needed for access to existing structures in order to minimize impacts to drainage ways, wetlands, etc. All land owners and applicable public officials have been notified of the project. Significant crossings include Big Walnut Creek, Interstate 71, Alum Creek State Park, the Olentangy River, and U.S. Route 23.

Need

The proposed Trent-Delaware 138 kV Line Improvement Project is one of several reliability upgrades AEP has planned to improve and maintain the quality of electric service and reliability to central Ohio and the surrounding AEP load area. The need for the Trent-Delaware 138 kV Line Improvement Project is shown in Power Siting case number 11-1313-EL-BSB. This case, known as the Vassell Substation Project, was approved by the Ohio Power Siting Board on March 26, 2012. The Vassell Substation Project includes 765/345 kV and 765/138 kV transformation and will supply power to the local 345 kV and 138 kV transmission system.

Load Flow Analysis

A summer 2014 peak load flow case was used to analyze system load flows. Analysis shows that without the proposed transmission line, along with other AEP projects, the central Ohio transmission system will experience voltage support problems and possible cascading transmission outages. The analysis took into account generation retirements, system load growth, and certain double contingencies during power transfers. AEP designs its system so that system voltage must be maintained at or above 92 percent during a contingency and equipment thermal loading may not exceed 100 percent of the equipment's emergency rating. In addition, normal system voltages should not go below 95 percent during steady state conditions. If system voltages decline below 92 percent the grid may become unstable and voltage collapse could occur. As part of the Vassell Substation Project, AEP provided load flow transcription diagrams to Staff for review. Staff verified that the double contingency outages caused voltage and thermal problems to the central Ohio transmission system. In addition, the diagrams showed that the addition of the proposed project and other AEP associated projects improved the voltage and thermal issues to AEP recommended planning criteria levels. The results of the load flow studies displayed voltage problems at the Delaware and Berkshire stations during certain double contingencies. The voltage problem is described below.

Double Contingency Outage Causing Voltage Problem

Delaware and Berkshire Stations 138 kV Voltages Affected

- 3,000 MW South-to-North Power Transfer
- Delaware-Hyatt 138 kV Line and Berkshire-Trent 138 kV Line Outage
 - Voltage Without System Upgrades: 77 percent, requirements not met.
 - Voltage With System Upgrades: 100 percent, requirements met.

Nature of Impacts

Social

The Applicant has proposed to construct the entire line within existing right-of-way. Therefore, potential impacts are expected to be largely confined to line stringing and construction access and should be temporary in nature. The removal of four towers may require crane or helicopter operation for deconstruction and removal of material. These options are still being considered by the Applicant and its contractors, and will be presented to Staff prior to construction at these locations. Residential aesthetic impacts are expected to be similar as present conditions, as there is an existing 138 kV circuit on one side of the towers, and the 138 kV corridor parallels an existing 345 kV double circuit corridor for much of its length.

There are 12 Agricultural District parcels identified in the study corridor. However, none of the four structures to be replaced are located on Agricultural District land, so no permanent impacts are expected to these parcels. The Applicant has stated that they will compensate property owners for any monetary losses due to the project through the right-of-way settlement process.

The Applicant had a Phase I archaeological survey performed for the route in January, 2013. Due primarily to the temporary nature of the access roads, limited structure replacement, and work within the existing right-of-way, no additional archaeological survey work was recommended in the Phase I report.

Surface Waters

The electric transmission line right-of-way contains 36 streams, including the Olentangy State Scenic River, Big Walnut Creek, and Little Walnut Creek. No pole structures are located within the 100-year flood zones of these streams. The right-of-way also contains 36 wetlands. None of these wetlands were scored as high quality wetlands (Category 2/3 or Category 3). All wetlands would be clearly staked prior to the commencement of any clearing in order to minimize incidental vehicle impacts. Stream and wetland impacts would be avoided by accessing pole locations from either side of the streams and/or wetlands, where practicable. If headwater streams or wetlands need to be crossed, it is the standard practice of the Applicant to use timber matting to avoid or minimize impacts. The Applicant would not cross the Olentangy River, Big Walnut Creek, or Little Walnut Creek with construction equipment. The Applicant would not conduct mechanized clearing within 25 feet of any stream channel. Stumps would be left in place to help maintain bank stability. To further limit impacts to streams and wetlands, tree clearing, which would be conducted by hand, would be limited to those trees that are perceived as posing an imminent risk to the construction and operation of the facility.

Two ponds, totaling 1.45 acres, are also located within the right-of-way. These ponds are man-made and appear to be used for recreational purposes and storm water retention. These resources would not be impacted by construction activities. The project would cross the Alum Creek Reservoir. The methods used to construct this project would not impede recreational use by patrons or impact this resource.

OPSB Staff has reviewed the Applicant's preliminary construction access plan, which will be incorporated into the final Storm Water Pollution Prevention Plan (SWPPP). Based on OPSB Staff's review of this plan, the Applicant has appropriately considered location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the Ohio Department of Natural Resources (ODNR), Division of Wildlife, and explains how impacts to all sensitive resources would be avoided or minimized during construction, operation, and maintenance. The Applicant met with the U.S. Army Corps of Engineers (USACE) and Staff on February 11, 2013 to determine the best method to remove transmission tower No. 37, which is located on an isolated finger of Alum Creek Reservoir at the Alum Creek State Park. Based on this meeting, the Applicant would prefer to cut and drop this structure across a natural water inlet and pull it to a safe location within the right-of-way using a dozer, where the structure can be dismantled and removed from the site. The structure foundations would be removed by hand to three feet below the surface of the ground and the holes would be backfilled with soil. The Applicant is also developing a backup methodology for the removal of the structure. If the Applicant chooses to

use the backup methodology, then the Applicant would be required to provide Staff with appropriate documentation for review and approval before deconstruction activities associated with transmission tower structure No. 37 would be authorized. The Applicant would utilize best management practices (BMPs) to minimize impacts to surface waters. Appropriate BMPs would be outlined in the SWPPP and a copy would be provided to Staff.

The Applicant anticipates submitting a Notice of Intent (NOI) for coverage under the Ohio Environmental Protection Agency General National Pollutant Discharge Elimination System (NPDES) Permit. Coverage under the USACE Nationwide Permit 12 for wetland and stream impacts is also anticipated.

Threatened and Endangered Species

The federal and state listed species and/or their suitable habitat that may be found in the project area include: the federal and state endangered Indiana bat (*Myotis sodalis*); the federal and state endangered clubshell (*Pleurobema clava*), rayed bean (*Villosa fabalis*), and the snuffbox (*Epioblasma triquetra*) mussel species; and the state endangered black shiner (*Notropis heterolepis*) fish species. Based on the type of construction activities proposed, these species and/or their suitable habitat would not be impacted by this project.

Vegetation and Ecologically-Sensitive Areas

The project route crosses through several vegetative communities, one park, and crosses conservation land. Specifically, the route crosses ODNR's Jones/Logan Scenic River Easement and the Alum Creek State Park. All project activities within the park and conservation lands should be coordinated with the appropriate agency/organization.

Conclusion

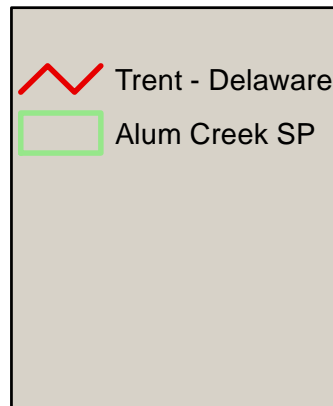
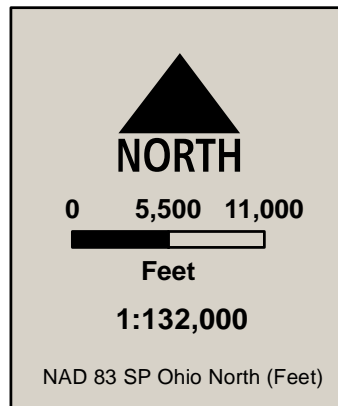
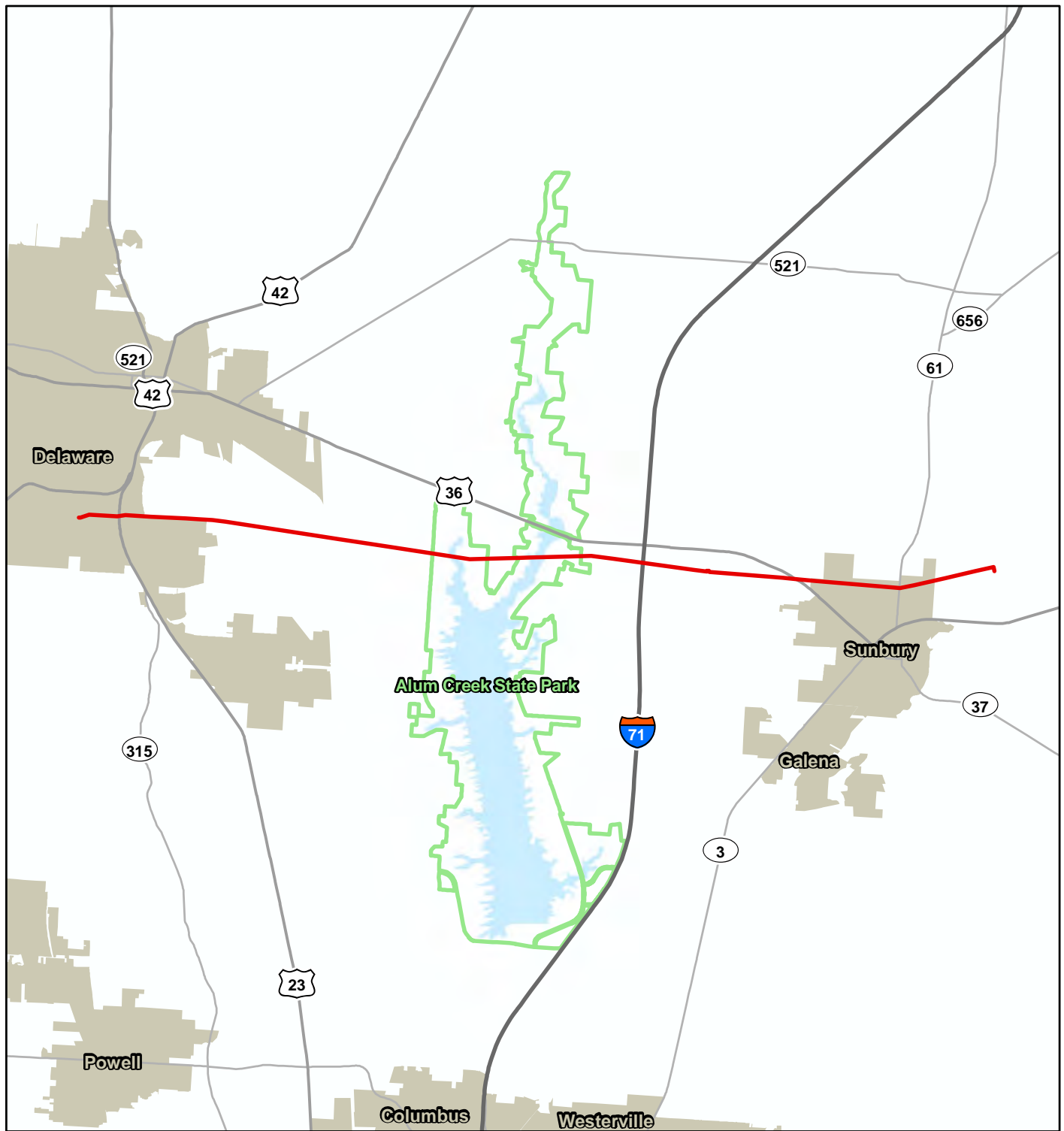
The Applicant's utilization of existing right-of-way for the entire length of the project significantly minimizes potential adverse impacts. With the following conditions, the construction of this project should pose only minimal negative social and ecological impacts. Staff recommends automatic approval of this case on February 20, 2013.

Staff Recommended Conditions:

1. The Applicant shall obtain and comply with all applicable permits and authorizations as required by federal and state laws and regulations 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. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.
2. The Applicant shall conduct a preconstruction conference(s) prior to the start of any project work (including and vegetation clearing), which the Staff shall attend, to discuss how environmental concerns will be satisfactorily addressed. The Applicant may conduct separate preconstruction meetings for each stage of construction.
3. The Applicant shall utilize BMPs when working in the vicinity of environmentally sensitive areas. This includes, but is not limited to, the installation of silt fencing (or similarly effective tool) prior to initiating construction near streams and wetlands. The

installation shall be done in accordance with generally accepted construction methods and shall be inspected regularly.

4. At least 30 days before the pre-construction conference, the Applicant shall submit to the Staff, for review and confirmation that it complies with this condition, a project construction access plan. This plan shall include all laydown areas, residential and environmentally sensitive area access points (walk in locations only), and any locations where vegetation clearing is required. The plan shall consider the location of residential fencing, private structures, streams (Olentangy State Scenic River, Big Walnut Creek, and Little Walnut Creek), wetlands, wooded areas, conservation easement areas (Jones/Logan Scenic River Easement), and park lands (Alum Creek State Park). Additional details shall be provided for access to structures 22, 23, and 54 per field observations.
5. The Applicant shall cut and drop transmission tower structure No. 37 across a natural water inlet feature of Alum Creek Reservoir and pulled to a safe location within existing right-of-way, where the structure shall be dismantled and removed from the site. The structure foundations shall be removed by hand to three feet below the surface of the ground and the holes shall be backfilled with soil. If the Applicant chooses to use a different methodology to deconstruct and remove this structure, then the Applicant shall be required to provide Staff with appropriate documentation for review and approval before deconstruction shall be authorized. Additionally, the Applicant shall have a separate pre-construction conference for this activity, which Staff and the USACE shall be invited to attend. The final deconstruction methodology and access plan shall be provided to Staff 30 days prior to the preconstruction conference.
6. The Applicant shall institute a public information program that informs affected property owners of the nature of the project, specific contact information for Applicant personnel who are familiar with the project, the proposed timeframe for project construction, and a schedule for restoration activities. Notification to property owners shall be given at least 30 days prior to work on the affected property.
7. That the Applicant shall avoid, where possible, any damage to field drainage systems resulting from construction of the facility in agricultural areas. Damaged systems shall be repaired to at least original conditions at Applicant's expense. Severely compacted soils shall be plowed, if necessary, to restore them to original condition.
8. The Applicant shall remove all temporary gravel and other construction staging area and access materials after completion of construction activities as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to preconstruction conditions in compliance with the NPDES permit(s) obtained for the project and the approved SWPPP created for this project.



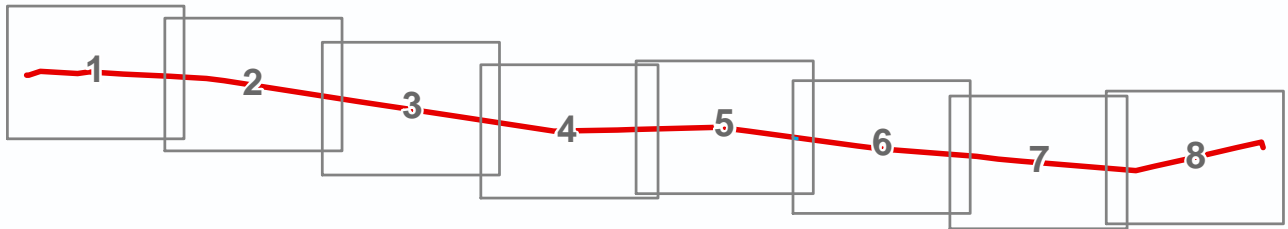
Overview Map

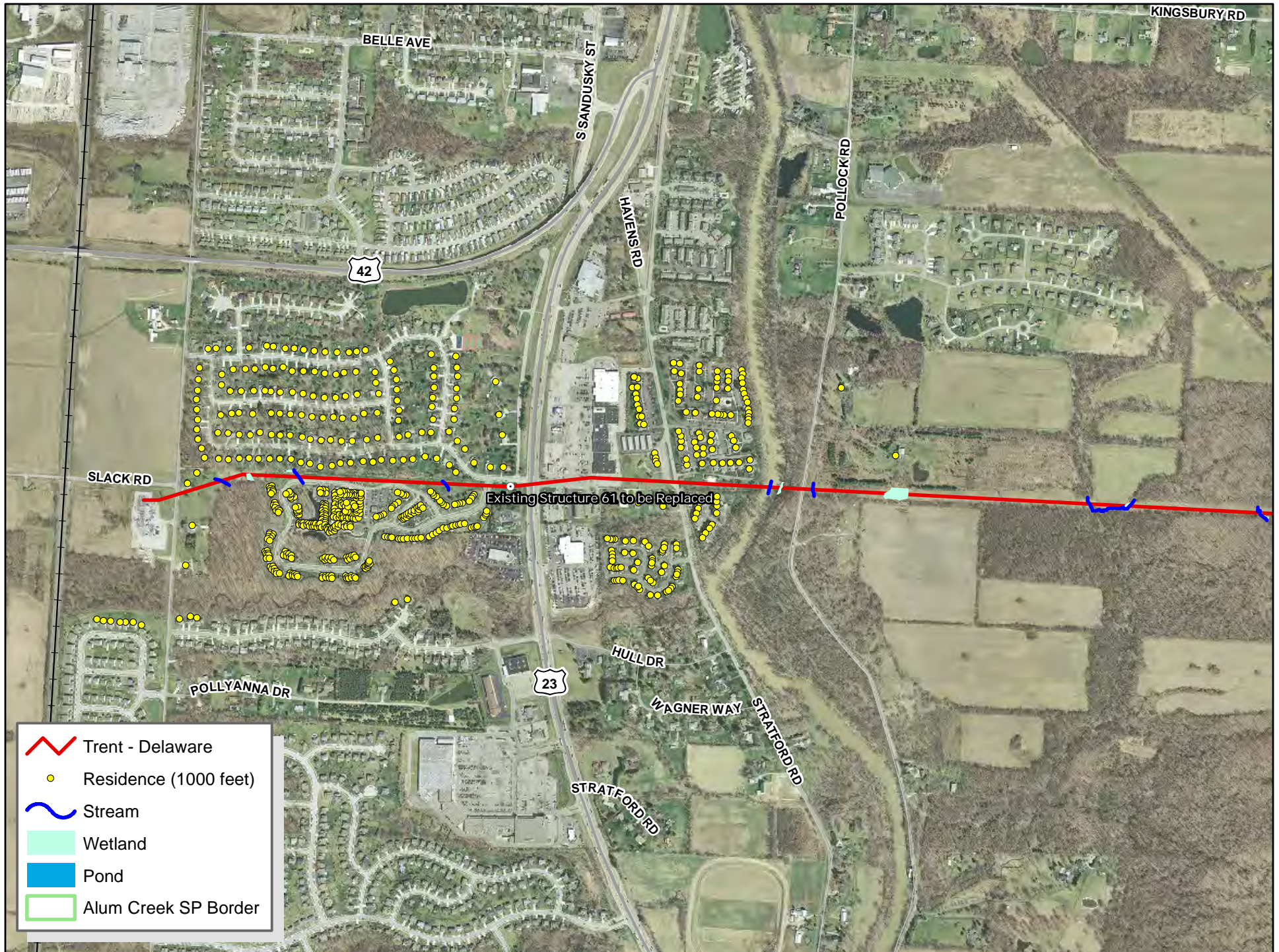
13-0171-EL-BLN

**Trent - Delaware 138kV
Line Improvement Project**

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 certified application and supplemental materials.

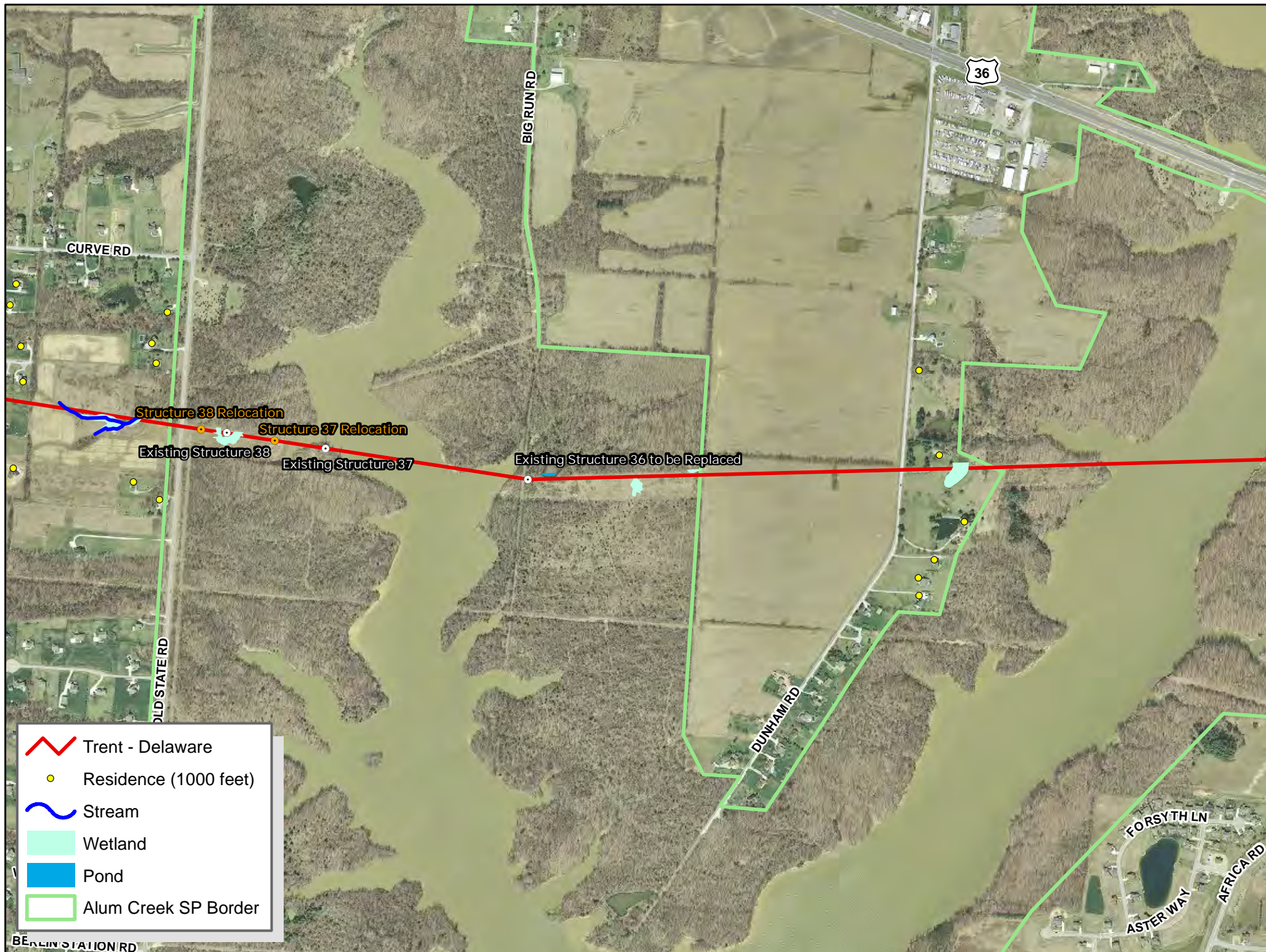
Map Index



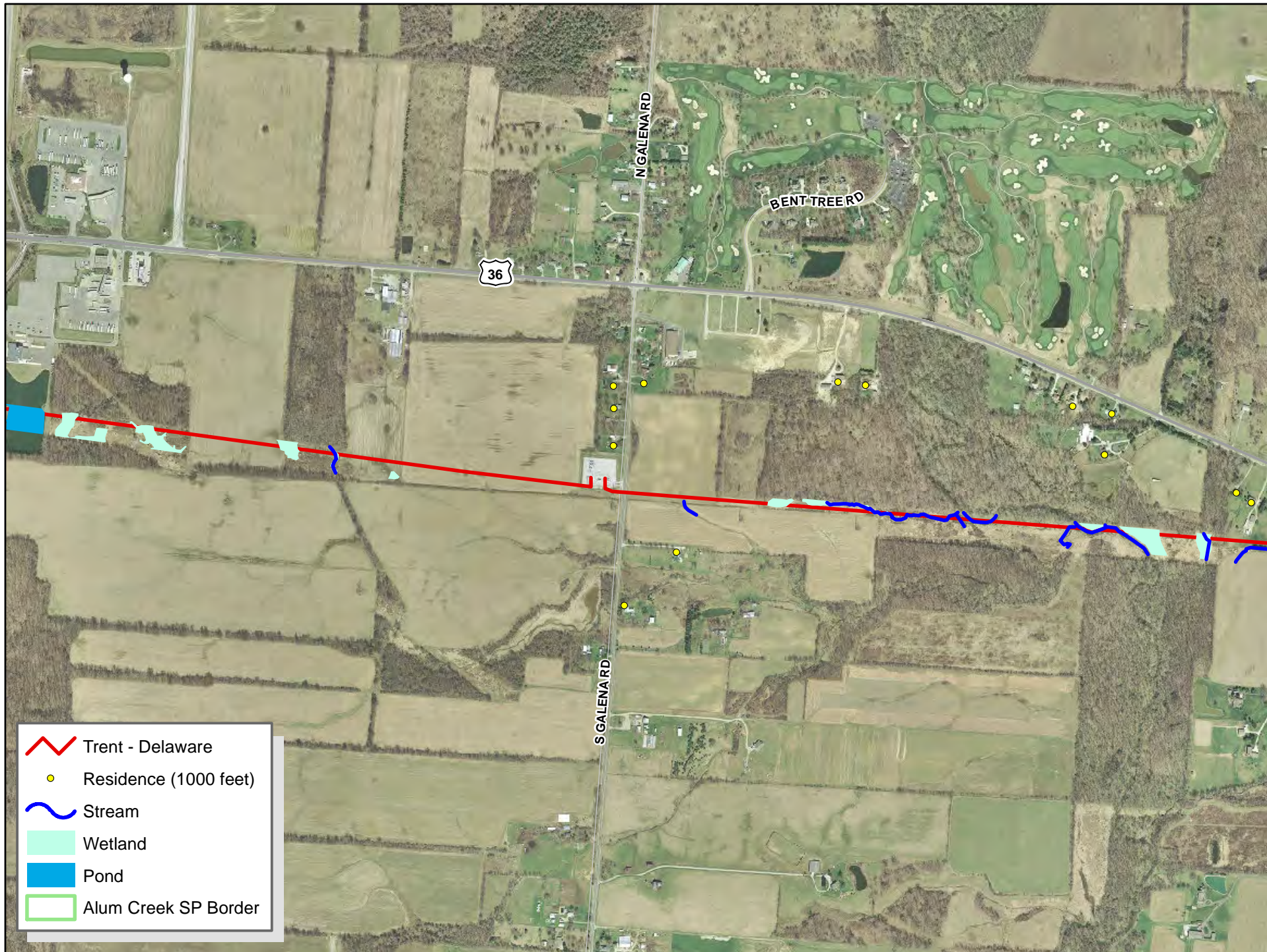
















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Case No(s). 13-0171-EL-BLN

Summary: Report of investigation electronically filed by Mr. Adam S Bargar on behalf of Staff of OPSB