

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 752 BLOOMFIELD AVENUE, WINDSOR, :
CONNECTICUT : AUGUST 31, 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 on the roof of the Sanctuary of Faith and Glory Church at 752 Bloomfield Avenue in Windsor, Connecticut (the “Property”). The Property is owned by the Sanctuary of Faith and Glory Church. Cellco has designated this site as its “Windsor SC6 Facility”.

II. Factual Background

The Property is a 3.21-acre parcel in Windsor’s Industrial zone district and is surrounded by commercial and industrial uses along Bloomfield Avenue and Addison Road and residential

uses to the east and south. (See Attachment 1 – Site Vicinity Map and Site Schematic (Aerial Photograph)). Cellco is licensed to provide wireless telecommunications services in the 850 MHz, 1900 MHz, 700 MHz and 2100 MHz frequency ranges in Windsor and throughout the State of Connecticut. Initially, the proposed Windsor SC6 Facility is proposed to provide wireless service in Cellco’s 2100 MHz frequency range only. The Windsor SC6 Facility will provide capacity relief to Cellco’s existing Windsor 3 and Windsor facilities; facilities that currently serve portions of I-91 and the Windsor Industrial Park.

III. Proposed “Small Cell” Facility

The proposed Windsor SC6 Facility would consist of a small tower attached to the roof of the existing Church building. The tower would support a single, canister-type “small cell” antenna, Remote Radio Head (RRH) and related electrical equipment. The tower, antenna, RRH and related equipment would all be concealed inside an RF transparent cupola structure. The cupola will extend to an overall height of 51’-2” above ground level, approximately 9’ above the height of the ridge line of the Church building. Cellco’s radio equipment will be located on a steel platform within a 9’-6”-foot by 9’-6” leased area along the westerly side of the building. The platform and equipment will be surrounded by a 6’ tall chain link fence with privacy slats. Project Plans for the proposed Windsor SC6 Facility are included in Attachment 2.

Specifications for Cellco’s “small cell” 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 “small cell” antenna, RRH and related equipment on a small tower attached to the roof of the building and radio equipment on a platform on the ground, will not involve a significant alteration in the physical and environmental characteristics of the Property. The installation of a small steel platform and security fence will result in minor ground disturbance adjacent to the building, in a portion of the Property previously disturbed. Access to the “small cell” facility equipment would extend from Bloomfield Avenue over the existing paved driveway and parking area on the Property.

2. Visual Effects

The visibility of the proposed “small cell” installation would be achieved from nearby locations along Bloomfield Avenue and Addison Road where the building can be seen today. The planned concealment structure (cupola) will appear as an original design element of the building. Cellco does not, therefore, expect that views of the small cell installation will have any adverse impact on aesthetics in the area. *See* Limited Visual Assessment and Photo-Simulations included in Attachment 4.

3. FCC Compliance

Radio frequency (“RF”) emissions from the proposed installation will be far below the standards adopted by the Federal Communications Commission (“FCC”). Included in Attachment 5 is a General Power Density table including a worst-case calculation of RF

emissions from the proposed facility. This calculation demonstrates that the proposed “small cell” facility will operate well within the RF emission standards adopted by the FCC.

4. FAA Summary Report

Included in Attachment 6 is a Federal Airways & Airspace Summary Report verifying that the small cell facility tower and concealment 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 Town, Property Owner and Abutting Landowners

On August 31, 2015, a copy of this Petition was sent to Windsor’s Town Manager Peter Souza and Sanctuary of Faith and Glory Church, the owner of the Property. Included in Attachment 7 are copies of the letters sent to Mr. Souza and Reverend Felton Best of the Sanctuary of Faith and Glory Church. A copy of this 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 copies of the Petition are 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 concealed “small cell” tower and related appurtenances on the roof of the building at the Property 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.

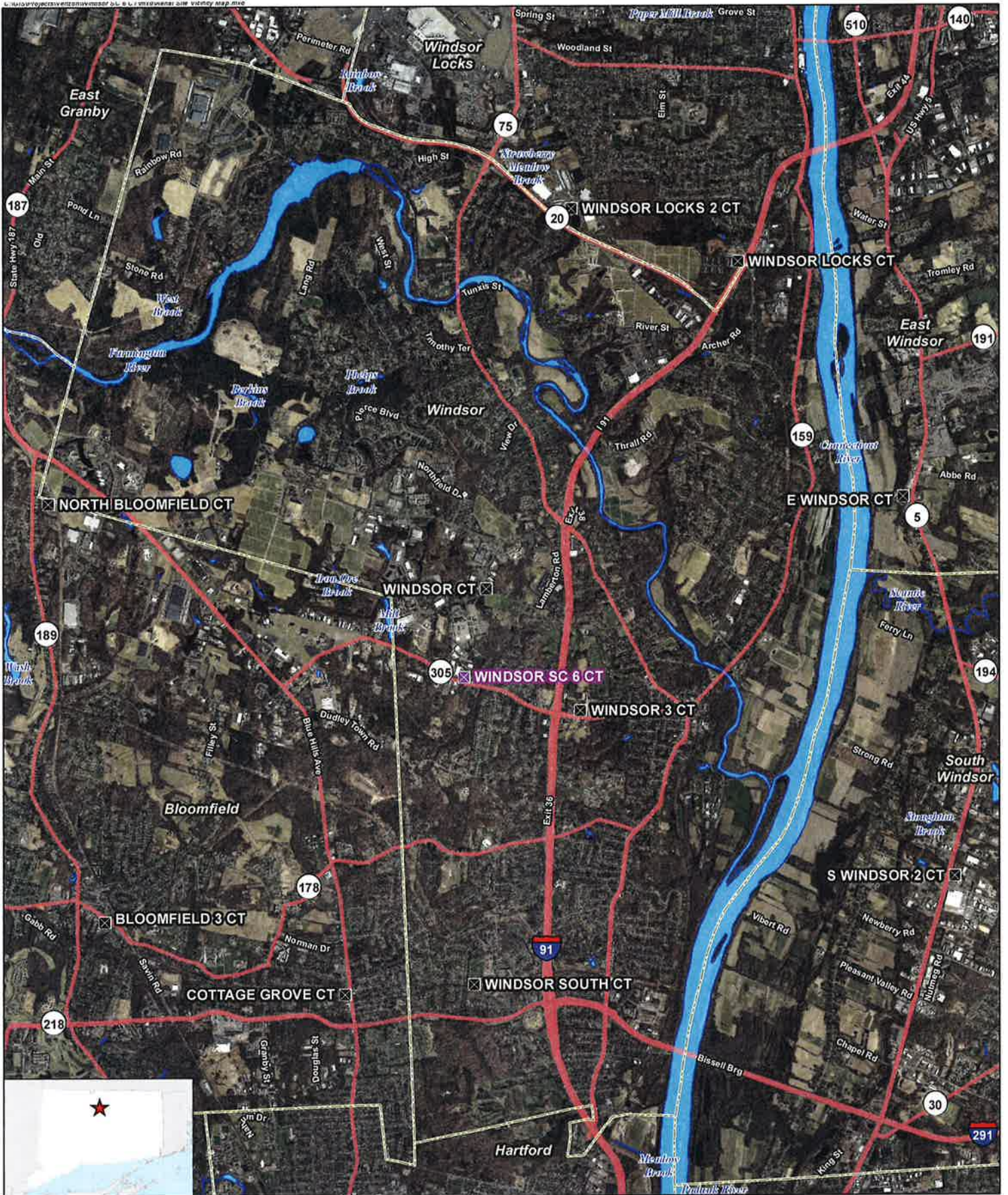
Respectfully submitted,

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



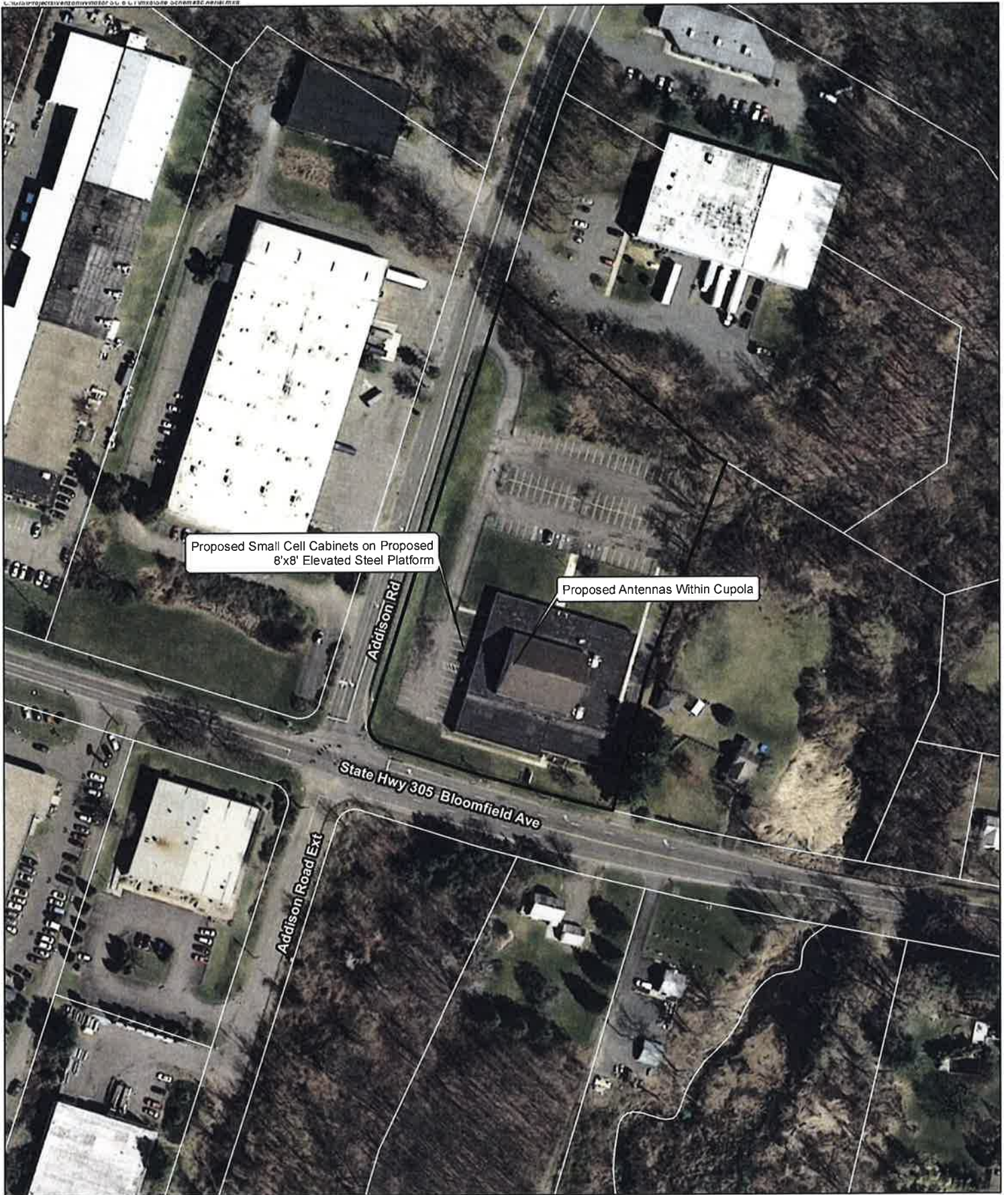
- Legend**
- ✖ Proposed Verizon Wireless Small Cell Facility
 - ✖ Surrounding Verizon Wireless Facilities
 - Municipal Boundary
 - ~ Waterbody

Site Vicinity Map

Proposed Small Cell Installation
 Windsor SC 6 CT
 752 Bloomfield Avenue
 Windsor, Connecticut



Base Map Source: 2012 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 5,405 feet
 Map Date: June 2015



Proposed Small Cell Cabinets on Proposed 8'x8' Elevated Steel Platform

Proposed Antennas Within Cupola

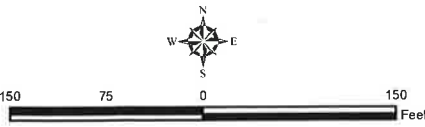
Legend

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

Site Schematic

Proposed Small Cell Installation
 Windsor SC 6 CT
 752 Bloomfield Avenue
 Windsor, Connecticut

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



ATTACHMENT 2

CELLCO PARTNERSHIP



d.b.a. **verizon**wireless

WIRELESS COMMUNICATIONS FACILITY

WINDSOR SC6 CT

752 BLOOMFIELD AVENUE
WINDSOR, CT 06095



VICINITY MAP SCALE: 1"=500'

DIRECTIONS TO SITE:

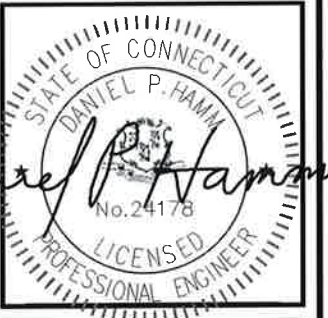
GET ON I-84 FROM E RIVER DR AND CONNECTICUT BLVD
HEAD EAST ON E RIVER DR TOWARD DARLIN ST
TURN LEFT TO STAY ON E RIVER DR
TURN LEFT AT THE 1ST CROSS STREET ONTO CONNECTICUT BLVD
TURN LEFT ONTO THE ROUTE 84 W RAMP TO HARTFORD/ROUTE 91
TAKE I-91 N TO CT-305 W/BLOOMFIELD AVE IN WINDSOR. TAKE EXIT 37 FROM I-91 N
MERGE ONTO I-84
TAKE EXIT 51 TO MERGE ONTO I-91 N TOWARD SPRINGFIELD
KEEP RIGHT AT THE FORK TO STAY ON I-91 N
TAKE EXIT 37 FOR CT-305/BLOOMFIELD AVE TOWARD WINDSOR CENTER
TURN LEFT ONTO CT-305 W/BLOOMFIELD AVE
DESTINATION WILL BE ON THE RIGHT
752 BLOOMFIELD AVE, WINDSOR, CT 06095

CONSULTANT TEAM	
PROJECT ENGINEER	HUDSON DESIGN GROUP, LLC 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586
MEP ENGINEER	HUDSON DESIGN GROUP, LLC 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586

PROJECT SUMMARY	
SITE NAME:	WINDSOR SC6 CT
SITE ADDRESS:	752 BLOOMFIELD AVENUE WINDSOR, CT 06095
PROPERTY OWNER:	SANCTUARY OF FAITH AND GLORY C/O REVEREND FELTON BEST 690 BLUE HILLS AVENUE BLOOMFIELD, CT 06112
APPLICANT:	CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS 99 EAST RIVER DRIVE EAST HARTFORD, CT 06108
SITE ACQUISITION CONTACT:	HOLLIS REDDING STRUCTURE CONSULTING GROUP (860)966-0989
LEGAL/REGULATORY COUNSEL:	KENNETH C. BALDWIN ESQ. ROBINSON + COLE LLP (860)275-8345
LATITUDE:	N41° 51' 22.91"
LONGITUDE:	W72° 40' 41.83"

SCOPE OF WORK INFO.	
VERIZON WIRELESS IS PROPOSING TO INSTALL THE FOLLOWING IMPROVEMENTS TO PROPOSED LEASE AREA AND EXISTING CHURCH BUILDING:	
<ul style="list-style-type: none"> (1) NEW SMALL CELL ANTENNA. (1) NEW RRH (1) NEW OVP 	
ITEMS LISTED ABOVE TO BE MOUNTED TO EXISTING STEEL COLUMN ATOP EXISTING ROOF WITHIN PROPOSED CUPOLA.	
<ul style="list-style-type: none"> NEW EQUIPMENT CABINETS: (2) SMALL CELL CABINET ON PROPOSED ELEVATED STEEL PLATFORM 	
ITEMS LISTED ABOVE TO BE INSTALLED WITHIN PROPOSED 9'-6"X9'-6" LEASE AREA	

SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	ABUTTERS MAP
A-1	SITE PLAN & EQUIPMENT PLAN
A-2	ELEVATION



Daniel P. Haman

CHECKED BY: DJR

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	08/3/15	REVISED PER COMMENTS	SB
0	06/12/15	ISSUED FOR REVIEW	GC

SITE NAME:
WINDSOR SC6 CT

SITE ADDRESS:
752 BLOOMFIELD AVENUE
WINDSOR, CT 06095

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

770 BLOOMFIELD AVENUE
N/F
TLD ACE CORPORATION
805 BLOOMFIELD AVENUE
WINDSOR, CT 06095

350 ADDISON ROAD
N/F
HARLYN REALTY LLC
86 PEAK MT DRIVE
EAST GRANBY, CT 06026

N/F
SANCTUARY OF FAITH & GLARY
C/O REVEREND FELTON BEST
690 BLUE HILLS AVENUE
BLOOMFIELD, CT 06112
MAP:44 BLOCK:106 LOT:137
AREA= 3.21 ± ACRES

740 BLOOMFIELD AVENUE
N/F
WOOD MARICA B
740 BLOOMFIELD AVENUE
WINDSOR, CT 06095

PROPOSED EQUIPMENT ON
ELEVATED STEEL PLATFORM
WITHIN FENCED LEASE AREA AT
GROUND LEVEL,
AND ANTENNA WITH RRH
ATTACHED TO PROPOSED PIPE
MAST CONCEALED IN
PROPOSED FIBERGLASS CUPOLA
ON ROOFTOP

775 BLOOMFIELD AVENUE
N/F
ROSELAND GROUP LLC
775 BLOOMFIELD AVENUE
WINDSOR, CT 06095

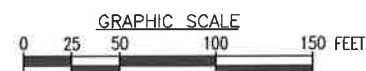
745 BLOOMFIELD AVENUE
N/F
VIETS STERLING
825 BLOOMFIELD AVENUE
WINDSOR, CT 06095

741 BLOOMFIELD AVENUE
N/F
WHISPERWOOD INC
355 RAINBOW ROAD
WINDSOR, CT 06095



ABUTTER MAP
22x34 SCALE: 1"=50'-0"
11x17 SCALE: 1"=100'-0"

1
C-1



SOURCE:

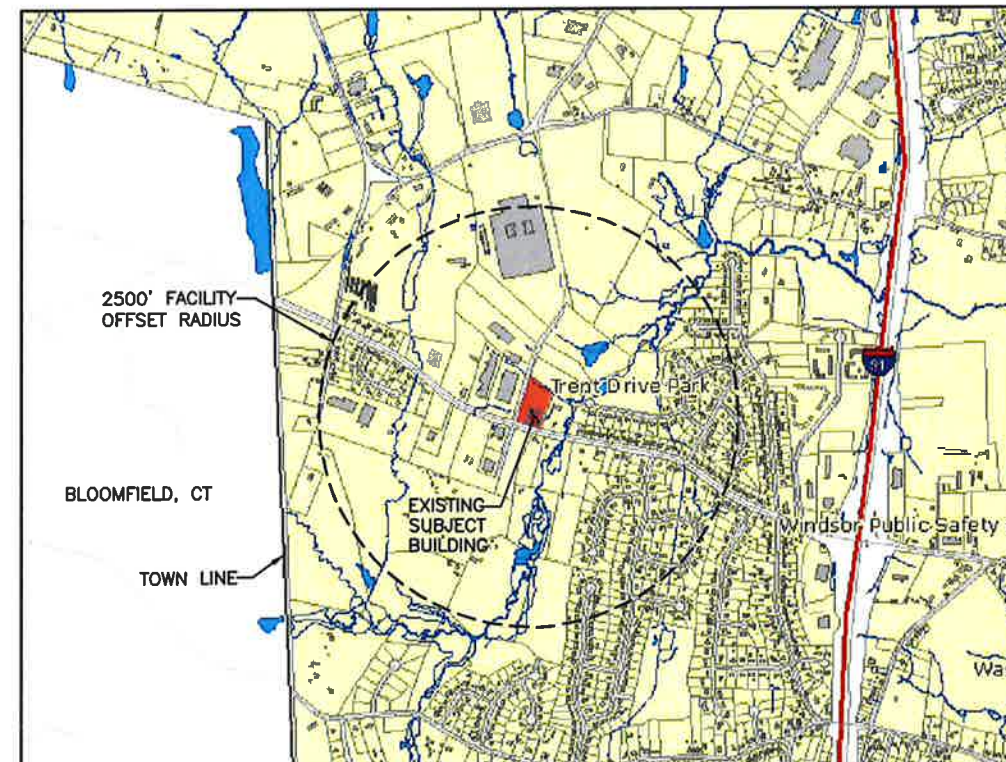
TOWN OF WINDSOR, CT ASSESSORS MAP AND GIS ONLINE
MAP, ACCESS ON 6/12/2015.

SITE SPECIFIC NOTES:

1. VERIFY AZIMUTHS W/ RF ENGINEER.
2. PROPERTY LINE INFORMATION IS COMPILED FROM ASSESSORS PLAN AND RECORD DOCUMENTS AND IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.

LEGEND

- PROPERTY LINE-SUBJECT PARCEL
- PROPERTY LINE-ABUTTERS
- TOWN BOUNDARY LINE
- CONTOUR LINE
- DELINEATED WETLAND LINE
- (E) BUILDING
- xxx-xx ASSESSORS MAP-BLOCK-LOT NO.
- (E) TREE LINE

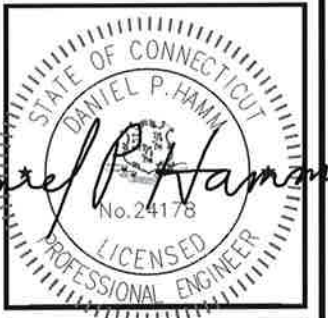


MUNICIPALITY NOTIFICATION LIMIT MAP

PREPARED FOR: CELCO PARTNERSHIP D.B.A.



1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090 TEL: (978) 557-5553
N. ANDOVER, MA 01845 FAX: (978) 336-5986



CHECKED BY: DJR

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	08/3/15	REVISED PER COMMENTS	SB
0	06/12/15	ISSUED FOR REVIEW	GC

SITE NAME:
WINDSOR SC6 CT

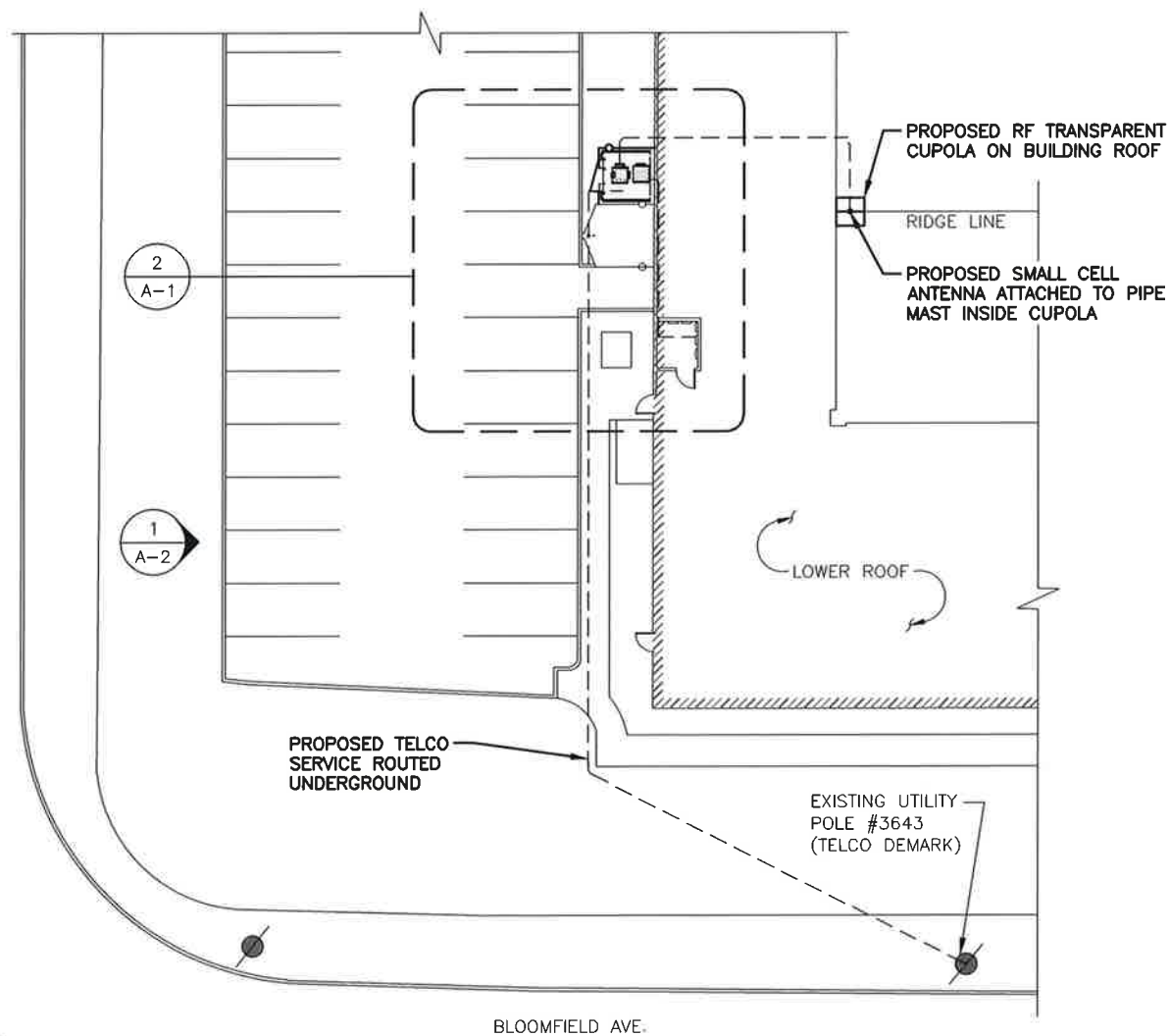
SITE ADDRESS:
752 BLOOMFIELD AVENUE
WINDSOR, CT 06095

SHEET TITLE
ABUTTERS MAP

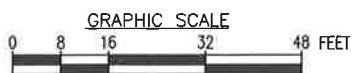
SHEET NUMBER
C-1



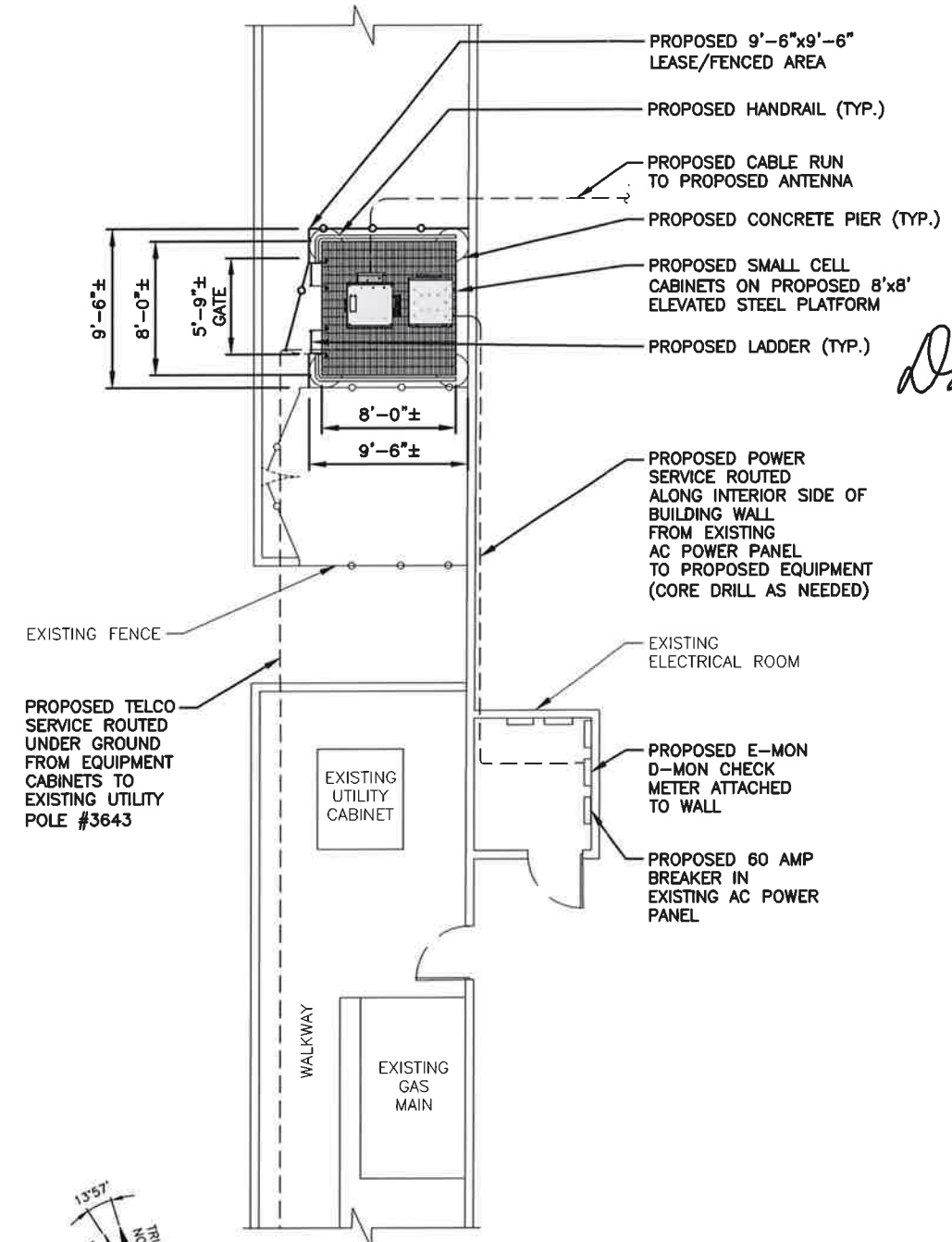
KEY PLAN
SCALE: N.T.S



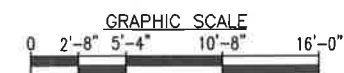
PARTIAL SITE PLAN
22x34 SCALE: 1/16"=1'-0"
11x17 SCALE: 1/32"=1'-0"



NOTE:
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, L.L.C. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.

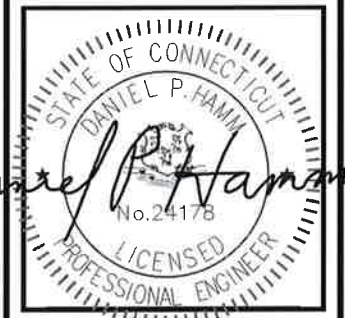


COMPOUND PLAN
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"



Hudson Design Group, LLC

1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090 TEL: (978) 557-5553
N. ANDOVER, MA 01845 FAX: (978) 336-5886



Daniel P. Haman

CHECKED BY: DJR
APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	08/3/15	REVISED PER COMMENTS	SB
0	06/12/15	ISSUED FOR REVIEW	GC

SITE NAME:
WINDSOR SC6 CT

SITE ADDRESS:
752 BLOOMFIELD AVENUE
WINDSOR, CT 06095

SHEET TITLE
SITE PLAN & EQUIPMENT PLAN

SHEET NUMBER
A-1



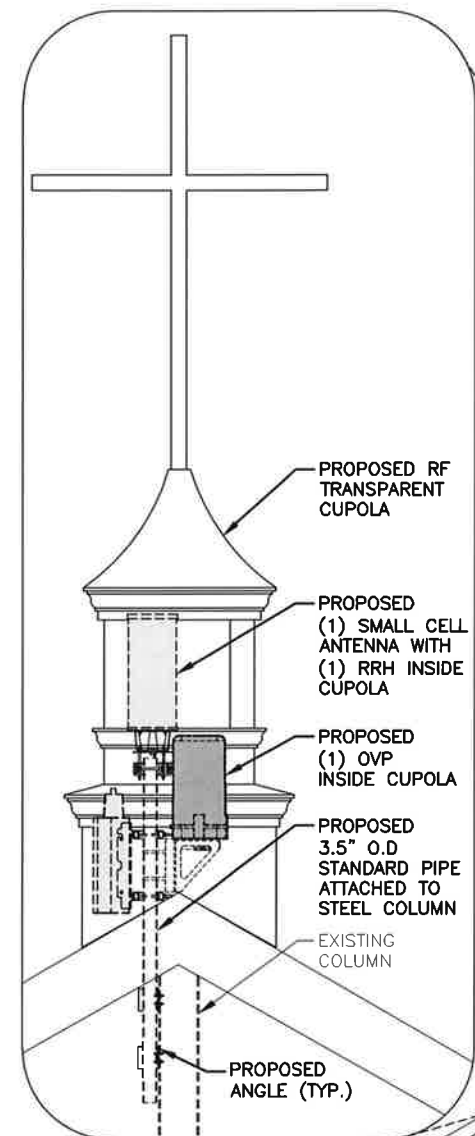
1600 OSGOOD STREET
 BUILDING 20 NORTH, SUITE 3090 TEL: (978) 557-5553
 N. ANDOVER, MA 01845 FAX: (978) 336-5886

PROPOSED ANTENNA INFORMATION

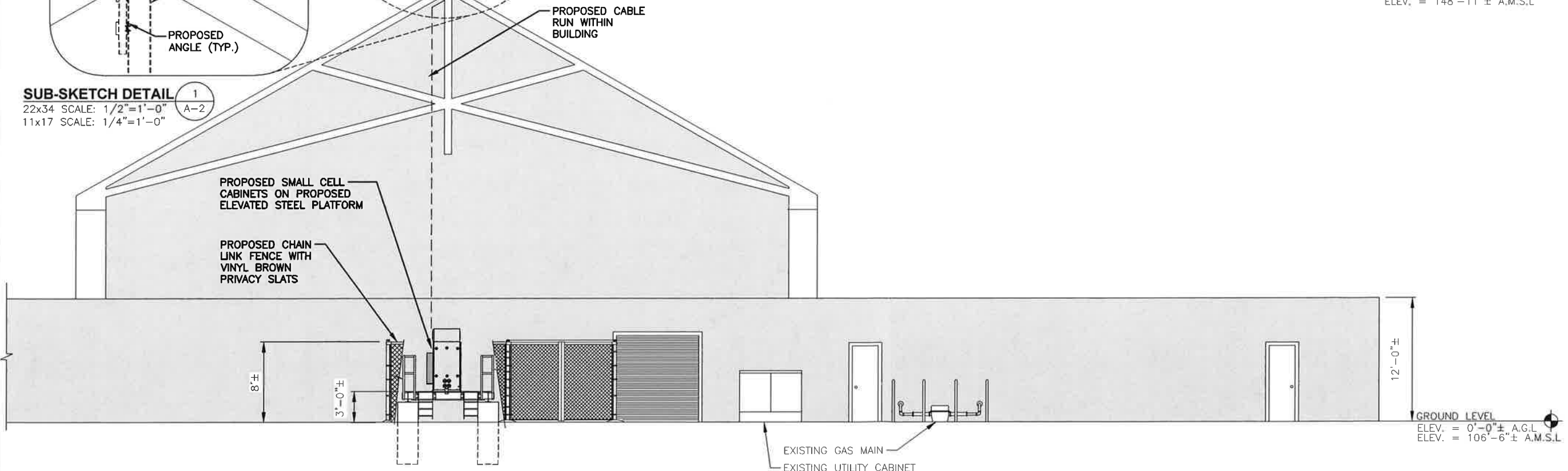
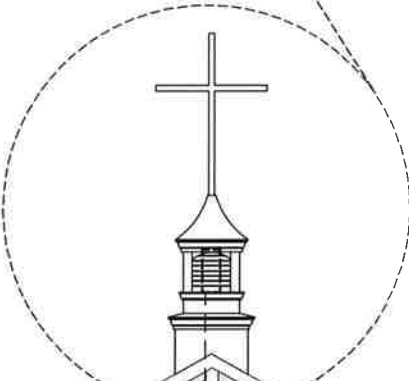
SECTOR	STATUS	AZIMUTH	CABLE LENGTH
ALPHA	PROPOSED	270°	120'

NOTE: CABLE LENGTH = EXACT LENGTH PLUS 25'

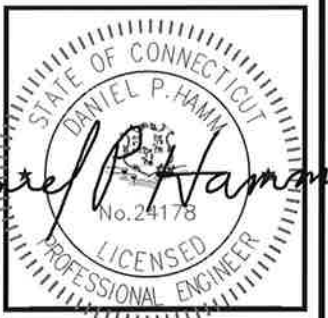
NOTE:
 AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.



SUB-SKETCH DETAIL 1
 22x34 SCALE: 1/2"=1'-0"
 11x17 SCALE: 1/4"=1'-0"



- TOP OF PROPOSED CROSS
 ELEV. = 60'-2"± A.G.L.
 ELEV. = 166'-8"± A.M.S.L.
- TOP OF PROPOSED CUPOLA
 ELEV. = 51'-2"± A.G.L.
 ELEV. = 157'-8"± A.M.S.L.
- ∅ OF PROPOSED ANTENNA
 ELEV. = 47'-0"± A.G.L.
 ELEV. = 153'-0"± A.M.S.L.
- TOP OF EXISTING RIDGE LINE
 ELEV. = 42'-5"± A.G.L.
 ELEV. = 148'-11"± A.M.S.L.



CHECKED BY: DJR

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	08/3/15	REVISED PER COMMENTS	SB
0	06/12/15	ISSUED FOR REVIEW	GC

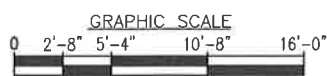
SITE NAME:
WINDSOR SC6 CT

SITE ADDRESS:
 752 BLOOMFIELD AVENUE
 WINDSOR, CT 06095

SHEET TITLE
ELEVATION

SHEET NUMBER
A-2

EAST ELEVATION 1
 22x34 SCALE: 3/16"=1'-0"
 11x17 SCALE: 3/32"=1'-0"



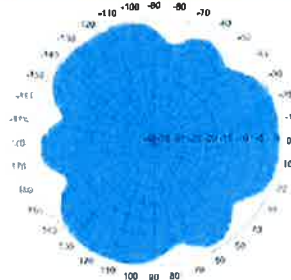
ATTACHMENT 3

Metro Cell Antennas with Internal Diplexer and GPS Antenna

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

NH360QS-DG-F0M

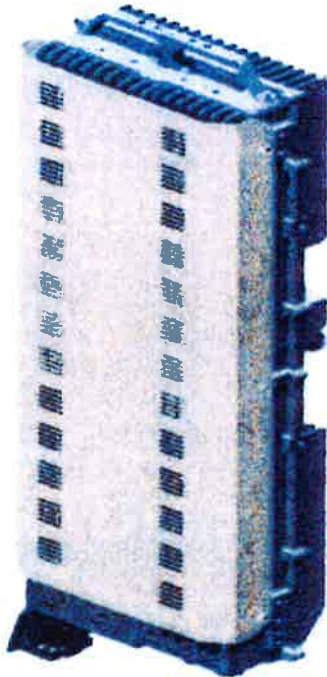
NH360QT-DG-F0



ELECTRICAL SPECIFICATIONS						698 - 896 and 1710 - 2170 MHz				
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
USIS, 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						698 - 896 and 1710 - 2170 MHz				
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						698 - 896 and 1710 - 2170 MHz				
Expected Ready Date for Manufacturing	March 2014					June 2014				

ALCATEL-LUCENT WIRELESS PRODUCT DATA SHEET RRH2x60-AWS

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).

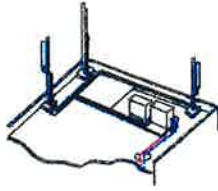
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

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.

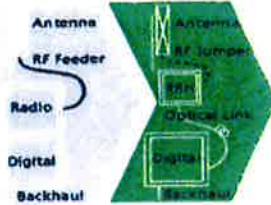
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

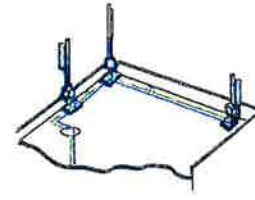
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



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 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

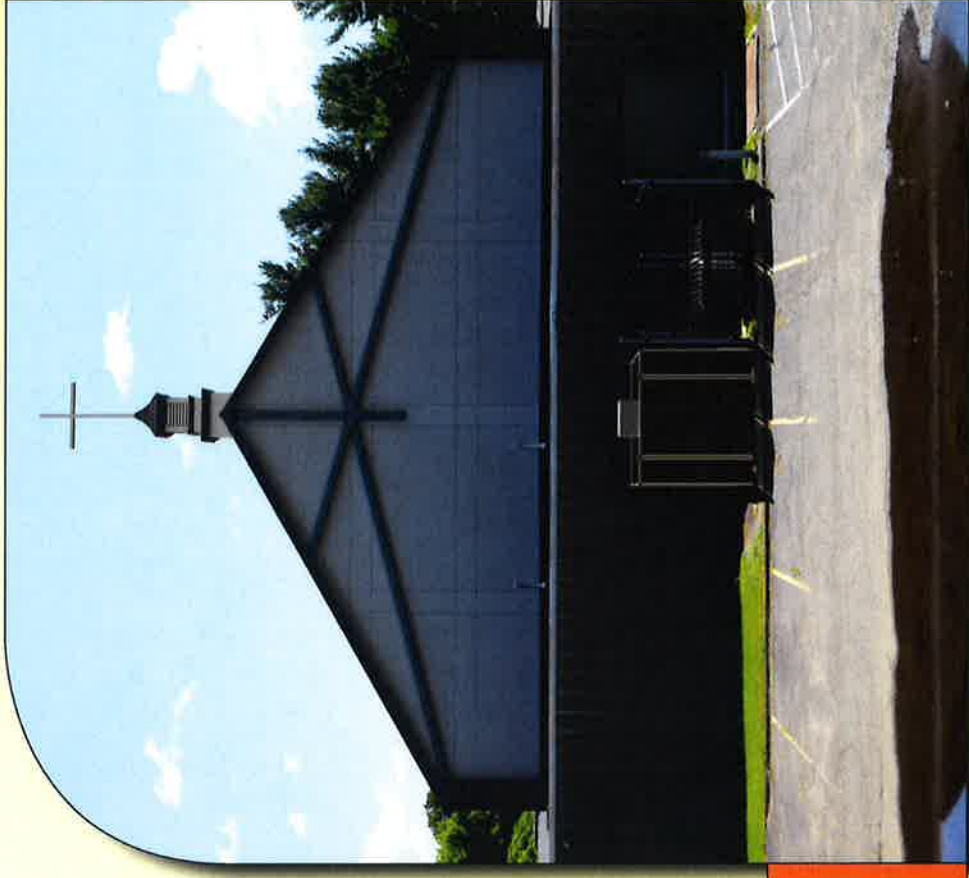
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ATTACHMENT 4

Limited Visual Assessments and Photo-Simulations

WINDSOR SC6 CT
752 BLOOMFIELD AVENUE
WINDSOR, CT 06095



Prepared in July 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 small cell wireless telecommunications Facility at 752 Bloomfield Avenue (State Highway 305) in Windsor, Connecticut (the "Property").

Project Setting

The Property is located on the north side of Bloomfield Avenue and east of Addison Road in a mixed commercial and residential area. The Property is currently developed with a church. The proposed Facility would include the installation of a pipe-mounted panel antenna and remote radio head concealed within a new cupola on the building's roof behind RF-transparent louvers. The antenna, pipe mast and associated mounting equipment would not be visible from the outside. The cupola has been designed to include a cross and match the existing building architecture and colors. It would extend approximately nine (9) feet above the roof peak (and about 51 feet above the ground level). The top of the cross would rise an additional nine (9) feet above the top of the cupola. Exterior ground equipment would be located within a fence-enclosure adjacent to the building's west side; the 8-foot tall vinyl fence-enclosure would include vinyl brown privacy slats.

Methodology

On July 22, 2015, APT personnel conducted field reconnaissance and photo-documented existing conditions. Four (4) 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 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 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

Views of the cupola and cross would be achieved from nearby locations to the west along Bloomfield Avenue and Addison Road where the building can be seen today. The small cell's concealment within a cupola results in no antenna or supporting equipment being visible from exterior locations. The cupola's design will be consistent with the style and colors of the building such that it would appear to be an original design element. The equipment enclosure will be located against a wall of the building, at the edge of a parking lot where existing equipment is currently located. The vinyl clad screening prohibits direct views of the ground equipment and softens its effect. 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



Base Map Source: 2012 Aerial Photograph (CTECO)



- Legend
- Points
 - Photo Location

PHOTO LOG





EXISTING

PHOTO

1

LOCATION

HOST PROPERTY

ORIENTATION

SOUTH

DISTANCE TO SITE

+/- 188 FEET





PROPOSED

PHOTO

1

LOCATION

HOST PROPERTY

ORIENTATION

SOUTH

DISTANCE TO SITE

+/- 188 FEET



EXISTING

PHOTO

2

LOCATION

ADDISON ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 174 FEET



PROPOSED

PHOTO

2

LOCATION

ADDISON ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 174 FEET



EXISTING

PHOTO

3

LOCATION

ADDISON ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 137 FEET



PROPOSED

PHOTO

3

LOCATION

ADDISON ROAD

ORIENTATION

SOUTHEAST

DISTANCE TO SITE

+/- 137 FEET



EXISTING

PHOTO

4

LOCATION

ADDISON ROAD AT BLOOMFIELD AVENUE

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 174 FEET





PROPOSED

PHOTO

4

LOCATION

ADDISON ROAD AT BLOOMFIELD AVENUE

ORIENTATION

NORTHEAST

DISTANCE TO SITE

+/- 174 FEET

ATTACHMENT 5

General Power Density

Site Name: Windsor SC 6, 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 ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
VZW AWS	2145	1	600	600	47	0.0977	1.0	9.77%

Total Percentage of Maximum Permissible Exposure

9.77%

*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: New Construction *
* Antenna Structure *

*

Airspace User: Mark Brauer

File: WINDSOR_SC_6_CT

Location: Hartford, CT

Latitude: 41°-51'-23.53" Longitude:
72°-40'-41.71"

SITE ELEVATION AMSL.....130 ft.
STRUCTURE HEIGHT.....61 ft.
OVERALL HEIGHT AMSL.....191 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 BDL
- FAR 77.9: NNR FAR 77.9 IFR Straight-In Notice Criteria for 4B9
- FAR 77.9(d): NNR (Off Airport Construction)

NR = Notice Required
NNR = Notice Not Required
PNR = Possible Notice Required (depends upon actual IFR procedure)
For new construction review Air Navigation Facilities at

bottom
of this report.

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

OBSTRUCTION STANDARDS

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

VFR TRAFFIC PATTERN AIRSPACE FOR: BDL: BRADLEY INTL

Type: A RD: 26511.9 RE: 168.3

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: 4B9: SIMSBURY

Type: A RD: 34139.45 RE: 177.1

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 1600 ft AMSL

PRIVATE LANDING FACILITIES

FACIL	BEARING	RANGE	DELTA
ARP FAA	To FACIL	IN NM	
ELEVATION IFR			
-----	-----	-----	-----
CT05 HEL KAMAN AEROSPACE CORP	288.63	1.02	+27
No Impact to Private Landing Facility Structure is beyond notice limit by 1198 feet.			
CT14 AIR BANCROFT	77.68	2.85	
+139			
No Impact to Private Landing Facility. DNE 200 ft AGL within 3 NM of Airport.			
CT85 AIR ROBERTS FARM	54.91	3.46	
+154			
No Impact to VFR Transitional Surface. Below surface height of 246 ft above ARP.			
CT00 HEL ELECTRO-METHODS INC	113.04	3.77	+87
No Impact to Private Landing Facility Structure is beyond notice limit by 17907 feet.			

+170	CT06	HEL DELTA ONE	168.93	4.13	
	No Impact to Private Landing Facility Structure is beyond notice limit by 20094 feet.				
	CT62	HEL TWIN MANUFACTURING COMPANY	132.43	4.16	+131
	No Impact to Private Landing Facility Structure is beyond notice limit by 20277 feet.				
	CT35	HEL HAMILTON STANDARD	348.36	4.7	+18
	No Impact to Private Landing Facility Structure is beyond notice limit by 23558 feet.				
	OCT5	HEL ST FRANCIS HOSPITAL	190.64	5.01	+7
	No Impact to Private Landing Facility Structure is beyond notice limit by 25441 feet.				
	CT50	HEL MARKS	346.44	5.32	+41
	No Impact to Private Landing Facility Structure is beyond notice limit by 27325 feet.				
	CT23	HEL DELLA	32.93	5.97	+76
	No Impact to Private Landing Facility Structure is beyond notice limit by 31274 feet.				

AIR NAVIGATION ELECTRONIC FACILITIES

GRND	FAC	ST	DIST	DELTA					
ANGLE	IDNT	TYPE	AT	FREQ	VECTOR	(ft)	ELEVA	ST	LOCATION
BEAR	-----								
	MYQ	LOCALIZER	I	111.1	347.89	27349	+21	CT	RWY 24 BRADLEY
IN	.04	238							
-.09	BDL	RADAR	ON		357.8	29910	-45	CT	BRADLEY INTL
	No Impact. EMI Notice is not required for this structure. The studied location is within 5 NM of a Radar facility. The calculated Radar Line-Of-Sight (LOS) distance is: 36 NM. This location and height is within the Radar Line-Of-Sight.								
.06	BDL	VORTAC	D	109.0	354.8	30906	+31	CT	BRADLEY
-.44	HFD	VOR/DME	R	114.9	155.59	86246	-658	CT	HARTFORD
-.04	BAF	VORTAC	R	113.0	354.72	111770	-76	MA	BARNES
-.02	CEF	VORTAC	R	114.0	18.33	130939	-50	MA	WESTOVER
-.46	CTR	VOR/DME	I	115.1	335.17	174702	-1409	MA	CHESTER
	MAD	VOR/DME	R	110.4	181.1	197787	-29	CT	MADISON

-.01

QHA RADAR ARSR Y 1320.340.88 238576 -1962 MA West Cummington

-.47

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: WKND @ 418 meters.

Airspace® Summary Version 15.5.391

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06-08-2015

16:45:48

ATTACHMENT 7

August 31, 2015

Via Certificate of Mailing

Peter Souza, Town Manager
Town of Windsor
275 Broad Street
P.O. Box 472
Windsor, CT 06095-0472

Re: **Installation of a Small Cell Telecommunications Facility at 752 Bloomfield Avenue, Windsor, Connecticut**

Dear Mr. Souza:

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 752 Bloomfield Avenue in Windsor (the “Property”).

The proposed “small cell” would consist of a short tower mast attached to a building on the Property. The tower would support a single canister-type antenna and a Remote Radio Head (“RRH”). The tower mast, antenna and RRH will be concealed within a radio frequency transparent cupola and will extend approximately 9 feet above the peak of the roof of the building (42.9 feet above grade). Equipment associated with the small cell facility will be located on a steel platform adjacent to the building.

A copy of Cellco’s Petition is attached for your review. Landowners whose property abuts 752 Bloomfield Avenue in Windsor, CT were also sent a copy of the Petition.

Robinson + Cole

Peter Souza
August 31, 2015
Page 2

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

Sincerely,



Kenneth C. Baldwin

KCB/kmd
Attachment

August 31, 2015

Via Certificate of Mailing

Sanctuary of Faith and Glory Church
c/o Reverend Felton Best
690 Blue Hills Avenue
Bloomfield, CT 06112-1212

Re: **Installation of a Small Cell Telecommunications Facility at 752 Bloomfield Avenue, Windsor, Connecticut**

Dear Reverend Best:

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 752 Bloomfield Avenue in Windsor (the “Property”).

The proposed “small cell” would consist of a short tower mast attached to a building on the Property. The tower would support a single canister-type antenna and a Remote Radio Head (“RRH”). The tower mast, antenna and RRH will be concealed within a radio frequency transparent cupola and will extend approximately 9 feet above the peak of the roof of the building (42.9 feet above grade). Equipment associated with the small cell facility will be located on a steel platform adjacent to the building.

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Robinson + Cole

Sanctuary of Faith and Glory Church
August 31, 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

August 31, 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 752 Bloomfield Avenue, Windsor, 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 752 Bloomfield Avenue in Windsor (the “Property”).

The proposed “small cell” would consist of a short tower mast attached to a building on the Property. The tower would support a single canister-type antenna and a Remote Radio Head (“RRH”). The tower mast, antenna and RRH will be concealed within a radio frequency transparent cupola and will extend approximately 9 feet above the peak of the roof of the building (42.9 feet above grade). Equipment associated with the small cell facility will be located on a steel platform adjacent to 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.

August 31, 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

752 BLOOMFIELD AVENUE

	Property Address	Owners and Mailing Address
1.	770 Bloomfield Avenue	TLD Ace Corporation 805 Bloomfield Avenue Windsor, CT 06095
2.	350 Addison Road	Harlyn Realty LLC 86 Peak Mountain Drive East Granby, CT 06026
3.	740 Bloomfield Avenue	Marcia B. Wood 740 Bloomfield Avenue Windsor, CT 06095
4.	741 Bloomfield Avenue	Whisperwood Inc. 355 Rainbow Road Windsor, CT 06095
5.	745 Bloomfield Avenue	Sterling Viets 825 Bloomfield Avenue Windsor, CT 06095
6.	775 Bloomfield Avenue	Rose Land Group LLC 775 Bloomfield Avenue Windsor, CT 06095