

PETITION FOR DECLARATORY RULING

SUBMITTED TO:

CONNECTICUT SITING COUNCIL

Petitioner: Cellco Partnership d/b/a Verizon Wireless

Subject Property: 276 New Britain Avenue, Plainville, CT (“Subject Building”)
Assessor’s Parcel 22-E-07, a/k/a “Connecticut Commons”

Proposed: Install wireless telecommunications transmission equipment on
three (3) rooftop ballast masts and place appurtenant radio
equipment on-grade behind the Subject Building.

Requested: Declaratory Ruling that a Certificate of Environmental
Compatibility and Public Need is *not* required, pursuant to C.G.S
§ 4-176(a), § 16-50k(a) and R.C.S.A. § 16-50j-38, § 16-50j-39,
and the Telecommunications Act of 1996, 47 U.S.C. 332(c)(7)(B),
all rights reserved.

Date: March 20, 2019

On behalf of Verizon Wireless by:

Gehring & Associates, LLC
Post Office Box 98
West Mystic, CT 06388
860-536-0675
wireless@gehringzone.com

verizon✓

GEHRING & ASSOCIATES, LLC
Wireless Planning & Zoning

Post Office Box 98
West Mystic, CT 06388

860-536-0675
wireless@gehringzone.com

March 20, 2019

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: PETITION FOR DECLARATORY RULING THAT A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS *NOT* REQUIRED FOR A ROOFTOP WIRELESS TELECOMMUNICATIONS INSTALLATION IN PLAINVILLE, CT

Dear Members of the Siting Council:

Cellco Partnership d/b/a Verizon Wireless ("Petitioner") is pleased to submit the enclosed Petition for a Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need ("Certificate") is *not* required for a proposed wireless telecommunications installation on the roof of an existing shopping center building located at 276 New Britain Avenue, Plainville, CT known locally as "Connecticut Commons" ("Subject Property" & "Subject Building").

Verizon Wireless has identified certain significant gaps and capacity issues with its wireless coverage in the vicinity of the Subject Property that can be alleviated by creating a new cell site in this section of Plainville. A search for existing towers did not reveal any such structures nearby. Other suitable mounting structures were then sought and the Subject Building was discovered to be a suitable structure to host a new antenna installation.

Verizon Wireless proposes to install antennas and related transmission equipment on three (3) separate ballast-mounted masts on the building's roof and place its associated radio equipment cabinets on-grade at the rear of the Subject Building.

The Petitioner looks forward to the Council's concurrence that a Certificate is *not* required for the proposed work.

Sincerely,

Gehring & Associates, LLC

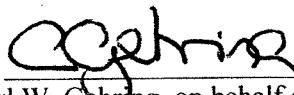
By 
Carl W. Gehring, on behalf of Cellco Partnership d/b/a Verizon Wireless

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Tab 1

Petition Statement

PETITION FOR A DECLARATORY RULING

THAT A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND
PUBLIC NEED IS *NOT* REQUIRED FOR A ROOFTOP WIRELESS
TELECOMMUNICATIONS INSTALLATION AT
276 NEW BRITAIN AVENUE, PLAINVILLE, CT

Petitioner: Cellco Partnership d/b/a Verizon Wireless, a Delaware General Partnership registered with the State of Connecticut, with offices at 20 Alexander Drive, Wallingford, CT 06492.

Purpose: Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need is *not* required.

Proposed: Install wireless telecommunications transmission equipment on three (3) rooftop ballasted masts and place appurtenant radio equipment on-grade behind the Subject Building.

Subject Property: 276 New Britain Avenue, Plainville, CT
Assessor's Parcel 22-E-07, a/k/a "Connecticut Commons"

Contact Info: Carl Gehring, Gehring & Associates, LLC
U.S. Mail: P.O. Box 98, West Mystic, CT 06388
FedEx or Courier: 23 East Main Street #222, Mystic, CT 06355
Office: 860-536-0675; Fax: 860-536-1273
Email: wireless@gehringzone.com

Statutory Authority: Connecticut General Statutes ("C.G.S") § 4-176(a) and § 16-50k(a) and the Regulations of Connecticut State Agencies ("R.C.S.A.") § 16-50j-38 and § 16-50j-39, and the Telecommunications Act of 1996, 47 U.S.C. 332(c)(7)(B), all rights reserved.

Date: March 20, 2019

I. INTRODUCTION

Cellco Partnership d/b/a Verizon Wireless (“Verizon Wireless” or “Verizon”) is an FCC Licensed wireless service provider with a national footprint. Verizon Wireless has identified certain coverage gaps and capacity issues with its service in the vicinity of the Subject Property that could be alleviated by the installation of a new site in the area. A search of the neighborhood did not discover any existing cell towers nearby so other structures suitable for co-location were sought.

The Subject Property, with its flat, open, clear roof space, located in a commercial area, was determined to be an ideal location for siting a new wireless installation so a lease was negotiated with the underlying property owner to allow for the installation of a new cell site at this location.

II. SUBJECT PROPERTY

The Subject Property is a commercial shopping center located at 276 New Britain Avenue in Plainville. The site is known locally as “Connecticut Commons” and consists of approximately 60 acres of land improved with over ten buildings totaling approximately 500,000 square feet of commercial space. The greater property is host to businesses such as Kohl’s, McDonalds, Lowes, Applebee’s, Marshalls and Dick’s Sporting Goods, among others. The Town of Plainville Subject Property Tax Assessor’s Map and Building Field Card are provided behind **Tab 3** hereunder for further reference.

The specific building upon which Verizon Wireless proposes to install consists of approximately 90,000 square feet of retail space on one floor with a 20-foot roof height. Located in the far southeastern corner of the greater site, the Building is bounded on its other sides by New Britain Avenue to the north, Route 84 to the south and other, off-site commercial enterprises to the east. The Subject Property is in a General Commercial zoning district. Overall, the nature of the area is that of highway-commercial. The Aerial Photo behind **Tab 2** hereunder can provide the reader a visual overview of the surrounding area.

The Subject Property was chosen during the search area process because it fit neatly into the search parameters for a new site to off-load capacity from Verizon’s existing, surrounding, on-air locations. Broad coverage to the area is currently being provided to this specific location via another site in Plainville (11 East Main St.) and two sites in New Britain (1 Hartford Sq. and 115 N. Mountain Rd.). Those surrounding and connecting sites are presently being overloaded during times of peak network traffic.

During times of high network traffic on those surrounding sites, footprint shrinkage will render coverage in the vicinity of the Subject Site problematic and less reliable. The solution to this capacity problem is to install a site at the Subject Property to originate coverage from this new location thereby off-loading and allowing the surrounding sites to relax and revert to providing coverage to their intended primary locations. A visual of this “before and after” capacity solution is shown on the RF Plots included under **Tab 5**.

III. PROPOSED INSTALLATION

Verizon Wireless proposes to erect three (3) separate tripod-style ballasted masts towards the rear corner of the roof. The mast tripods are taller than they are wide, hence have “*a height greater than [their] diameter*” and are therefore considered “towers” jurisdictional to the Connecticut Siting Council pursuant to R.C.S.A. § 16-50j-2a (30).

On each mast Verizon Wireless proposes to mount two (2) panel antennas per sector for a total of six (6) antennas. Also attached to each ballast tripod will be two (2) remote radio heads (“RRHs”) and one (1) surge protector for a total of six (6) RRHs and one (1) surge protector. Equipment specifications of the proposed antennas, and RRHs are proved behind **Tab 9** hereunder. Structural engineers were consulted to analyze the existing roof for confirmation that it could support Verizon Wireless’s installation as proposed. A copy of that report can be found behind **Tab 8** hereunder.

The radio equipment cabinets needed to service the roof-top antennas will be located on-grade behind the subject building, outside of normal public travel lanes, in an area that is used for deliveries, loading and dumpster storage. The equipment area will consist of a 12'-6" x 18' fenced area improved with an 8' x 8' platform upon which two standard size outdoor equipment cabinets will be mounted. The cabinets will contain radio equipment and batteries. The compound area will also house electrical and telephone demarcation cabinets and will be surrounded by an eight-foot tall chain-link fence fitted with privacy slats colored to match the rear facade of the Subject Building. The coax cables needed to connect the radio cabinets to the rooftop antennas will be housed in a cable tray that will travel up the back wall of the Subject Building (painted to match the existing facade) and then along the rooftop to the respective ballasted mast locations.

Power and telephone services will be brought in underground from an adjacent existing utility pole. Space will also be provided inside the compound for a future stand-by power generator in case one is desired later. A generator is not proposed at the present time because the surrounding cell sites that this new site intends to off-load capacity are already fitted with back-up power. It was therefore deemed less critical that the subject site also have its own emergency power source beyond the normal battery back-up which is currently being proposed. The Plans provided behind **Tab 12** hereunder can be consulted for further details and dimensions of the foregoing.

Because of the highway-commercial nature of the neighborhood, combined with placement of the masts towards the rear of the roof more hidden from view, stealthing the proposed antennas was not considered necessary. The Photosimulations behind **Tab 11** hereunder offer predictive viewsheds of the proposed installation. It is important to note that the consulting engineers who analyzed the roof to confirm its ability to support the proposed ballasted tripods advised that the roof could *not* support the additional weight and wind-loading of any type of stealthing of the proposed installation. In other words, the installation Verizon Wireless currently proposes will pass structural, but the addition of any sort of stealth screening would not pass. This is another reason why stealthing is not being proposed in the present instance. A copy of the engineer’s letter referencing this can be found behind the primary structural report at **Tab 8** hereunder.

IV. NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

It is Verizon Wireless's position that the proposed installation will have no adverse environmental effect and therefore should be granted leave to proceed without the need to procure a Certificate of Environmental Compatibility and Public Need. The Petitioner is proposing to install antennas on the roof of an existing commercial building and place equipment out back on-grade in an area that has already been disturbed and developed. There is no new clearing, land disturbance or traditional site construction associated with the installation proposed. The existing site is already improved and paved and the Petitioner is proposing to take advantage of that existing infrastructure to effectuate its installation. Furthermore, the proposed installation will have de minimis impact on the environment and surrounding locale for the following specific additional reasons:

a. RF Emissions Compliance

The proposed installation will be compliant with all applicable standards regarding RF emissions. See the RF Emissions compliance analysis at **Tab 5** hereunder. Also included behind **Tab 5** are an Affidavit of the Radio Frequency Engineer and RF Plots which, as previously mentioned, visually demonstrate the capacity off-load the Subject Site will provide to the surrounding sites currently servicing the area.

b. No Noise or other Nuisances

The proposed installation, with its equipment cabinets located behind a shopping center adjacent to a highway, will not emit any noise in excess of the surrounding ambient noise levels and therefore will not be noticeable. See the Assessment of Environmental Sound behind **Tab 6** hereunder.

Furthermore, no light, dust, smoke, vibration or other nuisance of any sort will be created by the installation of the proposed unmanned, unoccupied, wireless telephone installation.

c. De Minimis Visual Impact

The antenna portion of the proposed installation will take place up on the rear roof of a commercial shopping center located in a general highway-commercial area of Town. There will be some views of the proposed installation proximate to, and when in view of, the Subject Building's rear southeast corner; but overall the installation will be generally unnoticeable or hidden depending on the viewer's perspective. The proposed ground equipment will be placed behind the existing shopping center building in an area currently used for deliveries and dumpster storage. There are no scenic vistas of views that will be obstructed by the proposed installation. See the Photosimulations behind **Tab 11** hereunder.

d. FAA Compliance

The proposed rooftop antenna masts will not protrude high enough to result in any hazard to air navigation and will *not* need to be lighted. See FAA air hazard study behind **Tab 7** hereunder.

e. No Other Environmental Impacts

No ground clearing will be required. No endangered species or species of any kind will be impacted. No wetlands are located nearby. No existing stormwater runoff patterns will be altered or changed. No new utilities will be needed on-site. No water or sewer services will be required. No hazardous waste or waste of any kind will be generated. No deleterious impact of any sort will occur because of the proposed installation which will make use of existing, developed infrastructure on site.

V. NOTICE

Notice of the filing of this Petition has been provided to abutters and public officials as required. Copies of said notices and the site's abutters list can be found behind **Tab 10** hereunder.

VI. CONCLUSION

As demonstrated in the foregoing analysis, the Petitioner's proposed installation, on an existing building in a developed commercial area, will have no adverse environmental effect whatsoever. In fact, the only impact the proposed installation will have on the surrounding neighborhood will be the beneficial impact of providing enhanced wireless connectivity to Verizon Wireless's mobile users in the vicinity. Wireless connectivity is a benefit to the public safety and convenience and a benefit to commerce in the area. For the foregoing reasons, the Petitioner respectfully requests the Council approve this Petition as submitted. Verizon Wireless looks forward effectuating the proposed installation so that it may benefit the businesses, residents and visitors in that area of the Town of Plainville.

Respectfully Submitted,

Gehring & Associates, LLC

By Carl W. Gehring
Carl W. Gehring, on behalf of Celco Partnership d/b/a Verizon Wireless

Tab 2

Aerial Location Photo

Plainville 20

Connecticut Commons



Plainville 20

372

536

Tab 3

Tax Map & Field Card



 COMMERCIAL PROPERTY RECORD CARD 2018

TOWN OF PLAINVILLE

Situs : 250 NEW BRITAIN AVE

Parcel Id: 22-E-07

Class: Shopping Centers

Card: 3 of 7

Printed: September 13, 2018

Building Information

Year Built/Eff Year	2000 /	Line	Type	+/-	Meas1	Meas2	# Stops	Ident Units	Line	Type	+/-	Meas1	Meas2	# Stops	Ident Units
Building #	3	1	Overhead Dr-Roll Sh		80	1		2	1	Load Dock,St Or Conc		448	1		1
Structure Type	Discount Dept Store	1	Truck & Train Wells		1,300	1		1							
Identical Units	1	1	Enclosed Entry		1,044	1		1							
Total Units	8	1	Canopy Rf-Average		2,898	1		1							
Grade	B	2	Overhead Dr-Roll Sh		80	1		1							
# Covered Parking		2	Canopy Rf-Average		4,480	1		1							
# Uncovered Parking		1	Sprinkler Sys Wet		185,902	1		1							
DBA	DWSHOE, OLD NAVY, AC MOORE,														

Building Outlines/Exteriors

Interior/Exterior Information															
Line	Level From - To	Int Fin	Area	Perim	Use Type	Wall Height	Ext Walls	Construction	Partitions	Heating	Cooling	Plumbing	Physical	Functional	
1	01	01	100	103,628	1,433	Discount Store/Mkt	20	Concrete Bl	Fire Resistant	Normal	Hot Air	Central	Normal	3	4
2	01	01	100	89,974	1,330	Retail Store	18	Concrete Bl	Fire Resistant	Normal	Hot Air	Central	Normal	3	4

Interior/Exterior Construction

Outbuilding Data										
Line	Type	Yr Bld	Meas1	Meas2	Qty	Area	Grade	Phy	Fun	Value
1	Fence Chai	2000	8	230	1	1,840	C	3	3	3,960
2	Fence Chai	5,729,630	78							

YI COMMERCIAL PROPERTY RECORD CARD 2018
city direction

Situs : 250 NEW BRITAIN AVE

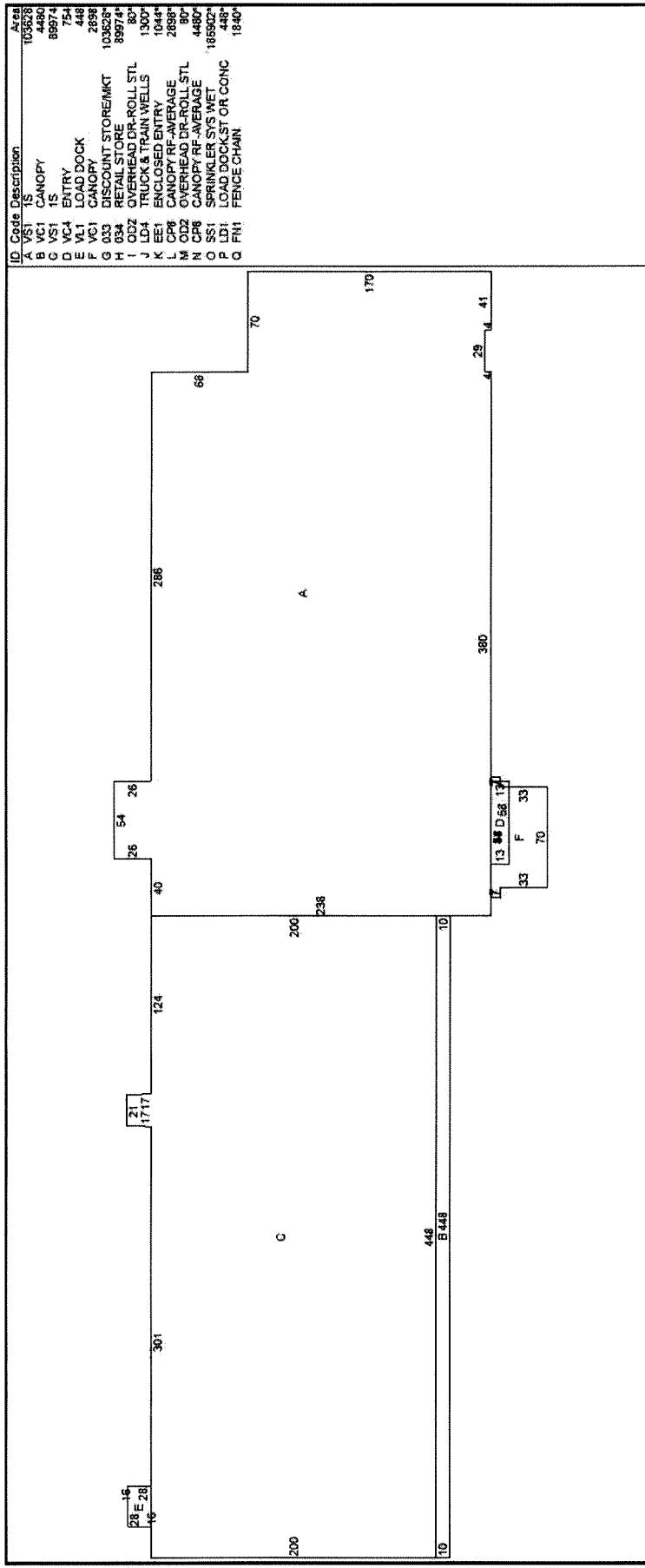
Parcel Id: 22-E-07

TOWN OF PLAINVILLE

Class: Shopping Centers

Card: 3 of 7

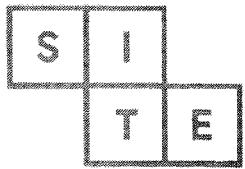
Printed: September 13, 2018



Additional Property Photos

Tab 4

Landowner
Authorization



DT CONNECTICUT COMMONS LLC
3300 ENTERPRISE PARKWAY
BEACHWOOD, OH 44122

December 21, 2018

**RE: Evidence of Lease and Landowner's Consent to File for Land Use Permits
Granted to Celco Partnership d/b/a Verizon Wireless**

To Whom It May Concern:

The undersigned is owner ("Landowner") of certain real property in the Town of Plainville, CT known as Connecticut Commons, 250 New Britain Ave., Assessor's Parcel 22-E-07 ("Subject Property").

Please be advised that Landowner has entered into a lease with Celco Partnership d/b/a Verizon Wireless ("Applicant") to install a wireless communications facility on a portion of the Subject Property and permission is hereby granted to Applicant to make application for Building, Zoning, Planning, Connecticut Siting Council or any other Land Use or Regulatory Permit(s) required to effectuate the installation of said wireless facility.

The Applicant, or its agent, is hereby authorized to execute the required application(s) regarding this matter. Permission is also hereby granted for public officials and Board, Commission or Council members, as required, to enter upon the Subject Property for the limited purpose of inspecting the specific site and access that are the subject of Verizon Wireless's proposed installation.

Sincerely,

DT CONNECTICUT COMMONS LLC

By 

Brian Reiss – Vice President of Ancillary Income



SITE CENTERS

3300 Enterprise Pkwy., Beachwood, OH 44122 • 877-225-5337 • SiteCenters.com

Tab 5

RF Affidavit RF Capacity Plots Confirmation of RF Emissions Compliance



AFFIDAVIT OF RADIO FREQUENCY ENGINEER

The undersigned, in support of the development of a new personal wireless communications facility on the roof of the Connecticut Commons shopping center building in Plainville, CT states the following:

1. My name is Mark Brauer. I have a degree in Electrical Engineering from Gateway Technical College and work as a Radio Frequency Engineer for Verizon Wireless. I am the Radio Frequency Engineer responsible for the Verizon Wireless network design in the area of Connecticut that includes the Town of Plainville.
2. Verizon Wireless is an FCC Licensed provider of wireless communications services with a national footprint.
3. The above-mentioned location is within an area where Verizon Wireless has identified a need to locate a new wireless facility. This was determined by the fact that wireless service needs improvement in this section of Plainville. Furthermore, it was determined that the coverage footprint provided by a facility in this area would connect well with those of existing facilities in the surrounding area.
4. I have personal knowledge of the subject site as well as the other existing antenna site locations used in Verizon Wireless's system in and around the surrounding area and adjacent towns. I have reviewed the plans to construct a new site at this location. I have analyzed the potential benefits a new site at this location would represent to Verizon Wireless's network and its users through an analysis of radio frequency propagation modeling. I employ computer simulations, which incorporate the results of field tests of existing facilities, to determine existing radio frequency (RF) coverage for Verizon Wireless' system, and to identify gaps in coverage. These simulations model characteristics such as antenna types, antenna height, output power, terrain, ground elevations and RF propagation effects of the frequencies utilized.
5. An analysis of this proposed location has indicated that antennas at this location as shown on the submitted plans, will work to satisfy the specific coverage and capacity requirements for Verizon Wireless's network in this location. Any reduction in the proposed height and/or antenna configuration would result in coverage footprint shrinkage. This would significantly limit the site's effectiveness in connecting with surrounding sites and impact the level of service Verizon Wireless is attempting to provide. Changes to the site configuration would limit the site's ability to resolve the existing coverage and capacity gaps and inadequacies in Plainville that motivated the search for a new site in the vicinity.

6. Radio frequency propagation modeling indicates that this installation will accomplish Verizon Wireless's coverage and capacity goals satisfactorily. Any reduction in the antenna configuration and/or the size of the Verizon Wireless equipment space would result in cell capacity shrinkage, which would lead to gaps in coverage and limit the site's effectiveness.
7. All Verizon Wireless equipment operating at the proposed communications facility and the resulting radio frequency exposure levels will be compliant with Federal Communications Commission requirements as well as federal and state health and safety standards.
8. Providing wireless communication services is a benefit to the residents, businesses, and visitors in the Town of Plainville as well as to mobile customers travelling throughout the area. The proposed location is well suited to meet Verizon Wireless's network requirements for the area due to its location and topographic characteristics. The absence of a wireless facility at or near this immediate location will result in the continued existence of a coverage gap and capacity problems. Without the proposed facility, Verizon Wireless will be unable to continue to provide reliable wireless communication services in this area of the Town of Plainville.

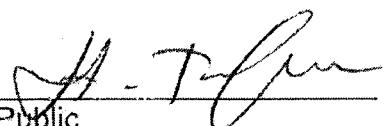
Signed and sworn under the pains and penalties of perjury this 4 day of February, 2019.



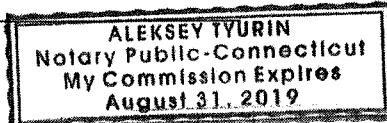
Mark Brauer - Radio Frequency (RF) Design Engineer
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

STATE OF Connecticut COUNTY OF New Haven

On this 4 day of February 2019, before me personally came the above-named Mark Brauer, known to me, and being duly sworn did acknowledge the foregoing to be his free act and deed.

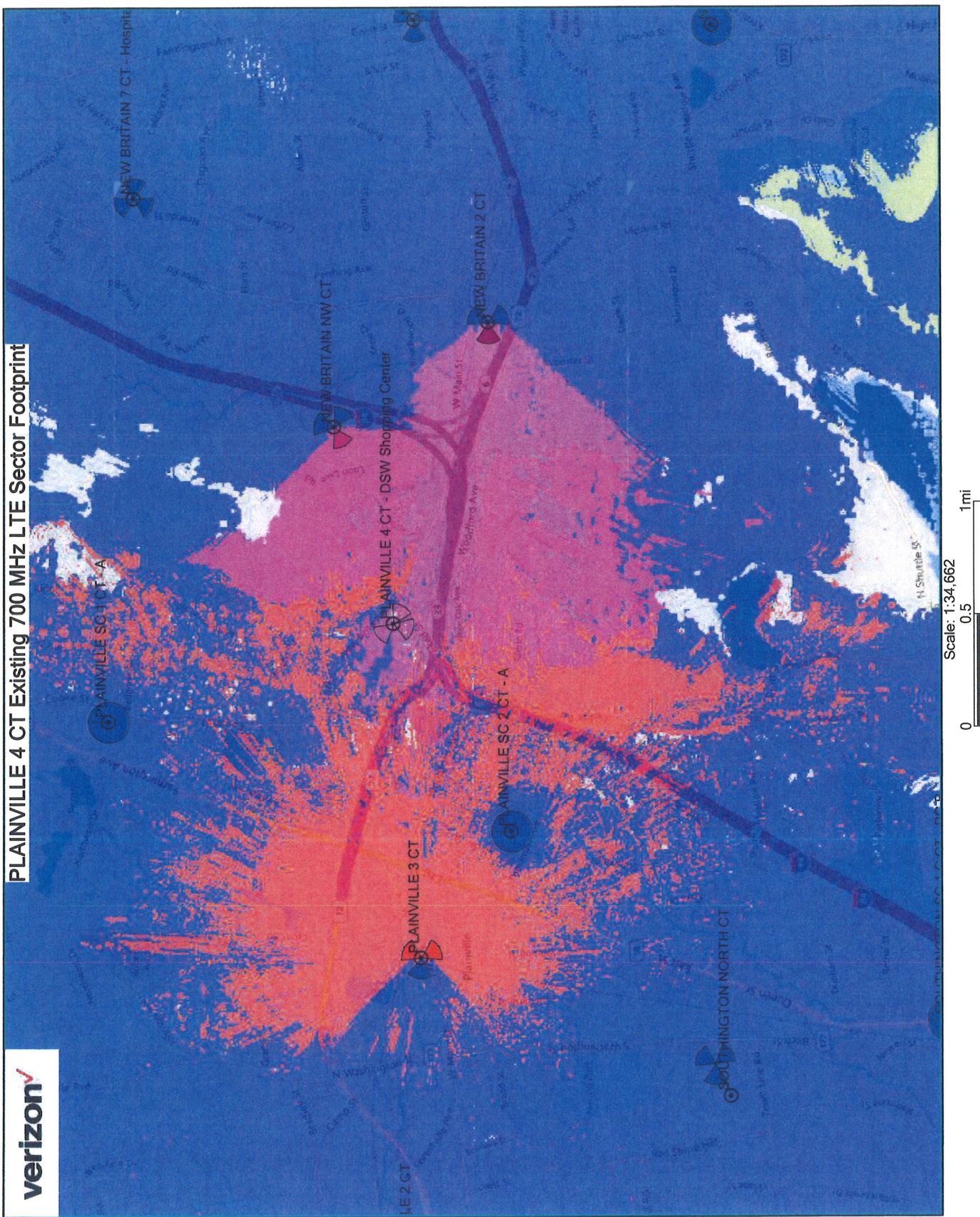

Notary Public

My Commission Expires:

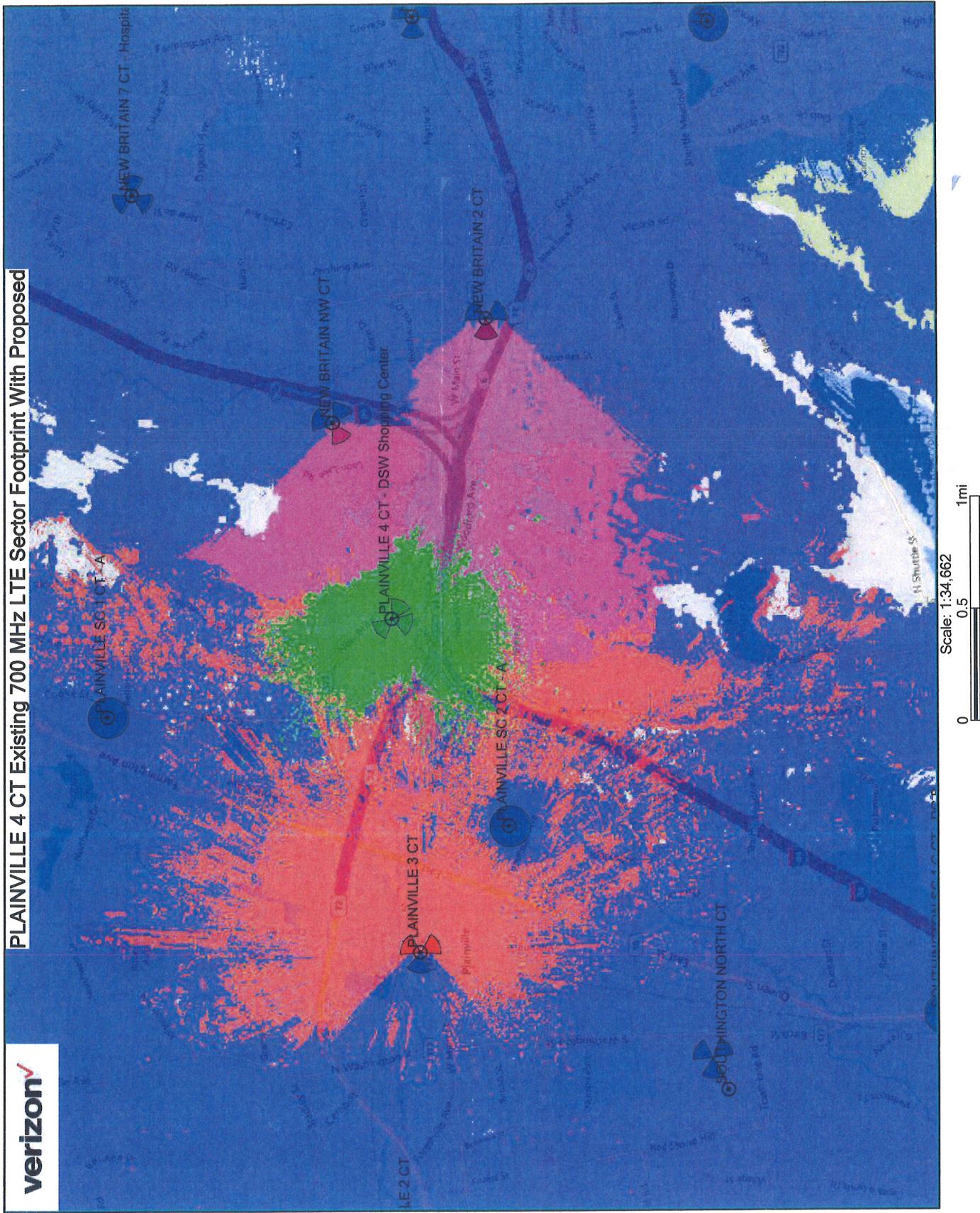


PLAINVILLE 4 CT Existing 700 MHz LTE Sector Footprint

verizon



PLAINVILLE 4 CT Existing 700 MHz LTE Sector Footprint With Proposed

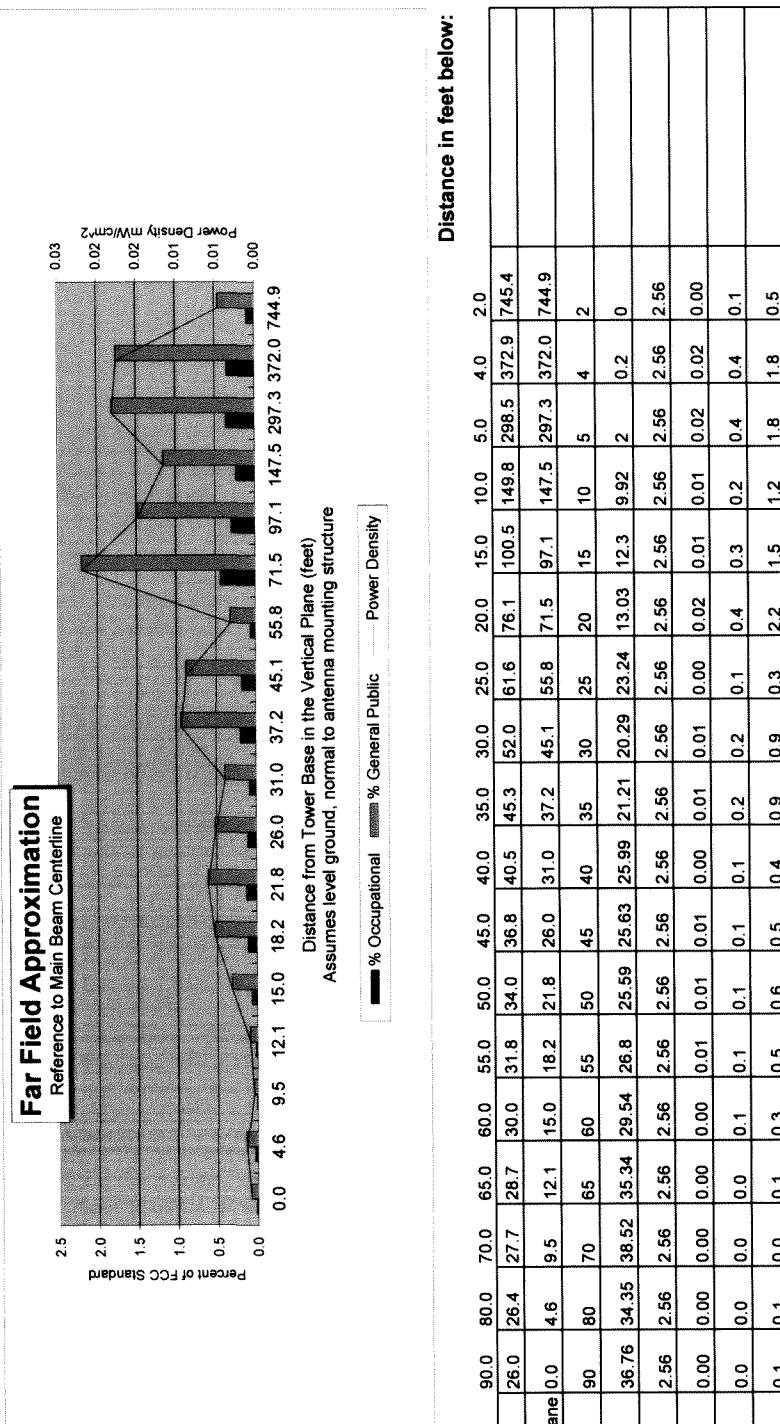
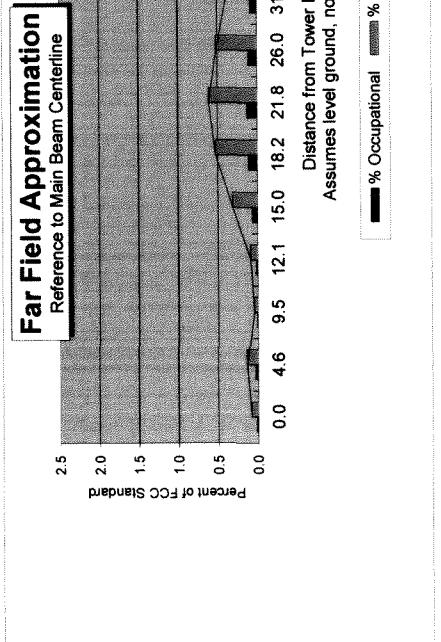


Site Name	Latitude	Longitude	Street Address	State	City	County	Structure Type	Centerline (ft)
PLAINVILLE 3 CT	41.671869	-72.86715	111 East Main St	CT	Plainville	Hartford	Lattice	81
NEW BRITAIN 2 CT	41.666411	-72.812803	1 Hartford Square	CT	New Britain	Hartford	Lattice	140
NEW BRITAIN NW CT	41.67659	-72.821414	115 North Mountain Rd	CT	New Britain	Hartford	Monopole	90

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole / Wire/ Yagi Antenna Types

Location:	Plainville 4, CT
Site #:	2.5
Date:	01/22/19
Name:	Mark Brauer
File Name:	Plainville 4, CT - FF Power
Operating Freq. (MHz):	2110.0
Antenna Height (ft):	29.0
Antenna Gain (dBi):	18.1
Antenna Size (in.):	72.0
Downtilt (degrees):	0.0
Feedline Loss (dB):	0.0
Power @ J4 (W):	180.0
Number of Channels	1



Antenna Type JAHH-65B
Max% 2.19%

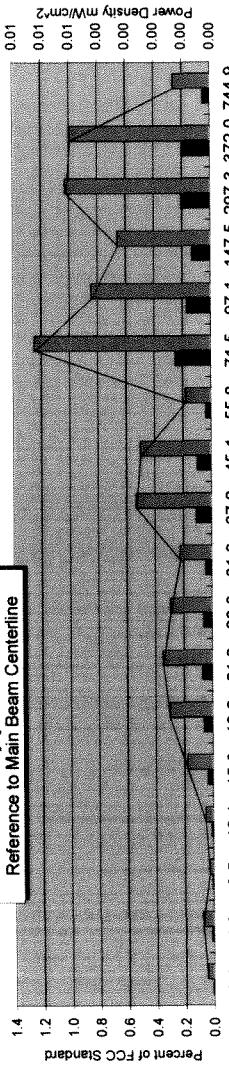
Instructions:

- 1) Fill in Site Location, Site number, Date, Name of Person Responsible for Date, and enter File Name to be saved as.
- 2) References to J4 refer to a point where the transmission line exits the equipment shelter and proceeds to the antenna(s). There is typically a connector located here where power measurements are made.
- 3) Enter Antenna Height (in feet to bottom of antenna), Antenna Gain (expressed as dB), add 2.17 to dBd to obtain dB, Antenna Size (vertical size in inches), Downtilt (in Degrees, enter zero if none), Feedline loss from J4 to Antenna, and J4 Pd
- 4) From manufacturer's plots, or data sheet, input Angle from mainbeam and dB below mainbeam centerline.
- 5) Enter Reflection coefficient (2.56 would be typical, 1 for free space)
- 6) Spreadsheet calculates actual power density, then relates as Occupational or General Population percentage of FCC Standard.
- 7) An odd distance may be entered in the rightmost column of the lower table.

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole / Wire / Yagi Antenna Types

Location:	Plainville 4. C.T
Site #:	1.4
Date:	01/22/19
Name:	Mark Brauer
File Name:	Plainville 4. C.T - FF Power
Operating Freq. (MHz)	746.0
Antenna Height (ft):	29.0
Antenna Gain (dBi):	14.4
Antenna Size (in):	72.0
Downtilt (degrees):	0.0
Feedline Loss (dB):	0.0
Power @ 14 (W):	120.0
Number of Channels	1

Far Field Approximation
Reference to Main Beam Centerline



Percent of FCC Standard

Power Density mW/cm²

Distance from Tower Base in the Vertical Plane (feet)

Assumes level ground, normal to antenna mounting structure

■ % Occupational ■ % General Public ■ Power Density

Distance in feet below:

Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0				
Solve for 1.0x to antenna	26.0	26.4	27.7	28.7	30.0	31.8	34.0	36.8	40.5	45.3	52.0	61.6	76.1	100.5	149.8	298.5	372.9	474.4																					
Distance from Antenna Structure Base in Horizontal plane	0.0	4.6	9.5	12.1	15.0	18.2	21.8	26.0	31.0	37.2	45.1	55.8	71.5	97.1	147.5	297.3	372.0	474.9																					
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2																					
dB down from centerline (referenced to centerline)	36.76	34.35	38.52	35.34	29.54	26.8	25.59	25.63	25.99	21.21	20.29	23.24	13.03	12.3	9.92	2	0.2	0																					
Reflection Coefficient (1 to 4.256 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56						
Power Density (mW/cm ²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Percent of Occupational Standard	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1					
Percent of General Population Standard	0.0	0.1	0.0	0.1	0.2	0.3	0.3	0.3	0.2	0.5	0.5	0.2	1.2	0.8	0.7	1.0	1.0	1.0	0.3																				
Antenna Type	JAH-H-65B																																						
Max%	1.25%																																						

Instructions:

- 1) Fill in Site Location, Site number, Date, Name of Person Responsible for Date, and enter File Name to be saved as.
- 2) References to J4 refer to a point where the transmission line exits the equipment shelter and proceeds to the antenna(s). There is typically a connector located here where power measurements are made.
- 3) Enter Antenna Height (in feet to bottom of antenna), Antenna Gain (expressed as dBi, add 2.17 to dBi to obtain dBi), Antenna Size (vertical size in inches), Downtilt (in Degrees, enter zero if none), Feedline loss from J4 to Antenna, and J4 P0
- 4) From manufacturer's plots, or data sheet, input Angle from mainbeam and dB below mainbeam centerline.
- 5) Enter Reflection coefficient (2.56 would be typical, 1 for free space)
- 6) Spreadsheets calculates actual power density, then relates as Occupational or General Population percentage of FCC Standard.
- 7) An odd distance may be entered in the rightmost column of the lower table.

Tab 6

Environmental Sound Compliance

Assessment of Environmental Sound



Rooftop Wireless Telecommunications Facility
276 New Britain Avenue
Plainville, CT 06062

January 17, 2019

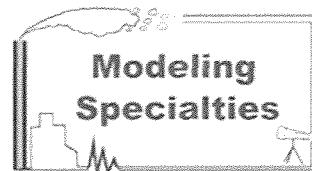
Prepared For:

Verizon Wireless
20 Alexander Dr., 2nd Floor
Wallingford, CT 06492



Prepared By:

Modeling Specialties
30 Maple Road
Westford, MA 01886



ENVIRONMENTAL SOUND EVALUATION

Overview of Project and Site Vicinity

Verizon Wireless plans to develop and operate a telecommunications facility in Plainville on the roof of Connecticut Commons Shopping Center at 276 New Britain Avenue in Plainville, CT. The facility includes antennas on the roof in the southeast corner of the plaza. Cabling and electronic equipment will be installed on the outside of the existing structure to ground mounted equipment in the rear of the building. Verizon Wireless provides engineering details in the zoning drawings prepared by EBI Consulting dated 11/27/18. The purpose of this study is to identify the potential sound sources, estimate the facility sound at the nearest sensitive locations and to address the need for a noise mitigation plan.

Because the project proposal includes only the electronics cabinet with its subtle fan sound and door mounted cooler, it has no potential to emit sound that can be heard from offsite. Noise is not expected to be an issue from the proposed facility. This abbreviated study is provided only to address the potential sound from a generator that may be installed in the future.

The facility is located on a large parcel with large stores along the south side. Huge parking lots are north of the major retail buildings. To the rear of the retail space is an accessway that is used for truck traffic. Most of the commercial units have loading docks. The proposed equipment compound will be located between two of those loading docks. The operating equipment will be about 1850 feet from the nearest residence to the north and 2300 feet to the nearest residences to the northwest. Based on the significant distance and shielding from the existing building, there is no potential of sound emissions of concern in those directions. The nearest residences to the south are about 1200 feet from the equipment and on the far side of Interstate 84. For those reasons, they have no potential to be affected by the equipment sound. The nearest receiving property is about 130 feet to south which is the 84 Lumber Yard. The lumber yard is not expected to be sensitive to modest sounds and is itself a source of sound from trucks and equipment.

A graphic is shown in Figure 1 to show the orientation of the site to the neighboring land uses. Figure 2 shows the equipment layout that is proposed as part of this project. Figure 3 provides the vertical character of the proposed facility.

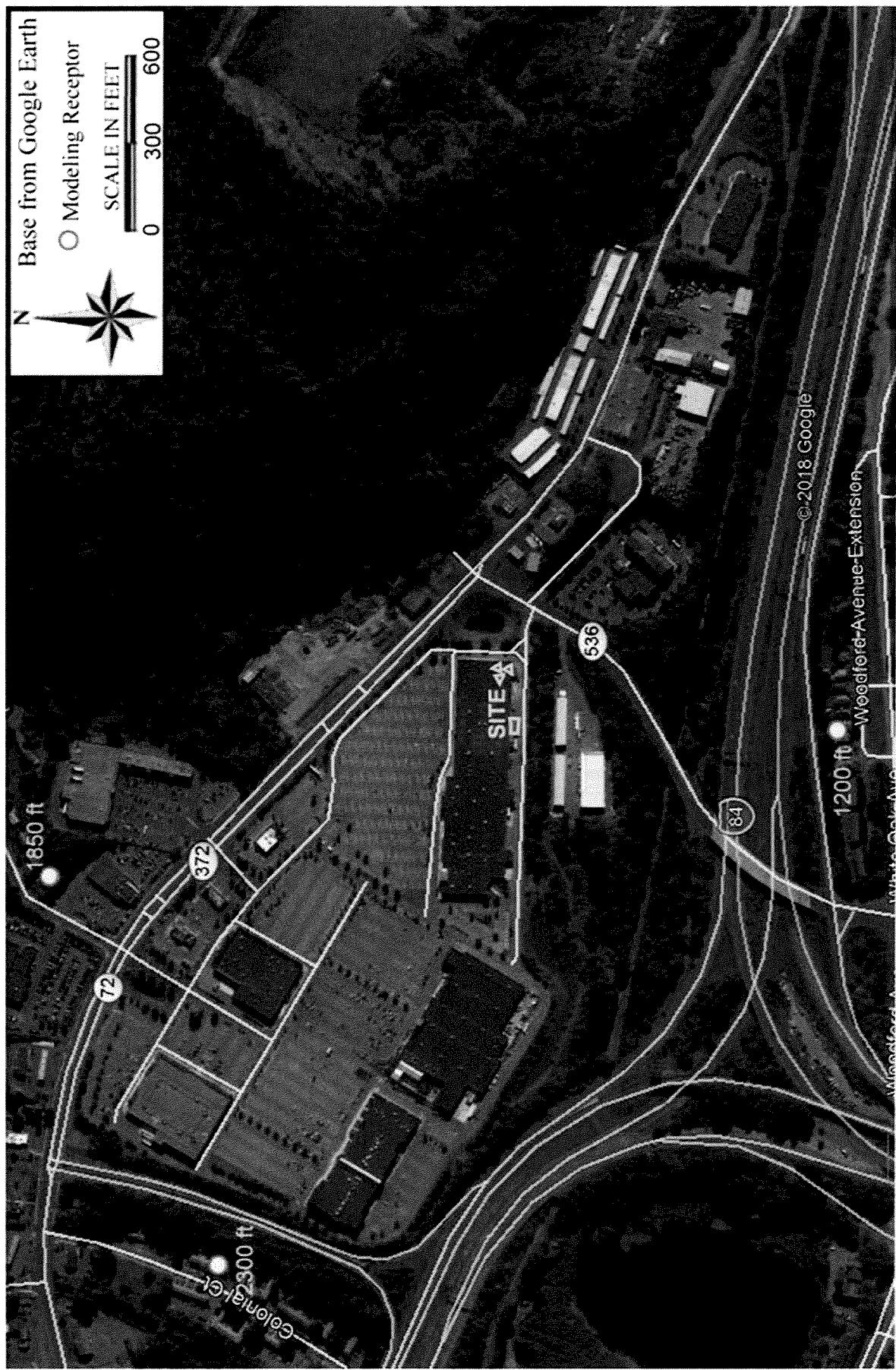


Figure 1 Aerial Photo of the Project Area Showing Site, Roadways and Area Land Uses

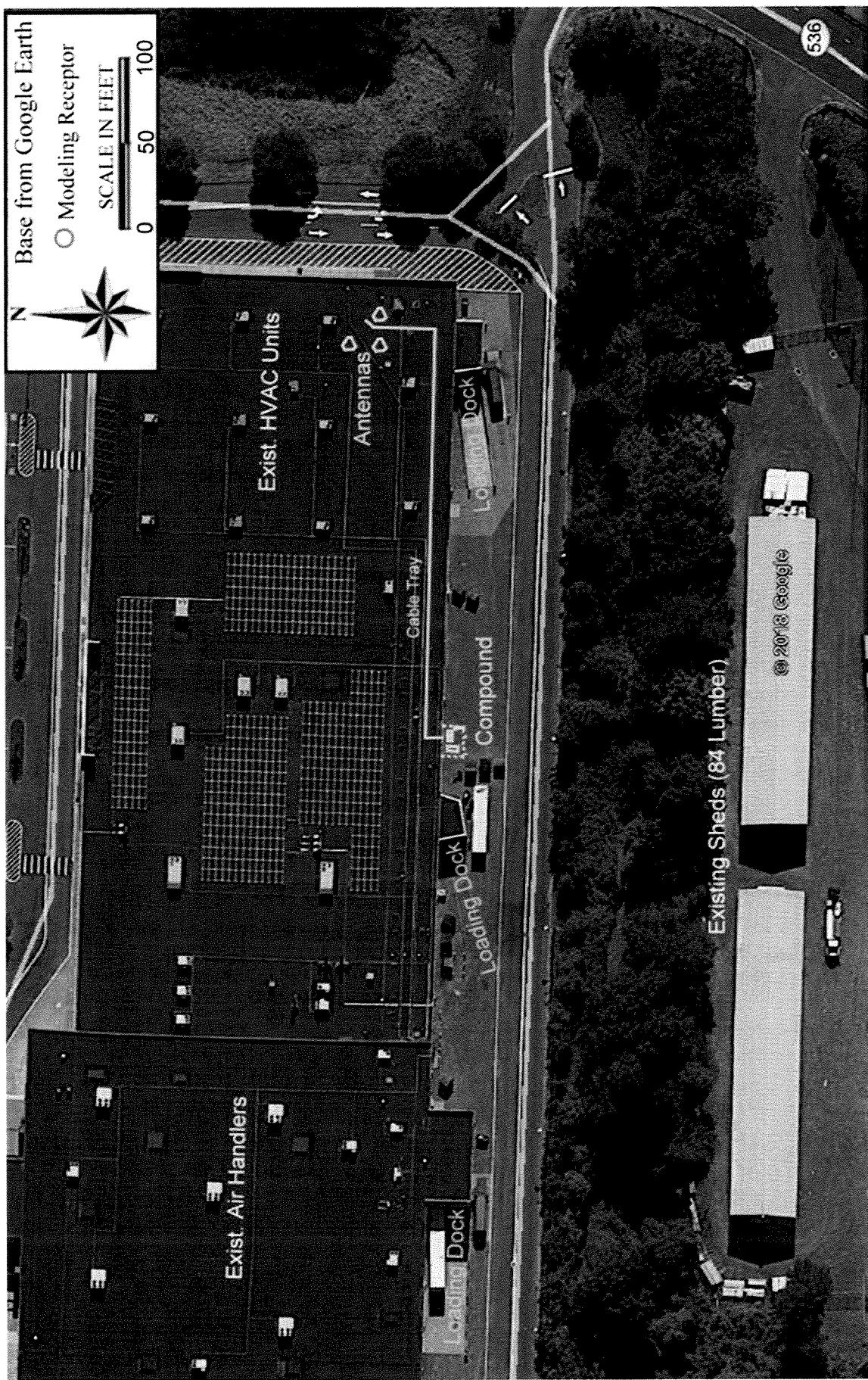


Figure 2 Project Layout Orientation Showing the Compound and Rooftop Antennas

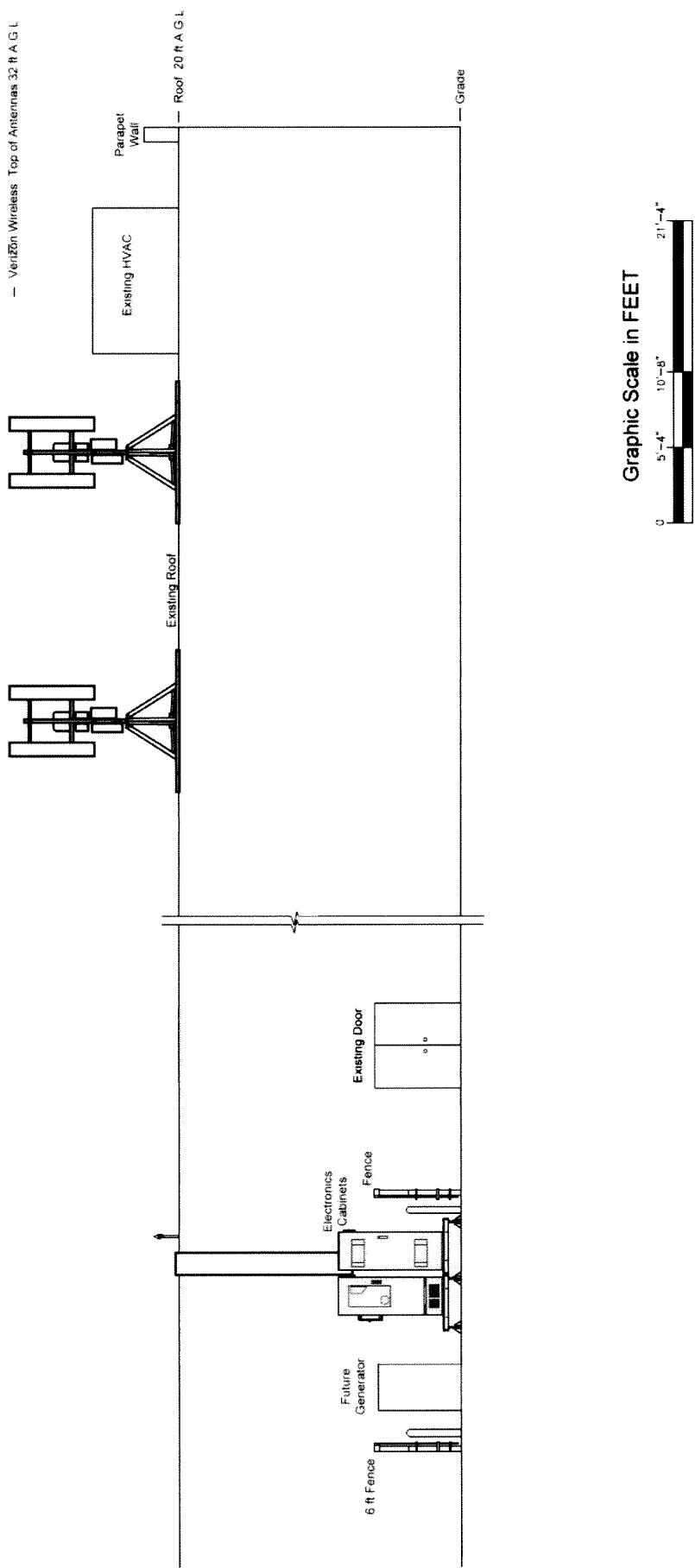


Figure 3 Sketch Showing the Vertical Character of the Proposed Rooftop and Support Equipment

Sound compliance is judged on two bases: the extent to which regulations or guidelines are met, and the extent to which it is estimated that the community is protected from excessive sound levels. No Sound level standards were identified for the Town of Plainville. Its Wireless Telecommunications regulation (Section 6.04) also provides no quantitative criteria. For that reason, the state standard is assumed to apply for this project.

The state of Connecticut (Connecticut Department of Energy & Environmental Protection or CDEEP) performance criteria are shown in Table 1 based on the land use of the emitter and the potentially affected receptors.

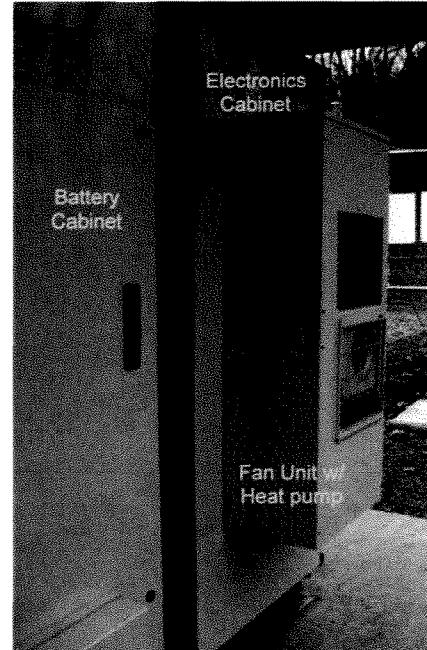
Table 1: Connecticut DEEP Noise Standards by Noise Zone
Based on SLUCONN (Standard Land Use Classification Manual of Connecticut)

Emitter Class	Receptor's Land Use			
	Industrial	Commercial	Residential/Day	Residential/Night
Class A (Res)	62 dBA	55 dBA	55 dBA	45 dBA
Class B (Com)	62 dBA	62 dBA	55 dBA	45 dBA
Class C (Ind)	70 dBA	66 dBA	61 dBA	51 dBA

Sounds from the Proposed Installation

Electronics Cabinets. Verizon Wireless proposes cabinet mounted electronics to support this facility. The antennas, cabling, utilities and the battery cabinet have no potential to emit sound. The only routine sound emissions planned for the Verizon Wireless equipment is related to a small fan inside the electronics cabinet for ventilation air. The cabinets are designed for minimal effect on the surrounding area. The cabinet fan has a smooth broadband character that produces about 50 dBA at 10 feet from the unit. These levels have no potential to affect any offsite receivers.

Under high ambient temperatures, a small heat pump on the front of the electronics cabinet will provide additional cooling. This is provided to protect the equipment from excessive heat. It is typically activated only at temperatures in the mid 90's F. Its sound is about 50 dBA at 23 feet from the unit. This remains well below the sound level from existing HVAC units on the roof or trucking activities behind of the retail buildings.



Emergency Generator. The emergency is not proposed as part of this project, but space is reserved for a generator if one is needed in the future. If a generator is eventually installed, there are only two occasions when it would be used. The first is the routine periodic testing of the unit. This is a maintenance function and assures that the equipment is available when needed for emergency use. Each test will last for one-half hour or less, no more than once per week and only during the daytime hours. The other occasion when the generator would operate is during the loss of

utility power. These rare events are most likely to occur during exceptional conditions like major storms. The emergency use is considered an upset condition that is not addressed in this report. Various generators are used by Verizon Wireless at its facilities depending on available infrastructure and specific needs of the project. While no generator set has been specified, the sound emissions from those varied generators range between upper 50's dBA and low 70's dBA at a reference distance of 23 feet. In the worst case, a 72-dBA generator is modeled in this study. Based on modeling results using CadnaA from Datakustic, the generator plus the door-mounted cooler would produce about 45 dBA at the nearest property line. A graphical summary of the modeling results is provided in Figure 4. Since both the source and receiver are commercial, the sound criterion at the receiver is 62 dBA.

7 Conclusions

Sound level modeling was conducted to simulate the sound emissions at the proposed telecommunications facility. Conservative assumptions were made based on the proposed plans provided by Verizon Wireless. The reported levels are only based on the proposed equipment from Verizon Wireless. Because of the commercial nature of nearby properties, noise from the proposed equipment is a non-issue. All equipment either produces no sound or very modest sound that is well below existing sources at this commercial facility. The nearest residential receptors are not only very distant (1850 feet or more) but they are shielded from any project sound by the shopping center buildings.

The plans show an area for a future generator. While it is not a part of this project, it was evaluated to identify any issues related to future sound. The generator that could be used has not been specified. Using a worst-case estimate based on the generators used by Verizon Wireless at other sites, its sound level at the nearest offsite property line will be about 45 dBA. This is well below the 62-dBA criterion provided by the state of Connecticut. Therefore, both the project sound and future sound from this facility complies with applicable noise standards with a large margin. Based on these results, the facility does not require additional noise mitigation to assure compliance with the applicable standards.

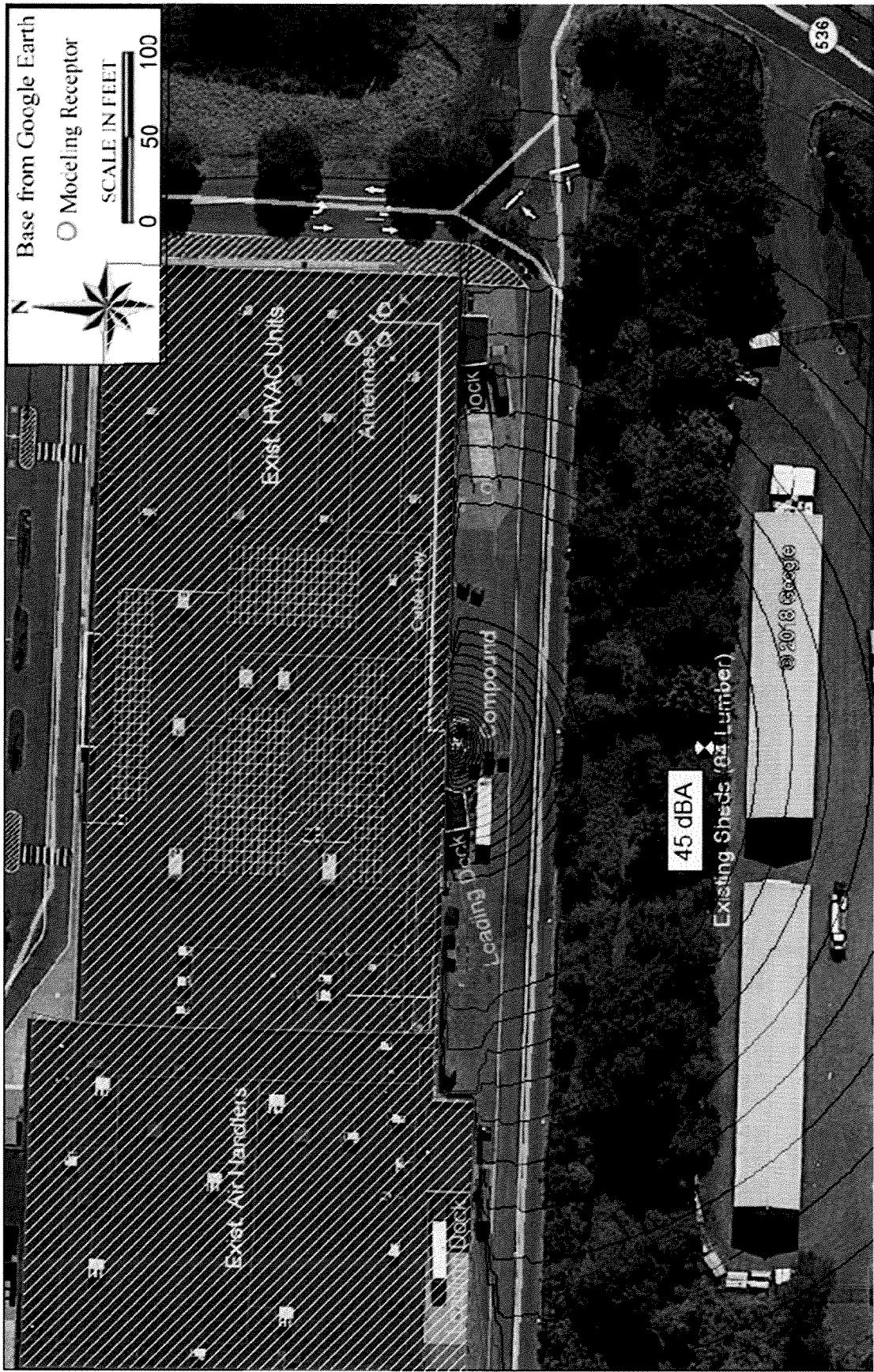


Figure 4 Graphical Summary of the Sound Level Modeling of Project Sources

Tab 7

FAA No Hazard
Determination

PLAINVILLE4.SRP

* Federal Airways & Airspace *
* Summary Report: New Construction *
* Antenna Structure *

Airspace User: Not Identified

File: PLAINVILLE4

Location: New Britain, CT

Latitude: 41°-40'-23.0" Longitude: 72°-50'-18.0"

SITE ELEVATION AMSL.....225 ft.
STRUCTURE HEIGHT.....32 ft.
OVERALL HEIGHT AMSL.....257 ft.
SURVEY HEIGHT AMSL.....257 ft.

NOTICE CRITERIA

FAR 77.9(a): NNR (DNE 200 ft AGL)
FAR 77.9(b): NNR (DNE Notice Slope)
FAR 77.9(c): NNR (Not a Traverse Way)
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for 4B8
FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for HFD
FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required

NNR = Notice Not Required

PNR = Possible Notice Required (depends upon actual IFR procedure)

For new construction review Air Navigation Facilities at bottom
of this report.

Notice to the FAA is not required at the analyzed location and height for
slope, height or Straight-In procedures. Please review the 'Air Navigation'
section for notice requirements for offset IFR procedures and EMI.

OBSTRUCTION STANDARDS

FAR 77.17(a)(1): DNE 499 ft AGL
FAR 77.17(a)(2): DNE - Airport Surface
FAR 77.19(a): DNE - Horizontal Surface
FAR 77.19(b): DNE - Conical Surface
FAR 77.19(c): DNE - Primary Surface
FAR 77.19(d): DNE - Approach Surface
FAR 77.19(e): DNE - Approach Transitional Surface
FAR 77.19(e): DNE - Abeam Transitional Surface

PLAINVILLE4.SRP

VFR TRAFFIC PATTERN AIRSPACE FOR: 4B8: ROBERTSON FIELD

Type: A RD: 8440.497 RE: 200

FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): DNE - Height No Greater Than 200 feet AGL.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

The structure is within VFR - Traffic Pattern Airspace Climb/Descent Area. Structures exceeding the greater of 350' AAE, 77.17(a)(2), or VFR horizontal and conical surfaces will receive a hazard determination from the FAA. Maximum AMSL of Climb/Descent Area is 552 feet.

VFR TRAFFIC PATTERN AIRSPACE FOR: HFD: HARTFORD-BRAINARD

Type: A RD: 54154.93 RE: 13.9

FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)

FAR 77.17(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)

FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 1700 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT TYP NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
CT60 HEL ULTIMATE	273.23	2.38	+4	
No Impact to Private Landing Facility				
Structure is beyond notice limit by 9461 feet.				
CT73 HEL SOUTH MEADOWS	342.01	3.15	+57	
No Impact to Private Landing Facility				
Structure is beyond notice limit by 14140 feet.				
CT75 HEL UCONN HEALTH CENTER	29.36	4.15	-83	
No Impact to Private Landing Facility				
Structure 83 ft below heliport.				

PLAINVILLE4.SRP

CT03 HEL BRISTOL HOSPITAL 272.64 4.4 -149
 No Impact to Private Landing Facility
 Structure 149 ft below heliport.

01CT HEL BERLIN FAIRGROUNDS 118.91 5.69 +197
 No Impact to Private Landing Facility
 Structure is beyond notice limit by 29573 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

APCH	FAC		ST		DIST	DELTA	GRND		
	IDNT	TYPE	AT	FREQ				VECTOR	(ft)
BEAR	4B8	CO	Y	A/G	310.74	10144	-3	CT PALINFIELD	-.02
	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notice Not Required for Stations operating with an ERP no greater than 3500 watts and frequencies are within the FAA/FCC co-location policy frequency bands. If ERP of 3500 watts is exceeded notice to the FAA is required.

HFD	VOR/DME	R	114.9	98.43	80351	-592	CT HARTFORD	-.42	
BDL	RADAR	ON			23.66	105668	+21	CT BRADLEY INTL	.01

No Impact. This structure does not require Notice based upon EMI.
 The studied location is within 20 NM of a Radar facility.
 The calculated Radar Line-Of-Sight (LOS) distance is: 38 NM.
 This location and height is within the Radar Line-Of-Sight.

BDL	VORTAC	D	109.0	22.65	105833	+97	CT BRADLEY	.05
MAD	VOR/DME	R	110.4	163.04	136880	+37	CT MADISON	.02
BAF	VORTAC	R	113.0	10.53	181227	-10	MA BARNES	0.00
BDR	VOR/DME	R	108.8	202.71	202525	+248	CT BRIDGEPORT	.07
CEF	VORTAC	R	114.0	23.85	209129	+16	MA WESTOVER	0.00
PWL	VOR/DME	I	114.3	279.86	211047	-993	NY PAWLING	-.27

CFR Title 47, §1.30000-§1.30004

AM STUDY NOT REQUIRED: Structure is not near a FCC licensed AM station.
 Movement Method Proof as specified in §73.151(c) is not required.
 Please review 'AM Station Report' for details.

PLAINVILLE4.SRP

Nearest AM Station: WLAT @ 5342 meters.

Airspace® Summary Version 18.9.514

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Copyright © 1989 - 2018

11-13-2018

15:15:18

Tab 8

Structural Report(s)



STRUCTURAL ANALYSIS LETTER

March 5, 2019

Site Name: Plainville 4 CT / DSW
Site Address: 276 New Britain Ave., Plainville, CT

EBI Project Number: 8118000524
Carrier: Verizon Wireless

This letter is to confirm EBI's structural analysis of the proposed Verizon antenna mounting system on the above listed site for supporting the proposed Verizon equipment upgrade. The intent of this review is to determine if the proposed modification of antennas, RRHs, and related equipment will exceed the structural capacity of the existing and proposed supporting structure(s).

The following sources of information were considered in preparing this evaluation:

- Photographs and notes taken by EBI personnel on a site visit on October 29, 2018
- RFDS dated October 26, 2018

Substantial proposed equipment modification at considered in this analysis includes:

- Installing (6) panel antennas on (3) proposed tripod ballast sleds (1 sled per sector)
- Installing (6) RRUs (2 per sector) on proposed tripod ballast sleds
- Installing (1) OVP at antennas
- Installation of (9) 4x8 timber sleepers 15' long (3) per sector below sleds perpendicular to joists below

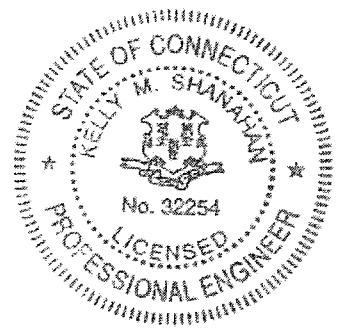
By engineering analysis and/or comparison, the proposed antenna mount and existing building structure are deemed sufficient for supporting the proposed Verizon equipment listed herein.

This certification is based on the physical mount characteristics as described and as determined through site specific photos, proposed CDs, and existing structural reports. This certification also relies upon the condition that all structural members and connections are properly designed and constructed, and that the structure is in good condition. Prior to installation of any equipment, the contractor shall inspect the condition of all supporting members and connectors, report any observed existing construction discrepancies and defects to the engineer immediately, and discontinue work until further notice. The contractor shall be responsible for the means and methods of construction.

Please contact us at 781-273-2500 if you have any questions.

Sincerely yours,
EBI Consulting

Kelly Shanahan, P.E.
Professional Engineer





EBI Consulting

environmental | engineering | due diligence

PHOTOGRAPH/ DOCUMENT LOG

Photo 1:

Rooftop components

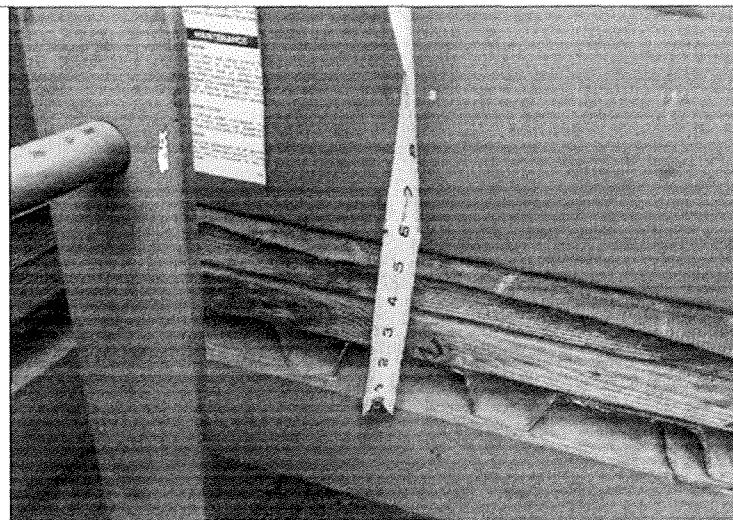


Photo 2:

General view of rooftop.



Photo 3:

General view of roof framing





STRUCTURAL DESIGN PARAMETERS

BUILDING CODES:

2018 Connecticut State Building Code (based on IBC 2015)
ASCE 7-10
AISC Steel Manual 14th Ed.
TIA/EIA-222 Revision G

OCCUPANCY RISK CATEGORY:

II

LIVE LOADS:

Roofs: 20 PSF

SNOW LOADS:

Ground Snow Load, Pg:	30 psf
Equation 7-1 Flat Roof Conversion Factor:	0.7
Snow Exposure Factor, Ce:	1.0
Thermal factor, Ct:	1.0
Snow Load Importance Factor:	1.0
Roof Snow Load, Pf:	30 psf min. per code

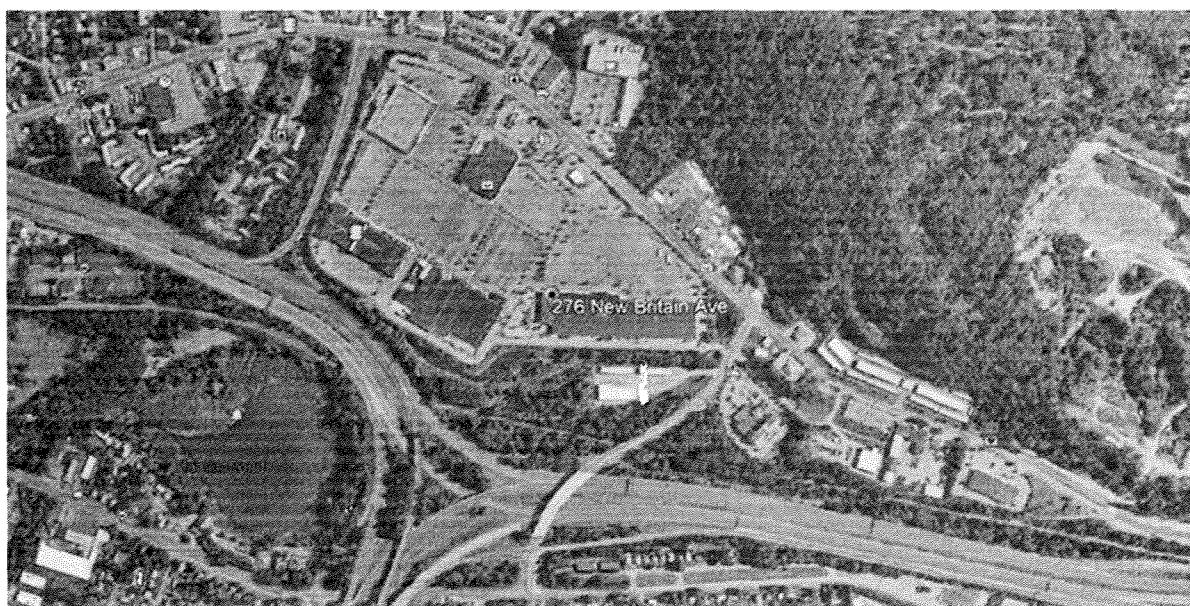
WIND LOADS:

Ultimate Wind Speed	125 mph
3-second gust wind speed:	97 mph
Importance Factor, I:	1.0 (where applicable)
Exposure Category:	C

SEISMIC LOADS:

Equipment Adds Negligible Load, Whole Building Seismic Analysis Not Required	
Component Importance Factor, I _P :	1.0
Spectral Acceleration Short Period, S _s :	0.183
Spectral Acceleration 1-Second Period, S ₁ :	0.064
Site class	D
Seismic design category:	B

Below is a screenshot taken from Google Earth, included for showing surrounding terrain





EBI Consulting

environmental | engineering | due diligence

21 B Street | Burlington, MA 01803 | P: 800.786.2346

Client: Verizon
Site ID: Plainville 4

This spreadsheet calculates the wind forces on proposed equipment and checks the existing ballast sled.

Shaded fields indicated user data entry. ASD method of design used.

References: (See also Structural Design Criteria Calc.)

ASCE 7-10

Dimensions and weights of existing and proposed equipment: (Loads on side control for RRH on mast pipe condition)

Description	Weight* (lbs)	Exposed			Qty./sector	Wind Centroid ht (ft)	Gravity centroid dist. (ft)**	K_d	Qty * Un-shielded Face surface area (sf)
		Height (in)	Width (in)	Depth (in)					
Flat Members									
Sled trays+misc	257.6	2.0	120.0	94.0	1	0.1	-3.6	0.95	1.67
Sled diagonals	28.4	48.0	3.5	4.0	3	1.5	-3.6	0.95	3.50
Raycap Surge Suppression	32.0	29.5	16.5	10.3	1	7.0	-3.6	0.95	3.38
Nokia RH_4X45-B66A-AWS	56.8	25.8	11.8	7.2	1	4.0	-3.6	0.95	2.11
(P) Commscope JAHH-65B-R3B	63	72.0	13.8	8.2	2	9.0	-3.6	0.95	13.80
Nokia RH_4X45-B25	57	21.6	12.0	9.0	1	4.0	-3.6	0.95	1.80
Round Members									
Exposed portion of 4-1/2" O.D. pipe	76	84.7	4.5	4.5	1	3.5	-3.6	0.95	2.65
Exposed portion of 2-7/8" O.D. pipe	17	36.0	2.9	2.9	2	9.0	-3.6	0.95	1.44

*weight is an estimate including required hardware, including pipe mount bracket

**Gravity centroid distance is distance from near edge of sled (negative values reduce overturning)

RRH dimensions shown above are worst case scenario, and final RRH's may be smaller than those shown above - refer to CD's.

3 Second Gust Wind Velocity, V_{3s} (no ice) =

97 mph

Height above grade

29 ft, center of antennas

Exposure Category

C $\alpha = 9.5$

z_g (ft) = 900

z_{min} (ft) = 15

$K_z = 2.01 * (z/z_g)^{0.1}$ =

0.98

$K_{zt} =$

1.00 topographic category 1

$I =$

1.00 Class II structure (telecom equipment)

Wind Force on equipment = $A * G_h * q_z * C_a$

Description	Aspect ratio	C_a or C_A	G_h	Wind			Equip. self-wt (lb)	Gravity OT moment (lb-ft)		Total OT moment (lb-ft)
				Pressure (psf)	Wind force (lb)	Wind OTM (lb-ft)		moment (lb-ft)	moment (lb-ft)	
Sled trays+misc	0.0	1.20	1.00	26.8	45	4	258	-927	-923	
Sled diagonals	13.7	1.62	1.00	36.2	127	190	85	-307	-117	
Raycap Surge Suppression	1.8	1.20	1.00	26.8	91	634	32	-115	518	
Nokia RH_4X45-B66A-AWS	2.2	1.20	1.00	26.8	57	226	57	-204	22	
(P) Commscope JAHH-65B-R3B	5.2	1.32	1.00	29.5	407	3661	127	-456	3205	
Nokia RH_4X45-B25	1.8	1.20	1.00	26.8	48	193	57	-206	-13	
Round Members										
Exposed portion of 4-1/2" O.D. pipe	18.8	0.96	1.00	21.5	57	201	76	-274	-74	
Exposed portion of 2-7/8" O.D. pipe	12.5	0.92	1.00	20.6	30	266	35	-125	141	
Totals:					860	5376	726	-2615	2760	



Client Verizon
Site ID Plainville 4

Check proposed mast pipe for supporting antenna:

Length mast pipe cantilevered above tripod bracing	5.33 ft, estimated maximum
1.6WL+1.2DL Sum of moments	2303 ft-lbs
Mast pipe steel grade	35 ksi
Plastic Modulus Z =	4.05 4-1/2" O.D. Schedule 40 pipe
Phi	0.90
Available Flexural Strength, LRFD	10631.25 ft-lbs

Bending unity checks:

Bending unity check, 1.6WL+1.2DL load combo:	22% <100% OK
--	--------------

Check Proposed horizontals supporting antenna pipe masts

Spacing between antennas	4 ft, estimated maximum (assumed centered on mast)
Dead load from antennas	63 lb
Dead load from pipe masts	35 lb
Dead load from horizontal pipes	11.6 plf
Wind load on horizontal pipes	19.73378 plf
Wind load on antennas	203.3798 lb
Resulting moment	977.2435 ft-lbs
Horizontal pipe steel grade	35 ksi
Plastic Modulus	1.37 2-7/8" O.D. Schedule 40 pipe
Phi	0.90
Available flexural strength	7192.5 ft-lbs for (2) horizontals

Bending unity checks:

Bending unity check, 1.6WL+1.2DL load combo:	14% <100% OK
--	--------------

K-SERIES JOIST ANALYSIS

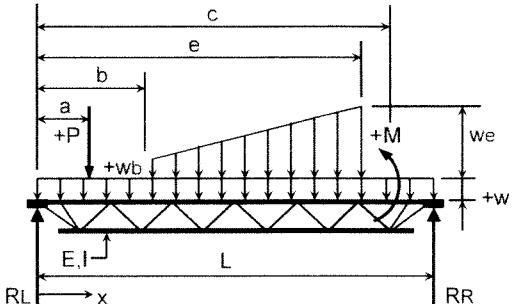
For standard K-Series Steel Joists Considered as Simple-Span Beams Subjected to Non-Standard Loads

Job Name: Plainville 4 Subject: Existing joists with ballasted sled load
EBI Job Number: 8118000524 Originator: MOB Checker: KS

Input Data:

Joist Data (Input required in yellow highlighted areas)

Designation =	22K4	closest designation with info available
Span, L =	30	ft.
Depth, D =	22	in. (from K-Joists Load Table)
Weight, w =	8	lbs./ft. (from K-Joists Load Table)
allowable w =	302	lbs./ft.
allowable w_{LL} =	219	lbs./ft.



Nomenclature

Intermediate Calc's

Inertia, I_x =	153.1	inches ⁴
M(allow) =	33975	ft.-#, $M = wL^2/8$
V(allow) =	4530	lbs., $V = wL/2$

*Loading considered is 1/3 of the total point load imposed by one sector frame applied at midspan considering distribution with 5' spacing on joists and 8' ballast trays above 15' timbers.

Actual Design Loads:

Full Uniform:

Joist Spacing= 5 feet

Dead Load = 10 psf

Live load = 30 psf, used to model snow load

$$w = 200 \text{ plf. } w = \text{spacing} * (DL + LL)$$

Start End

Distributed:	b (ft.)	Wb (plf)	e (ft.)	We (plf)
#1:	0.00	0	0.00	0
#2:				
#3:				
#4:				
#5:				
#6:				
#7:				
#8:				

Moments:	C (ft.)	M (ft-lbs)
#1:		
#2:		
#3:		
#4:		

Point Loads:	a (ft.)	P (lbs.)	*
#1:	15.0000	174.5185	
#2:	19.0000	174.5185	
#3:	11.0000	174.5185	
#4:	5.0000	400	
#5:			
#6:			
#7:			
#8:			
#9:			
#10:			
#11:			
#12:			
#13:			
#14:			
#15:			

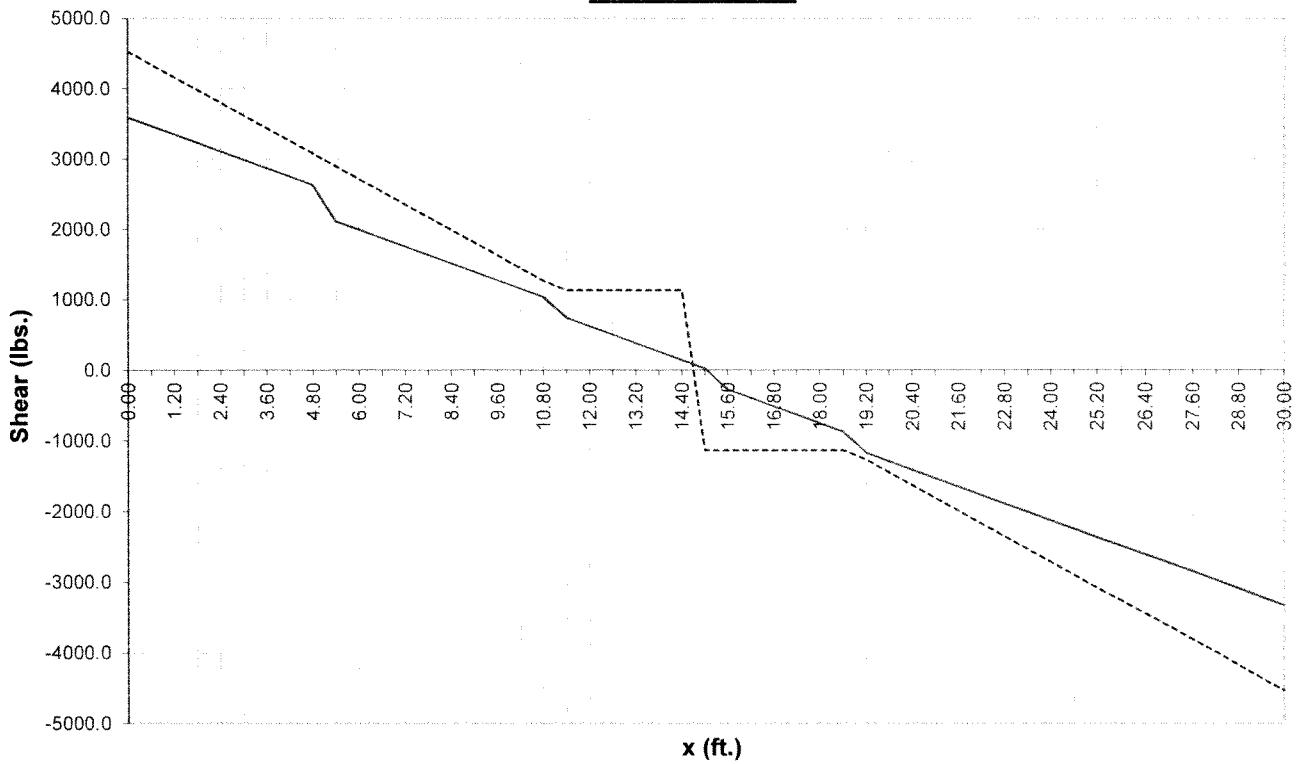
Maximum Stress Ratios:

$$\begin{array}{l} \text{S.R.} = 0.921 \text{ for Shear} \\ \text{S.R.} = 0.787 \text{ for Moment} \end{array}$$

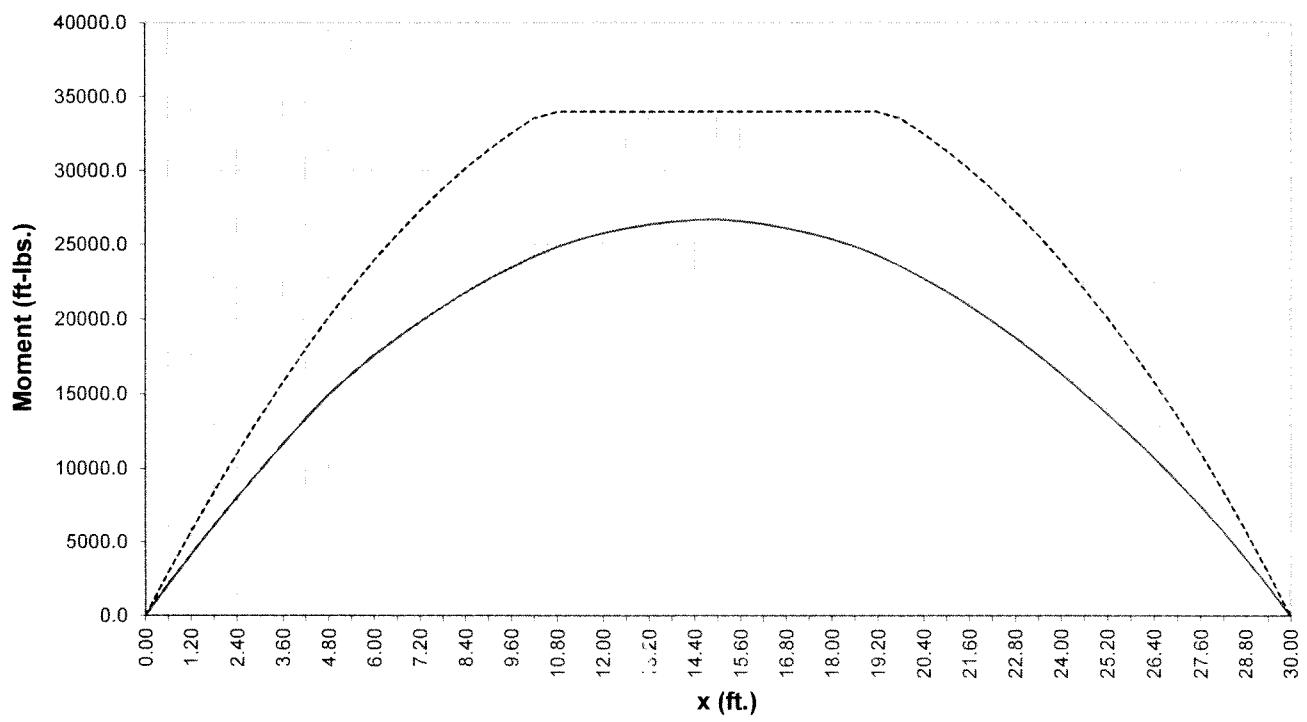
$$\begin{array}{l} @ x = 19.20 \text{ ft.} \\ @ x = 15.00 \text{ ft.} \end{array}$$

Comments

Shear Diagram



Moment Diagram



— = curves for allowable capacity loads

— = curves for actual design loads

STRUCTURAL ANALYSIS CODE COMPLIANCE LETTER

March 5, 2019

Site Name: Plainville 4
Site Address: 276 New Britain Avenue, Plainville, CT
EBI Project Number: 8118000524
Carrier: Verizon Wireless

To Whom It May Concern:

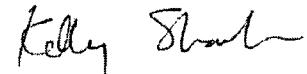
This letter is to confirm the code edition used in the analysis of the proposed Verizon Wireless antenna mounting system and of the supporting building structure. Refer to the Structural Analysis Letter by EBI Consulting dated March 5, 2019.

The antenna mount analysis was conducted in accordance with TIA-222 Revision G.4, as adopted by the International Building Code 2015, referenced by the 2018 Connecticut State Building Code currently in effect. The ultimate wind speed of 125 mph is as mandated by the 2018 Connecticut State Building Code, Appendix N. The TIA-222 code does not mandate wind speeds, but rather stipulates that local requirements are to be used. In the absence of local codes, TIA-222-G has suggested values reproduced from the now-outdated ASCE 7-05 code. The ultimate wind speed of 125 mph has been converted to a nominal wind speed of 97 mph (ref. IBC 2015 Eq. 16-33) to provide a wind speed compatible with the design equations of TIA-222-G while incorporating the current wind maps.

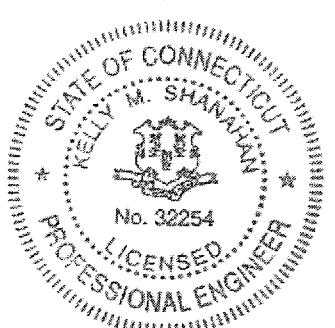
It is the opinion of EBI Consulting that this approach to the analysis is in compliance with the editions of the International Building Code and TIA-222 code currently adopted by the state of Connecticut, and is therefore the most appropriate approach.

Please contact us at 781-273-2500 if you have any questions.

Sincerely yours,
EBI Consulting


Kelly Shanahan, P.E.

Professional Engineer



March 15, 2019

Site Name: Plainville 4 CT / DSW
Site Address: 276 New Britain Ave., Plainville, CT

EBI Project Number: 8118000524
Carrier: Verizon Wireless

This letter is to confirm EBI's opinion that the existing structure intended to support the proposed Verizon wireless equipment cannot support the addition of a screen wall. The intent of this review is to determine if the proposed installation of a screen wall around the antenna frames will exceed the structural capacity of the existing structural support system.

The following sources of information were used in preparing this structural assessment:

- Photographs and notes taken by EBI personnel on a site visit on October 29, 2018
- RFDS dated October 26, 2018
- Structural Analysis Letter by EBI dated March 5, 2019

The proposed scope of work for the above-mentioned project beyond that included in the Structural Analysis Letter by EBI dated March 5, 2019 was the addition of a screen wall. The design of the sector mounts for the above-mentioned location required the addition of spreaders beneath each sector in order to not exceed the capacity of the existing structure.

Our conclusion is that the proposed addition of a stealth screening associated with the above mentioned antenna array would exceed the capacity of the existing structure.

Please contact us at 781-864-4443 if you have any questions.

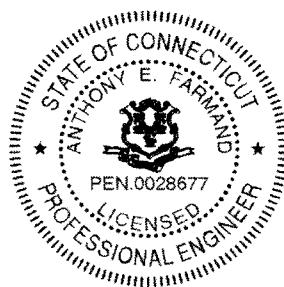
Sincerely yours,
EBI Consulting



Matthew O'Brien
Project Engineer



Anthony E. Farmand, PE
Civil Engineer

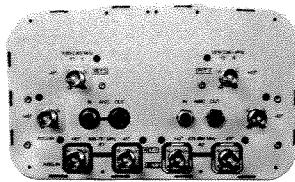


Tab 9

Equipment
Specifications

Product Specifications

COMMSCOPE®



JAHH-65B-R3B

Multiband Antenna, 698-787, 824-894 and 2x 1695-2360 MHz, 65° horizontal beamwidth, internal RETs and low bands have dippers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

Electrical Specifications

Frequency Band, MHz

	698-787	824-894	1695-1880	1850-1990	1920-2200	2300-2360
Gain, dBi	14.5	15.8	18.0	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2-14	2-14	0-10	0-10	0-10	0-10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR Return Loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm					

Electrical Specifications, BASTA*

Frequency Band, MHz

	698-787	824-894	1695-1880	1850-1990	1920-2200	2300-2360
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
	2 ° 14.3	2 ° 15.0	0 ° 17.2	0 ° 17.6	0 ° 17.7	0 ° 17.9
Gain by Beam Tilt, average, dBi	8 ° 14.3	8 ° 14.9	5 ° 17.6	5 ° 18.2	5 ° 18.3	5 ° 18.7
	14 ° 14.3	14 ° 15.4	10 ° 17.6	10 ° 18.2	10 ° 18.3	10 ° 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24
CPR at Sector, dB	11	12	11	11	11	8

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper [Time to Raise the Bar on BSAs](#).

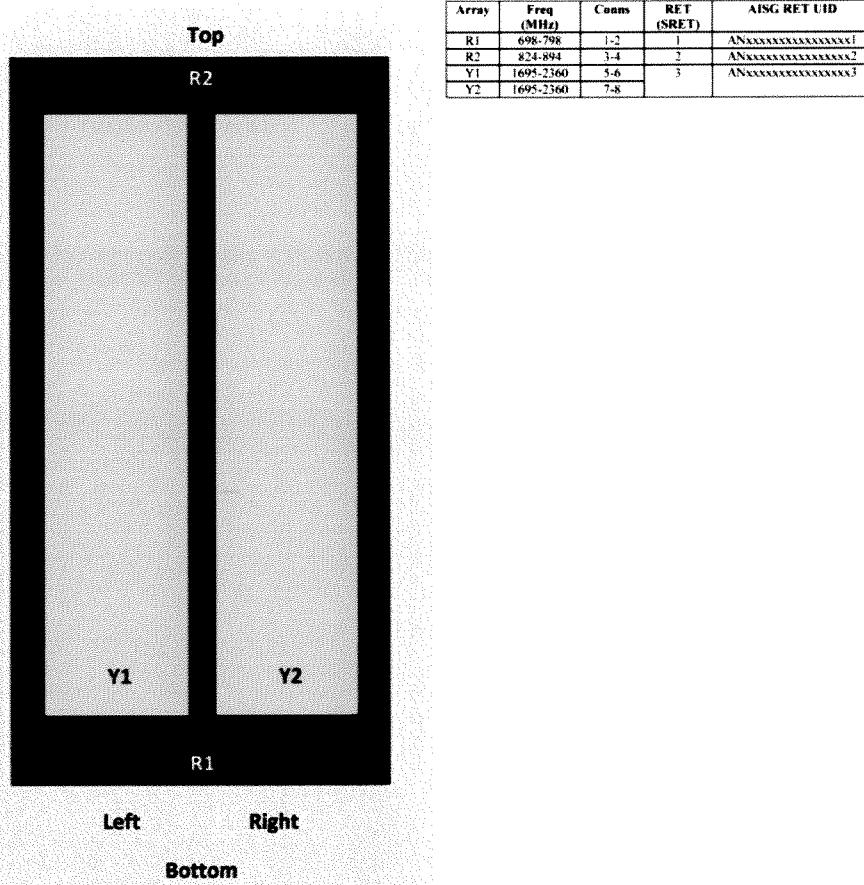
Array Layout

Product Specifications

COMMSCOPE®

JAHH-65B-R3B

JAHH-65B-R3B JAHH-65C-R3B



View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

General Specifications

Operating Frequency Band	1695 – 2360 MHz		698 – 787 MHz		824 – 894 MHz
Antenna Type	Sector				
Band	Multiband				
Performance Note	Outdoor usage				

Mechanical Specifications

RF Connector Quantity, total	8
RF Connector Quantity, low band	4
RF Connector Quantity, high band	4
RF Connector Interface	4.3-10 Female
Color	Light gray

Product Specifications

COMMSCOPE®

JAHH-65BR3B

Grounding Type	RF connector body grounded to reflector and mounting bracket
Radiator Material	Aluminum Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Location	Bottom
Wind Loading, frontal	746.0 N @ 150 km/h 167.7 lbf @ 150 km/h
Wind Loading, lateral	243.0 N @ 150 km/h 54.6 lbf @ 150 km/h
Wind Loading, rear	776.0 N @ 150 km/h 174.5 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

Length	1828.0 mm 72.0 in
Width	350.0 mm 13.8 in
Depth	208.0 mm 8.2 in
Net Weight, without mounting kit	28.7 kg 63.3 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 Port 5
Internal RET	High band (1) Low band (2)
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Single RET)
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male

Packed Dimensions

Length	1975.0 mm 77.8 in
Width	456.0 mm 18.0 in
Depth	357.0 mm 14.1 in
Shipping Weight	42.0 kg 92.6 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system



Product Specifications

COMMSCOPE®

JAHH-65B-R3B

Included Products

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

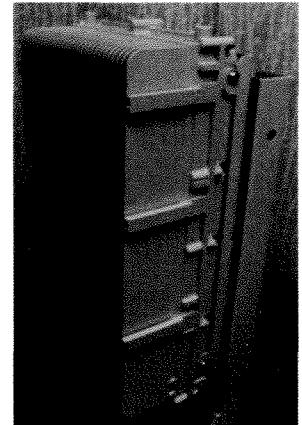
Performance Note Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.



The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

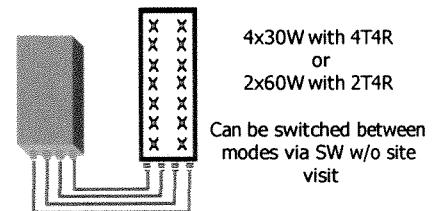
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield)
Volume in L	38 (with solar shield)
Weight in kg (lb) (w/o mounting HW)	26 (57.2) (with solar shield)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	550W typical @100% RF load (in 2Tx or 4Tx mode)
Environmental conditions	-40°C (-40°F) / +55°C (+131°F)
Wind load (@150km/h or 93mph)	Frontal:<200N / Lateral :<150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

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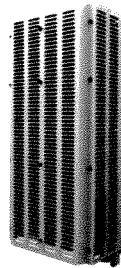
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ALCATEL-LUCENT B66A RRH4X45

The Alcatel-Lucent B66a Remote Radio Head 4x45 is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering. Its operational range covers beyond that of B4 (AWS) and B10 (AWS+).

Supporting 2Tx/4Tx MIMO and 2-way/4-way Rx diversity, the Alcatel-Lucent B66a RRH4x45 allows operators to have a compact radio solution to deploy LTE in the 2100 band (3GPP band 4, 10, and 66), providing them with the means to achieve high capacity, high quality, high reliability, large instantaneous bandwidth, and high coverage with minimum site requirements.

The Alcatel-Lucent B66a RRH4x45 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x90W or 4x45W RF output power. It also supports 4-way Rx diversity at the 70 MHz instantaneous bandwidth.



The Alcatel-Lucent B66a RRH4x45 is a compact (near zero-footprint) solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

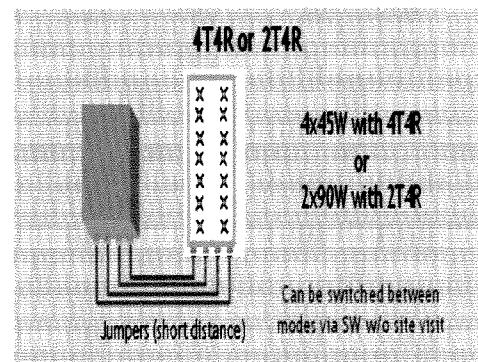
Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 2110 - 2180 MHz band/DL, 1710-1780MHz/UL (3GPP band 4, 10, and 66a)
- LTE 2Tx or 4Tx MIMO (SW selectable)
- Configuration: 2T2R/2T4R/4T4R
- Output power: Up to 2x90W or 4x45W (SW configurable)
- 70MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in AWS 1-3 band
- Selection of MIMO configuration (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through 4Tx MIMO
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



TECHNICAL SPECIFICATIONS

Features & Performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R selectable by SW)
Frequency band	AWS 1-3, B4/B66a DL: 2110-2180 MHz / UL: 1710-1780 MHz
Instantaneous bandwidth - #carriers	70 MHz – 4 LTE MIMO carriers (in 70 MHz occupied bandwidth)
LTE carrier bandwidth	5, 10, 15, 20 MHz
RF output power	2x90W or 4x45W (selectable by SW)
Noise figure – RX Diversity scheme	2 dB typical (<2.5 dB max) – 2 or 4 way Rx diversity
Receiver Sensitivity (FRC A1-3)	-104.5 dBm maximum
Sizes (HxWxD) in mm (In.)	655x299x182 (25.8x11.8x7.2) (with solar shield) 640x290x160 (25.2x11.4x6.3) (without solar shield)
Volume in Liters	35.5 (with solar shield) 29.7 (without solar shield)
Weight in kg (lb) (w/o mounting HW)	25.8kg (56.8lb) (with solar shield)
DC voltage range	Nominal: -48V, -40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	750W typical @100% RF load (In 2Tx or 4Tx mode); Add 58W for 2A*29V for AISG
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) UL50E Type 4 Enclosure
Wind load (@150km/h or 93mph)	250N (56lb) Frontal/150N (34lb) Lateral
Antenna ports	4 ports 4.3-10 female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate 7, 9.8 Gbps) SFP: SMDF (HW supports also SMSF and MMDF)
AISG interfaces	1 AISG 2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-487 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27 / FCC Part 15 / GR-3178-CORE

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Tab 10

Notice & Abutters List

GEHRING & ASSOCIATES, LLC
Wireless Planning & Zoning

Post Office Box 98
West Mystic, CT 06388

860-536-0675
wireless@gehringzone.com

March 20, 2019

Katherine Pugliese, Chair
Plainville Town Council
Town of Plainville
One Central Square
Plainville, CT 06062

RE: Notice of Filing Petition for Declaratory Ruling

Dear Chairwoman Pugliese:

Cellco Partnership d/b/a Verizon Wireless (“Verizon”) has filed a Petition for Declaratory Ruling with the Connecticut Siting Council for approval to install wireless telecommunications antennas on a building in the Connecticut Commons shopping center located at 276 New Britain Avenue in Plainville on Tax Assessor’s Parcel 22-E-07 (“Subject Building”).

The proposed installation will consist of three small ballasted masts twelve feet in height to be located on the rear roof of the Subject Building which will support panel antennas and transmission equipment. The radio equipment necessary to service the proposed antennas will be located out back, on-grade, at the rear of the Subject Building in the loading dock and dumpster storage area of the building, surrounded by a fence to secure access. A full copy of the Petition is included here for your reference.

Please contact me directly at 860-536-0675 if you have any questions.

Thank you.

Sincerely,

Gehring & Associates, LLC

By Carl W. Gehring
Carl W. Gehring, on behalf of Cellco Partnership d/b/a Verizon Wireless

Enclosure

cc: Town Planner

GEHRING & ASSOCIATES, LLC
Wireless Planning & Zoning

Post Office Box 98
West Mystic, CT 06388

860-536-0675
wireless@gehringzone.com

March 20, 2019

via Certified Mail

NOTICE OF FILING PETITION FOR DECLARATORY RULING

Please be advised that Cellco Partnership d/b/a Verizon Wireless (“Verizon”) has filed a Petition for Declaratory Ruling with the Connecticut Siting Council for approval to install wireless telecommunications antennas on a building in the Connecticut Commons shopping center located at 276 New Britain Avenue, Plainville, CT, Tax Assessor’s Parcel 22-E-07 (“Subject Building”).

The proposed installation will consist of three small ballasted masts twelve feet in height to be located on the rear roof of the Subject Building which will support panel antennas and transmission equipment. The radio equipment necessary to service the proposed antennas will be located out back, on-grade, at the rear of the Subject Building in the loading dock and dumpster storage area of the building, surrounded by a fence to secure access.

You are being provided Notice of this filing because you own property abutting Connecticut Commons.

You may view the full Petition at the offices of the Connecticut Siting Council at 10 Franklin Square in New Britain, or at the Plainville Town Hall, during normal business hours.

You may also contact me directly at 860-536-0675 if you would like more information.

Thank you.

Sincerely,

Gehring & Associates, LLC

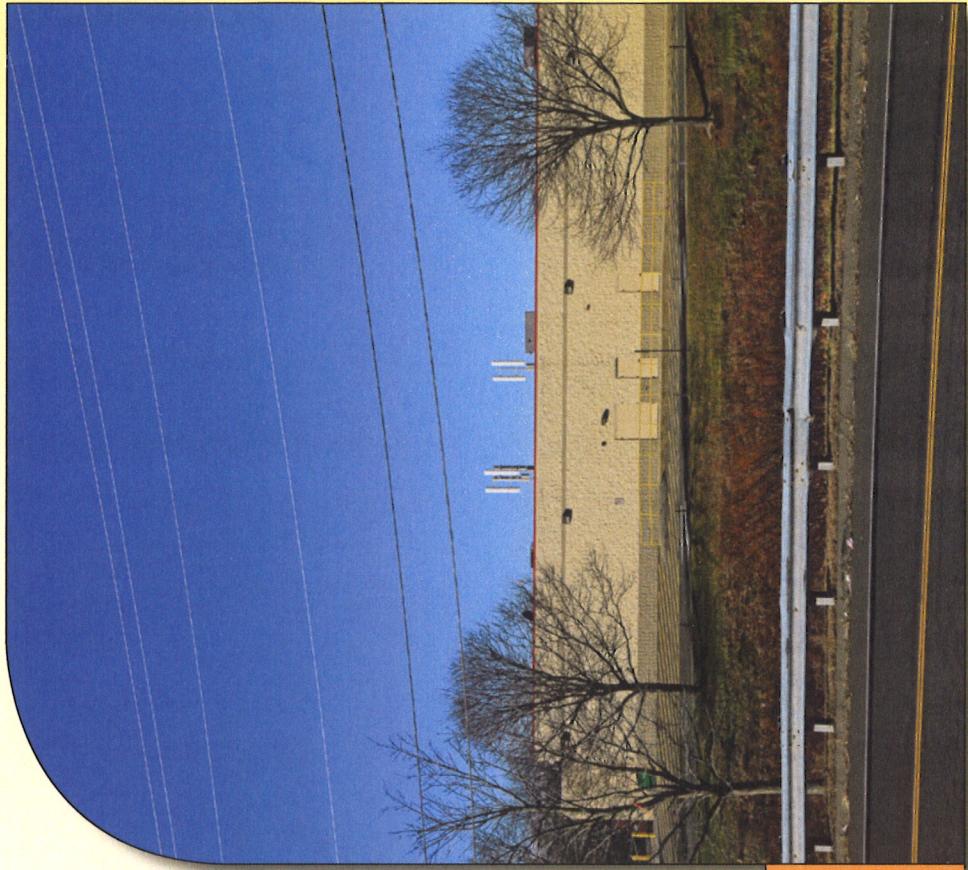
By *Carl W. Gehring*
Carl W. Gehring, on behalf of Cellco Partnership d/b/a Verizon Wireless

Parcel ID	Site Address	Owner Name	Mailing Address	Mailing City	State	Mailing Zip
31-A-01	84 CROOKED ST	84 SLB1 LLC	1019 ROUTE 519	EIGHTY-FOUR	PA	15330
31-B-01	O CROOKED ST	RISHABH LLC	440 BEDFORD ST	LEXINGTON	MA	02420
31-B-01-1	380 NEW BRITAIN AVE	JS & MS LLC	380 NEW BRITAIN AVE	PLAINVILLE	CT	06062
21-A-01	297 NEW BRITAIN AVE	SEP ENTERPRISES LLC	1375 BROADWAY 16TH FLR	NEW YORK	NY	10018
21-A-02	305 NEW BRITAIN AVE	SEP ENTERPRISES LLC	1375 BROADWAY 16TH FLR	NEW YORK	NY	10018
21-A-03	349 NEW BRITAIN AVE	311 NB PLAINVILLE LLC	321 MAIN ST	FARMINGTON	CT	06032
21-A-04	361 NEW BRITAIN AVE	J B W ENTERPRISES LLC	321 MAIN ST	FARMINGTON	CT	06032
21-A-05	O NEW BRITAIN AVE	GASOLINE ALLEY HOLDINGS LLC	1 HARTFORD SQ	NEW BRITAIN	CT	06052
21-A-05A	367 NEW BRITAIN AVE	J B W ENTERPRISES LLC	321 MAIN ST	FARMINGTON	CT	06032
22-B-09	225 NEW BRITAIN AVE	BEAUDOIN FAMILY LLC (THE)	P O BOX 6000	BRISTOL	CT	06010
22-B-10	181 NEW BRITAIN AVE	PMG NEW JERSEY II LLC	2359 RESEARCH CT	WOODBRIDGE	VA	22192
22-B-11	175 NEW BRITAIN AVE	MORTGAGE ASSISTANCE COMPANY LLC	175 NEW BRITAIN AVE	PLAINVILLE	CT	06062
22-B-13	167 NEW BRITAIN AVE	GATEWAY SQUARE LLC	P O BOX 113306	STAMFORD	CT	06991
22-D-29	245 NEW BRITAIN AVE	245 NEW BRITAIN AVENUE LLC	245 NEW BRITAIN AVE	PLAINVILLE	CT	06062
22-D-30	275 NEW BRITAIN AVE	HAYES-KAUFMAN PLAINVILLE LLC	1471 PLEASANT VALLEY RD	MANCHESTER	CT	06040
22-E-03	O COLONIAL CT	COLONIAL OF PLAINVILLE LLC	270 SYLVAN AVE	ENGLEWOOD	NJ	07632
22-E-05	1 COLONIAL CT	FRANCIS CONSTANCE	1 COLONIAL CT	PLAINVILLE	CT	06062
22-E-06	3 COLONIAL CT	TAYLOR JOHNE & TERESA C L/U	3 COLONIAL CT	PLAINVILLE	CT	06062
22-E-07	250 NEW BRITAIN AVE	BRE DDR CONNECTICUT COMMONS LLC	3300 ENTERPRISE PARKWAY	BEACHWOOD	OH	44122
22-E-07 KOHLS	200 NEW BRITAIN AVE	BRE DDR CONNECTICUT COMMONS LLC	3300 ENTERPRISE PARKWAY	BEACHWOOD	OH	44122
22-E-04	156 NEW BRITAIN AVE	PASCUAL FRANCIS T	156 NEW BRITAIN AVE	PLAINVILLE	CT	06062
23-R-05	19 SPARKS ST	PAVANO PAUL G & MASTRIANNI MICHAEL TRUSTEES OF THE THOMAS PAVANO SR TRUST	131 WHITING ST	PLAINVILLE	CT	06062
30-A-08	O WOODFORD AVE	VALLEY WATER SYSTEMS INC	37 NORTHWEST DR	PLAINVILLE	CT	06062
30-A-09A	O WOODFORD AVE	VALLEY WATER SYSTEMS INC	37 NORTHWEST DR	PLAINVILLE	CT	06062
22-E-07 KOHLS	200 NEW BRITAIN AVE	BRE DDR CONNECTICUT COMMONS LLC	3300 ENTERPRISE PARKWAY	BEACHWOOD	OH	44122

Tab 11

Photosimulations

Photo-Simulations



PLAINVILLE 4 CT
276 NEW BRITAIN AVENUE
PLAINVILLE, CT 06062

Prepared in January 2019 by:
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06419

Prepared for Verizon Wireless

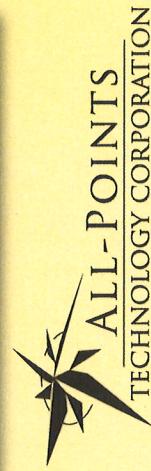


PHOTO LOG

Legend

- Site ● Visible
- Seasonal ● Seasonal
- Not Visible ● Not Visible



1 inch = 1,000 feet
1,000
500
0

1,000 feet
1,000
500
0

Sources: Esri, HERE, Delorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCan, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

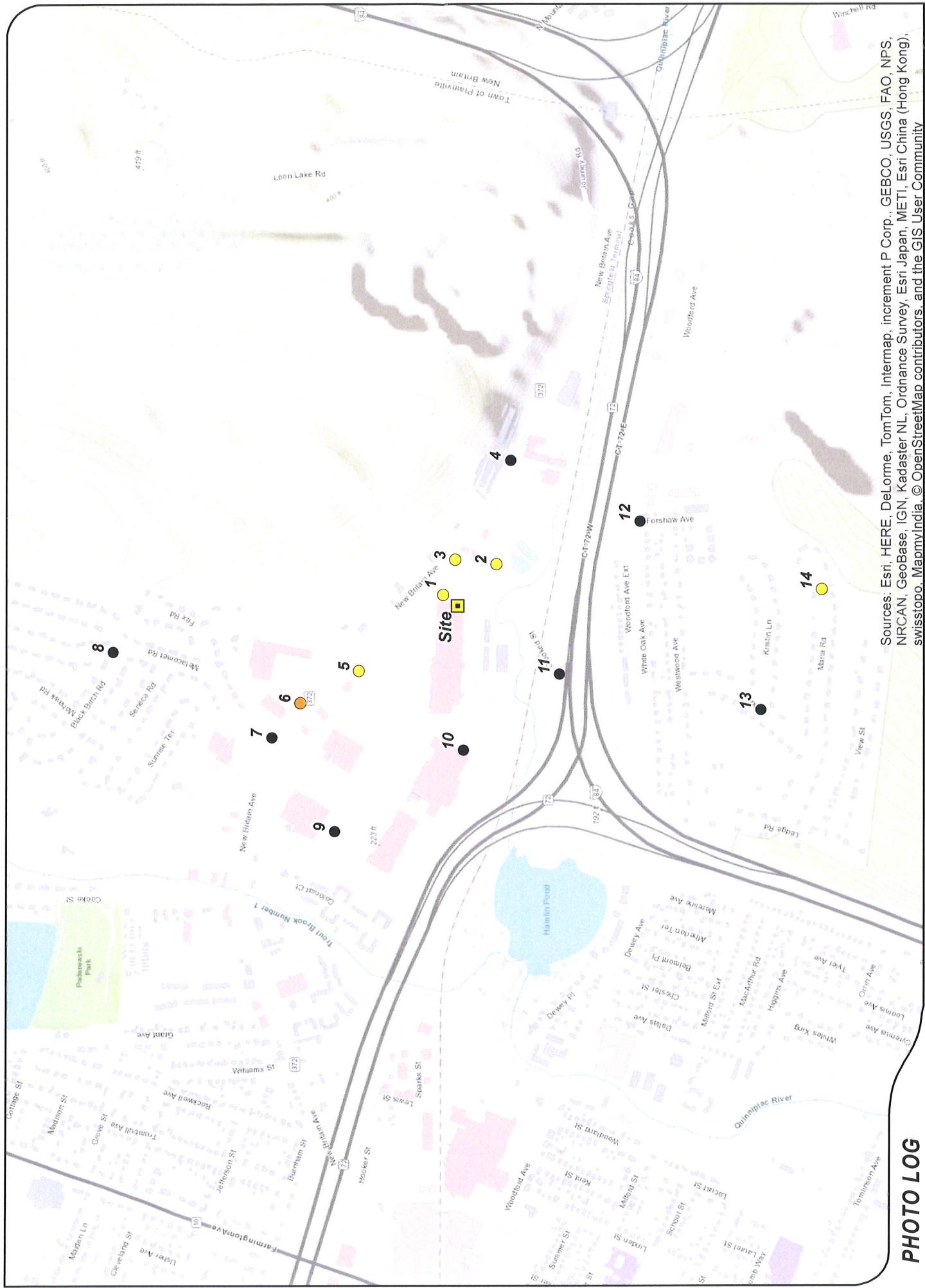
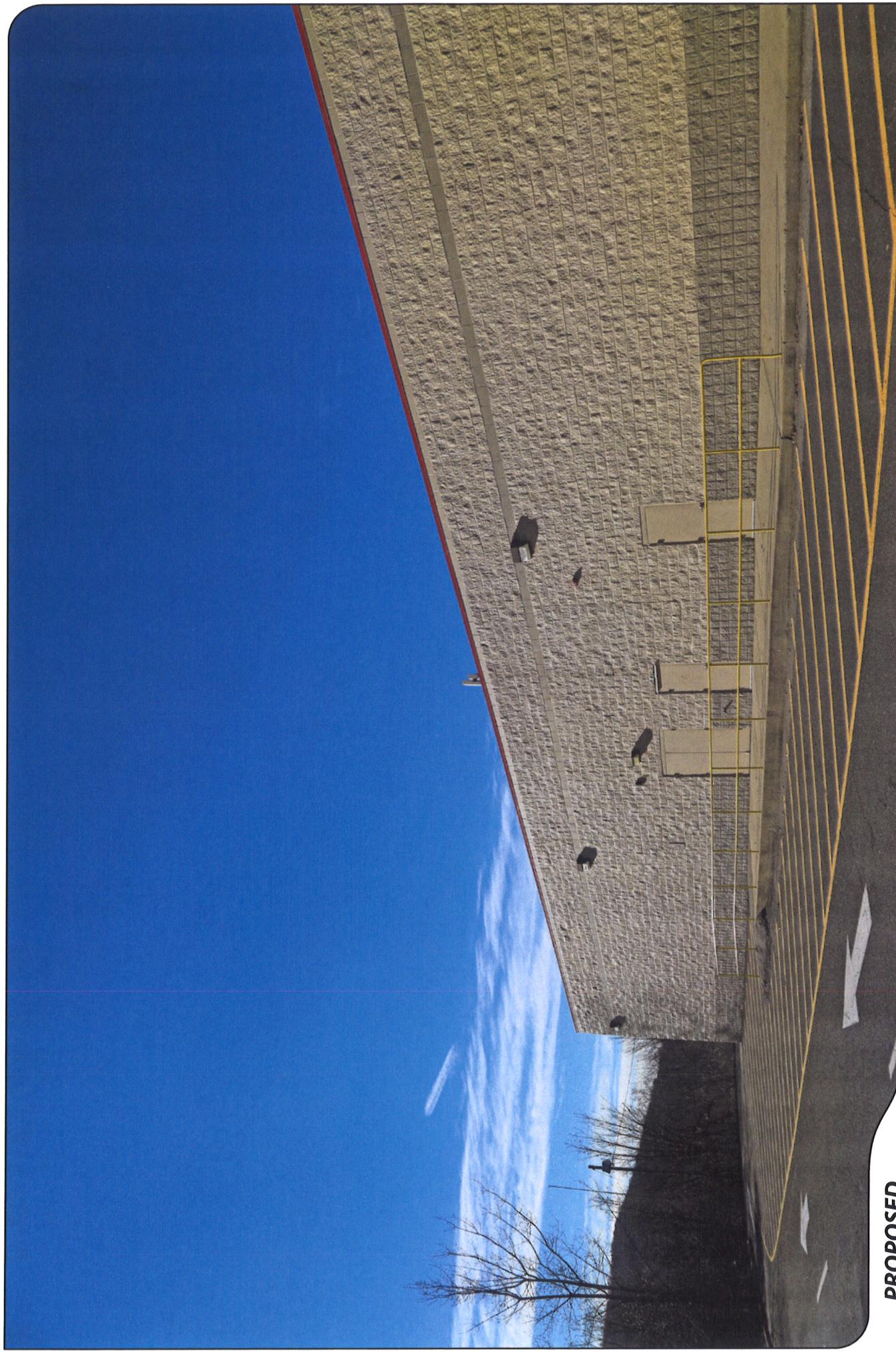




PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	HOST PROPERTY (24mm Focal Length)	SOUTHWEST	+/- 150 FEET	ALL-POINTS



PROPOSED

PHOTO

LOCATION

HOST PROPERTY (24mm Focal Length)

ORIENTATION
SOUTHWEST
+/- 150 FEET

DISTANCE TO SITE
VISIBILITY



verizon



EXISTING	PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
	2	FAIRFIELD INN	NORTHWEST	+/- 445 FEET	ALL-POINTS

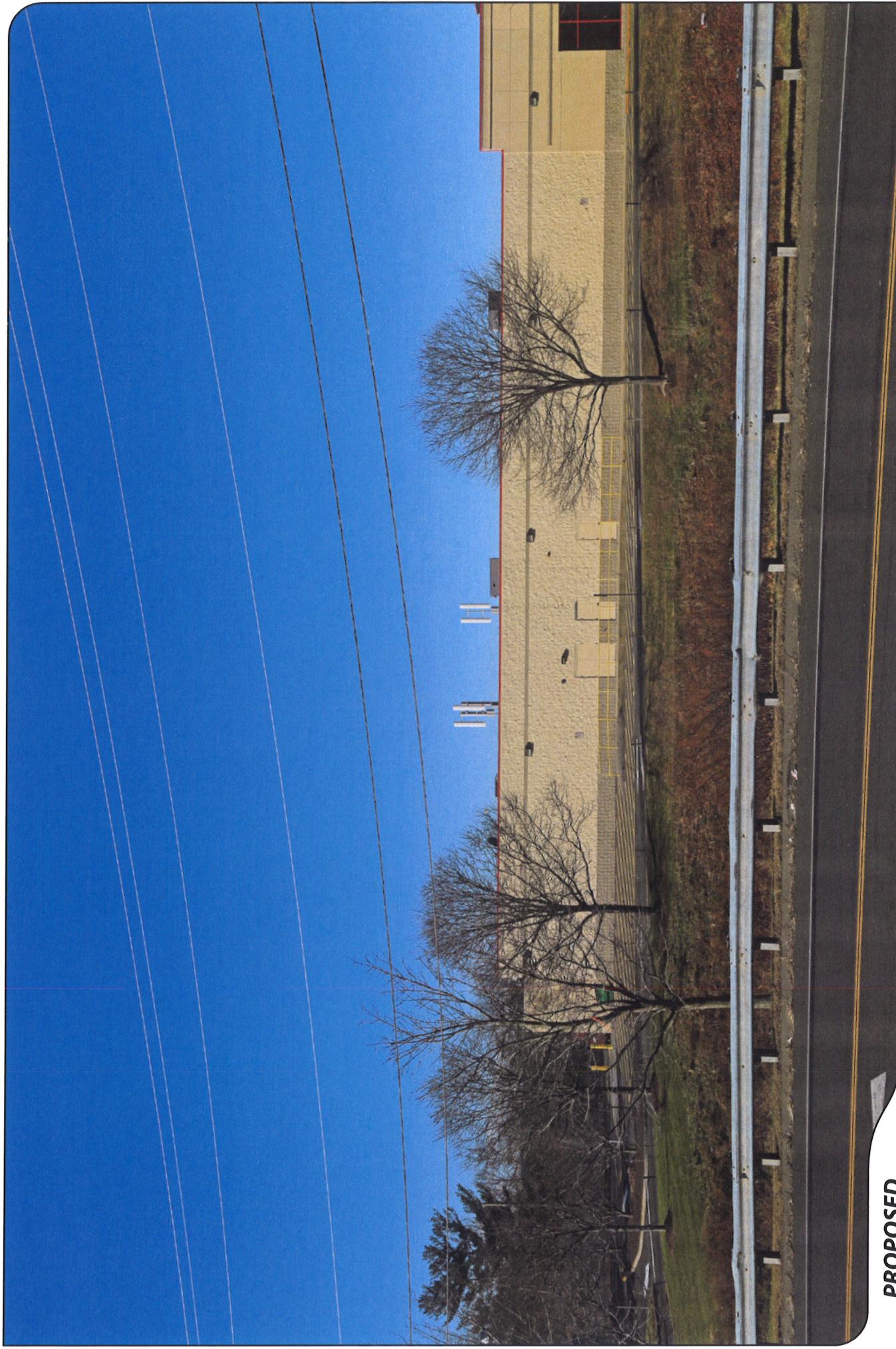


PROPOSED	PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
FAIRFIELD INN	2		NORTHWEST	+/- 445 FEET	





EXISTING	PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
	3	CROOKED STREET AT NEW BRITAIN AVENUE	WEST	+/- 380 FEET	ALL-POINTS



PROPOSED

PHOTO

3

LOCATION

CROOKED STREET AT NEW BRITAIN AVENUE

ORIENTATION

WEST

VISIBILITY

+/- 380 FEET



varizon



PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY	NOT VISIBLE
4	NEW BRITAIN AVENUE	NORTHWEST	+/- 0.24 MILE	ALL-POINTS	varizon





PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	HOST PROPERTY	SOUTHEAST	+/-0.18 MILE	ALL-POINTS



PROPOSED

PHOTO

5

LOCATION

HOST PROPERTY

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 0.18 MILE

VISIBILITY

ALL-POINTS



varizon



EXISTING	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY	SEASONAL
	NEW BRITAIN AVENUE	SOUTHEAST	+/- 0.28 MILE		



EXISTING

PHOTO

LOCATION

METACOMET ROAD AT NEW BRITAIN AVENUE

ORIENTATION	DISTANCE TO SITE	VISIBILITY
SOUTHEAST	+/- 0.35 MILE	NOT VISIBLE



varizon

ORIENTATION	DISTANCE TO SITE	VISIBILITY
SOUTHEAST	+/- 0.35 MILE	NOT VISIBLE

ALL-POINTS



EXISTING

PHOTO

8

LOCATION

METACOMET ROAD AT BLACK BIRCH ROAD

ORIENTATION	DISTANCE TO SITE	VISIBILITY
SOUTH	+/- 0.54 MILE	NOT VISIBLE



varizon



EXISTING	PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY	NOT VISIBLE
	9	HOST PROPERTY	SOUTHEAST	+/- 0.40 MILE		



EXISTING

PHOTO

10

LOCATION

HOST PROPERTY

ORIENTATION

EAST

VISIBILITY

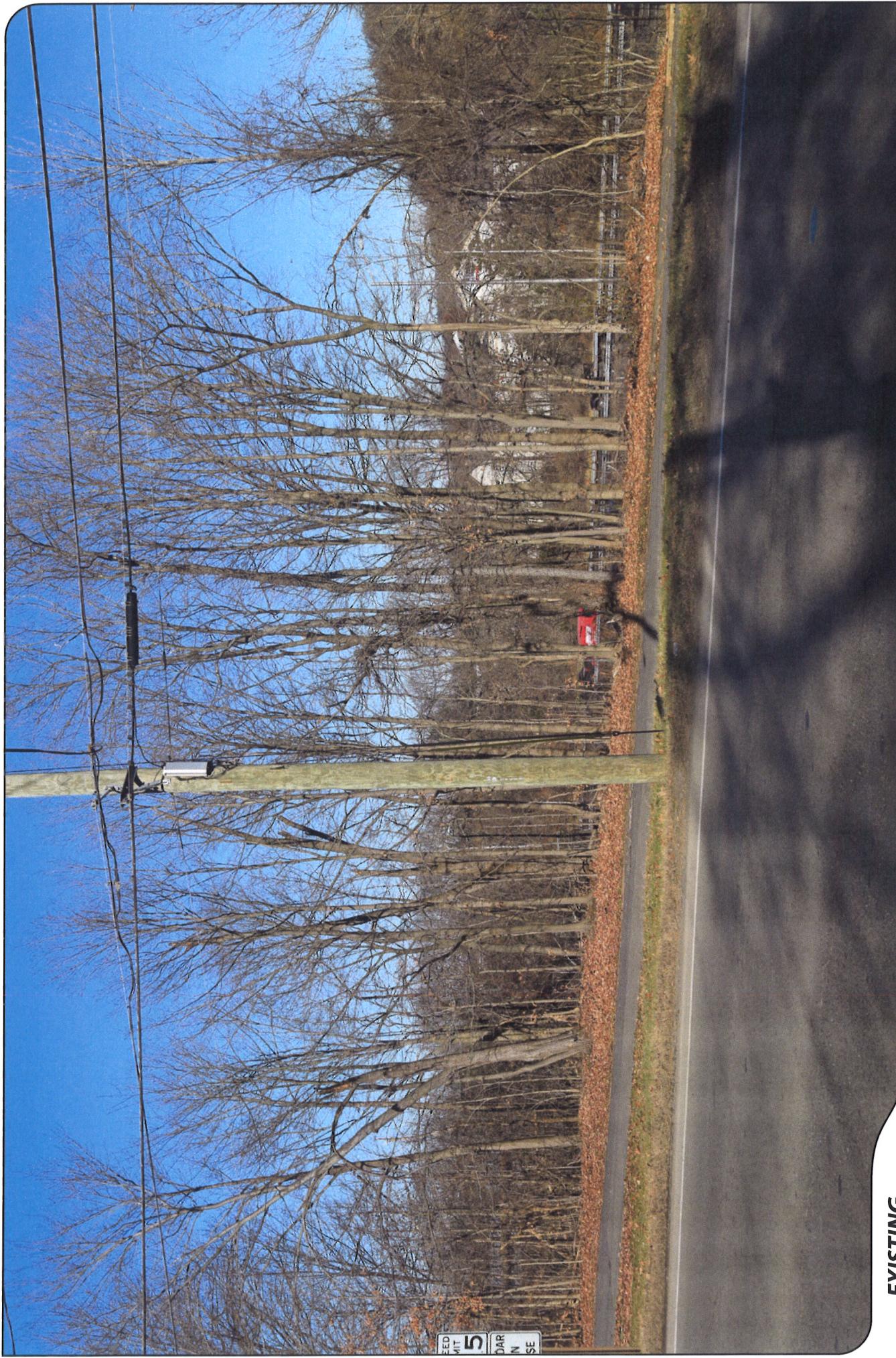
NOT VISIBLE

DISTANCE TO SITE

+/- 0.23 MILE



EXISTING	PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY	NOT VISIBLE
	11	CROOKED STREET	NORTHEAST	+/- 0.19 MILE		



EXISTING

PHOTO

12

LOCATION

WHITE OAK AVENUE

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 0.30 MILE

VISIBILITY

NOT VISIBLE

EEG MIT 5 DARK N SE



varizon



EXISTING

PHOTO

LINDA DRIVE
NORTHEAST

ALL-POINTS
+/- 0.49 MILE

NOT VISIBLE
VISIBILITY



varizon

ALL-POINTS
+/- 0.49 MILE

NOT VISIBLE
VISIBILITY

ALL-POINTS
+/- 0.49 MILE

NOT VISIBLE
VISIBILITY



EXISTING

PHOTO

LOCATION

LOCATION _____

NORTHLAND ORIENTATION

DISTANCE TO SITE

VISIBILITY



verizon 



PROPOSED

PHOTO

LOCATION

14

MARIA ROAD

ORIENTATION

NORTH

DISTANCE TO SITE

+/- 0.55 MILE

VISIBILITY



verizon

VISIBLE

EXISTING

LOCATION

PROPOSED EQUIPMENT COMPOUND AREA

ORIENTATION	DISTANCE TO SITE
NORTHWEST	+/- 54 FEET

PROPOSED

PROPOSED EQUIPMENT COMPOUND AREA

LOCATION

ORIENTATION

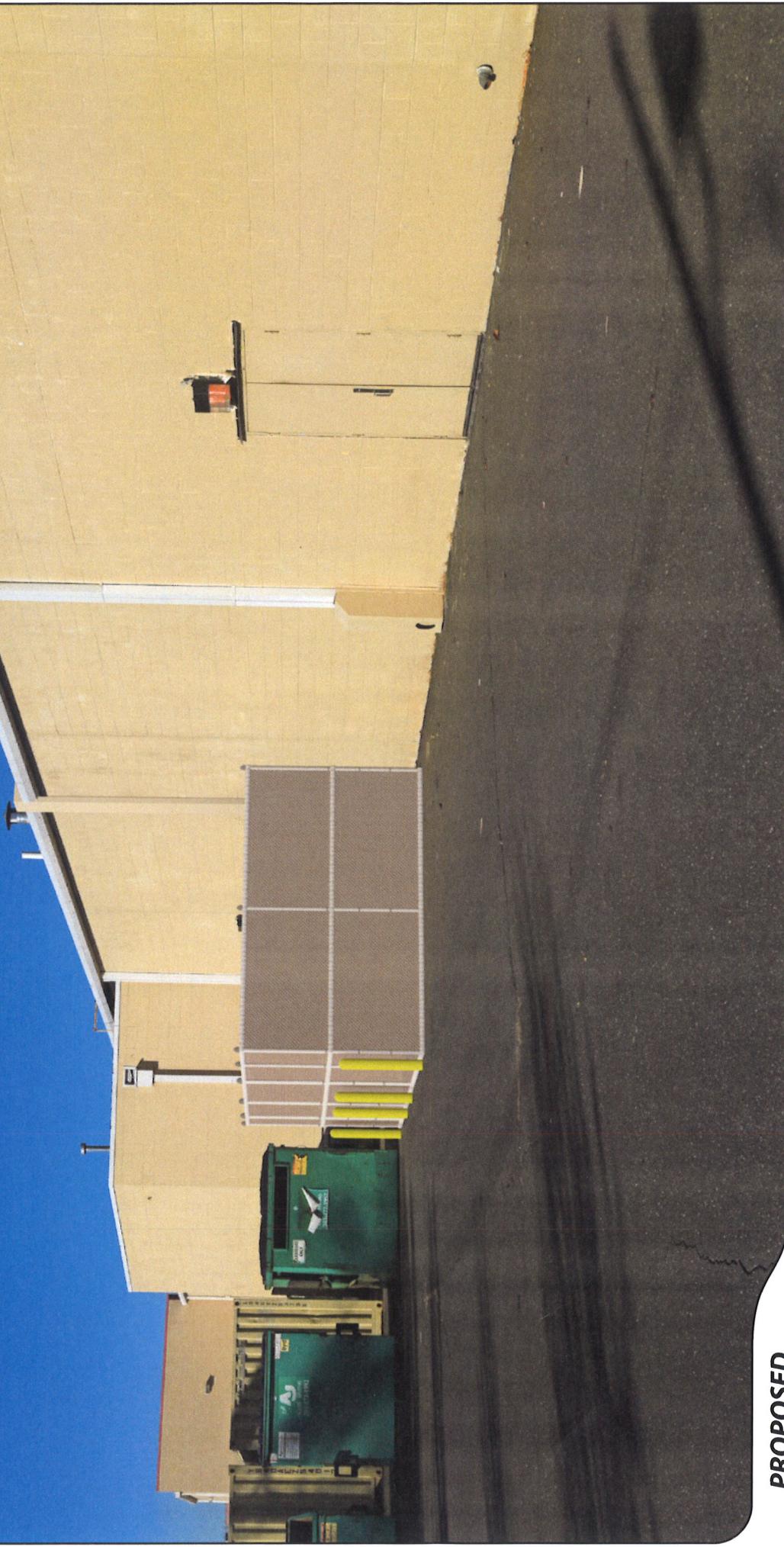
DISTANCE TO SITE

NORTHWEST

+/- 54 FEET



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Tab 12

Site Plan & Elevation
Drawings

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72 HOURS PRIOR TO DIGGING,
CONTRACTOR TO NOTIFY ALL
UTILITY COMPANIES TO LOCATE
ALL UNDERGROUND UTILITIES.

Know what's below.
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Kelly Shatz

PLAINVILLE 4

276 NEW BRITAIN AVENUE
PLAINVILLE, CT. 06062
HARTFORD COUNTY

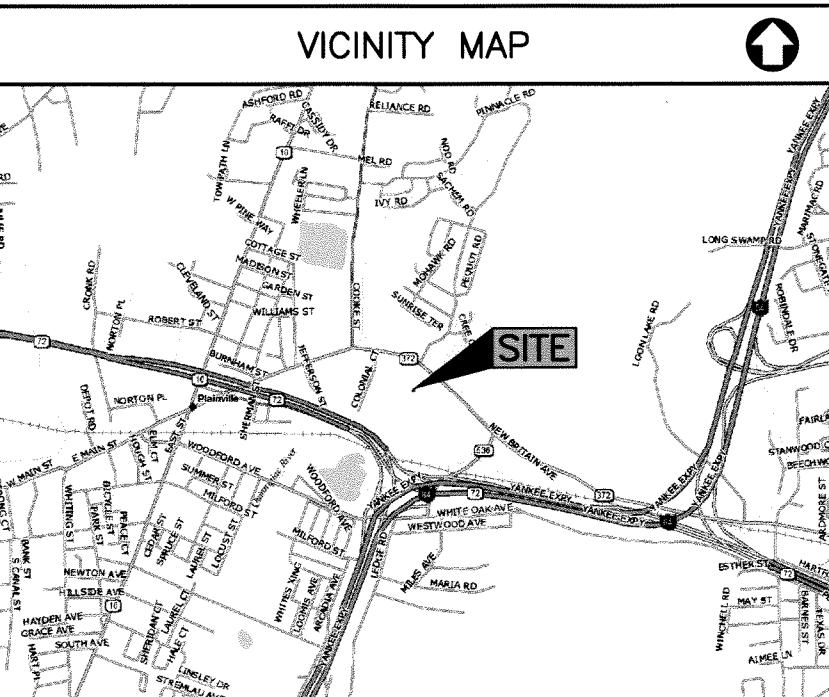
CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LOCAL CODES:

1. 2012 INTERNATIONAL CODE COUNCIL (ICC) INTERNATIONAL BUILDING CODE
2. 2014 NATIONAL FIRE PROTECTION ASSOCIATION 70 - NATIONAL ELECTRICAL CODE

PROJECT INFORMATION

SITE NAME:	PLAINVILLE 4
SITE ADDRESS:	276 NEW BRITAIN AVENUE PLAINVILLE, CT. 06062
COUNTY:	HARTFORD COUNTY
COORDINATES:	LATITUDE: 41° 40' 22.38" N (NAD 83) LONGITUDE: 72° 50' 17.47" W (NAD 83)
CENTER LINE OF ANTENNA:	29'-0"± A.G.L. 248'-0"± A.M.S.L.
GROUND ELEVATION:	219'± A.M.S.L.
OVERALL STRUCTURE HEIGHT:	22'-6"± A.G.L. 241'-6"± A.M.S.L.
PROPERTY OWNER:	BRE DDR CONNECTICUT COMMONS LLC 3300 ENTERPRISE PARKWAY BEACHWOOD, OH 44122
APPLICANT:	VERIZON WIRELESS 20 ALEXANDER DRIVE, 2ND FLOOR WALLINGFORD, CT 06492
LOCAL POWER:	EVERSOURCE ENERGY
LOCAL TELCO:	VERIZON



SCOPE OF WORK

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR VERIZON WIRELESS CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT.

1. INSTALL (6) PANEL ANTENNAS (2 PER SECTOR).
2. INSTALL (3) NON-PENETRATING BALLAST MOUNT (1 PER SECTOR).
3. INSTALL (6) RRUS AT ANTENNAS (2 PER SECTOR).
4. INSTALL (1) RAYCAP AT ANTENNAS.
5. INSTALL (1) RAYCAP AT WITHIN PROPOSED CABINET.
6. INSTALL (3) EQUIPMENT PLATFORM AT GRADE (1 PER SECTOR).
7. INSTALL (2) EQUIPMENT CABINETS.
8. INSTALL (1) HOFFMAN BOX ON PROPOSE H-FRAME.
9. INSTALL 100A 120/240VAC PANEL ON PROPOSED H-FRAME.
10. INSTALL (1) DISCONNECT BOX ON PROPOSED H-FRAME.
11. INSTALL CABLE TRAY.
12. INSTALL (1) HYBRID CABLE.

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
Z-1	ABUTTERS MAP & LIST
Z-2	ROOFTOP PLAN
Z-3	EQUIPMENT AND ANTENNA PLANS
Z-4	ELEVATION
Z-5	DETAILS
Z-6	DETAILS
Z-7	DETAILS
Z-8	DETAILS

PROJECT TEAM

APPLICANT:	VERIZON WIRELESS 20 ALEXANDER DRIVE, 2ND FLOOR WALLINGFORD, CT 06492
ARCHITECT & ENGINEER:	EBI CONSULTING 21 B STREET BURLINGTON, MA 01803 (781) 273-2500
LEGAL COUNSEL:	ELLEN FREYMAN SHATZ SCHWARTZ AND FENTIN (413) 737-1131

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C	01/31/19	REVISED PER COMMENTS	SM

EBI JOB NO:
8118000524

SITE INFO:

PLAINVILLE 4 CT
276 NEW BRITAIN AVENUE
PLAINVILLE, CT. 06062

SHEET TITLE:

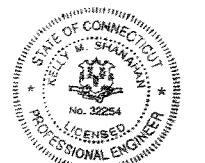
TITLE SHEET

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KB	
DATE:	
11/21/18	T-1

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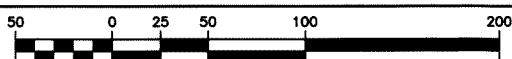
PLAINVILLE 4 CT
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SHEET TITLE:

ROOFTOP PLAN

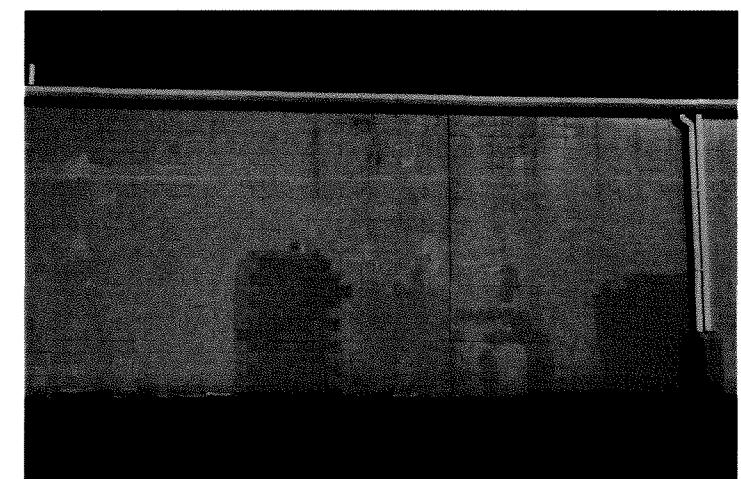


APPROX. NORTH

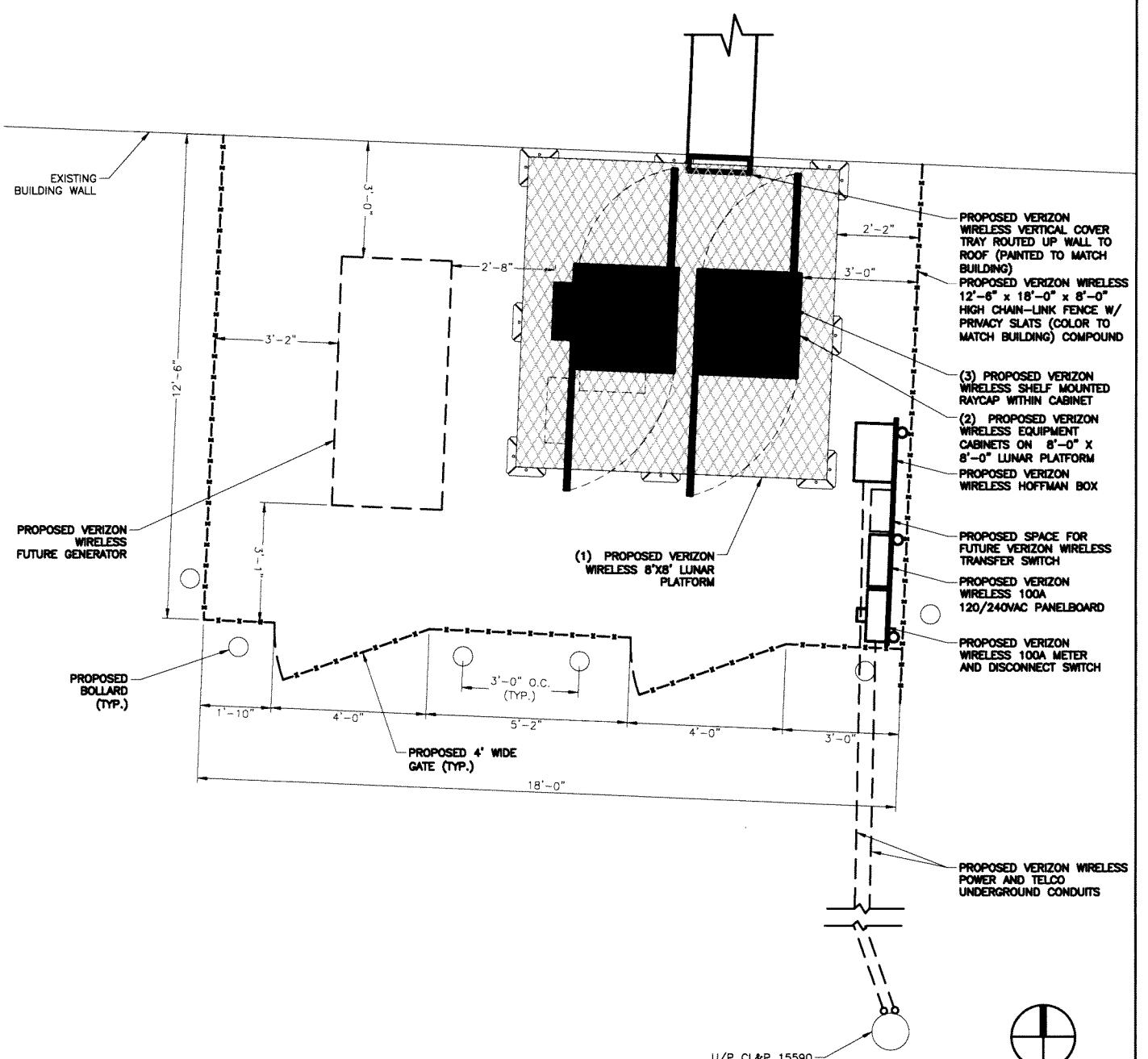


11x17 SCALE: 1" = 100"
22x34 SCALE: 1" = 50"

DRAWN BY: SH
CHECKED BY: KB
DATE: 11/21/18
SHEET NO:
Z-2



THIS PHOTO IS INSERTED TO
SHOW EXISTING CONDITIONS –
SEE ELEVATION AND DETAILS FOR
EQUIPMENT LAYOUT AND INFO

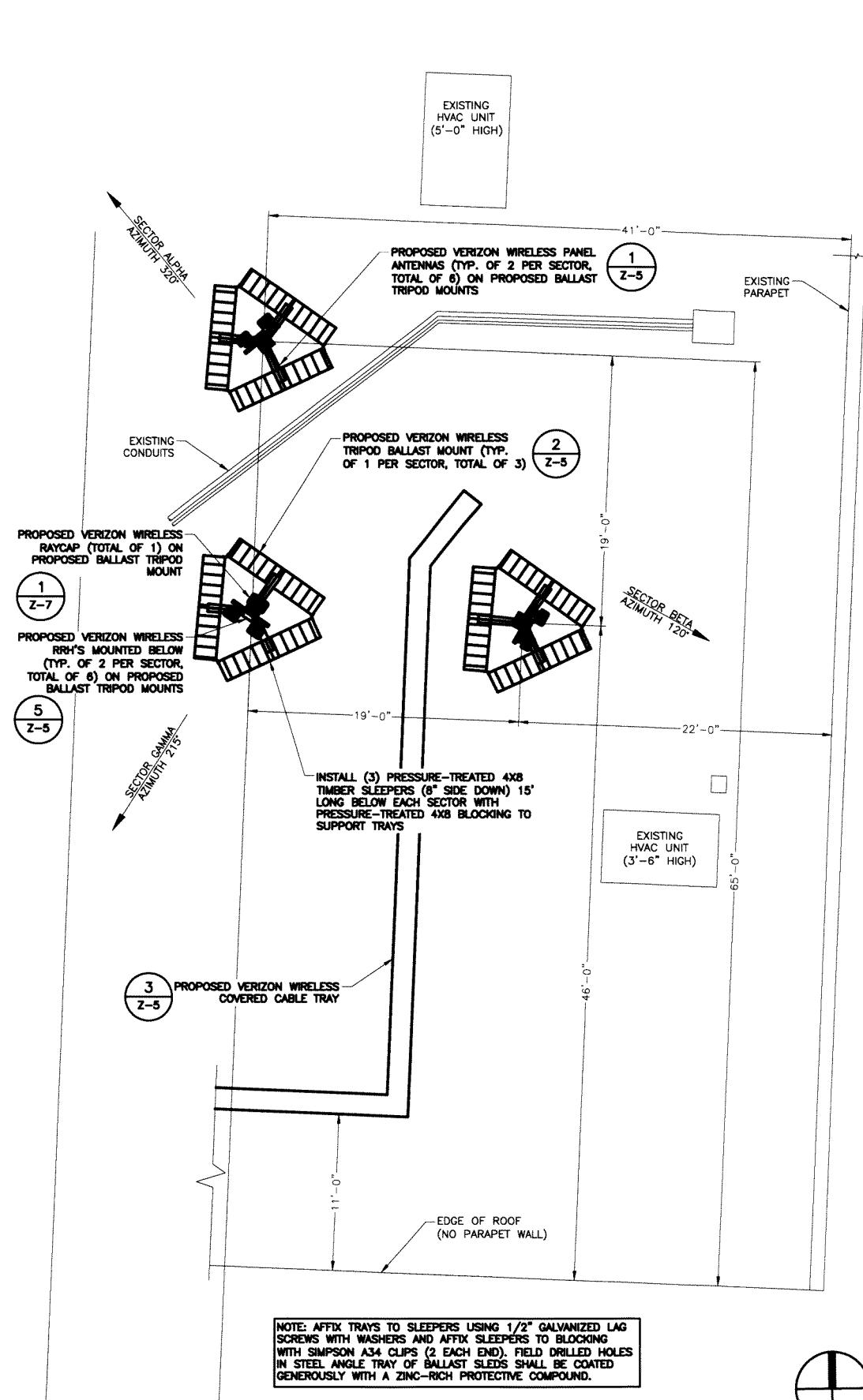


1 EQUIPMENT PLAN

0 2 4 8 11x17 SCALE: 1/4" = 1'-0"
22x34 SCALE: 1/2" = 1'-0"

2 ANTENNA PLAN

0 5'-4" 10'-8" 21'-4" 11x17 SCALE: 3/32" = 1'-0"
22x34 SCALE: 3/16" = 1'-0"



APPROX. NORTH

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SHEET TITLE:

EQUIPMENT AND
ANTENNA PLANS

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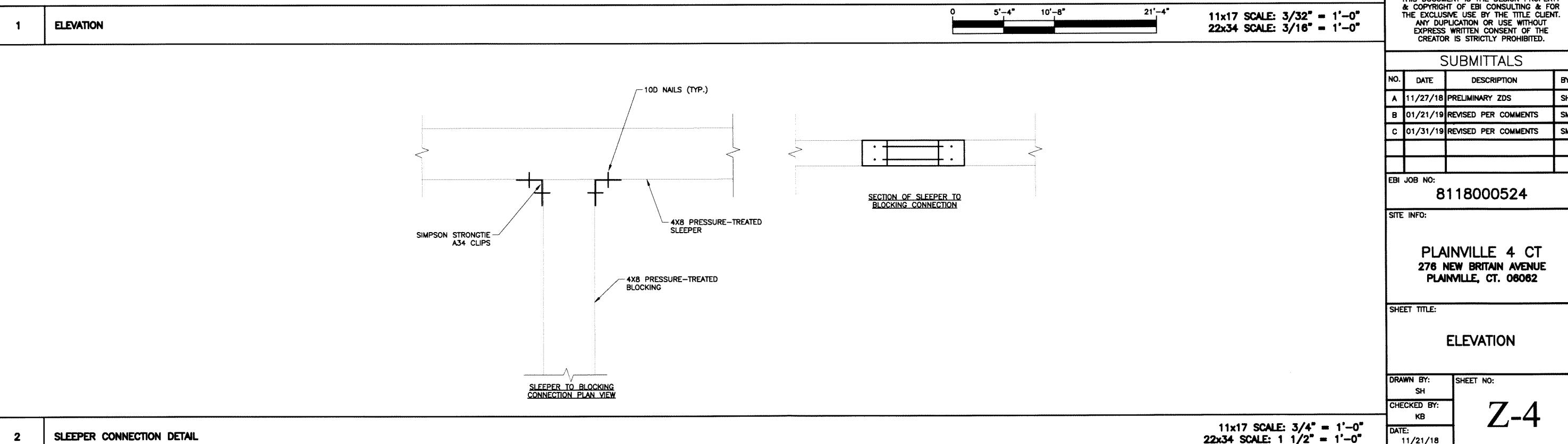
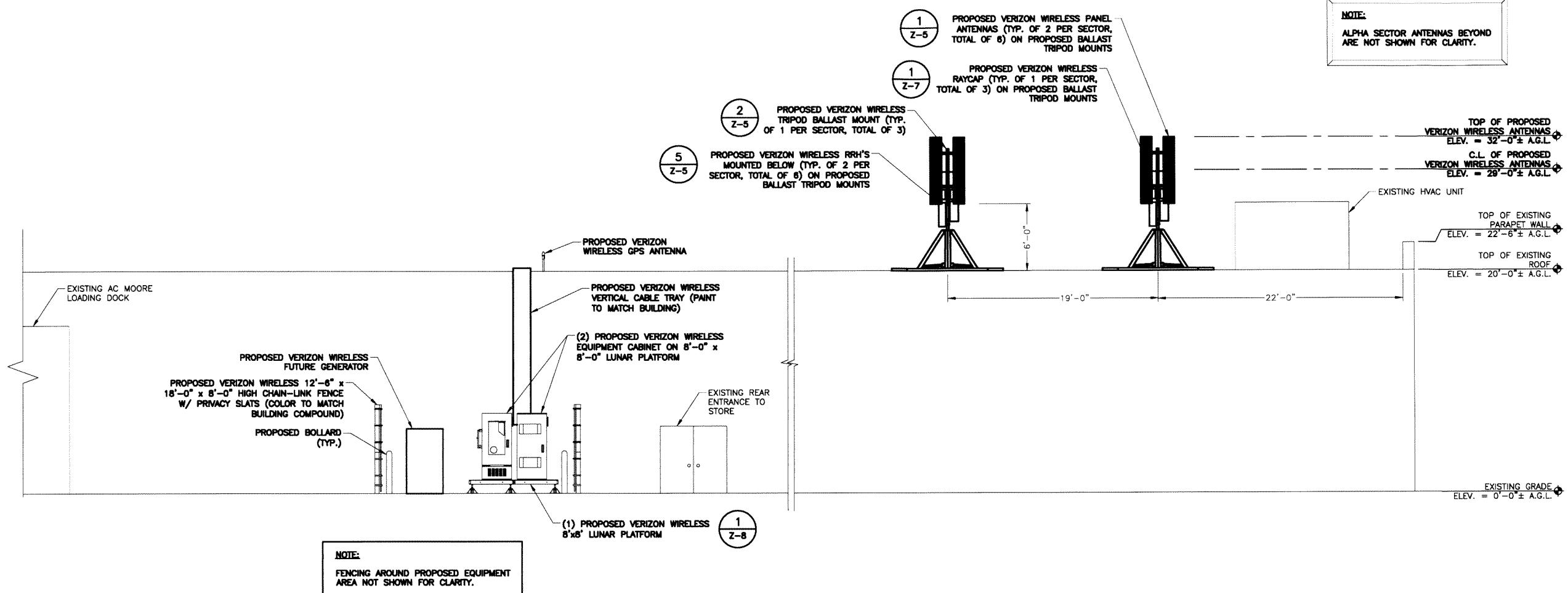
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STATE OF CONNECTICUT
* * * * * SHANNON * * * * *
No. 32254
LICENSED PROFESSIONAL ENGINEER

Kelly Shanks

1 PANEL ANTENNA DETAILS N.T.S. **2 NON-PENETRATING TRIPOD MOUNT** N.T.S. **3 CABLE TRAY DETAIL** N.T.S. **4 DISCONNECT SWITCH SPECIFICATION** N.T.S.

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SHEET TITLE:
DETAILS

DRAWN BY: SH **SHEET NO:**
CHECKED BY: KB **DATE:** 11/21/18

Z-5

5 RRH DETAIL & SPECIFICATION 11x17 SCALE: N.T.S. **6 VERTICAL CABLE TRAY SPECIFICATIONS & MOUNTING DETAIL** 11x17 SCALE: N.T.S.

MANUFACTURER **MODEL NUMBER** **DIMENSIONS (H x W x D)** **WEIGHT**

COMMSCOPE	JAHH-65B-R3B	72.0" x 13.8" x 8.2"	63.3 LBS.
-----------	--------------	----------------------	-----------

B66A_RRH4x45-AWS
DIMENSIONS: 25.8'Hx11.8'Wx7.2"D
WEIGHT: 56.8 LBS. (WITH SOLAR SHIELD)

B25_RRH4x30
DIMENSIONS: 21.6'Hx12.0'Wx9.0"D
WEIGHT: 57.2 LBS. (WITH SOLAR SHIELD)

PROPOSED AC/DC CONVERTER MOUNTED BEHIND RRH
PIPE MAST
5/8"x12" BOLT INCLUDED WITH MOUNTING BRACKET
POLE/WALL BRACKET WIRELESS PART NO.: 4x45AWSBKRT

PROPOSED AC/DC CONVERTER MOUNTED BEHIND RRH
PIPE MAST
5/8"x12" BOLT INCLUDED WITH MOUNTING BRACKET
POLE/WALL BRACKET WIRELESS PART NO.: 4x45AWSBKRT

PROPOSED 4 1/2" O.D. SCH. 40 PIPE MAST
MECHANICAL DOWNTILT BRACKET
NEW PANEL ANTENNA
EXISTING/PROPOSED 2-7/8" PIPE MAST (SEE PLANS FOR CLARITY)

PROPOSED NON-PENETRATING TRIPOD MOUNT, BY SITE PRO 1 PART NO. TRPD-HD
SEE DETAIL 3/Z-6 FOR ANTENNA MOUNT DETAILS

PROPOSED PRE-GALVANIZED STEEL MEDIUM DUTY CABLE TRAY WITH 9" RUNG SPACING. FASTEN TO SLEEPERS WITH HOLD DOWN CLAMPS & 3/8"x1-1/2" GALVANIZED LAG SCREWS
CABLE CONDUITS ATTACHED TO CABLE TRAY WITH CABLE TIES 6" O.C.
ROOF PAD ADHERE TO SLEEPERS, NOT TO ROOF MEMBRANE
4"X4"X36" LONG PVC SLEEPERS 4'-0" O.C. & AT ALL CABLE TRAY JOINTS (PVC SLEEPERS TO BE FILLED WITH CONCRETE)
SPLICE PLATE
#6 GREEN STRANDED COPPER WITH 2-HOLE LUG BONDING JUMPER

SEE TABLE

NUMBER OF COAXIAL CABLES **WIDTH OF CABLE TRAY** **NOMINAL DEPTH OF CABLE TRAY** **VALMONT PART NO.**

18	24"	4"	LT-24-4D
12	24"	4"	LT-24-4D
8	18"	4"	LT-18-4D
4	12"	4"	LT-12-4D

11x17 SCALE: N.T.S. **11x17 SCALE: N.T.S.**

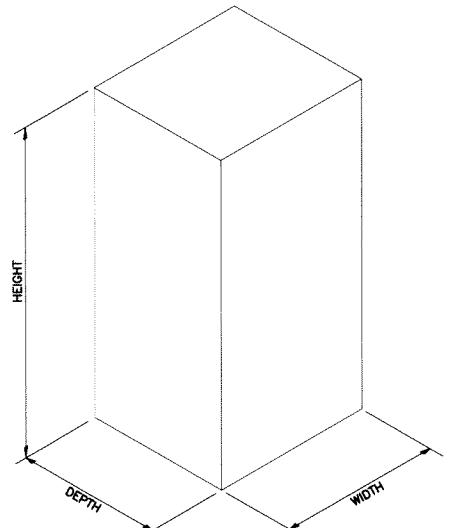
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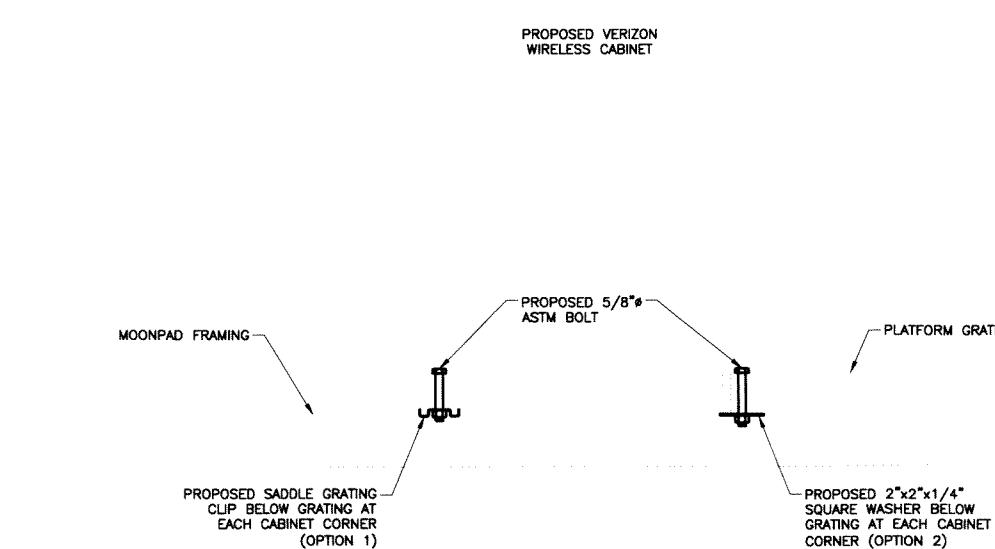
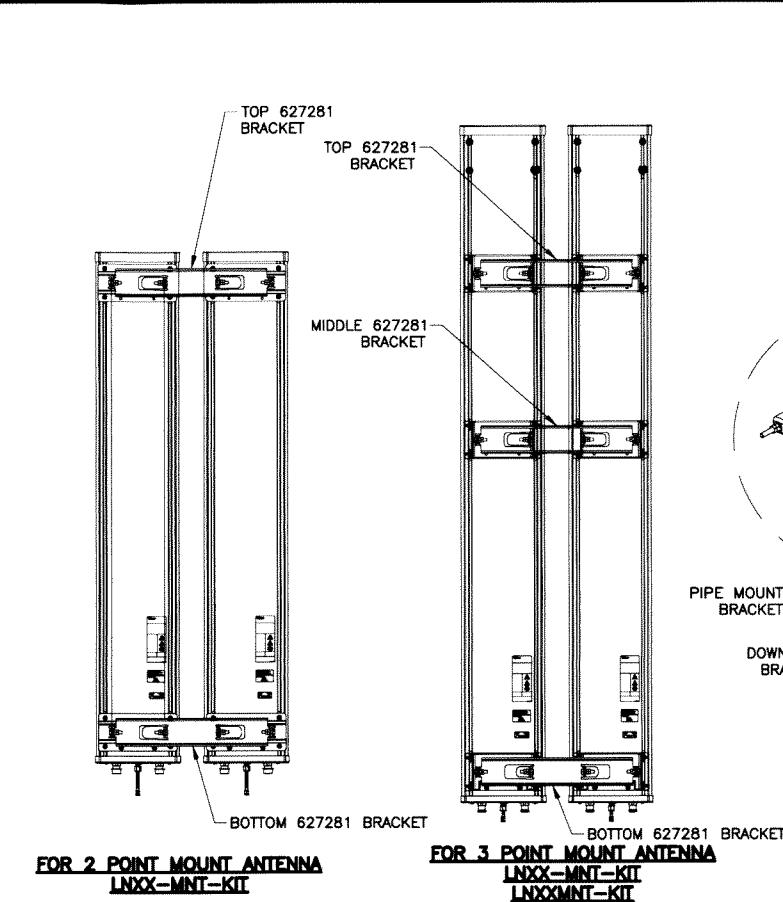
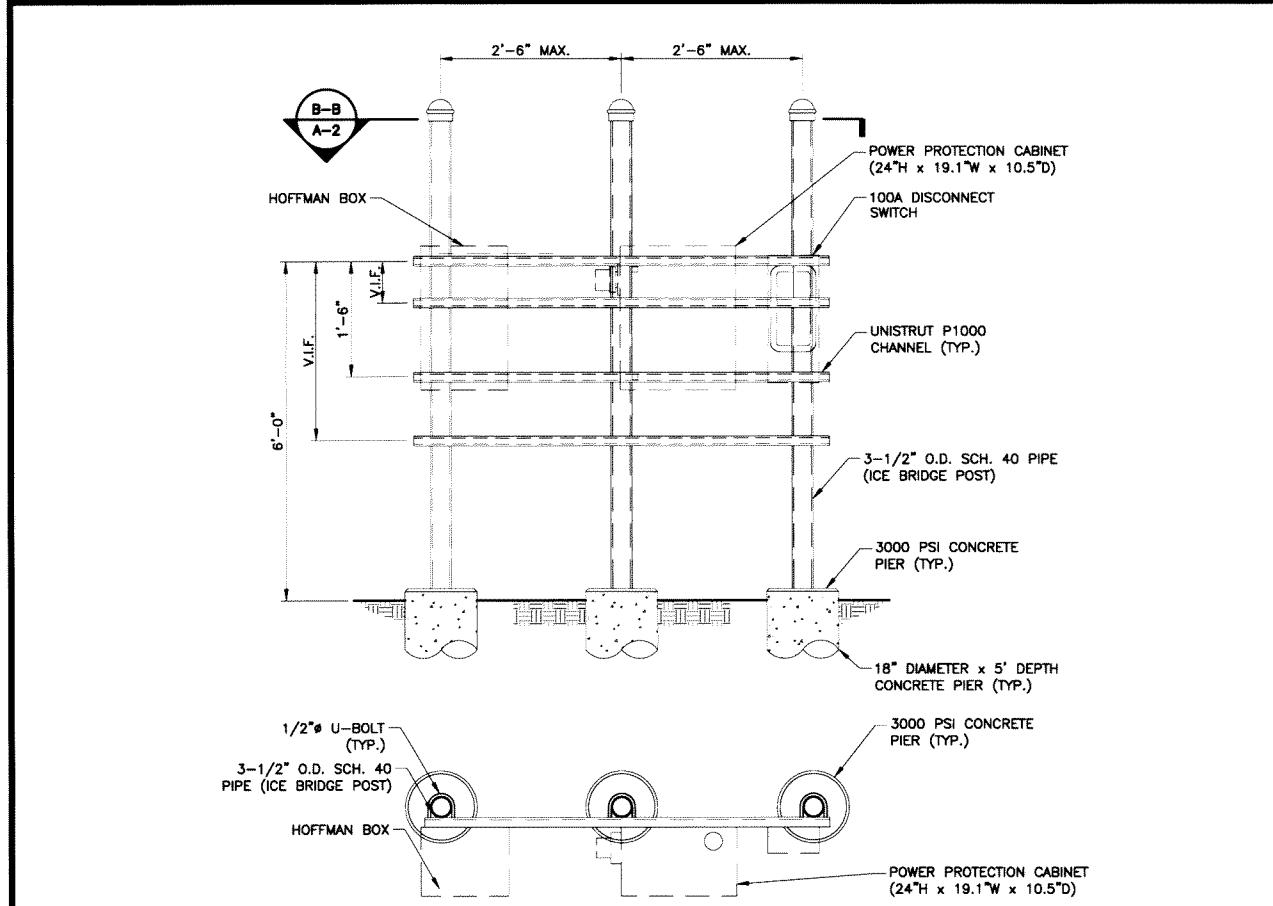
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Kelly Shan

STATE OF CONNECTICUT
* KELLY M. SHANAHAN *
NO. 22254
PROFESSIONAL ENGINEER

1	H-FRAME DETAIL	11x17 SCALE: N.T.S.	3	ANTENNA MOUNT DETAIL	11x17 SCALE: N.T.S.	ENGINEER STAMP/SIGNATURE																																																																			
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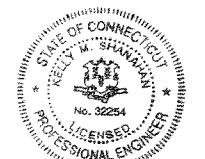


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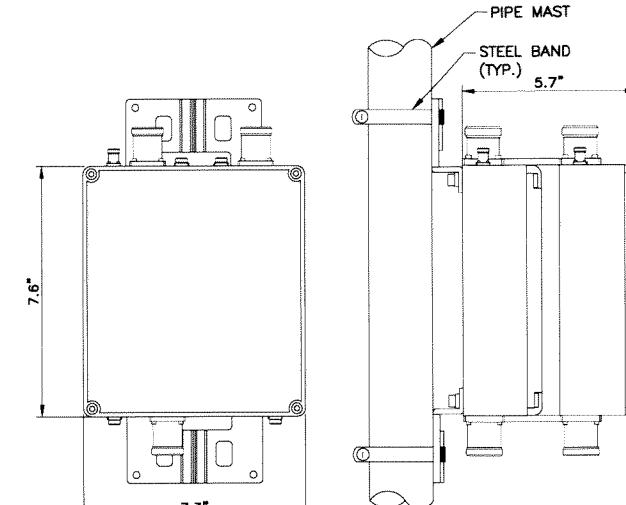
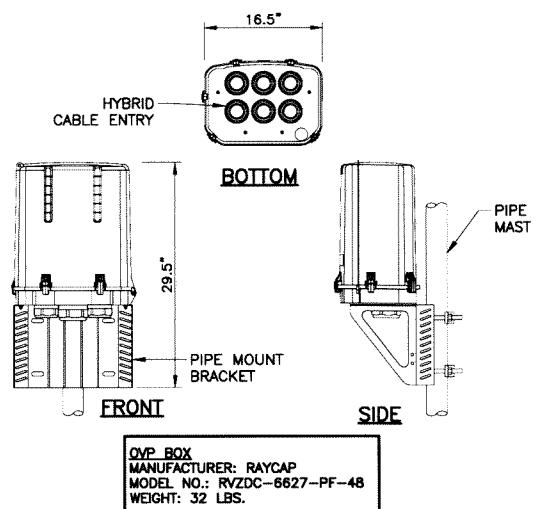
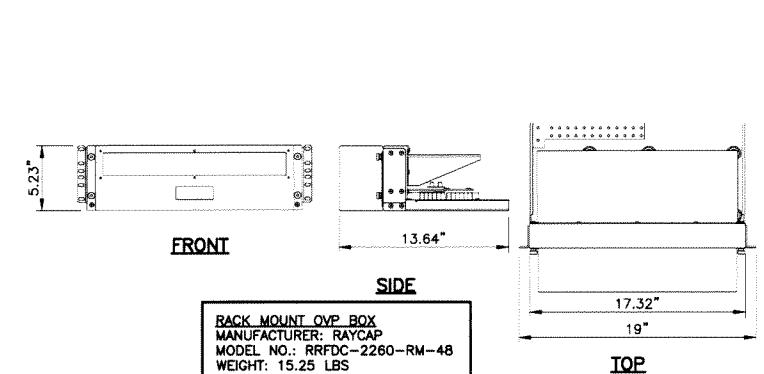
verizon[®]

20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

PREPARED BY:
EBI Consulting
environmental | engineering | due diligence
21 B Street | Burlington, MA 01803
Tel: (781) 273-2500 | Fax: (781) 273-3311
www.ebiconsulting.com



Kelly Shantz



COMMSCOPE: E15S09P73
DxHxW: 5.7"x7.6"x7.3"
WEIGHT WITHOUT MOUNTING
HARDWARE: 16.3 LB

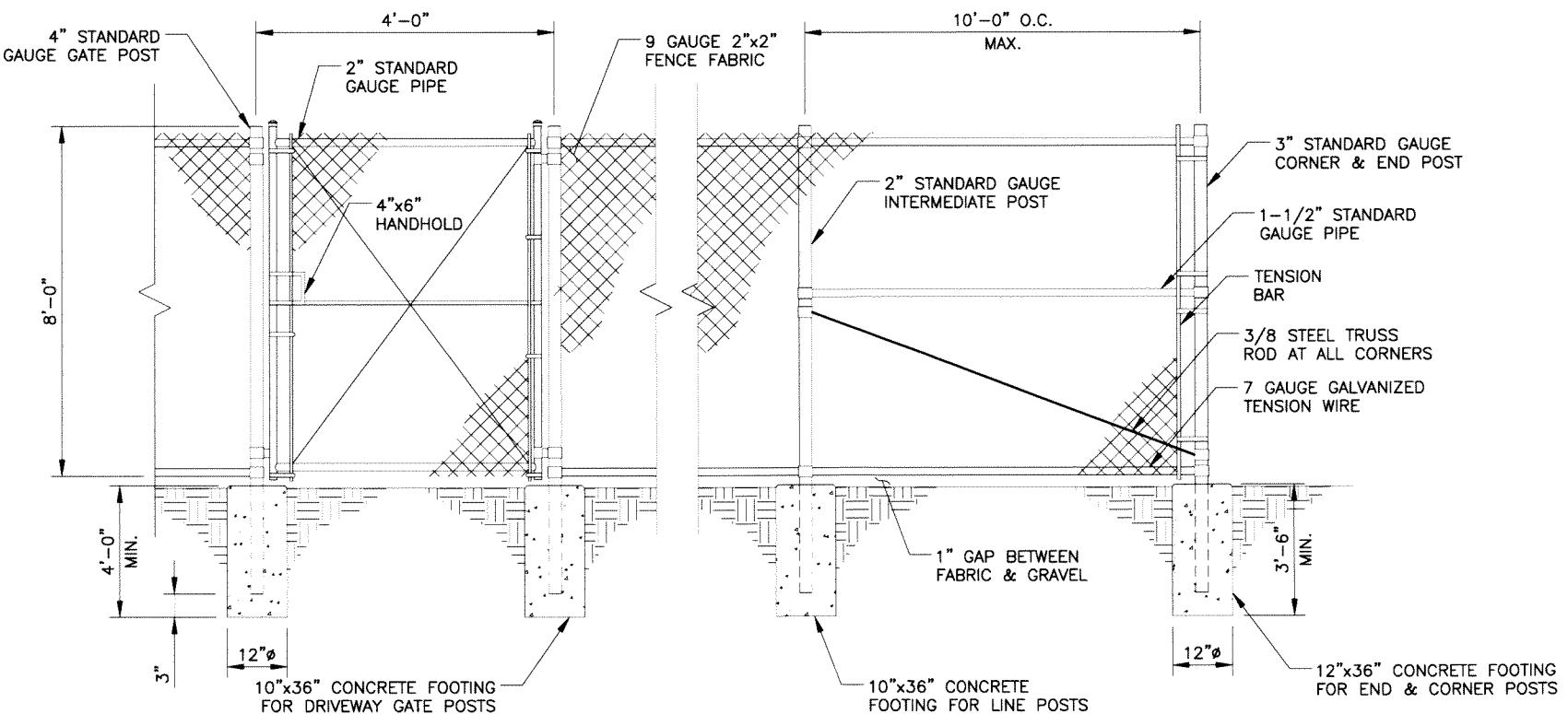
1 RAYCAP SPECIFICATION & DETAIL

11x17 SCALE: N.T.S.

2

DIPLEXER SPECIFICATION & DETAIL

11x17 SCALE: N.T.S.



3 CHAIN LINK GATE/FENCE DETAIL

SCALE: N.T.S.

ENGINEER STAMP/SIGNATURE

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SUBMITTALS

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EBI JOB NO:
8118000524

SITE INFO:

PLAINVILLE 4 CT
278 NEW BRITAIN AVENUE
PLAINVILLE, CT. 06062

SHEET TITLE:

DETAILS

DRAWN BY:	SHEET NO:
SH	
KB	
DATE: 11/21/18	

Z-7

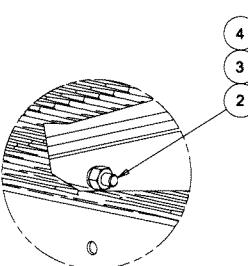
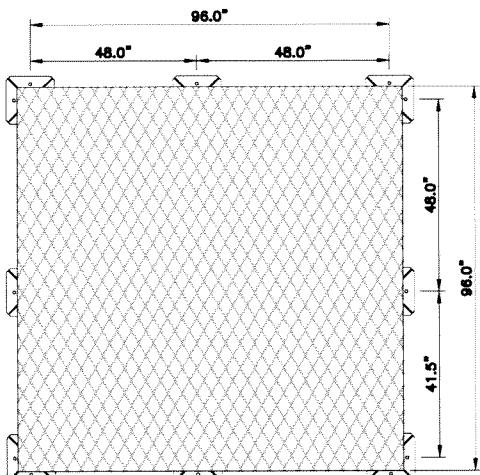
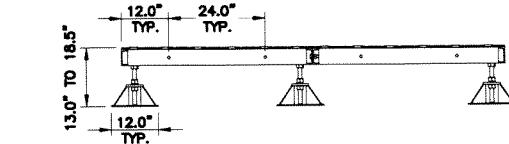


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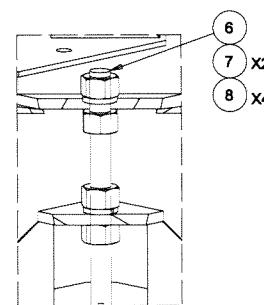
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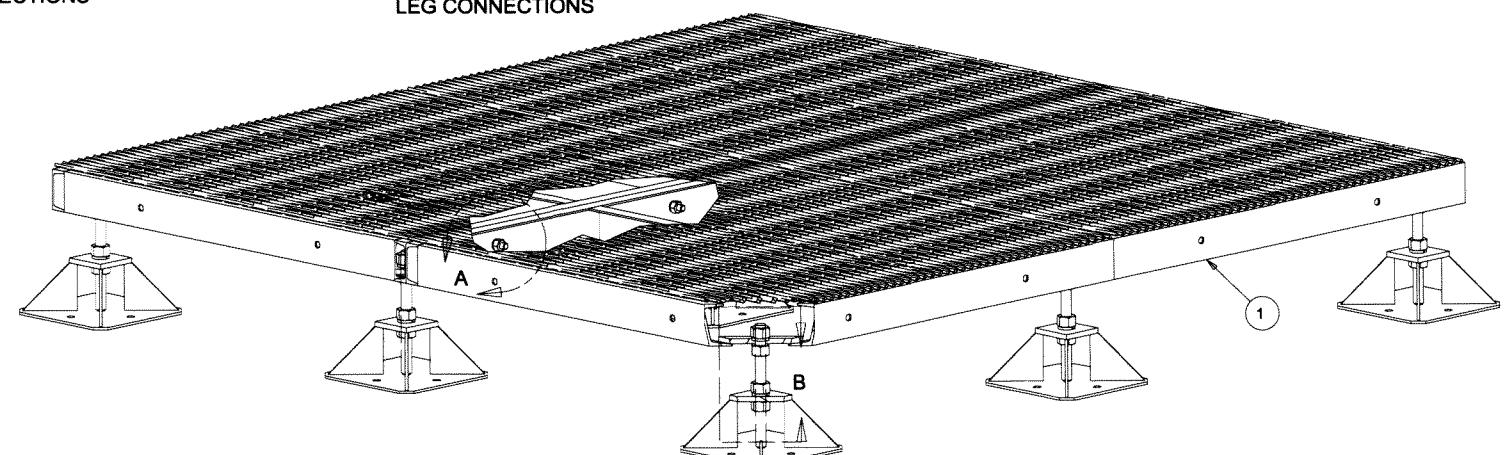
Kelly Shaver



TYPICAL ALL
PLATFORM TO PLATFORM
CONNECTIONS



TYPICAL ALL
LEG CONNECTIONS



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-MEP44	4' X 4' MODULAR EQUIPMENT PLATFORM BASE		201.72	806.87
2	8	G58134	5/8" x 1-3/4" HDG BOLT	1 3/4 in	0.27	2.15
3	8	G58LW	5/8" HDG LOCKWASHER		0.03	0.21
4	8	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	1.04
5	9	X-MPADS	1' SQAURE MODULAR PLATFORM FOOTPAD		17.50	157.53
6	9	G1R-12	1" x 12" THREADED ROD (HDG.)	12 in	2.68	24.09
7	18	G1LW	1" LOCK WASHER		0.09	1.70
8	36	G1NUT	1" HDG HEAVY HEX NUT		0.47	16.94
TOTAL WT. #						1010.53

ENGINEER STAMP/SIGNATURE

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PLAINVILLE, CT. 06062

SHEET TITLE:

DETAILS

DRAWN BY:

SH

SHEET NO:

Z-8

CHECKED BY:

KB

DATE:

11/21/18

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES ($\pm 0.030"$)
DRILLED AND GAS CUT HOLES ($\pm 0.030"$) - NO CONING OF HOLES
LASER CUT EDGES AND HOLES ($\pm 0.010"$) - NO CONING OF HOLES
BENDS ARE $\pm 1/2$ DEGREE
ALL OTHER MACHINING ($\pm 0.030"$)
ALL OTHER ASSEMBLY ($\pm 0.060"$)

DESCRIPTION
8' X 8'
MODULAR EQUIPMENT PLATFORM
WITH SMALL FOOTPADS



Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX
Engineering
Support Team:
1-888-753-7446

A valmont COMPANY

Part No.

MEP88-4S

Eng. Approval

MEP88-4S

CPD No.

Drawn By

Eng. Approval

Class Sub

Drawing Usage

Checked By

Dwg. No.

Customer

BMC 4/7/2016

A REVISED LEG POSITION	CEK 4/11/2016
REV	DESCRIPTION OF REVISIONS
REVISION HISTORY	CPD BY DATE