

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
: :
A PETITION OF CELLCO PARTNERSHIP : SUB-PETITION NO. 1133
D/B/A VERIZON WIRELESS FOR A : 1 PUBLIC WORKS DRIVE
DECLARATORY RULING FOR : EAST HAMPTON, CONNECTICUT
APPROVAL OF AN ELIGIBLE FACILITY : :
REQUEST FOR MODIFICATIONS TO AN : :
EXISTING TELECOMMUNICATIONS : :
TOWER AT 1 PUBLIC WORKS DRIVE, : :
EAST HAMPTON, CONNECTICUT : AUGUST 5, 2015

SUB-PETITION FOR DECLARATORY RULING:
ELIGIBLE FACILITIES REQUEST FOR MODIFICATIONS
THAT WILL NOT SUBSTANTIALLY CHANGE THE
PHYSICAL DIMENSIONS OF AN EXISTING TOWER

I. Introduction

Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. § 1455(a) (“Section 6409(a)”) and the October 21, 2014 Report and Order (FCC-14-533) issued by the Federal Communications Commission (“FCC”) (the “FCC Order”), Cellco Partnership d/b/a Verizon Wireless (“Cellco”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Sub-Petition”) that the proposed modifications to an existing Crown Castle (“Crown”) tower at 1 Public Works Drive in East Hampton, Connecticut constitutes an Eligible Facilities Request (“EFR”) under the FCC Order. Cellco has designated this site it’s “East Hampton 3 Facility”.

II. Factual Background

The Town of East Hampton (the “Town”) owns a 6.43-acre parcel at 1 Public Works Drive in East Hampton, Connecticut (the “Property”). The Property currently supports the Town’s Public Works Department offices and operations center. In the northerly portion of the

Property, Crown maintains a 180-foot self-supporting monopole tower. See Attachment 1 – Site Vicinity Map and Site Schematic (Aerial Photograph). The Crown tower is currently shared by AT&T, Sprint and the Town. Equipment associated with the existing antennas is located within a fenced compound near the base of the tower.

III. Proposed East Hampton 3 Facility

Cellco intends to install a total of twelve (12) antennas and nine (9) remote radio heads (“RRHs”) on a low-profile platform at the 160-foot level on the tower. Equipment associated with Cellco’s antennas will be located inside a 12’ x 20’ shelter in the southeasterly portion of the facility compound. A propane-fueled back-up generator will be located on the ground adjacent to Cellco’s shelter. A 1,000 gallon propane tank will be installed in the northeast corner of the compound. Power and telephone service will extend from the existing utility backboard at the tower site. Project Plans for Cellco’s East Hampton 3 Facility are included in Attachment 2. Specifications for Cellco’s antennas and RRHs are included in Attachment 3. A Structural Opinion Letter confirming that the Crown tower can accommodate Cellco’s proposed modifications is included in Attachment 4.

IV. Discussion

A. The Proposed Modification Will Not Cause a Substantial Change to the Physical Dimensions of the Existing Tower or Base Station

Section 6409(a) provides, in relevant part, that “a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.” Pursuant to the FCC Order, the proposed modification does not substantially change the physical dimensions of the tower or base station if the following criteria are satisfied.

1. *The proposed modified facility will not increase the height of the tower by more than ten (10) percent or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty (20) feet, whichever is greater.* Cellco proposes to install its antennas and RRHs at the 160-foot level on the existing 180-foot tower.

2. *The proposed facility will not protrude from the edge of the structure more than six (6) feet.* The proposed antennas and RRHs will protrude approximately four feet from the face of the tower.

3. *The proposed facility does not involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets.* Cellco intends to install a single equipment shelter to house its radio equipment and back-up power supply.

4. *The proposed facility does not entail any excavation or deployment outside the current site of the base station.* All of Cellco's site improvements will occur within the limits of the existing fenced compound area.

5. *The proposed facility does not defeat the existing concealment elements of the base station.* None of the existing antennas on the Crown tower are concealed in any fashion. Cellco's antennas will not be concealed.

6. *The proposed facility complies with conditions associated with the prior approval of construction or modification of the base station.* Cellco is not aware of any conditions imposed on the Town of East Hampton or Crown that would prohibit the shared use of the tower.

B. FCC Compliance

Operation of Cellco's facility will not increase the radio frequency ("RF") emissions at the Crown tower site to a level at or above the FCC Safety standard. A cumulative General Power Density table, including Cellco's proposed antennas is included in Attachment 5.

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

On August 5, 2015, a copy of this Sub-Petition was sent to East Hampton's Town Manager, Michael Maniscalco. The Town is the owner of the Property. See Attachment 6.

A copy of this Sub-Petition was also sent to each owner of land that abuts the Property. A sample abutter's cover letter and the list of those abutting landowners who were sent notice and a copy of the Sub-Petition is included in Attachment 7.

V. Conclusion

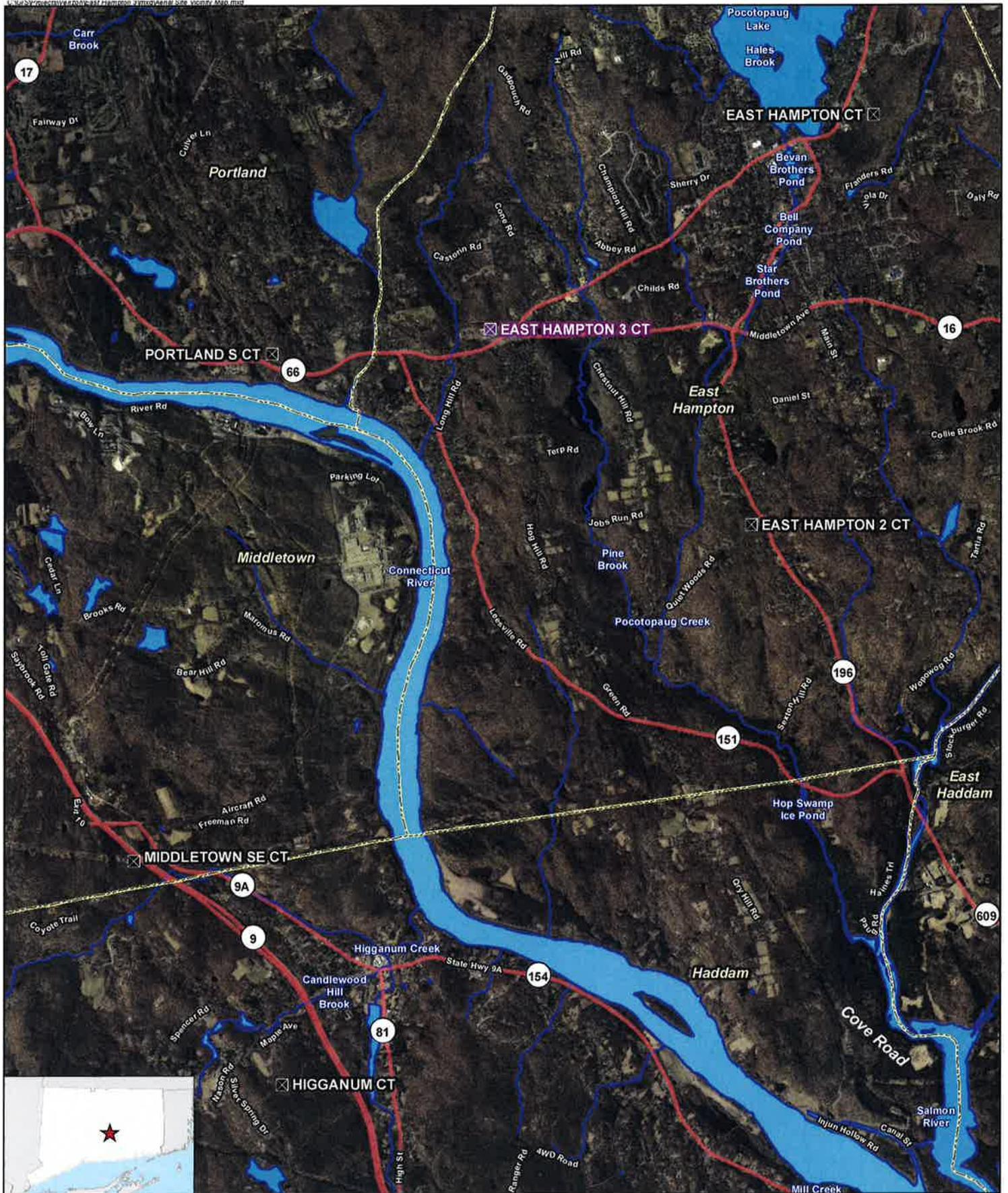
Based on the information provided above, Cellco respectfully submits that the proposed modification of the existing base station at the Property constitutes an "eligible facilities request" under Section 6409(a) and the FCC Order.

Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON
WIRELESS

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

ATTACHMENT 1



- Legend**
- Proposed Verizon Wireless Facility
 - Surrounding Verizon Wireless Facilities
 - Waterbody
 - Municipal Boundary
 - ~ Watercourse (CTDEEP)

Site Vicinity Map

Proposed Wireless Telecommunications Facility
 East Hampton 3 CT
 1 Public Works Drive
 East Hampton, Connecticut

Base Map Source: 2012 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 5,000 feet
 Map Date: July 2015





Legend

-  Existing 180' Monopole Tower (by others)
-  Existing Fenced Compound (by others)
-  Proposed Equipment
-  Approximate Subject Property
-  Approximate Parcel Boundary (CTDEEP GIS Parcels Last Updated 2010)

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



Site Schematic

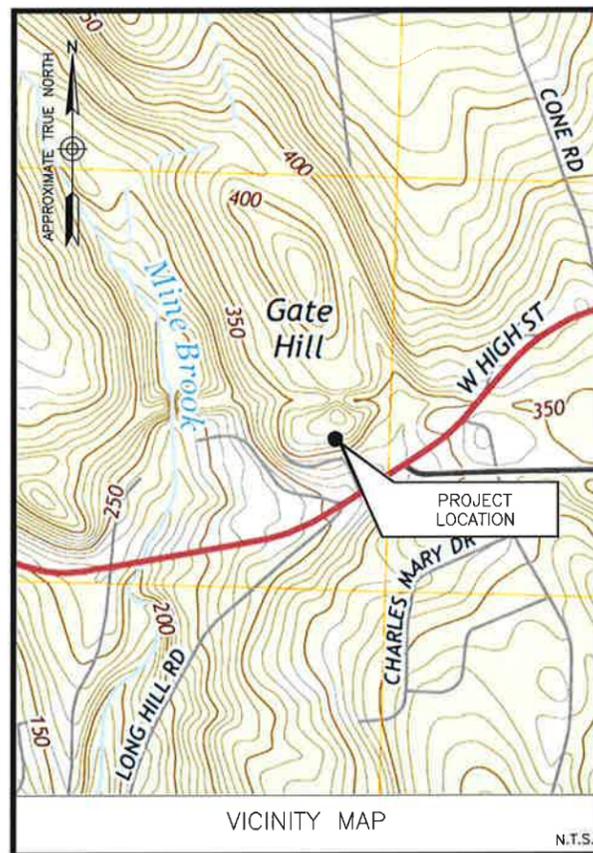
Proposed Wireless
 Telecommunications Facility
 East Hampton 3 CT
 1 Public Works Drive
 East Hampton, Connecticut



ATTACHMENT 2

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

PROPOSED WIRELESS FACILITY SITE NAME: EAST HAMPTON 3 1 PUBLIC WORKS DRIVE EAST HAMPTON, CT 06424



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 13, TAKE RAMP RIGHT FOR CT-66 TOWARD MARLBOROUGH/WILLIMANTIC. BEAR RIGHT ONTO CT-66/HEBRON RD. TURN RIGHT ONTO PUBLIC WORKS DR. SITE IS ON THE RIGHT.

SITE COORDINATES:
LATITUDE: 41°-33'-53.15" N
LONGITUDE: 72°-32'-35.22" W
(BASED ON GOOGLE EARTH)

ELEVATION DATA
GRADE ELEVATION AT MONOPOLE = 359'± A.M.S.L.
(BASED ON GOOGLE EARTH)

ELEVATION (TO C.L. OF ANTENNAS)
ELEVATION = 160'± A.G.L., 519'± A.M.S.L.

PROJECT INFORMATION

- THE SCOPE OF WORK SHALL INCLUDE:
1. THE UTILIZATION OF AN EXISTING EQUIPMENT SHELTER LOCATED IN AN EXISTING COMPOUND.
 2. A TOTAL OF UP TO TWO (12) PROPOSED CELLCO PARTNERSHIP ANTENNAS AND ASSOCIATED APPURTENANCES ARE TO BE MOUNTED TO THE EXISTING MONOPOLE AT CENTERLINE ELEVATION OF 160'± A.G.L.
 3. THE INSTALLATION OF A PROPOSED CELLCO PARTNERSHIP PROPANE TANK IN AN EXISTING COMPOUND.
 4. THE INSTALLATION OF A PROPOSED BACKUP GENERATOR ON AN EXISTING CONCRETE PAD.
 5. THE PROPOSED WIRELESS FACILITY INSTALLATION WILL BE DESIGNED IN ACCORDANCE WITH THE 2003 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2009 CONNECTICUT SUPPLEMENT.
- SCOPE OF WORK

SITE NAME:
EAST HAMPTON 3

SITE ADDRESS:
1 PUBLIC WORKS DRIVE
EAST HAMPTON, CT 06424
MIDDLESEX COUNTY

PROPERTY OWNER:
TOWN OF EAST HAMPTON
20 EAST HIGH STREET
EAST HAMPTON, CT 06424

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

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

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

PROJECT INFORMATION

SHEET NUMBER	DESCRIPTION
T-1	TITLE SHEET
C-1	ABUTTERS MAP
C-2	PARTIAL SITE PLAN
C-3	ANTENNA MOUNTING CONFIGURATION & NORTH ELEVATION
SHEET INDEX	

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

EAST HAMPTON 3

CSC DRAWINGS		
B	08/03/15	FOR SUBMITTAL
A	07/22/15	FOR COMMENT

Dewberry®

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

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

DRAWN BY: JC

REVIEWED BY: PD

CHECKED BY: GHN

PROJECT NUMBER: 50067815

JOB NUMBER: 50067824

SITE ADDRESS

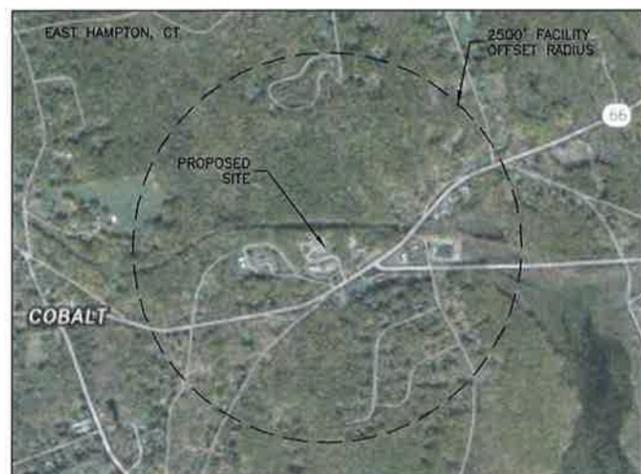
1 PUBLIC WORKS DRIVE
EAST HAMPTON, CT 06424

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



MUNICIPALITY NOTIFICATION LIMIT MAP ①



PARCEL ID: 06-5A-6-1
TOWN OF EAST HAMPTON
GILDERSLEEVE DRIVE
M.A.: 20 EAST HAMPTON HIGH STREET
EAST HAMPTON, CT 06424

PARCEL ID: 06-6-3-1
TOWN OF EAST HAMPTON
20 GILDERSLEEVE DRIVE
M.A.: 20 EAST HIGH STREET
EAST HAMPTON, CT 06424

PARCEL ID: 06-6-1A
TOWN OF EAST HAMPTON
GILDERSLEEVE DRIVE
M.A.: 20 EAST HAMPTON HIGH STREET
EAST HAMPTON, CT 06424

PARCEL ID: 06-6-1
TOWN OF EAST HAMPTON
5 GILDERSLEEVE DRIVE
M.A.: 20 EAST HIGH STREET
EAST HAMPTON, CT 06424

PARCEL ID: 02A-48A-30
STATE OF CONNECTICUT
BARTON HILL ROAD
M.A.: PO BOX 317546
NEWINGTON, CT 06131-7546

SUBJECT PROPERTY
PARCEL ID: 06-5A-8B
TOWN OF EAST HAMPTON
1 PUBLIC WORKS DRIVE
M.A.: 20 EAST HIGH STREET
EAST HAMPTON, CT 06424

PROPOSED
CENTERLINE OF
ACCESS

PARCEL ID: 06-5A-8
STATE OF CONNECTICUT
WEST HIGH STREET
M.A.: DOT-MAINT
EAST HAMPTON, CT 06424

PARCEL ID: 06-12-9-4
HIGHWAY 66 LLC
259 WEST HIGH STREET
M.A.: 244 MIDDLETOWN AVENUE
EAST HAMPTON, CT 06424

PARCEL ID: 06-12-9
BELLTOWN SPORTS LLC
265 WEST HIGH STREET
M.A.: 265 WEST HIGH STREET
EAST HAMPTON, CT 06424

NOTES:

1. ABUTTERS MAP BASED ON INFORMATION OBTAINED FROM THE TOWN OF EAST HAMPTON GEOGRAPHIC INFORMATION SYSTEM.

ABUTTERS MAP ②

SCALE: 1"=200' FOR 11"x17"
1"=100' FOR 22"x34"



EAST HAMPTON 3

CSC DRAWINGS

B	08/03/15	FOR SUBMITTAL
A	07/22/15	FOR COMMENT



Dewberry Engineers Inc.
800 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973 739 9400
FAX: 973 739 9710

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

DRAWN BY: JC

REVIEWED BY: PD

CHECKED BY: GHN

PROJECT NUMBER: 50067815

JOB NUMBER: 50067824

SITE ADDRESS

1 PUBLIC WORKS DRIVE
EAST HAMPTON, CT 06424

SHEET TITLE

ABUTTERS MAP

SHEET NUMBER

EAST HAMPTON 3

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A	07/22/15	FOR COMMENT



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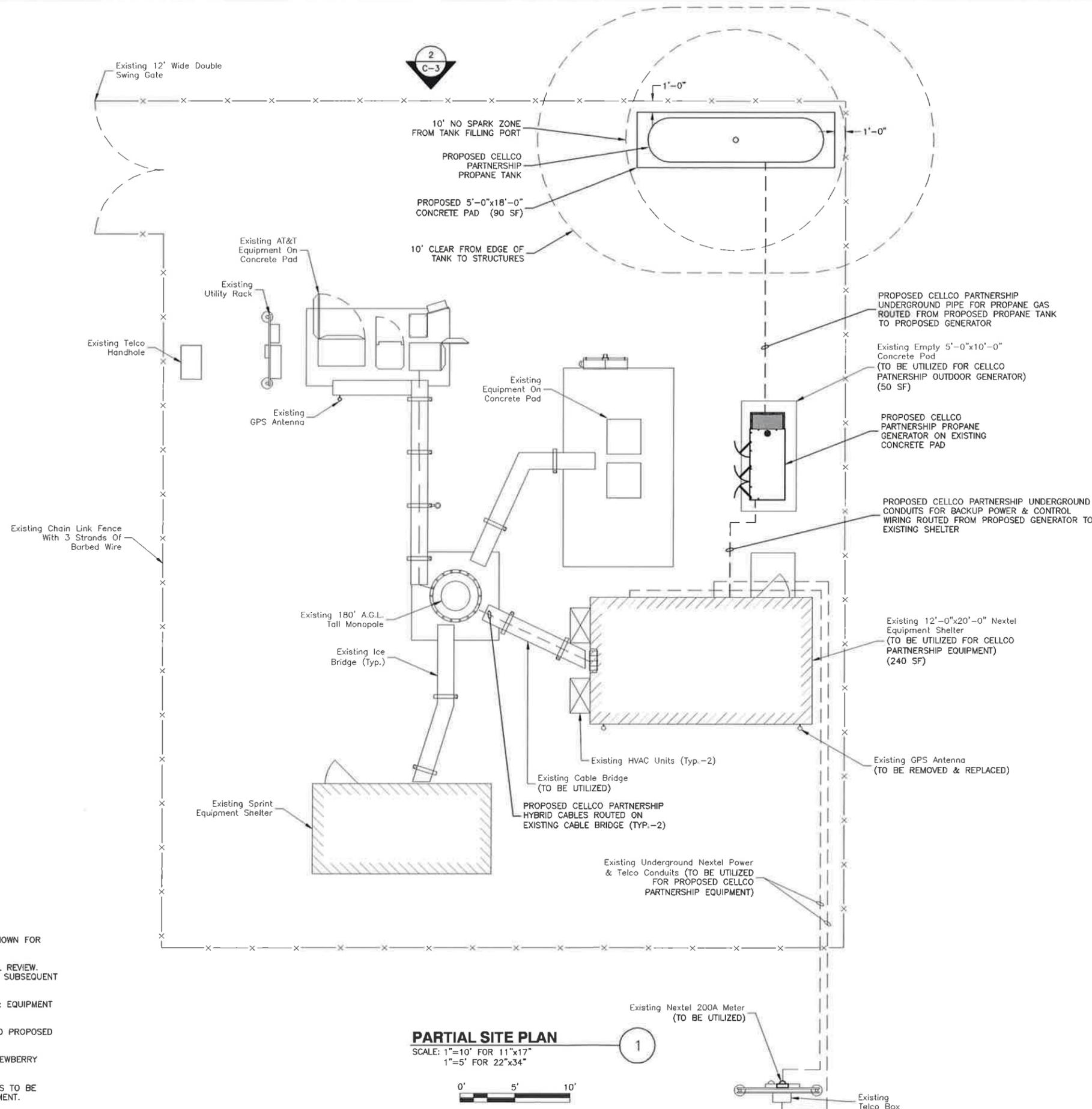
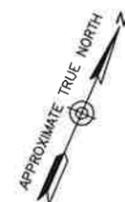
1 PUBLIC WORKS DRIVE
EAST HAMPTON, CT 06424

SHEET TITLE

PARTIAL SITE PLAN

SHEET NUMBER

C-2



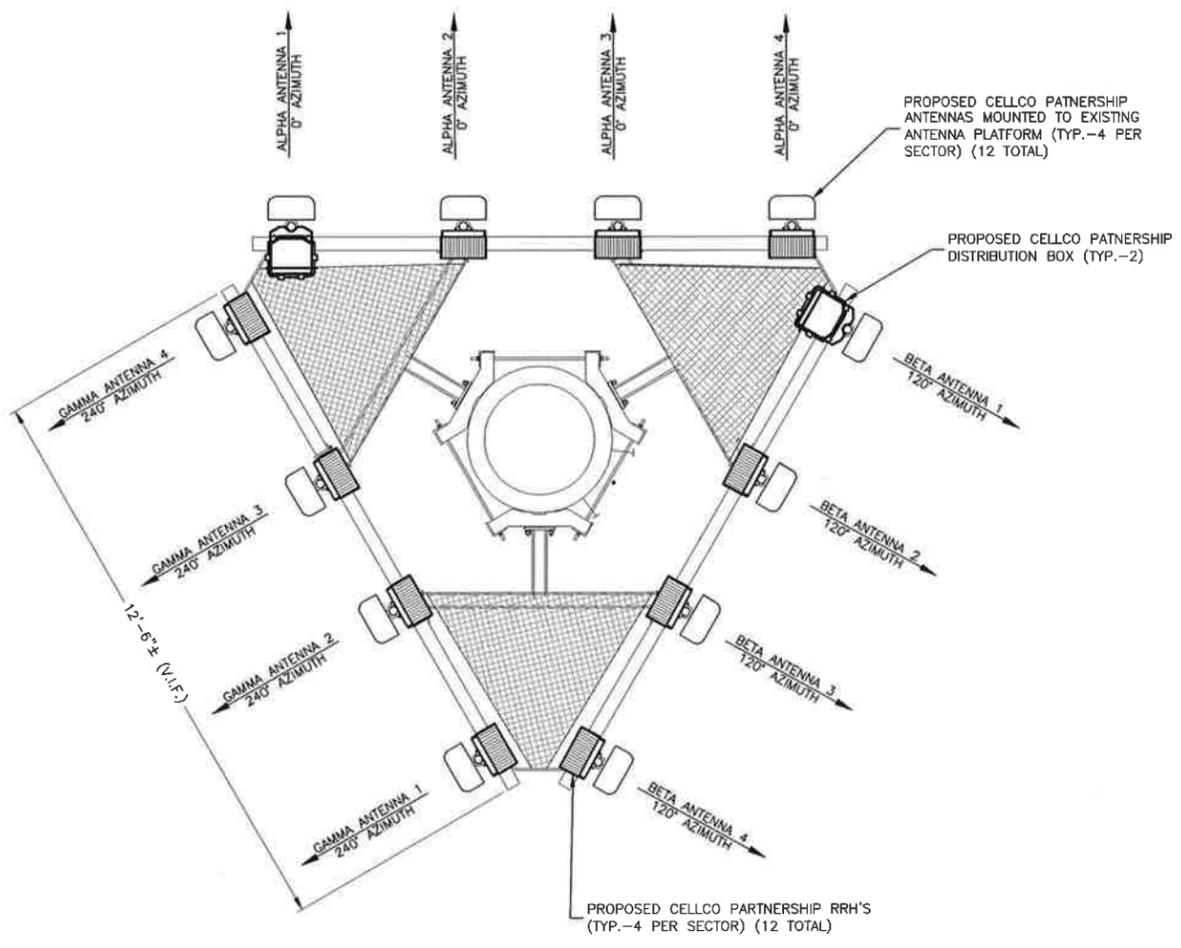
PARTIAL SITE PLAN

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"



NOTES:

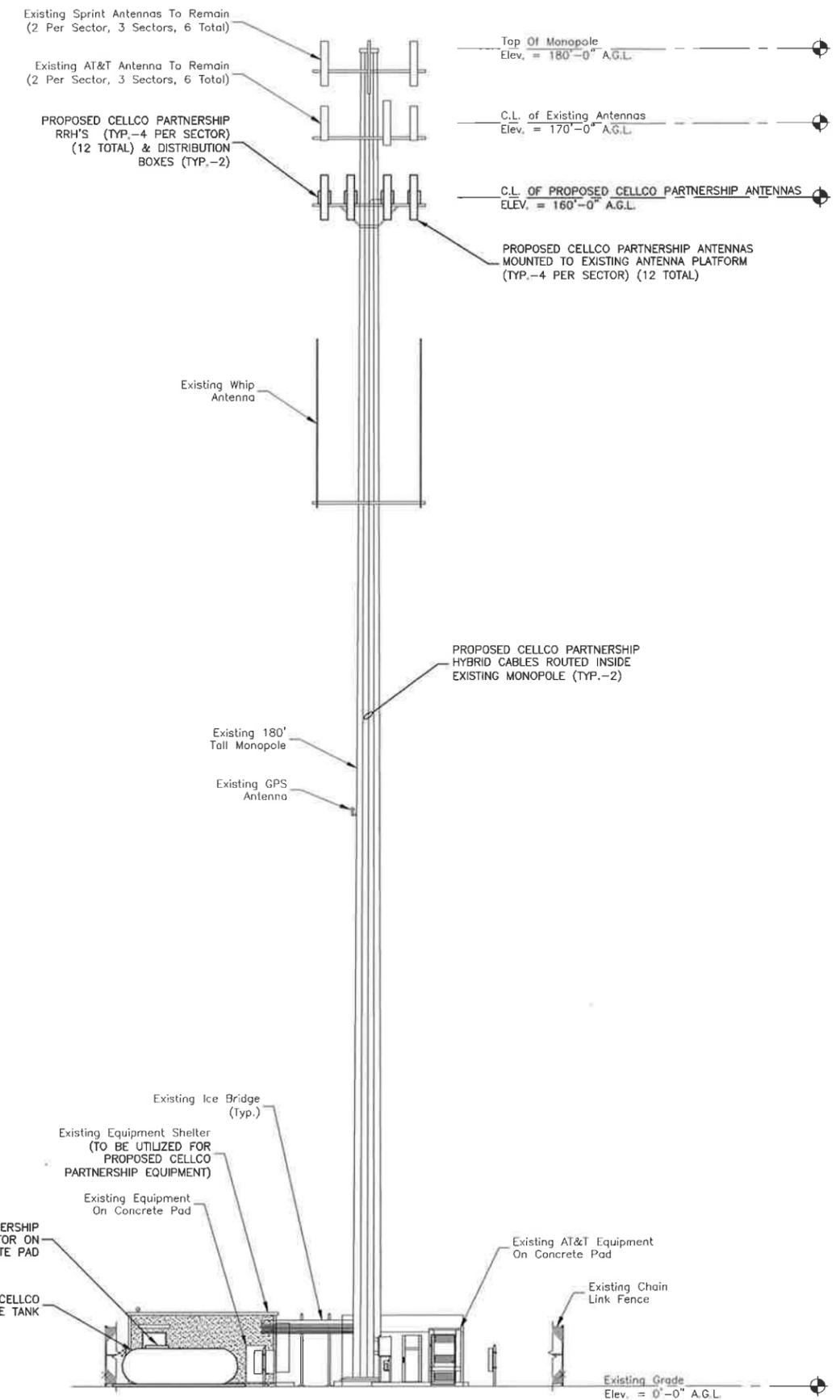
1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. THESE DRAWINGS ARE PROVIDED FOR SITING COUNCIL REVIEW. CONSTRUCTION LEVEL DRAWINGS WILL BE DEVELOPED SUBSEQUENT TO THE APPROVAL OF THESE DRAWINGS.
4. LOCATION & ORIENTATION OF ALL ANTENNAS, COAX & EQUIPMENT PENDING A STRUCTURAL ANALYSIS BY OTHERS.
5. EXISTING GROUND RING WILL BE UTILIZED TO GROUND PROPOSED CELLCO PARTNERSHIP EQUIPMENT.
6. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DEWBERRY ENGINEERS INC. ON 08/20/14.
7. EXISTING NEXTEL POWER, TELCO & GROUND CONDUITS TO BE UTILIZED FOR PROPOSED CELLCO PARTNERSHIP EQUIPMENT.



NOTE:
 1. ANTENNA MOUNTING CONFIGURATION IS PROVIDED FOR SITING COUNCIL REVIEW. CONSTRUCTION LEVEL DRAWINGS WILL BE DEVELOPED SUBSEQUENT TO THE APPROVAL OF THESE DRAWINGS.

ANTENNA MOUNTING CONFIGURATION
 SCALE: 1/4"=1' FOR 11"x17"
 1/2"=1' FOR 22"x34"
 1

- NOTES:**
- NORTH SHOWN AS APPROXIMATE.
 - SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
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CELLCO PARTNERSHIP
 d/b/a **verizon**wireless

EAST HAMPTON 3

CSC DRAWINGS

B	08/03/15	FOR SUBMITTAL
A	07/22/15	FOR COMMENT

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

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 CHECKED BY: GHN
 PROJECT NUMBER: 50067815
 JOB NUMBER: 50067824

SITE ADDRESS

1 PUBLIC WORKS DRIVE
 EAST HAMPTON, CT 06424

SHEET TITLE
 ANTENNA MOUNTING CONFIGURATION & NORTH ELEVATION
 SHEET NUMBER

C-3

ATTACHMENT 3

Product Specifications

LNX-6515DS-VTM

Andrew® Antenna, 698–896 MHz, 65° horizontal beamwidth, RET compatible

POWERED BY



Electrical Specifications

Frequency Band, MHz	698–806	806–896
Gain, dBi	16.7	17.6
Beamwidth, Horizontal, degrees	65	64
Beamwidth, Vertical, degrees	9.7	8.6
Beam Tilt, degrees	0–8	0–8
USLS, dB	17	17
Front-to-Back Ratio at 180°, dB	32	27
CPR at Boresight, dB	24	27
CPR at Sector, dB	15	13
Isolation, dB	30	30
VSWR Return Loss, dB	1.4 15.6	1.4 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153
Input Power per Port, maximum, watts	400	400
Polarization	±45°	±45°

Electrical Specifications, BASTA*

Frequency Band, MHz	698–806	806–896
Gain by all Beam Tilts, average, dBi	16.6	16.9
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3
	0 ° 16.6	0 ° 17.0
Gain by Beam Tilt, average, dBi	4 ° 16.6	4 ° 17.0
	8 ° 16.4	8 ° 16.8
Beamwidth, Horizontal Tolerance, degrees	±1	±0.9
Beamwidth, Vertical Tolerance, degrees	±0.6	±0.4
USLS, dB	18	18
Front-to-Back Total Power at 180° ± 30°, dB	25	23
CPR at Boresight, dB	24	27
CPR at Sector, dB	15	13

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

Mechanical Specifications

Color Radome Material	Light gray Fiberglass, UV resistant
Connector Interface Location Quantity	7-16 DIN Female Bottom 2
Wind Loading, maximum	878.0 N @ 150 km/h 197.4 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h 149.8 mph
Antenna Dimensions, L x W x D	2438.0 mm x 301.0 mm x 181.0 mm 96.0 in x 11.9 in x 7.1 in
Net Weight	19.8 kg 43.7 lb
Model with factory installed AISG 2.0 RET	LNX-6515DS-A1M

Product Specifications

COMMSCOPE®

POWERED BY



HBXX-6517DS-VTM

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

- Superior azimuth tracking and pattern symmetry with excellent passive intermodulation suppression

Electrical Specifications

Frequency Band, MHz	1710–1880	1850–1990	1920–2180
Gain, dBi	19.0	19.1	19.2
Beamwidth, Horizontal, degrees	67	66	65
Beamwidth, Vertical, degrees	5.0	4.7	4.4
Beam Tilt, degrees	0–6	0–6	0–6
USLS, dB	18	18	18
Front-to-Back Ratio at 180°, dB	30	30	30
CPR at Boresight, dB	21	22	21
CPR at Sector, dB	10	11	9
Isolation, dB	30	30	30
VSWR Return Loss, dB	1.4 15.6	1.4 15.6	1.4 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350
Polarization	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	1710–1880	1850–1990	1920–2180
Gain by all Beam Tilts, average, dBi	18.5	18.6	18.8
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3	±0.4
	0° 18.4	0° 18.4	0° 18.7
Gain by Beam Tilt, average, dBi	3° 18.7	3° 18.7	3° 18.9
	6° 18.4	6° 18.5	6° 18.6
Beamwidth, Horizontal Tolerance, degrees	±2.4	±1.7	±2.9
Beamwidth, Vertical Tolerance, degrees	±0.3	±0.3	±0.3
USLS, dB	18	19	19
Front-to-Back Total Power at 180° ± 30°, dB	25	26	26
CPR at Boresight, dB	22	23	22
CPR at Sector, dB	10	10	9

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

General Specifications

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

Product Specifications

COMMSCOPE®

HBXX-6517DS-VTM



Performance Note

Outdoor usage

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Low loss circuit board
Radome Material	PVC, UV resistant
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	4
Wind Loading, maximum	668.0 N @ 150 km/h 150.2 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h 149.8 mph

Dimensions

Depth	166.0 mm 6.5 in
Length	1903.0 mm 74.9 in
Width	305.0 mm 12.0 in
Net Weight	19.5 kg 43.0 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 2.0 Actuator	HBXX-6517DS-A2M
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency

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

Classification

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



Included Products

600899A-2 — Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.



The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

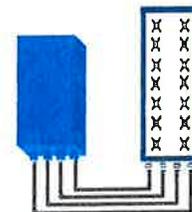
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

TECHNICAL SPECIFICATIONS

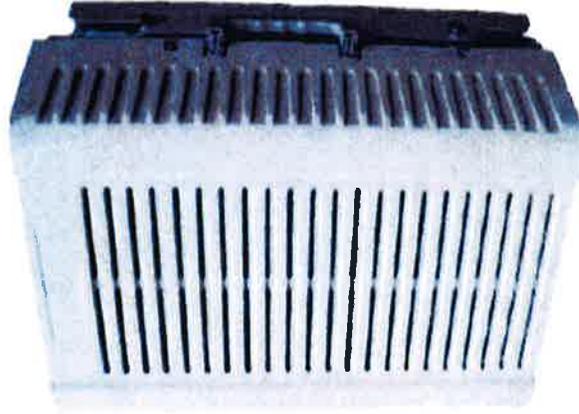
Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (In 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield)
Volume in L	38 (with solar shield)
Weight in kg (lb) (w/o mounting HW)	26 (57.2) (with solar shield)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	550W typical @100% RF load (in 2Tx or 4TX mode)
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) IP65
Wind load (@150km/h or 93mph)	Frontal: <200N / Lateral : <150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

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PCS RF MODULES

RRH1900 2X60 - HW CHARACTERISTICS

LA6.0.1/13.3



RRH2x60	
RF Output Power	2x60W
Instantaneous Bandwidth	20MHz
Transmitter	2 TX
Receiver	1900 HW version 1900A HW version
Features	2 Branch RX – LA6.0.1 4 Branch RX – LR13.3 AISG 2.0 for RET/TMA
Power	Internal Smart Bias-T -48VDC
CPRI Ports	2 CPRI Rate 3 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (top mounted)

** Not a Verizon Wireless deployed product

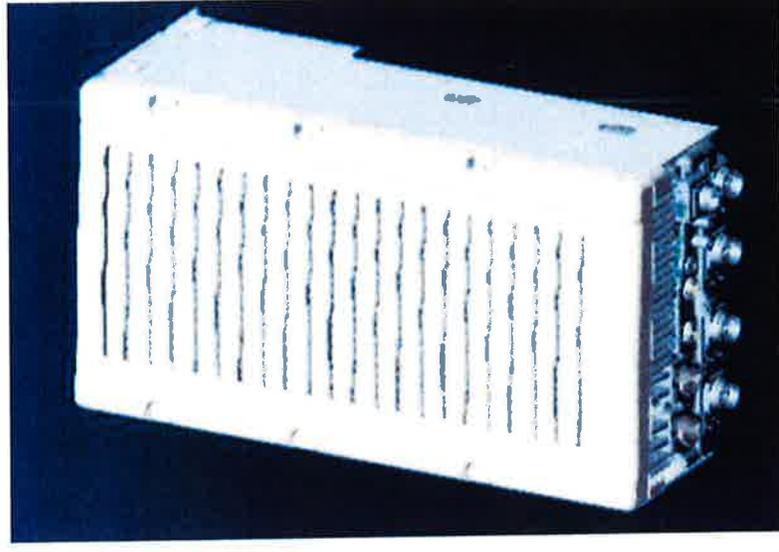
ALCATEL-LUCENT – CONFIDENTIAL – SOLELY FOR AUTHORIZED PERSONS HAVING A NEED TO KNOW – PROPRIETARY – USE PURSUANT TO COMPANY INSTRUCTION

NEW PCS RF MODULES FOR VZW

RRH2X60 - HW CHARACTERISTICS

LR14.3

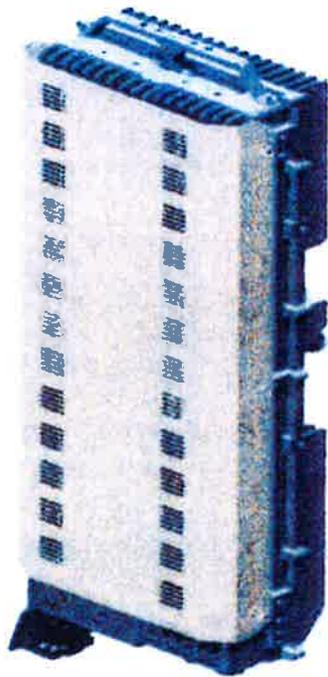
	RRH2x60
RF Output Power	2x60W (4x30W HW Ready)
Instantaneous Bandwidth	60MHz
Target Reliability (Annual Return Rate)	<2%
Receiver	4 Branch Rx
Features	AISG 2.0 for RET/TMA
Power	-48VDC Internal Smart Bias-T
CPRI Ports	2 CPRI Rate 5 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX, RX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (downward facing)
Dimensions	22"(h) x 12"(w) x 9.4" (d)**
Weight	55lb**



**-. Includes solar shield but not mounting brackets (8 lbs.)

ALCATEL-LUCENT RRH2x60-AWS PRODUCT DATASHEET

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).

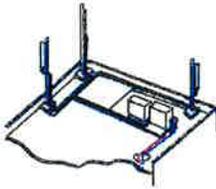
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

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.

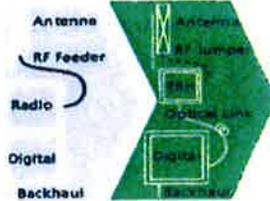
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation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

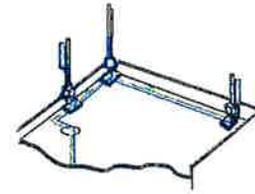
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



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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AT THE SPEED OF IDEAS™

Alcatel-Lucent 

ATTACHMENT 4

Date: July 29, 2015

Charles Trask
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277



Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject: Structural Opinion Letter

Carrier Designation: Verizon Wireless Co-Locate
Carrier Site Number: 300026
Carrier Site Name: East Hampton 3 CT

Crown Castle Designation:
Crown Castle BU Number: 876368
Crown Castle Site Name: YANKEE LAKE/EAST HAMPTON/TOWN
Crown Castle JDE Job Number: 302808
Crown Castle WO Number: 1096552
Crown Castle Application Number: 261477 Rev. 4

Site Data: 1 Public Works Dr., EAST HAMPTON, CT, Middlesex County
Latitude 41°33'53.1", Longitude -72°32'35.2"
180 Foot – MONOPOLE Tower

Dear Charles Trask,

Crown Castle is pleased to submit this "Structural Opinion Letter" for the structural integrity of the aforementioned tower. This evaluation has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1096552. The purpose of the opinion letter is to determine the suitability of the tower with the proposed and existing loading as specified in Tables 1 & 2 on the next page. This opinion is consistent with the guidelines as stated in the TIA/EIA 222-F standard and 2005 CT State Building Code based upon a fastest mile wind speed of 85 mph.

Based on a comparison of the original design loads (including wind speeds), the current loads, and the proposed loads, we have determined the tower structure and foundation ARE sufficient for the proposed loading.

We at the Crown Castle Engineering Department appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,


Aaron C Poot, P.E.
Manager Engineering



7/29/15

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount Information	Number of Feed Lines	Feed Line Size (in)
157.0	2	RFS/CELWAVE	DB-T1-6Z-8AB-0Z	Existing	2	1-5/8
	3	ALCATEL LUCENT	B13 RRH4X30-4R			
	3	ALCATEL LUCENT	RRH2X60-AWS			
	3	ALCATEL LUCENT	RRH2X60-PCS			
	6	COMMSCOPE	HBXX-6517DS-A2M			
	6	COMMSCOPE	LNx-6515DS-A1M			

Table 2 – Existing Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
178.0	6	DECIBEL	DB950F85E-M w/ Mount Pipe	6	1-5/8
170.0	3	KMW COMMUNICATIONS	AM-X-CD-16-65-00T-RET w/ Mount Pipe	1 2 12	3/8 3/4 1-5/8
	6	POWERWAVE TECHNOLOGIES	7770.00 w/ Mount Pipe		
	6	POWERWAVE TECHNOLOGIES	LGP21401		
	6	POWERWAVE TECHNOLOGIES	LGP21901		
	1	RAYCAP	DC6-48-60-18-8F		
	3	ERICSSON	RRUS 11 B12		
156.0	12*	ANDREW	844G45VTZASX w/ Mount Pipe	12*	1-5/8
131.0	5	DECIBEL	DB264-A	9	1-1/4
128.0	1	DECIBEL	DB420		
124.0	1	DECIBEL	DB225-K		
122.0	1	DECIBEL	DB230-E		
120.0	1	DECIBEL	DB230-E		
78.0	1	LUCENT	KS24019-L112A		

*Equipment to be removed

Table 3 – Previous Analysis Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
178.0	6	DECIBEL	DB950F85E-M w/ Mount Pipe	6	1-5/8
170.0	3	KMW COMMUNICATIONS	AM-X-CD-16-65-00T-RET w/ Mount Pipe	1 2 12	3/8 3/4 1-5/8
	6	POWERWAVE TECHNOLOGIES	7770.00 w/ Mount Pipe		
	3	ERICSSON	RRUS-11		
	6	POWERWAVE	LGP21401		

		TECHNOLOGIES			
	6	POWERWAVE TECHNOLOGIES	LGP21901		
	1	RAYCAP	DC6-48-60-18-8F		
158.0	3*	ALCATEL LUCENT	RRH2X40-07-U	2* 12**	1-5/8 1-5/8
	3*	ALCATEL LUCENT	RRH2X60-AWS		
	3*	ALCATEL LUCENT	RRH2X60-PCS		
	6*	COMMSCOPE	HBXX-6517DS-A2M w/ Mount Pipe		
	6*	COMMSCOPE	LNX_6515DS-A2M w/ Mount Pipe		
	2*	RFS CELWARE	DB-T1-6Z-8AB-0Z		
	12**	ANDREW	844G45VTZASX w/ Mount Pipe		
131.0	5	DECIBEL	DB264-A	9	1-1/4
128.0	1	DECIBEL	DB420		
124.0	1	DECIBEL	DB225-K		
122.0	1	DECIBEL	DB230-E		
120.0	1	DECIBEL	DB230-E		
78.0	1	LUCENT	KS24019-L112A		

*Previous Proposed Equipment

*Previous equipment to be removed

ATTACHMENT 5

ATTACHMENT 6

August 5, 2015

Via Certificate of Mailing

Michael Maniscalco, Town Manager
Town of East Hampton
20 East High Street
East Hampton, CT 06424

**Re: Proposed Modifications to Telecommunications Facility at 1 Public Works Drive,
East Hampton, Connecticut**

Dear Mr. Maniscalco:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to share the wireless telecommunications facility at 1 Public Works Drive in East Hampton (the “Property”). Cellco plans to install twelve (12) antennas and nine (9) remote radio heads on a low-profile platform at the 160-foot level on the 180-foot tower at the Property. Equipment associated with Cellco’s antennas will be located inside a 12’ x 20’ shelter installed near the base of the tower. A propane-fueled back-up generator will be install on a concrete pad adjacent to the shelter. A 1000 gallon propane tank will also be installed in the northeast portion of the tower compound.

As presented in the Sub-Petition, the proposed “small cell” facility improvements at the Property constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-533). A copy of the full Sub-Petition is attached for your review. Landowners whose property abuts the Property were also sent a copy of this Sub-Petition.

13958606-v1

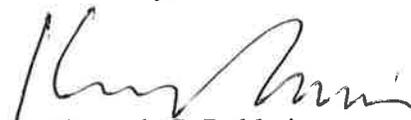
Robinson+Cole

Michael Maniscalco
August 5, 2015
Page 2

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.

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

Sincerely,



Kenneth C. Baldwin

Attachment

ATTACHMENT 7

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 5, 2015

Via Certificate of Mailing

«Name_and_Address»

Re: Sub-Petition for Declaratory Ruling Filed with the Connecticut Siting Council for Modifications to a Telecommunications Facility at 1 Public Works Drive, East Hampton, Connecticut

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to share the wireless telecommunications facility at 1 Public Works Drive in East Hampton (the “Property”). Cellco plans to install twelve (12) antennas and nine (9) remote radio heads on a low-profile platform at the 160-foot level on the 180-foot tower at the Property. Equipment associated with Cellco’s antennas will be located inside a 12’ x 20’ shelter installed near the base of the tower. A propane-fueled back-up generator will be installed on a concrete pad near the shelter. A 1000 gallon propane fuel tank will be installed in the northeast portion of the existing tower compound.

The facility improvements constitute a eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation Act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-533). A copy of the full Sub-Petition is attached for your review.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the Sub-Petition.

August 5, 2015

Page 2

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 Sub-Petition, the Council's process for reviewing the Sub-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,

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

ABUTTERS LIST

**1 PUBLIC WORKS DRIVE
EAST HAMPTON, CONNECTICUT**

	<u>Property Address</u>	<u>Owner and Mailing Address</u>
1.	Barton Hill Road	State of Connecticut P.O. Box 317546 Newington, CT 06131-7546
2.	West High Street	State of Connecticut DOT Maintenance West High Street East Hampton, CT 06424
3.	259 West High Street	Highway 66 LLC 244 Middletown Avenue East Hampton, CT 06424
4.	265 West High Street	Belltown Sports LLC 265 West High Street East Hampton, CT 06424
5.	5 Gildersleeve Drive	Town of East Hampton WPCA 20 East High Street East Hampton, CT 06424
6.	Gildersleeve Drive	Town of East Hampton WPCA 20 East High Street East Hampton, CT 06424
7.	20 Gildersleeve Drive	Town of East Hampton WPCA 20 East High Street East Hampton, CT 06424
8.	Gildersleeve Drive	Town of East Hampton WPCA 20 East High Street East Hampton, CT 06424