

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 SMALL :
 CELL TELECOMMUNICATIONS FACILITY :
 AT 8 CUSTOM DRIVE, OLD SAYBROOK, :
 CONNECTICUT : SEPTEMBER 15, 2015

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 small cell telecommunications facility on the roof of an existing industrial building at 8 Custom Drive in Old Saybrook, Connecticut (the “Property”). The Property is owned by ZZZ & I LLC. Cellco has designated this site its “Old Saybrook SC11 Facility”.

II. Factual Background

The Property is an approximately 1.47-acre parcel at the western end of Custom Drive. The Old Saybrook/Westbrook town boundary bisects the Property (0.91-acres of the Property are located in Old Saybrook; and 0.56-acres of the Property in Westbrook). The Property is zoned

Industrial in both Old Saybrook and Westbrook and is surrounded by industrial uses along Custom Drive and Spencer Plain Road. 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 Old Saybrook, Westbrook and throughout the State of Connecticut. Initially, the proposed Old Saybrook SC11 Facility described above will provide wireless service in Cellco’s 2100 MHz frequency range only. The Old Saybrook SC11 Facility will also provide coverage to existing gaps in 2100 MHz service and capacity relief to Cellco’s network in the western portions of Old Saybrook and eastern portions of Westbrook.

III. Proposed Old Saybrook SC11 Facility

The proposed Old Saybrook SC11 Facility would consist of a small tower attached to the roof of the building at the Property. The tower will support a single canister antenna (Model NH360QS-DG-F0M). A Remote Radio Head (“RRH”) (Model 2X60-AWS) and OVP box will be attached to an equipment support structure near the proposed tower on the roof. The top of the canister antenna will extend to an overall height of 31’-4” above grade, 7’-0” above the roof of the building. Equipment associated with the Old Saybrook SC11 Facility will be located in two cabinets located on the north side of the building. Power and telephone service to the Old Saybrook SC11 Facility will extend from existing service inside the building. (See Cellco’s Project Plans included in Attachment 2). Specifications for the Old Saybrook SC11 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 seven-foot tower, a single canister antenna, RRH, OVP and equipment on the roof and the installation of two equipment cabinets on the north side of the building, will not involve a significant alteration in the physical and environmental characteristics of the Property.

2. Visual Effects

The installation of a seven-foot tower, antenna and RRH on the roof of the existing industrial building at the Property would have minimal visual effects on the Property and the surrounding area. (*See* Limited Visual Assessment and Photo-Simulations (“Visual Assessment”) included in Attachment 4). As stated in the attached Visual Assessment, the proposed roof-top installation described above would have little to no adverse effect on existing views.

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 Old Saybrook SC11 Facility will operate well within the FCC safety standard (12.79% 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 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 15, 2015, a copy of this Petition was sent to Old Saybrook’s First Selectman Carl P. Fortuna, Jr., Westbrook’s First Selectman Noel Bishop and to the Property owner, ZZZ & I LLC. Copies of the letters sent to Mr. Fortuna, Mr. Bishop and the owner are included in Attachment 7. Notice of Cellco’s intent to file this Petition along with a copy of the Petition was also sent to the owners of land that abuts the Property. A sample abutter’s letter, and the list of abutting landowners 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 7-foot tower, canister antenna and RRH on the roof of the building at the Property and two equipment cabinets on the ground adjacent to the building 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.

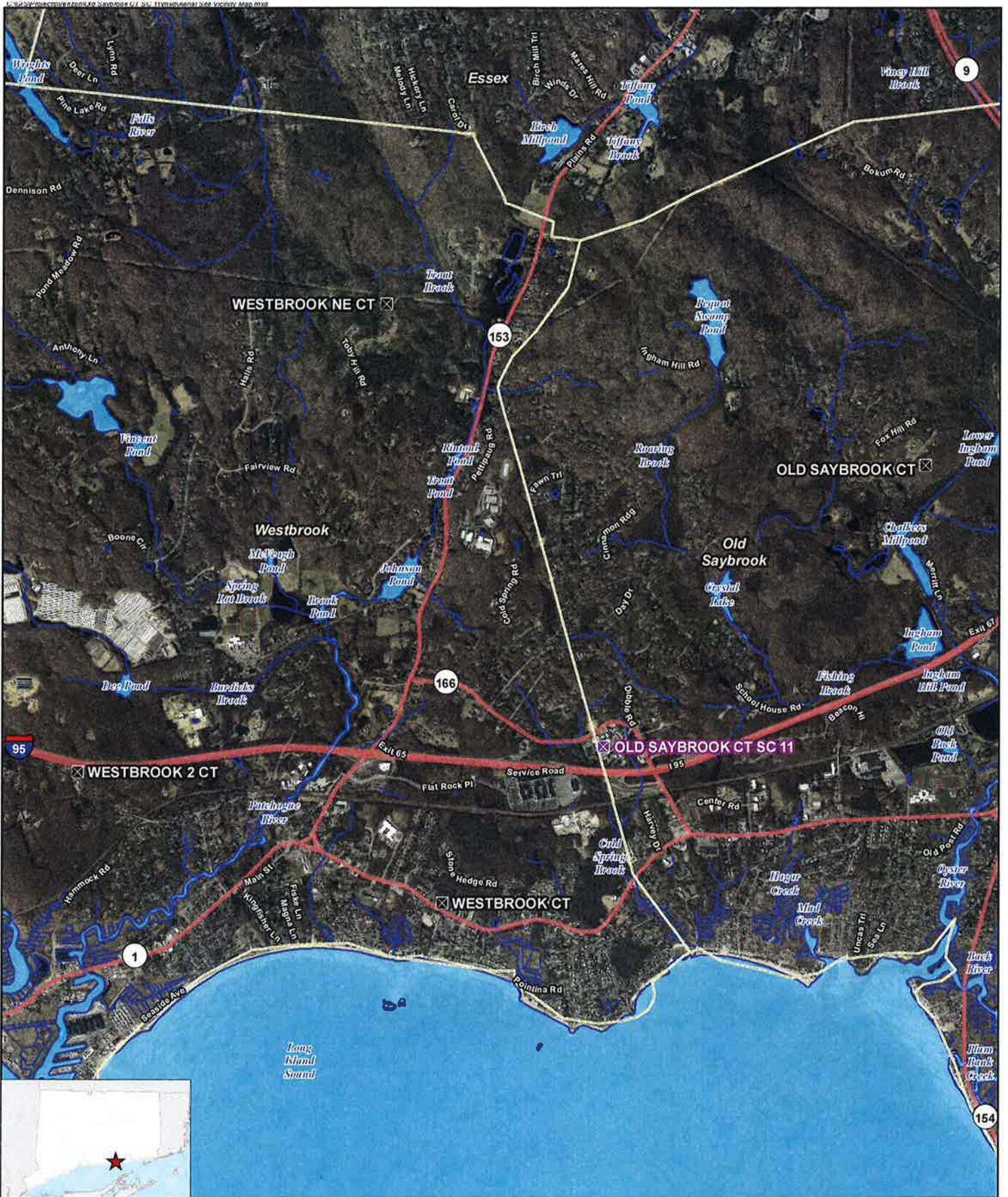
Respectfully submitted,

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

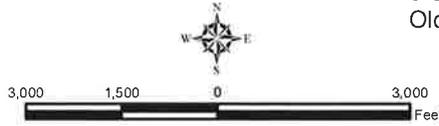


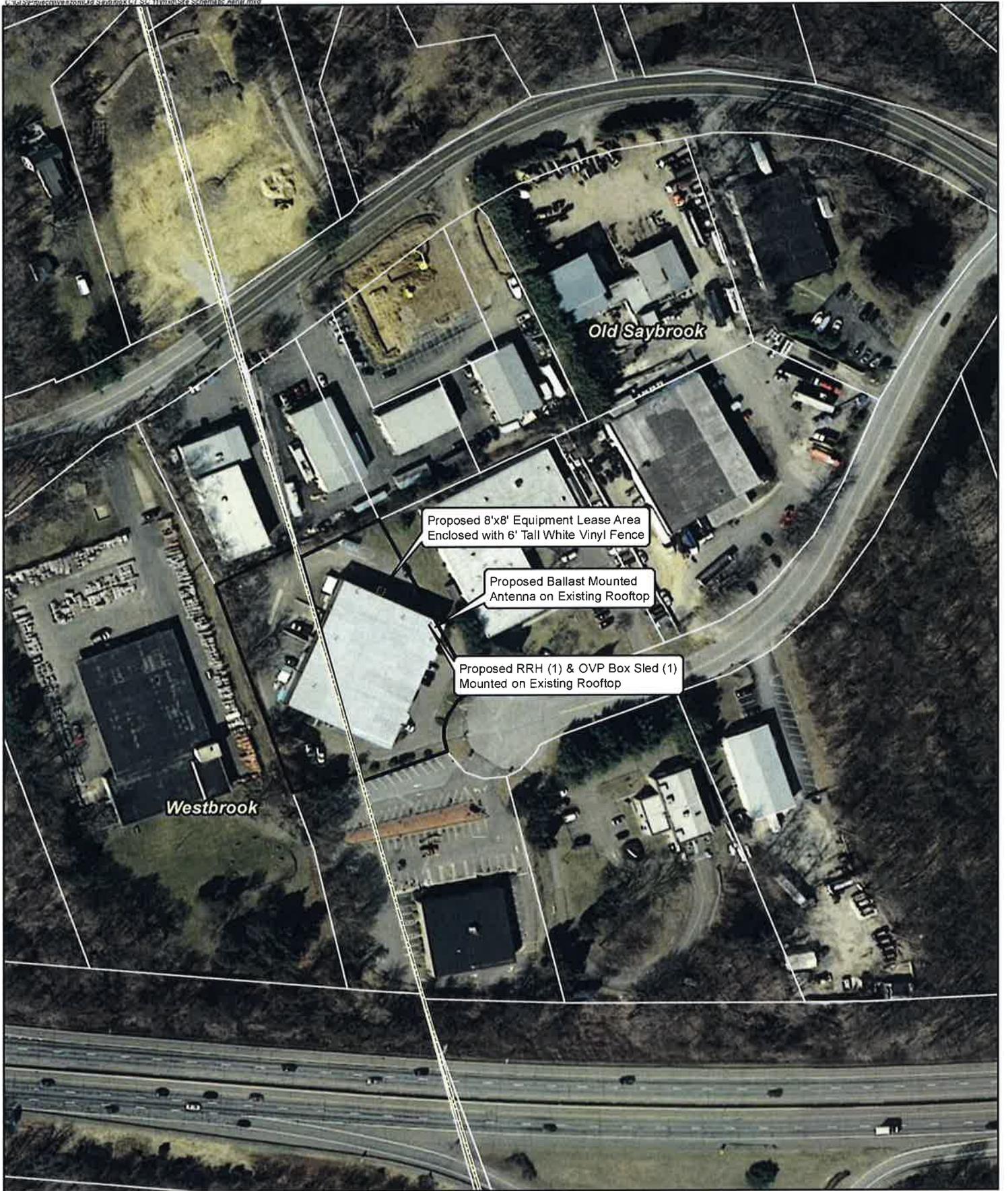
- Legend**
- X Proposed Verizon Wireless Small Cell Facility
 - X Surrounding Verizon Wireless Facilities
 - Municipal Boundary
 - ~ Watercourse
 - ~ Waterbody

Site Vicinity Map

Proposed Small Cell Installation
 Old Saybrook CT SC 11
 8 Custom Drive
 Old Saybrook, Connecticut

Base Map Source: 2012 Aerial Photograph (CTECO)
 Map Scale 1 inch = 3,000 feet
 Map Date: August 2015





Legend

- Proposed Equipment Lease Area
- Approximate Subject Property
- Approximate Parcel Boundary (CTDEEP GIS Parcels Last Updated 2010)
- Municipal Boundary

Map Notes:
 Base Map Source: 2012 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 150 feet
 Map Date: August 2015



Site Schematic

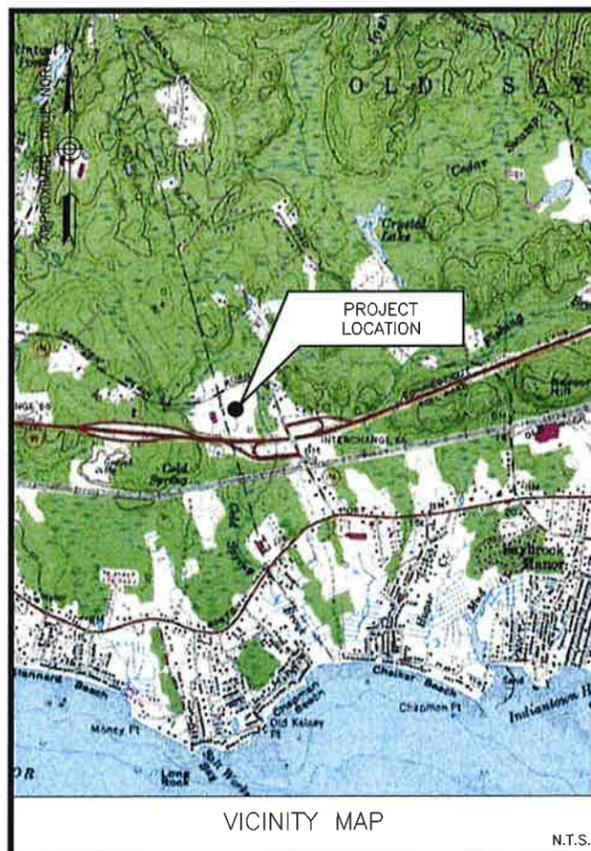
Proposed Small Cell Installation
 Old Saybrook CT SC 11
 8 Custom Drive
 Old Saybrook, Connecticut



ATTACHMENT 2

CELLCO PARTNERSHIP d/b/a **verizon**wireless

PROPOSED WIRELESS FACILITY
SITE NAME: OLD SAYBROOK CT SC 11
8 CUSTOM DRIVE
OLD SAYBROOK, CT 06475



DIRECTIONS FROM 99 EAST RIVER DRIVE, EAST HARTFORD, CT:

TAKE I-91 SOUTH TOWARD NEW HAVEN. AT EXIT 225, TAKE RAMP LEFT FOR CT-9 SOUTH TOWARD MIDDLETOWN/OLD SAYBROOK. TAKE RAMP RIGHT FOR US-1 SOUTH/I-95 SOUTH TOWARD NEW HAVEN/NY CITY. AT EXIT 66, TAKE RAMP RIGHT FOR CT-166. TURN RIGHT ONTO CT-166/SPENCER PLAIN RD. KEEP LEFT TO STAY ON CT-166/SPENCER PLAIN RD. TURN LEFT ONTO CUSTOM DR. SITE WILL BE ON THE RIGHT.

SITE COORDINATES:
 LATITUDE: N 41°-17'-31.17"
 LONGITUDE: W 72°-25'-26.49"
 (BASED ON GOOGLE EARTH)

ELEVATION DATA
 GRADE ELEVATION AT BUILDING = 19.3'± A.M.S.L.
 (BASED ON GOOGLE EARTH)

ELEVATION (TO TOP OF ANTENNA)
 ELEVATION = 31'-4"± A.G.L.

PROJECT INFORMATION

- THE SCOPE OF WORK SHALL INCLUDE:
1. THE INSTALLATION OF PROPOSED CELLCO PARTNERSHIP EQUIPMENT CABINETS LOCATED WITHIN A 8'-0"x8'-0" EQUIPMENT COMPOUND AT GRADE.
 2. A TOTAL OF ONE (1) PROPOSED CELLCO PARTNERSHIP ANTENNA AND ASSOCIATED APPURTENANCES ARE TO BE BALLAST MOUNTED ON AN EXISTING ROOFTOP AT AN ELEVATION OF 31'-4"± A.G.L. TO THE TOP OF THE ANTENNA.
 3. POWER SHALL BE ROUTED FROM DEMARC LOCATED ON EXTERIOR WALL OF BUILDING AND FIBER SHALL BE BROUGHT FROM CUSTOM DRIVE AND ROUTED TO THE PROPOSED CELLCO PARTNERSHIP EQUIPMENT COMPOUND LOCATED OUTSIDE AT GRADE. ROUTING SHOWN HEREIN IS SHOWN AS CONCEPTUAL. FINAL UTILITY DEMARC LOCATIONS AND ROUTING WILL BE COORDINATED WITH THE BUILDING OWNER AND LOCAL UTILITY COMPANIES.
 4. FINAL DESIGN & LOCATION OF PROPOSED ANTENNA MOUNTS & APPURTENANCES ARE PENDING A STRUCTURAL ANALYSIS.
 5. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.
- SCOPE OF WORK

SITE NAME:
 OLD SAYBROOK CT SC 11

SITE ADDRESS:
 8 CUSTOM DRIVE
 OLD SAYBROOK, CT 06475
 MIDDLESEX COUNTY

PROPERTY OWNER:
 PROSPECT REALTY PARTNERS LLC
 100 CLEARBROOK ROAD, 2ND FLOOR
 ELMSFORD, NY 10523

APPLICANT:
 CELLCO PARTNERSHIP
 d/b/a VERIZON WIRELESS
 99 EAST RIVER DRIVE
 EAST HARTFORD, CT 06108

SITE ACQUISITION CONTACT:
 JAMES SMITH
 STRUCTURE CONSULTING GROUP
 (860) 608-0028

LEGAL/REGULATORY COUNSEL:
 KENNETH C. BALDWIN, ESQ.
 ROBINSON & COLE
 (860) 275-8345

PROJECT INFORMATION

SHEET NUMBER	DESCRIPTION
T-1	TITLE SHEET
C-1	ABUTTERS MAP
C-2	PARTIAL SITE PLAN
C-3	NORTHEAST ELEVATION
SHEET INDEX	

CELLCO PARTNERSHIP
 d/b/a **verizon**wireless

**OLD SAYBROOK CT
 SC 11**

CSC DRAWINGS		
0	08/24/15	FINAL
A	08/13/15	FOR COMMENT

Dewberry®
 Dewberry Engineers Inc.
 600 PARSIPPANY ROAD
 SUITE 301
 PARSIPPANY, NJ 07054
 PHONE: 973.739.9400
 FAX: 973.739.9710

JIANG YU, P.E.
 CONNECTICUT LICENSE NO. 0023222

DRAWN BY: JC

REVIEWED BY: DER

CHECKED BY: GHN

PROJECT NUMBER: 50067815

JOB NUMBER: 50067834

SITE ADDRESS

8 CUSTOM DRIVE
 OLD SAYBROOK, CT 06475

SHEET TITLE

TITLE SHEET

SHEET NUMBER

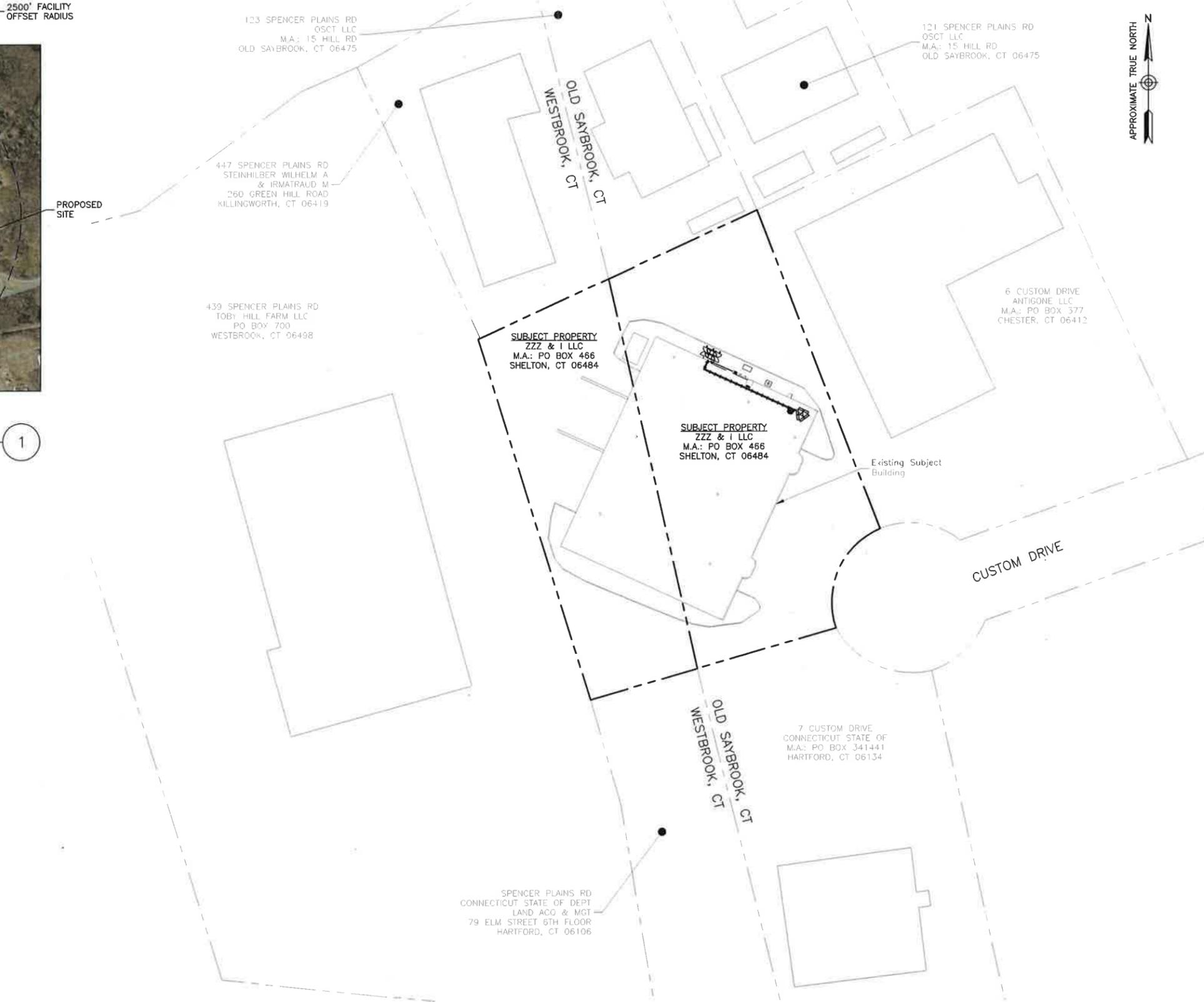
T-1



MUNICIPALITY NOTIFICATION LIMIT MAP

SCALE: N.T.S.

1



NOTES:

1. ABUTTERS MAP BASED ON INFORMATION OBTAINED FROM THE TOWN OF OLD SAYBROOK GEOGRAPHIC INFORMATION SYSTEM.

ABUTTERS MAP

SCALE: 1"=80' FOR 11"x17"
1"=40' FOR 22"x34"



2

CELLCO
PARTNERSHIP
d/b/a **verizon**wireless

**OLD SAYBROOK CT
SC 11**

CSC DRAWINGS		
0	08/24/15	FINAL
A	08/13/15	FOR COMMENT

Dewberry®

Dewberry Engineers Inc.
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PARSIPPANY, NJ 07054
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8 CUSTOM DRIVE
OLD SAYBROOK, CT 06475

SHEET TITLE

ABUTTERS MAP

SHEET NUMBER

C-1

**OLD SAYBROOK CT
SC 11**

CSC DRAWINGS

0	08/24/15	FINAL
A	08/13/15	FOR COMMENT



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SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
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CONNECTICUT LICENSE NO. 0023222

DRAWN BY: JC

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CHECKED BY: GHN

PROJECT NUMBER: 50067815

JOB NUMBER: 50067834

SITE ADDRESS

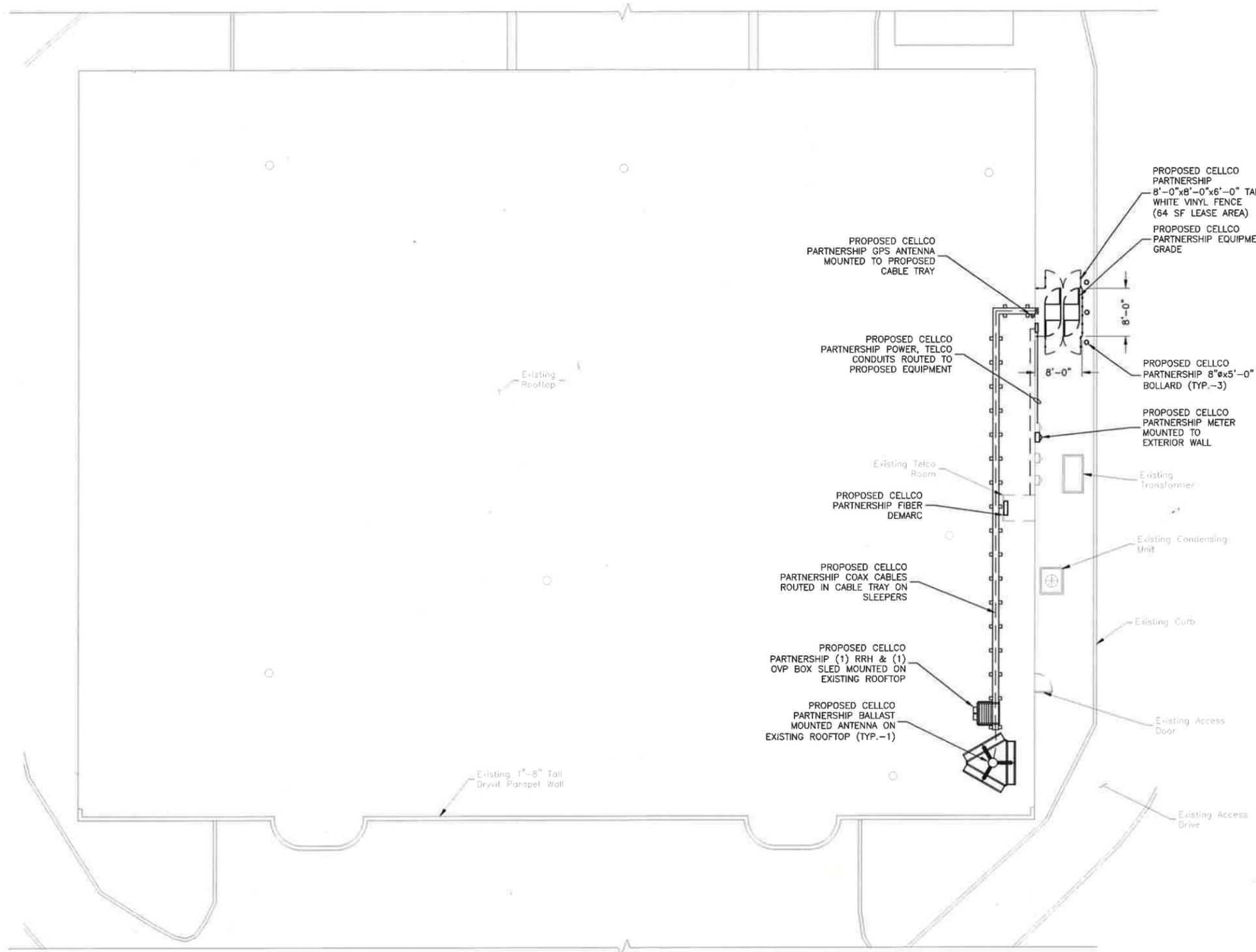
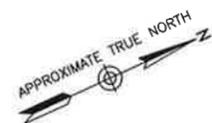
8 CUSTOM DRIVE
OLD SAYBROOK, CT 06475

SHEET TITLE

PARTIAL SITE PLAN

SHEET NUMBER

C-2



- NOTES:**
1. NORTH SHOWN AS APPROXIMATE.
 2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 3. THESE DRAWINGS ARE PROVIDED FOR SITING COUNCIL REVIEW. CONSTRUCTION LEVEL DRAWINGS WILL BE DEVELOPED SUBSEQUENT TO THE APPROVAL OF THESE DRAWINGS.
 4. LOCATION & ORIENTATION OF ANTENNAS, COAX, & APPURTENANCES PENDING A STRUCTURAL ANALYSIS.
 5. GROUND WILL BE TO PROPOSED GROUND RODS.
 6. SITE PLAN & ELEVATION BASED ON SITE VISIT BY DEWBERRY ENGINEERS INC. ON 02/27/15.
 7. FINAL ELECTRICAL DESIGN TBD.

PARTIAL SITE PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"



1

**OLD SAYBROOK CT
SC 11**

CSC DRAWINGS		
0	08/24/15	FINAL
A	08/13/15	FOR COMMENT

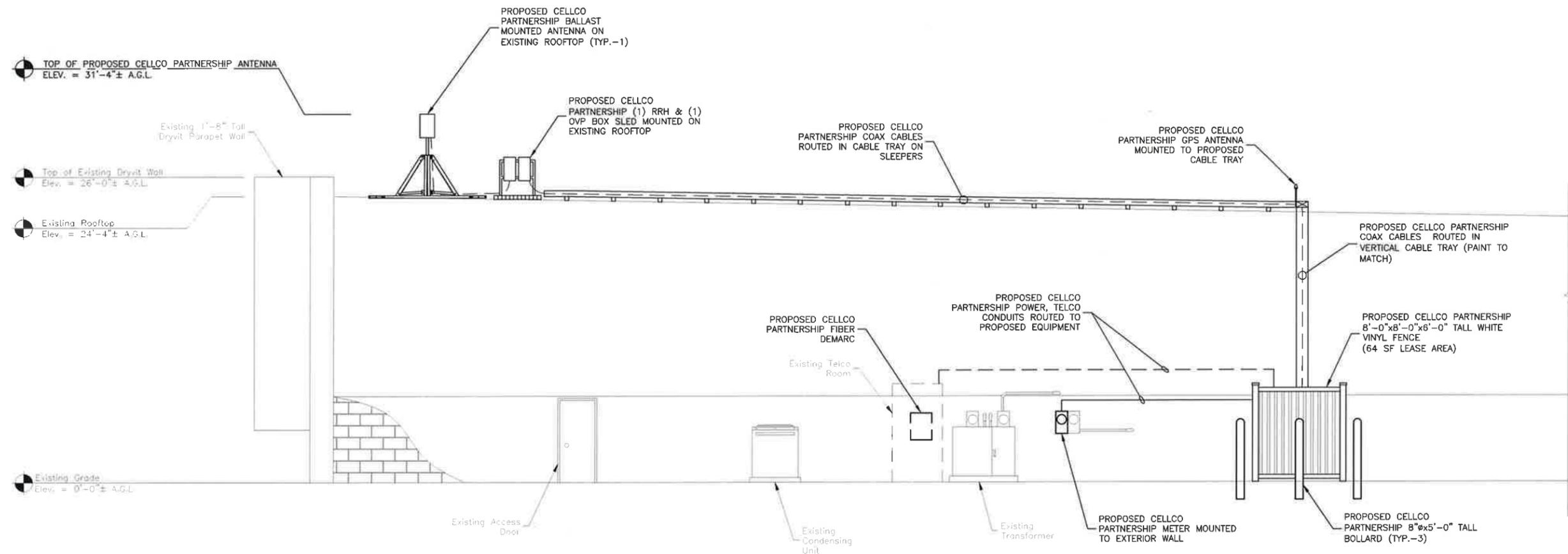
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CONNECTICUT LICENSE NO. 0023222

DRAWN BY:	JC
REVIEWED BY:	DER
CHECKED BY:	GHN
PROJECT NUMBER:	50067815
JOB NUMBER:	50067834

SITE ADDRESS
8 CUSTOM DRIVE
OLD SAYBROOK, CT 06475

SHEET TITLE
NORTHEAST ELEVATION
SHEET NUMBER



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 - FINAL ELECTRICAL DESIGN TBD.



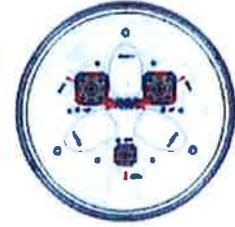
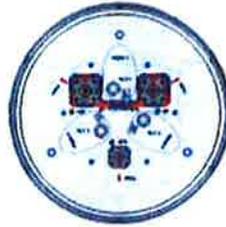
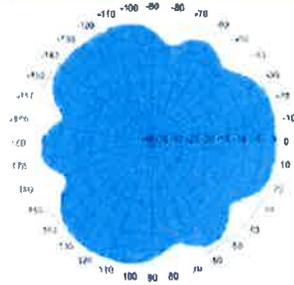
ATTACHMENT 3

Metro Cell Antennas with Internal Diplexer and GPS Antenna

Dualband Quasi-Omni (360°), Metro Cell Antenna

NH360QS-DG-F0M

NH360QT-DG-F0



ELECTRICAL SPECIFICATIONS										
Operating Frequency Range	698 - 896 and 1710 - 2170 MHz					698 - 896 and 1710 - 2170 MHz				
Frequency Bands, MHz	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170
Polarization	±45°	±45°	±45°	±45°	±45°	±45°	±45°	±45°	±45°	±45°
Gain, dBi	4.3	5.3	8.0	8.1	8.5	1.3	2.3	4.0	4.2	4.5
Beamwidth, Horizontal, degrees	360	360	360	360	360	360	360	360	360	360
Beamwidth, Vertical, degrees	30.0	24.0	16.0	15.0	14.0	60.0	55.0	32.5	30.0	28.5
USLS, dB	12	12	14	13	13	-	-	14	12	11
Beam Tilt, degrees	0	0	0-16	0-16	0-16	0	0	0	0	0
Isolation, dB	25	25	25	25	25	25	25	25	25	25
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)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)	1.5 (14.0)
PIM, 3rd Order, 2 x 20 W, dBc	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50
Input Power per Port, maximum, watts	250	250	250	250	250	250	250	250	250	250
MECHANICAL SPECIFICATIONS										
Connector Interface	7 - 16 DIN Female					7 - 16 DIN Female				
Connector Quantity, Location	2, Bottom					2, Bottom				
GPS Connector Interface	4.1/9.5 DIN female					4.1/9.5 DIN Female				
GPS Connector Quantity, Location	1, Bottom					1, Bottom				
Length, mm (inch)	730 (28.7)					360 (14.2)				
Outer Diameter, mm (inch)	305 (12.0)					305 (12.0)				
Wind Speed, maximum, km/h (mph)	241.4 (150)					241.4 (150)				
Net Weight, kg (lb)	20.0 (44.1)					12.0 (26.5)				
AVAILABILITY										
Expected Ready Date for Manufacturing	March 2014					June 2014				

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

The Alcatel-Lucent RRH2x60-AWS 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 RRH2x60-AWS 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 RRH2x60-AWS integrates all the latest technologies. This allows 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 RRH2x60-AWS 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 RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

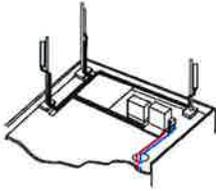
EASY INSTALLATION

The RRH2x60-AWS 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.

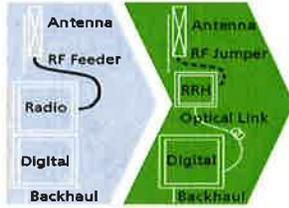
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

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

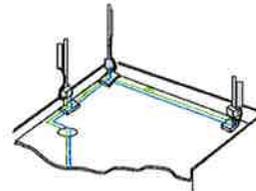
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

FEATURES

- RRH2x60-AWS integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- RRH2x60-AWS is optimized for LTE operation
- RRH2x60-AWS 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 : 510x285x186mm (27 l with solar shield)
- Weight : 20 kg (44 lbs)

Electrical Data

- Power Supply : -48V DC (-40.5 to -57V)
- Power Consumption (ETSI average traffic load reference) : 250W @2x60W

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 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 500m using MM fiber, up to 20km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Six 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, CE Mark – European Directive : 2002/95/EC (ROHS); 2002/96/EC (WEEE); 1999/5/EC (R&TTE)
- Health : EN 50385

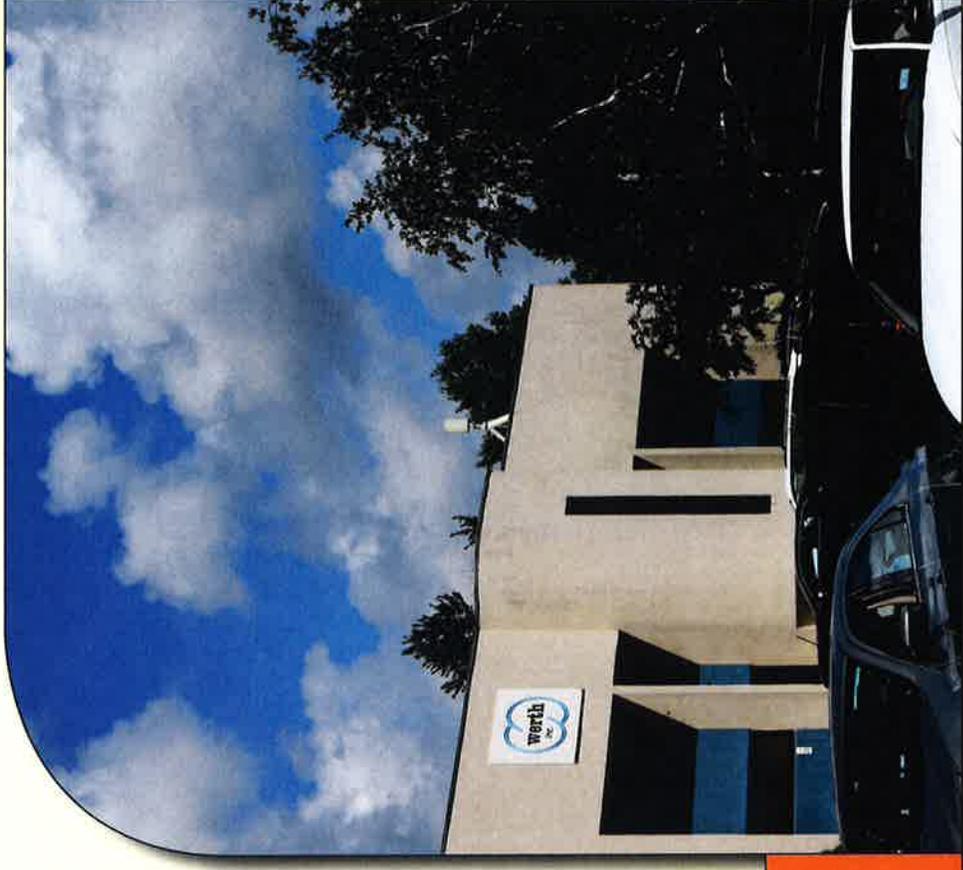
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ATTACHMENT 4

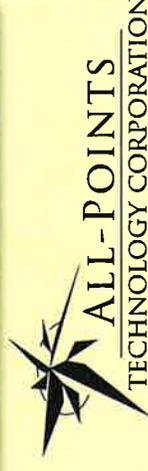
Limited Visual Assessments and Photo-Simulations

OLD SAYBROOK CT SC11
8 CUSTOM DRIVE
OLD SAYBROOK, CT



Prepared in September 2015 by:
All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06141

Prepared for Verizon Wireless



LIMITED VISUAL ASSESSMENT & PHOTO-SIMULATIONS

At the request of Cellco partnership LLC d/b/a Verizon Wireless, All-Points Technology Corporation, P.C. ("APT") completed a limited visual assessment and prepared computer-generated photo-simulations depicting the proposed installation of a wireless telecommunications Facility at 8 Custom Drive in Old Saybrook, Connecticut (the "Property").

Project Setting

The Property is located at the west side end of the Custom Drive cul-de-sac in an industrial park north of Interstate 95. The Property is developed with a multi-story building currently occupied by several tenants. The proposed Facility would include the installation of a single canister antenna ballast-mounted atop the northeast corner of the rooftop; the top of the canister would extend approximately seven (7) feet above the rooftop. An OVP box and remote radio head would be sled-mounted next to the antenna and extend approximately three (3) feet above the roof. Coax cables would extend westward across the roof and then down the building's side to a grass area where an 8-foot by 8-foot ground equipment enclosure will be located. The enclosure would be surrounded by a 6-foot tall, white vinyl fence and multiple bollards for protection from the adjacent parking lot. A GPS antenna would also be mounted to the roof at a point where the coax cable descends towards the ground.

Methodology

On August 19, 2015, APT personnel conducted field reconnaissance and photo-documented existing conditions. Three (3) nearby locations were selected to depict existing and proposed conditions with the new 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.

"The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm."¹

Three-dimensional computer models were developed for the building and proposed facility 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 Facility was scaled to the correct location and height, relative to the existing structure and surrounding area. For

¹ Warren, Bruce. *Photography*, West Publishing Company, Eagan, MN, c. 1993, (page 70).

presentation purposes in this report, all of the photographs were produced in an approximate 7-inch by 10.5-inch format². A photolog map and copies of the existing conditions and photo-simulations are attached.

Conclusions

The visibility of the proposed installation would be limited primarily to adjacent locations in the industrial park to the north and east and, to a lesser extent south. It will not be visible from locations to the west. The most prominent views would be achieved from the cul-de-sac, where the northeast corner of the building can be seen. The equipment enclosure's location against the east face of the building limits views to the parking lot and travel way; its concealment behind a fence will mitigate any direct views of ground equipment. Based on the results of this assessment, it is our opinion that the proposed installation of Verizon Wireless equipment at the Property would have little to no adverse effect on existing views.

² When viewing in this format size, we believe it is important to provide the largest representational image while maintaining an accurate relation of sizes between objects within the frame of the photograph and depicting the subject in a way similar to what an observer might see, to the greatest extent possible.

ATTACHMENTS



PHOTO LOG

Legend

-  Site
-  Photo Location





EXISTING

PHOTO

1

LOCATION

CUSTOM DRIVE

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 193 FEET



PROPOSED

PHOTO

1

LOCATION

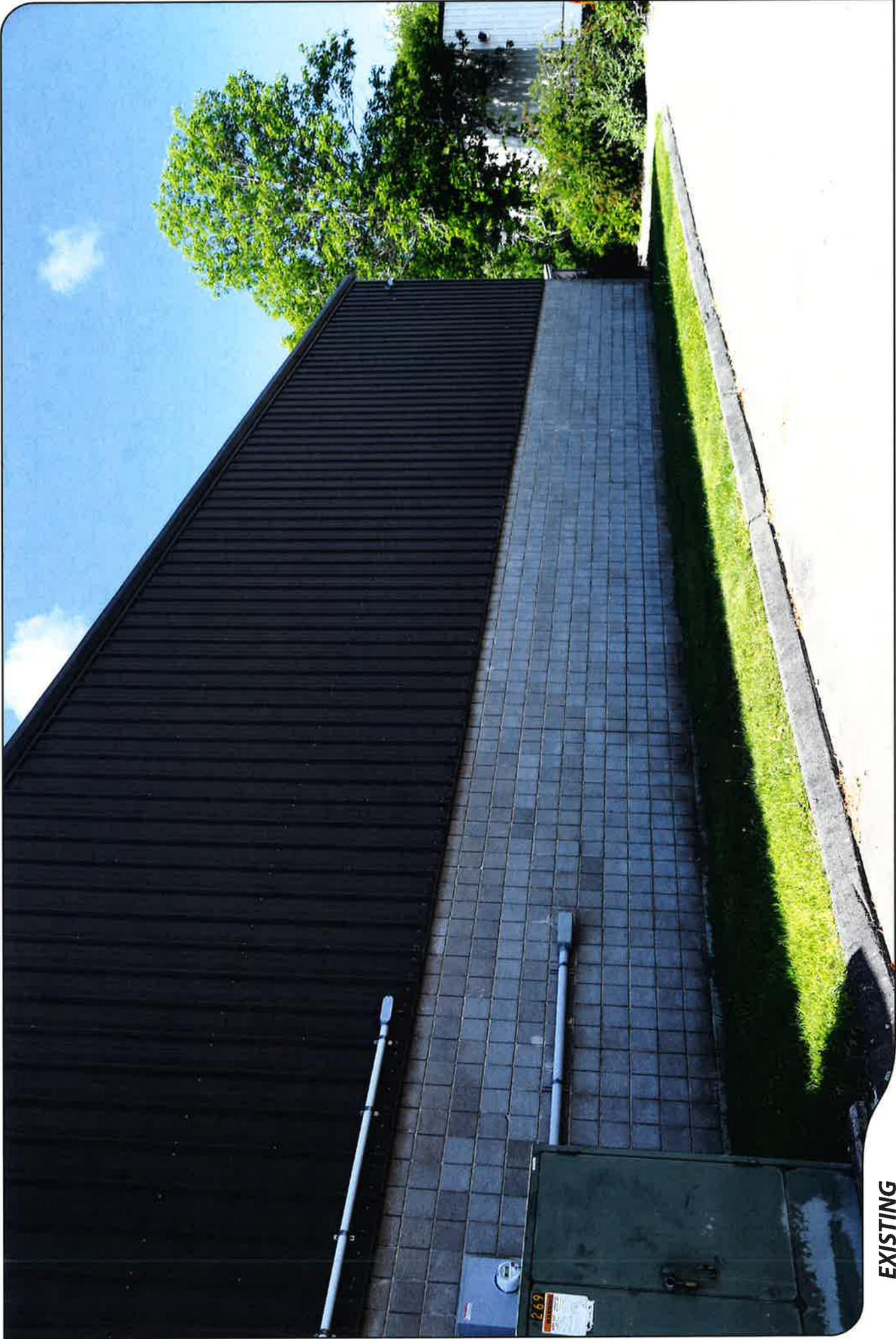
CUSTOM DRIVE

ORIENTATION

NORTHWEST

DISTANCE TO SITE

+/- 193 FEET



EXISTING

PHOTO

2

LOCATION

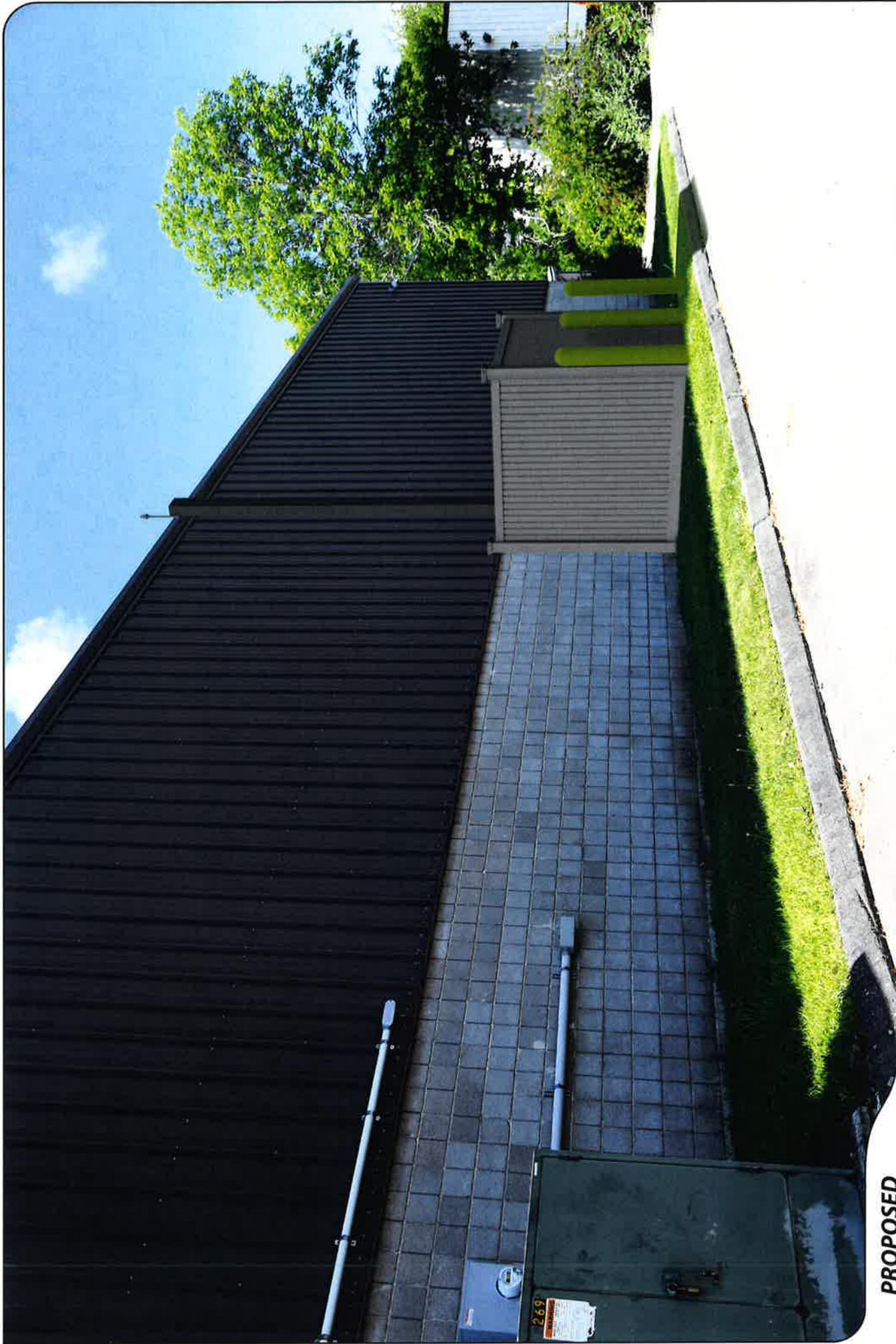
HOST PROPERTY (35mm Focal Length)

ORIENTATION

WEST

DISTANCE TO SITE

+/- 45 FEET



PROPOSED

PHOTO

2

LOCATION

HOST PROPERTY (35mm Focal Length)

ORIENTATION

WEST

DISTANCE TO SITE

+/- 45 FEET



EXISTING

PHOTO

3

LOCATION

OLD SAYBROOK DMV

ORIENTATION

NORTH

DISTANCE TO SITE

+/- 257 FEET



PROPOSED

PHOTO

3

LOCATION

OLD SAYBROOK DMV

ORIENTATION

NORTH

DISTANCE TO SITE

+/- 257 FEET

ATTACHMENT 5

Site Name: **OLD SAYBROOK CT SC11**
 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 ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
VZW AWS	2145	1	320	320	30	0.1279	1.0000	12.79%
Total Percentage of Maximum Permissible Exposure								12.79%

*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/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.

ATTACHMENT 6

* Federal Airways & Airspace *
* Summary Report: Alteration Of Existing Structure *
* Antenna Structure *
*

Airspace User: Jaime Laredo

File: OLD_SAYBROOK_CT_SC11

Location: Old Saybrook, CT

Latitude: 41°-17'-30.70" Longitude:
72°-25'-27.51"

SITE ELEVATION AMSL.....31.6 ft.
STRUCTURE HEIGHT.....31 ft.
OVERALL HEIGHT AMSL.....63 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 SNC
- FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for 42B
- 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.

If the proposed construction is an alteration to an existing structure, notice requirements may be superceded by the item exemptions listed below.

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.

No frequencies were identified in this alteration are included in the FAA's Co-Location Policy published in the Federal Register November 15, 2007.

Therefore, application of the Co-Location Policy notice exemption rule can not be applied.

Title 14 CFR Part 77.9(e), Notice Criteria Exception:
The location and analysis were based upon an existing antenna structure with the alteration limited to the addition of an antenna with a height increase of more than one (1) foot. Title 14 CFR Part 77.9(e)(4) specifically prohibits application of this rule when adding an antenna to an existing antenna structure. If the increase in height of the existing antenna structure exceeds notice requirements, notice to the FAA is mandatory.

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: SNC: CHESTER

Type: A RD: 39093.74 RE: 408
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

VFR TRAFFIC PATTERN AIRSPACE FOR: 42B: GOODSPEED

Type: A RD: 54257.78 RE: 7
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 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 1500 ft AMSL

PRIVATE LANDING FACILITIES

FACIL	BEARING	RANGE	DELTA
IDENT TYP NAME	To FACIL	IN NM	
ELEVATION IFR			
CT97 HEL MIDDLESEX HOSPITAL	355.64	2.23	+7
No Impact to Private Landing Facility Structure is beyond notice limit by 8550 feet.			
CT78 SEA LORD CREEK	41.25	4.75	+62
No Impact to VFr Transitional Surface. Below surface height of 375 ft above ARP.			
CT16 SEA FETSKE	24.31	5.47	+62
No Impact to VFR Transitional Surface. Below surface height of 447 ft above ARP.			
5CT7 AIR MILE CREEK	83.84	5.83	+32
No Impact to VFR Transitional Surface. Below surface height of 483 ft above ARP.			

AIR NAVIGATION ELECTRONIC FACILITIES

FAC	ST	DIST	DELTA
APCH	AT	FREQ	VECTOR
IDNT	TYPE	(ft)	ELEVA
GRND	BEAR	ST	LOCATION
MAD	VOR/DME	R	110.4 276.3
-.12			74034 -157 CT MADISON
GON	VOR/DME	R	110.8 82.06
.03			103253 +54 CT GROTON
HVN	VOR/DME	R	109.8 264.99
.03			127138 +57 CT NEW HAVEN
HFD	VOR/DME	R	114.9 345.19
-.34			131644 -786 CT HARTFORD

.02	HTO	VORTAC	I	113.6	167.72	139061	+41	NY	HAMPTON
-.09	ORW	VOR/DME	I	110.0	50.27	151245	-247	CT	NORWICH
-.1	QVH	RADAR ARSR	Y	1326.9	205.63	167080	-288	NY	RIVERHEAD
-.01	CCC	VOR/DME	R	117.2	217.9	167549	-22	NY	CALVERTON
0.00	FOK	TACAN	R	NA	199.01	175072	+13	NY	SUFFOLK CO
-.05	OKX	RADAR WXL	Y		217.82	197020	-158	NY	BRENTWOOD
.02	BDR	VOR/DME	R	108.8	255.83	198453	+54	CT	BRIDGEPORT

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.

Nearest AM Station: WLIS @ 4935 meters.

Airspace® Summary Version 15.7.400

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08-28-2015
 08:59:21

ATTACHMENT 7

September 15, 2015

Via Certificate of Mailing

Carl P. Fortuna, Jr., First Selectman
Town of Old Saybrook
Town Hall
302 Main Street
Old Saybrook, CT 06475

Re: **Installation of a Roof-Top Telecommunications Facility at 8 Custom Drive, Old Saybrook, Connecticut**

Dear Mr. Fortuna:

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 roof-top telecommunications tower at 8 Custom Drive in Old Saybrook, Connecticut (the “Property”).

The proposed facility would consist of a seven-foot tall tower attached to the roof of the existing industrial building at the Property. The tower would support a single canister-type antenna. A remote radio head (RRH) and OVP box will be attached to an equipment support structure also on the roof. The tower and antenna will extend to a height of 31’-4” above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located on the north side of the building.

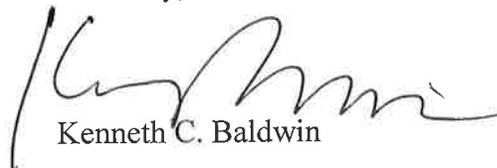
A copy of Cellco’s Petition is attached for your review. Landowners whose property abuts 8 Custom Drive site were also sent a copy of the Petition.

Robinson+Cole

Carl P. Fortuna, Jr.
September 15, 2015
Page 2

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth C. Baldwin', written in a cursive style.

Kenneth C. Baldwin

KCB/kmd
Attachment

September 15, 2015

Via Certificate of Mailing

Noel Bishop, First Selectman
Town of Westbrook
866 Boston Post Road
Westbrook, CT 06498

Re: Installation of a Roof-Top Telecommunications Facility at 8 Custom Drive, Old Saybrook, Connecticut

Dear Mr. Bishop:

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 roof-top telecommunications tower at 8 Custom Drive in Old Saybrook, Connecticut (the “Property”).

The proposed facility would consist of a seven-foot tall tower attached to the roof of the existing industrial building at the Property. The tower would support a single canister-type antenna. A remote radio head (RRH) and OVP box will be attached to an equipment support structure also on the roof. The tower and antenna will extend to a height of 31’-4” above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located on the north side of the building.

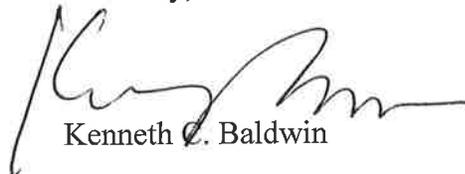
You are receiving this notice because the Town of Westbrook is located within 2,500 feet of the proposed facility. A copy of Cellco’s Petition is attached for your review. Landowners whose property abuts 8 Custom Drive site were also sent a copy of the Petition.

Robinson+Cole

Noel Bishop
September 15, 2015
Page 2

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth C. Baldwin', written in a cursive style.

Kenneth C. Baldwin

KCB/kmd
Attachment

September 15, 2015

Via Certificate of Mailing

ZZZ & I LLC
P.O. Box 466
Shelton, CT 06484

Re: **Installation of a Roof-Top Telecommunications Facility at 8 Custom Drive, Old Saybrook, 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 roof-top telecommunications tower at 8 Custom Drive in Old Saybrook, Connecticut (the “Property”).

The proposed facility would consist of a seven-foot tall tower attached to the roof of the existing industrial building at the Property. The tower would support a single canister-type antenna. A remote radio head (RRH) and OVP box will be attached to an equipment support structure also on the roof. The tower and antenna will extend to a height of 31’-4” above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located on the north side of the building.

A copy of Cellco’s Petition is attached for your review. Landowners whose property abuts 8 Custom Drive site were also sent a copy of the Petition.

Robinson+Cole

ZZZ & I LLC
September 15, 2015
Page 2

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

Sincerely,



Kenneth C. Baldwin

KCB/kmd
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 15, 2015

Via Certificate of Mailing

«Name_and_Address»

Re: Installation of a Roof-Top Telecommunications Facility at 8 Custom Drive, Old Saybrook, 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 roof-top telecommunications tower at 8 Custom Drive in Old Saybrook, Connecticut (the “Property”).

The proposed facility would consist of a seven-foot tall tower attached to the roof of the existing industrial building at the Property. The tower would support a single canister-type antenna. A remote radio head (RRH) and OVP box will be attached to an equipment support structure also on the roof. The tower and antenna will extend to a height of 31’-4” above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located on the north side of the building. A copy of Cellco’s Petition is attached for your review.

This notice is being sent to you because you are listed as an owner of land that abuts the Property. If you have any questions regarding the Petition, the Council’s process for reviewing the proposed 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 15, 2015
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

8 CUSTOM DRIVE, OLD SAYBROOK, CONNECTICUT

Old Saybrook

	Property Address	Owner's and Mailing Address
1.	123 Spencer Plains Road	OSCT LLC 15 Hill Road Old Saybrook, CT 06475
2.	121 Spencer Plains Road	OSCT LLC 15 Hill Road Old Saybrook, CT 06475
3.	6 Custom Drive	Antigone LLC P.O. Box 377 Chester, CT 06412
4.	7 Custom Drive	State of Connecticut P.O. Box 341441 Hartford, CT 06134

Westbrook

5.	Spencer Plains Road	State of Connecticut Land Acq. And Management 79 Elm Street, 6 th Floor Hartford, CT 06106
6.	439 Spencer Plains Road	Toby Hill Farm LLC P.O. Box 700 Westbrook, CT 06498
7.	447 Spencer Plains Road	Wilhelm A. and Irmatraud A. Steinhilber 260 Green Hill Road Killingworth, CT 06419