

Visibility Analysis

100 Pocono Road
Brookfield, Connecticut

Prepared For:

**Homeland Towers LLC
22 Shelter Rock Lane
Building C
Danbury, CT 06810**

Prepared By:

**All-Points TECHNOLOGY Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06141**

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Project Introduction

Homeland Towers is considering the development of a new wireless communications facility (“Facility”) at 100 Pocono Road in Brookfield, Connecticut (the “Property”). At the request of Homeland Towers, All-Points Technology Corporation, P.C. (“APT”) prepared this Visibility Analysis to evaluate the potential visual impacts associated with the proposed Facility from within a two-mile radius (the “Study Area”). Parts of the neighboring municipalities of New Fairfield and Danbury are located in the western portion of the Study Area.

Site Description and Setting

The approximately 43.28-acre Property is located west of Pocono Road and east of State Route 7 in Brookfield Center. The Property is developed with the Brookfield Municipal Center complex. The municipal complex includes the town hall, police department, fire department, and senior center buildings and various athletic fields, playgrounds, residential yard refuse center, and supporting infrastructure.

The area proposed for the Facility (the “Site”) is located in the southwestern portion of the Property, in a portion of the refuse center area, at an approximate ground elevation of 337 feet Above Mean Sea Level (“AMSL”). The proposed Facility would include a 150-foot tall steel monopole surrounded by a 62-foot by 75-foot, gravel base equipment compound. Cellco Partnership d/b/a Verizon Wireless would utilize the upper portion of the monopole by affixing an antenna platform at a centerline height of 146 feet above ground level (“AGL”). The Town of Brookfield plans to install three (3) 21-foot tall whip antennas and one (1) microwave dish mounted on a four (4) foot extension at the top of the monopole, one (1) 21-foot tall whip antenna mounted at 75 feet AGL, and one (1) microwave dish mounted at 60’ AGL.

Land use within the immediate vicinity of the Property is primarily a mix of industrial and commercial development to the south, west (along Federal Road aka Route 202) and northwest; with residential development occurring to the north (beyond Silvermine Road), east (across a railroad corridor), and farther south. An electrical transmission corridor extends south to north immediately beyond Route 7 followed by a large expanse of undeveloped wooded land bordering the Still River.

The topography within the Study Area is characterized as generally by gradual to steep rolling hills and valleys; ground elevations range from approximately 200 feet AMSL to 730 feet AMSL. The tree cover within the Study Area (consisting of mixed deciduous hardwoods with interspersed stands of conifers) occupies approximately 5,735 acres of the 8,042-acre study area (±71%).

Methodology

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of potential visibility throughout the entire Study Area including private properties and other areas inaccessible for direct observations. The in-field analyses included a balloon float and reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory visible and nonvisible locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

Computer modeling tools were used to predict those areas where at least a portion of the Facility is estimated to be visible including TerrSet, an image analysis program developed by Clark Labs at Clark University. Project- and Study Area-specific data were incorporated into the computer model, including the site location, its ground elevation and the proposed Facility height, as well as the surrounding topography and existing vegetation, which are the primary features that can block direct lines of sight.

Information used in the model included lidar¹-based digital elevation data and customized land use data layers developed specifically for this analysis. Lidar is a remote-sensing technology that develops elevation data in meters by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the returns can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," or "building." The system is also designed to capture many more data points than older radar-based systems. Thus, lidar-based digital elevation models ("DEM"s) have a much finer resolution and can also identify the different features of the landscape at the time that it was captured.

Viewshed analysis using lidar data provide a much more detailed view of the potential obstacles (especially trees and buildings), and therefore the viewshed modeling produces results with many smaller areas of visibility than those produced by using radar-based DEMs. Its precision makes lidar a superior source of data, but at present it is only available for limited areas of the state. The viewshed results are also checked against the most current aerial photographs in case significant changes (a new housing development, for example) have occurred since the time the lidar data was captured.

The lidar-based DEM created for this analysis represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in the years 2007 through 2012 and has a horizontal resolution of approximately two (2) feet. In addition, multiple land use data layers were created from the Natural Resources Conservation Service (through the USDA) aerial

¹ Lidar (a word invented to mean "light radar") may also be referred to as LiDAR, an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar, but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

photography (1-meter resolution, flown in 2012) using IDRISI image processing tools. The IDRISI tools develops light reflective classes defined by statistical analysis of individual pixels, which are then grouped based on common reflective values such that distinctions can be made automatically between deciduous and coniferous tree species, as well as grassland, impervious surface areas, surface water and other distinct land use features.

With these data inputs, the model is then queried to determine where the top of the Facility can be seen from any point(s) within the Study Area, given the intervening existing topography and vegetation. The results of the preliminary analysis are depicted on the attached maps and are intended to provide a representation of those areas where portions of the Facility may potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of 5 feet above the ground and the combination of intervening topography and tree canopy (year-round) and tree trunks (seasonally, when the leaves are off the deciduous trees). The shaded areas of predicted visibility shown on the map denote locations from within the Study Area which the proposed Facility may potentially be visible year-round (in yellow) above the tree canopy and/or seasonally, through the trees (during “leaf-off” conditions; depicted in orange). The Facility however may not necessarily be visible from all locations within those shaded areas. It is important to note that the computer model cannot account for mass density, the height, diameter and branching variability of the trees, or the degradation of views that occur with distance. In addition, each point – or pixel - represents about one square meter in area, and thus is not predicting visibility from all viewpoints through all possible obstacles. Although large portions of the predicted viewshed may theoretically offer visibility of the Facility, because of these unavoidable limitations the quality of those views may not be sufficient for the human eye to recognize the tower or discriminate it from other surrounding objects. Visibility also varies seasonally with increased, albeit obstructed, views occurring during “leaf-off” conditions. Beyond the density of woodlands found within the given Study Area, each individual tree has its own unique trunk, pole timber and branching pattern characteristics that provide varying degrees of screening in leafless conditions which cannot be precisely modeled.

Once the data layers were entered, image processing tools were applied and overlaid onto USGS topographic base maps and aerial photographs to achieve an estimate of locations where the Facility might be visible. Additional data was reviewed and incorporated into the visibility analysis, including protected private and public open space, parks, recreational facilities, hiking trails, schools, and historic districts. The Still River Linear Park trail system is located approximately 600 feet west of the Site, beyond Federal Road; this system extends northward, crossing Route 7 and Silvermine Road. The William Gurski Open Space trails are located approximately one mile to the northeast. Based on a review of publicly-available information, no designated state scenic roads exist within the Study Area.

Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a balloon float, vehicular and pedestrian reconnaissance, and photo-documentation.

Balloon Float and Field Reconnaissance

A balloon float and field reconnaissance were conducted July 13, 2015 to evaluate the visibility associated with the proposed Facility and to obtain photographs for use in this report. The balloon float consisted of raising an approximately four-foot diameter, red helium-filled balloon tethered to a string height of 150 feet

above ground level (“AGL”) at the proposed Facility location. Weather conditions were favorable for the in-field activities, with calm winds (less than 3 miles per hour) and partly cloudy skies. Once the balloon was secured, APT conducted a Study Area reconnaissance by driving along the local and State roads and other publicly accessible locations to document and inventory where the balloon could be seen above/through the tree canopy. Visual observations from the reconnaissance were also used to evaluate the results of the preliminary visibility mapping and identify any discrepancies in the initial modeling.

Photographic Documentation and Simulations

During the balloon float and field reconnaissance, APT drove the public roads within the Study Area and recorded observations, including photo-documentation, of those areas where the balloon was and was not visible. Photographs were obtained from several vantage points to document the views of a proposed Facility. The geographic coordinates of the camera’s position at each photo location were logged using global positioning system (“GPS”) technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter (“mm”) zoom lens, with the lens set to 50 mm.

“The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm.”²

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the balloon float, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over-predict visibility. Once the additional data was integrated into the model, APT re-calculated the visibility of the proposed Facility from within the Study Area to assist in producing the final viewshed map.

Photographic Simulations

One (1) photographic simulation was generated to portray a scaled rendering of the proposed Facility from where it will be visible on a year-round basis. Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the site area and Facility were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs³.

For presentation purposes in this report, the photographs were taken with a 50 mm focal length and produced in an approximate 7-inch by 10.5-inch format. When viewing in this format size, we believe it is important to

² Warren, Bruce. Photography, West Publishing Company, Eagan, MN, c. 1993, (page 70).

³ As a final step, the accuracy and scale of select simulations are tested against photographs of similar existing facilities with recorded camera position, focal length, photo location, and tower location.

provide the largest representational image while maintaining an accurate relation of sizes between objects within the frame of the photograph.

Photo-documentation of the balloon float and the photo-simulation of the proposed Facility are presented in the attachment at the end of this report. The balloon float photos are intended to provide visual reference points for the approximate height and location of the proposed Facility relative to the scene. The photo-simulation is intended to provide the reader with a general understanding of the different views that might be achieved of the Facility.

Photograph Locations

The table below summarizes characteristics of the photographs and simulations presented in the attachment to this report including a description of each location, view orientation, the distance from where the photo was taken relative to the proposed Facility and the general characteristics of that view. The photo locations are depicted on the visibility analysis maps provided as attachments to this report.

View	Location	Orientation	Distance to Site	View Characteristics
1	Elbow Hill Road	Southeast	±0.69 Mile	Year-round
2	Silvermine Road	Southeast	±0.62 Mile	Year-round
3	Silvermine Road	Southeast	±0.46 Mile	Year-round
4	Dean Road	Southeast	±0.41 Mile	Year-round
5	Brookfield Police Department	Southeast	±0.32 Mile	Year-round
6	Brookfield Parks and Recreation	Southeast	±0.25 Mile	Year-round
7	Brookfield Parks and Recreation	Southeast	±0.16 Mile	Year-round
8	Pocono Road	Southwest	±0.20 Mile	Year-round
9	Pocono Road	Southwest	±0.16 Mile	Year-round
10	Pocono Road	Southwest	±0.16 Mile	Not Visible
11	Pocono Road	Southeast	±0.12 Mile	Year-round
12	Pocono Road	Southwest	±0.09 Mile	Year-round
13	Junction Road	Northwest	±0.49 Mile	Year-round
14	Junction Road	Northeast	±0.54 Mile	Year-round
15	Junction Road	Northeast	±0.58 Mile	Year-round
16	Federal Road	Northeast	±0.61 Mile	Year-round
17	Federal Road	Northeast	±0.61 Mile	Not Visible
18	Federal Road	Northeast	±0.54 Mile	Year-round
19	Central Cemetery	Northeast	±0.57 Mile	Year-round
20	Old Oak Drive	East	±0.62 Mile	Year-round
21	Federal Road	Southeast	±0.73 Mile	Not Visible
22	Federal Road	Southeast	±0.80 Mile	Year-round
23	Federal Road	Southeast	±0.83 Mile	Year-round

Visibility Analysis Results

Results of this analysis are graphically displayed on the viewshed maps provided in the attachment at the end of this report. Areas from where the proposed Facility would be visible year-round comprise a total of approximately 348 acres and are primarily limited to the Property, locations to the east and north along Pocono Road and Silvermine Road, and to the south and west on Junction Road and Federal Road.

When the leaves are off the trees, seasonal views through intervening tree trunks and branches are anticipated to occur over some locations within an area of 752± additional acres. This estimate is based solely on computer modeling (APT did not have access to private properties for confirmation) which over predicts seasonal visibility. Therefore, although the “footprint” of seasonal visibility depicted on the viewshed maps covers several acres, views will not be achieved from all locations within those areas. The majority of potential seasonal views would be obstructed during leaf-off conditions by intervening tree trunks and branches or structures.

Views of the Facility from several locations on the Property would be unobstructed such that the majority of the tower would be visible. Other near-range views (within less than 0.25 mile) of the Facility would occur primarily along Pocono Road and offer similar profiles. Beyond approximately 0.35 mile from the Facility, views of the whip antennas and microwave dish will not be readily apparent.

Views of the Facility may be achieved from portions of the Still River Linear Park trail system. Areas immediately west of the Property are heavily wooded and any views from this portion of the trail would be limited to seasonal times of the year when the leaves are off the trees. Farther north along the trail, as it crosses Route 7 and Silvermine Road, year-round views of the top of the Facility may occur in some locations.

Proximity to Schools And Commercial Child Day Care Centers

No views of the proposed Facility would occur at schools or commercial child day care centers. The nearest school, Brookfield High School is located approximately 1.16 miles to the northeast. The nearest commercial child day care center, Prince of Peace Pre-School, is located approximately 0.57 mile to the south.

Limitations

The viewshed maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The simulations provide a representation of the Facility under similar settings as those encountered during the balloon float and reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the balloon float included partly cloudy skies and the photo-simulation presented in this report provides an accurate portrayal of the Facility during comparable conditions.

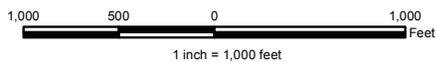
ATTACHMENTS



PHOTO LOG

Legend

- Site
- Year-Round Visibility
- Not Visible





DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	ELBOW HILL ROAD	SOUTHEAST	+/- 0.69 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	ELBOW HILL ROAD	SOUTHEAST	+/- 0.69 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	SILVERMINE ROAD	SOUTHEAST	+/- 0.62 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	SILVERMINE ROAD	SOUTHEAST	+/- 0.62 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	SILVERMINE ROAD	SOUTHEAST	+/- 0.46 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	SILVERMINE ROAD	SOUTHEAST	+/- 0.46 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	DEAN ROAD	SOUTHEAST	+/- 0.41 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	DEAN ROAD	SOUTHEAST	+/- 0.41 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	BROOKFIELD POLICE DEPARTMENT	SOUTHEAST	+/- 0.32 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	BROOKFIELD POLICE DEPARTMENT	SOUTHEAST	+/- 0.32 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	BROOKFIELD PARKS AND RECREATION	SOUTHEAST	+/- 0.25 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	BROOKFIELD PARKS AND RECREATION	SOUTHEAST	+/- 0.25 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	BROOKFIELD PARKS AND RECREATION	SOUTHEAST	+/- 0.16 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	BROOKFIELD PARKS AND RECREATION	SOUTHEAST	+/- 0.16 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	POCONO ROAD	SOUTHWEST	+/- 0.20 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	POCONO ROAD	SOUTHWEST	+/- 0.20 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	POCONO ROAD	SOUTHWEST	+/- 0.16 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	POCONO ROAD	SOUTHWEST	+/- 0.16 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	POCONO ROAD	SOUTHWEST	+/- 0.16 MILE	NOT VISIBLE



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	POCONO ROAD	SOUTHWEST	+/- 0.12 MILE	YEAR ROUND



SIMULATION

PHOTO

11

LOCATION

POCONO ROAD

ORIENTATION

SOUTHWEST

DISTANCE TO SITE

+/- 0.12 MILE

VISIBILITY

YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	POCONO ROAD	SOUTHWEST	+/- 0.09 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	POCONO ROAD	SOUTHWEST	+/- 0.09 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	JUNCTION ROAD	NORTHWEST	+/- 0.49 MILE	YEAR ROUND



SIMULATION

PHOTO

13

LOCATION

JUNCTION ROAD

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.49 MILE

VISIBILITY

YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	JUNCTION ROAD	NORTHEAST	+/- 0.54 MILE	YEAR ROUND



SIMULATION

PHOTO

14

LOCATION

JUNCTION ROAD

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.54 MILE

VISIBILITY

YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	JUNCTION ROAD	NORTHEAST	+/- 0.58 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	JUNCTION ROAD	NORTHEAST	+/- 0.58 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	FEDERAL ROAD	NORTHEAST	+/- 0.61 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	FEDERAL ROAD	NORTHEAST	+/- 0.61 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	FEDERAL ROAD	NORTHEAST	+/- 0.61 MILE	NOT VISIBLE



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	FEDERAL ROAD	NORTHEAST	+/- 0.54 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	FEDERAL ROAD	NORTHEAST	+/- 0.54 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	CENTRAL CEMETERY	NORTHEAST	+/- 0.57 MILE	YEAR ROUND



SIMULATION

PHOTO

19

LOCATION

CENTRAL CEMETERY

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 0.57 MILE

VISIBILITY

YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	OLD OAK DRIVE	EAST	+/- 0.62 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	OLD OAK DRIVE	EAST	+/- 0.62 MILE	YEAR ROUND



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	FEDERAL ROAD	SOUTHEAST	+/- 0.73 MILE	NOT VISIBLE



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	FEDERAL ROAD	SOUTHEAST	+/- 0.80 MILE	YEAR ROUND



SIMULATION

PHOTO

22

LOCATION

FEDERAL ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.80 MILE

VISIBILITY

YEAR ROUND



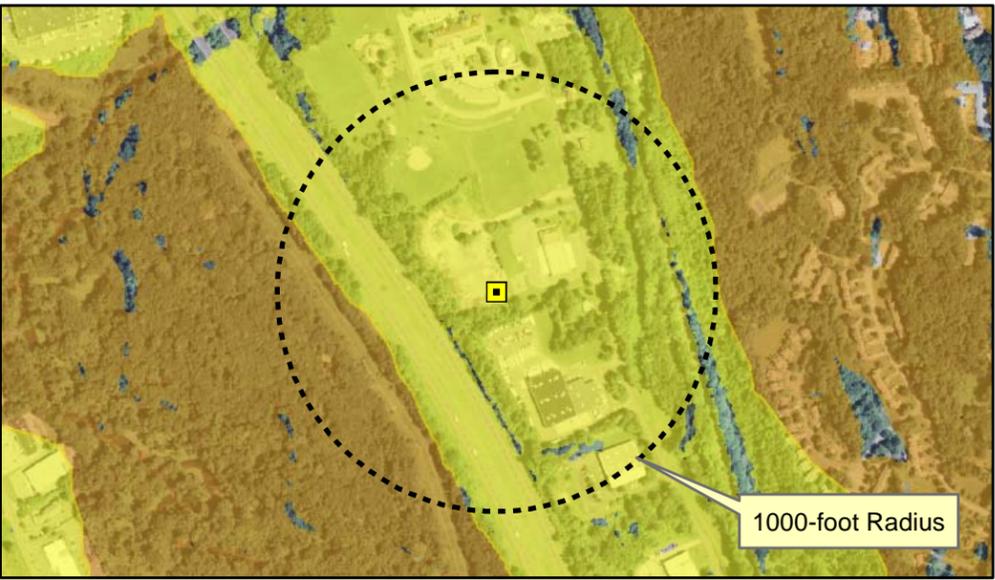
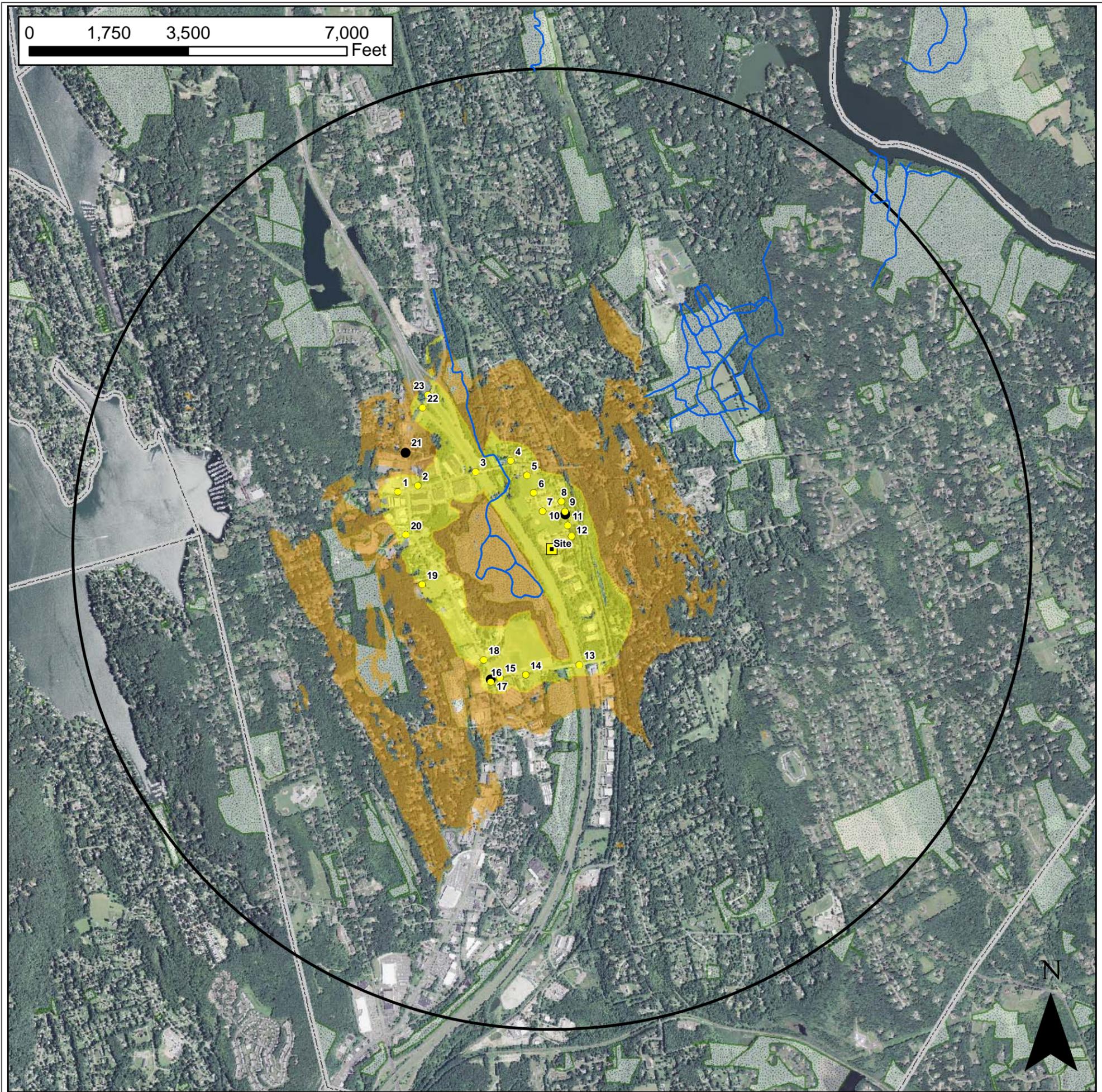
DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	FEDERAL ROAD	SOUTHEAST	+/- 0.83 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	FEDERAL ROAD	SOUTHEAST	+/- 0.83 MILE	YEAR ROUND



Viewshed Map – Aerial Base
 Proposed Wireless Telecommunications Facility
 Brookfield
 100 Pocono Road, Brookfield, CT

Proposed facility height is 150 feet AGL. Study area encompasses a two-mile radius and includes 8,042 acres of land.

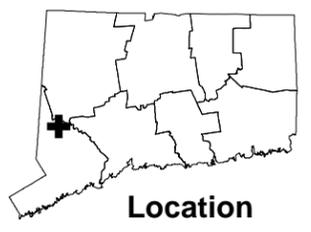
Map compiled 11/20/2015

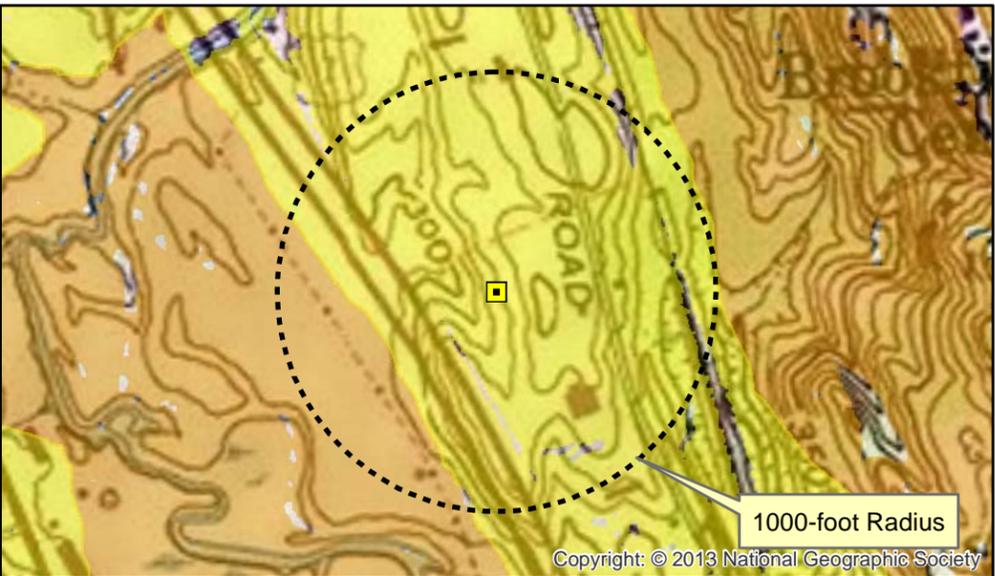
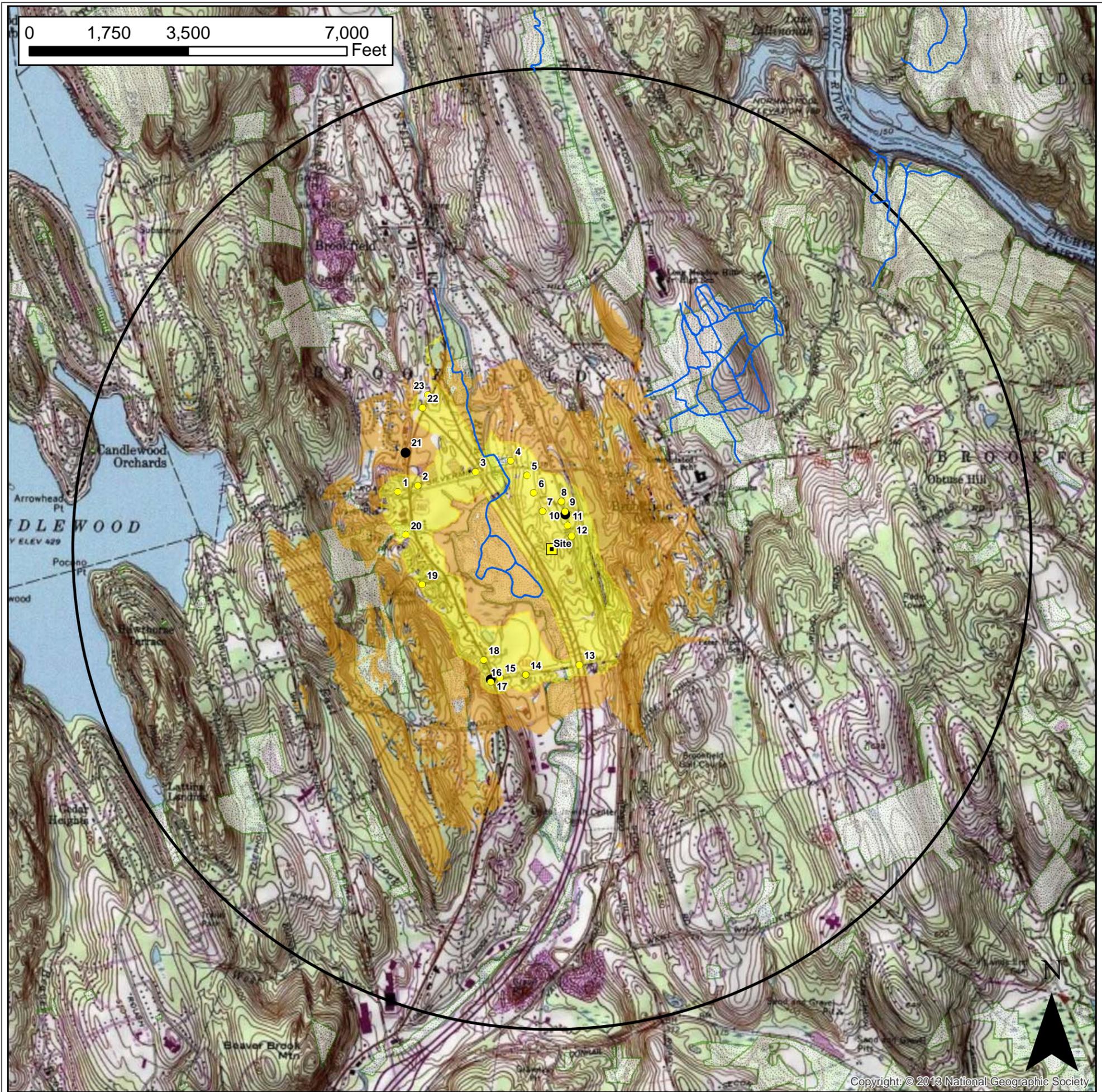
Map information field verified by APT on 7/13/2015.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

-  Proposed Tower
- Photo Locations**
-  Not Visible
-  Year-round Views
-  Trails
-  Predicted Seasonal Visibility (752 Acres)
-  Predicted Year-Round Visibility (348 Acres)
-  Towns
-  2-Mile Study Area
-  Open Space





Viewshed Map – Topo Base
 Proposed Wireless Telecommunications Facility
 Brookfield
 100 Pocono Road, Brookfield, CT

Proposed facility height is 150 feet AGL.
 Study area encompasses a two-mile radius and
 includes 8,042 acres of land.

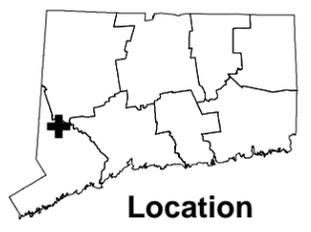
Map compiled 11/20/2015

Map information field verified by APT on 7/13/2015.

Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower
- Photo Locations**
- Not Visible
- Year-round Views
- Trails
- Predicted Seasonal Visibility (752 Acres)
- Predicted Year-Round Visibility (348 Acres)
- Towns
- 2-Mile Study Area
- Open Space



DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS

100 Pocono Road
Brookfield, Connecticut

Physical Geography / Background Data

Center for Land Use Education and Research, University of Connecticut (<http://clear.uconn.edu>)

*Land Use / Land Cover (2006)

*Coniferous and Deciduous Forest (2006)

^LiDAR data – topography (2007-2012)

United States Geological Survey

*USGS topographic quadrangle maps – Danbury, Newtown (1984)

National Resource Conservation Service

*NAIP aerial photography (2012)

Department of Transportation data

^State Scenic Highways (updated monthly)

Heritage Consultants

^Municipal Scenic Roads

Cultural Resources

Heritage Consultants

^National Register

^ Local Survey Data

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP)

*DEEP Property (May 2007)

*Federal Open Space (1997)

*Municipal and Private Open Space (1997)

*DEEP Boat Launches (1994)

Connecticut Forest & Parks Association

^Connecticut Walk Books East –

The Guide to the Blue-Blazed Hiking Trails of Western Connecticut, 19th Edition, 2006.

Other

^ConnDOT Scenic Strips (based on Department of Transportation data)

*Available to the public in GIS-compatible format (some require fees).

^ Data not available to general public in GIS format. Reviewed independently and, where applicable, GIS data later prepared specifically for this Study Area.

NOTE Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

LIMITATIONS

The visibility analysis map(s) presented in this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, tree canopy heights and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The photo-simulations in this report are provided for visual representation only. Actual visibility depends on various environmental conditions, including (but not necessarily limited to) weather, season, time of day, and viewer location.

