

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

Deficiency No. 5

The documents do not comply with the requirements of 16 NYCRR §86.5(b)(2)(i)-(iv) that the applicant state what efforts have been made to assure that any right-of-way avoids, or minimizes its visibility from, scenic, recreational and historic areas, areas of public view, heavily timbered areas, high points, ridge lines and steep slopes, and that the selection of any proposed right-of-way preserves the natural landscape and minimizes conflict with any present or future planned land use, in that the visual analysis must be supplemented by providing viewshed mapping to document project visibility and simulation views to demonstrate visual change that would result from installation of the facility from areas of public view. (Consultation with DPS staff is recommended in the development of these additional supporting materials).

Response

The Company respectfully disagrees with the Commission's assertion that 16 NYCRR § 86.5(b)(2) requires supplementation of the visual analysis in Exhibit 4 of the application with viewshed mapping and simulation views. The cited regulation requires only that Exhibit 4 "state" the "efforts, if any," made toward accomplishing these objectives. The Visual Resources section (Section 4.3) of the Company's Exhibit 4 provides multiple examples of statements of the Applicant's efforts to mitigate the project's impact on visual resources. Nonetheless, in the interest of cooperation with the Commission in furthering the progress of this proceeding, the Company, after consultation with DPS Staff in the development of these materials, is providing the viewshed mapping and simulation views as part of its response to Paragraph J of the Commission's request for additional information (Appendix A of the June 22, 2012 letter).

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Deficiency Letter

This page left intentionally blank.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request E

Section 4.5.2.1.1 and 4.5.2.2: Provide wetland delineation mapping and reports for wetlands occurring on the facility location, where NYSEG has existing access rights (along corridor shared with facility #984 south of KlineKill substation). Also, provide identification of areas where invasive species of concern to NYS occur along that shared ROW corridor.

Response

The attached Wetland Delineation Report delineates and evaluates wetlands and streams within an approximate 3.1-mile section of existing NYSEG transmission right-of-way in the Towns of Chatham and Ghent (Circuit #984). In addition, the attached Invasive Species Survey Report provides baseline survey data regarding the presence and extent of invasive species within the above-referenced right-of-way and general observations at road crossings along the proposed route for the new right-of-way. Both reports are included in Attachment E hereto.

Mr. Thomas Connare, Biologist and Sr. Environmental Scientist at URS Corporation, who is being added to NYSEG's witnesses for the Application, will sponsor the Wetland Delineation Report in Attachment E. Ms. Heidi Childs, Environmental Scientist at URS Corporation, who is being added to NYSEG's witnesses for the Application, will sponsor the Invasive Species Survey Report in Attachment E.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

This page left intentionally blank.

Attachment E

WETLAND DELINEATION REPORT

**NEW YORK STATE ELECTRIC & GAS CORPORATION (NYSEG)
COLUMBIA COUNTY TRANSMISSION PROJECT
TOWNS OF CHATHAM, GHENT AND STOCKPORT
COLUMBIA COUNTY, NEW YORK**

Prepared for:

New York State Electric & Gas Corporation

18 Link Drive

Binghamton, New York 13904

Prepared by:

URS Corporation

77 Goodell Street

Buffalo, New York 14203

October 2012

CONTENTS

1.0 Introduction and Project Description 1

2.0 Regulatory Framework 3

3.0 Project Area Description..... 4

4.0 Resource Consultation 6

5.0 Methodology 8

6.0 Results 10

7.0 References..... 15

TABLES

Table 6-1 Delineated Wetlands 12

Table 6-2 Delineated Streams..... 14

ATTACHMENTS

Attachment A: Figures

Figure 1 - Site Location

Figure 2 - National Wetland Inventory (NWI) Wetlands

Figure 3 - New York State Regulated Wetlands and Classified Streams

Figure 4 - Site Soils

Figure 5 - Delineated Wetlands and Streams

Attachment B: Photographic Log

1.0 INTRODUCTION AND PROJECT DESCRIPTION

This report has been prepared to support the NYSEG Columbia County Transmission Line Project (Project) in the Towns of Chatham, Ghent and Stockport in Columbia County, New York.

URS biologists delineated and evaluated wetlands and streams within an approximate 3.1-mile section of existing NYSEG Transmission right-of-way (ROW) in the Towns of Chatham and Ghent. This 3.1-mile length is part of the greater 11.1-mile Project, described in Section 1.1. The delineated wetlands and streams are, or have the potential to be, regulated by the USACE under Sections 404 of the Clean Water Act (CWA); and/or regulated by NYSDEC under Section 401 of the CWA, Article 24 - Freshwater Wetlands Act, and Article 15 - Protection of Waters Program. This document is intended to provide the results of those delineations along with related information necessary for the USACE and NYSDEC to verify wetland delineations and to make and document Jurisdictional Determinations of the wetlands within the area surveyed.

Section 1 of this report provides a general project description of the entire Project and a description of the limited survey area in which this wetland and stream investigation was conducted. This survey was conducted for an approximate 3.1-mile section of the full 11.1-mile proposed project. This 3.1-mile section, part of NYSEG's existing transmission line ROW, is the focus in this report and is described in further detail below. Section 2 outlines the regulatory framework that governs activities in wetlands and streams; Section 3 provides a description of the ecological setting of the area; Section 4 provides a summary of the agency resource information utilized in conducting the wetland delineation; Section 5 outlines the methodologies used to conduct field surveys; Section 6 provides the results of field surveys; and Section 7 provides references used to conduct the field work and to compile this report.

Figure 5 in Attachment A provides mapping of field-delineated wetlands and streams with an aerial photograph underlay, and Attachment B provides a photographic log depicting field-delineated wetland and stream features.

1.1 Project Description

The complete Project includes construction of the proposed 8.6 mile 115-kV Circuit #726, construction of 2.5 miles of 115-KV transmission lines needed to loop National Grid's 115-kV Trunk #15 ("Trunk #15") into a new switching station in the town of Ghent, the construction of the Ghent Switching Station, and the modification of the Klinekill Substation.

Circuit #726 will parallel the east side of the existing Craryville-Klinekill Circuit #984 for its entire distance in the town of Chatham, 0.5 miles, and for approximately 2.6 miles in the town of Ghent. The remaining 5.5 miles of Circuit #726 will be built on new ROW in the town of Ghent.

The two 115-kV lines that are required to loop Trunk #15 transmission line into the new Ghent Switching Station would begin at a point along Trunk #15 approximately 2,000 feet north of Stockport Road. The lines will extend in parallel on a new ROW from this point east and northeast approximately 6,450 feet to the Ghent Switching Station.

Both Circuit #726 and the lines running from and to Trunk #15 will be constructed primarily on single pole wood structures. Circuit #726 will share 3.1 miles of the ROW of the existing Craryville-Klinekill 115-kV Circuit #984. Where Circuit #726 will be constructed parallel to Circuit #984, the existing

ROW will need to be expanded by 50 feet to accommodate Circuit #726. The remaining 5.5 miles of Circuit #726 will be built on new ROW that will generally be 100 feet wide.

The new Ghent Switching Station will occupy an approximately 2 acre site adjacent and to the south of the existing industrial park along Falls Industrial Park Road and approximately 500 feet west of State Highway 9H in the town of Ghent.

NYSEG's existing Klinekill Substation, in the town of Chatham, will be modified to accept the new Circuit #726. Modifications will include a new 115-kV dead end 3 structure, an additional 115-kV bus, and associated switching and relaying equipment. The existing control house will be expanded, but the existing pad and fence line will not be modified.

1.2 Location of Field Investigation Reported Herein

This report shows the boundaries of and describes the wetlands and streams within an approximate 3.1-mile length of the existing NYSEG Transmission ROW in which a portion of the proposed project would be located. The 3.1-mile ROW where the field survey was conducted is located between the existing NYSEG Klinekill Substation on State Route 203 in the Town of Chatham, and the point approximately 4,700 feet south of County Route 21 at which the Transmission line turns west to a new ROW. The existing ROW is 100 feet wide.

2.0 REGULATORY FRAMEWORK

This report was prepared pursuant to Sections 401 and 404 of the Clean Water Act (CWA); New York State Environmental Conservation Law (ECL) Article 15; and New York State ECL Article 24. The project falls within the jurisdiction of USACE New York District and NYSDEC Region 4.

The Clean Water Act was implemented to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires state water quality certification for any federally permitted action involving discharges into waters of the United States to ensure that the permitted action will not violate the state's water quality standards or impair designated uses. Section 404 of the CWA requires that a permit be obtained for the discharge of dredged or fill material into waters of the United States, including wetlands and streams. Waters of the United States are defined under 33 Code of Federal Regulations (CFR), and wetlands are specifically defined under 33 CFR Part 328.3(b).

Article 15, Section 5 of New York State ECL, known as the Protection of Waters Program, regulates activities that may impact protected watercourses within New York State. Protected waters include all waters classified as C(T), C(TS), B, or A, as well as all navigable waters.

Article 24 of New York State ECL, known as the Freshwater Wetlands Act, regulates activities that may adversely affect wetlands of 12.4 acres in size or more, as well as smaller wetlands identified as having an unusually significant local value. Activities that occur within 100 feet of the wetland boundary are also regulated.

3.0 GENERAL PROJECT AREA DESCRIPTION

A general regional project area description for the full project is described, as well as a site-specific description of the 3.1-mile existing ROW survey area.

3.1 Regional Description

The entire 11.1-mile project is located within the Towns of Chatham, Ghent and Stockport in Columbia County, approximately 30 miles southeast of Albany (See Attachment A: Figure 1). The project is located within the Middle Hudson Watershed (USGS Cataloging Unit 02020006), and elevations in the surrounding region range from less than 100 feet to 1400 feet above mean sea level.

The project area is characterized by deciduous and mixed forest, and agricultural fields (pasture, hay field and cropland). Prevalent forest types in the region include beech-maple mesic, Appalachian oak-pine and Appalachian oak-hickory. The general population pattern in the area is rural-residential, with single-family dwellings dispersed throughout the area. Commercial/industrial land use comprises a small component of the project area.

3.2 Existing Transmission ROW Survey Area Description

The section of existing transmission ROW between State Route 203 and approximately 4700-feet south of County Highway 21, within which the wetland delineation survey was conducted is a 3.1 mile stretch located primarily within mixed hardwood forest and includes beech-maple mesic, Appalachian oak-pine and to a lesser degree Appalachian oak-hickory communities. A small section of the ROW crosses agricultural field.

The plant community within the ROW itself is maintained in an herbaceous/scrub-shrub state, with sparsely-vegetated bedrock exposed at higher elevations. Common plants within the ROW include goldenrods (*Solidago spp.*) asters (*Aster spp.*), orchard grass (*Dactylis glomerata*), red raspberry (*Rubus idaeus*), meadowsweet (*Spirea latifolia*), and shrub honeysuckles (*Lonicera spp.*). The topography along the ROW can be characterized as gently rolling hills, with the slope of land is generally to the west.

Kline Kill Creek, a Class C Standard C (TS) watercourse, crosses the ROW north of County Road 21, and an unnamed Class C, Standard C tributary to Kline Kill Creek crosses the ROW north of Shufelt Road. After crossing the ROW, Kline Kill Creek flows north and west from the survey area, eventually draining to Kinderhook Creek, a tributary to Stockport Creek. Stockport Creek drains to an inlet of the Hudson River.

Site soils are shown on Figure 4 in Attachment A as found on the Columbia County Soil Survey (USDA, 1972). Soil data lists nine predominant soil types in the survey area, which are listed below:

- BIC - Blasdell channery loam, rolling: Very deep and well-drained. Occurs along valley sides. 5-15 percent slopes.
- Ca - Canandaigua silt loam: Very deep, nearly level, poorly to very poorly drained. Occurs along drainageways and depressions. 0-3 percent slopes.
- Fn - Fuvaquents-Udifluvents complex frequently flooded: Nearly level, very poorly drained to excessively drained soils on flood plains. 0-3 percent slopes

- Ha - Halsey mucky silt loam: Deep, nearly level, very poorly drained. Occurs along drainageways and depressions. 0-3 percent slopes.
- NbC - Nassau channery silt loam, rolling, very rocky: Shallow and somewhat excessively drained. Occurs on sides and tops of small hills. 6-16 percent slopes.
- NbD - Nassau channery silt loam, hilly, very rocky: Shallow and somewhat excessively drained. Occurs on sides of hills and ridges. 16-30 percent slopes.
- Sw - Sun silt loam: Very deep, nearly level, poorly and very poorly drained. Occurs in drainageways adjacent to and between hillsides. 0-3 percent slopes.
- UnB - Unadilla silt loam, 3 to 8 percent slopes: Very deep, gently sloping and well drained.
- Wa - Wallpole sandy loam: Very deep, nearly level, poorly to somewhat poorly drained. Occurs on low, sandy flatlands. 0-3 percent slopes.

4.0 RESOURCE CONSULTATION

Before the field investigation, a desktop study and Agency resource consultation was conducted to provide more information about the survey area.

4.1 Wetland Information Review

Information sources used to determine the possible presence of wetlands include; USGS 7.5-Minute Series topographic maps (Attachment A: Figure 1); United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Maps (Attachment A: Figure 2); NYSDEC Freshwater Wetlands maps (Attachment A: Figure 3), and the United States Department of Agriculture - Soil Conservation Service Soil Survey of Columbia County, New York (Attachment A: Figure 4). USGS topographic maps indicate the possible presence of wetlands on the landscape. NWI maps show the general distribution of wetlands in the vicinity of the survey area, NYSDEC Freshwater Wetland maps show NYS-regulated wetlands in the vicinity of the survey area, and the soil survey maps indicate areas where hydric or potentially hydric and poorly drained soils may occur within the study area. As such, current, field-verified wetland boundaries of NWI wetlands and NYS-regulated wetlands may differ slightly or significantly from mapped boundaries.

New York State Regulated Wetlands. NYSDEC Freshwater Wetland mapping shows one NYS-regulated wetland crossed by the survey area. Freshwater Wetland ST-8 is mapped as a Class II wetland, approximately 295 acres in size. This wetland is associated with Kline Kill Creek (delineated as Stream 1 and Stream 2; see Results Section 6.0) and its riparian zone. Although NYSDEC maps indicate that Wetland ST-8 is present at this location, no wetlands were identified there during the field survey.

NYS-regulated wetlands are ranked I through IV by NYSDEC based on the benefits and values provided by each wetland. Class I wetlands have the highest rank. Different wetlands provide different functions and benefits and in varying degrees. Higher class wetlands provide the greatest level of benefits and have a higher level of protection. Lower class wetlands provide important functions and benefits, but typically require less protection to continue to provide these functions. According to 6 NYCRR Part 664: Freshwater Wetlands Maps and Classification (Statutory authority: Environmental Conservation Law §3-0301 and §24-1301), classification is determined by considering the following criteria:

- Vegetative Cover Type;
- Ecological Association;
- Special Features;
- Hydrological and pollution control features; and
- Distribution and location.

4.2 STREAM INFORMATION REVIEW

NYSDEC Stream Classification data were reviewed to determine the presence of streams protected by New York State under ECL Article 15 (Figure 3). In addition, 303(d) and 305(b) databases were

reviewed to determine if any streams in the survey area are considered to be Impaired Waters or Priority Listed Waters. No streams in the survey area are listed as such.

NYSDEC uses a stream classification system in order to identify the value and uses of watercourses in the state. A protected stream is any stream or particular portion of a stream for which any of the following classifications or standards have been adopted by the Agency: AA, AA(T), A,A(T), B, B(T), or C(T). Streams designated as (T) (trout) also include those more specifically designated as (TS) (trout spawning). Class D streams are the lowest level of classification and are not subject to protection under the NYSDEC Protection of Waters program. Disturbance to the bed or banks of protected streams requires a permit under Article 15 of the New York ECL.

Two classified streams cross the survey area:

- Kline Kill Creek, a Class C Standard C (TS) watercourse, crosses the ROW north of County Road 21; and
- Unnamed Class C, Standard C tributary to Kline Kill Creek crosses the ROW north of Shufelt Road.

After crossing the ROW, Kline Kill Creek flows north and west from the survey area, eventually draining to Kinderhook Creek, a tributary to Stockport Creek. Stockport Creek drains to an inlet of the Hudson River.

5.0 METHODOLOGY

A field survey was conducted in July 2012 to delineate wetland boundaries and stream courses; to characterize wetland functions and values; and to characterize streams. During the investigation, scientists walked the existing ROW approximately 4700 feet south of County Road 21 to Kline Kill Substation on State Route 203 to delineate and characterize streams and wetlands occurring within the existing 100-foot ROW.

5.1 Delineation Methods

The field team conducted delineation procedures according to the *USACE Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (U.S. Army Corps of Engineers 2009), and the *NYSDEC Freshwater Wetlands Delineation Manual* (NYSDEC 1995) for the routine delineation procedure. Vegetation, soils and hydrology were evaluated at each potential wetland. If these criteria indicated that a survey point was within a wetland, the boundary of the wetland was determined, and it was flagged with wetland delineation tape. The flagged boundary was surveyed using a global positioning system (GPS) unit. When streams were encountered, the channel was also GPS-surveyed. Wetlands and streams were described using wetland delineation sheets, and photographs were taken.

5.2 Wetland Classification

The three criteria for determining wetlands are described in detail below.

Vegetation. The term “hydrophytic” generally describes plants that are adapted to and have a competitive advantage in wet environments. According to the 1987 Manual, hydrophytic vegetation occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. The existence of hydrophytic vegetation can be positively determined if more than 50% of the dominant plant species is composed of indicator species with a wetland probability of occurrence rating greater than 33% (FAC, FACW or OBL indicator status). The National List of Plant Species that Occur in Wetlands: Northeast (Region 1) (Reed 1988) provides the wetland indicator status for nearly 7,000 plant species. An indicator status for each plant is listed and associated with the probability of its occurrence in a wetland. The indicator status units are as follows:

- Obligate Upland (UPL): may occur in wetlands in another region but occur <1% in the region specified.
- Facultative Upland (FACU): usually occur in non-wetlands but occasionally found in wetlands. Estimated probability of occurrence is 1% to <33%.
- Facultative (FAC): equally likely to occur in wetlands or non-wetlands. Estimated probability of occurrence is 33% to 67%.

- Facultative Wetland (FACW): usually occur in wetlands, but occasionally found in non-wetlands. Probability of occurrence is >67% to 99%.
- Obligate Wetland (OBL): occur almost always in wetlands under natural conditions. Estimated probability of occurrence is >99%.
- Not Listed (NL): never occurs in wetlands or may be too rare for consideration.

Soils. Hydric soils are soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Evidence of anaerobic conditions in the field is indicated in mineral soil by gleying (gray color due to reducing conditions (redox depletions), chromas of 1 or less in un-mottled soils, chromas of 2 or less in mottled (redox concentrations) soils (chromas assessed using the Munsell Soil Color Chart) or concretions of manganese oxide or iron oxide near the surface. Anaerobic conditions in organic soils are evidenced by a hydrogen sulfide odor, organic material comprising more than 50% of the upper layer, and/or the observance of an aquic or peraquic moisture regime. Soils with high sand content often develop poor color indicators for hydric conditions. Evidence of hydric sandy soils includes the accumulation of organic material in the surface horizon during periods of prolonged inundation and streaking of subsurface horizons by organic matter (due to fluctuation in the water table).

Hydrology. Wetland hydrology is evident in areas where the presence of water has an over-riding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. These areas are periodically inundated or have soils saturated to the surface for at least two weeks during the growing season. Indicators of wetland hydrology are not always evident in the field, especially in wet meadow plant communities during the summer dry season (in such cases, hydric soils and dominance of strongly hydrophytic vegetation are used to infer wetland hydrology). Primary field indicators of wetland hydrology include direct observation of inundation or soil saturation, water marks on woody vegetation, water-carried debris drift lines, sediment deposits on plants and other vertical deposits, and wetland drainage patterns. Secondary field indicators of wetland hydrology include oxidized root channels in the upper 12 inches of the soil column, water-stained leaves and the FAC-neutral test (hydrophytic vegetation is dominated by species with indicator status of FACW and OBL). Two or more secondary indicators must be present for the wetland hydrology criterion to be met.

6.0 RESULTS

During the July field investigation, 17 wetlands and 6 streams were delineated in the survey area. These features are shown on mapping in Attachment A: Figure 5 and photos of wetlands and streams in Attachment B. Wetland characteristics are listed in Table 6-1.

6.1 Delineated Wetlands

Three wetland community types were present in the survey area. Community types were recorded using the Cowardin classification system (Cowardin *et al.* 1979).

Palustrine Emergent Wetland (Shallow Emergent Marsh): Wetlands W1, W2, W3, W4, W5, W7, W11, W13, W14, W15, W16, W17

These marshes have less than 50 percent cover and occur on saturated mineral soils or deep muck soils. They are rarely inundated, but almost always saturated, and are more well drained than deep emergent marshes. Standing water may disappear completely after the wet season. Tree species may occur around the perimeter of the wetland but do not occur within the wetland boundary. If present, shrubs or saplings occur in isolated patches or individuals and include northern arrow-wood (*Viburnum recognitum*), Silky dogwood (*Cornus amomum*), meadow-sweet (*Spirea latifolia*), red elderberry (*Sambucus racemosa*) and willow (*Salix* spp.). Herbaceous species in these wetlands vary throughout the survey area, with the following species commonly appearing as dominants or co-dominants: Fringed sedge (*Carex rinite*), tussock sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*), jewelweed (*Impatiens capensis*), woolgrass (*Scirpus cyperinus*), boneset (*Eupatorium leucolepis*), Joe-pye weed (*Eupatorium maculatum*) and manna grasses (*Glyceria* spp.).

Palustrine Scrub-Shrub Wetland: Wetlands W6, W8, W9, W10, W15, W17

These wetlands occur on mineral soil or muck and are variable in structure and distribution. They can be found near ponds and/or stream sides, in transitional areas between forest and open land, and in isolated depressional areas. Tree species may occur around the perimeter of the wetland but do not occur within the boundary of a scrub-shrub wetland. Shrub species are dominant or co-dominant and include northern arrow-wood (*Viburnum recognitum*), willow (*Salix* spp.) red elderberry (*Sambucus racemosa*), meadow-sweet (*Spirea latifolia*) and steplebush (*Spirea tomentosa*). Herbaceous and emergent species are less dominant than shrub species and include fringed sedge (*Carex crinita*), tussock sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*), jewelweed (*Impatiens capensis*), woolgrass (*Scirpus cyperinus*), boneset (*Eupatorium leucolepis*), Joe-pye weed (*Eupatorium maculatum*) and manna grasses (*Glyceria* spp.).

Palustrine Open Water Wetland: Wetland W12

This category includes ponds and lakes. Most open water areas are less than 20 acres in size. Surface water in these open waters are generally less than 6 feet deep and less than 20 acres in size. In areas of slow-moving water, free-floating and submersed vegetation is common, including duckweed (*Lemna/Spirodela* sp.) and pond weeds (*Potamogeton* sp.). Margins of open water

habitats are commonly dominated by cattails (*Typha* sp.), bulrush (*Scirpus* sp.), and spikerush (*Eleocharis* sp.).

6.2 Evaluation of Wetland Functions

Functions of wetlands delineated within the study area were identified according to the USACE Highway Methodology Workbook Supplement. Typical functions of the delineated wetlands are:

Groundwater Recharge/Discharge - This function considers the potential for a wetland to serve as a groundwater recharge/discharge area. Although the wetlands located in the study area are assumed to be hydrologically connected to traditional navigable waterways, they can also be effective in holding surface water runoff for groundwater recharge. Wetlands having no apparent surface hydrologic connection and occur as small natural depressions are areas of groundwater recharge. In one case, wetland W4 originates from a hillside seep and occur as a discharge area. W12, an open water pond, provides recharge to some extent.

Floodflow Alteration - This function considers the effectiveness of a wetland in reducing flood damage by water retention for prolonged periods following precipitation events. Floodflow alteration is a primary function of those wetlands associated with watercourses. Wetlands found within the study area serve this function to some degree by attenuating runoff; however, this is a secondary function for smaller wetlands located higher in the watershed. Wetlands W8 and W11 offer the most significant flood flow alteration. W8 is large and riparian to Stream S5, and W11 occurs between two open-water ponds (located outside the ROW). W12, W13 and W16 are located in depressions within the local topography and hold precipitation that would otherwise become surface flow.

Sediment/Toxicant/Pathogen Retention - This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediment, toxicants, or pathogens in runoff from surrounding uplands or upstream-eroding wetland areas. Roadside wetlands such as W7, W8 and W11 may perform this function.

Nutrient Removal/Retention/Transformation - This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands, and the ability of the wetland to process these nutrients into other forms or trophic levels. Roadside wetlands W7, W8, and W11 may perform this function.

Wildlife Habitat - This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with a wetland and/or the wetland edge. All wetlands in the study area offer habitat to amphibians and mammals. W8 and W17, the largest and most diverse in the study area, provide more extensive habitat than the surrounding maintained ROW.

Table 6-1 Delineated Wetlands

Field ID	Wetland Community Type	Hydrologic Connectivity	Comments	Photographic Log Numbers
W1	PEM	No associated stream. Overland flow west during heavy precipitation may reach tributary to Kline Kill Creek.	Small, depressional.	5, 6
W2	PEM	Intermittent stream S3 flows west through W2 and continues out of ROW to unnamed tributary to Kline Kill Creek.	Small	7-10
W3	PEM	No associated stream. Overland flow west during heavy precipitation may reach tributary to Kline Kill Creek.	Small, depressional within and on sides of access trail.	11, 12
W4	PEM	No associated stream. Likely drains west to tributary to Kline Kill Creek, based on wetland size and slope of land.	Relatively large	13, 14
W5	PEM	No associated stream. Likely drains west to tributary to Kline Kill Creek, based on wetland size and slope of land	Relatively large	15, 16
W6	PSS	No associated stream. Likely drains west to tributary to Kline Kill Creek based on wetland size and slope of land.	Relatively large	17-19
W7	PEM	Intermittent stream S4 originates in W7, flows east as roadside drain, is culverted under road and eventually connects to stream S5, which is a mapped tributary (C, C) to Kline Kill Creek.	Small, low diversity (mainly common reed)	21, 22
W8	PSS	Intermittent stream S5, a mapped tributary (C, C) to Kline Kill Creek, flows northwest through W8.	Very large, very diverse, and with largest stand of common reed observed in ROW	24-30
W9	PSS	No associated stream. Overland flow west during heavy precipitation may reach tributary to Kline Kill Creek.	Moderate size	31, 32
W10	PSS	No associated stream. Overland flow west during heavy precipitation may reach tributary to Kline Kill Creek.	Moderate size	33, 34
W11	PEM	No associated stream. Based on aerial map, W11 continues east and west to ponds outside ROW. Drainage from ponds unknown. Field observation of ponds was not possible.	Relatively large size.	35-37

Table 6-1 Delineated Wetlands

Field ID	Wetland Community Type	Hydrologic Connectivity	Comments	Photographic Log Numbers
W12	POW	Intermittent stream S6 begins in W12 and drains north into W13. Channel ends in W13. Overland flow from W13 may continue north to roadside ditch during rare heavy rain events.	Scenic, recreational pond at private residence.	38-40
W13	PEM	Receives inflow from W12 via intermittent stream S6, which ends in W13. Overland flow from W13 may continue north to roadside ditch during rare heavy rain events.	Small, depressional.	41, 42
W14	PEM	No associated stream. Wetland occurs in pockets of a wet meadow sloping gently west.	Moderate size.	45, 46
W15	PEM/PSS	No associated stream. Level topography does not indicate regular overland flow.	Moderate size. PEM occurs within trail/access road, with PSS occurring on either side.	47, 48
W16	PEM	No associated stream. Fully surrounded by berm. Appears to be hydrologically isolated.	Very small, very low in diversity.	49
W17	PEM/PSS	No associated stream. Large size, high diversity and continuation of wetland west of study area suggest a hydrologic connection to unnamed tributary to North Creek.	Relatively large and diverse.	50-53

6.3 Delineated Streams

The 6 streams delineated in the survey area range from well-defined channels (Streams S1, S2, and S5) update to poorly defined, narrow headwater drainages (S3, S4 and S6). These features help to characterize the hydrology of the survey area and to determine the hydrologic connection, or lack of connection, between delineated wetlands in the survey area and wetland/water features outside the survey area. Stream locations are depicted in Attachment A and photos in Attachment B. Stream features are listed in Table 6-2.

Two streams were identified as perennial (S1 and S2) and 4 as intermittent (S3, S4, S5, and S6). A perennial stream has continuous flow in parts of its stream bed year-round during years of normal rainfall. An intermittent stream has a discernible channel but does not carry flow year-round. All delineated streams eventually flow west out the survey area to Kline Kill Creek.

Classified Streams

Delineated Streams S1 and S2 are two parallel channels of Kline Kill Creek (Class C, Standard C[(t)(s)], in close proximity to each other. The main channel splits east of the ROW and reconnects west of the ROW.

Delineated stream S5 is mapped by NYSDEC as a Class C, Standard C tributary to Kline Kill Creek.

Table 6-2 Delineated Streams

Field ID	Flow Type, Substrate	Bank to Bank Width (feet)	Bank Height (feet)	Comments	Photographic Log Numbers
S1	Perennial Cobble/Gravel	30-40	0-4	Kline Kill Creek: Channel 1 [C, C (t)(s)]	1, 2
S2	Perennial Cobble/Gravel	15-20	0-4	Kline Kill Creek: Channel 2 [C, C (t)(s)]	3, 4
S3	Intermittent Silt	0-3	0-1	Tributary to Kline Kill Creek. Flows east to west through ROW and through Wetland W2.	7, 9, 10
S4	Intermittent Silt	0-3	0-2	Tributary to Kline Kill Creek. Originates in Wetland W7. Flows west to east through ROW, and then to culvert under road to Stream S5.	22, 23
S5	Intermittent Gravel/Silt	3-6	0-2	Class C tributary to Kline Kill Creek. Flows southeast to northwest through ROW and wetland W8.	25, 26
S6	Intermittent Silt	0-3	0-2	Unmapped stream flows north from W12 to W13. Channel ends in W13. Overland flow from W13 may continue north to roadside ditch during rare heavy rain events.	43, 44

7.0 REFERENCES

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, Washington, D.C. FWS/OBS-79-31. 103 pp.

Federal Interagency Committee for Wetland Delineation. 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication. 76 pp. plus Appendices.

Department of the Interior, Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife, Washington, D.C., *Resource Publication 93*. 99 pp.

Lyons, John Grimson. 1993. *Practical Handbook for Wetland Identification and Delineation*. Lewis Publishers. Boca Raton-Ann Arbor-London-Tokyo. 157pp.

Munsell Soil Color Charts. 1994. Macbeth division of Kollmorgen Instruments Corporation. New Windsor, NY.

Newcomb, Lawrence. 1977. *Newcomb's Wildflower Guide*. Little, Brown and Co. Boston-Toronto-London. 490 pp.

Peterson, Roger Tory and Margaret McKenny. 1968. *A Field Guide to Wildflowers of Northeastern and North-Central North America*. Houghton Mifflin Co., Boston. 420 pp.

Petrides, George A. 1972. *A Field Guide to Trees and Shrubs: Northeastern and north-central United States and southeastern and south-central Canada; 2nd edition*. Houghton - Mifflin Co. Boston, MA and New York, NY. 428 pp.

Symonds, George W.D. 1958. *The Tree Identification Book: A New Method for the Practical Identification and Recognition of Trees*. Quill Publishers. New York, NY

Symonds, George W.D. 1963. *The Shrub Identification Book: The Visual Method for the Identification of Shrubs, Vines and Ground Covers*. Quill Publishers. New York, NY

Tiner, Ralph W. 1999. *Wetland Indicators: A Guide to Wetland Identification, Delineation, Classification, and Mapping*. Lewis Publishers. Boca Raton-Ann Arbor-London-Tokyo. 392 pp.

United States Army Corps of Engineers. 1987. Technical Report Y-87-1. 1987. *Corps of Engineers Wetlands Delineation Manual*. Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, MS.

United States Department of Agriculture, Soil Conservation Service, in Cooperation with Cornell University Agricultural Experiment Station. 1972. *Soil Survey of Columbia County, New York*. 199 pp.

United States Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement*. U.S. Army Engineer Research and Development Center. Vicksburg, MS.

United States Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. U.S. Army Engineer Research and Development Center, Vicksburg, MS.

United States Army Corps of Engineers. 2012. *Northcentral - Northeast Region - National Wetland Plant List – Final Draft Ratings*. U.S. Army Corps of Engineers: Cold Regions Research and Engineering Laboratory.

INVASIVE SPECIES SURVEY REPORT

**NEW YORK STATE ELECTRIC & GAS CORPORATION (NYSEG)
COLUMBIA COUNTY TRANSMISSION PROJECT
TOWNS OF CHATHAM, GHENT AND STOCKPORT
COLUMBIA COUNTY, NEW YORK**

Prepared for:

**New York State Electric & Gas Corporation
18 Link Drive**

Binghamton, New York 13904

Prepared by:

**URS Corporation
77 Goodell Street**

Buffalo, New York 14203

September 2012

CONTENTS

1.0 Introduction 1

2.0 Laws and Regulations..... 3

3.0 Identification 4

4.0 Baseline Monitoring 6

5.0 References..... 8

TABLES

Table 3-1: New York State Invasive Plant Species 4

Table 3-2: New York State Invasive Insect Species of Interest 5

Table 3-3: Invasiveness Rankings..... 5

Table 4-1: Invasive Species by Land Use/Habitat Type..... 7

ATTACHMENTS

Attachment A. Figures

Attachment B. Photographic Log

1.0 INTRODUCTION

This report has been prepared to support the NYSEG Columbia County Transmission Project in the Towns of Chatham, Ghent and Stockport in Columbia County, New York.

1.1 Project Description

The Project includes construction of the proposed 8.6 mile 115-kV Circuit #726, construction of 2.5 miles of 115-KV transmission lines needed to loop National Grid's 115-kV Trunk #15 ("Trunk #15") into a new switching station in the town of Ghent, the construction of the Ghent Switching Station, and the modification of the Klinekill Substation.

Circuit #726 will parallel the east side of the existing Craryville-Klinekill Circuit #984 for its entire distance in the town of Chatham, 0.5 miles, and for approximately 2.6 miles in the town of Ghent. The remaining 5.5 miles of Circuit #726 will be built on new ROW in the town of Ghent.

The two 115-kV lines that are required to loop Trunk #15 transmission line into the new Ghent Switching Station would begin at a point along Trunk #15 approximately 2,000 feet north of Stockport Road. The lines will extend in parallel on a new ROW from this point east and northeast approximately 6,450 feet to the Ghent Switching Station.

Both Circuit #726 and the lines running from, and to, Trunk #15 will be constructed primarily on single pole wood structures. Circuit #726 will share 3.1 miles of the ROW of the existing Craryville-Klinekill 115-kV Circuit #984. Where Circuit #726 will be constructed parallel to Circuit #984, the existing ROW will need to be expanded by 50 feet to accommodate Circuit #726. The remaining 5.5 miles of Circuit #726 will be built on new ROW that will generally be 100 feet wide.

The new Ghent Switching Station will occupy an approximately 2 acre site adjacent and to the south of the existing industrial park along Falls Industrial Park Road and approximately 500 feet west of State Highway 9H in the town of Ghent.

NYSEG's existing Klinekill Substation, located in the town of Chatham, will be modified to accept the new Circuit #726. Modifications will include a new 115-kV dead end 3 structure, an additional 115-kV bus, and associated switching and relaying equipment. The existing control house will be expanded, but the existing pad and fence line will not be modified.

1.2 Invasive Species Definition

Invasive plant species are plants that have been introduced into an environment outside of their native range, where they have few or no natural enemies to limit their spread. When they move into these environments, they are able to colonize the area and dominate or disrupt natural communities. Even if these plants are native elsewhere in the state, they are regarded as invasive vegetation if they colonize areas beyond their natural range of dispersal, such as native woody species that invade a grassland site.

1.3 Purpose

The purpose of this Invasive Species Survey Report is to provide baseline survey data regarding the presence and extent of invasive species within the Project Right of Way (ROW) of NYSEG's existing

transmission line and general observations at road crossings along the proposed route for the new ROW. Specifically, the survey area was along the existing transmission line corridor from the Klinekill substation to approximately 4700 feet south of County Route 21 (see Attachment A: Figure 1).

2.0 LAWS AND REGULATIONS

2.1 Federal

There are many federal laws that contain provisions for the control of invasive species and establishment of native species that apply to Federal land management, stewardship and other activities such as the Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, as amended (16 U.S.C. 4701 *et seq.*), Lacey Act, as amended (18 U.S.C. 42), Federal Plant Pest Act (7 U.S.C. 150aa *et seq.*), Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2801 *et seq.*), and Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). In addition, the Feb 3, 1999, Executive Order 13112 established the National Invasive Species Council to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts caused by invasive species. However, the Federal law applicable to the management of invasive species in this situation is Section 404 of the Clean Water Act (and it's implementing regulations).

2.2 New York State

The following Articles of the New York Consolidated Laws regulate management of invasive species in the State of New York. The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Agriculture and Markets has the regulatory authority to implement these laws:

- Inspection and Sale of Seeds (Article 9);
- Integrated Pest Management Program (Article 11);
- Prevention and Control of Disease in Trees and Plants; Insect Pests; Sale of Fruit-bearing Trees (Article 14);
- Forest Insect and Disease Control (Article 9, Title 13);
- Fish and Wildlife (Article 11);
- Fish and Wildlife Management Practices Cooperative Program (Title 5).

3.0 IDENTIFICATION

Table 3-1 shows the NYSDEC “Interim List” (according to habitat) and identifies the invasiveness ranking of each species as determined by the New York State Invasive Species Council. Invasive insect species are also documented in New York, and Table 3-2 lists two insect species of primary interest.

Table 3-1: New York State Invasive Plant Species

Common Name	Scientific Name	Invasiveness Rank*
Floating & Submerged Aquatic Vegetation		
Carolina Fanwort	<i>Cabomba caroliniana</i>	High
Rock Snot (diatom)	<i>Didymosphenia geminata</i>	Not Ranked
Brazilian Elodea	<i>Egeria densa</i>	Not Ranked
Water thyme	<i>Hydrilla verticillata</i>	Very High
European Frog's Bit	<i>Hydrocharis morus-ranae</i>	Very High
Floating Water Primrose	<i>Ludwigia peploides</i>	Very High
Parrot-feather	<i>Myriophyllum aquaticum</i>	High
Variable water milfoil	<i>Myriophyllum heterophyllum</i>	Very High
Eurasian water milfoil	<i>Myriophyllum spicatum</i>	Very High
Brittle Naiad	<i>Najas minor</i>	Moderate
Starry Stonewort (green alga)	<i>Nitellopsis obtusa</i>	Not Ranked
Yellow Floating Heart	<i>Nymphoides peltata</i>	High
Water-lettuce	<i>Pistia stratiotes</i>	Not Assessable
Curly-leaf Pondweed	<i>Potamogeton crispus</i>	Very High
Water Chestnut	<i>Trapa natans</i>	Very High
Shallow Emergent & Littoral Zone Wetlands		
Flowering Rush	<i>Butomus umbellatus</i>	Not Ranked
Japanese Knotweed	<i>Fallopia japonica</i>	Very High
Giant Knotweed	<i>Fallopia sachalinensis</i>	Very High
Yellow Iris	<i>Iris pseudacorus</i>	High
Purple Loosestrife	<i>Lythrum salicaria</i>	Very High
Reed Canary grass	<i>Phalaris arundinacea</i>	High
Common Reed-nonnative variety	<i>Phragmites australis var. australis</i>	Very High
Upland/Terrestrial – Herbaceous Species		
Garlic Mustard	<i>Alliaria petiolata</i>	Very High
Mugwort	<i>Artemisia vulgaris</i>	High
Brown Knapweed	<i>Centaurea jacea</i>	Moderate
Black Knapweed	<i>Centaurea nigra</i>	Moderate
Spotted Knapweed	<i>Centaurea stoebe ssp. micranthos</i>	High
Canada Thistle	<i>Cirsium arvense</i>	High
Bull Thistle	<i>Cirsium vulgare</i>	Not Ranked
Crown vetch	<i>Coronilla varia</i>	Moderate
Black Swallow-wort	<i>Cynanchum louiseae (nigrum)</i>	Very High
European Swallow-wort	<i>Cynanchum rossicum</i>	Very High
Fuller's Teasel	<i>Dipsacus fullonum</i>	Not Ranked
Cutleaf Teasel	<i>Dipsacus laciniatus</i>	High
Giant Hogweed	<i>Heracleum mantegazzianum</i>	High
Japanese Stilt Grass	<i>Microstegium vimineum</i>	Very High

Table 3-1: New York State Invasive Plant Species

Common Name	Scientific Name	Invasiveness Rank*
Upland/Terrestrial – Vines		
Porcelain Berry	<i>Ampelopsis brevipedunculata</i>	High
Oriental Bittersweet	<i>Celastrus orbiculatus</i>	Very High
Japanese Honeysuckle	<i>Lonicera japonica</i>	Very High
Mile-a-minute Weed	<i>Persicaria perfoliata</i>	Very High
Kudzu	<i>Pueraria montana var. lobata</i>	Very High
Upland/Terrestrial – Shrubs & Trees		
Norway Maple	<i>Acer platanoides</i>	Very High
Tree of Heaven	<i>Ailanthus altissima</i>	Moderate
Japanese Barberry	<i>Berberis thunbergii</i>	Very High
Russian Olive	<i>Elaeagnus angustifolia</i>	Moderate
Autumn Olive	<i>Elaeagnus umbellata</i>	Very High
Glossy Buckthorn	<i>Frangula alnus</i>	High
Border Privet	<i>Ligustrum obtusifolium</i>	High
Amur Honeysuckle	<i>Lonicera maackii</i>	Very High
Shrub Honeysuckles	<i>Lonicera morrowii/tatarica/x bella</i>	Very High
Bradford Pear / Callery Pear	<i>Pyrus calleryana</i>	Moderate
Common Buckthorn	<i>Rhamnus cathartica</i>	Very High
Black Locust	<i>Robinia pseudoacacia</i>	Very High
Multiflora Rose	<i>Rosa multiflora</i>	Very High

Source: NYSDEC (2011) , Cornell University 2011

Table 3-2: New York State Invasive Insect Species of Interest

Common Name	Scientific Name
Emerald Ash Borer	<i>Agilus planipennis</i>
Asian Longhorned Beetle	<i>Anoplophora glabripennis</i>

* Invasiveness Rankings serve as an “invasiveness assessment tool” that consider known invasive species populations and potential distribution within New York State; ecological impacts; biological characteristics and dispersal ability; distribution within both its native landscape and other places it has been introduced; difficulty of detection and control; and likelihood of hybridizing (NYISC, 2010).

Invasiveness Ranks are calculated on ranking forms to yield numerical scores. Higher scores reflect a higher ecological risk associated with a particular invasive species and lead to an invasiveness assessment as follows:

Table 3-3: Invasiveness Rankings

Relative Maximum Score	Rank	Invasiveness Assessment
>80.00	Very High	Prohibited
70.00 – 80.00	High	Prohibited
50.00 – 69.99	Moderate	Regulated
40.00 – 49.99	Low	Unregulated
<40.00	Insignificant	Unregulated

Source: NYISC, 2010

4.0 BASELINE MONITORING

A baseline survey was conducted by URS Biologists of the Project Area in July 2012. The investigation took place within the existing NYSEG Transmission ROW between the Klinekill Substation in the Town of Chatham and approximately 4700 feet south of the ROW crossing with County Route 21 (See Attachment A: Figure 1). Because URS did not have property access along proposed Circuit #726, west of the existing NYSEG transmission ROW, or along the proposed extension of National Grid 115-kV Trunk #15, investigation in those sections of the Project Area was limited to visual observation from where the proposed project crossed roads.

In addition to investigating the immediate survey area/ROW between the Klinekill Substation and south of County Route 21, survey personnel investigated the presence of existing invasive species infestations located outside of, and adjacent to, the survey area/ROW as allowed by visual observation. Survey teams did not enter properties for which NYSEG has not obtained access, or which are not parts of the Project. Anywhere adjacent infestation was noted, the information does not include GPS locations; location information was gleaned by marking up field maps where applicable.

A summary of the results of those investigations are as follows.

4.1 Field Investigation

URS staff biologists conducted field surveys throughout the proposed project corridor, identifying and documenting areas where invasive species were prevalent. GPS positions were recorded and photos were taken at each location. In forested areas, field staff walked the edges of the project corridor to look for evidence of invasive insects (pitted bark, exit holes, serpentine galleries, bark splitting, epicormic shoots and canopy die-back).

4.2 Results

4.2.1 Existing NYSEG ROW between Klinekill Substation and south of County Road 21

The following invasive species were found within/along the ROW: shrub honeysuckle, common reed, Japanese knotweed, reed canary grass, knapweed species, porcelain berry, purple loosestrife and multiflora rose. The locations of invasive plant species populations are documented on the accompanying drawings in Attachment A, and photos of these locations can be viewed in the attached photographic log (See Attachment B).

Honeysuckle is very abundant and distributed evenly within the existing ROW. Specific locations of these shrubs were not GPS-located because they are ubiquitous throughout the ROW. Common reed was observed in 5 distinct and discrete stands throughout the ROW, all north of County Route 21. The stands ranged from small (approximately 15 feet x 25 feet) to large (approximately 75 feet x 100 feet). Japanese knotweed was found in 2 distinct and discrete stands, one each on the north and south banks of Kline Kill Creek. Two large reed canary grass populations were observed within the ROW, one south of Kline Kill Creek and one south of County Road 21. Relatively small, patchy populations were observed periodically throughout the rest of the ROW, mainly in wetland areas. Knapweed species occur infrequently throughout the

ROW north of County Road 21 as isolated plants and not populations. South of County Route 21, knapweed is abundant throughout the existing ROW, with the largest populations in the vicinity of a residential property. Porcelain berry is concentrated along the south side of County Road 21, with some additional scattered plants farther south throughout the ROW. Purple loosestrife occurs only in the vicinity of a scenic/recreational pond on a residential property south of 21, and multiflora rose is scattered throughout the ROW primarily south of 21.

No evidence of invasive insects was observed, nor were any populations of invasive species known to be harmful to man (i.e., Giant Hogweed) noted within the survey area. Giant Hogweed is a noxious weed whose sap, in combination with moisture and sunlight, can cause severe skin and eye irritation, painful blistering, permanent scarring and blindness.

Table 4-1 shows invasive species distribution according to land use/habitat type.

Table 4-1: Invasive Species by Land Use/Habitat Type

Species Observed	Land Use/Habitat Type	Location	Relative Abundance	Corresponding Photos
Shrub Honeysuckle	Maintained scrub-shrub ROW within mixed forest	Ubiquitous throughout existing ROW	Abundant	5-6, 18
Common Reed	Wetland areas in maintained scrub-shrub ROW	5 discrete stands within along existing ROW, all north of County Road 21	Abundant	7-12
Knapweed Species	Maintained scrub-shrub ROW through mixed forest	Infrequent, scattered single plants throughout existing ROW north of County Route 21. Ubiquitous throughout existing ROW south of County Road 21	Abundant	13, 15, 16
Japanese Knotweed	Riparian, maintained scrub-shrub ROW through mixed forest	2 discrete stands, one each on North and South banks of Kline Kill Creek	Moderate	1-3
Reed Canary Grass	Maintained scrub-shrub ROW through crop field and mixed forest	2 large, discrete stands in existing ROW; one south of Kline Kill Creek, one south of County Road 21	Moderate	4, 16, 17
Multiflora Rose	Maintained scrub-shrub ROW	Scattered throughout existing ROW south of County Road 21	Moderate	18
Purple Loosestrife	Scenic/recreational pond on residential property	Occurs only in vicinity of pond south of County Road 21	Sparse-moderate	14
Porcelain Berry	Roadside scrub-shrub, maintained scrub-shrub ROW	South side of County Road 21, along road. Scattered throughout existing ROW	Sparse	12

5.0 REFERENCES

Association of Massachusetts Wetland Scientists. 2012. Beetles on the Loose! The Purple Loosestrife Bio-monitoring Control Project. http://www.amws.org/loosestrife_project.html

Blossey, B., D. Schroeder, S. D. Hight, and R. A. Malecki. 1994a. Host specificity and environmental impact of the weevil *Hylobius transversovittatus*, a biological control agent of purple loosestrife (*Lythrum salicaria*). *Weed Science* 42: 128-133.

Blossey, B., D. Schroeder, S. D. Hight, and R. A. Malecki. 1994b. Host specificity and environmental impact of two leaf beetles (*Galerucella californiensis* and *G. pusilla*) for the biological control of purple loosestrife (*Lythrum salicaria*). *Weed Science* 42:134-140.

Cornell Cooperative Extension, Pale Swallow-wart; Control and prevention. <http://www.swallow-wort.com/swort013.html>

National Park Service, Washington, DC, 2006. <http://www.nps.gov/plants/ALIEN/fact.htm>

New York Invasive Species Council. 2010. *FINAL REPORT - A Regulatory System for Non-Native Species*. 131pp. http://www.dec.ny.gov/docs/lands_forests_pdf/invasive062910.pdf

New York Invasive Species Clearinghouse and Website. 2012. <http://www.nyis.info/index.php?action=about>

Kaufman, Sylvan Ramsey & Wallace Kaufman. 2007. *Invasive Plants: a guide to identification and the impacts and control of common North American species* – 1st edition. Stackpole Books. Mechanicsburg, Pa. 458 pp.

STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE
PUBLIC SERVICE COMMISSION

Application of New York State Electric &
Gas Corporation for a Certificate of
Environmental Compatibility and Public
Need for the Columbia County
Transmission Project

PSC CASE NO. 12-T-0248

DIRECT TESTIMONY OF
THOMAS CONNARE
ON BEHALF OF
NEW YORK STATE ELECTRIC & GAS CORPORATION

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Carol Howland

1 **Q. Mr. Connare, please state your full name, employer and business address.**

2 A. My name is Thomas Connare. I am employed at URS Corporation. My business address
3 is 77 Goodell Street, Buffalo, NY 14203

4 **Q. In what capacity are you employed?**

5 A. I am a Biologist and Sr. Environmental Scientist at URS Corporation.

6 **Q. Please summarize your education and professional background.**

7 A. I received a Bachelor of Arts degree in Biology and completed coursework for a Master
8 of Arts degree in Ecology at the State University College of New York at Buffalo.

9 I have over 29 years of experience in environmental studies including endangered
10 species, plant, bird, wildlife and fisheries surveys; vegetative cover and habitat mapping;
11 environmental studies for natural gas pipeline, electric power line and wind farm
12 projects; wetland delineation; environmental permitting; FERC 7(b) and 7(c) filings; PSC
13 Article VII filings; SEQR environmental assessments and environmental impact
14 statements; wind farm and natural gas pipeline construction environmental inspection;
15 Phase I Environmental Site Assessments; and Stormwater Pollution Prevention Plan
16 (SWPPP) preparation and inspections..

17 **Q. Please describe your role in the Columbia County Transmission Project.**

18 A. For the Columbia County Transmission Project, I served as a consultant to NYSEG and
19 conducted a wetland delineation survey along the proposed project.

20 **Q. What portions of the Application does your testimony support?**

21 A. My testimony supports the wetland delineation survey.

22 **Q. Does this conclude your testimony at this time?**

12-T-0248

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Carol Howland

1 A. Yes.

STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE
PUBLIC SERVICE COMMISSION

Application of New York State Electric &
Gas Corporation for a Certificate of
Environmental Compatibility and Public
Need for the Columbia County
Transmission Project

PSC CASE NO. 12-T-0248

DIRECT TESTIMONY OF

HEIDI CHILDS
ON BEHALF OF

NEW YORK STATE ELECTRIC & GAS CORPORATION

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Heidi Childs

1 **Q. Ms. Childs, please state your full name, employer and business address.**

2 A. My name is Heidi Childs. I am employed by URS Corporation. My business address is
3 77 Goodell Street, Buffalo, New York 14203.

4 **Q. In what capacity are you employed?**

5 A. I am an Environmental Scientist for URS.

6 **Q. Please summarize your education and professional background.**

7 A. I received an Associate of Arts degree in Environmental Science from Paul Smith's
8 College and a Bachelor of Arts degree in Natural Resource Management from State
9 University of New York at Plattsburgh. I have more than 5 years of professional
10 experience in environmental and permitting for wind power facilities, transmission lines
11 and gas pipelines. My work has involved tasks related to environmental impact
12 assessments including wetland delineation, threatened and endangered species surveys,
13 water quality monitoring, cathodic protection surveys, and construction phase
14 environmental inspection.

15 **Q. Please describe your role in the Columbia County Transmission Project.**

16 A. For the Columbia County Transmission Project, I have been a consultant for NYSEG and
17 conducted wetland delineation surveys and invasive species surveys.

18 **Q. What portions of the Application does your testimony support?**

19 A. My testimony supports the wetland delineation surveys and invasive species surveys
20 conducted for the Application.

21 **Q. Does this conclude your testimony at this time?**

22 A. Yes.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request J

To support the application conclusions regarding the requirements of §86.5(b)(2)(ii), (iii) and (iv): Provide the following:

- *photographs, descriptions and analysis of views of the proposed facility location from areas of public view including: road crossing locations;*
- *resource locations listed in Table 4-3;*
- *areas of potential project visibility from SASS areas within the project study area;*
- *estimates of tree and vegetation heights considered to provide visual screening from areas of public views;*
- *simulation views of facility from areas identified as potentially having facility visibility from locations listed in Table 4-3 and locations in SASS areas;*
- *an assessment of the project's visual impact on Historic Resources;*
- *an assessment of visual impact on buildings that are potentially eligible for listing on the State or National Register(s) of Historic Places, within areas determined to have potential views to the project (from viewshed analysis required above) and within a one mile distance from the proposed facility location.*

Response

NYSEG has developed a viewshed analysis of the proposed transmission line, photo simulations of the proposed line, and a visual impact summary following consultations with DPS Staff. NYSEG has included photo simulations of the proposed line that depict both the vegetation with leaf-on and leaf-off conditions where it was determined there was likely to be a difference in visual impact between the two conditions. Additionally NYSEG has undertaken a survey of architectural resources located within the viewshed and within one mile of the proposed transmission line. NYSEG has included photo simulations that depict leaf-off vegetation from the architectural resources identified within the viewshed and within one mile of the proposed transmission line as the architectural survey was not completed in time to include leaf-on photo simulations from these resources. The detailed visual analysis and architectural resource survey reports are included as Attachment J.

Mr. Christian Lynn, Licensed Landscape Architect at URS Corporation, who is being added to NYSEG's witnesses for the Application and Dusty Werth will sponsor the Visual Impact Report in Attachment J. Ms. Zana Wolf, Senior Architectural Historian at URS Corporation, who is being added to NYSEG's witnesses for the Application, will

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

sponsor the Summary of Historic Architectural Reconnaissance Survey and Preliminary Determinations of Eligibility in Attachment J.

Attachment J

NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT
COLUMBIA COUNTY, NY

VISUAL IMPACT ANALYSIS



NOVEMBER 15, 2012



TABLE OF CONTENTS

1.0 STUDY BACKGROUND..... 1

1.1 OBJECTIVE..... 1

1.2 PROJECT DESCRIPTION..... 1

1.3 PROJECT SUMMARY 1

2.0 METHODOLOGY AND APPROACH 2

2.1 VIEWSHED ANALYSIS 2

2.2 VIEWSHED INTERPRETATION 3

2.3 KOP SELECTION AND DATA COLLECTION..... 3

2.4 SCENIC QUALITY ASSESSMENT 3-6

2.5 PHOTO SIMULATIONS 6

2.6 VISUAL CONTRAST..... 6-8

2.7 VISUAL IMPACT RATING..... 9

3.0 VISUAL IMPACT ANALYSIS 10-26

REFERENCES 27

LIST OF TABLES

Table 2-1 Scenic Quality Classification.....	6
Table 2-2 Visual Contrast Rating.....	7
Table 2-3 Visual Impact Rating.....	9
Table 3-1 Key Observation Points.....	10-11

LIST OF FIGURES

Figure 2-1 Typical Tangent Structure.....	2
Figure 2-2 Scenic Quality Field Inventory Worksheet.....	5
Figure 2-3 Visual Contrast Rating Form.....	8
Figure 3-1 KOP1 Location Map	12
Figure 3-2 KOP 3B Location Map	13
Figure 3-3 KOP 5 Location Map	14
Figure 3-4 KOP 7 Location Map	15
Figure 3-5 KOP 13 Location Map	16
Figure 3-6 KOP 15 Location Map	17
Figure 3-7 KOP 16 Location Map	18
Figure 3-8 KOP 17 Location Map	19
Figure 3-9 KOP 18 Location Map	20
Figure 3-10 KOP 19 Location Map	21
Figure 3-11 KOP 20 Location Map	22
Figure 3-12 KOP 21 Location Map	23
Figure 3-13 KOP 22 Location Map	24
Figure 3-14 KOP 23 Location Map	25
Figure 3-15 KOP 24 Location Map	26

APPENDICES

Appendix A	Viewshed Analysis
Appendix B	Photolog
Appendix C	Scenic Quality Assessment Field Worksheets
Appendix D	Visual Contrast Rating Worksheets
Appendix E	Photo Simulations
Appendix F	Supplemental Leaf-Off Photo Simulations

STUDY BACKGROUND

1.1 Objective

A visual impact analysis was completed for the proposed Columbia County Transmission Project on behalf of the New York State Electric and Gas (NYSEG) Corporation. This study was completed as a supplemental component for the Article VII Environmental Project Application to the New York State Department of Public Service for approximately 11.1 miles of new 115-kV transmission lines. The visual impact analysis evaluates and assesses the potential impacts to the visual resources within three miles of the Project Area. The multi-step process includes an initial computer analysis, on-site data collection, and selected amount of detailed analysis and digital simulations from critical locations. The analysis does not evaluate every location where there is a potential impact but instead gathers data from Key Observation Points (KOP's) that include visual resource characteristics that are representative of the region.

1.2. Project Description

The proposed Project facilities and improvements include 11.1 miles of new 115-kV transmission line, a new 115-kV switching station (Ghent Switching Station), and improvements at the existing Klinekill 115/34.5-kV Substation. The new transmission lines will consist of 2 - 1.25-mile lines from the existing National Grid Trunk #15 115-kV transmission line, which will be cut and extended into Ghent Switching Station, and 8.6 miles of 115-kV transmission line (Circuit #726) from Ghent Switching Station to Klinekill Substation.

1.3 Project Summary

The Project site is located approximately 30 miles south of Albany, on the east side of the Hudson River. To the west of the Hudson River the Catskill Mountain range and the associated recreational activities are a popular destination for visitors throughout all seasons. Along the east side of the Hudson River, small towns and villages are scattered and maintain some of the historic character of the region. Geographically, the upper Hudson Valley is an area of rolling topography consisting of primarily large wooded rural residential lots interspersed with pasture land, wetlands, and limited amounts of agricultural fields. There is limited commercial and industrial development in the vicinity of the Project and the majority of the land remains forested. Virtually all development occurs along the few roads within the Project Area.

2.0 METHODOLOGY AND APPROACH

2.1 Viewshed Analysis

A viewshed analysis was completed to gain a basic understanding of the potential visual impacts on the scenic quality of the landscape by the proposed transmission lines. Based on preliminary engineering, the viewshed analysis was conducted with GIS software and available data to determine the potential visibility of the poles and transmission lines for areas within 3 miles of the proposed route while incorporating the effects of topography, pole height, and intervening vegetation. The results of the analysis identified and mapped those areas where an observer would have potential visibility of the poles and lines. For all calculations, topography was obtained from a USGS 10 meter digital elevation model (DEM). The DEM estimates of the ground surface elevation for each 10 x 10 meter square area of the entire study area. In addition to the USGS 10 meter DEM data, LiDAR (Light Detection and Ranging) point cloud data was used to develop a further enhanced DEM where available.

Vegetation was modeled by overlapping forest cover data on the elevation data layer and assuming an average canopy height of 75 feet. Forest cover was derived from the USGS National GAP Analysis Program land cover dataset. The average tree height utilized in the model was derived from calculations of typical tree species of the Upper Hudson River Valley at a mature height. Typical species were obtained from a variety of sources including a recent study of the species present in floodplain forests in Columbia and Dutchess Counties (<http://hawthornevalleyfarm.org/fep/FEP%20Floodplain%20Forest%20Report%20Nov%202010.pdf>). Typical mature tree heights were obtained for each of the selected tree species from the USDA PLANTS database (<http://plants.usda.gov/java/>) which were then averaged to determine a height of 77 feet for the vegetation layer. Field measurements of tree heights conducted by the DPS (Department of Public Service) in two separate locations resulted in tree heights of 50 feet and 75 feet.

115KV SINGLE-CIRCUIT WOOD TANGENT
SUSPENSION STRUCTURE

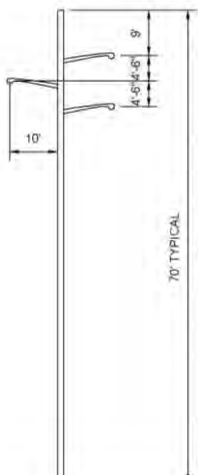


Figure 2-1 Typical Wood Tangent Structure

Preliminary pole locations and heights were provided by Burns & McDonnell and used as observer points from which viewshed calculations were calculated. By setting the observer location equal to the pole location and the height of the observer equal to the pole height, the viewshed analysis effectively maps all places on the landscape from where the pole would likely be visible

Additionally the viewshed of the existing transmission lines within the area were modeled. The model of the existing viewshed highlights areas that already have a view of existing transmission poles or lines and thus the visual impact additional poles and lines is lessened.

2.2 Viewshed Interpretation

Interpretation of viewshed calculation data can be complex because it incorporates many layers of data with varying levels of reliability. In general, viewshed calculations using simple topographic changes are accepted to be reliable for identifying areas where a specific project is not visible. The model determines where the Project is not visible because the topography between the observer and the Project obstructs any view. Identifying those areas where a project is visible is far less reliable when the model uses topography alone. This is especially true in heavily forested or developed areas where intervening vegetation and structures alter the viewshed.

Incorporation of vegetation into the viewshed model can potentially reduce reliability of the model. Vegetation heights may vary at each location, foliage presence/absence changes with the seasons and vegetation data can quickly become outdated. Despite some of the uncertainty of these variables, the viewshed calculations can provide reasonably reliable approximation of the characteristics of the visual environment and the potential visual impacts of the Project. When considered in coordination with field survey and data collection, the viewshed analysis is a highly effective tool for identifying KOP's for further evaluation.

2.3 KOP Selection and Data Collection

KOP's were identified based on the viewshed analysis, a survey of the potentially eligible historic structures, and the cultural resources identified in Table 4-3 of Exhibit 4 (Environmental Impacts) in the original NYSEG Article VII Application. Based on additional discussions and recommendations from DPS staff, supplementary KOP's were selected to assess potential visual impacts for viewsheds that were more representative of the geographic region. From the initially identified group of KOP's a smaller group of KOP's was selected for further evaluation. This determination was based on cultural and historic significance and the potential for visibility of the proposed transmission line.

For the initially identified KOP's, URS visited each site and inventoried the visual character through photo documentation. In addition, several photos at each location were captured with the intention of producing visual simulations. These photos were taken from locations where a typical user of the site would be likely to pass (e.g. from a trail, parking lot, etc.). The photos of the supplementary KOP's were provided by the DPS from their own site visits. A record of the photographs taken in association with the visual impact analysis is included in Appendix B Photo Log.

All of the photos were taken with high resolution, high quality cameras and utilized focal lengths ranging between 25mm and 50mm to approximate the focal length of the human eye.

2.4 Scenic Quality Assessment

As part of the field inventory and data collection, a scenic quality assessment was completed for each KOP. The assessment is a method for determining the scenic quality of a landscape based on the degree of distinctiveness. The assessment takes into consideration such factors as landform, vegetation, color, water, adjacent scenery, scarcity, and cultural modification. The scenic quality is determined by rating the distinctiveness and diversity of interest of a particular landscape relative to the design elements of form, line, color, and texture. The *Scenic Quality Field Inventory* (See Figure 2-1) worksheet used in the assessment process was a modified version

of the Bureau of Land Management's (BLM) Form 8400-4, which is part of their Visual Resource Management program. The Scenic Quality Field Inventory scoring is based on a point system which is outlined in Table 2-1, where the factors described below are each awarded a point value based on the visual assessment.

Landform

Topography contributes to the quality of a view as it becomes more extreme. Either severe topography or a complete absence of topography can be equally unique.

Vegetation

The vegetation of each vista adds elements of form and texture and each can either enhance or detract from a view. The unique nature of these patterns and forms are used to establish the score.

Water

Water can add movement or a sense of calmness to a scene. The degree to which water dominates the view is a primary way to assign a score.

Color

Color is present in each landscape. The way in which colors relate to one another is an important factor in determining a rating score. Color is evaluated on variety, contrast, and harmony.

Adjacent Scenery

The quality of adjacent views is also considered when establishing the scenic quality. The distance to adjacent scenery also influences the score.

Scarcity

Added value is given for the scarcity of a particular view or type of scenery within the physiographic region.

Cultural Modifications

Human activity can either enhance or detract from the scenic quality. A point value is assigned based on the amount a cultural modification has either increased or decreased the scenic quality of a view.

A *Scenic Quality Field Inventory* form was completed for the initial KOP's while in the field. In the case of the supplementary sites provided by DPS and those resulting from the potentially historic structure survey, the evaluation was subsequently completed using the photos provided along with high resolution aerial photography.

The completed *Scenic Quality Field Inventory* form for each of the KOP's is attached in Appendix C.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	
	Weather:	
	Observation Point:	
	Photo ID:	
	Scenic Quality Rating Unit:	

1. EVALUATOR NAMES:

2. LANDSCAPE CHARACTER

	a. Landform/ Water	b. Vegetation	c. Structure (General)
FORM			
LINE			
COLOR			
TEXTURE			

3. NARRATIVE

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		<input type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	3	1		
WATER	5	3	0		
COLOR	5	3	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0	-4		
TOTAL	+	+	=		

Figure 2-2 Scenic Quality Field Inventory Form

Table 2-1 – Scenic Quality Classification

SCENIC QUALITY CLASSIFICATION	DEFINITION
CLASS A – UNIQUE (19 and greater)	Landscapes represented by unique lands of outstanding or distinctive diversity or interest, including escarpments, monumental landforms, and scenic river ways.
CLASS B – ABOVE AVERAGE (11-18)	Landscapes of above average diversity of interest and consist of rolling, vegetated hills and valleys, and unique landforms that define the environment
CLASS C- COMMON (10 and under)	Landscapes are primarily common and of minimal diversity with few distinguishing features. Often times these are sites that have had previous cultural modification.

Source: BLM Manual H-8410-1 Visual Resource Inventory

2.5 Photo Simulations

Digital simulations were developed from selected KOP's as a method of gaining a better understanding of the visual impacts. The KOP's were selected with guidance from the DPS. The selected KOP's were determined to be critical views based on the potential visibility of the proposed transmission line, historical or cultural significance, or their regionally representative environmental and geographic qualities. Using a preliminary three-dimensional engineering model built in Power Line Systems CADD (PLS CADD) by Burns & McDonnell, the transmission line was inserted into Google Earth Professional to accurately locate and scale the proposed line structures in the correct geographic context. The Google Earth software can incorporate a Digital Elevation Model (DEM) but it does not display vertical vegetative growth. The height of the vegetation was accurately scaled in relationship to the proposed height of the transmission line structures and their relative location. The initial simulations were completed with photos which were captured in the summer when the visual impacts were minimized due to foliage. To assess the visual impacts in a "leaf-off" condition, a selection of simulations were re-examined based photos taken late in the fall, after the foliage had dropped.

2.6 Visual Contrast

Visual contrasts are produced through a range of direct and indirect actions or activities. Visual contrast rating is a method used by the BLM as part of their Visual Resource Management Program. Visual contrast is not the only consideration in completing a visual impact analysis; it is an important method to objectively identify areas where a proposed project is likely to have an impact and to estimate the degree of impact.

A visual contrast rating form (Figure 2-2) was completed for each of the photo simulation KOP's. The forms rate the visual contrast according to basic design elements of form, line, color, and texture. The terminology for defining visual contrast can be found in Table 2-2.

The other variable factors that are considered when rating visual contrast are listed below.

Distance

The contrast is usually less as viewing distance increases.

Angle of Observation

The apparent size of a project is directly related to the angle between the viewer's line-of-sight and the slope upon which the project occurs.

Length of Time the Project Is In View

If the viewer has only a brief glimpse of the project, the contrast may be less significant. If the project is viewed for a long period, as from an overlook, the contrast may be more significant.

Relative Size or Scale

The contrast created by the project is directly related to its size and scale in comparison to the surroundings features.

Season of Use

Visual contrast can vary depending on the physical conditions during the heaviest or most critical visitor use season, such as snow cover and tree defoliation during the winter, leaf color in the fall, or lush vegetation in summer, and flowering in the spring.

Light Conditions

The amount of contrast can be substantially affected by the light conditions. The direction and angle of lighting can affect color intensity, reflection, shadow, form, texture, and many other visual aspects of the landscape.

Atmospheric Conditions

The visibility of projects affected by atmospheric conditions such as air pollution or natural haze should be considered.

Table 2-2 – Visual Contrast Rating

VISUAL CONTRAST RATING	DEFINITION
None	The element of contrast is not visible or perceived.
Weak	The element of contrast can be seen but does not attract attention
Moderate	The element of contrast begins to attract attention and begins to dominate the characteristic landscape
Strong	The element of contrast demands attention, will not be overlooked, and is dominant in the landscape

Source: BLM Manual 8431 Visual Contrast Rating

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: _____
 Weather: _____
 Activity: _____

1. Name of Observation Point: _____
 2. Photo ID: _____

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM			
LINE			
COLOR			
TEXTURE			

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input type="checkbox"/> NO
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
Form													Evaluator's Names _____ Date _____
Line													
Color													
Texture													

SECTION C: MITIGATION

NARRATIVE/SKETCH: _____

SECTION E: SUMMARY

NARRATIVE: _____

Figure 2-3 Visual Contrast Rating Form

2.7 Visual Impact Rating

Based on the previously discussed evaluations a visual impact assessment for each of the established KOP's was determined and a level of visual impact was assigned. The levels of visual impact range from *None* to *Major* and are defined in Table 2-3. The definitions were established by the BLM.

Table 2-3 – Visual Impact Rating

VISUAL IMPACT RATING	DEFINITION	EXAMPLE
Major	Impacts resulting from construction disturbances and the long-term presence of new facilities that would substantially alter the scenic value of the landscape and would dominate views from sensitive viewpoints.	<ul style="list-style-type: none"> Structures that significantly impede and obstruct scenic views. Construction that would irrevocably damage scenic quality. Facilities that would be seen in the foreground and middleground distance zones in previously undisturbed, highly scenic landscapes.
Moderate	Impacts that would diminish the scenic quality of the landscape and would easily be noticeable from sensitive viewpoints.	<ul style="list-style-type: none"> Vertical utility structures that may detract from existing scenic quality. Facilities would be visible in the foreground to middleground distance zones from sensitive viewpoints. Facilities parallel to highly scenic landscapes that have not been previously disturbed.
Minor	Impacts that diminish the scenic quality of the landscape to a minimal degree and are potentially noticeable when viewed from moderately sensitive viewpoints.	<ul style="list-style-type: none"> Facilities would be visible in middleground or background distance zones from moderate sensitivity viewpoints, or parallel to existing facilities in previously disturbed landscape, or landscapes of common scenic quality.
Negligible	Impacts that would not diminish the scenic quality of the landscape.	<ul style="list-style-type: none"> Temporarily displacing vegetation while maintenance and/or construction occurs. Facilities would be visible in the background distance zone, where new facilities parallel existing facilities or traverse previously disturbed landscape in landscapes of common to minimal scenic quality.
None	No discernible or measurable impacts would result.	<ul style="list-style-type: none"> No project activity would take place within the viewshed.

Source: BLM Manual 8431: Visual Contrast Rating

3.0 VISUAL IMPACT ANALYSIS

A total of 24 KOP's were selected for the visual impact analysis. The 24 KOP's are identified in Table 3-1. Of the 24 KOP's, 15 were selected for further analysis because they were either representative of the region's environmental and geographic character, had a high potential for visual impact, or were identified as a result of the survey of potentially eligible historic structures and required a more detailed assessment. Photosimulations assessing the visual impact of the proposed transmission lines were completed for each of the 15 identified KOP's and are included in Appendix E.

Table 3-1 Key Observation Points

KOP	LOCATION	DESCRIPTION
1	Siegel Kline Kill Conservation Area*	View northeast from trail near parking lot
2	Siegel Kline Kill Conservation Area	View from trail looking down the existing transmission corridor
3	Art OMI International Center Guest Houses	View on driveway of guesthouse
3B	Art OMI International Visitor Center*#	View north from visitor center
4	Van Valkenburgh Isbister Estate	View north across County Route 22 from the house
5	Van Valkenburgh Isbister Estate *	View north across County Route 22 from the barn
6	West Ghent Recreational Facility	View northwest across West Ghent Cemetery
7	West Ghent Cemetery *#	View north across West Ghent Cemetery
8	Public Golf Course	View north from high point of public golf course
9	Route 9H South	View west along the road corridor
10	Route 9H North	View east along the road corridor

11	Lampman Cemetery/Route 385	View east from high point on the west side of Hudson River
12	Route 9H North	View south from road corridor north of proposed line crossing
13	Route 203-Chatham*	View west from road corridor
14	Siegel Kline Kill Conservation Area	View northwest from parking area
15	Siegel Kline Kill Conservation Area - Trail*	View northeast along trail near Route 21
16	142 Waltermire Road*#	View north across open field
17	Leggett Road at Gallagher Stud Farm*	View south across pasture
18	Old Post Road*#	View west looking over Route 9H
19	Stockport Road*	View north across agricultural fields
20	394 Old Post Road*^	View west
21	494 Old Post Road*^	View east
22	2268 Route 66*^	View west across residential properties
23	Christ Evangelical Lutheran Church, Route 66, Ghent, NY*^	View west across residential properties
24	116 Route 21*^	View east across residential and agricultural

*Photosimulation

#Supplemental Photosimulation in Leaf-Off Condition

^Viewpoint is located near potentially historic structures

KOP 1 – Siegel Kline Kill Conservation Area Looking Northwest from Parking Area

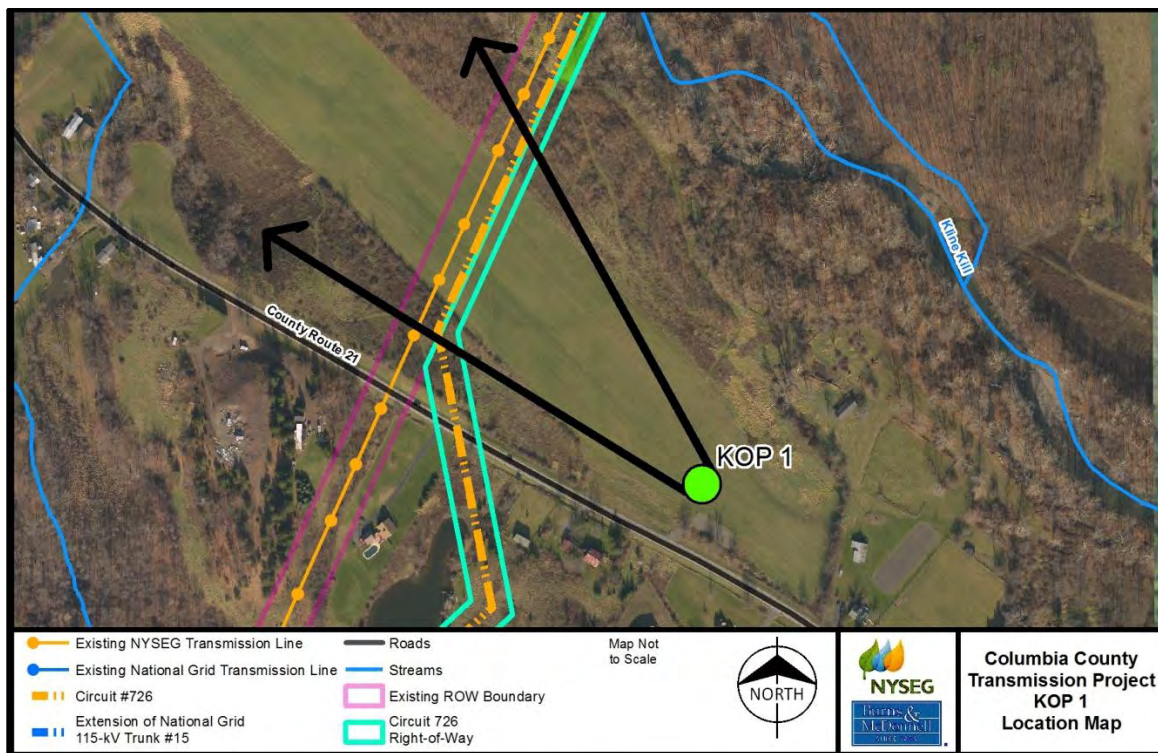


Figure 3-1 KOP 1 Location Map

Existing Environmental Setting

Located in a scenic conservation area, this view captures the hills and valleys typical to the region. The lowland in the bottom of the valley is punctuated by an agricultural field, forming a strong linear corridor. Despite a pristine first impression from the visitor's parking area, a different angle offers the view of the adjacent County Road 21 to the south and the existing transmission line that runs perpendicular to the viewshed. Located near the parking lot of the conservation area, this viewshed has year round accessibility and is regularly used for passive recreation.

Scenic Quality: Class B

Visual Impact Summary

The proposed transmission lines would be located approximately 850 feet from the visitor's parking area. The lines and structures will share a portion of the ROW with the existing transmission lines, limiting the impact from tree clearing. Because the proposed structures are approximately 15-20 feet taller than the existing transmission lines, they will be more prominent especially in the middle of the viewshed where the vegetated background is at a greater distance and the poles extend vertically above the tree line. In addition, the Project would require two vertical poles within the open field emphasizing the transmission lines and highlighting their presence.

Overall Impact: Moderate

KOP 3b – Art OMI Visitor Center

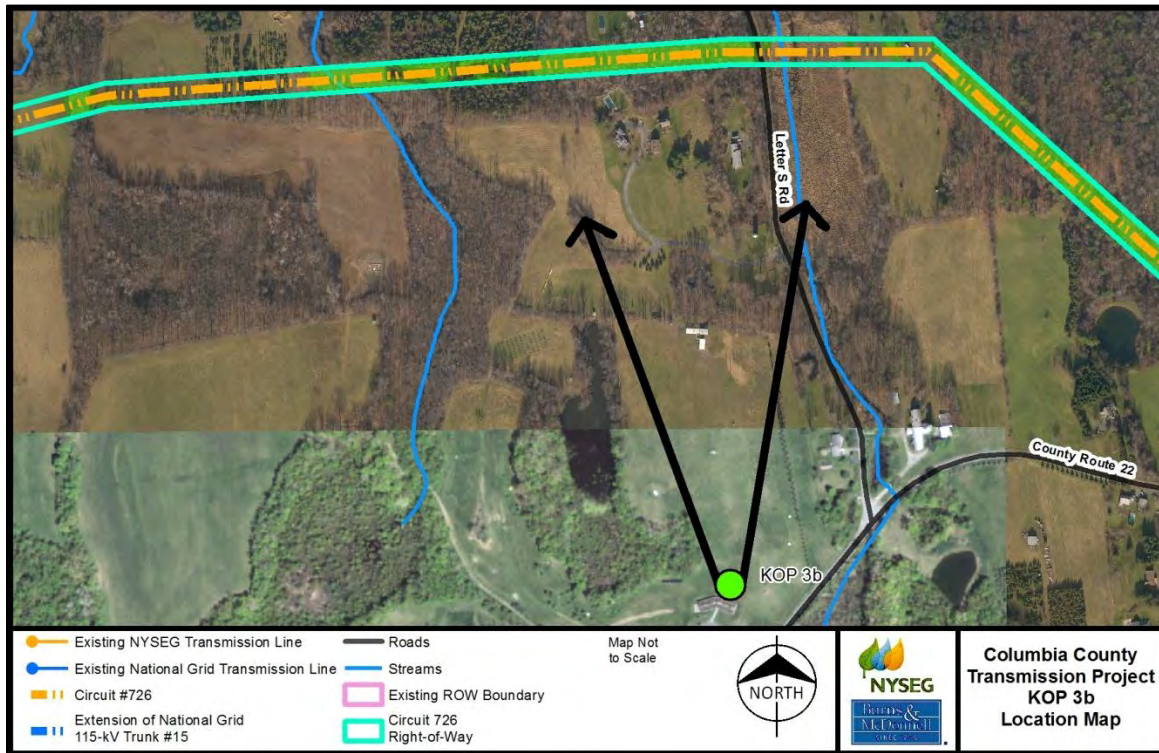


Figure 3-2 KOP 3b Location Map

Existing Environmental Setting

The north facing view from the Art OMI visitor center is dominated by the sculptural pieces that are scattered throughout a maintained rolling grass lawn. The open lawn extends approximately 1,000 feet northward before meeting the tree line that encloses the view. A large number of patrons regularly walk the grounds on self-guided tours through the sculpture fields. This viewshed is an area of particularly high visibility as it is located directly behind the visitor center and along the beginning of the sculpture fields walking tour.

Scenic Quality: Class A

Visual Impact Summary

The proposed transmission lines would be located approximately 800 feet behind the tree line in the middle ground of the view. Assigning a tree height of approximately 60 feet allows for minimal exposure of the support structures and reveals small segments of the conductors connecting them. The viewpoint is a significant distance from the line and prevents any of the proposed structures from becoming dominant features.

Overall Impact: Minor

KOP 5 – Vanvalkenburgh Isbister Estate from the Barn

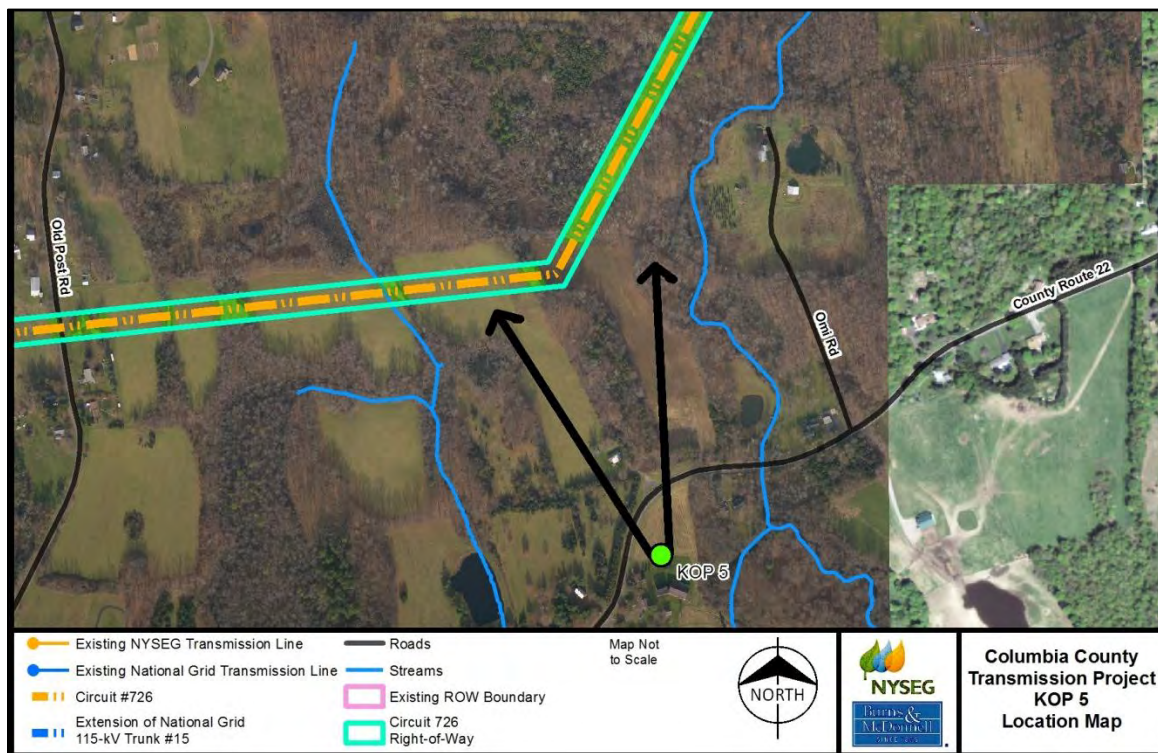


Figure 3-3 KOP 5 Location Map

Existing Environmental Setting

This private residence sits at a low elevation with long views across the wetland areas to the south. The burnt red barns are highly visible and in harmony with the surrounding landscape. The views to the south are extremely scenic and offer high quality of vegetative diversity, and historic architecture.

The north facing view from the historic estate looks upward across County Route 22, a regional connector between the Union Turnpike (Rt. 66) on the east and Route 9H on the west. Looking to the north from the barn complex on the property, the view is truncated by a large linear stand of pines running along the north side of County Route 22. The view is also interrupted horizontally by the existing distribution lines running adjacent to the south side of the road. The low elevation of this viewpoint and the property further limits any potential visibility.

Scenic Quality: Class B

Visual Impact Summary

There is no impact from this viewpoint. The evergreen vegetation on the north side of County Route 22 will block visibility in all seasons.

Overall Impact: None

KOP 7 – West Ghent Cemetery

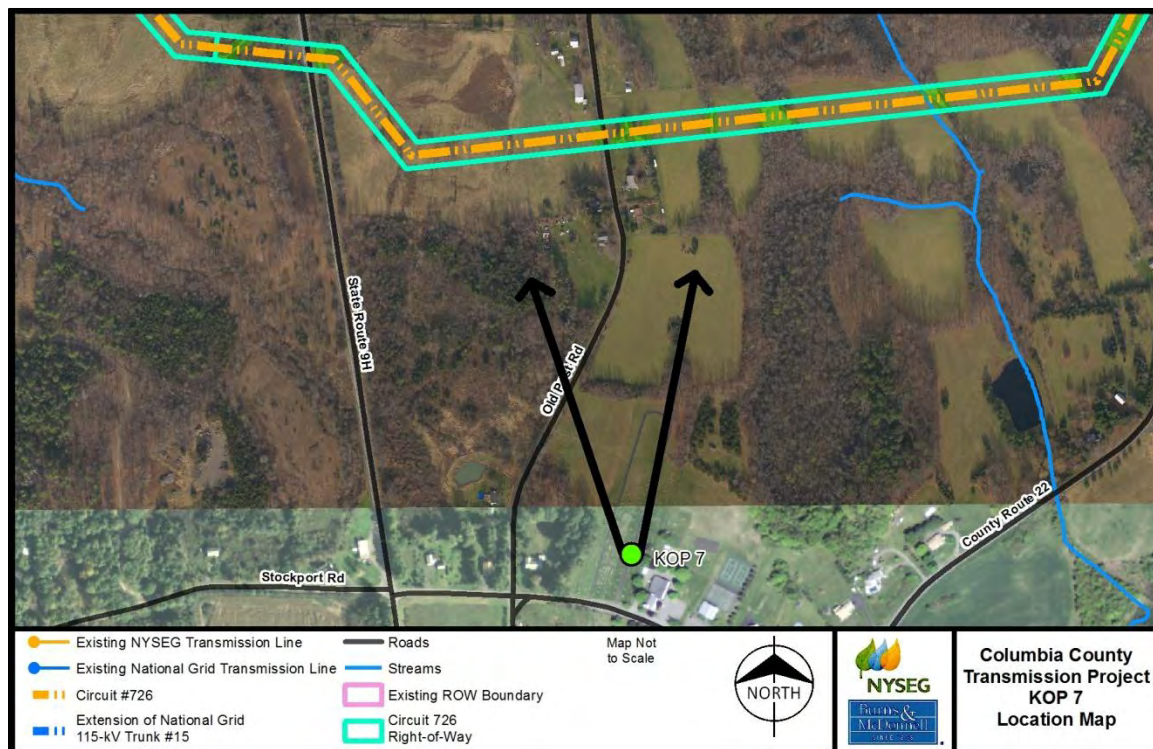


Figure 1-4 KOP 7 Location Map

Existing Environmental Setting

The West Ghent Cemetery situated on Stockport Road, has a long linear view to the north ultimately obstructed by a tree line approximately 500 feet in the distance. The West Ghent Recreation area is directly adjacent on the east of the well maintained cemetery. The repetitive and sculptural patterns of the gravestones uniformly dot the foreground and contrast the background by the distinct contrast in color and form. This viewshed is scenic because of the unique visual qualities as well as the cultural significance of the cemetery.

Scenic Quality: Class B

Visual Impact Summary

There was no impact at the original time of the evaluation. An additional photosimulation completed in the leaf-off condition did not result in the visibility of any of the proposed structures or lines.

Overall Visual Impact Rating: None

KOP 13 – Route 203 Looking South

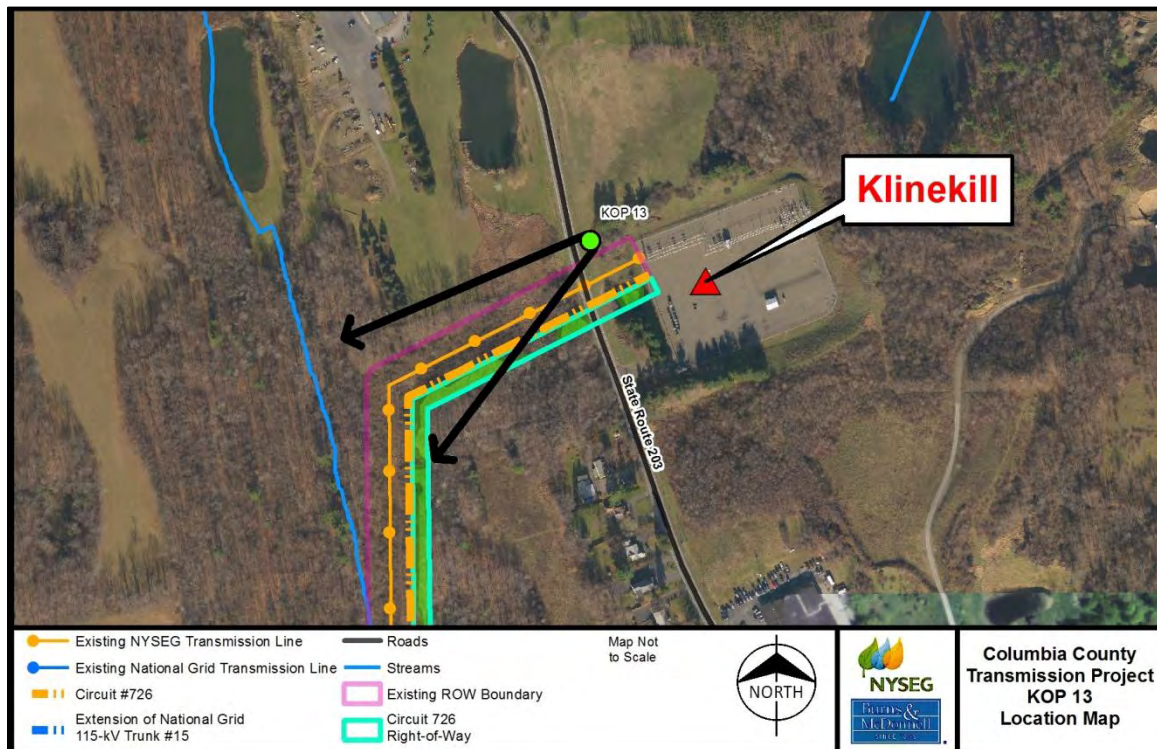


Figure 3-5 KOP 13 Location Map

Existing Environmental Setting and Scenic Quality

In this area, State Route 203 is a 2 lane road with a scattering of light industrial buildings along both sides. The view from Route 203 along the existing ROW shows a clearing that was completed for a previous transmission project. Looking to the west from Route 203, the corridor travels west for approximately 500 feet before turning to the south. At this point, the view is cut off by the tree line. The existing transmission line extends above the tree line creating an emphasis on the distinct form. The vertically dominant linear poles are in contrast with the coarse texture of the scrubby 10-15 feet vegetation within the ROW. The Klinekill Substation is located on the opposite side of Route 203. This view does not offer any unique vistas, terrain, or plant diversity.

Scenic Quality: Class C

Visual Impact Summary

While the proposed Project will require some additional clearing along the southern edge of the ROW, the texture and form created from that clearing will blend with the existing background without drawing significant attention. The addition of a sister line in this location will not have a significant visual impact due to existing conditions.

Overall Visual Impact Rating: Negligible

KOP 15 – Siegel Kline Kill Conservation Area Looking Northeast from Trail

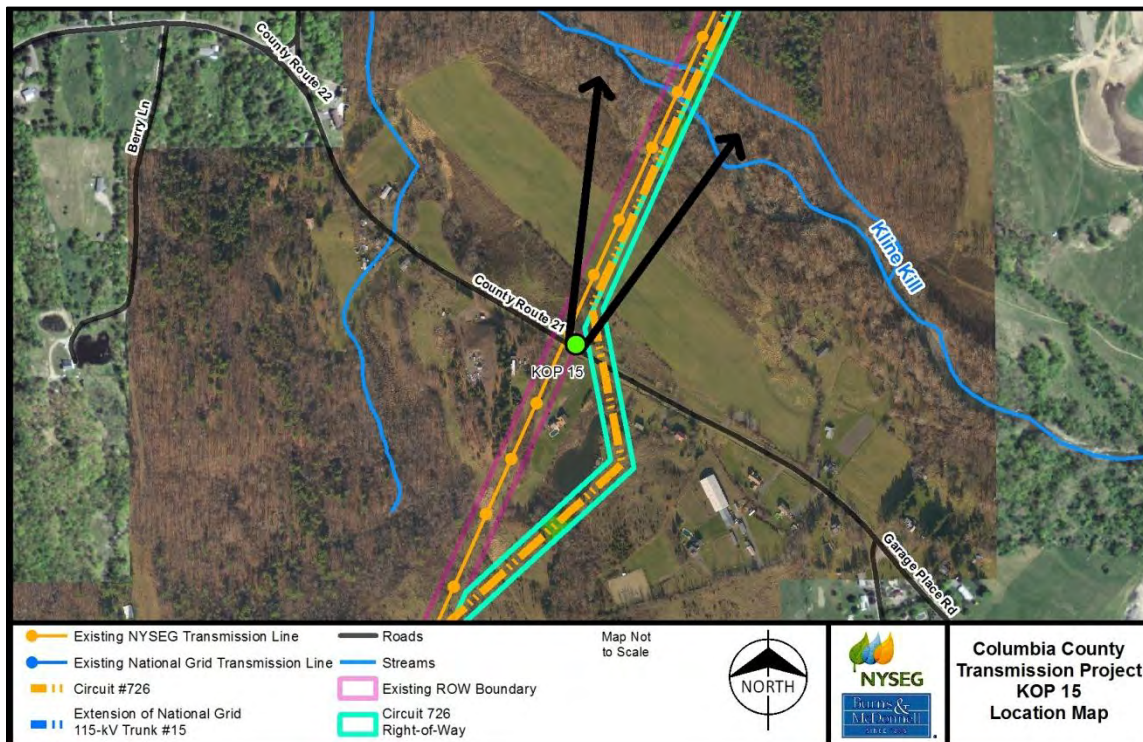


Figure 3-6 KOP 15 Location Map

Existing Environmental Setting

The view from the southerly trail in the Siegel Kline Kill Conservation Area looks northeast from the hillside adjacent to County Road 21. The viewshed looks across the existing agricultural field within the valley. Beyond the field, an established wetland forest eventually extends to the Kline Kill Stream at the toe of a gradual upward slope. The view from the trail's high point aligns with the ROW of the existing transmission lines as the approximate 150 foot wide ROW cuts through the wooded area. The 50 foot poles can be seen in the distance for 800 feet to the north. The existing clearing of the ROW is distinct and is a focal point of the viewshed.

Scenic Quality: Class C

Visual Impact Summary

The proposed transmission line would be located to the east of the existing line and require additional clearing along the edge of the woods. The proposed structures, which average a height of 70 feet, would be noticeably taller than the existing poles and would have more support structures located within the open area. The bold vertical form creates a contrast with the adjacent vegetation and land form. The proposed poles will extend beyond the tree line and be more visible than the existing lines. The addition of new transmission lines will not create an entirely new impact however it will increase the existing impact and draw more attention towards the ROW.

Overall Visual Impact Rating: Moderate

KOP 16 – 142 Waltermire Road Looking North

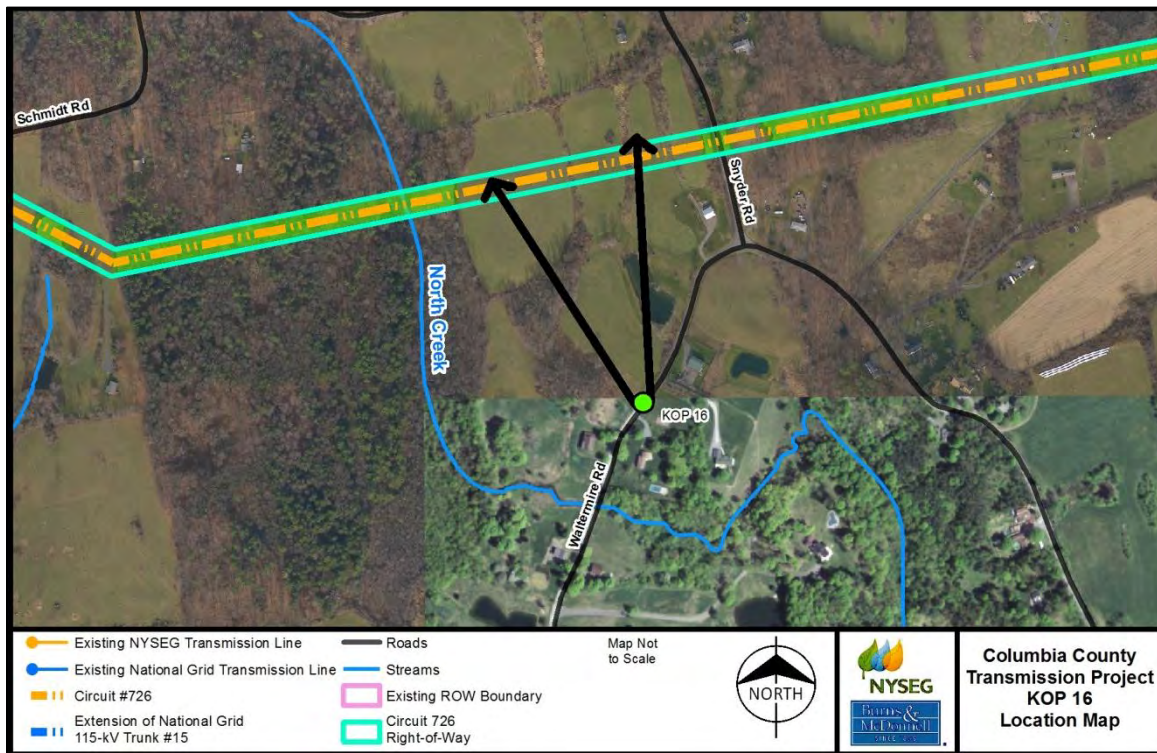


Figure 3-7 KOP 16 Location Map

Existing Environmental Setting

The setting captured in this view displays the rolling terrain, meadows, and mature tree stands that are indicative of the region's landscape. Waltermire Road is a loop that breaks off of the Union Turnpike, serving only residences along the road. The view looking north includes an old farmhouse representative of historic architecture in the region. The meadow in the foreground has gradations of green with highlights of perennial wildflowers while the middle ground is dominated by two large oak trees. Located approximately 1,500 feet from the viewpoint, the residence along the hillside is highlighted by its light and reflective colors. This is a highly scenic view.

Scenic Quality: Class A

Visual Impact Summary

The proposed line will cross approximately 900 feet north of Waltermire Road, passing through the meadow beyond the large oak trees. Because the line is running through the open meadow, the structures will have a distinct contrast in both form and texture. The opportunity to see a substantial length of line at one time is less likely because the land along Leggett Road is a mix of meadow and forest. The trees along Waltermire Road are scattered and have a limited depth. The leaf off impact will be more significant. See Appendix F for the leaf-off photosimulation.

Overall Visual Impact Rating: Moderate

KOP 17 – Leggett Road at Gallagher Stud Farm Looking South

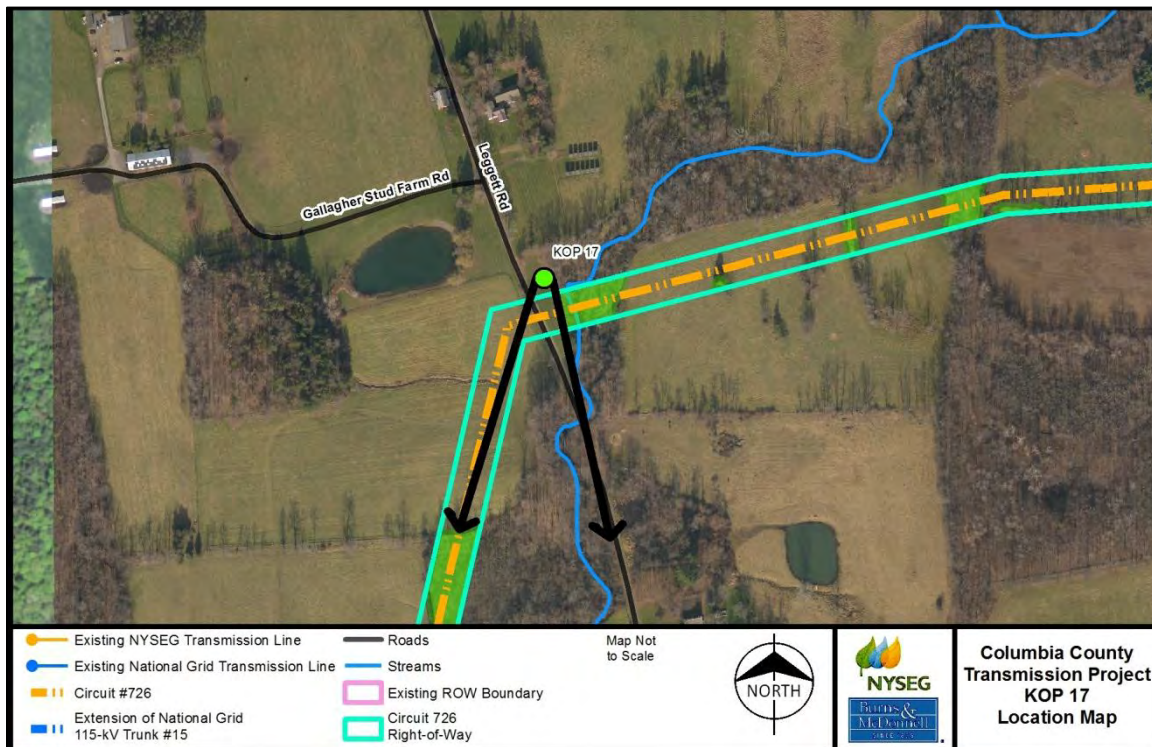


Figure 3-8 KOP 17 Location Map

Existing Environmental Setting

The view along Leggett Road is comprised mostly of open pasture land. This is a secondary local road and does not regularly receive regional traffic however this viewshed has an above average and unique scenic quality. This particular view looks south across the Gallagher Stud Farm. The rolling terrain is interspersed with mature stands of trees along the pasture's edges. The large horse farm is scenic and a notable feature within the region including the unique and uniformed black post fencing along the perimeter of the pastures.

Scenic Quality: Class B

Visual Impact Summary

The proposed transmission lines that run through the Gallagher Stud Farm will traverse an existing pasture and require clearing through the wooded area approximately 800 feet south of Leggett Road. Approximately 2,000 feet of this long south running segment of line is straight and is visible in the viewshed. Placed within low-cut pastures, the vertical form of the pole structures become a focal point. While the visibility dissipates with distance, the repetitive nature of the poles and swooping lines make them easily identifiable.

Overall Visual Impact Rating: Major

KOP 18 – 349 Old Post Road Looking West

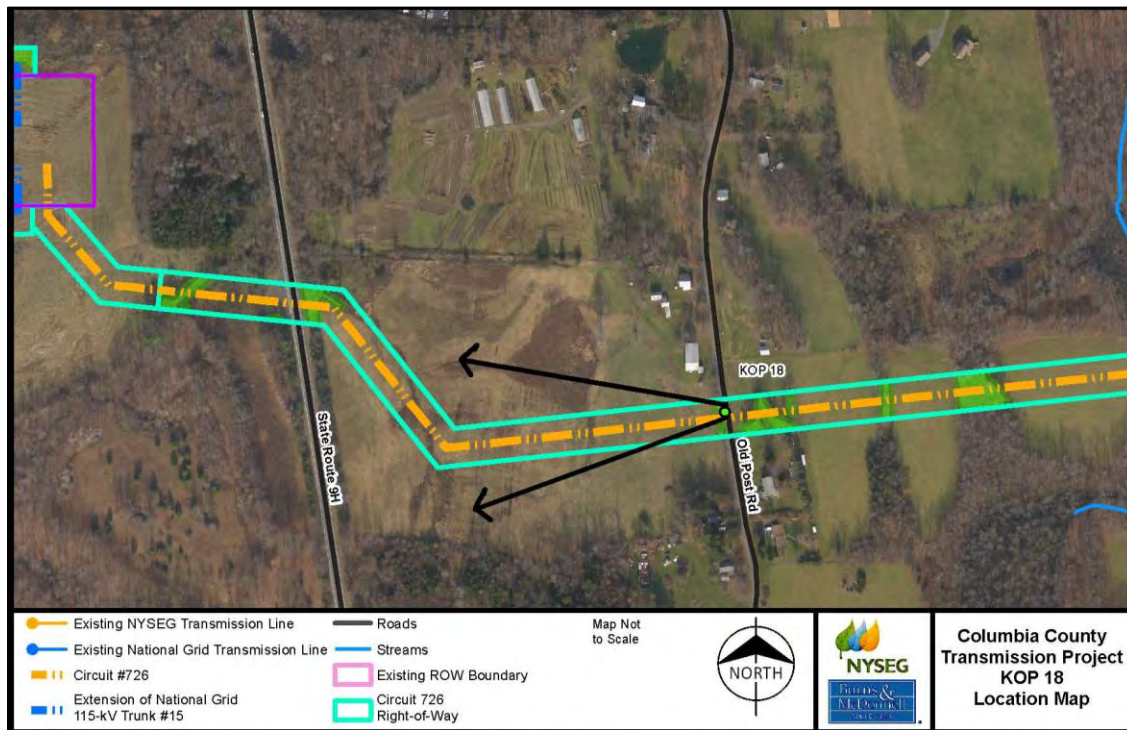


Figure 3-9 KOP 18 Location Map

Existing Environmental Setting

Looking west along Old Post Road offers some of the most scenic views in the region due to the dominating presence of the Catskill Mountains in the background. Views across the seasonally colorful meadow in the foreground eventually lead to Route 9H running north/south approximately 1,000 feet from the viewpoint. The road is mostly hidden behind a substantial row of mature trees. The long view down the rolling slope is very indicative of the region's topography and the change in color in the middle ground trees displays diversity in plant species. Additionally, the viewpoint is close to an older farm complex along Old Post Road that displays regionally historic architectural character.

Scenic Quality: Class A

Visual Impact Summary

The proposed transmission lines will bisect the foreground field running west for approximately 700 feet prior to shifting diagonally to the north. The lines require clearing through the existing trees that run adjacent to Route 9H on both the east and west sides. Due to the high elevation of the viewpoint, several of the proposed structures extend significantly above the middle ground tree line and the Catskill Mountain Range in the background. This brings a significant level of contrast with the hard linear nature of the proposed structures as well as the hue and color temperature of the poles. The proposed lines will be a dominant foreground feature from this viewpoint.

Overall Visual Impact Rating: Major

KOP 19 – Stockport Road Looking North

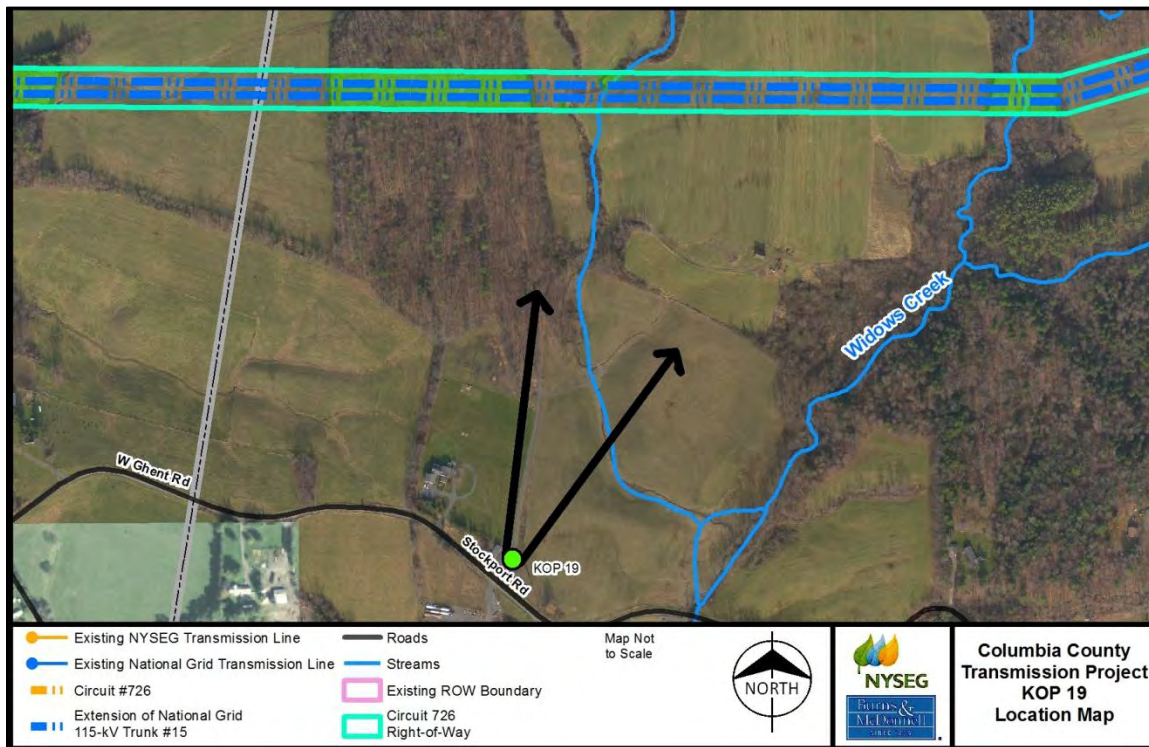


Figure 3-10 KOP 19 Location Map

Existing Environmental Setting

This viewshed is vast and comprised of mostly flat agricultural fields with a distant background of mature woods. Stockport Road is extremely rural and the majority of traffic is local. The middle ground has a small barn that appears to be well aged and adds to the scenic character of the viewshed. This view offers a unique long linear view without interruption.

Scenic Quality: Class B

Visual Impact Summary

The proposed dual transmission lines run directly east and west approximately 2,200 feet from Stockport Road. The proposed structures are apparent in the open field but the poles do not exceed the height of the background tree line which reduces their contrast and visibility. The linear and vertical nature of the poles contrast with the background however they are subdued as a result of their distance from the viewpoint.

Overall Visual Impact Rating: Minor

KOP 20 – 397 Old Post Road Looking Southwest

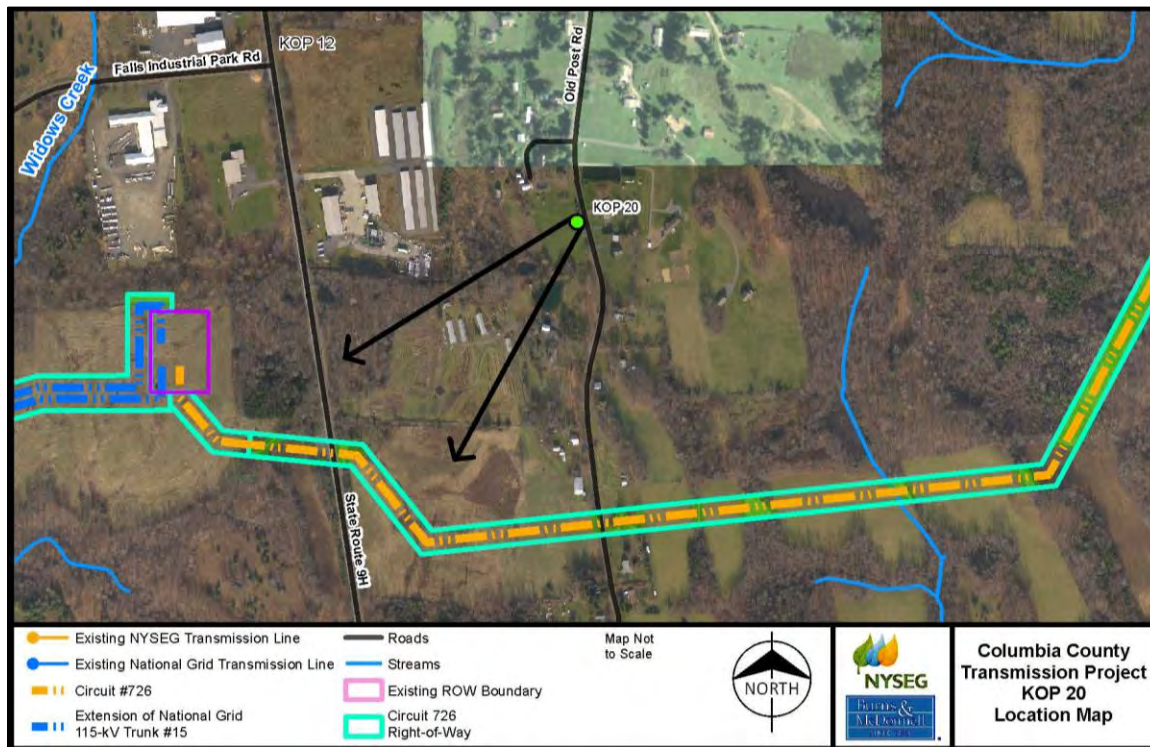


Figure 3-11 KOP 20 Location Map

Existing Environmental Setting

This viewpoint is located along Old Post Road on a topographic shelf between an uphill slope to the east and a downhill slope to the west. The view looks out over the Hudson River Valley with the Catskill Mountains framing the background. The residential structures adjacent to the viewpoint were identified as being potentially eligible historic structures. Several light industrial buildings exist at a lower elevation along Route 9H just to the west of the viewpoint. The industrial buildings remain mostly obscured by vegetation with the exception of a small number of exposed steel rooflines.

Scenic Quality: Class B

Visual Impact Summary

The proposed transmission line will have minimal visibility from this viewpoint. While there is a contiguous tree line along the property's southern boundary, there are some small areas where the vegetation is sparse enough to allow for some exposure of the transmission line. For the months when there is foliage on the trees, the transmission lines will remain obscured.

Overall Visual Impact Rating: Negligible

KOP 21 – 489 Old Post Road Looking East

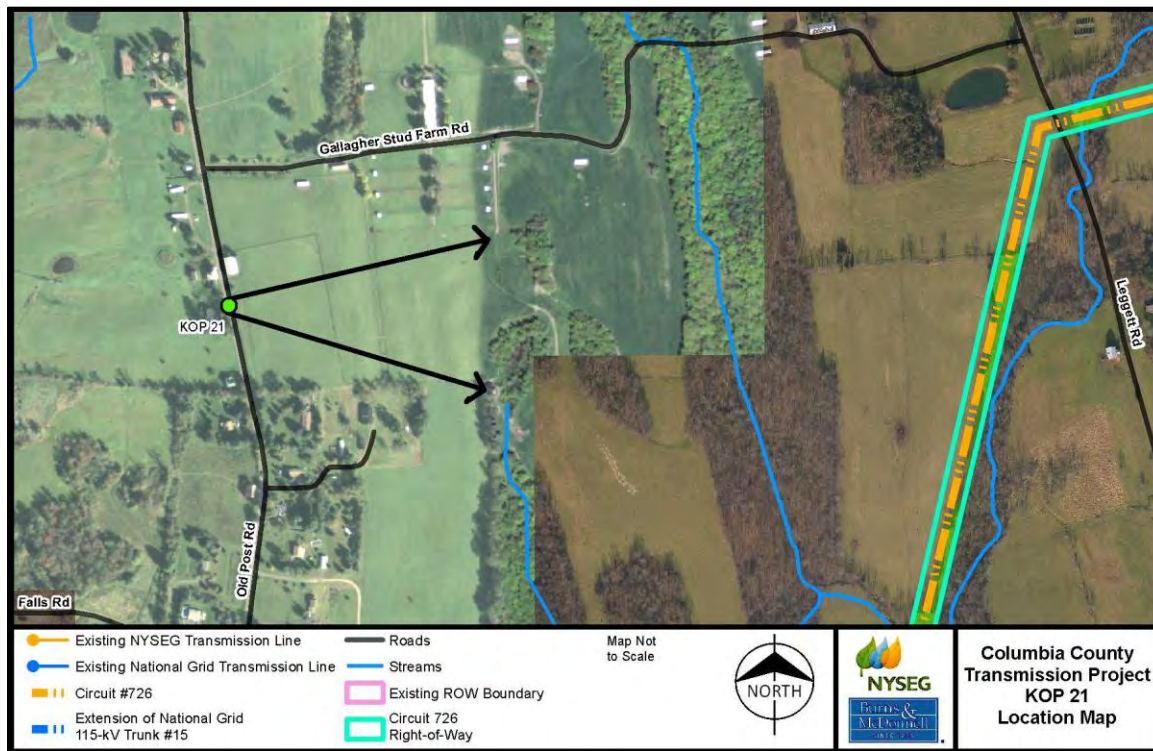


Figure 3-12 KOP 21 Location Map

Existing Environmental Setting

The viewpoint is located along Old Post Road adjacent to a property which has farm building structures that were identified as being potentially historic. The view to the east is mostly obscured because of the immediate increase in topography along Old Post Road. The area is primarily agricultural fields with sporadic farms and residential parcels. Distant tree lines and fencing run the perimeter of the fields.

Scenic Quality: Class B

Visual Impact Summary

There will be no visual impact when looking to the east. The proposed transmission lines will be completely obscured by the topography.

Overall Visual Impact Rating: None

KOP 22 – 2268 Route 66 Looking West

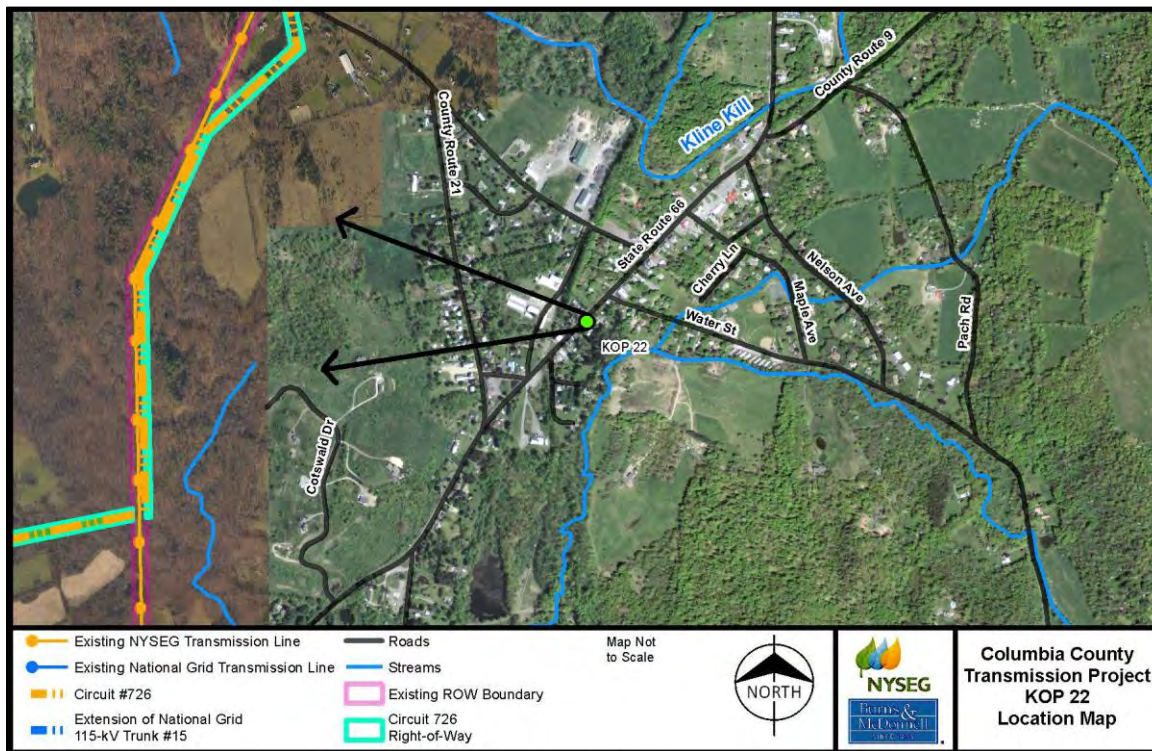


Figure 3-13 KOP 22 Location Map

Existing Environmental Setting

The viewshed from this location is comprised mostly of residential homes. Situated along Rt. 66, a two lane regional connector running through Ghent, the viewshed sees moderate traffic. The residential structure at this location was identified as being a potentially eligible historic structure. The view looks across Route 66 to the closely spaced residential homes. The residences on the west side of Route 66 have deep rectangular lots with a row of mature vegetation running along the rear portion of the lot. While the homes along the west side of the road display some historic character, they are only in fair condition and do not significantly increase the scenic quality of this viewshed.

Scenic Quality: Class B

Visual Impact Summary

Due to the topography, distance, structures, and vegetation between the viewpoint and the proposed transmission line, there will be no visual impact from this location.

Overall Visual Impact Rating: None

KOP 23 – Christ Evangelical Lutheran Church, Route 66, Ghent, Looking West

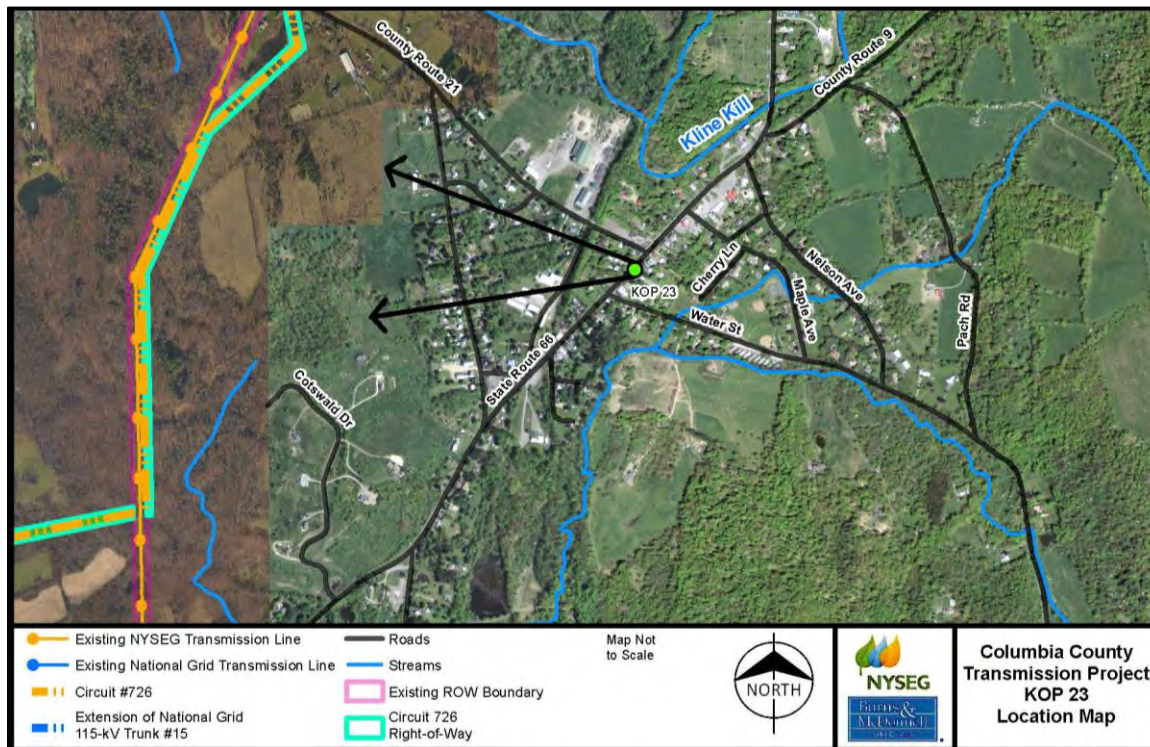


Figure 3-14 KOP 23 Location Map

Existing Environmental Setting

The viewshed from this location is comprised mostly of residential homes. Situated along Rt. 66, a two lane regional connector running through Ghent, the viewshed sees moderate traffic. The church at this location was identified as being a potentially eligible historic structure. The view looks across Route 66 to closely spaced residential homes. The residences on the west side of Route 66 have deep rectangular lots with a row of mature vegetation running along the rear portion of the lot.

The red colored home directly across the street has a garage building near the rear portion of the lot. The garage structure is equipped with a large metal antenna that extends approximately 25 feet above the roof line. While the homes along the west side of the road display some historic character, they are only in fair condition and do not significantly increase the scenic quality of this viewshed.

Scenic Quality: Class B

Visual Impact Summary

Due to the topography, distance, structures, and vegetation between the viewpoint and the proposed transmission line, there will be no visual impact from this location.

Overall Visual Impact Rating: None

KOP 24 –116 Route 21B Looking East

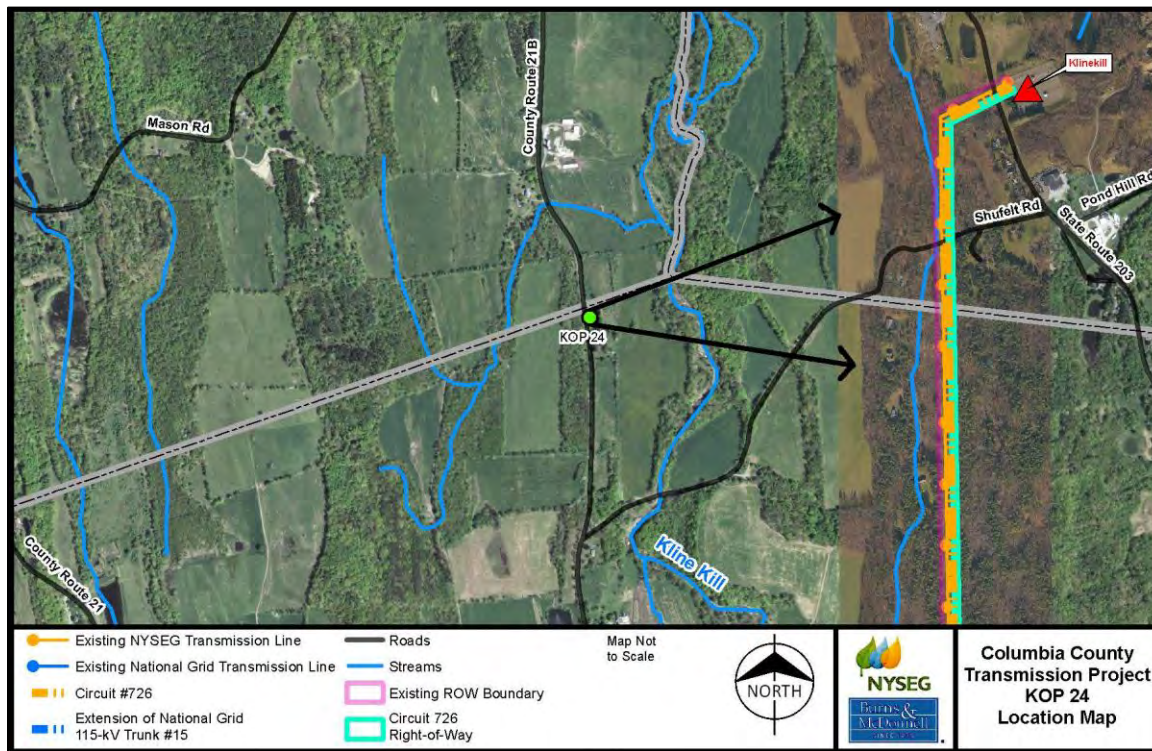


Figure 3-15 KOP 24 Location Map

Existing Environmental Setting

This viewpoint is located at a farm complex on which the buildings were identified as being potentially eligible historic structures. The view from Route 21B looks over a small pond and extends approximately 1000 feet to the east across agricultural fields and terminates at a small ridge running directly north and south perpendicular to the viewshed. The undulating topography and emerging ridgelines are visually dominant in the view. The water feature in the foreground add diversity in texture and light adding to the scenic quality

Scenic Quality: Class A

Visual Impact Summary

Due to the topography, distance, and vegetation between the viewpoint and the proposed transmission line, there will be no visual impact from this location.

Overall Visual Impact Rating: None

REFERENCES

1. Bureau of Land Management Manual 8431
<http://www.blm.gov/nstc/VRM/8431.html>
2. Bureau of Land Management Form 8400-4 (Visual Contrast Rating)
<http://www.blm.gov>
3. Bureau of Land Management Form 8400-1 (Scenic Quality Field Inventory)
<http://www.blm.gov>

Columbia County Transmission Project
Visual Impact Analysis

Appendix C
Scenic Quality Field Inventory
Worksheets

Lat 42° 26' 06.342" N
 Long 73° 34' 33.479" W

NEW YORK STATE ELECTRIC AND GAS CORPORATION
 COLUMBIA COUNTY TRANSMISSION PROJECT

SCENIC QUALITY FIELD INVENTORY

Date: 9/5/2012
 Weather: 68° Partly Cloudy
 Observation Point: KOP#1 - Klinekill Conservation Area
 Photo ID: 3391-3395 + 3464-3470
 Scenic Quality Rating Unit: B N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	flat, smooth	mowed field in foreground dominant tree line background	Sharp, clean - or transmission Clean + smooth
LINE	subtle, smooth	field edges Strong tree line	horizontal, vertical, + diagonals
COLOR	See vegetation →	Varied range of greens light foreground / field dark green background	grays + tans
TEXTURE	See vegetation →	tight, repetitive foreground blotchy irregularly textured background	smooth

3. NARRATIVE

Long view from visitor's parking area. An approximate 40 ACRE open field is surrounded on three sides by mature trees and the long southern side is lined by a rural rolling highway. A 60-70' transmission line bisects the entire view horizontally.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3 (2)	1		
VEGETATION	5	3 (3)	1		<input checked="" type="checkbox"/> B. 12-18
WATER	5	3	0		<input type="checkbox"/> C. 11 OR LESS
COLOR	5	3 (3)	1		
ADJACENT SCENERY	5 (4)	3	0		
SCARCITY	5	3 (3)	1		
CULTURAL MODIFICATION	5+	0	-4	Road + TRANSMISSION	
TOTAL	+	+	=	(15)	

42° 20' 04.342" N Lat
73° 31' 33.479" W

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	70° Mostly Cloudy
	Observation Point:	KOP#2 Kingskill ROW
	Photo ID:	3471-3476
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Consistently sloping topography	tall on corridor edges scrub/shrub in ROW	60' vert. dual wood transmission posts - angular + architectural
LINE	Short horizontals	jagged + irregular becoming more smooth towards background	vertical + horizontal linear transmission lines
COLOR	See Vegetation	Strong yellows, tans and greens in foreground blending to dark green in background	tans, reds, + grays
TEXTURE	See Vegetation	Sporadic + irregular in foreground transitioning to a smooth background	smooth, solid, simple

3. NARRATIVE

Long linear ROW corridor gently climbing topography towards the North. The approximate 150' Corridor is lined w/ 60'-80' deciduous and some evergreen trees. The 60' dual post wood transmission towers bisect the corridor. The towers are thin and are in scale w/ the adjacent vegetation.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		
VEGETATION	5	3	(2) 1		
WATER	5	3	(0)		
COLOR	5	(3)	1		
ADJACENT SCENERY	5	(4) 3	0	Trails + Natural Area	
SCARCITY	5	3	(1)		
CULTURAL MODIFICATION	5+	0	(-3) -4		
TOTAL	+	+	=	9	

42° 20' 08.395" N Lat
73° 40' 25.450" Westing

NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	74° Mostly Sunny
	Observation Point:	KOP# 3
	Photo ID:	3396-3407
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Sloping, mounded	Tree massing (approx 50' ht) in background, sporadically landscaped front yard (shrubs + perennials)	Residential Buildings Rigid architecture
LINE	Soft, curvilinear	Jagged tree line edge linear mowed outlets in yard; line between maintained lawn	Angular, hard
COLOR	See Vegetation	light grass foreground mix colored perennials dark deciduous tree background	beige/white siding brown roof dark gray
TEXTURE	See Vegetation	Smooth lawn texture coarse texture on shrubs Patchy inconsistent texture on background (tree line)	Road-fine linear repeated patterns

3. NARRATIVE

Looking uphill towards the Art OMI Cultural Center guesthouse the curvilinear drive winds through the front yard leading to the houses + parking area. The areas along the drive + adjacent to the house are maintained lawn w/ some landscaped beds around the residences. There is a significant massing of trees running behind the residences, creating a 40'-50' vertical backdrop.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		
VEGETATION	5	(4)	3	Plantings	
WATER	5	3	(0)		
COLOR	5	(3)	1		
ADJACENT SCENERY	5	(3)	0		
SCARCITY	5	(3)	1		
CULTURAL MODIFICATION	5+	(2) 0	-4	Well Maintained Homes	
TOTAL		+	+	=	(18)

Lat 42.371323
 Long -73.672208

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
 COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/6/2012
	Weather:	68° Partly Cloudy
	Observation Point:	KOP# 36 - Art OMI Visitors Center
	Photo ID:	3483-3514
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn and Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	rolling, gentle smooth	Smooth foreground Maintained lawn & Tree Law	Sculptural. Clean. Vertical and horizontal minimals
LINE	undulating curvilinear	Hard undulating lines distinguishing vegetation types	Crisp, deliberate lines form both positive + negative space
COLOR	See Vegetation	Green Spectrum. Some tan + yellow spotting	Charcoal + white
TEXTURE	See Vegetation	Smooth, patterned to coarse + irregular	Smooth

3. NARRATIVE

This view looks from the backside of the Art OMI Visitors Center across the sculpture field to the north. This relatively clean landscape is dotted w/ sculptural pieces, while not significant in relative volume, the sculptural pieces dominate the landscape because of their strong shape and high contrast.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		
VEGETATION	5	3	1		
WATER	5	3	0		
COLOR	5	3	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5	3	-4	Sculpture Fields	
TOTAL	+	+	=	19	<input checked="" type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS

42° 19' 13.648" N Lat.
73° 41' 24.526" W Long.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	76° - Partly Cloudy
	Observation Point:	KOP #4 - Van Valkenburgh / Sistor Farm
	Photo ID:	3408-3417
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Gradual increased topography to North	lawn pyramidal trees (40')	Dutch Colonial Barn
LINE	No distinct lines	lawn edge lines jagged + irregular toe line	architecture - vert + horizontal power lines - horizontal drive - curvilinear
COLOR	See Vegetation See Structure	spectrum of greens light grass/oaks dark evergreens	high contrast structures dark tones on drive + transmission lines
TEXTURE	See vegetation	tight patterns on trees	linear texture on buildings power lines - sharp

3. NARRATIVE

Looking from the front yard + parking area of the historic farm, there is a gravel cul de sac surrounded by moderately mature trees. No trees are original to the property. A well travelled Rt. 22 passes in front of the house and running along it is a 50'-60' transmission line. The house and barns are well screened from the road with the exception of the area where the gravel drive cuts through.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		<input checked="" type="checkbox"/> A. 19 OR MORE <input checked="" type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	(3)	1	Wetlands + Trees	
WATER	5	3	(0)		
COLOR	5	(4) 3	1		
ADJACENT SCENERY	5	(4) 3	0	Wetland + houses	
SCARCITY	5	(4) 3	1		
CULTURAL MODIFICATION	5+	(2) 0	-4	Historic Farmhouse / Road + Power Line	
TOTAL		+	+	= (19)	

42° 19' 15.407" N Lat
73° 41' 24.526" W Long

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/12
	Weather:	77° - Mostly Sunny
	Observation Point:	KOP5 - VV Farm - Barnside
	Photo ID:	343418 - 3422
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Simple, Symmetrical	natural grasses - foreground 35'-45' trees in background	road running adjacent to property.
LINE	Horizontal line along roadway	distinct horizontal line of separation between field + tree line is jagged	Strong vert. telephone poles horizontal road + power lines
COLOR	See Vegetation	browns, light greens, pink, + dark greens	Black/Gray/Red
TEXTURE	See Vegetation	tight + coarse	Fine + Ex Lines Gradational/Scattered - Drive. Directional - Barn.

3. NARRATIVE

The view from the Van Valkenburgh/Isbister Barns looks uphill across route 22 along which an existing transmission/telephone line has been located. From a certain vantage point, the road is hidden through topography however the electrical lines dominate the top 1/3 of the view. The foreground vegetation is a natural meadow w/ some seasonal color. The background is dominated by a dense evergreen and deciduous tree line.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3 (2)	1		
VEGETATION	5	3	1		<input checked="" type="checkbox"/> B. 12-18
WATER	5	3	0		<input type="checkbox"/> C. 11 OR LESS
COLOR	5 (4)	3	1		
ADJACENT SCENERY	5 (4)	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0 (-1)	-4		
TOTAL		+	+	=	(15)

42° 19' 08.445" N Lat
73° 41' 24.526" W Long

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/12
	Weather:	78° Mostly Cloudy
	Observation Point:	KOP 6 - Ghent Rec
	Photo ID:	3423-3425; 3516-3519
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Flat + short gradual slopes	regular, layered vertical + horizontal	bold, definitive moderate dimensional mass vertical + horizontal
LINE	Smooth	jagged, irregular butted in between lawn + trees	strong edges of distinction between elements
COLOR	See Vegetation →	light foreground dark green hues → background	bold reds, yellows, blues* blacks, white and grays
TEXTURE	See Vegetation →	sparse foreground dense background	High contrast Smooth

3. NARRATIVE

The view looking from the Ghent Recreation Facility overlooks a playground structure, ball fields, small maintenance sheds, and a cemetery in the middle ground. The bold colors from the manmade structures dominate the foreground. The view is very layered with distinct lines of separation between forms. The background is comprised of a strong tree line w/ dark colors and high contrast. Grave stones dot the middle ground and have some vertical presence.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		<input type="checkbox"/> A. 19 OR MORE <input checked="" type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	3	1	Some mature trees in foreground	
WATER	5	3	0		
COLOR	5	3	1	Playground is bold + unnatural	
ADJACENT SCENERY	5	3	0		
SCARCITY	5	4	1		
CULTURAL MODIFICATION	5+	2	0	Cemetery + Playground	
TOTAL		+	+	=	(16)

42° 19' 08.478" N. Lat.
73° 41' 54.841" W. Long.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	79° Partly Cloudy
	Observation Point:	KOP#7 Ghent Cemetery
	Photo ID:	3426-3436
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn and Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	flat terrain	Simple form - foreground irregular tree line	vertical gravestones dominate - paved drive
LINE	horizontal	distinct line between lawn + tree line	sharp distinct edges
COLOR	See Vegetation	green monotone grass tree line - high contrast of varied greens	grays + blacks some reddish hues
TEXTURE	See Vegetation	smooth foreground course background	smooth bold

3. NARRATIVE

The View overlooking the cemetery is dominated in the foreground by scattered gravestones. The strong vertical and horizontal angles of the gravestones sharply contrasts with a more irregular background of trees. An access drive passes near the outer edge of the cemetery perpendicular to the gravestones eventually falling out of site as it wraps around the edge of the property.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		
VEGETATION	5	3	1	Lawn	
WATER	5	3	0	None	
COLOR	5	3	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	2	-4	Cemetery	
TOTAL		+	+	=	(16)

42° 17' 56.213" N Lat.
73° 42' 16.981" W Long.

NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	80° Partly Cloudy
	Observation Point:	KOP # B - Golf Course
	Photo ID:	3431 - 3438
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Rolling Hills Larger hills in background	Maintained lawn in foreground irregular planting areas	Simple - bold
LINE	Soft lines in foreground Distinct terrain in background	Irregular	Vertical + horizontal
COLOR	Dark background	Shades of green Darker in areas of shadows	Small slices of gray
TEXTURE	Bold smooth background	Stippled foreground Blotchy middle ground	Solid

3. NARRATIVE

This view looks from a high point of a public golf course back towards moderately sized hills that make a presence in the background. While there has been significant manipulation to the property as a result of the golf course, this vantage point offers some long views of adjacent tree lines. Highway 9th runs in front perpendicular to the view just to the north however the rolling topographic features make it minimally noticeable when

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION <i>there is no traffic.</i>
LANDFORM	5	3	1		
VEGETATION	5	3	1	Fairways - manmade	<input checked="" type="checkbox"/> B. 12-18
WATER	5	3	0	Manmade Pond	
COLOR	5	3	1		<input type="checkbox"/> C. 11 OR LESS
ADJACENT SCENERY	5	4	3	Long Views	
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0	-4	Golf Course	
TOTAL		+	+	= 18	

42° 19' 27.631" N Lat
73° 42' 12.223" W Long

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	77° Mostly Cloudy
	Observation Point:	KOP #9 - Rt 9H Looking West
	Photo ID:	3439-3443
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn + Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Sloping to flat field	Irregular scrub Invasives	N/A
LINE	Indistinguishable	Silhouette tree line is jagged + broken	N/A
COLOR	See Vegetation	grays + greens	N/A
TEXTURE	See Vegetation	Blotchy, Irregular.	N/A

3. NARRATIVE View along Rt. 9H Looking to the east is muddled and offers only a minimal view to the farm field beyond. The slope immediately drops off to what appears to be a stream bed and then gradually gains elevation as it goes to the east. The vegetation in the foreground has some invasive species. A small open area along the road in the foreground of the view lacks deciduous vegetation and looks as though it could have at one point been a staging area for road construction.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		<input type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input checked="" type="checkbox"/> C. 11 OR LESS
VEGETATION	5	3	1		
WATER	5	3	0		
COLOR	5	3	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0	-4	Adjacent Roadway	
TOTAL	+	+	=	7	

42° 19' 27.140" N Lat.
73° 42' 10.463" W Long

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/12
	Weather:	77° Mostly Cloudy
	Observation Point:	KOP#10 Rt. 9H Looking East
	Photo ID:	3439 - 3443
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn and Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Sloped, smooth	Diverse, Patchy Irregular	architectural rigid
LINE	Soft undulating line along field edges	Semi Distinct line between field & tree	Line vertical & horizontal
COLOR	See Vegetation	Greens, pinks, reds, & purples	whites & grays
TEXTURE	See Vegetation	fine in foreground, coarse background	solid, bold

3. NARRATIVE View looking east travelling along route 9H is minimal w/out finding an opening in the tree line. This view which looks through a moderately sized opening shows a large farm field that is currently in a natural state. The terrain slopes upward to a ridge towards the east. The foreground field offers a diverse range of colors from the perennial flowers. The colonial style house at the top of the field is partially visible and is not a dominant landscape element. While not directly visible from this view, the cultural modification to the site is significant w/ a major north/south road directly adjacent.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(4) 3	1		<input type="checkbox"/> A. 19 OR MORE <input checked="" type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	(4) 3	1		
WATER	5	3	(0)		
COLOR	5	(4) 3	1	Seasonal	
ADJACENT SCENERY	5	(4) 3	0	Historic Looking Homes	
SCARCITY	5	(4) 3	1		
CULTURAL MODIFICATION	5+	0 (-)	-4	Adjacent Roadway	
TOTAL		+	+	=	(18)

L 42° 19' 36.525" N Lat.
 LON 73° 41' 41.069" W Long.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
 COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/5/2012
	Weather:	76° Mostly Cloudy
	Observation Point:	KOP #11
	Photo ID:	3451-3463
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn and Heidi Childs

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Sloping / Rolling Hills	Layered, Distinct Horizontal	N/A
LINE	Horizontal / Linear	Strong Linear Broken irregular tree line	N/A
COLOR	See Vegetation	Bold, Dark, Blotchy foreground	N/A
TEXTURE	See Vegetation	Regular / patterned smooth	N/A

3. NARRATIVE

This view looks across the Hudson Valley from the west. The view is accessed along Rt. 385. The long view is dominated w/ an agricultural field in the foreground w/ a backdrop of deciduous trees. The background beyond the Hudson to the east is accented w/ distant hills.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5 (4)	3	1	Long view of Mountains	<input type="checkbox"/> A. 19 OR MORE <input checked="" type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	(3)	1		
WATER	5	3	(0)		
COLOR	5	(3)	1		
ADJACENT SCENERY	5	(4)	3		
SCARCITY	5	(4)	3		
CULTURAL MODIFICATION	5+	(0)	-4	Roadway Behind	
TOTAL		+	+	=	(18)

Lat. 42.329152
 Long. -73.703960

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
 COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY

Date:	9/6/2012
Weather:	75° Cloudy
Observation Point:	KOP 12 - 9th North
Photo ID:	3520-3530
Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn & Heidi Chubb

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	flat w/ slight undulation	Vertical and low horizontal - no transition	Linear, Low geometric, architectural
LINE	minimal	Tree trunks - strong vertical lines irregular tree line	long horizontal chest verticals
COLOR	See Vegetation	green spectrum some light brown trees	red, off-white, charcoal. high contrast - non blending
TEXTURE	See Vegetation	Coarse & Irregular	Smooth -

3. NARRATIVE

Looking south along 9th provides minimal scenic potential. Route 9th is an extremely heavy travelled road w/ a speed limit of 55mph. Industrial offices & storage buildings occupy both sides in this Corridor. There is very limited long range visibility due to the increased topography towards the east and the treelines to the South.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3 (2)	1		<input type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input checked="" type="checkbox"/> C. 11 OR LESS
VEGETATION	5	3	1		
WATER	5	3	0		
COLOR	5	3	1		
ADJACENT SCENERY	5	3 (1)	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0 (-2)	4	Highway & Industrial	
TOTAL		+	+	=	(12)

* Photo Taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/21/12
	Weather:	Clear and Sunny
	Observation Point:	KOP 13 - Rt. 203 Looking South
	Photo ID:	IMG-691
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn (Not Completed in Field)

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Simple, indistinguishable	Irregular, Blended	Vertical, Dominant
LINE	N/A	Jagged, Irregular Tree Line	Clean, Sharp, Bold
COLOR	See Vegetation	Greens, Yellows, Browns, + Whites	High Contrast Light Colors
TEXTURE	See Vegetation	Coarse, Repetitive	Smooth Solid

3. NARRATIVE

The view looking off Rt. 203 captures an existing transmission line + an approximate 100' Row. The Row are slightly more open near the road but are reestablished in the middle ground. The Row is dominated by scrubby vegetation approximately 5-10' in height. Approximately 600' from Rt. 203, the Row turns and closes the view from the road.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	(1)		
VEGETATION	5	3	1	Low Scrub - Some Invasives	<input type="checkbox"/> B. 12-18
WATER	5	3	0		<input checked="" type="checkbox"/> C. 11 OR LESS
COLOR	5	(3)	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	(1)		
CULTURAL MODIFICATION	5+	0	(-4)	Transmission Lines	
TOTAL	+	+	=	(7)	

* Photo Taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/21/12
	Weather:	Clear Sunny
	Observation Point:	KOP-14 → Klinekill
	Photo ID:	IMG-692
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES:

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM			
LINE			
COLOR			
TEXTURE			

3. NARRATIVE

See SQFI for KOP #1
(Same View)

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		
VEGETATION	5	3	1		<input type="checkbox"/> B. 12-18
WATER	5	3	0		<input type="checkbox"/> C. 11 OR LESS
COLOR	5	3	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0	-4		
TOTAL	+	+	=		

* Photo taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/21/2012
	Weather:	Clear, Sunny
	Observation Point:	KOP-15 - Klinekill Case, within Tra
	Photo ID:	IMG-69B
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Valley Bottom w/ Hill sides	layered	Vertical, Linear
LINE	Strong Horizontals @ Topographic Transitions	horizontal, distinct	Bold, crisp verticals + diagonals
COLOR	See Vegetation	greens, reds, browns, + tans. Blended	high contrast, Light - nonearth tones
TEXTURE	See Vegetation	Coarse + smooth	smooth, precise, clean repetitive.

3. NARRATIVE The view from the high point of the Klinekill hiking trail is approximately 20' higher than the field in the middle ground. The existing transmission lines + ROW cut through + across this area, creating a distinct separation of vegetation. While the existing transmission lines do not have supports located by in the open field, the overhead lines + their repetitive pattern dominate the view. Despite the presence of the transmission lines, the view offers a rolling valley landscape typical of the area.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5 (4)	3	1		<input type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input checked="" type="checkbox"/> C. 11 OR LESS
VEGETATION	5	3	1		
WATER	5	3	0		
COLOR	5	3	1		
ADJACENT SCENERY	5	3	0		
SCARCITY	5	3	1		
CULTURAL MODIFICATION	5+	0	-4	transmission lines; clearing	
TOTAL	+	+	=	(10)	

* Photo taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/09/12
	Weather:	Clear/Sunny
	Observation Point:	KOP-11a - Walkerville Road # 142
	Photo ID:	IMG-698
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Rolling, Smooth Natural	Varied, diverse, dominant	Architectural angular
LINE	Curvilinear topographic transitions	jagged field, edges, irregular tree line	Strong Red Lines
COLOR	See Vegetation	green dominant w/ high contrast highlights	High Contrast Light Colors
TEXTURE	See Vegetation	Semi-coarse to Coarse	Solid, Crisp

3. NARRATIVE

View offers a typical landform w/ rolling hills, some mature vegetation, and evidence of a small stream. The fields which dominate the view have native wild flowers scattered throughout the landscape. The background captures to the upper portion of the home. As the only significant manmade element in the view, the architectural lines are highly contrasted w/ the natural surroundings.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5 (4)	3	1		
VEGETATION	5 (4)	3	1		
WATER	5	3	0		
COLOR	5 (4)	3	1		
ADJACENT SCENERY	5 (4)	3	0		
SCARCITY	5	3 (3)	1		
CULTURAL MODIFICATION	5+	0	-4		
TOTAL	+	+	=	(19)	

*Photo taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/24/12
	Weather:	Partly Cloudy
	Observation Point:	KOP 17 - Leggett Road Looking South
	Photo ID:	TRC-003
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn (Not completed in field)

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Rolling, Smooth	Short, Maintained, enveloped by vertical curtain	linear, grid like
LINE	Horizontal Crests	jagged tree frames Irregular tree line	Horizontal + vertical Clean
COLOR	See Vegetation	green dominant w/ some speckled highlights	Dark, High Contrast
TEXTURE	See Vegetation	smooth, repetitive coarse background	Solid w/ repetitive grid pattern.

3. NARRATIVE This south oriented view off of Leggett road offers a view of a local horse farm and associated fencing. The bold black fencing adjacent to the roadway is a dominant element. The land form in this view is unaltered, showing the undulating hills and valleys which are typical to the region. The farm is carved into an existing forested area which now comprises the background. This view does not offer a long range perspective.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		
VEGETATION	5	3 (2)	1		<input checked="" type="checkbox"/> B. 12-18
WATER	5	3	(0)		<input type="checkbox"/> C. 11 OR LESS
COLOR	5	(3)	1		
ADJACENT SCENERY	5	(3)	0		
SCARCITY	5	(3)	1		
CULTURAL MODIFICATION	5+	(2) (0)	-4	Stud Farm	
TOTAL	+	+	=	(16)	

*Photo taken by PPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/24/12
	Weather:	Clear
	Observation Point:	KOP 1B - Old Post Road (Looking west)
	Photo ID:	IMG-008
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Rolling w/ a dominant background of catkills	Open Field Framed w/ intro vegetation	N/A
LINE	Smooth horizontal line delineating mountain range	horizontal @ vegetation type transitions	N/A
COLOR	See Vegetation	diverse colors intense highlights dominate foreground	N/A
TEXTURE	See Vegetation	medium coarse foreground coarse middle ground smooth background	N/A

3. NARRATIVE

Looking from a near high point of Old Post Road offers a unique long view across the Hudson Valley dominated by the Catskill mountains in the background. The vegetation along the sloping foreground field offers a diverse range of colors and a bold canvased texture

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	1		<input checked="" type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	4	1		
WATER	5	3	0		
COLOR	5	4	1		
ADJACENT SCENERY	5	4	0	Historic Farmhouses	
SCARCITY	5	4	1		
CULTURAL MODIFICATION	5	4	0	Limited	
TOTAL	+	+	=	25	

* Photo Taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	9/21/12
	Weather:	Clear, Sunny
	Observation Point:	KOP # 19 - Old Stockport Road
	Photo ID:	IMG 714
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Flat - Some rolling	Long, Flat, Bold	Indistinct, Regular, Geometric
LINE	Soft, Broken Horizontal	Vertical, Complex Semi-regular	Hard, Straight Simple
COLOR	See Vegetation	Secondary colors Color Harmony	Tertiary colors Uniformity in color
TEXTURE	See Vegetation	Coarse Dense, Continuous	Smooth

3. NARRATIVE

The view from Old Stockport road is very representative of the agricultural setting w/ in the region. While the land is generally flat, the slight rolling nature adds interest. This is a particularly long view considering the terrain in the region.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		<input type="checkbox"/> A. 19 OR MORE
VEGETATION	5	(4)	3	Diversity	<input type="checkbox"/> A. 19 OR MORE
WATER	5	3	(0)	Varied	<input type="checkbox"/> A. 19 OR MORE
COLOR	5	(4)	3		<input checked="" type="checkbox"/> B. 12-18
ADJACENT SCENERY	5	(4)	3	Most open areas	<input checked="" type="checkbox"/> B. 12-18
SCARCITY	5	(3)	1	Ag is more common	<input type="checkbox"/> C. 11 OR LESS
CULTURAL MODIFICATION	5+	(0)	-4		<input type="checkbox"/> C. 11 OR LESS
TOTAL	+	+	=	18	

NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT

SCENIC QUALITY FIELD INVENTORY

Date: 11/6/2012
 Weather: Clear, Sunny 42°
 Observation Point: KOP 20 - 397 Old Post Road
 Photo ID: CIMG 16781 + 16783
 Scenic Quality Rating Unit: N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	flat plateau mountainous background	Irregular Form	Scattered, linear
LINE	smooth, flowing horizontal	Irregular, Jagged Smooth in mid/background	horizontal rooflines "
COLOR	high contrast dark gray	high contrast greens + browns	highlights whites + grays
TEXTURE	medium coarse	medium coarse smooth textured background	bold, smooth "

3. NARRATIVE The view looks from the potentially historic home towards the southwest. The view looks across the Hudson to capture the visually substantial Catskill Mountains in the background. There is a small scattering of light industrial buildings to the south which includes some tanks and additional maintenance facilities. *The high density of*

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5 (4)	3	1	Catskill Mountains	<input type="checkbox"/> A. 19 OR MORE <input checked="" type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	(3)	1		
WATER	5	3	(0)		
COLOR	5	(3)	1		
ADJACENT SCENERY	5 (4)	3	0	Historic Home	
SCARCITY	5 (4)	3	1	"	
CULTURAL MODIFICATION	5+ (0)	(0)	-4	Industrial Buildings	
TOTAL		+	+	= 18	

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	11/6/12
	Weather:	Clear, Sunny 42°
	Observation Point:	KOP21 - 489 Old Post Road
	Photo ID:	CIMG-6803 + 6801
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Steep terrain hillside	Vortical forming a wall	Linear
LINE	Hard Linear	Jagged	Vortical + Diagonal CRISP
COLOR	Grays	Silhouette dark greens in shadow	dark, solid hues
TEXTURE	smooth	Coarse.	smooth + solid.

3. NARRATIVE

View along Old Post Road near a potentially historic structure. The view towards the East is obstructed by a 15' hillside along the East side of the road. This is a rural two-lane road running parallel and to the east of the more heavily travelled Route 9H.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		
VEGETATION	5	(3)	1		<input checked="" type="checkbox"/> B. 12-18
WATER	5	3	(0)		<input type="checkbox"/> C. 11 OR LESS
COLOR	5	(3)	1		
ADJACENT SCENERY	5 (4)	3	0	Potentially Historic Structure	
SCARCITY	5 (4)	3	1		
CULTURAL MODIFICATION	5+	(0)	-4		
TOTAL	+	+	=	17	

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	11/6/12
	Weather:	Clear, Sunny 42°
	Observation Point:	KOP22 = 2260 Rt. 66
	Photo ID:	C176 6745 + 6749
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Flat, soft.	non massing. individually architectural dominant	Linear, Architectural
LINE	not distinct	Irregular	vertical + horizontal some diagonal
COLOR	→	greens + browns	Light Colored Homes Muted
TEXTURE	→	medium coarse	smooth, fine

3. NARRATIVE

The view looks across Rt. 66 in the town of Ghent. The generally historic looking homes are closely spaced and offer only minimal views into the background. The road is flanked on the west by power distribution lines + poles. The rear yards behind the homes are bordered by semi-evergreen vegetation limiting any extended views.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	①		<input type="checkbox"/> A. 19 OR MORE <input checked="" type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	④ 3	1	Large Streetside Trees	
WATER	5	3	①		
COLOR	5	④ 3	1	Historic Colors	
ADJACENT SCENERY	5	④ 3	0	Potentially Historic Homes	
SCARCITY	5	④ 3	1	"	
CULTURAL MODIFICATION	5+	①	-4		
TOTAL	+	+	=	①6	

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY

Date: 11/6/2012
 Weather: Clear, Sunny 42°
 Observation Point: KOP 23 - Christ Evangelical Church
 Photo ID: CIMG 6741 & 6743
 Scenic Quality Rating Unit: N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Indistinct	Distinct Prominent	Definite, rectangular Asymmetrical
LINE	Soft, weak Smooth	Broken, Jagged Diverging	Hard, horizontal, vertical + diagonal
COLOR	→	Bold, Green + Brown High Contrast	Bold, bright high contrast
TEXTURE	→	Medium, Varied. Discontinuous	Smooth, Fine Dense

3. NARRATIVE

This view looks across Rt. 66 in the town of Ghent from the potentially historic Christ Evangelical Church. The view captures typical homes sitting near the Row w/ deep (150') rear yards. The house directly across the street offers architectural character typical to the area. The garage building in the rear yard is two stories w/ a large 20'-30' antenna extending beyond the roof line. The antenna is dominant in the view due to its height and detracts from the scenic quality.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	3	(1)		<input type="checkbox"/> A. 19 OR MORE
VEGETATION	5	(4)	3	Large Mature Trees	<input type="checkbox"/> A. 19 OR MORE
WATER	5	3	(0)		<input type="checkbox"/> A. 19 OR MORE
COLOR	5	(4)	3	Historic Home Colors	<input checked="" type="checkbox"/> B. 12-18
ADJACENT SCENERY	5	(4)	3	Potentially Historic Structure	<input checked="" type="checkbox"/> B. 12-18
SCARCITY	5	(4)	3	Potentially Historic Structure	<input checked="" type="checkbox"/> B. 12-18
CULTURAL MODIFICATION	5+	0	(-2)	Antenna	<input type="checkbox"/> C. 11 OR LESS
TOTAL	+	+	=	(15)	

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

SCENIC QUALITY FIELD INVENTORY	Date:	11/6/2012
	Weather:	Clear, Sunny
	Observation Point:	KOP 24 - #115 Route 21B
	Photo ID:	CIMG6726 + 6729
	Scenic Quality Rating Unit:	N/A

1. EVALUATOR NAMES: Christian Lynn

2. LANDSCAPE CHARACTER

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	Rolling, Undulating	Distinct form of Willow Jagged + Architectural	Simple, Linear
LINE	Smooth, soft Simple	Jagged, diverging	Horizontal, Vertical Diagonal
COLOR	—————→	Subtle, muted in shadow, glare	Glare, Primary Colors Extreme Light + Dark
TEXTURE	—————→	Coarse to medium Coarse. Some Medium Striping	Solid

3. NARRATIVE

This viewshed is highly scenic. The view looks east across a potentially historic farmhouse property and agricultural fields. The vegetation in the foreground is distinct. The backdrop for the viewshed is a small ridge line approximately 1000' to the west. The view remains relatively unimpacted by significant cultural modification. The pond in the foreground adds scenic quality because of the reflection + textural change that it provides.

4. SCORE

	High	Medium	Low	Explanation or Rationale	SCENIC QUALITY CLASSIFICATION
LANDFORM	5	(3)	1		<input checked="" type="checkbox"/> A. 19 OR MORE <input type="checkbox"/> B. 12-18 <input type="checkbox"/> C. 11 OR LESS
VEGETATION	5	(4)	1		
WATER	5	(3)	0		
COLOR	5	(4)	1		
ADJACENT SCENERY	5	(4)	0	Potentially Historic	
SCARCITY	5	(4)	1	"	
CULTURAL MODIFICATION	5+	(3)	-4	"	
TOTAL		+	+	=	(25)

Columbia County Transmission Project
Visual Impact Analysis

Appendix D
Visual Contrast Rating Worksheets

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/5/12
 Weather: Partly Cloudy; 68°
 Activity Proposed 115kV Transmission Lines

1. Name of Observation Point: KOP #1 Siegel Klinekill Conservation Area
 2. Photo ID: 3391-3395

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	Simple
LINE	N/A	N/A	Horizontal; Vertical
COLOR	N/A	N/A	Subdued, Simple - Tans, Grays
TEXTURE	N/A	N/A	Smooth Crisp Bold

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS	Form													Evaluator's Names <u>Christian Lynn</u> Date <u>9/5/12</u>
	Line									✓				
	Color									✓	✓			
	Texture									✓	✓			

SECTION C: MITIGATION

NARRATIVE/SKETCH:

N/A

SECTION D: SUMMARY

NARRATIVE:

The proposed transmission lines will create a strong contrast against the existing landscape. While the existing lines are visually noticeable, the new lines are taller and have a greater number of poles exposed in the open area. The taller height of the lines gives the viewer a perspective that includes a light colored sky as the backdrop. This increases the contrast.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/16/2012
 Weather: 68°, Partly Cloudy
 Activity: Proposed 115kV Transmission Lines

1. Name of Observation Point: KOP#3B Art OMI Visitors Center
 2. Photo ID: 3483-3514

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	Minimal, Architectural
LINE	N/A	N/A	Simple Vertical + Sagging Horizontal
COLOR	N/A	N/A	Dark Hues, Subtle
TEXTURE	N/A	N/A	Simple, Smooth

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS	Form			✓				✓				✓		Evaluator's Names Date Christian Lynn 9/6/12
	Line			✓				✓				✓		
	Color				✓			✓				✓		
	Texture			✓				✓				✓		

SECTION C: MITIGATION

NARRATIVE/SKETCH:
 N/A

SECTION D: SUMMARY

NARRATIVE: The contrast and impact of the proposed transmission line can be seen in the background. Due to the distance from the proposed ROW, the contrasting color and texture is not distinct. The transmission lines are more visible due to their horizontal structure however the distance dilutes the contrast of the form.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/5/2012
Weather: 79° Partly Cloudy
Activity: Proposed 115kV Transmission Lines

1. Name of Observation Point: KOP #1 - West Ghent Cemetery
2. Photo ID: 3426-3430

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	N/A
LINE	"	"	"
COLOR	"	"	"
TEXTURE	"	"	"

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
Form				/				/				/	Evaluator's Names: Christian Lynn Date: 9/5/2012
Line				/				/				/	
Color				/				/				/	
Texture				/				/				/	

SECTION C: MITIGATION

NARRATIVE/SKETCH:

N/A

SECTION D: SUMMARY

NARRATIVE:

Lines are not visible in current views

*Photo taken by DPS

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/21/12

Weather: Clear & Sunny

Activity: Proposed 115kV Transmission Line

1. Name of Observation Point: KOP 13 - Route 203 Looking South

2. Photo ID: #MG 691

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	Transitional	Rigid, Bold, Prominent, Tall
LINE	N/A	N/A	Sharp, Strong Vertical, Angular
COLOR	N/A	N/A	Simple, ^{subtle} Solid, Low Chroma
TEXTURE	N/A	N/A	Crisp, Solid, Uniform, ^{orderly}

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)					
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None		
Form	✓	✓			✓	✓							✓	Evaluator's Names Date Christian Lynn 9/24/12
Line	✓	✓			✓	✓							✓	
Color			✓	✓	✓	✓							✓	
Texture			✓	✓	✓	✓							✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH: -Providing evergreen plant material along the south side of Route 203 would mitigate the visual impact to people travelling on the road.

SECTION D: SUMMARY

NARRATIVE: While the contrast from the proposed transmission line is high, when looking at it out of context, the presence of an existing line of similar characteristics greatly reduces the overall visual contrast.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/21/12
Weather: Clear
Activity: Proposed 115kv transmission Line

1. Name of Observation Point: KOP 15 Siegel Klinekill Conservation Area - From Trail
2. Photo ID: IMG 698

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	Small, Irregular	Bold, Solid, Tall
LINE	N/A	Weak, Soft	Bold, Continuous, Vertical
COLOR	N/A	N/A	Subtle colors, warm, (Lots of Light)
TEXTURE	N/A	N/A	Fine, Smooth, dense

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS	Form	✓	✓			✓	✓			✓	✓			Evaluator's Names Date Christian Lynn 9/27/2012
	Line		✓	✓		✓	✓					✓	✓	
	Color		✓	✓		✓	✓					✓	✓	
	Texture		✓	✓		✓	✓			✓	✓	✓	✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH:

SECTION D: SUMMARY

NARRATIVE: The proposed transmission lines as seen from the upper trail in the Klinekill Reservation creates a medium level of contrast. The existing lines, while slightly smaller previously contributed significant contrast and therefore the visual contrast from the new lines is significantly lessened. The clearing resulting from the additional transmission lines will create a negligible amount of contrast.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/07/12
Weather: Clear, Sunny
Activity: Proposed 115kV Transmission Line

1. Name of Observation Point: KOP 16 - Waltermire Road (Address 142)
2. Photo ID: IMG 1127

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	Long, Horizontal Smooth
LINE	N/A	N/A	Weak, Continuous Horizontal
COLOR	N/A	N/A	Cold, Subtle, dull
TEXTURE	N/A	N/A	Smooth, Fine Sparse

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS	Form			✓		✓	✓			✓	✓			Evaluator's Names Date Christian Lynn 9/27/12
	Line			✓		✓	✓			✓	✓			
	Color		✓			✓	✓					✓	✓	
	Texture			✓		✓	✓					✓	✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH: Additional evergreen screening along the north side of Waltermire road would conceal the proposed transmission lines as seen from the road.

SECTION D: SUMMARY

NARRATIVE: The view of proposed activity from this location creates a medium amount of contrast. This particular view blocks the view of two support structures however a slightly different view might make the structures more exposed. The distance to the proposed line significantly softens the linear and bold form of the transmission line.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/24/12
Weather: Partly Cloudy
Activity: Proposed 115kV Transmission Lines

1. Name of Observation Point: KOP 17 - Leggett Road (Looking South)
2. Photo ID: 003

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	Amorphous Irregular	Bold, Prominent Linear
LINE	N/A	Weak, Broken	parallel, vertical Concave, Bold
COLOR	N/A	Natural, Earthy	Cool - Lines warm - Poles
TEXTURE	N/A	Rough	Solidly Smooth

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS	Form	✓				✓				✓				Evaluator's Names Date Christian Lynn 9/27/12
	Line		✓			✓				✓				
	Color		✓			✓				✓				
	Texture	✓				✓				✓				

SECTION C: MITIGATION

NARRATIVE/SKETCH: Taller established vegetation along the south side of Leggett Road would help in mitigating the Short view.

SECTION D: SUMMARY

NARRATIVE: There is a medium to strong contrast created from the proposed transmission lines. While the scale of the proposed line is similar to the existing adjacent vegetation, the form and the boldness of the proposed line is of a distinct contrast.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/24/2012
Weather: Clear, Sunny
Activity: Proposed 115kV Transmission Line

1. Name of Observation Point: KOP#19 - Old Post Road Looking West
2. Photo ID: TMG 008

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	Amorphous, soft	Tall, Linear, Thin, Long
LINE	N/A	Irregular, weak	Straight, Vertical, Parallel Continuous
COLOR	N/A	Subtle, subtle	Warm, Brown + Gray Hues Some dull lines
TEXTURE	N/A	Coarse, Patchy	Dense, Smooth, Bold

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None		
ELEMENTS	Form	✓	✓	✓		✓	✓	✓						✓	Evaluator's Names <u>Christian Lynn</u> Date <u>9/27/12</u>
	Line	✓	✓	✓		✓	✓	✓						✓	
	Color	✓	✓	✓		✓	✓	✓						✓	
	Texture	✓	✓	✓		✓	✓	✓						✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH:

SECTION D: SUMMARY

NARRATIVE:

The Open field creates high contrast & draws attention to vertical structures. The presence of a solid and irregular background increases the attention payed to the tops of the proposed transmission lines. The simple and non-complex geometry is in contrast to the existing natural form.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 9/21/2012
Weather: Clear, Sunny
Activity: Proposed 115kV Transmission line

1. Name of Observation Point: KOP 19 - Looking North from Stockport Road
2. Photo ID: IMG 714

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	Moderate, geometric, long vertical + horizontal
LINE	N/A	N/A	straight, parallel continuous vertical
COLOR	N/A	N/A	lines are muted + subtle. poles are emphasized w/ higher chrom
TEXTURE	N/A	N/A	solid, bold, continuous Fine

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS	Form	✓				✓								Evaluator's Names Date 9/27/12 Christian Lynn
	Line		✓			✓								
	Color				✓	✓							✓	
	Texture				✓	✓							✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH:

Because of the significant amount of distance to the proposed lines, 6-10' plantings on the northern roadside would shield views of the lines.

SECTION D: SUMMARY

NARRATIVE:

The proposed structures do not create a strong degree of contrast. The proposed dual lines are separated significantly from the viewer and therefore reduces the overall contrast. The fact that the tree line in the background exceeds the height of the proposed structures makes them a less dominant feature. Depending on the clarity of the atmosphere the lines will be more or less in contrast.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 11/6/12
Weather: Clear, Sunny
Activity: Proposed 115kV Transmission Lines

1. Name of Observation Point: KOP 20 - 397 Old Post Road Looking South
2. Photo ID: CIMG 0481

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	Vertical, Linear
LINE	N/A	N/A	Crisp Horizontal + Vertical Lines
COLOR	N/A	N/A	Dark Bold Hues
TEXTURE	N/A	N/A	Solid + Smooth

SECTION B: CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS													3. Are there potential measures for mitigation? See description below. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Form				✓				✓				✓	Evaluator's Names: Christian Lynn
Line				✓				✓				✓	Date: 11/9/2012
Color				✓				✓				✓	
Texture				✓				✓				✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH: A row of evergreen vegetation along the southern edge of the property line would create permanent screening when the trees reach a height of 30'!

SECTION E: SUMMARY

NARRATIVE: The proposed transmission structures + lines will minimally impact the viewshed from the potentially historic property. The proposed line will be located approximately 1500' to the southwest. The transmission line will only be exposed during the winter months where the vegetative massing is less dense.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 11/6/2012
 Weather: Clear, Sunny
 Activity: Propose 115kV Transmission Line

1. Name of Observation Point: KOP 21-#489 Old Post Road Looking East
 2. Photo ID: CIMG-6801

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	N/A
LINE	↓	↓	↓
COLOR			
TEXTURE			

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
ELEMENTS				✓				✓				✓	Evaluator's Names: <u>Christian Lynn</u> Date: <u>11/9/12</u>
Form				✓				✓				✓	
Line				✓				✓				✓	
Color				✓				✓				✓	
Texture				✓				✓				✓	

SECTION C: MITIGATION

NARRATIVE/SKETCH:

N/A

SECTION E: SUMMARY

NARRATIVE:

There will be no visual impact.
 Multiple layers of vegetation + topography between
 -from viewpoint + transmission line will obstruct views
 in all seasons.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 11/6/2012
 Weather: Clear, Sunny
 Activity: Proposed 115kV Transmission Line

1. Name of Observation Point: KOP 22 - 2268
 2. Photo ID: CIMG 6745

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	N/A
LINE	↓	↓	↓
COLOR	↓	↓	↓
TEXTURE	↓	↓	↓

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None	
Form				/				/				/	Evaluator's Names Date <u>Christian Lynn 11/9/2012</u>
Line				/				/				/	
Color				/				/				/	
Texture				/				/				/	

SECTION C: MITIGATION

NARRATIVE/SKETCH:

N/A

SECTION E: SUMMARY

NARRATIVE:

There will be no visual impact from the proposed transmission lines.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 11/6/2012
 Weather: Clear, Sunny
 Activity: Proposed 115kV Transmission Line

1. Name of Observation Point: KOP 23 - Christ Evangelical Church, Ghent NY
 2. Photo ID: CIMG 6729

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	N/A
LINE	↓	↓	↓
COLOR			
TEXTURE			

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input type="checkbox"/> NO		
	LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)						
	Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None			
Form				✓				✓				✓		Evaluator's Names <u>Christian Lynn</u>	Date <u>11/9/12</u>
Line				✓			✓				✓				
Color				✓			✓				✓				
Texture				✓			✓				✓				

SECTION C: MITIGATION

NARRATIVE/SKETCH:

N/A

SECTION E: SUMMARY

NARRATIVE:

There will be no visual impact from this viewpoint.

**NEW YORK STATE ELECTRIC AND GAS CORPORATION
COLUMBIA COUNTY TRANSMISSION PROJECT**

VISUAL CONTRAST RATING FORM

Date: 11/6/2012
 Weather: Clear, Sunny
 Activity: Proposed 115kV Transmission Line

1. Name of Observation Point: KOP 24 - #115 on Route 213 Looking East
 2. Photo ID: CIMG 6729

SECTION A: PROPOSED ACTIVITY DESCRIPTION

	a. Landform / Water	b. Vegetation	c. Structure (General)
FORM	N/A	N/A	N/A
LINE	↓	↓	↓
COLOR			
TEXTURE	↓	↓	↓

SECTION B: CONTRAST RATING

SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												3. Are there potential measures for mitigation? See description below. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
		LAND / BODY WATER (1)				VEGETATION (2)				STRUCTURES (3)									
		Strong	Medium	Weak	None	Strong	Medium	Weak	None	Strong	Medium	Weak	None						
ELEMENTS	Form				✓					✓								Evaluator's Names <u>Christian Lynn</u>	Date <u>11/9/2012</u>
	Line				✓					✓									
	Color				✓					✓									
	Texture				✓					✓									

SECTION C: MITIGATION

NARRATIVE/SKETCH:

N/A

SECTION E: SUMMARY

NARRATIVE:

The visibility of the proposed transmission line is fully obstructed by topography. There will be no visual impact from this location.



November 8, 2012

Ms. Carol A. Howland
Lead Analyst – Environmental, Health & Safety Compliance
NYSEG/RG&E
18 Link Drive
P.O. Box 5224
Binghamton, NY 13902-5224

Re: Summary of Historic Architectural Reconnaissance Survey and Preliminary Determinations of Eligibility for NYSEG Columbia County Transmission Line Project, Chatham, Ghent, Kinderhook, and Stockport, Columbia County, New York

Dear Ms. Howland,

This letter summarizes the results of a historic architectural reconnaissance survey conducted by URS for the above-referenced project. This investigation was completed on behalf of New York State Electric & Gas (NYSEG), pursuant to §122 of the Public Service Law (PSL §122). The historic architectural reconnaissance survey and analysis were completed by professionals meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History.

Introduction

The proposed transmission project includes the following components: construction of the proposed 8.6-mile 115-kV Circuit #726; construction of 2.5 miles of 115-kV transmission lines needed to loop National Grid's 115-kV Trunk #15 into a new switching station in the town of Ghent; construction of the Ghent Switching Station; and modification of the Klinekill substation. Circuit #726 will parallel the east side of the existing Craryville-Klinekill Circuit #984, on expanded right-of-way, for 0.5 mile through the town of Chatham and for 2.6 miles through the town of Ghent. The remaining 5.5 miles of Circuit #726 will be on new right-of-way in the town of Ghent. The two lines needed to loop Trunk #15 would begin 2,000 feet north of Stockport Road and extend in parallel on new right-of-way in a northeasterly direction to the Ghent Switching Station. The lines will be constructed primarily on single pole wood structures. The Ghent Switching Station will be located on a 2-acre site adjacent to the existing industrial park along Falls Industrial Park Road, approximately 500 feet west of State Highway 9H in the town of Ghent. The route of the proposed transmission line is shown on the enclosed Project Location Map.

Viewshed Analysis

Burns & McDonnell conducted a viewshed analysis to gain a basic understanding of the proposed project's potential visual impacts on the landscape. The viewshed analysis used GIS software and data to determine the visibility of poles, based on preliminary engineering information, for areas within 5 miles of the proposed route. The results of this analysis essentially identified and mapped those areas where an observer might be able to see the poles and transmission lines given the model factors considered. The viewshed calculations considered the effects of topography, pole height, and the potential effects of intervening vegetation on line of sight visibility. For all calculations, topography was determined using a USGS 10 meter digital elevation model (DEM), which provides an estimate of the ground surface

URS Corporation
437 High Street
Burlington, NJ 08016
Tel: 609-386-5444
Fax: 609-386-6994



elevation for every 10 x 10 meter square area across the entire study area. In addition to the USGS 10 meter DEM data, LiDAR (Light Detection and Ranging) point cloud data was used to develop a DEM where available. Vegetation was modeled by overlapping forest cover data on top of the elevation data layer, assuming an average canopy height of 75 feet. Forest cover was derived from the USGS National GAP Analysis Program land cover dataset.

Preliminary pole locations and heights were provided by Burns & McDonnell engineers and used as observer points from which viewshed calculations were prepared. By setting the observer location equal to the pole location and the height of the observer equal to the pole height, the viewshed calculated effectively maps all places on the landscape where the pole would likely be visible from. Additionally, the viewshed of the existing transmission lines within the area were modeled. The existing viewshed model highlights areas that already have a view of an existing transmission line and thus the additional impact of a new view may be lessened. This is especially true where the existing and proposed line would run parallel to each other in a common corridor.

Historic Architectural Background Research

Burns & McDonnell conducted a review of 1960 aerial photography and 1953 USGS topographic maps to determine the locations of buildings aged fifty years or older within the project study area. Burns & McDonnell created GIS shapefiles for all buildings shown on the historic aerials and topographic maps (706 buildings within a one-mile radius of the project), and based on the results of the viewshed analysis, determined whether each of the resources was located within or outside of the project's viewshed (hereafter referred to as the viewshed area). Of the 706 total buildings identified, 218 were determined to lie within the viewshed area. Burns & McDonnell also reviewed the files of the New York State Historic Preservation Office (SHPO) to identify resources listed in or determined eligible for listing in the National Register of Historic Places (NRHP) within one mile of the project. URS conducted additional SHPO file review to identify previously surveyed resources (with and without NRHP evaluations) within one mile of the project. In conjunction with the architectural reconnaissance survey (summarized below), URS also consulted county tax parcel data for property information and approximate construction dates.

Reconnaissance Survey Methodology

In October 2012, URS architectural historians conducted historic architectural reconnaissance survey of all properties within and immediately adjacent to the viewshed area provided by Burns & McDonnell. Properties that are technically outside of the viewshed area, but whose tax parcels border the viewshed area were included in the survey to provide a buffer zone. The viewshed area and immediately adjacent parcels constitute the Area of Potential Effects (APE) for the project. The goals of the historic architectural reconnaissance survey were: 1) to field-check the results of the historic imagery review and SHPO research; 2) to identify any additional resources within the APE that were constructed in 1965 or earlier; and 3) to identify resources potentially eligible for or listed in the National Register of Historic Places (NRHP) that may be affected by the proposed project.

The reconnaissance survey was conducted entirely from public roadways. No private property access was sought or granted for this phase of the investigation. Twenty (20) properties identified during Burns & McDonnell's historic imagery review as containing buildings aged fifty years or older were not surveyed and documented because the buildings were not visible from public roadways (Table 1). In some cases, visibility was sufficient to confirm that a resource constructed in 1965 or earlier remained extant, but foliage or other obstructions prevented adequate photography. In other cases, such as properties with buildings set well back from the road, visual confirmation was not possible. Resources that were not surveyed and documented due to visibility issues are listed in Table 1 below and their locations are shown in the enclosed resource location maps. These properties were assigned URS survey numbers for the purpose of visual representation in the maps.



Table 1. Architectural Resources Not Surveyed and Documented Due to Visibility Issues

URS Survey No.	Map Sheet	Tax Parcel ID	Address	Municipality
29	C8	55.-1-44.200	299 Pond Hill Road	Chatham
30	C8	65.-1-2	Route 203	Chatham
33	C8	65.-1-6	2047 Route 203	Chatham
151	E7	75.4-1-15.1	1361 Church Street	Ghent
167	F7	84.-2-33	48 Konig Road	Ghent
193	E7	75.-1-6.12	1923 Route 22	Ghent
207	E5	74.-1-45.1	1347 Route 22	Ghent
210	F5	83.-1-12	Nyfler Road	Ghent
211	F4	83.1-1-1	1210 Route 22	Ghent
215	F4	83.-1-2	1129 Route 22	Ghent
274	C7	65.-1-4.100	Pond Hill Road	Chatham
275	B7	55.-1-16.200	2228 Route 203	Chatham
276	C8	65.-1-17	1990 Route 203	Ghent
277	D6	65.-1-3	1864 Route 21	Ghent
278	D7	75.-1-12.11	1666 Route 21	Ghent
279	E3	73.-1-31	Route 25	Stockport
280	E4	73.-1-46.2	Old Post Road	Ghent
281	E4	73.-1-50	707 Route 25	Stockport
283	E7	75.-1-30.111	Route 21	Ghent
284	F3	73.-1-34	451 Route 25	Stockport

Results and Recommendations

URS identified and documented a total of 208 *previously unevaluated* architectural resources constructed in 1965 or earlier within the APE, including 17 resources that were not identified during Burns & McDonnell’s historic imagery review. Sixteen (16) resources identified during Burns & McDonnell’s historic imagery review are no longer extant; the buildings have been removed entirely or replaced with buildings constructed after 1965.

Of the 208 resources inventoried in the reconnaissance survey:

- 207 newly documented (never before surveyed) architectural resources were identified and documented in the enclosed inventory and resource location maps.
- One (1) resource was previously surveyed and documented at the state level, but had no determination of National Register eligibility: “Broadstairs” (URS Survey No. 168; SHPO USN 02110.000002). This resource is documented in the enclosed inventory and resource location map (sheet F7).

Of the 208 total previously unevaluated architectural resources documented in this submittal, 196 are recommended not eligible for listing in the NRHP and 12 are recommended potentially eligible for listing in the NRHP. Table 2 below lists the 12 resources that are recommended potentially eligible by URS. Please see the enclosed inventory for more detailed information on all of the surveyed resources.

Table 2. Architectural Resources Recommended Potentially Eligible for Listing in the NRHP by URS

URS Survey No.	Map Sheet	Tax Parcel ID	Address	Municipality	Style/Type	Date
11	B7	55.-1-31	2190 Route 203	Chatham	Greek Revival	Ca. 1830
12	C7	65.-1-4.2	116 Route 21B	Ghent	Adam	Ca. 1840
45	D8	66.17-1-6	164 Route 66/ Hudson Avenue	Chatham	Stick	Ca. 1889



78	E8/F8 detail view	75.4-3-12	2311 Route 66	Ghent	Queen Anne	Ca. 1900
88	E8/F8 detail view	75.4-3-5	Route 66	Ghent	Neoclassical	Ca. 1900
120	E8/F8 detail view	75.4-2-12	2268 Route 66	Ghent	Italianate	Ca. 1850
168 (SHPO USN: 02110.000002; "Broadstairs")	F7	84.-1-33	8 Snyder Road	Ghent	Georgian	Ca. 1800
184	F6	84.-1-17	142 Waltermire Road	Ghent	Greek Revival, vernacular	Ca. 1830
208	F5	74.-1-44	Route 22	Ghent	Pre-railroad	Ca. 1780
228	F3	73.-2-62	397 Old Post Road	Ghent	Gothic Revival	Ca. 1890
233	E4	73.-2-46.1	489 Old Post Road	Ghent	Italianate, vernacular	Ca. 1860
253	E4	74.-1- 26.112	134 Leggett Road	Ghent	Pre-railroad	Ca. 1760

In addition, 2 resources were identified within the APE that are listed in the NRHP: the Blinn-Pulver Farmhouse at 219 Hudson Avenue/Route 66 in Chatham (SHPO USN 02141.000031) was listed in 2003; and the Van Valkenburgh-Isbister Farm at 1129-42 Route 22 in Ghent (SHPO USN 02110.000020) was listed in 2006. One (1) additional resource was being considered for listing in the NRHP by the National Park Service as of March 31, 2012: the Bartlett House at 2258 Route 66 in Ghent (SHPO USN 02110.000001) (<http://www.nps.gov/history/nr/pending/P20120331.htm>). The locations of these resources are shown on the enclosed resource location maps (sheets D8, F4, and E8/F8 detail view respectively).

Two (2) resources within the APE were previously determined not eligible for listing in the NRHP: a barn referred to as the Clark-Olson Property on Route 66 in Ghent (SHPO USN 02110.000016); and Country Folk Gift Shop on Route 66 in Ghent (SHPO USN 02110.000018). The locations of these resources are shown on the enclosed resource location map (sheet E8/F8 detail view); however, the resources were not re-evaluated as part of this study.

The historic architectural reconnaissance survey identified 12 resources that are potentially eligible for listing in the NRHP and may be visually impacted by the proposed project. In addition, the background research identified two resources that are listed in the NRHP and one that is currently being considered for listing in the NRHP by the National Park Service. We recommend that the potential effects on NHRP-eligible and -listed resources be considered in greater detail as the project progresses.

If you have any questions or need additional information, please contact me by telephone at (609) 386-5444 or electronic mail at zana.wolf@urs.com.

Sincerely,

Zana Wolf
Senior Architectural Historian
URS Corporation



Enclosures

Project Location Map

Resource Location Maps (Multiple Sheets)

Inventory of Previously Unevaluated Architectural Resources

STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE
PUBLIC SERVICE COMMISSION

Application of New York State Electric &
Gas Corporation for a Certificate of
Environmental Compatibility and Public
Need for the Columbia County
Transmission Project

PSC CASE NO. 12-T-0248

DIRECT TESTIMONY OF

CHRISTIAN LYNN
ON BEHALF OF

NEW YORK STATE ELECTRIC & GAS CORPORATION

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Christian Lynn

1 **Q. Mr. Lynn, please state your full name, employer and business address.**

2 A. My name is Christian Lynn. I am employed by URS Corporation. My business address
3 is 1375 Euclid Avenue, Suite 600, Cleveland, OH 44115.

4 **Q. In what capacity are you employed?**

5 A. I am a Licensed Landscape Architect for URS' office of Planning and Landscape
6 Architecture

7 **Q. Please summarize your education and professional background.**

8 A. I received a Bachelor of Arts from Kenyon College with a concentration in Studio Art and
9 a Master of Landscape Architecture from Cornell University. I am a licensed Landscape
10 Architect in the State of Ohio and New York.

11 I have 6 years of planning and design work in regional, local, and site specific planning
12 and design projects. I have over 6 years of experience with visual simulation, three
13 dimensional modeling and visual impact work relating to both public and private
14 facilities with specific work relating to visual impact from energy related substation
15 improvements. I have also been regularly involved with federally funded transportation
16 projects and the associated NEPA compliant permitting process.

17 **Q. Please describe your role in the Columbia County Transmission Project.**

18 A. For the Columbia County Transmission Project, I was involved in determining the visual
19 impact of the proposed project from multiple Key Observation Points (KOP's). The
20 KOP's identified either capture viewsheds from culturally significant locations,
21 potentially eligible historic locations, or viewpoints that are geographically representative
22 of the region. By utilizing scenic quality assessments, visual contrast ratings, mapping,

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Christian Lynn

1 three-dimensional modeling, and multi seasonal photosimulations, the level of impact for
2 each identified KOP was determined.

3 **Q. What portions of the Application does your testimony support?**

4 A. My testimony supports the portions of the application relating to the visual resources

5 **Q. Does this conclude your testimony at this time?**

6 A. Yes.

STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE
PUBLIC SERVICE COMMISSION

Application of New York State Electric &
Gas Corporation for a Certificate of
Environmental Compatibility and Public
Need for the Columbia County
Transmission Project

PSC CASE NO. 12-T-0248

DIRECT TESTIMONY OF

ZANA WOLF
ON BEHALF OF

NEW YORK STATE ELECTRIC & GAS CORPORATION

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Zana Wolf

1 **Q. Ms. Wolf, please state your full name, employer and business address.**

2 A. My name is Zana Wolf. I am employed by URS Corporation. My business address is
3 437 High Street, Burlington, NJ 08016.

4 **Q. In what capacity are you employed?**

5 A. I am a Senior Architectural Historian for URS' office of Archaeology and Historic
6 Architecture.

7 **Q. Please summarize your education and professional background.**

8 A. I received a Bachelor of Arts in Fine Arts from the University of Pennsylvania and a
9 Master of Science in Historic Preservation from the University of Pennsylvania. I meet
10 the Secretary of the Interior's Professional Qualification Standards for Architectural
11 History.

12 I have 12 years of professional experience in architectural history and cultural resources
13 consulting. I have over 5 years of experience with architectural history consulting on
14 utility projects. My work has involved architectural history research and surveys as they
15 pertain to the proposed transmission lines and pipelines. During these projects, I identify
16 National Register eligible and listed resources, and determine if the proposed project has
17 the potential to affect these historic resources.

18 **Q. Please describe your role in the Columbia County Transmission Project.**

19 A. For the Columbia County Transmission Project, I was involved in a reconnaissance level
20 architectural history survey. Through this effort, our architectural history team completed
21 preliminary survey and National Register eligibility assessments for historic buildings
22 that were within the viewshed area of the proposed transmission project.

New York State Electric & Gas Corporation - Article VII Application (Electric Facility)

Zana Wolf

1

2 **Q. What portions of the Application does your testimony support?**

3 A. My testimony supports the portions of the application concerning the architectural history
4 survey.

5 **Q. Does this conclude your testimony at this time?**

6 A. Yes.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

Information Request L

As required by §86.7, Exhibit 6 provides a statement and brief analysis of economic effects: Provide: clarification as to whether NYSEG will seek easements for ROW or it will negotiate for purchasing fee-owned ROW. This issue should be clarified separately for both the NYSEG and National Grid portions of the facility, as appropriate. Furthermore, the applicant should specify: (1) any restrictions on land uses for ROW to be acquired; (2) setback provisions that may apply for safe clearances and how they may affect land use; (3) analysis of effects on electric transmission ROW on property valuation generally.

Response

NYSEG typically seeks easements for right-of-way ("ROW") in the first instance. In some cases, NYSEG will purchase ROW in fee depending on the particular circumstances. NYSEG intends to employ this strategy for both Circuit 726 and the extension of the National Grid Trunk #15.

1. NYSEG includes language in its standard ROW easement agreement that generally restricts the erection of structures that would interfere with the safe operation of NYSEG's facilities and/or endanger the public. Beyond that, the language does not unduly restrict the use of the property by the owner. It specifically allows for cultivation of land and other uses.

The easement agreement requires that the property owner maintain a safe distance from the transmission line conductors as established by National Electric Safety Code ("NESC"). NYSEG designs its transmission lines in accordance with the NESC current edition. The code specifies safety clearances that need to be applied in specific situations including, *inter alia*: roads, streets and other areas subject to truck traffic; driveways, parking lots and alleys; other areas traversed by vehicles, such as cultivated, grazing, forest and orchard lands, industrial sites, commercial sites, etc. Thus, the design accommodates property owner's current use of the land to the extent practicable.

For clarity and convenience to the property owner, NYSEG notes on the easement agreement the applicable distance that shall be maintained from the aerial wires.

NYSEG's standard ROW easement agreement template is included as Attachment L.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

2. NYSEG does not require any setback beyond what is covered by the easement agreement.
3. NYSEG has not conducted independent market research on the effects of electric transmission ROW on property values. NYSEG searched for studies on this subject and found, in the Journal of Real Estate Literature (Volume 18, Number 2, 2010) an article entitled "The Effects of Electric Transmission Lines on Property Values: A Literature Review." The article presents a review of empirical studies on the effects of electric transmission lines on property values.

The article reviews three types of studies:

- Survey-based studies of opinions and perceptions concerning the impacts of transmission lines, some of which studies also analyze sales prices.
- Empirical studies of sales price effects using multiple regression analysis or other closely related statistical techniques.
- A mix of study types, including paired sales analyses, case studies, and sale/resale analyses.

The survey based studies showed that most homeowners were not averse to living in proximity to transmission lines, but that the attitudes of realtors were more negative than the attitudes of homeowners. One study found that while half of those surveyed considered transmission lines an eyesore, most said they have no effect on sales price.

According to the authors, the statistical price analyses represent the actual behavior of the real estate market as revealed in transactional data. One of these studies, which involved sales of farm land, found that the relationship of land value to the number of power line structures was not statistically significant. To further examine the effects of power lines and easements, very similar parcels, with the main difference being that one had a power line and the other did not, were paired and analyzed. The lines did not appear to negatively affect land value. Another study concluded that power lines do not have an effect on market value as a whole, but said that when determining fair compensation for property taken, several components of loss must be identified, such as rights of ownership lost and increased operating costs. One study analyzed the impact of double-circuit steel tower lines and found that there was an approximately 6% negative impact on properties between 50 and 200 feet from the line, but that lines seemed to have no impact on at distances beyond 200 feet. A 1991 analysis of the impact of a 138 kV transmission line on vacant recreational land using multiple

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

regression techniques indicated no statistically significant relationship between sales price and proximity to a power line easement.

The third category of study the article reviews is sales price analyses using sale and resale analysis, average sales price per square foot comparisons, case studies and paired sales analysis. The conclusions were similar to those in the studies that used regression analysis. One study frequently cited in the article concluded that the value of residential property is not significantly affected by proximity to a power line. Although negative attitudes toward these lines do exist, market evidence shows that properties near power lines are readily salable on competitive market terms.

The authors of the article conclude that the studies they reviewed, which were conducted between 1964 and 2009, generally pointed to small or no effects on sales prices due to the presence of electric transmission lines. Some studies found an effect, but this effect generally dissipated with time and distance. The effects that were found ranged from approximately 2% to 9%. Most studies found no effect and in some cases a premium was observed.

NEW YORK STATE ELECTRIC & GAS CORPORATION

Case12-T-0248 - Application of New York State Electric & Gas Corporation for a Certificate of Environmental Compatibility and Public Need for the Construction of the "Columbia County Transmission Project," Approximately 11.1 Miles of 115 Kilovolt Transmission Lines and related facilities in the Towns of Chatham, Ghent, and Stockport, in Columbia County.

Response to June 22, 2012 Appendix A Information Requests

This page left intentionally blank.