

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

IN RE: :  
: :  
A PETITION OF CELLCO PARTNERSHIP : PETITION NO. \_\_\_\_  
D/B/A VERIZON WIRELESS FOR A :  
DECLARATORY RULING ON THE NEED TO :  
OBTAIN A SITING COUNCIL CERTIFICATE :  
FOR THE INSTALLATION OF A ROOF-TOP :  
WIRELESS TELECOMMUNICATIONS :  
FACILITY AT 327 HUNTINGTON STREET, :  
NEW LONDON, CONNECTICUT : SEPTEMBER 20, 2016

PETITION FOR A DECLARATORY RULING:  
INSTALLATION HAVING NO  
SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

I. Introduction

Pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies (“R.C.S.A.”), Cellco Partnership d/b/a Verizon Wireless (“Cellco”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Petition”) that no Certificate of Environmental Compatibility and Public Need (“Certificate”) is required under Section 16-50k(a) of the Connecticut General Statutes (“C.G.S.”) to install a new telecommunications tower attached to the Kingdom Alliance Corp. building at 327 Huntington Street in New London, Connecticut (the “Property”). The Property and building are owned by Kingdom Alliance Corp., Inc. Cellco has designated this site as its “New London SC2 Facility”.

II. Factual Background

The Property is a 1.45- acre parcel in New London’s Commercial C-1 zone and is immediately adjacent to Interstate 95. See Attachment 1 – Site Vicinity and Site Schematic Maps (Aerial Photograph).

Cellco is licensed to provide wireless telecommunications services in the 850 MHz, 1900 MHz, 700 MHz and 2100 MHz frequency ranges in New London and throughout the State of Connecticut. Initially, the proposed New London SC2 Facility described above will provide wireless service in Cellco's 2100 MHz frequency range only.

### III. Proposed New London SC2 Facility

The proposed New London SC2 Facility would consist of a small tower attached to the existing sign structure on the roof of the Kingdom Alliance Corp. building. The tower will support a single small cell 2100 MHz panel antenna (Model HBXX-6513DS). The tower and antenna will extend to a height of approximately 59.68' above ground level; approximately 10' above the top of the existing sign structure. A remote radio head ("RRH") (Model RRH2x60-AWS) will be mounted to the façade of the existing building beneath the sign structure. Additional equipment associated with the New London SC2 Facility will be located on a 8' x 8' concrete pad on the ground near the northeasterly corner of the building. The equipment will be surrounded by an 8' tall vinyl stockade fence. Power and telephone service to the New London SC2 Facility will extend from existing service on the Property. (See Cellco's Project Plans included in Attachment 2). Specifications for the New London SC2 Facility antenna and RRH are included in Attachment 3.

### IV. Discussion

#### A. The Proposed Facility Modifications Will Not Have A Substantial Adverse Environmental Effect

The Public Utility Environmental Standards Act (the "Act"), C.G.S. § 16-50g et seq., provides for the orderly and environmentally compatible development of telecommunications towers in the state to avoid "a significant impact on the environment and ecology of the State of Connecticut." C.G.S. § 16-50g. To achieve these goals, the Act established the Council, and

requires a Certificate of Environmental Compatibility and Public Need for the construction of cellular telecommunication towers “that may, as determined by the council, have a substantial adverse environmental effect”. C.G.S. § 16-50k(a).

1. Physical Environmental Effects

Cellco respectfully submits that the installation of a tower attached to the existing sign support structure, supporting a single panel antenna and the placement of associated radio equipment cabinets on the building and on the ground behind a fenced enclosure, will not involve a significant alteration in the physical and environmental characteristics of the Property.

2. Visual Effects

The installation of a small tower and antenna on the roof of the building would not have an adverse visual impact on existing views of the building or the Property and would not impact the character of the community. (See Visual Assessment & Photo-Simulations (“Visual Assessment”) included in Attachment 4). As concluded in the Visual Assessment, the visibility of the proposed roof-top tower and antenna described above is limited to locations on the Property and portions of adjacent properties, the majority of which are occupied by state (Interstate 95) and local roads and rights-of-way. Views of the tower and antenna structure from other portions of the Property and from adjoining parcels are obstructed by existing vegetation.

3. FCC Compliance

Radio frequency (“RF”) emissions from the proposed installation will be well below the standards adopted by the Federal Communications Commission (“FCC”). Included in Attachment 5 is a General Power Density table, which demonstrates that Cellco’s New London SC2 Facility will operate well within the FCC safety standard (23.51% of the Standard).

4. FAA Summary Report

Included in Attachment 6 is a Federal Airways & Airspace Summary Report (the “FAA Report”) verifying that the tower and antenna attached to the building and sign support structure at the Property would not constitute an obstruction or hazard to air navigation and that notification to the FAA is not required.

B. Notice to the Town, Property Owner and Abutting Landowners

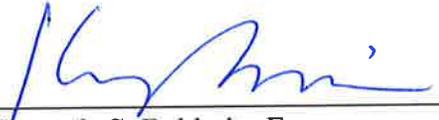
On September 20, 2016, a copy of this Petition was sent to New London’s Mayor Michael Passero and to Kingdom Alliance Corp., Inc., the owner of the Property. Copies of the letters sent to the Mayor and Kingdom Alliance Corp., Inc. are included in Attachment 7. A copy of Cellco’s Petition was also sent to the owners of land that abuts the Property. A sample abutter’s letter, and the list of those abutting landowners who were sent notice of the filing of the Petition is included in Attachment 8.

V. Conclusion

Based on the information provided above, Cellco respectfully requests that the Council issue a determination in the form of a declaratory ruling that the installation of a small tower, supporting a single panel antenna attached to the sign structure on the roof of the building and the installation of associated equipment will not have a substantial adverse environmental effect and does not require the issuance of a Certificate of Environmental Compatibility and Public Need pursuant to § 16-50k of the General Statutes.

Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON  
WIRELESS

By  \_\_\_\_\_

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597  
(860) 275-8200  
Its Attorneys

# **ATTACHMENT 1**



**Legend**

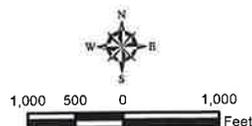
- ✕ Proposed Verizon Wireless Facility
- ✕ Surrounding Verizon Wireless Facilities
- ▭ Municipal Boundary
- 🌊 Waterbody

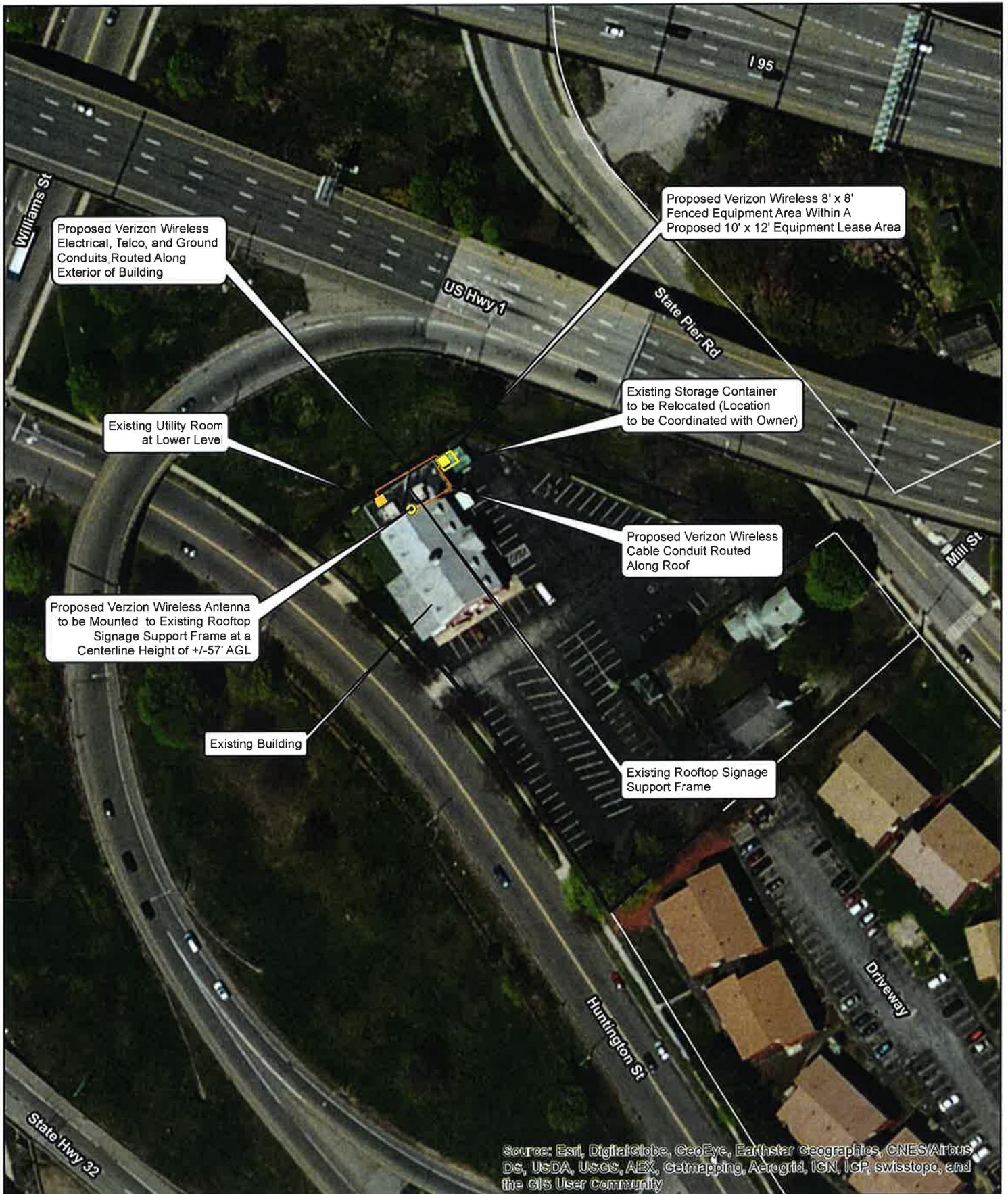
**Site Vicinity Map**

Proposed Wireless  
Telecommunications Facility  
New London SC 2  
327 Huntington Street  
New London, Connecticut



Base Map Source: 2012 Aerial Photograph (CTECO)  
Map Scale: 1 inch = 2,000 feet  
Map Date: August 2016

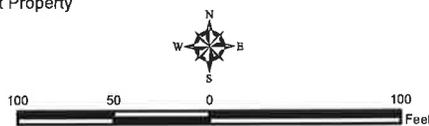




**Legend**

-  Proposed Verizon Wireless
-  Proposed Verizon Wireless Lease
-  Proposed Verizon Wireless Equipment Area
-  Proposed Verizon Wireless Conduit
-  Existing Utility Room
-  Approximate Parcel Boundary (CTDEEP GIS Parcels Last Updated 2010)
-  Subject Property

Map Notes:  
 Base Map Source: ESRI World Imagery  
 Map Scale: 1 inch = 100 feet  
 Map Date: August 2016



**Site Schematic**

Proposed Wireless  
 Telecommunications Facility  
 New London SC 2  
 327 Huntington Street  
 New London, Connecticut



# **ATTACHMENT 2**

# verizon

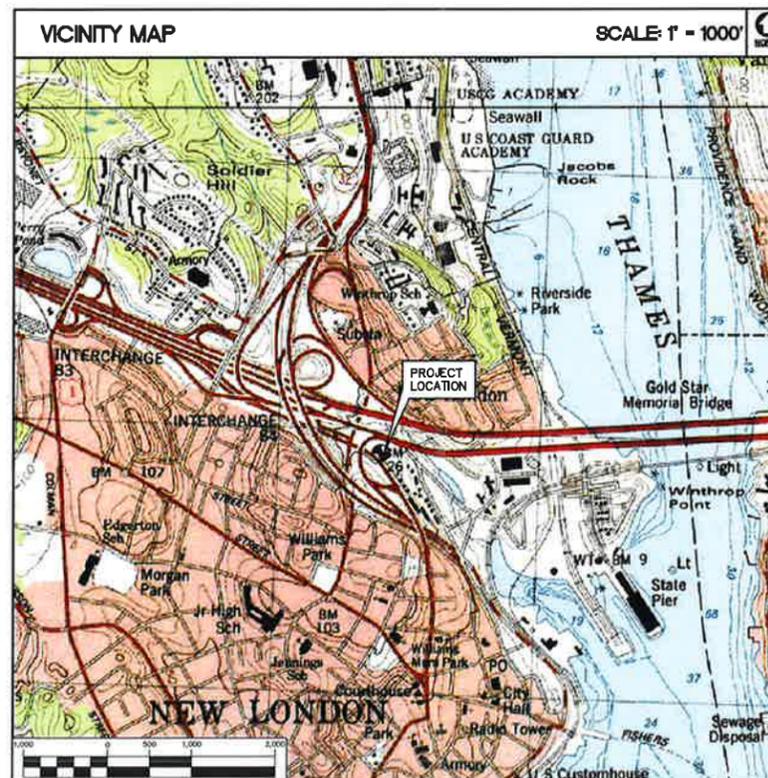
## WIRELESS COMMUNICATIONS FACILITY

NEW LONDON SC2  
327 HUNTINGTON STREET  
NEW LONDON, CT 06320

SITE DIRECTIONS		
FROM:		TO:
99 EAST RIVER DRIVE EAST HARTFORD, CONNECTICUT		327 HUNTINGTON STREET NEW LONDON, CONNECTICUT
1. HEAD NORTHEAST ON E RIVER DR	335 FT.	
2. TURN LEFT ONTO THE CT-2 E RAMP TO NORWICH	0.2 MI.	
3. MERGE ONTO I-84 E	374 FT.	
4. TAKE EXIT 55 FOR CT-2 E TOWARD NORWICH/NEW LONDON/I-84 E	0.4 MI.	
5. CONTINUE ONTO CT-2 E	23.4 MI.	
6. KEEP RIGHT AT THE FORK TO CONTINUE ON CT-11 S, FOLLOW SIGNS FOR NEW LONDON	7.4 MI.	
7. CONTINUE ONTO EXIT 4 (SIGNS FOR CT-82/SALEM/HADLYME)	0.2 MI.	
8. TURN LEFT ONTO CT-82 E	1.2 MI.	
9. AFTER THE TRAFFIC CIRCLE, TAKE THE 1ST EXIT ONTO CT-85 S	10.3 MI.	
10. TURN LEFT ONTO THE ROUTE 95 N RAMP TO NEW LONDON	456 FT.	
11. MERGE ONTO I-95 N	1.2 MI.	
12. TAKE EXIT 83 TOWARD CT-32 N/NORWICH/DOWNTOWN/NEW LONDON	0.2 MI.	
13. MERGE ONTO I-95 FRONTAGE RD	0.2 MI.	
14. CONTINUE ONTO HUNTINGTON ST AND DESTINATION WILL BE ON THE LEFT	0.1 MI.	

GENERAL NOTES
1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELCO PARTNERSHIP.

SITE INFORMATION
THE SCOPE OF WORK SHALL INCLUDE:
1. THE INSTALLATION OF A PROPOSED CELCO PARTNERSHIP EQUIPMENT CABINET LOCATED WITHIN A ±8'x8' FENCED EQUIPMENT AREA AT GRADE ADJACENT TO SUBJECT BUILDING.
2. A TOTAL OF ONE (1) PROPOSED CELCO PARTNERSHIP ANTENNA AND ASSOCIATED APPURTENANCES ARE PROPOSED TO BE PIPE MOUNTED TO EXISTING ROOFTOP SIGNAGE SUPPORT FRAME ATOP SUBJECT BUILDING ROOF AT A CENTERLINE ELEVATION OF ±58.54' AGL.
3. POWER AND TELCO UTILITIES SHALL BE ROUTED FROM DEMARCS LOCATED WITHIN OR ADJACENT TO THE EXISTING BUILDING TO THE PROPOSED CELCO PARTNERSHIP EQUIPMENT CABINET. ROUTING SHOWN HEREIN IS TENTATIVE. FINAL UTILITY DEMARC LOCATIONS AND ROUTING TO BE DETERMINED DURING CONSTRUCTION DOCUMENT PHASE OF THE PROJECT, AND WILL BE COORDINATED WITH BUILDING OWNER AND LOCAL UTILITY COMPANY REQUIREMENTS.
4. FINAL DESIGN OF ANTENNA MOUNTS SHALL BE INCLUDED IN THE CONSTRUCTION PLANS.
5. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.



PROJECT SUMMARY	
SITE NAME:	NEW LONDON SC2
SITE ADDRESS:	327 HUNTINGTON STREET NEW LONDON, CT 06320
PROPERTY OWNER:	KINGDOM ALLIANCE CORP. INC. C/O REGINALD STEWART 67 STONE RIDGE ROAD COLCHESTER, CT 06415
APPLICANT:	CELCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
VERIZON SITE ACQUISITION CONTACT:	JIM SMITH CELCO PARTNERSHIP (860) 808-0028
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROMBINSON & COLE (860) 257-8345
TOWER COORDINATES:	LATITUDE 41°-21'-48.683" LONGITUDE 72°-06'-08.325" GROUND ELEVATION: 47.44± A.M.S.L. COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 2-C SURVEY CERTIFICATION AS PREPARED BY CENTEK ENGINEERING INC., DATED JUNE 10, 2015.

SHEET INDEX		
SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	2
C-1	ABUTTERS MAP	2
C-2	PARTIAL SITE PLAN, ELEVATION AND ANTENNA MOUNTING CONFIGURATION	2

REV.	DATE	BY	DESCRIPTION
2	06/19/16	HMR	CFC
1	06/28/16	HMR	CFC
0	06/23/16	AWC	HMR
			ISSUED FOR CSC - CLIENT REVIEW
			ISSUED FOR CSC - REVISED FOR NEW PROPERTY OWNER

PROFESSIONAL ENGINEER SEAL



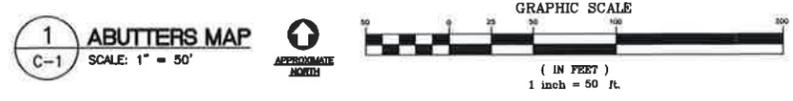
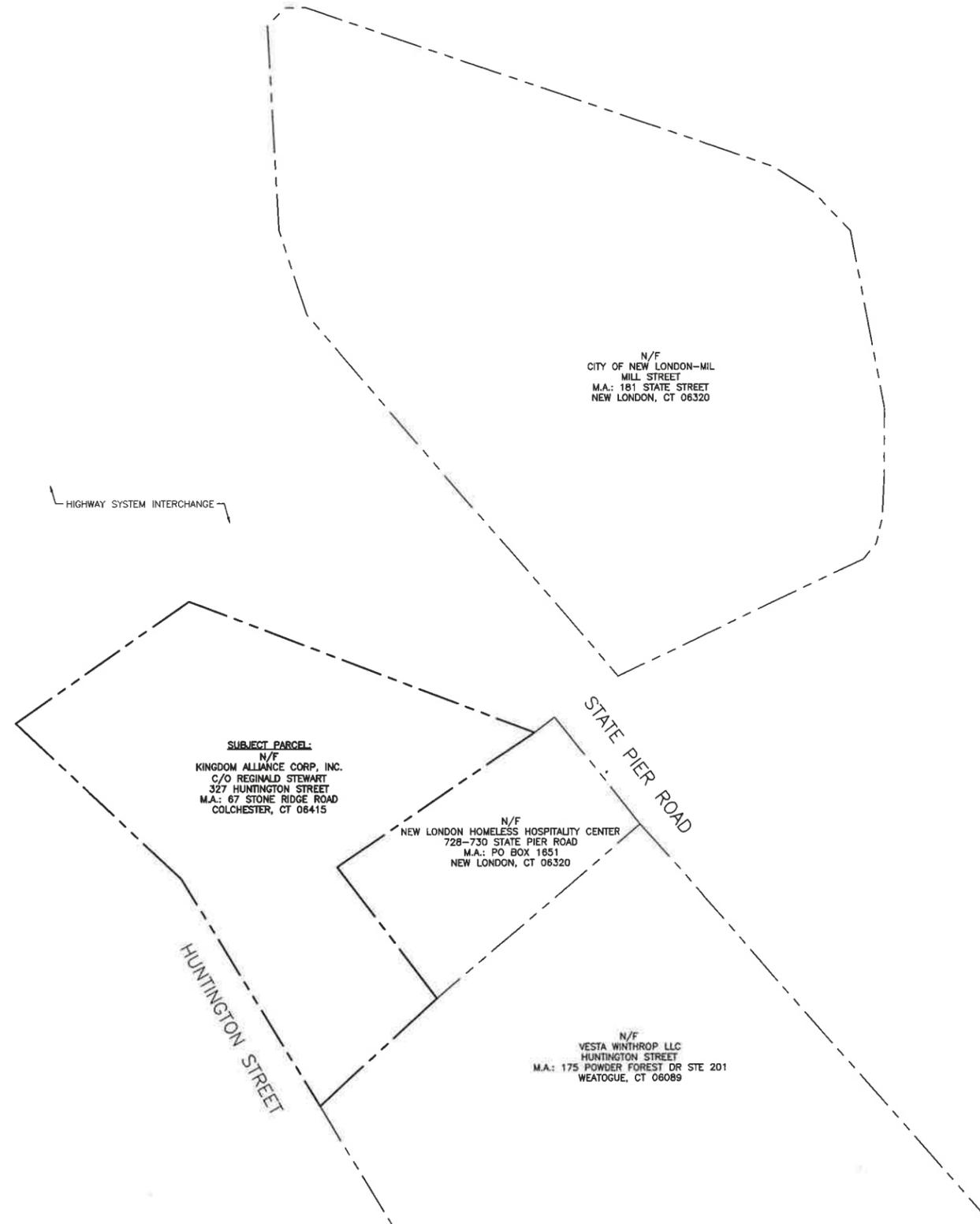
CENTEK engineering  
Centek on Solibus  
1001 4th Street  
632 North Branford Road  
Branford, CT 06405  
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless  
WIRELESS COMMUNICATIONS FACILITY  
**NEW LONDON SC2**  
327 HUNTINGTON STREET  
NEW LONDON, CT 06320

DATE: 08/19/16  
SCALE: AS NOTED  
JOB NO. 15134.000

TITLE SHEET

**T-1**  
Sheet No. 1 of 3



REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	09/19/16	HMR	CFC	ISSUED FOR CSC - REVISED FOR NEW PROPERTY OWNER
1	06/29/16	HMR	CFC	ISSUED FOR CSC
0	06/23/16	AWC	HMR	ISSUED FOR CSC - CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL



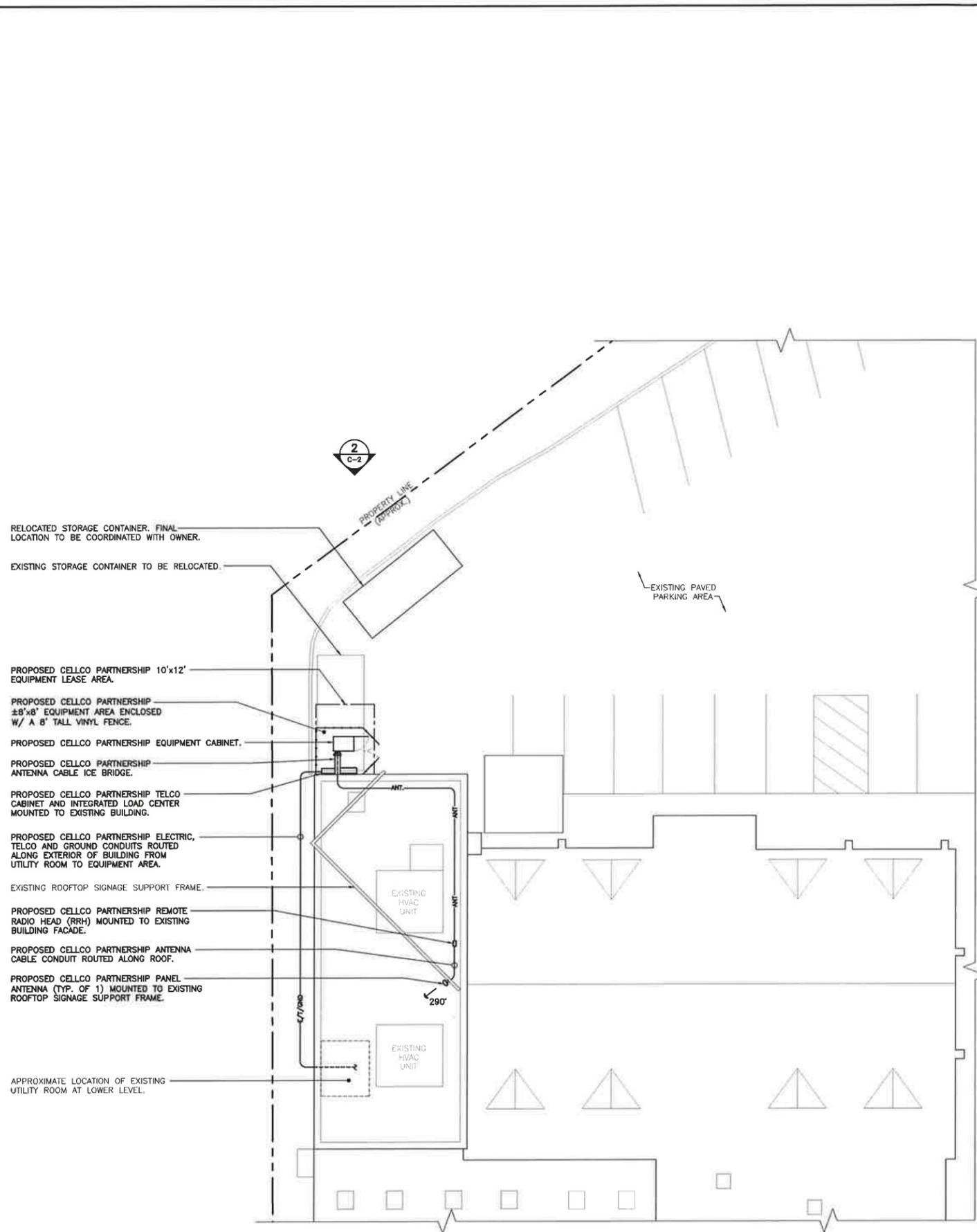
**CENITEK** engineering  
Centered on Solutions™  
1203 4th Street  
632 North Bedford Road  
Branford, CT 06405  
www.CenitekEng.com

**Cellco Partnership d/b/a Verizon Wireless**  
WIRELESS COMMUNICATIONS FACILITY  
**NEW LONDON SC2**  
327 HUNTINGTON STREET  
NEW LONDON, CT 06320

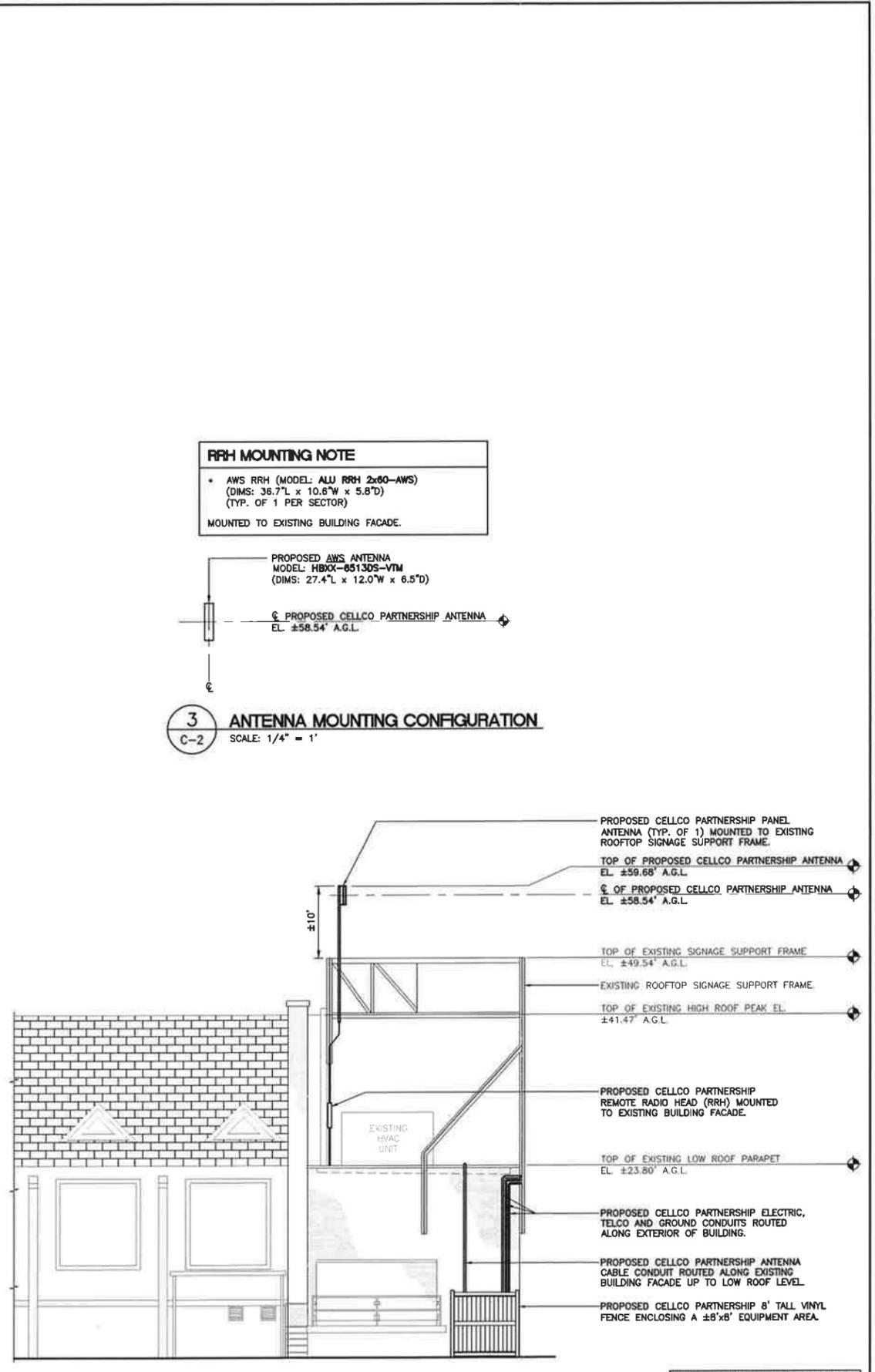
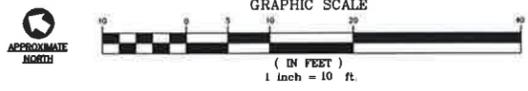
DATE: 09/19/16  
SCALE: AS NOTED  
JOB NO. 15134.000

ABUTTERS MAP

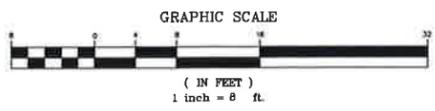
**C-1**  
Sheet No. 2 of 3



**1 PARTIAL SITE PLAN**  
SCALE: 1" = 10'



**2 PARTIAL EAST ELEVATION**  
SCALE: 1/8" = 1'- 0"



HEIGHTS SHOWN HEREIN REFERENCED FROM FAA 2-C SURVEY CERTIFICATION AS PREPARED BY CENTEK ENGINEERING INC., DATED JUNE 10, 2015.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
2	08/19/16	HMR	CFC	ISSUED FOR CSC - REVISED FOR NEW PROPERTY OWNER
1	06/28/16	HMR	CFC	ISSUED FOR CSC
0	06/23/16	AWC	HMR	ISSUED FOR CSC - CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL



**CEN TEK engineering**  
Centek Engineering Inc.  
203 498-0980  
203 498-0987 Fax  
1000 North Main Street  
Branford, CT 06405  
www.CentekEng.com

**Cellco Partnership d/b/a Verizon Wireless**  
WIRELESS COMMUNICATIONS FACILITY  
**NEW LONDON SC2**  
327 HUNTINGTON STREET  
NEW LONDON, CT 06320

DATE: 08/19/16  
SCALE: AS NOTED  
JOB NO. 15134.000  
**PARTIAL SITE PLAN, ELEVATION AND ANTENNA MOUNTING CONFIG.**

# **ATTACHMENT 3**

POWERED BY



## HBX-6513DS-VTM

**Andrew® Antenna, 1710–2180 MHz, 65° horizontal beamwidth, RET compatible**

- Rugged, reliable design with excellent passive intermodulation suppression

### Electrical Specifications

Frequency Band, MHz	1710–1880	1850–1990	1920–2180
Gain, dBi	15.0	15.0	15.5
Beamwidth, Horizontal, degrees	68	66	64
Beamwidth, Vertical, degrees	15.0	14.1	13.5
Beam Tilt, degrees	0–18	0–18	0–18
USLS, dB	16	16	16
Front-to-Back Ratio at 180°, dB	28	30	28
CPR at Boresight, dB	20	19	19
CPR at Sector, dB	7	8	8
Isolation, dB	30	30	30
VSWR   Return Loss, dB	1.4   15.6	1.4   15.6	1.4   15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350
Polarization	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm

### Electrical Specifications, BASTA\*

Frequency Band, MHz	1710–1880	1850–1990	1920–2180
Gain by all Beam Tilts, average, dBi	14.3	14.4	14.6
Gain by all Beam Tilts Tolerance, dB	±0.7	±0.7	±0.8
	0°   14.7	0°   14.8	0°   15.2
Gain by Beam Tilt, average, dBi	9°   14.4	9°   14.6	9°   14.6
	18°   13.5	18°   13.5	18°   13.7
Beamwidth, Horizontal Tolerance, degrees	±2.1	±1.4	±3.1
Beamwidth, Vertical Tolerance, degrees	±1.2	±0.7	±1
USLS, dB	17	17	18
Front-to-Back Total Power at 180° ± 30°, dB	24	24	23
CPR at Boresight, dB	20	18	18
CPR at Sector, dB	6	8	10

\* 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.](#)

### General Specifications

Antenna Brand	Andrew®
Antenna Type	Metro Cell
Band	Single band
Brand	DualPol®   Teletilt®
Operating Frequency Band	1710 – 2180 MHz

HBX-6513DS-VTM

POWERED BY



Performance Note

Outdoor usage

## Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Low loss circuit board
Radome Material	PVC, UV resistant
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	2
Wind Loading, maximum	119.0 N @ 150 km/h 26.8 lbf @ 150 km/h
Wind Speed, maximum	241.5 km/h   150.1 mph

## Dimensions

Depth	83.0 mm   3.3 in
Length	695.0 mm   27.4 in
Width	166.0 mm   6.5 in
Net Weight	2.8 kg   6.2 lb

## Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 2.0 Actuator	HBX-6513DS-A1M
RET System	Teletilt®

## Regulatory Compliance/Certifications

### Agency

RoHS 2011/65/EU  
China RoHS SJ/T 11364-2006  
ISO 9001:2008

### Classification

Compliant by Exemption  
Above Maximum Concentration Value (MCV)  
Designed, manufactured and/or distributed under this quality management system



## Included Products

DB390 — Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Use for narrow panel antennas. Includes two pipe mounts.

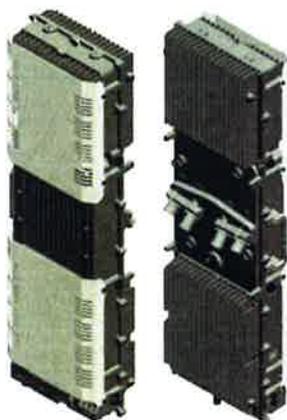
DB5098 — Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

### \* Footnotes

Performance Note      Severe environmental conditions may degrade optimum performance

# ALCATEL-LUCENT WIRELESS PRODUCT DATASHEET B4 RRH2X60-4R FOR AWS BAND APPLICATIONS

The Alcatel-Lucent B4 RRH2x60-4R is a high power, small form factor Remote Radio Head operating in the AWS frequency band (3GPP Band 4) for LTE technology. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.



A distributed Node B expands the deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent B4 RRH2x60-4R is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information.

## **SUPERIOR RF PERFORMANCE**

The Alcatel-Lucent B4 RRH2x60-4R integrates all the latest

technologies. This allows operators to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

It supports multiple discontinuous LTE carriers within an instantaneous bandwidth of 45 MHz corresponding to the entire AWS B4 spectrum.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

## **OPTIMIZED TCO**

The Alcatel-Lucent B4 RRH2x60-4R is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

The Alcatel-Lucent B4 RRH2x60-4R is a very cost-effective solution to deploy LTE MIMO.

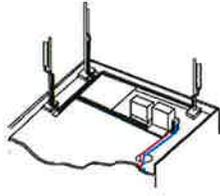
## **EASY INSTALLATION**

The B4 RRH2x60-4R includes a reversible mounting bracket which allows for ease of installation behind an antenna, or on a rooftop knee wall while providing easy access to the mid body RF connectors.

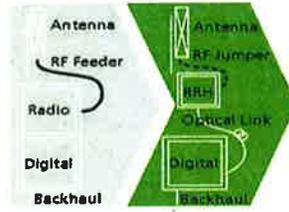
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent B4 RRH2x60-4R installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent B4 RRH2x60-4R is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

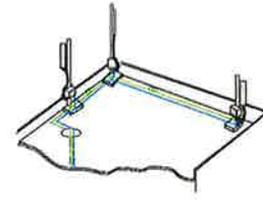
Installation can easily be done by a single person as the Alcatel-Lucent B4 RRH2x60-4R is compact and weighs about 25 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

## FEATURES

- B4 RRH2x60-4R integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- B4 RRH2x60-4R is optimized for LTE operation
- B4 RRH2x60-4R is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

## BENEFITS

- MIMO LTE operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses in RF cables and thus reducing power consumption by 50% compared to conventional solutions
- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and

silent solutions, with minimum impact on the neighborhood, which ease the deployment

- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

## TECHNICAL SPECIFICATIONS

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

### Dimensions and weights

- HxWxD : 930x270x146 mm (with solar shield)
- Weight : 25 kg (55 lbs) (with solar shield)

### Electrical Data

- Power Supply : -48V DC (-38 to -57V)
- Power Consumption: 346W typ. @2x30W (100%RF), 560W typ. @2x60W (100%RF)

### RF Characteristics

- Frequency band: 1710-1755, UL / 2110-2155 MHz, DL (3GPP band 4)
- Output power: 2x60W at antenna connectors
- Technology supported: LTE
- Instantaneous bandwidth: 45 MHz
- Rx diversity: 2-way and 4-way uplink reception
- Typical sensitivity without Rx diversity: -105 dBm for LTE

### Connectivity

- Two CPRI (3-6) optical ports for daisy chaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 300m using MM fiber, up to 15km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Four external alarms
- Surge protection for all external ports (DC and RF)

### Environmental specifications

- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%
- Environmental Conditions : ETS 300 019-1-4 class 4.1E
- Ingress Protection : IEC 60529 IP65

- Acoustic Noise : Noiseless (natural convection cooling)

### Safety and Regulatory Data

- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089, GR 3108, OET-65
- Safety : IEC60950-1, EN 60825-1, UL, ANSI/NFPA 70, CAN/CSA-C22.2
- Regulatory : FCC Part 15 Class B
- Health : EN 50385

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# **ATTACHMENT 4**

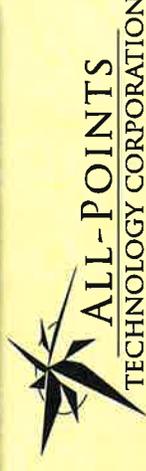
# Visual Assessment & Photo-Simulations

NEW LONDON SC2  
327 HUNTINGTON STREET  
NEW LONDON, CT 06320



Prepared in August 2016 by:  
All-Points Technology Corporation, P. C.  
3 Saddlebrook Drive  
Killingworth, CT 06141

Prepared for Verizon Wireless



# **VISUAL ASSESSMENT & PHOTO-SIMULATIONS**

At the request of Cellco partnership LLC d/b/a Verizon Wireless, All-Points Technology Corporation, P.C. ("APT") completed this visual assessment and prepared computer-generated photo-simulations depicting the proposed installation of a small-cell wireless telecommunications facility ("Facility") at 327 Huntington Street in New London, Connecticut (the "Property").

## **Project Setting**

The Property is developed with a house of worship and associated paved parking. It is surrounded on three sides by I-95 (and access ramp) to the north, State Pier Road to the east and Huntington Street to the west. A residential apartment complex abuts the Property to the south.

The proposed Facility would include the installation of one panel antenna and associated appurtenances mounted to existing rooftop sign support structures. A remote radio head would be mounted to the building façade. Electric, telco and ground conduits would be routed along the building's façade and roof from associated ground equipment enclosed within an 8' tall fenced area (measuring 8' by 8') adjacent to a loading dock.

## **Methodology**

On August 4 and 15, 2016, APT personnel conducted field reconnaissance and photo-documented existing conditions at and around the Property. Five nearby locations were selected to depict existing and proposed conditions with the proposed installation. At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter ("mm") zoom lens, with the lens set to 50 mm to present a consistent field of view.

Three-dimensional computer models were developed for the building and proposed small cell components from AutoCAD information. Photographic simulations were then generated to portray scaled renderings of the proposed installation. Using field data, site plan information, and image editing software, the proposed installation was scaled to the correct location and height, relative to the existing structure(s) and surrounding area. A photolog map and copies of the existing conditions and photo-simulations are attached.

A total of five locations were documented. The five locations simulated with the proposed installation were chosen in the field because they presented generally unobstructed view lines towards at least a portion of the building and represent the approximate limits of visibility associated with the proposed installation.

The photos and simulations within the attached document are static in nature and do not necessarily or fairly characterize the prevailing views from all locations within a given area. The simulations provide a representation of the proposed installation under similar settings as those encountered during the field reconnaissance. Views of the Facility can change substantially throughout the seasons as well as the time of day, and are dependent on weather and other atmospheric conditions including but not necessarily limited to haze, fog, and clouds; the location, angle and intensity of the sun; light conditions, and the specific viewer location.

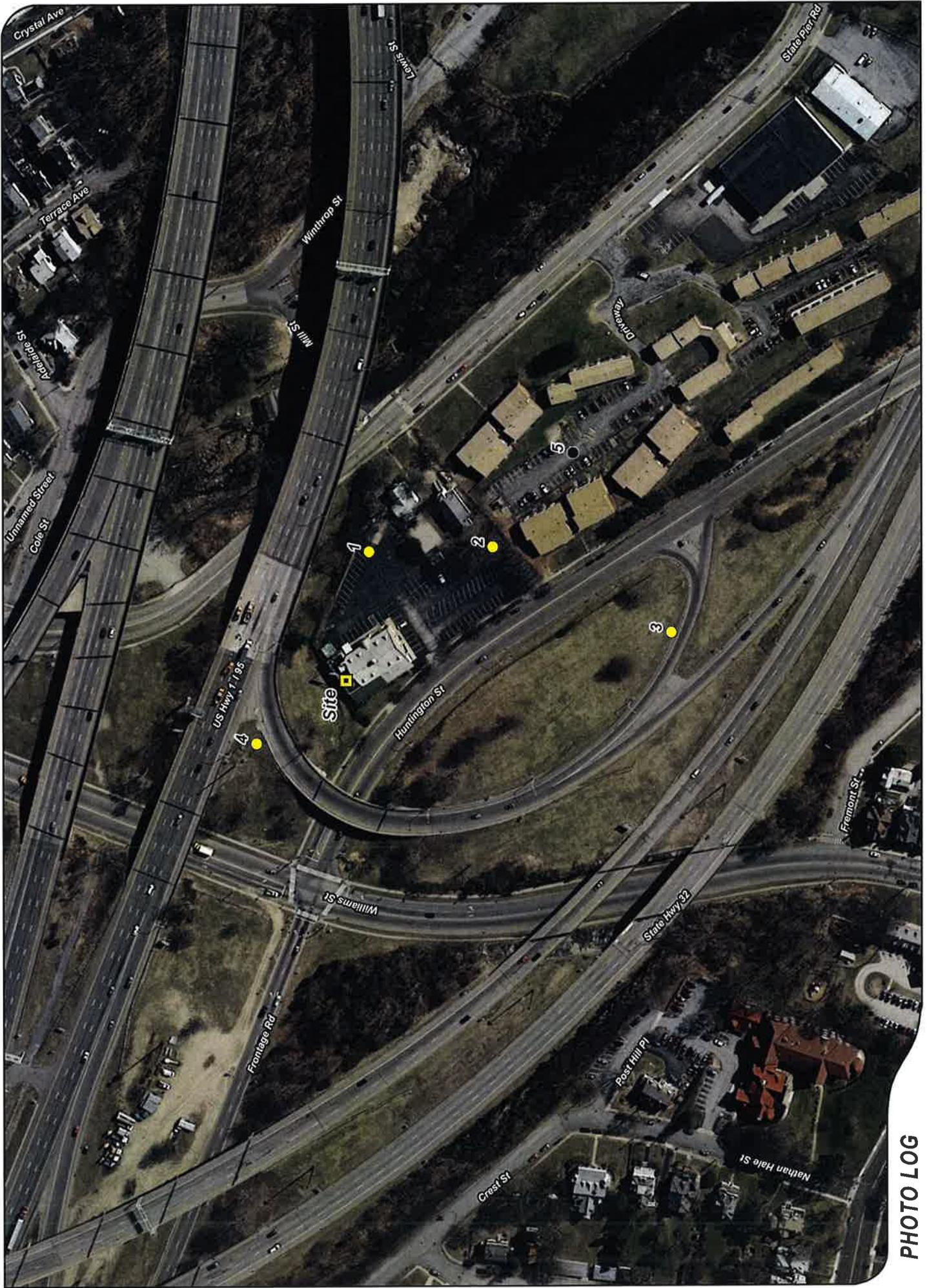
## **Conclusions**

The visibility of the proposed installation would be limited to locations on the Property and portions of adjacent properties, the majority of which are occupied by state and local roads and rights-of-way. To the south lie residential buildings that are separated from the Property by existing vegetation. Limited locations on this adjoining parcel may experience an increase in views during leaf-off conditions however most would still be obscured by intervening trees.

Beyond those areas abutting the Property, the proposed installation will not be conspicuous due to its slim profile and sufficient distances from visual receptors.

Based on the results of this assessment, it is our opinion that the proposed installation of the Verizon Wireless small cell facility will not have an adverse visual impact on existing views of this building or the character of the community.

## **ATTACHMENTS**



# PHOTO LOG

Legend

- Site
- Year-Round Visibility
- Not Visible





**EXISTING**

PHOTO

1

LOCATION

**HOST PROPERTY**

ORIENTATION

**NORTHWEST**

DISTANCE TO SITE

**+/- 211 FEET**



ALL-POINTS  
TECHNOLOGY CORPORATION

**verizon**



**PROPOSED**

PHOTO

1

LOCATION

**HOST PROPERTY**

ORIENTATION

**NORTHWEST**

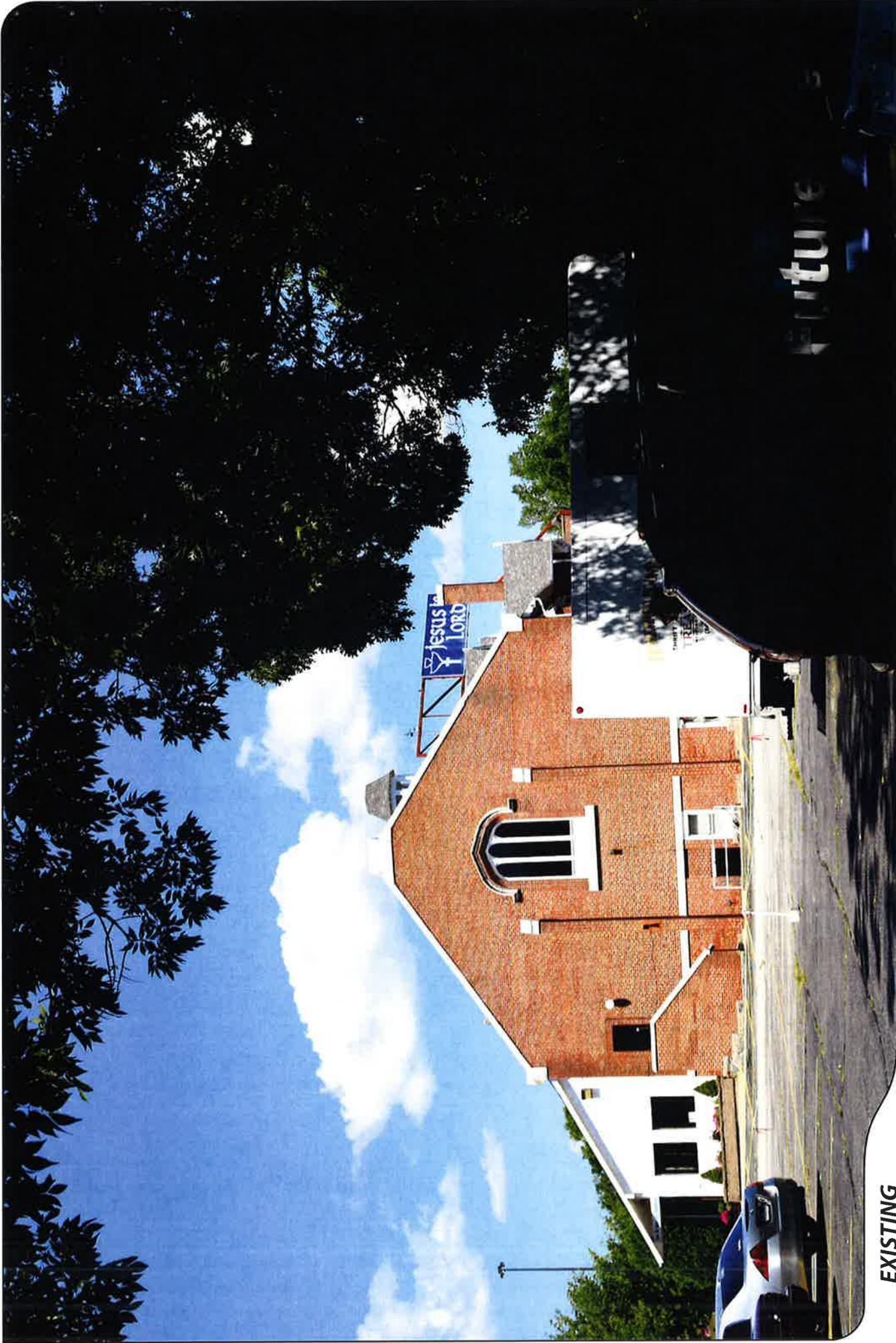
DISTANCE TO SITE

**+/- 211 FEET**



ALL-POINTS  
TECHNOLOGY CORPORATION

**verizon**



**EXISTING**

PHOTO

2

LOCATION

**HOST PROPERTY**

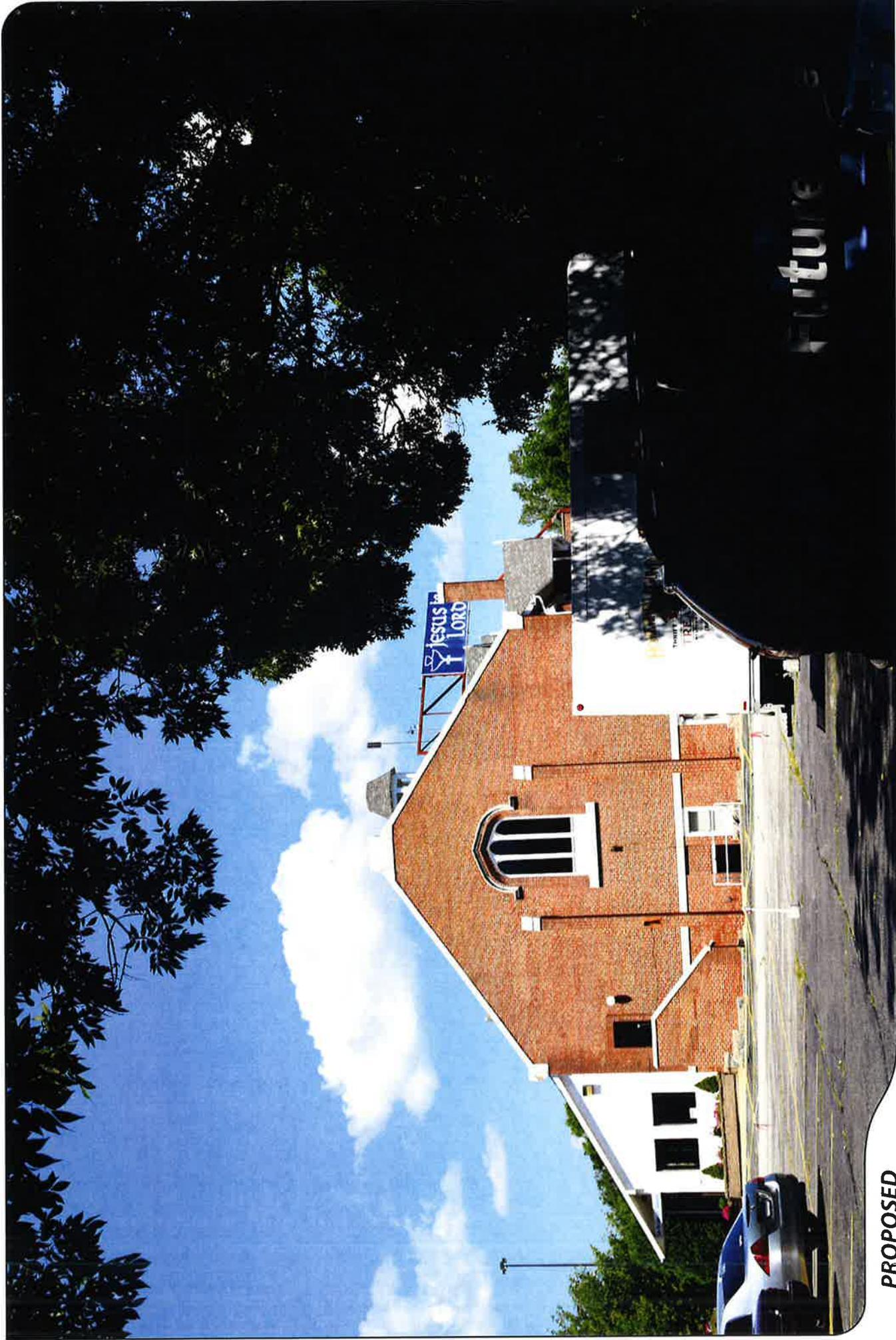
ORIENTATION

**NORTHWEST**

DISTANCE TO SITE

**+/- 318 FEET**





**PROPOSED**

PHOTO

2

LOCATION

HOST PROPERTY

ORIENTATION

**NORTHWEST**

DISTANCE TO SITE

**+/- 318 FEET**



ALL-POINTS  
TECHNOLOGY CORPORATION





**EXISTING**

PHOTO

3

LOCATION

**ENTRANCE TO I-95**

ORIENTATION

**NORTH**

DISTANCE TO SITE

**+/- 0.10 MILE**





**PROPOSED**

PHOTO

3

LOCATION

ENTRANCE TO I-95

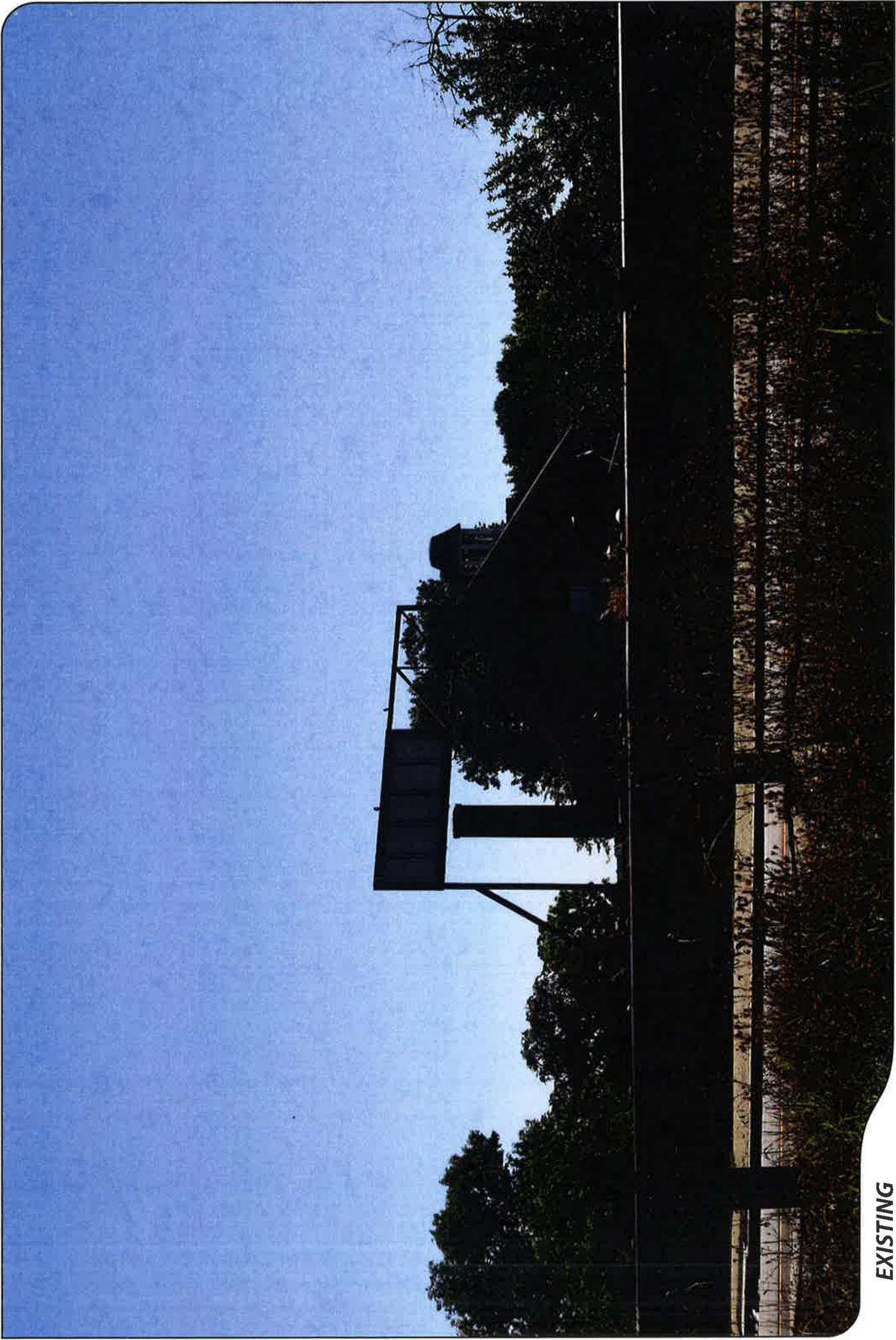
ORIENTATION

NORTH

DISTANCE TO SITE

+/- 0.10 MILE





**EXISTING**

PHOTO

4

LOCATION

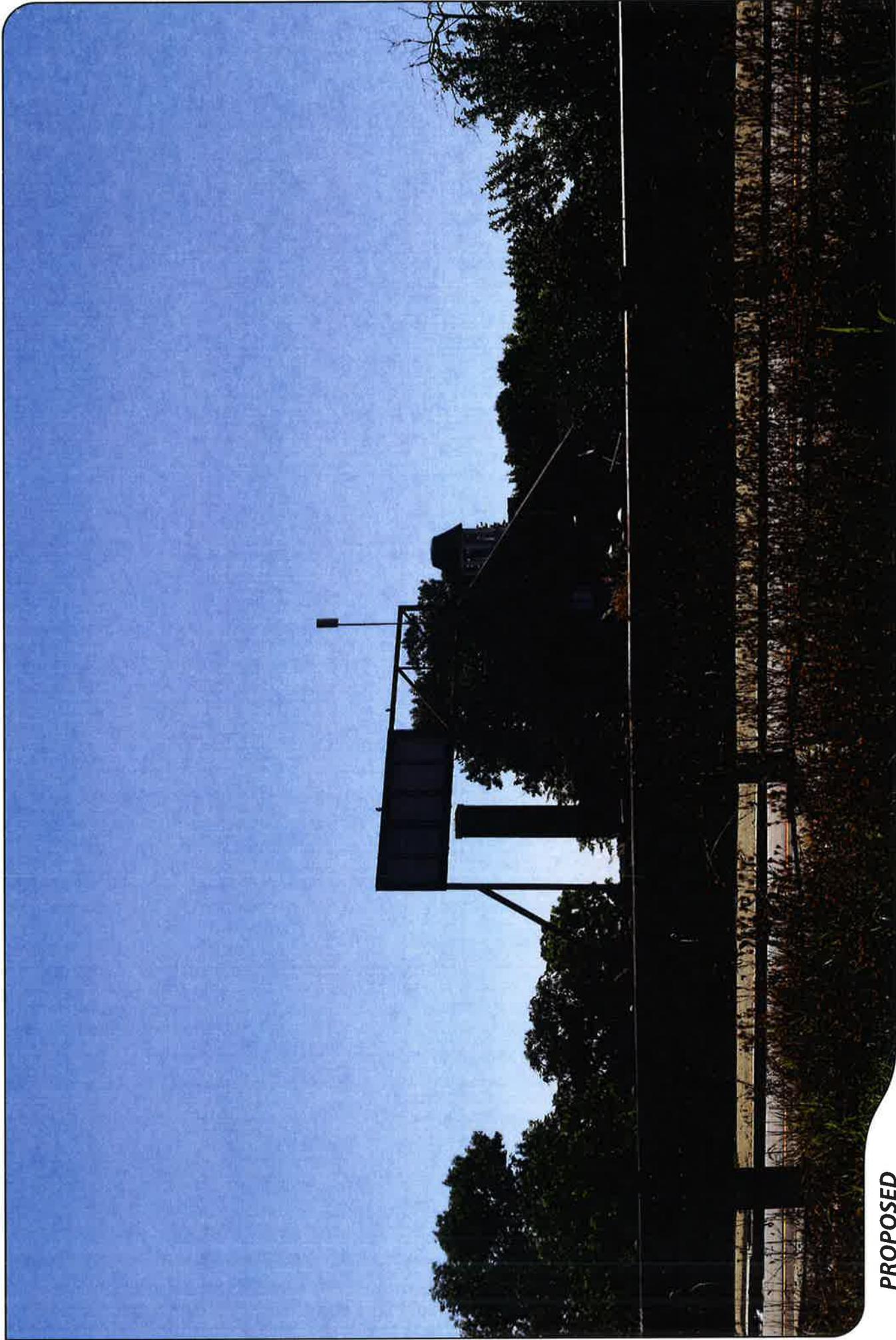
I-95

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 190 FEET



**PROPOSED**

PHOTO

4

LOCATION

I-95

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 190 FEET



ALL-POINTS  
TECHNOLOGY CORPORATION

verizon



**NOT VISIBLE FROM THIS LOCATION**

**EXISTING**

PHOTO

5

LOCATION

93 STATE PIER ROAD

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 393 FEET



# **ATTACHMENT 5**

General Power Density

Site Name: New London SC 2, CT  
 Cumulative Power Density

Operator	Operating Frequency (MHz)	Number of Trans.	ERP Per Trans. (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm <sup>2</sup> )	Maximum Permissible Exposure* (mW/cm <sup>2</sup> )	Fraction of MPE (%)
VZW PCS	1970	0	470	0	57	0.0000	1.0	0.00%
VZW Cellular	869	0	422	0	57	0.0000	0.5793333333	0.00%
VZW AWS	2145	1	2124	2124	57	0.2351	1.0	23.51%
VZW 700	746	0	1050	0	57	0.0000	0.4973333333	0.00%

**Total Percentage of Maximum Permissible Exposure**

23.51%

\*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm<sup>2</sup> = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.

# **ATTACHMENT 6**

NEW\_LONDON\_SC\_2\_CT.txt  
\*\*\*\*\*  
\* Federal Airways & Airspace \*  
\* Summary Report: Existing Structure \*  
\* Antenna Structure \*  
\*\*\*\*\*

Airspace User: Your Name

File: NEW\_LONDON\_SC\_2\_CT

Location: New London, CT

Latitude: 41°-21'-48.63" Longitude: 72°-06'-6.32"

SITE ELEVATION AMSL.....47.44 ft.  
STRUCTURE HEIGHT.....60 ft.  
OVERALL HEIGHT AMSL.....107 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 GON
- FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for 0B8
- 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.

The location and analysis were based upon an existing structure. However, no existing aeronautical study number was identified. If the 'existing' structure penetrates an obstruction surface defined by CFR 77.17, 77.19, 77.21 or 77.23 (see below) it is strongly recommended the FAA be notified of the 'existing' structure to determine obstruction marking or lighting requirements. It is not uncommon for the FAA to issue a Determination of No Hazard (DNH) for an existing structure and modify the airspace to accommodate the structure, should that be required. If the FAA issues a DNH enter the aeronautical study number (ASN) in the space provided on the Airspace Analysis Window Form and re-run Airspace.

The below analysis reflects the aeronautical conditions that exist as of the date stamped on this analysis.

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 - Transitional Surface

VFR TRAFFIC PATTERN AIRSPACE FOR: GON: GROTON-NEW LONDON

Type: A RD: 17370.95 RE: 8.7  
FAR 77.17(a)(1): DNE

NEW\_LONDON\_SC\_2\_CT.txt  
 FAR 77.17(a)(2): DNE - Height No Greater Than 200 feet AGL.  
 VFR Horizontal Surface: DNE  
 VFR Conical Surface: DNE  
 VFR Approach Slope: DNE  
 VFR Transitional Slope: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: 0B8: ELIZABETH FIELD

Type: A RD: 44153.98 RE: 7  
 FAR 77.17(a)(1): DNE  
 FAR 77.17(a)(2): Does Not Apply.  
 VFR Horizontal Surface: DNE  
 VFR Conical Surface: DNE  
 VFR Approach Slope: DNE  
 VFR Transitional Slope: 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 1000 ft AMSL

PRIVATE LANDING FACILITIES

FACIL	BEARING	RANGE	DELTA ARP	FAA
IDENT TYP NAME	To FACIL	IN NM	ELEVATION	IFR
69CT HEL THE SHORE	118.01	5.56	+96	

No Impact to Private Landing Facility  
 Structure is beyond notice limit by 28783 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

APCH	FAC	ST	DIST	DELTA	GRND	
BEAR	IDNT	TYPE	AT	FREQ VECTOR	(ft) ELEVA ST LOCATION	ANGLE
	GON	VOR/DME	R	110.8 131.45	18234 +98 CT GROTON	.31
	GON	ATCT	Y	A/G 127.00	19251 +20 CT GROTON-NEW LONDON	.06
	GON	LOCALIZER	U	111.3 117.47	20207 +100 CT RWY 05 GROTON-NEW	.28
48	ORW	VOR/DME	I	110.0 21.74	75680 -203 CT NORWICH	-.15
	HFD	VOR/DME	R	114.9 309.79	158535 -742 CT HARTFORD	-.27
	SEY	VOR/DME	R	117.8 116.48	161219 +7 RI SANDY POINT	0.00
	MAD	VOR/DME	R	110.4 263.44	163147 -113 CT MADISON	-.04
	HTO	VORTAC	I	113.6 200.01	172449 +85 NY HAMPTON	.03
	PVD	RADAR	Y	2735. 46.46	189577 -459 RI THEODORE FRANCIS	-.14
	QVH	RADAR ARSR	Y	1326.9 222.21	239222 -244 NY RIVERHEAD	-.06

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.

NEW\_LONDON\_SC\_2\_CT.txt

Nearest AM Station: WXML @ 3568 meters.

Airspace® Summary Version 16.7.421

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08-01-2016  
12:58:54

# **ATTACHMENT 7**

September 20, 2016

*Via Certificate of Mailing*

Michael Passero, Mayor  
City of New London  
181 State Street  
New London, CT 06320

**Re: Proposed Installation of a Roof-Top Wireless Telecommunications Facility at  
327 Huntington Street, New London, Connecticut**

Dear Mayor Passero:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a new telecommunications facility on the roof of the building at 327 Huntington Street in New London (the “Property”). The facility will consist of a roof-top tower attached to the existing sign support structure supporting a single panel-type antenna. The tower and antenna will extend to a height of 59.68’ above ground level, approximately 10’ above the existing sign support structure. Equipment associated with the facility will be attached to the building façade and located on an 8’ x 8’ concrete pad at the northeast corner of the building.

A copy of the Petition is attached for your review. Landowners whose parcels abut the Property were also sent notice of this filing along with a copy of the Petition.

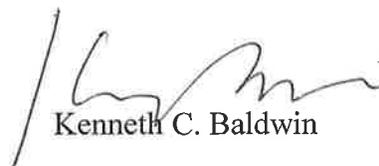
15134677-v1

# Robinson + Cole

Michael Passero  
September 20, 2016  
Page 2

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

September 20, 2016

*Via Certificate of Mailing*

Kingdom Alliance Corp., Inc.  
c/o Reginald Stewart  
67 Stone Ridge Road  
Colchester, CT 06415

**Re: Proposed Installation of a Roof-Top Wireless Telecommunications Facility at  
327 Huntington Street, New London, Connecticut**

Dear Sir or Madam:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a new telecommunications facility on the roof of the building at 327 Huntington Street in New London (the “Property”). The facility will consist of a roof-top tower attached to the existing sign support structure supporting a single panel-type antenna. The tower and antenna will extend to a height of 59.68’ above ground level, approximately 10’ above the existing sign support structure. Equipment associated with the facility will be attached to the building façade and located on an 8’ x 8’ concrete pad at the northeast corner of the building.

A copy of the Petition is attached for your review. Landowners whose parcels abut the Property were also sent notice of this filing along with a copy of the Petition.

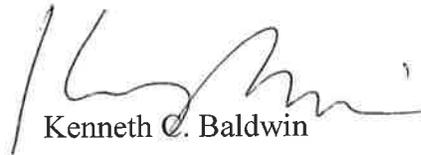
15134657-v1

# Robinson + Cole

Kingdom Alliance Corp., Inc.  
September 20, 2016  
Page 2

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

# **ATTACHMENT 8**

KENNETH C. BALDWIN

280 Trumbull Street  
Hartford, CT 06103-3597  
Main (860) 275-8200  
Fax (860) 275-8299  
kbaldwin@rc.com  
Direct (860) 275-8345

Also admitted in Massachusetts

September 20, 2016

*Via Certificate of Mailing*

«Name\_and\_Address»

**Re: Notice of Intent to File a Petition for Declaratory Ruling with the Connecticut Siting Council for the Installation of a Roof-Top Wireless Telecommunications Facility at 327 Huntington Street, New London, Connecticut**

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Petition for Declaratory Ruling (“Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install a new telecommunications facility on the roof of the building at 327 Huntington Street in New London (the “Property”). The facility will consist of a roof-top tower attached to the existing sign support structure supporting a single panel-type antenna. The tower and antenna will extend to a height of 59.68’ above ground level, approximately 10’ above the existing sign support structure. Equipment associated with the facility will be attached to the building façade and located on an 8’ x 8’ concrete pad at the northeast corner of the building. A copy of the Petition is attached for your review.

This notice is being sent to you because you are listed on the Town Assessor’s records as an owner of land that abuts the Property. If you have any questions regarding the Petition, the Council’s process for reviewing the Petition or the details of the filing itself, please feel free to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

September 20, 2016  
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Attachment

**CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS**

**ABUTTING PROPERTY OWNERS**

**327 HUNTINGTON STREET  
NEW LONDON, CONNECTICUT**

	<b>Property Address</b>	<b>Owner's and Mailing Address</b>
1.	Huntington Street	Vesta Winthrop LLC 175 Powder Forest Drive, Suite 201 Weatogue, CT 06089
2.	Mill Street	City of New London- Mil 181 State Street New London, CT 06320
3.	728-730 State Pier Road	New London Homeless Hospitality Center PO Box 1651 New London, CT 06320