APPENDIX G
Public Scoping Document

TRI-LAKES RELIABILITY PROJECT

Public Scoping Document

For the New York State Environmental Quality Review Act
Draft Environmental Impact Statement
(DEIS)

Project to be Located in the
Adirondack Park
in the
Towns of Clifton, Colton, Parishville and Piercefield
St. Lawrence County, NY

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New York Power Authority

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Table of Contents

1.0 INTRODUCTION 1

2.0 PROJECT DESCRIPTION 2

2.1 Information to be Included in the Project Description Chapter of the DEIS 3

3.0 POTENTIALLY SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS 4

3.1 Wetlands and Vegetation Study 4
3.2 Shoreline and Designated Rivers 5
3.3 Cultural Resource Assessment 6
3.4 Visual Assessment 6
3.5 Cumulative and Secondary Growth Analysis 7

4.0 MITIGATION MEASURES 8

5.0 ALTERNATIVES 9

6.0 APPENDICES TO ACCOMPANY DEIS 9

Attachment 1 Draft DEIS Table of Contents
Attachment 2 Protocol for Wetland Delineation and Vegetation Covertype Determination
Attachment 3 Cultural Resources Assessment Methodology
Attachment 4 Visual Assessment Methodology

Acronyms

ACHP	Advisory Council on Historic Preservation
APA	Adirondack Park Agency
APE	Area of Potential Effects
DEC	New York Department of Environmental Conservation
DEIS	Draft Environmental Impact Statement
GIS	Geographic Information System
κV	Kilovolt
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NYPA	New York Power Authority
NYSM	New York State Museum
ROW	Right-of-Way
SEQRA	State Environmental Quality Review Act
SR	State Route
SRHP	State Register of Historic Places
SVC	Static Var Compensation
SWPPP	Storm Water Pollution Prevention Plan

1.0 Introduction

In response to initiatives of elected and municipal officials and interested citizens in the Tri-Lakes Region, an Agreement ("Agreement") was executed in September 2004 by and among the Villages of Lake Placid and Tupper Lake, and Niagara Mohawk now known as National Grid ("Niagara Mohawk") and the New York Power Authority ("NYPA") to help alleviate longstanding power problems in the region through short-term and long-term solutions. One of the long-term solutions identified by Niagara Mohawk and NYPA as required for this area, and included in the agreement, is to upgrade and expand the existing Tri-Lakes Region electricity delivery facilities by installing a new 46 kilovolt ("kV") line within the Adirondack Park in St. Lawrence County (see Figure 1, Project Location Map). The purpose of the Tri-Lakes Reliability Project ("Project") is to increase the reliability of the electric system in the region through improvements to capacity and delivery.

For the purposes of this Public Scoping Document (Scoping Document), the term "Project" refers to all proposed components of the Project including wood poles, conductors, hardware, and regulator and substation facilities, as well as the Project right-of-way ("ROW") and access roads. The term "Project Area" is the geographical area encompassing the Project, including alternative routes considered.

The proposed Project is approximately 26 miles long and consists of a combination of existing electric distribution and a new 46 kV line sharing wood pole structures and ROW in some locations and only new 46 kV lines on wood poles within new ROW in others. The Preferred Route begins in Parishville, NY, at the new Stark Falls 115/46 kV Substation that interconnects with the existing 115 kV system, and ends in Piercefield at the existing Piercefield Substation (new regulator station). The Alternate Route begins in Clifton, NY at a new 115/46 kV Newton Falls Substation and also ends at the Piercefield Substation. Section 2.0 provides a description of the proposed Project structures and ROW configurations.

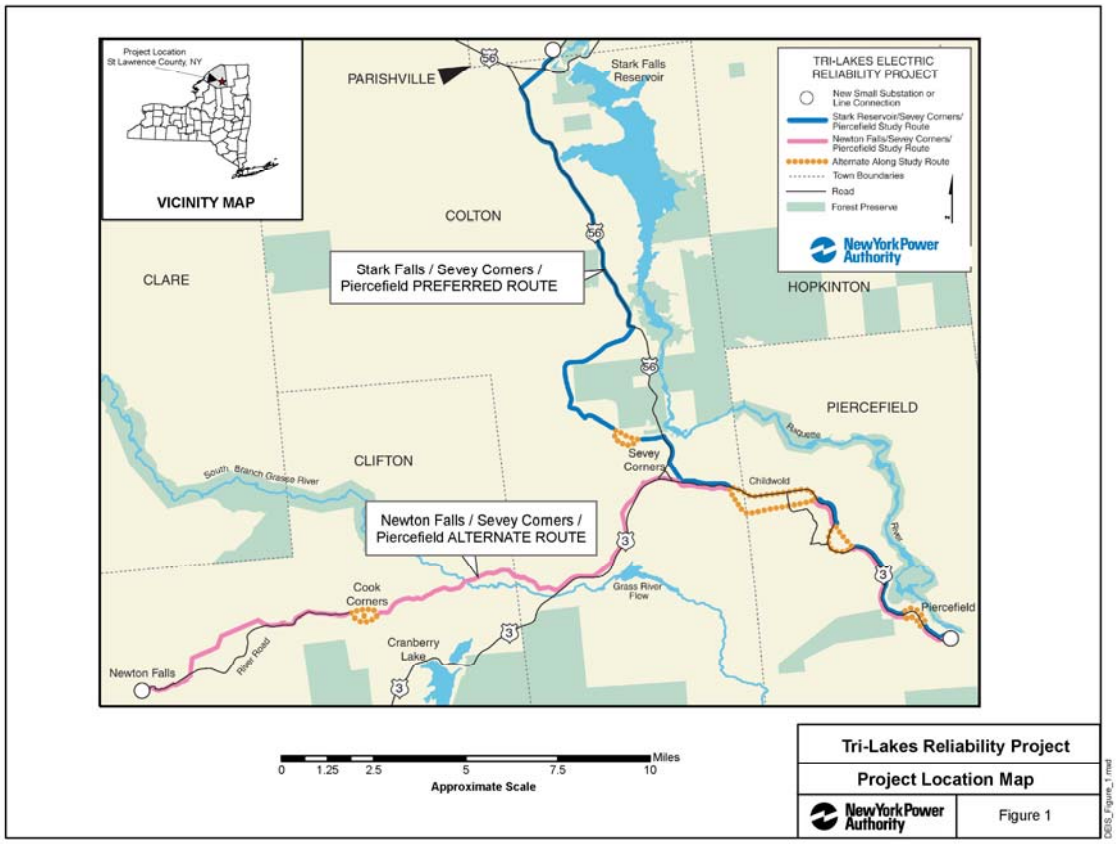
Operating voltage defines line designation: the Niagara Mohawk sub-transmission system operates in the range of 22 kV to 69 kV. For voltages above 69 kV the systems are identified as being part of the transmission system. The distribution system includes lines and electric systems below 22 kV. The choice of operating voltage is made by using engineering planning criteria to analyze the electrical load to be served, the distance between the generation and the load, the performance of the system, and economics.

The Tri-Lakes Reliability Project is being developed in compliance with applicable state and federal environmental regulations including review under the State Environmental Quality Review Act ("SEQRA") and the Adirondack Park Agency ("APA") Act.

In accordance with SEQRA, this Scoping Document will identify and discuss elements to be addressed in the Tri-Lakes Reliability Project Draft Environmental Impact Statement ("DEIS") including methods which will be used to assess the nature of impacts to environmental resources. The scope of this document is limited to the Project.

For the proposed Project, NYPA serves as lead agency and is the applicant for all governmental permits or approvals required for siting (determining the most appropriate location), and construction. Niagara Mohawk is responsible for the design, engineering, procurement, construction, installation, testing, and overall project management of the proposed 46 kV line, subject to NYPA oversight.

NYPA, acting as Lead Agency, in accordance with SEQRA, distributed this Scoping Document to all interested and involved agencies and to various members of the community who requested copies. NYPA invited written comments on the draft Scoping Document and solicited comments at a public open house meeting held in the Tri-Lakes Region on June 10, 2005. Written comments were accepted through June 20, 2005 and reviewed. NYPA revised the draft Scoping Document to ensure that all relevant comments were addressed in the DEIS.



2.0 Project Description

In keeping with the SEQRA process, possible routes were studied within the Project Area. These routes are depicted on the Project Location Map at the end of this section and described below:

The Newton Falls Alternate Route Segment begins in Clifton, NY and continues east through Newton Falls and the of village of Cook Corners for approximately 18 miles to Sevey Corners. This route segment consists of several ROW types including: cross-country new overhead, new offset overhead parallel to State Route 3, overbuild of existing distribution lines, spanning of sensitive wetlands and boring under the Grasse River.

The Piercefield Preferred Route Segment begins at Sevey Corners and continues east for approximately 10 miles to the vicinity of the Piercefield Substation. This route segment passes through the villages of Childwold and Gale and includes three route variations through these areas. It contains the following ROW configurations: new cross country, new overhead offset from State Route 3 and overbuild of existing distribution lines.

The Stark route begins near the Stark Reservoir and continues south along State Route 56 to the area around Crooked Lake where it proceeds around a Forest Preserve Parcel before returning to the State Route 56 corridor. This section consists of overbuild of existing distribution lines, new overhead cross country, new overhead offset along State Route 56, and spanning of sensitive wetland areas.

Concurrent to this Project, the siting and installation of two transmission enhancing devices, static var compensators (SVCs), contemplated as a short term measure in the Agreement, is currently undergoing an independent regulatory review and permitting process.

2.1 Information to be Included in the Project Description Chapter of the DEIS

The Project Description chapter of the DEIS will include, at a minimum, the following information:

Project Description

- A list of governmental entities having approval authority over the Project, along with the nature of each entity's jurisdiction, the approvals required from each entity, and whether or not such entities are subject to the SEQRA process.
- A general description of the Project Area, including a discussion of surface waters, existing road networks, and regulatory restrictions that could affect development at a given location.
- Maps showing the Preferred and Alternative Routes as well as locations of any ancillary facilities such as storage yards, and regulator and substation locations.
- Maps showing in general the existing electric transmission system and existing road networks in and around the Project Area.
- Drawings and specifications of the proposed transmission system including the ROW, access routes, work trails, pole types and locations, conductors, and interconnection facilities.
- The location and points of interconnection with the existing transmission system, a summary of the approach and findings of the interconnection assessment and all associated reliability studies.
- Explanation of why each component of the Project was selected over competing designs.

Project Purpose, Needs, and Benefits

- A discussion of the load and reliability issues that determined the need for and general location of this Project.
- A description of the anticipated local and regional benefits of the Project.
- A description of the routing analysis that led to the selection of the Preferred and Alternate Routes.

Project Ownership and Organization

- Identification of the Project Owner, Operator, and support and design firms involved in Project development.

Construction and Operation Phase activities

- Construction phasing and scheduling
- Clearing requirements
- Construction methods and facilities
- Access routes and temporary work spaces
- Sediment and Erosion Control measures
- Vegetation management (including herbicide use)

3.0 Potentially Significant Adverse Environmental Impacts

It is not anticipated that the Project will have significant adverse environmental impacts due to the studies and siting conducted during the regulatory process. (See DEIS Table of Contents, Attachment 1.) Wetlands and vegetation, shorelines and designated rivers, cultural resources, and views and visual resources have been identified as areas requiring study for the potential of adverse environmental impact for this Project (see below). The DEIS will present these studies, analyze potentially significant environmental impacts and discuss any other Project area environmental considerations.

The following studies are being conducted to ensure that impacts, if any, are minimal:

3.1 Wetlands and Vegetation Study

Clearing and maintenance activities required for Project construction and operation have the potential to affect wetlands and vegetative communities (a variable assemblage of interacting plant, and possibly animal populations that share a common environment) in the ROW. The area in which the proposed 46 kV line will be located contains numerous wetlands and a variety of vegetative communities and habitat that will be considered in final route selection and pole placement. To the extent practicable, final pole placement will avoid wetlands and.

A combination of desktop and field studies will be completed and reported in the DEIS to describe ecological conditions and provide the basis for impact assessment. The protocol for the wetland delineation and vegetation covertype determination is described in Attachment 2.

Information to be presented in the DEIS will include:

- Topographic maps showing dominant ecological communities and wetlands within and adjacent to the ROW.
- Identification of general habitat for threatened and endangered plant and animal species based on the results of field work, a desktop analysis and agency consultation.
- An assessment of vegetative communities based on aerial photo interpretation and available Geographic Information System (GIS) database resources.
- Information (type of substrate, bank structure, and presence or absence of adjacent vegetation as it relates to habitat) on aquatic and terrestrial fauna within the Project Area.
- Identification of surface waters that will be affected by the Project, including size, vegetative cover type, function and value, and a description of potential impacts.
- A description of methods used to avoid or minimize impacts on streams, rivers and wetlands.
- Measures for controlling sediment and erosion, and stormwater runoff during line construction will be described.

The following reports will be included as Appendices to the DEIS:

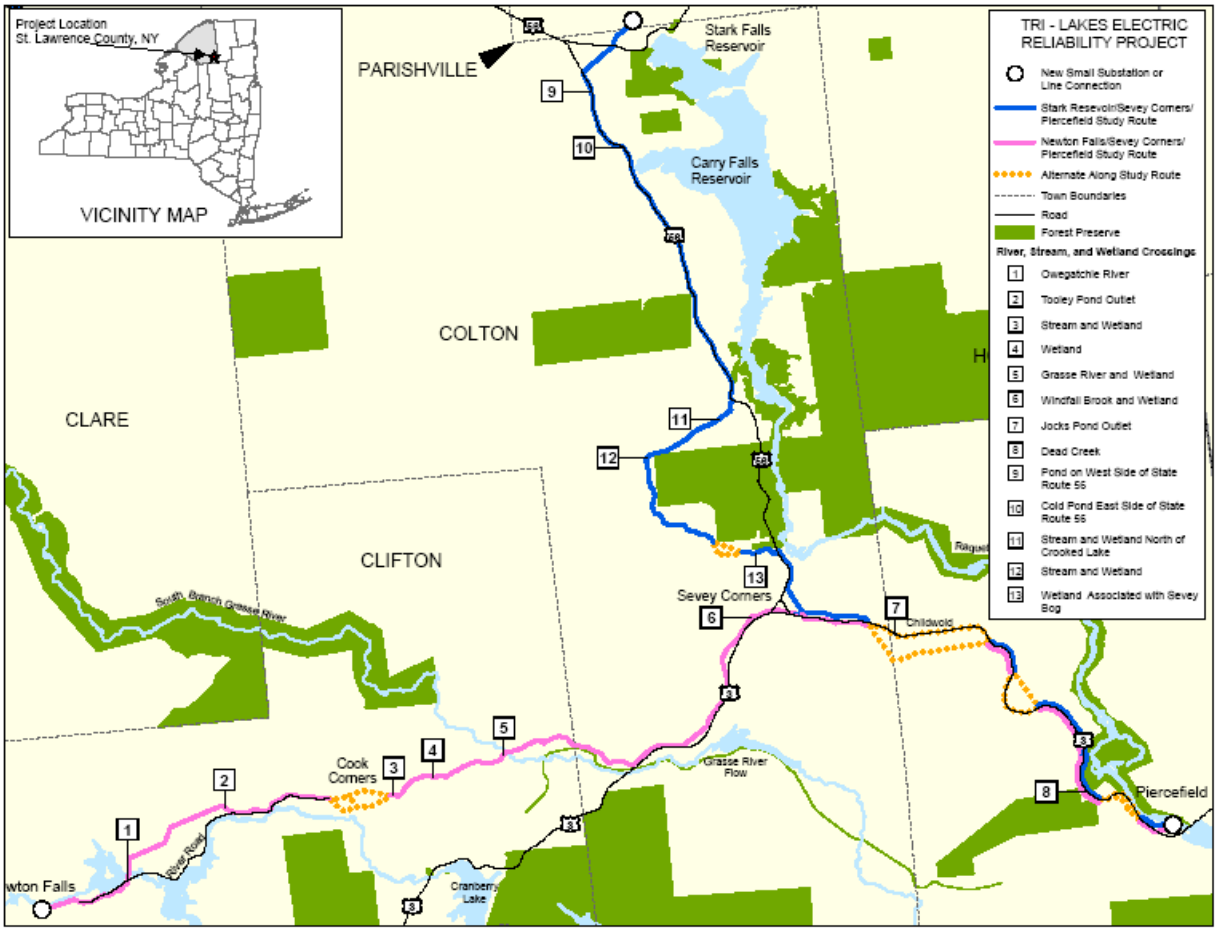
- Wetland Delineation Report
- Sediment and Erosion Control Plan and Wetlands Restoration Plan
- Storm Water Management Pollution Prevention Plan (SWPPP)
- Agency Consultation Correspondence
- Routing Study Report
- Cultural Resource Assessment

3.2 Shoreline and Designated Rivers

The Project will cross a number of streams, rivers, lakes and ponds. In addition to the South Branch of the Grasse River, which is included on the New York list of designated Wild, Scenic and Recreational Rivers, there are several water crossings in the Project Area including:

- Oswegatchie River
- Tooley Pond Outlet
- Grasse River and wetland at approximately reference marker N11.8
- Windfall Brook and Wetland
- Jocks Pond Outlet
- Dead Creek
- Cold Pond east side of SR 56 at approximately reference marker S4.2
- Stream and wetland north of Crooked Lake
- Wetland associated with Sevey Bog

The DEIS will address each crossing. The proposed methods for evaluation of Project impacts to wetland and biological resources are discussed in Section 3.1 above and Attachment 2. In addition, construction in wetlands and adjacent to rivers and streams is likely to affect views and the general visual quality of each area. The methods for identifying and evaluating potential visual impacts are discussed in Section 3.4 below and Attachment 4. The results of these studies will be presented in the DEIS with accompanying tables and figures, as appropriate to clearly describe conditions and potential impacts



3.3 Cultural Resource Assessment

The proposed Project has the potential to affect both historic structures and archeological resources. Cultural resources reviews and studies to ensure minimal adverse effects to these resources will be conducted in compliance with applicable APA rules and regulations, SEQRA and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. NHPA requirements are triggered by any federal permits that will be required for this Project.

The cultural resources studies will follow the sequence of phased study outlined in the New York State Standards for Cultural Resource Investigations (1994) and the Advisory Council on Historic Preservation's (ACHP) implementing regulations found at 36 CFR 800. First, a background literature review will be conducted to identify known cultural resources within the Areas of Potential Effects (APE) for the Preferred and Alternate Routes. Although known sensitive cultural resources within the APE that are identified through the background research, will be avoided through siting to the extent possible, more in-depth field surveys are likely to be required along the Preferred Route.

Second, areas within the Preferred Route's APE for archeology that are considered to be particularly sensitive for archeological resources may require subsurface investigation. If cultural resources are identified, subsequent examination may be needed to evaluate the potential of the identified resources to be eligible for the State Register of Historic Places (SRHP) and/or the National Register of Historic Places (NRHP).

A third phase of investigation may be required to address significant sites that may be affected by the Project and that cannot be avoided. For archeological resources, that may mean data recovery or other alternative forms of resolution of effects. Attachment 3 to this Scoping Document provides more detail on the proposed cultural resources assessment methodology.

The APE for architecture will most likely extend beyond the defined project ROW and, in some areas, may require field inventory of significant and potentially significant architectural resources that may be affected by the project. Subsequent visual impact assessment for inventoried historic properties may be needed to determine if the Project will result in adverse effects to these resources. The methods for assessing the potential visual impacts of the project are discussed in Section 3.4 and Attachment 4 of this Scoping Document.

3.4 Visual Assessment

As a part of the permitting process, a detailed visual assessment will be conducted in accordance with APA and New York Department of Environmental Conservation ("DEC") requirements and guidance and in conformance with SEQRA. The DEIS will discuss the visual assessment including the existing visual quality of the Project Area and any potential changes which might occur with the construction of the Tri-Lakes 46 kV line. The visual assessment itself will be used to assist in the final pole placement, to identify potential impacts and develop mitigation strategies (see DEIS at 3.3, 4.0) to the extent practicable.

There are a number of visual assessment measures which must be implemented in order to meet APA requirements. Guidance on how to assure 1) the substantial invisibility of poles greater than 40 feet and 2) the consolidation of visual intrusions are set forth in the APA's "Policy on Agency Review of Proposals for New Telecommunications Towers and Other Tall Structures" dated February 15, 2002. The policy's purpose is to maintain the visual quality and character of the Park and to avoid undue impacts to scenic vistas, locally important viewsheds, and historic resources. Requirements include that a visual assessment must be applied on a site-specific basis. As part of the alternative assessment required by the APA, methods of avoiding or reducing clutter in a viewshed through consolidation at a site with more than one pole are also necessary. Further guidance for the development of visual assessments is provided in the

DEC publication "Assessing and Mitigating Visual Impacts" (DEC DEP-00-2; July 31, 2000). Both of these sources will be utilized in the visual assessment and DEIS.

As a part of the visual assessment, an inventory process which determines pole character and the degree of visibility is critical to understanding any possible visual effects which may result from the Project. This inventory will include public use areas, road crossings, scenic or recreational river crossings, and designated vistas from which the new poles will be potentially visible[1].

Preliminary project analysis has yielded some information to be utilized in the visual assessment. In most locations, proposed sub-transmission facilities will be supported on poles that are generally 59-66 feet tall. Preliminary analysis indicates that poles of this height will be well screened by tree canopy in the adjacent forest that is the same height or taller. In order to eliminate pole placements in wetlands or near stream banks or at road crossing, occasionally, taller poles may be used to increase span between poles. These sites will be analyzed in the visual assessment and discussed in the DEIS. In order to minimize ROW visual effects, there are a number of options for screening views of the ROW such as offsetting and undergrounding of the 46 kV lines. The Project proposes to use offsetting as a general practice. Offsetting and undergrounding may also occur near recreational rivers and other navigable water bodies considered travel corridors consistent with APA regulations. These sites will also be analyzed in the visual assessment and discussed in the DEIS.

The DEIS visual assessment section will include text, site character photographs, topographic zone of visibility maps, cross-section, and photographic simulation to describe view and potential visual impacts. The focus will be to describe the near and middle view as they relate to view context, viewer number, view of activities, and the landscape setting. A significant number of tree or canopy height measurements will be included in the visual assessment. Information developed as part of the visual assessment will be provided in text, tables, figures (photo renderings and maps), as appropriate, to describe existing conditions and potential impacts. Attachment 4 provides a detailed description of the methodology to be used to evaluate the potential visual impacts of the Project

3.5 Cumulative and Secondary Growth Analysis

Estimates of primary and secondary growth resulting from operation of the Project, to the extent possible, will be analyzed and discussed in Section 9 of the DEIS. Residential and business growth in the Tri-Lakes Region is controlled, in part, on a local level through municipal and regulatory agency decisions. This growth is induced by a variety of factors, only one of which is the availability of electricity. The cumulative and secondary growth analysis will discuss conditions in the region that could benefit from increased electric reliability as well as any possible negative consequences of increased reliability. The DEIS discussion of cumulative and secondary growth analysis will include the following:

[1] The visual inventory will include development of a zone of visibility map for the area within three miles of the poles. The zone of visibility map will be completed based on a digital terrain model and presented in the DEIS. The visual inventory, along with photographic simulation, and topographic computer generated "3D" models will be used to show the changes in landscape and forest cover of both roadside vistas and of the offset (the clearing of the ROW at least 100 feet from the highway). Standard zone of visibility mapping and cross-section analysis will show potential visibility from viewpoints on roads, rivers, or water bodies. Based on the completed inventory, a rating matrix that summarizes the amount of visibility based on height in relationship to trees and structures, visual setting, view duration, view context, and number of viewers, may be developed. The matrix will be discussed with the review agencies prior to presentation in the application materials.

- Existing conditions for Tri-Lakes Region
  - Regional population by town based on 1990, 2000 and 2004 census data (federal and state)
  - Housing growth
    - Tri-Lakes region: Tupper Lake, Lake Placid, Saranac Lake
    - Surrounding communities
  - Commercial activities (manufacturing and other businesses with high load factors)
    - Economic base and employment/unemployment in region
    - Changes in regional economy over past 15 years
    - Change in number of employers / type of employers in past 15 years
    - Change in energy demands of employers in past 15 years
  - Zoning and land use plan designations for Tri-Lakes Region
  - Other factors (non-electric) affecting growth in the Tri-Lakes Region over the past 15 years.
- Existing and projected electric needs:
  - Power needs today
  - Changes in demand over past 15 years
  - Demand Side Management (DSM) – show how it is being used and to what effect
  - Factors affecting reliability
  - Frequency of electrical brown outs and black outs in Tri-Lakes Region and surrounding communities.
  - Discussion of current short-term solutions to power needs
  - Relationship between Static Var Compensators (SVCs) and Tri-Lakes 46 kV 46 kV line and contribution to improved reliability of electric system
- Anticipated increase in improvement in reliability of electricity due to the operation of the Tri-Lakes 46 kV line:
  - Decision factors that led to proposed size of line (46 kV)
  - Portion anticipated to stabilize system reliability – peak and off-peak demand
  - Portion for anticipated future needs?
- Potential beneficial and adverse effects of new 46 kV line:
  - Summary of changes in region over past 15 years
  - Benefits of improved electric reliability to public agencies and businesses in Tri-Lakes Region and surrounding communities
  - Benefits of improved electric reliability to education
  - Potential for residential, public sector and business growth
  - Potential Project effect on utility rates.

4.0 Mitigation Measures

The Project will avoid or minimize potential impacts to sensitive resources through routing and careful placement of Project facilities whenever possible. Where avoidance or minimization is not possible, mitigation measures will be developed on a resource- and location-specific basis. The DEIS will describe how avoidance, minimization and/or mitigation measures are selected including a description of both location specific and generic measures, as appropriate for the resource and potential impact.

Potential actions and mitigation measures to be considered include:

- Routing of the line to avoid sensitive resources
- Avoidance by moving pole locations
- Overbuilding (installing proposed new 46 kV line and existing distribution line on a new wood pole in an existing pole location) to consolidate existing utilities and reduce visual clutter
- Timing construction to avoid seasonally sensitive events (e.g., bird nesting time, peak tourist events, etc.)
- Use of long-line spans over sensitive wetlands, stream crossings, and scenic river areas
- Underground placement in particularly sensitive viewsheds
- Data recovery of archeological resources when avoidance is not possible
- Construction techniques to minimize impacts to sensitive habitats and vegetation (e.g., winter work and selective ROW clearing)
- Construction techniques to minimize impacts to sensitive visual receptors (including NRHP-eligible and listed structures) (e.g., type of vegetative clearing to implement along ROW)

5.0 Alternatives

A number of alternatives have been identified and reviewed to identify a preferred route for the Project. Alternatives to be discussed in the DEIS include:

- No action
- Alternative tap points (sub-stations)
- Alternative routes
- Alternative support structures
- Underground/under water options

Information on the potential beneficial and any adverse environmental and economic impacts associated with each option will be discussed. Maps of the Preferred and Alternate Routes for the Project will be included in the DEIS routing study appendix.

6.0 Appendices to Accompany DEIS

The following reports will be included as Appendices to the DEIS:

- Routing Study Report (Alternatives Analysis)
- Wetland Delineation Report
- Phase 1A Cultural Resources Report, Historic Architectural Survey Report
- Visual Impact Assessment Report
- Environmental Work Plan (Storm Water Pollution Prevention Plan; including stream and water crossing methods)
- Agency Consultation Correspondence
- Scoping Document

Attachment 1

Draft DEIS Table of Contents

EXECUTIVE SUMMARY

1 PROJECT DESCRIPTION
- 1.1 General
  - 1.1.1 General Project Description
  - 1.1.2 Project Need
  - 1.1.3 Routing Studies
  - 1.1.4 Project Location
  - 1.1.5 Proposed Project Structures and ROW configuration
  - 1.1.6 Existing Transmission Structures
- 1.2 Project Ownership and Organization
  - 1.2.1 Ownership
  - 1.2.2 Project Management
  - 1.2.3 Support and Design Firms
- 1.3 Development Schedule
  - 1.3.1 Construction Phase Activities
  - 1.3.2 Operational Phase Activities

2 ALTERNATIVES TO THE PROPOSED ACTION
- 2.1 No Action
- 2.2 Alternative Tap Points
- 2.3 Alternative Routes
  - 2.3.1 Sub-Alternate Route Identification and Analysis
- 2.4 Alternative Support Structures
- 2.5 Underground/under water options
- 2.6 Generation Alternatives

3 EXISTING ENVIRONMENTAL SETTING
- 3.1 Geology & Soils
  - 3.1.1 Geology
  - 3.1.2 Soils
- 3.2 Topography & Slope
- 3.3 Baseline Ambient Air Quality, Meteorology and Climatology
  - 3.3.1 Climatology and Meteorology
  - 3.3.2 Ambient Air Quality
- 3.4 Noise
- 3.5 Water Resources
  - 3.5.1 Surface Water
  - 3.5.2 Ground Water
  - 3.5.3 Water Quality
- 3.6 Fish & Wildlife
  - 3.6.1 Fish
  - 3.6.2 Wildlife
- 3.7 Threatened & Endangered Species
  - 3.7.1 Plants
  - 3.7.2 Animals
- 3.8 Wetlands
  - 3.8.1 Communities Characteristics

3.8.2 Wetland Functions and Values
3.8.3 Large Wetland Complexes
3.9 Vegetation
3.9.1 Terrestrial Communities
3.9.2 Wetlands Communities
3.10 Cultural Resources
3.10.1 Archeological Resources
3.10.2 Architectural Resources
3.11 Land Use
3.11.1 Existing Land Uses
3.11.2 Applicable Zoning Regulations
3.11.3 Shoreline Regulations
3.11.4 Forest Preserve Regulations (if applicable)
3.11.5 Adirondack Park State Land Master Plan
3.11.6 Recreation Resources
3.12 Visual Resources
3.13 Public Health & Safety
3.13.1 Public Health
3.13.2 Public Safety
3.14 Socioeconomics
3.14.1 Population
3.14.2 Housing
3.14.3 Employment
3.15 Transportation
3.15.1 Regional Road Network
3.15.2 Rail Service
3.15.3 Air Service
4 ENVIRONMENTAL IMPACTS OF CONSTRUCTION AND MITIGATION MEASURES
4.1 Geology and Soils
4.1.1 Geology
4.1.2 Soils
4.2 Air Quality
4.3 Noise
4.4 Water Quality – Environmental Consequences
4.5 Fish and Wildlife
4.5.1 Fisheries
4.5.2 Wildlife
4.6 Wetlands
4.7 Threatened and Endangered Species
4.7.1 Plants
4.7.2 Animals
4.8 Vegetation
4.9 Cultural Resources
4.9.1 Archeological Resources
4.9.2 Architectural Resources
4.10 Land Use
4.10.1 Land Use and Zoning
4.10.2 Forest Preserve
4.10.3 Adirondack Park Lands
4.10.4 Recreation Resources

4.11 Shoreline and Designated Rivers
4.12 Visual Resources
4.12.1 Right-of-Way (ROW) Clearing
4.12.2 Access Roads and Trails
4.12.3 Structures
4.12.4 Recreation Resources
4.13 Public Health & Safety
4.14 Socioeconomics
4.15 Traffic and Transportation

5 ENVIRONMENTAL IMPACTS OF OPERATION AND MITIGATION MEASURES
5.1 Geology and Soils
5.1.1 Geology
5.1.2 Soils
5.2 Air Quality
5.3 Noise
5.4 Water Quality
5.5 Fish and Wildlife
5.5.1 Fish
5.5.2 Wildlife
5.6 Wetlands
5.7 Threatened and Endangered Species
5.7.1 Plants
5.7.2 Animals
5.8 Vegetation
5.9 Cultural Resources
5.9.1 Archeological Resources
5.9.2 Architectural Resources
5.10 Land Use
5.10.1 Land Uses and Zoning
5.10.2 State Forest Preserve
5.10.3 Adirondack Park Agency Act
5.10.4 Recreation Resources
5.11 Shoreline and Designated Rivers
5.12 Visual Resources
5.12.1 Inspection
5.12.2 Maintenance and Repair
5.12.3 Vegetation Management
5.12.4 Visual Impact During Operations
5.13 Public Health & Safety
5.14 Socioeconomics
5.14.1 Population and Housing
5.14.2 Area Business and Employment
5.15 Traffic and Transportation

6 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

7 RELATIONSHIP BETWEEN THE LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

8 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

9 CUMULATIVE IMPACTS, GROWTH INDUCING EFFECTS AND SECONDARY IMPACTS
9.1 General
9.2 Air Quality
9.3 Noise
9.4 Water Quality
9.5 Fish and Wildlife
9.6 Wetlands
9.7 Vegetation
9.8 Cultural Resources
9.8.1 Archeological Resources
9.8.2 Architectural Resources
9.9 Land Use and Recreation
9.10 Shoreline and Designated Rivers
9.11 Visual Resources
9.12 Public Health & Safety
9.13 Socioeconomics
9.14 Traffic and Transportation
10 IMPACTS OF THE PROPOSED ACTION ON THE USE AND CONSERVATION OF ENERGY
11 REFERENCES
APPENDICES
Appendix A Alternative Routing Studies Report
Appendix B Wetlands Environmental Report
Appendix C Phase 1 A Cultural Resources Investigation
Appendix D Visual Impact Assessment Report
Appendix E Environmental Work Plan
Appendix F Agency Consultation Correspondence
Appendix G Public Scoping Document

Attachment 2

Protocol for Wetland Delineation and Vegetation Covertype Determination

Introduction

This protocol is for the use of field personnel responsible for wetland boundary delineations on the Preferred and Alternate Routes of the Tri-Lakes Reliability Project. The data collected by the field crews will be used as supporting documentation for the delineated wetland boundaries, as well as to provide semi-quantitative information for assessing the potential impacts to vegetation associated with construction and maintenance of the proposed 46 kV line. The objective of this protocol is to enable field crews to collect data in a timely, cost-effective manner that ensures uniform quality and ease of interpretation.

Wetland Boundary Delineation

The method to be used for delineation of wetland boundaries is based on that described in the 1987 *Corps of Engineers Wetlands Delineation Manual* ("the 1987 Manual"), as clarified and updated through a series of guidance documents and memoranda from Headquarters of the U.S. Army Corps of Engineers[2] (USACE), and the New York State Freshwater Wetlands Delineation Manual (1995). The following is a brief description of the basic field methodology to be used.

1. Wetland scientists, performing the delineation, will walk the proposed route of the Preferred and Alternate Routes. In places where new right-of way ("ROW") is proposed outside of an existing transmission line ROW, delineators will follow a centerline either flagged at an earlier date by others, or as determined from hand-held Global Positioning System (GPS) equipment (Trimble GeoXT units).
2. Using their knowledge and best professional judgment, delineators will identify wetlands and verify the existence of hydrophytic vegetation, hydric soils, and wetland hydrology.
3. At each point where the proposed 46 kV line crosses from an upland to a wetland, delineators will determine the location of the wetland boundary through observation of changes in slope, vegetation, and soil characteristics. Wetland boundaries will be demarcated in the field with pink WETLAND DELINEATION survey flagging. Each flag will be marked with an identification number[3]. In sections where the proposed 46 kV line will be located within an existing transmission ROW, delineators will mark wetland boundaries within the existing ROW and extending another 50 feet beyond the edge of the existing ROW clearing, where practicable. On sections of the route where new 46 kV line ROW would be constructed, wetland boundaries lying within 50 feet on either side of the centerline will be delineated.
4. At representative locations, data on the characteristics of the soil, vegetation, and hydrology on both sides of the wetland boundary will be recorded on standard data forms (i.e. the Routine Wetland Determination Data Form). Data will not be recorded at every wetland crossed by the routes. The following criteria will be used to determine under what circumstances an upland/wetland pair of observation points will be recorded:
    - For all crossings of river segments designated Wild and Scenic

[2] A version of the 1987 manual that incorporates the issued guidance documents and memoranda is available on-line at http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf.

[3] A system for determining the identification number of each wetland boundary line has been developed and will be used during the fieldwork.

- For wetland crossings greater than 100 feet wide, data will be recorded at paired observation points on each wetland boundary within the ROW
- At wetland crossings between 50 and 100 feet wide, data will be recorded at a single paired observation point along the wetland boundary within the ROW
- At most wetlands less than 50 feet wide, data at a single paired observation point will be collected at every tenth wetland encountered within this size category, or more frequently, at the discretion of the delineation team
- At wetlands less than 30 feet wide, notes on the characteristics of the vegetation will be recorded as described below, under "Vegetation Covertype Data."

Boundary Delineation of Non-Wetland Waters of the United States

At points where the proposed 46 kV line route crosses waters of the United States that do not meet wetland criteria (e.g., a rocky stream with no hydrophytic vegetation within or adjacent to its channel), boundary lines will also be delineated along the banks or shoreline of that waterbody. For crossings of less than 5 feet only the centerline of waterbody will be located by GPS survey. At major stream crossings, including the Grasse, Oswegatchie, and Raquette rivers, a standard pair of wetland/upland observation points will be recorded, even if there is a steep bank without wetland vegetation.

Vegetation Covertype Data

In the course of walking along the proposed 46 kV line route, wetland delineators will record data on vegetation covertypes. Likely upland and wetland covertypes will be defined before the beginning of fieldwork. A vegetation covertype data form will be used to record data, including the following:

- Pre-defined vegetation covertype
- Approximate beginning and ending points for vegetation covertype units, as determined through field verification of aerial photos and/or a hand-held GPS unit. At transitions between upland and wetland covertypes, the wetland boundary line will be recorded.
- The nature of the tree canopy (e.g., continuous, discontinuous, separate individuals) and estimated general height of canopy.
- Noteworthy deviations from the pre-defined covertype.
- Vegetation units within each wetland will be classified according to Cowardin et al, 1979, and included on the covertype data sheet.
- Previously undefined covertypes will be described and named.
- At major covertype transition points (e.g., changes from upland to wetland), photographs will be taken to show the characteristics of each covertype. At stream crossings, photographs will be taken showing views upstream and downstream from the centerline of the proposed 46 kV line.

Attachment 3

Cultural Resources Assessment Methodology

Cultural resources reviews will be conducted to comply with the Adirondack Park Agency (APA) Rules and Regulations, the State Environmental Quality Review Act (SEQRA) and Section 106 of the National Historic Preservation Act of 1966, as amended (triggered by any federal permits that will be required for this Project). The cultural resources studies will follow the sequence of phased study outlined in the New York State Standards for Cultural Resource Investigations (1994) and the Advisory Council on Historic Preservation's (ACHP) implementing regulations found at 36 CFR 800

Cultural resources tasks anticipated for this Project are discussed below.

Cultural Resources Task 1: Initiate Consultations

NYPA met with the New York State Office of Parks, Recreations and Historic Preservation ("SHPO"), on August 22, 2005. The following were addressed:

- Detailed introduction to the Project.
- Definition of the Areas of Potential Effect (APE) for archeology.
- Definition of the APE for architecture.
- Field Approaches to data gathering for archeological and architectural cultural resources.
- Reporting format.

Cultural Resources Task 2: Background Literature Review for Archeology and Walkover Survey

NYPA's contractor performed a Phase IA background literature review of the defined study area. The study area was defined so that it included the two APEs as ultimately defined by the Preferred and Alternate Routes. Cultural resource specialists checked archeological and architectural site files maintained by the SHPO and the New York State Museum (NYSM), and reviewed published and non-published materials located in libraries and at local historical societies.

The routes were walked over by a team of archeologists to identify areas of obvious disturbance, potential archeological sensitivity, and surface evidence of archeological resources. Recommendations for follow-up field investigations were made based on the results of the background research and observations made during the walkover survey. Observations of areas where there was surface evidence of archeological sites or where the field teams judged that subsurface investigation was warranted (i.e. undisturbed areas adjacent to previously recorded sites) were noted for future subsurface investigation. In combination with the information generated from the SHPO, NYSM, and library research, these data were used to assess the relative archeological sensitivity of the Preferred and Alternate Routes and the APE. A Phase IA report was provided to the SHPO and the APA for their review and comment.

Cultural Resources Task 3: Archeological Site Identification

Based on discussions with the SHPO, NYPA will perform Phase 1B cultural resources subsurface investigations along the Preferred and Alternate Route. Subsurface shovel testing will be conducted only within previously undisturbed portions of the APE for archeology that have topography of less than 15 percent slope to determine if the APE contains archeological resources. The Phase 1B report will include recommendations for possible further investigations of identified sites if any are determined to be potentially eligible to the NRHP. Shovel tests will be placed at proposed pole locations and at 50 or 100-foot intervals, depending upon potential agreed-upon cultural resources sensitivity of the respective portions of the Project along new and previously undisturbed access areas, construction storage yards, or

other areas of the Project that will undergo ground disturbing activity. The work performed will comply with the SHPO's *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (1995). Soils from each shovel test will be screened through .25-inch mesh hardware cloth. An additional four shovel test units would be placed in cardinal direction around positive shovel tests (tests that yield artifacts) to assist in delineating the site limits within the proposed ROW. All cultural materials collected will be brought back to a Project laboratory for processing and analysis. A report will be prepared that describes the field investigation methods, the results of field observations, results of field shovel testing, laboratory analyses of artifacts and will include recommendations for evaluation of discovered sites against criteria for National Register of Historic Places (NRHP) eligibility.

Cultural Resources Task 4: Archeological Site Testing

The purpose of the task, Phase II testing, is to examine sites recommended as having potential to be eligible to the NRHP (Task 3). Sites will be examined in enough detail to determine if they actually meet the NRHP criteria for eligibility. A report would be produced with the results of investigations conducted and would include recommendations about the investigated sites' potential eligibility to the NRHP. Wherever practicable, options would be developed for avoiding those sites determined by SHPO as potentially eligible to the NRHP. If the Project would affect archeological sites evaluated as potentially eligible to the NRHP, then consultation with the SHPO and the APA would take place to consider potential options that would mitigate adverse effects.

Cultural Resources Task 5: Conduct Architectural Historical Inventory within Architectural APE.

An inventory survey will be conducted within the architectural APE for architecture (coincides with the defined Project viewshed). The survey will identify structures that may be style-dated 50 years old or older. For structures that may be recommended by the project architectural historian as potentially eligible to the NRHP, a New York Office of Parks, Recreation and Historic Preservation Architecture Inventory Form will be completed. A report of the survey results and recommendations will be prepared and provided to the SHPO for review. Visual impacts to historic properties will be assessed under the Visual Impact Assessment task as described in Attachment 4, herein. Wherever possible, recommendations will be developed for routing that will avoid or minimize impacts to potentially eligible properties. If avoidance is not possible, a work scope will be developed for performing Project impact assessment for NRHP-eligible structures within the APE and seek SHPO and agency concurrence about the scope.

Attachment 4

Visual Assessment Methodology

To develop an accurate record of the visual consequences of the Project, the visual analysis will include use of zone of visibility mapping, visual receptor assessment, photographic inventory, and photographic simulation. The APA recommends a 5-mile zone of visibility for tall structures. This guidance is general to all structures of all heights. Typically proposed structure height for the transmission poles will be between 39-66 feet in height. At this height the poles will generally be hidden by the existing tree canopy. The trees on River Road, Tooley Pond Road, and along New York State (NYS) Route 3 are roughly 50 feet tall. The DEC [4] recommends a 3-mile zone of visibility. At three miles the form and color of a structure is frequently readily identifiable. The degree of visibility at this distance is strongly related to form and color of structure. Working at a 3-mile distance allows more accurate visibility assessment, and subsequent photographic simulation. At times, because of the importance of the vista point, it may be necessary to go beyond the three or five mile zone of visibility, however, at ground level or in areas without significant elevation changes, a 3-mile zone of visibility will be adequate.

Zone of Visibility Maps

The visibility zone maps will be based on digital elevation models rather than simple cross sections. A cross section will be utilized to assess visibility from a vista point such as historic building to a pole or segment of the Project right of way (ROW).

Visual Receptor Assessment

This inventory will assemble data on the number of viewers, activity of viewers (hikers, boaters, vehicle passengers), view duration, and relative distance between viewers and structures (near view, middle view and distance view).

To prepare the visual receptor assessment, map analysis will be completed for distances between viewers and structures. Numbers of viewers is gathered from highway traffic data, hiker trail logs, census data, and real estate tax rolls. A road inventory will be completed to assess view duration of travelers. View duration is controlled by the speed of vehicles, the amount of clearing, and the structure and structure height.

Photographic Inventory

To support the mapping data and viewer assessment, typical photographs will be taken from view points and include local or regional vistas. To aid the photographic inventory, balloons may be flown to the height of the structures, or flags flown at tree top level to assure that location and heights are accurately represented. Color photographs will be taken both with a normal lens and telephoto lens of each site.

Sites that will be of particular interest for purpose of photographic inventory include fire towers, heavily-visited mountain peaks, state parks or campgrounds, highway rest stops, town or municipal parks or buildings, historic buildings or districts, designated scenic vistas, lake or shoreline areas that provide long clear vistas, boat or canoe launches, and tour road networks.

Photographic Simulation

Using data collected in the above process, a select group of locations will be evaluated using photographic simulations. The photographic simulation locations will be selected based on discussions with staff of the APA, DEC, and local public input as part of SEQRA scoping. Approximately 24 sites

[4] "New York State Department of Environmental Conservation (DEC) Visual Assessment Guidance"

for each route will be the subjects of photographic simulation. To prepare the photographic simulation, both the structure and view point must be accurately identified. Once identified, a Digital Elevation Model (DEM) is produced to create a net of topography to fit over the photographic image to assess if there is adequate topographic detail available in the photograph. The DEM also allows for future insertion of the structure into the image. Using a combination of GIS, computer aided drafting (CAD), and photograph rendering (Photoshop), the proposed structures are placed into the selected image. Photographic rendering, shadows, and shading that naturally occurs are added to give a more realistic image. A large portion of the character of the image is obtained by using photographs of similar structures in a setting that is matched as closely as possible to the proposed construction site. Creating accurate images enhances public understanding of the Project and aids in regulatory review.

Each road, scenic, or recreational river crossed by the ROW will be the subject of photographic simulation. To complete the evaluation of visibility and prepare photograph simulations, balloon testing will be required at most sites.

The visual inventory will evaluate the visibility of project structures and cleared ROW for visibility from the designated scenic vistas, fire towers, boat launches, canoe access sites, state or municipal parks, and state roads.

Visual Assessment Approach Outline

This outline identifies

1. What type of condition is anticipated to be studied;
2. How we propose to study it; and
3. Where these techniques and conditions will occur.

Inventory of Potential Visual Impact Conditions

OB Overbuild – using drawings, plans and photo simulations, provide a comparison/contrast of the potential visual effect of replacing an existing distribution line with an overbuild condition. We shall assess structure height, adjacent tree heights, back drop, view angle, receptors. (Utilize methodology techniques 1, 2, 8.)

OV Overbuild Through Village – in addition to overbuild assessment, we shall inventory significant buildings and those over 50 years in age and assess the potential visual effect. (Utilize methodology techniques 1, 2, 8, 4.)

OS Off-Set – provide birds-eye view or isometric (proportionally correct) to depict area character and potential impact on environs and wild forest character if applicable. Quantify forest density by basal analysis to estimate off set distance for visual screening balance setback distance with work trail impacts. (Utilize methodology techniques 1, 2, 4, 5, 6, 7, 8.)

RDC Road Crossing – study visual character for new road crossing in plan and photo each way for conditions at crossing. (Utilize methodology techniques 1, 2, 8, 9.)

D Divergence – where the proposed 46 kV line strikes off from a road corridor or off set, consider the effects of long views created down the length of the new corridor. Consider: "Picket fence," opening vista to new views, potential mitigation. (Utilize methodology techniques 1, 2, 3, 4, 6, 8, 9.)

MV Middle View Consideration – divergent routes, while screened from roads, may be visible from important water bodies, and recreation resources. Study with sections, viewshed analysis and field verification of tree height, topography, receptors. (Utilize methodology techniques 1, 2, 3, 4, 6, 7, 8, 9.)

RVC River Crossing – study and present views of crossing from river both upstream and downstream. Compare pole heights, tree heights, receptors including recreationalist, traveler, and resident. (Utilize methodology techniques 1, 2, 3, 4, 5, 6, 8, 9.)

NL New Line – along road, trail or cross country, assess change in visual character due to structures height, clearing width, height of existing trees, topography, etc. (Utilize methodology techniques 1, 2, 8, 9.)

UG Underground – at specific location where line must be invisible, study visibility of overhead structures and determine best location from up stream and down stream to utilize existing vegetation to provide visual screen for the transition structure. (Utilize methodology techniques 1, 2, 3, 4, 5, 6, 8, 9.)

WS Wetland Span – in locations where longer spans are required to protect natural resources and taller or more substantial span structures are anticipated, the visual effect of the structure change should be quantified or an alternative off set, off trail route considered. (Utilize methodology techniques 1, 2, 4, 5, 6, 8.)

Visual Methodology

The following methodology and assessment techniques shall be applied to each of the potential impact conditions, as may be appropriate.

1. Structures – we shall have a file of design drawings, construction limitation, and photographs for comparison and simulations.
2. Site Visit – we shall visit the potential impact locations and record existing conditions by photo inventory, map notation, and measure representative tree heights.
3. Viewshed Mapping – using United States Geodetic Survey USGS topography we shall determine the extent of potential visibility.
4. Field Verification – if necessary, we shall float weather balloons at structure heights and field-verify the viewshed mapping results with photo documentation.
5. Basal Density – we shall analyze the screening potential of vegetation to derive an appropriate off set distance to travelways and wild forest lands by measurement and photography of similar existing buffers, and by quantifying the vegetative density at the proposed new condition locations.
6. Birds-eye View – combining 3-D computer imagery with aerial photographs and field notes will allow us to represent a birds-eye or isometric (proportionately correct) overview to better understand complex visual issues like off set or divergent routes, within the context of the existing landscape and environmental fabric.
7. Low Level Aerials – low level photos taken from a small plane may be employed to provide an overview of the environs.
8. Photo Simulations – we shall provide “before” and “after” photo renderings which shall provide a realistic representation of the anticipated change of the visual character as a result of the project construction.
9. Receptors – Physical change is only one factor in visual impact assessment. An analysis and discussion of the anticipated number of potential receptors, view angle, view duration shall be prepared.

10. Methodology Discussion and Report – The data prepared shall be presented and discussed in a written report. This report shall identify mitigation techniques, and present conclusions as to the significance of visual effect.

STUDY MATRIX

Potential Visual Impact Conditions

Mile Marker-Newton Falls to Sevey Corners

	OVERBUILD	OVERBUILD THROUGH VILLAGE	OFF-SET	ROAD CROSSING	DIVERGENCE	MIDDLE VIEW	RIVER CROSSING	NEW LINE	UNDERGROUND	WETLAND SPAN
N1	OB									
N2		OV								
N2.5			OS							
N3				RDC	D		RVC			
N4-N5						MV				
N5.5							RVC			
N6-N7			OS							
N8	OB	OV	OS	RDC	D					
N9					D					
N10-N11								NL		
N11.5									UG	
N12								NL		
N12.5										WS
N14-N18			OS							
N19		OV								

Methodology and Assessment Techniques

1. Structure	●	●	●	●	●	●	●	●	●	●
2. Site Visit	●	●	●	●	●	●	●	●	●	●
3. Viewshed					●	●	●		●	
4. Balloon		●	●		●	●	●		●	●
5. Vegetation Density			●				●		●	●
6. Birds-eye			●		●	●	●		●	●
7. Aerial			●			●				
8. Photo Simulation	●	●	●	●	●	●	●	●	●	●
9. Receptor				●	●	●	●	●	●	
10. Report	●	●	●	●	●	●	●	●	●	●