SARATOGA ASSOCIATES

Proposed Wireless Telecommunications Facility (CT024)

Site Name: New Canaan – West Elementary School
769 Ponus Ridge Road
New Canaan, CT 06840

VISUAL RESOURCE ASSESSMENT

HOMELAND TOWERS

Prepared for:
Homeland Towers
9 Harmony Street, 2nd Floor
Danbury, CT 06810

April 19, 2017

Landscape Architects, Architects, Engineers and Planners, P.C.

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#2017-010

VISUAL RESOURCE ASSESSMENT

Homeland Towers seeks approval from the Connecticut Siting Council for a certificate of Environmental Compatibility and Public Need to construct a wireless telecommunications facility (the “Project”) to be located on property at 769 Ponus Ridge Road (“host property”) in the Town of New Canaan, Connecticut. The project site is located on unused woodland property at West Elementary School. The property is currently owned by Town of New Canaan. The Project would be constructed under a lease agreement with the Town of New Canaan.

To address issues of potential visual impact, Saratoga Associates, Landscape Architects, Architects, Engineers, and Planners, P.C. was retained to conduct a Visual Resource Assessment ("VRA") of the proposed Project.

The study area for this VRA extends to a two-mile radius from the project site (hereafter referred to as the “2-mile study area”). However, because the project area is heavily wooded, detailed analysis is focused on viewpoints within a ½-mile radius (“½-mile study area”).

Project Description

The Project includes the construction of a 110-foot tall stealth “monopine” style tower designed to support up to four levels of antenna mounts along with public safety antennas with associated ground equipment to be located within a fenced enclosure at the base of the tower. The lease area will be approximately 75 feet by 75 feet with a fenced compound ("tower site") will approximately 75 feet by 62 feet (4,650 square feet). The tower site is located at approximately 41° 08' 23.4300" N, 73° 31' 22.0500" W. The existing ground elevation in this area is approximately 338 feet above mean sea level (AMSL). Access to the tower site is along a newly constructed 12-foot wide gravel drive from the West School parking lot. The access drive would then follow the north and east perimeter fence surrounding the school play field.

The stealth “monopine” tower design will included a dense non-uniform branching pattern that will help to blend the structure with the visual characteristics of the surrounding forest.

Landscape Setting

The 47 acre host property is identified in Town of New Canaan tax records as 769 Ponus Ridge Road. The proposed fenced compound area and 12-foot wide access road are located entirely within this parcel. Approximately 11 acres of the project site include the West Elementary School building, parking and playfields, the remainder of the site is undeveloped woodland.

The site is immediately adjacent to the Aquarion water tower which is located within a 0.2 acre “island” parcel surrounded on all sides by the West Elementary School parcel. The existing water tower is approximately 30 feet in diameter and 65 feet tall. Access to the water tower parcel is via an easement along the south edge of the school property. The proposed monopine telecommunications tower will be located approximately 125 feet ENE of the existing water tower.

The host property is zoned “2 acre Residence” as defined by the New Cannan Town Code.

The tower site is approximately 1,200 feet east of Ponus Ridge Road, 670 feet north east of Bennington Place and 370 feet south of Winfield Lane.

The nearest residential structure is approximately 320 feet south of the tower site on a “flag lot” off of Bennington Place. This same structure is approximately 220 feet from the existing water tower.

The topography within the 2-mile study area is characterized by a gently rolling terrain ranging in elevation from 468 feet at the north end of the 2-mile study area to 113 feet at the southern portion of the 2-mile study area along the headwaters of the Noroton River. The North Stamford Reservoir is approximately ¾ mile west of the Project site.

The study area is heavily wooded with broad tracts of mature second growth deciduous forest interspersed with stands of mature evergreen species. The tree canopy occupies approximately 5,270 acres of the 8,040 acre study area (66%).[1] Mature tree cover generally ranges from approximately 50 to 75 feet in height.

The ½-mile study is comprised of low to moderate density (2 acre to 5 acre lot) residential development. Structures are typically large, well-maintained single family homes setback from the main roads with long driveways or along share private streets. The campus of the private New Canaan Country School is approximately ½ mile south of the Project site.

Residential neighborhoods are typically densely wooded with well landscaped understory areas. Mature trees commonly extend to road edges limiting long distance vistas.

Approximately 5.9 miles of public and private streets are within the ½-mile study area. Ponus Ridge Road is the most heavily travelled roadway. Filtered short duration views of the proposed project will occur for travelers passing West Elementary School on Ponus Ridge Road. Nearby residential and collector roads including Bennington Place and Winfield Lane will be substantially screened by dense intervening vegetation, although glimpses of the proposed monopine tower may occur through small openings in the tree cover or seasonally through deciduous branches. Project views from all other roads within the ½ mile study area are substantially or completely screened by local vegetation.

Viewshed Analysis

Viewshed mapping identifies the geographic area within which there is a relatively high probability that some portion of the proposed Project could be visible.

One viewshed overlay was prepared defining the area within which there would be no visibility of the Project due to the screening effect of intervening topography. This "bare earth" analysis identifies the maximum potential geographic area within which further investigation is appropriate. A second overlay was prepared illustrating the screening effect of existing mature vegetation and built structures. The more realistic "land cover" condition identifies the geographic area where one would expect to be substantially screened by intervening forest vegetation and buildings.

[1] Tree cover calculations are based on areas with 50% or greater tree canopy coverage within 30 meter x 30 meter grid cells as presented in the National Land Cover Database (NLCD) 2011 Percent Tree Canopy dataset. https://www.sciencebase.gov/catalog/item/581d598be4b0dee4cc8e4547

Global Mapper 17.0 GIS software was used to generate viewshed areas based on publicly available topographic and land cover datasets. Topographic data was derived from the National Elevation Dataset (1/9 arc second).[2] Using Global Mapper's viewshed analysis tool, the proposed tower location and height were input and a conservative offset of six feet was applied to account for the observer's eye level. The resulting viewshed identifies grid cells with a direct line-of-sight to the tower high point.

Within the ½-mile study area existing forest vegetation and built structures were manually digitized from 3-inch resolution digital ortho-photographs (2016) acquired from Connecticut Environmental Conditions Online (CTEcho). For the remainder of the 2-mile study area existing forest vegetation is based on areas with 50% or greater tree canopy coverage as presented in the National Land Cover Database (NLCD) 2011 Percent Tree Canopy dataset.[3]

The screening effect of vegetation was incorporated by adding 50 feet to digitized areas that are completely forested. Existing built structures were assumed to be 25 feet tall. Forested areas and building footprints were removed from the viewshed result to account for affected areas located within structures or densely wooded cover.

Based on field observation, most trees in forested portions of the study area are taller than 50 feet. This height therefore represents a conservative estimate of the efficacy of vegetative screening. It is important to note that digitized vegetation is based on interpretation of forest areas that are clearly distinguishable in the source aerial photography. As such, the potential screening value of site-specific vegetative cover such as small hedgerows, street trees and individual trees and other areas of non-forest tree cover may not be represented in the viewshed analysis.

It is noteworthy that untrained reviewers often misinterpret “bare earth” condition viewshed maps to represent wintertime, or leafless condition visibility. In fact, deciduous woodlands provide a substantial visual barrier in all seasons. Since the digitized forest cover overlay generally identifies only larger stands of woodland vegetation that is clearly distinguishable from aerial photography, the land cover viewshed map is substantially representative of both leaf-on and leaf-off seasons. The “bare earth” condition map is provided only to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. Such topography-only viewshed maps are generally not appropriate for public interpretation.

By themselves, the viewshed maps do not determine either how much of the proposed wireless telecommunications tower would be visible above intervening landform or vegetation (e.g., 100%, 50%, 10% etc. of total tower height), but rather the geographic area within which some portion of the facility theoretically would be visible. Their primary purpose is to provide a general understanding of a project’s potential visibility and identify areas where further investigation is appropriate.

[2] https://viewer.nationalmap.gov/basic/
[3] https://www.sciencebase.gov/catalog/item/581d598be4b0dee4cc8e4547

Figure 1 illustrates areas of potential project visibility at a macro scale within the 2-mile study area. Figure 2 provides a more localized assessment of potential project visibility within the ½-mile study area.

Based on viewshed mapping direct Project views will be substantially limited to areas in and immediately surrounding West Elementary School. Other areas of visibility will occur in relatively small and narrow bands where openings in intervening vegetation creates a limited line-of-sight in the direction of the project. Narrow bands of direct visibility are found to the south of Irwin Park in the vicinity of Bennington Place. Since the viewshed analysis does not include the screening value of site specific landscaping or scrub vegetation, project visibility from these areas will likely be less than predicted in the viewshed analysis.

Of the 502 acres within the 1/2-mile study area, a direct view of the proposed telecommunications tower is likely from approximately 5 acres (1.0%). Of the 5.9 miles of roads within the 1/2-mile radius study area, direct project visibility is found along approximately 200 linear feet (0.06%).

Study Area Reconnaissance

Field Observation and Photography - An experienced visual analyst drove public roads to inventory those areas where viewshed mapping identified potential project visibility. Photographs were taken from multiple vantage points to document the views in the direction of the Project site from places where a Project view was identified.

Several locations where project visibility was not predicted were also photographed to provide documentation visual conditions from other areas of interest. Emphasis was placed on locations considered to be of scenic, cultural and/or social importance to the community. Such places include recreation and conservation areas, historic resources, open spaces, local roadways and residential neighborhoods.

Photographs were taken using a Nikon D3100 digital single lens reflex ("DSLR") 12.2-mega pixel camera with a lens setting of approximately 50mm[4] to simulate normal human eyesight relative to scale. The precise coordinates of each photo location were recorded in the field using a handheld global positioning system (GPS) unit. In cases where the balloon was not visible the "waypoint indicator" function of the GPS (arrow pointing along a calculated bearing) was used to determine the precise direction of the tower site.

[4] A Nikon D3100 digital SLR with an 18-55milimeter (mm) zoom lens was used for all Project photography. This digital camera, similar to most digital SLR cameras, has a sensor that is approximately 1.6 times smaller than a comparable full frame 35mm film camera. Recognizing this differential, the zoom lens used was set to approximately 31mm to achieve a field-of-view comparable to a 50mm lens on a full frame 35mm camera (31mm x 1.6 = 50mm).

Photographs were taken from the following places:

Map ID	Location	Direction	Distance to Tower (feet)	Theoretical View Indicated by Land Cover Viewshed - (See Figures 1 & 2)	Tower Visible Based on 3D Modeling	Photo/ Simulation Provided as
1	Ponus Ridge at Road at West School	ENE	1,250	Yes	Yes	Figure 3
2	Ponus Ridge Road at Bennington Place	NE	1,290	No	No	Figure 4
3	Bennington Place Near #60	NNE	700	Yes	Yes	Figure 5
4	Bennington Place near #72	N	760	No	Seasonal	Figure 6
5	Bennington Place near#106	N	950	Yes	Seasonal	Figure 7
6	West School at Ponus Ridge Road	E	1,200	Yes	Yes	Figure 8
7	West School Playfield	E	550	Yes	Yes	Figure 9
8	Ponus Ridge Road at Winfield Lane	ESE	1,300	No	No	Figure 10
9	Winfield Lane near#77	SE	720	No	Seasonal	Figure 11
10	Winfield Lane at Cul-de-sac	S	590	No	Seasonal	Figure 12
11	Ponus Ridge Road at Bartling Drive	NNE	1,950	No	No	Figure 13
12	Frogtown Road at Frogtown Lane	NW	2,430	Yes	Seasonal	Figure 14
13	Carriage Lane	WSW	2,020	Yes	No	Figure 15

Photo Simulations

To illustrate how the monopine design wireless telecommunications tower will appear, photo simulations were prepared from 13 representative locations. Photo simulations were developed by superimposing a rendering of a three-dimensional computer model of the proposed Project into the base photograph taken from each corresponding visual receptor The three-dimensional computer model was developed using *Autodesk Civil 3D*® and *3D Studio Max Design*® software (3D Studio Max).

Photo simulations for all locations illustrate the one level of antenna mounts ("neutral host design"). In addition, the maximum four levels of antenna mounts is simulated for photo locations; #3 Bennington Place near #3 (Figure 5c), #7 – West School Playfield (Figure 9) and #10 Winfield Lane at Cul-de-sac (Figure 12c).

Simulated perspectives (camera views) were matched to the corresponding base photograph for each simulated view by replicating the precise coordinates of the field camera position (as recorded by handheld GPS) and the focal length of the camera lens used (e.g. 50mm). Precisely matching these parameters assures scale accuracy between the base photograph and the subsequent simulated view. The cameras elevation (Z) value is derived from digital elevation model (DEM) data plus the cameras height above ground level. The camera's target position was set to match the bearing of the corresponding existing condition photograph as recorded in the field. With the existing conditions photograph displayed as a "viewport background," and the viewport properties set to match the photograph pixel dimensions, minor camera adjustments were made (horizontal and vertical positioning, and camera roll) to align the horizon in the background photograph with the corresponding features of the 3D model.

To verify the camera alignment, elements (e.g. existing buildings, topography, vegetation, roads, etc.) visible within the photograph were identified and digitized from digital orthophotos. Each element was assigned a Z value based on DEM data and then imported to 3D Studio Max. A 3D terrain model was also created (using DEM data) to replicate the existing site topography. The digitized elements were then aligned with corresponding elements in the photograph by adjusting the camera target. If necessary, slight camera adjustments were made for accurate

alignment. Using this method of camera alignment, photo simulations do not solely rely on the position of the balloon visible in the photo frame.

A daylight system was created matching the exact date and time of each baseline photograph to assure proper shading and shadowing of modeled elements.

Once the camera alignment was verified, a to-scale 3D model of the proposed 110 foot tall wireless telecommunications tower was merged into the model space. The 3D model of a "stealth" monopine style tower was constructed. The monopine branching pattern and bristle density were built in sufficient detail to accurately convey visual character and reveal impacts. The scale, alignment, elevations and location of the visible elements of the proposed facilities are true to the conceptual design. Post production editing (i.e., airbrush out portion of tower that falls below or behind foreground topography and vegetation) was completed using Adobe Photoshop software.

Conclusions

The project site is located immediately adjacent (within 125 feet) of the 65-foot ± tall Aquarion water tower; an existing tall public infrastructure resource.

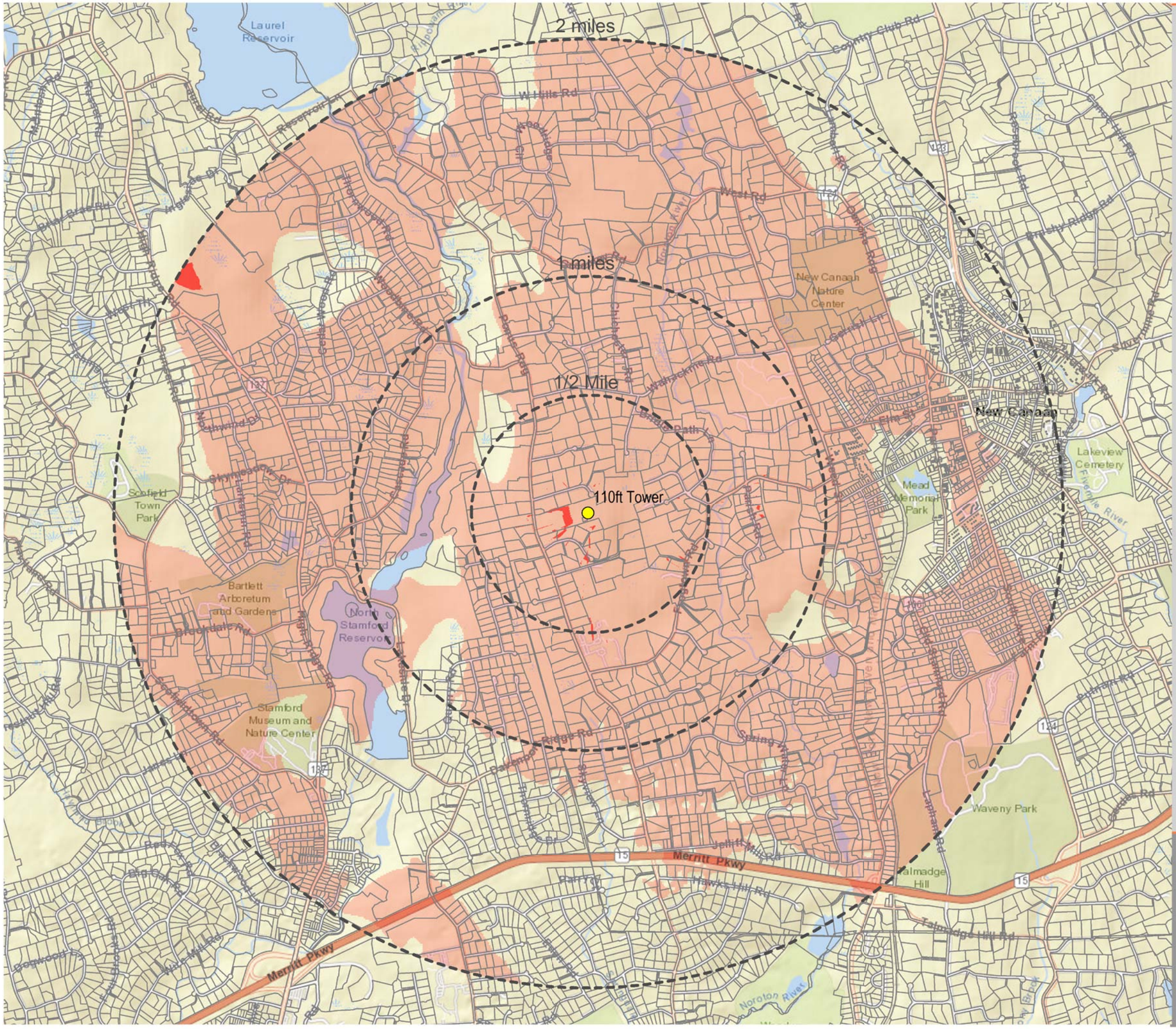
The study area is characterized by a gently rolling landscape characterized by broad tracts of mature second growth deciduous forest interspersed with stands of mature evergreen species. Existing topography and mature woodland vegetation screen views of the proposed Project from most vantage points. Of the 502 acres within the 1/2-mile study area, a view of the proposed telecommunications tower is likely from approximately 5 acres (1.0%). Of the 5.9 miles of public roads within the 1/2-mile radius study area, potential project views are found along approximately 200 linear feet (0.06%). Project views from residential streets is substantially or completely screened by roadside vegetation.

Low to moderate density (2 acre to 5 acre lot) single-family development is uniformly distributed throughout the study area. Project views are most notable from the east side of West Elementary school in the vicinity of the rear parking lot, outdoor playground and playfield. Views from most residential properties within the study area are substantially or fully screened by intervening vegetation.

Saratoga Associates estimates that the proposed telecommunications tower will be partially visible, primarily through existing deciduous vegetation during leaf-off season, from approximately 9-10 residential properties. This includes 6-7 properties on Bennington Place and 2-3 properties on Winfield Lane. As evidenced by the photo simulations, when visible, the proposed monopine tower will be filtered through intervening deciduous vegetation. Views will be substantially or completely screened during leaf-on season.

Use of a stealth "monopine" tower design helps to blend the structure with the visual characteristics of the surrounding forest further reducing visual impact. As illustrated in Figures 3, 7 and 10, there is no significant difference in project visibility or visual character between the

one level antenna mount (neutral host design) and installation of up to four levels of antenna mounts.



LEGEND

- Bare Earth Viewshed Area (Excludes existing vegetation and structures)
- Land Cover Viewshed Area (Includes existing vegetation and structures)

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Bare Earth' condition overlay identifies areas where the proposed telecommunictions tower high point may be visible without consideration of the screening effect of existing vegetation or built structures. Bare earth analysis is provided to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. This topography-only viewshed map is not representative of project visibility during winter season leaf-off conditions.

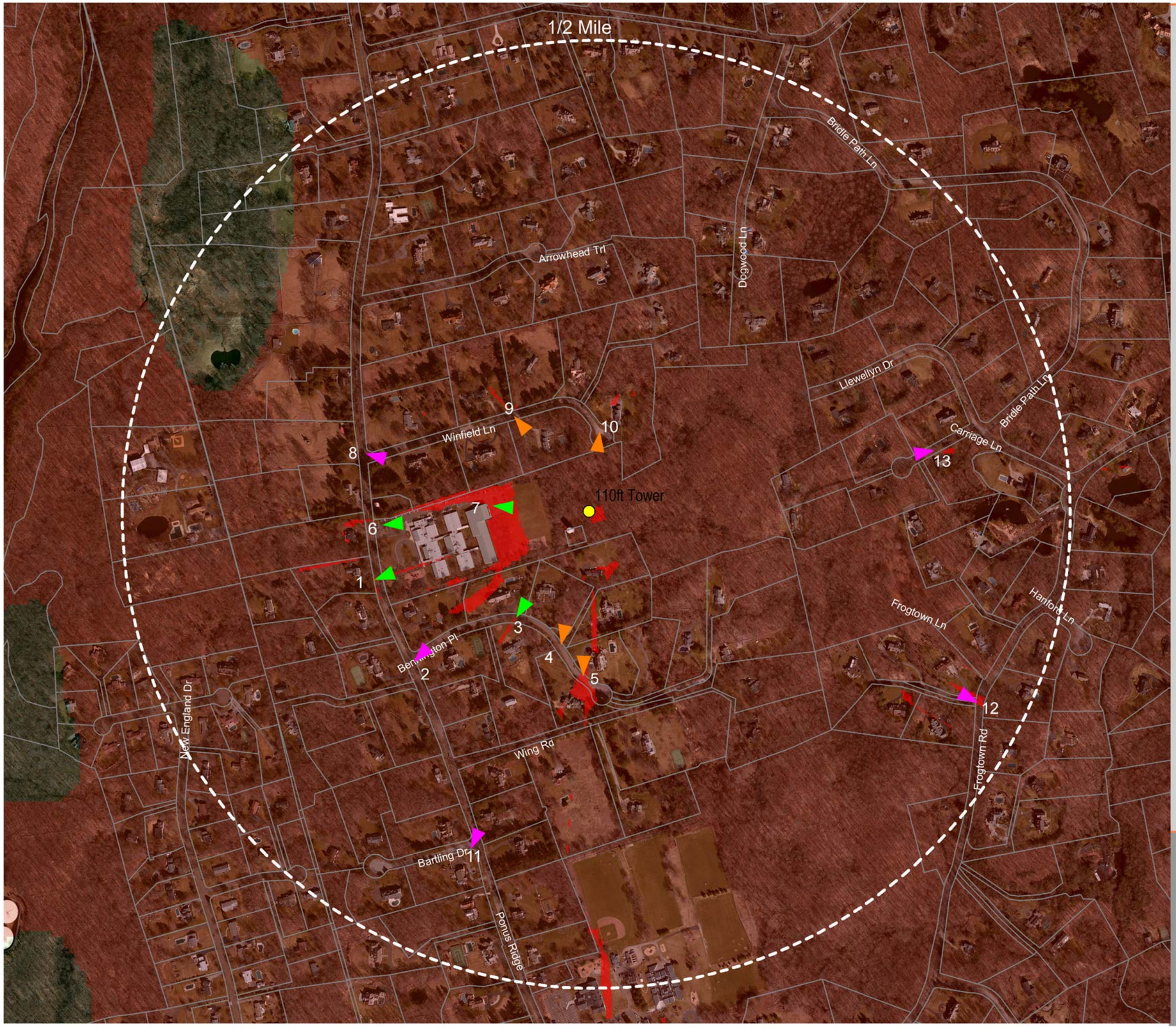
The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthoimagery. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.

0 ft 2000 ft 4000 ft 6000 ft

FIGURE 1
VIEWSHED MAP - 2 MILE RADIUS
Visual Resource Assessment
Proposed Telecommunications Tower

HOMELAND TOWERS

New Canaan - West Elementary School
(CT024)
769 Ponus Ridge Road
New Canaan, CT



LEGEND

Bare Earth Viewshed Area
(Excludes existing vegetation and structures)

Land Cover Viewshed Area
(Includes existing vegetation and structures)

ID # Photo Location - Tower Not Visible*

ID # Photo Location - Tower Visible*

ID # Photo Location - Tower Visible Seasonally*

* Visibility determined through 3D modeling and photo simulation

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Bare Earth' condition overlay identifies areas where the proposed telecommunictions tower high point may be visible without consideration of the screening effect of existing vegetation or built structures. Bare earth analysis is provided to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. This topography-only viewshed map is not representative of project visibility during winter season leaf-off conditions.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthoimagery. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.

0 ft 1000 ft 2000 ft 3000 ft 4000 ft 5000 ft 6000 ft 7000 ft

FIGURE 2

VIEWSHED MAP - 1/2 MILE RADIUS

Visual Resource Assessment

Proposed Telecommunications Tower

HOMELAND TOWERS

New Canaan - West Elementary School
(CT024)
769 Ponus Ridge Road
New Canaan, CT

Photograph Information

Date:	March 06, 2017
Time:	11:16am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 19.6926” N 73° 31’ 38.1288” W
Distance:	1,250 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 3a

Existing Condition

VP1 - Ponus Ridge Road at West School

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:16am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 19.6926” N 73° 31’ 38.1288” W
Distance:	1,250 Feet
Visibility:	Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 3b

Simulated Condition - One Antenna Level

VP1 - Ponus Ridge Road at West School

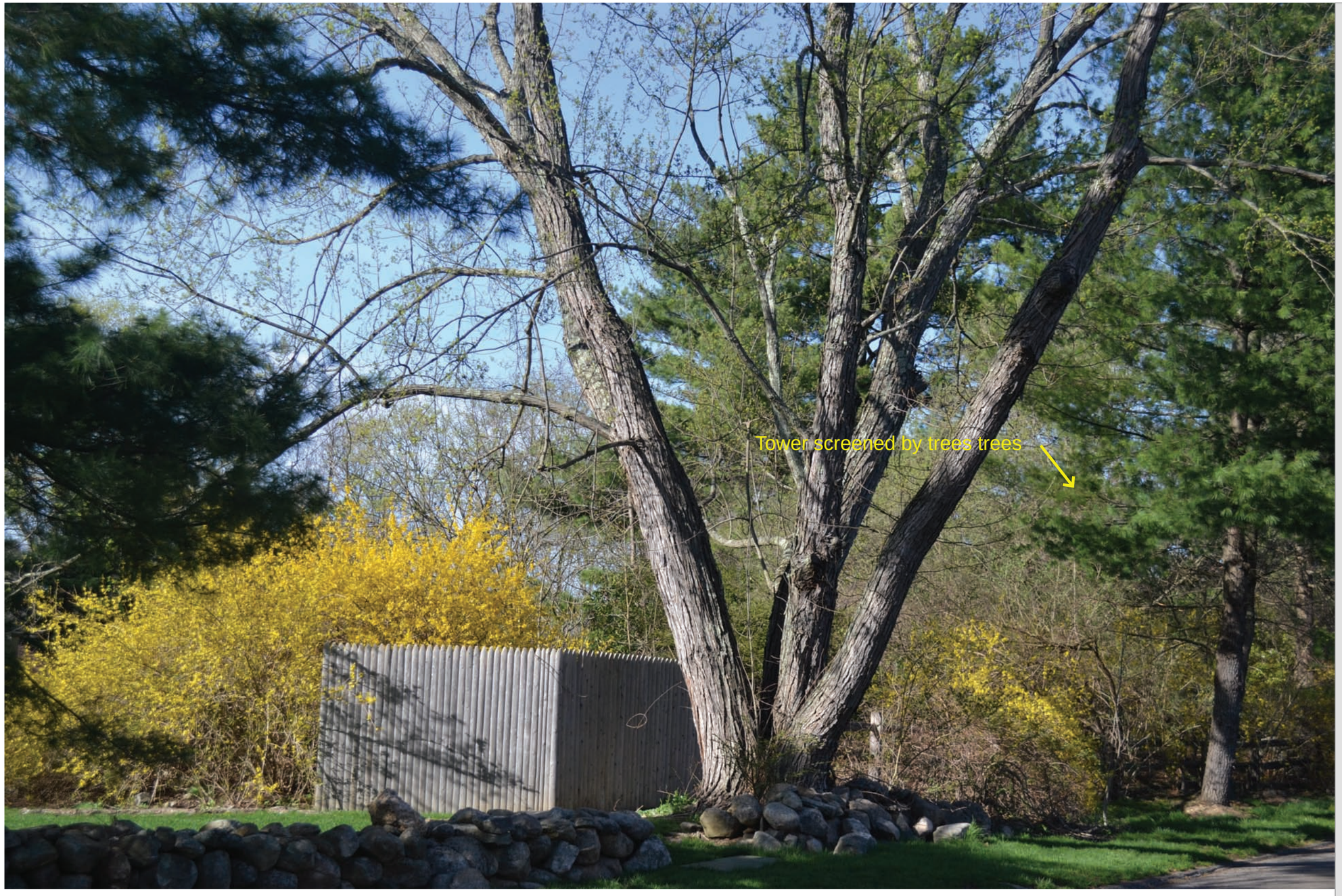
SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840



Photograph Information

Date:	, 2017
Time:	
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 15.2024” N 73° 31’ 35.2310” W
Distance:	1,290 Feet
Visibility:	Not Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 4a

Existing Condition

VP2 - Ponus Ridge Road at Bennington Place

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	10:58am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 17.6872” N 73° 31’ 27.8002” W
Distance:	700 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 5a

Existing Condition

VP3 - Bennington Place near #60

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

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Distance:	700 Feet
Visibility:	Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 5b

Simulated Condition - One Antenna Level

VP3 - Bennington Place near #60

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	10:58am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 17.6872” N 73° 31’ 27.8002” W
Distance:	700 Feet
Visibility:	Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 5c

Simulated Condition - Four Antenna

VP3 - Bennington Place near #60

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:04am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 16.2000” N 73° 31’ 24.5000” W
Distance:	760 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 6a

Existing Condition

VP4 - Bennington Place near #72

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:04am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 16.2000” N 73° 31’ 24.5000” W
Distance:	760 Feet
Visibility:	Seasonal

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 6b

Simulated Condition - One Antenna Level

VP4 - Bennington Place near #72

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:02am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 14.5069” N 73° 31’ 22.8748” W
Distance:	950 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 7a

Existing Condition

VP5 - Bennington Place near #106

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:02am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 14.5069” N 73° 31’ 22.8748” W
Distance:	950 Feet
Visibility:	Seasonal

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 7b

Simulated Condition - One Antenna Level

VP5 - Bennington Place near #106

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:15am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 22.7000” N 73° 31’ 37.6000” W
Distance:	1,200 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 8a

Existing Condition

VP6 - West School at Ponus Ridge Road

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

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New Canaan CT 06840

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Distance:	1,200 Feet
Visibility:	Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 8b

Simulated Condition - One Antenna Level

VP6 - West School at Ponus Ridge Road

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	10:53am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 23.8079” N 73° 31’ 29.5972” W
Distance:	550 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 9a

Existing Condition

VP7 - West School at Playfield

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

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769 Ponus Ridge Road
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Date:	March 06, 2017
Time:	10:53am
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Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 23.8079” N 73° 31’ 29.5972” W
Distance:	550 Feet
Visibility:	Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 9b

Simulated Condition - One Antenna Level

VP7 - West School at Playfield

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

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New Canaan - West Elementary School (CT024)
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Date:	March 06, 2017
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Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 23.8079” N 73° 31’ 29.5972” W
Distance:	550 Feet
Visibility:	Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 9c

Simulated Condition - Four Antenna

VP7 - West School at Playfield

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	, 2017
Time:	
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 26.6860” N 73° 31’ 38.9385” W
Distance:	1,300 Feet
Visibility:	Not Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 10a

Existing Condition

VP8 - Ponus Ridge Road at Winfield Lane

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:11am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 28.8000” N 73° 31’ 28.1000” W
Distance:	720 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 11a

Simulated Condition - One Antenna Level

VP9 - Winfield Lane near #77

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:11am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 28.8000” N 73° 31’ 28.1000” W
Distance:	720 Feet
Visibility:	Seasonal

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 11b

Simulated Condition - One Antenna Level

VP9 - Winfield Lane near #77

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:09am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 28.0000” N 73° 31’ 21.8000” W
Distance:	590 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 12a

Existing Condition

VP10 - Winfield Lane at Cul-de-sac

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:09am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 28.0000” N 73° 31’ 21.8000” W
Distance:	590 Feet
Visibility:	Seasonal

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 12b

Simulated Condition - One Antenna Level

VP10 - Winfield Lane at Cul-de-sac

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	11:09am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 28.0000” N 73° 31’ 21.8000” W
Distance:	590 Feet
Visibility:	Seasonal

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 12c

Simulated Condition - Four Antenna

VP10 - Winfield Lane at Cul-de-sac

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	, 2017
Time:	
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 05.3049” N 73° 31’ 30.4862” W
Distance:	1,950 Feet
Visibility:	Not Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 13a

Existing Condition

VP11 - Ponus Ridge Road at Bartling Drive

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	10:46am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 13.20” N 73° 30’ 54.10” W
Distance:	2,430 Feet

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 14a

Simulated Condition

VP12 - Frogtown Road at Frogtown Lane

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	March 06, 2017
Time:	10:46am
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 13.20” N 73° 30’ 54.10” W
Distance:	2,430 Feet
Visibility:	Seasonal

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 14a

Simulated Condition

VP12 - Frogtown Road at Frogtown Lane

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840

Photograph Information

Date:	, 2017
Time:	
Focal Length:	50mm (film equivalent)
Camera:	14.2mp Nikon D3100
Photo Location:	41° 08’ 27.1359” N 73° 30’ 56.5056” W
Distance:	2,020 Feet

Visibility: Not Visible

The above photograph is intended to be viewed 18 inches from the reader’s eye when printed on 11”x17” paper.

Figure 15a

Existing Condition

VP13 - Carriage Lane

SARATOGA ASSOCIATES

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

HOMELAND TOWERS

New Canaan - West Elementary School (CT024)
769 Ponus Ridge Road
New Canaan CT 06840