

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF HOMELAND TOWERS, LLC AND  
NEW CINGULAR WIRELESS PCS, LLC d/b/a AT&T FOR  
A CERTIFICATE OF ENVIRONMENTAL  
COMPATIBILITY AND PUBLIC NEED FOR THE  
CONSTRUCTION, MAINTENANCE, AND OPERATION  
OF A TELECOMMUNICATIONS FACILITY AT 183  
SOUNDVIEW LANE,  
TOWN OF NEW CANAAN, CONNECTICUT

DOCKET NO. 487

May 27, 2020

HOMELAND TOWERS, LLC AND NEW CINGULAR WIRELESS PCS, LLC d/b/a AT&T  
SUPPLEMENTAL SUBMISSION

Homeland Towers, LLC and AT&T (the “Applicants”) respectfully submit the following supplemental information to the Connecticut Siting Council in the above-referenced proceeding:

Supplemental Information Regarding Siting Council Interrogatory Response No. 31

As indicated in the Applicants’ response to Connecticut Siting Council Interrogatory No. 31, a noise study of AT&T’s proposed facility was conducted and is provided in Attachment 1. As set forth in the attached Environmental Sound Assessment, the noise associated with the operation of AT&T’s proposed facility, which includes sound attenuation blankets, will remain well below the CTDEEP and New Canaan nighttime standard. It is also noteworthy that the enclosed assessment demonstrates that under worst-case conditions, which include the operation of the cooling equipment and the emergency back-up generator simultaneously, the noise level will also comply with the nighttime standards at the closest receptors. As noted in the attached assessment, worst-case conditions are rare and would only occur if the emergency generator was tested on one of the hottest days of the summer when the cooler is operating.

Supplemental Information Regarding AT&T’s Emergency Back-up Generator

Included in Attachment 2 are updated drawings with information regarding AT&T’s emergency back-up generator. AT&T selected a 15kW generator manufactured by Polar Power, Inc. The drawings were updated to reflect this generator and a reconfiguration of AT&T’s equipment and generator within the proposed equipment compound area. The Environmental Sound Assessment in Attachment 1 was based on this emergency back-up generator.

**CERTIFICATE OF SERVICE**

I hereby certify that on this day the foregoing was sent electronically to the Connecticut Siting Council and the service list below with one hard copy sent to the Connecticut Siting Council, in accordance with Connecticut Siting Council directives.

May 27, 2020



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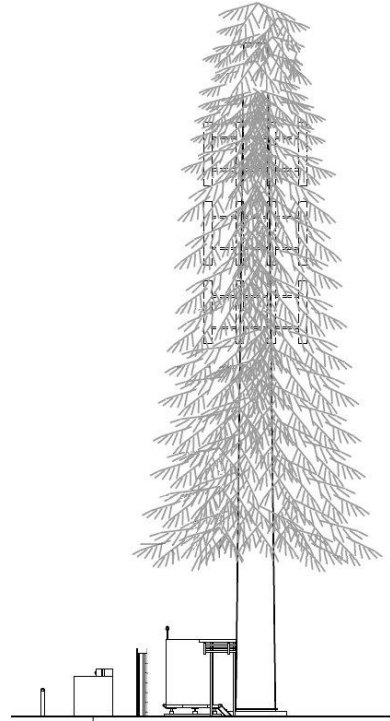
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# **ATTACHMENT 1**

# Environmental Sound Assessment



Wireless Communication Facility  
CT2652 New Canaan  
*New Monopine*  
*Soundview Lane, New Canaan, CT 06897*

May 15, 2020

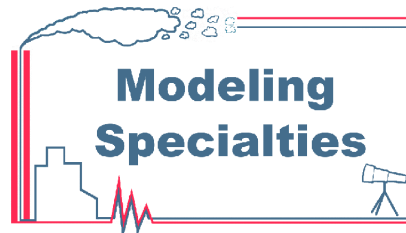
Prepared For:

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## ENVIRONMENTAL NOISE EVALUATION

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AT&T Mobility is developing a Wireless Communication Facility (the site) in New Canaan Connecticut to support personal wireless communication in the area. The proposed AT&T Wireless antennas will be mounted on a new monopine tower. Unmanned electronic equipment will be enclosed in a walk-in cabinet at the foot of the tower. A small door-mounted cooler unit will be mounted on the cabinet, typically producing no sound, but will produce sound when it is actively supplementing the cooling. An emergency generator is also proposed within the fenced equipment compound at the foot of the tower. The diesel generator will operate only during emergencies and for occasional daytime testing of about one-half hour.

This report addresses land uses in the area, measured ambient sound levels in the area, sources expected at this installation and resulting sound levels at area sensitive locations.

### Overview of Project and Site Vicinity

The project is located in New Canaan, CT. The area surrounding the site is zoned Residential and has a residential character with St. Luke's School located to the north. Neighbors in the three other directions from the equipment are residential. The nearest property line is at the school. The nearest residences in various directions are addressed in this report as receptors. Other residences in the area are more distant and will receive less sound energy than those modeled here.

Ambient sound levels were established by field measurements. The sound levels resulting from the proposed equipment were estimated using vendor data and measurements made at similar installations. Plans by AT&T/Smartlink/Ramaker dated May 5, 2020 provided the necessary information to support the evaluation of project sounds. The corresponding sound levels expected at the nearby sensitive locations were estimated using noise modeling techniques prescribed in acoustical literature.

Figure 1 has a backdrop of Google aerial imagery and is annotated to show the proposed site, surrounding area and nearby receptor locations, showing the orientation and approximate distance from the proposed equipment to the receptor location. It is noted that the construction activities at the school shown in the Google image are now complete. Figure 2 shows a field view of the St. Luke's School from the site at the time of the sound survey.



**Figure 1:** Project Area Showing the Site, Nearby Features and Modeled Sensitive Receptors



**Figure 2:** Field Image from the Site Overlooking the St. Luke’s School at Time of Survey

## Discussion of General Noise Analysis Methods

There are a number of ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. Following is a brief introduction to the noise measurement terminology used in this assessment.

### *Noise Metrics*

The Sound Level Meter used to measure environmental sound is a standardized instrument.<sup>1</sup> It contains “weighting networks” to adjust the frequency response of the instrument to approximate that of the human ear under various circumstances. One of these is the *A-weighting* network. *A-weighted* sound levels emphasize the middle frequency sounds and de-emphasize lower and higher frequency sounds; they are reported in decibels designated as “dBA.” All broadband levels represented in this study are weighted using the *A-weighting* scale.

The sounds in our environment usually vary with time, so they cannot always be described with a single number. Two methods are used for describing variable sounds. These are *exceedance levels* and *equivalent level*. Both are derived from a large number of moment-to-moment *A-weighted* sound level measurements. Exceedance levels are designated  $L_n$ , where “n” can have any value from 0 to 100 percent. For example:

- ◆  $L_{10}$  is the sound level in dBA exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The  $L_{10}$  is sometimes called the *intrusive* sound level because it is caused by occasional louder noises like those from passing motor vehicles.
- ◆  $L_{50}$  is the median sound level in dBA exceeded 50 percent of the time during the measurement period.
- ◆  $L_{90}$  is the sound level in dBA exceeded 90 percent of the time during the measurement period. The  $L_{90}$  is close to the lowest sound level observed. It is essentially the same as the *residual* sound level, which is the sound level observed when there are no loud, transient noises.

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<sup>1</sup> American National Standard Specification for Sound Level Meters, ANSI S1.4-1983, published by the Standards Secretariat of the Acoustical Society of America, NY.

By using exceedance levels, it is possible to separate steady sounds ( $L_{90}$ ) from occasional louder sounds ( $L_{10}$ ) in the environment. The *equivalent level* is the level of a hypothetical steady sound that has the same energy as the actual fluctuating sound observed. The equivalent level is designated  $L_{eq}$ , and is also A-weighted. The equivalent level is strongly influenced by occasional loud, intrusive noises. When a steady sound is observed, all of the  $L_n$  and  $L_{eq}$  are equal.

In the design of noise control treatments, it is essential to know something about the frequency spectrum of the sound of interest. Noise control treatments do not function like the human ear, so simple A-weighted levels are not useful for noise-control design or the identification of tones. The spectra of sounds are usually stated in terms of *octave band sound pressure levels*, in dB, with the octave frequency bands being those established by standard.<sup>2</sup> The sounds at the proposed site have been evaluated with respect to the octave band sound pressure levels, as well as the A-weighted equivalent sound level. Only the A-weighted values are presented here since they represent the more easily recognized sound scale.

### ***Noise Regulations and Criteria***

Sound compliance is judged on two bases: the extent to which governmental regulations or guidelines are met, and the extent to which it is estimated that the community is protected from the excessive sound levels. The governmental regulations that may be applicable to sound produced by activities at the project site are summarized below.

#### ***Federal***

- Occupational noise exposure standards: 29 CFR 1910.95. This regulation restricts the noise exposure of employees at the workplace as referred to in OSHA requirements. Workers will not routinely attend this facility, so these standards are not applicable. But the facility emits only modest levels of sound which would meet the requirements.

#### ***State***

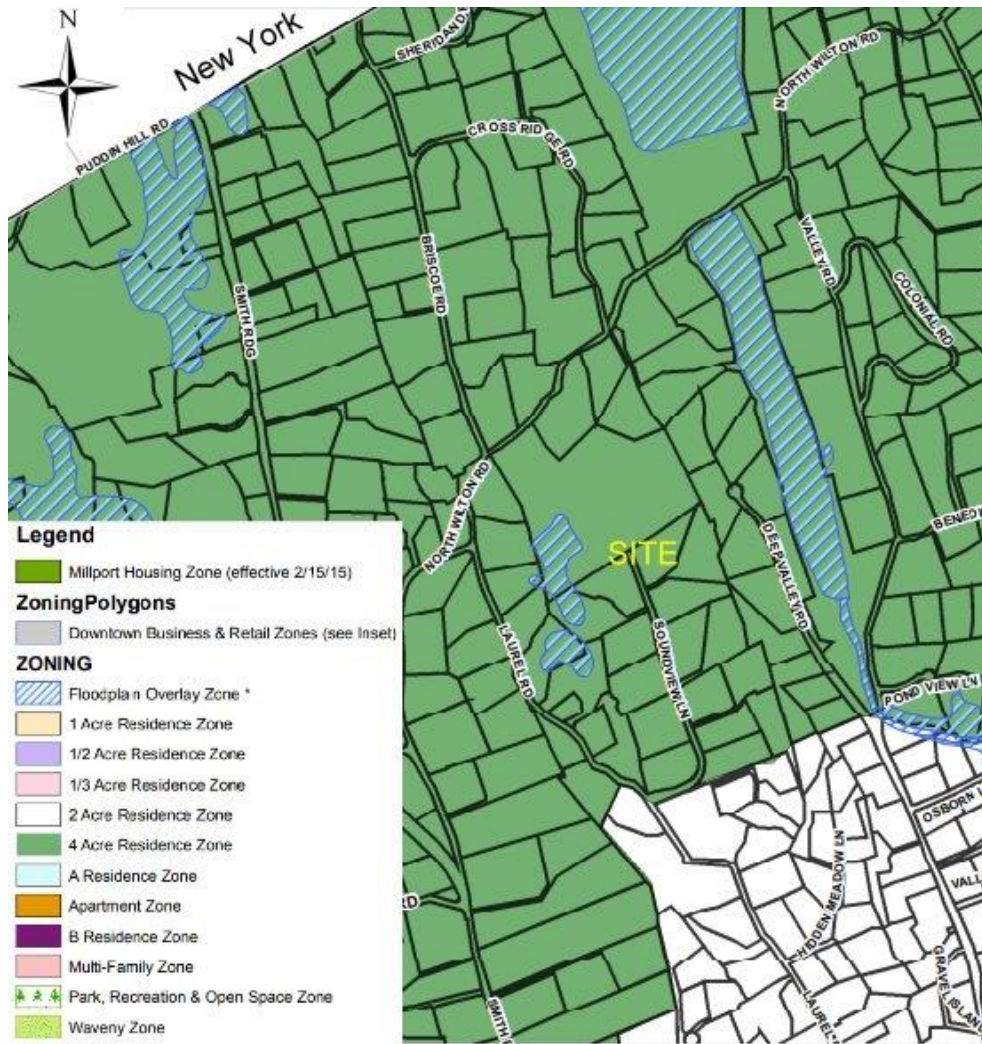
- The state of Connecticut (Connecticut Department of Energy & Environmental Protection or CTDEEP) regulates noise at Regulation Title 22a, Sections 69-1 through 69-7.4, Control of Noise. The project is a Class B (Utility - Communications) emitter. The land use is Utility in a residential Zone 2A. The site is surrounded by residential land whose property lines were evaluated as Class A Noise Receptors. An excerpt from the Town of New Canaan Zoning Map is shown in Figure 3. The details of the CTDEEP performance criteria are shown in Table 1 below and are based on the source and receiving land uses.

**Table 1: Overview of CTDEEP Performance Criteria**

Emitter's Zone	Receptor's Zone			
	Industrial	Commercial	Residential/Day	Residential/Night
Residential	62 dBA	55 dBA	55 dBA	45 dBA
Commercial	62 dBA	62 dBA	55 dBA	45 dBA
Industrial	70 dBA	66 dBA	61 dBA	51 dBA

<sup>2</sup> American National Standard Specification for Octave, Half-octave and Third-octave Band Filter Sets, ANSI S1.11-1966(R1975).





**Figure 3:** Excerpt of the New Canaan Online Zoning Map

### **Local**

- The Town of New Canaan has an ordinance providing for Noise Pollution Control. Its definition section refers directly to the CTDEEP requirements. The ordinance provides specific daily performance standards of 45 dBA during nighttime hours (7 pm to 7 am), with other specific times on weekends and holidays. There are exemptions listed that include the emergency operation of generators.

### **Existing Community Sound Levels**

The area has a suburban residential character. The nearest sensitive receptors are other residences located south of the St. Luke’s School. Sound level measurements were made off Soundview Drive to establish the background sound levels for the area on April 23, 2020. The ambient sound fluctuates through the day and night, but the proposed sources are typically limited to daytime hours. Measurements were made during the daytime. A new source of sound tends to be noticed most during conditions that are otherwise quiet. Because of this, the ambient sound survey was scheduled under conditions that include no precipitation, light or no winds and off-peak traffic.

The quiet conditions of the survey were exaggerated due to the state of emergency orders related to the COVID-19 emergency. While daytime activities at the St. Luke’s School would usually include busses,

traffic, pedestrians and facility maintenance, these were absent during the survey. The only sounds noted from the school were rooftop air handlers. It is noted that Personal Protective Equipment and social distancing were employed for the survey consistent with the CDC (Center for Disease Control and Prevention) recommendations.

Attended sound level measurements were made using a Rion NA-28 sound level meter. The measurements created a baseline community sound level and captured the frequency-specific character of the sound. The meter was mounted on a tripod approximately 5 feet above the ground. The microphone was fitted with factory recommended foam windscreen. The meter was programmed to take measurements for 20 minutes and then stored processed statistical levels. The meter meets the requirements of ANSI S1.4 Type 1 – Precision specification for sound level meters. The meter was calibrated in the field using a Larsen Davis Cal-250 acoustical calibrator before and after the sessions. The field calibrations indicated that the meters did not drift during the study. The spectrum analyzer complies with the requirements of the ANSI S1-11 for octave band filters.

### Results of the Ambient Survey

The results of the ambient sound level measurements are summarized in Table 2. The Leq represents the “average” sound level during the sample while the L<sub>90</sub> represents the “background” sound level. Both are shown in this study to characterize the existing sound field. Baseline levels are affected by community conditions, meteorology, seasons, insects and traffic patterns. Comparing the Leq levels (including all sounds) to the L<sub>90</sub> levels (quietest 10% of momentary samples) provides additional detail of the sound character in the area. The steady character of the observed sound is reflected in the two metrics being equal. The measurements also indicate that the existing daytime sound levels are currently within the residential target levels of the CTDEEP standards for daytime sounds (55 dBA).

**Table 2: Ambient Sound Levels Measured on April 23, 2020**

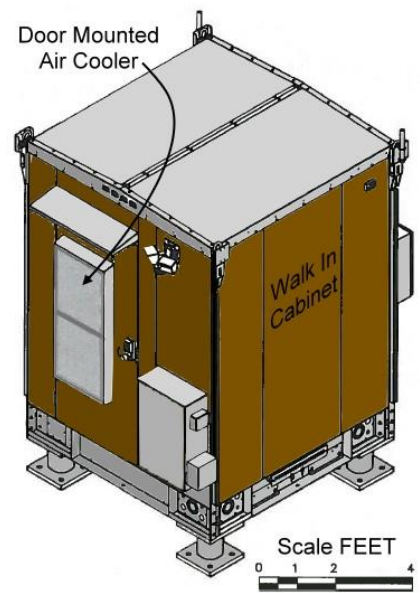
Location	Time	Condition	L <sub>eq</sub>	L <sub>90</sub>
Site	9:10 AM	Daytime	43 dBA	40 dBA
Soundview Drive	9:35 AM	Daytime	40 dBA	40 dBA

Consistent with most residential communities, the daytime is affected by elevated traffic volumes on local or distant roadways along with local daytime activities. During the site measurement, there was a distant helicopter activity that seemed to intrude into an otherwise quiet condition. Another sample was taken, which reduced the Leq level but not the background L<sub>90</sub> level. The ambient baseline was defined by the lowest measured level of 40 dBA.

### Sounds from the Proposed Installation

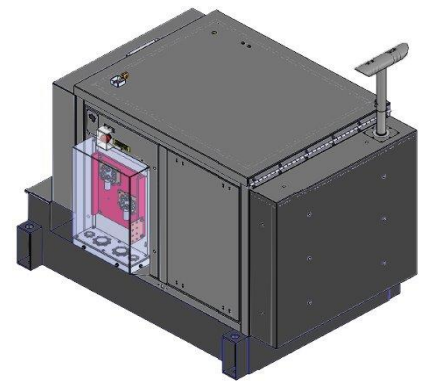
The proposed installation has been designed to minimize the effect on the sound environment. Most of the equipment planned for the installation will produce no sound. Sounds that will be produced by the equipment will be significantly mitigated to manage any effects at sensitive locations. This analysis represents the most likely sound levels to be expected as a result of the normal operation of the equipment using data from potential equipment vendors and measurements of other similar equipment. Details of the modeling and assumptions are provided below. The proposed equipment will include antennas on the monopine and cable trays that support necessary cabling. None of this equipment will produce environmental sound. As noted above, there are only two proposed sources of sound related to this project, i.e., the cabinet coolers and a standby generator to provide system power during periods when utility support is lost. The equipment is described and quantified below:

**Environmental Control Equipment.** A walk-in cabinet will be located in the fenced compound at the base of the monopine. The cabinet will house AT&T equipment that is environmentally sensitive. The proposed Vertiv cabinet has two ways to provide cooling. Multiple fans move filtered ambient air through the front wall and out the back wall. Their speed and corresponding sound level vary based on how much cooling is needed. The ventilation system provides adequate cooling except when the ambient temperature is very high. When needed (only when cabinet temperature is over 100° F), the door-mounted cooler provides additional support. The highest operational sound levels are expected in the hottest periods of summer when the cooler is active and is only expected to occur during the daytime. It is noted that the system has a heating mode with minimal interaction with the outdoors, so is not associated with community sound.



### **Non-Routine Sound Emissions**

The installation will include a small diesel generator installed inside a separate enclosure. It is a Polar DC generator, which dramatically changes the way that it supports the facility. The generator will only operate to the speed demanded by the load. The horizontal configuration of the generator keeps the sound source low to the ground which takes full benefit of the proposed acoustical liner on the fence. This unit will also be configured to sit on a supplementary fuel tank and has an exhaust extension for staff safety. Both features are included in the modeling study.



The engine will routinely be remotely tested to assure availability. But since these tests include no load, the unit test will operate at a significantly lower speed and sound level than under emergency operation. The routine test sound levels are expected to be in the mid 50's dBA. For this conservative study, a 60 dBA rating is used for the tests. The equipment is monitored remotely, so attended service will be infrequent. The generator sound under full load (emergency) is rated at 65 dBA at 23 feet from the unit.

### ***Equipment Sound Level Modeling***

A computer model was developed for the project sounds based on conservative sound propagation principles prescribed in acoustics literature. Each of the expected sources during operation of the facility were identified and quantified, then estimated at the nearest sensitive receptors. Sound levels decrease with distance, so the resulting sound level will be lower at more distant locations. The sound modeling accounts for specific source and propagation path assumptions for each modeled receiver location.

Sound level prediction modeling was performed using CADNA software under downwind weather conditions as assumed in the standard ISO 9613-2. Table 3 summarizes the modeling input parameters.

**Table 3: Modeling Input Parameters**

Item	Modeling Input and Description
Terrain	Flat terrain assumed
Temperature	10°C
Relative Humidity	70%
Weather Condition	6.5 mph, directly from facility to receptor*
Ground Attenuation	0.2, hard surface (0.5 = soft ground, 0.0 = pure reflection)
Atmospheric Inversion	CONCAWE – Category F**
# of Sound Reflections	2
Receptor Height	1.5 meter above ground level

\* Propagation calculations incorporate the adverse effects of certain atmospheric and meteorological conditions on sound propagation, such as gentle breeze of 1 to 5 m/s (ISO 1996-2: 1987) from source to receiver.

\*\*CONCAWE – Category F indicates an atmosphere that promotes sound propagation.

Some receptors are in line-of-site of the equipment, so no terrain effects were included in the modeling. An equipment layout plan is shown in Figure 4. An elevation drawing of the compound is shown in Figure 5.

### ***Results of Sound Level Modeling***

The routine operation of the facility is not expected to include the cabinet cooler or generator, so it will emit only fresh air fan sounds when needed. To calculate the effect of the facility under the worst conditions, the sounds from the cabinet fans plus cooler plus generator are modeled together at receptor locations. The site location, receptors and their orientation to the proposed equipment were shown in Figure 1. The results of the worst-case modeling are shown in Table 4. Like air conditioning units in the surrounding community, the need for the supplemental cooler is expected to be limited to the warmest summer days under direct sunlight conditions. The cooler and generator test might never operate together as modeled in this worst-case scenario.

**Table 4: Predicted Routine and Worst-Case Sound Levels Expected at Receptors**

Receptor Location	Distance (Ft) (from Cabinet)	Ambient Level Day/Night (dBA)	Daytime Sound Standard (dBA)	Routine Operation (dBA)	Cooler+ Generator Worst-Case Level
P/L, North	35	40	55	40	50 dBA
P/L, East	65	40	55	33	42 dBA
St. Luke’s School	240	40	55	21	32 dBA
Residence, Southeast	350	40	55	20	29 dBA
Residence, South	515	40	55	17	26 dBA
Residence, Southwest	425	40	55	19	27 dBA

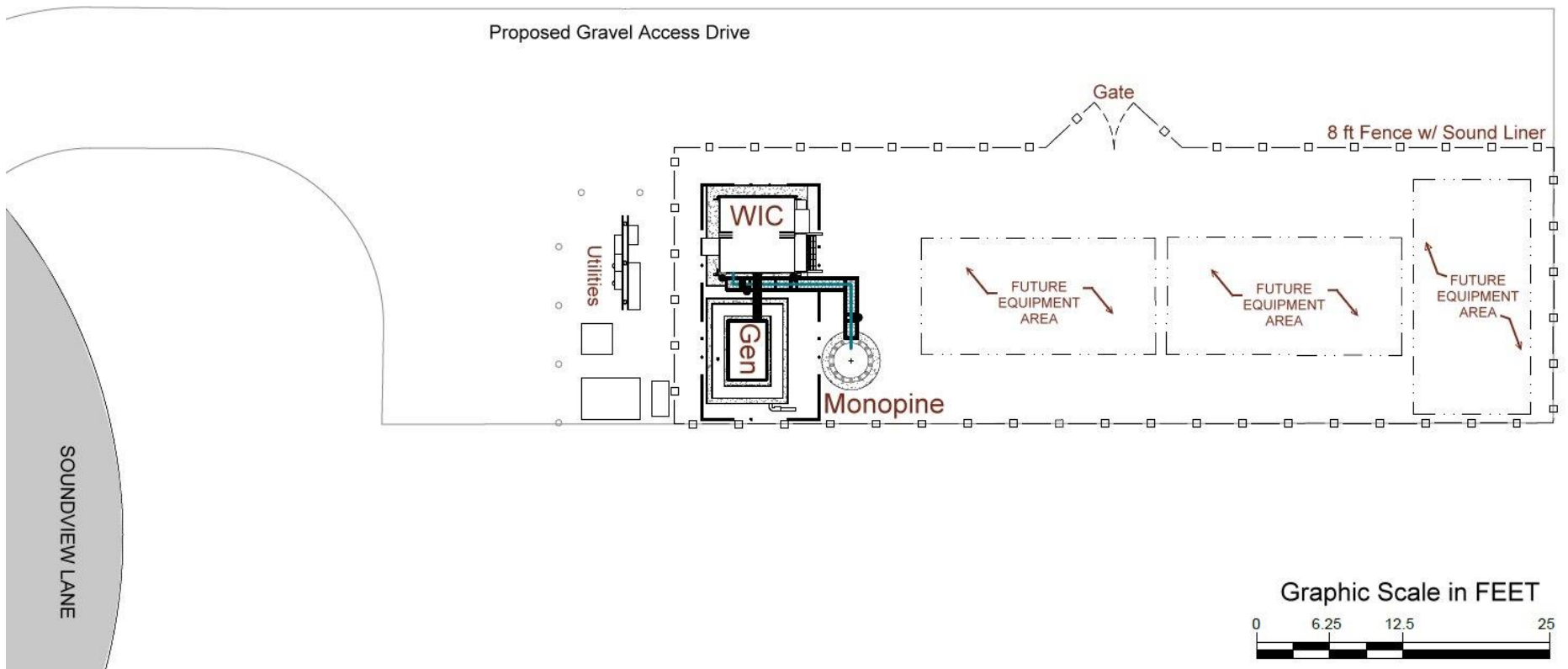
Note: It is customary to conduct all calculations using precise values, but to round the result to whole dBA. All results are rounded to units (dBA).

### ***Sound Mitigation Features***

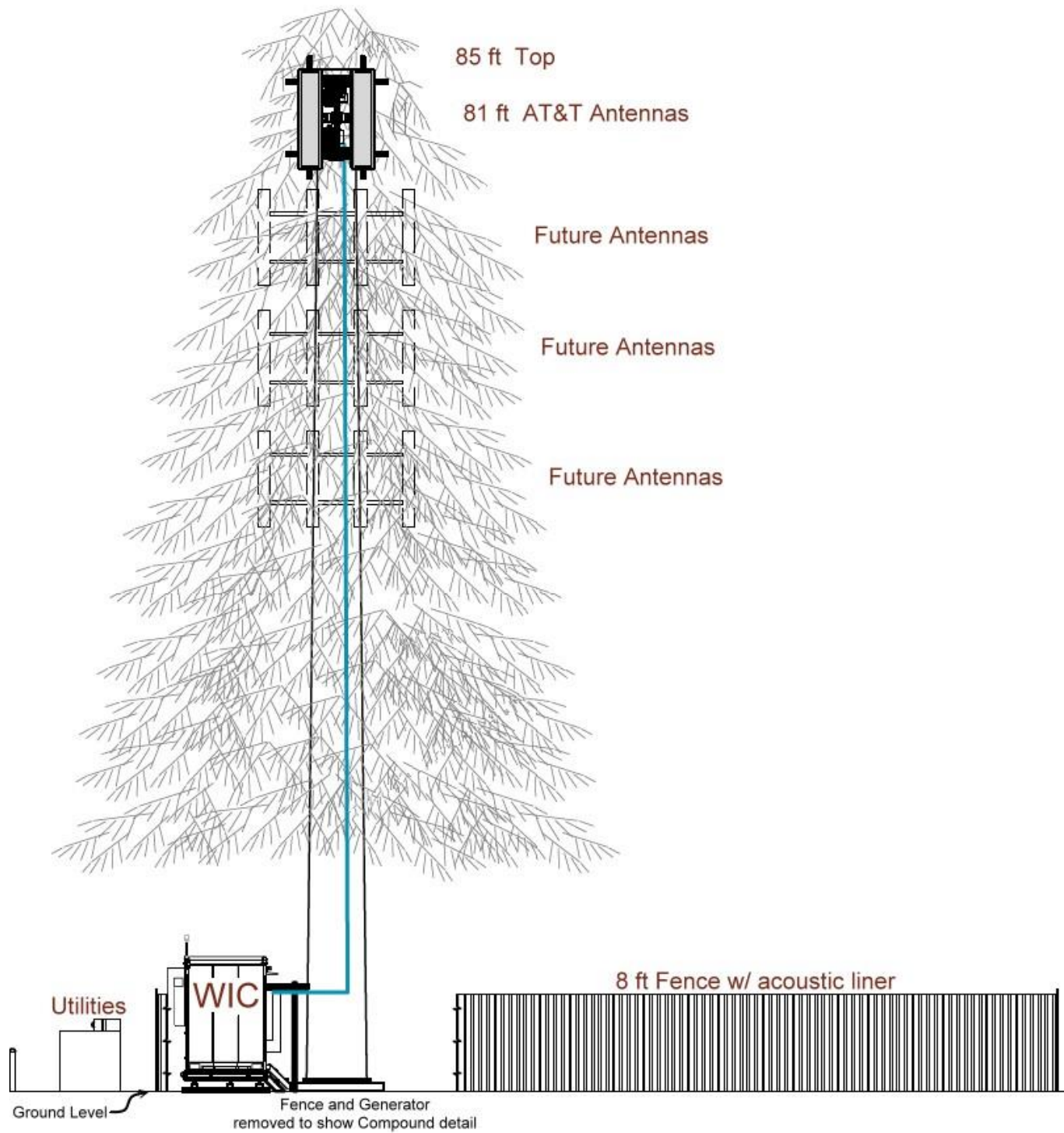
There are several notable mitigation measures in place to achieve the low sound levels shown above. The selection of the walk-in cabinet reduces area and sound levels associated with full size shelters. The cabinet is oriented so the cooler sound is directed site-west, away from the nearest property lines. The DC generator was specifically selected to minimize the off-site sound levels. The lower sound levels are a result of its inverter design, fully enclosed diesel engine and its low profile. The physical size of the generator cabinet is important because its low profile allows the proposed fence mounted sound barrier to effectively reduce the generator sound in the community.



Approx. Property Line



**Figure 4:** Plan Showing the Proposed Layout of the Equipment Compound



## ELEVATION VIEW

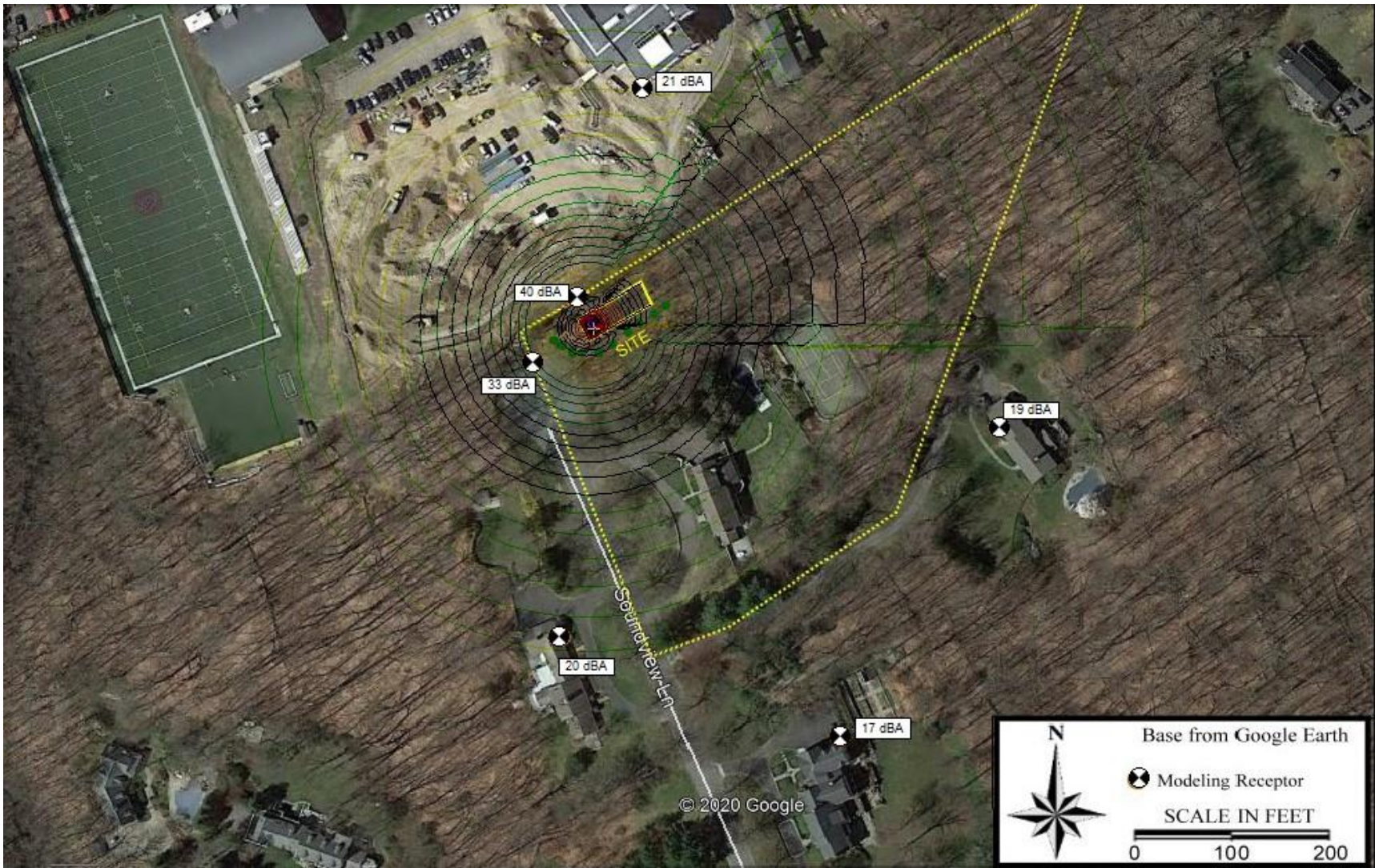
**Figure 5:** View Showing the Proposed Elevation Layout of the Site

## Conclusion

The potential sounds from the proposed installation were evaluated using measured field baseline, vendor data and numerical modeling methods. Most of the time, the proposed wireless facility will produce no sound. The ambient sound level was established to be 40 dBA during the daytime. The cabinet ventilation sound is expected to be needed only during the daytime and produces a sound equal to the ambient at the nearest property line. If ventilation fan support were needed during a hot summer night, it would remain well below the CTDEEP and New Canaan nighttime standard of 45 dBA. The modeling results corresponding to the routine daytime facility operation is shown in Figure 6. The CTDEEP standards apply at the property line. Additional receptors are added to represent areas of active land use in the area.

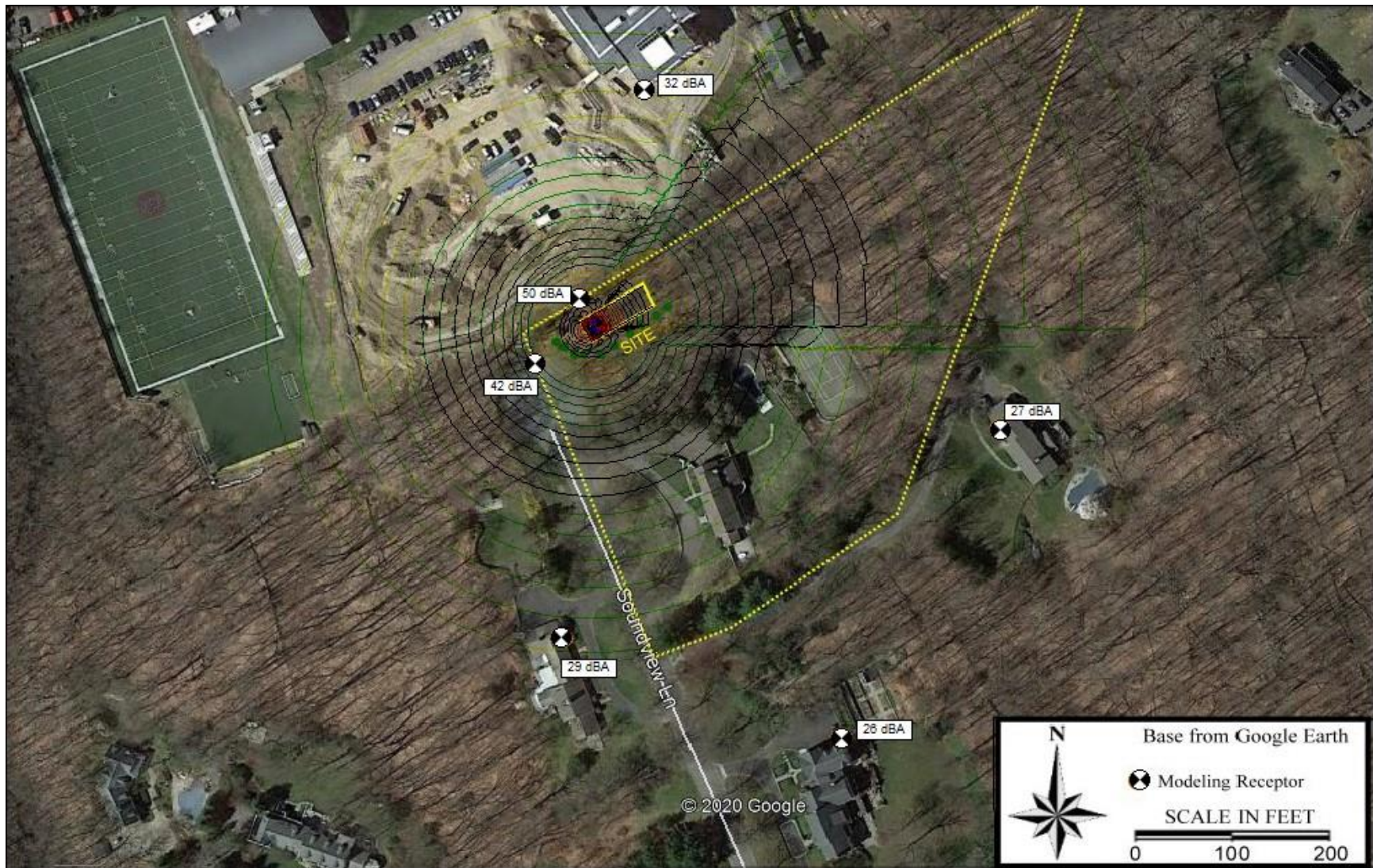
Infrequently, the proposed facility will include testing of the emergency generator. The supplementary cooler might also be needed under hot summer daytime conditions. The infrequent daytime testing was modeled to include the combined sound from cooler and generator operation. This represents a worst-case estimate, which could only happen if the routine test landed on one of the few hottest days of the summer. The graphical modeling results for this worst-case condition is shown in Figure 7.

The results of this expert analysis indicate the facility will comply with all federal, state and local requirements with respect to environmental sound at residential receptors.



**Figure 6:** Graphical Summary of the Modeling Results Under Routine Operating Conditions





**Figure 7:** Graphical Summary of the Modeling Results Under Worst-Case Operating Conditions

# **ATTACHMENT 2**



HOMELAND TOWERS, LLC

# WIRELESS TELECOMMUNICATIONS FACILITY

## NEW CANAAN NORTHEAST 183 SOUNDVIEW LANE NEW CANAAN, CT 06840

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**at&t**  
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WATERFORD, CT 06385 PH: (860)-663-1697  
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### PERMITTING DOCUMENTS

NO	DATE	REVISION
0	08/29/19	FOR REVIEW: RCB
1	09/04/19	CLIENT COMMENTS: RCB
2	01/09/20	CLIENT COMMENTS: RCB
3	01/14/20	CLIENT COMMENTS: RCB
4	01/21/20	CLIENT COMMENTS: RCB
5	01/21/20	CLIENT COMMENTS: RCB
6	01/24/20	CLIENT COMMENTS: RCB
7	05/22/20	CLIENT COMMENTS: RCB
8	05/26/20	CLIENT COMMENTS: RCB

### DRAWING INDEX

- T-1 TITLE SHEET & INDEX
- VB-101 & VB102 BOUNDARY & TOPOGRAPHIC SURVEY
- SP-1 SITE PLAN & ABUTTERS MAP
- CP-1 COMPOUND PLAN & TOWER ELEVATION
- C-1 SITE DETAILS
- C-2 SITE DETAILS

### SITE INFORMATION

PROJECT LOCATION: 183 SOUNDVIEW LANE  
NEW CANAAN, CT 06840

PROJECT DESCRIPTION: RAWLAND SITE W/ GROUND  
EQUIPMENT WITHIN 2,310 SF  
TELECOMMUNICATIONS LEASE AREA  
W/ NEW 90'± AGL MONOPINE.

PROPERTY DEVELOPER: HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2ND FLOOR  
DANBURY, CT 06810

DEVELOPER CONTACT: RAY VERGATI  
(203) 297-6345

ENGINEER CONTACT: ROBERT C. BURNS, P.E.  
(860) 663-1697 x206

LATITUDE: 41° 11' 26.43"N  
LONGITUDE: 73° 29' 42.16"W  
ELEVATION: 502.3± AMSL

MAP: 40  
BLOCK: 105  
LOT: 74  
ZONE: 4 ACRE RESIDENCE ZONE

### DESIGN PROFESSIONALS OF RECORD

PROF: ROBERT C. BURNS P.E.  
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EXTENSION - SUITE 311  
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DEVELOPER: HOMELAND TOWERS, LLC  
ADDRESS: 9 HARMONY STREET  
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DANBURY, CT 06810

### HOMELAND TOWERS NEW CANAAN NORTHEAST

SITE 183 SOUNDVIEW LANE  
ADDRESS: NEW CANAAN, CT 06840

APT FILING NUMBER: CT283450

DATE: 08/29/19 DRAWN BY: ELZ

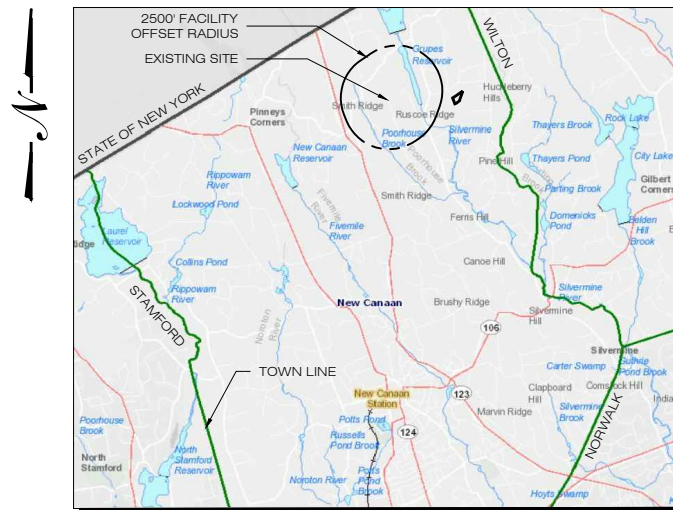
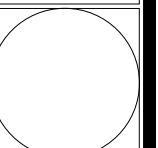
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**TITLE SHEET  
& INDEX**

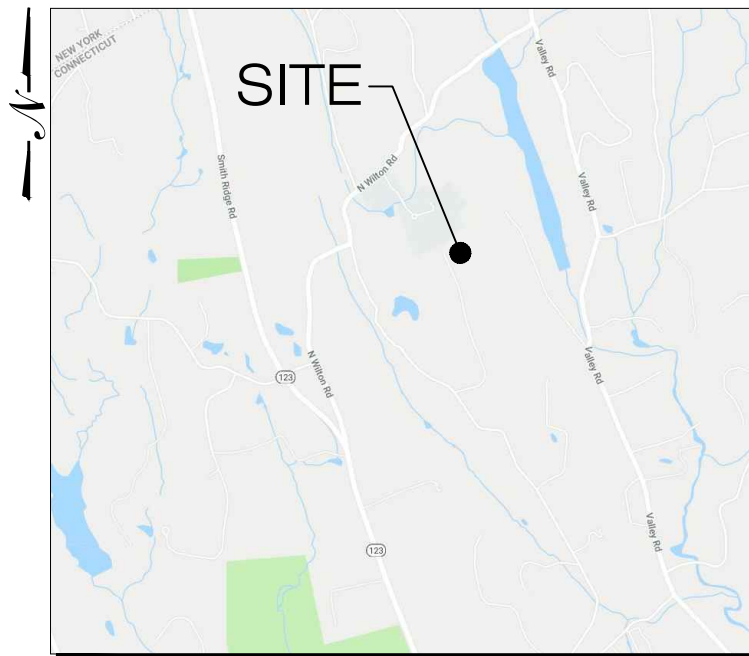
### SHEET NUMBER:

**T-1**



**MUNICIPAL NOTIFICATION LIMIT MAP**

SCALE: 1" = 1 Mile



**VICINITY MAP**

SCALE: 1" = 500'

### OWNER:

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NEW CANAAN, CT 06840

### APPLICANTS:

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### HOMELAND PROJECT ATTORNEY:

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WHITE PLAINS, NY 10601  
(914) 761-1300

### POWER PROVIDER:

EVERSOURCE: (800) 286-2000

### TELCO PROVIDER:

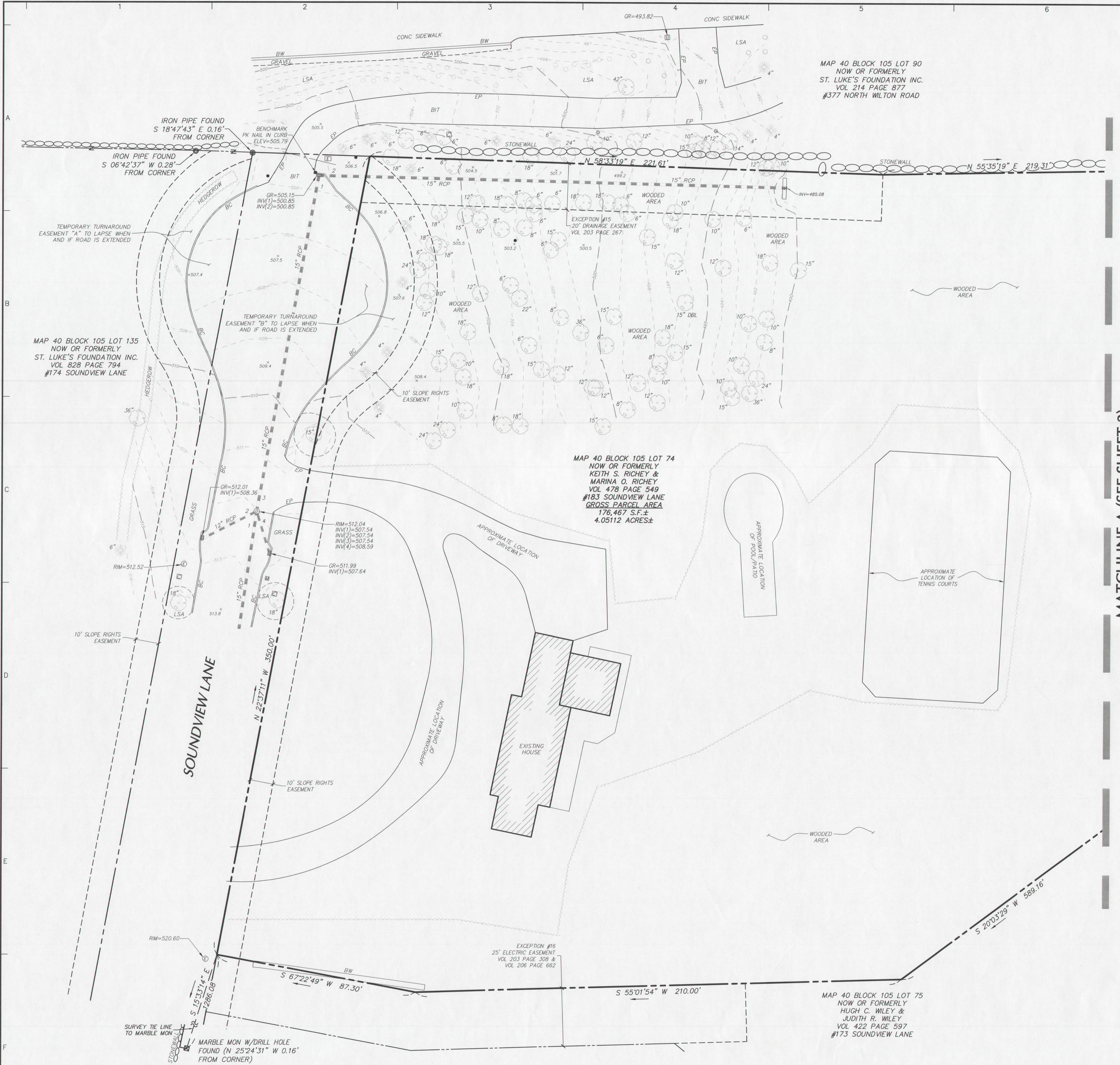
FRONTIER (800) 921-8102

### CALL BEFORE YOU DIG:

(800) 922-4455

### GOVERNING CODES:

CONNECTICUT STATE BUILDING CODE, LATEST EDITION  
NATIONAL ELECTRIC CODE, LATEST EDITION  
TIA-222-G

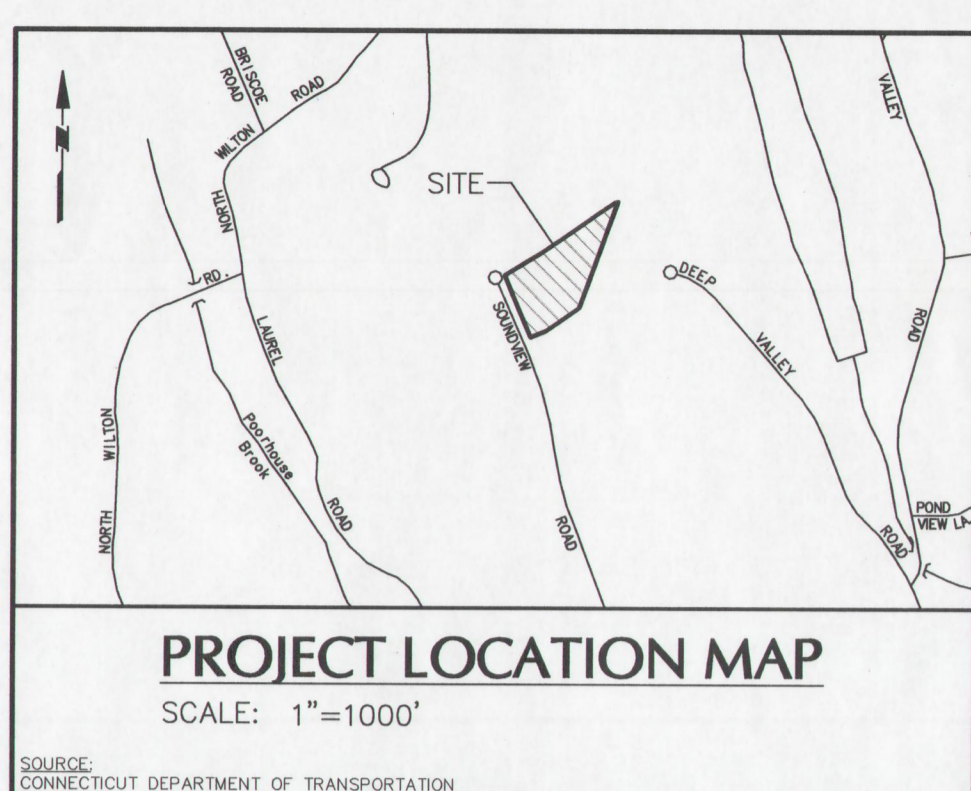


MAP 40 BLOCK 105 LOT 90  
 NOW OR FORMERLY  
 ST. LUKE'S FOUNDATION INC.  
 VOL 214 PAGE 877  
 #377 NORTH WILTON ROAD

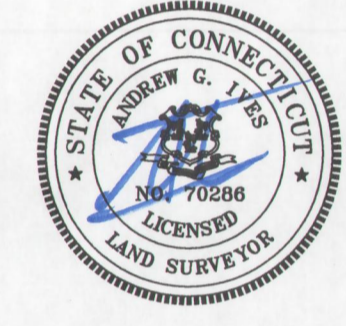
MAP 40 BLOCK 105 LOT 74  
 NOW OR FORMERLY  
 KEITH S. RICHEY &  
 MARINA O. RICHEY  
 VOL 478 PAGE 549  
 #183 SOUNDVIEW LANE  
 GROSS PARCEL AREA  
 176,467 S.F. ±  
 4.05112 ACRES ±

MAP 40 BLOCK 105 LOT 75  
 NOW OR FORMERLY  
 HUGH C. WILEY &  
 JUDITH R. WILEY  
 VOL 422 PAGE 597  
 #173 SOUNDVIEW LANE

MAP 40 BLOCK 105 LOT 135  
 NOW OR FORMERLY  
 ST. LUKE'S FOUNDATION INC.  
 VOL 828 PAGE 794  
 #174 SOUNDVIEW LANE

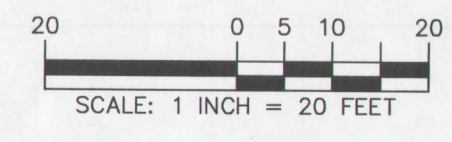


- LEGEND** (NOT SHOWN TO SCALE)
- BOLLARD
  - MAILBOX
  - SIGN
  - SHRUB
  - TREE
  - CATCH BASIN
  - ELECTRIC BOX
  - COMMUNICATIONS BOX
  - LIGHT POLE
  - MANHOLE (TYPE AS LABELED)
  - SPOT ELEVATION
  - BIT
  - CONC
  - LSA
  - BW
  - EP
  - BC
  - CHAINLINK FENCE
  - TREE LINE
  - EASEMENT LINE
  - PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - CONTOUR LINE



MATCHLINE A (SEE SHEET 2)

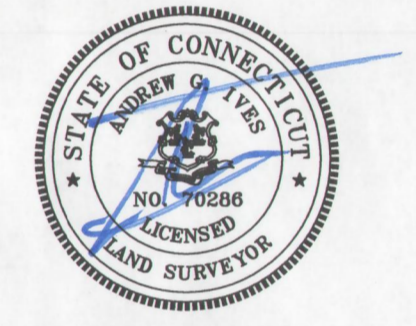
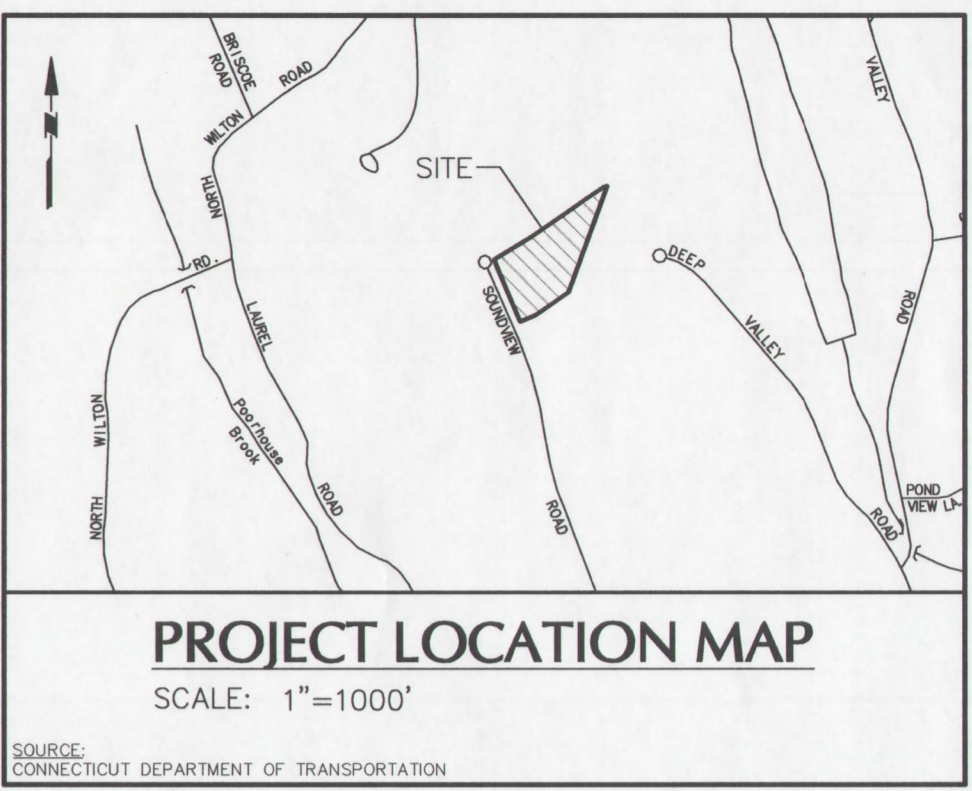
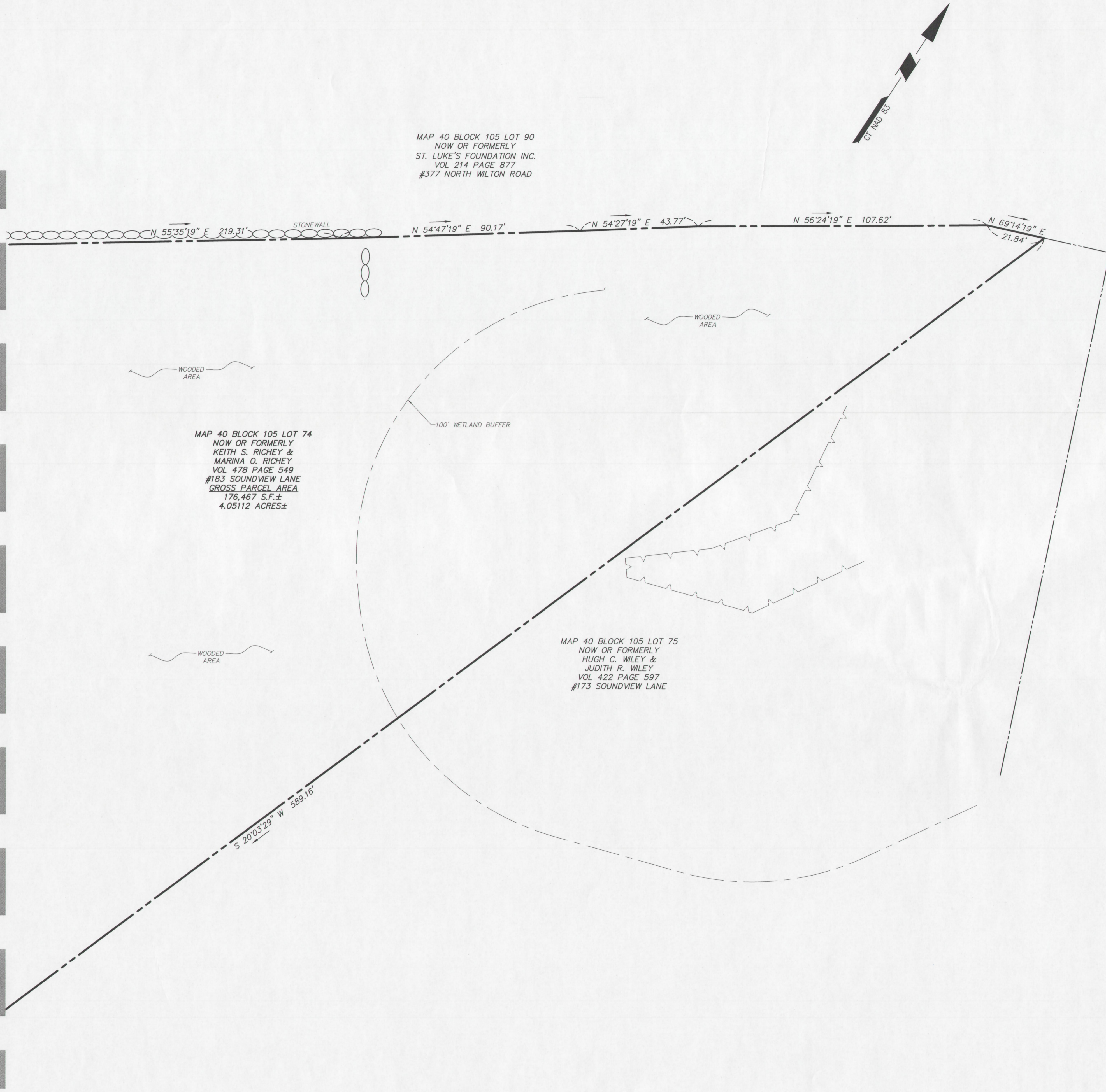
Date	Description	No.
REVISIONS		
"TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON."		
 ANDREW G. IVES		6/15/2019
DATE SIGNED		
PROFESSIONAL LAND SURVEYOR		
CT STATE LIC. NO. 70286		
<b>LANGAN</b>		
Langan CT, Inc. 555 Long Wharf Drive New Haven, CT 06511		
T: 203.562.5771 F: 203.789.6142 www.langan.com		
Project		
<b>183 SOUNDVIEW LANE</b>		
NEW CANAAN CONNECTICUT		
Drawing Title		
<b>BOUNDARY &amp; TOPOGRAPHIC SURVEY</b>		
Project No.	Drawing No.	
140205701	VB101	
Date	MAY 24, 2019	
Drawn By	JIS	
Checked By	AGI	
Sheet 1 of 2		



**NOTES**

- THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
  - THIS SURVEY IS A PROPERTY SURVEY CONFORMING TO A HORIZONTAL ACCURACY OF A-2 AND A TOPOGRAPHIC SURVEY CONFORMING TO A T-2 ACCURACY. THE BOUNDARY DETERMINATION IS A RESURVEY. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A BOUNDARY OPINION AND DEPICT SITE FEATURES FOR FUTURE SITE DEVELOPMENT.
- THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, DEED INFORMATION AND THE FOLLOWING REFERENCES:
  - COMMITMENT FOR TITLE INSURANCE ISSUED BY SOUND TITLE, LLC. FILE NUMBER: ST25031, EFFECTIVE: DATE JULY 24, 2017, EXCEPT AS HERINAFTER SET FORTH:
    - NOT SURVEY RELATED.
    - SURVEY PROVIDED.
    - 5. NOT SURVEY RELATED.
    - RIGHTS MAY EXIST.
    - 8. NOT SURVEY RELATED.
    - SURVEY PROVIDED.
    - 14. NOT SURVEY RELATED.
    - DRAINAGE EASEMENT AS DEFINED IN VOL 203 PAGE 267. DEPICTED ON SURVEY.
    - ELECTRIC EASEMENT AS DEFINED IN VOL 203 PAGE 308 AND VOL 206 PAGE 662. DEPICTED ON SURVEY.
    - MAP REFERENCED IN NOTE 2B OF SURVEY.
  - MAP TITLED "RE-SUBDIVISION MAP #5336 PREPARED FOR JOHN P. CRETELLA NEW CANAAN, CONNECTICUT FOUR ACRE RESIDENCE ZONE TOTAL AREA (NEW LOTS ONLY) = 47.361 ACRES (EXCLUDING ROADWAY)", SCALE: 1"=100', DATED: JUNE 27, 1969
  - MAP TITLED "MAP #6815 SHOWING EXCHANGE OF PROPERTY BETWEEN KENNETH G. TROPIN & KATHLEEN O. TROPIN AND JOHN E. COX & NANCY E. COX NEW CANAAN, CONNECTICUT", SCALE: 1"=100', DATED: JULY 13, 1993, BY: MOODY & O'BRIEN, SURVEYORS
  - MAP TITLED "COMPILATION PLAN DEPICTING CONSOLIDATION OF PROPERTY AT ST. LUKE'S SCHOOL IN NEW CANAAN, CONNECTICUT PREPARED FOR ST. LUKE'S FOUNDATION INC.", SCALE: 1"=100', DATED: DECEMBER 14, 2010, BY: ROCCO V. D'ANDREA, INC., MAP #7522
  - MAP TITLED "ZONING LOCATION SURVEY DEPICTING ST. LUKE'S SCHOOL LOCATED AT 377 NORTH WILTON ROAD IN NEW CANAAN, CONNECTICUT PREPARED FOR ST. LUKE'S FOUNDATION, INC." SCALE: 1"=100', DATED: JULY 1, 2010, LAST REVISED: AUGUST 9, 2017, BY: ROCCO V. D'ANDREA, INC., MAP #7726
- THE MERIDIAN OF THIS SURVEY IS REFERENCED TO CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD 83 AS ESTABLISHED THROUGH GPS METHODS.
- ELEVATIONS SHOWN ARE REFERENCED TO NAVD 88 ESTABLISHED THROUGH GPS METHODS.
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN CT, INC. FIELD WORK COMPLETED DURING THE MONTH OF MAY 2019.
- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP ENTITLED "FAIRFIELD COUNTY, CONNECTICUT, PANEL 378 OF 626, MAP NUMBER: 09001C0378F, EFFECTIVE DATE: JUNE 18, 2010" THE PROJECT AREA IS IN ZONE X (UNSHADED).
- UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
- ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA MAY BE SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.
- UNLESS SPECIFICALLY NOTED HEREON, THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.
- ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATION OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF THIS SURVEY.
- WETLANDS WERE DELINEATED IN JUNE 2019 BY ALL-POINTS TECHNOLOGY CORP., P.C.
- PRIOR TO ANY DESIGN OR CONSTRUCTION, THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
- THIS SURVEY IS NOT VALID WITHOUT THE EMBOSSED OR INKED SEAL OF THE PROFESSIONAL.

MATCHLINE A (SEE SHEET 1)



Date	Description	No.
06/05/19	ADD WETLANDS INFORMATION	1

REVISIONS

"TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON."

*Andrew G. Ives* 6/5/2019  
 ANDREW G. IVES DATE SIGNED  
 PROFESSIONAL LAND SURVEYOR  
 CT STATE LIC. NO. 70286

**LANGAN**

Langan CT, Inc.  
 555 Long Wharf Drive  
 New Haven, CT 06511

T: 203.562.5771 F: 203.789.6142 www.langan.com

Project

**183 SOUNDVIEW LANE**

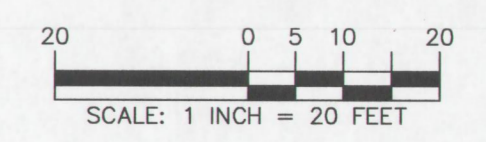
NEW CANAAN CONNECTICUT

Drawing Title

**BOUNDARY & TOPOGRAPHIC SURVEY**

Project No.	Drawing No.
140205701	VB102
Date	
MAY 24, 2019	
Drawn By	
JJS	
Checked By	
AGI	

Sheet 2 of 2



**SITE AREAS & VOLUMES OF EARTHWORK**

SITWORK ENTAILS APPROXIMATELY NET 130 CUBIC YARDS OF FILL. THE COMPOUND AND ROADWAY WILL IMPORT APPROXIMATELY 60 CUBIC YARDS OF CLEAN BROKEN STONE. THE UTILITY TRENCH FROM THE DEMARC TO THE COMPOUND WILL EXCAVATE APPROXIMATELY 60 CUBIC YARDS OF MATERIAL THAT WILL BE USED TO BACKFILL THE TRENCH.

COMPOUND AREA SLOPES:  
 EXISTING - 10%  
 PROPOSED - 4.5%

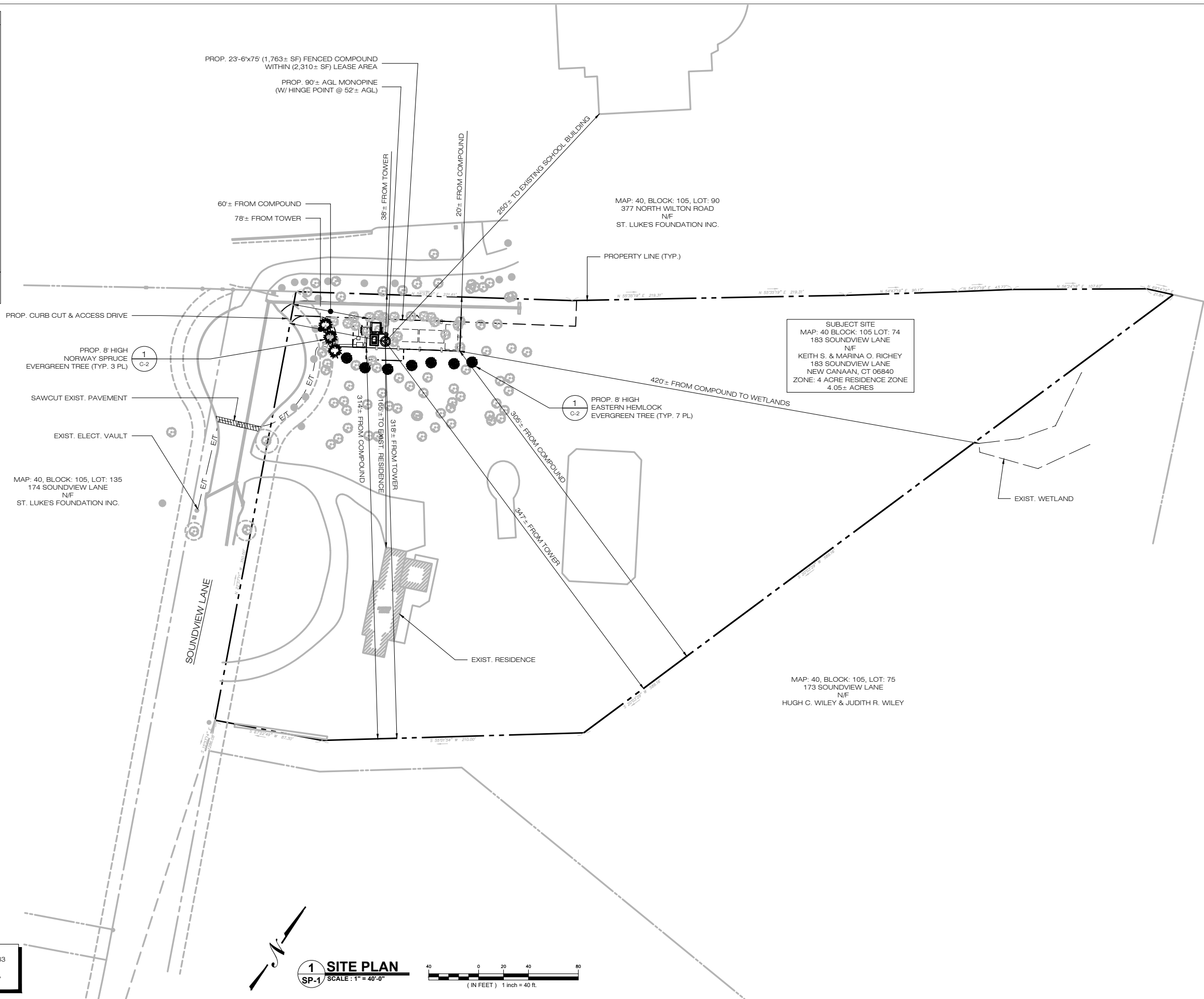
TOTAL AREA OF DISTURBANCE = 8,700± SF

STORMWATER VELOCITY:  
 PRIOR TO GROUND COVER < 3.0 FT/SEC  
 FOLLOWING GROUND COVER < 3.0 FT/SEC

STORMWATER VOLUME:  
 PROPOSED IMPERVIOUS AREA = 4,067 SF  
 WATER QUALITY STD VOLUME (1") = 339 CF  
 STORAGE VOLUME (6" DEPTH, 40% VOIDS) = 353 CF

GROUND COVER TO BE ESTABLISHED AS FOLLOWS (U.O.N.):  
 - WHITE CLOVER @ 0.20#/- SF  
 - TALL FESCUE @ 0.45#/- SF  
 - RYEGRASS @ 0.10#/- SF

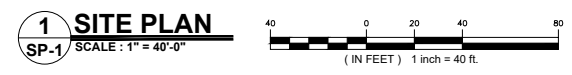
NOTE:  
 24 TREES WILL NEED TO BE REMOVED IN CONSTRUCTION OF THE FACILITY. (SEE 1/CP-1)



**LEGEND**

---	PROPERTY LINE
- - -	PROPERTY LINE (ABUTTERS)
E/T	PROP. UNDERGROUND ELECTRICAL/TELCO.

MAP REFERENCES:  
 1. "VB-101 & 102, BOUNDARY & TOPOGRAPHIC SURVEY"; 183 SOUNDVIEW LANE, NEW CANAAN, CT; PREPARED BY LANGAN CT, INC. 555 LONG WHARF DRIVE, NEW HAVEN, CT 06511; DATED MAY, 24, 2019



**H**  
 HOMETOWN TOWERS, LLC  
 9 HARMONY STREET  
 2ND FLOOR  
 DANBURY, CT 06810  
 (203) 297-6345

**at&t**  
 340 MOUNT KEMBLE AVENUE  
 MORRISTOWN, NEW JERSEY 07960

**ALL-POINTS**  
 TECHNOLOGY CORPORATION  
 567 VAUXHALL STREET EXTENSION - SUITE 311  
 WATERFORD, CT 06385 PH: (860)-663-1697  
 WWW.ALLPOINTS.COM FAX: (860)-663-0935

**PERMITTING DOCUMENTS**

NO	DATE	REVISION
0	08/29/19	FOR REVIEW: RCB
1	09/04/19	CLIENT COMMENTS: RCB
2	01/09/20	CLIENT COMMENTS: RCB
3	01/14/20	CLIENT COMMENTS: RCB
4	01/21/20	CLIENT COMMENTS: RCB
5	01/21/20	CLIENT COMMENTS: RCB
6	01/24/20	CLIENT COMMENTS: RCB
7	05/22/20	CLIENT COMMENTS: RCB
8	05/26/20	CLIENT COMMENTS: RCB

**DESIGN PROFESSIONALS OF RECORD**  
 PROF: ROBERT C. BURNS P.E.  
 COMP: APT ENGINEERING  
 ADD: 567 VAUXHALL STREET  
 EXTENSION - SUITE 311  
 WATERFORD, CT 06385  
 DEVELOPER: HOMETOWN TOWERS, LLC  
 ADDRESS: 9 HARMONY STREET  
 2ND FLOOR  
 DANBURY, CT 06810

**HOMETOWN TOWERS**  
**NEW CANAAN NORTHEAST**  
 SITE 183 SOUNDVIEW LANE  
 ADDRESS: NEW CANAAN, CT 06840  
 APT FILING NUMBER: CT283450  
 DATE: 08/29/19 DRAWN BY: ELZ  
 CHECKED BY: RCB

SHEET TITLE:  
**SITE PLAN & ABUTTERS MAP**

SHEET NUMBER:  
**SP-1**

**PERMITTING DOCUMENTS**

NO	DATE	REVISION
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6	01/24/20	CLIENT COMMENTS: RCB
7	05/22/20	CLIENT COMMENTS: RCB
8	05/26/20	CLIENT COMMENTS: RCB

**DESIGN PROFESSIONALS OF RECORD**

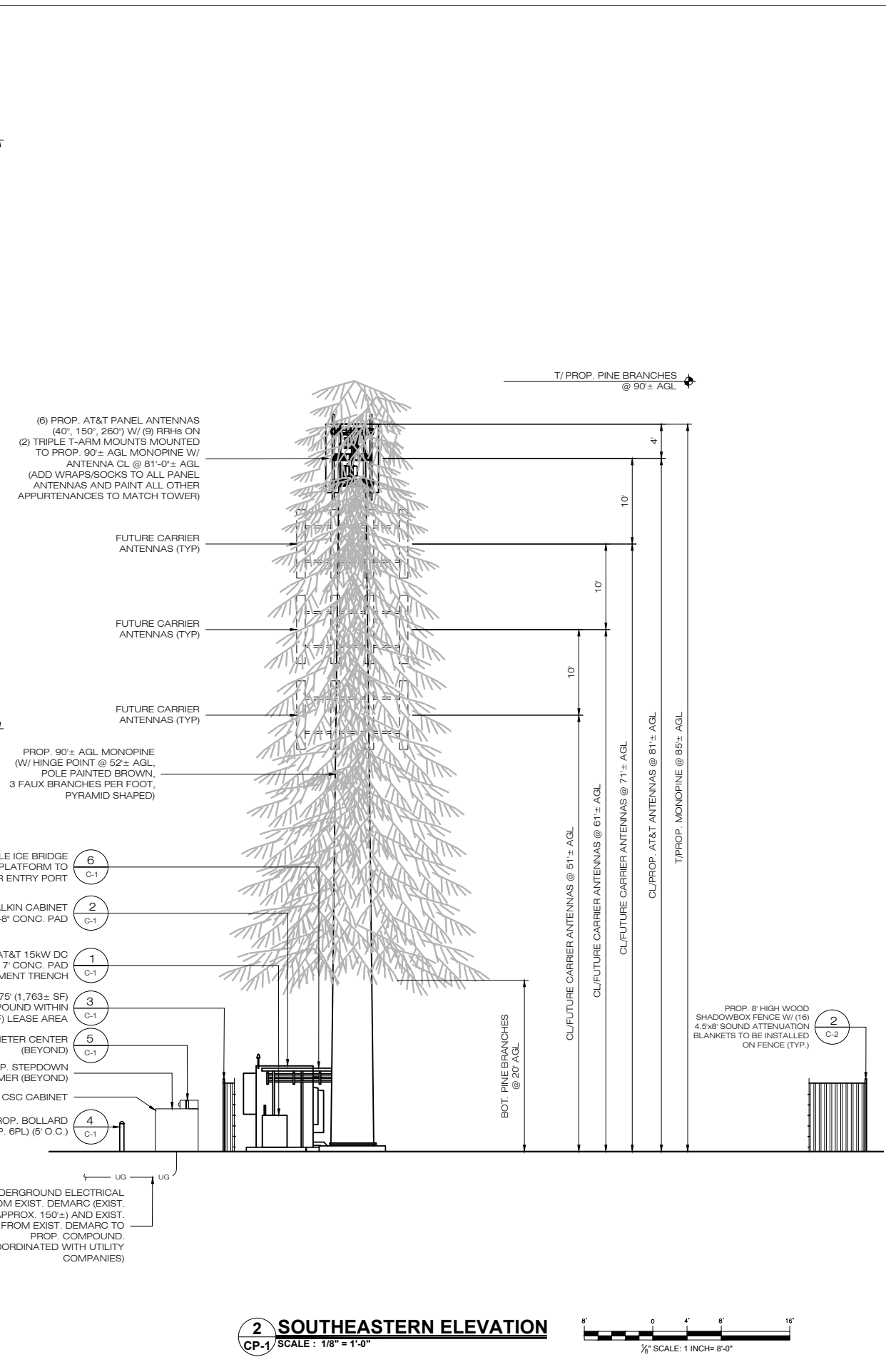
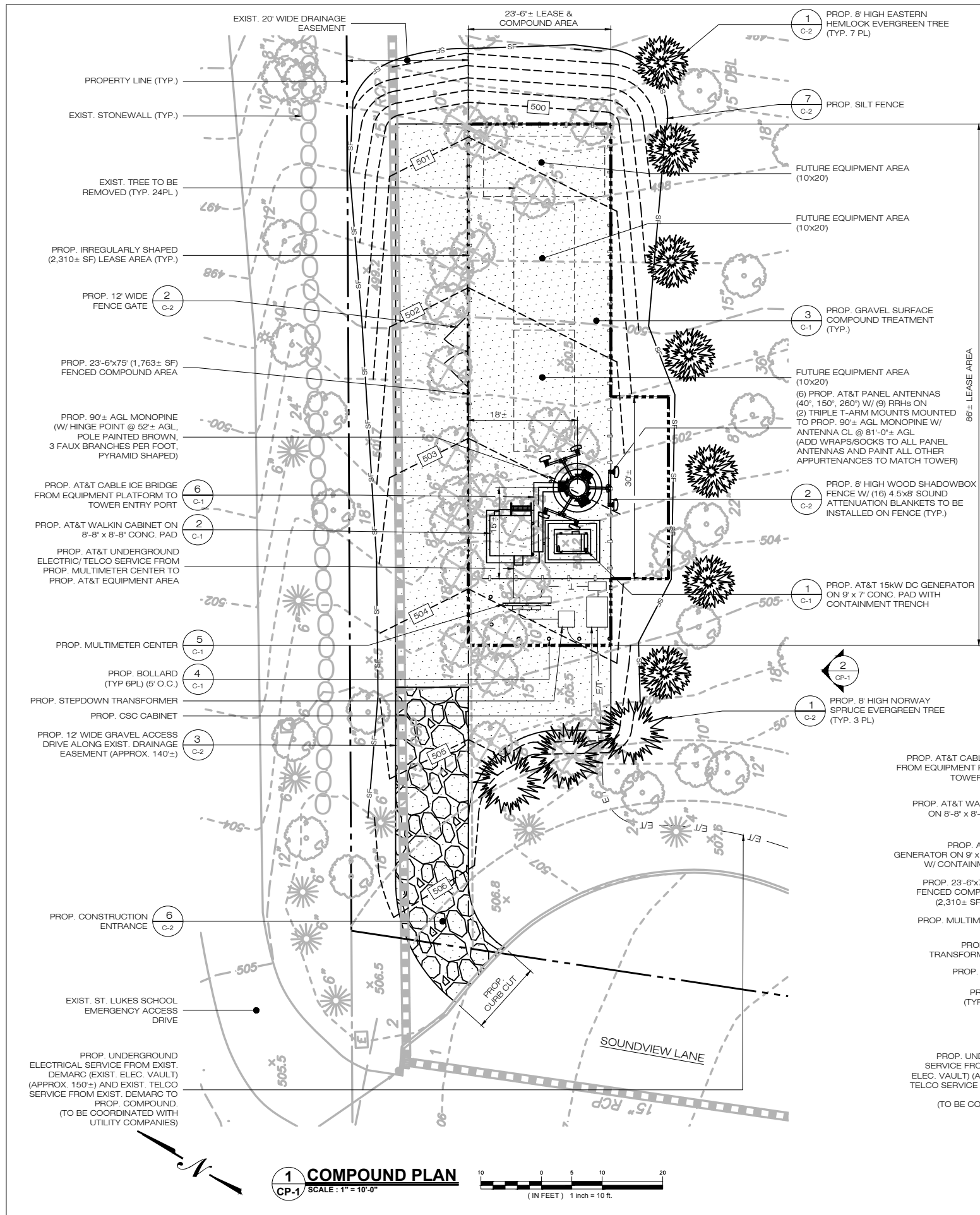
PROF: ROBERT C. BURNS P.E.  
 COMP: APT ENGINEERING  
 ADD: 567 VAUXHALL STREET  
 EXTENSION - SUITE 311  
 WATERFORD, CT 06385  
 DEVELOPER: HOMETOWN TOWERS, LLC  
 ADDRESS: 9 HARMONY STREET  
 2ND FLOOR  
 DANBURY, CT 06810

**HOMETOWN TOWERS  
 NEW CANAAN NORTHEAST**

SITE: 183 SOUNDVIEW LANE  
 ADDRESS: NEW CANAAN, CT 06840  
 APT FILING NUMBER: CT283450  
 DATE: 08/29/19 DRAWN BY: ELZ  
 CHECKED BY: RCB

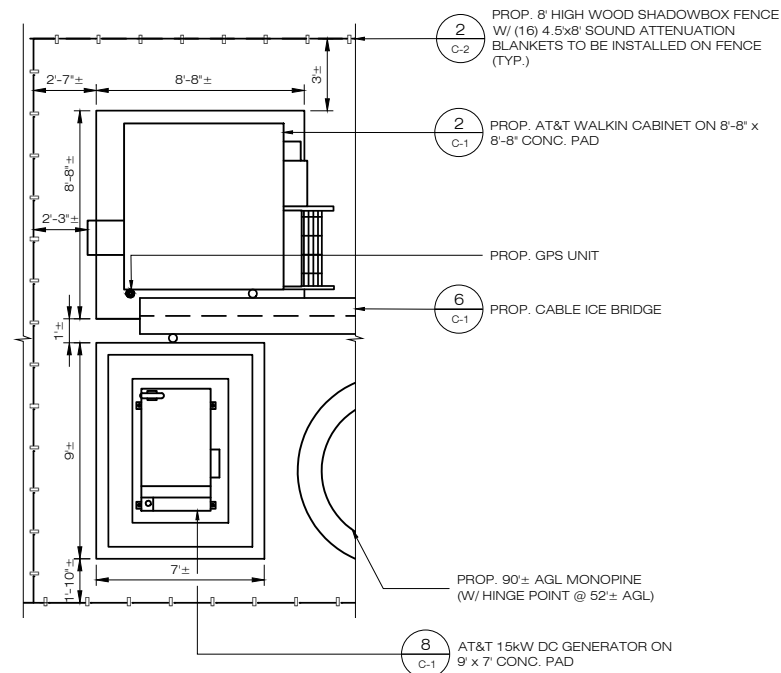
**SHEET TITLE:  
 COMPOUND PLAN &  
 TOWER ELEVATION**

SHEET NUMBER:  
**CP-1**

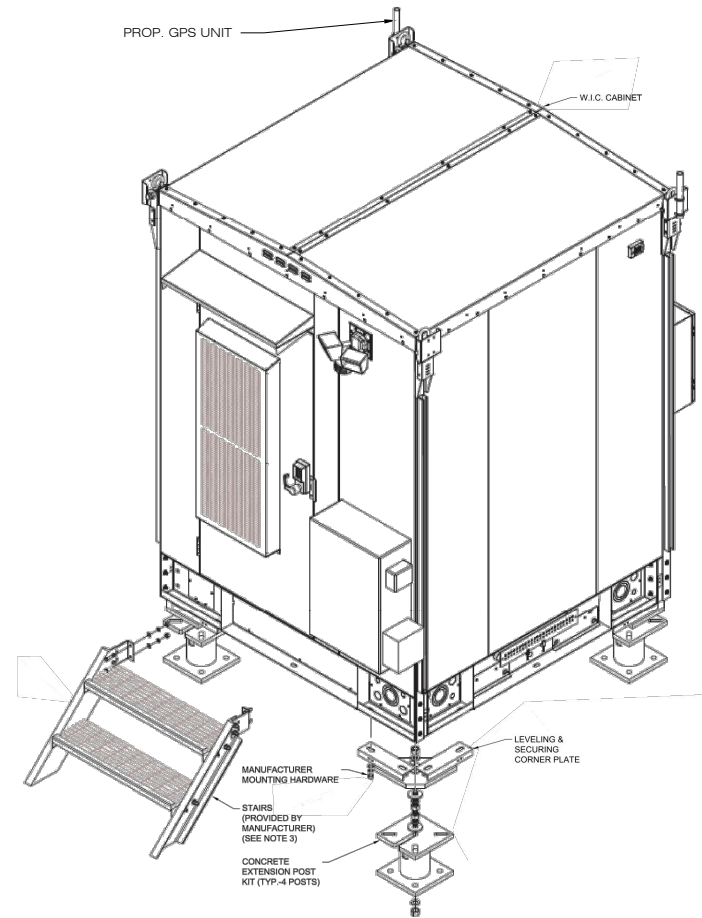
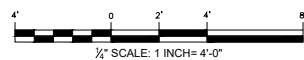


**1 COMPOUND PLAN**  
 CP-1 SCALE: 1" = 10'-0"  
 (IN FEET) 1 inch = 10 ft.

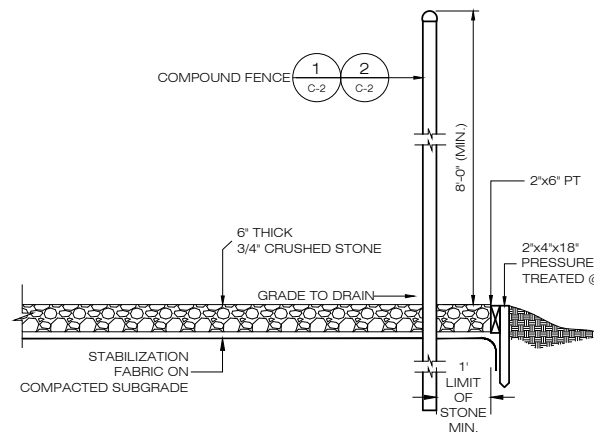
**2 SOUTHEASTERN ELEVATION**  
 CP-1 SCALE: 1/8" = 1'-0"  
 1/8" SCALE: 1 INCH = 8'-0"



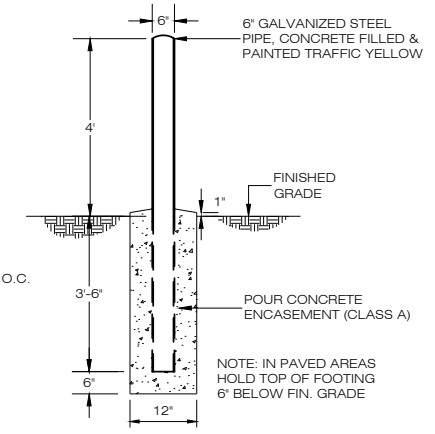
**1 AT&T EQUIPMENT AREA**  
C-1 SCALE: 1/4" = 1'-0"



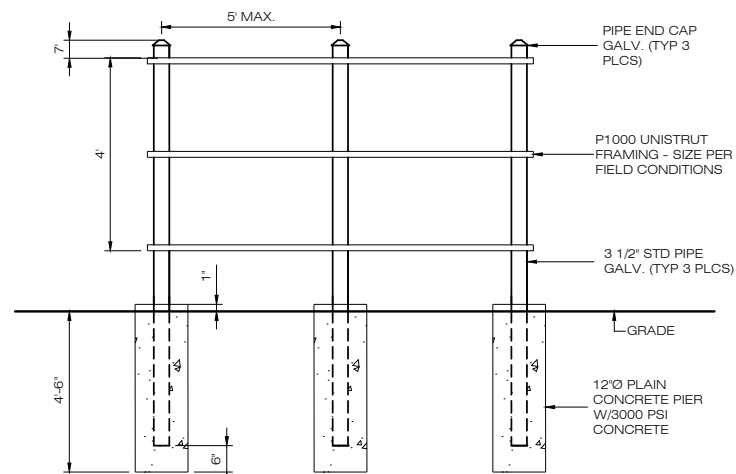
**2 AT&T WALKIN CABINET**  
C-1 SCALE: N.T.S.



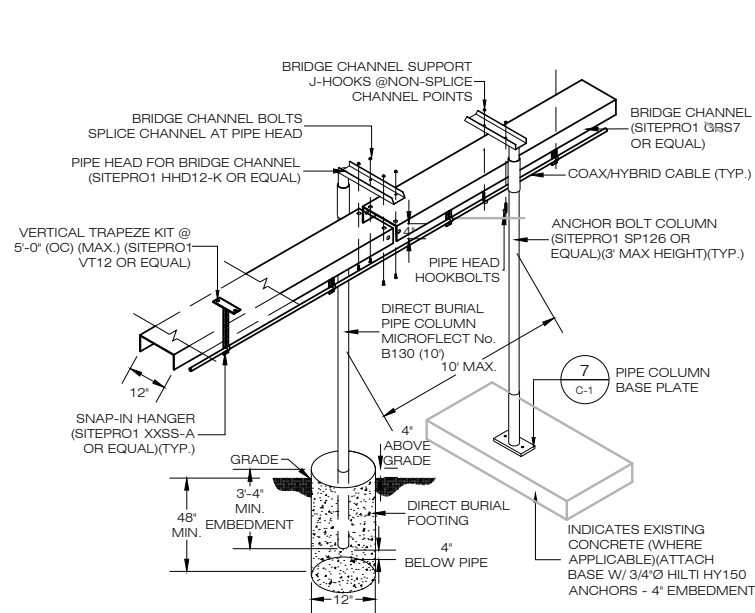
**3 COMPOUND DETAIL**  
C-1 SCALE: N.T.S.



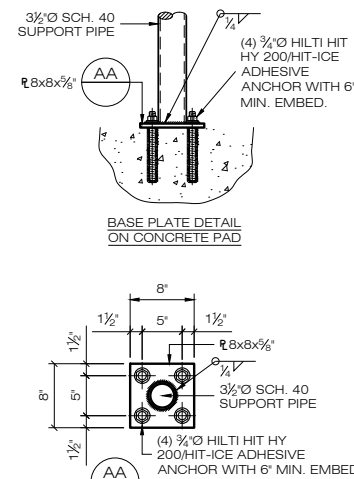
**4 BOLLARD DETAIL**  
C-1 SCALE: N.T.S.



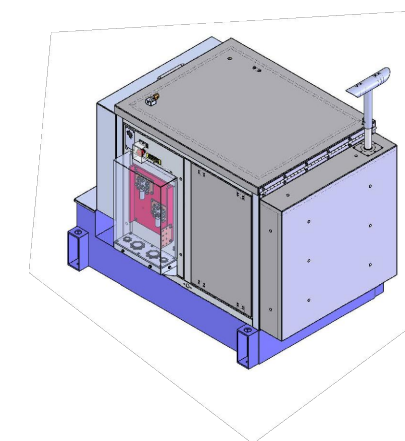
**5 UTILITY BACKBOARD FRAME DETAIL**  
C-1 SCALE: N.T.S.



**6 CABLE BRIDGE & COAX HANGER DETAIL**  
C-1 SCALE: N.T.S.



**7 PIPE BASE PLATE**  
C-1 SCALE: N.T.S.



POLAR POWER, INC.,  
15KW 48VDC GENERATOR  
HORIZONTAL ALUMINUM ENCLOSURE

**8 GENERATOR**  
C-1 SCALE: N.T.S.

**H**  
HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
(203) 297-6345

**at&t**  
340 MOUNT KEMBLE AVENUE  
MORRISTOWN, NEW JERSEY 07960

**ALL-POINTS**  
TECHNOLOGY CORPORATION  
567 VAUXHALL STREET EXTENSION - SUITE 311  
WATERFORD, CT 06385  
PH: (860)-663-1697  
WWW.ALLPOINTS TECH.COM FAX: (860)-663-0935

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8	05/26/20	CLIENT COMMENTS: RCB

**DESIGN PROFESSIONALS OF RECORD**

PROF: ROBERT C. BURNS P.E.  
COMP: APT ENGINEERING  
ADD: 567 VAUXHALL STREET  
EXTENSION - SUITE 311  
WATERFORD, CT 06385

DEVELOPER: HOMELAND TOWERS, LLC  
ADDRESS: 9 HARMONY STREET  
2ND FLOOR  
DANBURY, CT 06810

**HOMELAND TOWERS  
NEW CANAAN NORTHEAST**

SITE 183 SOUNDVIEW LANE  
ADDRESS: NEW CANAAN, CT 06840

APT FILING NUMBER: CT283450

DATE: 08/29/19 DRAWN BY: ELZ

CHECKED BY: RCB

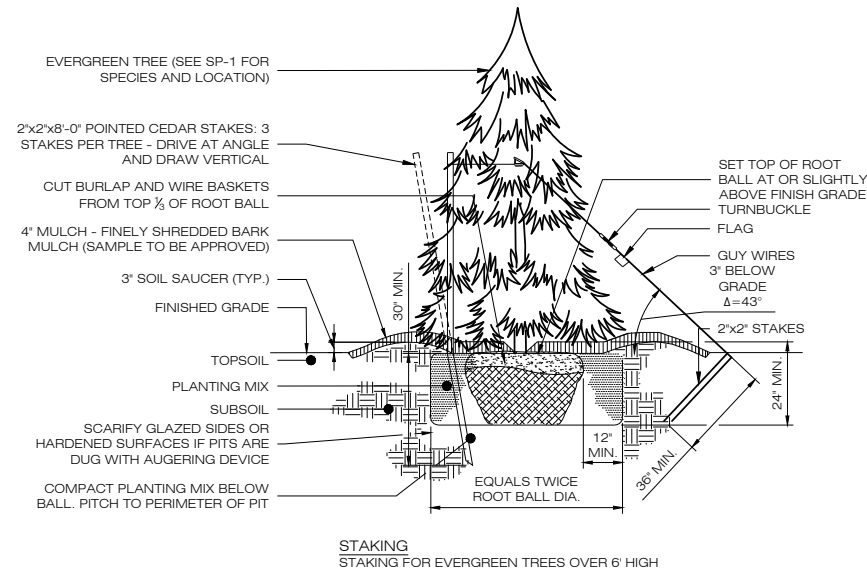
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**SITE DETAILS**

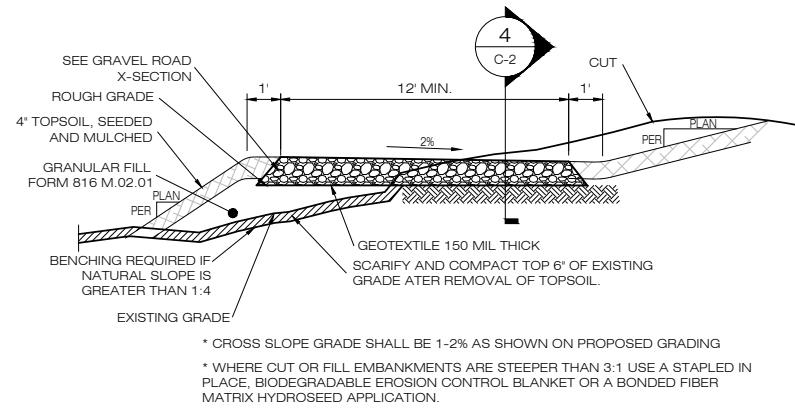
SHEET NUMBER:

**C-1**

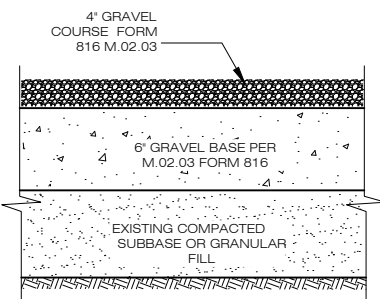




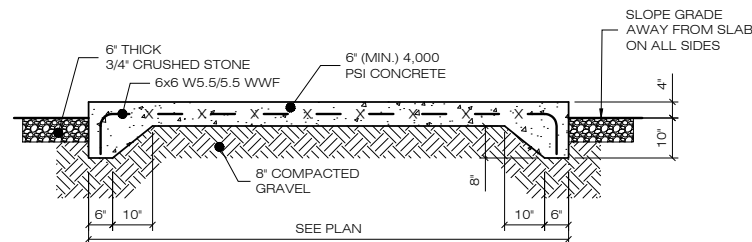
**1 EVERGREEN TREE PLANTING**  
C-2 SCALE: N.T.S.



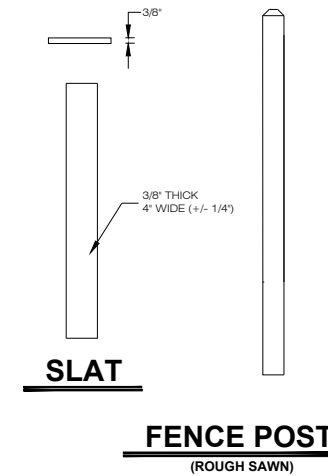
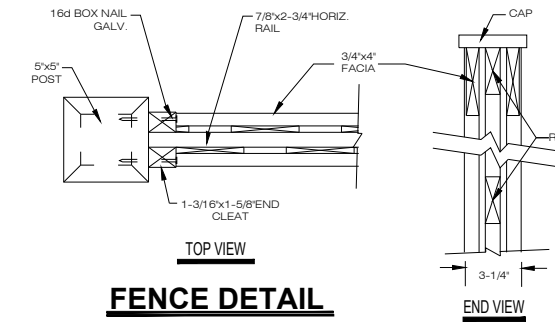
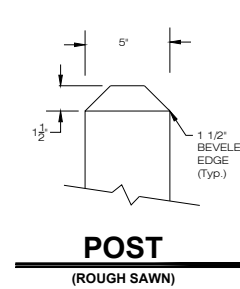
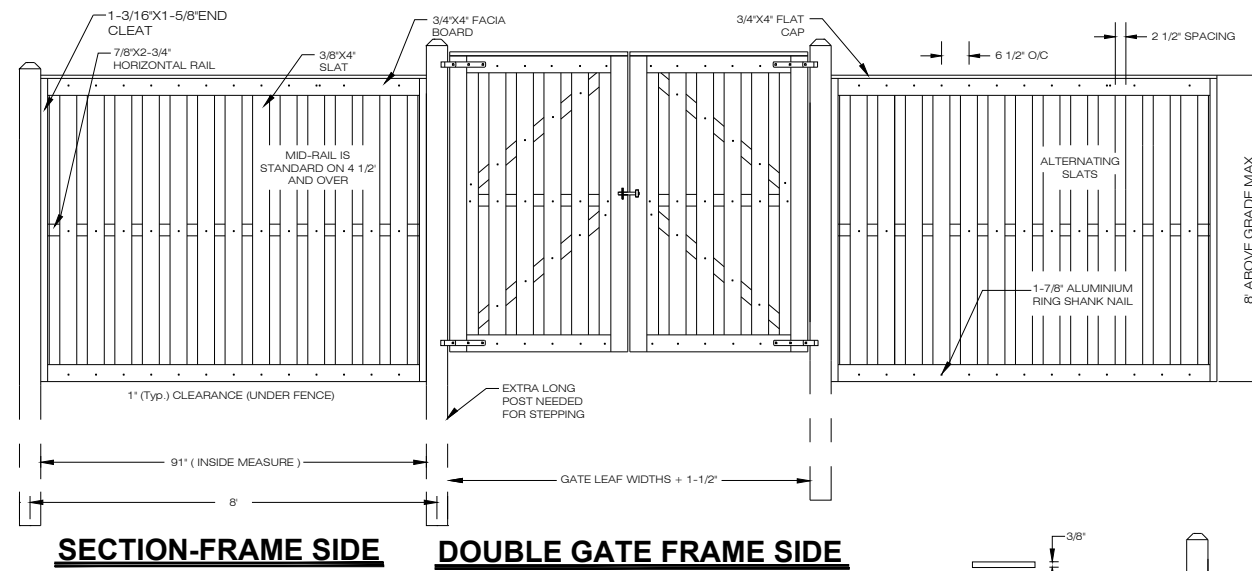
**3 TYPICAL ROAD CROSS SECTION**  
C-2 SCALE: N.T.S.



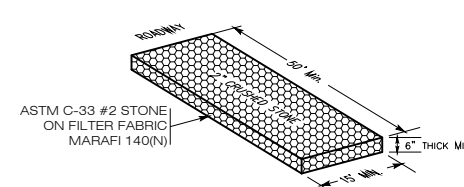
**4 GRAVEL ROAD SECTION**  
C-2 SCALE: N.T.S.



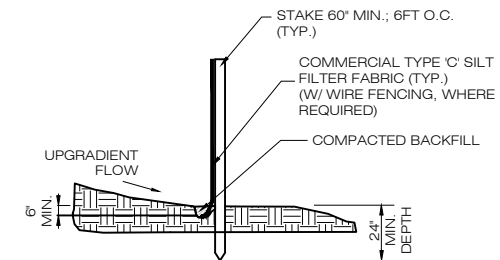
**5 EQUIPMENT PAD**  
C-2 SCALE: N.T.S.



**2 SHADOWBOX FENCE**  
Typ. 8' Section Length - Northern White Cedar  
C-2 SCALE: N.T.S.



**6 (CE) CONSTRUCTION ENTRANCE DETAIL**  
C-2 SCALE: N.T.S.



**7 GEOTEXTILE SILT FENCE DETAIL**  
C-2 SCALE: N.T.S.

**H**  
HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
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**at&t**  
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3	01/14/20	CLIENT COMMENTS: RCB
4	01/21/20	CLIENT COMMENTS: RCB
5	01/21/20	CLIENT COMMENTS: RCB
6	01/24/20	CLIENT COMMENTS: RCB
7	05/22/20	CLIENT COMMENTS: RCB
8	05/26/20	CLIENT COMMENTS: RCB

**DESIGN PROFESSIONALS OF RECORD**  
PROF: ROBERT C. BURNS P.E.  
COMP: APT ENGINEERING  
ADD: 567 VAUXHALL STREET  
EXTENSION - SUITE 311  
WATERFORD, CT 06385

DEVELOPER: HOMELAND TOWERS, LLC  
ADDRESS: 9 HARMONY STREET  
2ND FLOOR  
DANBURY, CT 06810

**HOMELAND TOWERS**  
**NEW CANAAN NORTHEAST**  
SITE 183 SOUNDVIEW LANE  
ADDRESS: NEW CANAAN, CT 06840  
APT FILING NUMBER: CT283450  
DATE: 08/29/19 DRAWN BY: ELZ  
CHECKED BY: RCB

SHEET TITLE:  
**SITE DETAILS**

SHEET NUMBER:  
**C-2**