CAPTION SHEET CASE MANAGEMENT SYSTEM

1. REPORT DATE: 00/00/00	
2. BUREAU: FUS	
3. SECTION(S):	4. PUBLIC MEETING DATE: 00/00/00
5. APPROVED BY:	
DIRECTOR:	
SUPERVISOR:	
6. PERSON IN CHARGE:	7. DATE FILED: 03/04/05
8. DOCKET NO: A-110150 F0031	9. EFFECTIVE DATE: 00/00/00

PARTY/COMPLAINANT:

RESPONDENT/APPLICANT: DUQUESNE LIGHT COMPANY

COMP/APP COUNTY: UTILITY CODE: 110150

ALLEGATION OR SUBJECT

LETTER OF NOTIFICATION OF DUQUESNE LIGHT COMPANY, PURSUANT TO 52 PA. CODE SEC 57.74(C)(2), FOR THE SITING AND CONSTRUCTION OF A 4.1 MILE 138 KV TRANSMISSION LINE IN HAMPTON AND MCCANDLESS TOWNSHIPS.

Duquesne Light
Our Energy...Your Power

Legal Department
411 Seventh Avenue, 9-1
Pittsburgh, PA 15219

Tel 412-393-1546
Fax 412-393-1418
rsestak@dqe.com

Regina M. Sestak
Assistant General Counsel

A-110150F0031

March 4, 2005

By Overnight Delivery

James J. McNulty, Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

In re: Application of Duquesne Light Company for the Siting and Construction of a 4.1 mile 138 kV Transmission Line in Hampton and McCandless Townships, Allegheny County

Dear Secretary McNulty:

Enclosed for filing are an original and six (6) copies of Duquesne Light Company's Application for Authorization to Site and Construct a 138kV Transmission Line in Hampton and McCandless Townships. Appended to the Application are the Notice of Filing Pursuant to 52 Pa. Code §57.74(c)(2), the Exhibit to the Notice, Exhibits 1 through 8 to the Application, and the Certificate of Service. Exhibit 9 to the Application is being provided as a separate document due to its bulk. A complete copy is being provided to Robert Bennett, Fixed Utility Services. Copies of the Application and Exhibits, or of the Notice and Exhibit, are being served by certified mail upon all persons who are listed in the Certificate of Service.

Please date stamp the enclosed copy of this letter, list the docket number thereon, and return it to me in the stamped, self-addressed envelope enclosed.

Thank you for your attention to this matter. Please contact me at (412) 393-1546, if you have any questions.

Sincerely,

Regina M. Sestak

Regina M. Sestak
Attorney for Duquesne Light Company

Enclosures

cc: All persons listed on the Certificate of Service (with enclosures)
Robert J. Bennett, Manager, Bureau of Fixed Utility Services (with enclosure)

165

Before the
PENNSYLVANIA PUBLIC UTILITY COMMISSION

In re:	:	
Application of Duquesne Light Company	:	
for the Siting and Construction of a 4.1 mile	:	
138 kV Transmission Line in Hampton and	:	Docket No. A- 110150
McCandless Townships, Allegheny County	:	Folder 0031

APPLICATION FOR AUTHORIZATION TO SITE AND CONSTRUCT A 138kV TRANSMISSION LINE IN HAMPTON AND McCANDLESS TOWNSHIPS

TO THE HONORABLE COMMISSION:

AND NOW comes Duquesne Light Company ("Duquesne Light") and, pursuant to Commission Regulation 57.71 through 57.77, 52 Pa. Code § 57.71 through 57.77, files the within Application of which the following is a statement:

INTRODUCTION

1. The name of the Applicant and the address of its principal business office are:

Duquesne Light Company
411 Seventh Avenue
Pittsburgh, PA 15230-1930

2. Duquesne Light is a duly incorporated Pennsylvania public utility engaged in the distribution of electric service to the public, primarily within Allegheny and Beaver Counties, Pennsylvania, in an area of approximately 800 square miles having a combined population based on the 2000 census of approximately 1,327,057.

3. The name and address of Duquesne Light's attorney, who is authorized to receive notice and communications with respect to this application, are:

Regina M. Sestak, Assistant General Counsel
Duquesne Light Company
411 Seventh Avenue, 8-2
Pittsburgh, PA 15219

GENERAL DESCRIPTION OF THE PROPOSED LINE

4. Duquesne Light proposes to construct a 138 kilovolt ("kV") transmission line segment which will tap its Cheswick-North 138 kV double circuit transmission line (Circuits Z-55 and Z-56), located in Hampton Township, and connect the northern circuit (Z-56) to its upgraded Wildwood Substation, also located in Hampton Township, Allegheny County, Pennsylvania. This line will be identified as the "Cheswick-North tap to Wildwood Substation" ("the Line"). A topographic map of the area, that shows the location of the Line, is attached hereto and incorporated herein as Exhibit 1. A system map that shows the location and voltage of existing Duquesne Light transmission lines and substations and the location of the Line and the Wildwood Substation is attached hereto and incorporated herein as Exhibit 2.

5. The Line is 4.1-miles long and overbuilds or replaces existing 23 kV lines for approximately 95 percent of its total length. The Line exits Wildwood Substation, in Hampton Township, toward the west along the south side of the substation access road for approximately 400 feet, on an existing 50' right-of way ("R/W"), before turning southward. The Line then follows the eastern boundary of North Park for approximately 3,900 feet, on an existing 50' R/W. The Line turns southwest for approximately 1,900 feet following the existing 23kV line through North Park and across Hemlock Drive, by existing License Agreement, with no specified easement width. The Line turns westward following along the southern boundary of North Park for approximately 1,600 feet, by existing License Agreement, with no specified easement width, where it enters McCandless Township. The Line continues for another 1,000 feet, on private property centerline R/W to Peebles Road. The Line follows Peebles Road to the southwest for 2,400 feet, and then turns southward following the existing 23 kV line along private property centerline R/W for 1600 feet. It then generally follows Ringeisen Road and Duncan Avenue for 2,000 feet to the major intersection of Thomson Run Road, Duncan Avenue and Ferguson

Road. The Line then turns southeast and follows an existing 23 kV distribution line along Ferguson Road for approximately 3,200 feet where it enters back into Hampton Township, then continues to follow Ferguson Road for another 2,300 feet. The Line then turns southward for 350 feet along an existing 23 kV distribution line on Linwood Road and then follows a paper street behind houses along Coventry Drive on new construction on public right-of way for 900 feet. It then turns east on new construction across a proposed 85' private property R/W for 300 feet to a tap of circuit Z-56 at existing tower #656. A length of 2.2 miles of the Line will be located within Hampton Township, and a length of 1.9 miles of the Line will be located within McCandless Township, Allegheny County. The existing private property rights-of-way agreements are for transmitting electric current for any and all purposes, together with the right to erect, use, maintain and renew the line, and to trim or remove trees, which at any time, may interfere with the construction, maintenance or renewal of the line.

6. A description of the type of construction and materials involved in the Line is attached hereto and incorporated herein as Exhibit 3. Four cross-sectional diagrams showing the typical placement of the support structures are attached hereto and incorporated herein as Exhibits 4, 5, 6 and 7.

7. Construction of the Lines will take place in the following sequence:

(1) The R/W will be cleared as required to accommodate the construction and provide electrical clearances for the operation of the completed Line;

(2) Construction vehicles will enter the R/W to auger holes and install the wood poles;

(3) After installation of the necessary insulators, guys, grounding and other hardware on each pole, the overhead conductors will be installed and the Line connected to existing Tower #656 and to the substation terminal at the Wildwood Substation.

PROPERTY OWNERS

8. The names and address of all known persons, corporations and other entities of record owning property within the proposed rights-of-way are shown in Exhibit 8. Duquesne Light has not acquired any new R/W for the Line.

STATEMENT OF NEED

9. In order to supply the McCandless, Hampton, Pine and Richland areas with reliable electrical energy a 138 – 23 kV substation is required. The existing 23kV Wildwood Substation must be upgraded to 138 kV which will require the construction of a new 138 kV transmission line. The Wildwood Substation, built in 1938, is supplied from the 23 kV subtransmission system. The 23 kV subtransmission system is in turn supplied from two large 138 kV transmission substations, called the North and Pine Creek Substations. Originally, the Wildwood Substation supplied the area with a distribution service voltage of 4 kV. The portions of McCandless and Hampton Townships served by Wildwood Substation were initially mostly rural. As the territory continued to develop into larger commercial and residential areas, the original 4 kV distribution was no longer able to provide the additional capacity required. In the early 1970's this growth was supplied by the Wildwood Substation and the newly established 13.2/23 kV distribution system. These new distribution circuits originate from 138 kV transmission substations, i.e., the North and the Pine Creek Substations. As the electrical load continued to grow in the 1990's and early 2000's, maximum loading during peak times has occurred on the original 4 kV Wildwood Substation, the newer 13.2/23 kV distribution circuits, and on the main 138 kV transmission substations. The proposed 138 kV Wildwood Substation will alleviate these load problems and improve the circuit reliability in the area. Some of the existing circuits are extremely long and therefore restoration time is increasing. Establishment of a new 138-23 kV substation will greatly improve service restoration time by cutting circuit exposure approximately by 50%. Duquesne Light performs an

annual Reliability Benchmarking Study. This study is conducted by SGS Statistical Services, LLC which is located in Tucson, Arizona. This service provides reliability information to 46 Electric Utilities across the United States. The study incorporates system outage averages, trend charts, Six-Sigma screening and performance points to analyze circuits. The study indicates that a significant number of worse performing circuits in the Duquesne Light system originate from both North and Pine Creek Substations. These two substations and some of the circuits supplied by the substation would be relieved by Wildwood Substation. The loading and reliability of the area would be greatly improved. To summarize, this upgrade will result in the following:

1) Eliminate the older 4 kV circuits;
2) Eliminate overloads on the existing 13.2/23 kV circuits by establishing new 13.2/23 kV distribution circuits at the upgraded Wildwood Substation;
3) Eliminate overloads on the North and Pine Creek 138 kV substations by transferring portions of distribution load to the newly upgraded Wildwood Substation; and
4) Improve circuit reliability by reducing circuit length and thereby reducing circuit exposure.

SAFETY CONSIDERATIONS

10. The Line will be designed, constructed, operated and maintained to meet or exceed the requirements of the 2002 current edition of the National Electrical Safety Code ("NESC"). The safety standards contained in the NESC relating to overhead electric supply lines have been incorporated into the design of the proposed Line as minimum safety standards as to required clearances and structural loadings. The design, construction, operation and maintenance procedures for this project will conform to Duquesne Light's transmission and distribution construction standards and Duquesne Light's procedures for construction, operation, maintenance and safety,

which include erosion and sedimentation control, storm water management, and line clearance and vegetation management on rights-of-way. These standards meet or exceed all relevant NESC standards and all standards of the Federal Occupational Safety and Health Administration.

ENVIRONMENTAL ASSESSMENT

11. Duquesne Light contracted with GAI Consultants to complete a comprehensive study of the projected environmental impacts of the Line and six alternate routes. The results of the study are contained in the Environmental Assessment and Line Route Study, dated May, 2004, and designated as Exhibit 9. The Line is referred to as Route E-1 in the Study.

12. A total of 23 environmental and socioeconomic resource criteria were evaluated to determine the projected impacts of the alternate routes. The 23 resource criteria were based on Pennsylvania Public Utility Commission regulations as well as traditional environmental impact assessment criteria. Exhibit 9 describes and scores the environmental impact of each alternate route in the Executive Summary (pages xii thru xv), Section 2, and Section 3. The corridor planning methodology and a comparison of the merits and detriments of each route are discussed in Exhibit 9, in particular Sections 2 and 3. There are no archaeological, geologic, historic, scenic, or wilderness areas located within two miles of the study area. There are no airports or air navigation directional beacons located within two miles of the study area.

GENERAL DESCRIPTION OF THE ALTERNATE ROUTES

13. Seven proposed routes, the Line (Route E-1) and six alternate routes, were selected to be included in the Environmental Assessment and Line Route Study. Routes A, B, C, D, and D/C would tap the northern circuit (Z-56) of the Cheswick-North line at four different locations, in Hampton Township, and Route E would tap the northern circuit (Z-20) of the Crescent-North line, in Ross Township. An aerial

photographic map of the area, Figure ES-1, showing all seven routes is included in Exhibit 9.

14. Route A is 4.2-miles long and follows Wildwood Road eastward for approximately 7,480 feet to Pennsylvania Route 8 and then continues southward along Route 8 for approximately 13,000 feet to Pine Creek where it crosses east over Route 8. The route continues for 700 feet on new private property R/W to the Anvil Products plant, then turns to the southeast for 1,000 feet along an existing sub-transmission line. A tap of circuit Z-56 at existing Tower #670 is the southern termination of this route. Route A would generally be constructed on public R/W and will require overbuilding on existing electric lines along Wildwood Road and Route 8. Route A is located entirely within Hampton Township, Allegheny County.

15. Route B is 3.1-miles long and follows an existing 23 kV line toward the south for approximately 12,500 feet. At Duncan Avenue, the route continues to the southwest for approximately 3,900 feet following distribution lines along residential streets. A tap of circuit Z-56 at existing Tower #660 will be the southern termination of this route. The northern section of Route B would be constructed on the existing 23 kV R/W between Wildwood Substation and Duncan Avenue. The southern section would be constructed on new private property and public R/W. Route B is located entirely within Hampton Township, Allegheny County.

16. Route C is 4.5-miles long and exits Wildwood Substation to the south crossing Wildwood Road and proceeds on new R/W for approximately 400 feet over private property before it drops down to the CSX Railroad R/W in the Pine Creek Valley. This route parallels the railroad (in the R/W) for approximately 23,130 feet (a 600-foot section at Mount Royal Boulevard is on new private property R/W). As this route approaches the north circuit (Z-56) of the Cheswick-North line, it proceeds west over existing transmission line R/W for a distance of approximately 400 feet to a tap of circuit Z-56 at existing tower #669. Route C is located entirely within Hampton Township, Allegheny County.

17. Route D follows the alignment of the Line for the first 5,600 feet. This 3.2-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet before turning southward. The route follows an existing 23 kV line along the eastern boundary of North Park for approximately 5,200 feet with an additional 600 feet on new private property R/W to Hemlock Drive. It continues southward for approximately 3,100 feet following existing distribution lines to the end of Laurel Lane (includes a 600-foot section of new private property R/W over the Wildwood Golf Club). This route then proceeds approximately 6,000 feet on new R/W across private property before crossing Ferguson Road. (From this point on the route follows the same alignment as the Line) The route then follows existing distribution lines for 350 feet. After crossing Linwood Drive, it then proceeds 900 feet over new public R/W, on a paper street behind houses along Coventry Drive, turning east for 300 feet on new private property R/W to a tap of circuit Z-56 at existing tower #656. Route D is located entirely within Hampton Township, Allegheny County.

18. Route D/C is a combination of Route D and Route C, following Route D in the approximate northern half and Route C in the approximate southern half of its alignment. This 4.1-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet before turning southward. This route follows an existing 23 kV line along the eastern boundary of North Park for approximately 5,200 feet with an additional 600 feet on new private property R/W to Hemlock Drive. It continues southward for approximately 3,100 feet following existing distribution lines to the end of Laurel Lane (includes a 600-foot section of new private property R/W over the Wildwood Golf Club). Past the south end of Laurel Lane, the route leaves the distribution line R/W, and proceeds on new private property R/W approximately 1,700 feet to connect with Route C along the CSX Railroad line. The route parallels the railroad for approximately 10,100 feet (a 600-foot section at Mount Royal Boulevard is on new R/W). As the route approaches

the Cheswick-North line, it proceeds west approximately 400 feet over transmission line R/W to a tap of circuit Z-56 at existing tower #669. Route D/C is located entirely within Hampton Township, Allegheny County.

19. Route E follows the alignment of the Line for the first 14,800 feet. This 4.8-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet. The route follows an existing 23 kV line along the eastern boundary of North Park for approximately 3,900 feet. The route turns southwest for approximately 1,900 feet following the existing 23kV line across North Park and Hemlock Drive. The route turns westward following along the southern boundary of North Park for approximately 1,600 feet, where it enters McCandless Township. The route continues for another 1,000 feet to Peebles Road. The route then follows Peebles Road to the southwest for 2,400 feet, and turns southward following the existing 23 kV line along existing R/W for 1600 feet. It then generally follows Ringeisen Road and Duncan Avenue for 2,000 feet to the major intersection of Thomson Run Road, Duncan Avenue and Ferguson Road. The route continues along the 23kV line southward following Thomson Run Road for 5,100 feet where it enters Ross Township. The route continues to follow Thomson Run Road for another 5,400 feet where it turns east for 200 feet on Duquesne Light property to a tap of its Crescent-North 138 kV circuit Z-20 at existing Tower #647-1, inside the North 138 kV Substation. Other than the last 200 feet on Duquesne Light property, the route overbuilds an existing 23kV line for the entire length. Route E is located within Hampton, McCandless, and Ross Townships, Allegheny County.

SELECTION OF PROPOSED LINE

20. The Line (Route E-1) is the most suitable alternative for the proposed transmission line project. The Line had the second lowest environmental impact score and had the second lowest score for non-existing R/W. Other than the last 900 feet on a paper street R/W and 300 feet on new private property R/W, no commercial/densely

populated areas or residential land or roads are crossed on non-electric line R/W. Although route E had the lowest environmental impact score, this route was not selected because the final mile of the route approaching the tap is already supporting four existing 23 kV circuits. Due to the reliability issues involved with a mile long 138 kV and four existing 23 kV circuits on a single pole line, Route E was rejected. See Section 3 of Exhibit 9 for the environmental impact scores of all the routes.

21. The Line was also selected because, in the future, the Line can readily be extended to the North Substation, along an existing 23 kV R/W, should the load growth in the area require a new independent line from North Substation to Wildwood Substation. Once the 138 kV line is extended a new breaker position can be established at North Substation and thereby increase the electrical capacity and improve the service reliability to the area.

CONSTRUCTION COST AND IN-SERVICE DATE

22. The estimated cost of construction of the project is $2,500,000; the proposed in-service date for the Line is June 1, 2007.

LITIGATION

23. There is no litigation concluded or in progress concerning the construction of the Line.

SERVICE OF APPLICATION

24. Copies of this Application, or Notice of its filing, have been served upon all interested parties by certified mail, return receipt requested, as required by Commission Regulation 57.74, 52 Pa. Code § 57.74.

EXHIBITS

25. The following exhibits are attached to this Application:

1) Topographic Map showing the location of the Line

2) Duquesne Light System Map showing the location of the Line

3) A Description of the Line

4) Cross-sectional Diagram of the Line

5) Cross-sectional Diagram of the Line

6) Cross-sectional Diagram of the Line

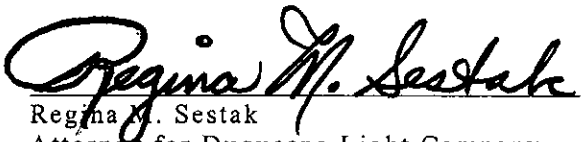
7) Cross-sectional Diagram of the Line

8) Names and Addresses of Property Owners

The following Exhibit accompanies this Application because it is too bulky to attach directly:

9) Environmental Assessment and Line Route Study

Respectfully submitted,



Regina M. Sestak
Attorney for Duquesne Light Company
Pa. I.D. # 23632

Duquesne Light Company
411 Seventh Avenue, 8-2
Pittsburgh, PA 15219

Telephone: (412)393-1546
FAX: (412) 393-1418

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

AFFIDAVIT

THOMAS P. SCHMITT, being duly sworn according to law, deposes and says that he is a Senior Engineer at Duquesne Light Company and the project engineer for the proposed Line; that he is authorized to and does make this Affidavit for it; and that the facts set forth above are true and correct to[t] the best of his knowledge, information and belief, and he expects Duquesne Light Company to be able to prove the same at any hearing hereof.

Thomas P. Schmitt

Sworn to and subscribed
before me this 24th day
of February, 2005.

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Mary Jane Hammer, Notary Public
City Of Pittsburgh, Allegheny County
My Commission Expires Oct. 6, 2007
Member, Pennsylvania Association Of Notaries

Before the
PENNSYLVANIA PUBLIC UTILITY COMMISSION

In re:	:	
Application of Duquesne Light Company	:	
for the Siting and Construction of a 4.1 mile	:	
138 kV Transmission Line in Hampton and	:	Docket No. A- _____
McCandless Townships, Allegheny County	:	Folder _____

NOTICE OF FILING PURSUANT TO 52 Pa. Code §57.74 (c)(2)

An Application is being filed with the Public Utility Commission on March 4, 2005, concerning the proposed siting and construction of a 4.1 mile long, 138 kilovolt ("kV") transmission line ("the Line") that will overbuild or replace existing 23 kV lines for approximately 95 percent of its total length. The Line exits Wildwood Substation, in Hampton Township, toward the west along the south side of the substation access road for approximately 400 feet, on an existing 50' right-of way ("R/W"), before turning southward. The Line then follows the eastern boundary of North Park for approximately 3,900 feet, on an existing 50' R/W. The Line turns southwest for approximately 1,900 feet following the existing 23 kV line through North Park and across Hemlock Drive, by existing License Agreement, with no specified easement width. The Line turns westward following along the southern boundary of North Park for approximately 1,600 feet, by existing License Agreement, with no specified easement width, where it enters McCandless Township. The Line continues for another 1,000 feet, on private property centerline R/W to Peebles Road. The Line follows Peebles Road to the southwest for 2,400 feet, and then turns southward following the existing 23 kV line along private property centerline R/W for 1600 feet. It then generally follows Ringeisen Road and Duncan Avenue for 2,000 feet to the major intersection of Thomson Run Road, Duncan Avenue and Ferguson Road. The Line then turns southeast and follows an existing 23 kV distribution line along Ferguson Road for approximately 3,200 feet where it enters back into Hampton Township, then continues to follow Ferguson Road for another 2,300 feet. The Line then turns southward for 350 feet along an existing 23 kV distribution line on Linwood Road and then follows a paper street behind houses along Coventry Drive on new construction on public right-of way for 900 feet. It then turns east on new construction across a proposed 85' private property R/W for 300 feet to a tap of circuit Z-56 at existing tower #656. A length of 2.2 miles of the Line will be located within Hampton Township, and a length of 1.9 miles of the Line will be located within McCandless Township, Allegheny County. A map showing the proposed route of the Line is attached.

Copies of the full Application and Exhibits are available for public examination during normal operating hours at Hampton Community Library, 4960 Route 8/Shoppers Plaza, Allison Park, PA 15101, and at Northland Public Library, 300 Cumberland Road, Pittsburgh, PA 15237. A copy of the full Application and additional information is also available at: www.duquesnelightwildwood.info.

Regina M. Sestak

Regina M. Sestak
Attorney for Duquesne Light Company
Duquesne Light Company
411 Seventh Avenue, 8-2
Pittsburgh, PA 15219
Telephone: (412)393-1546
FAX: (412) 393-1418

PROPRIETARY INFORMATION

Docket Number A-110150 F0031

Name of Document 138kV Tap to Wildwood Substation Maps

Date Document Received 3-4-2005

DOCUMENT CONTAINS

PROPRIETARY INFORMATION

EXHIBIT 3

DESCRIPTION OF THE LINE

The Line is 4.1-miles long. The Line will be a three-phase alternating current 138 kV transmission line. It will consist of three phase conductors and one or two shield wires. Each phase conductor will be an 853.7 kcmil 24/13 Aluminum Conductor Alloy Reinforced ("ACAR") conductor. Each shield wire will be a #1 AWG Aluminum Equivalent, 4/3 Alumoweld-Aluminum ("AWAC") conductor. The Line will require approximately 110 single wood or steel poles and 7 wood or steel pole H-frames. The existing poles will be replaced with larger poles. The poles will be directly embedded. The height of the poles will range between 60 feet and 75 feet above the ground. The typical length of the spans will vary from 125 feet to 200 feet. The maximum span length will be 1,443 feet, between H-frames. The minimum line to structure clearance is 3.75 feet. The minimum conductor ground clearance at mid span is 32 feet under normal conditions and 30 feet under maximum load and temperature.

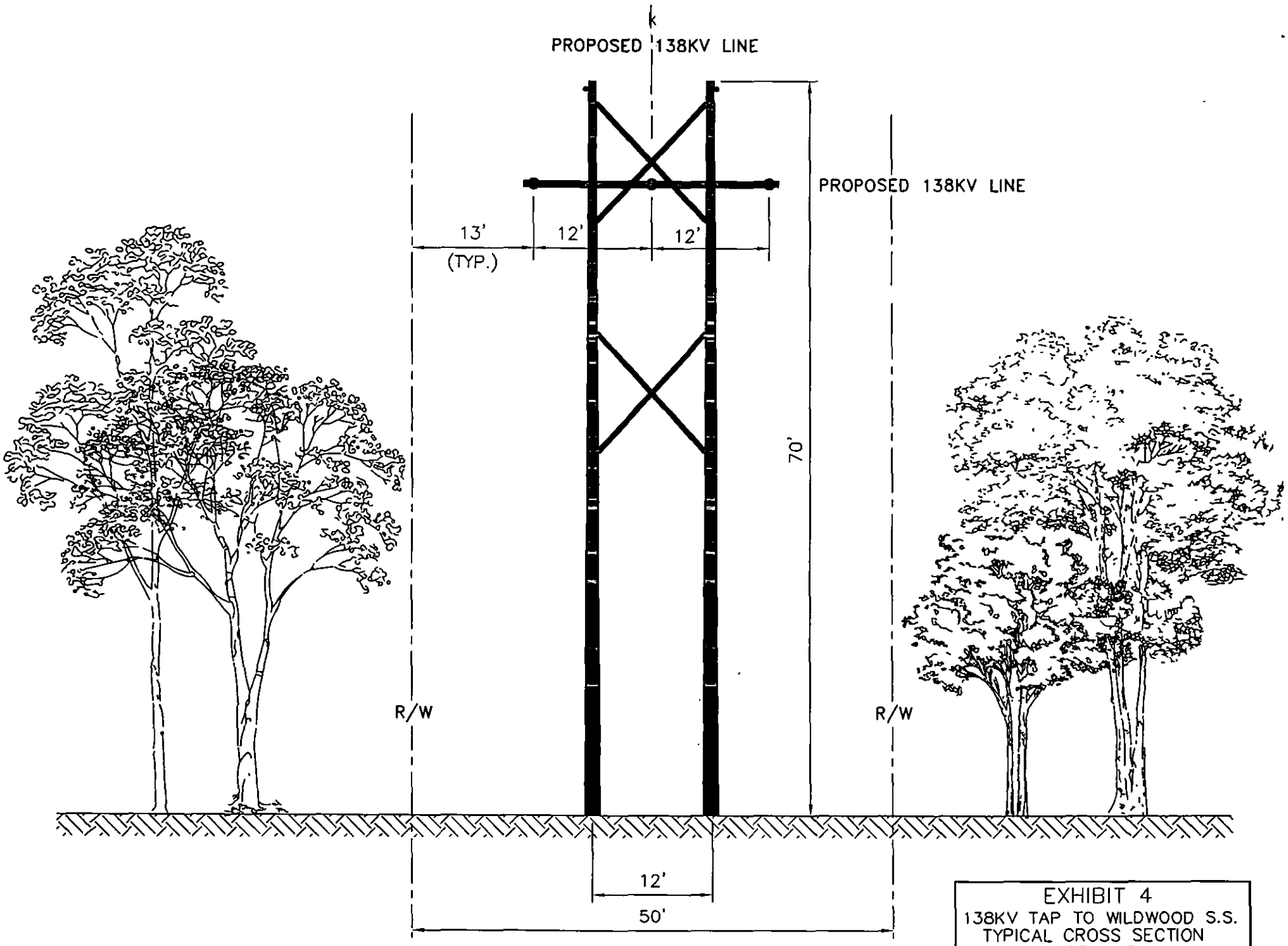
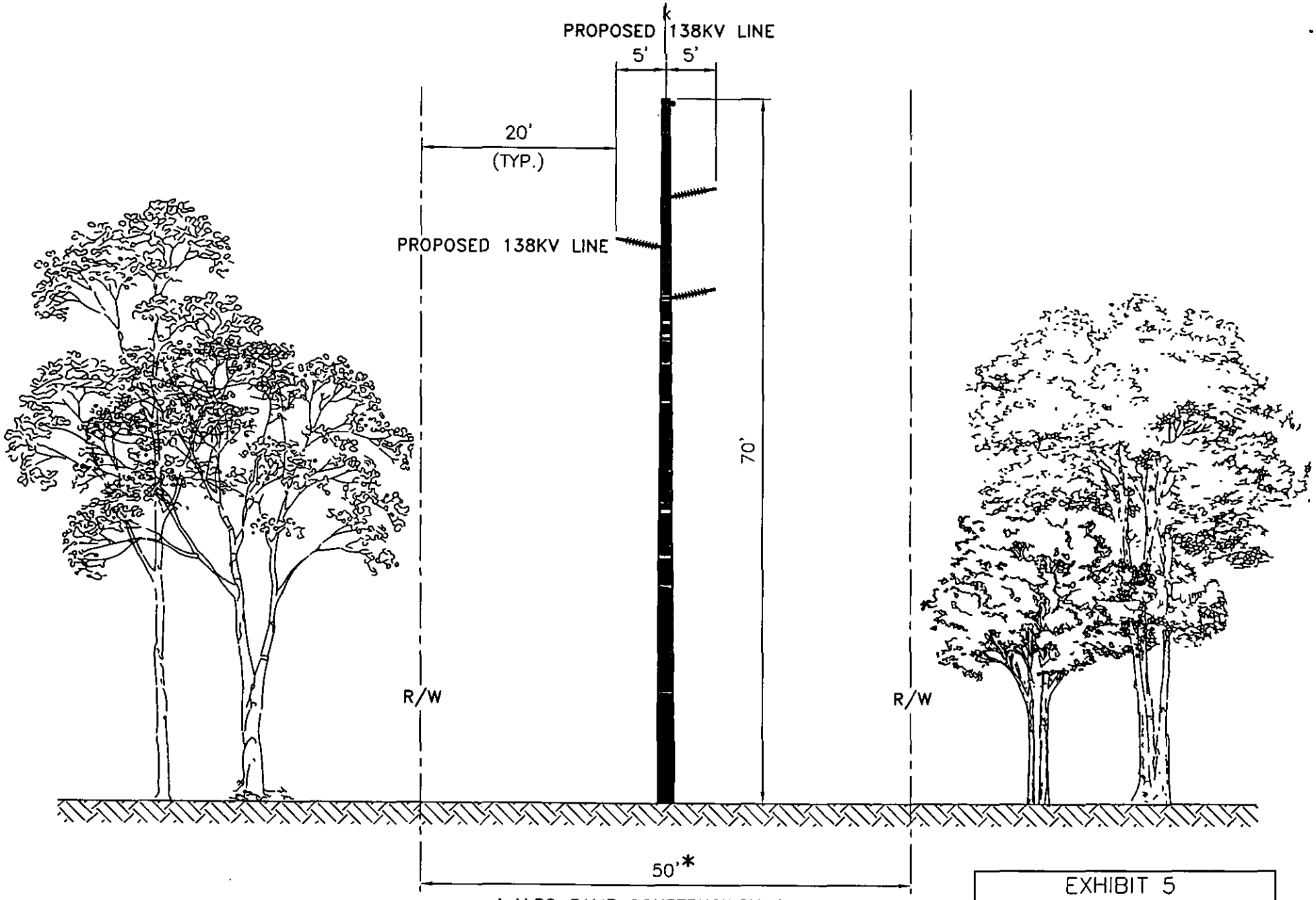


EXHIBIT 4
138KV TAP TO WILDWOOD S.S.
TYPICAL CROSS SECTION
OF LINE



* ALSO SAME CONSTRUCTION ON CENTERLINE RIGHT-OF-WAY AND BY LICENSE AGREEMENT; i.e. NO RIGHT-OF-WAY WIDTH.

EXHIBIT 5
138KV TAP TO WILDWOOD S.S.
TYPICAL CROSS SECTION
OF LINE

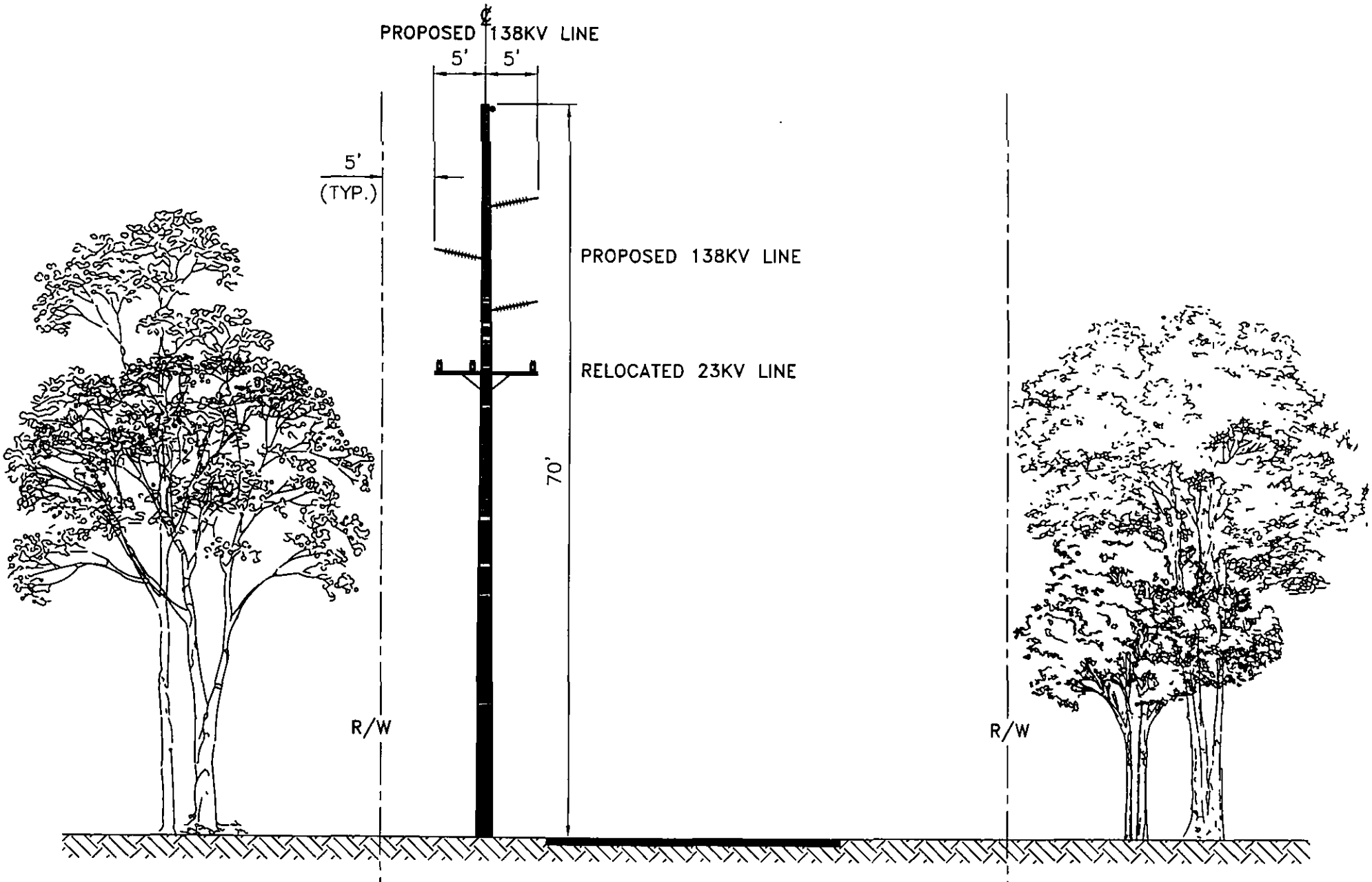


EXHIBIT 6
138KV TAP TO WILDWOOD S.S.
TYPICAL CROSS SECTION OF LINE

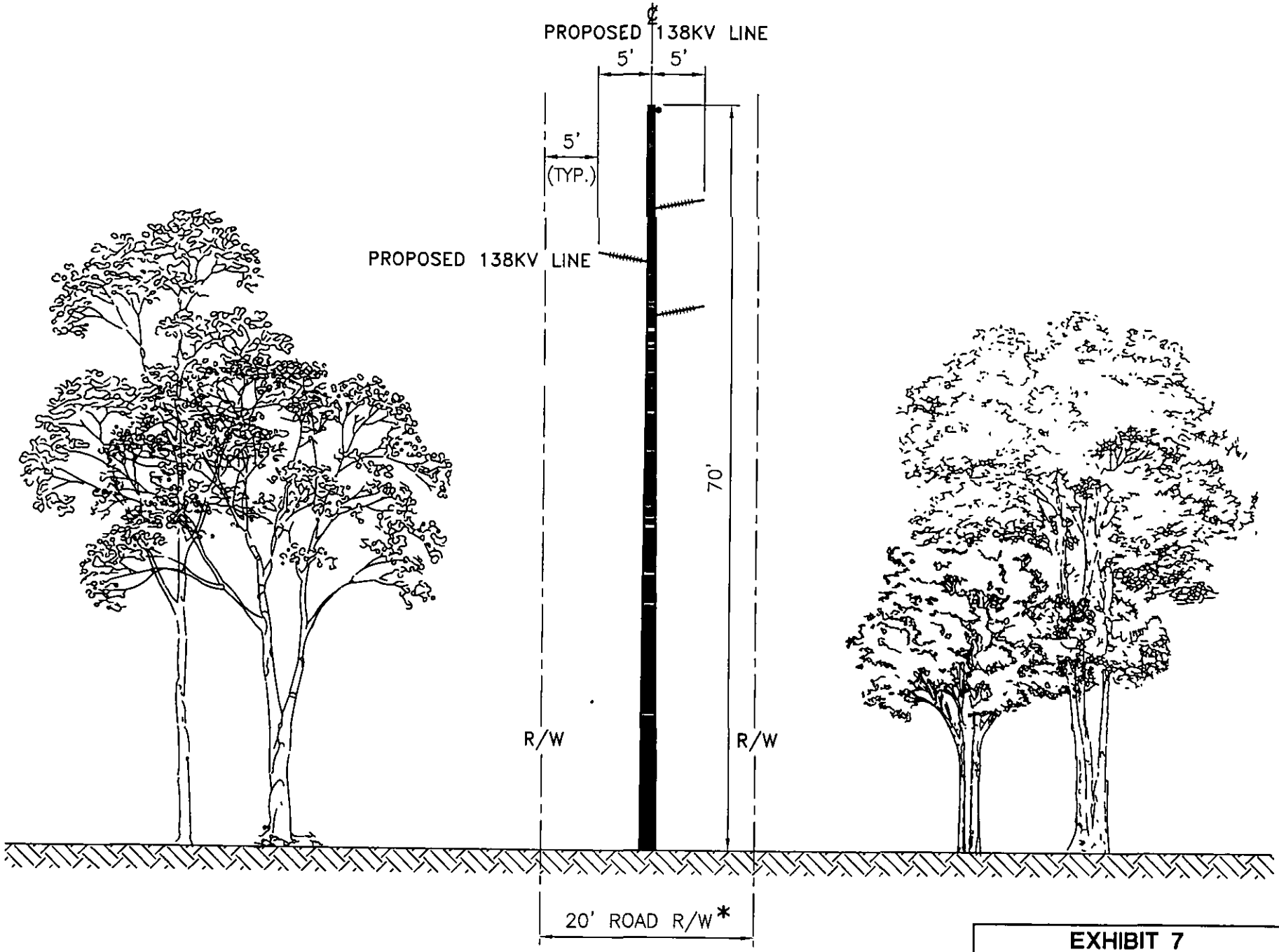


EXHIBIT 7
138KV TAP TO WILDWOOD S.S.
TYPICAL CROSS SECTION OF LINE

EXHIBIT 8

Name	Mailing Address	City State Zip
MTRM Associates	2361 Venture Drive	Gibsonia, PA 15044
Parkway Tennis Club	2330 Wildwood Road	Allison Park, PA 15101
Vincent P. Rutledge	2330 Wildwood Road	Allison Park, PA 15101
County of Allegheny	County Office Building	Pittsburgh, PA 15219
Terence J. & Thomas J. Nypaver	1956 Shady Oak Circle	Allison Park PA, 15101
James E. Hurley & Patricia A. McKenney	1952 Shady Oak Circle	Allison Park PA, 15101
Pauline B. Kleysteuber	1948 Shady Oak Circle	Allison Park PA, 15101
Paul M Jr. and Mary K Miller	1945 Shady Oak Circle	Allison Park, PA 15101
Francis Patrick and Patricia Ann Sullivan	1941 Shady Oak Circle	Allison Park, PA 15101
Oleg P and Nadejda E Lapets	1937 Shady Oak Circle	Allison Park, PA 15101
Robert B and Suzanne L Watkins	1933 Shady Oak Circle	Allison Park, PA 15101
Karen L Dominici	1929 Shady Oak Circle	Allison Park, PA 15101
Gordon B Higgins and Margaret Una Trevaion	1925 Shady Oak Circle	Allison Park, PA 15101
Matthew J and Margaret A Nypaver	1921 Shady Oak Circle	Allison Park, PA 15101
Arthur R and Helen P Belmont	1917 Shady Oak Dr	McCandless, PA 15101
George S and Ellen F Groves	1913 Shady Oak Dr	Allison Park, PA 15101
Richard P and Christine M Cottrill	1909 Shady Oak Dr	Allison Park, PA 15101
Janice E Jorgenson	1905 Shady Oak Dr	Allison Park, PA 15101
David B Milkey	9530 Springfield Dr	Allison Park, PA 15101
Mark J and Donna J Hillenbrand	9531 Springfield Dr	Allison Park, PA 15101
Christine Lynne Salon	9500 Peebles Rd	Allison Park, PA 15101
Michael A Leo	9494 Peebles Rd	Allison Park, PA 15101
Michael A Voit	1306 Wendyview Dr	Allison Park, PA 15101
Kyle W and Maureen E Nellis	1301 Wendy View Dr	Allison Park, PA 15101
Paulette D Fischer and Michael R Johnston	9462 Peebles Rd	Allison Park, PA 15101
Frederick C & Betty Ann Evarts & Roger C Evarts	9456 Peebles Rd	Allison Park, PA 15101
Albert C Jr and Anna M Forsythe	9450 Peebles Rd	Allison Park, PA 15101
Edward B and Kay R Unks	9440 Peebles Rd	Allison Park, PA 15101
George F Ziegler	9422 Peebles Rd	Allison Park, PA 15101
Bonita J and Kelly R Robertson	9404 Peebles Rd	Allison Park, PA 15101
James A and Louise A McConnel	9390 Peebles Rd	Allison Park, PA 15101
David G and Irene A Mooney	9368 Peebles Rd	Allison Park, PA 15101
Leslie Glenn	9350 Peebles Rd	Allison Park, PA 15101
Zygmunt J and Judy A Paclawski	9290 Peebles Rd	Allison Park, PA 15101
Nancy Elizabeth Molter	1799 Sample Rd	Allison Park, PA 15101
John Paul Klauss	9120 Collington Sq	Allison Park, PA 15101
Brian D Walczak	9118 Collington Sq	Allison Park, PA 15101
Amwood LLP	0 P.O. Box 355	Bakerstown, PA 15007
Nathan F and L Delberta Kerr	1776 Sample Rd	Allison Park, PA 15101
Richard A and Rosemary C Smith	9057 Ringeisen Rd	Allison Park, PA 15101
Ronald Knox and Christine A Porter	9041 Ringeisen Rd	Allison Park, PA 15101
Roberta Chappel	9025 Ringeisen Rd	Allison Park, PA 15101
David A and Pamela V Yakelis	9009 Ringeisen Rd	Allison Park, PA 15101
Harry J and Dorothy S Dowey	8983 Ringeisen Rd	Allison Park, PA 15101
Pawel and Anna Wankowicz Kalinska	8977 Ringeisen Rd	Allison Park, PA 15101
John J and Clara Pauline Colpo	8951 Ringeisen Rd	Allison Park, PA 15101
Holy Trinity Greek OrthodoxChurch	302 W North Ave	Pittsburgh, PA 15212

Name	Mailing Address	City State Zip
Violas Food Stores INC	8001 Rowan Rd	Cranberry Twp, PA 16066
Sunoco	1675 Duncan Ave	Allison Park, PA 15101
Dennis A Mascari	1700 Ferguson Rd	Allison Park, PA 15101
Dennis A and Mary Louise Mascari	8700 Thompson Run Rd	Allison Park, PA 15101
Richard J and Susan A Smolen	1720 Ferguson Rd	Allison Park, PA 15101
Richard J and Susan A Smolen	1736 Ferguson Rd	Allison Park, PA 15101
David E & Anne M Macintyre	1772 Ferguson Rd Apt 101	Allison Park, PA 15101
Jack H Nofsinger	1772 Ferguson Rd Apt 102	Allison Park, PA 15101
Rose Pitassi Peckman	1772 Ferguson Rd Apt 103	Allison Park, PA 15101
Donald E Klingenberger	1772 Ferguson Rd Apt 104	Allison Park, PA 15101
Joel F & Martha Jane Pitlock	1772 Ferguson Rd Apt 105	Allison Park, PA 15101
James T & Shirley A Dougherty	1772 Ferguson Rd Apt 106	Allison Park, PA 15101
Robert L & Patricia P Kiser	1770 Ferguson Rd Apt 201	Allison Park, PA 15101
Joan Shannon	1770 Ferguson Rd Apt 202	Allison Park, PA 15101
Janice E Llewellyn	1770 Ferguson Rd Apt 203	Allison Park, PA 15101
Anne C Korneff	1770 Ferguson Rd Apt 204	Allison Park, PA 15101
Jay W Auld	1770 Ferguson Rd Apt 205	Allison Park, PA 15101
Mary A Everett	1770 Ferguson Rd Apt 206	Allison Park, PA 15101
Margaret J Genter	1800 Foxcroft Ln Apt 1001	Allison Park, PA 15101
Marcia Elaine Bonk	1806 Ferguson Rd	Allison Park, PA 15101
George A Steffy	1820 Ferguson Rd	Allison Park, PA 15101
Ronald A and Janice M Cammarata	1828 Ferguson Rd	Allison Park, PA 15101
Darryl E Pecher	1836 Ferguson Rd	Allison Park, PA 15101
Jean R Lorenzo	1850 Ferguson Rd	Allison Park, PA 15101
Daniel J and Heidi L Huber	1852 Ferguson Rd	Allison Park, PA 15101
Minati Ghosal	1811 Guyton Rd	Allison Park, PA 15101
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Chad M and Sharon L Isherwood Slencak	8412 Post Rd	Allison Park, PA 15101
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Michael J Dicaprio	3960 N Monet North Ct	Allison Park, PA 15101
Bruce A and Julie Ann Krist	3954 N Monet North Ct	Allison Park, PA 15101
William D and Catherine A Cameron	3948 N Monet North Ct	Allison Park, PA 15101
Ronald R and Cheryl L Loesch	3942 N Monet North Ct	Allison Park, PA 15101
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Rolf Max and Patricia A Thiebes	2155 Coventry Dr	Allison Park, PA 15101
Carl E and Barbara P Schaier	2161 Linwood Dr	Allison Park, PA 15101
Norman H and Linda J Ryan	3862 Greenfield Dr	Allison Park, PA 15101
Clement H and Frances J Blackstone	3849 Greenfield Rd	Allison Park, PA 15101
Kenneth M and Iris G Stehle	3843 Greenfield rd	Allison Park, PA 15101
Giacinto and Nancy Tucciarone	3837 Greenfield Rd	Allison Park, PA 15101
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Name	Mailing Address	City State Zip
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Darin M Witherup	3813 Greenfield Rd	Allison Park, PA 15101
David P and Marylyn S Tessmer	3807 Greenfield Rd	Allison Park, PA 15101
David R and Lorri Anne Jackson	3801 Greenfield Rd	Allison Park, PA 15101
James A and Jill M Balik	2154 Coventry Dr	Allison Park, PA 15101
Mary Kaufman	2148 Coventry Dr	Allison Park, PA 15101
Rita E and Edward D Reidy	2142 Coventry Dr	Allison Park, PA 15101
Donald C and Jacquelyn B Antczak	2136 Coventry Dr	Allison Park, PA 15101
Arthur C and Margaret O Chapman	2130 Coventry Dr	Allison Park, PA 15101
Timothy J and Pamela S Bucha	2124 Coventry Dr	Allison Park, PA 15101
Richard H and Evelyn M Oberlander	2118 Coventry Dr	Allison Park, PA 15101
Gregory L and Kathleen M Scott	3782 Coventry Ct	Allison Park, PA 15101
Steven and Jo Ellen Wershbale	3765 Coventry Ct	Allison Park, PA 15101
St Paul's United Methodist Church	1997 Ferguson Rd	Allison Park, PA 15101
Fiore C Sr and Maureen Londino	4033 Rosemonte Dr	Allison Park, PA 15101
Todd A and Heather E Bigatel	2130 Wyland Ave	Allison Park, PA 15101
Douglas N and Corinne Cavlovic	2103 Legendary Dr	Allison Park, PA 15101
Deborah L Iwanyshyn	2100 Legendary Dr	Allison Park, PA 15101
Wayne J Sharp	2129 Legendary Dr	Allison Park, PA 15101
Todd J Frischling	2155 Ferguson Rd	Allison Park, PA 15101
Robert D and Barbara K Pietrala	2167 Ferguson Rd	Allison Park, PA 15101
John E and Carin C Constantakis	3993 Pere Marquette Dr	Allison Park, PA 15101

Before the
PENNSYLVANIA PUBLIC UTILITY COMMISSION

In re Application of Duquesne Light	:	
Company for the Siting and Construction of a	:	
4.1 mile 138 kV Transmission Line in Hampton	;	Docket No. A-_____
and McCandless Townships, Allegheny County	:	Folder _____

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the Application and Exhibits upon the participants listed below in accordance with the requirements of 52 PA. Code §57.74(b) (relating to service of copies):

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2063 15th Floor, RCSOB
Harrisburg, PA 17105-2063

I hereby certify that I have this day served a true and correct copy of the foregoing Notice of Filing and Exhibit upon the participants listed below in accordance with the requirements of 52 Pa. Code §57.74(c) (relating to service of notice):

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Francis Patrick & Patricia Ann Sullivan
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Oleg P. & Nadejda E. Lapets
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Matthew J. & Margaret A. Nypaver
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Roger C. Evarts
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Allen D. Biehler
Secretary of the Department of Transportation
Room 1200 Transportation & Safety Building
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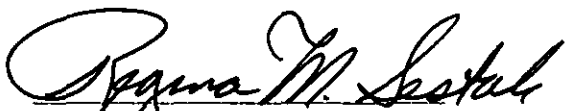
Wayne S. Spilove
Chairman of the Historical & Museum Commission
P.O. Box 1026
Harrisburg, PA 17120

Dated this 4th day of March, 2005.



Regina M. Sestak
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Telephone: (412) 393-1546
FAX (412) 393-1418

EXHIBIT 9
In re: A - 110150 F0031
Application of Duquesne Light Company
for the Siting and Construction of a 4.1 mile
138 kV Transmission Line in Hampton and
McCandless Townships, Allegheny County

GAI CONSULTANTS

ENVIRONMENTAL ASSESSMENT AND LINE ROUTE STUDY, P.O. 47780 - W.O. L0317 WILDWOOD SUBSTATION 138 kV TRANSMISSION LINE ALLEGHENY COUNTY, PENNSYLVANIA

Prepared For: **Duquesne Light Company**
Pittsburgh, Pennsylvania

Project C020461.20

May 2004

DUQUESNE LIGHT COMPANY
PITTSBURGH, PENNSYLVANIA

ENVIRONMENTAL ASSESSMENT AND LINE ROUTE STUDY
P.O. 47708 - W.O. L0317
WILDWOOD SUBSTATION 138 kV TRANSMISSION LINE
ALLEGHENY COUNTY, PENNSYLVANIA

GAI CONSULTANTS, INC.
570 BEATTY ROAD
MONROEVILLE, PENNSYLVANIA 15146-1300

PROJECT C020461.20

MAY 2004

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EXECUTIVE SUMMARY

Overview

Duquesne Light Company (DLCo) proposes to construct a 138 kV transmission line from its Wildwood Substation located in Hampton Township, Allegheny County, Pennsylvania, to a tap of either its Cheswick-North 138 kV double circuit transmission line (Circuits Z-55 and Z-56) located in Hampton Township, or its Crescent North 138 kV double circuit transmission line (Circuits Z-20 and Z-21) located in Ross Township. Seven feasible alternative routes were studied, running from the Wildwood Substation in a generally southward direction. Six routes tap the northern circuit (Z-56) of the Cheswick-North line at four different locations, while the seventh route taps the northern circuit Z-20 of the Crescent North Line inside the North 138 kV Substation.

The transmission line will typically be constructed using single pole structures, either wood or steel, and will be similar to a typical wood pole line supplying the area. A study area was chosen to include the seven alternatives, with expanded study within two miles of the centerlines of each of the proposed routes. Figure ES-1 is an aerial map identifying the study area and alternative line routes.

Project Need

The Wildwood Substation was built in 1938. The substation is supplied from the 23 kV subtransmission system. The 23 kV subtransmission system is in turn supplied from the larger 138 kV transmission substations called North and Pine Creek Substations. The distribution service voltage at Wildwood is 4 kV. Portions of the town of McCandless and Hampton Township served by Wildwood Substation were mostly rural. As the territory continued to develop into larger commercial and residential areas, the original 4 kV

distribution was no longer able to provide additional capacity. During the early 1970s, the area continued to be supplied by Wildwood Substation and the newer 13.2/23 kV distribution system. These circuits originate from the 138 kV transmission substations mentioned previously called North and Pine Creek Substations. As the electrical load continued to grow in the late 1990s, maximum loading during peak times has occurred on the original 4 kV Wildwood Substation, the newer 13.2/23 kV distribution circuits as well as the main 138 kV transmission substations. In order to provide adequate electrical capacity and reliability to this area, it will be necessary to upgrade the existing 23 kV Wildwood Substation to 138 kV. This upgrade will:

1) eliminate the older 4 kV circuits;
2) eliminate overloads on the existing 13.2/23 kV circuits by establishing new 13.2/23 kV distribution circuits at the upgraded Wildwood Substation; and
3) eliminate overloads on the North and Pine Creek 138 kV substations by transferring portions of distribution load to the new upgraded Wildwood Substation.

Alternative Routes

In order to supply adequate power to this substation, a new transmission line will need to be constructed either from the Cheswick-North 138 kV transmission line or the Cresent-North 138 kV transmission line which are located approximately 2.5 miles or 3.5 miles south of the Wildwood Substation, respectively. Seven alternative line routes have been selected within an approximately three-mile wide study area. The seven alternative routes located on quadrant maps are identified on Figures ES-2 through ES-5 and include the following:

Route A. This 4.2-mile long route follows Wildwood Road eastward for approximately 7,480 feet to Pennsylvania Route 8 (Route 8) and then continues southward along Route 8 for approximately 13,000 feet to Pine Creek where it crosses east over Route 8. The line continues for 700 feet on new ROW to the Anvil Products plant, then turns to the southeast for 1,000 feet *along* an existing subtransmission line. A tap of Circuit Z-56 at existing Tower #670 will be the southern termination of this route. Route A will generally be constructed on public ROW and will require overbuilding of existing electric lines along Wildwood Road and Route 8.

Route B. This 3.1-mile long route follows an existing 23 kV line toward the south for approximately 12,500 feet. At Duncan Avenue, the route continues to the southwest for approximately 3,900 feet following distribution lines along residential streets. A tap of Circuit Z-56 at existing Tower #660 will be the southern termination of this route. The northern section of Route B will be constructed on the existing 23 kV ROW between Wildwood Substation and Duncan Avenue. The southern section will be constructed on new ROW and public ROW.

Route C. This 4.5-mile long route exits Wildwood Substation to the south crossing Wildwood Road and proceeds on new ROW for approximately 400 feet over private property before it drops down to the CSX Railroad ROW in the Pine Creek Valley. This route parallels the railroad (in the ROW) for approximately 23,130 feet (a 600-foot section at Mount Royal Boulevard is on new ROW). As this route approaches the northern circuit (Z-56) of the Cheswick-North line, it proceeds west over existing transmission line ROW for a distance of approximately 400 feet to a tap of Circuit Z-56 at existing Tower #669.

Route D. This 3.2-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet before turning southward. The route follows an existing 23 kV line along the eastern boundary of North Park for approximately 5,200 feet, with an additional 600 feet on new ROW to Hemlock Drive. It continues southward for approximately 3,100 feet following existing distribution lines to the end of Laurel Lane (including a 600-foot section of new ROW over the Wildwood Golf Club). This route will then proceed for approximately 6,000 feet on new ROW across private property before crossing Ferguson Road. The route then follows existing distribution lines for 350 feet. After crossing Linwood Road, it then proceeds 900 feet over new ROW, most of which is on a paper street behind houses along Coventry Drive, turning east for 300 feet on new ROW to a tap of Circuit Z-56 at existing Tower #656.

Route D/C. This route is a combination of Route D in approximately the northern half and Route C in the southern half of the alignment. The 4.1-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet before turning southward. This route follows an existing 23 kV line along the eastern boundary of North Park for approximately 5,200 feet, with an additional 600 feet on new ROW to Hemlock Drive. It continues southward for approximately 3,100 feet following existing distribution lines to the end of Laurel Lane (including a 600-foot section of new ROW over the Wildwood Golf Club). Past the south end of Laurel Lane, the route leaves the distribution line ROW and proceeds on new ROW approximately 1,700 feet to connect with Route C along the CSX Railroad line. This route parallels the railroad for approximately 10,100 feet (a 600-foot section at Mount Royal

Boulevard is on new ROW). As the route approaches the Cheswick-North line, it proceeds west approximately 400 feet over transmission line ROW to a tap of Circuit Z-56 at existing Tower #669.

Route E. This 4.8-mile line route exits Wildwood Substation toward the west and follows the alignment of Route D along an existing 23kV line across North Park for the first 5,600 feet, then continues across Hemlock Drive for 700 feet. This route turns westward approximately 2,500 feet following the existing 23kV line across North Park to Peebles Road. Route E then follows Peebles Road to the southwest for 2,400 feet and turns southward following the existing 23 kV line through residential property for 1,600 feet. It then generally follows Ringeisen Road for 2,000 feet to the major intersection of Thomson Run Road, Duncan Avenue and Ferguson Road (Common point with Route E-1). Route E continues along the 23kV line southward for 10,500 feet following Thomson Run Road where it turns east for 200 feet on Duquesne Light property to a tap of Circuit Z-20 at Tower 647-1 inside the North 138kV Substation. Other than on Duquesne Light property at the North Substation, this route overbuilds an existing 23kV line for the entire length.

Route E-1. This 4.1-mile line route exits Wildwood Substation toward the west and follows the alignment of Route D along an existing 23kV line across North Park for the first 5,600 feet, then continues across Hemlock Drive for 700 feet. It then turns west along the 23kV line and follows the alignment of Route E for another 8,500 feet. At the intersection of Thomson Run Road, Duncan Avenue and Ferguson Road, Route E-1 follows a distribution line along Ferguson Road to the southeast for approximately 5,500 feet. The route then intersects Route D and turns southward for 350 feet along existing distribution lines and then follows a paper street behind houses along Coventry Drive on a new ROW

for 900 feet, and turns east on new ROW across private property for 300 feet to a tap of Circuit Z-56 at existing Tower # 656.

Environmental Studies

A total of 23 environmental and socioeconomic resources criteria were evaluated to determine impacts projected for the seven alternative routes. The 23 resource criteria were based on Pennsylvania Public Utility Commission regulations as well as traditional environmental impact assessment criteria. To facilitate the selection of a Preferred Route, three areas were evaluated: 1) the immediate construction ROW; 2) the area adjacent to the proposed ROW that would be in view of sensitive resources; and 3) a four-mile wide corridor based on the centerline of the ROW. Only those portions of the routes that are on new ROW or on existing non-electric ROW were evaluated. This procedure is based on the premise that portions of the routes that are located on existing electric line ROW are not considered to generate substantially new impacts. The four-mile corridor was used to evaluate potential impacts on archaeologic and historic resources, scenic areas, unique geologic areas, wilderness areas and airports, as is required by current regulations. Table ES-1 presents the scores of environmental studies for the alternative routes under consideration as located on Figure ES-1. Higher scores indicate greater environmental impact.

Findings

Route A. Route A is the third most desirable route from an environmental resource perspective. This route has the highest impacts to urban areas (commercial/densely populated). The route is located adjacent to major roadways for nearly its entire length, impacting a heavily developed section of Route 8 and the intermittent development along

Wildwood Road. Conversely, Route A has little impact on natural resources including vegetation, wildlife, streams, and most other natural systems. This route has a relatively moderate score for construction on new ROW.

Route B. Route B is the fifth most desirable route considering overall effects on environmental resources. It has relatively high impacts to adjacent residential areas. The route is located on existing ROW for 84 percent of its length and, therefore, impacts to natural resources would be less than for routes having large amounts of new ROW.

Route C. Route C is the fourth most desirable route considering effects on environmental resources. It is located mostly on existing railroad ROW, minimizing potential impacts. As illustrated in Table 3-4, Route C had a low impact score for commercial/densely populated areas. The railroad ROW and Route C avoid residential areas, one of the highest-weighted resource criteria. Visual impacts are considered lowest since nearly all of the route is in the Pine Creek valley, shielded from view for much of its length. Also, since Route C would be located near the edge of the cleared portion of the railroad ROW, impacts to forest land would be less than on new ROW.

Route D. Route D is the least desirable route (seventh) considering effects on environmental resources. For one-half of its length, this route is located on new ROW and, therefore, impacts to all resources studied would be greater than for routes following existing ROW. This route has the highest impact score for Non-existing ROW impacts. The impact score for Other Recreational Areas adjacent to or crossed by the proposed route is the second highest (Route D/C is highest). North Park is crossed and the Wildwood Golf Club is paralleled and crossed by this route. It also has the highest score for forested area cleared and new ROW required. The route also crosses a building of the

old Wildwood Mine (currently in commercial use) as it spans Wildwood Road and adjacent Pine Creek.

Route D/C. Route D/C is the sixth most desirable route considering effects on environmental resources. It has the highest impact scores for Other Recreational Areas, and has substantial impacts for forested land cleared categories (third highest). Otherwise, it follows subtransmission and distribution line ROW or railroad ROW for much of its length, with approximately 0.6-mile located on non-existing ROW.

Route E. Route E is the most desirable route considering effects on environmental resources. Route E has the lowest score for non-existing ROW since it is located entirely on existing ROW or substation property. No commercial/densely populated areas or residential land or roads are crossed on non-electric line ROW. Since it follows existing ROW almost entirely, there are little impacts to forested land.

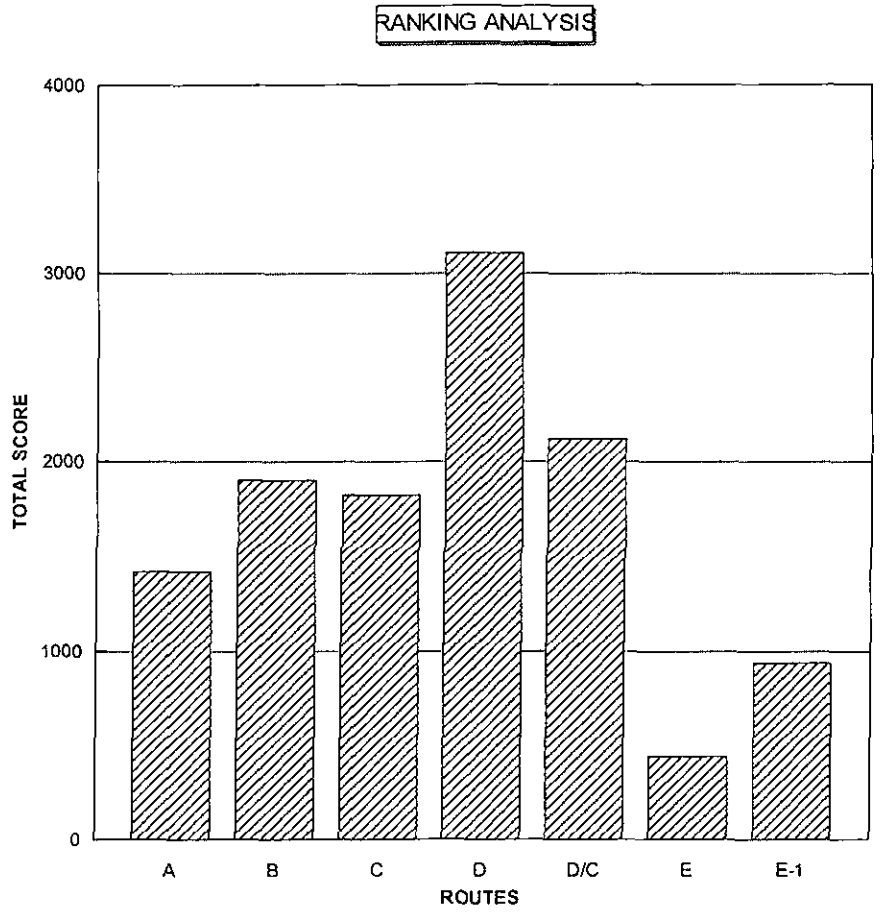
Route E-1. Route E-1 is the second most desirable route considering effects on environmental resources. It is also tied with Route E for the least impacts to Commercial/Densely Populated Areas and is relatively low in impacts to residential areas on new ROW. The fact that it is primarily on existing ROW has minimized impacts to many natural resource categories. There are no highway or road crossings on new or non-electric ROW.

In conclusion, **Route E is the most suitable environmental alternative** (based on least impacts) for the proposed transmission line project. Routes A, C and E-1 are also environmentally acceptable and suitable as licensable alternative routes.

Table ES-1

SCORES OF ENVIRONMENTAL STUDIES
FOR ALTERNATIVE ROUTES UNDER CONSIDERATION
(Higher Score = Greater Impact)

Route	Total Score	Rank
A	1417	3
B	1903	5
C	1822	4
D	3103	7
D/C	2125	6
E	437	1
E-1	932	2



PROPRIETARY INFORMATION

Docket Number A-110150 F0031

Name of Document Figures ES-1, ES-2, ES-3 ES-4, and ES-5

Date Document Received 3-4-2005

DOCUMENT CONTAINS

PROPRIETARY INFORMATION

1.0 INTRODUCTION

1.1 Overview

Duquesne Light Company (DLCo) proposes to construct a 138 kV transmission line from its Wildwood Substation located in Hampton Township, Allegheny County, Pennsylvania to a tap of either its Cheswick-North 138 kV double circuit transmission line (Circuits Z-55 and Z-56) located in Hampton Township, or its Crescent-North 138 kV double circuit transmission line (Circuits Z-20 and Z-21) located in Ross Township. Seven feasible alternative routes were studied, running from the Wildwood Substation in a generally southward direction. Six routes tap the northern circuit (Z-56) of the Cheswick-North line at four different locations, while the seventh route taps the northern circuit Z-20 of the Crescent-North Line inside the North 138 kV Substation as described by the routes below:

A. from the Wildwood Substation along Wildwood Road and then along Pennsylvania Route 8 (Route 8) to a tap at existing Tower #670;

B. from the Wildwood Substation along existing subtransmission line Circuit 22454 and distribution lines extending southward from Duncan Avenue to a tap at existing Tower #660;

C. from the Wildwood Substation along the CSX Railroad right-of-way (ROW) adjacent to Pine Creek, then west at the Circuit Z-56 transmission line to a tap at existing Tower #669;

D. from the Wildwood Substation along existing subtransmission and distribution lines extending southward through North Park and along

Wildwood Golf Club, with new ROW from Duncan Avenue to a tap at existing Tower #656.

D/C. from the Wildwood Substation along existing subtransmission and distribution lines extending southward through North Park and along Wildwood Golf Club, then crossing on new ROW a short distance to connect with Route C, then proceeding along the railroad ROW to a point where it exits west at the Z-56 transmission line to a tap at Tower #669;

E. from the Wildwood Substation along existing subtransmission and distribution lines throughout its length, following the same alignment as Route D through North Park, turning west adjacent to the Wildwood Golf Club, then following Peebles Avenue, Ringeisen Road, and then Thompson Run Road to Tower 647-1 inside the North Substation; and

E-1. from the Wildwood Substation along existing subtransmission and distribution lines on the same alignment as Route E, passing through North Park and adjacent to Wildwood Golf Club, then along Peebles Road and Ringeisen Road, then along Ferguson Road to a point where it turns south on new ROW to connect with Tower #656.

The transmission line will typically be constructed using single pole structures, either wood or steel, and will be similar to a typical wood pole line supplying the area. A study area was chosen to include the seven alternatives, with expanded study within two miles of the centerlines of each of the proposed routes. Figure ES-1 is an aerial map identifying the study area and alternative line routes.

This report documents the results of the environmental assessment and line route study, which have been performed in accordance with the Pennsylvania Public Utility Commission (PAPUC) regulations (Title 52, Part 1, Subpart C, Chapter 57). This document has been prepared by GAI Consultants, Inc. (GAI), at the request of DLCo. The proposed transmission line will be constructed as soon as all approvals are obtained, and is scheduled for completion by June 1, 2006.

GAI assembled a team consisting of land use planners, environmental specialists, design engineers, and archaeologists to prepare this environmental assessment and line route study. Established professional procedures were used to survey the Alternative Route ROWs for potential impacts by means of field reconnaissance, recent aerial photographs, topographic maps, literature review and contacts with federal, state and local government agencies.

In order to select a Preferred Route, three areas were evaluated: the immediate, construction ROW; the area adjacent to the proposed ROW (including sensitive resources that are in view); and a four-mile wide corridor including the area two miles on either side of the centerline of each ROW. The four-mile corridor was used to evaluate potential impacts on archaeologic and historic resources, scenic areas, unique geologic areas, wilderness areas and airports. Only those portions of the routes that are on new ROW or on existing non-electric ROW were evaluated. This procedure is based on the premise that portions of the routes that are located on existing electric line ROW are not considered to generate substantially new impacts. In addition, GAI studied 23 environmental and socioeconomic resources criteria to determine impacts for the seven alternative routes.

The 23 resource criteria were based on PAPUC regulations as well as traditional environmental impact assessment criteria.

Section 1 of this report presents the need for the transmission line, the design features and the description of the alternative routes. The existing environment and predicted environmental effects of the seven alternative routes, as well as mitigation measures are discussed in Section 2.

Section 3 presents a comparison of the seven routes and the methodology for selection of the Preferred Route.

1.2 Project Need

The Wildwood Substation was built in 1938. The substation is supplied from the 23 kV subtransmission system. The 23 kV subtransmission system is in turn supplied from the larger 138 kV transmission substations called North and Pine Creek Substations. The distribution service voltage at Wildwood is 4 kV. Portions of the town of McCandless and Hampton Township served by Wildwood Substation were mostly rural. As the territory continued to develop into larger commercial and residential areas, the original 4 kV distribution was no longer able to provide additional capacity. During the early 1970s, the area continued to be supplied by Wildwood Substation and the newer 13.2/23 kV distribution system. These circuits originate from the 138 kV transmission substations mentioned previously called North and Pine Creek Substations. As the electrical load continued to grow in the late 1990s, maximum loading during peak times has occurred on the original 4 kV Wildwood Substation, the newer 13.2/23 kV distribution circuits as well as the main 138 kV transmission substations. In order to provide adequate electrical

capacity and reliability to this area, it will be necessary to upgrade the existing 23 kV Wildwood Substation to 138 kV. This upgrade will:

1) eliminate the older 4 kV circuits;

2) eliminate overloads on the existing 13.2/23 kV circuits by establishing new 13.2/23 kV distribution circuits at the upgraded Wildwood Substation; and

3) eliminate overloads on the North and Pine Creek 138 kV substations by transferring portions of distribution load to the new upgraded Wildwood Substation.

1.3 Expansion at Wildwood

The existing Wildwood Substation is located in a secluded area behind public storage buildings. It will not be expanded to replicate the multi-transformer configuration of North Substation and Pine Creek Substation, but will be expanded to accommodate a single 138/23 kV transformer and three distribution circuits. In order to supply this substation with power at a 138 kV nominal voltage, a new transmission line will need to be constructed from the nearby Cheswick-North 138 kV transmission line or the Crescent-North 138 kV transmission line which are located approximately 2.5 miles or 3.5 miles south of the Wildwood Substation, respectively. Seven line routes have been selected, each within a two-mile wide area of evaluation. The transmission line will typically be constructed using single pole structures, either wood or steel, and will be similar to a typical wood pole line supplying the area. Steel towers will not be used and the 138 kV expansion should not present any significant visual impacts.

1.4 Line Route Description

1.4.1 Route A. This 4.2-mile long route follows Wildwood Road eastward for approximately 7,480 feet to Route 8 and then continues southward along Route 8 for approximately 13,000 feet to Pine Creek and crosses east over Route 8. The line then continues for 700 feet on new ROW to the Anvil Products plant, then turns to the southeast for 1,000 feet along an existing subtransmission line. A tap of Circuit Z-56 at existing Tower #670 will be the southern termination of this route. Route A will generally be constructed on public ROW and will require overbuilding of existing electric lines along Wildwood Road and Route 8.

1.4.2 Route B. This 3.1-mile long route follows an existing 23 kV line toward the south for approximately 12,500 feet. At Duncan Avenue, the route continues to the southwest for approximately 3,900 feet following distribution lines along residential streets. A tap of Circuit Z-56 at existing Tower #660 will be the southern termination of this route. The northern section of Route B will be constructed on the existing 23 kV ROW between Wildwood Substation and Duncan Avenue. The southern section will be constructed on new ROW and public ROW.

1.4.3 Route C. This 4.5-mile long route exits Wildwood Substation to the south crossing Wildwood Road and proceeds on new ROW for approximately 400 feet over private property before it drops down to the CSX Railroad ROW in the Pine Creek Valley. This route parallels the railroad (in the ROW) for approximately 23,130 feet (a 600-foot section at Mount Royal Boulevard is on new ROW). As this route approaches the north circuit (Z-56) of the Cheswick-North line, it proceeds west over existing transmission line

ROW for a distance of approximately 400 feet to a tap of Circuit Z-56 at existing Tower #669.

1.4.4 Route D. This 3.2-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet before turning southward. The route follows an existing 23 kV line along the eastern boundary of North Park for approximately 5,200 feet and 600 feet on new ROW to Hemlock Drive. It continues southward for approximately 3,100 feet following existing distribution lines to the end of Laurel Lane (includes a 600-foot section of new ROW over the Wildwood Golf Club). This route will then proceed for approximately 6,000 feet on new ROW across private property before crossing Ferguson Road. The route then follows existing distribution lines for 350 feet. After crossing Linwood Road, it then proceeds 900 feet over new ROW, most of which is on a paper street behind houses along Coventry Drive, turning east for 300 feet on new ROW to a tap of Circuit Z-56 at existing Tower #656.

1.4.5 Route D/C. This route is a combination of Route D in approximately the northern half and Route C in the southern half of the alignment. The 4.1-mile long route exits Wildwood Substation toward the west along the south side of the substation access road for approximately 400 feet before turning southward. This route follows an existing 23 kV line along the eastern boundary of North Park for approximately 5,200 feet, with approximately 600 feet of new ROW required near Hemlock Drive. The route continues southward for approximately 3,100 feet following existing distribution lines to the end of Laurel Lane (including a 600-foot section of new ROW over the Wildwood Golf Club). Past the south end of Laurel Lane, the route leaves the distribution line ROW and proceeds on new ROW approximately 1,700 feet to connect with Route C along the CSX Railroad line. This route parallels the railroad for approximately 10,100 feet (a 600-foot section at Mount

Royal Boulevard is on new ROW). As the route approaches the Cheswick-North line, it proceeds west approximately 400 feet over existing transmission line ROW to a tap of Circuit Z-56 at existing Tower #669.

1.4.6 Route E. This 4.8-mile route exits Wildwood Substation toward the west and follows the alignment of Route D along an existing 23kV line across North Park for the first 5,600 feet, then continues across Hemlock Drive for 700 feet. This route turns westward approximately 2,500 feet following the existing 23kV line across North Park to Peebles Road. Route E then follows Peebles Road to the southwest for 2,400 feet and turns southward following the existing 23kV line through residential property for 1,600 feet. It then follows Ringeisen Road for 2,000 feet to the major intersection of Thomson Run Road, Duncan Avenue and Ferguson Road (Common point with Route E-1). Route E continues along the 23kV line southward for 10,500 feet following Thomson Run Road where it turns east for 200 feet on Duquesne Light property to a tap of Circuit Z-20 at Tower 647-1 inside the North 138kV Substation. Other than on Duquesne Light property at the North Substation, this route overbuilds an existing 23kV line for the entire length.

1.4.7 Route E-1. This 4.1-mile route exits Wildwood Substation toward the west and follows the alignment of Route D along an existing 23kV line across North Park for the first 5,600 feet, then continues across Hemlock Drive for 700 feet. It then turns west along the 23kV line and follows the alignment of Route E for another 8,500 feet. At the intersection of Thomson Run Road, Duncan Avenue and Ferguson Road, Route E-1 overbuilds a distribution line along Ferguson Road to the southeast for approximately 5,500 feet. The route intersects Route D, and then turns southward for 350 feet along existing distribution lines and then follows a paper street behind houses along Coventry

Drive on new ROW for 900 feet, and turns east on new ROW across private property for 300 feet to a tap of Circuit Z-56 at existing Tower #656.

1.4.8 Summary. This project includes seven alternative line routes and will provide the following:

- electrical capacity for future needs including further development of this busy and dense area;
- the 138 kV line will add flexibility to the electrical distribution system by establishing a new 138 kV substation which will eliminate overloads on the North and Pine Creek Substations by transferring load to the new upgraded Wildwood Substation via new 13.2/23 kV distribution circuits;
- the reliability of the distribution circuits in the entire area will be improved by reducing the length and exposure of the feeders and establishing additional circuit ties; and
- service restoration will be greatly improved.

2.0 ENVIRONMENTAL EFFECTS AND MITIGATION

2.1 Land Use

Existing land uses are described in this section within and adjacent to the routes, as well as the changes to those land uses which will occur as a result of construction of any of the seven alternate routes for this 138 kV transmission line. Impacts have been considered within the proposed ROW. Land use/cover types within and adjacent to the ROW of each of the routes were classified according to criteria developed in *A Land Use and Land Cover Classification System for Use with Remote Sensor Data* (Anderson, et al., 1976).

The Anderson System provides a standardized, multilevel procedure for classifying land use and land cover, primarily based upon remote sensor data (i.e., aerial photography) and field confirmation. The various levels (I through IV, with IV being the most detailed) provide increasing levels of refinement in relation to resolution of data and required level of detail. For example, Level I identifies forest lands; Level II differentiates between deciduous forest, evergreen forest, and mixed forest; Level III differentiates between the size of the timber (sampling, pole and mature stages) and the density of the understory (sparse or moderate to dense). Level IV distinguishes between dominate canopy species groups (i.e., White Oak, Black Oak, and Northern Red Oak; and Black Cherry-Maple). An Anderson Level II evaluation provides the appropriate amount of detail for the environmental assessment of the Wildwood Substation - 138 kV Transmission Line Project.

A computer-based Anderson Level II evaluation was conducted for each of the routes during the summer months of 2003. Table 2-1 presents a description of land use

classifications used for this analysis. Present land use patterns were identified from aerial photographs, by examining United States Geological Survey (USGS) 1:24,000 scale topographic mapping (7.5-minute quadrangles), and from field reconnaissance. Lands to be used for the project were determined based on aerial photographs, field visits, and augmented data from USGS maps for stream, pond, road and utility crossings.

The Anderson Level II analysis provides a breakdown of land use into the following classification:

Residential Lands	Urban Lands (Commercial and Industrial Lands)
Deciduous Forests	Evergreen Forests
Croplands/Pasture	Palustrine Emergent Wetlands
Mixed Forests	Palustrine Scrub-Shrub Wetlands
Orchards/Vineyards	Palustrine Forested Wetlands
Herbaceous Rangeland	Streams
Shrub-Brush Rangeland	Lakes/Ponds and Reservoirs
Mixed Rangeland	

A database was established using the above criteria for land use and other criteria for other resource categories. The database was used to evaluate the seven optional routes proposed for the project and includes all of the environmental resources studied to select the Preferred Route. The data files are archived at GAI's offices in Monroeville, Pennsylvania. Land use and environmental resources were identified within the prescribed distances for each alternative route as identified in the Summary of Environmental Effects later in this report.

For purposes of this study, "new ROW" denotes land that is not currently used for any type of utility, highway, or other ROW that will require an agreement from the current property owner. "Existing ROW" denotes land that is currently used for ROW purposes, including power lines, roads, pipelines, and railroads.

2.1.1 Existing Environment. The following land use descriptions were developed from north to south, starting at the Wildwood Substation and continuing to the Cheswick-North 138 kV transmission line. Alternative route locations and nearby resources are shown on Figure 3-1. Roads and development are shown on Figure 3-2 and land use constraint areas and other resources are shown on Figure 3-3 for the Extended Study Area. These figures are included in Appendix D of this report.

2.1.1.1 Alternative Route A. Alternative A is approximately 4.2 miles long and, except at the northern and southern ends, follows subtransmission or distribution line ROWs. This route exits the Wildwood Substation to the east, following Wildwood Road for approximately 1,000 feet, 800 feet of which is new ROW, through urban development. The route then overbuilds existing electrical lines, which are located in public ROW, and extends first eastward along Wildwood Road, then south along Route 8. Starting at the Wildwood Substation, the route exits to the east crossing Pine Creek at the Wildwood Road bridge and follows Wildwood Road on the north side through urban development. Proceeding eastward, this route continues to overbuild existing distribution or subtransmission lines a total of 7,480 feet to Route 8, proceeding though a mix of first residential areas and businesses (with a scattering of natural vegetation), then crosses the

wooded valley of Crouse Run, follows adjacent to a forested area, and then proceeds adjacent to a small residential area to the Route 8 intersection.

Proceeding south along Route 8 on existing ROW for a distance of approximately 13,000 feet, nearly all of the land use is either in transportation use or in some form of urban development. The land has already been cleared of natural vegetation for the lines that will be overbuilt by the proposed 138 kV line. Route A continues south through a mix of offices, businesses, and apartment houses along Route 8, past Sample Road, Craighead Road, and Harts Run Road, to the intersection with Duncan Avenue. The route continues south through a heavily urbanized area to the Route 8 bridge over Pine Creek, and then continues east approximately 700 feet on new ROW to the Anvil Products plant. The last 1,000 feet is over a steep, wooded hillside and overbuilds an existing 23 kV line on existing ROW to a tap at Tower #670 of the Cheswick-North 138 kV transmission line. Except for approximately 1,500 feet of route, all of the line is located on publically-owned or existing ROW.

2.1.1.2 *Alternative Route B*. Route B is approximately 3.1 miles long. This route exits the Wildwood Substation to the east, following Wildwood Road for approximately 1,000 feet, 800 feet of which is new ROW, through urban development. The route then turns south along Wildwood Sample Road, overbuilding an existing 23 kV line for a distance of approximately 5,500 feet to Sample Road. In this rural section, it intermittently follows Wildwood Sample Road, sometimes proceeding through forested areas with intermittent residential development. South of Sample Road, the route continues in a southerly direction

following the 23 kV line for approximately 6,000 feet, proceeding through residential subdivisions with scattered wood lots. The line continues southwest overbuilding the 23 kV line, first traversing the forested valley of Pine Creek, and then continues over grassland adjacent to the Pine Creek Golf Driving Range, to Duncan Avenue.

South of Duncan Avenue, new ROW in forested land and commercial/ residential land is required for a distance of 800 feet. Dense residential development is then encountered for a distance of 1,400 feet where this route follows local distribution line ROW until reaching Walters Avenue. The route then crosses residential land on new ROW for approximately 500 feet. The route then continues on distribution line ROW southwest in residential areas for approximately 900 feet, turns south as it approaches the Cheswick-North 138 kV transmission line, with a final 300-foot section that will be on new ROW. Except for 2,400 feet, all of the line is located on existing ROW.

2.1.1.3 *Alternative Route C*. Route C is approximately 4.5 miles long and has been routed along an existing CSX Railroad ROW virtually throughout the transmission line's length. Efforts have been made to locate poles within the railroad ROW wherever possible, avoiding to a large extent adjacent forested land, wetlands and sporadic development. Exiting the Wildwood Substation, this route crosses Wildwood Road and a residential property along new ROW as it proceeds 400 feet downhill to the railroad ROW near old Wildwood Mine buildings (currently the Wildwood Peddlers Fair Flea Market). The route continues south for approximately 6,700 feet following the railroad ROW through wooded terrain, often with adjacent wetlands, snaking generally south along Pine Creek, which it crosses

three times. Due to topographic constraints, the route then must be located on a side slope for approximately 1,200 feet. The route then crosses Sample Road near several businesses. Route C heads generally south and southwest along railroad ROW approximately 4,830 feet past reclaimed mine spoils near Bryant Road, through wooded and grassed areas.

Leaving the Bryant Road area, the route continues a distance of 5,700 feet to Mount Royal Boulevard through the deeply entrenched Pine Creek valley, with the line jogging southeast along the railroad ROW through adjacent wooded terrain and extensive wetlands. Pine Creek is designated as a delayed-harvest trout stream in this section. The route must then be located on new ROW for 600 feet to cross Pine Creek and Mount Royal Boulevard. After these crossings the route proceeds approximately 900 feet along railroad ROW past the Hampton Township Sewage Treatment Plant to cross Duncan Avenue. The route then turns easterly and continues for approximately 2,200 feet to Route 8, and then turns south for 1,000 feet. Near the Hampton/Shaler Township line, Route C turns west from the railroad ROW. It proceeds approximately 400 feet on transmission line ROW along a forested hillside to a tap at Tower #669 of the Cheswick-North 138 kV transmission line.

2.1.1.4 *Alternative Route D*. This 3.2-mile route exits Wildwood Substation towards the west, along the south side of the substation access road, passing through scrub/shrub vegetation for approximately 400 feet. The route then turns southwest to follow an existing 23 kV line for approximately 5,200 feet. The route then crosses Wildwood Road, buildings of the old Wildwood Mine complex, and

proceeds over slopes of the Wild Mountain Snow Tubing property. Proceeding south along the wooded eastern boundary of North Park, it continues overbuilding the 23 kV line as the route makes a bend southwest in wooded terrain. It then proceeds for approximately 600 feet on new ROW through a wooded area and then parallels Hemlock Drive. Heading southeast for approximately 2,100 feet on Hemlock Drive and following existing distribution line ROW, the route passes adjacent to the Wildwood Golf Club to the west and residential development to the east, to a crossing of Sample Road. Crossing the Wildwood golf course for 600 feet on new ROW, Route D proceeds south along Laurel Lane for approximately 400 feet on existing distribution line ROW, with scattered residential development nearby. The line then requires new ROW for approximately 2,600 feet as it turns southwest through wooded terrain and parallels the CSX Railroad and Pine Creek, and proceeds across Duncan Avenue.

From this point, the line continues on new ROW 3,400 feet first southwest, then turns south, through residential areas and wood lots to Ferguson Road. Then the route passes through dense residential areas on existing distribution line ROW for 350 feet along Linwood Road. The route traverses approximately 900 feet of new ROW through residential areas along a paper street. The line then turns east on new ROW for 300 feet to a tap at Tower #656 of the Cheswick-North 138 kV transmission line.

2.1.1.5 *Alternative Route D/C*. This 4.1-mile route exits Wildwood Substation following the Route D alignment towards the west along the south side of the substation access road, passing through scrub/shrub vegetation for

approximately 400 feet. The route then turns southwest to follow an existing 23 kV line for approximately 5,200 feet. The route crosses Wildwood Road, buildings of the old Wildwood Mine complex, and proceeds over slopes of the Wild Mountain Snow Tubing property. Proceeding south along the wooded eastern boundary of North Park, it continues overbuilding the 23 kV line as the route makes a bend southwest in wooded terrain. It then proceeds for approximately 600 feet on new ROW and then parallels Hemlock Drive. Heading southeast for approximately 2,100 feet on Hemlock Drive and following existing distribution line ROW, the route passes adjacent to the Wildwood Golf Club to the west and residential development to the east, to a crossing of Sample Road. Crossing the Wildwood golf course for 600 feet on new ROW, Route D proceeds south along Laurel Lane for approximately 400 feet on existing distribution line ROW. The line then requires new ROW for approximately 1,700 feet as it turns south through wooded terrain and crosses Bryant Road, to connect to Route C along the CSX Railroad.

Leaving the Bryant Road area, the route continues a distance of 5,650 feet to Mount Royal Boulevard through the deeply entrenched Pine Creek valley. The line then jogs southeast along the railroad ROW through adjacent wooded terrain and extensive wetlands. Pine Creek is designated as a delayed-harvest trout stream in this section. The route must then be located on new ROW for 600 feet to cross Pine Creek and Mount Royal Boulevard. The route proceeds approximately 900 feet along rural railroad ROW past the Hampton Township Sewage Treatment Plant to cross Duncan Avenue. The route then turns easterly with residential development and a church school on the far bank of Pine Creek.

It continues for approximately 2,200 feet to near Route 8, and then turns south for 1,000 feet. Near the Hampton/Shaler Township line, Route C strikes westward from the railroad ROW. It proceeds approximately 400 feet on transmission line ROW along a forested hillside to a tap at Tower #669 of the Cheswick-North 138 kV transmission line.

2.1.1.6 *Alternative Route E*. This 4.8-mile route exits Wildwood Substation following the Route D alignment towards the west, overbuilding an existing 23 kV line for approximately 5,600 feet. It is located on the south side of the substation access road, passing through scrub/shrub vegetation for approximately 400 feet. Turning southwest, the route crosses Wildwood Road, buildings of the old Wildwood Mine complex, and proceeds over slopes of the Wild Mountain Snow Tubing property. Proceeding south along the wooded eastern boundary of North Park, it continues overbuilding the 23 kV line as the route makes a bend southwest in wooded terrain, to a point where it leaves Route D.

Route E continues to overbuild the 23 kV line for 700 feet and then turns west through wooded areas of North Park (and adjacent to the Wildwood Golf Club), proceeding 2,500 feet to Peebles Road. The route follows Peebles Road southwest through residential development for approximately 2,400 feet, then turns southward across residential property for 1,600 feet. It then follows along side of Ringeisen Road for 2,000 feet to the major intersection of Thompson Run Road, Duncan Avenue and Ferguson Road. The line then proceeds along Thompson Run Road a distance of 10,500 feet where it turns east across Duquesne Light property

for approximately 200 feet to a tap of Tower 647-1 of the Crescent-North 138 kV transmission line inside the North 138kV Substation.

2.1.1.7 *Alternative Route E-1*. This 4.1-mile line route exits Wildwood Substation following the Route D alignment towards the west, overbuilding an existing 23 kV line for approximately 5,600 feet. It is on the south side of the substation access road, passing through scrub/shrub vegetation for approximately 400 feet. Turning southwest, the route crosses Wildwood Road, buildings of the old Wildwood Mine complex, and proceeds over slopes of the Wild Mountain Snow Tubing property. Proceeding south along the wooded eastern boundary of North Park, it continues overbuilding the 23 kV line as the route makes a bend southwest in wooded terrain to a point where it leaves Route D.

Route E-1 continues to follow the 23 kV line for 700 feet and then turns west through wooded areas of North Park (and adjacent to the Wildwood Golf Club), proceeding 2,500 feet to Peebles Road. The route follows Peebles Road southwest through residential development for approximately 2,400 feet, then turns southward across residential property for 1,600 feet. It then follows along side of Ringeisen Road for 2,000 feet to the major intersection (and urban complex) of Thompson Run Road, Duncan Avenue and Ferguson Road. The route then follows Ferguson Road southeast, through residential development, for a distance of 5,500 feet and intersects Route D. Turning south, the route continues passing through dense residential areas along existing distribution lines for 350 feet. It then follows new ROW for 900 feet at the rear property lines along a paper street, finally turning east

for 300 feet on new ROW to Tower #656 of the Cheswick-North 138 kV transmission line.

2.1.2 Impacts and Mitigation. A discussion of projected impacts to land use within the study area as a result of construction of the 138 kV Wildwood Substation transmission line is presented in this section. Construction on new ROW will require the clearing and maintenance of a 50-foot wide ROW. Generally, Routes A, B, C, and E-1 will have small disturbances to existing land use, since these routes are primarily located on the existing ROWs of electrical lines, roads, or railroads. Route A will require approximately 1,500 feet of new ROW, Route B 2,400 feet, Route C 1,000 feet, and Route E-1 1,200 feet of new ROW. Route D requires approximately 8,400 feet of new ROW nearly divided between wooded and residential property, while Route D/C requires approximately 3,500 feet of mixed-use new ROW. Route E is located entirely on existing ROW and will only require minimal clearing.

Minor earth disturbance and selected tree trimming will occur at pole locations and along existing ROW for all of the routes where the existing maintained area is widened to 50 feet. ROW clearing will be based on the following guidelines:

- new ROW: 50-foot width per linear foot;
- railroad ROW: 25-foot width per lineal foot (based on the assumption that the transmission line would be located on the edge of the cleared portion of the ROW, so only half of the ROW would need to be cleared);
- existing electric line ROW: 20-foot width per lineal foot (based on the difference between the assumed cleared width of 30 feet for the existing line and the required width of 50 feet for the transmission line);

- public road ROW: 10-foot width per lineal foot (based on the assumption that the additional cleared width would only apply to the side of the line adjacent to the edge of the road ROW); and
- property owners may also experience tree height and other restrictions beyond these cleared widths.

Approximately 0.4-acre for Route A, 0.8-acre for Route B (some of this area is currently being cleared for a residential development), and 5.7 acres for Route C will be cleared in forest land on new and existing ROW. Route D will impact over 9.1 acres of forest on new and existing ROW. Also, approximately 4.1 acres for Route D/C and 1.7 acres for Route E-1 will be cleared in forest land on new and existing ROW. Route E will impact 0.9 acre of forest on existing ROW.

All of the routes will have secondary impacts during construction, especially in residential areas and some business areas. These impacts involve noise and other construction-related disturbances including disruptions to vehicular traffic. All of the routes, except Route E, impact residential property on new ROW. Residential impacts on Routes A, B, C, D, D/C and E-1 are 0.1-mile, 0.3-mile, 0.3-mile, 0.9-mile, 0.2-mile and 0.2-mile of new residential ROW involvement, respectively.

The most substantial land use effects associated with construction of the proposed line include a reduction in woodland and effects upon residential areas. Total rangeland area will be increased as a result of construction, although a temporary reduction in this land use will occur during the construction phase until vegetation becomes re-established.

The construction of new ROW in wooded areas will result in the removal of a number of mature trees. Some side trimming of woody vegetation may be necessary to

widen the existing maintained areas along all of the routes. New access roads are not expected to be required. No loss of wetland areas will be incurred as a result of project implementation for any alternative route. Effects upon wetlands are fully discussed in Section 2.2.2.

2.1.2.1 *Alternative Route A*. This route is approximately 4.2 miles long. The route follows existing ROW for all but 0.3-mile and land use will not change if this route is constructed. The majority of the land crossed on existing ROW is urban. Dense urban areas are located in the vicinity of the Wildwood Road/ Route 8 intersection and the Duncan Avenue/Route 8 intersection. However, most of the construction along Route 8 will not incur impacts to urban development. The majority of land use impacts will be secondary in nature (noise-related and traffic-related), since virtually no change in land use will occur as a result of construction of Route A. No special mitigation measures are required.

2.1.2.2 *Alternative Route B*. Route B is approximately 3.1 miles long with the largest adjacent land uses on existing ROW being rangeland and residential. The primarily residential areas affected are at the corner of Wildwood Road and Hardies Road, at crossings of Wildwood Lane, Timberlane Road, Tanglewood Road, Hitching Post Road, Trottier Road, Saddle Road, Ferguson Road, Linwood Road and along Auld Road. Since existing electrical lines will be overbuilt in most residential areas, little change of land use will occur. An 800-foot section between Duncan Avenue and Lake Avenue is on new ROW and will require the removal of woodlands. This land will be converted to rangeland. The majority of land use impacts will be secondary in nature (noise-related and traffic-related), since little

change in land use will occur as a result of construction of Route B. No special mitigation measures are required.

2.1.2.3 *Alternative Route C*. Route C is approximately 4.5 miles long. The largest adjacent land uses on existing ROW are rangeland and wetlands. No wetland impacts are anticipated since all construction will take place within the railroad ROW, which contains few wetlands. None will be impacted. Construction of Route C will also impact approximately 0.1-mile of urban land and 0.3-mile of residential land. Otherwise, this route is located in a mostly undeveloped portion of the study area. The land is either in transportation use or in rangeland. The majority of land use impacts will be the trimming of trees and brush on and near the existing railroad ROW that might encumber the proposed line. No special mitigation measures are expected.

2.1.2.4 *Alternative Route D*. Route D is approximately 3.2 miles long, with 1.6 miles to be located on new ROW. Most of the land use along this route is classified as forest, rangeland, and urban/residential land. The forested land (9.1 acres) will be converted to rangeland within the new ROW. Residential impacts will occur along Hemlock Drive, Laurel Lane, Wyland Road, Ferguson Road, Linwood Road, and Coventry Drive. At these locations, grassed and treed yards will be converted to ROW. Other than the ROW restrictions, the land can be used by the property owner as previously. No special mitigation measures are required.

2.1.2.5 *Alternative Route D/C*. Route D/C is approximately 4.1 miles long and is a combination of Route D in the northern half and Route C in the southern half. It contains 0.6-mile to be located on new ROW. Most of the land on new

ROW is classified as forested land. The forested land (4.1 acres) will be converted to rangeland within the new ROW. Otherwise, nearby land use is the same as for Route D to the end of Laurel Lane. Residential impacts will occur along Hemlock Drive and Laurel Lane. At these locations, grassed and treed yards will be converted to ROW. Other than the ROW restrictions, the land can be used by the property owner as previously. When the route transitions to Route C, it will follow the CSX Railroad ROW. While wetlands are located nearby, no wetland impacts are anticipated since all construction will take place within the railroad ROW. This portion of the route is mostly undeveloped. The land is either in transportation use or in rangeland. The majority of land use impacts will be the trimming of trees and brush on and near the existing railroad ROW that might encumber the proposed line. No special mitigation measures are required.

2.1.2.6 *Alternative Route E*. Route E is approximately 4.8 miles long and is located entirely on existing ROW or Duquesne Light substation property. The existing ROW is either in grassland (primarily in North Park) or transportation use throughout the remainder of the route. Forested areas are also found adjacent to Route E. Since the existing ROW followed is already cleared, there will be little impact from the additional clearing required (only 0.9 acre) and no special mitigation measures are required.

2.1.2.7 *Alternative Route E-1*. Route E-1 is approximately 4.1 miles long and is located mostly on existing ROW, except for a 1,200-foot section at the southern terminus. The existing ROW is either in grassland, primarily in North Park, or transportation use throughout the remainder of the route. Approximately 0.2-mile

of residential land will be crossed on new ROW. Approximately 1.7 acres of forest land will be cleared on new ROW. Since most of the existing ROW is already cleared and there will be little impact from the additional clearing required, no special mitigation measures are needed.

2.2 Plant and Wildlife Habitat

An overview of terrestrial and wetland ecosystems is presented in this section. Unique plant and animal communities in the study area are discussed. The study area was examined during field visits in June, July and August of 2003 by professional biologists from GAI. These biologists conducted a survey of the routes and characterized the various ecological features. Vegetative communities were identified and species dominance estimated.

Terrestrial land use/cover types were identified in accordance with Anderson, et al. (1976) (see Table 2-1, Section 2.1.1). Wetland identification was based on the guidelines presented in the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual.* Preliminary wetland locations were identified by reviewing the United States Department of Agriculture's (USDA's) *Soil Survey of Allegheny County, Pennsylvania,* the United States Fish and Wildlife Service's (USFWS's) National Wetland Inventory maps, aerial photography, topographic mapping, and from field investigations.

All identified wetlands were classified according to the USFWS *Classification of Wetlands and Deepwater Habitats in the United States* (Cowardin, et al., 1979). The field surveys also identified unique habitat, and wildlife species utilizing the study area. Additional information was collected on vegetative and wildlife communities in the study

area through review of literature, 1993 aerial photography and contacts with natural resource agencies.

2.2.1 Existing Environment. The vegetation and wildlife that occur in the study area's terrestrial and wetland ecosystems are identified in this section. Any unique ecosystems or communities, federal or state listed threatened or endangered species, including critical habitat, are also described. Listings of plant and wildlife species observed during field visits and expected to occur are presented in Appendix A. The flora and fauna in and near the study area are well documented. Identifications of vegetation found in Braun (1950) and Genoways and Brenner (1985) have been reviewed. Information on birds, mammals, and reptiles and amphibians were obtained from *Mammals of Pennsylvania* (Doutt, et al., 1980), *Species of Special Concern in Pennsylvania* (Genoways and Brenner, 1985), *A Field Guide to the Birds* (Peterson, 1980), *Understanding Predation and Northeastern Birds of Prey* (Bonney, et al., 1981) and *Pennsylvania Birds* (Wakely and Wakely, 1989). A check list of Pennsylvania amphibians and reptiles including a bibliography and atlas of species distribution found in McCoy (1982) was also reviewed. The field reconnaissance visits focused on areas identified as being potentially sensitive through map and aerial photography review.

The Wildwood Substation - 138 kV Transmission Line study area lies within the northern limits of the Mixed Mesophytic Forest Region on the unglaciated portion of the Appalachian Plateau (Braun, 1950). The historic climax association had a variety of dominant species in the arboreal layer. These include Sugar Maple (*Acer saccharum*), Red Oak (*Quercus rubra*), White Oak (*Quercus alba*), American Beech (*Fagus grandifolia*), Yellow Poplar (*Liriodendron tulipifera*), Basswood (*Tilia americana*), and Black Cherry

(*Prunus serotina*). Distinctive species not found in the canopy included Redbud (*Cercis canadensis*), Ironwood (*Carpinus caroliniana*), Flowering Dogwood (*Cornus florida*), and Hophornbeam (*Ostrya virginiana*). Shrubs typically found in this forest region were Witch-hazel (*Hamamelis virginiana*), Spicebush (*Lindera benzoin*), and several dogwood species (*Cornus spp.*).

In and near the study area, deciduous forest associations are typically dominated by pole-sized Sugar Maple, Black Cherry, and White Ash (*Fraxinus americana*). Shagbark Hickory (*Carya ovata*), Black Locust (*Robinia pseudo-acacia*), Red Oak and White Oak are locally abundant. The understory typically contains Sassafras (*Sassafras albidum*), Slippery Elm (*Ulmus rubra*), and White Ash saplings. The herbaceous layer is sparse with White Wood Aster (*Aster divaricatus*), Sassafras (*Sassafras albidum*), White Ash saplings, Spinulose Wood Fern (*Drypteris spinulosa*), and Avens (*Geum canadense*) as the common species.

Forested areas in the study area generally provide good quality bird and wildlife habitat. Many species of birds utilize forest areas as breeding residents, permanent residents, and migrants. Typical breeding species in deciduous woodlands include Eastern Wood Pewee (*Conotopus virens*), Wood Thrush (*Hyla mustelina*), Red-eyed Vireo (*Vireo olivaceous*), American Redstart (*Setophaga rusticilla*), and Summer Tanager (*Piranga rubra*). Typical year round residents include Black-capped Chickadee (*Perus atricapillus*), Blue Jay (*Cyanocitta cristata*) and Northern Cardinal (*Cardinalis cardinalis*). Numerous species of reptiles and amphibians occur in wooded areas. The Eastern Box Turtle (*Terrapene carolina carolina*), American Toad (*Bufo americana*), and Red-backed Salamander (*Plethodon cinerus*) inhabit upland deciduous forest. Mammalian species

occurring in forested areas in the vicinity of the routes include several species of shrews (Family Soricidae), White-footed Mouse (*Peromyscus leucopus*), Eastern Chipmunk (*Tamias striatus*) and several weasel species (Family Mustelidae). Important game species in forested areas include White-tailed Deer (*Odocoileus virginianus*), Gray Squirrel (*Sciurus carolinensis*) and furbearers such as Racoon (*Procyon lotor*) and Gray Fox (*Urocyon cinereoargenteus*).

Large areas of herbaceous rangeland are found within and adjacent to the alternative routes, since much of the routing is overbuilding lines in existing ROW. Ground cover plant species in these areas include grasses (Family Graminae), asters, (*Aster* spp.), goldenrods (*Solidago* spp.), Dogbane (*Apocynum androsaemifolium*), and Japanese Honeysuckle (*Lonicera japonica*). Also, herbaceous species, seedlings of Red Maple (*Acer rubrum*), Allegheny Blackberry (*Rubus allegheniensis*), Sassafras, and Black Cherry are locally abundant.

Wildlife species utilizing the existing ROWs consist primarily of those species typical of forest edge and forest habitats. The species that are most common along existing maintained ROW are Eastern Garter Snake (*Thamnophis sirtalis*), Black Rat Snake (*Elaphe obsoleta*), Common Yellowthroat (*Geothlypis trichas*), Gray Catbird (*Dumetella carolinensis*), Eastern Cottontail (*Sylvilagus floridanus*) and Meadow Vole (*Microtus pennsylvanicus*). Numerous species occurring in the adjacent forest habitats, as described above, would be expected to utilize rangeland areas within the existing ROW for feeding and nesting.

Four types of wetlands are found along the alternative routes including palustrine emergent, palustrine scrub-shrub, palustrine forested and riverine wetlands. Palustrine

wetlands are primarily located along Pine Creek and Crouse Run in the study area. Palustrine emergent wetlands are typically dominated by stands of Reed Canary Grass (*Phalaris arundinacea*), Touch-me-nots (*Impatiens sp.*), and Sedges (*Carex spp.*). Rugose-veiny Goldenrod (*Solidago rugosa*), and Tall Coneflower (*Rudbeckia laciniata*), and Teartumb (*Polygonum sp.*) are locally abundant. Palustrine scrub-shrub wetlands are typically dominated by saplings of Slippery Elm, Red-osier Dogwood (*Cornus stolonifera*), Gray Dogwood (*Cornus foemina*), Red Maple and Allegheny Blackberry. The woody vine layer is composed of Japanese Honeysuckle, Wild Grape (*Vitis* spp.) and Poison Ivy (*Toxicodendron radicans*). Sedges, Reed Canary Grass and Touch-me-nots are common in the herbaceous layer. Palustrine forested wetlands in the study area are typically dominated by Black Cherry trees. Black Willow (*Salix nigra*) and American Sycamore (*Platanus occidentalis*) are locally abundant. The shrub layer is typically composed of Slippery Elm, Privet (*Ligustrum vulgare*) and Ninebark (*Physocarpus opulifolius*). Japanese Honeysuckle, Spinulose Woodfern, and Velvet Grass (*Holcus lanatus*) are common on the forest floor.

Wetlands in the study area were identified in two ways: by the use of the USFWS's NWI maps for the entire study area, and by field reconnaissance in and adjacent to proposed transmission line routes. The NWI maps identify seven palustrine wetlands in the study area. Numerous wetlands were identified by field studies, principally along Pine Creek. Route C is adjacent to and sometimes will make aerial crossings of some of these wetlands. All three palustrine wetland types will be crossed: emergent, scrub-shrub and forested wetlands. However, no structures will be located in wetland areas, and impacts will be negligible.

Riverine wetlands are restricted to stream channels. Riverine wetlands are located along Pine Creek, Crouse Run and Little Pine Creek. Pine Creek and Little Pine Creek are shown on the NWI maps as riverine unknown perennial unconsolidated bottom wetland which is permanently flooded. Crouse Run is classified as a riverine perennial unconsolidated bottom wetland. Route A crosses Pine Creek three times and Crouse Run once. Route B crosses both Pine Creek and Crouse Run once. Route C, located primarily in the Pine Creek valley, crosses Pine Creek five times. Route D crosses Pine Creek and three tributaries to Pine Creek. Route D/C which is located in the Pine Creek valley for approximately one-third of its length crosses Pine Creek three times and two tributaries to Pine Creek. Route E crosses Pine Creek, two tributaries to Pine Creek and Little Pine Creek. Route E-1 crosses Pine Creek and a tributary to Pine Creek.

There is one unique environmental location in the study area. The valley of Crouse Run is steep-walled, and remains cold throughout much of the year. The narrow valley walls channel and trap cooler air currents so that the valley bottom remains cool throughout summer months. This results in the growth of wildflowers and vegetation that are unique to the area.

Frequent areas of residential and/or urban land are adjacent to Routes A, B, E, and E-1. Vegetative cover in these areas is generally restricted to closely mowed grassland and ornamental tree and shrub planting, and occasional small wood lots. Mature native trees have been selectively retained in some neighborhoods. In general, these areas are of very limited value to wildlife.

2.2.2 Impacts and Mitigation. Transmission line construction can have considerable impacts upon natural resources and wildlife. Generally, the longer the

proposed alignment, the greater the potential for adverse impacts, particularly if new ROW is required. In order to minimize impacts, existing ROW was used to route the proposed transmission line wherever possible, and environmentally sensitive areas were avoided where possible. Five of the seven alternative routes primarily follow existing ROW (Routes A, B, C, E and E-1). Also, Route D/C follows existing ROW for over 85 percent of its length and Route D follows existing ROW for approximately 50 percent of its length.

Where routes share existing ROW, the effects of construction and operation on wildlife populations are expected to be minimal. Construction activities will utilize the existing ROW to the extent possible, and overbuilding of existing lines will minimize impacts to surrounding vegetation and animals. A maximum of 50 feet of clearing when on new ROW will be typical, thereby minimizing disturbance to adjacent habitats. Existing access roads will be used to the extent possible; new access roads are not expected to be required. Although some loss of individual animals may be incurred within the new ROW, it is anticipated that most animals can relocate to suitable adjacent habitat. Depending on the habitat type in question, these displaced animals may be able to reestablish in the maintained ROW following construction. For example, the Eastern Cottontail is a typical resident of power line ROWs in Pennsylvania and should be able to relocate to adjacent areas for the duration of construction. Although some wildlife population decreases may be experienced in response to limits upon carrying capacity of adjacent habitats, these decreases should be minimal due to the small area of disturbance.

With the exceptions of Route D, the total size of individual forest tracts on new ROW will not be substantial. Clearing new ROW will result in somewhat higher predation rates, increased nest parasitism, and human disturbances associated with forest edges.

This may have a minor negative effect upon forest birds (Brittingham and Temple, 1983; Bushman and Therres, 1988). Local populations of some forest interior species may also decrease as a result of the project. Typical forest interior species in Pennsylvania include the Hooded Warbler (*Wilsonia citrina*) and the Ovenbird (*Seiurus aurocapilus*).

Areas which were previously forested will be maintained as rangeland within the ROW. Because forest cannot be allowed to regenerate within the ROW, the potential effects of construction are greater in forested areas than for any other terrestrial land uses. Rangeland areas will increase as a result of project implementation. A maximum of 50 feet of ROW will be maintained as rangeland. This additional rangeland will provide foraging areas for numerous wildlife species.

The maintenance of ROW, including tree trimming and brush clearing, may have an effect upon terrestrial animal species occurring in the area. Maintenance may destroy the nests and young of some species if it coincides with the breeding season; driving over the ROW for inspection purpose can also destroy nests and young. However, these impacts should be minimal and should not have any adverse effect upon wildlife populations.

Typical methods that will be used by DLCo to minimize impacts to vegetation and wildlife include, but are not limited to:

- Plant cover in the ROW wire zone will be maintained as a low shrub-herb-fern-grass community.
- Implement selective clearing, based on stem density, in the ROW border zone and allow compatible herbaceous and shrub species to grow in the

ROW border zone. Use selective herbicide applications to manage undesirable vegetation in and along the ROW corridor.

- Considering span length, allow tree growth in deep valleys and ravines where the conductor height exceeds the mature height of the surrounding trees factoring for minimum allowable electrical safety clearance requirements.
- All disturbed areas will be restored to their original contours. Seeding and mulching will immediately follow seedbed preparation.
- All cutting in and along the ROW less than five inches in diameter, other than buffer areas, will be piled and crushed or disposed of by chipping or shredding. Cutting larger than five inches in diameter will be stacked behind the edge of the ROW or removed, as directed by the landowner
- Tree pruning and removal and wood disposal efforts in and along the ROW edge will be performed in such a manner as to minimize, as much as possible, damage to desirable plant species.

Wetlands are environmentally sensitive areas and highly productive habitat areas and have been avoided whenever practicable during route selection. Wetlands provide a number of significant benefits to the ecological and human environments. Transmission line construction, operation and maintenance do not change the wetland's basic ecological function; any unavoidable effects would be minimal and temporary. No structures are located in wetlands for any alternative routes. The only impacts that may occur are during construction and will be repaired. Emergent wetlands and scrub-shrub wetlands will become reestablished as an emergent or scrub-shrub wetland following construction.

Some forested wetlands may also receive minor impacts due to the trimming of trees for electrical safety line clearance. However, no loss of wetlands will occur.

Early in the project, coordination was initiated with the USFWS, Pennsylvania Fish and Boat Commission (PFBC), Pennsylvania Game Commission (PGC); and the Pennsylvania Department Environmental Protection (PaDEP) concerning the potential for occurrence of endangered, threatened, and rare species within the study area. Appendix B contains correspondence from these agencies.

A response from the USFWS has indicated that except for an occasional transient species, no federally listed or proposed threatened or endangered species are known to occur in the study area. No protected bird or mammal species under the jurisdiction of the PGC are known to occur in the study area. The PFBC indicates that except for occasional transient species, rare, candidate, threatened or endangered species under their jurisdiction are not known to exist in the vicinity of the study area.

However, the Pennsylvania Department of Conservation and Natural Resources (PADCNR) has indicated that the Pennsylvania Natural Diversity Inventory search has revealed a Pennsylvania endangered species within Hampton Township. This is the *Trillium nivale* (snow trillium), which grows in moist woods and on slopes and was last seen in the study area in 1993. A map was provided that indicated the location of sightings, with one location in the study area at a mid-point in the Crouse Run valley. No alternative routes are located in the vicinity of the snow trillium sighting. Nor did field investigations in July 2003 along the proposed routes reveal snow trillium.

An Erosion and Sedimentation (E&S) Control Plan will be executed during the construction phase for any route that is selected for construction, minimizing impacts from

erosion and resulting sedimentation. Specific impacts to vegetation and wildlife for each route are discussed below.

2.2.2.1 *Alternative Route A*. Because Route A is located on or adjacent to public road ROW and distribution line ROW for almost its entire length of 4.2 miles, no substantial effects upon terrestrial or wetland vegetation or on wildlife are expected to result from construction and operation of this route. This route crosses Crouse Run and its associated palustrine forested wetland on existing ROW adjacent to Wildwood Road and will not affect habitat of the snow trillium. Any minor earth disturbances affecting the southern and northern terminus areas of the line where limited amounts of new ROW (approximately 1,500 feet) are required and for providing new overbuild structures will be controlled through an Erosion and Sedimentation (E&S) Control Plan executed during the construction phase. No mitigation measures are required.

2.2.2.2 *Alternative Route B*. Similar to Route A, Route B is located on and adjacent to public road ROW and existing distribution line ROW for most of its length. Only a small section of new ROW is located in forest land. This area is located just south of Duncan Avenue where approximately 0.8-acre of forest will be converted to rangeland. This route crosses Crouse Run and its associated palustrine forested wetland on existing ROW and is not in close proximity to habitat suitable for snow trillium. No substantial long-term effects upon terrestrial or wetland vegetation or wildlife are expected to result from construction and maintenance of this route. An E&S Control Plan will be executed during the

construction phase. Mitigation measures may be required for construction in wetland areas. Route B is 3.1 miles long.

2.2.2.3 *Alternative Route C*. Except for approximately 400 feet of new ROW at the northern terminus, 600 feet of new ROW at the Mount Royal Boulevard crossing, and 400 feet of existing transmission line ROW at the southern terminus, the remainder of this approximately 4.5-mile long route is located on existing railroad ROW that is both cleared and maintained. Only 25 feet of the 50-foot wide ROW would need to be cleared. Construction of this route will require converting 5.7 acres of forest to rangeland. A service road follows the railroad and is suitable for construction of this route. The line structures will be built in existing railroad ROW, but some transmission wires and guys may extend beyond the railroad ROW. Wetlands are found in many locations adjacent to the railroad ROW (Figure 3-1). These will not be affected, unless required electrical safety clearances to trees are not sufficient, in which case trees will be trimmed. At five locations, the route crosses Pine Creek, which is a trout-stocked stream throughout its length and a delayed harvest trout stream in parts of the route. However, no effect on Pine Creek is expected since no activity will take place in the stream.

Contact will be made during the construction phase with the USACE and the PaDEP in order to appraise them of transmission line construction in proximity to the wetlands. The PFBC will also be notified of construction in proximity to a trout-stocked stream. No other mitigation measures are required.

2.2.2.4 *Alternative Route D*. Route D is approximately 3.2 miles long, with 1.6 miles to be located on new ROW. Most of the land on new ROW is classified

as forest land. Construction of this route will require converting approximately 9.1 acres of forest land to rangeland. Clearing and construction of the route will result in minor disturbance and displacement of wildlife and their habitat. Construction of Route D will also require clearing of a new ROW through partially disturbed forest areas. These are generally located at the edge of residential areas. Wildlife impacts associated with new ROW through a forest area are greater than those associated with construction on and adjacent to existing ROW. Clearing a new ROW through a forested area reduces the habitat for forest interior breeding species and contributes to forest fragmentation. Once construction is completed there will be a permanent loss of forest habitat but an increase in edge habitat on the ROW. These edge habitats are used by a wide variety of wildlife species. Local populations of some species utilizing edge habitats, such as deer and rabbits, may increase.

Despite affecting the most forested land of any route, only minor habitat changes will occur owing to the limited amount of acreage (9.1 acres) affected. No mitigation measures are required.

2.2.2.5 *Alternative Route D/C*. Route D/C is approximately 4.1 miles long and is a combination of Route D in its northern half and Route C in its southern half. This route requires the second-most new ROW (0.6-mile). Approximately 4.1 acres of forested land will be converted to rangeland and will result in the loss of this amount of forested land and the generation of a small amount of edge habitat. Most of the remainder of the new ROW is currently in rangeland or grassland.

Only small amounts of urban and residential land is located adjacent to this route and impacts to these sectors are small. Pine Creek is crossed three times, and about 0.8-mile of wetland/stream land use is found adjacent to the route. Since no structures or facilities will be located in wetlands and no work in the stream will be required, no impacts to these resources are expected. A delayed harvest trout stream is located in parts of the route. Contact will be made during the construction phase with the USACE and the PaDEP in order to appraise them of transmission line construction in proximity to the wetlands. The PFBC will also be notified of construction in proximity to a trout-stocked stream. No other mitigation measures are required.

2.2.2.6 *Alternative Route E*. This is the longest route at 4.8-mile long and is built entirely on existing transmission or distribution line ROW except for a 200-foot section at the southern terminus which is on Duquesne Light property and requires no new ROW. Consequently, it also does not require any negotiations with any new ROW owners. In its northern section, this route overbuilds an existing 23kV transmission line through North Park and is on the same alignment as is Route D, to near Hemlock Drive. Thereafter, it is on existing transmission or distribution line ROW that primarily follows roads and streets to the North Substation. Large amounts of residential or urban lands are found adjacent to the ROW that will be followed. Equal amounts of rangeland will be also be followed, with most found along existing transmission line ROW In the vicinity of North Park. Except for construction adjacent to active roadways, most socio-economic impacts are expected to be minor. Impacts to wetlands, streams, and forested lands, and

other natural resources are also expected to be low. No mitigation measures are required.

2.2.2.7 *Alternative Route E*-1. Similar to Route E, this 4.1-mile long route can be built entirely on existing transmission or distribution line ROW and requires no new ROW, except for a 1,200-foot section of new ROW at the southern terminus. This route follows Route E to the intersection of Thompson Run Road, Duncan Avenue, and Ferguson Road crossing rangeland and adjacent forested areas of North Park. At Peebles Road, it begins following adjacent to residential areas and urban areas. Except for construction adjacent to active roadways, most socio-economic impacts are expected to be minor. Approximately 1.7 acres of forest land will be converted to rangeland at the southern terminus. No mitigation measures are required.

2.3 Hydrology

An overview of water environments traversed by the routes is presented in this section. The existing environment is discussed in Section 2.3.1. Potential impacts upon water resources and measures to avoid or mitigate adverse environmental effects are presented in Section 2.3.2.

2.3.1 Existing Environment. As in most areas of Southwestern Pennsylvania, the drainage basins located within the study area are characterized by dendritic patterns. Typically, steep ravines located on ridges collect storm water runoff and deposit it in intermittent streams. These collect within valley bottoms and form perennial streams. Average annual runoff ranges from 14 to 20 inches and is primarily influenced by the distribution of precipitation. Other factors, however, such as land use, vegetative cover,

geology, and physiography also influence the variability of flow within individual watersheds. Runoff exhibits distinct seasonal variation, with the period of highest runoff occurring in early spring, late summer and early fall. Seasonal differences in evapo-transpiration account for most of the variation (PaDER, 1983).

The proposed project is located within Subbasin 18, Lower Allegheny River, of the PaDER State Water Plans (1982). The USACE was contacted regarding navigability of streams in the study area. No streams in the study area are navigable. The Allegheny River is the only watercourse near the study area which is navigable.

Streams traversed by project alternative routes are located within the Pine Creek watershed. Pine Creek generally flows from northwest to southeast in the study area, flowing into the Allegheny River near the town of Etna outside of the study area. Within this watershed, there are four major tributaries. Gourdhead Run flows north to south along Route 8, entering Pine Creek near Duncan Avenue. Crouse Run generally flows from northeast to southwest entering Pine Creek roughly midway in the study area. Willow Run generally flows north to south and enters Pine Creek next to the Wildwood Substation near the northern boundary of the study area. Little Pine Creek originates near the North Allegheny High School near McKnight Road and flows generally southeast to a confluence with Pine Creek in Etna. Pine Creek, with a drainage area of approximately 67.3 square miles, originates near Wexford and Gibsonia and flows generally south through the townships of Pine, Richland, McCandless, Hampton and Shaler, entering the Allegheny River at Etna Borough.

The study area is located in the Allegheny River Basin of the Ohio Valley Study Area (Area No. 9) of the Commonwealth of Pennsylvania's Comprehensive Water Quality

Management Planning (COWAMP). Over 40 percent (751 miles out of approximately 1,840 miles) of the major streams in the Ohio Valley Study Area exhibit chronic or occasional violations of Pennsylvania Water Quality Standards. Approximately 66 percent of these water quality violations are due to non-point source pollution, primarily acid drainage from abandoned coal mines. In the Ohio Valley Study Area, mine drainage by itself or in combination with other types of pollution accounts for over 85 percent of the 751 major stream miles having water quality problems. Other significant pollution problems include inadequately treated industrial waste discharges and municipal discharges (PaDER, 1984). Pine Creek is located in COWAMP Subbasin 18A. That subbasin is identified as affected by acid mine drainage, urban runoff, sewage, and industrial waste.

The PaDEP classifies and establishes water quality standards and criteria for all surface waters within the state. These standards include general water use categories and corresponding water quality standards. According to these standards, Pine Creek and its tributaries are classified for Cold Water Fishes (CWF) from its source to North Park Lake Dam, and as a trout stocked fishery (TSF) from the dam to its mouth. Currently, Pine Creek is stocked with trout by the PFBC from its mouth to, and including, North Park Lake. A section from the highway bridge at Duncan Avenue to a railroad bridge near Bryant Road is designated as a delayed harvest, artificial lures area only.

Currently, there is no evidence of use of these streams for drinking water or irrigation. None of these streams exhibit major acidic degradation. However, there are several sources of acid mine drainage evidence in the vicinity of the old Wildwood Mine in the northern portion of the study area. Also, concentrated amounts of acidic water sourced from old mines may occur after heavy rainstorms, as may sewage from overflow

devices built into municipal systems. Water quality is generally good in both Pine Creek and its tributaries.

2.3.2 Impacts and Mitigation. The streams that are traversed by each of the alternative routes and the type of crossings made are presented in Table 2-2. All of the alternative routes cross Pine Creek at least once. However, impacts will generally be minor since most of the overhead line crossings of Pine Creek and perennial tributaries will be on existing ROW. It will not be necessary to ford Pine Creek with construction vehicles. The transmission line poles will be constructed to prevent sedimentation from entering nearby streams.

2.3.2.1 Alternative Route A. Route A crosses Willow Run and Crouse Run on existing ROW adjacent to Wildwood Road, crosses Gourdhead Run (which is mostly culverted) along Route 8 ROW, and then crosses Pine Creek three times along Route 8, again on existing ROW. None of the crossings require work that would be done in streams. The pole structures will be overbuilt to carry the new 138 kV line and earth disturbance will be limited to the immediate vicinity of each pole. Access will be from adjacent roads.

2.3.2.2 Alternative Route B. Route B crosses Willow Run on existing ROW adjacent to Wildwood Road, crosses Crouse Run overbuilding a 23 kV line in existing ROW, and crosses Pine Creek following the same 23 kV line in existing ROW. There are available construction methods that will alleviate the need to cross these streams at-grade. These will be used to avoid impacts. An unnamed intermittent tributary to Pine Creek will also be crossed near the Wyland School in distribution line ROW. Elfinwild Run is also crossed on new ROW south of Wyland

School. Earth disturbance will be limited to the immediate vicinity of each pole and the area of the stream crossing.

2.3.2.3 *Alternative Route C*. Route C is located in railroad ROW and includes five crossings of Pine Creek, which it follows, and crosses two unnamed tributaries midway in the study area. Both tributaries flow from west to east and enter Pine Creek. A service road for the railroad is located in the ROW and can be used to construct the transmission line poles, which will be located in the railroad ROW. The service road has dedicated bridges and will prevent the need to make at-grade crossings, either to Pine Creek or the two tributaries which are crossed adjacent to Pine Creek. Despite the seven stream crossings required for Route C, impacts will be minor since no construction work in the stream is required.

2.3.2.4 *Alternative Route D*. Route D crosses Pine Creek on existing ROW near the Old Wildwood Mine (now the Wildwood Peddler's Fair Flea Market) complex, crosses an unnamed tributary to Pine Creek in North Park, and two more tributaries near Duncan Avenue. The first crossing of Pine Creek near Wildwood Road has a bridge available for a crossing point. However, two of the crossings of tributaries will likely be at-grade. Available construction methods that would alleviate the need to cross these streams at-grade will be used to minimize or avoid impacts. Again, impacts will be minor to streams since no construction work in streams will be required.

2.3.2.5 *Alternative Route D/C*. Following the Route D alignment, Route D/C crosses Pine Creek on existing ROW near the Old Wildwood Mine complex and crosses two unnamed tributaries to Pine Creek in North Park. Thereafter,

Route D/C alignment crosses Pine Creek two more times as it follows the Route C alignment to the southern terminus. Impacts will be minor to streams since no construction work in streams will be required.

2.3.2.6 *Alternative Route E*. Route E crosses Pine Creek on existing ROW near the Old Wildwood Mine complex and crosses an unnamed tributary to Pine Creek in North Park. Following Thompson Run Road, Route E crosses Little Pine Creek and then a tributary to Little Pine Creek on existing ROW adjacent to roadways. No impacts to streams are expected on this route since it is adjacent to roadways and is located on existing ROW.

2.3.2.7 *Alternative Route E-1*. This route has the least stream involvement of all alternative routes. Following the Route E alignment, Route E-1 crosses Pine Creek on existing ROW near the Old Wildwood Mine complex and then crosses an unnamed tributary to Pine Creek in North Park. No other streams are crossed on this route and no impacts are expected.

Mitigation measures for all routes include preparation of an E&S Control Plan, which will be included in the construction documents and available for review by the Allegheny County Conservation District. Since plans call for all waterbodies to be spanned, no long-term impacts are anticipated from any of the alternatives. Any impacts during construction will be minimized by implementation of the E&S Control Plan.

Among the protection measures included in this plan are:

- Stream crossings by vehicles will be restricted. Access to structures will be gained from upland locations wherever possible.

- Temporary stream crossings may be used during construction, consisting of either mudboard or gravel pads. If needed, culverts will be constructed with stone and gravel fill.
- Any required construction roads will be laid out to prevent sediments from reaching streams. A strip of undisturbed land will be left between the construction road and the stream (filter strip). The width of the filter strip will be greater in steep slope areas than on level areas.
- Straw or hay bales will be placed along the stream banks to prevent entry of sediment into the stream.
- During construction drainage ditches, creeks and waterways will be kept free of obstructions.
- Where available, existing access roads will be used to avoid the fording of streams.
- Appropriate controls will be used at structure locations to prevent sediments from entering streams.

2.4 Scenic and Recreational Areas

A description of scenic and recreational resources within the study area is presented in this section.

2.4.1 Existing Environment. To identify scenic areas, the *Outstanding Scenic Geologic Features of Pennsylvania*, Parts 1 and 2 (Geyer and Bolles, 1979 and 1987), the *Atlas of Pennsylvania* (Cuff, et al., 1989), and USGS 1:24,000 topographic maps were used. Scenic areas listed in these sources represent some of the most distinguished

scenic geologic features of the Commonwealth. Field evaluation were also used to identify any notable resources.

One outstanding scenic geological feature was identified. Cold Valley is located within the study area in the steeply-walled valley along Crouse Run. Cold Valley is located west of Hampton Cemetery and the village of Talley Cavey. The valley bottom remains cold through much of the summer months. Narrow valley walls channel and trap winter air currents so that the valley bottom remains cool throughout the year. The wildflower snow trillium (*Trillium nivale*), a Pennsylvania rare species, is found in Cold Valley as well as other plants normally found in more northern climates. Rocks exposed in the valley walls are sandstones, siltstones, and shales of the Glenshaw Formation of the Conemaugh Group (Geyer and Bolles, 1979 and 1987).

Recreation areas include those lands managed for the maximization of recreational opportunities. These areas include state parks, county parks and playgrounds, athletic fields, golf courses and reservoirs maintained by the USACE. These resources in the study area are summarized below. No state parks or state picnic area are located in the study area (Pennsylvania Bureau of State Parks, 1989). However, Allegheny County's 3,010-acre North Park is located in the northwestern corner of the study area. This is a major regional facility providing a full compliment of recreational opportunities for the citizens of Allegheny County. Other than the trails in North Park, no major hiking or biking trails are located in the study area (Thwaits, 1985; Sundquist and Hams, ed., 1986; Raphael, ed., 1987; Gray, 1988; Burkholder, ed, 1989; Cuff, et al., 1989; Pennsylvania Bureau of State Parks, 1989).

Other recreation areas were identified from USGS 1:24,000 topographic mapping, 1:12,000 aerial photography (1993) and from field surveys. Recreation areas located adjacent to portions of the routes that are either on new ROW or on existing non-electric ROW are presented in Table 2-3. Portions of the route that are located on existing electric line ROW are not considered to generate substantially new impacts.

2.4.2 Impacts and Mitigation. Route A has no recreational area involvement and crosses Crouse Run and Cold Valley along Wildwood Road on existing electrical power line ROW. Route B is located adjacent to the Pine Creek Golf Driving Range and crosses Crouse Run valley just south of Cold Valley; there are no impacts. Route C has no involvement with either a scenic geological resource or recreational area.

Route D crosses North Park for a distance of approximately 600 feet on new ROW. No facilities at the park are located near the proposed route, except for one shelter near the existing 23 kV line that will be overbuilt. This route also crosses approximately 600 feet of the Wildwood Golf Course on new ROW. Except for construction-related disturbance, no substantial impacts are expected to these recreation areas.

Route D/C follows the same alignment as Route D in its northern section and crosses North Park for a distance of approximately 600 feet on new ROW. It overbuilds an existing electrical subtransmission line. No facilities at the park are located near the proposed route, except for one shelter near the existing 23 kV line that will be overbuilt. This route also crosses approximately 600 feet of the Wildwood Golf Course. Except for construction-related disturbance, no substantial impacts are expected to these recreation areas.

Both Route E and Route E-1 do not cross a scenic geological resource or recreational area on new ROW.

Other than the small section of the Wildwood Golf Course in the vicinity of Sample Road and Laurel Lane that is crossed by Routes D and D/C, no impacts to recreation resources will be incurred by alternative routes for the proposed project. No functions of the golf course will be impacted by the crossings of Routes D or D/C. No mitigation is required.

2.5 Wilderness and Natural Areas

An overview of wilderness and natural areas is presented in this section for the study area.

2.5.1 Existing Environment. Wilderness areas and natural areas fall under three general classifications: wilderness areas, national natural landmarks, and designated natural areas. No wilderness areas designated by the Wilderness Act (16 United States Code, Section 1172) are located in the study area.

National natural landmarks have been recognized by the National Park Services as areas of outstanding biologic or geologic importance (Federal Register, 1983-1991). No national natural landmarks are located in the study area.

Designated natural areas are maintained as wild areas by governmental agencies or private organizations. The locations of designated natural areas were determined from several sources (PaDER, 1986; Cuff, et al., 1989; DeLorme, 1989; and Pennsylvania Bureau of State Parks, 1989). No designated natural areas are located in the study area.

2.5.2 Impacts and Mitigation. No federal wilderness areas, national natural landmarks or designated natural areas are located within two miles of any of the alternative routes. Therefore, no impacts to these resources will occur.

2.6 Terrain and Landscape

2.6.1 Existing Environment. The study area varies with a mixture of commercial and light industrial development along Route 8 in the east, with extensive moderate-density residential development covering much of the central portion, and with scattered suburban residential areas and rural, undeveloped land further to the west. A dominant topographic feature is the rural Pine Creek valley that winds generally north-south through the study area. No one land use dominates the visual environment. Each land use type has an influence on the overall visual character adjacent to any of the alternative transmission line routes. Both terrain and vegetation can influence the extent of visual impact, while the existing land use can determine the type and number of viewers that would be affected by the proposed transmission line. For example, transmission lines located on level, open terrain (such as fields and farmland) can be seen for longer distances than transmission lines located in hilly, wooded areas.

Study area terrain is typical of Western Pennsylvania, with hilly areas dominating and wooded side slopes. The typical local elevation differences in the study area is approximately 400 feet, from approximately 830 feet mean sea level (MSL) along Pine Creek near Allison Park to a hilltop of 1,225 feet MSL between Crouse Run and Pine Creek. In most cases, the hilly nature of the study area prevents long views of ROWs. Except for some areas along Route 8, most roads in the study area have many curves, restricting long viewsheds. With the exception of the Wildwood Golf Course along Sample

Road and a golf driving range along Duncan Avenue, most of the viewer opportunities are from roadways. The linear nature of the CSX Railroad ROW allows for some longer views for observers in the valley bottom, but the rural nature of the valley of Pine Creek provides for few viewers.

The roads in the study area have adjacent electric distribution, telephone and cable service lines, and many have anchors and guy wires that are installed across the roads. Steel lattice towers are located on the Cheswick-North 138 kV transmission line. There are also numerous pipeline ROWs that cross roadways in the study area.

2.6.2 Impacts and Mitigation. At the northern terminus, the driveway to the Wildwood Substation is remote, surrounded by vegetation, and the facilities are on a hilltop generally removed from the public's view. At the southern terminus, towers for the Cheswick-North 138 kV transmission line are a common sight and an additional (lower) tap line would be in visual keeping with the existing electrical transmission corridor. An optional southern terminus is the existing North Substation for Alternative E. Therefore, the terminal points for the proposed transmission line project would present low visual impact.

For the proposed transmission line itself, the impact on the existing visual environment is partially related to its scale and physical design properties. Most of the transmission and distribution lines to be overbuilt are carried on single, wood pole structures. Overbuilt replacements will be on single pole structures, of wood or steel. The following definition were used during the visual impact assessment:

- **Minimal.** Visual impact is low because the existing terrain and/or vegetation will limit the visual impact. Visual impact is also considered low when a limited number of viewers or viewpoints are involved.
- **Moderate.** Visual impact is moderate when the existing terrain and/or vegetation will only partially limit the visual impact, and multiple viewers and/or viewpoints are involved.
- **Severe.** Visual impact is severe because the existing terrain and/or vegetation will not limit the visual impact and large numbers of viewers or viewpoints, or scenic areas are involved.

2.6.2.1 *Alternative Route A*. Route A is located primarily along transportation corridors including Route 8 and Wildwood Road. Adjacent commercial development is extensive, with a scattering of industrial development and residential buildings (see Photograph 1, Appendix C). Since the route is located mostly along existing roadways and would require an overbuild, visual impacts would occur during construction when vehicles and workers are in the area. Approximately 50 percent of existing pole structures will be replaced with poles approximately 25 feet taller. Additional guying and private property anchor rights would be required. There are wood pole structures and telephone poles currently lining the roadways. There will be few opportunities to screen the proposed transmission line along this route. The overall visual impact for Route A would be moderate, owing to the many observers using the highways. Photographs 1 and 2 show the typical existing conditions along a route following distribution lines.

2.6.2.2 *Alternative Route B*. Route B is located mostly on existing subtransmission and distribution line ROW which is located mostly through residential areas and some forested land. In the northern sections near Wildwood Sample Road, hilly and forested land will obscure much of the overbuild reconstruction (Photograph 3). In the southern half of the route, many residential areas are crossed. The existing terrain and/or vegetation will partially limit the visual impact of the distribution line ROW that will be followed, but many residential and road users will see the line. Where the line spans Pine Creek, the wide valley and a nearby golf driving range will provide a long viewshed to observers. Because of these considerations, the visual impact for Route B will be moderate, when compared to the other options in the study area. Photograph 4 shows the existing conditions at a typical residential location.

2.6.2.3 *Alternative Route C*. Alternative Route C follows the rural Pine Creek valley where there are few road crossings and few observers. Moreover, the high valley walls and vegetated sidewalls limit viewsheds into the valley. While the line will be seen by fishermen using Pine Creek, the location of the line along the railroad ROW will minimize its visual effect. The overall visual impact for Route C would be minimal due to these conditions (see Photographs 5 and 6).

2.6.2.4 *Alternative Route D*. Approximately 50 percent of Route D is located on new ROW, mostly through forested terrain. While it follows and overbuilds an existing 23 kV line from the Wildwood Substation to Laurel Drive, it crosses the Wild Mountain Snow Tubing area (see Photograph 7), passes through a corner of North Park and runs adjacent to the Wildwood Golf Course, the two

most frequented recreational facilities in the study area. Some cloaking of the line will occur in North Park, as it passes primarily through forested areas. South of Laurel Drive, this route is located on new ROW, mostly through forested land and residential subdivisions. Because this section of the route is presently undisturbed, the visual impact will be severe, owing to these conditions. The existing terrain and/or vegetation will only partially limit the visual impact of creating new ROW through forested and residential areas. The new ROW will be visible from road crossings and obtrusive to adjacent property owners (see Photograph 8). Overall, Route D is considered as generating visually severe impacts.

2.6.2.5 Alternative Route D/C. Like Route D, Route D/C follows and overbuilds an existing 23 kV line from the Wildwood Substation to Laurel Drive, crossing the Wild Mountain Snow Tubing area, passing through a corner of North Park and running adjacent to the Wildwood Golf Course. Again, some cloaking of the line will occur in North Park, as it passes primarily through forested areas. South of Laurel Drive, this route is located on new ROW until it intercepts and follows the same alignment as Route C in the Pine Creek Valley. About one-half-mile of this new ROW passes through forested terrain. It will present a new transmission corridor to viewers traveling along Bryant Road. Along the CSX Railroad line, Route D/C is shielded from view for much of its length. Overall, Route D/C is considered as generating moderate impacts.

2.6.2.6 Alternative Route E. This route also follows the Route D alignment through portions of North Park, and impacts the same facilities as previously discussed for Route D. After leaving the Route D alignment, Route E continues

westward through North Park overbuilding the existing 23 kV subtransmission line (it is also adjacent to Wildwood Golf Course in this section). It then overbuilds the subtransmission line as it proceeds through residential areas, near the Hosack Elementary School, and past a major business complex at the intersection of Duncan Avenue, Ferguson Road and Thompson Run Road. Continuing southward overbuilding the subtransmission line, Route E passes through intermittent dense and sparse residential development to the North Substation, passing adjacent to the Temple Ohad Shalom and McCandless Swim Club in the process. Overall, Route E is considered as generating moderate *impacts.*

2.6.2.7 *Alternative Route E-1*. This route follows the same alignment as Route E to the intersection of Duncan Avenue, Ferguson Road and Thompson Run Road. The same conditions apply here as for the Route E alignment. Leaving the intersection, Route E-1 proceeds through often dense residential development along Ferguson Road to its southern terminus. Overall, Route E-1 is considered as generating moderate impacts.

2.7 Archaeologic and Historic Resources

2.7.1 Existing Environment. Documented cultural resources which include historic and archaeological sites listed on the National Register of Historic Places (NRHP), recorded but unregistered archaeological sites, and recorded historic standing structures within two miles of the centerlines of the seven proposed routes have been identified. Table 2-5 presents the recorded cultural resources. The following procedures were undertaken in order to locate these resources:

- a review was made of the archaeology site files at the Bureau for Historic Preservation of the Pennsylvania Historical and Museum Commission (BHP/PHMC) at the William Penn Memorial Museum in Harrisburg; and
- a review was completed of the files in the BHP/PHMC for sites included in the NRHP and for historic standing structures which were identified in surveys of Allegheny County that were conducted by the Pittsburgh Historical and Landmark Foundation (PHLF).

The distribution of archaeological and historical sites identified throughout the study area provides a general indication of prehistoric and historic settlement patterns. However, it represents only an approximate indication of cultural resource sensitivity within the study area (i.e., numbers of sites).

2.7.1.1 *National Register Sites*. No NRHP sites are located in or adjacent to alternative routes for the project. There are two sites that are listed on the NRHP that are within two miles of the seven Alternative Routes. The Isaac Lightner House is located in Glenshaw and is approximately 1.5 miles from the tap points at the Cheswick-North 138 kV transmission line for the seven routes. The Allegheny Bridge over Pine Creek in Shaler Township ranges from one-mile for Route A up to 1.5 miles away for Route D. There will be no effect on these historic resources by the project no matter what route is selected for construction.

2.7.1.2 *Archaeological Sites*. There are thirteen archaeological sites recorded within the study area; these are generally located in the northwest corner. Route A has no archaeological involvement. Route B has one site located within 2,000 feet of the centerline but there will be no effect from construction or operation.

There are also six archaeological sites located within 2,000 feet of Routes C, E and E-1. Again, there will be no impacts. One archeological site is located adjacent to Route D and Route D/C, with another five sites located within 2,000 feet. None of these sites will be affected by either construction or operation of either route.

2.7.1.3 *Historic Standing Structures*. There are no eligible historic standing structures in or adjacent to alternative routes for the project. However, within the study area there are two structures in Hampton Township identified by the BHP/PHMC as National Register Listed Eligible Properties. One structure is an unnamed resource on Mount Royal Boulevard within two miles of all of the routes. In Shaler Township, there are nine resources identified by the BHP/PHMC as National Register Listed Eligible Properties. Seven of the nine are located within two miles of the alternative routes.

2.7.2 Impacts and Mitigation.

2.7.2.1 *National Register Sites*. None of the historic resources in the study area are within view of any alternative route. Therefore, there are no impacts to National Register properties.

2.7.2.2 *Archaeological Sites*. Alternative Routes A, B, C, E and E-1 do not have any archaeological sites either in or adjacent to the proposed ROW. Therefore, no archaeological impacts are associated with these routes. One archeological site is located adjacent to Routes D and D/C which would have to be located, flagged, and protected prior to construction of either of these routes. No operational impacts will occur for any of the routes.

2.7.2.3 *Historic Standing Structures*. Historic standing structures that are within two miles of alternative routes are not within visual range of any alternative routes. Thus, no impacts will be generated by any proposed route. No mitigation measures are required.

2.8 Airports

Regulations by the PAPUC require that all airports be identified within two miles of a proposed transmission line. Also, Federal Aviation Administration (FAA) regulations provide for a review process and for making a "Determination of Hazard or No Hazard" for all structures that might constitute a hazard to aeronautical operations. Moreover, FAA regulations provide for a review of all electrical structures and devices that might interfere with the navigation aids (NAVAIDS) and communication facilities for air operations. The primary NAVAIDS of concern include:

- VORTAC 360 degree directional beams; and
- airport instrument landing system (ILS).

2.8.1 Existing Environment. The Pennsylvania Aeronautical Chart (1990) was used to locate aeronautical features important to the proposed project. There are no airports within two miles of the study area.

Air navigation directional beacons may be affected if a high voltage line is directly in the line of sight between the facility and its airborne receiver. There are no navigational directional beacons within two miles of the study area.

2.8.2 Impacts and Mitigation. There are no impacts to airports or navigation facilities and no mitigation is required.

2.9 Unique Geologic Resources

There are no unique geologic resources in the study area, other than Cold Valley that was identified in Section 2.4. Cold Valley is located within the study area in the steeply-walled valley along *Crouse* Run. The valley bottom remains cold through much of the summer months. Narrow valley walls channel and trap winter air currents so that the valley bottom remains cool throughout the year. Rocks exposed in the valley walls are sandstones, siltstones, and shales of the Glenshaw Formation of the Conemaugh Group (Geyer and Bolles, 1979, 1987). Routes A and B cross Cold Valley on existing ROW. However, there are no impacts to Cold Valley by these routes. No mitigation is required.

2.10 Soil and Sedimentation

Identified in this section are the soils which are located along the alternative routes and the effects upon soils resulting from the project. Except for Route D, erosion potential associated with the project is expected to be minimal, because little land surface will be disturbed. Erosion potential is associated with the following:

- structure construction; and
- provision of access roads.

The data regarding soils was obtained from the county soil survey generated by the USDA Soil Conservation Service for Allegheny County (1981).

2.10.1 Existing Environment. All seven routes cross the Gilpin-Weikert-Atkins soil association and the Gilpin-Wharton-Upshur soil association. The soils in the Gilpin-Weikert-Atkins soil association are shallow and moderately deep, well drained soils underlain by gray shale on uplands and deep, poorly drained soils on flood plains. This association is generally found in long, narrow contour areas on valley sides that parallel

the streams. Gilpin soils are well drained and moderately deep to shale and fine grained sandstone bedrock. These soils are located on the sides of valleys. The Weikert soils consist of shallow, gently sloping to very steep, well-drained soils on uplands. These soils formed in material that weathered from shale and fine-grained sandstone bedrock. Atkins soils are deep, poorly drained with a high water table and are found on flood plains.

Soils in the Gilpin-Wharton-Upshur association are moderately deep to deep, well drained soils underlain by red and gray shale on uplands. This association is situated on gently rolling to hilly uplands and is highly dissected by small streams and drainageways. The Gilpin soils are moderately well drained and are deep to gray clay shale bedrock. Minor soils in this association include the deep, well drained Clymer, Hazleton, and Rayne soils. Also included are the deep and moderately well drained Ernest and Vandergrift soils, the deep and somewhat poorly drained Cavode soils and the deep and poorly drained Brinkerton soils.

2.10.2 Impacts and Mitigation. The potential effects upon soils from the proposed project include the loss of soil that has been excavated from either water or wind erosion, reduction of soil quality from mixing topsoil and subsoil, and soil compaction caused by the passage of construction equipment.

Some erosion and sedimentation may be generated from vegetative clearing, structure placement, and construction of access roads. Following existing ROWs will minimize the potential for erosion and resulting sedimentation. Also, the limited area of denuded soils and the erosion controls that DLCo traditionally uses during transmission system construction will help alleviate the generation and movement of sediments.

Wetland areas present special construction difficulties due to their sensitivity to compaction, the lack of soil cohesion, and the saturated nature of their hydric soils. Unless a new construction road goes through them (and these occasions will be temporary), construction of the line will typically not affect wetlands since the distances between structures allow wetlands to be spanned. No transmission pole structures will be located in wetland areas.

E&S impacts resulting from construction of the line will be minimal for Routes A, B, C, E and E-1 since most of the lengths of these routes follow existing ROW. Access roads serve virtually all of these routes and new access will not be required. Although trees and shrubbery may be removed from the ROW, the herbaceous vegetation for the most part will be preserved. Therefore, vegetation will be removed and soils disturbed only at the structure locations. For Route D, vegetation will be removed from the ROW width of 50 feet for 50 percent (1.6 miles) of its length. A 0.6-mile section of Alternative D/C is on new ROW and vegetation will be removed from the ROW width of 50 feet.

The following are some of the steps that DLCo will use, among others, to minimize soil and sedimentation impacts:

- Existing roads and ROWs will be used to access structure locations wherever possible.
- Site-specific E&S Control Plans will be prepared which may be submitted to the Allegheny County Soil Conservation District for their review prior to the commencement of the project.
- At construction locations, typical controls may include an uphill diversion ditch to protect the construction site from runoff and staked haybales to

control erosion. In special cases where the potential for erosion is great, a small sediment trap may also be used.

- Generally, for construction roads and marshalling yards, a combination of diversion ditches and staked hay bales or silt fence will be used.
- Stream crossings by vehicles will be minimized where possible. Access to structures will be gained from upland locations wherever possible. Construction roads will be laid out to prevent sediment from reaching streams. A strip of undisturbed land will be left between the road and all streams (called filter strips). *If the road or structure location is close and/or* the slope is steep, hay bales or silt fence will be used.

Table 2-1

LAND USE CLASSIFICATIONS

Classification	Description
Residential	Areas dominated by single or multi-family housing units.
Urban	Includes all human-dominated land uses, with the exception of residential. Typically includes industrial and/or commercial areas with much of the land covered by structures. Also includes areas intensively used but with few structures such as golf courses, cemeteries, and urban parks. Transportation, communication, and utility land uses are also included.
Agricultural	Broadly defined as land devoted primarily to the production of food and fiber. Includes cropland, pastureland, and orchards, as well as farm associated structures.
Forest	Those areas having an areal tree-crown density of 10 percent or more. Includes both deciduous and coniferous woodlands.
Wetland	Areas where the dominant vegetation is suited to hydric soils. Includes floodplains, streams, rivers, and open-water areas.

Source: Anderson, et al., 1976.

Table 2-2

PERENNIAL STREAM CROSSINGS

Milepoint		Stream Crossing
Route A:	0.06	Willow Run
	0.99	Crouse Run
	3.38	Gourdhead Run
	3.84	Pine Creek
	4.02	Pine Creek
	4.11	Pine Creek
Route B:	0.06	Willow Run
	1.26	Crouse Run
	2.15	Pine Creek
	2.81	Elfinwild Run
Route C:	0.16	Pine Creek
	0.55	Pine Creek
	1.02	Pine Creek
	1.40	Tributary to Pine Creek
	2.48	Tributary to Pine Creek
	2.63	Pine Creek
	3.67	Pine Creek
Route D:	0.20	Pine Creek
	1.10	Tributary to Pine Creek
	1.97	Tributary to Pine Creek
	2.23	Tributary to Pine Creek
Route D/C:	0.20	Pine Creek
	1.10	Tributary to Pine Creek
	2.03	Tributary to Pine Creek
	2.20	Pine Creek
	3.19	Pine Creek
Route E:	0.20	Pine Creek
	1.12	Tributary to Pine Creek
	4.05	Little Pine Creek
	5.10	Tributary to Little Pine Creek
Route E1:	0.20	Pine Creek
	1.12	Tributary to Pine Creek

Source: GAI, 2003.

Table 2-3

RESOURCES CROSSED, ADJACENT TO, OR NEARBY[1]
ROUTES[2] ON NEW OR NON-ELECTRIC LINE RIGHTS-OF-WAY

Route A:	None	
Route B:	Other Recreation Areas: Institutional Complexes:	Pine Creek Golf Driving Range Assembly of God Church[1] Wyland School[1]
Route C:	Other Recreation Areas: Institutional Complexes:	Ballfield on Duncan Avenue[1] St. Ursula Church and School[1]
Route D:	Recreational Areas Crossed: Other Recreation Areas: Institutional Complexes:	North Park Wildwood Golf Club Outlook Point Assisted Living[1]
Route D/C:	Recreation Areas Crossed: Other Recreation Areas: Institutional Complexes:	North Park Wildwood Golf Club Ballfield on Duncan Avenue[1] St. Ursula Church and School[1]
Route E:	None	
Route E-1:	Other Recreation Areas	Ellen Hughes Park[1]

Notes:

1 Within line of sight, but not adjacent.

2 Above parameters (crossed, adjacent and nearby) were developed in past projects involving the PAPUC and are considered to be the standard.

Source: GAI, 2003.

Table 2-4

RECREATION AREAS WITHIN TWO MILES OF
NEW OR NON-ELECTRIC LINE RIGHTS-OF-WAY

Name	Route						
	A	B	C	D	D/C	E	E1
Ballfield, Duncan Avenue	X	X	X	X	X		X
Hampton Community Park	X	X	X				
Hartwood Acres	X		X		X		
McCandless Swim Club		X	X	X	X		X
North Park	X	X	X	X	X		X
Pine Creek Golf	X	X	X	X	X		X
Wild Mountain Snow Tubing	X	X	X	X	X		X
Wildwood Golf Club	X	X	X	X	X		X
Wildwood Highlands	X	X	X	X	X		X
Ballfield, Peebles Road (Peebles School)				X			X
Ballfield, Peebles Road (Hosack Elementary School)			X	X	X		X
Ellen Hughes Park	X	X	X	X	X		X
Falls Run Park	X		X				
Stoneridge Park	X		X				
St. Mary's Park	X		X		X		
McElheny Park		X	X	X			X
Kiawanas Park							
Ballfields (LaRoche College)		X	X	X	X		X

Source: GAI, 2003.

Table 2-5

ARCHAEOLOGICAL AND HISTORICAL ARCHITECTURAL RESOURCE SITES

USGS Quad	County	Township/Boro	Site Number	Site Name/ Former Name	Original Type	Date	NR Eligible	NR Listed
Archaeological Sites								
Emsworth	Allegheny	McCandless	36AL162	McCandless Dump	Campsite	Archaic, Middle Woodland, Late Prehistoric	N/A	No
Emsworth	Allegheny	McCandless	36AL178	Propagation Site	Campsite	Paleo, Archaic, Historic	N/A	No
Emsworth	Allegheny	McCandless	36AL179	Propagation Site	Campsite	Archaic	N/A	No
Emsworth	Allegheny	Pine Township	36AL188	Wyoming Shelter	Campsite	Unknown	N/A	No
Glenshaw	Allegheny	Hampton	36AL172	Rocky Dell 2	Rockshelter	Unknown	N/A	No
Glenshaw	Allegheny	Hampton	36AL173	Stone Foundation Site	Foundation	Historic	N/A	No
Glenshaw	Allegheny	Hampton	36AL177	Sand Pit Site	Campsite	Transitional	N/A	No
Glenshaw	Allegheny	Hampton	36AL180	Hemlock #2 Site	Campsite	Unknown	N/A	No
Glenshaw	Allegheny	Hampton	36AL191	Sample Road Site	Campsite	Unknown/Historic	N/A	No
Glenshaw	Allegheny	Hampton	36AL214	CRMP's Gln-1	Undiagnostic Point	Middle Woodland	No	No
Glenshaw	Allegheny	Hampton	36AL315	Deborah Cooper	Campsite	Middle Woodland	No	No
Glenshaw	Allegheny	Hampton	36AL93	Rocky Dell 1	Rockshelter	Late Prehistoric	N/A	No
Glenshaw	Allegheny	Indiana Township	36AL171	Dietrich	Campsite/ Workshop	Archaic, Transitional, Early Woodland, Middle Woodland, Late Prehistoric	N/A	No
Glenshaw	Allegheny	Indiana Township	36AL322	Hartwood #1	Isolated Find	Late Archaic, Late Woodland	No	No
Glenshaw	Allegheny	Indiana Township	36AL323	Hartwood #2	Isolated Find	Unknown	No	No
Glenshaw	Allegheny	Indiana Township	36AL324	Hart Woods Farmstead	Farmstead	Historic	No	No
Glenshaw	Allegheny	Indiana Township	36AL325	Claus Farmstead	Farmstead	Historic	No	No
Glenshaw	Allegheny	McCandless	36AL166	Sesqui Grove	Campsite	Archaic	N/A	No
Glenshaw	Allegheny	McCandless	36AL167	80th Division	Campsite	Archaic	N/A	No
Glenshaw	Allegheny	McCandless	36AL175	Deer Browse Site	Campsite	Archaic, Transitional	N/A	No
Glenshaw	Allegheny	McCandless	36AL176	Boy Scout Cabin Site	Campsite	Archaic	N/A	No

Table 2-5 (Continued)

USGS Quad	County	Township/Boro	Site Number	Site Name/ Former Name	Original Type	Date	NR Eligible	NR Listed
Archaeological Sites (Continued)								
Glenshaw	Allegheny	McCandless	36AL182	Boat Ramp Site	Campsite	Unknown	N/A	No
Glenshaw	Allegheny	McCandless	36AL189	Point Grove Site	Campsite	Archaic	N/A	No
Glenshaw	Allegheny	McCandless	36AL94	Massachusetts Grove	Campsite	Archaic	N/A	No
Glenshaw	Allegheny	Richland Township	36AL352	Old Hardt Farm	Campsite	Early Archaic, Middle Woodland	No	No
Glenshaw	Allegheny	Shaler	36AL482	Glenshaw Rockshelter	Rockshelter	Unknown Period	No	No
Glenshaw	Allegheny	West Deer	36AL98	Lager Farm	No Description	No Description	N/A	No
Historical Architectural Resource Sites								
Glenshaw	Allegheny	Shaler	000073	Bridge in Shaler Twp.	N/A	Birchfield Road L.R. 02349	No	Yes
Glenshaw	Allegheny	Shaler	001751	Isaac Lightner House	N/A	2407 Mount Royal Boulevard	No	Yes
Glenshaw	Allegheny	Hampton	008895	Calvert House	N/A	2538 Middle Road	Yes	No
Glenshaw	Allegheny	Hampton	100600	02 1 0 0807 0 022572	N/A	Mount Royal Boulevard	Yes	No
Glenshaw	Allegheny	Richland Township	None Available	Willow Run Viaduct	N/A	Willow Run near PA Turnpike	Yes	No
Glenshaw	Allegheny	Richland Township	009077	Charles Gibson House	N/A	Intersection of Gibsonia and Lakeside Drive	Yes[2]	No
Glenshaw	Allegheny	Shaler	096216	Pine Creek Bridge No. 7	N/A	Fall Run Road	Yes[2]	No
Glenshaw	Allegheny	Shaler	104294	Shaler High School	N/A	Mount Royal Blvd. East Side	Yes	No
Glenshaw	Allegheny	Shaler	124118	Bauerlein Brewing Co.	N/A	100 Evergreen Avenue	Yes[2]	No

Notes:

[1] Gray shading denotes NHRP-listed.

[2] Unable to identify a map location.

3.0 SELECTION OF THE PREFERRED ROUTE

3.1 Overview

Following in this section are the methods and study results of the route selection process. The overall objective of the route selection process was to site an environmentally sound, economically feasible, and licensable route within the study area between the Wildwood Substation and DLCo's 138 kV transmission lines. After an analysis of the environmental constraints imposed by the study area, seven alternative routes were defined and analyzed for environmental impacts. No other routes appeared to meet the overall project objective. For the purposes of route selection, environmental resources are defined as particular environmental features that may be impacted by construction of an electric transmission line, or may affect its operation. The occurrence of environmental resources are key factors that determined the selection of the preferred route.

3.2 Resource Categories

A list of Resource Evaluation Criteria was developed in order to compare the suitability of the seven alternative routes. This list contains 23 resource categories, as identified later in this section. The resources were chosen based on federal and state requirements, their sensitivity to impact by electric transmission lines, and sources of data available. Some examples of resources evaluated include airports, unique geological resources, state parks, and archaeological sites. The 23 categories of resources were identified and analyzed along each of the seven routes during the selection process.

To evaluate resource impacts, each was measured in units such as acres, miles, or number of crossings by the proposed transmission line route. Some of the references

and sources used to identify the resources included aerial photographs, USGS mapping at 1:24,000 scale, publications of the PaDEP and private publications such as Atlas of Pennsylvania and Pennsylvania Atlas and Gazetteer. Field surveys augmented the library data.

The 23 resource categories used in the evaluation to select the preferred route are briefly described as follows:

- **State Forests**. These areas are multiple-use lands owned and maintained by PADCNR.
- **State Parks**. These areas offer recreational opportunities and are protected by the PADCNR.
- **State Game Lands**. These areas are set aside for public hunting and game propagation and are protected by the PGC.
- **Other Recreational Areas**. These areas include county and local parks, as well as golf courses that could be identified from the field reconnaissance, USGS maps and aerial photography.
- **National Natural Landmarks**. These areas are listed and protected by the National Park Service, and represent outstanding natural areas or geologic features.
- **Designated Natural Areas**. These are areas recognized for their special natural features and are listed and protected by the PADCNR or by private conservation organizations.
- **Wilderness Areas**. Wilderness areas are federal lands protected by the Wilderness Act.

- **Unique Geologic Resources**. These features offer outstanding scenic opportunities and are listed by PADCNR.
- **Historic Sites**. These sites include sites listed on the NRHP, sites nominated but not listed on the NRHP, and recorded historic standing structures.
- **Designated Scenic Areas**. Although not necessarily protected by PADCNR, these areas have scenic and natural significance, and are listed in a variety of publications. Some areas are located in state parks.
- **National Wild and Scenic Rivers**. These streams have received national recognition for their recreational and scenic value, and are also protected by the PADCNR.
- **State Scenic Rivers**. Many of these rivers are being studied for inclusion on the federal list of Wild and Scenic rivers, and are protected by the PADCNR.
- **Hiking and Biking Trails**. Although these are linear resources that could easily be spanned by the transmission line, they also have scenic value.
- **Airports**. Electric transmission lines can potentially interfere with present physical obstructions; the safety zone depends upon terrain and runway configuration. The Federal Aviation Administration protects airports.
- **Streams**. Only crossings of perennial streams were used in the evaluation. Perennial streams were identified from USGS topographic mapping. For impact evaluation purposes, only the number of crossings at grade were considered. In other words, if there was an existing bridge or culvert

available for equipment to cross the stream, this crossing was not counted as having an impact.

- **Archaeological Sites.** These areas include both unregistered and registered sites designated by the National Register and Pennsylvania Museum Commission.
- **Commercial/Densely Populated Areas**. These areas are defined by industrial, commercial, and closely spaced residential development, including apartment buildings and multi-story office complexes.
- **Residential Areas**. These areas are characterized by suburban and scattered residential development and were identified from examining road networks on the USGS and aerial photographs.
- **Highway, Railroad and Road Crossings**. These were identified from highway, local, and USGS maps.
- **Institutional Complexes**. These areas include schools, churches, nursing homes, and hospitals.
- **Forested Land Cleared.** This represents areas that are presently tree-covered that will be cleared for construction and maintained as rangeland. Forest land includes plant and wildlife habitat that is valuable for food and cover, and is disappearing in the study area.
- **Wetland Cleared**. Wetlands are also valuable plant and wildlife habitat, and represent those areas that would be disturbed during construction.

- **Non-Existing ROW**. These include all undisturbed land required for transmission line construction and operation that does not follow or parallel an existing road, railroad, or utility ROW.

Existing electric and gas transmission lines, railroad ROWs and the 23 resources were mapped on USGS 7.5-minute quadrangle maps at a scale of 1:24,000. The specific environmental resources (tabulated in Table 3-1) were mapped for an approximately 6.7 *square mile study area.* This study area can generally be described as that portion of Allegheny County between Route 8 to the east, Thompson Run Road to the west, Wildwood Road to the north, and the Cheswick-North 138 kV transmission line to the south. The resources near the routes are shown on topographic and property maps prepared for this study (Figure 3-1 in Appendix D) and the constraining factors are shown on Figure 3-2 (in Appendix D). Figure 3-3 (in Appendix D) identifies resources within two miles of alternative line routes but outside the *study area.*

Four measurements were used during the selection of the preferred route: linear distance adjacent, acres cleared, number of resources crossed and/or adjacent, and the number of resources within a specified distance of the centerline (1,000 feet, 2,000 feet or two miles depending on the resource). The measurements were only taken for portions of the routes that are on new ROW or on existing non-electric line ROW. This procedure is based on the premise that portions of the routes that are located on existing electric line ROW are not considered to generate substantially new impacts.

The following parameters were used during the measurement of the 23 resources:

- The linear distance adjacent, acres cleared, number of resources crossed and/or adjacent were determined (as appropriate) based on either a 50-foot wide ROW or a road ROW.
- The number within a specified distance was determined for resources within that distance in any direction from the centerline, but outside of the 50-foot ROW for each route. (Golf courses were double counted since they are both recreation and commercial areas.)
- All resources were based on USGS 1:24,000 scale mapping and 1:12,000 scale aerial photography.

Following data acquisition, it was found that 17 of the criteria to be used for comparing the alternative routes did not occur on or in proximity to any of the routes. These 17 criteria were:

- state forests;
- state parks;
- state game lands;
- national natural landmarks;
- designated natural areas;
- wilderness areas;
- unique geologic sites;
- historic sites;
- designated scenic areas;
- national wild and scenic rivers;
- state scenic rivers;

- hiking and bike trails;
- airports;
- streams;
- archaeological sites;
- institutional complexes; and
- wetland cleared.

As a result, 6 of the 23 criteria were used to compare the alternative routes. Database software was used for the compilation of the data. Table 3-1 presents a summary of all resource data collected, including the PAPUC criteria for resources within the four-mile corridor. Table 3-2 presents the resources that could actually be impacted by construction and operation of the proposed project; in other words, those resources that would be directly affected by the alternatives. Raw data were assembled by the database software for the routes (see Table 3-2). Raw data are those measurements compiled for the environmental resource criteria.

3.3 Relative Scaling

In order to put resource measurements on a relative scale (acres, number, feet) and to obtain an impact score that could be compared across the different alternatives, the raw data were mathematically proportioned to a scale of 1 to 10 (see Table 3-3). In this procedure the route with the highest score (worst) for individual resources receives a 10; that with the lowest score (best) receives a 1. Thus, the raw scores are transformed to a relative scale from 1 to 10 to obtain Relative Scores for each Resource Evaluation Criterion. Using the relative position of the route in comparison to the values for all routes

provided an indication of how the route compares overall. This process is based on a methodology suggested by Gaige, et al. (1991).

3.4 Weighting

In order to determine the most suitable route, the relative scores for each criterion for each route need to be totaled. Because it was felt that not all of the criteria are equally important in selecting between the routes, especially as perceived by the public, the criteria weights established by the Siting Criteria Council (SCC) for the GPU-DQE 500 kV Transmission Line Project, were used. A criterion weight identified the relative importance of each criterion in the selection of the preferred route. The Nominal Group Technique (NGT), which is a structured design-making technique, was used by the SCC. The results of the NGT are shown in Table 3-4 under the weights column. While a range of 0 to 100 was possible, on an individual basis, the SCC's average weight ranged from 17.9 to 88.8.

SCC weights were used for 21 of the 23 resource criteria. Three resource criteria, wilderness area, forest land cleared and non-existing ROW, not weighted by the SCC, are used in this project. Weights for these three resources were determined by considering the relative importance of these resources and the weights assigned to related resources by the SCC. No wilderness areas are in the study area. Since wilderness areas are similar to designated natural areas, these two resources were grouped together in Tables 3-1 through 3-4 and the SCC weight for designated natural areas was used. Likewise, National Wild and Scenic Rivers and State Scenic Rivers were grouped and weighted together.

Clearing forest land has a considerable impact on wildlife species, therefore, a relatively high weight should be assigned. In addition, forested land in the study area has

decreased recently due to rapid urban development, leading to a loss of important wildlife habitat. The weight for forest land cleared should be higher than the SCC weight for State Forests (43.4) since these forests have legal protection and are managed for timber. Since wetlands are considered to be more sensitive areas than forests, the weight for forest land cleared should be lower than 66.6, the SCC weight for wetland cleared. Thus, a weight of 60.0 was assigned for forest land cleared. The environmental impacts for construction on non-existing ROW are much higher than those associated with construction on existing ROW. Therefore, a high weight should be assigned for non-existing ROW. After considering the weights assigned to residential areas, commercial areas, forests, wetlands and visually sensitive areas, a weight of 80.0 was assigned for non-existing ROW.

The relative scores achieved by each route for each criterion were then multiplied by the criteria weights developed by the SCC (Weight Column of Table 3-4) to obtain the impact scores shown in Table 3-4. The impact scores were summed to obtain an overall impact score for each alternative route. These scores were then ranked and Table ES-1 presents the ranking analysis.

3.5 Route Analysis

3.5.1 Route A. Route A is the third most desirable route from an environmental resource perspective. This route has the highest impacts to urban areas (commercial/ densely populated). The route is located adjacent to major roadways for nearly its entire length, impacting a heavily developed section of Route 8 and the intermittent development along Wildwood Road. Conversely, Route A has little impact on natural resources including vegetation, wildlife, streams, and most other natural systems. This route has a moderate low score for construction on new ROW.

3.5.2 Route B. Route B is the fifth most desirable route considering overall effects on environmental resources. It has relatively high impacts to adjacent residential areas. The route is located on existing ROW for 84 percent of its length and, therefore, impacts to natural resources would be less than for routes having large amounts of new ROW.

3.5.3 Route C. Route C is the fourth most desirable route considering effects on environmental resources. It is located almost entirely on existing railroad ROW, minimizing potential impacts. As illustrated in Table 3-4, Route C had a low impact score for Commercial/Densely Populated Areas crossed. The railroad ROW and Route C avoid residential areas, one of the highest-weighted resource criteria. Visual impacts are considered lowest since nearly all of the route is in the Pine Creek valley, shielded from view for much of its length. Also, since Route C would be located near the edge of railroad ROW, impacts to forest land would be less than on new ROW.

3.5.4 Route D. Route D is the least desirable route (seventh) considering effects on environmental resources. For one-half of its length, this route is located on new ROW and, therefore, impacts to all resources studied would be greater than for routes following existing ROW. This route has the highest impact score for Non-existing ROW impacts. Two Other Recreational Areas are involved with this route. North Park is crossed and the Wildwood Golf Club is crossed and paralleled by this route. It also has the highest score for forested area cleared and new ROW required. The route also crosses a building of the old Wildwood Mine (currently in commercial use) as it spans Wildwood Road and adjacent Pine Creek.

3.5.5 Route D/C. Route D/C is the sixth most desirable route considering effects on environmental resources. It has the highest impact scores for Other Recreational

Areas, and has substantial impacts in forested land cleared categories (third highest). Otherwise, it follows subtransmission line and distribution line ROW or railroad ROW for much of its length, with about 0.6-mile of non-existing ROW located where the route transitions from Route D to Route C, and at the southern terminus.

3.5.6 Route E. Route E is the most desirable route considering effects on environmental resources. Route E has the lowest score for non-existing ROW since it is located entirely on existing ROW or substation property. No commercial/densely populated areas or residential land or roads are crossed on non-electric line ROW. Since it follows existing ROW there are little impacts to forest land.

3.5.7 Route E-1. Route E-1 is the second most desirable route considering effects on environmental resources. It also is tied with Route E for the least impacts to Commercial/Densely Populated Areas, and is relatively low in impacts to residential areas on new ROW. The fact that it is primarily on existing ROW has minimized impacts to many natural resources categories.

3.6 Preferred Route

In conclusion, Route E (having the lowest environmental impact score) is the most suitable alternative for the proposed transmission line project. Routes A, C, and E-1 are also environmentally acceptable and suitable as licensable alternative routes.

TABLE 3-1
SUMMARY OF RESOURCE DATA COLLECTED - ALTERNATIVE ROUTES

RESOURCE EVALUATION CRITERIA	A	B	C	D	D/C	E	E-1
STATE OWNED LANDS/REC. AREAS							
State Forests*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Parks*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Game Lands*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Recreational Areas*							
number adjacent/crossed	0.0	1.0	0.0	2.0	3.0	0.0	0.0
number within line of sight	0.0	0.0	1.0	0.0	1.0	0.0	1.0
NATURAL AREAS							
National Natural Landmarks *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Natural/Wilderness Areas*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VISUALLY SENSITIVE AREAS							
Unique Geological Resources *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Historic Sites *							
number adjacent or in view	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	6.0	4.0	8.0	4.0	6.0	1.0	5.0
Designated Scenic Areas *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nat. Wild & Scenic/State Scenic Rivers*							
number crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hiking and Bike Trails *							
number crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RESOURCE EVALUATION CRITERIA	A	B	C	D	D/C	E	E-1
ENGINEERING CONSTRAINTS							
Airports *							
number impacted	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within two miles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HYDROLOGY							
Streams							
number of crossings at grade**	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHAEOLOGICAL AREAS							
Archaeological Sites *							
number disturbed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within 2,000 feet	0.0	0.0	0.0	6.0	6.0	0.0	0.0
SOCIAL OR COMMUNITY IMPACTS							
Commercial/Densely Populated Areas*							
linear distance adjacent (miles)	0.3	0.3	0.1	0.1	0.1	0.0	0.0
Residential Areas*							
linear distance adjacent (miles)	0.1	0.3	0.3	0.9	0.2	0.0	0.2
Highway, Railroad and Road Crossings *							
number of crossings	0.0	1.0	20.0	5.0	13.0	0.0	0.0
Institutional Complexes*							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
number within 1,000 feet	0.0	2.0	2.0	1.0	2.0	0.0	1.0
Forest Land Cleared							
acres	0.4	0.8	5.7	9.1	4.1	0.9	1.7
Wetland Cleared							
acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-existing ROW							
miles required	0.3	0.5	0.2	1.6	0.6	0.0	0.2

*Data is for portions of the routes which are either on new ROW or non-electric line ROW (the linear distance may be counted twice where land use is different on either side of the ROW). Portions of the routes which follow existing electric line ROW are not considered to generate a new impact and so are not included in this impact analysis.
**There are no stream crossings at grade for this project.

TABLE 3-2
RAW DATA - ALTERNATIVE ROUTES

RESOURCE EVALUATION CRITERIA	A	B	C	D	D/C	E	E-1
STATE OWNED LANDS/REC. AREAS							
State Forests*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Parks*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Game Lands*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Recreational Areas*							
number crossed or within line of sight	0.0	1.0	1.0	2.0	3.0	0.0	1.0
NATURAL AREAS							
National Natural Landmarks *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Natural/Wilderness Areas*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VISUALLY SENSITIVE AREAS							
Unique Geological Resources *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Historic Sites *							
number adjacent or in view	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Scenic Areas *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nat. Wild & Scenic/State Scenic Rivers*							
number crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hiking and Bike Trails *							
number crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENGINEERING CONSTRAINTS							
Airports*							
number impacted	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RESOURCE EVALUATION CRITERIA	A	B	C	D	D/C	E	E-1
HYDROLOGY							
Streams							
number of crossings at grade**	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHAEOLOGICAL AREAS							
Archaeological Sites *							
number disturbed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOCIAL OR COMMUNITY IMPACTS							
Commercial/Densely Populated Areas*							
linear distance adjacent (miles)	0.3	0.3	0.1	0.1	0.1	0.0	0.0
Residential Areas*							
linear distance adjacent (miles)	0.1	0.3	0.3	0.9	0.2	0.0	0.2
Highway, Railroad and Road Crossings *							
number of crossings	0.0	1.0	20.0	5.0	13.0	0.0	0.0
Institutional Complexes*							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest Land Cleared							
acres	0.4	0.8	5.7	9.1	4.1	0.9	1.7
Wetland Cleared							
acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-existing ROW							
miles required	0.3	0.5	0.2	1.6	0.6	0.0	0.2

*Data is for portions of the routes which are either on new ROW or non-electric line ROW (the linear distance may be counted twice where land use is different on either side of the ROW). Portions of the routes which follow existing electric line ROW are not considered to generate a new impact and so are not included in this impact analysis.
**There are no stream crossings at grade for this project.

TABLE 3-3
FINAL RELATIVE SCORES - ALTERNATIVE ROUTES

RESOURCE EVALUATION CRITERIA	A	B	C	D	D/C	E	E-1
STATE OWNED LANDS/REC. AREAS							
State Forests*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Parks*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Game Lands*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Recreational Areas*							
number crossed or within line of sight	1.0	4.0	4.0	7.0	10.0	1.0	4.0
NATURAL AREAS							
National Natural Landmarks *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Natural/Wilderness Areas*							
linear distance adjacent (miles)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VISUALLY SENSITIVE AREAS							
Unique Geological Resources *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Historic Sites *							
number adjacent or in view	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Scenic Areas *							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nat. Wild & Scenic/State Scenic Rivers*							
number crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hiking and Bike Trails *							
number crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENGINEERING CONSTRAINTS							
Airports*							
number impacted	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RESOURCE EVALUATION CRITERIA	A	B	C	D	D/C	E	E-1
HYDROLOGY							
Streams							
number of crossings at grade**	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHAEOLOGICAL AREAS							
Archaeological Sites *							
number disturbed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOCIAL OR COMMUNITY IMPACTS							
Commercial/Densely Populated Areas*							
linear distance adjacent (miles)	10.0	10.0	4.0	4.0	4.0	1.0	1.0
Residential Areas*							
linear distance adjacent (miles)	2.0	4.0	4.0	10.0	3.0	1.0	3.0
Highway, Railroad and Road Crossings *							
number of crossings	1.0	1.5	10.0	3.3	6.9	1.0	1.0
Institutional Complexes*							
number adjacent/crossed	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest Land Cleared							
acres	1.0	1.4	6.5	10.0	4.8	1.5	2.3
Wetland Cleared							
acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-existing ROW							
miles required	2.7	3.8	2.1	10.0	4.4	1.0	2.1

*Data is for portions of the routes which are either on new ROW or non-electric line ROW (the linear distance may be counted twice where land use is different on either side of the ROW). Portions of the routes which follow existing electric line ROW are not considered to generate a new impact and so are not included in this impact analysis.
**There are no stream crossings at grade for this project.

TABLE 3-4
ENVIRONMENTAL IMPACT SCORES - ALTERNATIVE ROUTES

RESOURCE EVALUATION CRITERIA	WEIGHT	A	B	C	D	D/C	E	E-1
STATE OWNED LANDS/REC. AREAS								
State Forests*								
linear distance adjacent (miles)	43.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Parks*								
linear distance adjacent (miles)	69.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Game Lands*								
linear distance adjacent (miles)	33.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Recreational Areas*								
number crossed or within line of sight	67.3	67.3	269.2	269.2	471.1	673.0	67.3	269.2
NATURAL AREAS								
National Natural Landmarks *								
number adjacent/crossed	78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Natural/Wilderness Areas*								
linear distance adjacent (miles)	73.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VISUALLY SENSITIVE AREAS								
Unique Geological Resources *								
number adjacent/crossed	59.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Historic Sites *								
number adjacent or in view	76.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Designated Scenic Areas *								
number adjacent/crossed	71.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nat. Wild & Scenic/State Scenic Rivers*								
number crossed	72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hiking and Bike Trails *								
number crossed	42.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENGINEERING CONSTRAINTS								
Airports*								
number impacted	52.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUBTOTALS		67.3	269.2	269.2	471.1	673.0	67.3	269.2

RESOURCE EVALUATION CRITERIA	WEIGHT	A	B	C	D	D/C	E	E-1
HYDROLOGY								
Streams								
number of crossings at grade**	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHAEOLOGICAL AREAS								
Archaeological Sites *								
number disturbed	54.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOCIAL OR COMMUNITY IMPACTS								
Commercial/Densely Populated Areas*								
linear distance adjacent (miles)	88.8	888.0	888.0	355.2	355.2	355.2	88.8	88.8
Residential Areas*								
linear distance adjacent (miles)	76.9	153.8	307.6	307.6	769.0	230.7	76.9	230.7
Highway, Railroad and Road Crossings *								
number of crossings	33.1	33.1	48.0	331.0	107.6	226.7	33.1	33.1
Institutional Complexes*								
number adjacent/crossed	83.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Forest Land Cleared								
acres	60.0	60.0	84.8	389.0	600.0	289.7	91.0	140.7
Wetland Cleared								
acres	66.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-existing ROW								
miles required	80.0	215.0	305.0	170.0	800.0	350.0	80.0	170.0
SUBTOTALS		1349.9	1633.4	1552.8	2631.8	1452.3	369.8	663.3
TOTALS		1417.2	1902.6	1822.0	3102.9	2125.3	437.1	932.5

*Data is for portions of the routes which are either on new ROW or non-electric line ROW (the linear distance may be counted twice where land use is *different on either side* of the ROW). Portions of the routes which follow existing electric line ROW are not considered to generate a new impact and so are not included in this impact analysis.
**There are no stream crossings at grade for this project.

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APPENDIX A

SPECIES LISTS

Table A-1

PLANT SPECIES OBSERVED IN THE STUDY AREA

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Agrimony, Small Flowered	*Aqrimonia parviflora*	F, W
Aspen, Large-toothed	*Populus grandidenta*	F
Aster	*Aster spp.*	F, R, W, Rs, U, A
Aster, Crooked-stemmed	*Aster prenanthoides*	F, W
Aster, New England	*Aster novae-angliae*	F, R
Beech, American	*Fagus grandifolia*	F, R, Rs, U, A
Blackberry, Allegheny	*Rubus allegheniensis*	V
Bluegrass, Canada	*Poa compressa*	V
Bluegrass, Kentucky	*Poa pratensis*	V
Boneset	*Eupatorium perfoliatum*	R
Box Elder	*Acer negundo*	F, W
Broomsedge	*Andropogon virginicus*	R, Rs, A
Bulrush	*Scirpus spp.*	W
Burdock	*Arctium minus*	R
Cattail, Broad-leaved	*Typha latifolia*	W
Cherry, Black	*Prunus serotina*	V
Cinquefoil, Common	*Potentilla simplex*	R, F
Clearweed	*Pilea pumila*	W
Cleavers	*Galium aparine*	V
Clover, Red	*Trifolium pratense*	R,A
Crabapple, Wild	*Pyrus coronaria*	V
Creeper, Virginia	*Parthenocissus quinquefolia*	F, W, Rs
Crown-vetch	*Coronilla varia*	F
Dewberry	*Rubus spp.*	R
Dock, Broad	*Rumex obtusifolius*	R, A
Dock, Curly	*Rumex crispus*	R, A
Dogbane, Spreading	*Apocynum androsaemifolium*	R, A
Dogwood, Flowering	*Cornus florida*	V
Dogwood, Gray	*Cornus foemina*	R, W

Table A-1 (Continued)

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Dogwood, Red-osier	*Cornus stolonifera*	W
Elderberry, Common	*Sambucus canadensis*	F, W
Elm, Slippery	*Ulmus rubra*	F, R, W, Rs
Fern, Christmas	*Polystichum acrostichoides*	F
Fern, Grape	*Botrychium sp.*	F
Fern, Sensitive	*Onoclea sensibilis*	F, W
Fern, Spinulose Wood	*Dryopteris spinulosa*	F, W
Fleabane, Daisy	*Erigeron annuus*	R, A
Geranium, Wild	*Geranium maculatum*	F, R, W
Goldenrod, Canada	*Solidago canadensis*	R, W
Goldenrod, Grass-leaved	*Euthamia graminifolia*	R, A
Goldenrod, Gray	*Solidago nemoralis*	R, Rs
Goldenrod, Rugose-veiney	*Solidago rugosa*	R
Goldenrod, Wreath	*Solidago caesia*	R, F
Grape, Wild	*Vitis sp.*	F, R, A
Grass, Barnyard	*Echinochlea crusgalli*	R, A
Grass, Brome	*Bromus inermis*	R
Grass, Deertongue	*Dichanthelium clandestinum*	R, W
Grass, Foxtail	*Setaria sp.*	R, A
Grass, Orchard	*Dactylis glomerata*	R
Grass, Reed Canary	*Phalaris arundinacea*	W, R
Grass, Rice Cut	*Leersia oryzoides*	W
Grass, Wool	*Scirpus cyperinus*	W
Ground Ivy	*Glecoma hederacea*	V
Hawthorn	*Crataegus sp.*	R, F
Hickory, Bitternut	*Carya cordiformis*	F
Hickory, Pignut	*Carya glabra*	F
Hickory, Shagbark	*Carya ovata*	F
Honeysuckle, Japanese	*Lonciera japonica*	R
Hornbeam	*Ostrya virginiana*	F
Horsetail, Field	*Equisetum arvense*	F, W

Table A-1 (Continued)

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Ironwood, New York	*Vernonia noveboracensis*	R, A, W
Ironwood	*Carpinus caroliniana*	F, W, Rs
Ivy, Ground	*Glecoma hederacea*	V
Ivy, Poison	*Toxicodendron radicans*	V
Jack-in-the-Pulpit	*Arisaema triphyllum*	F
Joe Pye Weed, Spotted	*Euptoriadelphus maculatus*	W, R
Joe Pye Weed, Sweet	*Euptoriadelphus purpureus*	W, R
Lace, Queen-Anne's	*Daucus carota*	R, Rs, U, A
Locust, Black	*Robinia pseudo-acacia*	F
Maple, Red	*Acer rubrum*	F, R, W, A,
Maple, Sugar	*Acer saccharum*	F
Mayapple	*Podophyllum peltatum*	F
Milkweed, Common	*Asclepias syriaca*	R, A
Mint, Mountain	*Pycananthemum sp.*	R, F
Moneywort	*Lysimachia nummularia*	W
Moss	*Polytricum sp.*	F
Mullein, Common	*Verbascum thapsus*	R, Rs, U, A
Mustard, Garlic	*Alliaria petiolata*	F, R, Rs, U, A
Ninebark	*Physocarpus opulifolius*	W
Oak, Northern Red	*Quercus rubra*	F, R, Rs, U, A
Oak, Pin	*Quercus palustris*	W
Oak, White	*Quercus alba*	F, R, Rs, U, A
Patridgeberry	*Mitchella repens*	F
Plantain English	*Plantago lanceolata*	R, Rs
Plantain, Common	*Plantago major*	R, A
Pokeweed	*Phytolacca americana*	R
Poplar, Tulip	*Liriodendron tulipifera*	F, R, Rs, U, A
Ragweed, Common	*Ambrosia artemisiifolia*	A, R
Raspberry, Black	*Rubus occidentalis*	F, R, Rs, U, A
Reed, Common	*Phragmites australis*	W
Rose, Multiflora	*Rosa multiflora*	V

Table A-1 (Continued)

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Rush, Soft	*Juncus effusus*	W
Sassafras	*Sassafras albidum*	F, R, Rs, U
Sedge	*Carex sp.*	V
Self, Heal	*Prunella vulgaris*	R, A
Smartweed	*Polygonum sp.*	F, W
Smartweed, Pennsylvania	*Polygonum pennsylvanicum*	W
Snakeroot, White	*Eupatorium rugosum*	F
Solomon's Seal	*Polygonatum biflorum*	F
Solomon's-seal, False	*Smilacina racemosa*	F, Rs
Sorrel, Sheep	*Rumex acetosella*	R
Sorrel, Yellow Wood	*Oxalis stricta*	V
Spicebush	*Lindera benzoin*	F, W
Spikerush	*Eleocharis sp.*	W
Spirea, Steeplebush	*Spiraea tomentosa*	W
Spleenwort, Ebony	*Asplenium platyneuron*	F
Strawberry, Wild	*Fragaria virginiana*	R, Rs, U, A
Sumac, Smooth	*Rhus glabra*	R, A
Sumac, Winged	*Rhus copallina*	R, A
Sycamore, American	*Platanus occidentalis*	F, R, Rs, U, A
Tearthumb, Arrow-leaved	*Polygonum saggitatum*	W
Teasel	*Dipsacus sylvestris*	R
Thistle, Bull	*Cirsium vulgare*	R, A
Thistle, Field	*Cirsium discolor*	R, A
Thoroughwort, Late-flowering	*Eupatorium serotinum*	F, W
Timothy	*Phleum pratense*	A
Touch-me-not, Pale	*Impatiens pallida*	W
Touch-me-not, Spotted	*Impatiens capensis*	W
Vervian, Blue	*Verbena hastata*	W
Violet, Common Blue	*Viola papilionacea*	F, Rs
Walnut, Black	*Juglans nigra*	F
Water-pepper, Mild	*Polygonum hydropiperiodes*	W

Table A-1 (Continued)

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Willow, Black	*Salix nigra*	W, Rs, U
Wild Lily-of-the-Valley	*Maianthemum canadense*	F
Wingstem	*Actinomeris alternifolia*	R, A
Witchhazel	*Hamamelis virginiana*	W, F
Yarrow	*Achillea millifolium*	R, Rs, U, A

Notes:

A	Agricultural (pasture and cropland).
F	Forest (dominated by tree growth).
R	Rangeland (dominated by shrubs, herbs, and small trees).
Rs	Residential (dominated by planted ornamentals).
U	Urban.
V	Various, wide-range species that occurs in a variety of types.
W	Wetland (wet soil conditions, various vegetation).

Table A-2

WILDLIFE SPECIES OCCURRING IN THE STUDY AREA

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Woodchuck	*Marmota monax*	F, R, A
White-tailed Deer	*Odocoileus virginianus*	F, R, W, A
Eastern Gray Squirrel	*Sciurus carolinensis*	F, Rs
Eastern Cottontail	*Sylvilagus floridanus*	F, R, W, Rs, A
Eastern Chipmunk	*Tamias striatus*	F, Rs
Eastern Garter Snake	*Thamnophis sirtalis*	F, R, Rs, A
Meadow Vole	*Microtus pennsylvania*	F, R, W, Rs
European Starling	*Sturnus vulgaris*	F, R, Rs, A
Blue Jay	*Cyanocitta cristata*	F, Rs
Turkey Vulture	*Cathartes aura*	F, A
Mallard	*Anas platrhynchos*	W
Canada Goose	*Branta canadensis*	W, A
American Crow	*Corvus brachyrhynchos*	F, R, A
American Robin	*Turdus migratorius*	R, Rs
Eastern Bluebird	*Sialia sialis*	R, A
Northern Cardinal	*Cardinalis cardinalis*	F, Rs
Black-capped Chickadee	*Parus atricapillus*	F, Rs
Mourning Dove	*Zenaida macroura*	R, Rs, U, A
Rock Dove	*Columbia livia*	Rs, U, A
Red-tailed Hawk	*Buteo jamaicensis*	F, R, A
Song Sparrow	*Melospiza melodia*	F, R, W, Rs
Barn Swallow	*Hirundo rustica*	R, A
House Sparrow	*Passer domesticus*	A, R, Rs, U
Northern Black Racer	*Coluber constrictor*	F, R
Red-winged Blackbird	*Agelaius phoeniceus*	W, R, A
Downy Woodpecker	*Dendrocopos pubescens*	F, W

Table A-2 (Continued)

Common Name	Scientific Name	Vegetation/Land Use Category(ies)
Bullfrog	*Rana catesbeiana*	W
Ring-necked Pheasant	*Phasianus colchicus*	R, A
Wood Thrush	*Hylocichla mustelina*	F
Field Sparrow	*Spizella pusilla*	R
Scarlet Tanager	*Piranga olivacea*	F
Indigo Bunting	*Passerina cyanea*	R
Blackburnian Warbler	*Dendroica fusca*	F
Opossum	*Didelphis marsupialis*	F, W
Raccoon	*Procyon lotor*	F, R, W, Rs, A
Striped Skunk	*Mephitis mephitis*	F, R, Rs, A
American Woodcock	*Philohela minor*	F, R, W

Notes:

A	Agricultural (pasture and cropland).
F	Forest (dominated by tree growth).
R	Rangeland (dominated by shrubs, herbs, and small trees).
Rs	Residential (dominated by planted ornamentals).
U	Urban.
V	Various, wide-range species that occurs in a variety of types.
W	Wetland (wet soil conditions, various vegetation).

APPENDIX B

PROJECT CORRESPONDENCE

CENTRAL FILES

GAI CONSULTANTS

Project No. 02-461-20

AMD
DWO
LRD
PY 6/24
TNK
HAT
JMM 6-24-03
JDM 6-24-03
RJH

WJW 6-24-03
MEM 6-24-03
DRK 6-25
RJP
Fin. File
Acct.
Ret. to. Central Files

GAI Consultants, Inc.
570 Beatty Road
Monroeville, PA 15146-1300
Phone: 412/856-6400
FAX 412/856-4970

June 24, 2003

Project 02-461-20

Mr. David Densmore
Supervisor
U.S. Fish and Wildlife Service
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

Endangered/Threatened Species Impact Review
Duquesne Light - Wildwood Substation 138kV Transmission Line
Hampton and Shaler Townships, Allegheny County, Pennsylvania

Dear Mr. Densmore:

On behalf of the Duquesne Light Company, GAI Consultants, Inc. (GAI) is preparing an Environmental Inventory and Line Routing Study for a 138 kV transmission line that will extend from the Cheswick-North 138 kV line for approximately three to five miles along the selected route to the Wildwood Substation in Hampton Township, Pennsylvania. The study area for the Environmental Inventory and Line Routing Study is shown on the enclosed portion of the Glenshaw, PA USGS 7.5-minute quadrangle map.

Presently, GAI is requesting information on natural resources of special concern and the potential for the occurrence of endangered and threatened species, or their critical habitat under the jurisdiction of the U.S. Fish and Wildlife in the project area. Information is also requested concerning listed species occurring in wetlands hydrologically connected to or located within one-half-mile of the project area.

Thank you for your assistance and if you have any questions or need additional information, please contact me at 412-856-6400, extension 3203.

Sincerely,
GAI Consultants, Inc.

John M. Mores, AICP
Project Manager

JMM:MEM/gmg
0246120-ltrs-mem/jco4

Enclosure

cc: Mr. Thomas P. Schmitt, Duquesne Light Company

PROPRIETARY INFORMATION

Docket Number A-110150 F-0031

Name of Document Site Location Map

Date Document Received 3-4-2005

DOCUMENT CONTAINS

PROPRIETARY INFORMATION

CENTRAL FILES

GAI CONSULTANTS

Project No. 02-461-20
AMD
DWO
LRD
JMM 6-24-03 ✓
PY 6/24
TNK
HAT
JDM 6-24-03
WJW 6-24-03
RJH ✓
MEM 6-24-03
DRK 6-25 ✓
RJP ✓
Fin. File
Acct.
Ret. to. CENTRAL Files

GAI Consultants, Inc.
570 Beatty Road
Monroeville, PA 15146-1300
Phone: 412/856-6400
FAX 412/856-4970

June 24, 2003

Project 02-461-20

Mr. John Arway
Chief
Pennsylvania Fish and Boat Commission
450 Robinson Lane
Bellefonte, Pennsylvania 16823-9620

Endangered/Threatened Species Impact Review
Duquesne Light - Wildwood Substation 138kV Transmission Line
Hampton and Shaler Townships, Allegheny County, Pennsylvania

Dear Mr. Arway:

On behalf of the Duquesne Light Company, GAI Consultants, Inc. (GAI) is preparing an Environmental Inventory and Line Routing Study for a 138 kV transmission line that will extend from the Cheswick-North 138 kV line for approximately three to five miles along the selected route to the Wildwood Substation in Hampton Township, Pennsylvania. The study area for the Environmental Inventory and Line Routing Study is shown on the enclosed portion of the Glenshaw, PA USGS 7.5-minute quadrangle map.

Presently, GAI is requesting information on natural resources of special concern and the potential for the occurrence of endangered and threatened species, or their critical habitat under the jurisdiction of the Pennsylvania Fish and Boat Commission in the project area. Information is also requested concerning listed species occurring in wetlands hydrologically connected to or located within one-half-mile of the project area. We have enclosed a completed species impact review request form for your use.

Thank you for your assistance and if you have any questions or need additional information, please contact me at 412-856-6400, extension 3203.

Sincerely,
GAI Consultants, Inc.

John M. Mores, AICP
Project Manager

JMM:MEM/gmg
0246120-ltrs-mem/jco4

Enclosures

cc: Mr. Thomas P. Schmitt, Duquesne Light Company

PFBC-NESU-1 (5/14/01)

COMMONWEALTH OF PENNSYLVANIA
FISH AND BOAT COMMISSION
NONGAME AND ENDANGERED SPECIES UNIT (NESU)

SPECIES IMPACT REVIEW (SIR) REQUEST FORM

A. This form provides the site information necessary to perform a computer database search for species of special concern listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, the Pennsylvania Fish and Boat Code or the Wildlife Code.

B. Use only ***one form*** for each proposed project or location. Complete the information below and mail form to:

Nongame and Endangered Species Unit
PA Fish and Boat Commission
450 Robinson Lane
Bellefonte, PA 16823
Fax: (814) 359-5153

C. This form, a cover letter including a project narrative, and accompanying maps should be sent to the above address for environmental reviews that ***only*** concern ***reptiles, amphibians, fishes and aquatic invertebrates.*** Reviews for other natural resources must be submitted to other appropriate agencies.

D. The absence of recorded information from our databases and files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A review is valid for one year.

E. ***Please send us only one (1) copy of your request*** – either by fax or by mail – not both. Mail is preferred to improve legibility of maps. Facsimile submission will not improve our response turn-around time.

F. ***Allow 30 days for completion of the review from the date of PFBC-NESU receipt.*** Large projects and workload may extend this review timeframe.

G. ***In any future correspondence with us following your receipt of the SIR response, please refer to the assigned SIR number at the top left of our cover letter.***

H. **FORMS THAT ARE NOT COMPLETED IN FULL, WILL NOT BE REVIEWED.**

PLEASE PRINT OR TYPE: If available, provide the potential conflict **PNDI Search Number:** _____

PFBC-NESU response should be sent to:

Company/Agency: GAI Consultants, Inc. Form Preparer: Mary McDonald

Address: 570 Beatty Road

Monroeville, PA 15146-1300 Phone (8:00 AM to 4:00 PM): 412-856-6400, extension 3194

Project Description: Environmental Inventory and Line Routing Study for the construction of a 138 kV transmission line from the Cheswick-North 138 kV transmission line to the Wildwood Substation in Hampton Township, Pennsylvania.

Indicate if the project is: Transportation or Non-transportation ■ (check one)

Will the proposed project encroach directly or indirectly (e.g., runoff) upon wetlands or waterways? Circle one for each:

Wetlands: Yes No Unknown Waterways: Yes No Unknown

County: Allegheny Township/Municipality: Shaler and Hampton Townships

Name of the United States Geological Survey (U.S.G.S.) 7.5 Minute Quadrangle Map where project is located: Glenshaw

Project size (in acres): Unknown – Route has not been selected. Length will be 3-5 miles.

Attach an 8.5" by 11" photocopy (**DO NOT REDUCE**) of the section of the U.S.G.S. Quadrangle Map which identifies the project location. On this map, indicate the location of the project center (if linear, depict both ends) and outline the approximate boundaries of the project area.

Specify latitude/longitude of the project center. **Latitude:** 40 ° / 35'/ 00" N

Indicate latitude/longitude in degrees-minutes-seconds format only. **Longitude:** 80° / 57' / 30" W

Three steps are needed to convert from decimal degrees to degrees-minutes-seconds: (1) Degrees will be the whole number. (2) To get minutes, multiply the decimal degree portion by 60. (3) Multiply the decimal minute portion by 60 to get seconds.
Example: (Latitude) 40.93748 = 40°; 0.93748 x 60 = 56.2488'= 56'; 0.2488 x 60 = 14.928 = 15" = **40°56'15" N**
(Longitude) 75.94740 = 75°; 0.94740 x 60 = 56.844' = 56'; 0.844 x 60 = 50.64 = 51" = **75°56'51" W**

FOR PFBC-NESU USE ONLY

SIR#	Quad Name	Data Source	Search Result-Potential Species Conflict	Action

CENTRAL FILES

GAI CONSULTANTS

Project No. 02-461-20
AMD WJW 6-24-03
DWO
LRD MEM 6-24-03
PY 8/20 ✓ DRK 6-25 ✓
TNK
HAT RJP ✓
JMM 6-24-03
Fin. File
JDM 6-24-03 Acct.
RJH ✓ Ret. to. CENTRAL Files

GAI Consultants, Inc.
570 Beatty Road
Monroeville, PA 15146-1300
Phone: 412/856-6400
FAX 412/856-4970

June 24, 2003

Project 02-461-20

Mr. Justin Newell
Pennsylvania Natural Diversity Inventory
Pennsylvania Department of
Conservation and Natural Resources
P. O. Box 8552
Harrisburg, Pennsylvania 17105-8552

Endangered/Threatened Species Impact Review
Duquesne Light - Wildwood Substation 138kV Transmission Line
Hampton and Shaler Townships, Allegheny County, Pennsylvania

Dear Mr. Newell:

On behalf of the Duquesne Light Company, GAI Consultants, Inc. (GAI) is preparing an Environmental Inventory and Line Routing Study for a 138 kV transmission line that will extend from the Cheswick-North 138 kV line for approximately three to five miles along the selected route to the Wildwood Substation in Hampton Township, Pennsylvania. The study area for the Environmental Inventory and Line Routing Study is shown on the enclosed portion of the Glenshaw, PA USGS 7.5-minute quadrangle map.

Presently, GAI is requesting information on natural resources of special concern and the potential for the occurrence of endangered and threatened species, or their critical habitat under the jurisdiction of the Pennsylvania Bureau of Forestry in the project area. Information is also requested concerning listed species occurring in wetlands hydrologically connected to or located within one-half-mile of the project area. We have enclosed a completed PNDI search form for your use.

Thank you for your assistance and if you have any questions or need additional information, please contact me at 412-856-6400, extension 3203.

Sincerely,
GAI Consultants, Inc.

John M. Mores, AICP
Project Manager

JMM:MEM/gmg
0246120-ltrs-mem/jco4

Enclosures

cc: Mr. Thomas P. Schmitt, Duquesne Light Company

3930-PM-WM0041 Rev. 1/2003

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERSHED MANAGEMENT
BUREAU OF WATERWAYS ENGINEERING

FOR OFFICIAL USE ONLY
PNDI Screening
Reviewer
Date
Phone No.

SUPPLEMENT NO. 1
PENNSYLVANIA NATURAL DIVERSITY INVENTORY SEARCH FORM

This form provides site information necessary to perform a computer screening for species of special concern listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, the Pennsylvania Fish and Boat Code or the PA Game and Wildlife Code. Records regarding species of special concern are maintained by PA DCNR in a computer database called the "Pennsylvania Natural Diversity Inventory" (PNDI). Results from this search are not intended to be a conclusive compilation of all potential special concern resources located within a proposed project site. On-site biological surveys may be recommended to provide a definitive statement on the presence or absence, or degree of natural integrity of any project site. Results of this PNDI search are valid for one year after the initial search or conclusion of coordination with the jurisdictional agency (whichever is later), then a new PNDI coordination process must be initiated, and a new PNDI search is required. The search area should include the entire area that presently or in the future requires a permit or authorization.

Please complete the information below, attach an 8½" x 11" photocopy (DO NOT REDUCE) of the portion of the U.S.G.S. Quadrangle Map that identifies the project location and outlines the approximate boundaries of the project and mail to the appropriate DEP regional office or delegated County Conservation District prior to completing a Chapter 105 environmental assessment or any other DEP permit application. (SEE REVERSE SIDE FOR LIST OF OFFICES AND ADDRESSES).

NAME: Mary McDonald, GAI Consultants, Inc.

ADDRESS: 570 Beatty Road

Monroeville, PA 15146-1300

PHONE: (412) 856-6400 X 3194

COUNTY: Allegheny

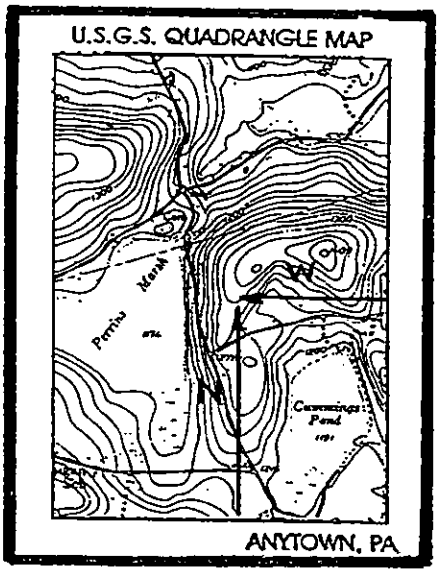
MUNICIPALITY: Hampton and Shaler Townships

U.S.G.S. 7½ Minute Quadrangle

Glenshaw

PROJECT DESCRIPTION AND SIZE (Briefly describe entire area relevant to your project, including acreage.)

The species impact review is needed for an Environmental Inventory and Line Routing Study for a 138kV transmission line. Alternative routes considered for selection range from 3 to 5 miles in length (please see the enclosed site location map for the size of the study area).



Latitude 40 ° 35 ' 00 " Longitude 80 ° 57 ' 30 "

(OR) North (Up) 15.1 inches

West (to the left) 11.8 inches

- INDICATE BY LATITUDE AND LONGITUDE; – OR --
- INDICATE PROJECT LOCATION TO THE NEAREST ONE TENTH INCH MEASURING FROM THE EDGE OF THE MAP IMAGE FROM THE LOWER RIGHT CORNER.

FOR OFFICIAL USE ONLY

SCREENING RESULTS - Follow the directions of the checked block.

☐ No potential conflicts were encountered during the PNDI inquiry. Include this form and the PNDI receipt with your Chapter 105 environmental assessment or other DEP permit application submissions.

☐ Potential conflicts must be resolved by contacting the natural resource agencies listed on the PNDI receipt. Please provide a copy of this form and the PNDI receipt along with a brief description of your project to the listed agency for consultation and recommendations. Include this form, the printed PNDI search results and the natural resource agency's written recommendation with your Chapter 105 environmental assessment or other DEP permit application submissions.

DELEGATED COUNTY CONSERVATION DISTRICTS

ams County
0 Old Harrisburg Road, Ste. 201
ettysburg, PA 17325

egheny County
xington Technology Park
g 1, Suite 102
00 N. Lexington St.
ittsburgh, PA 15208-2521

mstrong Co.
msdale Admin. Bldg.
24 Armsdale Rd., Suite B-2
ittanning, PA 16201

aver County
00 Third St., Ste 202
eaver, PA 15009-2026

dford County
rawn Court, Suite 4
2 W. Pitt Street
edford, PA 15522

rks County
ricultural Center
38 County Welfare Rd.
.O. Box 520
eesport, PA 19533-0520

air County
07 Blair Street
ollidaysburg, PA 16648

adford County
ill Nature Res. Center
5, Box 5030-C
owanda, PA 18848

cks County
4 Town Center
w Britain, PA 18901-5182

utler County
2 McCune Drive
tler, PA 16001-6501

ambria County
01 Candlelight Dr., Ste. 221
ensburg, PA 15931

meron County
00 E. Fourth St. 2nd Fl.
mporium, PA 15834

rbon County
64 Interchange Rd.
ehighton, PA 18235-5114

ntre County
4 Holmes Ave., Ste. 4
llefonte, PA 16823

hester County
vernment Service Center
1 Westtown Rd., Ste. 240
st Chester, PA 19380-0990

egated Programs
hapter 105
6 and GP9 only
DES and E&S Permits

Clarion County
265 Holiday Inn Rd., Ste. 2
Clarion, PA 16214

- Clearfield County
650 Leonard Street
Clearfield, PA 16830

- Clinton County
◆ 216 Spring Run Rd., Rm. 104
Mill Hall, PA 17751-9543

- Columbia County
◆ 702 Sawmill Rd., Suite 204
Bloomsburg, PA 17815

- Crawford County
◆ 14699 N. Main St. Ext.
Meadville, PA 16335-9441

- Cumberland County
43 Brookwood Ave., Suite 4
Carlisle, PA 17013-9172

- Dauphin County
1451 Peters Mountain Road
Dauphin, PA 17018

- Delaware County
◆ Rose Tree Park Hunt Club
1521 N. Providence Rd.
Media, PA 19063

- Elk County
◆ Courthouse Annex
300 Center St.
Ridgway, PA 15853

- Erie County
◆ 1927 Wager Road
Erie, PA 16509

- Fayette County
10 Nickman Plaza
Lemont Furnace, PA 15456

Forest County
528 Elm St., Box 4
Tionesta, PA 16353

- Franklin County
Administrative Annex
218 N. Second Street
Chambersburg, PA 17201

- Fulton County
216 North Second Street, Ste. 15
McConnellsburg, PA 17233-1170

- Greene County
◆ Greene County Office Building
93 E. High Street, Room 215
Waynesburg, PA 15370-1839

- Huntingdon County
◆ RR 1, Box 7C
Huntingdon, PA 16652-9603

- Indiana County
◆ USDA Service Ctr.
1432 Rt. 286, Hwy. E
Indiana, PA 15701-1467

- Jefferson County
◆ RR 5, Box 51
Brookville, PA 15825

- Juniata County
RR 3, Box 302
Mifflintown, PA 17059-9609

- Lackawanna County
1300 Old Plank Rd.
Mayfield, PA 18433

- Lancaster County
◆ Farm & Home Center, Room 6
1383 Arcadia Road
Lancaster, PA 17601-3149

- Lawrence County
430 Court St.
New Castle, PA 16101

- Lebanon County
2120 Cornwall Rd., Ste. 5
Lebanon, PA 17042-9788

- Lehigh County
Lehigh Ag. Ctr, Ste 102
4184 Dorney Park Rd.
Allentown, PA 18104-5728

- Luzerne County
485 Smith Pond Rd.
Shavertown, PA 18708

- Lycoming County
542 County Farm Rd., Ste. 202
Montoursville, PA 17754

McKean County
995 South Ave., Box E
Custer City, PA 16725

- Mercer County
◆ 747 Greenville Rd.
Mercer, PA 16137-5023

- Mifflin County
20 Windmill Hill #4
Burnham, PA 17009

- Monroe County
◆ 8050 Running Valley Road
Stroudsburg, PA 18360

- Montgomery County
143 Level Road
Collegeville, PA 19426-3313

◆ Montour County
- 112 Woodbine Lane, Ste. 2
Danville, PA 17821

- Northampton County
Greystone Bldg.
Gracedale Complex
Nazareth, PA 18064-9211

- Northumberland County
RR 3, Box 238C
Sunbury, PA 17801

- Perry County
31 W. Main Street,
P.O. Box 36
New Bloomfield, PA 17068

- Pike County
◆ HC 8, Box 6770, Route 402
Hawley, PA 18428

- Potter County
◆ 107 Market Street
Coudersport, PA 16915

- Schuylkill County
1206 Ag. Center Dr.
Pottsville, PA 17901

- Snyder County
◆ 403 West Market Street
Middleburg, PA 17842-1038

- Somerset County
N. Ridge Bldg., Ste 103
1590 N. Center Ave.
Somerset, PA 15501

- Sullivan County
◆ RR 2, Box 2022B
Dushore, PA 18614

- Susquehanna County
◆ County Office Building
31 Public Avenue
Montrose, PA 18801

- Tioga County
◆ 29 East Avenue
Wellsboro, PA 16901

- Union County
◆ 88 Bull Run Crossing, Ste. 5
Lewisburg, PA 17837

- Venango County
471 Beach Road
Franklin, PA 16323

- Warren County
◆ 609 Rouse Ave., Ste. 203
Youngsville, PA 16371

- Washington County
100 W. Beau Street, Ste. 602
Washington, PA 15301

- Wayne County
◆ 470 Sunrise Ave.
Honesdale, PA 18431

- Westmoreland County
211 Donohoe Road
Greensburg, PA 15601

- Wyoming County
1 Hollowcrest Complex
Tunkhannock, PA 18657

- York County
118 Pleasant Acres Rd.
York, PA 17402

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Soils and Waterways Office	County Responsibility
rthcentral Regional Office W. Third St., Suite 101 Williamsport, PA 17701 570) 327-3574	Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, and Union
rtheast Regional Office ublic Square kes-Barre, PA 18711-0790 570) 826-2511	Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, and Wyoming
rthwest Regional Office Chestnut Street adville, PA 16335 814) 332-6942	Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, and Warren

Soils and Waterways Office	County Responsibility
Southcentral Regional Office 909 Elmerton Avenue, Second Floor Harrisburg, PA 17110 (717) 705-4707	Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, and York
Southeast Regional Office Lee Park, Suite 6010, 555 North Lane Conshohocken, PA 19428 (610) 832-6130	Bucks, Chester, Delaware, Montgomery, and Philadelphia
Southwest Regional Office 400 Waterfront Drive Pittsburgh, PA 15222-4745 (412) 442-4000	Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, and Westmoreland

CENTRAL FILES

GAI CONSULTANTS

Project No. 02-461-20
AMD
DWO
LRD
PY
TNK
HAT
RJH
Fin. File
Acct.
Ret. to. Central Files

MEM 6-24-03
JMM 6-24-03
DRK 6-25
RJP
JDM 6-24-03
WJW 6-24-03

GAI Consultants, Inc.
570 Beatty Road
Monroeville, PA 15146-1300
Phone: 412/856-6400
FAX 412/856-4970

June 24, 2003

Project 02-461-20

Mr. Kevin Mixon
Pennsylvania Game Commission
Division of Environmental
Planning and Habitat Protection
2001 Elmerton Avenue
Harrisburg, Pennsylvania 17110-9797

Endangered/Threatened Species Impact Review
Duquesne Light - Wildwood Substation 138kV Transmission Line
Hampton and Shaler Townships, Allegheny County, Pennsylvania

Dear Mr. Mixon:

On behalf of the Duquesne Light Company, GAI Consultants, Inc. (GAI) is preparing an Environmental Inventory and Line Routing Study for a 138 kV transmission line that will extend from the Cheswick-North 138 kV line for approximately three to five miles along the selected route to the Wildwood Substation in Hampton Township, Pennsylvania. The study area for the Environmental Inventory and Line Routing Study is shown on the enclosed portion of the Glenshaw, PA USGS 7.5-minute quadrangle map.

Presently, GAI is requesting information on natural resources of special concern and the potential for the occurrence of endangered and threatened species, or their critical habitat under the jurisdiction of the Pennsylvania Fish and Boat Commission in the project area. Information is also requested concerning listed species occurring in wetlands hydrologicIly connected to or located within one-half-mile of the project area.

Thank you for your assistance and if you have any questions or need additional information, please contact me at 412-856-6400, extension 3203.

Sincerely,
GAI Consultants, Inc.

John M. Mores, AICP
Project Manager

JMM:MEM/gmg
0246120-ltrs-mem/jco4

Enclosure

cc: Mr. Thomas P. Schmitt, Duquesne Light Company

Commonwealth of Pennsylvania
Pennsylvania Fish and Boat Commission
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823
814-359-5147
July 21, 2003

SIR # 12542

GAI CONSULTANTS
JOHN MORES
570 BEATTY ROAD
MONROEVILLE, PA 15146

RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species
DUQUESNE LIGHT - WILDWOOD SUBSTATION 138kV TRANSMISSION LINE
PNDI Search Number (if available):
HAMPTON,SHALER Township/Borough, ALLEGHENY County, Pennsylvania

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code. The absence of recorded information from our files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A Species Impact Review is valid for one year only.

__X__ ***NO ADVERSE IMPACTS EXPECTED FROM THE PROPOSED PROJECT***

__x__ Except for occasional transient species, rare, candidate, threatened or endangered species under our jurisdiction are not known to exist in the vicinity of the project area. Therefore, no biological assessment or further consultation is needed with the Commission. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

____ An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, no adverse impacts are expected to the species of special concern.

If you have any questions regarding this review, please contact the biologist indicated below:

____	Jeff Schmid	814-359-5236	__X__	David Spotts	814-359-5115
____	Kathy Derge	814-359-5186	____	Steven Kepler	814-359-5117

I am enclosing a copy of our "SIR Request Form", which is to be used for all future species impact review requests. Please make copies of the attached form and use with all future project reviews. Thank you in advance for your cooperation and attention to this important matter of species conservation and habitat protection.

SIGNATURE: David E. Spotts DATE: July 21, 2003

PFBC-DES-NDS-1 (5/2/03)

COMMONWEALTH OF PENNSYLVANIA

FISH AND BOAT COMMISSION

NATURAL DIVERSITY SECTION

SPECIES IMPACT REVIEW (SIR) REQUEST FORM

A. This form provides the site information necessary to perform a computer database search for species of special concern listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, the Pennsylvania Fish and Boat Code or the Wildlife Code.

B. Use only *one form* for each proposed project or location. Complete the information below and mail form to:

Natural Diversity Section
Division of Environmental Services
PA Fish and Boat Commission
450 Robinson Lane
Bellefonte, PA 16823
Fax: (814) 359-5175

C. This form, a cover letter including a project narrative, and accompanying maps should be sent to the above address for environmental reviews that *only* concern ***reptiles, amphibians, fishes and aquatic invertebrates***. Reviews for other natural resources must be submitted to other appropriate agencies.

D. The absence of recorded information from our databases and files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A review is valid for one year.

E. ***Please send us only one (1) copy of your request*** – either by fax or by mail – not both. Mail is preferred to improve legibility of maps. Facsimile submission will not improve our response turn-around time.

F. ***Allow 30 days for completion of the review from the date of PFBC receipt.*** Large projects and workload may extend this review timeframe.

G. ***In any future correspondence with us following your receipt of the SIR response, please refer to the assigned SIR number at the top left of our cover letter.***

H. **FORMS THAT ARE NOT COMPLETED IN FULL WILL NOT BE REVIEWED.**

PLEASE PRINT OR TYPE: If available, provide the potential conflict **PNDI Search Number:** _____

PFBC response should be sent to:

Company/Agency: _____ Form Preparer: _____

Address: _____

_____ Phone (8:00 AM to 4:00 PM): _____

Project Description: _____

_____

Indicate if the project is: Transportation ☐ or Non-transportation ☐ (check one)

Will the proposed project encroach directly or indirectly (e.g., runoff) upon wetlands or waterways? Circle one for each:

Wetlands: Yes No Unknown Waterways: Yes No Unknown

County: _____ Township/Municipality: _____

Name of the United States Geological Survey (U.S.G.S.) 7.5 Minute Quadrangle Map where project is located:

_____ Project size (in acres): _____

Attach an 8.5" by 11" photocopy (**DO NOT REDUCE**) of the section of the U.S.G.S. Quadrangle Map which identifies the project location. On this map, indicate the location of the project center (if linear, depict both ends) and outline the approximate boundaries of the project area.

Specify latitude/longitude of the project center. **Latitude:** _____°/_____'/_____" N

Indicate latitude/longitude in degrees-minutes-seconds format only. **Longitude:** _____°/_____'/_____" W

Three steps are needed to convert from decimal degrees to degrees-minutes-seconds: (1) Degrees will be the whole number. (2) To get minutes, multiply the decimal degree portion by 60. (3) Multiply the decimal minute portion by 60 to get seconds.
Example: (Latitude) 40.93748 = 40°; 0.93748 x 60 = 56.2488' = 56'; 0.2488 x 60 = 14.928 = 15" = 40°56'15" N
(Longitude) 75.94740 = 75°; 0.94740 x 60 = 56.844' = 56'; 0.844 x 60 = 50.64 = 51" = 75°56'51" W

FOR PFBC USE ONLY

SIR#	Quad Name	Data Source	Search Result-Potential Species Conflict	Action

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
2001 ELMERTON AVENUE, HARRISBURG, PA 17110-9797

CC: IMM
MEM
LIE
File

July 16, 2003

RECEIVED
JUL 21 2003
GAI CONSULTANTS INC.
PROJ. NO 2002-461-20

Mr. John M. Mores, AICP
GAI Consultants, Inc.
570 Beatty Run Road
Monroeville, PA 15146

In re: Duquesne Light-Wildwood Substation 138kV
Transmission Line
Hampton and Shaler Townships
Allegheny County, PA

Dear Mr. Mores:

This is in response to your letter of June 24, 2003, requesting information concerning endangered and threatened species of birds and mammals as related to this project.

Our office review has determined that no state listed endangered or threatened species are known to occur within the proposed project area. Except for occasional transient individuals, this project should not impact any endangered or threatened species of birds or mammals recognized by the Pennsylvania Game Commission. However, should project plans change or if additional information on endangered or threatened species becomes available, this determination may be reconsidered.

National Wetland Inventory maps indicate wetlands in the project area that may be impacted. Our agency considers wetlands to be critical and unique wildlife habitat. You should be aware that any impacts to wetlands or other bodies of water will require permits from the Department of Environment Protection under Chapter 105 and the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

Please contact me directly at (717) 783-5957 if you have any questions.

Sincerely,

James R. Leigey
Wildlife Impact Review Coordinator
Division of Environmental Planning
And Habitat Protection
Bureau of Land Management

JRL/jy

Cc: File

Pennsylvania Department of Conservation and Natural Resources

RECEIVED
JUL 21 2003

July 11, 2003

GAI CONSULTANTS INC. 717-787-7067
Fax 717-772-0271
PROJ. NO 2002-461-20

CC: DRK
MEM
LTE
TMM
file

Bureau of Forestry

John M. Mores, AICP
GAI Consultants, Inc.
570 Beatty Road
Monroeville, PA 15146-1300

Re: Bureau of Forestry, Pennsylvania Natural Diversity Inventory Search for Line Routing Study Hampton and Shaler Townships, Allegheny County, PA - PNDI # 14660

Dear John:

The Pennsylvania Natural Diversity Inventory (PNDI) information system revealed hits on species of special concern based on the information you submitted on June 24, 2003.

Pennsylvania endangered species within the townships include *Trillium nivale* (snow trillium). *T. nivale* grows in moist woods and on slopes and was last seen in the study area in 1993. We are providing a map of known population locations (not for public view) so that sewage facility plans can be designed to avoid impacts to plant species of special concern. As plans for the transmission line develop, please coordinate further with our office.

This response represents the most up-to-date summary of the PNDI data files and is applicable for one year. Should project plans change or additional information on listed or proposed species become available this determination may be reconsidered. Please phone this office if you have questions concerning this response or the PNDI system.

Sincerely,

Lauren Forster

Lauren Forster
Environmental Review Intern
PNDI, PA Natural Heritage Program

PROPRIETARY INFORMATION

Docket Number A-110150 F-0031

Name of Document Map

Date Document Received 3-4-2005

DOCUMENT CONTAINS

PROPRIETARY INFORMATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

CC: LTE
MEM
IMM
file

July 9, 2003

RECEIVED
JUL 14 2003
GAI CONSULTANTS INC.
PROJ. NO 2002-461-20

John M. Mores, AICP
Project Manager
GAI Consultants, Inc.
570 Beatty Road
Monroeville, PA 15146-1300

Dear Mr. Mores:

This responds to your letter of June 24, 2003, requesting information about natural resource areas of special concern, and federally listed and proposed species in the vicinity of the proposed substation transmission line project (Wildwood-Duquesne Light) located in Hampton and Shaler Townships, Allegheny County, Pennsylvania. The following comments are provided pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, 16 U.S.C. 661 *et seq.*) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient species, no federally listed or proposed threatened or endangered species under our jurisdiction are known to occur within the project impact area. Therefore, no biological assessment nor further consultation under the Endangered Species Act are required with the Fish and Wildlife Service. This determination is valid for two years from the date of this letter. If the proposed project has not been fully implemented prior to this, an additional review by this office will be necessary. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

Based on our office review of project information provided and map reconnaissance (i.e., County Soils maps and/or National Wetland Inventory maps), wetlands may occur within the boundaries of the proposed project. Work in wetlands requires permits from the Pennsylvania Department of Environmental Protection and/or the Army Corps of Engineers. We suggest you contact the DEP and the Corps at the addresses listed below for information on permit requirements.

Pennsylvania Department of
Environmental Protection
Division of Rivers and
Wetlands Conservation
P.O. Box 8554
Harrisburg, PA 17105-8554

District Engineer, Pittsburgh District
U.S. Army Corps of Engineers
William S. Moorhead Federal Buiding
1000 Liberty Avenue
Pittsburgh, PA 15222

By copy of this letter, we are informing these agencies of the proposed project.

This response relates only to endangered and threatened species under our jurisdiction and a preliminary review for wetlands, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Therefore, we suggest contacting a qualified consultant to evaluate your site for potential wetland impacts.

For information regarding State resources of special concern, including State-listed endangered and threatened species, please contact the Pennsylvania Game Commission (birds and mammals; State Game Lands), the Pennsylvania Fish and Boat Commission (fish, reptiles, amphibians and aquatic invertebrates; trout streams), the Pennsylvania Department of Conservation and Natural Resources (PNDI; plants and plant sanctuaries; State Forests; State Parks; Natural Areas; State Wild and Scenic Rivers) and the Department of Environmental Protection (Special Protection Watersheds; Wetlands).

If we can be of further assistance, please contact Michael Schmaus of my staff at 814-234-4090.

Sincerely,

David Densmore
Supervisor

Enclosure

FEDERALLY LISTED AND PROPOSED SPECIES THAT NO LONGER OCCUR IN PENNSYLVANIA

COMMON NAME	SCIENTIFIC NAME	STATUS**	FORMER DISTRIBUTION
MAMMALS			
Canada lynx	*Lynx canadensis*	PT	north-central PA (Tioga Co.)
Delmarva Peninsula fox squirrel	*Sciurus niger cinereus*	E	mature forests of southeastern PA (Delaware and Chester Co.)
Eastern cougar	*Felis concolor couguar*	E	state-wide
Grey wolf	*Canis lupus*	E	state-wide
MOLLUSKS			
Fanshell*	*Cyprogenia stegaria*	E	Ohio River drainage
Orange pimpleback*	*Plethobasus striatus*	E	Ohio River drainage
Pink mucket pearly mussel*	*Lampsilis abrupta*	E	Ohio River drainage
Ring pink mussel*	*Obovaria retusa*	E	Ohio River drainage
Rough pigtoe*	*Pleurobema plenum*	E	Ohio River drainage
INSECTS			
American burying beetle	*Nicrophorus americanus*	E	state-wide
Karner blue butterfly	*Lycaeides melissa samuelis*	E	pine barrens, oak savannas (wild lupine habitat) (Wayne Co.)
Northeastern beach tiger beetle	*Cicindela dorsalis dorsalis*	T	along large rivers in southeastern PA
PLANTS			
Eastern prairie fringed orchid	*Platanthera leucophaea*	T	wet prairies, bogs (Crawford Co.)
Sensitive joint-vetch	*Aeschynomene virginica*	T	freshwater tidal marshes of Delaware river (Delaware and Philadelphia Co.)
Virginia spiraea*	*Spiraea virginiana*	T	along Youghiogheny River (Fayette Co.)
Smooth coneflower	*Echinacea laevigata*	E	serpentine barrens (Lancaster Co.)

Revised 10/19/00

* *It is possible that remnant populations of some of these species (indicated with an *) may still occur in Pennsylvania, however, there have been no confirmed sightings of these species for over 70 years.*

** *E = Endangered, T = Threatened, PT = Proposed Threatened*

The following is a partial list of additional species that no longer occur in Pennsylvania: moose, bison, wolverine, passenger pigeon, Bachman's sparrow, greater prairie-chicken, olive-sided flycatcher, Bewick's wren, eastern tiger salamander, blue pike, butterfly mussel, Diana fritillary butterfly, precious underwing moth, deertoe mussel, marbled underwing moth, cobblestone tiger beetle, mountain clubmoss, crested yellow orchid, red milkweed, American barberry, small white lady's-slipper, etc, etc.

U.S. FISH AND WILDLIFE SERVICE
315 SOUTH ALLEN ST., SUITE 322, STATE COLLEGE, PA 16801

FEDERALLY LISTED, PROPOSED AND CANDIDATE SPECIES
(in Pennsylvania)

Common Name	Scientific Name	Status[1]	Distribution (by County and/or Watershed)
FISHES			
Shortnose sturgeon[2]	*Acipenser brevirostrum*	E	Delaware River & other Atlantic coastal waters
REPTILES			
Bog turtle	*Clemmys muhlenbergii*	T	Current - Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill, York. Historic - Crawford, Mercer, Philadelphia Co.
Eastern massasauga rattlesnake	*Sistrurus catenatus catenatus*	C	Current - Butler, Crawford, Mercer and Venango Co. Historic - Allegheny and Lawrence Co.
BIRDS			
Bald eagle	*Haliaeetus leucocephalus*	T	Suitable habitats across the state. Recent nesting in Butler, Cameron, Centre, Chester, Crawford, Dauphin, Erie, Forest, Huntingdon, Lancaster, Lebanon, Mercer, Northumberland, Pike, Tioga, Venango, Warren, Wayne and York Co. Wintering concentrations occur near ice-free sections of rivers, lakes and reservoirs, including the Delaware River.
Piping plover	*Charadrius melodus*	E	Migratory. No nesting in Pennsylvania since 1950s. Designated critical habitat on Presque Isle, Erie Co.
MAMMALS			
Indiana bat	*Myotis sodalis*	E	Winter hibernacula: Armstrong, Blair, Lawrence, Luzerne, Mifflin and Somerset Co.
MOLLUSKS			
Dwarf wedgemussel	*Alasmidonta heterodon*	E	Current - Delaware River (Wayne Co.). Historic - Delaware River watershed (Bucks, Carbon, Chester and Philadelphia Co.); Susquehanna River watershed (Lancaster Co.)
Clubshell mussel	*Pleurobema clava*	E	French Creek and Allegheny River watersheds (Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Co.); Shenango River (Ohio River watershed; Mercer and Crawford Co.)
Northern riffleshell	*Epioblasma torulosa rangiana*	E	French Creek and Allegheny River watersheds (Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Co.)
PLANTS			
Northeastern bulrush	*Scirpus ancistrochaetus*	E	Current - Adams, Bedford, Blair, Carbon, Centre, Clinton, Cumberland, Dauphin, Franklin, Huntingdon, Lackawanna, Lehigh, Lycoming, Mifflin, Monroe, Perry, Snyder and Union Co. Historic - Northampton Co.
Small-whorled pogonia	*Isotria medeoloides*	T	Current - Centre, Chester and Venango Co. Historic - Berks, Greene, Monroe, Montgomery and Philadelphia Co.

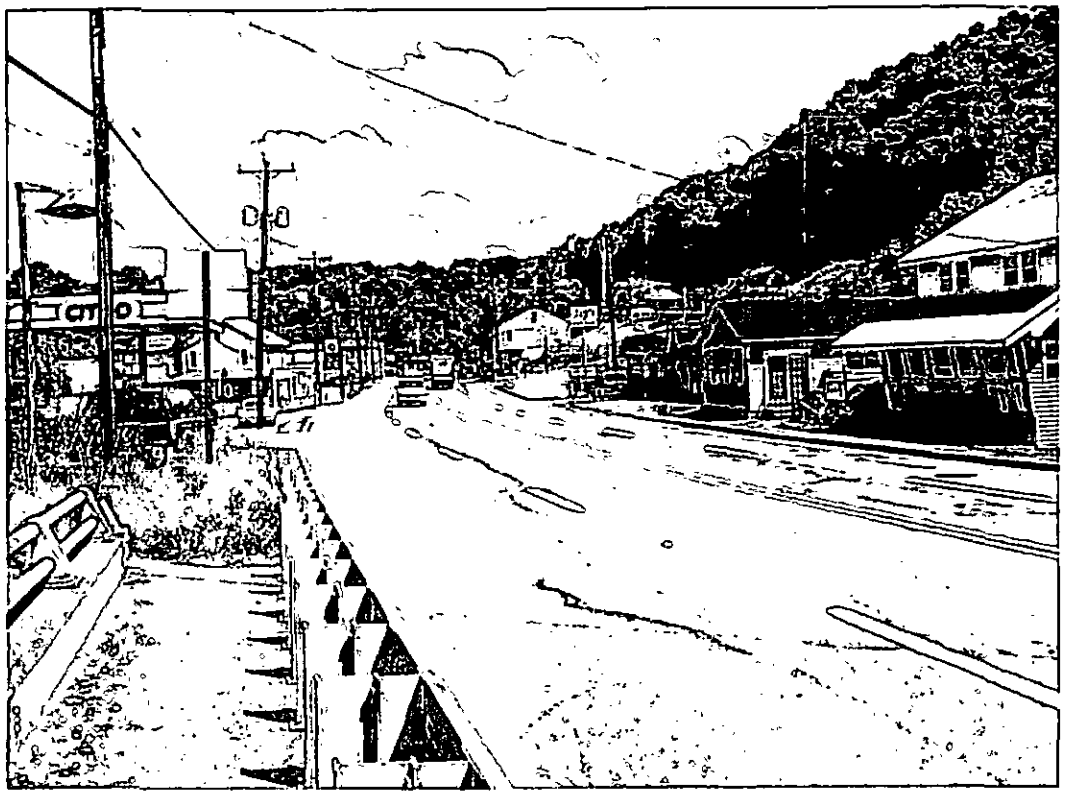
[1] *E = Endangered, T = Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate* *Revised 2/27/03*

[2] *Shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service*

U.S. FISH AND WILDLIFE SERVICE
315 SOUTH ALLEN ST., SUITE 322, STATE COLLEGE, PA 16801

APPENDIX C

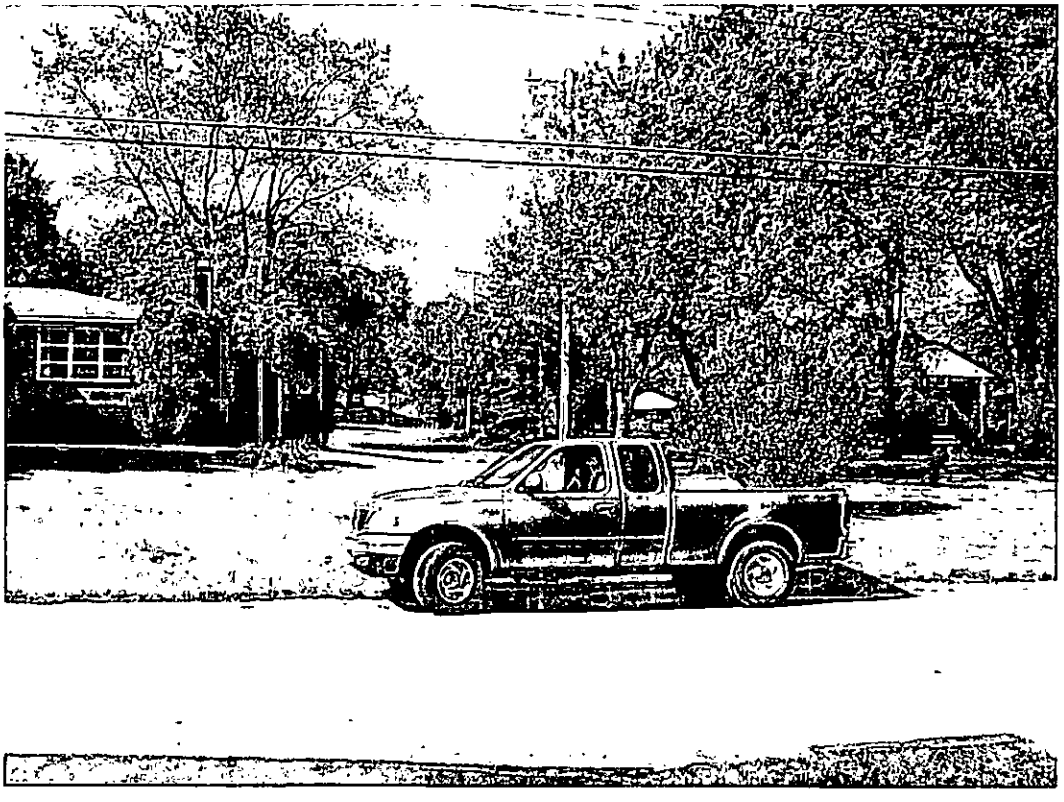
PHOTOGRAPHS



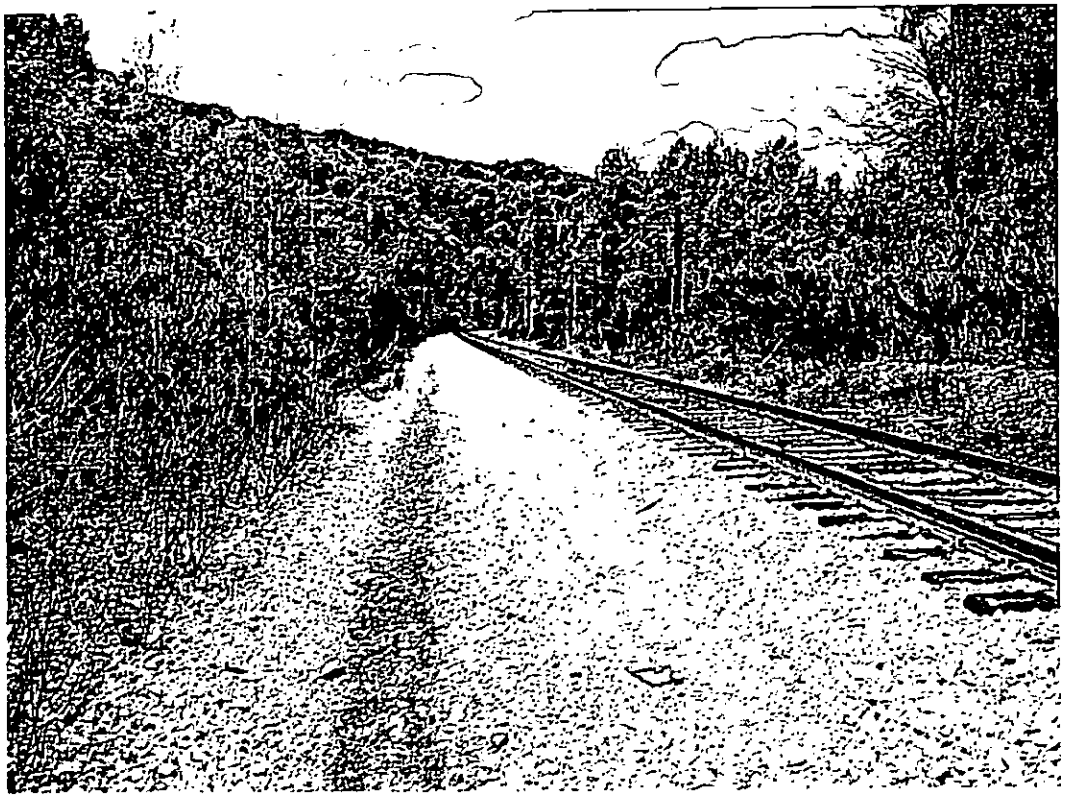
Photograph 1: Route A: looking north along Route 8 at the Duncan Avenue intersection.

Photograph 2: Route A: Wildwood Road at the intersection of Hardies Road (looking east at the sample road that will be overbuilt).

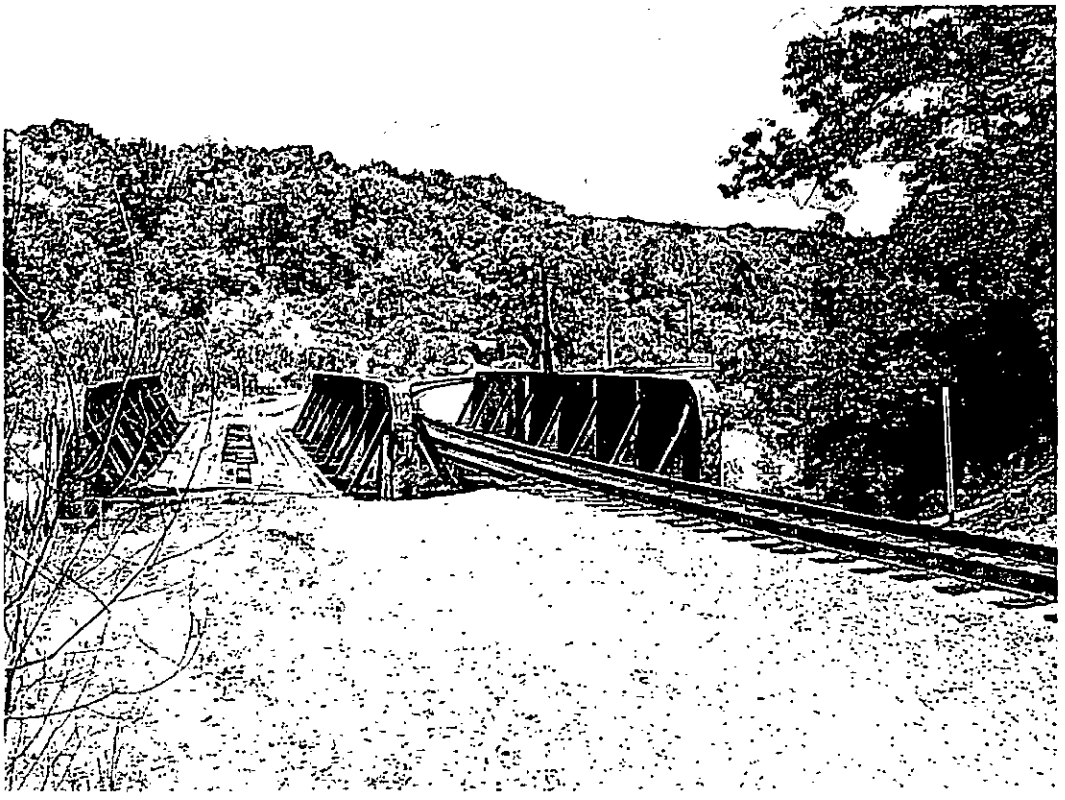
Photograph 3: Route B: a typical view along the existing 23 kV line near Wildwood Road that will be overbuilt.



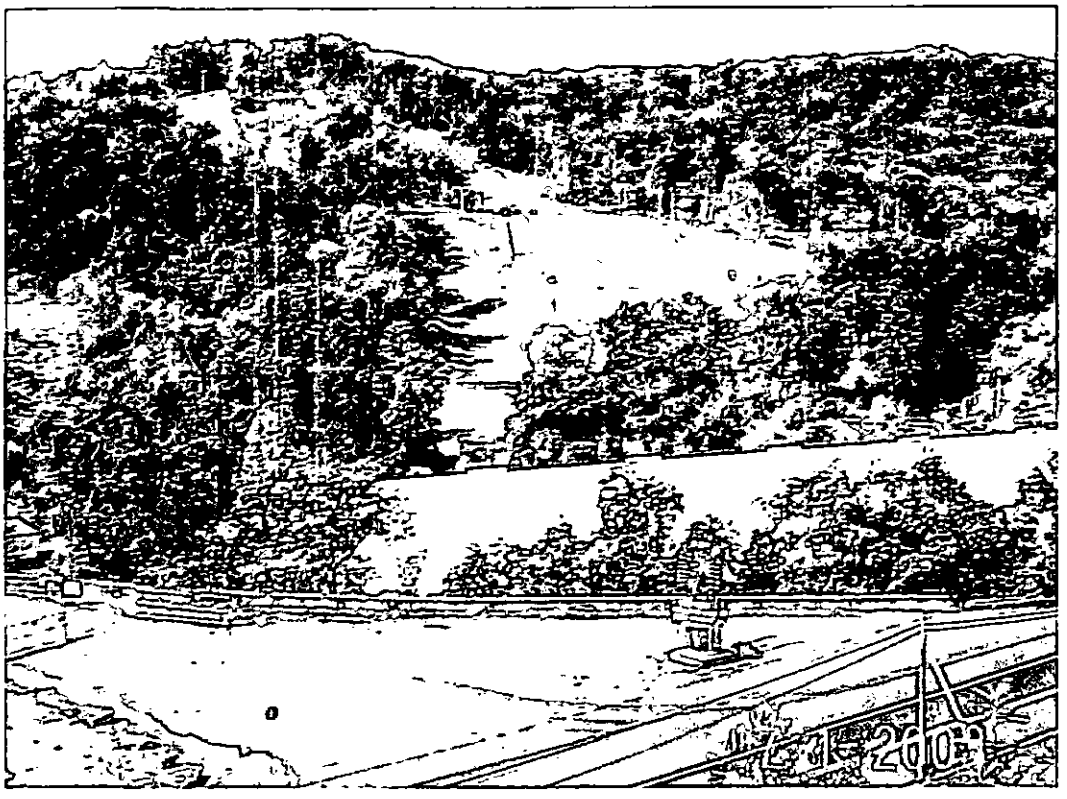
Photograph 4: Route B: looking north along the 23 kV line passing through a residential area at Saddle Road.



Photograph 5: Route C: view along CSX Railroad at tracks, service road, and existing electrical service.

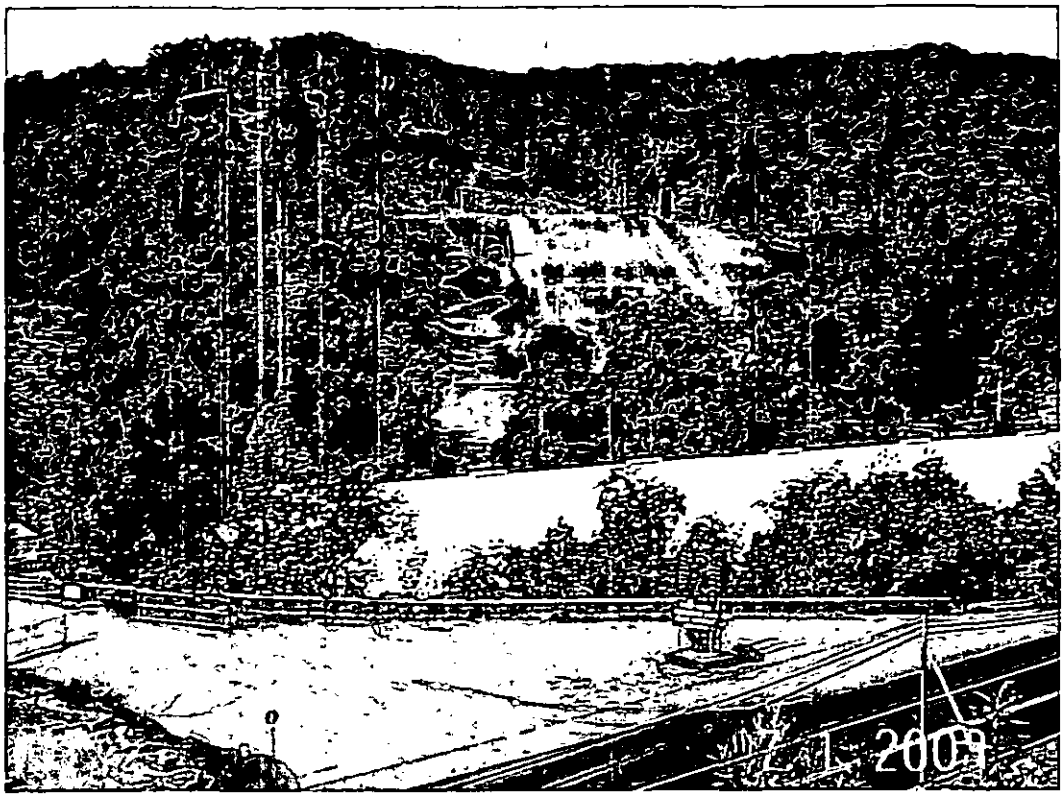


Photograph 6: Route C: dedicated service road bridge over Pine Creek at the start of delayed harvest trout fishing season.

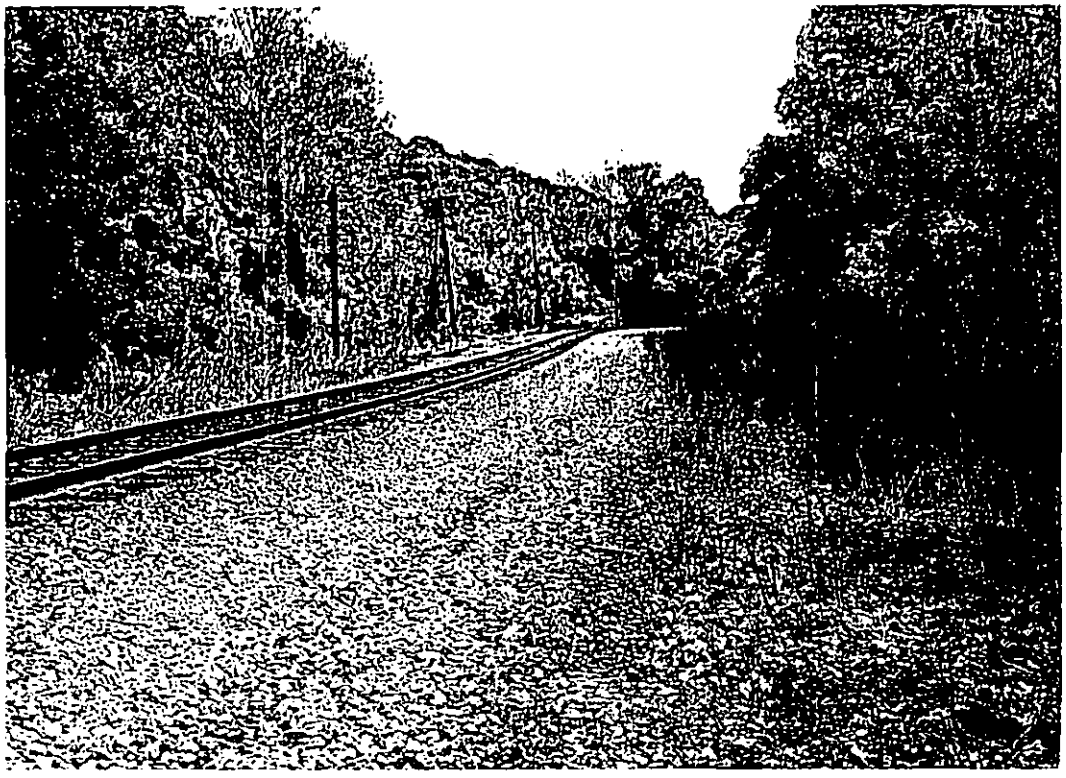


Photograph 7: Route D: the line will pass over a building and the Wild Mountain snow tubing area next to Wildwood Road.

Photograph 8: Route D: the line will be routed on a new right-of-way through this subdivision near its southern terminus.

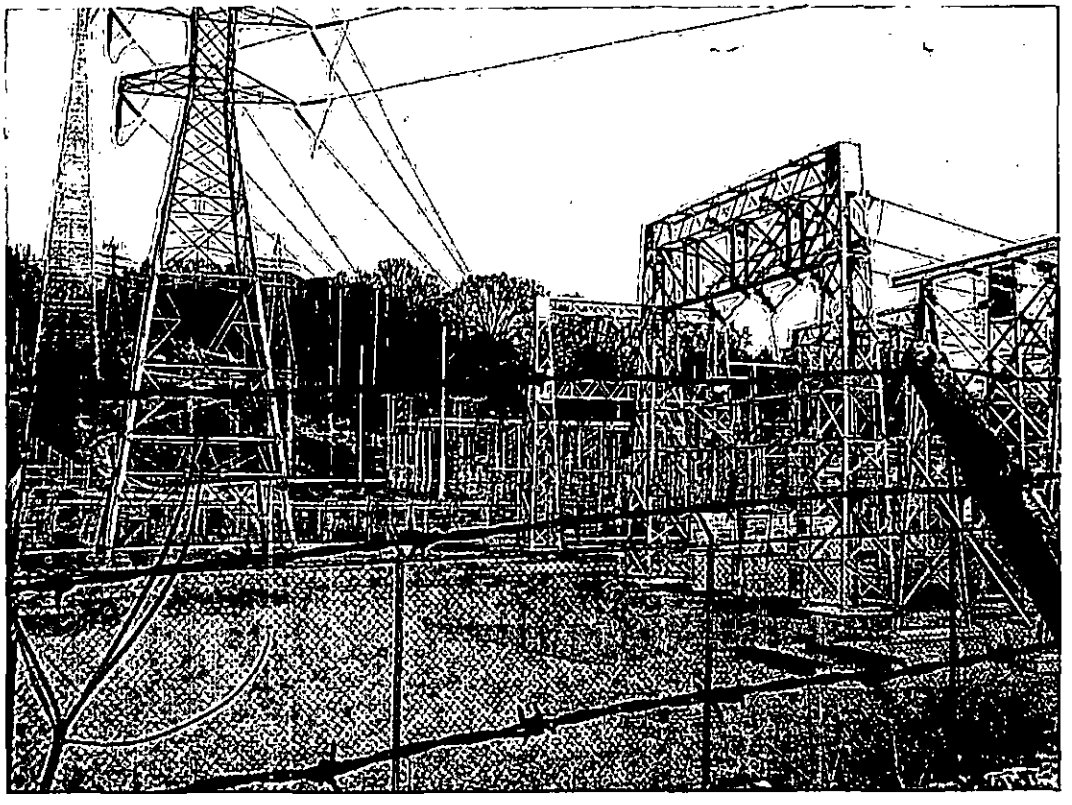


Photograph 9: Route D/C follows Route D in its northern half (shown: Wild Mountain snow tubing).

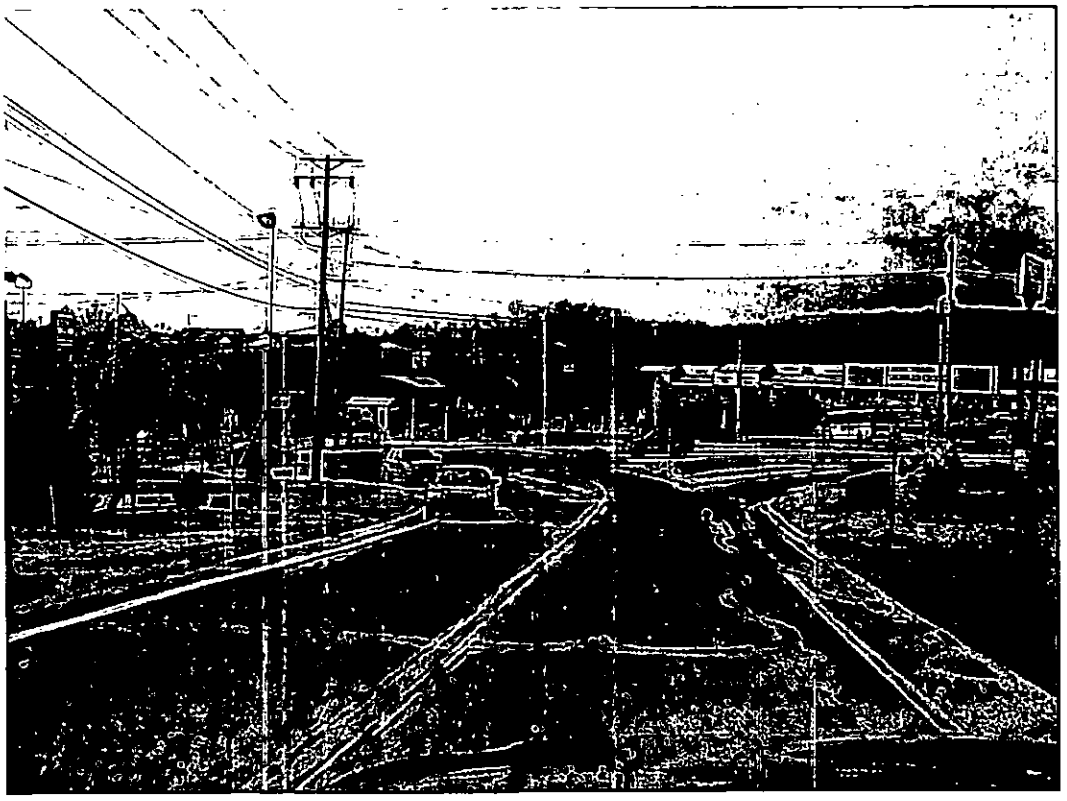


Photograph 10: Route D/C follows Route C along the CSX Railroad in its southern half.

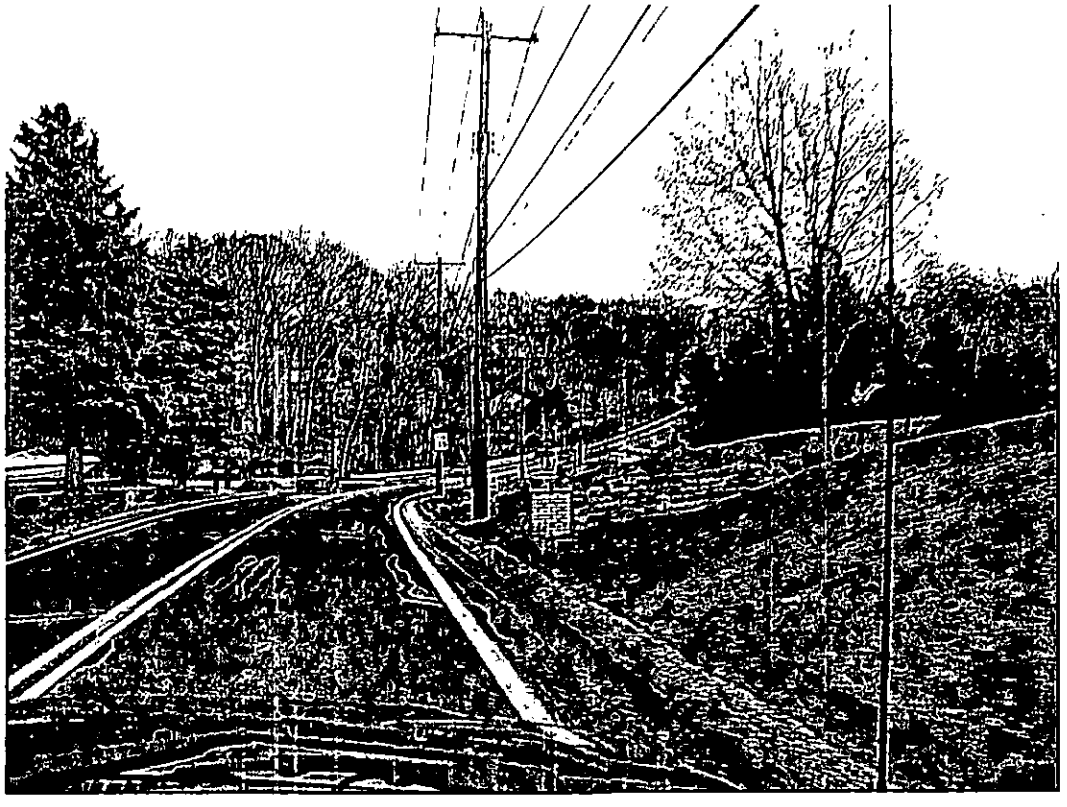
Photograph 11: Route E proceeds extensively along Thompson Run Road.



Photograph 12: Route E ends at the North Substation.



Photograph 13: Route E-1 leaves Route E at Duncan Manor Plaza and proceeds along Ferguson Road.



Photograph 14: Typical development along Route E-1.

APPENDIX D

OVERSIZED FIGURES

PROPRIETARY INFORMATION

Docket Number _____

Name of Document Figures 3-1, 3-2, 3-3

Date Document Received 3-4-2005

DOCUMENT CONTAINS

PROPRIETARY INFORMATION