STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP	:	PETITION NO. ____
D/B/A VERIZON WIRELESS FOR A	:	
DECLARATORY RULING ON THE NEED TO	:	
OBTAIN A SITING COUNCIL CERTIFICATE	:	
FOR THE INSTALLATION OF A ROOF-TOP	:	
WIRELESS TELECOMMUNICATIONS	:	
FACILITY AT 303 SLATER AVENUE,	:	
GRISWOLD, CONNECTICUT	:	SEPTEMBER 2, 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 9-foot tower on the roof of the Griswold High School at 303 Slater Avenue in Griswold, Connecticut (the "Property"). The Property is owned by the Town of Griswold ("Owner"). Cellco has designated this site as its Jewett City SC2 Facility.

II. Factual Background

The Property is a 49.74-acre parcel in Griswold's R-40 Residential zone district. The Property is surrounded by educational uses including the Griswold Elementary and Middle School buildings as well as residential and commercial uses along Routes 138 and 164. *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 Griswold and throughout the State of Connecticut. Initially, the proposed Jewett City SC2 Facility described above will provide wireless service in Cellco's 2100 MHz frequency range only. The Jewett City SC2 Facility will also provide coverage to existing gaps in 2100 MHz service, and capacity relief to Cellco's network in western portions of Griswold and eastern portions of Lisbon, particularly the Griswold High School campus.

III. Proposed Jewett City SC2 Facility

The proposed Jewett City SC2 Facility would consist of a small tower attached to the roof of the Griswold High School building. The tower will support a single canister-type antenna (Model NH180QS-DG-F0M), and a Remote Radio Head ("RRH") (Model 2X60-AWS). The tower, antenna and RRH will be concealed within a faux vent pipe-type structure. The top of the faux vent stack will extend to a height of approximately ten (10) feet above the roof of the building (approximately 38.1 feet above grade). Equipment associated with the Jewett City SC2 Facility will be located in two (2) ground-mounted equipment cabinets located near the southeast corner of the building. Power and telephone service to the Jewett City SC2 Facility will extend from existing service on the Property. (*See* Cellco's Project Plans included in Attachment 2). Specifications for the Jewett City SC2 Facility antenna and RRH are included in Attachment 3.

IV. Discussion

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

The Public Utility Environmental Standards Act (the "Act"), C.G.S. § 16-50g et seq., provides for the orderly and environmentally compatible development of telecommunications

towers in the state to avoid "a significant impact on the environment and ecology of the State of Connecticut." C.G.S. § 16-50g. To achieve these goals, the Act established the Council, and requires a Certificate of Environmental Compatibility and Public Need for the construction of cellular telecommunication towers "that may, as determined by the council, have a substantial adverse environmental effect". C.G.S. § 16-50k(a).

1. Physical Environmental Effects

Cellco respectfully submits that the installation of a small tower, supporting a single canister antenna and RRH, concealed by a faux vent pipe and the placement of two equipment cabinets on the ground adjacent to the building, will not involve a significant alteration in the physical and environmental characteristics of the Property.

2. Visual Effects

The installation of a small tower, canister antenna and RRH on the roof of the existing Griswold High School concealed within a faux vent pipe and two equipment cabinets on the ground adjacent to the building, 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 concluded in the attached Visual Assessment, the proposed small cell facility installation described above would have little effect on existing views and the aesthetics of the area.

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 Jewett City SC2 Facility will operate well within the FCC safety standard (2.95 % of the Standard).

4. FAA Summary Report

Included in Attachment 6 is a Federal Airways & Airspace Summary Report (the "FAA Report") verifying that the faux vent stack and antenna 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 2, 2015, a copy of this Petition was sent to Griswold's First Selectman Kevin A. Skulczyck. The Town of Griswold owns the Property. A copy of the Petition was also sent to Lisbon's First Selectman Thomas W. Sparkman, because portions of the Property are within 2,500 feet of the Lisbon/Griswold Town line. Copies of the letters sent to Mr. Skulczyck and Mr. Sparkman are included in Attachment 7. 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 notice of the filing of the Petition is included in Attachment 8.

V. Conclusion

Based on the information provided above, Cellco respectfully requests that the Council issue a determination in the form of a declaratory ruling that the installation of the small cell facility described above 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
Jewett City SC 2 CT
303 Slater Avenue
Griswold, Connecticut

N
W E
S

3,500 1,750 0 3,500
Feet

Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 3,500 feet
Map Date: July 2015

Legend

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

Site Schematic

Proposed Small Cell Installation
Jewett City SC 2 CT
303 Slater Avenue
Griswold, Connecticut

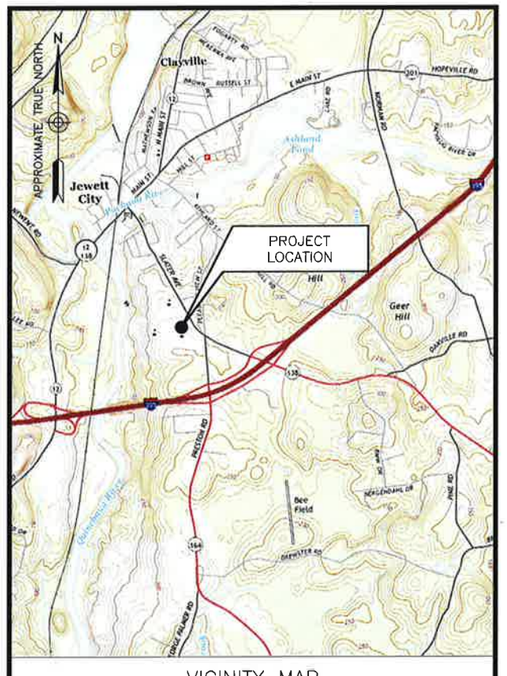
Map Notes:
**none within mapped area*
Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 400 feet
Map Date: July 2015

400 200 0 400 Feet

ATTACHMENT 2

CELLCO PARTNERSHIP d/b/a verizonwireless

PROPOSED WIRELESS FACILITY
SITE NAME: JEWETT CITY SC 2
303 SLATER AVENUE
GRISWOLD, CT 06351



VICINITY MAP

N.T.S.

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

TAKE RAMP LEFT FOR I-84 E/US-6 E TOWARD NORWICH. AT EXIT 55, TAKE RAMP RIGHT FOR CT-2 EAST TOWARD NORWICH/NEW LONDON. AT EXIT 28 N, TAKE RAMP RIGHT FOR I-395 NORTH TOWARD PROVIDENCE. AT EXIT 85, TAKE RAMP RIGHT. TURN LEFT ONTO CT-164/PRESTON RD. TURN LEFT ONTO CT-138/SLATER AVE. DESTINATION WILL BE ON THE LEFT.

SITE COORDINATES:
LATITUDE: 41°-35'-43.256" N
LONGITUDE: 71°-58'-45.740" W
(BASED ON FAA 1-A SURVEY)

ELEVATION DATA
GRADE ELEVATION AT BUILDING = 190.9'± A.M.S.L.
(BASED ON FAA 1-A SURVEY)

ELEVATION (TO TOP OF ANTENNA)
ELEVATION = 38.1'± A.G.L., 229.0'± A.M.S.L.

PROJECT INFORMATION

THE SCOPE OF WORK SHALL INCLUDE:

1. THE INSTALLATION OF PROPOSED CELLCO PARTNERSHIP EQUIPMENT CABINETS LOCATED IN A FENCED COMPOUND AT GRADE.
2. A TOTAL OF UP TO ONE (1) PROPOSED CELLCO PARTNERSHIP ANTENNA AND ASSOCIATED APPURTENANCES ARE TO BE CONCEALED INSIDE A FALSE VENT STACK ON A BALLAST MOUNT WITH A TOP ELEVATION OF 38.1'± A.G.L.
3. POWER AND TELCO UTILITIES SHALL BE ROUTED FROM EXISTING DEMARCS INSIDE BUILDING TO THE PROPOSED CELLCO PARTNERSHIP EQUIPMENT COMPOUND 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. 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:
JEWETT CITY SC 2

SITE ADDRESS:
303 SLATER AVENUE
GRISWOLD, CT 06351
NEW LONDON COUNTY

PROPERTY OWNER:
TOWN OF GRISWOLD
28 MAIN STREET
JEWETT CITY, CT 06351

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

SITE ACQUISITION CONTACT:
ALEKSEY TYURIN
VERIZON WIRELESS
(860) 803-8213

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

PROJECT INFORMATION

SHEET NUMBER	DESCRIPTION
T-1	TITLE SHEET
C-1	ABUTTERS MAP
C-2	SITE PLAN
C-3	WEST ELEVATION
C-4	ANTENNA PLAN & EQUIPMENT PLAN
	SHEET INDEX

CELLCO PARTNERSHIP d/b/a verizonwireless

JEWETT CITY SC 2

CSC DRAWINGS		
0	09/01/15	FOR SUBMITTAL
A	07/24/15	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:	HD
REVIEWED BY:	BSH
CHECKED BY:	GHN
PROJECT NUMBER:	50067815
JOB NUMBER:	50072614

SITE ADDRESS

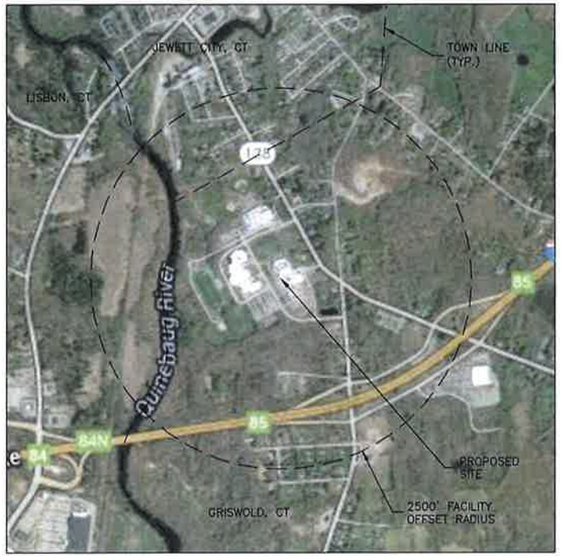
303 SLATER AVENUE
GRISWOLD, CT 06351

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



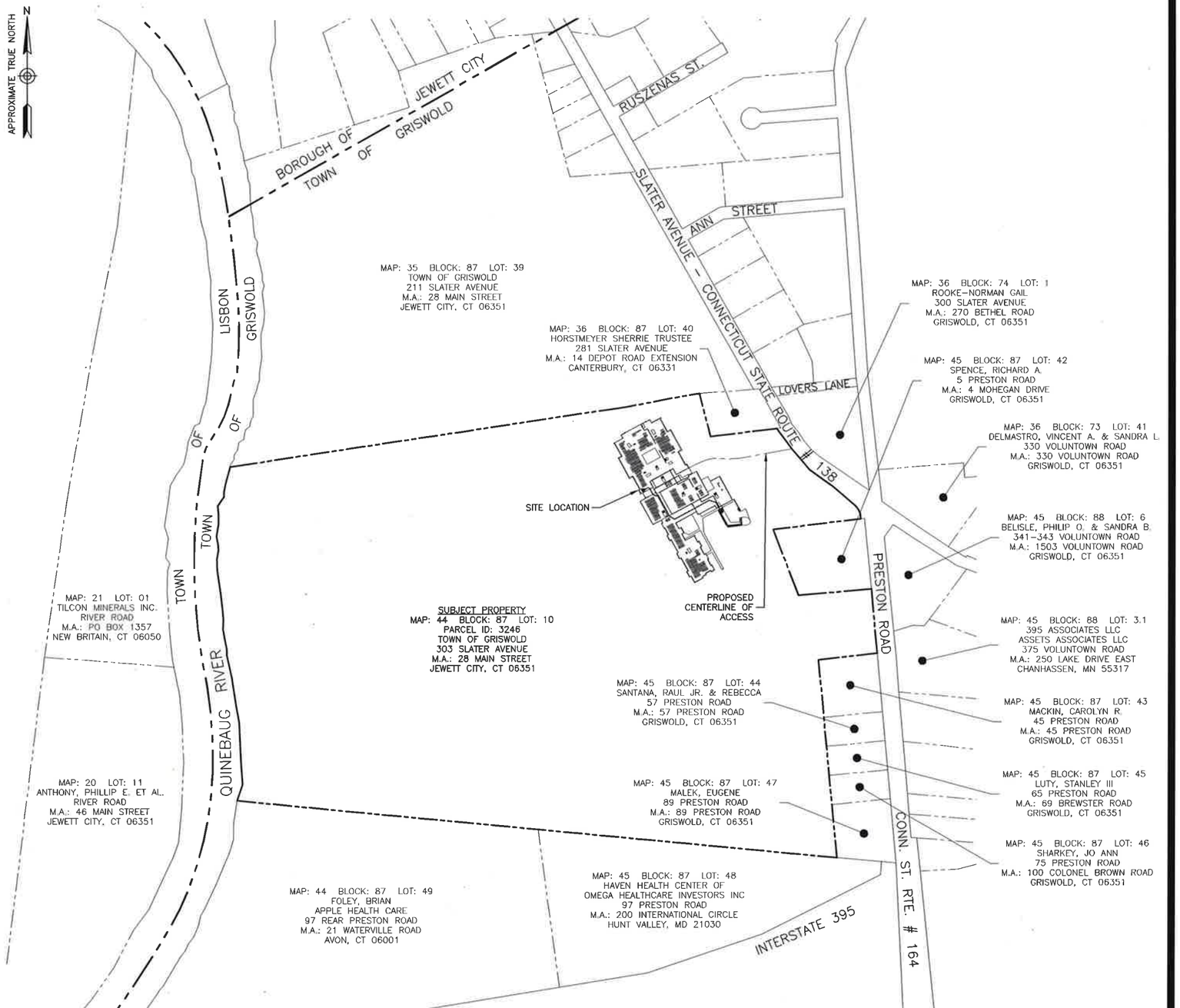
NOTES:

1. MUNICIPALITY NOTIFICATION LIMIT MAP OBTAINED FROM GOOGLE MAPS ON 07/22/15.

MUNICIPALITY NOTIFICATION LIMIT MAP (1)

SCALE: 1"=2000' FOR 11"x17"
1"=1000' FOR 22"x34"

0' 1000' 2000'



NOTE:

1. ABUTTERS MAP BASED ON INFORMATION OBTAINED FROM THE TOWN OF GRISWOLD PROPERTY MAPS & TAX ASSESSOR INFORMATION.

ABUTTERS MAP (2)

SCALE: 1"=400' FOR 11"x17"
1"=200' FOR 22"x34"

0' 200' 400'

CELLCO PARTNERSHIP
d/b/a verizonwireless

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303 SLATER AVENUE
GRISWOLD, CT 06351

SHEET TITLE

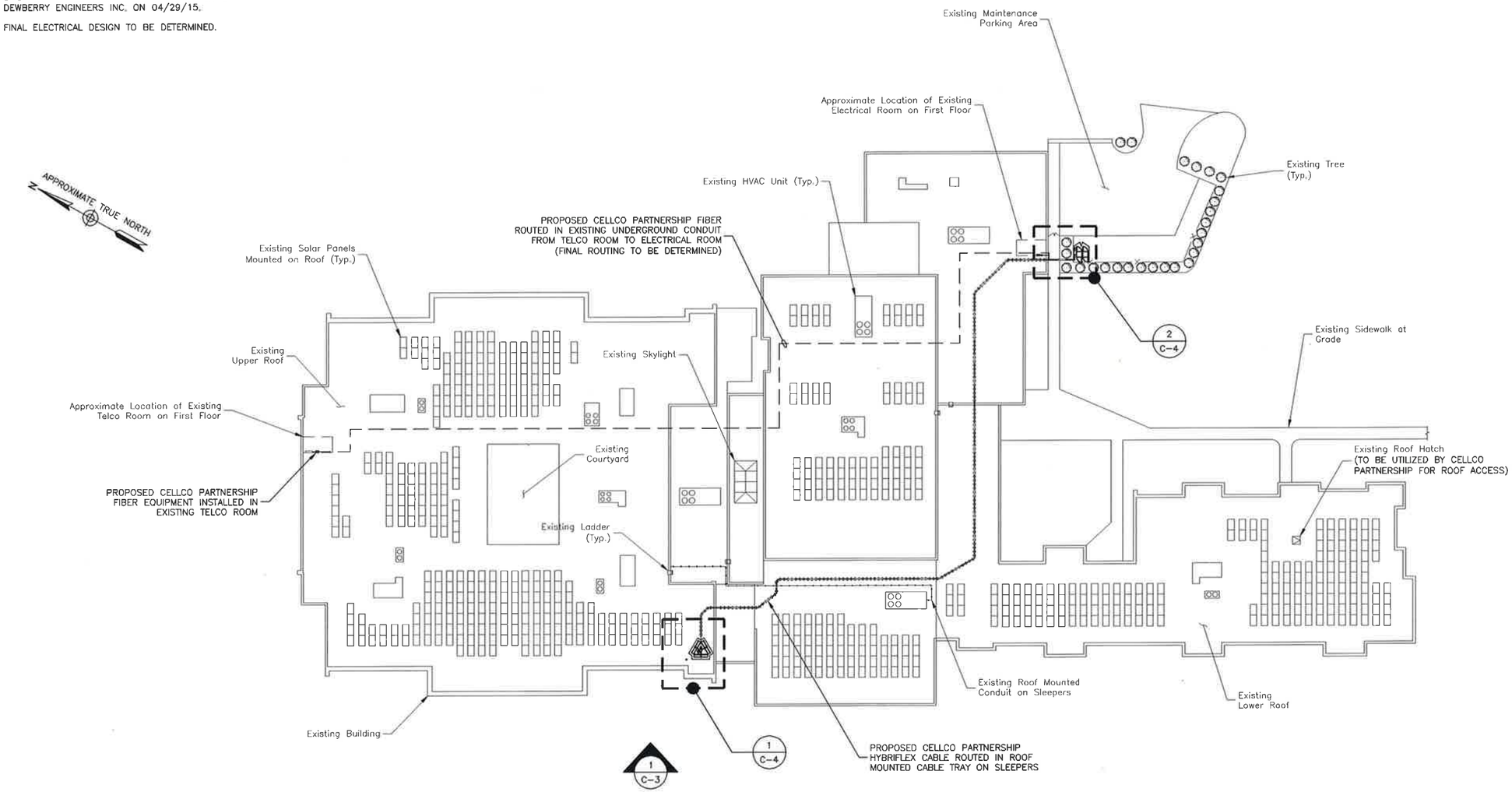
ABUTTERS MAP

SHEET NUMBER

C-1

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. THESE DRAWINGS ARE PROVIDED FOR SITTING COUNCIL REVIEW. CONSTRUCTION LEVEL DRAWINGS WILL BE DEVELOPED SUBSEQUENT TO THE APPROVAL OF THESE DRAWINGS.
4. LOCATION & ORIENTATION OF ANTENNAS, COAX, RRH & OVP BOX PENDING A STRUCTURAL ANALYSIS.
5. GROUND WILL BE TO (2) PROPOSED DRIVEN GROUND RODS AT GRADE. FINAL DESIGN TO BE DETERMINED.
6. SITE PLAN & ELEVATION BASED ON SITE VISIT BY DEWBERRY ENGINEERS INC. ON 04/29/15.
7. FINAL ELECTRICAL DESIGN TO BE DETERMINED.



SITE PLAN 1

SCALE: 1"=60' FOR 11"x17"
1"=30' FOR 22"x34"

0' 30' 60'

CELLCO PARTNERSHIP
d/b/a verizonwireless

JEWETT CITY SC 2

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A	07/24/15	FOR COMMENT

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SITE ADDRESS

303 SLATER AVENUE
GRISWOLD, CT 06351

SHEET TITLE

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 SITTING COUNCIL REVIEW. CONSTRUCTION LEVEL DRAWINGS WILL BE DEVELOPED SUBSEQUENT TO THE APPROVAL OF THESE DRAWINGS.
4. LOCATION & ORIENTATION OF ANTENNAS, COAX, RRH & OVP BOX PENDING A STRUCTURAL ANALYSIS.
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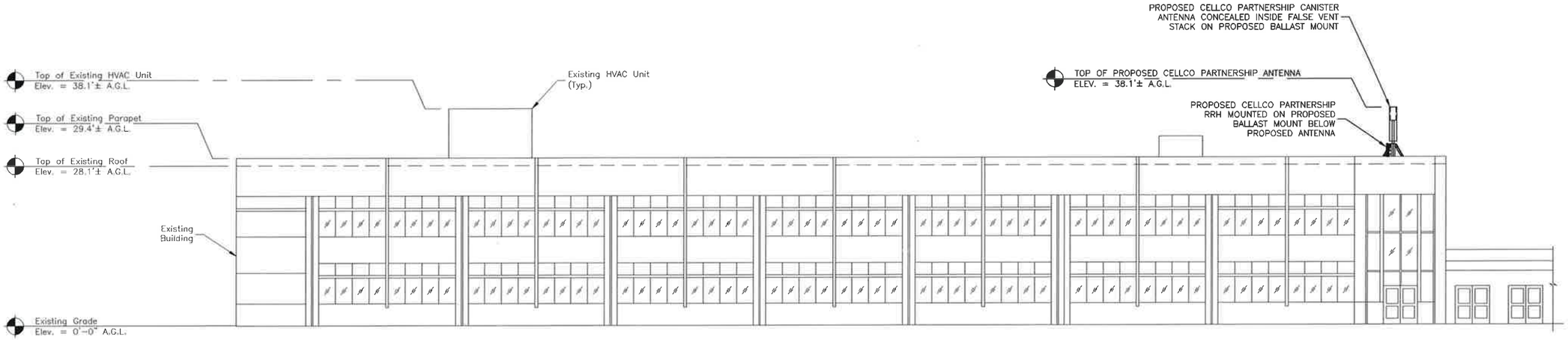

WEST ELEVATION (2)
SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

0' 10' 20'

CELLCO PARTNERSHIP
d/b/a verizonwireless

JEWETT CITY SC 2

CSC DRAWINGS		
0	09/01/15	FOR SUBMITTAL
A	07/24/15	FOR COMMENT

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DRAWN BY:	HD
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SITE ADDRESS

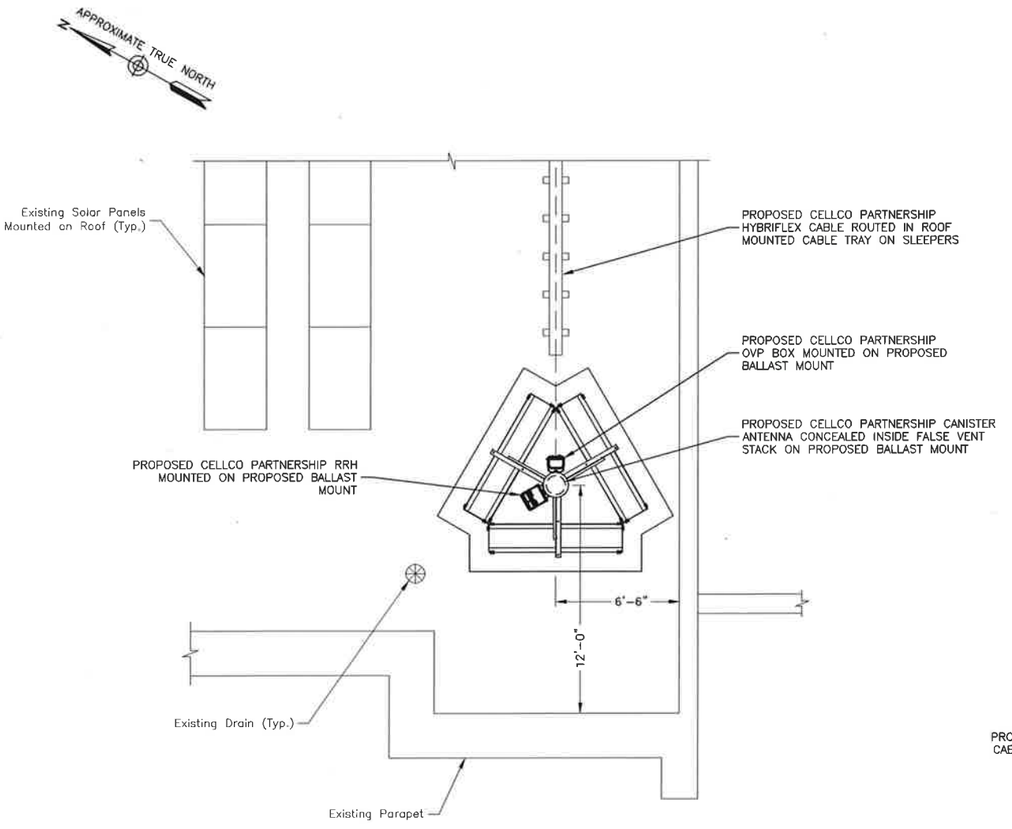
303 SLATER AVENUE
GRISWOLD, CT 06351

SHEET TITLE

WEST ELEVATION

SHEET NUMBER

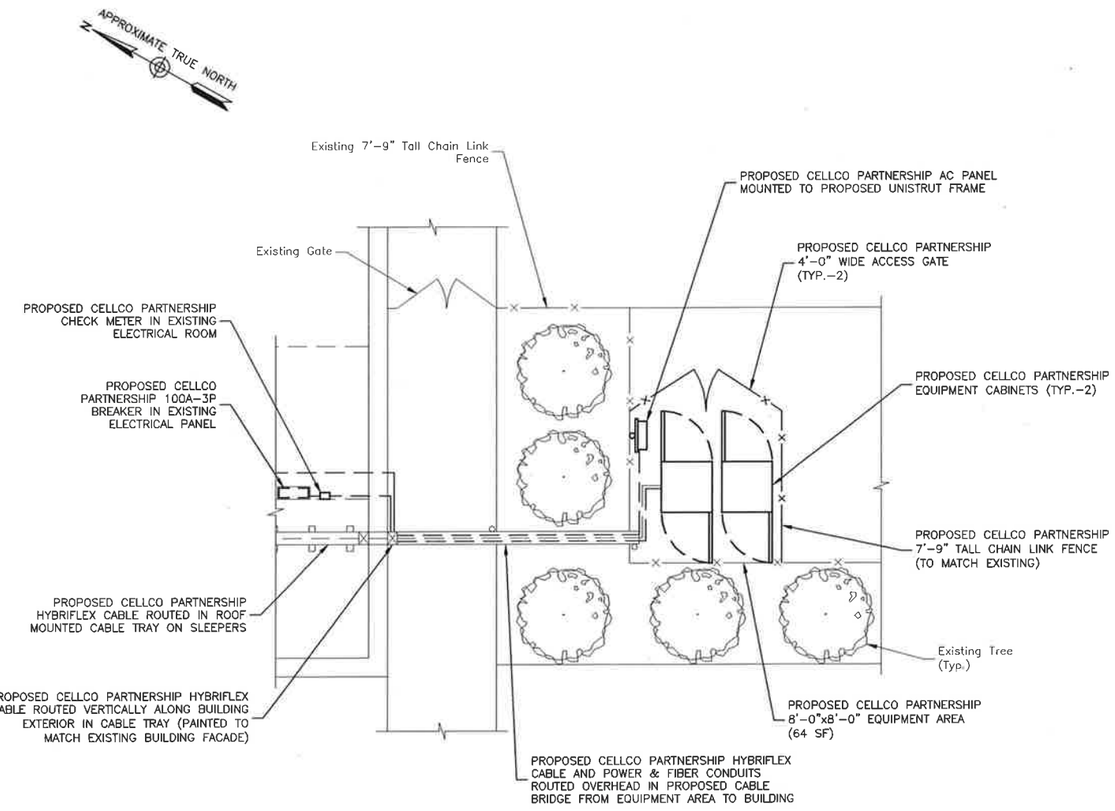
C-3



ANTENNA PLAN 1

SCALE: 1/8"=1' FOR 11"x17"
1/4"=1' FOR 22"x34"

0' 2' 4' 8'



EQUIPMENT PLAN 2

SCALE: 1/8"=1' FOR 11"x17"
1/4"=1' FOR 22"x34"

0' 2' 4' 8'

CELLCO PARTNERSHIP
d/b/a verizonwireless

JEWETT CITY SC 2

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A	07/24/15	FOR COMMENT

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303 SLATER AVENUE
GRISWOLD, CT 06351

SHEET TITLE

ANTENNA PLAN &
EQUIPMENT PLAN

SHEET NUMBER

C-4

ATTACHMENT 3

Product Specifications

COMMSCOPE®

NH180QS-DG-F0M

Andrew® Dualband half Quasi omni Metro Cell Antenna, 698-896 and 1710–2170 MHz with fixed tilt in the low band and manual tilt in the high band. Contains internal diplexer and active GPS L1 band antenna

POWERED BY ANDREW.

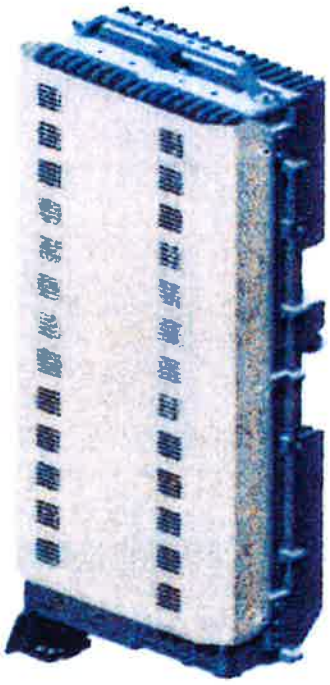
Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1920–2170
Gain, dBi	6.0	6.8	9.7	9.7	9.9
Beamwidth, Horizontal, degrees	193	180	181	182	179
Beamwidth, Vertical, degrees	36.8	33.9	15.3	14.1	13.3
Beam Tilt, degrees	0	0	0–16	0–16	0–16
USLS, dB	14	14	9	10	9
Isolation, dB	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
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	125	125	125	125	125
Polarization	±45°	±45°	±45°	±45°	±45°

Mechanical Specifications

Color | Radome Material	Light gray | ASA, UV stabilized
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 2
GPS Connector Interface | Quantity	4.1-9.5 DIN Female | 1
Wind Loading, maximum	167.0 N @ 150 km/h 37.5 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph
Antenna Dimensions, L x OD	728.0 mm x 305.0 mm | 28.7 in x 12.0 in
Net Weight	11.5 kg | 25.4 lb

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).

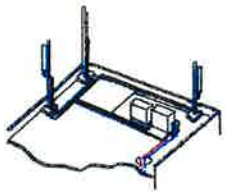
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

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.

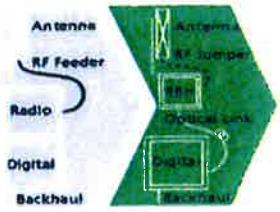
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

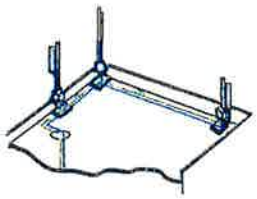
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



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

JEWETT CITY SC2
303 SLATER AVENUE
GRISWOLD,CT 06351

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 303 Slater Avenue in Griswold, Connecticut (the "Property").

Project Setting

The Property is located west of Slater Avenue and is currently developed with the Town's Elementary and High School complex. The proposed Facility would include the installation of a single canister antenna and OVP box concealed within an RF-transparent vent stack, ballast-mounted to the west side of the Elementary School building roof. The faux vent stack would extend approximately six (6) feet above an existing parapet surrounding the roof. Associated ground equipment would be located exterior of the building's east side, near a service entrance and existing landscaped area.

Methodology

On August 10, 2015, APT personnel conducted a field reconnaissance to photo-document existing conditions. Five nearby locations were selected to depict existing and proposed conditions. 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 lens set to 50 mm for all but one view. Photo location 5 was shot 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.

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 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 on the Property as the building is set back from Slater Avenue approximately 200 feet. The combination of the small cell's concealment within a cylindrical faux vent stack and its relatively short height above the building roof results in the Facility appearing to be part of the building's mechanical system. 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 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

250 125 0 250 Feet

1 inch = 250 feet

ALL-POINTS

verizon

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**HOST PROPERTY**	**NORTHEAST**	**+/- 248 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizonwireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**HOST PROPERTY**	**NORTHEAST**	**+/- 248 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**HOST PROPERTY**	**NORTH**	**+/- 367 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**HOST PROPERTY**	**NORTH**	**+/- 367 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizonwireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	**HOST PROPERTY**	**NORTHWEST**	**+/- 0.10 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
3	**HOST PROPERTY**	**NORTHWEST**	**+/- 0.10 MILE**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**HOST PROPERTY**	**SOUTHEAST**	**+/- 460 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**HOST PROPERTY**	**SOUTHEAST**	**+/- 460 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	**HOST PROPERTY (24mm Focal Length)**	**WEST**	**+/- 108 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
5	**HOST PROPERTY (24mm Focal Length)**	**WEST**	**+/- 108 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon wireless

ATTACHMENT 5

Site Name: Jewett City SC 2 , 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 PCS	1970	11	0	0	38.25	0.0000	1.0	0.00%
VZW Cellular	869	9	0	0	38.25	0.0000	0.579333333	0.00%
VZW AWS	2145	1	120	120	38.25	0.0295	1.0	2.95%
VZW 700	746	1	0	0	38.25	0.0000	0.497333333	0.00%

Total Percentage of Maximum Permissible Exposure 2.95%

*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: Existing Structure *
* Non-Antenna Structure *
****

Airspace User: Your Name

File: JEWETT_CITY_SC_2_CT

Location: Jewett City, CT

Latitude: 41°-35'-42.04" Longitude: 71°-58'-45.37"

SITE ELEVATION AMSL.....178 ft.
STRUCTURE HEIGHT.....38 ft.
OVERALL HEIGHT AMSL.....216 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 (No Expected TERPS® impact with IJD)
FAR 77.9: NNR (No Expected TERPS® impact LZD)
FAR 77.9(d): NNR (Off Airport Construction)

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

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

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

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

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

VFR TRAFFIC PATTERN AIRSPACE FOR: IJD: WINDHAM
Type: A RD: 75945.25 RE: 239.7
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

VFR TRAFFIC PATTERN AIRSPACE FOR: LZD: DANIELSON
Type: A RD: 84296.31 RE: 233.8
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 900 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
24CT	AIR	BEE FIELD	161.76	1.77	-64	

No Impact to Private Landing Facility.
DNE 200 ft AGL within 3 NM of Airport.

CT43	AIR	SPRUCE	92.23	2.17	+16	

No Impact to Private Landing Facility.
DNE 200 ft AGL within 3 NM of Airport.

CT93	HEL	BACKUS HOSPITAL	238.07	5.99	+107	

No Impact to Private Landing Facility
Structure is beyond notice limit by 31396 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	ST AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND APCH BEAR ANGLE
ORW	VOR/DME	I	110.0	201.3	15106	-94	CT	NORWICH	-.36
GON	VOR/DME	R	110.8	191.65	98458	+207	CT	GROTON	.12
PVD	RADAR	Y	2735.	66.11	113732	-360	RI	THEODORE FRANCIS	-.18

No Impact. Existing Structures Do Not Require Notice based upon EMI. The FAA takes into account and adjusts radar facilities for reflection, clutter and false targets. The studied location is within 20 NM of an Air Traffic Radar facility.
The calculated Radar Line-Of-Sight (LOS) distance is: 47 NM.
This location and height is within the Radar Line-Of-Sight.

PUT	VOR/DME	R	117.4	15.64	136418	-436	CT	PUTNAM	-.18
HFD	VOR/DME	R	114.9	276.36	156261	-633	CT	HARTFORD	-.23

PVD	VORTAC	R	115.6	72.4	157423	+167	RI	PROVIDENCE .06
SEY	VOR/DME	R	117.8	144.75	191096	+116	RI	SANDY POINT .03
BDL	RADAR	ON		303.36	229075	-20	CT	BRADLEY INTL -.01

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: WICH @ 9300 meters.

Airspace® Summary Version 15.5.391

07-09-2015
10:21:39

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

September 2, 2015

Via Certificate of Mailing

Kevin A. Skulczyck, First Selectman
Town of Griswold
28 Main Street
P.O. Box 369
Griswold, CT 06351

Re: **Installation of a Roof-Top Telecommunications Facility at the Griswold High School, 303 Slater Avenue, Griswold, Connecticut**

Dear Mr. Skulczyck:

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 on the Griswold High School at 303 Slater Avenue in Griswold, Connecticut (the "Property").

The proposed facility would consist of a 10-foot tall tower attached to the roof of the Griswold High School building. The tower would support a single canister-type antenna and remote radio head (RRH). The tower, antenna and RRH will extend to a height of 38.1 feet above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located near the southeast corner of the building.

A copy of Cellco's Petition is attached for your review. Landowners whose property abuts 303 Slater Avenue site were also sent a copy of the Petition.

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

September 2, 2015

Via Certificate of Mailing

Thomas W. Sparkman, First Selectman
Town of Lisbon
Town Office Building
1 Newent Road
Lisbon, CT 06351

Re: **Installation of a Roof-Top Telecommunications Facility at the Griswold High School, 303 Slater Avenue, Griswold, Connecticut**

Dear Mr. Sparkman:

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 on the Griswold High School at 303 Slater Avenue in Griswold, Connecticut (the "Property").

The proposed facility would consist of a 10-foot tall tower attached to the roof of the Griswold High School building. The tower would support a single canister-type antenna and remote radio head (RRH). The tower, antenna and RRH will extend to a height of 38.1 feet above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located near the southeast corner of the building.

You are receiving this notice because the Town of Ellington 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 303 Slater Avenue site were also sent a copy of the Petition.

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 2, 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 Roof-Top Telecommunications Facility at the Griswold High School, 303 Slater Avenue, Griswold, 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 on the Griswold High School at 303 Slater Avenue in Griswold, Connecticut (the "Property").

The proposed facility would consist of a 10-foot tall tower attached to the roof of the Griswold High School building. The tower would support a single canister-type antenna and remote radio head (RRH). The tower, antenna and RRH will extend to a height of 38.1 feet above ground level. Equipment associated with the antenna will be located in two ground-mounted cabinets located near the southeast corner of the building. A full copy of the Petition filing 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.

Sincerely,

Kenneth C. Baldwin

Attachment

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

303 SLATER AVENUE
GRISWOLD, CONNECTICUT

Griswold

	Property Address	**Owner and Mailing Address**
1.	211 Slater Avenue	Town of Griswold 29 Main Street Jewett City, CT 06351
2.	281 Slater Avenue	Sherrie Horstmeyer, Trustee 14 Depot Road Extension Canterbury, CT 06331
3.	300 Slater Avenue	Gail Rooke-Norman 270 Bethel Road Griswold, CT 06351
4.	5 Preston Road	Richard A. Spence 4 Mohegan Drive Griswold, CT 06351
5.	330 Voluntown Road	Vincent A. and Sandra L. Delmastro 330 Voluntown Road Griswold, CT 06351
6.	341-343 Voluntown Road	Philip O. and Sandra B. Belisle 1503 Voluntown Road Griswold, CT 06351
7.	45 Preston Road	Carolyn R. Mackin 45 Preston Road Griswold, CT 06351
8.	57 Preston Road	Rebecca and Raul Santana 57 Preston Road Griswold, CT 06351
9.	65 Preston Road	Stanley Luty III 69 Brewster Road Griswold, CT 06351

	Property Address	Owner and Mailing Address
10.	75 Preston Road	Jo Ann Sharkey 100 Colonel Brown Road Griswold, CT 06351
11.	89 Preston Road	Eugene Malek 89 Preston Road Griswold, CT 06351
12.	97 Preston Road	Haven Health Center of Omega Healthcare Investors Inc. 200 International Circle, Suite 3500 Hunt Valley, MD 21030
13.	97 Preston Road (Rear)	Brian Foley Apple Health Care 21 Waterville Road Avon, CT 06001
14.	375 Voluntown Road	395 Associates LLC Assett Associates LLC 250 Lake Drive East Chanhassen, MN 55317

Lisbon

15.	0 River Road	Phillip E. Anthony, Et Al 46 Main Street Jewett City, CT 06351
16.	0 River Road	Tilcon Materials Inc. P.O. Box 1357 New Britain, CT 06050