STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP 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 ATTACHED TO A BUILDING AT 137 SOUTH MAIN STREET, WEST HARTFORD, CONNECTICUT	:	PETITION NO. ____
	:	AUGUST 14, 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 tower, attached to an existing commercial building at 137 South Main Street in West Hartford, Connecticut (the "Property"). The building and Property are owned by Lexham Avon LLC. Cellco has designated this site as its West Hartford SC1 Facility.

II. Factual Background

The Property is a 1.41-acre parcel at the southwest corner of South Main Street and Sedgewick Road in West Hartford. The Property is zoned R-10 Residential and is surrounded by

commercial and residential uses. *See* Attachment 1 – Site Vicinity Map and Site Schematic (Aerial Photograph). Cellco is licensed to provide wireless telecommunications services in the 700 MHz, 850 MHz, 1900 MHz and 2100 MHz frequency ranges in West Hartford and throughout the State of Connecticut. Initially, the proposed West Hartford SC1 Facility will provide wireless service in Cellco's 2100 MHz frequency range only and provide capacity relief to Cellco's surrounding cell sites.

III. Proposed "Small Cell" Facility

The proposed West Hartford SC1 Facility would consist of a small tower, attached to the westerly side of the existing commercial building at the Property. The tower would support a single canister-type small cell antenna and a Remote Radio Head ("RRH") and would extend approximately eight (8) feet above the roof of the building (approximately 29 feet above ground level). Equipment associated with the West Hartford SC 1 Facility will be located in a lower level utility room inside the building. Power and telephone service to the West Hartford SC 1 Facility will extend from existing service inside the building. (*See* Cellco's Project Plans included in Attachment 2). Specifications for the "small cell" antenna (Commscope Model NH360QS-DG-F0M) and RRH (Model 2X60-AWS) 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[1] 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 small tower attached to the building at the Property, supporting a single "small cell" canister-type antenna and RRH and the placement of an equipment inside the building, will not involve a significant alteration in the physical and environmental characteristics of the Property or the surrounding commercial and residential area. There is no ground disturbance associated with the proposed installation as all improvements are located either on or inside the existing building.

2. Visual Effects

The installation of a small tower, a single canister-type antenna and RRH attached to the existing commercial building at the Property, would have minimal visual effects on the Property and its surroundings. (*See* Limited Visual Assessment and Photo-Simulations ("Visual Report") included in Attachment 4). As concluded in the Visual Report, visibility of the proposed small cell installation would be limited primarily to locations immediately north and south of the Property. From these areas, other, more prominent utility infrastructure is also visible. The proposed small cell facility will not, therefore, have a significant impact on aesthetics in the area.

[1] Tower is defined as a structure, whether free standing or attached to a building or another structure, that has a height greater than its diameter and that is high relative to its surroundings and used to support antennas for sending or receiving radio signals. (*See* R.C.S.A. Section 16-50j-2a(23)).

3. FCC Compliance

Radio frequency ("RF") emissions from the proposed small cell installation will be far below the standard adopted by the Federal Communications Commission ("FCC"). Included in Attachment 5 is a worst-case General Power Density table demonstrating that Cellco's "small cell" facility will operate well within the FCC safety standard.

4. FAA Summary Report

Included in Attachment 6 is a Federal Airways & Airspace Summary Report verifying that the new tower, antenna and RRH installation attached to the building 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 August 14, 2015, a copy of this Petition was sent to West Hartford Mayor Scott Slifka, Town Manager Ronald Van Winkle, Town Planner Todd Dumais, and Lexham Avon LLC, the owner of the Property. Included in Attachment 7 is a copy of the letters sent to Mayor Slifka, Mr. Van Winkle, Mr. Dumais and Lexham Avon LLC. 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 those abutting landowners who received a copy 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 tower, attached to the building, and supporting a small cell canister antenna and a RRH 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.

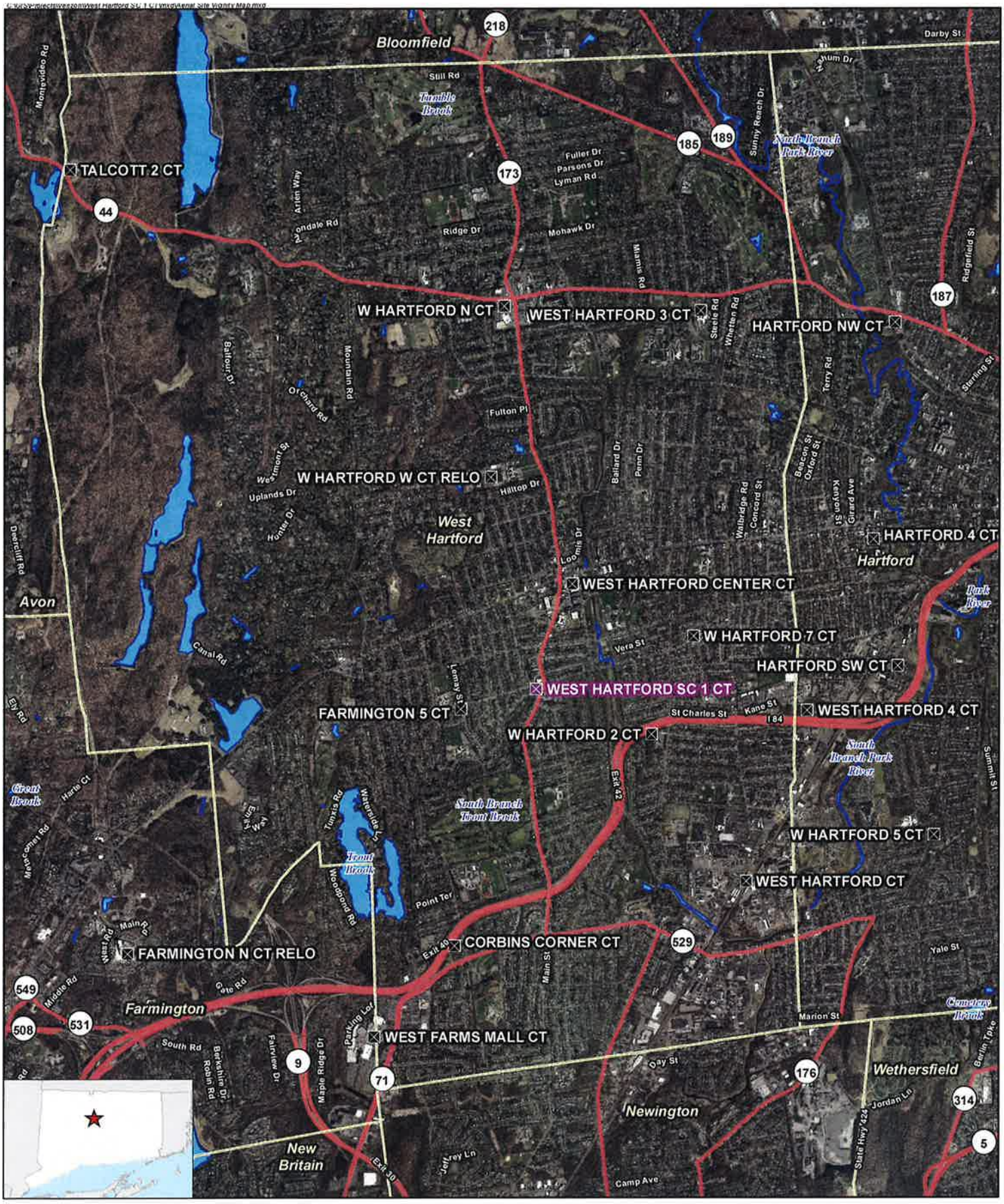
Respectfully submitted,

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

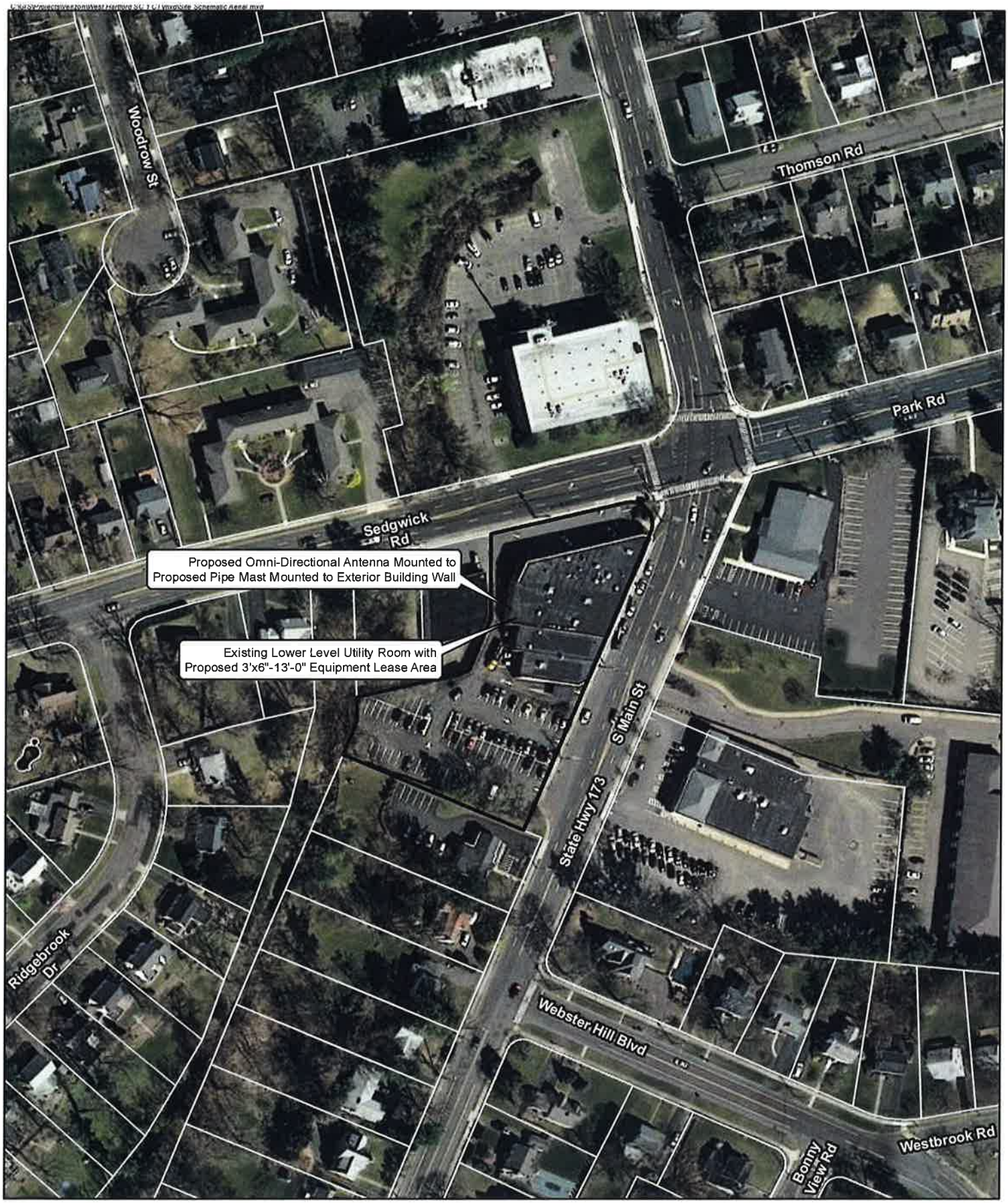
- Proposed Verizon Wireless Small Cell Facility
- Surrounding Verizon Wireless Facilities
- Municipal Boundary
- Waterbody

Site Vicinity Map

Proposed Small Cell Installation
West Hartford SC 1 CT
137 South Main Street
West Hartford, Connecticut

Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 4,000 feet
Map Date: July 2015

4,000 2,000 0 4,000 Feet



Legend

- Approximate Subject Property
- Approximate Parcel Boundary (CTDEEP GIS Parcels Last Updated 2010)

Site Schematic

Proposed Small Cell Installation
West Hartford SC 1 CT
137 South Main Street
West Hartford, Connecticut

N
W E
S

150 75 0 150
Feet

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

verizonwireless

ALL-POINTS

ATTACHMENT 2

Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

WEST HARTFORD SC1
137 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

SITE DIRECTIONS

FROM: 99 EAST RIVER DRIVE
EAST HARTFORD, CONNECTICUT

TO: 137 SOUTH MAIN STREET
WEST HARTFORD, CONNECTICUT

1.	HEAD NORTHEAST ON E RIVER DR TOWARD DARLIN ST	0.3 MI.
2.	TURN LEFT TO STAY ON E RIVER DR	354 FT.
3.	TURN LEFT AT THE 1ST CROSS STREET ONTO CONNECTICUT BLVD	0.2 MI.
4.	TURN LEFT ONTO THE I-84 W RAMP TO HARTFORD/I-91	482 FT.
5.	MERGE ONTO I-84 W	4.5 MI.
6.	TAKE EXIT 43 TOWARD PARK RD/W HARTFORD CENTER	0.5 MI.
7.	TURN LEFT ONTO PARK RD	0.4 MI.
8.	TURN LEFT ONTO S MAIN ST, AND DESTINATION WILL BE ON THE RIGHT	197 FT.

GENERAL NOTES

1. PROPOSED ANTENNA LOCATIONS AND HEIGHTS PROVIDED BY CELLCO PARTNERSHIP.

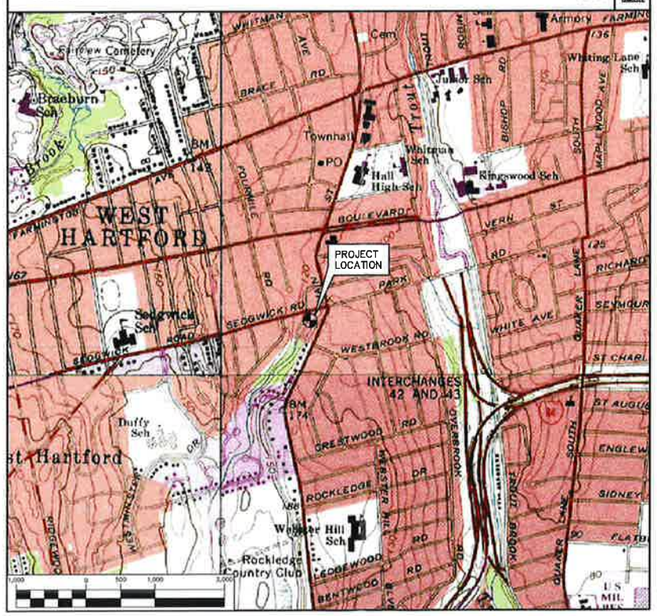
SITE INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

1. THE INSTALLATION OF A PROPOSED CELLCO PARTNERSHIP EQUIPMENT CABINET LOCATED IN LOWER LEVEL UTILITY ROOM OF SUBJECT BUILDING WITHIN ±3'-6"x13'-0" LEASE AREA.
2. A TOTAL OF ONE (1) PROPOSED CELLCO PARTNERSHIP ANTENNA AND ASSOCIATED APPURTENANCES ARE PROPOSED TO BE MOUNTED TO THE EXTERIOR WALL OF THE SUBJECT BUILDING AT A CENTERLINE ELEVATION OF ±27.8' AGL.
3. POWER AND TELCO UTILITIES SHALL BE ROUTED FROM DEMARCS LOCATED WITHIN OR ADJACENT TO THE EXISTING BUILDING TO THE PROPOSED CELLCO 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. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

SITE NAME:	WEST HARTFORD SC1
SITE ADDRESS:	137 SOUTH MAIN STREET WEST HARTFORD, CT 06107
PROPERTY OWNER:	LEXHAM AVON LLC 274 RIVERSIDE AVE PENTHOUSE WESTPORT, CT 06880
APPLICANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
VERIZON SITE ACQUISITION PERSON:	STEVE SCHADLER CELLCO PARTNERSHIP (508) 887-0357
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN, ESQ. ROBINSON & COLE (860) 257-8345
SITE COORDINATES:	LATITUDE 41°-45'-09.286" LONGITUDE 72°-44'-40.055" GROUND ELEVATION: 121.8'± A.M.S.L. COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 1-A SURVEY CERTIFICATION AS PREPARED FOR VERIZON WIRELESS BY MARTINEZ COUCH AND ASSOCIATES L.L.C., DATED JUNE 12, 2015.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	0
C-1	ABUTTERS MAP	0
C-2	PLANS, ELEVATION AND ANTENNA MOUNTING CONFIGURATION	0

PROFESSIONAL ENGINEER SEAL

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	06/10/15	HMR	DMD	ISSUED FOR CSC - CLIENT REVIEW

Cellco Partnership d.b.a. verizon wireless

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless
WIRELESS COMMUNICATIONS FACILITY
WEST HARTFORD SC1
137 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

DATE: 06/10/15
SCALE: AS NOTED
JOB NO. 14252.000

TITLE SHEET

T-1

SOUTH MAIN STREET

N/F
TOWN OF WEST HARTFORD
130 SOUTH MAIN STREET
M.A.: 50 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

N/F
SOUTHERN NEW ENGLAND TELEPHONE CO
125 SOUTH MAIN STREET
M.A.: 1 SBC CENTER RM 36-M-1
ST. LOUIS, MO 63101

PARK ROAD

SEDGWICK ROAD

N/F
TAYLOR & MODEEN REALTY CO
136 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

N/F
BROADWALK REALTY INC.
15 SEDGWICK ROAD
M.A.: CRAIG YELIN
20 WESTBOROUGH DRIVE
WEST HARTFORD, CT 06107

N/F
TOWN OF WEST HARTFORD PIPELINE - R/W
15 SEDGWICK ROAD
M.A.: 50 MAIN STREET SOUTH
WEST HARTFORD, CT 06107

N/F
TOWN OF WEST HARTFORD EXEMPT
15 SEDGWICK ROAD
M.A.: 50 MAIN STREET SOUTH
WEST HARTFORD, CT 06107

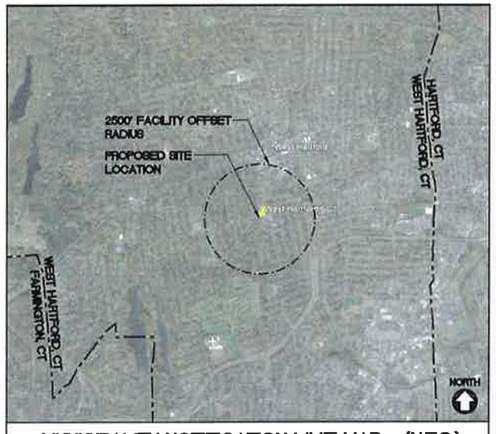
SUBJECT PROPERTY:
N/F
LEXHAM AVON LLC
137 SOUTH MAIN STREET
M.A.: 274 RIVERSIDE AVE PENTHOUSE
WESTPORT, CT 06880

SOUTH MAIN STREET

N/F
SAINT ELIZABETH MANOR II LLC
142 SOUTH MAIN STREET
M.A.: C/O RONCALLI INSTITUTE
PO BOX 427
PORTLAND, CT 06480

N/F
155 SOUTH MAIN LLC
155 SOUTH MAIN STREET
M.A.: 621 FARMINGTON AVENUE
HARTFORD, CT 06105

N/F
RPL ASSOCIATES I LLC
150 SOUTH MAIN STREET
M.A.: C/O AFS LEASE ACCOUNTING
PO BOX 6500
CARLISLE, PA 17013



MUNICIPALITY NOTIFICATION LIMIT MAP (N.T.S.)

1 / C-1 ABUTTERS MAP
SCALE: 1" = 40'

APPROXIMATE NORTH

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	08/10/15	HMR	DMD	ISSUED FOR CSC - CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

Cellco Partnership d.b.a. Verizon Wireless

CENTEK engineering
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WIRELESS COMMUNICATIONS FACILITY

WEST HARTFORD SC1

137 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

DATE: 08/10/15
SCALE: AS NOTED
JOB NO. 14252.000

ABUTTERS MAP

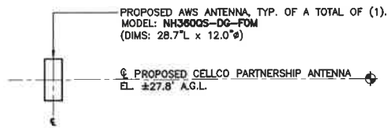
C-1

Sheet No. 2 of 3

RRH MOUNTING NOTE

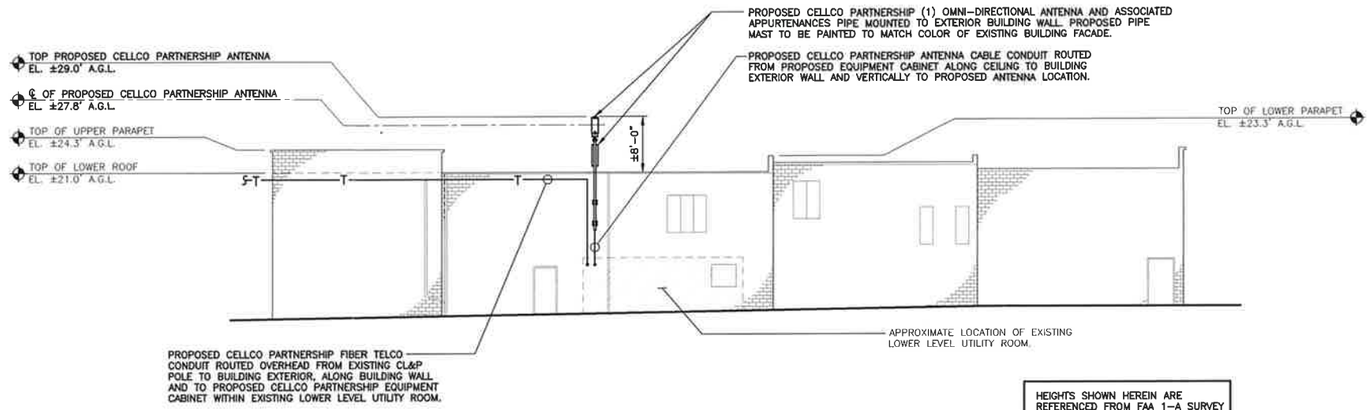
- AWS RRH (MODEL: **ALU RRH 2x60-AWS**
  (DIMS: 36.7"L x 10.6"W x 5.8"D)
  (TYP. OF 1)

MOUNTED TO PIPE MAST.



4 / C-2 ANTENNA MOUNTING CONFIGURATION

SCALE: 1/4" = 1'

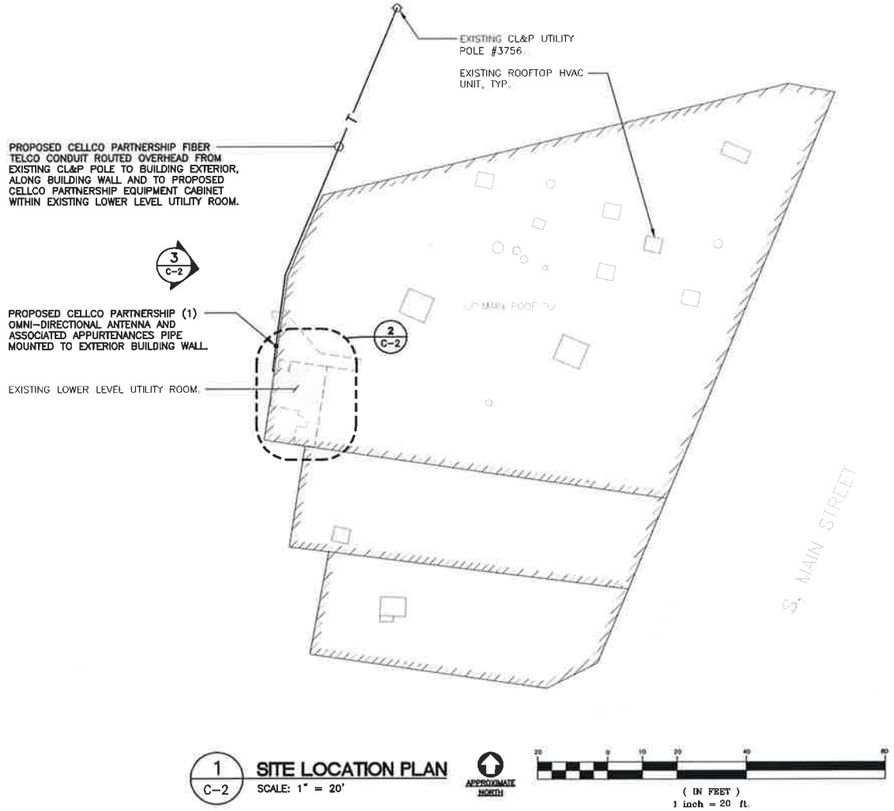


HEIGHTS SHOWN HEREIN ARE REFERENCED FROM FAA 1-A SURVEY CERTIFICATION AS PREPARED FOR VERIZON WIRELESS BY MARTINEZ COUCH AND ASSOCIATES L.L.C., DATED JUNE 12, 2015.

3 / C-2 WEST ELEVATION

SCALE: 1" = 10'

(IN FEET)
1 inch = 10 ft.

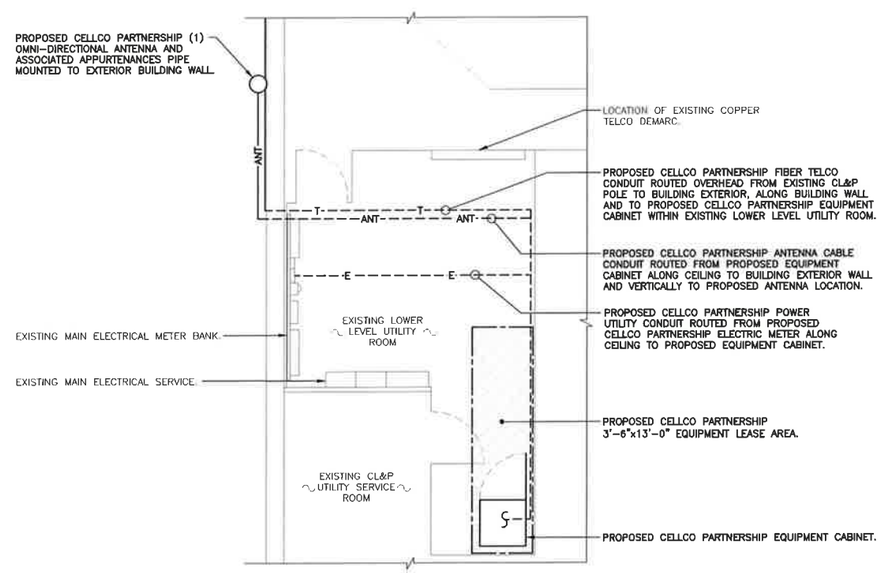


1 / C-2 SITE LOCATION PLAN

SCALE: 1" = 20'

APPROXIMATE NORTH

(IN FEET)
1 inch = 20 ft.



2 / C-2 LOWER LEVEL UTILITY ROOM PLAN

SCALE: 1/4" = 1'

APPROXIMATE NORTH

(IN FEET)
1 inch = 4 ft.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	08/10/15	HMR	DMD	ISSUED FOR CSC - CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

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WEST HARTFORD SC1

137 SOUTH MAIN STREET
WEST HARTFORD, CT 06107

DATE:	08/10/15
SCALE:	AS NOTED
JOB NO.	14252.000

PLANS, ELEVATION AND ANTENNA MOUNTING CONFIG.

C-2

Sheet No. 3 of 3

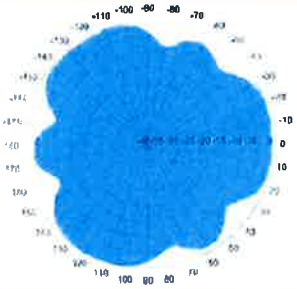
ATTACHMENT 3

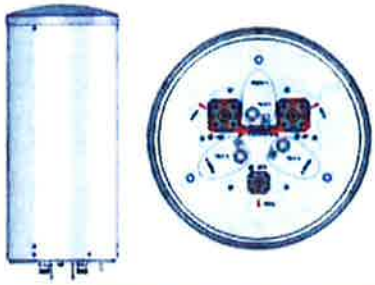
COMMSCOPE®

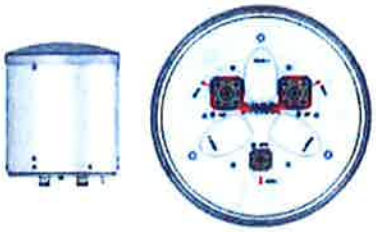
verizonwireless

Metro Cell Antennas with Internal Diplexer and GPS Antenna

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

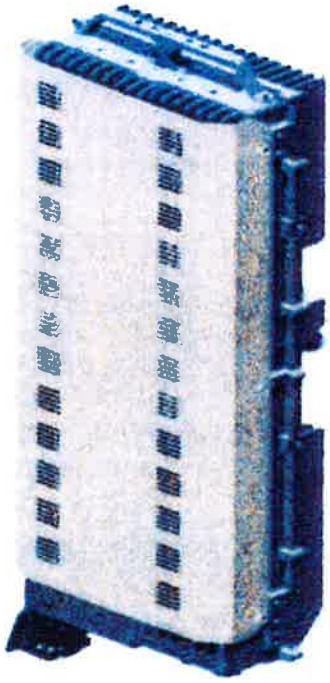






	NH360QS-DG-F0M					NH360QT-DG-F0				
ELECTRICAL SPECIFICATIONS										
Operating Frequency Range	698 - 896 and 1710 - 2170 MHz					698 - 896 and 1710 - 2170 MHz				
Frequency Bands, MHz	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170	698 - 806	806 - 896	1710 - 1880	1850 - 1990	1920 - 2170
Polarization	±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	-150	-150	-150	-150	-150	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	250	250	250	250	250	250	250	250	250	250
MECHANICAL SPECIFICATIONS										
Connnector Interface	7 - 16 DIN Female					7 - 16 DIN Female				
Connector Quantity, Location	2, Bottom					2, Bottom				
GPS Connnector 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				

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.

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.

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).

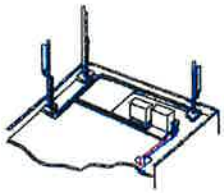
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

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.

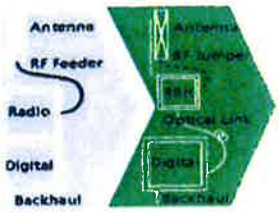
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

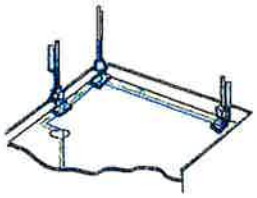
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

- 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
- 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.

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 daisychaining 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

Alcatel·Lucent

AT THE SPEED OF IDEAS™

ATTACHMENT 4

Limited Visual Assessment and Photo-Simulations

WEST HARTFORD SC1
135-137 SOUTH MAIN STREET
WEST HARTFORD,CT

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

Prepared for Verizon Wireless

ALL-POINTS
TECHNOLOGY CORPORATION

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 small cell wireless telecommunications Facility at 135-137 South Main Street in West Hartford, Connecticut (the "Property").

Project Setting

The Property is located southwest of the intersection of South Main Street and Sedgwick Road (Route 173) in a mixed commercial and residential section of West Hartford. The Property is currently improved with a single-story, multi-retail tenant, brick building. The proposed Facility would include the installation of a single canister, omni-directional antenna mounted atop a pipe-mast to be affixed to the exterior side of the building. The antenna would extend to a top height of 29 feet above existing grade, approximately eight (8) feet above the roof. An MCO would also be attached to the pipe-mount, below the antenna and just above the existing roofline. Electrical and telco service cables would extend up the exterior side of the building and would be painted to match the façade. Ground equipment would be located within the building.

Methodology

On July 31, 2015, APT personnel conducted a field reconnaissance to photo-document existing conditions. Five (5) nearby locations were selected to represent where the existing building is visible and depict 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 for all but one of the photographs. Photo-location number 3 was captured using a 24 mm lens setting in order to provide a greater depth of field for presentation in this report. Focal lengths ranging from 24 mm to 50 mm approximate views similar to that achieved by the human eye. However, two key aspects of an image can be directly affected by the specific focal length that is selected: field of view and relation of sizes between objects in the frame. A 24 mm focal length provides a wider field of view, representative of the extent the human eyes may see (including some peripheral vision), but the relation of sizes between objects at the edges of the photos can become minimally skewed. A 50 mm focal length has a narrower field of view than the human eye but the relation of sizes between objects is represented similar to what the human eye might perceive.

> *"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]"*

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

When taking photographs for these analyses, APT prefers a focal length of 50 mm; however there are times when wider views (requiring the use of alternate lens settings, as in this case) can better reflect "real world" viewing conditions by providing greater context to the scene. Regardless of the lens setting, the scale of the subject in the photograph and corresponding simulation remains proportional to its surroundings.

Using field data, site plan information, and 3D modeling software, the spatially referenced models of the project area, the existing structure and the proposed installation were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs, depicting the proposed installation scaled to the correct location and height, relative to the existing structure and surrounding area. For presentation purposes in this report, all of the photographs were produced in an approximate 7-inch by 10.5-inch format[2]. 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 locations north and south of the Property. The installation would not be visible from Main Street and other areas to the east (see View #3 for example). From most locations where the proposed installation would be visible, other more prominent existing infrastructure can be seen. Based on the results of this assessment, it is APT's opinion that the proposed installation of Verizon Wireless equipment at the Property would not be highly visible nor have a significant impact on aesthetics in the area.

Limitations

This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen. The locations simulated were chosen in the field because they presented unobstructed view lines towards the existing structure and proposed installations, to the greatest extent feasible. They are however static in nature and do not necessarily fairly characterize the prevailing views from all locations within a given area. The photo-simulations provide a representation of the Facility under similar settings as those encountered during the field reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the reconnaissance included mostly sunny skies and the photo-simulations presented in this report provide an accurate portrayal of the Facility during comparable conditions.

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

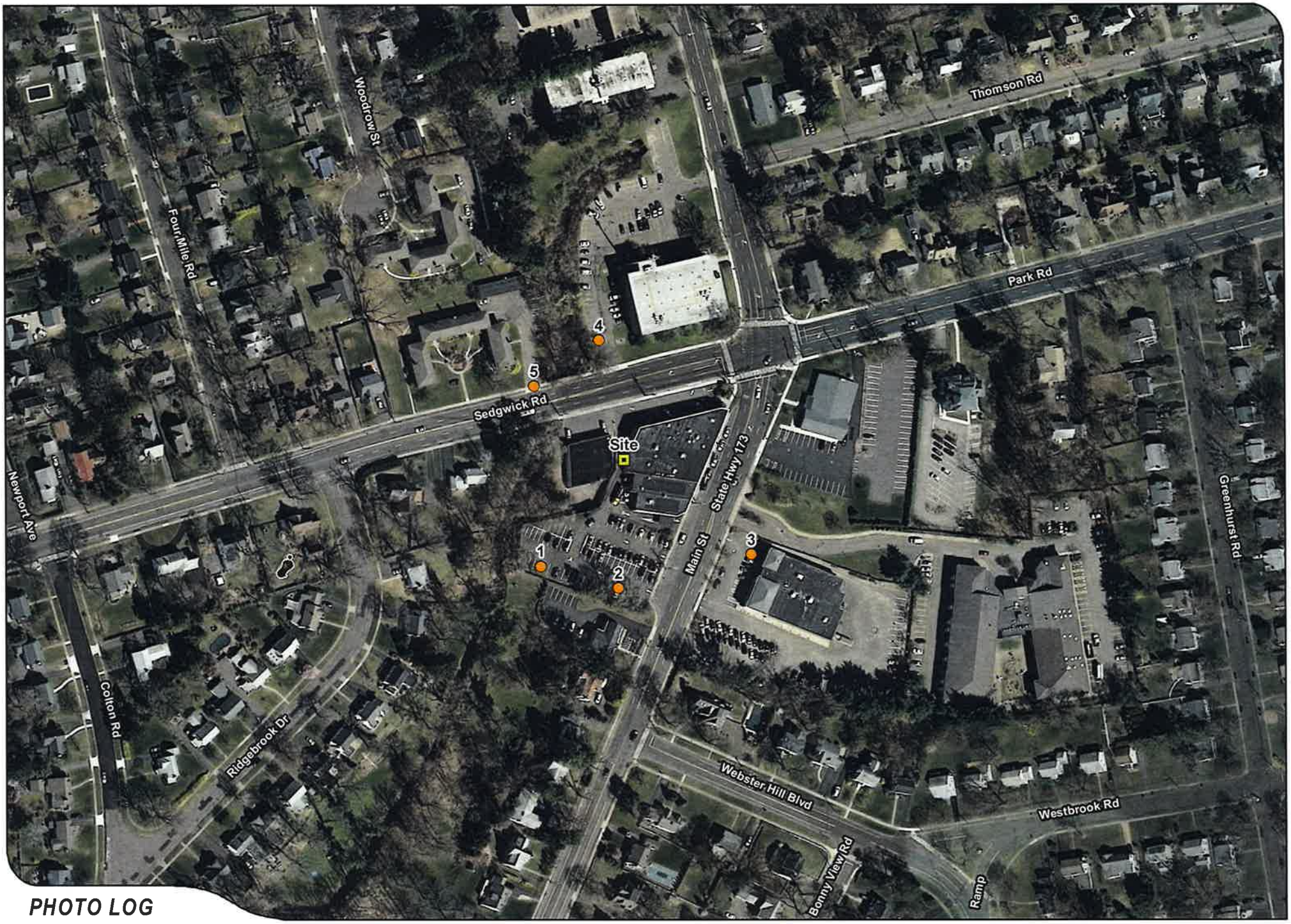


PHOTO LOG

Legend

Site Photo Location

1 inch = 200 feet

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**HOST PROPERTY**	**NORTHEAST**	**+/- 219 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**HOST PROPERTY**	**NORTHEAST**	**+/- 219 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**HOST PROPERTY**	**NORTH**	**+/- 210 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**HOST PROPERTY**	**NORTH**	**+/- 210 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

NOT VISIBLE FROM THIS LOCATION

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	**CVS PARKING LOT (24mm Focal Length)**	**NORTHWEST**	**+/- 255 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**SEDGWICK AVENUE**	**SOUTH**	**+/- 194 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizonwireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**SEDGWICK AVENUE**	**SOUTH**	**+/- 194 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	**SEDGWICK AVENUE**	**SOUTHEAST**	**+/- 190 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	**SEDGWICK AVENUE**	**SOUTHEAST**	**+/- 190 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

ATTACHMENT 5

Site Name: West Hartford SC 1 CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissable Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW AWS	2145	1	595	595	27.2	0.2892	1.0	28.92%

Total Percentage of Maximum Permissible Exposure 28.92%

*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^2 = 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
*
                    *               Non-Antenna Structure
*

**************************************************

                    Airspace User: Mark Brauer

                    File: WEST_HARTFORD_SC_1_CT

                    Location:  Hartford, CT

                    Latitude:  41°-45'-9.29"         Longitude: 72°-
44'-40.06"

                    SITE ELEVATION AMSL.....122 ft.
                    STRUCTURE HEIGHT.........29 ft.
                    OVERALL HEIGHT AMSL.....151 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
HFD
       FAR 77.9:    NNR FAR 77.9 IFR Straight-In Notice Criteria for
4B8
       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.

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: HFD: HARTFORD-BRAINARD
Type: A RD: 24640.03 RE: 13.9
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 Approach Slope: DNE
VFR Transitional Slope: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: 4B8: ROBERTSON FIELD
Type: A RD: 38942.08 RE: 201.6
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): DNE - No Airway Found

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
0CT5	HEL	ST FRANCIS HOSPITAL	57.33	2.43	-33	
		No Impact to Private Landing Facility Structure 0 ft below heliport.				
0CT9	HEL	HARTFORD HOSPITAL	87.81	2.96	-60	
		No Impact to Private Landing Facility Structure 4 ft below heliport.				
CT06	HEL	DELTA ONE	59.94	4.35	+130	
		No Impact to Private Landing Facility Structure is beyond notice limit by 21431 feet.				
CT88	HEL	RENTSCHLER	89.47	5.22	+103	
		No Impact to Private Landing Facility Structure is beyond notice limit by 26717 feet.				
CT73	HEL	SOUTH MEADOWS	251.12	5.48	-49	
		No Impact to Private Landing Facility Structure 9 ft below heliport.				

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND ANGLE	APCH BEAR
HFD	ATCT	Y	A/G	104.25	26171	+76	CT	HARTFORD-BRAINARD	.17	
HFD	LOCALIZER	I	109.7	105.94	26404	+140	CT	RWY 02 HARTFORD-B	.30	2

HFD VOR/DME R 114.9 127.12 67429 -698 CT HARTFORD
-.59
BDL RADAR ON 13.97 69842 -85 CT BRADLEY INTL
-.07
No Impact. Alteration 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: 34 NM.
This location and height is within the Radar Line-Of-Sight.

BAF VORTAC R 113.0 2.94 149372 -116 MA BARNES
-.04
MAD VOR/DME R 110.4 174.9 160509 -69 CT MADISON
-.02
CEF VORTAC R 114.0 20.02 172653 -90 MA WESTOVER
-.03
HVN VOR/DME R 109.8 192.13 182754 +145 CT NEW HAVEN
.05
CTR VOR/DME I 115.1 344.23 204061 -1449 MA CHESTER
-.41

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: WTIC @ 5725 meters.

Airspace® Summary Version 15.7.400

07-27-2015
15:53:15

ATTACHMENT 7

Robinson + Cole

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

August 14, 2015

Via Certificate of Mailing

Scott Slifka, Mayor
Town of West Hartford
50 South Main Street
West Hartford, CT 06107

Re: **Installation of a Small Cell Telecommunications Facility at 137 South Main Street, West Hartford, Connecticut**

Dear Mayor Slifka:

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 "small cell" telecommunications facility at 137 South Main Street in West Hartford (the "Property").

The proposed "small cell" would consist of a small tower attached to the westerly side of the building at the Property. The tower would support a single canister-type antenna and a Remote Radio Head ("RRH") and would extend approximately eight (8) feet above the roof of the building. Equipment associated with the small cell facility will be located inside the building.

A copy of Cellco's Petition is attached for your review. Landowners whose property abuts 137 South Main Street in West Hartford, CT were also sent a copy of the Petition.

Robinson+Cole

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

Sincerely,

Kenneth C. Baldwin

KCB/kmd
Attachment

Robinson + Cole

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

August 14, 2015

Via Certificate of Mailing

Ronald Van Winkle, Town Manager
Town of West Hartford
50 South Main Street
West Hartford, CT 06107

Re: **Installation of a Small Cell Telecommunications Facility at 137 South Main Street, West Hartford, Connecticut**

Dear Mr. Van Winkle:

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 "small cell" telecommunications facility at 137 South Main Street in West Hartford (the "Property").

The proposed "small cell" would consist of a small tower attached to the westerly side of the building at the Property. The tower would support a single canister-type antenna and a Remote Radio Head ("RRH") and would extend approximately eight (8) feet above the roof of the building. Equipment associated with the small cell facility will be located inside the building.

A copy of Cellco's Petition is attached for your review. Landowners whose property abuts 137 South Main Street in West Hartford, CT were also sent a copy of the Petition.

Robinson+Cole

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

Sincerely,

Kenneth C. Baldwin

KCB/kmd
Attachment

Robinson + Cole

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

August 14, 2015

Via Certificate of Mailing

Todd Dumais, Town Planner
Town of West Hartford
50 South Main Street
West Hartford, CT 06107

Re: **Installation of a Small Cell Telecommunications Facility at 137 South Main Street, West Hartford, Connecticut**

Dear Mr. Dumais:

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 "small cell" telecommunications facility at 137 South Main Street in West Hartford (the "Property").

The proposed "small cell" would consist of a small tower attached to the westerly side of the building at the Property. The tower would support a single canister-type antenna and a Remote Radio Head ("RRH") and would extend approximately eight (8) feet above the roof of the building. Equipment associated with the small cell facility will be located inside the building.

A copy of Cellco's Petition is attached for your review. Landowners whose property abuts 137 South Main Street in West Hartford, CT were also sent a copy of the Petition.

Robinson+Cole

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

Sincerely,

Kenneth C. Baldwin

KCB/kmd
Attachment

Robinson + Cole

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

August 14, 2015

Via Certificate of Mailing

Lexham Avon LLC
274 Riverside Avenue Penthouse
Westport, CT 06880

Re: **Installation of a Small Cell Telecommunications Facility at 137 South Main Street, West Hartford, 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 "small cell" telecommunications facility at 137 South Main Street in West Hartford (the "Property").

The proposed "small cell" would consist of a small tower attached to the westerly side of the building at the Property. The tower would support a single canister-type antenna and a Remote Radio Head ("RRH") and would extend approximately eight (8) feet above the roof of the building. Equipment associated with the small cell facility will be located inside the building.

A copy of Cellco's Petition is attached for your review. Landowners whose property abuts 137 South Main Street in West Hartford, CT were also sent a copy of the Petition.

Robinson+Cole

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

August 14, 2015

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 "Small Cell" Telecommunications Facility at 137 South Main Street, West Hartford, 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 "small cell" telecommunications facility at 137 South Main Street in West Hartford (the "Property").

The proposed "small cell" would consist of a small tower attached to the westerly side of the building at the Property. The tower would support a single canister-type antenna and a Remote Radio Head ("RRH") and would extend approximately eight (8) feet above the roof of the building. Equipment associated with the small cell facility will be located inside 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 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.

Sincerely,

Kenneth C. Baldwin

Attachment

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTING PROPERTY OWNERS

137 SOUTH MAIN STREET, WEST HARTFORD, CONNECTICUT

	Property Address	Owner's and Mailing Address
1.	125 South Main Street	Southern New England Telephone Co. One SBC Center, Rm 36-M-1 St. Louis, MO 63101
2.	15 Sedgwick Road	Broadwalk Realty Inc. c/o Craig Yelin 20 Westborough Drive West Hartford, CT 06107
3.	15 Sedgwick Road ROW	Town of West Hartford 50 South Main Street West Hartford, CT 06107
4.	15 Sedgwick Road Exempt	Town of West Hartford 50 South Main Street West Hartford, CT 06107
5.	155 South Main Street	155 South Main LLC 621 Farmington Avenue Hartford, CT 06105-2903
6.	150 South Main Street	RPL Associates I LLC c/o AFS Lease Accounting P.O. Box 6500 Carlisle, PA 17013-6500
7.	142 South Main Street	Saint Elizabeth Manor II LLC c/o Roncalli Institute P.O. Box 427 Portland, CT 06480-0427
8.	136 South Main Street	Taylor and Modeen Realty Co. 136 South Main Street West Hartford, CT 06107

	Property Address	Owner's and Mailing Address
9.	130 South Main Street	Town of West Hartford 50 South Main Street West Hartford, CT 06107