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Case Number: 08-289-GA-BTX

Date Filed: 9/26/2008

Section: 1 of 4

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Dominion East Ohio
P.O. Box 26666
Richmond, VA 23261-6666

FILE

Dominion®

September 17, 2008

Alan Schriber
Chairman
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

RE: Application for a Certificate of Environmental Compatibility and Public Need for the Franklin 20" Pipeline Project.
Case No. 08-289-GA-BTX.

Dear Chairman Schriber:

Enclosed please find an original and twenty copies of The Dominion Resource Services Company, d/b/a Dominion East Ohio Gas Company, Application for the Certificate of Environmental Compatibility and Public Need for the Franklin 20" Natural Gas Pipeline. As proposed, the project is an 8.4 mile 20-inch diameter high pressure pipeline through Wayne and Summit Counties, Ohio.

Pursuant to Ohio Administrative Code (OAC) Chapter 4906-15, we have provided the following:

1. Project Summary and Facility Overview
2. Review of Need for Proposed Project
3. Site and Route Alternative Analysis
4. Technical Data
5. Financial Data
6. Socioeconomic and Land Use Impact Analysis
7. Ecological Impact Analysis

The following information is included per the requirements of OAC 4906-5-03(A)(3):

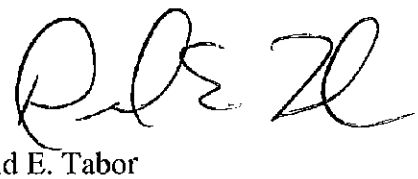
a) Applicant — Dominion East Ohio
1201 East 55th Street
Cleveland, Ohio 44103

b) Name and Location — Franklin 20" Pipeline
Wayne County and Summit County, Ohio

Dominion East Ohio
P.O. Box 26666
Richmond, VA 23261-6666

c) Authorized Representative:David E. Tabor
Director, Dominion East Ohio Gas
1201 East 55th Street
Cleveland, Ohio 44103
(216) 736-6325

Very truly yours,
Dominion East Ohio Gas



David E. Tabor
Director, Dominion East Ohio Gas

cc: Renee Jenkins, Docketing

Dominion East Ohio
P.O. Box 26666
Richmond, VA 23261-6666

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September 17, 2008

Now comes David E. Tabor who says that the information and material contained in the attached Application for the Certificate of Environmental Compatibility and Public Need for the Franklin 20" Natural Gas Pipeline Project is true and accurate to the best of my knowledge, information and belief.

David E. Tabor

Sworn to and subscribed before me the 18th day of September, 2008.

Notary Public
My Commission Expires:

SHERRY JONES
NOTARY PUBLIC • STATE OF OHIO
Recorded in Cuyahoga County
My commission expires Jan. 22, 2013

Application to the Ohio Power Siting Board For a Certificate of Environmental Compatibility and Public Need

Dominion East Ohio Gas

Franklin 20-Inch Natural Gas Pipeline Project

OPSB CASE NO. 08-289-GA-BTX

September 2008

Dominion

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Chapter 4906-15

Instructions for the Preparation of Certificate Applications for Electric Power, Gas and Natural Gas Transmission Facilities

4906-15-01 Project summary and facility overview.

(A) An applicant for a certificate to site a major electric power, gas, or natural gas transmission facility shall provide a project summary and overview of the proposed project. In general, the summary should be suitable as a reference for state and local governments and for the public. The summary and overview shall include the following:

(1) A statement explaining the general purpose of the facility.

(2) A description of the proposed facility.

(3) A description of the site or route selection process, including descriptions of the major alternatives considered.

(4) A discussion of the principal environmental and socioeconomic considerations of the preferred and alternate routes or sites.

(5) An explanation of the project schedule (a bar chart is acceptable).

(B) Information filed by the applicant in response to the requirements of this section shall not be deemed responses to any other section of the application requirements.

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4906-15-02 Review of need for proposed project.

(A) The applicant shall provide a statement explaining the need for the proposed facility, including a listing of the factors upon which it relied to reach that conclusion and references to the most recent long-term forecast report (if applicable). The statement shall also include but not be limited to, the following:

(1) A statement of the purpose of the proposed facility.

(2) Specific projections of system conditions or local requirements that impacted the applicant's opinion on the need for the proposed facility.

(3) Relevant load flow studies and contingency analyses, if appropriate, identifying the need for system improvement.

(4) For electric power transmission facilities, one copy of the relevant power flow base case model data, including "East Central Area Reliability Coordination Agreement" equivalents, in "General Electric (Positive Sequence Load Flow), Power Technology Incorporated", or common raw data format on diskette, with appropriate directions to recover data if compressed.

(5) For gas or natural gas transmission projects, one copy in electronic format of the relevant base case system data on diskette, with a description of the analysis program and the data format.

(B) Expansion plans.

(1) For the electric power transmission lines and associated facilities, the applicant shall provide a brief statement of how the proposed facility and site/route alternatives fit into the applicant's most recent long-term electric forecast report and the regional plans for expansion,

including, but not limited to, the following:

(a) Reference to any description of the proposed facility and site/route alternatives in the most recent long-term electric forecast report of the applicant.

(b) If no description was contained in the most recent long-term electric forecast report, an explanation as to why none was filed in the most recent long-term electric forecast report.

(c) Reference to regional expansion plans, including East Central Area Reliability Coordination Agreement bulk power plans, when applicable (if the transmission project will not affect regional plans, the applicant shall so state).

(2) For gas transmission lines and associated facilities, the applicant shall provide a brief statement of how the proposed facility and site/route alternatives fit into the applicant's most recent long-term gas forecast report, including the following:

(a) Reference to any description of the proposed facility and site/route alternatives in the most recent long-term gas forecast report of the applicant.

(b) If no description was contained in the most recent long-term gas forecast report, an explanation as to why none was filed in the most recent long-term gas forecast report.

(C) For electric power transmission facilities, the applicant shall provide an analysis of the impact of the proposed facility on the electric power system economy and reliability. The impact of the proposed facility on all interconnected utility systems shall be evaluated, and all conclusions shall be supported by relevant load flow studies.

(D) For electric power transmission lines, the applicant shall provide an analysis and evaluation of the options considered which would eliminate the need for construction of an electric power transmission line, including electric power generation options and options involving changes to existing and planned electric power transmission substations.

(E) The applicant shall describe why the proposed facility was selected to meet the projected need.

(F) Facility schedule.

(1) Schedule. The applicant shall provide a proposed schedule in bar chart format covering all applicable major activities and milestones, including:

(a) Preparation of the application.

(b) Submittal of the application for certificate.

(c) Issuance of the certificate.

(d) Acquisition of rights-of-way and land rights for the certified facility.

(e) Preparation of the final design.

(f) Construction of the facility.

(g) Placement of the facility in service.

(2) Delays. The applicant shall describe the impact of critical delays on the eventual in-service date.

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4906-15-03 Site and route alternatives analyses

(A) The applicant shall conduct a site and route selection study prior to submitting an application for an electric power transmission line, electric power transmission substation, gas or natural gas transmission line, or a gas compressor station. The study shall be designed to evaluate all practicable sites, routes, and route segments for the proposed facility identified within the project area.

(1) The applicant shall provide the following:

(a) A description of the study area or geographic boundaries selected, including the rationale for the selection.

(b) A map of suitable scale which includes the study area and which depicts the general routes, route segments, and sites which were evaluated.

(c) A comprehensive list of all siting criteria utilized by the applicant, including any quantitative or weighting values assigned to each.

(d) A description of relevant factors or constraints identified by the applicant and utilized in the route and site selection process.

(e) A description of the process by which the applicant utilized the siting criteria to determine the preferred and alternate routes and sites.

(f) A description of the routes and sites selected for evaluation, their final ranking, and the rationale for selecting the preferred and alternate routes and sites.

(g) A description of any qualitative or other factors utilized by the applicant in the selection of the preferred and alternate routes or sites.

(2) The applicant shall provide one copy of any constraint map utilized for the study directly to the board staff for review.

(B) The applicant shall provide a summary table comparing the routes, route segments, and sites, utilizing the technical, financial, environmental, socioeconomic, and other factors identified in the study. Design and equipment alternatives shall be included where the use of such alternatives influenced the siting decision.

(C) The applicant may provide a copy of any route and site selection study produced by or for the applicant for the proposed project as an attachment to the application. The study may be submitted in response to paragraphs (A) and (B) of this rule, provided that the information contained therein is responsive to the requirements of paragraphs (A) and (B) of this rule.

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4906-15-04 Technical data

(A) Site/route alternatives. Information on the location, major features, and the topographic, geologic, and hydrologic suitability of site/route alternatives shall be submitted by the applicant. This information may be derived from the best available reference materials.

(1) Geography and topography. The applicant shall provide map(s) of not less than 1:24,000 scale, including the area one thousand feet on each side of a transmission line alignment, and the area within the immediate vicinity of a substation site or compressor station site,

which shall include the following features:

(a) The proposed transmission line alignments, including proposed turning points.

(b) The proposed substation or compressor station site locations.

(c) Major highway and railroad routes.

(d) Identifiable air transportation facilities, existing or proposed.

(e) Utility corridors.

(f) Proposed permanent access roads.

(g) Lakes, ponds, reservoirs, streams, canals, rivers, and swamps.

(h) Topographic contours.

(i) Soil associations or series.

(j) Population centers and legal boundaries of cities, villages, townships, and counties.

(2) Slope and soil mechanics. The applicant shall:

(a) Provide a brief, but specific description of the soils in the areas depicted on the above map(s) where slopes exceed twelve per cent. This information may be extracted from published sources.

(b) Discuss the rationales as to suitability of the soils for foundation construction.

(B) Layout and construction. The applicant shall provide information on the poposed layout and preparation of route/site alternatives, and the description of the proposed major structures and their installation as detailed below.

(1) Site activities. The applicant shall describe the proposed site clearing, construction methods and reclamation operations, including:

(a) Surveying and soil testing.

(b) Grading and excavation.

(c) Construction of temporary and permanent access roads and trenches.

(d) Stringing of cable and/or laying of pipe.

(e) Removal and disposal of construction debris such as crates, pallets, etc.

(f) Post-construction reclamation.

(2) Layout for associated facilities. The applicant shall:

(a) Provide a map of 1:2,400 scale of the site of major transmission line associated facilities such as substations, compressor stations and other stations, showing the following proposed features:

(i) Final grades after construction, including the site and access roads.

(ii) Proposed location of major structures and buildings.

(iii) Fenced-in or secured areas.

(iv) Estimated overall dimensions.

(b) Describe reasons for the proposed layout and any unusual features.

(c) Describe plans for any future modifications in the proposed layout, including the nature and approximate timing of contemplated changes.

(C) Transmission equipment. The applicant shall provide a description of the proposed transmission lines, as well as switching, capacity, metering, safety and other equipment pertinent to the operation of the proposed electric power and gas transmission lines and associated facilities. Include any provisions for future expansion.

(1) Provide the following data for electric power transmission lines:

(a) Design voltage.

(b) Tower designs, pole structures, conductor size and number per phase, and insulator arrangement.

(c) Base and foundation design.

(d) Cable type and size, where underground.

(e) Other major equipment or special structures.

(2) Provide a description for electric power transmission substations that includes a single-line diagram and a description of the proposed major equipment, such as:

(a) Breakers.

(b) Switchgear.

(c) Bus arrangement and structures.

(d) Transformers.

(e) Control buildings.

(f) Other major equipment.

(3) Provide the following data for gas transmission lines:

(a) Maximum allowable operating pressure.

(b) Pipe material.

(c) Pipe dimensions and specifications.

(d) Other major equipment.

(4) Provide a description of gas transmission facilities such as:

(a) Control buildings.

(b) Heaters, odorizers, and above-ground facilities.

(c) Any other major equipment.

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4906-15-05 Financial data.

(A) Ownership. The applicant shall state the current and proposed ownership status of the proposed facility, including sites, rights-of-way, structures, and equipment. The information shall cover sole and combined ownerships, any leases, options to purchase, or franchises, and shall specify the extent, terms, and conditions of ownership, or other contracts or agreements.

(B) Electric capital costs. The applicant shall submit estimates of applicable capital and intangible costs for the various components of electric power transmission facility alternatives. The data submitted shall be classified according to the federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for the utility companies, unless the applicant is not an electric light company, a gas company or a natural gas company as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the capital costs classified in the accounting format ordinarily used by the applicant in its normal course of business). The estimates shall include:

(1) Land and land rights.

(2) Structures and improvements.

(3) Substation equipment.

(4) Poles and fixtures.

(5) Towers and fixtures.

(6) Overhead conductors.

(7) Underground conductors and insulation.

(8) Underground-to-overhead conversion equipment.

(9) Right-of-way clearing and roads, trails, or other access.

(C) Gas capital cost. The applicant shall submit estimates of applicable capital and intangible costs for the various components of gas transmission facility alternatives. The data submitted shall be classified according to the federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for utility companies, unless the applicant is not an electric light company, a gas company or a natural gas company as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the capital costs classified in the accounting format ordinarily used by the applicant in its normal course of business. The estimates shall include:

(1) Land and land rights.

(2) Structures and improvements.

(3) Pipes.

(4) Valves, meters, boosters, regulators, tanks, and other equipment.

(5) Roads, trails, or other access.

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4906-15-06 Socioeconomic and land use impact analysis.

(A) The applicant shall conduct a literature search and map review for the area within one thousand feet on each side of each proposed transmission line centerline and within one thousand feet of the perimeter of each substation or compressor station designed to identify specific land use areas as required in paragraph (B)(3) of this rule. On-site investigations shall be conducted within one hundred feet of each side of each proposed transmission line centerline and within one hundred feet of the perimeter of each substation or compressor station to characterize the potential effects of construction, operation, and maintenance of the proposed facility.

(B) The applicant shall provide, for each of the site/route alternatives and adjacent areas, map(s) of not less than 1:24,000 scale, including the area one thousand feet on each side of a transmission alignment, and the area within the immediate vicinity of a substation site, which map(s) shall include the following features:

(1) Proposed transmission line alignments, including proposed turning points.

(2) Proposed substation or compressor station locations.

(3) General land use within the area, including, but not limited to:

(a) Residential use.

(b) Commercial use.

(c) Industrial use.

(d) Cultural use (as identified in paragraph (F) of this rule).

(e) Agricultural use.

(f) Recreational use.

(g) Institutional use (e.g., schools, hospitals, churches, government facilities, etc.).

(4) Transportation corridors.

(5) Existing utility corridors.

(6) Noise-sensitive areas.

(7) Agricultural land (including agricultural district land) existing at least sixty days prior to submission of the application located within each transmission line right-of-way or within each site boundary.

(C) The applicant shall provide for each of the site/route alternatives, a description of the impact of the proposed facility on each land use identified in paragraph (B)(3) of this rule. As it relates to agricultural land, the evaluation shall include impacts to cultivated land, permanent pasture land, managed wood lots, orchards, nurseries, and agricultural-related structures.

(1) Construction: The applicant shall estimate the probable impact of the proposed facility on each land use (including: (a) buildings that will be destroyed, acquired, or removed as the result of the planned facility and criteria for owner compensation; and (b) field operations [such as plowing, planting, cultivating, spraying, and harvesting], irrigation, and field drainage systems).

(2) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility on each land use.

(3) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during the construction of the proposed facility and during the operation and maintenance of the proposed facility to minimize impact to land use, such as effects on subsurface field drainage systems.

(D) The applicant shall provide the following public interaction information for each of the site/route alternatives:

(1) A list of counties, townships, villages, and cities within one thousand feet on each side of the centerline or facility perimeter.

(2) A list of the public officials contacted regarding the application, their office addresses, and office telephone numbers.

(3) A description of the program or company/public interaction planned for the siting, construction, and operation of the proposed facility, i.e. public information programs.

(4) A description of any insurance or other corporate program, if any, for providing liability compensation for damages, if such should occur, to the public resulting from construction or operation of the proposed facility.

(5) A description of how the facility will serve the public interest, convenience, and necessity.

(6) An estimate of the increase in tax revenues as a result of facility placement.

(7) A description of the impact of the facility on regional development, referring to pertinent formally adopted regional development plans.

(E) The applicant shall provide the following health, safety, and aesthetic information for each site/route alternative:

(1) The applicant shall provide a description of how the facility will be constructed, operated, and maintained to comply with the requirements of applicable state and federal statutes and regulations, including the 2002 edition of the "National Electrical Safety Code", applicable occupational safety and health administration regulations, U.S. department of transportation gas pipeline safety standards, and

Chapter 4901:1-16 of the Administrative Code.

(2) For electric power transmission facilities, the applicant shall discuss the production of electric and magnetic fields during operation of the preferred and alternate site/route. If more than one conductor configuration is to be used on the proposed facility, information shall be provided for each configuration that constitutes more than ten per cent of the total line length, or more than one mile of the total line length being certificated. Where an alternate structure design is submitted, information shall also be provided on the alternate structure. The discussion shall include:

(a) Calculated electric and magnetic field strength levels at one meter above ground, under the conductors and at the edge of the right-of-way for:

(i) Winter normal conductor rating.

(ii) Emergency line loading.

(iii) Normal maximum loading.
Provide corresponding current flows, conductor ground clearance for normal maximum loading and distance from the centerline to the edge of the right-of-way. Estimates shall be made for minimum conductor height. The applicant shall also provide typical cross-section profiles of the calculated electric and magnetic field strength levels at the normal maximum loading conditions.

(b) References to the current state of knowledge concerning possible health effects of exposure to electric and magnetic field strength levels.

(c) Description of the company's consideration of electric and magnetic field strength levels, both as a general company policy and specifically in the design and siting of the transmission line project including: alternate conductor configurations and phasing, tower height, corridor location and right-of-way width.

(d) Description of the company's current procedures for addressing public inquiries regarding electric and magnetic field strength levels, including copies of informational materials and company procedures for customer electric and magnetic field strength level readings.

(3) The applicant shall discuss the aesthetic impact of the proposed facility with reference to plans and sketches, including the following:

(a) The views of the proposed facility from such sensitive vantage points as residential areas, lookout points, scenic highways, and waterways.

(b) Structure design features, as appropriate.

(c) How the proposed facility will likely affect the aesthetic quality of the site and surrounding area.

(d) Measures that will be taken to minimize any visual impacts created by the proposed facility.

(4) For electric power transmission facilities, the applicant shall provide an estimate of the level of radio and television interference from operation of the proposed facility, identify the most severely impacted

areas, if any, and discuss methods of mitigation.

(F) The applicant shall provide, for each of the site/route alternatives, a description of the impact of the proposed facility on cultural resources. This description shall include potential and identified recreational areas and those districts, sites, buildings, structures, and objects which are recognized by, registered with, or identified as eligible for registration by the Ohio historical society or the Ohio department of natural resources. It shall include but not be limited to the following:

(1) Location studies: The applicant shall describe studies used to determine the location of cultural resources within the study corridor. Correspondence with the Ohio historical preservation office shall be included.

(2) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on cultural resources.

(3) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility on cultural resources.

(4) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during the operation and maintenance of the proposed facility to minimize impact to cultural resources.

(G) The applicant shall submit data and related information on noise emissions generated by the proposed transmission line and associated facilities. Construction noise information shall be submitted for only those portions of transmission line routes requiring more than four months of actual construction time to complete in residential, commercial, and other noise-sensitive areas.

(1) Construction: To assure noise control during construction, the applicant shall estimate the nature of any intermittent, recurring, or particularly annoying sounds from the following sources:

(a) Dynamiting or blasting activities.

(b) Operation of earth moving and excavating equipment.

(c) Driving of piles.

(d) Erection of structures.

(e) Truck traffic.

(f) Installation of equipment.

(2) Operation and maintenance: The applicant shall estimate the effect of noise generation due to the operation or maintenance of the transmission line and associated facilities.

(3) Mitigation procedures: The applicant shall describe any equipment and procedures designed to mitigate noise emissions during both the site clearing and construction phase, and during the operation and maintenance of the facility to minimize noise impact.

(H) The applicant shall provide site-specific information that may be required in a particular case to adequately describe other significant issues of concern that were not addressed above. The applicant shall describe measures that were taken and/or will be taken to avoid or minimize adverse impact. The applicant shall describe public safety-related equipment and procedures that were and/or will be taken.

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4906-15-07 Ecological impact analysis.

(A) The applicant shall provide a summary of any studies that have been made by or for the applicant on the natural environment in which the proposed facility will be located. The applicant shall conduct and report the results of a literature search, including map review, for the area within one thousand feet on each side of a transmission line alignment and the area within the immediate vicinity of a substation or compressor station site. On-site investigations shall be conducted within one hundred feet on each side of a transmission line centerline or within one hundred feet of a substation or compressor station site to characterize the potential effects of construction, operation, or maintenance of the proposed facility.

(B) The applicant shall provide for each of the site/route alternatives a map(s) of not less than 1:24,000 scale, including the area one thousand feet on each side of the transmission line alignment and the area within the immediate vicinity of a substation site or compressor station site. The map(s) shall include the following:

(1) Proposed transmission line alignments.

(2) Proposed substation or compressor station locations.

(3) All areas currently not developed for agricultural, residential, commercial, industrial, institutional, or cultural purposes including:

(a) Streams and drainage channels.

(b) Lakes, ponds, and reservoirs.

(c) Marshes, swamps, and other wetlands.

(d) Woody and herbaceous vegetation land.

(e) Locations of threatened or endangered species.

(4) Soil associations in the corridor.

(C) The applicant shall provide for each of the site/route alternatives a description of each stream or body of water (and associated characteristics including floodplain) that is present and may be affected by the proposed facility, including but not limited to the following:

(1) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on streams and bodies of water. This shall include the impacts from route clearing.

(2) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility after construction on streams and bodies of water. This shall include the permanent impacts from route clearing.

(3) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during construction of the proposed facility and during the operation and maintenance of the proposed facility to minimize the impact on streams and bodies of water.

(D) The applicant shall provide for each of the site/route alternatives a description of each wetland that is present and may be affected by the proposed facility. The applicant shall describe the probable impact on these wetlands, including but not limited to the following:

(1) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on wetlands and wildlife habitat.

(2) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility after construction on wetlands and wildlife habitat. This would include the permanent impacts from route clearing and any impact to natural nesting areas.

(3) Mitigation procedures: The applicant shall describe the mitigation

procedures to be used during construction of the proposed facility and during the operation and maintenance of the proposed facility to minimize the impact on wetlands and wildlife habitat.

(E) The applicant shall provide for each of the site/route alternatives a description of the naturally occurring vegetation that is present and may be affected by the proposed facility. The applicant shall describe the probable impact to the environment from the clearing and disposal of this vegetation, including but not limited to the following:

(1) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on the vegetation. This would include the impacts from route clearing, types of vegetation waste generated, and the method of disposal or dispersal.

(2) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility after construction on species described above. This would include the permanent impact from route clearing and any impact to natural nesting areas.

(3) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during construction of the proposed facility and during the operation and maintenance of the proposed facility to minimize the impact on species described above.

(F) The applicant shall provide for each of the site/route alternatives a description of each major species of commercial or recreational value and species designated as endangered or threatened, in accordance with U.S. and Ohio species lists, that is present and may be affected. The applicant shall describe the probable impact to the habitat of the species described above, including but not limited to the following:

(1) Construction: The applicant shall estimate the probable impact of the construction of the proposed facility on commercial, recreational, threatened, or endangered species. This would include the impacts from route clearing and any impact to natural nesting areas.

(2) Operation and maintenance: The applicant shall estimate the probable impact of the operation and maintenance of the proposed facility after construction on species described above. This would include the permanent impact from route clearing and any impact to natural nesting areas.

(3) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during construction of the proposed facility and during the operation and maintenance of the proposed facility to minimize the impact on species described above.

(G) The applicant shall provide for each of the site/route alternatives a description of the areas with slopes and/or highly erodible soils (according to the natural resource conservation service and county soil surveys) that are present and may be affected by the proposed facility. The applicant shall describe the probable impact to these areas, including but not limited to the following:

(1) Construction: The applicant shall provide a description of the measures that will be taken to avoid or minimize erosion and sedimentation during the site clearing, access road construction, facility construction process, and any other temporary grading. If a storm water pollution prevention plan is required for the proposed facility, the applicant shall include the schedule for the preparation of this plan.

(2) Operation and maintenance: The applicant shall describe and estimate the probable impact of the operation and maintenance of the proposed

facility after construction on the environment. This would include permanent impacts from sites where grading has taken place.

(3) Mitigation procedures: The applicant shall describe the mitigation procedures to be used during construction of the proposed facility and during operation and maintenance of the proposed facility to minimize the impact on the environment due to erosion from storm water run-off.

(H) The applicant shall provide site-specific information that may be required in this particular case to adequately describe other significant issues of concern that were not addressed above. The applicant shall describe measures that were taken and/or will be taken to avoid or minimize adverse impacts. The applicant shall describe public safety-related equipment and procedures that were and/or will be taken.

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Prior Effective Dates: 10/10/78, 3/20/87, 8/28/98

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APPENDICES

4906-15-01 PROJECT SUMMARY AND FACILITY OVERVIEW

(A) PROJECT SUMMARY AND FACILITY OVERVIEW

This Application seeks a Certificate of Environmental Compatibility and Public Need from the Ohio Power Siting Board (OPSB) for Dominion East Ohio, Inc.'s (Dominion East Ohio) proposed 8.4 mile 20-inch diameter high pressure pipeline though Wayne and Summit Counties, Ohio. The project, referred to as the Franklin 20" Natural Gas Pipeline, will start at an existing Dominion East Ohio storage yard and compressor station in Chippewa Township, Wayne County, connect to Franklin Station in Green Township, Summit County, and terminate at Shoop Station in Green Township, Summit County. The preferred pipeline route has a 40-foot to 60-foot wide right-of-way (ROW) and follows an existing gas pipeline corridor along nearly its entire length. A reduced construction corridor width of 30 feet will be established in woodlot areas and near streams.

The Dominion East Ohio project area predominantly occupies upland settings drained by the Tuscarawas River, which crosses the western portion of the corridor, and its tributaries. It includes agricultural fields, woodlands, scattered residential areas, wetlands, and residential development associated with the city of New Franklin toward the eastern terminus.

(1) General Purpose of the Facility

The proposed Franklin 20-inch natural gas pipeline will help secure current and future natural gas supplies for customers in northern Ohio markets, including the greater Cleveland and Akron regions. The proposed pipeline will provide greater flexibility to store gas during the warm weather months, and move gas from storage to distribution markets during cold weather. Its net effect will be to increase current gas storage capacity by 10 billion cubic feet (Bcf), consequently securing gas storage in the area for the foreseeable future. Further, the proposed pipeline will increase efficiency by minimizing migration loss in the storage pools and providing larger working gas capacity for peak day requirements. Dominion East Ohio will construct, maintain, operate, and own the proposed natural gas pipeline.

Dominion East Ohio's existing natural gas pipelines in the project area are incapable of meeting projected demands within their design parameters. Dominion East Ohio's storage capabilities have become inadequate to move necessary amounts of gas to minimize migration losses from the current storage systems. Studies indicate that peak day send-out

of gas has continued to increase, although the load has declined in the oldest parts of the system. Connection of the proposed pipeline to the existing natural gas transmission system in northeastern Ohio will ensure the continued supply of natural gas to the region and fulfill Dominion East Ohio's legal requirement to provide services to meet customer demands. Consequently, by constructing the proposed Franklin 20-inch pipeline, Dominion East Ohio will meet its legal obligations, corporate public responsibility, and business development goals.

(2) Summary Description of Proposed Facility

The proposed project involves the installation of approximately 8.4 miles of 20-inch diameter pipe for the Preferred Route. Beginning at an existing Dominion East Ohio storage yard (Chippewa Compressor; PID 12-03130.000) in Chippewa Township, in northeastern Wayne County, the pipeline will travel eastward to another existing Dominion East Ohio storage yard (Shoop Station; PID 2808325) near the western shore of Nimisila Reservoir in Franklin Township, Summit County. Additional existing project facilities include 18 well pads and 18 associated access roads bordering the proposed pipeline. The pipeline project will be approximately 8.44 and 8.87 miles long for the Preferred and Alternate Route, respectively. Installation of the natural gas pipeline will require excavation of a 4-foot wide by 6-foot deep trench over the majority of the route; horizontal directional drilling (HDD) is planned for several sections to avoid impact to sensitive land use areas. Ideally, a 60-foot wide permanent ROW will be utilized for the pipeline corridor.

(3) Route Selection Process

Dominion East Ohio conducted a preliminary route screening and then a route selection study for the project to systematically evaluate potential routes for connecting the pipeline from the Chippewa Compressor station to the Shoop station while connecting the pipeline with the Franklin station located near the middle of the two end-point stations (refer to Figure 3-1). The goal of the route studies was the selection of a Preferred and Alternate route that would result in the least overall impact to sensitive land uses and natural/cultural resources while also being economically feasible routes that could be constructed in the desired timeframe. The interconnections to these three stations are critical to the project's viability and investment justification.

Dominion East Ohio's alternative analysis process involved identifying the boundary of the study area, defining the criteria for evaluation of several routes that could be feasibly

constructed, and applying a screening process for identifying three routes for further, in-depth analysis of impacts in terms of socioeconomic factors, land use and natural resources.

The study area and preliminary routing analyses were limited by the two pipeline end points and the project requirement that the Franklin station, located between the end points, be connected to the new Franklin 20-inch pipeline. This consideration represents the primary criterion for defining the study area and preliminary analysis. The secondary criteria that were considered in identifying preliminary routes were 1) minimum impacts to sensitive land uses (residential, ecological, and recreational), 2) the use of existing ROW and 3) shortest overall distances. All routes must cross the Tuscarawas River and the adjacent Metroparks Towpath bike/pedestrian trail. Dominion East Ohio developed seven (7) route alternatives based on the primary and secondary criteria.

Based on the study's selection criteria and the quantification of constraint features for each of the seven routes, the three most feasible route alternatives having the least impacts on land use were chosen for a more in-depth route selection study. The analysis of these three routes entailed a more detailed, quantification-based scoring evaluation of constraints including ecological features, land use, cultural resources and engineering.

Based on the lowest score results (i.e., cumulative, least impact on the various features or constraints), the Preferred and Alternate routes were determined. The two routes are illustrated in Figure 03-1. The Preferred route will consist of 100% ROW owned by Dominion East Ohio, approximately 5% of which is also public road ROW. The Alternate Route will consist of 38% exclusively road ROW.

There is 46% commonality between the two selected routes; this occurred as a consequence of the rather unique characteristics of the study area and project requirements to connect three stations. The use of existing ROW was determined to have the least impact on the primary constraints and land features compared to negotiating new easements and the resultant impacts from more extensive tree/vegetation clearing in sensitive areas. For the above reasons, Dominion East Ohio submitted a request for waiver of the 20% commonality rule given the project requirements and resulting study area limitations. The waiver was granted to Dominion East Ohio in an August 6, 2008 entry to the OPSB case file.

More descriptions of the Preferred and Alternate routes are provided in Chapter 6 and are illustrated in Figures 03-1, 04-1A, 04-1B, 04-2A, 04-2B, 06-1A through 06-1D, and 06-2A through 06-2D.

(4) Principal Environmental and Socioeconomic Considerations

A general socioeconomic survey of the study area was performed as part of this application and as part of the route selection analysis. This included a field survey, preparation of a land use map, current population estimates and projections for the area, consideration of compatibility of the project with local and regional development plans, and an assessment of the impact of the proposed pipeline project on the surrounding community.

(a) Land Use Impacts: The primary land uses in the surrounding area of both the Preferred and Alternate Routes is a combination of agricultural land, medium to large-lot residential, and woodlots. No significant industrial land use has been identified in the study area.

After installation, the proposed pipeline will have no aesthetic impact beyond the required cleared ROW, valves, line-of-sight pipeline markers and the currently existing well pads and access roads. Any damage to agricultural drainage tiles and compaction of soil resulting from access by construction vehicles will be restored post-construction. Topsoil on agricultural lands under cultivation will be segregated and restored.

Based on reviews of local plans and contacts with local government officials, the project does not appear to conflict with any local or regional development plans.

(b) Economic Impacts: The project is anticipated to have a small, positive, impact on the local economy, because labor for the construction of the pipeline will be drawn as much as possible from local sources. No new housing or schools will be required because non-local employees will stay at local motels and hotels.

(c) Ecological Impacts: An assessment of ecological impacts of the proposed project was attained through on-site investigations and through literature reviews and agency communication regarding the surrounding vicinity. GAI Consultants (GAI) and Environment and Archaeology LLC (EA) performed field surveys, wetland delineations, and stream assessments for the entire 200-foot study corridor of the Preferred Route. Environmental fieldwork was completed for portions of the Alternate Route in common with the Preferred Route.

Dominion East Ohio's request for a waiver from fully developing ecological information on the Alternate Route was granted in the OPSB case file, as stated above. Dominion East Ohio followed OPSB staff recommendations that for areas where the Preferred and Alternate Routes do not share commonality, the information for the Alternate Route does not necessarily have to be of the same quality as information for the Preferred. Thus, digital Ohio Wetland Inventory (OWI) data and Environmental Systems Research Institute, Inc. (ESRI) stream data was supplemented in locations along the Alternate Route where fieldwork was not completed. Desktop developed information is considered to have less accuracy as compared to field-generated information.

The Preferred Route uses environmental information collected from both field survey and desktop sources. This method is comparable to what the USACE refers to as "comprehensive determination" in the USACE Wetland Delineation Manual (1987). This method results in the maximum amount of data for use in making ecological impact determinations and the data is usually quantitative. This approach was used on the Preferred Route, but not the Alternate Route. Because the desktop data is not comparable in quality to field data, the natural resource impacts between the two routes appear to be very similar, most probably due to less accuracy in using desktop data sources for the Alternate Route.

Sixteen perennial, intermittent, and ephemeral streams were delineated within the 200-foot study corridor of the Preferred Route. Twelve streams are located within the 200-foot study corridor of the Alternate Route. Of these, 12 stream crossing locations were identified along the Preferred Route and 9 stream crossings were mapped along the Alternate Route. Through the use of HDD techniques, only five streams (headwaters and lower class streams) would be crossed by trench construction on the Preferred Route. Some of these streams are crossed more than one time by the Preferred and/or Alternate Routes. Ohio Environmental Protection Agency (Ohio EPA) Qualitative Habitat Evaluation Index (QHEI) and Primary Headwater Habitat Evaluation Index (HHEI) data forms were completed for all of the streams that were identified along the Preferred Route and portions of the Alternate Route in common with the Preferred Route.

Twenty-two delineated wetlands were identified within the 200-foot study corridor of the preferred route. Using the U.S. Army Corps of Engineers wetland delineation methods and the Ohio EPA Ohio Rapid Assessment Method (ORAM), wetland delineations were completed for wetlands identified within the study corridor. Wetland acreage within the 60-foot project ROW totals 4.3 acres for the Preferred Route and 3.3 acres for the Alternate Route.

However, through the use of HDD, only 0.4 acres is expected to be impacted during construction activities on the Preferred Route. Detailed ecological evaluations and other supporting data for both the Preferred and Alternate Route are included in Section 7 and Appendix 07-1.

A construction methodology evaluation for the Preferred Route based upon GAI's ecological surveys, engineering evaluation, and field surveys with OPSB and Ohio EPA staff has been completed. Dominion East Ohio will use a combination of HDD and trenching for stream crossings. An environmental inspector will be on site during construction activities in sensitive areas to ensure that commitments near higher quality streams and headwaters are fulfilled. Such measures are expected to minimize impacts and re-establish the value and function of higher quality streams and headwaters post-restoration. Construction methods will follow Ohio State Certification Requirements under U.S. Army Corps of Engineers Nationwide Permit (NWP) 12 to reduce impact to these sensitive areas.

A literature review of available resources and correspondence with the U.S. Fish and Wildlife Service (USFWS), Ohio Department of Natural Resources-Division of Natural Areas and Preserves (ODNR-DNAP),Ohio Department of Natural Resources-Division of Real Estate and Land Management (ODNR-DRELM), and Ohio Department of Natural Resources-Division of Wildlife (ODNR-DOW) indicated that the Preferred and Alternate Routes are within the range of a number of species that are on federal and/or state listed threatened or endangered species or are of high interest. A number of field surveys were conducted to discern the presence of these species, as well as potential impact to critical habitat.

Suitable habitat for the Eastern Prairie Fringed Orchid was found, but USFWS-approved biologists did not find this species in the Project area during the flowering period of the plant (Appendix 7-2). No other state or federal-listed plants were identified during the field surveys or need additional coordination with USFWS.

The Indiana bat may occur in the proposed route corridors due to project location within species range, as well as the suitable habitat provided as discussed in Section 4906-15-07(B)(3)(e) of this Application. Davey Resource Group documented thirteen potential Indiana Bat maternity roosting trees throughout the ROW area of the Proposed Route. HDD will be utilized to avoid impacts to two of the 13 potential maternity trees, and the Project route will avoid impacts to three other potential maternity trees. Through coordination with the USFWS it was determined that emergence surveys should be conducted for the remaining eight trees before August 15th. Emergence surveys were conducted within the specified

timeframe. No bats were seen emerging from marked maternity roost trees, and the trees were subsequently removed by the Davey Tree Expert Company, with approval from USFWS.

No other wildlife species considered endangered or threatened by the State of Ohio or by the federal government should be significantly impacted by construction of the project along the Preferred Route. The project area either does not provide the appropriate habitat, the pipeline corridor is outside of the range of such species, or natural history characteristics of potential species are such that any impact would be minimal.

(d) Cultural Impacts: An overview of known cultural resources adjacent to the Preferred and Alternate Routes was performed as part of this application. The study included the compilation of previously recorded archaeological sites and sites from the National Register of Historic Places (NRHP). In addition, historical maps and documents were consulted to determine likely locations of potential but previously unrecorded historic sites.

GAI conducted a Phase I cultural resources survey between November 5 and November 30, 2007 and a supplemental survey of a historic site between March 31 and April 5, 2008. The goal of these surveys was to identify and generally characterize archaeological sites and historic architectural resources within the project area. GAI's Phase I study consisted of an archaeological field reconnaissance, a geomorphological reconnaissance of the floodplain settings within the project area, a shovel test survey of localities with a moderate to high archaeological potential, and an archaeological survey in portions of the project area determined to possess moderate to high archaeological potential. These areas consisted primarily of undisturbed, relatively level to gently sloping, well-drained uplands with limited alluvial settings. The study determined that no adverse impacts to cultural resources will occur if HDD is used to install the proposed pipeline beneath the Tuscarawas River floodplain in the Clinton Ohio & Erie Canal Historic District and a prehistoric site potentially eligible for National Register of Historic Places (NRHP) listing.

(5) Project Schedule Summary

Construction of this project is proposed to begin in April 2009, and is scheduled to be in service by January 2010. Any delays that may occur would in turn delay the in-service date of the natural gas pipeline. In particular, negotiation of new property easements, as would be required by the Alternate Route, would delay the project by a minimum of three months compared to the Preferred Route. Delays continuing into the 2009-2010 heating season could be detrimental to pressure distribution within the system.

4906-15-02 REVIEW OF NEED FOR PROPOSED PROJECT

(A) STATEMENT OF FACILITY NEED

(1) Purpose of Proposed Facility

Dominion East Ohio, as a public utility is required under Ohio Revised Code 4905.22 to "...furnish necessary and adequate service and facilities, and every public utility shall furnish and provide with respect to its business such instrumentalities and facilities, as are adequate and in all respects just and reasonable." The project involves the installation of a new 20-inch natural gas pipeline for purposes of increasing and enhancing current gas storage capacity for an additional 10 billion cubic feet (Bcf). The proposed Franklin 20" natural gas pipeline is one such facility that is required to increase the effectiveness and efficiency of the Dominion East Ohio storage facilities and reduce the operating costs to the customer.

(2) System Conditions and Local Requirements

The need for the proposed pipeline is based upon providing a new outlet/inlet for storage gas from the Stark-Summit County base pools. The existing storage infrastructure has become inadequate to move the amounts of gas needed to significantly impact the migration losses from the Dominion East Ohio storage system. In constructing the proposed Storage Expansion Project, Dominion East Ohio will meet legal obligations, corporate responsibility to the public, and business development goals.

(3) Relevant Load Flow Studies

A study was undertaken to look at migration from Dominion East Ohio's storage fields and what controllable factors had the greatest impact on reducing the annual migration losses. Utilizing Six Sigma techniques, an analysis of storage data from 1980 through 2007 was conducted. The results of the analysis pointed to two factors that had significant impact on migration losses. The first was the amount of storage gas removed from Stark-Summit base pools in November and March of the withdrawal season. The second was the amount of gas injected in Stark-Summit base pools in September and October of the injection season.

Two events have contributed to the decline in the storage systems ability to withdraw storage gas from Stark-Summit base pools. The first was the down-rating of the pipeline SOC 20". In 2003, a smart-pig run was made on the SOC 20"pipeline. As a result of the findings from the smart-pig run, the SOC 20" pipeline was initially down-rated and eventually removed from service as an outlet for the Stark-Summit base pools. This severely restricted the ability to move gas from Stark-Summit base pools to transmission pipeline TPL8. Transmission pipeline TPL8 exposes Stark-Summit base pools to the Cleveland area base and heat load.

The second event has been the decline of system base and heating load in the Akron area. The Akron area is the major outlet for Stark-Summit base pool storage via pipelines TPL1, TPL2, and TPL5. With the decline in heating and base load, especially base load, it has become more difficult to withdraw gas from the Stark-Summit base pools in the early and late periods of the withdrawal season. This decline in base and heating load has led to an increase in gas migration losses thereby resulting in an increase in costs associated with the lost gas.

Dominion East Ohio's Planning Department uses SynerGee Gas 4.3.2 computer network modeling and analysis software (licensed by Advantica,Inc.) to indicate how natural gas systems operate and where system improvements must be made to achieve various end results such as improved pressure, locating new system supplies, or system reliability.

The Planning Department analyzed the model to find the best way to provide another outlet for the Stark-Summit base pools. This outlet needed to move storage gas to the Cleveland area market during the early and late periods of the withdrawal season to limit the migration of storage gas from the Stark-Summit base pools. Ideally, the pipeline would also provide new inlets into the Stark-Summit base pools during the injection season. This would provide efficiencies by distributing the gas flow and reduce current bottlenecks in the system.

The model showed that a 20" pipeline run from Shoop Station through Franklin Station ending at Chippewa Compressor Station would address the current problems as stated by connecting Stark-Summit base pools to pipeline TPL8 at Franklin Station and pipeline TPL13 at Chippewa Compressor Station. This would allow Stark-Summit base pool gas to move on pipelines TPL8 and TPL13 to the Cleveland area market during the targeted months of

withdrawal season. The pipe was sized as to not exceed maximum pressure drops for required flow rates.

Figure 02-1 shows Dominion East Ohio's current operations for withdrawals from Stark-Summit base pools through Franklin Station run 1,307 psig into pipeline TPL8. This flow rate will vary according to demand. The configuration of the storage system currently limits Dominion East Ohio to this outlet for withdrawals from Stark-Summit base pools.

Figure 02-2 shows the flow rate through the proposed Franklin 20" into pipeline TPL13. This provides another outlet for Stark-Summit base pools withdrawals when pipelines TPL1, TPL2, and TPL5 cannot accept any further flow from Stark-Summit base pools. This flow rate will vary according to demand.

Figure 02-3 shows the flow rate through the proposed Franklin 20" into pipeline TPL13 through the compressors at Chippewa Compressor Station during late season withdrawal. This model uses a suction pressure of 150 psig at Chippewa Compressor Station to move storage gas from Stark-Summit base pools. This would occur when the storage pool pressure has fallen to a level where free flowing into pipelines TPL8 and TPL13 would not provide significant volumes. This scenario can also be utilized to inject Stark-Summit base pool gas into peak pools Group 7, Group 10, and Group 11. Injection is currently done by bringing off-system gas to Chippewa Compressor Station. The new pipeline would increase the deliverability from these pools for times of peak demand utilizing Stark-Summit base pool gas versus off system gas.

Figure 02-4 shows injections into Stark-Summit base pools with the current infrastructure with 1,500 psig backpressure at the compressor stations. Figure 2-4A shows the same operations with the proposed Franklin 20" in operation. With the Franklin 20" in operation for the given scenario, approximately 15 million standard ft^3/day (mmscfd) of gas is stored that could not have been stored with the current system. Dominion East Ohio will then allow the new pipeline to meet the demands of the second factor which is to inject more gas into Stark-Summit base pools during September and October to help lessen migration losses. These factors clearly demonstrate the importance of constructing the Franklin 20" to significantly reduce operating costs of the Dominion East Ohio Storage Field.

Figure 02-5 shows an overview schematic of the proposed Franklin 20" in relation to compressor stations and other pipeline locations.

(4) Electronic Power Transmission Base Case System Data

This section does not apply because this is a natural gas transmission project.

(5) Copy of Base Case System Data

One copy of the base case system data in electronic format has been provided separately to the staff of the Ohio Power Siting Board.

(B) EXPANSION PLANS

(1) Electric Transmission Lines and Associated Facilities

This project involves a natural gas pipeline; therefore, this section is not applicable.

(2) Gas Transmission Lines and Associated Facilities

The new proposed pipeline is needed to reduce the gas migration losses from the Stark-Summit base pools during critical periods by providing additional injection inlets and provide more efficient movement of gas to the Cleveland market (from base pool) through new connections with existing transmission lines. The reduction in gas system base and heating load in the Akron area and the removal of an existing 20" pipeline from service has necessitated the proposed 20" new pipeline. There are no additional expansion plans at this time.

(C) IMPACT ON ELECTRIC SYSTEM ECONOMY AND RELIABILITY

This project involves a natural gas pipeline; therefore this section is not applicable.

(D) OPTIONS TO ELIMINATE THE NEED FOR THE PROPOSED ELECTRIC TRANSMISSION LINE

This project involves a natural gas pipeline; therefore this section is not applicable.

(E) FACILITY SELECTION RATIONALE

Dominion East Ohio system planners investigated the conditions within the service area and concluded that the proposed project will reduce current migration losses, increase deliverability for times of peak demand, and reduce the operating costs of the storage field.

(F) FACILITY SCHEDULE

(1) Schedule

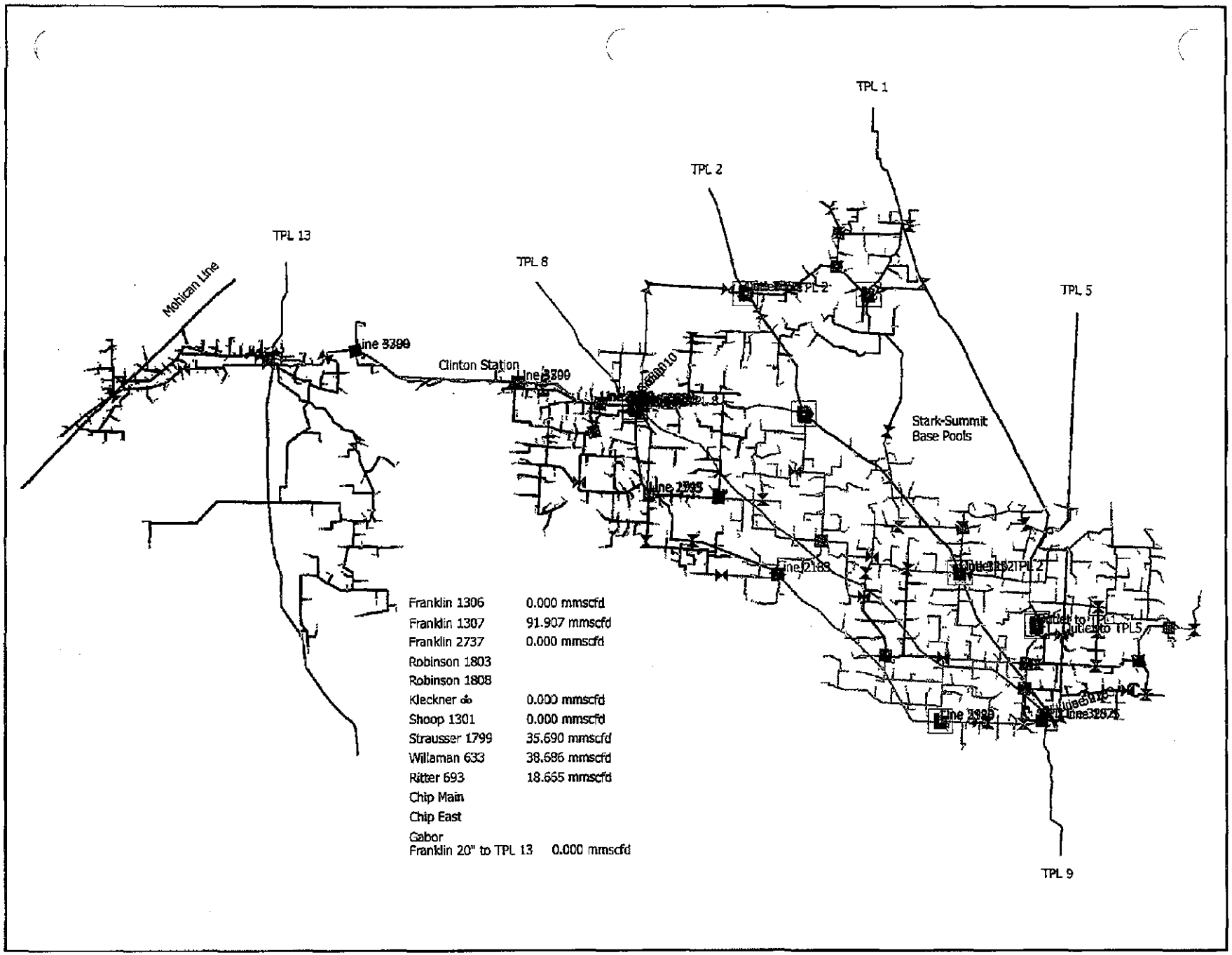
The overall project schedule for major activities and milestones is presented in bar chart form as Figure 02-6. This schedule is valid for the Preferred Route.

(2) Delays

Impediments to the project schedule would delay the in-service date of the natural gas pipeline projected to be completed before the 2009-2010 heating season. In particular, negotiation of new property easements, as would be required by the Alternate Route, would delay the project by a minimum of three months compared to the Preferred Route. Delays could cause a critical situation of gas migration loss with corresponding difficulty in delivering natural gas during peak demand within the service area.

APPENDIX 02-1A

LOAD FLOW STUDIES



Model Name: OPSB Storage Fields with Proposed 20in
SynerGEE Gas 4.3.2 (14 Mar 2008)

Current Stark-Summit withdrawals through Run 1307
at Franklin Station into TPL 8 early season

Figure 02-1

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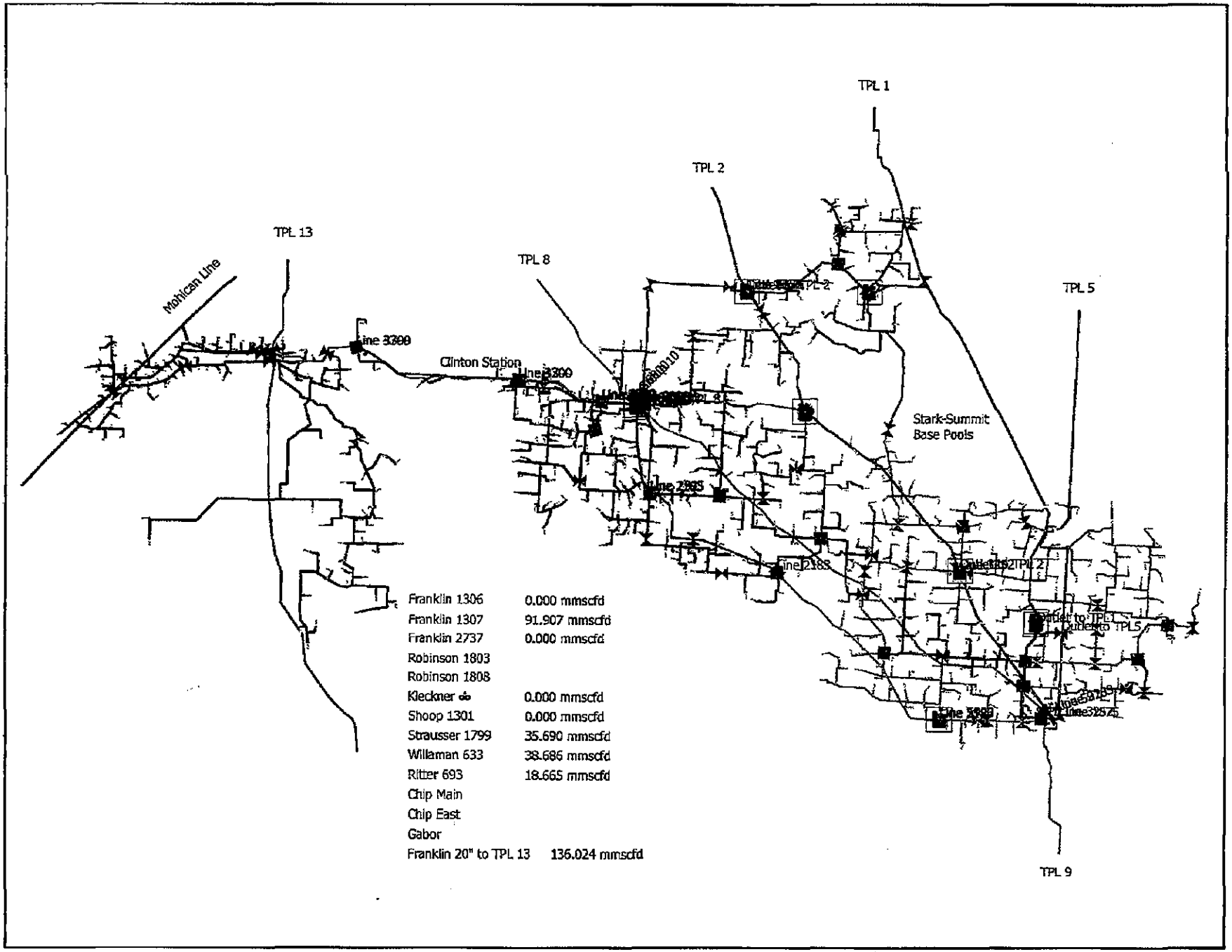

Model Name: OPSB Storage Fields with Proposed 20in

SynerGEE 4.3.2 (14 Mar 2008)

Stark-Summit withdrawals through run 1307 and Proposed Franklin 20" early season

Figure 02-2

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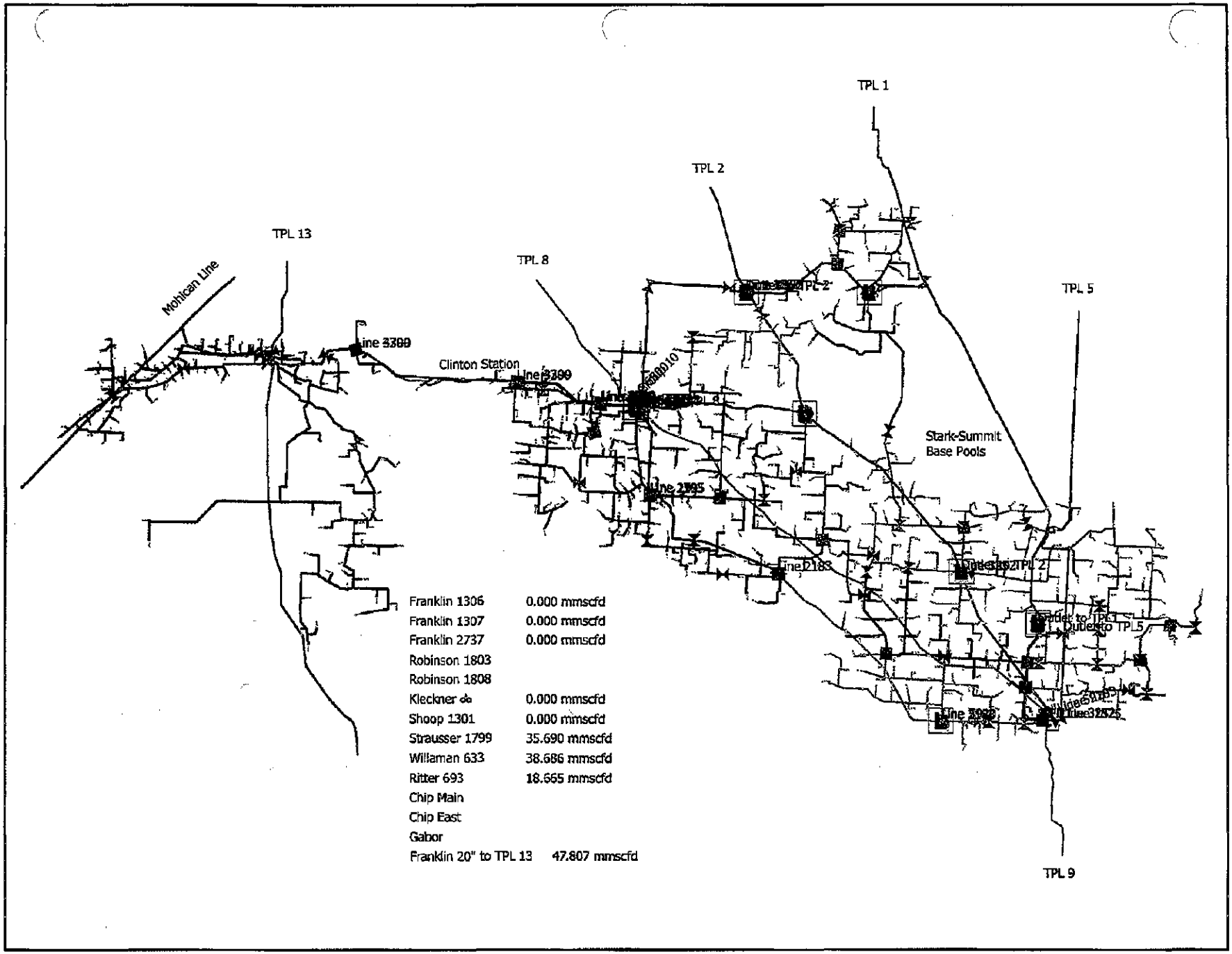

Model Name: OPSB Storage Fields with Proposed 20in

SynerGEE Gas 4.3.2 (14 Mar 2008)

Stark-Summit Base on suction at Chippewa Compressor Station late season withdrawal

Figure 02-3

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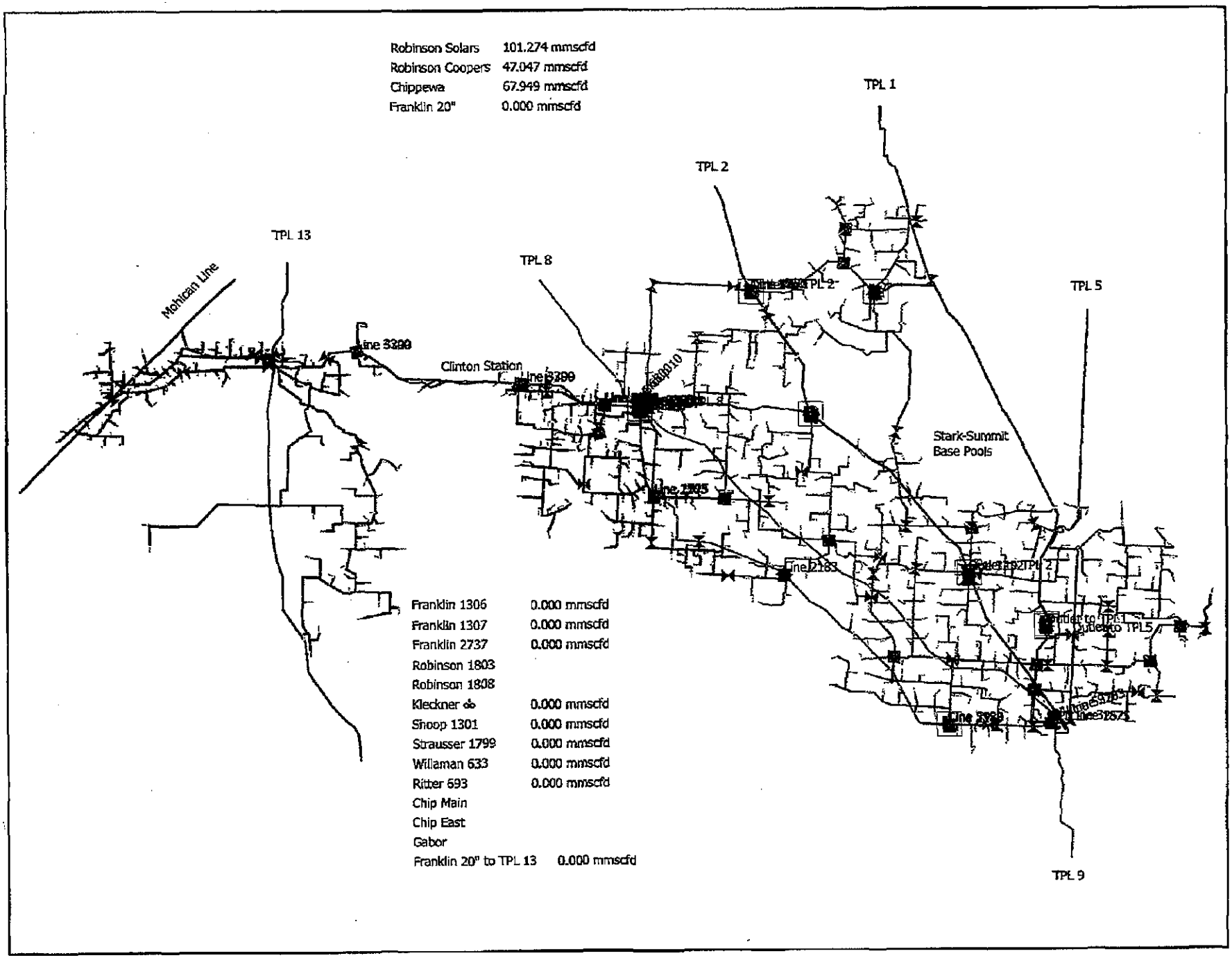


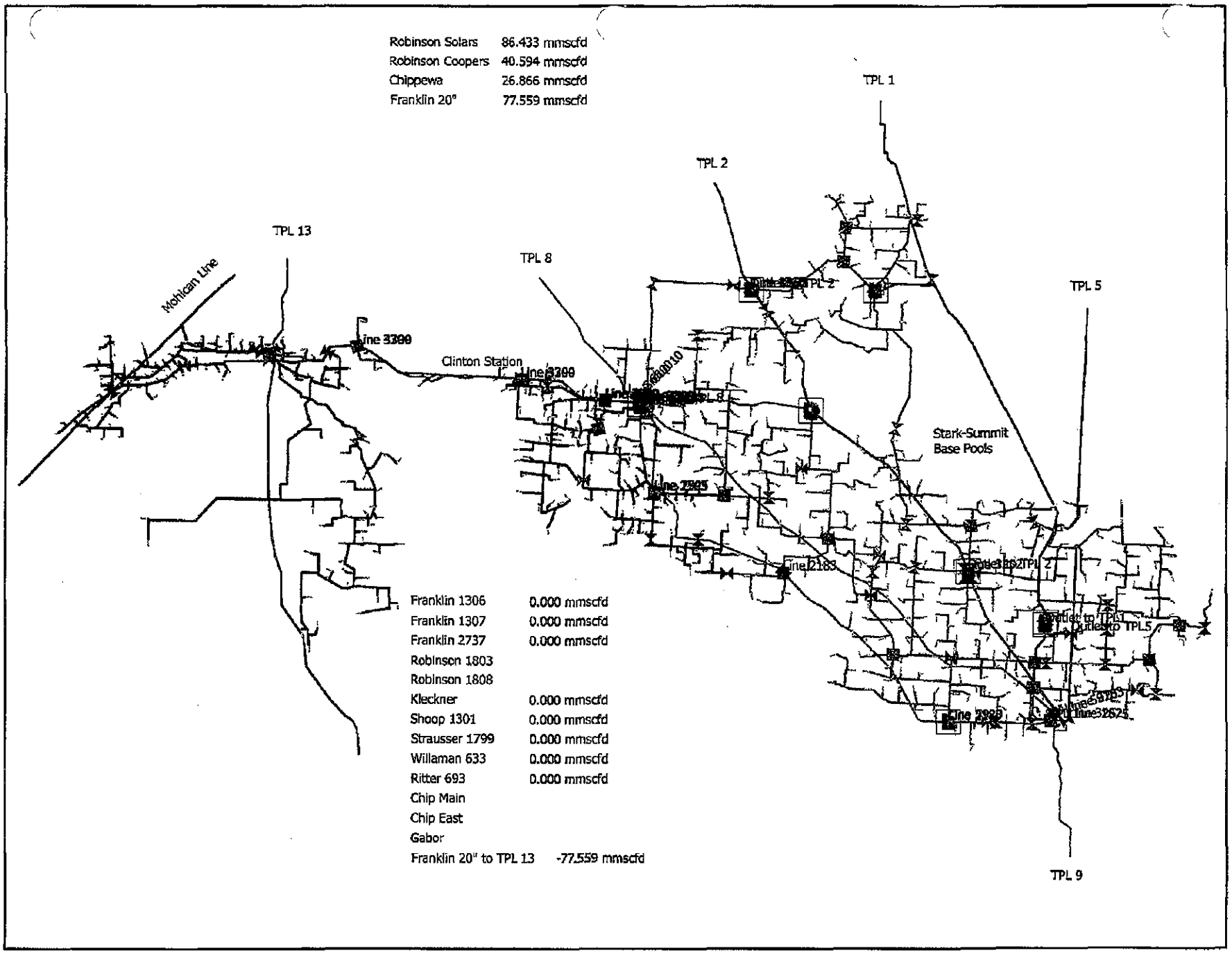
Model Name: OPSB Storage Fields with Proposed 20in

SynerGEE 4.3.2 (14 Mar 2008)

Injections from Robinson and Chippewa Compressor Stations

Figure 02-4

5/2/2008 [illegible]:36 PM



Model Name: OPSB Storage Fields with Proposed 20in

SynerGEE Gas 4.3.2 (14 Mar 2008)

Injections from Robinson and Chippewa Compressor Stations with Franklin 20"

Figure 02-4a

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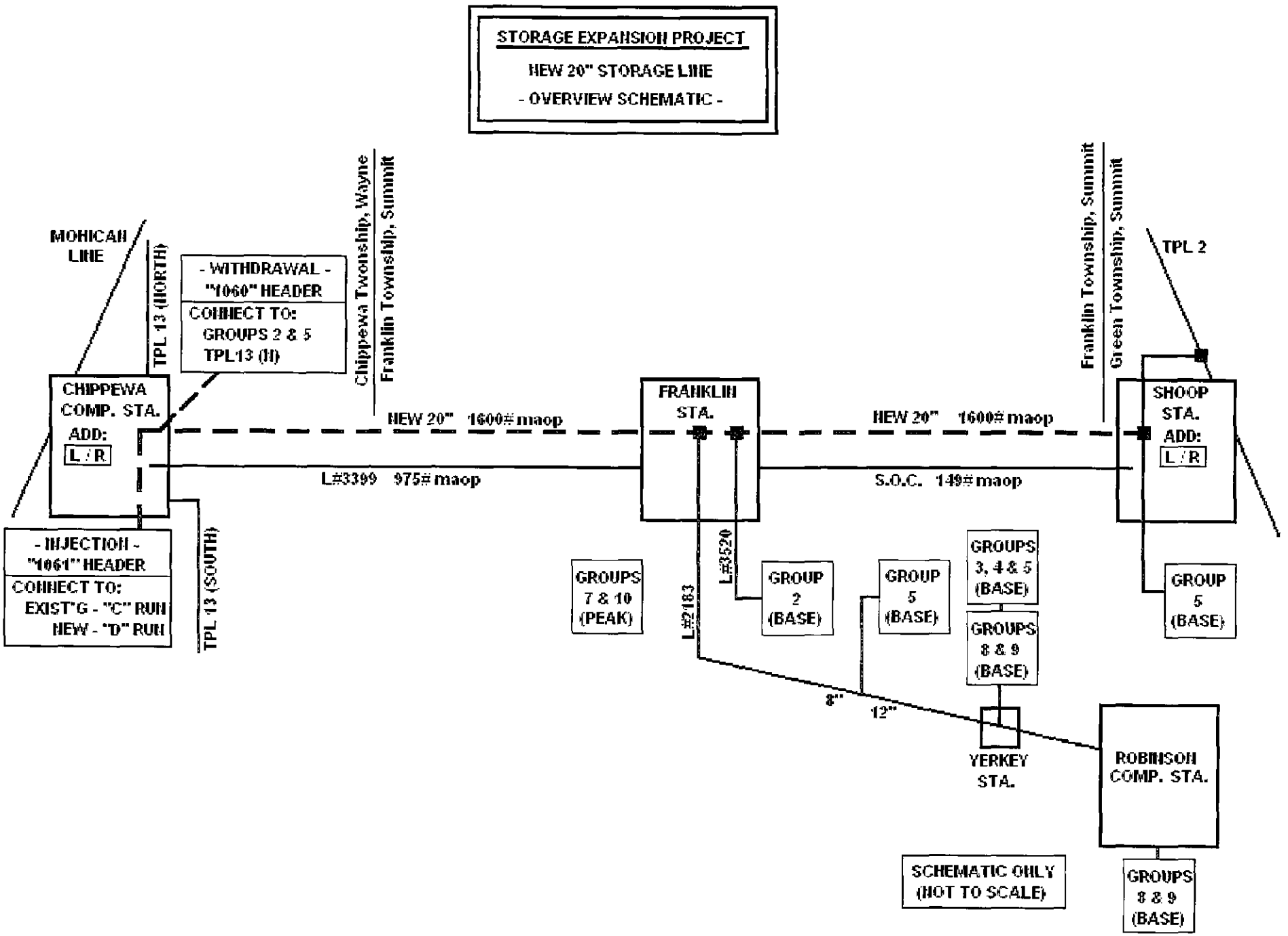
APPENDIX 02-1B

OVERVIEW SCHEMATIC

FIGURE 02-5
New20"StorageLine – OverviewSchematic.doc



APPENDIX 02-1C

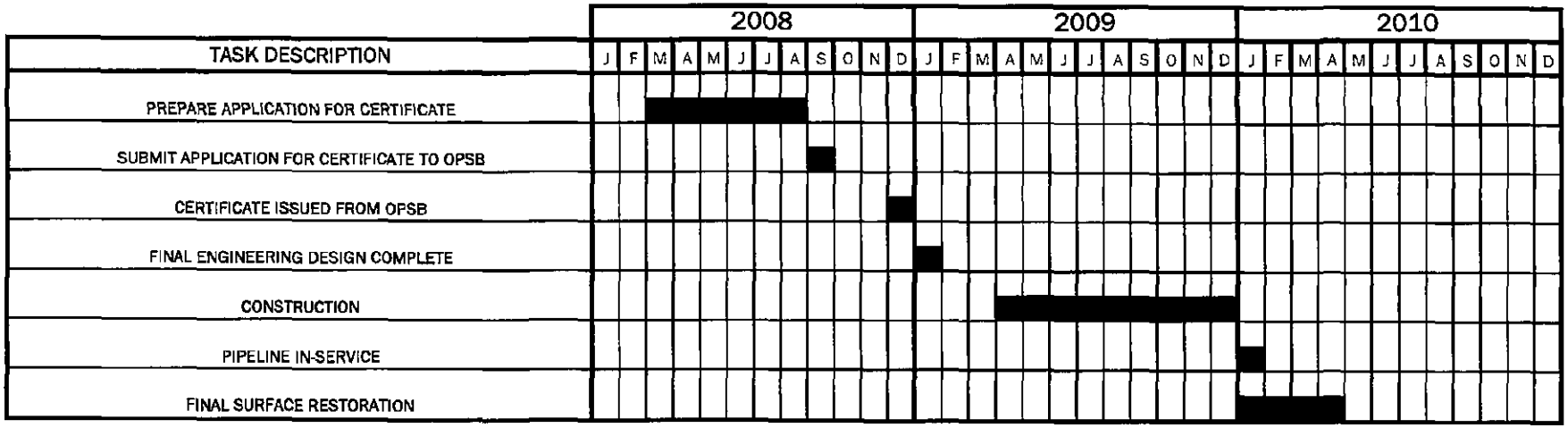
PROJECT SCHEDULE

FIGURE 02-6

PROJECT SCHEDULE

Dominion East Ohio Gas

Franklin 20-inch Natural Gas Pipeline Project



4906-15-03 SITE AND ROUTE ALTERNATIVES ANALYSIS

This report section describes the study and analysis of pipeline route alternatives and summarizes Dominion East Ohio's preliminary route screening analysis report and route selection study report conducted in April 2008. This section and the aforementioned documents prepared by Dominion East Ohio fulfill the requirements of 4906-15-03(A) and (B).

Dominion East Ohio's objective in conducting the preliminary route screening and route selection study for the Franklin 20" gas pipeline was to evaluate potential routes for connecting the pipeline from the Chippewa Compressor station to the Shoop Station while interconnecting the pipeline with the Franklin station located near the middle of the two end-point stations (Figure 3-1). The goal of the route studies was the selection of a Preferred and Alternate Route that would result in the least overall impact to sensitive land uses and natural/cultural resources while also being economically feasible routes that could be constructed in the needed timeframe. The interconnections to these three stations are critical to the project's viability and justification for financial investment. The system of interconnections are needed to limit the migration of storage gas from the Stark-Summit base pools, allow for withdrawals into transmission lines for supplying gas to markets with higher demand , and increased efficiency of base pool injection operations.

Dominion East Ohio's alternative analysis process involved identifying the boundary of the study area, defining the criteria for evaluation of several routes that could be feasibly constructed, and applying a screening process for identifying three routes for further, in-depth analysis of impacts in terms of socioeconomic factors, land use and natural resources.

The study area and preliminary routing analysis was limited by the two pipeline end points and the project requirement that the Franklin station, located between the end points, be connected to the new 20-inch pipeline. This connection represents the primary criterion for defining the study area and preliminary analysis. The secondary criteria that were considered in identifying preliminary routes were 1) minimum impacts to sensitive land uses, 2) the use of existing right-of-way (ROW) 3) and shortest overall distances. All routes must cross the Tuscarawas River and the adjacent Metroparks Towpath bike/pedestrian

trail. Dominion East Ohio developed seven route alternatives based on the primary and secondary criteria.

For the preliminary route screening analysis, the seven route alternatives were developed using aerial photography, topographic maps, windshield observations, and Dominion East Ohio's local knowledge of sensitive land use constraints (residential and recreational areas). One of Dominion East Ohio's secondary criteria used in selecting the seven route alternatives was the maximum use of Dominion East Ohio-owned ROW, existing road ROW, and other utility line (e.g., electric) ROW. The lengths of the seven route alternatives range from 8.4 to 16.9 miles.

Based on the study's selection criteria and the quantification of constraint features for each of the seven routes, the three most feasible route alternatives having the least impacts on land use were chosen for a more in-depth route selection study. The analysis of these three routes entailed a more detailed, quantification-based evaluation of constraints including ecological features, land use, cultural resources and engineering. The impacts for each constraint type were quantified in common units including acreage, linear distances, and number of occurrences as appropriate to each constraint. Dominion East Ohio developed and assigned a scoring rationale and weighting values to each type of constraint in order to objectively determine a score for each of the three route alternatives.

Based on the lowest score results (i.e., cumulative, least impact on the various constraints), the Preferred and Alternate routes were determined. There is 46% commonality between the two selected routes; this occurred as a consequence of the rather unique characteristics of the study area and project requirements to connect the three Dominion East Ohio stations. Dominion East Ohio submitted a request for waiver of the 20% commonality rule due to the study area limitations resulting from the project requirement to connect the three pipeline station facilities. The waiver was granted to Dominion East Ohio in an August 6, 2008 entry to the OPSB case file. The two routes are illustrated in Figure 03-1.

Both the Preferred and Alternate Routes are located within existing ROW (e.g., utility or public road) at 100% and 97%, respectively. The Preferred route will consist of 100% ROW owned by Dominion East Ohio with approximately 5% of the route also within public road ROW. The Alternate Route will consist of 38% exclusively public road ROW, which would result in higher construction impacts to private property, traffic flow and potentially higher capital costs due to future relocation of the pipeline, as compared to the Preferred Route.

Given that the Preferred Route is comprised of approximately 5% public road ROW, the Preferred Route will clearly minimize impacts and inconvenience to the general public and residents in vicinity of the pipeline project. The Preferred Route will largely avoid possible future relocations of the new 20-inch pipeline that may be required with road improvement or widening projects. Relocating gas pipelines in these cases are typically recovered through rate increases or gas company charges to customers. The Preferred Route would also have less traffic impacts (lane closures) and involve trenching through 13 private residence driveways and front lawns compared to 69 on the Alternate Route.

Dominion East Ohio is proactively planning to minimize impacts to streams and wetlands through the use of horizontal directional drilling (HDD) at a number of segments of the Preferred Route. Dominion East Ohio proposes to use a trench construction methodology to cross only five of the 12 stream channels on the Preferred Route. These five streams include two intermittent headwater streams and three Class I or II streams. The remaining seven streams on the Preferred Route will be bored using HDD methods to avoid ecological impacts to these streams, including one Modified Class III stream. All of the five streams to be trenched on the Preferred Route already have one or more existing pipelines in place beneath the streambed at the same planned crossing point. In general, the Preferred Route has more clusters of streams and wetlands in proximity to each other that allows for more feasible and cost-effective use of HDD than along the Alternate Route. No long-term adverse impacts are expected to any stream to be crossed by trenching on the Preferred Route based on the mitigation and restoration techniques, and precautions to be employed during construction (refer to Section 4 (B) (1) (b) and Section 7.

There are an estimated 4.3 acres and 3.3 acres of wetland located within the maximum 60-foot right-of-way corridor of the Preferred and Alternate Routes, respectively. However, pipeline construction on the Preferred Route is projected to only disturb 0.4 acres of wetland through the use of HDD methods of these predominately low quality Category 1 wetlands. Wetland construction areas will have restricted width and wood mats for construction equipment access. Mitigation measures during construction activities in wetland areas are discussed in Section 7 (D).

The Preferred Route is adjacent to fewer residences than the Alternate Route, within 100 feet of the respective centerlines. The Preferred Route has only 38 residences within 100 feet of the centerline while the Alternate Route has 64 residences within 100 feet. In addition, as stated above, the Preferred Route would also have less traffic impacts (lane

closures) and involve trenching through 13 private residence driveways and front lawns compared to 69 on the Alternate Route.

The Preferred Route impacts fewer acres of woodlots, as compared to the Alternate Route. The Preferred Route centerline crosses 5,328 linear feet of woodlot as compared to 8,898 linear feet for the Alternate Route centerline. In woodlot areas, clearing a 30-foot wide corridor is planned to minimize the total number of trees to be removed, particularly mature trees. This corridor width will result in clearing of approximately 3.9 acres along the Preferred Route versus an estimated 4.8 acres on the Alternate Route. The lower woodlot impact on the Preferred Route is due to the existing clearing along much of the Dominion East Ohio-owned ROW.

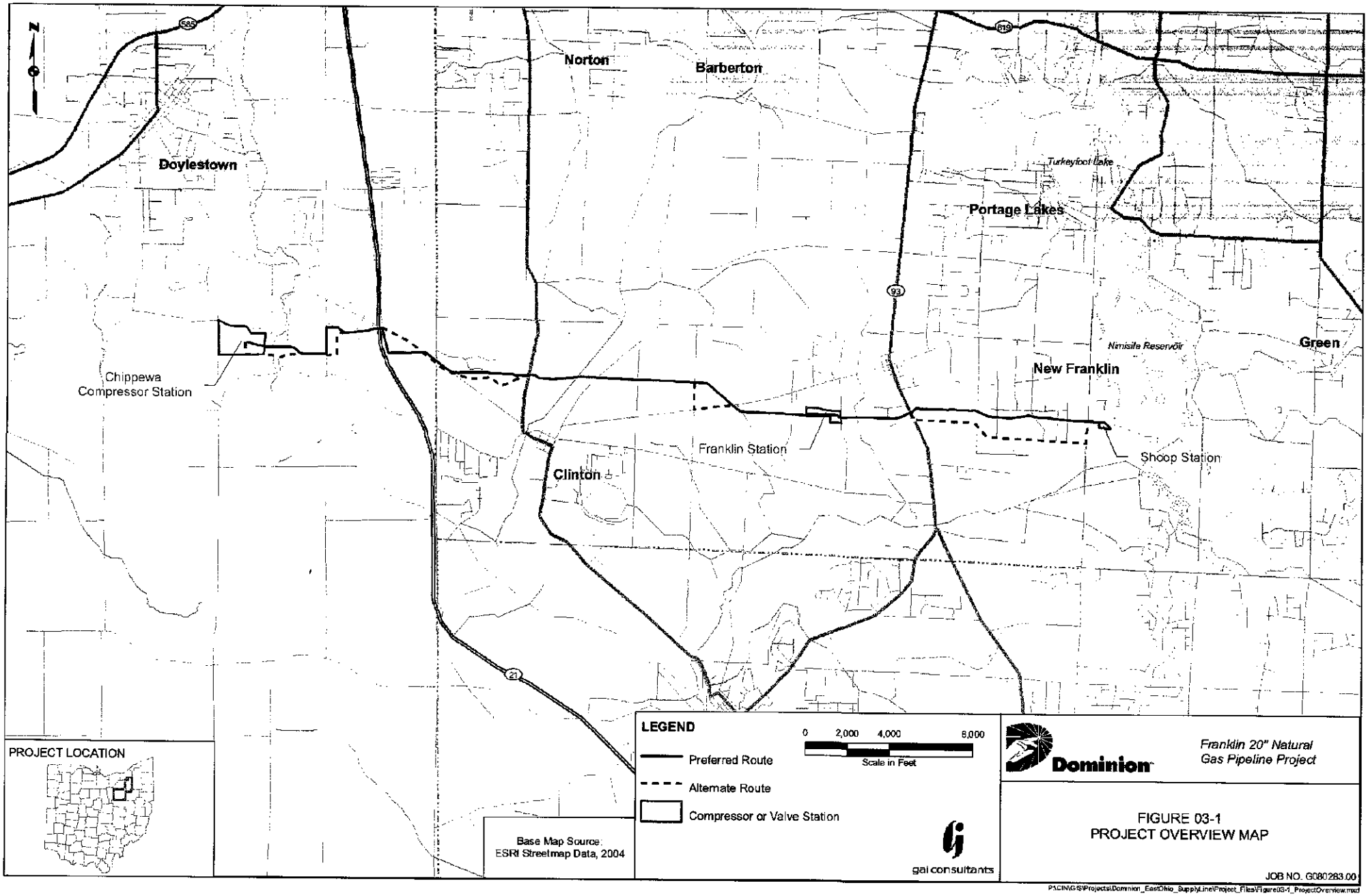
Based on the above considerations of ecological, socioeconomic, and engineering constraints, the Preferred Route was selected as the best possible route for the Dominion East Ohio 20" Franklin Pipeline. Dominion East Ohio's entire preliminary route screening analysis report and route selection study report, conducted in April 2008, is included in Appendix 03-1. A summary table of all route constraints and features evalutated for the preparation of this application is presented in Table 06-2 of this report.

Conclusions

Dominion East Ohio has determined that construction and operation of the pipeline following the Preferred Route would represent the least socioeconomic and overall ecological impact within the project area. For this particular project, the utilization of an existing, maintained pipeline ROW as opposed to the development of a pipeline following new ROW adjacent to public roadways for a significant portion of its length will result in fewer impacts during construction, operation, and maintenance of the project. The results of the route selection study and the analyses of the potential impacts identified in this Application clearly establish that the addition of approximtely 3.5 miles of new ROW along the Alternate Route in the project area can be viewed as an unnecessary burden to both the landowners (e.g., trenching through higher number of driveways and front lawns) and to the public that must use the roadways.

Further, Dominion East Ohio has determined that, through the use of the proposed construction methods, including the use of HDD, and application of the mitigation

procedures as outlined in this application, the impacts associated with the construction of this proposed pipeline on the Preferred Route would be minimal and temporary.


N
585
Norton
Barberton
819
Doylestown
Turkeyfoot Lake
Portage Lakes
93
Nimisila Reservoir
Green
New Franklin
Chippewa
Compressor Station
Franklin Station
Shoop Station
Clinton
21
PROJECT LOCATION
LEGEND
Preferred Route
Alternate Route
Compressor or Valve Station
0 2,000 4,000 8,000
Scale in Feet
Base Map Source:
ESRI Streetmap Data, 2004
gai consultants
Dominion
Franklin 20" Natural
Gas Pipeline Project
FIGURE 03-1
PROJECT OVERVIEW MAP
JOB NO. G080283.00
P:\CIN\GIS\Projects\Dominion_EastOhio_SupplyLine\Project_Files\Figure03-1_ProjectOverview.mxd

APPENDIX 03-1

PRELIMINARY ROUTE SCREENING ANALYSIS

August 14, 2008

Dominion East Ohio (DEO)
Ohio Design Group

Franklin 20-Inch Natural Gas Storage Pipeline Project
Explanation of
Preliminary Route Screening Analysis

Introduction

Dominion East Ohio (also referred to as "DEO") prepared a route selection study in April 2008. The study established DEO's basis for selecting the preferred and alternative routes for the Franklin 20-inch storage pipeline project. The study was prepared to explain why the preferred route was selected, and supports the Certificate of Environmental Compatibility and Public Need application and the Ohio Power Siting Board review process.

The scope of the route selection study was limited to routes considered constructible based on several criteria, including business case requirements, pipeline distance, sensitive impact areas, and right of way conditions. The study itself did not discuss the various routes DEO considered and disqualified based on constructability factors. The intent of this document is to present DEO's preliminary route screening process and the routes not mentioned in the Route Selection Study.

Background

The need for the proposed pipeline is based upon providing a new outlet/inlet for storage gas from DEO-owned underground storage pools. The existing storage infrastructure has

become inadequate to move the amounts of gas needed to significantly impact the migration losses from the Dominion East Ohio storage system.

A study was undertaken to look at migration from Dominion East Ohio's storage fields and what controllable factors had the greatest impact on reducing the annual migration losses.

Utilizing Six Sigma techniques, an analysis of storage data from 1980 through 2007 was conducted. The results of the analysis pointed to two factors that had significant impact on migration losses. The first was the amount of storage gas removed from Stark-Summit base pools in November and March of the withdrawal season. The second was the amount of gas injected in Stark-Summit base pools in September and October of the injection season.

Two events have contributed to the decline in the storage systems ability to withdraw storage gas from Stark-Summit base pools. The first was the down rating of the SOC 20". In 2003 a smart-pig run was made on the SOC 20". As a result of the findings from the smart-pig run, the SOC 20" was initially down-rated and eventually removed from service as an outlet for the Stark-Summit base pools. This severely restricted the ability to move gas from Stark-Summit base pools to transmission pipeline TPL8. TPL8 exposes Stark-Summit base pools to the Cleveland area base and heat load.

The second event has been the decline of system base and heating load in the Akron area. The Akron area is the major outlet for Stark-Summit base pool storage gas via TPL1, TPL2, and TPL5. With the decline in heating and base load, especially base load, it has become more difficult to withdraw gas from the Stark-Summit base pools in the early and late periods of the withdrawal season. This has led to an increase in gas migration losses thereby resulting in an increase in costs associated with the lost gas.

Dominion East Ohio's Planning Department uses SynerGee Gas 4.3.2 computer network modeling and analysis software (licensed by Advantica,Inc.) to indicate how natural gas systems operate and where system improvements must be made to achieve various end results such as improved pressure, locating new system supplies, or system reliability.

The Planning Department analyzed the model to find the best way to provide another outlet for the Stark-Summit base pools. This outlet needed to move storage gas to the Cleveland area market during the early and late periods of the withdrawal season to limit the migration of storage gas from the Stark-Summit base pools. Ideally the pipeline would also provide new inlets into the Stark-Summit base pools during the injection season. This would provide efficiencies by distributing the gas flow and reduce current bottlenecks in the system.

The model showed that a 20" pipeline run from Shoop Station through Franklin Station ending at Chippewa Compressor Station would address the current problems as stated by connecting Stark-Summit base pools to TPL8 at Franklin Station and TPL13 at Chippewa Compressor Station. This would allow Stark-Summit base pool gas to move on TPL8 and TPL13 to the Cleveland area market during the targeted months of withdrawal season. The pipe was sized so as not to exceed maximum pressure drops for required flow rates.

As a gas storage project, the installation of the Franklin 20-Inch will allow DEO to more efficiently use assets currently owned and operated.

Study Corridor - Information

The proposed Franklin 20-Inch is located in Wayne and Summit Counties in the state of Ohio. Approximately 28% of the project area is located in Wayne County and the other 72% in Summit County. The proposed gas storage pipeline project will begin to the

southeast of Doylestown, Ohio in Wayne County at the Chippewa Compressor Station and to run easterly toward Shoop Station located about 8.7 miles to the east near the southwestern corner of Nimisila Reservoir in Summit County. Wayne County had a population of 111,564 in the year 2000 and is in the northeastern corner of the State of Ohio as is the adjacent Summit County, which is the location of the remainder of the project area. The population of Summit County in 2000 was 543,487.

Although the Counties are highly populated, the project area is not highly developed. Large lot estate single-family residences and farmsteads largely characterize the area. The area is a "bedroom" community which depends on more developed areas for employment and commercial activity. Unlike most of Summit County, the village of Clinton in the extreme western side of Summit County does have smaller lot residential development. Additionally, the Tuscarawas River runs adjacent to the Village of Clinton, generally in a North South direction.

Preliminary Routing Analysis

Dominion East Ohio conducted a preliminary routing analysis for the Franklin 20-Inch project within the Wayne and Stark County. The preliminary routing analysis used one primary criterion and several secondary criteria for siting the project. The primary criterion specified that the storage pipeline must connect Chippewa Station to Franklin Station to Shoop Station. The three assets are owned and operated by Dominion East Ohio and critical to the operations of Dominion's storage facilities. The interconnection requirements are central to the viability of the project and the business case justification. The primary criterion was mandatory in the preliminary routing analysis, and, as a result, several routes were selected that satisfied the requirement. The secondary criteria were elements Dominion East Ohio used to guide the assessment process to qualify and disqualify identified routes. The secondary criteria included the following elements:

- Keep pipeline distance as short as possible
- Minimize sensitive impact – Residential and Recreational

- Utilize existing DEO-owned right of way as much as possible - minimize the amount of pipeline installed in road right of way and other utility easements

The preliminary route assessment used the secondary criteria elements to qualify routes for the formal route selection study. Dominion East Ohio also decided to only select the top three routes for the route selection study due to the time and expense of performing quantitative and qualitative analysis.

The Franklin 20-Inch route corridor has seven (7) routes that satisfy the primary criterion of connecting Chippewa Station to Franklin Station to Shoop Station. The routes are illustrated in the attached maps (seven sheets). The routes are bound to the north by Vanderhoof Road and Turkeyfoot Lake, and to the south by the Summit – Stark County line. The routes vary in length from 45,995 feet to 68,112 feet, and could be installed by virtue of DEO right of way, road right of way, other utility right of way, or a combination of some or all. Based on aerial photography and windshield reviews, similarities and differences between the routes were noted and compared against the secondary criteria mentioned above.

Once the seven routes were identified, DEO compared the routes against the secondary criteria. Each route was evaluated based on aerial photography and windshield review. Based on these observations, Dominion evaluated each route against the secondary criteria. The first criterion evaluated was pipeline distance. The pipeline routes were measured based on scaled drawings and distances were determined. Based on the distances, Dominion calculated a percent differential for each route based on the shortest route. The percent differential was the basis for the first criterion. Each route distance and corresponding differential is listed in Table 1. The second criterion was sensitive land-use impacts. DEO did a high-level evaluation of recreational areas and residential areas impacted by the proposed project. The evaluation was limited to studying aerial photography combined with local knowledge. The recreational area evaluation was based on number of occurrences where the pipeline would traverse the area, while the

residential area evaluation was based on high-level observations and assigned one of four percentages, 25%, 50%, 75% or 100% based on pipeline impacts. Table 1 demonstrates that all the routes impact at least one recreational area, and that Alternative #5 and #6 impact two areas.

All the routes cross the Tuscarawas River, and as a result, must cross the Metroparks Towpath bike trail; however, Alternatives #5 and #6 also cross the Chippewa Golf Course. The golf course crossing would impact 4.51 acres during the golfing season (May through August), resulting in a major impact to a local recreational area. The final criterion was right of way requirements. Dominion satisfied the primary criterion of connecting the proposed pipeline to three operating assets by examining observable routes traveling within the route corridor. The criterion was accomplished by reviewing Dominion-owned right of ways, road right of ways, and electric utility right of ways. Based on the review, seven routes were identified using one or some of the types of right of way. The preliminary routing analysis assigned rough percentages to the type of right of way used for each route. Based on the percentages, Dominion evaluated each route while favoring Dominion-owned right of way. All the secondary criteria information is summarized in Table 1. Further, the table also contains the determination of what routes qualified for the route selection study and basis for the decision.

Conclusion

The preliminary routing analysis resulted in the three routes qualifying for the route selection study. The Primary route, Alternative route #1, and Alternative route #2 provided the shortest distance, least impact, and greatest percentage of Dominion-owned right of way.

Table 1. Franklin 20" Storage Pipeline Route: Secondary Criteria Information

	Distance		Senstive Area Impacts		Right Of Way			Qualify for Route Selection Study? (Y/N)	Basis for Decision
	Pipeline (footage)	Differential from Shortest Route	Recreational (# of occurances)	Residential (25, 50, 75, 100%)	Dominion Owned	Road	Electric Utility		
PRIMARY Route	45,995	0%	1	50%	100%	0%	0%	Y	Utilized existing Dominion r/w; shortest pipeline distance; minimal impact to recreational areas and residence
ALTERNATE Route #1	46,482	1.0%	1	50%	75%	25%	0%	Y	Majority of route uses Dominion r/w; second shortest pipeline distance
ALTERNATE Route #2	47,451	3.1%	1	75%	0%	100%	0%	Y	Shortest distance after Primary and Alternative #1 routes
ALTERNATE Route #3	59,110	22.2%	1	75%	0%	100%	0%	N	R/W and Recreation/Residential Area Scores were equal to Alt #2; however pipeline distance was 19% longer than Alt #2
ALTERNATE Route #4	62,844	26.8%	1	75%	0%	100%	0%	N	R/W and Recreation/Residential Area Scores were equal to Alt #2; however pipeline distance was 24% longer than Alt #2
ALTERNATE Route #5	85,536	46.2%	2	50%	15%	100%	75%	N	Have to open cut 4.51 acres of Chippewa Golf Course, including several ponds; Need to negotiate agreement with electric utility for shared ROW; distance is 46% longer than Primary Route
ALTERNATE Route #6	68,112	32.5%	2	75%	15%	35%	50%	N	Have to open cut 4.51 acres of Chippewa Golf Course, including several pond; Need to negotiate agreement with electric utility for shared ROW; distance is 32% longer than Primary Route

AERIAL BASE MAP

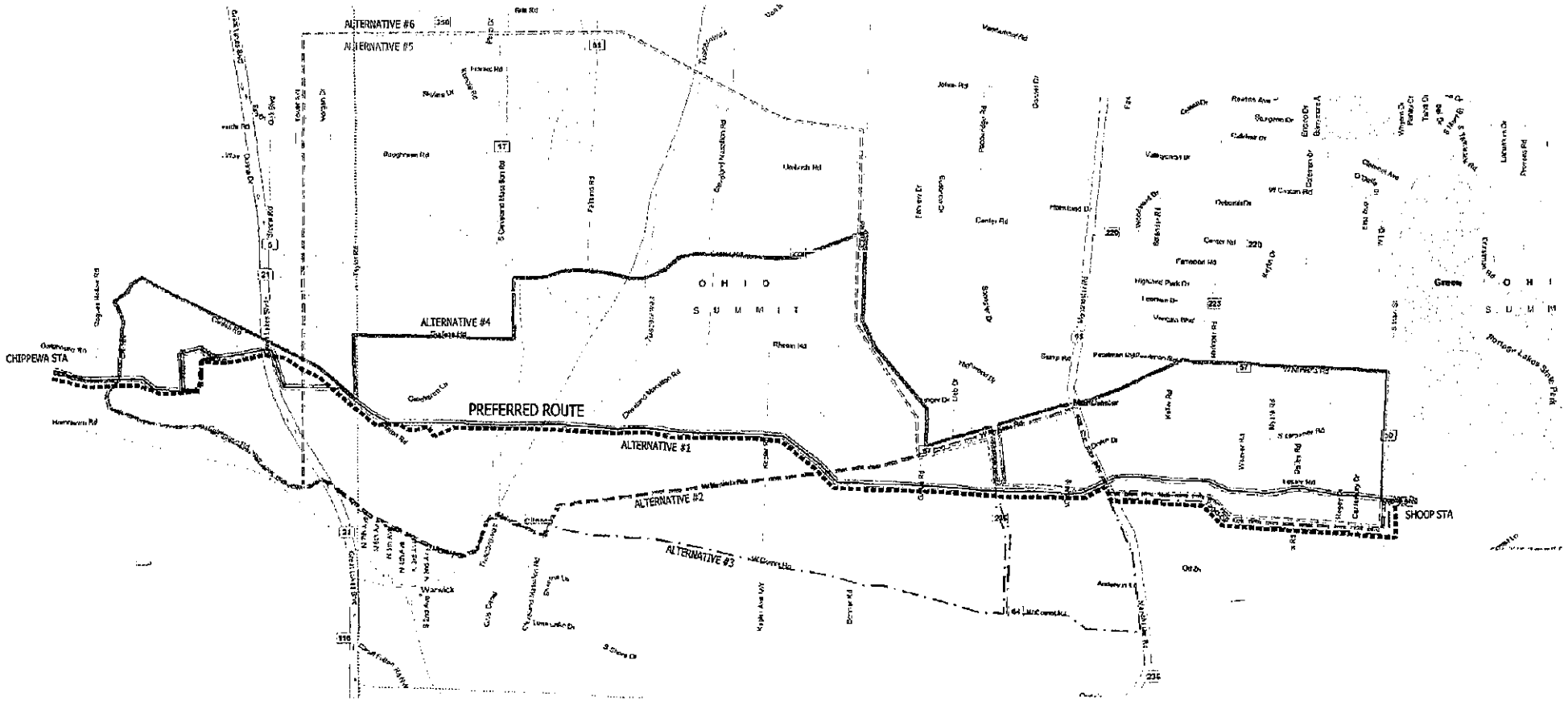
LEGEND – PIPELINE ROUTE

PREFERRED ROUTE	8.7 MI.		
ALTERNATIVE #1	8.8 MI.		
ALTERNATIVE #2	9.0 MI.		
ALTERNATIVE #3	11.2 MI.	ALTERNATIVE #4	11.9 MI.
		ALTERNATIVE #5	16.2 MI.
		ALTERNATIVE #6	16.9 MI.

Dominion East Ohio

FRANKLIN 20" STORAGE PIPELINE PROJECT

WAYNE COUNTY TO SUMMIT COUNTY



'EGEND – PIPELINE ROUTE

PREFERRED ROUTE	8.7 MI.			ALTERNATIVE #4	11.9 MI.
ALTERNATIVE #1	8.8 MI.			ALTERNATIVE #5	16.2 MI
ALTERNATIVE #2	9.0 MI.			ALTERNATIVE #6	16.9 MI.
ALTERNATIVE #3	11.2 MI.				

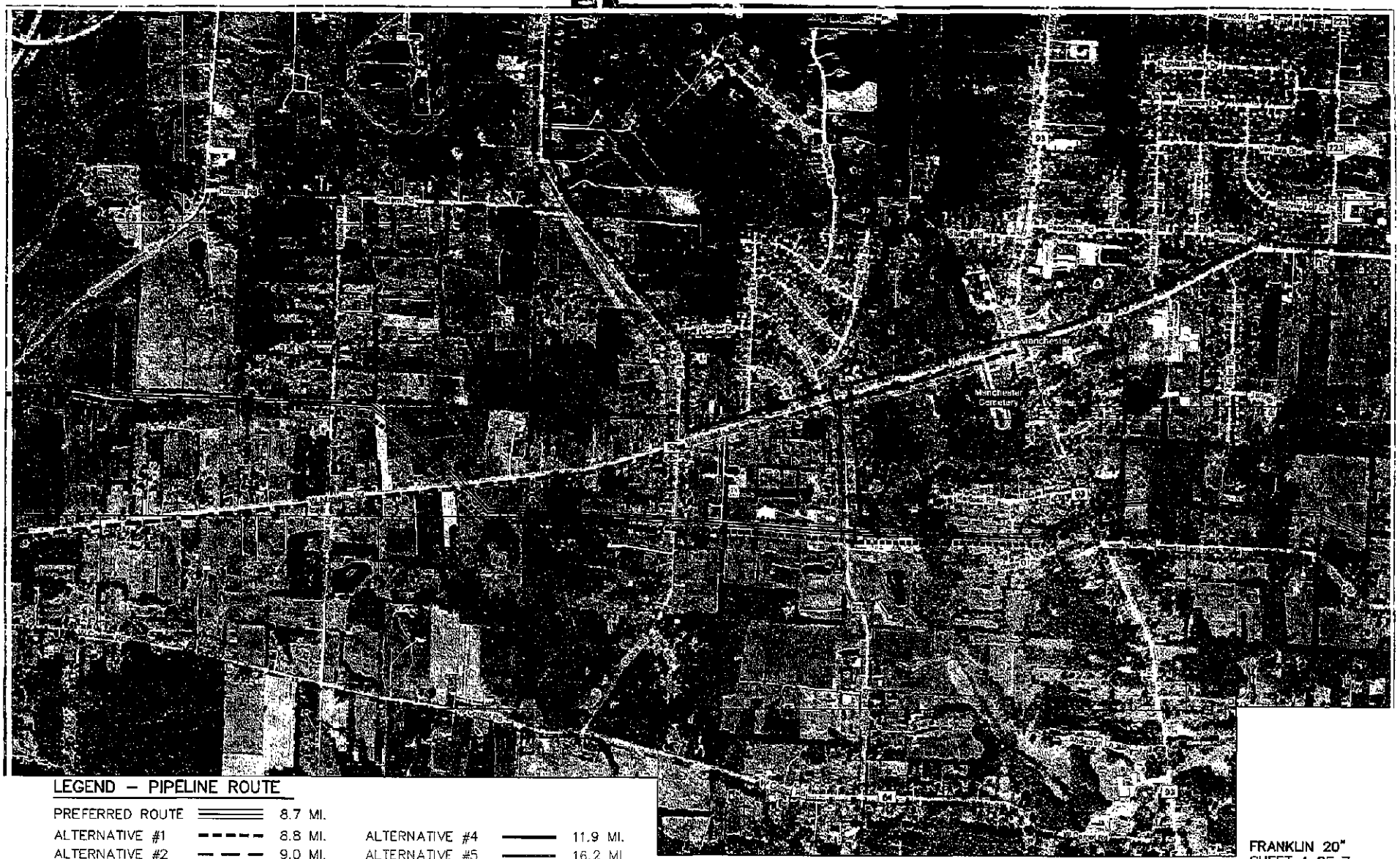
OVERVIEW PLAN

SHEET 1 OF 7

LEGEND – PIPELINE ROUTE

PREFERRED ROUTE	8.7 MI.			
ALTERNATIVE #1	8.8 MI.	ALTERNATIVE #4	11.9 MI.	
ALTERNATIVE #2	9.0 MI.	ALTERNATIVE #5	16.2 MI	
ALTERNATIVE #3	11.2 MI.	ALTERNATIVE #6	16.9 MI.	

FRANKLIN 20"
SHEET 3 OF 7



LEGEND – PIPELINE ROUTE

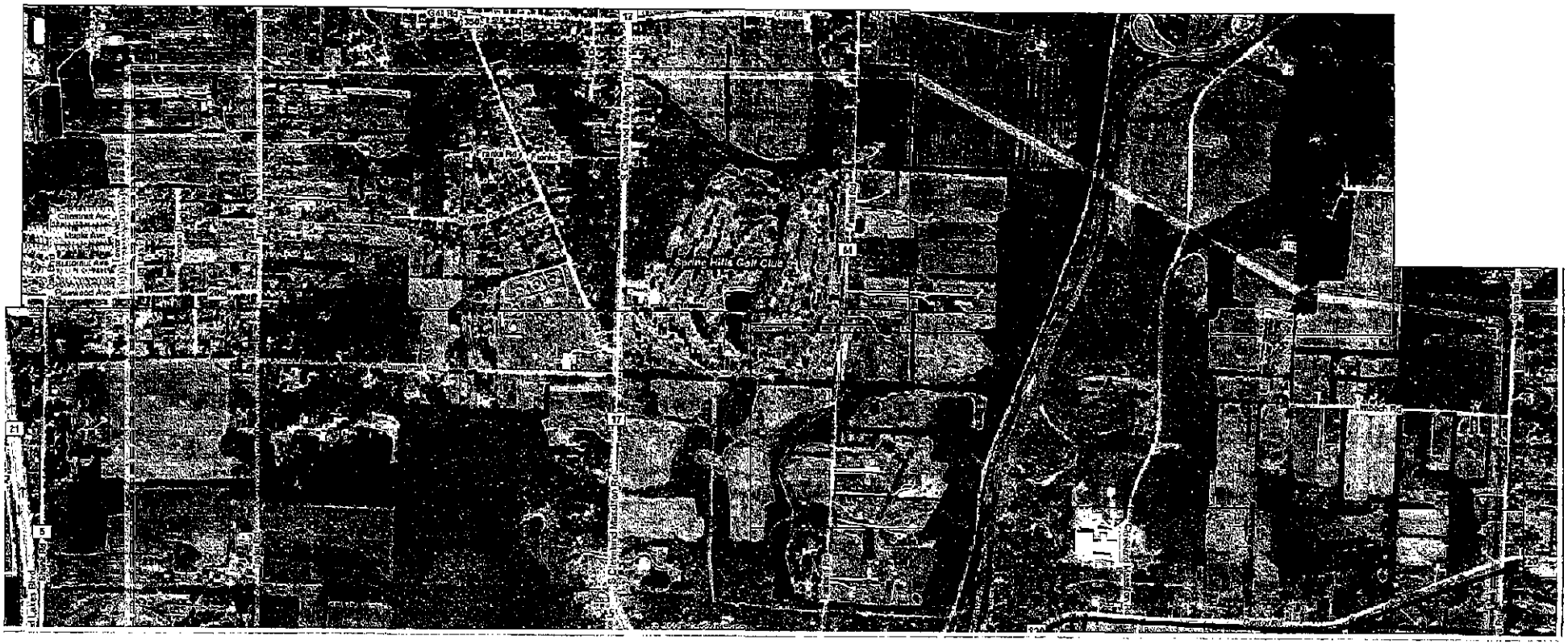
PREFERRED ROUTE	═══	8.7 MI.			
ALTERNATIVE #1	- - - - -	8.8 MI.	ALTERNATIVE #4	———	11.9 MI.
ALTERNATIVE #2	— — —	9.0 MI.	ALTERNATIVE #5	———	16.2 MI
ALTERNATIVE #3	—·—·—	11.2 MI.	ALTERNATIVE #6	====	16.9 MI.

FRANKLIN 20"
SHEET 4 OF 7

LEGEND – PIPELINE ROUTE

PREFERRED ROUTE	8.7 MI.			
ALTERNATIVE #1	8.8 MI.	ALTERNATIVE #4	11.9 MI.	
ALTERNATIVE #2	9.0 MI.	ALTERNATIVE #5	16.2 MI	
ALTERNATIVE #3	11.2 MI.	ALTERNATIVE #6	16.9 MI.	

FRANKLIN 20"
SHEET 5 OF 7



LEGEND – PIPELINE ROUTE

PREFERRED ROUTE	8.7 MI.			
ALTERNATIVE #1	8.8 MI.	ALTERNATIVE #4	11.9 MI.	
ALTERNATIVE #2	9.0 MI.	ALTERNATIVE #5	16.2 MI	
ALTERNATIVE #3	11.2 MI.	ALTERNATIVE #6	16.9 MI.	

FRANKLIN 20"
SHEET 6 OF 7

LEGEND – PIPELINE ROUTE

PREFERRED ROUTE	8.7 MI.			
ALTERNATIVE #1	8.8 MI.	ALTERNATIVE #4	11.9 MI.	
ALTERNATIVE #2	9.0 MI.	ALTERNATIVE #5	16.2 MI	
ALTERNATIVE #3	11.2 MI.	ALTERNATIVE #6	16.9 MI.	

FRANKLIN 20"
SHEET 7 OF 7

APPENDIX 03-1

ROUTE SELECTION STUDY

FRANKLIN 20 INCH

ROUTE SELECTION STUDY

DOMINION EAST OHIO

APRIL 2008

FINAL

TABLE OF CONTENTS

1.0 Introduction

This document presents the Route Selection Study conducted by Dominion East Ohio for the Franklin 20-inch pipeline. The proposed natural gas pipeline is required to increase the effectiveness and efficiency of the Dominion East Ohio storage facilities and reduce the operating costs to the customer. The total length of the proposed pipeline will vary depending on the selected route. The project vicinity is a mixture of rural and established residential region, approximately 15 miles from Akron and 35 miles from Cleveland.

The need for the proposed pipeline is based upon providing a new outlet/inlet for storage gas from the Stark-Summit base pools. The existing storage infrastructure has become inadequate to move the amounts of gas needed to significantly impact the migration losses from the Dominion East Ohio storage system.

The Route Selection Study identifies major constraints and uses an evaluation process to compare candidate routes that avoid or minimize adverse effects to the extent possible. Dominion East Ohio performed the study to evaluate and score environmental, socio-economic, cultural, and engineering/construction issues during the study.

2.0 Purpose and Objectives

The Route Selection Study was performed to assist in identifying routes best suited for the pipeline and to support the required regulatory filings for the project. Dominion East Ohio intends to prepare and submit an application for certificate of environmental compatibility and public need to the Ohio Power Siting Board (OPSB) for the project. The Route Selection Study will assist in the preparation of the application and has been developed in accordance with the provisions of the Ohio Revised Code (ORC) 4906-15-03 for natural gas transmission facilitates.

The methodology of the Route Selection Study is designed to identify suitable routes that minimize the overall effects on ecology, sensitive land uses, and cultural features to the greatest extent possible while maintaining economic and technical feasibility. The results

of this study are the basis for the Preferred and Alternative Routes being submitted in the OPSB application for a certificate of environmental compatibility and public need.

3.0 Pipeline Route Selection

The Route Selection study involved the collection and evaluation of environmental, cultural, land use, and engineering data in order to identify candidate routes for the new pipeline and associated connections. The study area and potential pipeline routes were identified and subsequently scored and ranked to facilitate the selection of the Preferred and Alternative Routes.

3.1 Route Selection Study Area Delineation

Interconnection points for the proposed natural gas pipeline drive the study area for the route selection process. The Franklin 20-inch pipeline has three interconnection points throughout the route that are vital to the pipeline design and operations. All routes will begin at Chippewa Compressor Station, converge on Franklin Station, and terminate at Shoop Station. All three locations are Dominion East Ohio owned and operated assets.

The study area boundary was based on a review of United States Geological Survey (USGS) maps, state and county road maps, aerial photographs, and visual observations of the area. Constraints such as major water bodies, urban areas, transportation routes and existing utility corridors, and the location of the fixed points played key roles in determining the lateral study area dimensions and candidate routes. The study area is limited geographically to Wayne County to the northeast and Summit County to the southwest.

Residential development throughout the study area was a major deciding factor with respect to pipeline routing. Residences are concentrated along major roads and are also scattered throughout the study area. Routing near residential areas was avoided where possible especially where other viable candidate route segments were available. Dominion East Ohio only reviewed viable routes that could potentially be constructed.

3.2 Screening Attributes

Once the study area was identified, the next phase was to identify screening attributes, or features of the study area that represented possible constraints on the development of the natural gas pipeline. The screening attributes were classified as environmental, engineering, cultural, or land use constraints.

Constraint maps were prepared for the study area using the Ohio Geographically Referenced Information System, Summit and Wayne Counties, Ohio, 2006. The information on the maps were updated with relevant constraints provided by state agencies, federal agencies, and site reconnaissance.

3.2.1 Environmental Attributes

A list of environmental attributes was developed with the intent that potential routes would avoid these areas to the extent possible. The following attributes were considered as environmental constraints in the siting process:

- Woodlots and areas requiring clearing
- Ohio Wetland Inventory Map (OWI) wetlands
- Perennial, intermittent, and ephemeral surface drainage crossings
- Recorded endangered, threatened, and protected species locations

Areas that would require significant tree cutting and trimming and surface drainage were identified based on available aerial photography, USGS topographic maps, and the field survey. OWI digital GIS coverage of the project area were compared to determine potential wetland areas.

3.2.2 Land Use Attributes

A list of land use features was developed with the intent that potential routes would avoid sensitive areas, while utilizing existing or planned facilities, to the extent possible. The following land use attributes were considered in the siting process:

- Recreational areas

- Potentially sensitive institutional land use
- Housing, including residential subdivisions and trailer parks
- Property ownership, tax parcels, and boundaries
- Designated Agricultural District land crossed

A windshield land use survey of the area was conducted to update existing maps and aerial photography. Property boundaries and Agricultural District land parcels were provided by the Wayne County Auditor and the Summit County Auditor.

3.2.3 Cultural Attributes

A list of cultural features was developed with the intent that potential routes would avoid these areas to the extent possible. The following attributes were considered as cultural constraints in the siting process:

- Sites listed on the National Register of Historic Places (NRHP)
- Ohio Historic Inventory (OHI) buildings
- Known archaeological sites
- Known cemeteries

Recorded NRHP, OHI, and known archaeological listings were available from the Ohio Historic Preservation Office (OHPO) GIS website. The information is maintained by the OHPO in electronic GIS databases via the OHPA website. The limits of the site boundaries were edited based on field reconnaissance and review of detailed mapping. Cemeteries were identified through a review of topographic and road maps, supplemented by the windshield land use survey.

3.2.4 Engineering Attributes

Engineering attributes were identified by Dominion East Ohio. The list of attributes was developed with the intention to avoid routes involving increased engineering and right-of-way acquisition challenges resulting in increased construction costs. The following attributes were engineering considerations in the siting process:

- Major and minor road crossings
- Rail road crossings
- Total route length

These attributes were determined based on available USGS topographic maps, aerial photography, and project vicinity reconnaissance.

4.0 Identification of Potential Corridors

After the constraint data were collected and plotted on the base map, the base map was reviewed to identify potential corridors for the pipeline. The primary focus was to identify potential corridors that avoided, to the extent possible, the identified constraints or to minimize potential impact where it could not be avoided.

Preferred routing options for the pipeline included the following:

- Routes along or adjacent to existing utility and/or transportation easements
- Routes that avoid residence and associated potential aesthetic effects to the extent possible
- Routes with minimal impact on woodland and wetland areas

Using the constraint map, routes were selected that generally avoid sensitive areas. Where complete avoidance was not practical, the next best options were those that minimize impacts. The application of this methodology generally resulted in corridors that ran adjacent to or within existing road and natural gas pipeline right-of-way for much of their length. Each route was also required to be feasible from a construction and operations perspective.

4.1 Route Descriptions

The candidate routes selected for comparison are shown on Figure 1. Finer resolution aerial photography base maps are provided as Figure 2. The segments parallel existing natural gas pipelines and roads that pass through the project area.

5.0 Route Scoring

5.1 Route Scoring Rationale

The Franklin 20-Inch route selection process involves balancing the many conflicting constraints identified in the study area. One way to compare the alternatives is to develop a ranking system based on attributes that are linked to the objectives of the route selection.

The objective of this selection study is to identify a project route that minimizes the overall effects on the environmental, land use, and cultural resources while still providing a technically and economically feasible route. Fifteen quantifiable attributes relating to these objectives were developed. Each attribute for every route was scored as described in the following sections. After the attribute table was completed, the objectives of the Route Selection Study were revisited and the route that most closely matched the objectives was selected as the best candidate.

Numerical scoring of the routes was conducted according to the following steps:

i. Step 1: Assembly of "Raw" Route Data: Three (3) potential routes were identified. Scoring was completed for each of these potential routes. Each route was assigned a "buffer" of 30 feet on either side of the centerline, resulting in a 60-foot wide corridor. Corridor width was selected based upon conservative maximum limits of construction impacts. Where appropriate, attributes occurring within that corridor, or crossed by the proposed storage line centerline, were measured within each 100-foot wide buffer. The various other ecological, land use, and engineering constraints were measured either as linear feet crossed by the centerline or as an attribute count within the 100-foot buffer.

ii. Step 2: Scoring Constraints: Scores, instead of raw data, were used so that no single attribute received unequal consideration in the route selection process.

The number of available scores can be as many or as few as desired, however, an uncomplicated approach usually achieves satisfactory results. In this study, the raw data were assigned a score of 0, 1, 5, or 10 depending on the magnitude of the attribute. Attributes with a lower score are more desirable. If there were no occurrences of the attribute, a score of 0 was assigned. Some attributes including Ohio Historical Inventory structures were scored on all or none basis. This process was used to develop attribute scores for each potential route.

iii. Step 3: Totaling Attributes to Find Route Score: The attribute groups for each constraint category were totaled to provide a route score.

5.2 Data Sources and Scoring

5.2.1 Ecological

Wetland data was collected from published Ohio Wetland Inventory (OWI) maps. Other environmental data was collected from publicly available sources including the ODNR, U.S. Fish and Wildlife Service (USFWS) and U.S. Department of Agricultural, Natural Resource Conservation Service (USDA-NRCS). USGS topographic maps and digital aerial photography were also reviewed to determine streams, wooded areas, and ponds. The information obtained from these sources was used to score each candidate route according to the following scoring rationale:

Constraint	Score	Rationale
Length of route requiring significant tree removal or trimming (acres)	0 1 5 10	- No tree removal or trimming - Less than 10 acres crossed - 10.1 to 15.0 acres crossing - More than 15.1 acres crossing
Identified wetlands crossed by centerline (acres)	0 1 5 10	- None crossed - 0.1 to 2.0 acres crossed - 2.1 to 3.1 acres crossed - More than 3.1 acres or more
Stream crossings (feet)	0 1 5 10	- No streams in R/W - 200 ft to 509 ft crossed - 510 to 900 ft crossed - More than 900 ft crossing

Recorded endangered, threatened, or protected species areas crossed by centerline	0 1 5 10	- No areas crossed - 0.1 to 2.5 areas impacted - 2.5 to 3.6 areas impacted - More than 3.6 areas impacted

5.2.2 Land Use

Dominion East Ohio conducted a field survey of the area noting land uses on USGS maps and aerial photographs. The land use of the study area was supplemented by the following sources:

- USGS 7.5-minute topographic maps
- Aerial photographs of the study area

The information obtained from the these sources was used to score each of the potential routes according to the following scoring rationale:

Constraint	Score	Rationale
Residential properties crossed by centerline (acres)	0 1 5 10	- No residences crossed by centerline - 1 to 45 acres crossed by centerline - 46 to 75 acres crossed by centerline - 76 or more acres crossed by centerline
Commercial property crossed by centerline (acres)	0 1 5 10	- No commercial crossed by centerline - 0.1 to 2.0 acres crossed by centerline - 2.1 to 4.0 acres crossed by centerline - 4.1 acres or more crossed by centerline
Institutional land uses within 100 feet (e.g. schools, hospitals, day care facilities, churches)	0 1 5 10	- No institutional land uses within 1,000ft - 1 institutional land uses within 1,000 ft - 2 institutional land uses within 1,000 ft - 3 or more institutional land uses within 1,000 ft
High Population Areas (miles)	0 1 5 10	- No high population areas - 1.0 to 1.9 miles of high population areas - 2.0 to 2.9 miles of high population area - 3.0 or more of high population areas

5.2.3 Cultural

Recorded NRHP listings were obtained from the National Park Service (NPS). This information is maintained by NPS in an electronic GIS database via the NPS web site. This information was imported into the GIS system used for this study. Cemeteries were identified using USGS topographic maps supplemented by the windshield land use survey. The information obtained from these sources was used to score each of the potential routes according to the following scoring rationale:

Constraint	Score	Rationale
NRHP sites within 100 ft	0 10	- None - One or more
Known archaeological sites within 100 feet	0 1 5 10	- No archaeological sites within 100 ft - 2 to 6 archaeological sites within 100 ft - 7 to 11 archaeological sites within 100ft - More than 11 archaeological sites within 100 ft
Ohio Historical Inventory sites within 100 ft	0 5	- None - One or more
Cemeteries within 100 feet	0 10	- None - One or more

5.2.4 Engineering

Road, rail and stream crossing data was collected from USGS maps of the area, county engineering maps and the field reconnaissance. The data was collected and transferred to the constraint map of the study area. The information obtained from these sources was used to score each of the potential routes according to the following scoring rationale:

Constraint	Score	Rationale
Number of road crossings	0 1 5 10	- No road crossings - 1 to 9 road crossings - 10 to 23 road crossings - 24 or more road crossings
Number of railroad crossings	0 5	- No railroad crossings - One or more railroad crossings
Length of Route	1 5 10	- Less than 8.8 miles - 8.9 to 9.3 miles - More than 9.4 miles

6.0 Discussion Of Route Selection

The results of the route selection study are provided in Table 1. The Preferred route had the lowest score with 44, second was Alternative route #1 with 52, and third was the Alternative route #2 with 93. Based on the study, Dominion East Ohio proposes to use the Preferred route to install the Franklin 20-inch storage pipeline.

The route selection study scored each route based on ecological, land use, cultural, and engineering impacts. Based on Dominion East Ohio's study, the Preferred route will result in the least amount of tree clearing, the lowest number of residential and commercial property owners, and the shortest route distance, just to name a few. The preferred route parallels an existing Dominion-owned right of way over 95 percent of the proposed route. The Alternative #1 route is the next best option based on impacts. The route has the least amount of stream crossings and road crossings, along with having similar impacts to the Preferred route. The Alternative route #2 impacts were significantly higher than the other two routes. The route impacts the least amount of wetlands; however, all other impacts are greater than the preferred route.

TABLE 1
FRANKLIN 20 INCH
CONSTRAINTS SCORING TABLE

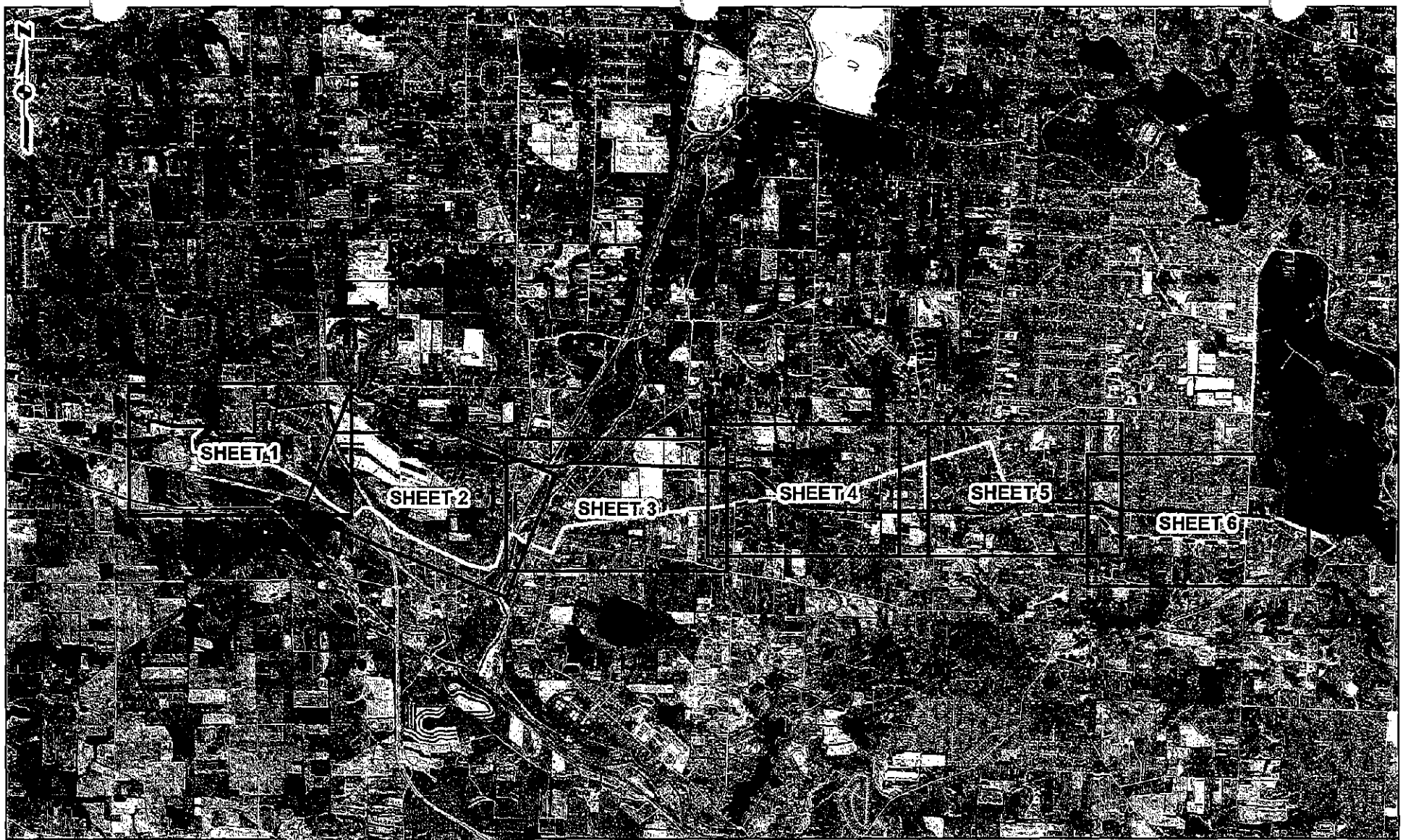
Table 1. Dominion East Ohio Franklin 20-Inch Constraints Scoring							
		Route data[a]			Score		
Type	Constraint	Preffered	Alternative #1	Alternative #2	Preffered	Alternative #1	Alternative #2
Ecological	Length of route requiring significant tree removal or trimming (acres)	8.8[b]	13.5	9.8	1	5	1
	Identified Wetland crossed by centerline (acres)	3.1	3.2	0.7	5	5	1
	Stream crossings (ft)	891.7	491	508.3	5	1	1
	Threatened and endangered species (areas impacted)	1	1	0	5	5	0
Land Use	Residential (acres)	50.8	68.9	139	5	5	10
	Commercial (acres)	0.6	0.3	4.8	1	1	10
	Institutional Land Use (e.g. hospitals, churches, day care facilities)	0	0	3	0	0	10
	High Population Areas (miles)	2.8	4.4	7.3	1	10	10
Cultural	Known archaeological sites within 100ft	0	0	0	0	0	0
	Known National Register Historcal Preservation sites within 100ft	0	0	1	0	0	10
	Historical resources within 100ft	3	3	3	5	5	5
	Cemeteries	0	0	1	0	0	10
Engineering	Number of road crossings	22	17	31	5	5	10
	Number of rail road crossings	1	1	1	5	5	5
	Length of Route (miles)	8.7	9	9.7	1	5	10
				Scoring Results	39	52	93

Notes:

a - Impacts were calculated by GAI consultants using quantitative analysis techniques. The data provided by GAI is included in the supplemental information section of the route selection study

b - Based on Ohio Geographical Referenced Information Program (2003), the preferred route requires 17.5 acres of tree removal. However, the preferred route travels parallel to existing utility right-of-way that does not require tree clearing. As a result, Dominion's analysis determined 50% of the original 17.5 acreas will not require tree clearing.

FIGURE 1
FRANKLIN 20 INCH
CONSTRAINTS MAP INDEX



PROJECT LOCATION

SUMMIT AND
WAYNE COUNTIES, OHIO

REFERENCE:OHIO GEOGRAPHICALLY REFERENCED INFORMATION PROGRAM, STARK, SUMMIT & WAYNE COUNTIES, OHIO, 2006.

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- SHEET BOUNDARY

Feet
0 2,500 5,000 10,000

CONSTRAINTS MAP INDEX

DOMINION EAST OHIO
FRANKLIN 20-INCH
PIPELINE PROJECT

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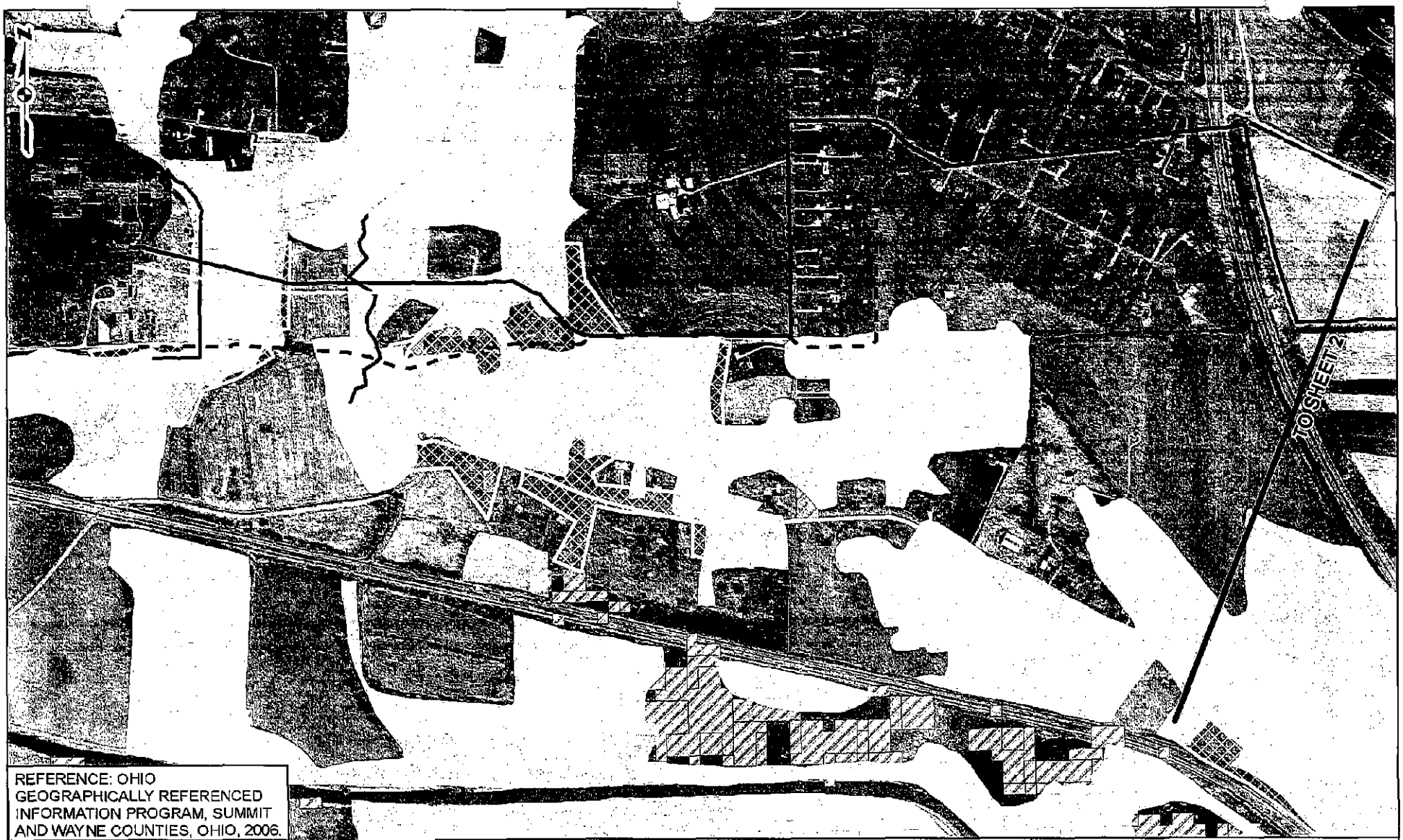
FIGURE 2
FRANKLIN 20 INCH
CONSTRAINTS MAPS



REFERENCE: OHIO GEOGRAPHICALLY REFERENCED INFORMATION PROGRAM, SUMMIT AND WAYNE COUNTIES, OHIO, 2006.

PROJECT LOCATION

SUMMIT AND
WAYNE COUNTIES, OHIO

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- STREAM
- DECIDUOUS FOREST
- COMMERCIAL
- RESIDENTIAL
- SHRUB AND BRUSH
- OWI WETLAND
- FORESTED AREA
- HISTORICAL RESOURCES
- ARCHAEOLOGY
- NAT'L REGISTER

0 400 800 1,600 Feet

CONSTRAINTS MAP
SHEET 1 OF 6

DOMINION EAST OHIO
FRANKLIN 20-INCH
PIPELINE PROJECT

gai consultants

Dominion

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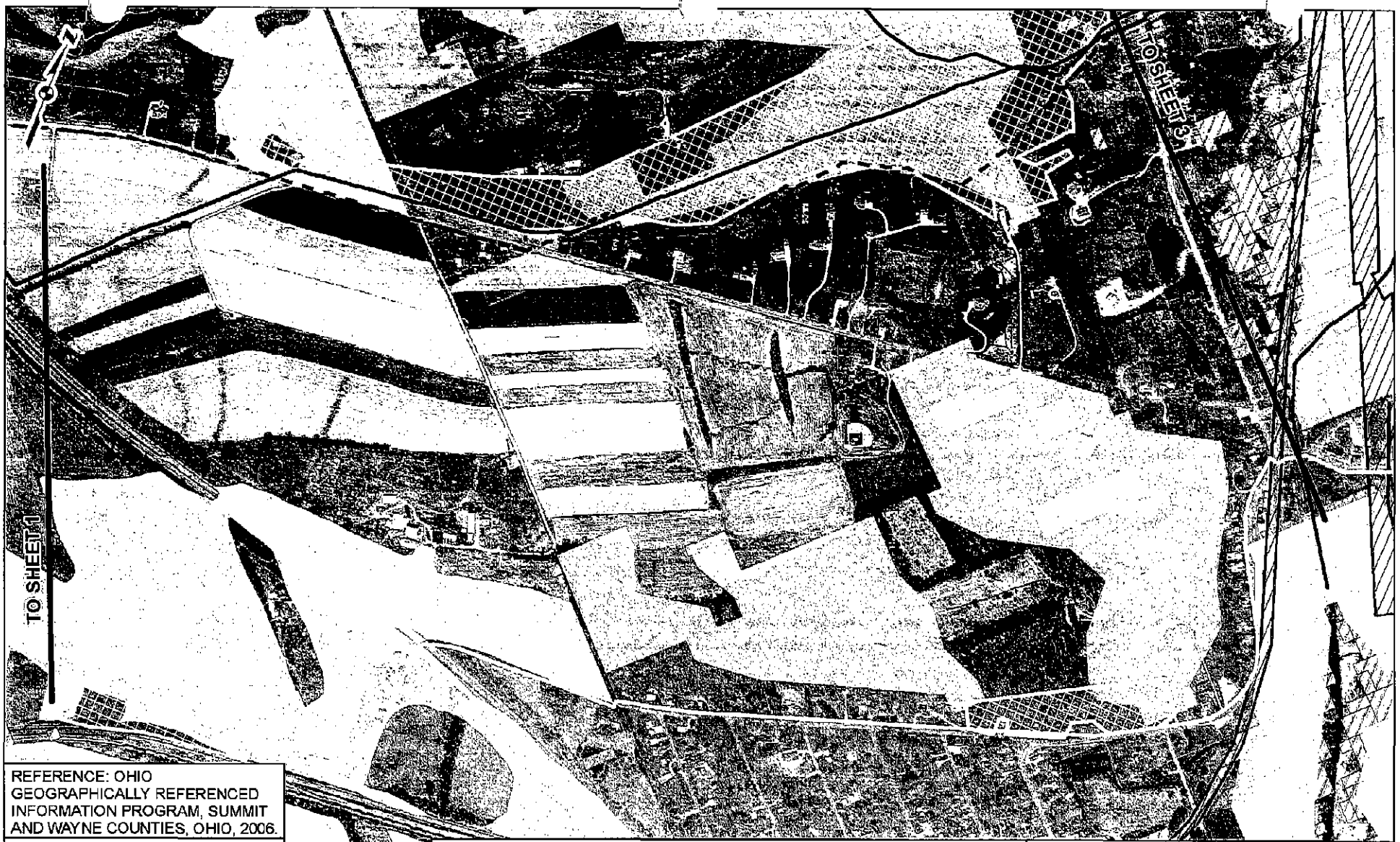

REFERENCE: OHIO GEOGRAPHICALLY REFERENCED INFORMATION PROGRAM, SUMMIT AND WAYNE COUNTIES, OHIO, 2006.

PROJECT LOCATION

SUMMIT AND
WAYNE COUNTIES, OHIO

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- STREAM
- DECIDUOUS FOREST
- COMMERCIAL
- RESIDENTIAL
- SHRUB AND BRUSH
- OWI WETLAND
- FORESTED AREA
- HISTORICAL RESOURCES
- ARCHAEOLOGY
- NAT'L REGISTER

0 400 800 1,600 Feet

CONSTRAINTS MAP
SHEET 2 OF 6

DOMINION EAST OHIO
FRANKLIN 20-INCH
PIPELINE PROJECT

gai consultants

Dominion

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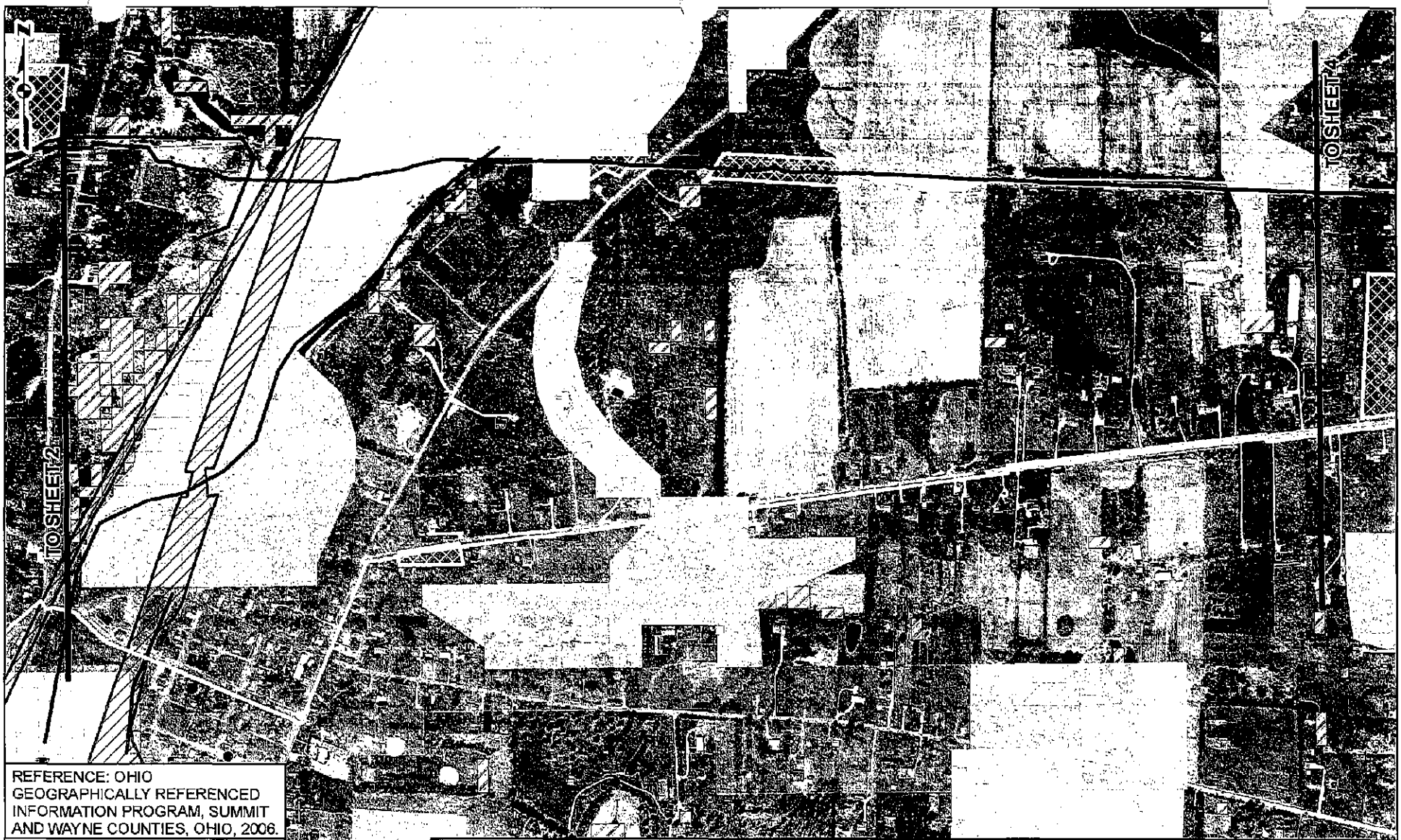

REFERENCE: OHIO GEOGRAPHICALLY REFERENCED INFORMATION PROGRAM, SUMMIT AND WAYNE COUNTIES, OHIO, 2006.

PROJECT LOCATION

SUMMIT AND WAYNE COUNTIES, OHIO

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- STREAM
- DECIDUOUS FOREST
- COMMERCIAL
- RESIDENTIAL
- SHRUB AND BRUSH
- OWI WETLAND
- FORESTED AREA
- HISTORICAL RESOURCES
- ARCHAEOLOGY
- NAT'L REGISTER

0 400 800 1,600 Feet

CONSTRAINTS MAP SHEET 3 OF 6

DOMINION EAST OHIO
FRANKLIN 20-INCH PIPELINE PROJECT

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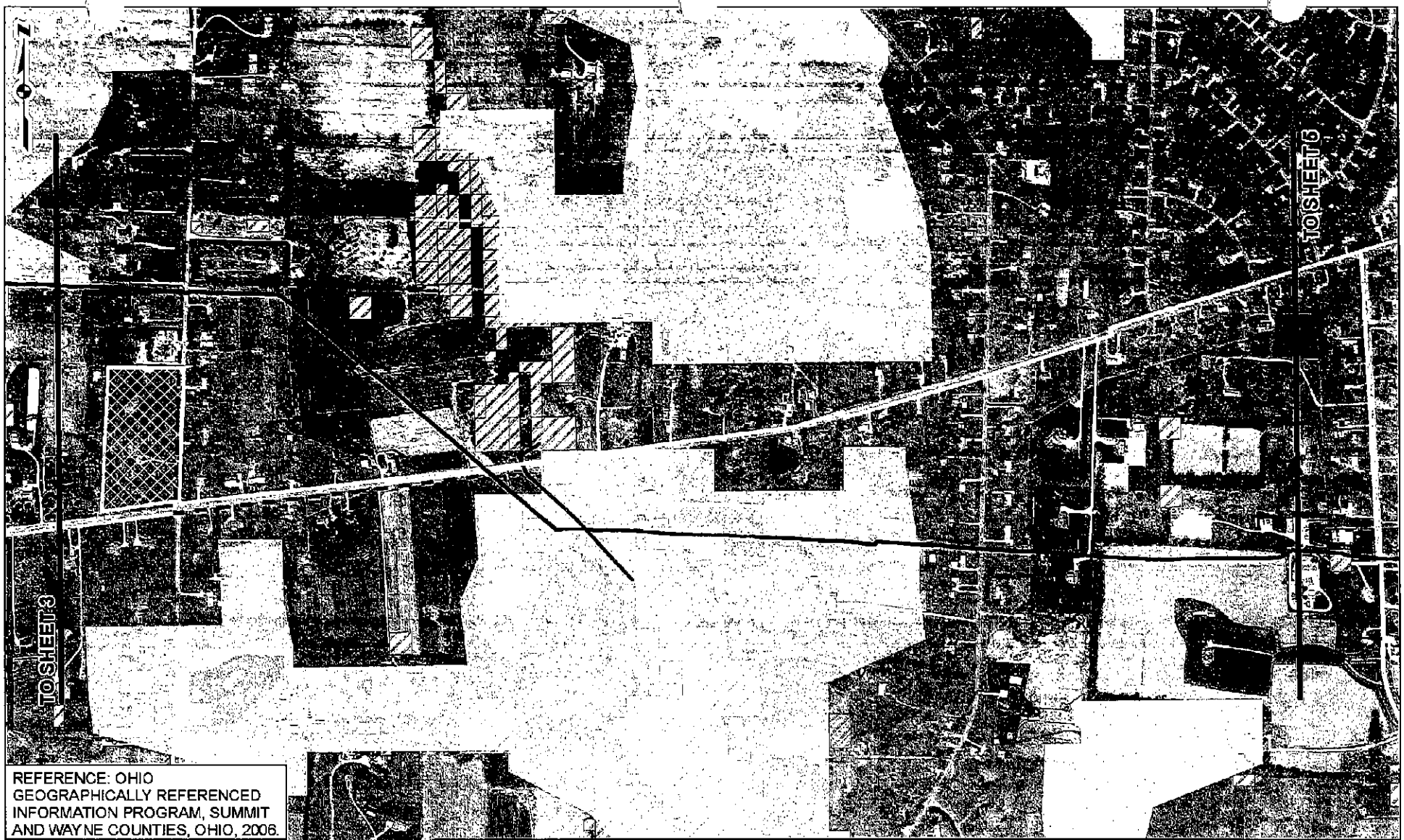

REFERENCE: OHIO GEOGRAPHICALLY REFERENCED INFORMATION PROGRAM, SUMMIT AND WAYNE COUNTIES, OHIO, 2006.

PROJECT LOCATION

SUMMIT AND WAYNE COUNTIES, OHIO

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- STREAM
- DECIDUOUS FOREST
- COMMERCIAL
- RESIDENTIAL
- SHRUB AND BRUSH
- OWI WETLAND
- FORESTED AREA
- HISTORICAL RESOURCES
- ARCHAEOLOGY
- NAT'L REGISTER

0 400 800 1,600 Feet

CONSTRAINTS MAP SHEET 4 OF 6

DOMINION EAST OHIO
FRANKLIN 20-INCH
PIPELINE PROJECT

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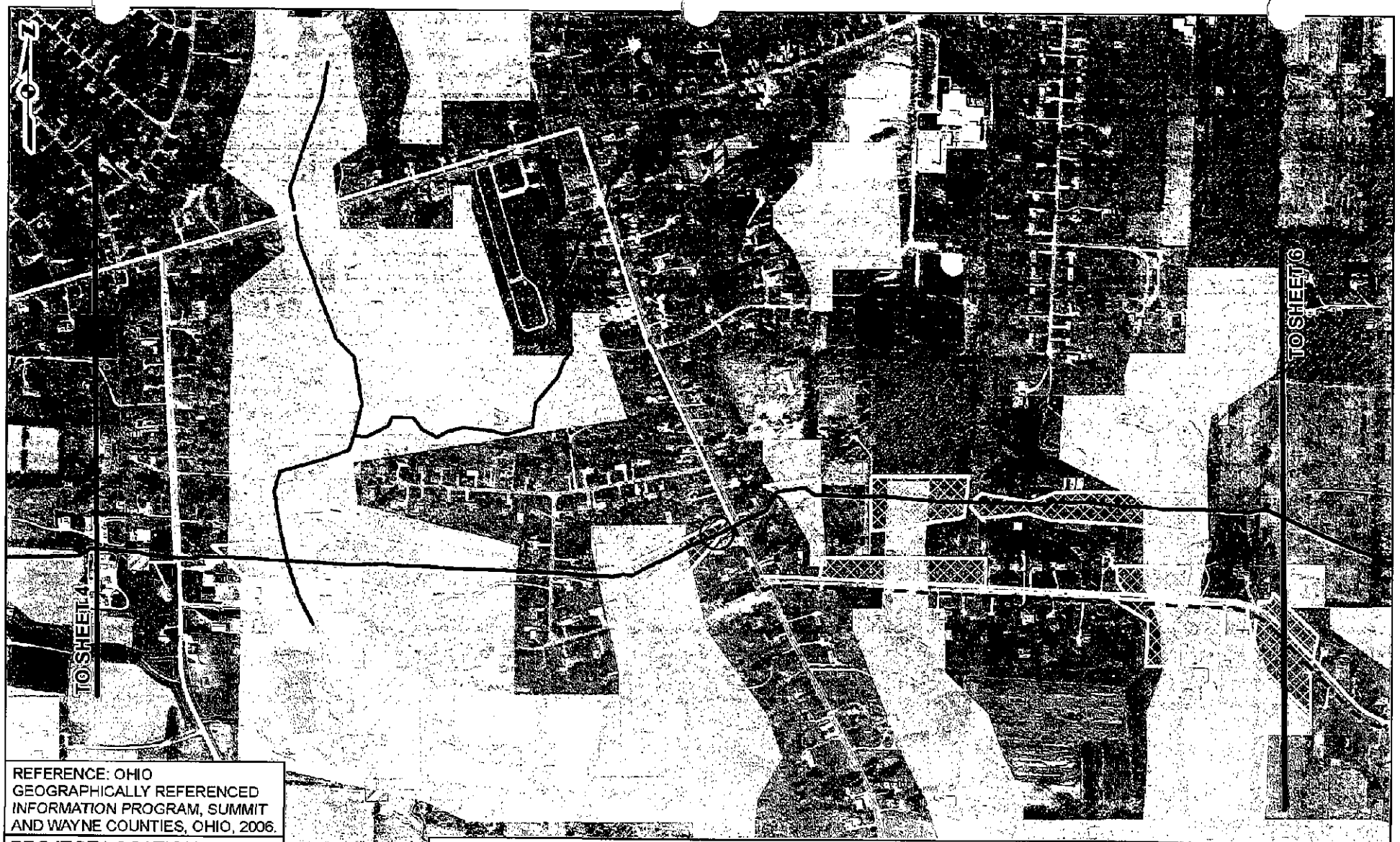

REFERENCE: OHIO GEOGRAPHICALLY REFERENCED *INFORMATION PROGRAM*, SUMMIT AND WAYNE COUNTIES, OHIO, 2006.

PROJECT LOCATION

SUMMIT AND WAYNE COUNTIES, OHIO

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- STREAM
- DECIDUOUS FOREST
- COMMERCIAL
- RESIDENTIAL
- SHRUB AND BRUSH
- OWI WETLAND
- FORESTED AREA
- HISTORICAL RESOURCES
- ARCHAEOLOGY
- NAT'L REGISTER

0 400 800 1,600 Feet

CONSTRAINTS MAP SHEET 5 OF 6

DOMINION EAST OHIO
FRANKLIN 20-INCH
PIPELINE PROJECT

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Dominion

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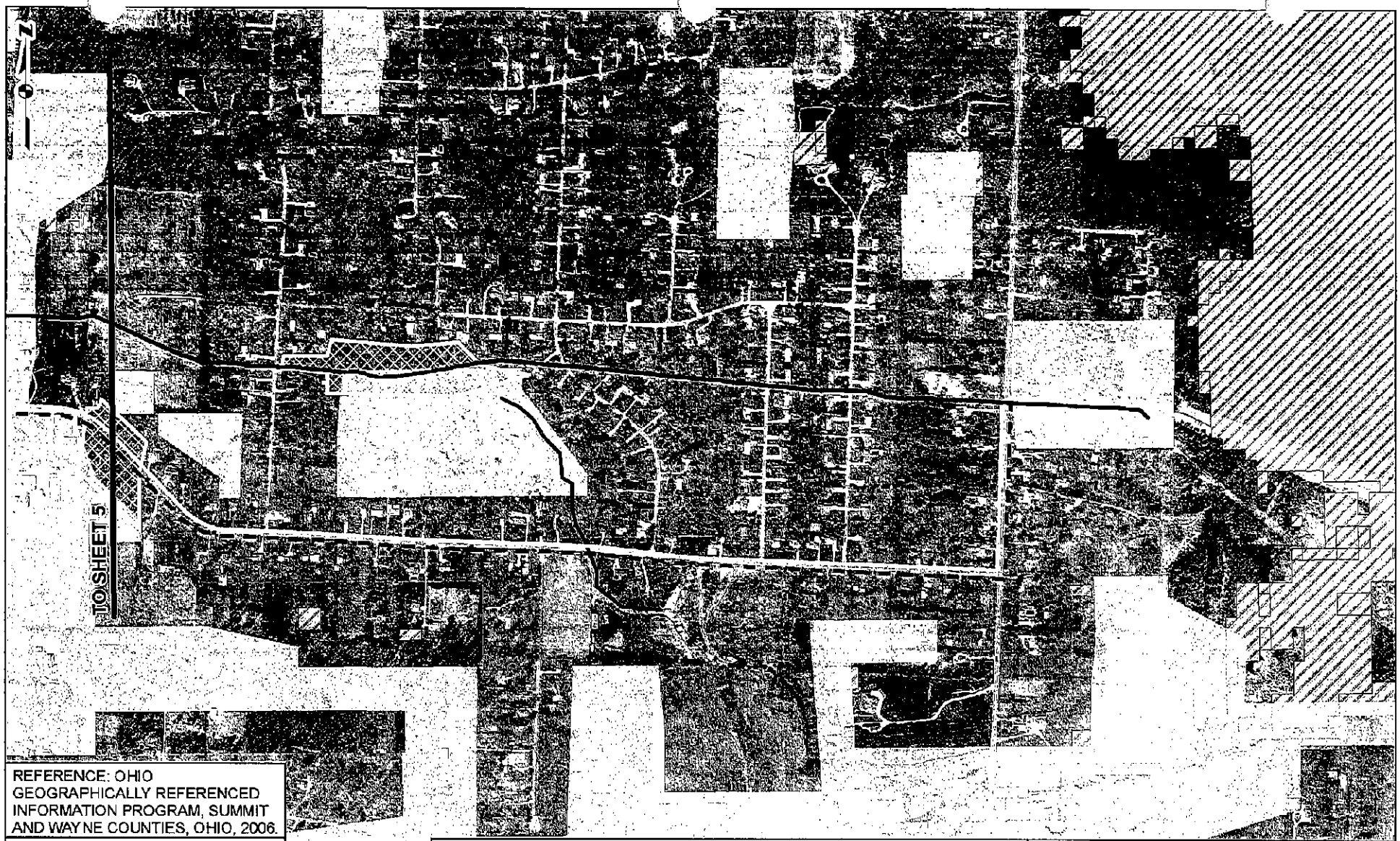

REFERENCE: OHIO GEOGRAPHICALLY REFERENCED INFORMATION PROGRAM, SUMMIT AND WAYNE COUNTIES, OHIO, 2006.

PROJECT LOCATION

SUMMIT AND WAYNE COUNTIES, OHIO

LEGEND

- PREFERRED ROUTE
- ALTERNATIVE #1 ROUTE
- ALTERNATIVE #2 ROUTE
- STREAM
- DECIDUOUS FOREST
- COMMERCIAL
- RESIDENTIAL
- SHRUB AND BRUSH
- OWI WETLAND
- FORESTED AREA
- HISTORICAL RESOURCES
- ARCHAEOLOGY
- NAT'L REGISTER

0 400 800 1,600 Feet

CONSTRAINTS MAP SHEET 6 OF 6

gai consultants

DOMINION EAST OHIO
FRANKLIN 20-INCH
PIPELINE PROJECT

Dominion

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APPENDIX 1
SUPPLEMENTAL INFORMATION

IMPACT SUMMARY
FRANKLIN 20-INCH STORAGE PIPELINE PROJECT, DOMINION RESOURCES SERVICES, INC.

Description	Route		
	Preferred	Alternative #1	Alternative #2
Length (miles)	8.8	8.9	9.7
OWI Wetlands (acres)	3.1	3.2	0.7
Streams (feet)[1]	891.7	491.0	508.3
Forested Areas (acres)[2]	17.5	13.5	9.8
High Population Areas (miles)[3]	2.8	4.4	7.3
Railroads	1	1	1
Major Roads and Highways	2	2	2
Minor Roads and Highways	20	15	29
Schools	0	0	1
Cemeteries	0	0	1
Churches	0	0	1
Hospitals	0	0	0
Recreation Areas	0	0	0
Land Use (acres)[4]			
Residential	50.8	68.9	139.0
Commercial	0.6	0.3	4.8
Shrub and Brush Rangeland	51.6	37.7	22.8
Deciduous Forest Land	14.7	20.1	25.1
Grassland	9.8	7.7	1.2
Institutional	0.2	0.2	0.6
Highway	2.7	1.3	0.0
Non-Forested Wetlands	1.2	1.2	1.9
Cropland	73.4	74.0	34.3
Farmstead	0.6	1.1	1.6
Rail	0.0	1.5	0.1
Electric Utilities	0.0	0.0	0.1
Cemeteries	0.0	0.0	1.3
Pastures	0.2	0.0	0.0

Notes:

1 Streams were manually digitized based on topographic mapping (photorevised 1994).

2 Forested areas were manually digitized based on aerial photography obtained from the Ohio Geographical Referenced Information Program (2003).

3 High population areas were calculated as the length in miles of the centerline through areas of a 660-foot corridor where two or more structures were clustered within close vicinity. Aerial photography obtained from the Ohio Geographical Referenced Information Program (2003) was used to determine the location of structures.

4 Land use data was acquired from the Ohio Department of Natural Resources' website (1994).

(A) ALTERNATIVE SITES/ROUTES OF PROJECTS

(1) Geography and Topography

Maps at 1:24,000 scale, including the area 1,000 feet on each side of the proposed pipeline route, are presented in Figures 04-1A, 04-1B, 04-2A and 04-2B. These maps were developed from the following United States Geological Survey (USGS) 7-1/2 minute topographic base maps:

- Doylestown, Ohio 1969 (photorevised 1978)
- Canal Fulton, Ohio 1958 (photorevised 1970 and 1978)

The data on this map was updated using information from field reconnaissance conducted by GAI in April and May 2008.

(a) Proposed Transmission Lines: The pipeline alignments for the Preferred and Alternate Routes, including the proposed turning points, are shown in Figures 04-1A, 04-1B, 04-2A, and 04-2B, which also include land use and other features.

(b) Proposed Station Site Locations: No new compressor stations are required for this gas pipeline project. Connections will be made to Dominion East Ohio's Chippewa Compressor Station, Franklin Station, and Shoop Station which are depicted on Figure 03-1 and other figures in this section.

(c) Major Highway and Railroad Routes: The majority of road crossings of the Preferred and Alternate routes are township and county roads. Major highways within 1,000 feet of both the Preferred and Alternate Routes include State Route 21 and State Route 93. State Route 21 is crossed by both pipeline routes 1.0 miles east of the Dominion East Ohio Chippewa Station pipeline terminus. State Route 93 is also crossed by both pipeline routes 1.4 miles west of the eastern pipeline terminus at Dominion East Ohio's Shoop Station.

The Conrail/Penn Central Railroad owned by CSX Transportation, intersects both the Preferred and Alternate Routes approximately 1,125 feet east of South Cleveland Masillon

Road and approximately 1,000 feet west of the Tuscawaras River. The B & O Railroad, also owned by CSX Transportation, is within the 1000-foot corridor of the Preferred and Alternate Routes at the intersection of the railroad with Hametown Road which is approximately 700 feet from the centerlines of the Preferred and Alternate Routes.

(d) Air Transportation Facilities: The closest air transportation facilities to the study area are the Akron-Canton Regional Airport and the Wayne County Airport. The Akron-Canton Regional Airport, a commercial Class C airport located in the city of Green, in southern Summit County is located approximately 6.5 miles from the city of Manchester, and about 9.5 miles from the city of Clinton. The Wayne County Airport is a public airport located six miles (10km) northeast of Wooster, Ohio and located about 20 miles from Clinton. These airports are not located within 1,000 feet of the Preferred or Alternate Routes.

(e) Utility Corridors: The single major utility corridor in the vicinity of the Preferred and Alternate Routes, with the exception of the gas pipelines within the existing right-of-way (ROW) that parallel these two routes, is shown on Figure 04-1A. The Preferred and Alternate Routes cross one existing high-voltage electric transmission line ROW owned by the Ohio Edison Power company. This high-voltage line is located west of the village of Clinton in the vicinity of Clinton Road in the E-F Segment of the Preferred Route.

(f) Proposed Permanent Access Roads: No newly constructed permanent access roads are planned for this project. Approximately 20 existing access roads used for servicing of Dominion East Ohio's gas well pads will be utilized for construction access and for equipment lay-down purposes.

(g) Lakes, Ponds, Reservoirs, Streams, Canals, Rivers, and Swamps: A full description of the lakes, ponds, reservoirs, streams, canals, rivers, and swamps located within 1,000 feet of the proposed Preferred and Alternate Routes is provided in Section 4906-15-07(B)(3) of this application. Sixteen perennial, intermittent, and ephemeral streams were delineated within the 200-foot study corridor of the Preferred Route. Twelve streams are located within the 200-foot study corridor of the Alternate Route. Of these, 12 stream crossing locations were identified along the Preferred Route centerline and nine stream crossings are along the Alternate Route centerline. Dominion East Ohio proposes to use a trench construction methodology to cross only five of the 12 stream channels on the Preferred Route. These five streams include two intermittent headwater streams and three Class I or II streams. The remaining seven streams on the Preferred Route will be bored using a horizontal directional

drill (HDD) methodology. No long-term adverse impacts are expected to any stream to be crossed by trenching on the Preferred Route, based on the mitigation techniques and precautions to be employed during construction [refer to Section 4B(1)(b) and Section 7]. Several wetland areas were identified and delineated along both the Preferred and Alternate Routes. An estimated 4.3 acres and 3.3 acres of wetland are located within the maximum 60-foot right-of-way corridor of the Preferred and Alternate Routes, respectively. Pipeline construction on the Preferred Route is estimated to only disturb 0.4 acres of wetland through the use of a HDD methodology in several areas. Mitigation measures during construction activities in wetland areas are discussed in Section 7 (D).

Table 06-2 includes a comparison and quantification of all of the land use constraints, including those described above, for the Preferred and Alternate Routes.

(h) Topographic Contours: Using USGS topographic source data, maps of existing surface contour intervals (10-feet) of the study area were prepared and are illustrated on Figures 04-1A, 04-1B, 04-2A, and 04-2B.

(i) Soil Associations Crossed By the Preferred and Alternate Routes: Soil associations and soil series within the Preferred and Alternate Routes are shown on Figure 04-3A and 04-3B. Major associations in Wayne County include the Melvin-Euclid-Orrville association, Mechanicsburg-Berks association, and the Canfield-Wooster Riddles association. Soils along the project's western terminus are within the Melvin-Euclid-Orrville association. Mechanicsburg-Berks association and the Canfield-Wooster Riddles association encompass the project uplands in the eastern portion. In Summit County, most of the project land lies within the Canfield-Wooster association, with Chagrin-Holly-Lobdell association assigned to alluvial settings along the Tuscarawas River, and to a small area at the eastern portion of the study area, adjacent to the Nimisila Reservoir, being assigned to the Chili association. (U.S. Department of Agriculture, 2007)

Project area soil associations are briefly described as follows.

- Melvin-Euclid-Orrville association: These soils were formed in glacial till and in residuum and are found in well-drained, gently sloping to very steep, upland settings.
- Mechanicsburg-Berks association: Characteristically these soils occur on nearly level to moderately steep, moderately well to well drained uplands.

- Canfield-Wooster Riddles association: Formed in glacial till, characteristically these soils are moderately steep, moderately well to well drained uplands.
- Chagrin-Holly-Lobdell association: This soil association is characterized by recent alluvium found on in nearly level, well- to poorly-drained settings.
- Chili association: These soils were formed in sandy and gravely glacial outwash and occur on nearly level to moderately steep uplands.

The Preferred and Alternate Routes cross several soil types listed as hydric and/or prime farmland in both Wayne and Summit counties as specified by the USDA Natural Resources Conservation Service. Refer to Table 04-1 for a complete list of soil types along the Preferred and Alternate Routes.

(j) Population Centers and Legal Boundaries: Population centers and legal boundaries within the vicinity of the Preferred and Alternate Routes are shown on Figures 04-1A, 04-1B, 04-2A, and 04-2B. Both the Preferred and Alternate Routes are located in northeastern Wayne and southwest Summit Counties, Ohio and generally span the distance southeast of the city Doylestown, Chippewa Township, Wayne County, to the western shore of Nimisila Reservoir in New Franklin, Summit County.

(2) Slope and Soil Mechanics

The Preferred and Alternate Routes include a few topographic slopes that will require specific planning for safe construction operations and protection of stream channels. Several of the soil associations are described in the USDA soil surveys as having greater than 12 percent slopes. The sloped area immediately east of the Tuscarawas River contains some of the steeper slopes of the proposed routes; pipeline installation in this area is planned to be performed using HDD, therefore no open trench cuts are planned on this particular steep slope. Although the construction challenges in the sloped areas are not insurmountable, it is expected that areas at the base of slopes near these stream channels will require extra care in pipeline installation planning, erosion control, and restoration due to the higher erosion potential and the presence of stream channels. Geotechnical borings are currently in progress to evaluate the underlying geology at locations that are being considered for HDD. This data will also be reviewed for constructability purposes for areas involving open trench work. A copy of the Stormwater Pollution Prevention Plan (SWP3) for the project that addresses these issues, in conjunction with the National Pollutant Discharge Elimination System (NPDES) construction stormwater permit, will be provided to the OPSB

well in advance of the start of construction. Where possible, clearing will be minimized on slopes and stumps will be left in place as extra precautions to help minimize the potential for slope erosion. The soil associations crossed by the Preferred and Alternate Routes are discussed earlier in this chapter and are depicted on Figures 04-3A and 04-3B.

(B) LAYOUT AND CONSTRUCTION

(1) Site Activities

(a) Surveying and Soil Testing: Dominion East Ohio has performed a land survey of the entire Preferred Route centerline and an extensive amount of the Alternate Route centerline (where there is commonality of the centerlines); this survey occurred in August 2008. The Preferred Route centerline is positioned a minimum of ten feet offset from existing pipelines owned by Dominion East Ohio over nearly the entire route distance.

Man-made facilities near the centerline that might affect the pipeline design and construction will be located during additional surveys. During surveying and soil testing, some minimal clearing of small trees may be required if they obstruct the sight of the surveyor. Offsets will be used to survey around large trees and other large obstructions. The pipeline ROW of 40 to 60 feet will be staked along the route prior to construction.

A geotechnical investigation is underway for the Preferred Route which involves soil borings and tests at various locations along the proposed pipeline ROW to document underlying soil and rock conditions prior to soil excavation.

(b) Grading and Excavation: The Preferred and Alternate Routes are characterized by topography that consists of relatively level land to minor slopes along the majority of the length, so grading requirements will be minimal for construction access. The ROW will be cleared of vegetation, where necessary, and tree stumps cut or removed to permit construction equipment access and excavation. The approximate amount of woodlot area for the Preferred and Alternate routes is listed in Table 06-2 of this report. The Preferred Route centerline crosses 5,328 linear feet of woodlot as compared to 8,898 linear feet for the Alternate Route centerline. In woodlot areas, a 30-foot wide corridor is planned to be cleared to minimize the cutting of mature trees in particular. This corridor width will result in clearing of approximately 3.9 acres along the Preferred Route whereas an estimated 4.8

acres would be cleared on the Alternate Route. Grading work will be preceded by the installation of soil erosion and sedimentation control measures.

Pipeline construction will entail excavation of a trench approximately 4 feet wide by 6 feet deep over the majority of the selected route, with HDD utilized to bore beneath several sensitive land use areas for the remainder of the route. Material excavated from the trench will be stockpiled within the ROW. Open cuts of rock layers or similar materials will require hydraulic hoe-rams or equivalent equipment. The pipeline will then be installed as described below, and the trench backfilled. Excess backfill material will be distributed over the trench and spoil areas or hauled from the site. Finally, the topsoil will be replaced in the trench from spoil areas, and final grading will restore the land surface to its original contours.

Any broken or damaged drain tile or pipe will be replaced with the same size and the same or better quality. Mulching and re-seeding will be conducted in non-agricultural areas.

The proposed Preferred Route crosses intermittent, perennial and ephemeral streams that have been classified as streams or headwaters in accordance with OEPA guidelines (as discussed further in Section 7). Dominion East Ohio will evaluate the final construction methods to be employed for each of these channels on a case-by-case basis in conjunction with the Ohio Power Siting Board (OPSB), Ohio Environmental Protection Agency (Ohio EPA), and construction engineers. The current crossing method planned for these streams is presented in Table 07-3 and Table 07-4.

Dominion East Ohio utilizes two methods for crossing streams. Each method has advantages and disadvantages depending on the site-specific conditions. The most common method of stream crossing is open trench excavation for relatively low flow streams. This involves digging a trench across the stream, lifting the pipe into the trench, then backfilling, re-contouring, and restoration of the stream bed and banks. Construction at each stream location can be scheduled during low flow conditions, independent of the remainder of the pipeline construction. If necessary, temporary coffer dams can be utilized with diversion pumps to allow trenching through a stream. A short time frame of construction activity at these stream-crossing locations minimizes potential erosion problems and stream impacts.

The second method involves HDD under the channel. This method is frequently used to minimize impacts to high value ecological and archaeological resources that could not otherwise be avoided, and to avoid potential impacts to navigation on navigable waters. However, the evaluation process for use of HDD must take into consideration the transport of large drilling equipment to the drill site, the possibility of release of bentonite-based drilling fluids, and a longer installation process.

For sensitive locations where HDD is selected as the installation method, the HDD equipment will be set up on upland areas outside of the sensitive area (e.g., wetland). Silt fence or other erosion controls will be installed around the drill pipe entry point and exit point when necessary. HDD operations have a potential to release drilling fluids into the surface environment through existing fractures in the subsurface rock and soil; these releases of drilling fluid are referred to as "frac-outs". Containment measures taken during a frac-out event will include reduction or elimination of pressure, straw bale containment, and removal of drilling mud from the surface. The area affected by any frac-out will be restored as closely as possible to original conditions. HDD will not continue until the frac-out is completely contained.

Dominion East Ohio evaluated each stream and river crossing of the Preferred Route on a case-by-case basis to determine the method of pipeline construction. Using information obtained from ecological surveys conducted by Environment & Archaeology, Inc. and GAI, engineering professional judgment, and field surveys/consultation with the OPSB and Ohio EPA, Dominion East Ohio has selected a proposed crossing and construction method for each stream and river. The selected construction methods are presented in Table 07-3 and 07-4 for primary streams and headwater streams, respectively, for the Preferred Route.

The higher quality streams and headwaters will involve HDD or open trench methods with proven mitigation techniques. The mitigation techniques include a restricted width for vegetation clearing and equipment access, selected tree removal within 25 feet of the stream, erosion control measures (e.g., rock check dams), and installing wood mats for equipment at the restricted and narrow crossing points. The restoration plans include design and implementation by a firm specializing in stream restoration, including planting of native shrubs and other vegetation. These methods are expected to minimize impacts and quickly re-establish the value and function of the higher quality streams.

As with stream crossings, wetland areas were also examined to determine the overall most feasible and protective crossing methodology. Either trench excavation and construction or HDD will be used. Dominion East Ohio's proposed crossing methodology for each wetland along the Preferred Route is presented in Table 07-2. By using HDD in the majority of wetland areas, restricting widths of the construction corridor, and providing wood matting at equipment crossings, only an estimated 0.4 acres of wetlands will be disturbed during construction on the Preferred Route. Table 06-2 includes a comparison and quantification of all land use constraints, including those described above, for the Preferred and Alternate Routes.

(c) Construction of Access Roads and Trenches: No new permanent access roads will be required for the natural gas pipeline. Temporary access to the construction areas will occur from existing county and state route roads, existing access roads owned and maintained by Dominion East Ohio, and along the existing Dominion East Ohio ROW on the entire Preferred Route. The Dominion East Ohio ROW or other ROW follows approximately 97% the entire Preferred and a large extent of the Alternate Route.

The pipeline trench will typically be 6 feet deep and 4 feet wide. When a section of trench has been excavated, a corresponding section of pipe will be welded together. A number of trackhoes or other equipment outfitted with lifting straps will lift the sections of welded pipe for placement into the trench onto sandbag pedestals.

(d) Laying of Pipe: The pipe and other equipment will be staged at nearby existing well pad locations, existing access roads, and along the existing Dominion East Ohio ROW on the Preferred or Alternate route. There may be locations where additional staging is required. In the event that additional areas are required, they will be evaluated for ecological and archaeological resources prior to use for staging. Dominion East Ohio will obtain additional pipe delivery and staging areas as close to the ROW as possible while avoiding ecologically sensitive areas.

Pipe handling will be minimized to prevent damage to the pipe and coating. To the extent possible, pipe will be strung along the ROW directly from delivery trucks. If the delivery schedule does not allow immediate stringing of the pipe, it will be stockpiled at the staging areas and loaded onto stringing trucks as needed.

Pipe will be handled using spreader bars, fabric slings, padded forklifts, or other methods that will prevent damage to end bevels and coating. When stockpiling or stringing pipe, padding will be used to protect the coating and the pipe will be properly supported to prevent distortion of the pipe roundness or damage to factory bevels.

Pipe will be installed such that secondary stresses are kept to a minimum to avoid abrasions, scuffing, sharp protrusions, and cracking. Any supported pipe will be insulated at the point of contact with a suitable insulating material such as rock shield or fiberglass sheeting. The pipeline welds will be x-rayed, welded joints coated, pipe examined for flaws in the coating and the coating repaired if necessary, and the pipeline then lowered into the trench. Before the pipe is buried, cathodic protection wires and other monitoring systems will be installed.

The trench will be backfilled and excess soil will be spread over the trench and spoil areas or hauled from the site. Topsoil replacement and final grading will be completed as described above. After installation, the pipeline will be hydrostatically and air pressure tested to verify its integrity according to industry standards.

(e) Removal and Disposal of Construction Debris: The ROW will be maintained to the extent possible to consolidate debris at designated locations and generally keeping the ROW area clear and organized for construction purposes. Refuse will be properly disposed to an approved landfill or other appropriate location.

Where trees must be cleared from the ROW, Dominion East Ohio will follow landowner requests for disposal to the extent practical. Where cutting of trees and brush from woodlots is necessary, the preference is to place the felled trees along the edge of the ROW as opposed to chipping trees in place which may inhibit germination of future seed mix during restoration. However, if adjacent landowners request other disposal methods (including personal use of chips), requests will be evaluated by Dominion East Ohio on a case-by-case basis. As required, excess vegetation may be disposed to other suitable areas if the property owner so wishes. Only stumps that are preventing pipeline installation will be removed, all other stumps within the ROW will be reduced to ground surface level and left in place as long as they do not interfere with trenching activities.

(f) Post Construction Reclamation: Once pipeline construction is complete, the ROW will be restored where possible to conditions equivalent to or improved from the conditions in

existence prior to construction. Photographs will be taken of the entire route before clearing and grading begins in order to provide a record of comparison to ensure restored conditions after construction. Restoration will include the permanent repair of fences and other surface facilities, the restoration of drainage ditches, fertilizing, seeding, and mulching of non-cultivated areas, and the removal of temporary soil erosion and sedimentation control measures after vegetative cover has been established. The Stormwater Pollution Prevention Plan will include these specifications. Areas adjacent to streams and wetlands will be restored to original contours using methods to minimize soil erosion and degradation. Appropriate seed mixes will be used to establish herbaceous and shrub vegetation. To protect the pipeline during future excavation work, the line will be surveyed and line markers will identify the pipeline location.

(2) Layout for Associated Facilities

(a) Map of Associated Facilities: No new facilities will be constructed in association with the pipeline. The location of the existing Dominion East Ohio stations that the pipeline will be connected to are shown in Figures 03-1, 04-1A, 04-1B, 04-2A, and 04-2B, which include various forms of land use and feature data. The existing stations include Chippewa Compressor Station at the western terminus, Franklin Station (at Hampsher Road approximately 0.5 miles west of State Route 93), and Shoop Station at the eastern terminus of the pipeline. Above-ground connections and valve systems will be installed within the boundaries of these three stations. A connection is planned for the new 20" pipeline to two to three existing 12" header pipes located approximately 1,000 feet east of Cleveland-Massillon Road for the purpose of a future connection to a gas production field. These connections will not require fencing, but a gravel pad will be installed around the above-grade pipe connection.

(b) Reasons for Proposed Layout and Unusual Features: There are no unusual features related to the storage expansion project.

(c) Future Modification Plans: The proposed natural gas pipeline is sized to provide adequate capacity for forseeable future needs.

(C) TRANSMISSION EQUIPMENT

(1) Electric Transmission Line Data

Not Applicable.

(2) Electric Transmission Substation Data

Not Applicable.

(3) Gas Transmission Line Data

(a) Maximum Allowable Operation Pressure: The proposed pipeline will have a maximum allowable operating pressure of 1,600 PSI.

(b) Pipe Material: The pipe material will be steel.

(c) Pipe Dimensions and Specifications: The pipe dimensions and specifications include:

- 20-inch Weld Treated FBE, X-65, 0.500 Wall Steel Pipeline, with PowerCrete coating.

(d) Other Major Equipment: The pipeline will be constructed with full-opening valves and closures at each interconnection with the three existing stations to allow the use of instrumented internal inspection devices. The proposed pipeline will be equipped with a cathodic protection system for the prevention of external corrosion. A pig launcher/receiver will also be installed at both Chippewa and Shoop Stations.

(4) Gas Transmission Facilities

(a) Control Buildings: No control buildings are planned for the project.

(b) Other Major Equipment: No other major equipment is planned at this time.

TABLE 04-1
SOIL SERIES IDENTIFIED WITHIN THE 2,000-FT. STUDY CORRIDOR OF THE PREFERRED AND ALTERNATE ROUTES

Soil Series	Description
BgA	Bogart loam, 0 to 2 percent slopes
BgB	Bogart loam, 2 to 6 percent slopes
BrE	Berks silt loam, 18 to 25 percent slopes
BrE	Berks silt loam, 18 to 25 percent slopes
BrF	Berks silt loam, 25 to 70 percent slopes
BtB	Bogart loam, 2 to 6 percent slopes
CdA	Canfield silt loam, 0 to 2 percent slopes
CdB	Canfield silt loam, 2 to 6 percent slopes
CdC2	Canfield silt loam, 6 to 12 percent slopes, eroded
CfB	Canfield – Urban land complex, undulating
CfC	Canfield – Urban land complex, rolling
Cg	Carlisle muck
Ck	Chagrin silt loam, alkaline
CnA	Chili loam, 0 to 2 percent slopes
CnB	Chili loam, 2 to 6 percent slopes
CnC	Chili loam, 6 to 12 percent slopes
CoC2	Chili gravelly loam, 6 to 12 percent slopes, moderately eroded
CoD2	Chili gravelly loam, 12 to 25 percent slopes, eroded
CoF	Chili gravelly loam, 25 to 70 percent slopes
CpB	Chili silt loam, 2 to 6 percent slopes
CyD	Connotton-oshtemo complex, 12 to 18 percent slopes
Da	Damascus loam
DkD	Dekalb sandy loam, 12 to 18 percent slopes
DkE	Dekalb sandy loam, 18 to 25 percent slopes
EuA	Euclid silt loam, occasionally flooded
FcA	Fitchville silt loam, 0 to 2 percent slopes
FcB	Fitchville silt loam, 2 to 6 percent slopes
Fr	Frenchtown silt loam
GfB	Glendford silt loam, 2 to 6 percent slopes
GfC	Glenford silt loam, 6 to 12 percent slopes
GfC2	Glenford silt loam, 6 to 12 percent slopes, eroded
Hy	Holly silt loam – alkaline
JtA	Jimtown loam, 0 to 2 percent slopes
Le	Lobdell silt loam, occasionally flooded

Soil Series (continued)	Description (continued)
LnB	Loudonville silt loam, 2 to 6 percent slopes
LnC2	Loudonville silt loam, 6 to 12 percent slopes, eroded
LnD	Loudonville silt loam, 12 to 18 percent slopes
Md	Melvin silt loam, frequently flooded
Od	Olmsted loam
Or	Orville silt loam
OsB	Oshtemo sandy loam, 2 to 6 percent slopes
OtB	Oshtemo sandy loam, 2 to 6 percent slopes
ReA	Ravenna silt loam, 0 to 2 percent slopes
ReB	Ravenna silt loam, 2 to 6 percent slopes
Sb	Sebring silt loam
So	Sloan silt loam
Ua	Udorthents
Uf	Udorthents, sanitary landfill
W	Water
WrB	Wheeling silt loam, 2 to 6 percent slopes
WuB	Wooster-Riddles silt loam, 2 to 6 percent slopes
WuC	Wooster-Riddles silt loam, 6 to 12 percent slopes
WuC2	Wooster-Riddles silt loam, 6 to 12 percent slopes, moderately eroded
WuD	Wooster silt loam, 12 to 18 percent slopes
WuD2	Wooster-Riddles silt loam, 12 to 18 percent slopes, moderately eroded
WuE2	Wooster silt loam, 18 to 25 percent slopes, moderately eroded
WuF2	Wooster silt loam, 25 to 50 percent slopes, moderately eroded
WvD2	Wooster silt loam – Sandstone substratum, 12 to 18 percent slopes, moderately eroded

SOURCES: U.S. Department of Agriculture. Soil Surveys of Wayne and Summit Counties, Ohio.

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Ohio Wetland Inventory (OWI) Designated Area
- Agricultural District Land
- Woodlot
- Stream
- Electric Transmission Line
- Railroad

Base Map Source: USGS 7.5-minute topographic quadrangle maps of Canal Fulton and Doylestown, Ohio.

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FIGURE KEY

04-1A 04-1B

0 1,000 2,000 4,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 04-1A
LAND USE AND CONSTRAINT MAP
WESTERN PROJECT AREA

JOB NO. G080283.00

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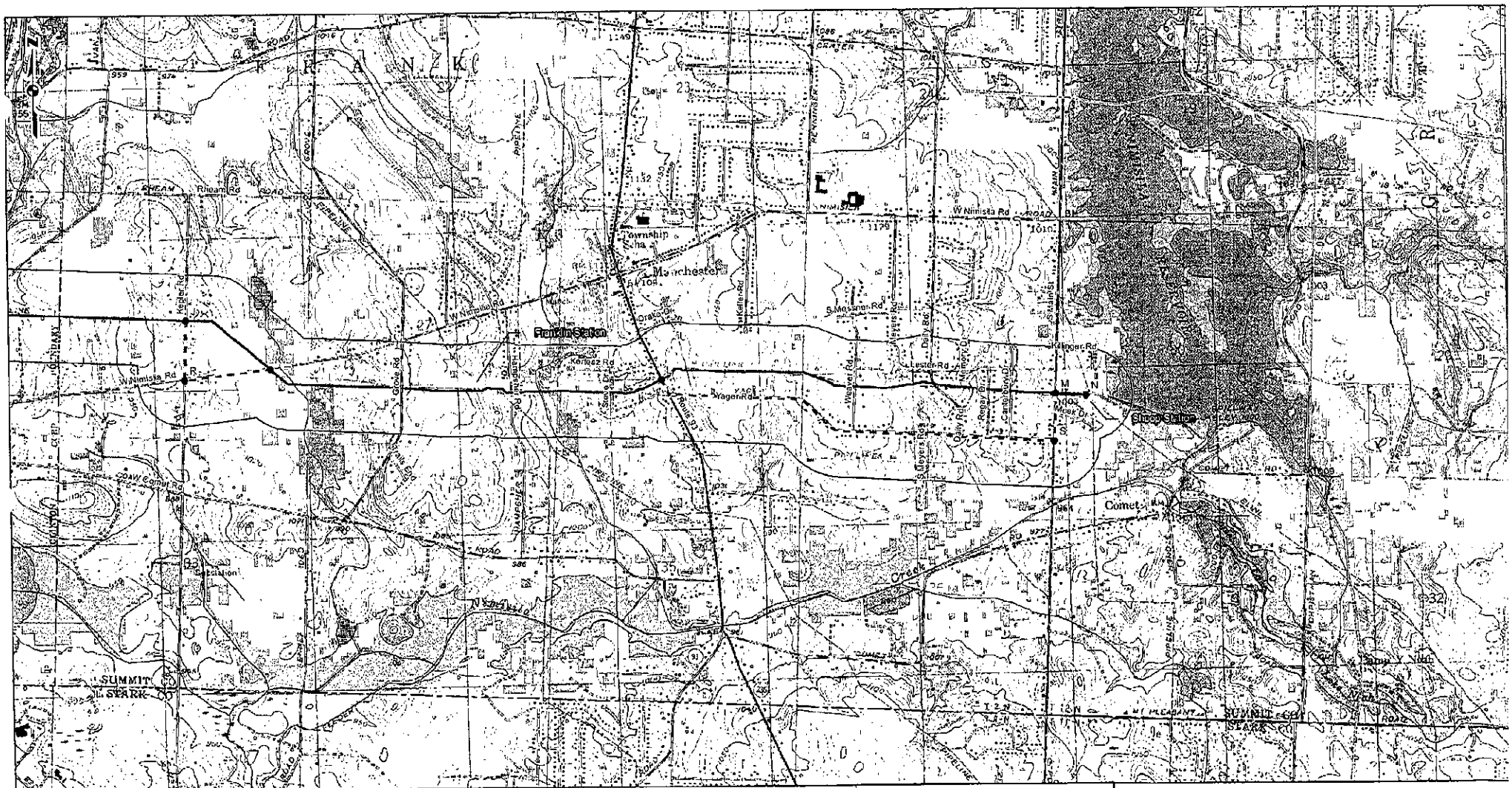


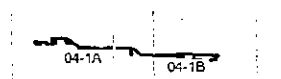
LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Ohio Wetland Inventory (OWI) Designated Area
- Agricultural District Land
- Woodlot
- Stream
- Electric Transmission Line
- Railroad

Base Map Source: USGS 7.5-minute topographic quadrangle maps of Canal Fulton and Doylestown, Ohio.

gai consultants

FIGURE KEY



Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 04-1B
LAND USE AND CONSTRAINT MAP
EASTERN PROJECT AREA

JOB NO. G080283.00

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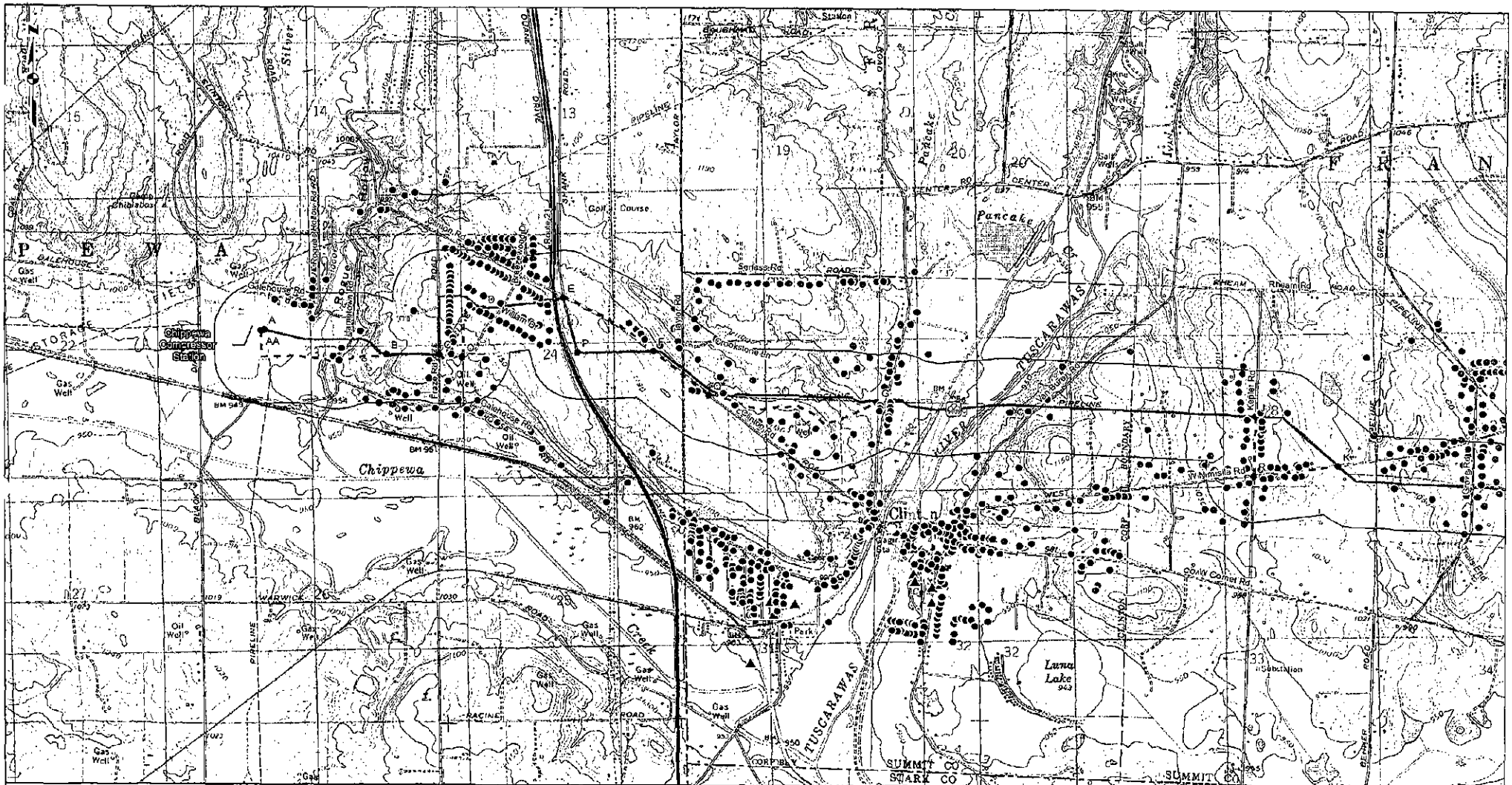

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Commercial Structure
- Residential Structure
- School
- Hospital
- Church
- Recreation Area
- Golf Course
- Airport
- Cemetery
- National Register Site
- Historical/Architectural Resource

Base Map Source: USGS 7.5-minute topographic quadrangle maps of Canal Fulton and Doylestown, Ohio.

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FIGURE KEY

04-2A 04-2B

0 1,000 2,000 4,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 04-2A
LAND USE AND CONSTRAINT MAP
WESTERN PROJECT AREA

JOB NO. G080283.00

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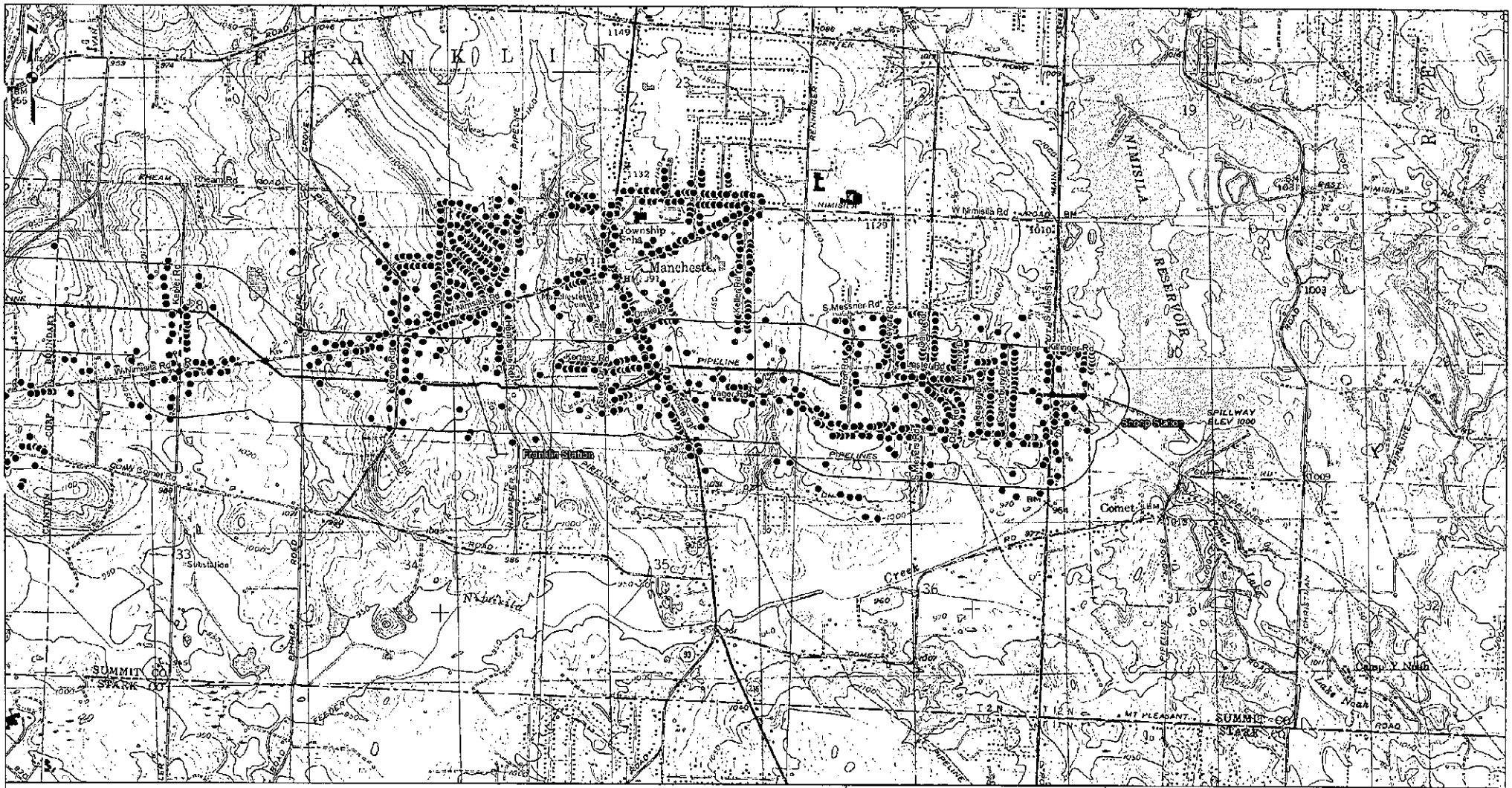

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Commercial Structure
- Residential Structure
- School
- Hospital
- Church
- Recreation Area
- Golf Course
- Airport
- Cemetery
- National Register Site
- Historical/Architectural Resource

Base Map Source: USGS 7.5-minute topographic quadrangle maps of Canal Fulton and Doylestown, Ohio.

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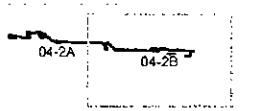
FIGURE KEY



0 1,000 2,000 4,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 04-2B
LAND USE AND CONSTRAINT MAP
EASTERN PROJECT AREA

JOB NO. G080283.00

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LEGEND

- Preferred Route
- Alternate Route
- 2,000-Foot Route Corridor
- Compressor or Valve Station

Note: Soil Series Descriptions are provided on Table 04-1.

Base Map Source:
USGS 7.5-minute topographic quadrangle maps of Canal Fulton and Doylestown, Ohio.

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FIGURE KEY

04-3A 04-3B

0 1,000 2,000 4,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 04-3A
SOILS MAP
WESTERN PROJECT AREA

JOB NO. G080263.00

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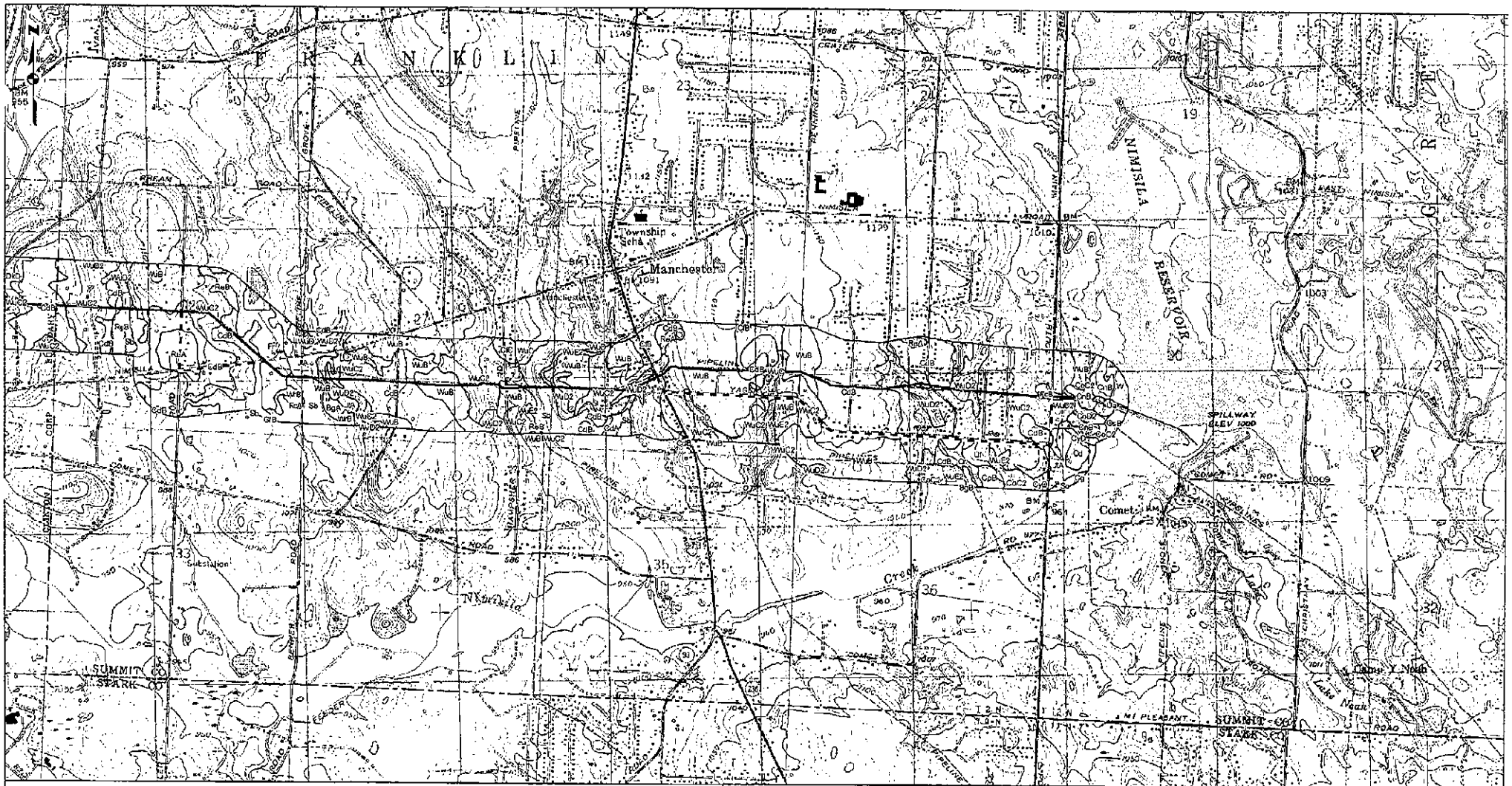

LEGEND

- Preferred Route
- Alternate Route
- 2,000-Foot Route Corridor
- Compressor or Valve Station

Note: Soil Series Descriptions are provided on Table 04-1.

Base Map Source:
USGS 7.5-minute topographic quadrangle maps of Canal Fulton and Doylestown, Ohio.

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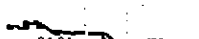
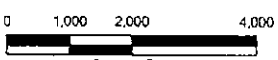
FIGURE KEY





Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 04-3B
SOILS MAP
EASTERN PROJECT AREA

JOB NO. G080283.00

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4906-15-05 FINANCIAL DATA

(A) OWNERSHIP

Dominion East Ohio will construct, own, operate, and maintain the new natural gas pipeline.

(B) ELECTRIC CAPITAL COSTS

This facility is a natural gas pipeline. Therefore, this section does not apply.

(C) GAS CAPITAL COSTS

Estimates of applicable intangible and capital costs for both the Preferred and Alternative pipeline routes are identified in Table 05-1.

TABLE 05-1
Estimates of Applicable Intangible and Capital Costs
Preferred and Alternate Routes

Description	Preferred ($)	Alternate ($)
Land & Land Rights	$150,000	$225,000
Structures and Improvements	$0	$0
Pipe	$3,966,964	$4,087,976
Valves, meters, boosters, regulators, tanks, and other equipment	$2,975,000	$2,975,000
Roads, trails of other access	$0	$0
Estimated Contractor Cost	$11,043,350	$11,232,630
Estimated Company Labor	$197,004	$201,227
TOTALS	***$18,332,318***	***$18,721,833***

4906-15-06 SOCIOECONOMIC AND LAND USE IMPACT ANALYSIS

(A) SOCIOECONOMIC CHARACTERISTICS

GAI conducted a review of local planning documents, maps, and web sites and communicated with local planning agencies and governmental offices, in order to study the general socioeconomic characteristics of the project area. The Preferred and Alternate Routes pass through the east-central portion of Chippewa Township, Wayne County, Ohio, then enter Summit County, Ohio and pass north of the village of Clinton and through the city of New Franklin, ending near the western shore of Nimisila Reservoir. The route is approximately 14 miles from the Akron metropolitan area, Summit County, and approximately 23 miles from Wooster, the largest city in Wayne County. Socioeconomic characteristics of the study areas are essentially the same for both the Preferred and Alternate Routes due to their close proximity and are summarized in the following discussion. Table 06-1 provides information regarding population estimates and projections for the project area.

U.S. Census Bureau data indicate the countywide population of Wayne County was 111,564 in 2000; representing a 9.1 percent increase since the 1990 Census. The population projection is 119,846 persons in 2010, and 128,669 in 2020. The population density in Wayne County in 2000 was 78 persons/ km^2 (201 mi^2). There were 42,324 housing units at an average housing density of 29 housing units/ km^2 (76/ mi^2). For the year 2000, the average household in Wayne County consisted of 2.68 persons. Utility gas is used for heating in 62.5 % of the Wayne County occupied housing units. Median income for Wayne County households was $41,538, with per capita income at $18,330. About 5.4 % of families and 8.0% of the population were below the poverty line, with an unemployment rate of 3.2% at the time of the 2000 U.S. Census.

Most of Chippewa Township, Wayne County, is unincorporated, but the township also includes the village of Doylestown (pop. 2,799), as well as small portions of the village of Marshallville and the city of Rittman. The 2000 U.S. Census count for the population residing in Chippewa Township was 10,085, yielding a density of 108.5 persons/km^2 (280.9 mi^2). There were a total of 3,910 housing units, with an average household size of 2.64 persons. Utility gas is used for heating in 60.7 % of the Chippewa Township homes. The median household income was $48,882, and per capita income was $20,664.

In 2000, the U.S. Census Bureau reported that the population of Summit County was 542,889, representing a 5.2 percent increase in population from the 1990 U.S. Census. The county population is projected to reach 557, 659 persons by 2010, and 564, 806 by 2020. Population density is 508 persons/km^2 (1315 mi^2). In 2000, the average household in Summit County consisted of 2.45 persons. There were 230,880 housing units with an average housing density of 216 units/ km^2 (559/ mi^2). Of occupied housing units, 88.5% (217,788) use utility gas for home heating. The median income for Summit County households was $42,304, with per capita income at $22,842. About 7.5% of families and 9.9% of the population were below the poverty line, with an unemployment rate of 4.0% at the time of the 2000 U.S. Census.

The Village of Clinton is located in the southwestern portion of Summit County. The village's population was recorded as 1,337 according to the 2000 U.S. Census, and grew to 1,395 by 2005. Clinton's population density in 2000 was 145.4 persons/km^2 (376.2 mi^2). A total of 528 housing units were recorded, with an average household size of 2.69 persons. Utility gas is used for heating 80.1% of the occupied Clinton homes. The median household income was $49,353 and per capita income was $23,063.

The community of New Franklin is located on the southern edge of Summit County, east of Clinton. New Franklin was formerly Franklin Township and New Franklin Village, which merged in January 1, 2005. The city includes residents with mailing addresses in Akron, Barberton, Canal Fulton, Clinton, and Norton. New Frankin's population was 14,530, according to the 2000 U.S. Census, and attained 16,721 by 2005. Statistics available prior to the merger showed 6,746 housing units in the area with 89.4 to 95.2 percent of occupied housing units using utility gas for heating.

Residential development, as well as limited commercial and recreational development, is increasing throughout the study area. The socioeconomic impacts of the proposed natural gas pipeline will be similar to those associated with the construction, operation and maintenance of other public utility lines installed throughout the study area during the past 30 years to accommodate residential, commercial and industrial growth. Accordingly, it is not anticipated that construction, operation or maintenance of the proposed natural gas pipeline along either route will significantly affect the socioeconomic characteristics of the project area.

(B) ROUTE ALIGNMENTS AND LAND USE

(1) Proposed Routing

Land use maps at 1:24,000-scale, including the area 1,000 feet on either side of the proposed routes, are presented as Figures 04-1A to 04-1B and 04-2A to 04-2B. The Preferred and Alternate Routes are each proposed to have a 60-foot wide right-of-way (ROW). The Preferred Route follows existing ROW its entire length, while the Alternate Route follows existing utility and road right-of-way most of its length. The Preferred and Alternate Routes share 46 percent of their lengths in common. It should be noted that all distances referenced in the following descriptions are approximate and may vary somewhat with final surveying and engineering decisions. In addition, not all of the planned segments, roadways in particular, that will be horizontally directionally drilled (HDD) are identified below.

(a) Preferred Route: The 8.44-mile Preferred Route originates at the Chippewa Compressor Station in Wayne County. The route is illustrated in map figures at the end of this report section; the maps include nodes along the route which are shown as A (Chippewa Station)-B-C-D-E-P-F-G-J-K-L-M-N (Shoop Station). The Preferred Route continues in an eastward direction and connects to the Shoop Station located adjacent to Jones Drive near the western shore of Nimisila Reservoir in New Franklin, Summit County, Ohio.

- Segment A (Chippewa Station)–B (0.5 mile)
  - The Preferred Route originates at the Dominion East Ohio Storage Yard (Chippewa Station) in western Wayne County, Ohio. The route runs east-southeast from the storage yard for approximately 2,800 feet, crossing Hametown Road at approximately 2,000 feet, to Node B. In this section, HDD will be used to minimize impacts to wetlands 1, 2 and 3 as well as streams S-1 and S-2.
- Segment B–C (0.2 mile)
  - After Node B, the Preferred Route continues east for approximately 1,150 feet, to Node C adjacent to the west side of Fraze Road.
- Segment C-D (0.4 mile)
  - After Node C, the Preferred Route runs north adjacent to the west side of Fraze Road for approximately 1,250 feet, then turns east crossing Fraze Road.
  - The Preferred Route then runs east southeast for approximately 1,025 feet, adjacent to the south side of William Drive, to Node D

- Segment D-E (0.3 mile)

  - After Node D, the Preferred Route crosses William Drive, runs east through a residential area, crossing Rogues Drive at approximately 570 feet and Great Lakes Boulevard/ State Route 21 at approximately 1,625 feet to Node E south of Clinton Road. By using HDD to cross State Route 21, impacts to this major roadway will be minimized.

- Segment E-P-F (0.5 mile)

  - At Node E, the Preferred Route turns south, parallel to Great Lakes Boulevard/ State Route 21, through agricultural land for approximately 1,200 feet to Node P.

  - From Node P, the Preferred Route then turns east and runs for approximately 1,650 feet to Node F west of Clinton Road.

- Segment F-G (1.0 mile)

  - From Node F, the Preferred Route crosses Clinton Road then turns southeast and runs adjacent to the north side of Clinton Road, and adjacent to a wooded area, for approximately 1,675 feet.

  - The Preferred Route then turns east and runs through a clearing in a ROW corridor within a wooded area for approximately 3,450 feet to Node G.

- Segment G-J (1.6 miles)

  - From Node G, the Preferred Route continues east, crossing South Cleveland Massillon Road at approximately 195 feet, continuing approximately 300 feet to a point where a HDD will begin.

  - After the route continues approximately 3,100 feet, HDD will be used beneath the Penn Central Railroad for approximately 775 feet. The HDD will continue under the Tuscarawas River and under Wetland Complex 7a and 7b for approximately 1,925 more feet, surfacing in the vicinity of Van Buren Road.

  - The Preferred Route then continues east, adjacent to approximately 700 feet of wooded area, then through approximately 850 feet of agricultural land.

  - The Preferred Route then runs adjacent to a farm lane for approximately 2,670 feet to Node J at Kepler Road.

- Segment J-K-L (2.0 miles)

  - After Node J, the Preferred Route crosses Kepler Road and continues east for approximately 600 feet.

- The Preferred Route then turns southeast and runs for approximately 1,600 feet, crossing West Nimisila Road, to Node K.

- From Node K, the Preferred Route continues southeast for approximately 500 feet then turns east crossing Grove Road at approximately 2,470 feet. In this segment, HDD will be used to minimize impacts to Wetlands 9a, 9b and 9c.

- The Preferred Route then intersects with Dominion East Ohio Franklin Station at approximately 1,850 feet. The route then crosses Hampsher Road at approximately 540 feet, then Steve Drive at approximately 4,630 feet. The Preferred Route continues east for approximately 470 feet then turns northeast for approximately 640 feet to Node L at State Route 93. In this segment, HDD will be used to minimize impacts to Wetland 10.

- Segment L-M (1.7 miles)

  - From Node L, the Preferred Route runs east through various wooded areas, agricultural lands and residential areas, crossing Weaver Road. at approximately 4,280 feet.

  - The Preferred Route then continues east through more residential areas and wooded areas crossing Daily Road at approximately 6,040 feet, Regay Drive at approximately 7,200 feet, then Canterbury Drive at approximately 7,700 feet.

  - After crossing Canterbury Drive, the Preferred Route continues east for approximately 900 feet to Node M, adjacent to the east side of South Main Street.

- Segment M-N (0.2 mile)

  - After Node M, the Preferred Route continues east adjacent to the south side of Jones Drive for approximately 820 feet, terminating at the Dominion East Ohio Shoop Station west of the Nimisila Reservoir.

(b) Alternate Route: The Preferred Route shares a common route alignment of 46 percent with the Alternate Route. The segments B-C, D-E, G- J, K-L, and M-N, totaling approximately 3.9 miles, are shared by both the Preferred and Alternate Routes. Segments AA-B, C-O, O-D, E-F, F-Q, Q-G, J-R, R-K, L-S and S-M have different routes from the preferred with a total distance of approximately 5.0 miles. These differing segments are discussed below. The total length of the Alternate Route is 8.87 miles, with the beginning and ending points identical to the Preferred Route.

- Segment AA (Chippewa Station)-B (0.6 mile)
  - The Alternate Route originates at the Dominion East Ohio Storage Yard (Chippewa Station) in western Wayne County, Ohio. From Chippewa Station, the Alternate Route runs south for approximately 550 feet. In this section, HDD will be used to minimize impacts to OWI wetlands and streams S-1 and S-2.
  - The Alternate Route then turns east and crosses Hametown Road at approximately 1,640 feet, then continues east for approximately 1,150 to Node B.
- Segment C-O-D (0.3 mile)
  - From Node C, the Alternate Route runs east for approximately 500 feet to Node O.
  - The Alternate Route then turns north and runs adjacent to the rear of parcels east of Fraze Road for approximately 1,025 feet, then turns east and runs for approximately 375 feet to Node D, adjacent to the south side of William Drive.
- Segment E-F (0.4 mile)
  - From Node E, the Alternate Route runs southeast, adjacent to the south side of Clinton Road for approximately 2,280 feet to Node F.
- Segment F-Q-G (1.1 mile)
  - From Node F, the Alternate Route continues southeast adjacent to the south side of Clinton Road for approximately 1,530 feet, to Node Q.
  - From Node Q, the Alternate Route then turns east southeast, crossing Clinton Road., and continues for approximately 2,670 feet (approximately 1,770 of which is adjacent to wooded area).
  - The Alternate Route then turns northeast, through a clearing in a ROW corridor within a wooded area for approximately 950 feet, then through a residential area for another approximately 390 feet to Node G.
- Segment J-R-K (0.6 mile)
  - From Node J, the Alternate Route turns south adjacent to the west side of Kepler Road. for approximately 1,290 feet crossing West Nimisila Road at approximately 1,270 feet to Node R.
  - From Node R, the Alternate Route turns east crossing Kepler Road and continues running east adjacent to the south side of West Nimisila Road for approximately 1,870 feet to Node K.

- Segment L-S-M (1.9 miles)
  - From Node L, the Alternate Route turns south-southeast adjacent to the west side of Manchester Road/ State Route 93 for approximately 420 feet. In this segment, HDD will be used to minimize construction impacts to Class III stream S-10.
  - The Alternate Route then turns east and crosses Manchester Road/ State Route 93 and runs adjacent to the south side of Yager Road for approximately 8,600 feet and crosses South Main Street to Node S.
  - From Node S, the Alternate Route then turns and runs north, crossing Meek Drive at approximately 550 feet, for approximately 1,040 feet to Node M.

(2) **Compressor Stations**

No compressor stations are proposed for this project.

(3) **General Land Use**

The study area consists of largely upland settings drained by the Tuscarawas River, which crosses the western portion of the corridor. It includes woodlands, residential areas, agricultural land, and toward the eastern end, residential development associated with the city of New Franklin. No major areas of commercial or industrial land use occur within the study area. Institutional facilities in the area are limited to scattered churches and schools along major roads. The centerline of the Preferred Route would cross a total of 120 land parcels while the Alternate Route would cross 85 parcels.

Detailed aerial land use constraint maps for the Preferred and Alternate Routes are presented in Figures 06-1A through 06-1D and 06-2A through 06-2D. A comparison of land use characteristics for the Preferred and Alternative Routes is included in Table 06-2. Additional details for various land use categories are discussed below.

(a) ***Residential:*** The study area includes numerous residences primarily located along major highways and roadways in Wayne and Summit Counties. Because of its proximity to the Akron metropolitan area, population and housing in the study area are expected to grow. Residential development within the study area currently is most concentrated along primary roads and adjacent to subdivisions. The number of residences within 100 and 1,000 feet of the proposed routes was estimated from field reconnaissance, county assessor data, and aerial photography.

The total number of residences within 1,000 feet of the project centerline is 584 for the Preferred Route and 539 for the Alternate Route. However, the Preferred Route has only

38 residences within 100 feet of the centerline while the Alternate Route has 64 residences within 100 feet. Consequently, the Preferred Route would have a lower impact on residences in closer proximity to the proposed pipeline.

Portions of four private residences are located within the 60-foot ROW corridor of the Preferred Route. Because these residences were constructed from 1955 to 1972, subsequent to Dominion East Ohio's acquisition of the 60-foot ROW and construction of the existing gas pipelines in this ROW, their construction appears to be an unauthorized encroachment on the existing gas pipeline ROW.

The construction, operation, and maintenance of the natural gas pipeline will have no permanent effect on existing property parcels and associated residences. No residential structures will be removed as a result of this project. Dominion East Ohio and its contractors will strive to take appropriate precautionary measures during pipeline construction to minimize disruption to these landowners, as well as others in proximity to the ROW. These measures will include advance notification of the four homeowners within the 60-foot ROW.

(b) Commercial: Commercial development within 1,000 feet of the Preferred and Alternate Routes is limited to small enterprises scattered along major roads. No concentrations of commercial land use were identified along the Preferred or Alternate Routes.

(c) Industrial: No industrial facilities are located within either 100 ft or 1,000 ft of the centerline of the Preferred Route or the Alternate Route. Consequently, no impacts to industrial land uses will result from this project.

(d) Cultural: Background information on cultural resources in the study area was obtained from:

- The National Register of Historic Places (NRHP)
- The Ohio State Historic Preservation Office (OHPO),including the Ohio Archaeology Inventory (OAI), and
- The Ohio Department of Natural Resources (ODNR)

The Phase I archaeological survey identified eight archaeological sites within the study area. Seven of these sites are not potentially eligible for NRHP listing and will not be adversely affected by the proposed pipeline. The remaining site (designated as Site 1 during the Phase

I survey) has the potential to contribute new and significant information to the archaeological record. Because the site will be avoided by use of HDD, no further investigations are currently warranted. However, if design changes occur that could potentially impact the site, Phase II evaluation would be warranted, in accordance with Section 106 of the National Historic Preservation Act. Additionally, the proposed pipeline corridor will bisect the NRHP-listed Clinton Ohio & Erie Canal Historic District in the Tuscarawas River floodplain. Paralleling the historic canal is the multi-purpose Towpath Trail, which is heavily used for recreation and managed by Summit County Metro Parks. HDD also is planned for this area, including an adjacent wetland, to avoid surface impacts to these important features.

Additional analysis of the cultural resources data, as presented in Table 06-2, indicated that four and five archaeological sites identified during the Phase I survey have been recorded within 1,000 feet of the Preferred and Alternate Routes, respectively. Three of these sites *are within 100 feet of the Preferred Route while all five are within 100 feet of the Alternate* Route. Regarding historic/architectural resources, three such resources are located within 1,000 feet of both the Preferred and Alternate Routes and two such resources are located within 100 feet of both routes.

No cemeteries are located within either 100 or 1,000 feet of the Preferred or Alternate Routes.

(e) Agricultural:

Agricultural areas are still common along portions of the routes. A discussion of Agricultural District land along the routes is included as paragraph (B)(7).

(f) Recreational: The Summit County Metro Parks' Towpath Trail associated with the canal historic district, mentioned in Section (d) above is the only recreational land that will be traversed by the Preferred or Alternate Routes. However, HDD will avoid any impacts to this area. The Chippewa Golf Course in Chippewa Township near the Summit County line is within 1,000 feet of the center line of the Preferred and Alternate Routes.

(g) Institutional: No churches, schools, hospitals, or cemeteries were identified within either 100 feet or 1,000 feet of the centerline of the Preferred Route or Alternate Route. Consequently, no impacts to institutional land uses are expected as a result of the project.

(4) Transportation Corridors

Moving west to east, major transportation corridors traversed by the proposed pipeline routes include State Route 21, State Route 93 and the Conrail/Penn Central Railroad. The B & O Railroad is within the 1,000-foot corridor of the Preferred and Alternate routes. As Table 06-2 indicates, the Preferred and Alternate routes are within or adjacent to 100 percent and 97 percent of existing utility or public road ROW, respectively. However, an assessment of each route's proximity to county or state public road ROW shows a greater difference between the two routes. Whereas only 5 percent of the Preferred Route is within public road ROW, 38 percent of the Alternate Route is within public road ROW.

A higher percentage of public road ROW presents several disadvantages for the placement of a new 20-inch gas pipeline. First, pipelines installed within a road ROW are subject to relocation if future widening of the existing roadway occurs. The costs for such future relocations would likely be recovered through increased gas rates to customers. Secondly, partial or full road closures for pipeline installation will adversely impact traffic flow for an estimated two to three months. Thirdly, private homeowners along the selected route would experience significant disruptions while driveways and front lawns are excavated for pipeline installation. An analysis of the Preferred and Alternate routes indicates the presence of 69 residential driveways and front lawns that would require trenching for pipeline installation along the Alternate Route while only 13 residential driveways and front lawns would be similarly affected along the Preferred Route.

(5) Existing Utility Corridors

Utility corridors, including those used for overhead high-voltage electric lines and buried gas pipelines, in the vicinity of the Preferred and Alternate Routes are shown on Figures 04-1A, 04-1B, 04-2A, and 04-2B. The Preferred and Alternate Routes cross only one existing high-voltage electric transmission line ROW owned by Ohio Edison. This line is crossed by the Preferred and Alternate Routes (E-F segment) in the vicinity of Clinton Road.

(6) Noise Sensitive Areas

Noise sensitive areas located within the 1,000-foot corridor of both the Preferred and Alternate Routes consist primarily of residences and a few scattered commercial buildings. No churches, schools, or hospitals are located within the 1,000-foot corridor of the Preferred or Alternate Routes. Based on available data, 584 homes were identified within 1,000 feet of the Preferred Route, 38 of which are located within 100 feet. A total of 539 residences

were identified within 1,000 feet of the Alternate Route, with 64 residences located within 100 feet. Given the total number of residences within 100 feet of the proposed routes, the short-term noise impacts are expected to be greater for residential occupants along the Alternate Route as compared to the Preferred Route.

Construction noise will be limited to excavation and pipeline installation equipment. To mitigate noise, construction activities will occur during daytime hours and equipment will be outfitted with standard mufflers. No noise issues related to operation of the natural gas pipeline are anticipated. Further discussion of noise impacts during construction is provided later in this chapter.

(7) Agricultural District Land

Information obtained from the Summit and Wayne County Auditors indicates only one Agricultural District land parcel is within 1,000 feet of the Preferred Route. The 60-foot project ROW would encompass about 3.9 acres for the Preferred Route. The Alternate Route passes through two Agricultural District land parcels. The 60-foot project ROW for the Alternate Route would encompass about 2.8 acres of these two agricultural districts. The locations of agricultural districts in the study corridor are shown in Figures 06-1A through 06-1D.

Pipeline installation across agricultural lands is generally preferable to installation in other land use types, such as residential areas or woodlots. In addition to fewer obstacles, installation in agricultural areas would be expected to have lower local traffic and noise impacts than more populous areas. Potential agricultural impacts, including topsoil compaction and damage to drainage tiles, would be mitigated, as described in (G)(1).

(C) LAND USE IMPACTS OF THE PROPOSED PROJECT

(1) Impacts of Construction

(a) General Land Use: The primary land uses in the surrounding area of both the Preferred and Alternate Routes is a combination of agricultural land, medium to large-lot residential, and woodlots. Construction will be limited primarily to areas adjacent to existing ROW. As presented in Table 06-2 and mentioned previously, the fewer number of residences within 100 feet of the project centerline and longer linear footage of agricultural land along the Preferred Route are among the factors that favor the Preferred Route over the Alternate Route.

Access issues and other impacts to residential land use will be avoided to the greatest extent possible, however, construction activities may warrant traffic control, particularly along the Alternate Route. Temporary disruptions to adjacent land use may also occur.

Dominion East Ohio does not anticipate the removal of any existing structures for pipeline installation. The only aesthetic impact following installation will be the presence of pipeline markers. Where the pipeline crosses agricultural fields, construction activities, including vehicular traffic, may compact soils and cause damage to drainage tiles. Dominion East Ohio will mitigate such potential damage by restoring impacted drainage tiles to their original condition in the vicinity of the pipe trench excavation, segregating and restoring excavated topsoil, and ensuring the pipeline is well below the plow zone. No additional temporary or permanent access roads will be constructed for installation or maintenance of the proposed pipeline.

(b) **Agricultural District Land:** Because pipeline construction will occur primarily in areas adjacent to existing ROW, no significant long-term impacts on properties in agricultural districts are anticipated. However, temporary disruptions to agricultural district land use may occur in the 3.9 acres or 2.8 acres within the 60-foot ROW of the Preferred and Alternate routes, respectively (see Table 06-2). Traffic controls also may be necessary. Some temporary soil compaction and unavoidable damage to drainage tiles may result when construction vehicles cross agricultural district lands. To mitigate such impacts, Dominion East Ohio will restore damaged drainage tiles to their original condition in the vicinity of pipe trench excavation, will segregate and restore excavated topsoil, and also will ensure the pipeline is installed well below the plow zone. Further, Dominion East Ohio will reimburse the landowner or tenant farmer for the value of any crops that may be damaged during construction of the pipeline. No permanent or temporary access roads will be necessary for either pipeline installation or maintenance.

(2) **Impacts of Operation and Maintenance**

(a) **General Land Use:** Pipeline maintenance operations will be limited to periodic inspections. Operation and maintenance of the pipeline is not anticipated to impact any land use in the area.

(b) **Agricultural District Land:** Operation and maintenance of the natural gas pipeline is expected to have little impact on the surrounding land use, including agricultural district properties. After installation, periodic inspections of the pipeline will be performed and in

the rare event that major repairs are necessary, the work will likely be isolated. Any agricultural land disturbed during construction will be restored to its original condition.

(3) Mitigation Procedures

(a) **General Land Use:** Pipeline construction is not anticipated to cause any major changes in land use along either the Preferred or Alternate Route. Land use impacts in general will be temporary, occurring as the pipeline is installed. The majority of streams and wetlands on the Preferred and Alternate Routes will be avoided through the use of HDD. Further, a soil erosion and sediment control plan will be developed and measures in place prior to excavation activities. Siltation will be mitigated through Best Management Practices and will be outlined in the Stormwater Pollution Prevention Plan, required to obtain Ohio Environmental Protection Agency's (Ohio EPA) Construction Storm Water General Permit (OHC000002), as specified by the National Pollutant Discharge Elimination System.

(b) **Agricultural District Land:** Dominion East Ohio will minimize potential impacts to agricultural lands. As mentioned previously, restoration of drainage tile and minimization of compaction during and after installation of the proposed pipeline will ensure continued agricultural activity after construction and during operation of the gas pipeline. Excavated topsoil will be segregated and restored.

(D) PUBLIC INTERACTION INFORMATION

(1) Townships, Towns and Villages within 1,000 feet of the Route Alternatives

The townships, towns, and villages located within 1,000 feet of the Preferred and Alternate Routes are included in Table 06-1.

(2) Public Officials Contacted

Dominion East Ohio contacted federal, state, and local agencies and officials by a letter, which summarized the proposed project and included a map of the project area. The purpose of the letters was to solicit preliminary comments from the agencies and officials concerning possible routes.

The U.S. Fish and Wildlife Service (USFWS) responded by letter, dated May 6, 2008, recommending that the proposed pipeline project be located such that high quality fish and

wildlife habitat, such as forest, wetlands and streams, be avoided to the maximum extent possible. The USFWS further recommended contacting the U.S. Army Corps of Engineers concerning the possible requirement of a Section 404 permit. The USFWS letter listed five endangered or threatened species of concern in the project range, as follows: 1) the federally threatened Northern Monkshood (*Aconitum noveboracense*), known to exist in Summit County, 2) the federally threatened Eastern Prairie Fringed Orchid (*Platanthera leucophaea*), found in Wayne County, 3) the Bald Eagle *(Haliaeetus leucocephalus*), protected by the Bald and Golden Eagle Protection Act, Migratory Bird Protection Act, and the State of Ohio, 4) the Eastern Massasauga (*Sistrurus catenatus*), a federal candidate species reported for Wayne County, and 5) the federally endangered Indiana Bat (*Myotis sodalis*), reported for all counties of Ohio. These species are discussed further in Section 4906-15-07(E) and (F) of this Application. A copy of the letter received from the USFWS is included in Appendix 06-1.

A Natural Heritage data request form was completed for the study area and submitted to the ODNR Division of Natural Areas and Preserves (DNAP). DNAP personnel, however, indicated that a more comprehensive project review could be conducted within ODNR's various divisions and would ensure that all pertinent divisions were consulted. Such reviews are prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations.

Accordingly, the interdisciplinary project review was requested, coordinated through ODNR's Division of Real Estate and Land Management, and documented in detailed comments dated May 12, 2008 (See Appendix 06-1). The review found that the Natural Heritage Database contains records near the proposed project area of two endangered bird species of Special Concern in Ohio, the Virginia Rail (*Rallus limicola*) and the Sora (*Porzana carolina*). The ODNR-Division of Wildlife does not believe the proposed pipeline will impact either species. The review further commented that no state nature preserves, wildlife areas, or scenic rivers are located in the vicinity of the project, although the project is near Portage Lakes State Park. Further discussion and description of work performed related to threatened and endangered plant and animal species is found in Section 7 of this application.

(3) Public Information Programs

Among public information activities Dominion East Ohio conducted for the proposed project were hosting a public information open house and sending a notification of access to

property owners to facilitate conducting environmental and cultural resources assessments, staking, surveying, and other similar activities. Contact information for the public officials and agencies notified of the meeting is included in Appendix 06-2.

The public information open house was held on Tuesday, May 13, 2008 at Occasions Party Center, 6800 Manchester Road, Clinton, in Summit County. Notices of the open house appeared in the *Akron Beacon Journal* (May 9, 2008) and *Canton Repository* (May 12, 2008). Letters (dated April 11, 2008) were mailed to property owners along the potential route notifying them of the project and the public meeting. Sign-in sheets indicated 43 individuals from the general public attended the open house to speak with project engineers and planners. Comments generally focused upon concerns regarding exactly where the line would be located, with some objections raised where proposed alternatives crossed private properties. Several landowners indicated they wished they had been contacted about the project sooner. Most landowners expressed a desire to be contacted about further project planning. An additional comment was voiced by a resident who had concerns about archaeological field crews working in the area on a Sunday. Dominion East Ohio informed attendees that further information would be forthcoming and that the project centerline had not yet been determined, thus allowing for changes, based on the available mapping, to avoid areas of concern identified by landowners. After the public meeting, a letter (dated May 30, 2008) was mailed to property owners concerning access for Dominion East Ohio's employees and contractors during the following 12 months.

Copies of property owner notification letters, public meeting advertisements, and the open house sign-in sheet are provided in Appendix 06-2.

(4) Liability Compensation

Dominion East Ohio is self-insured and also purchases excess public liability and property damage insurance. Dominion East Ohio will provide liability compensation for damages as a result of construction or operation of the proposed pipeline, if such should occur.

(5) Serving the Public Interest

The project will serve the public interest by helping ensure that natural gas needs in the foreseeable future are met at a reasonable cost to consumers even during periods of peak demand. A more detailed explanation of need issues is provided in Chapter 2 of this Application.

(6) Tax Revenues

Dominion East Ohio will pay property taxes on utility facilities in each jurisdiction crossed by the completed facility. The approximate total property taxes associated with the Preferred and Alternate Routes are included in Table 06-3.

(7) Impact on Regional Development

The proposed pipeline will help ensure the long-term vitality of the Dominion East Oho natural gas system. This essentially will benefit all customer classes by maintaining pipeline pressures and supplies for the foreseeable future.

The project is likely to have a positive impact on regional development in Wayne and Summit Counties through the increased reliability and availability of natural gas. The proposed project will help secure current and future natural gas supplies for customers throughout northeast Wayne County and southwest Summit County, where continued growth in population and housing are predicted. No negative impacts on regional development are foreseen for this project.

(E) HEALTH AND SAFETY INFORMATION

(1) Compliance with Safety Regulations

The construction and operation of the proposed natural gas pipeline will comply with Title 49, Part 191, "Transportation of Natural and Other Gas By Pipeline: Annual reports, Incident Reports, and Safety Related Condition Reports", and Part 192, "Transportation of Natural and Other Gas By Pipeline: Minimum Federal Safety Standards," and Part 199, "Drug and Alcohol Testing," OAC Rule 4901:1-16, and will meet all applicable safety standards established by OSHA.

(2) Electric and Magnetic Field Production

Because the proposed facility is not an electric transmission line, this section is not applicable.

(3) Aesthetic Impact

(a) Views of the Facility: After the natural gas pipeline has been installed, post-construction land reclamation activities completed, and re-vegetation started, public views

of the pipeline from public roads, residential areas, and other sensitive vantage points will be fairly benign with respect to the surrounding environment. Only the pipeline markers, two to three valves/gravel pads, and existing access roads will be visible to the public.

(b) Structure Design Features: No additional special design features are planned to further minimize the minor potential aesthetic impacts associated with aboveground portions of the project.

(c) Facility Effects on Site and Surrounding Area: Because most of the project, with the exception of markers, valves, well pads, and existing access roads, is underground, the project is expected to have minimal effects on the surrounding area.

(d) Visual Impact Minimization: Because the proposed natural gas pipeline will be largely underground, special measures are not deemed necessary to minimize visual impact.

(4) Estimate of Radio and Television Interference

This section is not applicable.

(5) Other Safety Issues

Steel pipe sections, pipeline corrosion protection, certified welding, x-ray inspections of welds, and other safety features will be designed into the proposed pipeline. For example, the outside of each pipe section is coated with a green epoxy layer that prevents corrosion. Before each pipe section is installed, this coating will be carefully inspected in the field to ensure it has no flaws or defects. All welded joints between pipe sections will be x-rayed to ensure they meet strict industry standards. Welds will then be sealed with an epoxy material to prevent corrosion. When construction is complete, the inside of the pipeline will be cleaned with a device that removes dust, scale, water and other debris. Finally, the new pipeline will be pressure tested with water to make sure there are no leaks. When the pipeline has passed all of these safety checks it will be ready to receive natural gas. Once in operation, the pipeline will be inspected regularly for leaks, and the ground will be monitored for potential soil erosion.

(F) CULTURAL IMPACTS OF THE PROPOSED PROJECT

(1) Archaeological Studies and Agency Correspondence

Cultural and Archaeological Sites: A review was conducted of maps, files, and electronic databases available from the following:

- The National Register of Historic Places (NRHP)
- The Ohio State Historic Preservation Office (OHPO),including the Ohio Archaeological Inventory
- The Ohio Department of Natural Resources (ODNR)

Further discussion of previously recorded archaeological sites within 1,000 feet of the Preferred and Alternate Routes can be found above in paragraph (B)(3)(d) of this section. A Phase I cultural resources survey along the proposed project corridor was conducted between November 5 and 30, 2007, and a supplemental survey was conducted between March 31 and April 3, 2008, at a site (identified as 33SU466), comprised of two remnant foundations which likely date to the 20th century.

(2) Construction Impacts on Cultural Resources

It is expected that construction impacts to any significant cultural resources identified in the Phase I investigation can be avoided. HDD will be used to avoid impacts to both the Clinton Ohio & Erie Historic District and its towpath and to a potentially significant prehistoric site, identified as Site 1 and briefly discussed above in (B)(3)(d). A Phase II investigation and recovery should be undertaken, if design criteria change and avoidance of the prehistoric site is not possible.

(3) Operation and Maintenance Impacts on Cultural Resources

Pipeline maintenance operations will be limited to periodic inspections. No impacts on cultural resources are anticipated as a consequence of operation and maintenance.

(4) Mitigation Procedures

No additional mitigation of cultural resources is required as long as HDD is used to avoid the two sites listed in paragraph (2) above.

(G) NOISE EMISSIONS

(1) Construction Noise Estimate

The construction phase of the pipeline will result in a temporary increase in noise generated by the equipment used for clearing woody brush, excavation, pipeline installation, and backfilling. The implementation of mitigation procedures described below is expected to control and minimize noise to the extent possible.

(2) Operation and Maintenance

Operation and maintenance of the proposed natural gas pipeline will not produce any audible noise.

(3) Mitigation Procedures

Any temporary noise increases anticipated during the construction phase will be mitigated in several ways, as follows: standard construction techniques will be used, equipment will be outfitted with standard mufflers and properly maintained, equipment operation will be confined to daytime hours, with the exception of HDD. Noise related procedures will comply with applicable OSHA standards. The total duration of project construction is estimated to be six months, but duration of construction in any given noise sensitive area is expected to be less than one week at most locations. The noise impacts on nearby sensitive areas during construction along either the Preferred or Alternate Route will be controlled to the extent possible and are expected to be minimal. Once installed, operation of the pipeline will not produce any audible noise.

(H) OTHER SIGNIFICANT ISSUES

Dominion East Ohio has determined that construction, operation, and maintenance of the proposed pipeline following the Preferred Route would represent the least impact to residential areas, cultural resources, agricultural lands, recreational areas, noise sensitive areas, and transportation corridors. For example, the number of residences within 100 feet of the project centerline is less for the Preferred Route than the Alternate Route – 38 to 64. Utilization of the Alternate Route would require the acquisition of approximately 3.5 miles of new ROW adjacent to public roadways and, while Dominion East Ohio is confident that proper construction techniques can minimize traffic delays, some disruption will be inevitable.

The acquisition of new ROW, if the Alternate is selected, would result in either a delay of the start of construction of a minimum of three months, or an extended period of construction that could delay the in-service date of the project well into the 2009-2010 heating season. It should be clear that the utilization of an existing, maintained ROW as opposed to the development of a new pipeline adjacent to public roadways for a significant portion of its length would result in fewer socioeconomic impacts to the project area.

TABLE 06-1

STUDY AREA DEMOGRAPHICS OF PREFERRED AND ALTERNATE ROUTES

Government Unit	1990 Census	2000 Census	2010 Projections
WAYNE COUNTY	101,461	111,564	119,846
Chippewa Township	9,329	10,085	Not Available
SUMMIT COUNTY	514,990	542,899	557,659
City of New Franklin (Formerly Franklin Township and New Franklin Village which merged January 1, 2005)	14, 835	16,530	> 16, 721 (2005 Census Data)
Village of Clinton	1,176	1, 337	> 1,395(2005 Census Data)

Source: Office of Strategic Research, Ohio Department of Development Ohio County Profiles. (2000).

U.S. Census Bureau. www.factfinder.census.gov. Accessed: March 24, 2008.

U.S. Census Bureau, 2000 Census Demographic Profiles, http://www.ohiomm.com/beacon/census/ Accessed: March 25, 2008.

Wayne County, Ohio, Demographic Profile, Data Center, OSU, Department of Human and Community Resource Development: http://ohioline.osu.edu/~dataunit/profiles/pdf/waynd.pdf Accessed March 24, 2008.

TABLE 06-2

COMPARATIVE LAND USE CONSTRAINTS OF THE PREFERRED AND ALTERNATE ROUTES

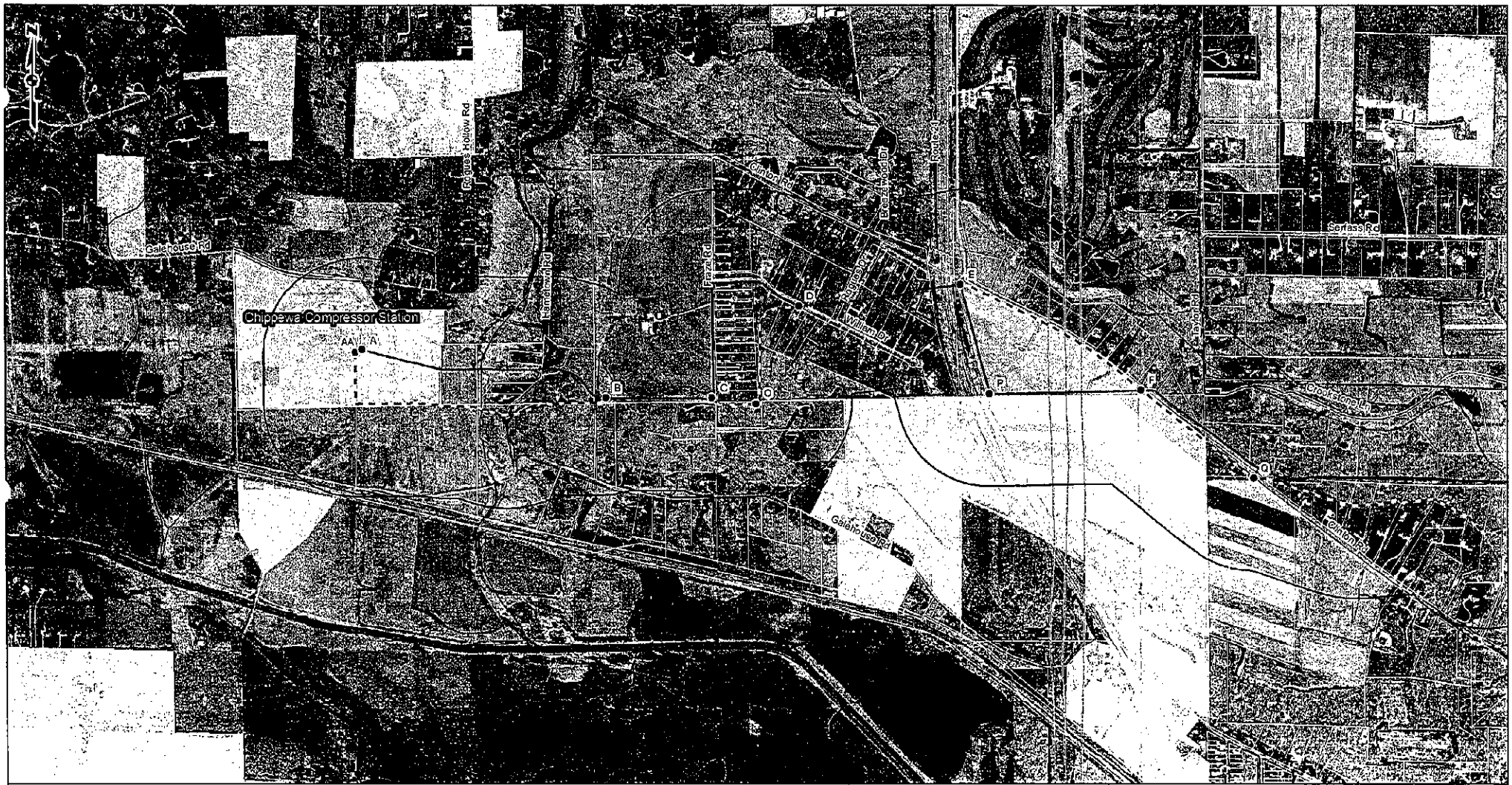
	LAND USE CONSTRAINTS	Preferred Route	Alternate Route
1	Route Length (miles)	8.44	8.87
2	Total # of Residences within 100/1,000 Feet of Project Centerline[1]	38/584	64/539
3	Total # of Residences within 60-foot Project ROW[1]	4	0
4	Percentage of Route within or Adjacent to Existing ROW (utility and public road)[1]	100%	97%
5	Percentage of Route within Public Road ROW	5%	38%
6	Linear Feet of Woodlot Crossed by the Project Centerline[1]	5,328	8,898
7	Acres of Woodlot within ROW (utilizing reduced clearing width of 30 feet)[1]	3.9	4.8
8	# of Ponds and Lakes within 100/1,000 Feet of Project Centerline[1,7]	0/24	0/29
9	Total # of Streams Crossing Centerline (all streams, regardless of construction method, HDD or trench) [1,6,8]	12	9
10	Total # of Streams to be Crossed by Trenching Method / HDD Method	5/7	3/6
11	Wetland Acreage Impacted by Trenching in 60-foot ROW (with HDD at other wetlands as proposed)	0.4	0.3
12	Wetland Acreage within 60-foot Project ROW [2,6]	4.3	3.3
13	Wetland Acreage within 100 Feet of Project Centerline[2,6]	12.7	10.8
14	# of Cemeteries within 100/1,000 feet of Project Centerline[1]	0/0	0/0
15	# of Archaeological Sites within 100/1000 Feet of Project Centerline[3,9]	3/4	5/5
16	# of Historic/Architectural Resources within 100/1000 Feet of Project Centerline[3,9]	2/3	2/3
17	# of National Register Sites within 100 Feet of Project Centerline	0	0
18	Total # of Institutional Land Uses within 100/1,000 Feet of Project Centerline[1]	0/0	0/0
19	Total # of Recreational Land Uses within 100/1,000 Feet of Project Centerline[1]	1/2	1/2
20	# of Species of Concern Records within 100/1,000 Feet of Project Centerline[4]	2/2	2/2
21	# of ODNR Managed Areas within 100/1,000 Feet of Project Centerline[4]	1/1	1/1
22	Total # of Agricultural District Lands Crossed by the Project Centerline	1	2
23	Acres of Agricultural District Land within 60-Foot Project ROW	3.9	2.8
24	# of Parcels Crossed by the Project Centerline [5] (all parcels on preferred route have Dominion-owned easements)	120	85
25	Total # of Road Crossings[1]	20	17

Notes:
1 - Based upon available mapping and field surveys.
2 - Wetlands as delineated and determined during 2007 and 2008 field surveys.
3 - Additional cultural resource field data was collected on the Preferred Route and portions of the Alternate Route that share commonality with the Preferred Route.
4 - Based upon ODNR and USFWS records.
5 - Based upon Summit and Wayne County Auditor records.
6 - Environmental field work was completed for the Preferred Route and portions of the Alternate Route that share commonality with the Preferred Route. Digital Ohio Wetland Inventory (OWI) data and ESRI stream data was supplemented in locations along the Alternate Route where fieldwork was not performed.
7 - Open water areas that were delineated as jurisdictional wetland were not included as ponds.
8 - These assessments considered all types of construction methodologies that would be utilized for the project (e.g. open trenching, horizontal directional drilling (HDD), etc.), regardless of likely impact.
9 – See discussion in Section 6 regarding use of HDD to avoid impacts to cultural resources.

TABLE 06-3
ESTIMATED PROPERTY TAX SUMMARY FOR THE PREFERRED ROUTE
(ASSUMES IN-SERVICE DATE OF 2009)

Annual Property Tax Estimate for the Preferred Route				
Tax Code	**County**	**District**	**Value ($)**	**Annual Property Tax**
OH14723	SUMMIT	Franklin TP Northwest LSD	$1,441,971	$ 77,389.09
OH14727	SUMMIT	Green VILL Green LSD	$ 56,150	$ 1,965.35
OH14726	SUMMIT	Clinton VILL Northwest LS	$ 650,296	$ 34,900.69
OH14722	SUMMIT	Franklin TP Manchester LS	$ 34,649	$ 2,021.26
OH15321	WAYNE	Chippewa,DoylestownVLChip	$ 297,500	$ 6,831.73
OH15317	WAYNE	Chippewa TWP Chippewa LSD	$ 297,500	$ 21,614.67
			TOTAL	$ 144,722.79

Note: Assumes no capital additions or retirements throughout 10-year period.



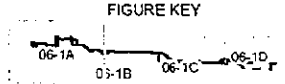
LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Ohio Wetland Inventory (OWI) Designated Area
- Agricultural District Land
- Woodlot
- Stream
- Railroad
- Electric Transmission Line

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

gai consultants

FIGURE KEY



0 500 1,000 2,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-1A
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00

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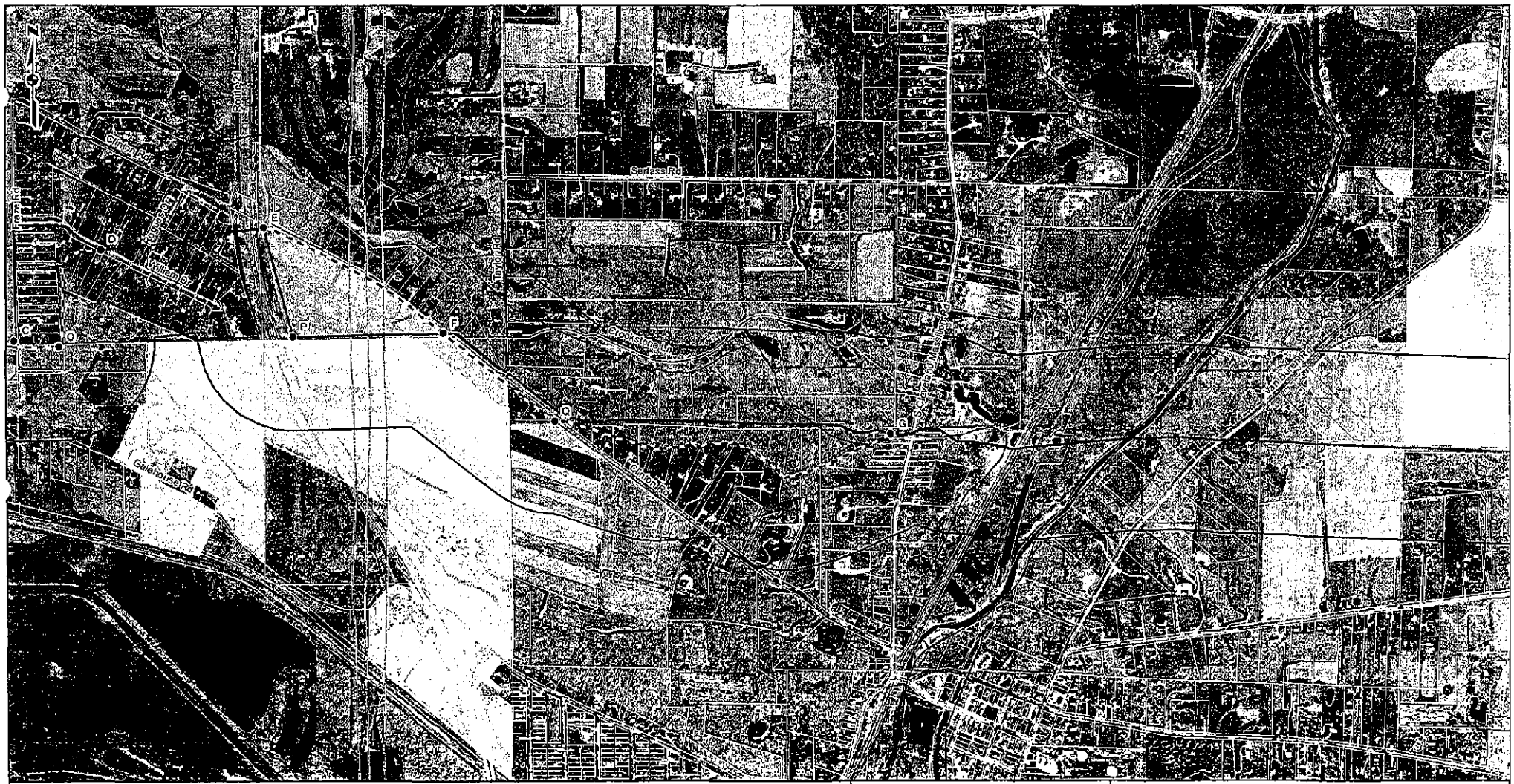


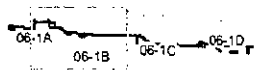
LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Ohio Wetland Inventory (OWI) Designated Area
- Agricultural District Land
- Woodlot
- Stream
- Railroad
- Electric Transmission Line

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

gai consultants

FIGURE KEY



0 500 1,000 2,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-1B
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00

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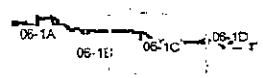
LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Ohio Wetland Inventory (OWI) Designated Area
- Agricultural District Land
- Woodlot
- Stream
- Railroad
- Electric Transmission Line

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

gai consultants

FIGURE KEY



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Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-1C
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00

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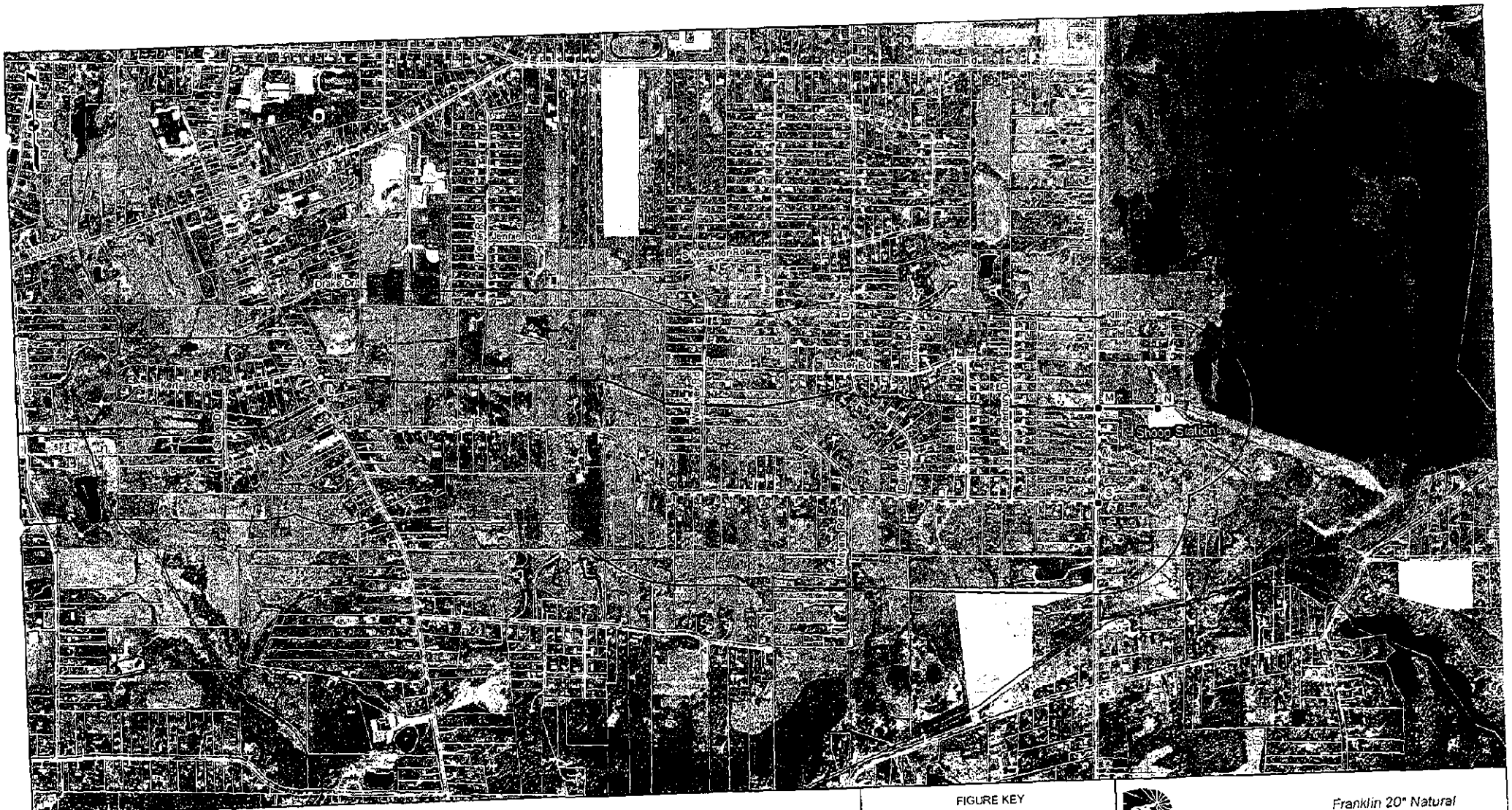

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Ohio Wetland Inventory (OWI) Designated Area
- Agricultural District Land
- Woodlot
- Stream
- Railroad
- Electric Transmission Line

gai consultants

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio

FIGURE KEY

06-1A 06-1B 06-1C 06-1D

0 500 1,000 2,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-1D
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00

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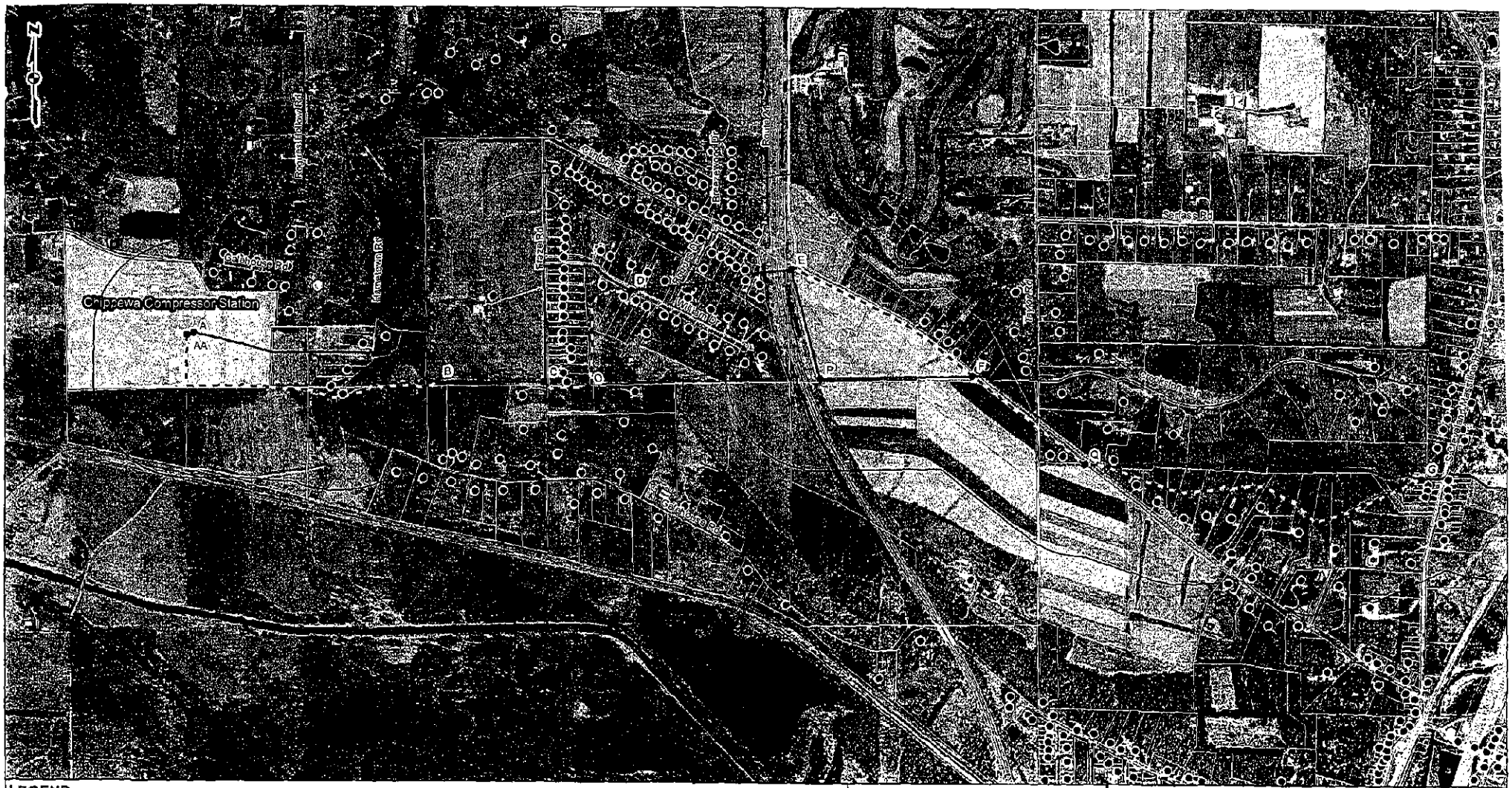

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Commercial Structure
- Residential Structure
- School
- Hospital
- Church
- Recreation Area
- Golf Course
- Airport
- Cemetery
- National Register Site
- Historical/Architectural Resource

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

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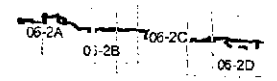
FIGURE KEY



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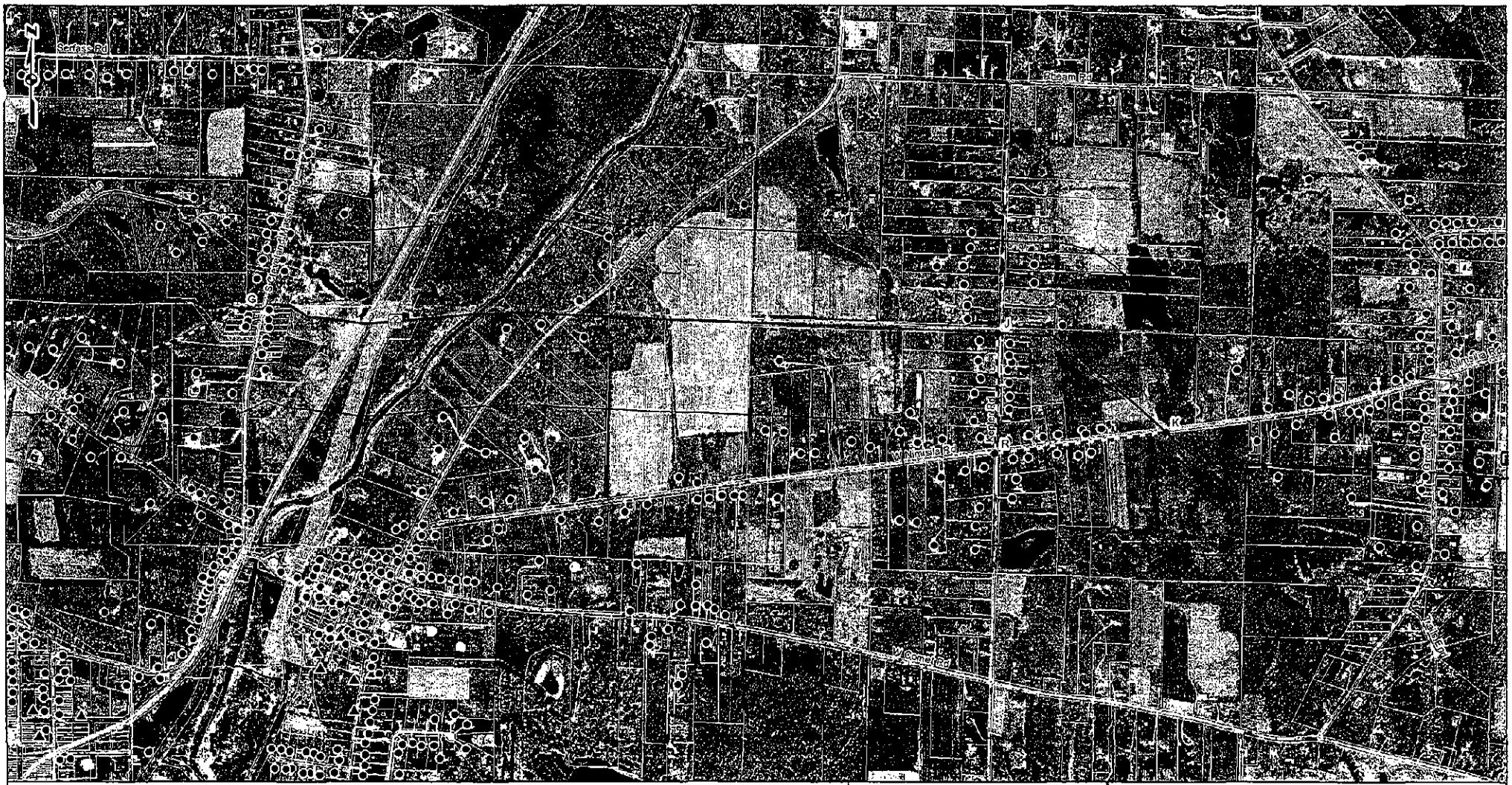
Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-2A
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00



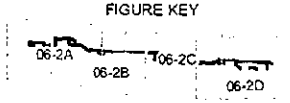
LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Commercial Structure
- Residential Structure
- School
- Hospital
- Church
- Recreation Area
- Golf Course
- Airport
- Cemetery
- National Register Site
- Historical/Architectural Resource

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

gai consultants

FIGURE KEY



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Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-2B
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00

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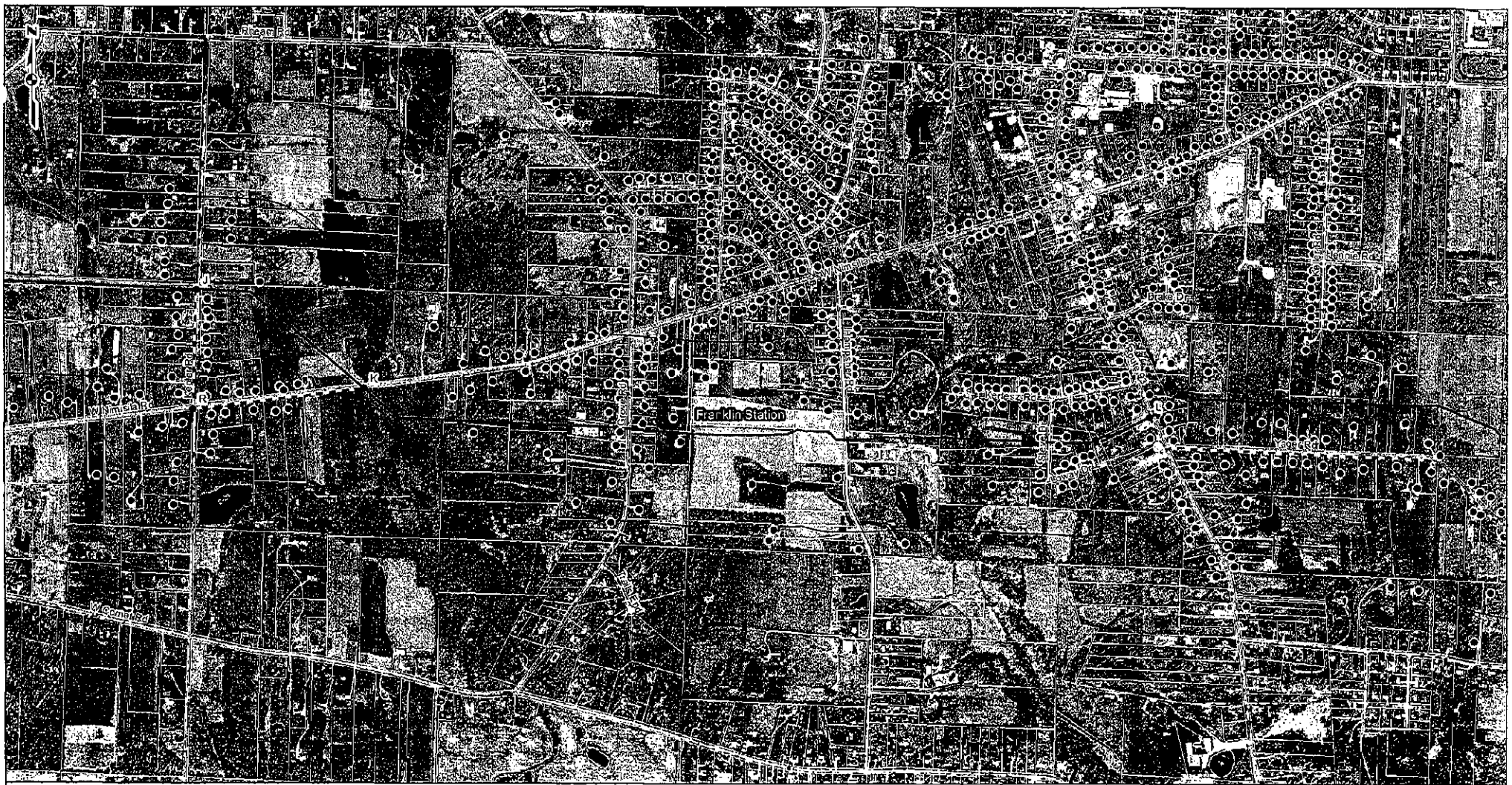

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Commercial Structure
- Residential Structure
- School
- Hospital
- Church
- Recreation Area
- Golf Course
- Airport
- Cemetery
- National Register Site
- Historical/Architectural Resource

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

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FIGURE KEY

06-2A 06-2B 06-2C 06-2D

0 500 1,000 2,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-2C
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO G080283.00

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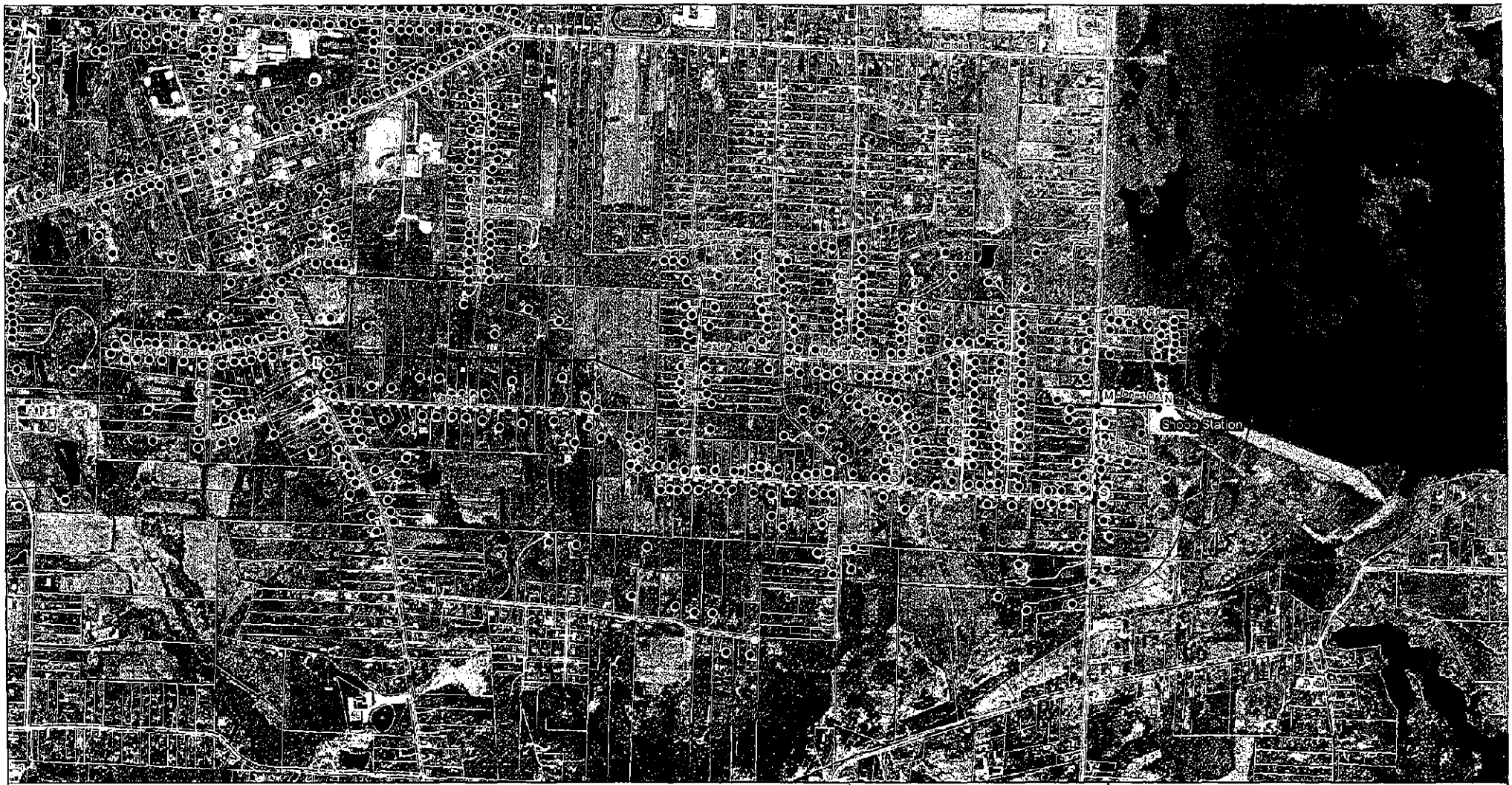

LEGEND

- Preferred Route
- Alternate Route
- Route Node
- 2,000-Foot Route Corridor
- Compressor or Valve Station
- Parcel Boundary
- Commercial Structure
- Residential Structure
- School
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- Golf Course
- Airport
- Cemetery
- National Register Site
- Historical/Architectural Resource

Base Map Source: 2006 Ohio Statewide Imagery Program (OSIP) Aerial Photography of Wayne and Summit Counties, Ohio.

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FIGURE KEY

06-2A 06-2B 06-2C 06-2D

0 500 1,000 2,000

Scale in Feet

Dominion

Franklin 20" Natural Gas Pipeline Project

FIGURE 06-2D
CANDIDATE ROUTES AND LAND USE CONSTRAINTS

JOB NO. G080283.00

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APPENDIX 06-1

AGENCY CORRESPONDENCE

APPENDIX 06-1A

TELEPHONE LOGS WITH OHIO DEPARTMENT OF NATURAL RESOURCES

gai consultants
transforming ideas into reality®

GAI Consultants, Inc.
Pittsburgh Office
385 East Waterfront Drive
Homestead, PA 15120-5005
T 412.476.2000
F 412.476.2020
www.gaiconsultants.com

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Telephone Log

Date: June 23, 2008

Project/Admin. No.: C070939.00

Call From:	Matt White	**Tel No.:**	1513
Company:	GAI		
Call To:	Becky Jenkins	**Tel No.:**	614-265-6631
Company:	ODNR		
Subject:	Habitat Assessment and Bird Survey Questions		
cc:			

Summary of Discussion, Decisions, and Commitments:

I spoke with Beck Jenkins about the need to determine the best course of action for habitat assessments for American Bittern, Trumpeter Swan, Sandhill Crane, and Golden-winged Warbler. I spoke with her about the possibility of ruling out that the potential for habitat for the American Bittern, Trumpter Swan, and Sandhill Crane exists in the Project area within Wayne Co. because of the absence of large bodies of water and other landscape features not found in the area that are easily distinguishable of the habitat for these species. She said that a general statement report highlighting what is present in the area along with our determination will sufice for submission. I also asked her about habitat surveys and possible concurrent presence/absence surveys for Golden-winged Warbler and she indicated that approach is a good idea based upon the time restrictions of when the species breeding period ends. I also asked Becky about how the ODNR views HDD and her answer was that an HDD is viewed as no impact. However, if the situation arises and an open—cut is required then as a safety net the area should be previously evaluated for habitat.

APPENDIX 06-1B

OHIO DEPARTMENT OF NATURAL RESOURCES SPECIES REVIEW

Mishelle L. Beercheck

From: Mitch, Brian [Brian.Mitch@dnr.state.oh.us]
Sent: Monday, May 12, 2008 10:06 AM
To: Mishelle L. Beercheck
Subject: 08-0099; Franklin 20" Storage Pipeline Project
Attachments: oledata.mso; image001.gif; 08-0099map1.jpg; 08-0099map2.jpg

ODNR COMMENTS TO Ms. Jennifer C. Broush, GAI Consultants, 385 East Waterfront Drive, Homestead, Pennsylvania, 15120.

Location: The site is located in Sections 23 and 24, Chippewa Township, Wayne County and Sections 25, 26, 27, 28, 29, and 30, Franklin Township, Summit County, Doylestown and Canal Fulton Quadrangles.

Project: The proposed project involves the construction of 8.7 miles of 20" natural gas pipeline. The proposed pipeline follows an existing pipeline right-of-way throughout nearly its entire length, minimizing disturbance to the surrounding area. Disturbance will be limited to a maximum 100" radius around the proposed centerline. Existing access roads and storage areas will be used and will be located within the one-half-mile study area being requested.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Rare and Endangered Species: The ODNR, Division of Natural Areas and Preserves, Natural Heritage Database contains records of rare species near the proposed project. *Rallus limicola,* Virginia Rail, has an Ohio Status of Special Concern and was last observed at this location in June of 1986. *Porzana carolina,* Sora, has an Ohio Status of Special Concern and was last observed at this location in June of 1986. The map included with this message displays the locations of records.

There are no unique natural features within the proposed project and there are no state nature preserves, wildlife areas, or scenic rivers in the vicinity of the site. However, the site is near the Portage Lakes State Park. The red line on the map represents the approximate boundary of the park.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Fish and Wildlife: The ODNR, Division of Wildlife (DOW) has the following comments.

The project is within the range of the Indiana bat (Myotis sodalis), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniosa*), Bitternut hickory (*Carya cordiformis),* Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (Populus deltoides), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur

within the project area, these trees must be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between September 30 and April 1. If suitable trees must be cut during the summer months of April 2 to September 29, a net survey must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the bald eagle (*Haliaeetus leucocephalus*), a state and federally threatened species. The location of bald eagle activity frequently changes. Therefore, closer to the actual date of construction, the applicant must obtain an updated status of bald eagle activity in the area. To obtain any changes in status, contact Mark Shieldcastle at the Ohio Department of Natural Resources, Division of Wildlife, Crane Creek Wildlife Research Station, for current information on the presence of bald eagles in the area. He can be reached at (419) 898-0960. If a nest is located within ½ mile of the project site, coordination with the DOW is required.

The project is within the range of the bobcat (*Lynx rufus*), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

The portion of the project located in Wayne County is within a county where current records exist for the Eastern massasauga (*Sistrurus catenatus*), a state endangered and a Federal candidate snake species. Due to the location of this project, the DOW believes the project is not likely to impact this species. However, if an Eastern massasauga is encountered during construction of the project, work should immediately be stopped, and the DOW should be contacted.

The portion of the project located in Wayne County is also within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if wetland habitat is located near the project area, construction must be avoided during the species' nesting period of May 1 to July 31. If no wetland habitat is in the vicinity of the project area, the project is not likely to impact this species.

The project area in Wayne County is also within the range of the trumpeter swan (*Cygnus buccinator*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if wetland habitat is located near the project area, construction must be avoided during the species' nesting period of May 1 to August 1. If no wetland habitat is in the vicinity of the project area, the project is not likely to impact this species.

Additionally, the portion of the project located in Wayne County is within the range of the sandhill crane (*Grus canadensis*), a state endangered species. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if grassland, prairie, or wetland habitat is in the vicinity of the project, construction must not occur during the species' nesting period of April 1 to September 1. If this habitat is not present near the project area, the project is not likely to have an impact on this species.

The portion of the project located in Wayne County is within the range of the Eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered amphibian. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from that area. Therefore, if the project proposes to impact riparian corridor habitat, a survey conducted by an approved herpetologist is required to determine the presence or absence of the species.

The portion of the project located in Summit County is within the range of the elfin skimmer (*Nannothemis bella*), a state endangered dragonfly, the racket-tailed emerald (*Dorocordulia libera*), a state endangered dragonfly, and the chalk-fronted corporal (*Ladona julia*), a state endangered dragonfly. Due to the mobility of these species, the project is not likely to impact these species.

The portion of the project located in Summit County is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

The portion of the project located in Summit County is also within the range of the golden-winged warbler (*Vermivora chrysoptera*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if shrub-dominated habitat such as successional fields, woodland edges, and clearings are present within the project area, construction must not occur during the species' nesting period of May 15 to July 15. If this successional habitat is not present, the project is not likely to impact this species.

The Natural Heritage Database contains records near the proposed project for the Virginia rail (*Rallus limicola*), a state bird species of special concern, and the sora (*Porzana carolina*) a state bird species of special concern. Due to the status of these species, the date of the records, and the type of work proposed, the DOW believes the project is not likely to impact this species.

Parks and Recreation: The ODNR, Division of Parks and Recreation has the following comments.

By the information provided it appears the pipeline *may* cross the boundary line for Portage Lakes State Park. The local contact is Regional Park Manager Bruce Carpenter; he can be contacted at 330-644-2220 for local questions or concerns.

This project does cross state park land and/or water, a real estate agreement will need to be created. The agreement process should be started well in advance of the project start date. The agreement must be fully executed prior to work on the Division's land or waters. The Division of Parks and Recreation's Real Estate Manager is Mr. Kim Caris; Mr. Caris can be reached at 614-265-6514.

The Division expects that all appropriate construction and installation BMP's are implemented.

ODNR appreciates the opportunity to provide these comments. Please contact Brian Mitch at (614) 265-6378 if you have questions about these comments or need additional information.

Brian Mitch, Environmental Review Manager
Ohio Department of Natural Resources
Environmental Services Section
2045 Morse Road, Building C-4
Columbus, Ohio 43229-6693
Office: (614) 265-6378
FAX: (614) 267-4764
brian.mitch@dnr.state.oh.us

APPENDIX 06-1C

DOMINION EAST OHIO SPECIES SUMMARY
TO OHIO DEPARTMENT OF NATURAL RESOURCES

August 12, 2008

Project C070939.00

Mr. Brian Mitch
Environmental Review Manager
Ohio Department of Natural Resources
Environmental Services Section
2045 Morse Road, Building C-4
Columbus, Ohio 43229-6693

Dominion East Ohio Gas
Proposed Franklin 20-Inch Storage Pipeline Project
Threatened and Endangered Species
Wayne and Summit Counties, Ohio

Dear Mr. Mitch:

On behalf of Dominion East Ohio Gas (DEOG), GAI Consultants, Inc. (GAI) is submitting this letter and the enclosed reports to the Ohio Department of Natural Resources (ODNR). This letter and the enclosed reports are in response to the May 12, 2008 ODNR comments on the DEOG Proposed Franklin 20-Inch Storage Pipeline Project (Project). The Project involves the construction of 8.7 miles of 20-inch natural gas pipeline in Chippewa Township, Wayne County, Ohio and Franklin Township, Summit County, Ohio.

For all species referred to in the ODNR comments of May 12, 2008, below is a summary of the actions requested by the ODNR and how these requests were addressed.

Indiana bat (*Myotis sodalis*)

The ODNR requested a habitat assessment due to proposed tree removal for the Project; this assessment is included in Appendix A. The habitat assessment identified a limited amount of quality habitat and flight corridors in the Project area, however, 13 potential maternity trees were identified. Horizontal directional drilling (HDD) will be utilized to avoid impacts to two of the 13 potential maternity trees and the Project route will avoid impacts to three other potential maternity trees. Through coordination with the United States Fish and Wildlife Service (USFWS) it was determined that emergence surveys should be conducted for the remaining eight trees before August 15th. Emergence surveys are currently underway.

Bald eagle (*Haliaeetus leucocephalus*)

The ODNR requested that GAI contact Mark Shieldcastle (ODNR, Department of Wildlife) closer to the date of construction for updated nest locations and further consultation.

Eastern massasauga (*Sistrurus catenatus catenatus*)

The ODNR determined that this species was not likely to be impacted by the Project, due to the location of the Project. However, per the request of the USFWS, an approved herpetologist conducted a habitat

assessment. The habitat assessment found no suitable Eastern massasauga habitat in the Project area and is included in Appendix B.

Eastern hellbender (*Cryptobranchus alleganiensis*)

The ODNR requested a survey for this species because the Project crosses the Tuscarawas River. A habitat assessment was conducted by an approved herpetologist and found no suitable habitat for the eastern hellbender in the Project area. The habitat assessment report is included in Appendix B.

American bittern (*Botaurus lentiginosus*)

The ODNR requested that a habitat assessment be conducted for this species. An approved biologist conducted a habitat assessment and found no suitable American bittern nesting habitat in the Project area. The habitat assessment is included in Appendix C.

Trumpeter swan (*Cygnus buccinator*)

The ODNR requested that a habitat assessment be conducted for this species. An approved biologist conducted a habitat assessment and found no suitable trumpeter swan nesting habitat in the Project area. The habitat assessment is included in Appendix C.

Sandhill crane (*Grus canadensis*)

The ODNR requested that a habitat assessment be conducted for this species. An approved biologist conducted a habitat assessment and found no suitable sandhill crane nesting habitat in the Project area. The habitat assessment is included in Appendix C.

Golden-winged warbler (*Vermivora chrysoptera*)

The ODNR requested that a habitat assessment be conducted for this species. An approved biologist conducted a habitat assessment and identified a small portion of the Project area containing suitable golden-winged warbler habitat. After consultation with the ODNR, a presence/absence survey was conducted and no golden-winged warblers were observed in the Project area. The habitat assessment and presence/absence survey report is included in Appendix D.

The ODNR comments indicated that the following species would not be impacted by the Project for the reasons listed below:

- Bobcat (*Lynx rufus*) – the mobility of the species likely precludes impact
- Elfin skimmer (*Nannothemis bella*) – the mobility of the species likely precludes impact
- Racket-tailed emerald (*Dorocordulia liberia*) – the mobility of the species likely precludes impact
- Chalk-fronted corporal (*Ladona julia*) – the mobility of the species likely precludes impact
- Black bear (*Ursus americanus*) – the mobility of the species likely precludes impact
- Virginia rail (*Rallus limicola*) – the status of species, date of the records, and nature of the Project likely preclude impact. Furthermore, HDD will be utilized in the one area containing potentially suitable habitat for this species, thus further avoiding any potential impacts to this species.
- Sora (*Porzana carolina*) – the status of species, date of the records, and nature of the Project

likely preclude impact

The Project area does not cross the boundary line for Portage Lake State Park; the southern-most edge of the park is approximately 3.4 miles north of the Project area.

Consultation with the ODNR and USFWS, along with requested habitat assessments and presence/absence surveys, indicates that the Project is unlikely to impact any species referred to by the ODNR in the comments dated May 12, 2008. As requested, Mark Shieldcastle, of the ODNR Department of Wildlife, will be contacted closer to the start of construction to determine if there will be any potential impacts of the Project on bald eagle nesting sites in the vicinity.

On behalf of DEOG, GAI requests that the ODNR review the enclosed reports and provide a written response at their earliest convenience. If you have any questions or concerns regarding this request, please contact me at 412-476-2000.

Respectfully,
GAI Consultants, Inc.

Stephen E. Gould, Q.E.P., G.I.S.P.
Project Manager

APPENDIX 06-1D

U.S. FISH & WILDLIFE SERVICE SPECIES REVIEW

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4132
(614) 469-6923 / FAX (614) 469-6919
May 6, 2008

Stephen Gould
GAI Consultants
385 East Waterfront Drive
Homestead, PA 15120-5005

TAILS: 2008-TA-0548

Re: Dominion East Ohio proposed Franklin 20-inch storage pipeline project, Wayne and Summit Counties, OH

Dear Mr. Gould:

This is in response to your March 28, 2008 letter requesting information regarding federally threatened and endangered species at the above-referenced project site. The proposed project involves the installation of 8.7 miles of new 20-inch natural gas pipeline in Chippewa and Franklin Townships of Wayne and Summit Counties Ohio. According to your letter, the proposed pipeline follows an existing pipeline right-of-way throughout most of its length and disturbance caused by pipeline construction will be limited to a maximum 100-ft radius around the proposed centerline. Existing access roads and storage areas located within a half mile of the proposed project area will be utilized.

There are no Federal wilderness areas, wildlife refuges, or designated Critical Habitat within the vicinity of the proposed site. However, Portage Lakes State Park is very near or adjacent to the project area. We recommend you contact Ohio Department of Natural Resources, Division of Real Estate & Land Management to determine if additional consultation with the Ohio Department of Natural Resources is required.

In general, we recommend that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat, such as forests, streams, and wetlands. Best constructions techniques should be used to minimize erosion, particularly on slopes. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. We support and recommend mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species. In particular, for this project, staging areas should be kept well away from streams and wetlands, and previously disturbed, open areas should be utilized wherever possible and construction right-of-ways should be quickly replanted with native vegetation following pipeline installation.

ENDANGERED SPECIES COMMENTS: The proposed project lies within the range of the **Indiana bat** (*Myotis sodalis*), a Federally-listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. Summer habitat requirements for the species are not well defined but the following are considered important:

(1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
(2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
(3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

It appears from aerial photographs of the proposed route that suitable habitat for the Indiana bat may be present in portions of the proposed pipeline. In order for the Service to evaluate potential impacts to the Indiana bat, the Applicant must submit additional information. We recommend including the following information:

(1) a map of the site with all forested areas indicated, including acreage;
(2) a description of forested habitat, including dominant species composition, age, density of understory, and canopy cover;
(3) please indicate the location of suitable roost trees (dead or live trees with peeling bark, cracks, or crevices), and describe the species, condition (live or dead), size (diameter breast high), and canopy cover;
(4) descriptions and the sizes of any forested parcels onsite that will be preserved – preservation of forested habitat is the most significant way to minimize potential impacts to the Indiana bat and its habitat;
(5) please note the location and size of any other forested properties within the vicinity of the project that are protected in perpetuity (e.g. parks, conservation easements, etc.);
(6) please include the locations of any wetlands, streams, ponds, and cleared paths or trails;
(7) describe connectivity of the site and other adjacent forested parcels;
(8) any avoidance and minimization measures necessary to protect the bat and its habitat (such as seasonal tree clearing, temporary preservation of suitable habitat, etc.);
(9) please include your determination of whether or not the project is likely to adversely affect the Indiana bat, using the information above as justification for your position.

Based on this information, the Service will evaluate potential impacts to the Indiana bat from the proposed project. Depending on the extent and location of impacts to suitable Indiana bat habitat, we will likely recommend mist net or emergence surveys to determine bat usage of the project area. These surveys would need to be designed and conducted in coordination with this office, and may only be completed during the summer months. If sufficient information is not provided to document a "not likely to adversely affect" determination, formal consultation under Section 7 of the Endangered Species Act of 1973, as amended, will be necessary.

The portion of the project within Summit County lies within the range of the federally threatened **northern monkshood** (*Aconitum noveboracense*). The plant is found on cool, moist, talus slopes or shaded cliff faces in wooded ravines. We recommend that the project location be examined to determine if suitable habitat for the monkshood is present. If suitable habitat is found, surveys may be necessary to determine if the plant is present. Surveys should be conducted in coordination with the Ohio Field Office.

The portion of the project within Wayne County lies within the range of the **eastern prairie fringed orchid** (*Platanthera leucophaea*), a federally-listed threatened species. This tall showy orchid is found in wet prairies, sedge meadows, and moist road-side ditches. We recommend that the project location be examined to determine if suitable habitat for the orchid is present. If suitable habitat is present, we recommend that surveys for this species be conducted in early July when the orchids are in bloom.

The project area lies within the range of the **bald eagle** (*Haliaeetus leucocephalus*). The bald eagle has been removed from the Federal list of endangered and threatened species due to recovery. This species continues to be afforded protection by the Bald and Golden Eagle Protection Act, Migratory Bird

Protection Act, and the State of Ohio. There is a known bald eagle nest approximately one mile from the proposed project location. However, due to the land use between the project area and the nest, no impact to this species is expected.

The project lies within the range of the **eastern massasauga** (*Sistrurus catenatus catenatus*), a docile rattlesnake that is declining throughout its national range and is currently a Federal Candidate species. The snake is currently listed as endangered by the State of Ohio. Your proactive efforts to conserve this species now may help avoid the need to list the species under the Endangered Species Act in the future. Due to their reclusive nature, we encourage early project coordination to avoid potential impacts to massasaugas and their habitat. At a minimum, project evaluations should contain delineations of whether or not massasauga habitat occurs within project boundaries.

The massasauga is often found in or near wet areas, including wetlands, wet prairie, or nearby woodland or shrub edge habitat. This often includes dry goldenrod meadows with a mosaic of early successional woody species such as dogwood or multiflora rose. Wet habitat and nearby dry edges are utilized by the snakes, especially during the spring and fall. Dry upland areas up to 1.5 miles away are utilized during the summer, if available. For additional information on the eastern massasauga, including project management ideas, please visit the following website: http://www.fws.gov/midwest/Endangered/lists/candidat.html or contact this office directly.

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C.661 et seq.), the Endangered Species Act of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

Please note that consultation under section 7 of the ESA may be warranted for this project since suitable habitat for the Indiana bat, eastern prairie fringed orchid, northern monkshood, and/or eastern massasauga may be impacted by this project. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If you have questions, or if we may be of further assistance in this matter, please contact Jennifer Smith-Castro at extension 14 in this office.

Sincerely,

Mary Knapp

Mary Knapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH
ODNR, Division of Real Estate & Land Management, Columbus, OH

APPENDIX 06-1E

TELEPHONE LOG WITH U.S. FISH & WILDLIFE SERVICE

gai consultants
transforming ideas into reality®

GAI Consultants, Inc.
Pittsburgh Office
385 East Waterfront Drive
Homestead, PA 15120-5005
T 412.476.2000
F 412.476.2020
www.gaiconsultants.com

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CELEBRATING FIFTY YEARS OF SERVICE

Telephone Log

Date: 6/18/2008

Project/Admin. No.: C080420.00

Call From:	Sarena Selbo	**Tel No.:**	614-469-6923 x17
Company:	USFWS, Reynoldsburg Ecological Services Field Office		
Call To:	Henry B. Schumacher	**Tel No.:**	412-476-2000 x1535
Company:	GAI Consultants, Inc.		
Subject:	Habitat for Eastern Prairie Fringed Orchid and Northern Monkshood		
cc:			

Summary of Discussion, Decisions, and Commitments:

Ms. Selbo returned my call from yesterday inquiring about habitat for the eastern prairie fringed orchid (EPFO) and northern monkshood in Wayne and Summit Counties. Ms. Selbo said that in addition to wet roadside ditches, mesic prairie, and sedge meadow habitats, they have found potentially viable populations in 1) shrub/prairie complexes with a significant sedge/grass component and varying degrees of shrub cover (not 100% cover, but they have found the EPFO in areas with significant shrub cover), 2) forest edges or in the understory of willow/dogwood woodlands, 3) sedge-grasslands under waist-high grass, and 4) roadside ditches that do not have a permanent groundwater source (e.g. they have found them on roadsides along agricultural fields when the ground was quite dry). The EPFO is not found in successional old-fields dominated by goldenrods and asters. In and around the Kilbuck Wildlife Area (in the near vicinity of the project), the best time to survey for the EPFO is during its flowering period (first week of July to mid-July), which is a little later than elsewhere in the state that populations are found. Ms. Selbo said that the EPFO is quite difficult to identify outside of the flowering period, as it is difficult to find even if you know the location of a population (it is easily overtopped and hidden) and there are few distinguishing vegetative characteristics that someone without significant experience with this species can use to identify the EPFO. I asked Ms. Selbo if Anthony Baumert and I would be able to conduct surveys for the EPFO if potential habitat was found. Ms. Selbo said that we should send her our resumes so she could determine how much experience we had with plant identification in various habitats. Additionally, Ms. Selbo said that the USFWS staff were conducting a survey for the EPFO in the Kilbuck Wildlife Area on Tuesday, July 8th and that if we assisted with that survey and had sufficient experience with plant identification, we could conduct the species surveys. I asked if Ms. Selbo might give me coordinates of known populations within the

Kilbuck Wildlife Area, so that we could view the habitat for a better understanding of suitable habitat in the near vicinity of the project. Ms. Selbo said that she was hesitant to do so, given the precarious state of the species' population and the difficulty we would have finding individual plants even with the coordinates (the coordinates are simply center points for large populations, so extensive searches would still have to be conducted for the species even with the center-point coordinates). Ms. Selbo said she would send me photos of known habitat in the area and I said I would send her resumes for Anthony Baumert and myself.

Regarding the northern monkshood, we were in agreement as to the habitat requirements for this species (cool, rocky, moist, talus slopes in wooded areas) and I mentioned that there did not appear to be much, if any, potential habitat for the northern monkshood that is within the project area in Summit County. Ms. Selbo said that if the project ran near the Cayahoga river (if it crossed or ran near the surrounding riparian area) I should contact her and/or conduct habitat surveys. I told Ms. Selbo I would contact her when I could determine whether the project approached this area.

APPENDIX 06-1F

CORRESPONDENCE REGARDING THE INDIANA BAT

Mishelle L. Beercheck

From: JHickey@davey.com
Sent: Thursday, August 07, 2008 2:52 PM
To: Sheri.L.Franz@dom.com; Mishelle L. Beercheck; Jennifer C. Broush
Subject: FW: Dominion East Ohio Gas - Franklin 20-inch Storage Pipeline Project, Wayne and Summit Co.

Sheri,

Below is our guidance letter and approval from USFWS.

Jessica Hickey
Project Manager/Biologist
Davey Resource Group
3728 Fishcreek Road
Stow, Ohio 44224
P: 800-828-8312
F: 330-673-0860
jhickey@davey.com

-----Original Message-----
From: Angela_Boyer@fws.gov [mailto:Angela_Boyer@fws.gov]
Sent: Thursday, August 07, 2008 2:38 PM
To: Hickey, Jessica
Cc: Jennifer_Smith-Castro@fws.gov
Subject: Dominion East Ohio Gas - Franklin 20-inch Storage Pipeline Project, Wayne and Summit Co.

Jessica,

I have reviewed the Indiana bat habitat assessment for the subject project site I received earlier today. Based on the information provided in that assessment and our telephone conversations today, it appears that the project right-of-way does not provide good mist netting locations. The assessment reports that a total of 13 potential maternity roost trees were found within or directly adjacent to the project area. It is also my understanding that 5 of these potential maternity roost trees will not be removed due to horizontal directional drilling (HDD) under the Tuscarawas River (avoiding trees # 6 and 7) and due to their location on the outer edge of the right-of-way (avoiding trees # 8, 10, and 13). From our phone discussion and the photos provided in the assessment, trees #6 and 7 provide the best potential Indiana bat maternity habitat of the 13 trees that were noted in the right-of-way Also, these trees occur near a recent capture site of a post-lactating female Indiana bat. We are pleased to learn that HDD is being proposed and that no disturbance to these trees and the surrounding forested riparian area will occur as a result of this project.

I agree that it is appropriate to conduct emergence surveys, in lieu of mist net surveys, on the 8 potential maternity roost trees within the project right-of-way that cannot be avoided. Emergence surveys should be conducted between May 15 and August 15, when the presence of maternity colonies could be detected. Emergence surveys should begin at

sunset and continue for a minimum of one hour or until it is otherwise too dark to see emerging bats. We recommend a bat emergence survey be conducted for a minimum of two consecutive nights for each tree exhibiting characteristics suitable for bat roosting (trees in close proximity may be monitored concurrently). If bats are detected emerging from the tree during the first night of survey, a second night is not necessary. The surveyor(s) should position him or herself so that emerging bats will be silhouetted against the sky as they exit the roost. Tallies of emerging bats should be made at approximately 2-minute intervals. Please ensure that you are close enough to the roost tree, cave, or mine to observe all exiting bats, but not close enough to influence emergence (i.e., do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights (use a AAA mag-lite or similar to record data if necessary). Do not shine a light on the roost tree/crevice/cave/mine entrance itself as this may prevent or delay bats from emerging. If available, use of an infra-red/night vision or thermal-imaging video camera or spotting scope is encouraged. Use of an ultrasonic bat detector(s) may also increase detectability of emerging bats (attempt to discern the peak frequency of bat calls if using a tunable detector). The survey should not be conducted during inclement weather such as precipitation, strong wind, and temperatures below 10°C. During these weather conditions, bats become less active and may not be detectable.

The results of this survey should be coordinated with this office, and if bat activity is detected, a mist net survey may still be recommended to determine which bat species are present within the project area. If no bat activity is detected, the trees surveyed may be cut the day following the second night of the survey.

Please contact me or Jennifer Smith-Castro with any questions regarding this project.

Sincerely,

Angela Boyer
Endangered Species Coordinator for Ohio
U.S. Fish and Wildlife Service
6950 Americana Parkway, Suite H
Reynoldsburg, OH 43068
(614) 469-6923, ext. 22
(614) 469-6919 FAX
angela_boyer@fws.gov

Mishelle L. Beercheck

From: Jennifer_Smith-Castro@fws.gov
Sent: Friday, August 15, 2008 8:33 AM
To: JHickey@davey.com
Cc: Angela_Boyer@fws.gov; Mishelle L. Beercheck; Sheri.L.Franz@dom.com
Subject: Re: Dominion 20" pipeline, Summit and Wayne Counties
Attachments: pic06900.jpg; image002.jpg

Jessica,

Due to the presence of potential primary Indiana bat maternity roost trees that were proposed to be removed, in our correspondence on August 7, 2008 we recommended a bat emergence survey be conducted for a minimum of two nights on eight trees. The results of those bat emergence surveys indicate that no bats are utilizing any of those eight trees. Therefore, the service agrees that the removal of those eight trees today will not impact the Indiana Bat.

If you have questions, or if we may be of further assistance in this matter, please feel free to contact me. Thank you.

Jennifer Smith-Castro

****
Jennifer Smith-Castro
Fish and Wildlife Biologist
S. Fish & Wildlife Service
Reynoldsburg Ecological Services Field Office 6950 Americana Parkway, Suite H Reynoldsburg, OH 43068-4127
614-469-6923 ext. 14
614-469-6919 (FAX)
jennifer_smith-castro@fws.gov
****

JHickey@davey.com

08/14/2008 10:46 PM

To: Jennifer Smith-Castro@fws.gov

cc: Angela_Boyer@fws.gov, Sheri.L.Franz@dom.com, m.beercheck@gaiconsultants.com

Subject: Dominion 20" pipeline, Summit and Wayne Counties

Jennifer,

On August 13 and 14, 2008 we completed an emergence survey along the proposed Dominion Franklin 20" pipeline corridor. This emergence survey covered Trees 1,2,3, 4,5, 9, 11, and 12, located on the map sheets provided with the habitat survey report. These trees were watched for at least one-half hour before sunset to at least an hour after sunset. Biologists sat far enough away from the trees so as to not disturb any emerging bats but could still see the trees clearly.

August 13, 2008 was a clear to partly cloudy cool night with temperatures in the low 600's. Sunset was at 8:26 pm. Bats were seen flying around the area at 8:35 pm. No bats were seen emerging from the trees.

August 14, 2008 was an overcast night with a heavy rainstorm approximately 1 hour prior to survey time. No precipitation occurred during the study but the humidity level was almost 100%. Sunset was at 8:25 pm, however, with the overcast sky the wooded areas became dark sooner. Bats were seen flying around the area at 8:13 pm. No bats were seen emerging from these trees.

As no bats were seen emerging from these trees, we will be taking them down tomorrow. If you have any questions please give me a call at 440-263-9568.
Thank you.

Jessica Hickey
Project Manager/Biologist
Davey Resource Group
3728 Fishcreek Road
Stow, Ohio 44224
P: 800-828-8312 ext. 27
F: 330-673-0860
jhickey@davey.com

(Embedded image moved to file: pic06900.jpg)

APPENDIX 06-2

PUBLIC INVOLVEMENT INFORMATION

APPENDIX 06-2A

PUBLIC OFFICIALS CONTACTED

PUBLIC OFFICIALS CONTACTED REGARDING THE OBSB APPLICATION AND PUBLIC MEETING

Name/Title	Street Address	City	State	Zip Code	Phone no.
Summit County Executive	175 S. Main St.	Akron	OH	44308	(330)643-2001
Summit County Clerk of Council	175 S. Main St.	Akron	OH	44308	(330) 643-2725
Commissioner's Clerk of Wayne County	428 W. Liberty	Wooster	OH	44691	(330) 287-5512
Summit Co. Planning Commission	175 S. Main St., Suite 207	Akron	OH	44208	(330) 643-255
Wayne Co. Planning Department	428 W. Liberty	Wooster	OH	44691	(330) 287-5420
Chippewa Township Clerk	14228 Galehouse	Doylestown	OH	44230	(330) 658-2112
Doylestown Village Clerk	24 S. Portage St.	Doylestown	OH	44230	(330) 658-2181
Clinton Village Clerk	7871 Main St.	Clinton	OH	44216	(330) 882-4782
Green Mayor's Office	5383 Massillon Rd.	Green	OH	44232	(330) 896-6602
New Franklin Mayor's Office	5611 Manchester Road	Akron	OH	44319	(330) 882-4324
Ohio EPA	50 W. Town St., Suite 700	Columbus	OH	43215	(614) 644-3020
Ohio DNR	2045 Morse Road	Columbus	OH	43229	(614) 265 -6565
Ohio Historic Preservation Office	567 E. Hudson St.	Columbus	OH	43211	(614) 298-2000
US Army Corps of Engineers – Huntington District	502 Eighth St.	Huntington	WV	25701	(304) 399-5211
Office Supervisor, U.S. Fish & Wildlife Service	6950 American Parkway, Suite H	Reynoldsburg	OH	43068	(614) 469- 6923
State Senator Ron Amstutz, Dist. 22	Ohio Statehouse, Room 140	Columbus	OH	43215	
State Rep. Jim Carmichael, Dist. 3	77 S. High St., 12th Fl.	Columbus	OH	43215	
State Rep. Stephen Dyer, Dist. 43	77 S. High St., 10th Fl.	Columbus	OH	43215	
State Rep. Vernon Skykes, Dist. 44	77 S. high St., 11th Fl.	Columbus	OH	43215	

APPENDIX 06-2B

LETTER TO GOVERNMENT OFFICIALS REGARDING PROJECT

Dominion℠

April 30, 2008

Dear Government Official:

Dominion East Ohio has made tentative plans to install a new 20inch natural gas pipeline that will extend through portions of New Franklin and Green, Summit County, Ohio, and Chippewa Township, Wayne County, Ohio. Your community has been identified as being a part of this proposed pipeline route. Construction of this new pipeline is tentatively scheduled to begin in the second quarter of 2009. Attached is a proposed map of the pipeline route, which is on existing Dominion right of way.

As part of the application process with the Ohio Power Siting Board (OPSB), Dominion East Ohio will host an informational public meeting on Tuesday, May 13, 2008 at the Occasions Party Center (6800 Manchester Rd., Clinton, OH 44216) at 6:00 PM.

An overview of the project will be given with time allotted for questions about potential residential concerns. We look forward to the opportunity to fully explain the benefits of this expansion project. You are more than welcome to attend, or you may feel free to call me directly with questions prior to the meeting. My contact information is at the bottom of this letter for your convenience.

Respectfully,

Tracy Stevens External
Affairs Manager

4725 Southway SW, Canton, OH 44706 Ph.
3304783104 Toll Free 8664785778 Email:
Tracy.W.Stevens@dom.com

APPENDIX 06-2C

PUBLIC MEETING POWERPOINT PRESENTATION

Dominion East Ohio

Franklin Storage

Expansion Project Public Meeting May 13, 2008

Who We Are:

Cleveland-based Dominion East Ohio, founded in 1898, is the largest natural gas distribution company within Dominion Resources, Inc.

We serve 1.2 million customers in northeast Ohio, including Cleveland, Akron, Canton, Youngstown, Warren, Wooster, Ashtabula, New Philadelphia, Marietta and Lima.

Dominion Resources Inc.

Headquartered in Richmond, Virginia, Dominion is one of the nation's largest producers and transporters of energy, with a portfolio of approximately 26,500 megawatts of generation, 1.1 trillion cubic feet equivalent of natural gas transmission gathering and storage pipeline. Dominion owns the nation's largest underground gas storage system and operates more than 975 bcf of storage capacity, serving retail energy customers in 11 states.

What:

Dominion East Ohio plans to build a 20-inch diameter natural gas pipeline. The new, 8.7-mile pipeline will be built on the company's existing right of way.

Where:

The new pipeline will be built between the company's Chippewa Station in Chippewa Township, Wayne County, and Shoop Station in the City of Green, Summit County.

When:

The Company is tentatively scheduled to begin pipeline construction, in its existing right of way, in the second quarter of 2009, pending regulatory approval.

Why:

The new pipeline will increase system efficiency and service reliability for area customers.

Questions?

APPENDIX 06-2D

PUBLIC MEETING ATTENDANCE SHEETS

Dominion

OPSB Public meeting 05/13/08

Name (Please Print)	Address	City/State/Zip	Phone Number	Email Address
KENNETH Schilling	7007 KEPLER R	Clinton O 44216	330 882-6183	—
Richard Schilling	2769 N ST	Clinton 44216	330 882 6633	
Shirley A. Fites	6837 Kepler Rd.	Clinton Oh 44216	330-882-4396	
PETER E. SCHILLING	6871 KEPLER	CLINTON OHIO 44216	330 882 5003	
Linda J. Schilling	6871 Kepler Rd	Clinton OH 44216	330-882-5003	
Elizabeth [illegible]	7754 S. 5th Ave	Clinton OH 44216	330-882-4675	
ROBERT R. SCHILLING	1901 W. NIMISILA RD	CLINTON OH 44216	330-882-4939	
John L. Crasi	6973 Van Buren Rd.	Clinton OH 44216	330-372-4265	
Michael Richards	5917 MYERS Rd	CLINTON Oh	330 882-9558	
JoAnn Richards	5917 MYERS RD	CLINTON OH 44216	330 882-9558	
Wesley Elmond	186 Lester Rd	Akron Oh 44319	330-882-5781	
Roger Darnell	6980 Van Buren	Clinton OH 44216	330-882-4924	
Lisa Jacob	6788 Manchester	Clinton	882 5730	
Juanita Jacob	6810 Manchester	Clinton	882 3014	
JIM KUNKLE	3003 SERFASS Rd	CLINTON	882-5265	

Schilling Farm LLC

Dominion

OPSB Public meeting 05/13/08

Name (Please Print)	Address	City/State/Zip	Phone Number	Email Address
CLARENCE MOORE	DOMINION EOG	CLEVELAND OHIO	216 736- 6835	CLARENCE_W._MOORE @DOM.COM
TIM MURRAY	7020 VANBUREN	CLINTON OH	330-753-1700	
Neil Gleason	11638 Frazer Rd	Doylestown OH	330 658 6331	
Steve Donovan	18199 William Dr	Doylestown Oh	330-658-6424	
NICK ORAVEC	18283 WILLIAM DR	DOYLESTOWN OH	330 658 3820	
Jim Stripe for Julia Stripe	6360 Strode	Canton Oh	330 882 5785	
Eric & Mary Robbins	5862 Dailey	Akron 44319	330882-6037	Kim-robbins @neo.rr.com
Bob Sonnhalter	705 Yager Rd	Clinton Ohio	330-882-6349	
Bradley Sparks	2519 SHADOW LANE	CLINTON OH 44216	330 882 2709	
CHARLES & BETTY WILSON	450W COMET RD	CLINTON OH 44216	330-882-4344	
ROBERT SCOTT	585 YAGER RD	CLINTON OH 44216	330 882 5723	bob585@sbcglobal.NET
Melissa Wright	314 Lester Rd.	Akron OH 44319	330 882 2685	
PAUL EMERY	DOMINION EOG	AVON OH	216-736-6763	
Scott Hallam	Dominion EOG	N. Canton	330-266-2041	Scott.a.hallam@dom.com
MARK MESSERSMITH	DOM EOG	N. CANTON	216-736-5755	P.Mark.Messersmith @dom.com
NEIL DURBIN	DOMINION EAST OHIO	CLEVELAND	216-736-6239	Neil.J.Durbin@dom.com

Dominion

OPSB Public meeting 05/13/08

Name (Please Print)	Address	City/State/Zip	Phone Number	Email Address
Cindy Maloof	765 Yager	Clinton 44216	882-3273	
Lawrence Shaffer	5833 Regay	Akron 44319	882-6964	
Mr & Mrs Ben Weather	18139 William Dr	Doylestown, 44230.	658-3092.	
Steve Robison	11333 HAZE RD.	Doylestown, OH 44230	658-4663	
DAVE BAGLIA	5807 CANTERBURY DR	Akron OH 44319	882 4295	
W. J. TOTH	735 YAGER RD	CLINTON OH 44216	882-9746	
J Bale	1650 W. Nimisila	Clinton OH 44216	892 9785	
Dan & Raven Crookston	2984 Crookston Ln	Clinton, Oh 44216	882-8686	
ESSIE BERG	6035 Weaver Rd.	Clinton, OH 44216	~~882-6648~~ 882-4460	
Tom LAWSON	5902 S MAIN ST	CLINTON, OH 44216	330-620-0813	
D. L. GARLOCK	1741 JOHNS RD	CLINTON OH 44216	882-3549	
Richard L. Schelcher	619 Yager Rd.	Clinton Oh. 44216	882-5521	
DON HANEY	6008 WEAVER RD	CLINTON, OH 44216	882-4431	
Sharon Sopko	781 Yager Rd.	Clinton, OH 44216	882-5591	
Tim Crawford	4109 S. Cleve Mass Rd	Norton, Oh 44203		Summit Cty council

APPENDIX 06-2E

PUBLIC NOTICES

Notice published in the *Akron Beacon Journal* on Friday, May 9, 2008

PUBLIC NOTICE

Dominion East Ohio Schedules May 13, 2008, Public Meeting to Outline Plans for New Pipeline Construction between Chippewa and Shoop Stations.

Dominion East Ohio invites residents of Green and New Franklin in Summit County and Chippewa Township, Wayne County, Ohio, and other interested members of the public, to attend a public informational meeting regarding company plans to build an 8.7-mile high pressure pipeline, beginning at Chippewa Station, in Chippewa Township, Wayne County, passing through Franklin Station, and ending at Shoop Station, in the City of Green, Summit County.

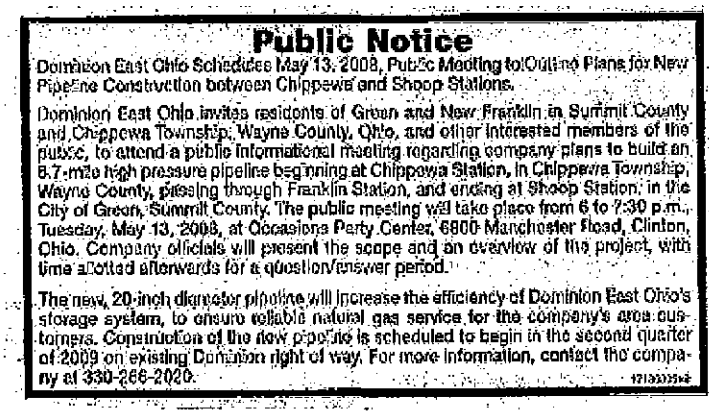
The public meeting will take place from 6 to 7:30 p.m., Tuesday, May 13, 2008, at Occasions Party Center, 6800 Manchester Road, Clinton, Ohio. Company officials will present the scope and an overview of the project, with time allotted afterwards for a question/answer period.

The new, 20-inch diameter pipeline will increase the efficiency of Dominion East Ohio's storage system, to ensure reliable natural gas service for the company's area customers. Construction of the new pipeline is scheduled to begin in the second quarter of 2009 on existing Dominion right of way.

For more information, contact the company at 330-266-2020.

e09_2507490.id

Notice published in the *Canton Repository* on Monday, May 12, 2008



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The new, 20-inch diameter pipeline will increase the efficiency of Dominion East Ohio's storage system, to ensure reliable natural gas service for the company's area customers. Construction of the new pipeline is scheduled to begin in the second quarter of 2009 on existing Dominion right of way. For more information, contact the company at 330-266-2020.

APPENDIX 06-2F

LETTER TO COMMUNITY MEMBERS REGARDING PROJECT

April 11, 2008

RE: Notification of Proposed Natural Gas Pipeline Installation

Dear :

Dominion East Ohio (DEO) has made tentative plans to install a new 20-inch steel gas pipeline that will transverse through portions of Franklin and Green Townships, Summit County, Ohio and Chippewa Township, Wayne County, Ohio. Your property, (Parcel #), address of , has been identified as being a part of this proposed pipeline route. Construction of this new pipeline is tentatively scheduled to begin in the second quarter of 2009.

Please note a couple of items that will be taking place in 2008:

1. DEO will be hosting a public informational meeting. We do encourage and invite you to attend. Meeting date and time is: **May 13, 2008, at 6:00 p.m. – 7:30 p.m.** Location of the meeting is: **Occasions Party Center, 6800 Manchester Road, Clinton, OH 44216.** The scope and an overview of this project will be given and time will be allotted afterward for a question/answer period.

2. A Land Representative from DEO will contact you to schedule an appointment. They will arrange their schedule to meet with you, preferably on-site. This will provide an opportunity for further discussion and review of the route, identify any issues related to the route and work together in resolving those issues. In the interim should you have any questions, please contact Dominion's Land Services Department at 330-266-2020.

Sincerely,

DOMINION EAST OHIO

Kimberly A. Milano
Land Services Coordinator

APPENDIX 06-2G

NOTIFICATION OF PROPERTY ACCESS

May 30, 2008

«Owner»
«Address»
«City_State_Zip»

«Salutation»:

Subject: Notification of Accessing Property

Dominion East Ohio (DEO) is making notification that they and/or their associated contractor(s) will be periodically accessing your property during the next 12 months. This is for the purpose of conducting feasibility and/or other related studies, for the potential of installing a new 20-inch steel gas pipeline that will transverse through portions of Clinton, New Franklin and Green, Summit County, Ohio and Chippewa Township, Wayne County, Ohio. Your property is listed as follows:

(Parcel #«Parcel_Number»), address of «Address», «City_State_Zip»

Reasons for access include:

- archeological digging/exploration
- surveying and staking (pipeline route)
- environmental assessment
- any other activity as required by the project

Access to your property may be done on any day of the week during daylight hours. As a landowner, you have the right to request identification from any Dominion employee or associated contractor. The applicable party should satisfactorily comply with the request.

Construction of this potential pipeline is tentatively scheduled to begin in the second quarter of 2009.

Should you have any questions, please contact Dominion's Land Services Department at 330-266-2020.

Sincerely,

DOMINION EAST OHIO

Kimberly A. Milano
Land Services Coordinator

4906-15-07 ECOLOGICAL IMPACT ANALYSIS

(A) SUMMARY OF ECOLOGICAL IMPACT STUDIES

An assessment of ecological impacts of the proposed project was achieved through on-site investigations and through literature reviews and agency communication regarding the project vicinity. GAI Consultants (GAI) and Environment and Archaeology LLC (EA) performed field surveys, wetland delineations, and stream assessments for the entire 200-foot study corridor of the Preferred Route. Environmental fieldwork was completed for portions of the Alternate Route in common with the Preferred Route. Following Ohio Power Siting Board (OPSB) recommendations regarding the waiver from fully developing ecological information on the Alternate Route, as discussed in Section 4906-15-01, digital Ohio Wetland Inventory (OWI) data and Environmental Systems Research Institute, Inc. (ESRI) stream data were supplemented in locations along the Alternate Route where fieldwork was not completed. Desktop developed information is considered to have less accuracy as compared to field-generated information. A comparison of two areas using the two disparate data sources is not usually applied in this type of analysis.

EA conducted wetland and stream delineations along the project area in December 2006 and May 2008. In November 2007, GAI completed supplemental wetland delineations and stream identifications to include access roads, laydown areas, and well pads along the pipeline easement from Chippewa to Shoop Station. GAI conducted Qualitative Habitat Evaluation Index (QHEI) and Headwater Habitat Evaluation Index (HHEI) evaluations of streams along the Preferred Route and supplemental areas, in April and May 2008. Wetland delineations and Ohio Rapid Assessment Method (ORAM) for wetlands were performed in areas not previously assessed. Additionally, GAI field-verified stream lengths and wetland boundaries within the 200-foot corridor of the Preferred Route centerline, supplemental to previous EA and GAI fieldwork, during May and August, 2008. Project wetland delineation and stream assessment reports, as well as survey results, are included in Appendix 07-1. Due to variety of consultant coding for streams and wetlands, a unique identifier was created for purposes of this application (Table 7-1).

Literature searches, incorporating the area within one thousand feet on each side of the centerline, were supplemented with field collected environmental data for the ecological impact analysis. These examinations included reviews of available aerial photography, USGS maps, OWI maps, and soil survey data for Summit and Wayne Counties. Additional information regarding vegetation and wildlife was gathered from the Ohio Department of Natural Resources-Division of Natural Areas and Preserves (ODNR-DNAP), Ohio Department of Natural Resources-Division of Wildlife (ODNR-DOW), U.S. Fish and Wildlife Service (USFWS), and through literature reviews and personal communications. Ecological findings are discussed under subsequent headings throughout this Section.

(B) ECOLOGICAL FEATURES

Maps at a scale of 1:24,000 illustrating the Preferred and Alternate Routes, including 1,000 feet on each side of the routes, are presented in Figure 04-1A, 04-1B, 04-2A, and 04-2B. The following sections provide brief descriptions of the mapped features.

(1) Route Alignments

The Preferred and Alternate Route alignments, including proposed turning points, are presented on Figures 04-1A, 04-1B, 04-2A, and 04-2B and are discussed in Section 4906-15-04(A)(1)(a) of this Application.

(2) Substations and Compressor Stations

No substations or compressor stations are planned for this project.

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

(a) Streams and Drainage Channels: The surface water features along the Preferred Route and portions of the Alternate Route, including ponds, perennial, intermittent, and ephemeral streams, and non-jurisdictional ditches, are discussed in section (C), and are depicted in Figures 07-1A through 07-1F. Tables 07-3 and 07-4 provide summaries of the proposed crossing method for each stream on the Preferred Route.

Sixteen perennial, intermittent, and ephemeral streams were delineated within the 200-foot study corridor of the Preferred Route. Twelve streams are located within the 200-

foot study corridor of the Alternate Route. Of these, twelve stream crossing locations were identified along the Preferred Route and nine stream crossings were mapped along the Alternate Route. The Preferred and/or Alternate Routes cross some of these streams more than one time. These streams were identified using U.S. Geological Survey (USGS) topographic maps, aerial photography, and ESRI stream data. Additionally, environmental field reconnaissance was conducted on the Preferred Route and on the portions of the Alternate Route in common with the Preferred Route. Following OPSB recommendations regarding the waiver from fully developing ecological information on the Alternate Route, ESRI stream data was supplemented in locations along the Alternate Route where fieldwork was not completed. Desktop developed information is considered to have less accuracy as compared to field-generated information. A comparison of two areas using the two disparate data sources is not usually applied in this type of analysis.

Ohio Environmental Protection Agency (Ohio EPA) Qualitative Habitat Evaluation Index (QHEI) and Primary Headwater Habitat Evaluation Index (HHEI) data forms were completed for all of the streams that were identified along the Preferred Route and portions of the Alternate Route in common with the Preferred Route. These data forms are provided in Appendix 07-1D.

OEPA Primary Headwater Habitat Evaluation Index (HHEI)

The HHEI is designed to provide a qualitative measure of habitat that is based on several physical measurements found to correlate well with biological measures of stream quality. HHEI is calibrated to watersheds that are less than or equal to 1.0 mi ^{2} and deep pools that are less than or equal to 40 cm.

Thirteen HHEI assessments were conducted on the streams within 100-foot of the Preferred Route and along portions of the Alternate Route in common with the Preferred Route. The location of each HHEI location is shown on the Wetland Delineation and Stream Assessments Maps included as Figures 07-1A through 07-1F.

The following paragraphs provide a summary of the total number, type (i.e. class), and general characteristics of headwater streams that were identified along the Preferred and Alternate Routes. Note that each HHEI evaluation was conducted on a representative reach of each headwater stream. However, multiple HHEI evaluations

may have been performed on an individual headwater stream if the character or class of that stream was observed to change.

Class I: Class I streams represent poor quality streams in terms of integrity of substrate and resource structure. One Class I stream was identified with a score of 23/100. This stream is located near Clinton Road, along a portion of the project that is shared by the Preferred and Alternate Routes. The channel of this ephemeral drainage has a bank full width of approximately 2 ½ foot and the dominant substrates include silt, gravel, and leaf pack/woody debris.

Modified Class I: Five Modified Class I stream reaches were identified during the environmental field reconnaissance with scores ranging from a low of 15 (Stream S-2b) to a high of 28 (Stream S8). All of these streams showed indications of stream channel modifications, such as channelization and/or channel relocation, culverting, moderate to severe bank erosion, riparian removal, and filling. The stream substrates generally consist largely of a combination of silt, gravel, and leaf pack/woody debris. Generally, these ephemeral drainages have a bank full width of less than 3 feet.

Class II: Class II streams represent a moderate quality resource in terms of integrity of substrate and resource structure. No Class II streams were identified along the Preferred Route.

Modified Class II: Six Modified Class II streams were identified with scores ranging from a low of 36 (Streams S-6 and S7a) to a high of 66 (Stream S-9). All of these streams showed indications of stream channel modifications, such as channelization and/or channel relocation, culverting, moderate to severe bank erosion, riparian removal, and filling. The stream substrate generally consists of a combination of silt, gravel, cobble, and leaf pack/woody debris. The maximum pool depth varies between 2 ½ and 7 ½ inches and the maximum bank full width does not exceed 5 ½ foot.

Class III: Class III streams are considered the highest quality resources that require Ohio EPA oversight. No Class III streams were identified along the Preferred Route.

Modified Class III: One Modified Class III stream was identified and is located in a wooded area, east of Weaver Road. This stream shows indications of stream channel modification (i.e. existing natural gas pipeline ROW, riparian removal, drainage tile upstream), which is why this stream received a modified designation. The two dominant

substrates include sand and gravel, followed by cobble, silt, leaf pack/wood debris, boulder, and boulder-slab. The majority of the upper stream reach was largely dry, while isolated pools were noted along the lower portion of the stream reach. The maximum pool depth was recorded to be 11 inches downstream of the proposed crossing location with an average bank full width of approximately 10 ½ feet.

OEPA Qualitative Habitat Evaluation Index (QHEI)

Eight QHEI assessments were conducted on streams that were identified during the field reconnaissance. The location where each QHEI assessment was conducted is shown on Figures 07-1A through 07-1F. Note each QHEI evaluation was conducted on a representative reach of each stream. The QHEI method is generally considered appropriate for streams with drainage areas greater than one square mile or if natural pools are greater than 40 cm.

The QHEI survey revealed eight streams within the 200-foot Preferred Route study corridor, six of which will be crossed by the proposed alignment. Four of these streams were determined to have an aquatic use designation of warmwater habitat (WWH), while the remaining four streams appear to satisfy the criteria for modified warmwater habitat (MWH) surface waters.

These aquatic use designations were based upon QHEI score, field observations, documented Ohio EPA use designations, and other available resources. It should be noted that ultimately the Ohio EPA decides the aquatic life use designation for any particular surface water.

(b) Lakes, Ponds, and Reservoirs: There were no lakes, ponds, or reservoirs identified within 100 feet of the Preferred or Alternate Route. The southwestern shore of Nimisila Reservoir is about 500 feet of where the Preferred and Alternate Routes enter Shoop Station. There are 24, and 29, ponds found within 1,000 feet of the Preferred and Alternate Route centerlines, respectively. The majority of these ponds are less than 0.5 acres in size. None of the construction, operation, or maintenance activities are expected to impact these water bodies along the Preferred or Alternate Route alignments.

(c) Wetlands: A desktop study, followed by field delineations, assessed wetlands within 100 feet of the entire Preferred Route centerline, and portions of the Alternate

Route in common with the Preferred Route. Field delineations included an evaluation of hydrophytic vegetation, hydric soils, and wetland hydrology, in accordance with the U.S. Army Corps of Engineers *Manual for Identifying and Delineation of Jurisdictional Wetlands* (1987). Qualitative Ohio EPA ORAM (Ohio Rapid Assessment Method) for wetlands (Version 5.0) were completed during the field investigations for each of the delineated wetlands that were identified throughout the 200-foot study corridor. Wetlands within 1,000 feet of both routes were evaluated by reviewing Ohio Wetland Inventory (OWI) maps. U.S. Department of Agriculture Natural Resource Conservation Service (USDA-NRCS) soil survey and hydric soil lists for Wayne and Summit Counties Ohio were reviewed for the Preferred and Alternate Routes. Following OPSB recommendations regarding the waiver from fully developing ecological information on the Alternate Route, digital OWI data was supplemented in locations along the Alternate Route where fieldwork was not completed. Desktop developed information is considered to have less accuracy as compared to field-generated information. A comparison of two areas using the two disparate data sources is not usually applied in this type of analysis.

Completed U.S. Army Corps of Engineers wetland delineation and Ohio EPA ORAM data forms for the wetlands identified along the Preferred Route are provided in Appendix 07-1A, 07-1B, and 07-1C. Table 07-2 provides a breakdown of the wetlands that are located within the 200-foot study corridor, along with associated Cowardin and ORAM Classifications, and the proposed crossing method for each wetland along the Preferred Route. Detailed wetland maps showing field delineated wetlands within the 200-foot study area are shown at a 1:6,000 scale, illustrated in Appendix 07-01, Figures 07-1A through 07-1F.

Twenty-two wetlands were identified and delineated within the 200-foot study corridor of the Preferred Route. Twelve wetlands are classified as Palustrine Emergent (PEM) under the Cowardin classification system. Four wetlands are classified as Palustrine Emergent/Palustrine Scrub-Shrub (PEM/PSS). Two wetlands are classified as Palustrine Emergent /Palustrine Forested (PEM/PFO). Two wetlands are classified as PEM/PSS/PFO. One wetland is Palustrine Open Water (POW). One wetland is a vernal pool.

For the ORAM assessment, nine wetlands were calculated to be Category I wetlands (Score 0/100 to 29.9). These include Wetlands 1, 4, 5, 6, 7c, 7d, 8, 9b, and 11.

Category 1 wetlands constitute those that support minimal wildlife habitat, and have minimal hydrological and recreational functions. These wetlands do not provide critical habitats for, nor contain, threatened or endangered species. These limited quality wetlands are considered to be a resource that has been severely degraded, has a limited potential for restoration, or to be of low ecological functionality.

Twelve wetlands are considered to be Category II wetlands (Score 30/100 to 59.9/100). These include Wetlands 2, 3, 7a, 9a, 9c, 9d, 10, 10a, 10b, 10c, 10d, and 11a. Category 2 wetlands are considered wetlands of moderate quality, with functioning, diverse, healthy water resources that have ecological integrity. These wetlands support moderate wildlife habitat, and are wetlands dominated by native species but generally without the presence of rare or endangered species. Category 2 wetlands also include those that are degraded, but have reasonable potential for establishing lost wetland functions.

One wetland, Wetland 7b complex, has a Category III classification (Score 60/100 to 100/100), with a score of 68. Category 3 wetlands constitute those of superior quality, which supports high levels of biological diversity, native species, and high functional values. These wetlands often provide habitat for threatened or endangered species. Wetland 7b complex is a relatively large, high quality mature wetland.

Dominion East Ohio plans to drill beneath the majority of wetlands on the Preferred or Alternate Route, using HDD techniques to avoid impacts to these wetlands. Wetland acreage within the 60-foot construction corridor of the Preferred and Alternate Routes are 4.3 and 3.3, respectively. Table 06-2 lists the comparative impact of Preferred and Alternate Routes on wetlands within the project study area. Table 07-2 lists proposed crossing methodology of wetlands in the study corridor. Due to the planned horizontal directional drilling (HDD) of the majority of wetlands along the Preferred Route, it is estimated that approximately 0.4 acre of wetland will be impacted within the 60-foot study corridor.

(d) Woody and Herbaceous Vegetation Land: The Preferred and Alternate Routes are bordered for portions of their lengths by woodlots, scrub/shrub, old-field, and agricultural cropland. The reduced construction corridor width of 30 feet that Dominion East Ohio will establish in woodlot areas minimizes impacts to woodlots to 3.9 and 4.8 acres, for the Preferred and Alternate Routes, respectively. The woody and herbaceous plant species identified along the Preferred and Alternate Routes during the field