ALL-POINTS TECHNOLOGY CORPORATION

VISIBILITY ANALYSIS

COVENTRY NORTHWEST CT
FOLLY LANE
COVENTRY, CONNECTICUT

Prepared for:

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Project Introduction

Cellco Partnership (d/b/a Verizon Wireless) is pursuing a Certificate of Environmental Compatibility and Public Need from the Connecticut Siting Council ("Council") for the development of a new wireless communications facility ("Facility") off Folly Lane in Coventry, Connecticut (the "Host Property"). At the request of Verizon Wireless, All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate the potential visibility of the proposed Facility within a two-mile radius of the proposed site location ("Study Area"). The Study Area also includes parts of the neighboring municipalities of Coventry, Tolland, and Mansfield which are located in the southern, northern, and eastern portions of the Study Area, respectively.

Site Description and Setting

The Host Property consists of an approximately 24.2-acre parcel located on the southern side of Folly Lane, approximately 1,000 feet east of North River Road and approximately 636 feet west of Goose Lane. The area proposed for the Facility (the "Site") is located in the central portion of the Host Property, approximately 524 feet south of Folly Lane at a ground elevation of ±542 feet Above Mean Sea Level ("AMSL"). The proposed Facility would include a 140-foot tall steel monopole with appurtenances that would extend to an overall height of ±143 feet. The Facility will be surrounded by a ±60-foot by ±40-foot, fenced, gravel based equipment compound. An existing gravel driveway, originating off of Folly Lane, would be extended approximately 75 feet and include a ±15 foot by ±20-foot turn-around parking area to access the Facility. The proposed utilities that will service the Facility will be routed underground from utility pole #CL&P 3816 located near the northeast corner of the Host Property's existing gravel access drive. The Host Property is currently part of the Skungamaug River Golf Course. A garage for the golf course, as well as an existing asphalt parking area and bulk material storage lie north of the proposed Facility location.

Land use within the immediate vicinity of the Host Property is a mix of residential development, agricultural land and large portions of undeveloped forest. The nearest trail system, The Willimantic River Trail, runs in a north and south direction and is located ±1.7 miles to the east. The Laidlaw Recreation Area is situated approximately 0.4 mile to the southeast. The topography is characterized generally by rolling to steep hills, with the Skungamaug River and associated waterbodies occupying the western portions of the Study Area. Ground elevations range from approximately 310 feet AMSL to nearly 780 feet AMSL. The tree cover within the Study Area (consisting of mixed deciduous hardwoods with interspersed stands of conifers) occupies approximately 6,831 acres of the 8,042-acre study area (±85%).

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

To conduct this assessment, a predictive computer model was developed specifically for this project using TerrSet, an image analysis program developed by Clark Labs at Clark University, to provide an estimation of potential visibility throughout the Study Area. 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 (which are the primary features that can block direct lines of sight).

Information used in the model included lidar[1]-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 2010. In addition, multiple land use data layers were created from the Natural Resources Conservation Service (through the USDA) aerial photography (flown in 2016) using the image processing tools. Terrset 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 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. The Facility however may not necessarily be visible from all locations within those areas identified by the predictive model. 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

[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.

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.

Balloon Float and 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.

On February 28, 2017, APT personnel conducted a balloon float and field reconnaissance to evaluate the visibility associated with the proposed Facility and to obtain existing conditions 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 142 feet above ground level ("AGL") at the Site. Weather conditions were favorable for the in-field activities, with calm winds (around 3 miles per hour) and mostly sunny 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 and where the balloon was not visible. Photographs were obtained from several vantage points to document the views towards the Site. 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. APT uses a standard focal length of 50mm, presenting a consistent field of view throughout the document. On occasion, APT will include photos taken at lower focal lengths, providing a greater depth of field and context to the scene by including surrounding features within the photograph. In this report, photograph 7 was taken with a 24mm focal length. Photos 23, 39, 40, and 41 were taken using a 35mm focal length.

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 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 maps.

Photographic Simulations

Photographic simulations were generated to portray scaled renderings of the proposed Facility from representative locations where the proposed Facility would be visible. 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 programs.

For presentation purposes in this report, the photographs were taken with focal lengths ranging from 24mm to 50mm and produced in an approximate 7-inch by 10.5-inch format. When viewing in this format size, we believe it is important to present the largest representational image while providing key contextual elements (landmarks, street signs, utility poles, etc so that the viewer can determine the proportionate scale of each object within the scene. Photo-documentation of the balloon float and photo-simulations of the proposed Facility are presented in the attachment at the end of this report. The balloon float photos provide visual reference points for the approximate height and location of the proposed Facility relative to the scene. The photo-simulations are intended to provide the reader with a general understanding of the different views that might be achieved of the Facility. It is important to consider that the publicly-accessible locations selected are typically representative of a “worst case” scenario. They were chosen to present unobstructed view lines (wherever possible), are static in nature and do not necessarily fairly characterize the prevailing views from all locations within a given area. From several locations, moving a few feet in any direction will result in a different perspective of the Facility than what is presented in the photographs. In several cases, a view of the Facility may be limited to the immediate area of the specific photo location presented herein.

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 were chosen in the field because they provide generally unobstructed view lines towards the Site and represent the extent and nature of visibility associated with the proposed Facility. Photo-simulations were prepared for the 19 locations with year-round and seasonal visibility to depict the proposed installation. The photo locations and simulations are depicted within the attachments provided at the end of this report.

View	Location	Orientation	Distance to Site	View Characteristics
1	Weigold Road at Gehring Road Extension (Tolland)	Southeast	±1.58 Miles	Not Visible
2	Summerwood Ridge (Tolland)	Southeast	±0.96 Mile	Not Visible
3	North River Road	Southeast	±0.45 Mile	Not Visible
4	North River Road	Southeast	±0.42 Mile	Seasonal
5	North River Road	East	±0.25 Mile	Seasonal
6	North River Road	Northeast	±0.26 Mile	Seasonal
7	North River Road*	Northeast	±0.24 Mile	Not Visible
8	North River Road	Northeast	±0.30 Mile	Seasonal
9	North River Road	Northeast	±0.42 Mile	Not Visible
10	North Farms Road	East	±0.84 Mile	Year round
11	North Farms Road	East	±0.87 Mile	Not Visible
12	Barbara Drive	Northeast	±0.64 Mile	Not Visible
13	Broad Way	Northeast	±1.49 Miles	Not Visible
14	Broad Way	Northeast	±0.86 Mile	Not Visible
15	Broad Way	Northeast	±0.62 Mile	Not Visible
16	Broad Way	Northeast	±0.57 Mile	Seasonal
17	Broad Way	Northeast	±0.52 Mile	Seasonal
18	Merrow Road	Northeast	±0.44 Mile	Seasonal
19	Merrow Road	North	±0.43 Mile	Seasonal
20	Goose Lane	Northwest	±0.67 Mile	Not Visible
21	Deer Hill Lane	Northwest	±0.39 Mile	Seasonal
22	Merrow Road	Northwest	±0.51 Mile	Not Visible
23	Woodmont Drive at Merrow Road**	Northwest	±0.59 Mile	Not Visible
24	Merrow Road	Northwest	±0.77 Mile	Not Visible
25	Geraldine Drive	West	±0.69 Mile	Not Visible
26	Geraldine Drive	Southwest	±0.51 Mile	Not Visible
27	Eric Drive	Southwest	±0.54 Mile	Not Visible
28	Goose Lane	Southwest	±0.48 Mile	Not Visible
29	Cassidy Hill Road	Southwest	±1.27 Miles	Not Visible
30	Goose Lane (Tolland)	South	±1.21 Miles	Not Visible
31	Goose Lane	Southwest	±0.20 Mile	Not Visible
32	Goose Lane	Southwest	±0.19 Mile	Seasonal
33	Goose Lane	West	±0.17 Mile	Seasonal
34	Goose Lane	Northwest	±0.22 Mile	Not Visible
35	Goose Lane	Northwest	±0.39 Mile	Not Visible
36	Folly Lane	Southwest	±0.13 Mile	Seasonal
37	Folly Lane	South	±0.11 Mile	Seasonal
38	Folly Lane	South	±0.10 Mile	Year Round
39	Folly Lane**	Southeast	±0.10 Mile	Year Round
40	Folly Lane**	Southeast	±0.11 Mile	Year Round
41	Folly Lane**	Southeast	±0.13 Mile	Seasonal
42	Folly Lane	Southeast	±0.16 Mile	Seasonal

* *Photo taken with 24mm focal length*

** *Photo taken with 35mm focal length*

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 above the tree canopy, year-round, comprise a total of approximately ±77 acres. When the leaves are off the trees, seasonal views through intervening tree trunks and branches have the potential to occur over some locations within an area of ±190 additional acres.

In general, the majority of year-round views of the Facility appear limited to locations on the Host Property and within the immediate vicinity of the Site, extending ±0.11 mile to the north across Folly Lane, where the golf course can be seen from the road, and to surrounding fairways and greens. Portions of North Farms Road, which is located at a higher elevation at ±0.84 mile away to the west, may also achieve some year-round views). Beyond these areas, year-round visibility is restricted due to the combination of the topography and dense forest cover. Seasonal views (during "leaf-off" conditions) would extend less than 0.6 mile in all directions from the Site.

Proximity to Schools And Commercial Child Day Care Centers

No schools or commercial child day care centers are located within 250 feet of the Site location or within the 2-mile Study Area. The nearest commercial child day care center, Prince of Peace Pre-School, is located approximately 2.9 miles to the south at 10 North River Road in Coventry. The nearest school, Coventry Grammar School, is located approximately 3.1 miles to the south at 3453 Main Street in Coventry.

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 necessarily 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 simulations provide a representation of the Facility under similar settings as those encountered during the balloon floats 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.

ATTACHMENTS

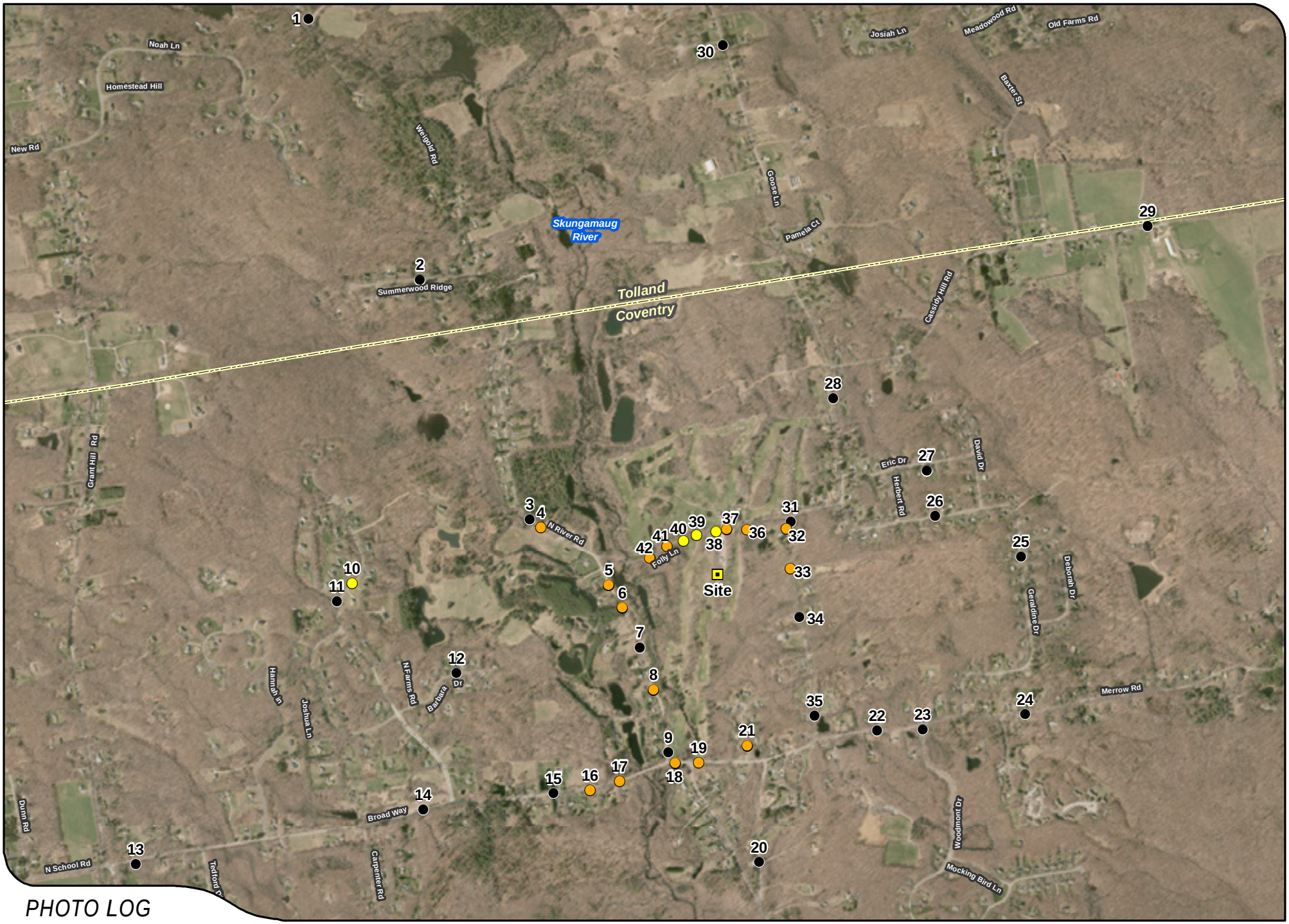

PHOTO LOG

Legend

Site | Not Visble | Seasonal Visibility | Year-Round Visibility

N W E S

2,000 1,000 0 2,000 Feet

1 inch = 2,000 feet

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**WEIGOLD ROAD AT GEHRING ROAD EXTENSION (TOLLAND)**	**SOUTHEAST**	**+/- 1.58 MILES**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**SUMMERWOOD RIDGE (TOLLAND)**	**SOUTHEAST**	**+/- 0.96 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**NORTH RIVER ROAD**	**SOUTHEAST**	**+/- 0.45 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**NORTH RIVER ROAD**	**SOUTHEAST**	**+/- 0.42 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**NORTH RIVER ROAD**	**SOUTHEAST**	**+/- 0.42 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**NORTH RIVER ROAD**	**EAST**	**+/- 0.25 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**NORTH RIVER ROAD**	**EAST**	**+/- 0.25 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**NORTH RIVER ROAD**	**NORTHEAST**	**+/- 0.26 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**NORTH RIVER ROAD**	**NORTHEAST**	**+/- 0.26 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**NORTH RIVER ROAD**	**NORTHEAST**	**+/- 0.24 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**NORTH RIVER ROAD**	**NORTHEAST**	**+/- 0.30 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**NORTH RIVER ROAD**	**NORTHEAST**	**+/- 0.30 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	**NORTH RIVER ROAD**	**NORTHEAST**	**+/- 0.42 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	**NORTH FARMS ROAD**	**EAST**	**+/- 0.84 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	**NORTH FARMS ROAD**	**EAST**	**+/- 0.84 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	**NORTH FARMS ROAD**	**EAST**	**+/- 0.87 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	**BARBARA DRIVE**	**NORTHEAST**	**+/- 0.64 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	**BROAD WAY**	**NORTHEAST**	**+/- 1.49 MILES**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	**BROAD WAY**	**NORTHEAST**	**+/- 0.86 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	**BROAD WAY**	**NORTHEAST**	**+/- 0.62 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	**BROAD WAY**	**NORTHEAST**	**+/- 0.57 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	**BROAD WAY**	**NORTHEAST**	**+/- 0.57 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	**BROAD WAY**	**NORTHEAST**	**+/- 0.52 MILE**	**SEASONAL**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	**BROAD WAY**	**NORTHEAST**	**+/- 0.52 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	**MERROW ROAD**	**NORTHEAST**	**+/- 0.44 MILE**	**SEASONAL**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	**MERROW ROAD**	**NORTHEAST**	**+/- 0.44 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	**MERROW ROAD**	**NORTH**	**+/- 0.43 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	**MERROW ROAD**	**NORTH**	**+/- 0.43 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	**GOOSE LANE**	**NORTHWEST**	**+/- 0.67 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	**DEER HILL LANE**	**NORTHWEST**	**+/- 0.39 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	**DEER HILL LANE**	**NORTHWEST**	**+/- 0.39 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	**MERROW ROAD**	**NORTHWEST**	**+/- 0.51 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	**WOODMONT DRIVE AT MERROW ROAD**	**NORTHWEST**	**+/- 0.59 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
24	**MERROW ROAD**	**NORTHWEST**	**+/- 0.77 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
25	**GERALDINE DRIVE**	**WEST**	**+/- 0.69 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
26	**GERALDINE DRIVE**	**SOUTHWEST**	**+/- 0.51 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
27	**ERIC DRIVE**	**SOUTHWEST**	**+/- 0.54 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
28	**GOOSE LANE**	**SOUTHWEST**	**+/- 0.48 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
29	**CASSIDY HILL ROAD**	**SOUTHWEST**	**+/- 1.27 MILES**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
30	**GOOSE LANE (TOLLAND)**	**SOUTH**	**+/- 1.21 MILES**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
31	**GOOSE LANE**	**SOUTHWEST**	**+/- 0.20 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
32	**GOOSE LANE**	**SOUTHWEST**	**+/- 0.19 MILE**	**SEASONAL**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
32	**GOOSE LANE**	**SOUTHWEST**	**+/- 0.19 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
33	**GOOSE LANE**	**WEST**	**+/- 0.17 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
33	**GOOSE LANE**	**WEST**	**+/- 0.17 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
34	**GOOSE LANE**	**NORTHWEST**	**+/- 0.22 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
35	**GOOSE LANE**	**NORTHWEST**	**+/- 0.39 MILE**	**NOT VISIBLE**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
36	**FOLLY LANE**	**SOUTHWEST**	**+/- 0.13 MILE**	**SEASONAL**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
36	**FOLLY LANE**	**SOUTHWEST**	**+/- 0.13 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
37	**FOLLY LANE**	**SOUTH**	**+/- 0.11 MILE**	**SEASONAL**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
37	**FOLLY LANE**	**SOUTH**	**+/- 0.11 MILE**	**SEASONAL**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
38	**FOLLY LANE**	**SOUTH**	**+/- 0.10 MILE**	**YEAR ROUND**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
38	**FOLLY LANE**	**SOUTH**	**+/- 0.10 MILE**	**YEAR ROUND**

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EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
39	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.10 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
39	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.10 MILE**	**YEAR ROUND**

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verizon

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
40	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.11 MILE**	**YEAR ROUND**

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PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
40	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.11 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
41	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.13 MILE**	**SEASONAL**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
41	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.13 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
42	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.16 MILE**	**SEASONAL**

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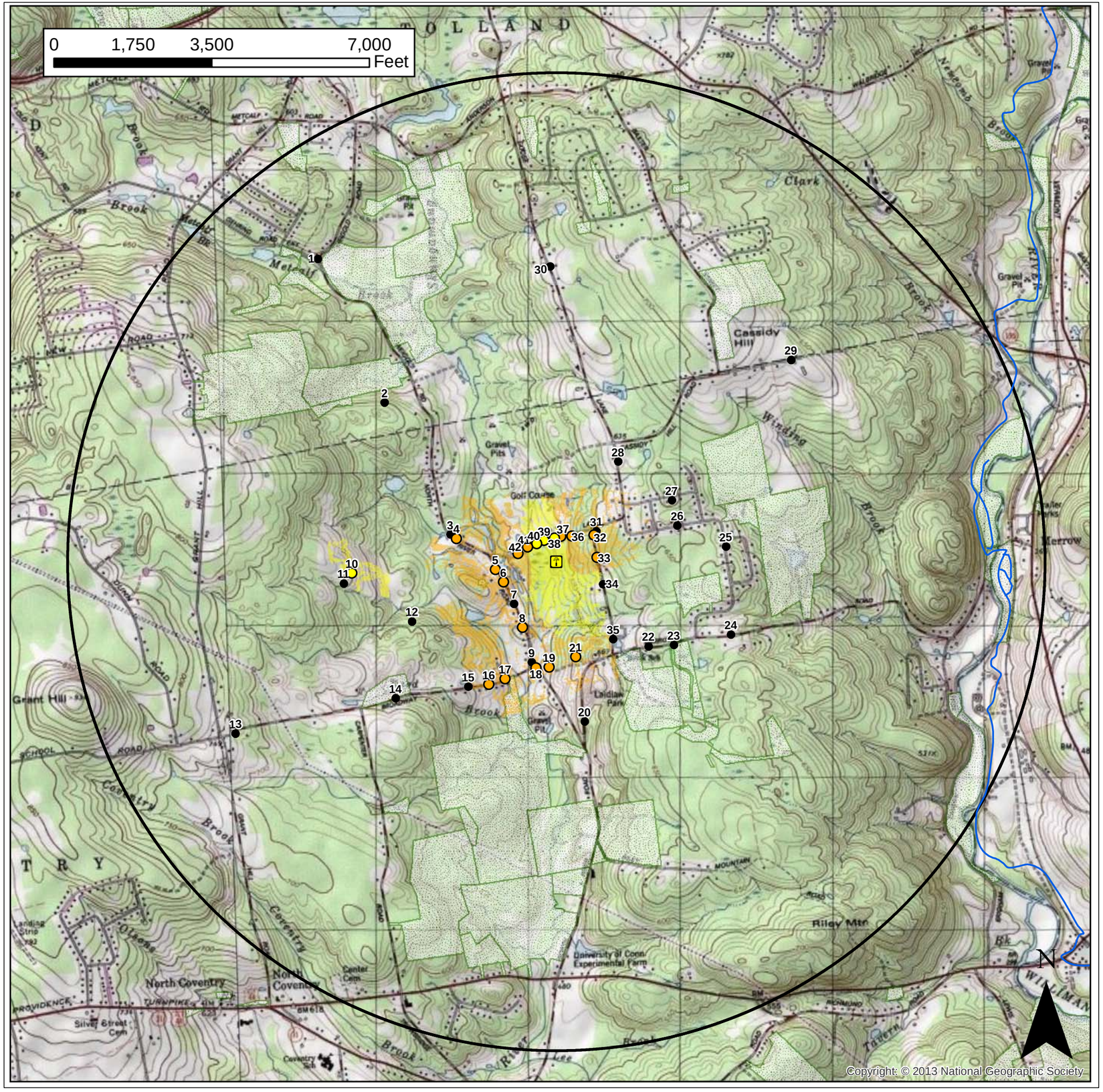
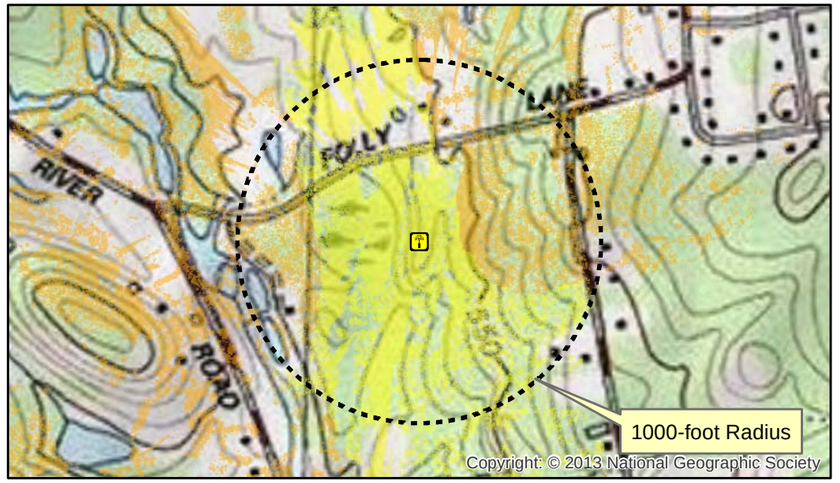
PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
42	**FOLLY LANE**	**SOUTHEAST**	**+/- 0.16 MILE**	**SEASONAL**





Viewshed Map – Topo Base

Proposed Wireless Telecommunications Facility
Coventry NW
Folly Lane, Coventry, CT

Proposed facility height is 143 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 compiled 3/28/2017

Map information field verified by APT on 2/28/2017.

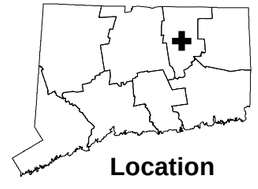
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower

Photo Locations

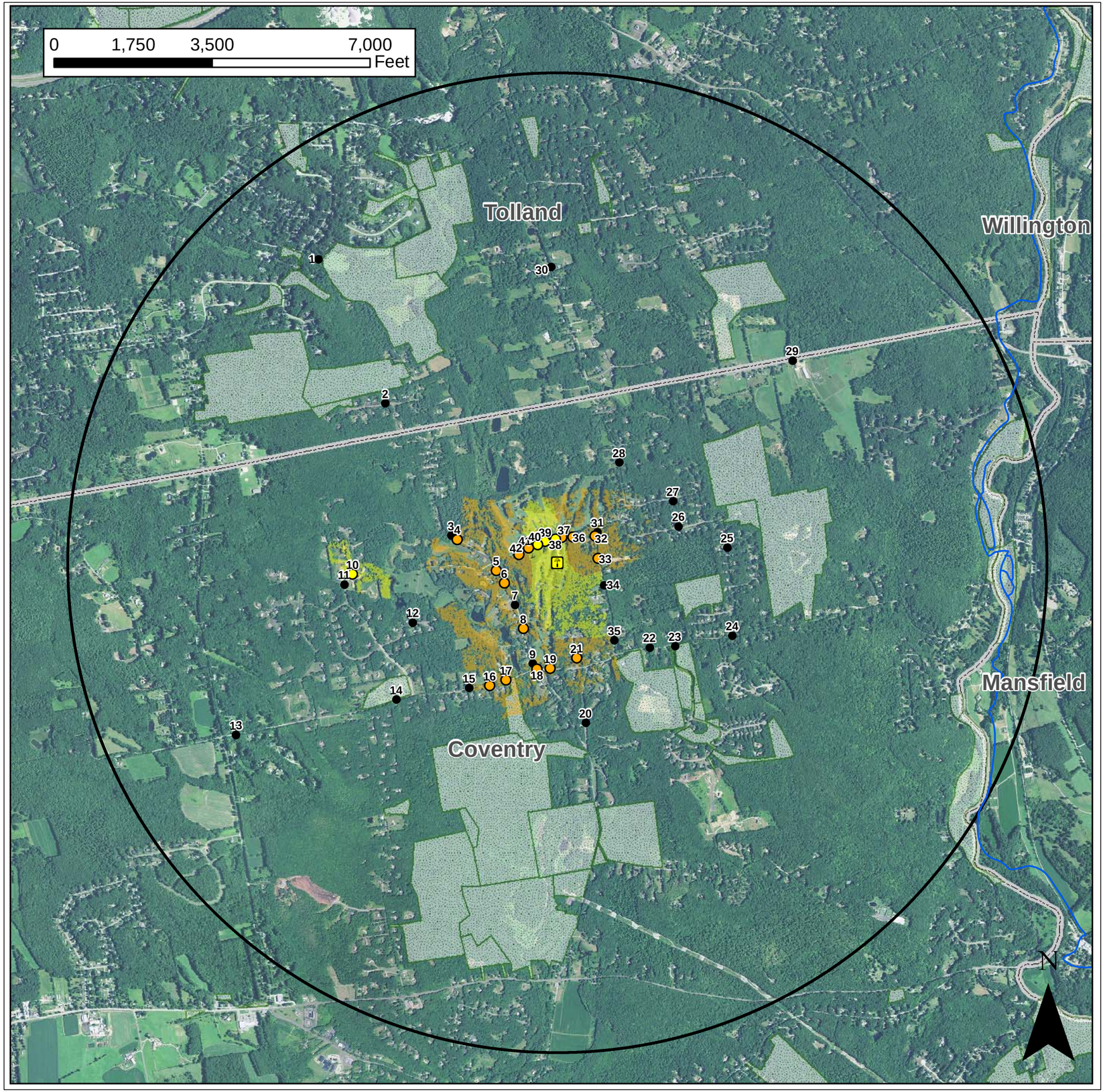
- Not Visible
- Seasonal Views
- Year-round Views
- Trails
- Predicted Seasonal Visibility (190 Acres)
- Predicted Year-Round Visibility (77 Acres)
- Towns
- 2-Mile Study Area
- Open Space

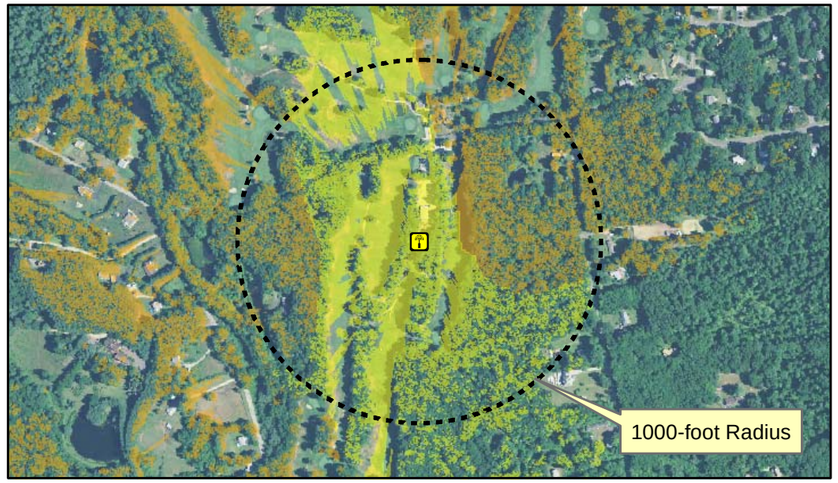


Location

verizon

ALL-POINTS TECHNOLOGY CORPORATION





Viewshed Map – Aerial Base

Proposed Wireless Telecommunications Facility
Coventry NW
Folly Lane, Coventry, CT

Proposed facility height is 143 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 compiled 3/28/2017

Map information field verified by APT on 2/28/17.

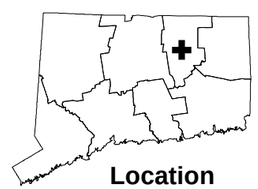
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views
- Trails
- Predicted Seasonal Visibility (190 Acres)
- Predicted Year-Round Visibility (77 Acres)
- Towns
- 2-Mile Study Area
- Open Space



Location

verizon

ALL-POINTS TECHNOLOGY CORPORATION

DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS
104 Folly Lane
Coventry, Connecticut

Physical Geography / Background Data
Digital elevation model (DEM) derived from 1-meter USGS lidar data obtained from NOAA (2010)

Forest areas are generated with TerrSet (Clark University) image processing from the lidar data and 2016 NRCS/NAIP digital orthophotos with 1-foot pixel resolution (leaf-on) and CLEAR 2012 0.30-foot (leaf-off)

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP and the towns

United States Geological Survey
*USGS topographic quadrangle maps – Rockville, Coventry (1984)
Department of Transportation data
^State Scenic Highways (2015)
Heritage Consultants
^Municipal Scenic Roads

Cultural Resources
Heritage Consultants
^National Register
^State Register of Historic Places
^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 & West –
The Guide to the Blue-Blazed Hiking Trails of Western Connecticut 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
Viewshed analysis conducted using Clark University's TerrSet. 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 lidar DEM, 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.