

Tab 8

ATTACHMENT 8

Visibility Analysis

As set forth in detail in the enclosed Visual Assessment & Photo-Simulations report, areas where the tower site would be visible comprise approximately 35 acres of year-round visibility and approximately 10 acres of seasonal visibility. The combination of topography and mature trees in the immediate area surrounding the tower site minimize the extent of visibility beyond these areas. The year-round visibility beyond the immediacy of the tower site would be limited to locations at the northern portion of the Soundview Lane cul-de-sac, portions of the adjacent St. Luke's School campus and the John D. Milne Lake. Year-round views from the John D. Milne Lake comprise approximately 25 acres (over half of the year-round predicted visibility), primarily over open water.

Seasonal views ("leaf-off") increase the visibility of the tower site and will primarily occur along North Wilton Road near St. Luke's School. Views from nearby residential properties during leaf-off conditions should not increase substantially beyond the views depicted in the attached visual assessment.

Visual Assessment & Photo-Simulations

**NEW CANAAN NORTHEAST:
CT027
183 SOUNDVIEW LANE
NEW CANAAN, CT 06840**

Prepared For:

**Homeland Towers
9 Harmony Street
2nd Floor
Danbury, CT 06810**

Prepared By:

**All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06419**

May 2019

VISUAL ASSESSMENT REPORT

Homeland Towers is seeking approval for the development of a new wireless communications facility (“Facility”) at 183 Soundview Lane in New Canaan, Connecticut (“Host Property”). At the request of Homeland Towers, All-Points Technology Corporation, P.C. (“APT”) completed this assessment to evaluate the potential visual effects of the proposed Facility from within a two-mile radius (the “Study Area”)

Project Undertaking

Homeland Towers plans to install the proposed Facility in the northwestern corner of the Host Property (“Site”). The Facility would include a ± 85 -foot tall monopole designed to resemble a pine tree (“monopine”) at an approximate ground elevation of 500 feet Above Mean Sea Level (“AMSL”). Faux branches would extend approximately five feet above the top of the pole to provide a conical top, bringing the total Facility height to ± 90 feet above ground level (“AGL”). Antenna arrays would be concealed within faux branching affixed to the monopole. The faux branches would extend to within ± 20 feet of the ground surface. The monopine would be built within an approximate 23.5-foot by 75-foot gravel base, fenced equipment compound. The Facility has been designed to accommodate multiple service providers. Access to the Site would be gained from Soundview Lane over a new, 12-foot wide gravel base road.

Project Setting

The Host Property is located east of Soundview Lane at the end of the cul-de-sac. Generally, land use within the immediate vicinity of the Site is residential, with the St. Luke’s School immediately to the north. Single-family residentially-developed properties are located east, west and south of the Host Property.

The topography throughout the Study Area is characterized as rolling hills. Ground elevations range from approximately 275 feet AMSL to 550 feet AMSL. The tree cover within the Study Area (consisting primarily of mixed deciduous hardwoods with interspersed stands of conifers) occupies approximately $\pm 4,600$ acres of the 8,042-acre Study Area ($\pm 57\%$).

Methodology

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

Preliminary Computer Modeling

To conduct this assessment, a predictive computer model was developed specifically for this project using ESRI's ArcMap GIS¹ software and available GIS data. The predictive model incorporates Project and Study Area-specific data, including the site location, its ground elevation and the proposed Facility height, as well as the surrounding topography, existing vegetation, and structures (the primary features that can block direct lines of sight).

A digital surface model ("DSM"), capturing both the natural and built features on the Earth's surface, was generated for the extent of the Study Area utilizing State of Connecticut 2016 LiDAR² LAS³ data points. LiDAR is a remote-sensing technology that develops elevation data 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." Derived from the 2016 LiDAR data, the LAS datasets contain the corresponding elevation point data and return classification values. The Study Area DSM incorporates the first return LAS dataset values that are associated with the highest feature in the landscape, typically a treetop, top of a building, and/or the highest point of other tall structures.

Once the DSM was generated, ESRI's Viewshed Tool was utilized to identify locations within the Study Area where the proposed Facility may be visible. ESRI's Viewshed Tool predicts visibility by identifying those cells⁴ within the DSM that can be seen from an observer location (the proposed Facility). Cells where visibility was indicated were extracted and converted from a raster dataset to a polygon feature which was then overlaid onto an aerial photograph and topographic base map. Since the DSM includes the highest relative feature in the landscape, isolated "visible" cells are often indicated within heavily forested areas (e.g., from the top of the highest tree) or on building rooftops during the initial processing. It is recognized that these areas do not represent typical viewer locations and overstate visibility. As such, the resulting polygon feature is further refined by extracting those areas. The viewshed results are also cross-checked against the most current aerial photographs to assess whether significant changes (a new housing development, for example) have occurred since the time the LiDAR-based LAS datasets were captured.

The results of the preliminary analysis 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 five (5) feet above the ground and the combination of intervening topography, trees and other vegetation, and structures. However, the Facility may not necessarily be visible from all locations within those areas identified by the predictive model, which has limitations. For instance, it is important to note that the computer model cannot account for mass density, tree diameters and branching variability of trees, or the degradation of views that occur with distance. As a result, some areas depicted on the viewshed maps as theoretically offering potential visibility of the Facility may be over-predicted because the quality of those views is not sufficient for the human eye to recognize the Facility or discriminate it from other surrounding or intervening objects.

¹ ArcMap is a Geographic Information System desktop application developed by the Environmental Systems Research Institute for creating maps, performing spatial analysis, and managing geographic data.

² Light Detection and Ranging

³ An LAS file is an industry-standard binary format for storing airborne LiDAR data.

⁴ Each DSM cell size is 1 square meter

Seasonal Visibility

Visibility also varies seasonally with increased, albeit obstructed, views occurring during “leaf-off” conditions. Beyond the variabilities associated with density of woodland stands found within any given Study Area, each individual tree also has its own unique trunk, pole timber and branching patterns that provide varying degrees of screening in leafless conditions which, as introduced above, cannot be precisely modeled. Seasonal visibility is therefore estimated based on a combination of factors including the type, size, and density of trees within a given area; topographic constraints; and other visual obstructions that may be present. Taking into account these considerations, areas depicting seasonal visibility on the viewshed maps are intended to represent locations from where there is a potential for views through intervening trees, as opposed to indicating that leaf-off views will exist from within an entire seasonally-shaded area.

To refine the estimate of seasonal visibility through the trees, forested areas were manually adjusted to eliminate 500-foot wide areas of vegetation surrounding the Facility and perimeters of forested areas with otherwise unimpeded aspects toward the site. This distance, although considered conservative, is based on 20+ years of field experience and observations, and assumes that a person standing within a forested area will not be able to discern an object like the Facility beyond 500 feet. Depending on the density of the intervening tree canopy and understory of the surrounding woodlands, it is assumed that some locations (but not all) within 500 feet could provide visibility of at least a portion of the Facility during “leaf-off” conditions.

Crane Test and Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a crane test, vehicular and pedestrian reconnaissance, and photo-documentation. The crane test and field review were completed on April 17, 2019. The crane test consisted of positioning a crane at the proposed Facility location and extending the crane boom with a brightly-colored flag to the top height of the Facility (± 90 feet AGL). This provided a fixed object unaffected by wind. Due to the density of trees at the proposed Facility location, the crane boom was positioned ± 5 -feet to the north/northwest of the proposed tower centerline. The photographic simulations were generated taking this factor into account and depict the proposed Facility at its correct location.

Once the crane boom 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 boom/flag could be seen above and 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

During the Study Area reconnaissance, APT obtained photo-documentation of representative locations where the boom/flag was visible. At each photo location, the geographic coordinates of the camera’s position 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.⁵ APT typically uses a standard

⁵ The Canon EOS 6D is a full-framed camera which includes a lens receptor of the same size as the film used in 35mm cameras. As such, the images produced are comparable to those taken with a conventional 35mm camera.

focal length of 50mm to present a consistent field of view. On occasion, photos are taken at lower focal lengths to provide a greater depth of field and context to the scene by including surrounding features within the photograph. During this evaluation, photos 3, 11 and 23 were taken at a 24mm focal length.

Photograph Locations

The table on the following page summarizes the photographs and simulations presented in the attachment to this report, and includes a description of each location, view orientation, the distance from where the photo was taken relative to the proposed Facility site, and the general characteristics of the view. The photo locations are depicted on the photolog and viewshed maps provided as attachments to this report.

Photographic Simulations

Photographic simulations were generated to portray scaled renderings of the proposed Facility from five (5) locations presented herein where the Facility may be recognizable above or through the trees. There were an additional four (4) specific locations from where the boom/flag was visible to APT staff during the reconnaissance. However, if constructed, the Facility would not be easily discernable as a tower due to the thickness of the trees in those locations and/or the distance from the Site. As a result, no simulations were prepared for these photographs. These photo locations have been assigned “Crane Visible Through Trees” designations on the photolog and viewshed maps.

Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the site 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 programs, which were ultimately composited and merged with the existing conditions photographs (using Photoshop image editing software). The scale of the subjects in the photograph (the boom/flag) and its corresponding simulation (the Facility) are proportional to their surroundings.

For presentation purposes in this report, the photographs were produced in an approximate 7-inch by 10.5-inch format. When reproducing the images in this format size, we believe it is important to present the largest view while providing key contextual landscape elements (existing development, street signs, utility poles, etc.) so that the viewer can determine the proportionate scale of each object within the scene.

Photo-documentation of the field reconnaissance and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The field reconnaissance photos that include the boom/flag in the view provide visual reference points for the approximate height and location of the proposed Facility relative to the scene.

All simulations were created to represent the proposed Facility height of ± 85 feet AGL, with the faux top extending up an additional ± 5 feet. The photo-simulations are intended to provide the reader with a general understanding of the different view characteristics associated with the Facility from various locations. Photographs were taken from publicly-accessible areas and were chosen to present unobstructed view lines (wherever possible).

View	Location	Orientation	Distance to Site	Visibility
1	Osborn Lane	Northwest	±0.68 Mile	Not Visible
2	Valley Road at Deep Valley Road	West	±0.48 Mile	Not Visible
3	Deep Valley Road**	Northwest	±0.18 Mile	Not Visible
4	Colonial Road*	Southwest	±0.53 Mile	Crane Visible Through Trees
5	Colonial Road	Southwest	±0.58 Mile	Not Visible
6	Colonial Road*	Southwest	±0.60 Mile	Crane Visible Through Trees
7	Colonial Road*	Southwest	±0.58 Mile	Crane Visible Through Trees
8	Valley Road at Colonial Road	Southwest	±0.52 Mile	Not Visible
9	North Wilton Road at Lantern Ridge Road	Southwest	±0.86 Mile	Year Round
10	North Wilton Road	Southwest	±0.57 Mile	Not Visible
11	Cross Ridge Road at North Wilton Road^	South	±0.36 Mile	Not Visible
12	Cross Ridge Road*	Southeast	±0.52 Mile	Crane Visible Through Trees
13	Cross Ridge Road	South	±0.60 Mile	Not Visible
14	Sheridan Drive	Southeast	±0.92 Mile	Not Visible
15	Briscoe Road at Cross Ridge Road	Southeast	±0.73 Mile	Not Visible
16	Briscoe Road	Southeast	±0.36 Mile	Not Visible
17	Briscoe Road	Southeast	±0.32 Mile	Seasonal
18	North Wilton Road	Southeast	± 0.29 Mile	Year Round
19	North Wilton Road	Southeast	± 0.27 Mile	Seasonal
20	Soundview Lane	Northwest	± 0.36 Mile	Not Visible
21	Soundview Lane	Northwest	±0.25 Mile	Not Visible
22	Soundview Lane	North	±0.10 Mile	Not Visible
23	Soundview Lane^	North	±158 Feet	Year Round

**Photo-simulations were not prepared due to heavily obstructed views*

***Photograph was taken at 24 mm focal length but adjusted to 35 mm focal length*

^Photograph was taken at 24 mm focal length

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the field reconnaissance, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over or under-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.

Conclusions

Areas from where the Facility would be visible comprise ± 35 acres of year-round visibility and ± 10 acres of seasonal visibility. Cumulatively, this equals approximately 0.55% of the Study Area. As seen on the visibility maps, the year-round views beyond the immediacy of the Host Property would be limited to locations at the northern terminus of the Soundview Lane cul-de-sac, portions of the adjacent St. Luke's School campus and John D. Milne Lake. Year-round views from John D. Milne Lake comprise ± 25 acres ($\pm 55\%$ of the total year-round predicted visibility), primarily over open water. The combination of topography and presence of mature trees both in the immediate area of the Host Property and throughout much of the Study Area serves to minimize the extent of visibility beyond these areas.

Based on observations made during the field reconnaissance, it is evident that seasonal ("leaf-off") views from North Wilton Road near St. Luke's School will allow increased lines of sight to the Facility. Views from nearby residential properties should not increase substantially beyond the views depicted in the attachment.

Proximity to Schools And Commercial Child Day Care Centers

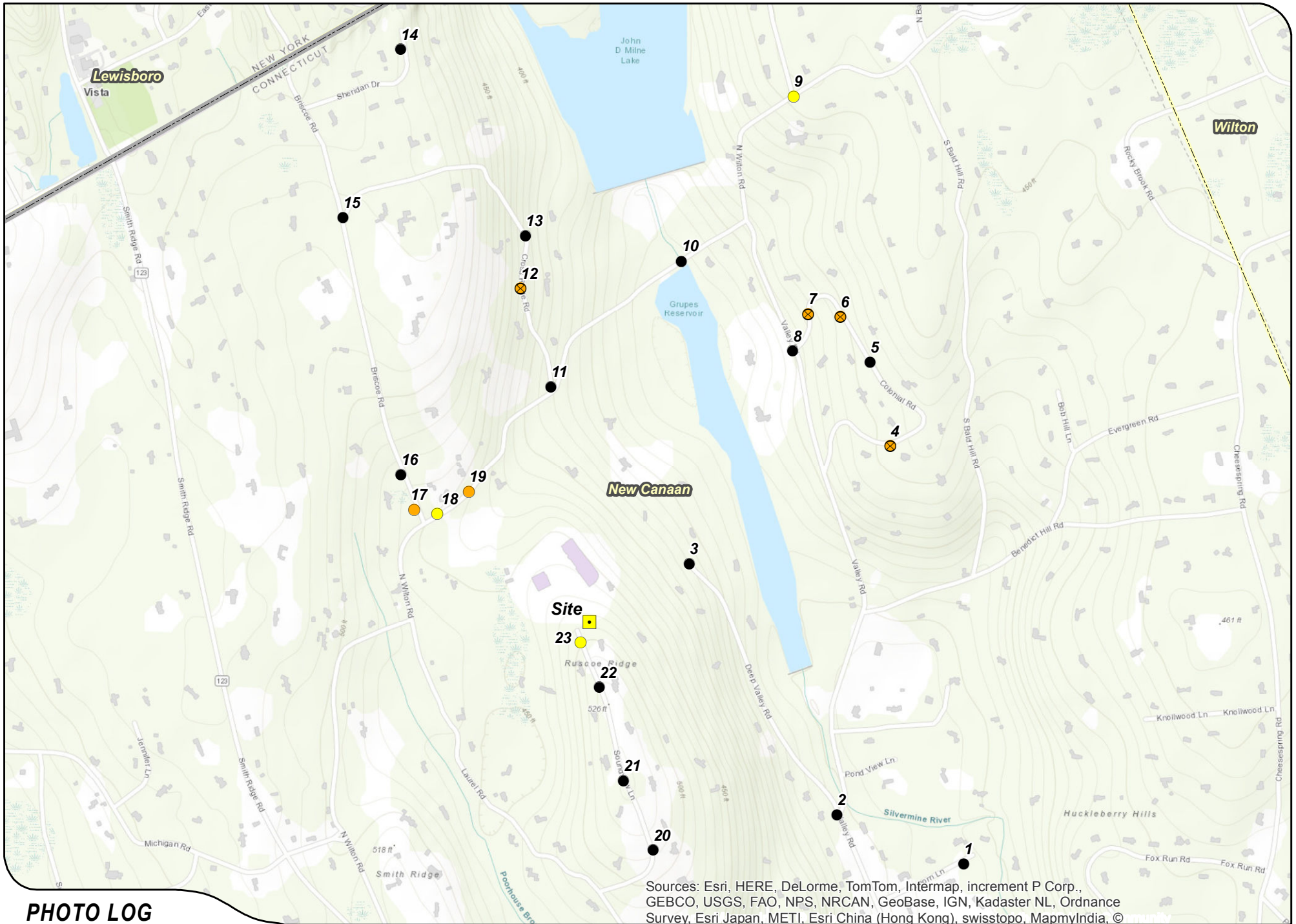
The nearest school building is located ± 250 feet from the Host Property; St. Luke's School at 377 North Wilton Road in New Canaan, abuts the Host Property to the north. Year-round views are anticipated from the St. Luke's School campus, however, APT was not provided access to the campus during the field reconnaissance. There are no commercial child day care centers within 250 feet of the Host Property. The nearest commercial child day care center is Children's Day School of Wilton, located approximately 2.8 miles to the east at 111 Ridgefield Road in Wilton. No views of the Facility are anticipated from the Children's Day School in Wilton.

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. This analysis may not account for all visible locations, as it is based on the combination of computer modeling, incorporating 2016 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 photo-simulations provide a representation of the Facility under similar settings as those encountered during the field review 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 field review included partly cloudy skies.

ATTACHMENTS

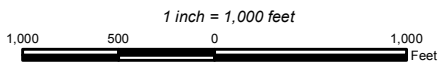


Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©

PHOTO LOG

Legend

- Site
- Visible
- Seasonal
- ⊗ Balloon Visible Through Trees
- Municipal Boundary
- State Boundary





PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	OSBORN LANE	NORTHWEST	+/- 0.68 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	VALLEY ROAD AT DEEP VALLEY ROAD	NORTHWEST	+/- 0.48 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019
35mm Focal Length

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	DEEP VALLEY ROAD	SOUTHWEST	+/- 0.18 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	COLONIAL ROAD	SOUTHWEST	+/- 0.53 MILE	CRANE VISIBLE THROUGH TREES



DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	COLONIAL ROAD	SOUTHWEST	+/- 0.58 MILE	NOT VISIBLE

PHOTOGRAPHED ON 4/17/2019



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	COLONIAL ROAD	SOUTHWEST	+/- 0.60 MILE	CRANE VISIBLE THROUGH TREES



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	COLONIAL ROAD	SOUTHWEST	+/- 0.58 MILE	CRANE VISIBLE THROUGH TREES



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	VALLEY ROAD AT COLONIAL ROAD	SOUTHWEST	+/- 0.52 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	NORTH WILTON ROAD AT LANTERN RIDGE ROAD	SOUTHWEST	+/- 0.86 MILE	YEAR ROUND



SIMULATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	NORTH WILTON ROAD AT LANTERN RIDGE ROAD	SOUTHWEST	+/- 0.86 MILE	YEAR ROUND



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	NORTH WILTON ROAD	SOUTHWEST	+/- 0.57 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019
24mm Focal Length

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	CROSS RIDGE ROAD AT NORTH WILTON ROAD	SOUTH	+/- 0.36 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	CROSS RIDGE ROAD	SOUTHEAST	+/- 0.52 MILE	CRANE VISIBLE THROUGH TREES



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	CROSS RIDGE ROAD	SOUTH	+/- 0.60 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	SHERIDAN DRIVE	SOUTHEAST	+/- 0.92 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	BRISCOE ROAD AT CROSS RIDGE ROAD	SOUTHEAST	+/- 0.73 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	BRISCOE ROAD	SOUTHEAST	+/- 0.36 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	BRISCOE ROAD	SOUTHEAST	+/- 0.32 MILE	SEASONAL



SIMULATION

PHOTO

17

LOCATION

BRISCOE ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.32 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	NORTH WILTON ROAD	SOUTHEAST	+/- 0.29 MILE	YEAR ROUND



SIMULATION

PHOTO

18

LOCATION

NORTH WILTON ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.29 MILE

VISIBILITY

YEAR ROUND



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	NORTH WILTON ROAD	SOUTHEAST	+/- 0.27 MILE	SEASONAL



SIMULATION

PHOTO

19

LOCATION

NORTH WILTON ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.27 MILE

VISIBILITY

SEASONAL



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	SOUNDVIEW LANE	NORTHWEST	+/- 0.36 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	SOUNDVIEW LANE	NORTHWEST	+/- 0.25 MILE	NOT VISIBLE



PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	SOUNDVIEW LANE	NORTH	+/- 0.10 MILE	NOT VISIBLE



24mm Focal Length
PHOTOGRAPHED ON 4/17/2019

DOCUMENTATION

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	SOUNDVIEW LANE	NORTH	+/- 158 FEET	YEAR ROUND



SIMULATION

PHOTO

23

LOCATION

SOUNDVIEW LANE

ORIENTATION

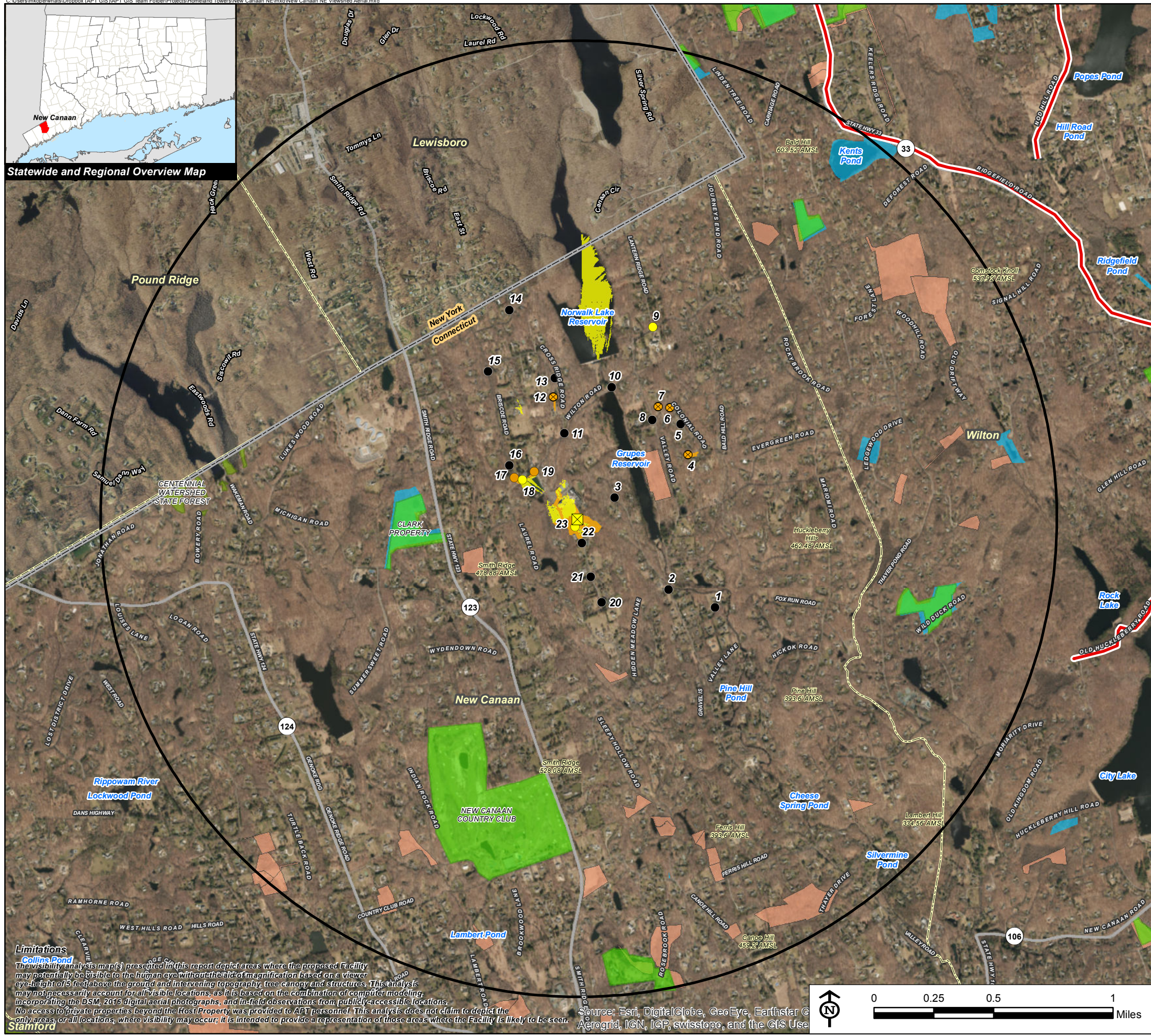
NORTH

DISTANCE TO SITE

+/- 158 FEET

VISIBILITY

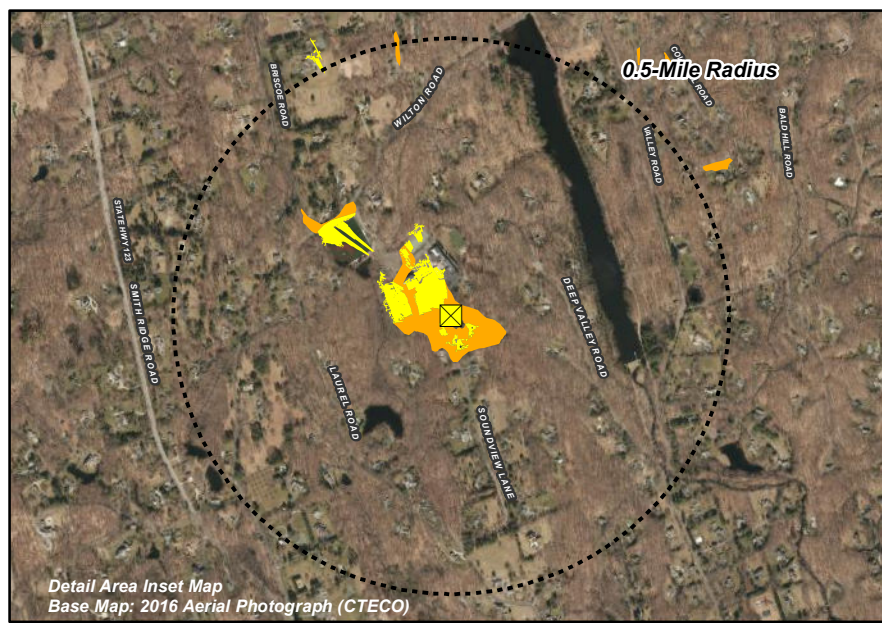
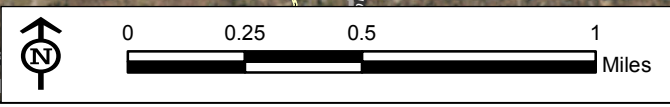
YEAR ROUND



Statewide and Regional Overview Map

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 and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating the DSM, 2016 digital 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.

Source: Esri, DigitalGlobe, GeoEye, Earthstar ©
 Agrogrid, IGN, IGP, swisstopo, and the GIS User



Detail Area Inset Map
 Base Map: 2016 Aerial Photograph (CTECO)

Viewshed Analysis Map

Proposed Wireless Telecommunications Facility
 CT027 - New Canaan Northeast
 183 Soundview Lane
 New Canaan, Connecticut

Proposed facility height is 90 feet AGL.
 Forest canopy height is derived from LiDAR data.
 Study area encompasses a two-mile radius and includes 8,042 acres of land.
 Map information field verified by APT on April 11, 2019
 Base Map Source: ESRI Aerial Imagery
 Map Date: May 2019

- Legend**
- Proposed Site
 - Study Area (2-Mile Radius)
 - Photo Locations (April 17, 2019)
 - Not Visible
 - Balloon Visible Through Trees
 - Seasonal Visibility
 - Year-Round Visibility
 - Predicted Year-Round Visibility (35 Acres)
 - Areas of Potential Seasonal Visibility (10 Acres)
 - State Boundary
 - Municipal Boundary
 - Trail (CT)
 - Scenic Highway (CT)
 - DEEP Boat Launches (CT)
 - Municipal and Private Open Space Property (CT)
 - State Forest/Park (CT)
 - Protected Open Space Property (CT)**
 - Federal
 - Land Trust
 - Municipal
 - Private
 - State

Data Sources:
Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LIDAR LAS data points, using first return values associated with the highest feature in the landscape (such as a treetop or top of building). The DSM captures the natural and built features on the Earth's surface.

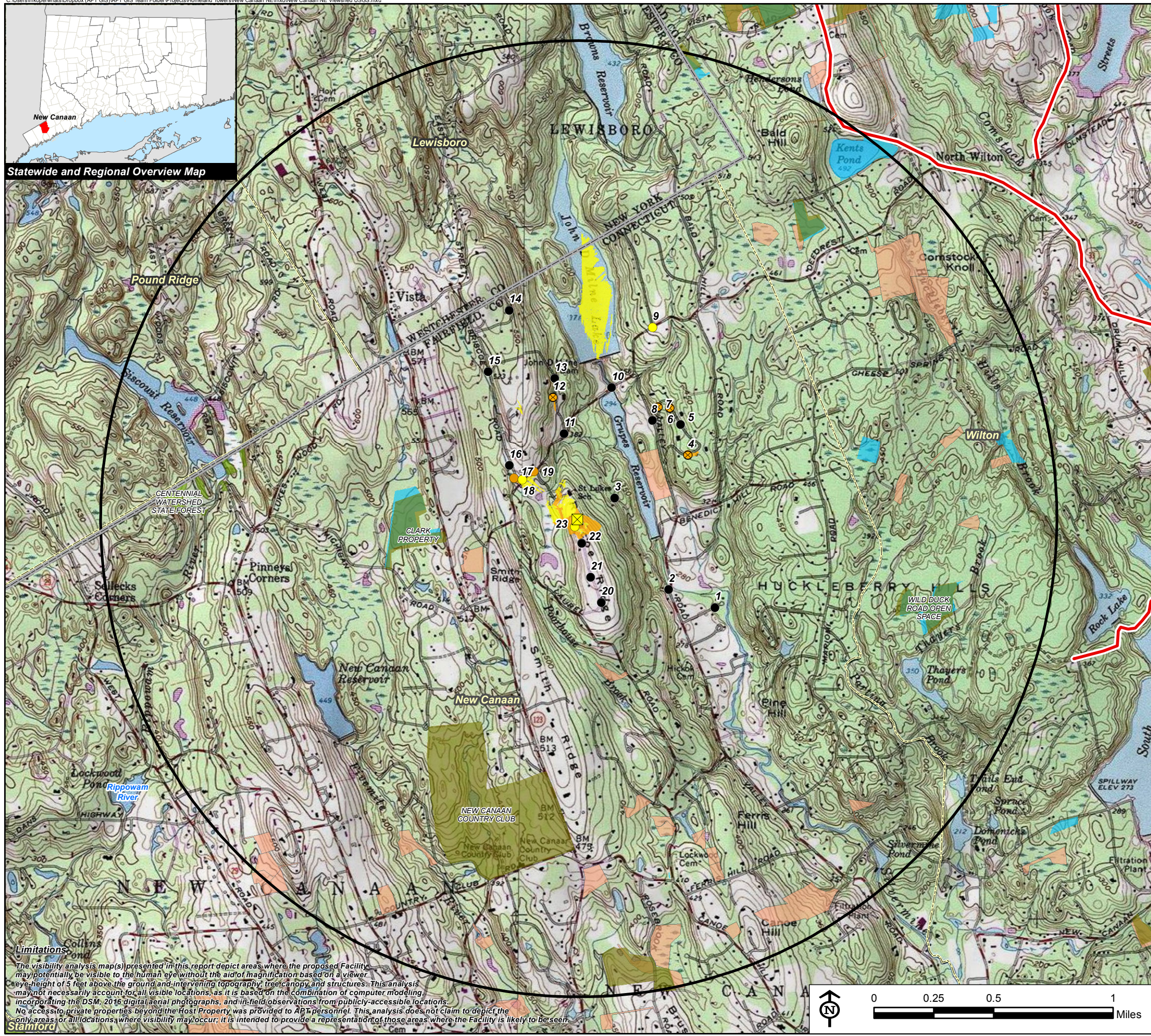
Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

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

Other
 CTDOT Scenic Strips (based on Department of Transportation data)

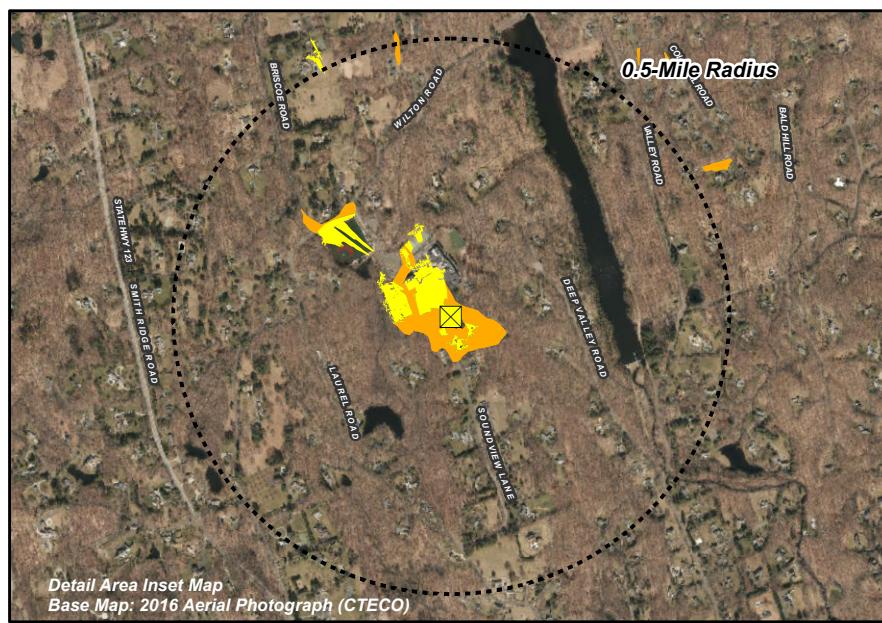
Notes
 **Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.





Statewide and Regional Overview Map

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, and structures. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling incorporating the DSM, 2016 digital 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.



Detail Area Inset Map
 Base Map: 2016 Aerial Photograph (CTECO)

Viewshed Analysis Map

Proposed Wireless Telecommunications Facility
 CT027 - New Canaan Northeast
 183 Soundview Lane
 New Canaan, Connecticut

Proposed facility height is 90 feet AGL.
 Forest canopy height is derived from LiDAR data.
 Study area encompasses a two-mile radius and includes 8,042 acres of land.
 Map information field verified by APT on April 11, 2019
 Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, Pound Ridge, NY-CT (1971) and Norwalk North, CT (1975)
 Map Date: May 2019

- Legend**
- Proposed Site
 - Study Area (2-Mile Radius)
 - Photo Locations (April 17, 2019)
 - Not Visible
 - Balloon Visible Through Trees
 - Seasonal Visibility
 - Year-Round Visibility
 - Predicted Year-Round Visibility (35 Acres)
 - Areas of Potential Seasonal Visibility (10 Acres)
 - State Boundary
 - Municipal Boundary
 - Trail (CT)
 - Scenic Highway (CT)
 - DEEP Boat Launches (CT)
 - Municipal and Private Open Space Property (CT)
 - State Forest/Park (CT)
 - Protected Open Space Property (CT)**
 - Federal
 - Land Trust
 - Municipal
 - Private
 - State

Data Sources:
Physical Geography / Background Data
 A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points, using first return values associated with the highest feature in the landscape (such as a treetop or top of building). The DSM captures the natural and built features on the Earth's surface.
 Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)
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 & West: *The Guide to the Blue-Blazed Hiking Trails of Western Connecticut Western Connecticut, 19th Edition, 2006.*
Other
 CTDOT Scenic Strips (based on Department of Transportation data)
Notes
 **Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

