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Also admitted in Massachusetts

November 17, 2017

Via Federal Express

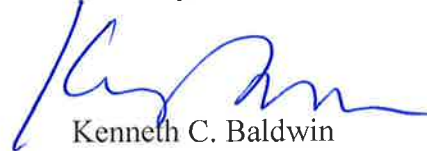
Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Docket No. 477 – Application Of Cellco Partnership d/b/a Verizon Wireless For A Certificate Of Environmental Compatibility And Public Need For The Construction, Maintenance And Operation Of A Wireless Telecommunications Facility At 46 Cemetery Road, Canterbury, Connecticut**

Dear Ms. Bachman:

Enclosed please find an original and fifteen (15) copies of Cellco Partnership d/b/a Verizon Wireless' Responses to the Siting Council's Pre-Hearing Interrogatories in Docket No. 477.

Sincerely,



Kenneth C. Baldwin

KCB/kmd
Enclosure

17292483-v1

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
 :
APPLICATION OF CELLCO PARTNERSHIP : DOCKET NO. 477
D/B/A VERIZON WIRELESS FOR A :
CERTIFICATE OF ENVIRONMENTAL :
COMPATIBILITY AND PUBLIC NEED FOR :
THE CONSTRUCTION, MAINTENANCE :
AND OPERATION OF A WIRELESS :
TELECOMMUNICATIONS FACILITY AT 46 :
CEMETERY ROAD IN CANTERBURY, :
CONNECTICUT : NOVEMBER 17, 2017

**RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS
TO CONNECTICUT SITING COUNCIL PRE-HEARING INTERROGATORIES**

On November 9, 2017, the Connecticut Siting Council (“Council”) issued Pre-Hearing Interrogatories to Cellco Partnership d/b/a Verizon Wireless (“Cellco”), relating to Docket No. 477. Below are Cellco’s responses.

Question No. 1

Were return receipts received for each abutting landowner identified in the application? If not, list the abutters that did not receive notice and describe any additional effort to serve notice.

Response

Cellco received certified mail receipts back from all but one of the abutting landowners. The notice letter to Cynthia Jackson at 106 Cemetery Road was returned marked “unclaimed” on September 19, 2017. On September 20, 2017, the same notice was sent to Ms. Jackson by first class mail.

Question No. 2

Which frequencies would Cellco initially install at the proposed site? What is the determining factor for the deployment of additional frequencies within the proposed service area?

Response

Cellco will initially deploy its 700 MHz and 2100 MHz frequencies at the Canterbury South Facility. Additional frequencies would be deployed and activated as required to meet service demands of Cellco's customers.

Question No. 3

How do the different frequencies interact? Are all frequencies used to transmit voice and data services? Are all frequencies LTE capable? Please explain.

Response

All of Cellco's licensed frequencies (700 MHz, 850 MHz, 1900 MHz, 2100 MHz) are LTE capable and are used to transmit both voice and data services. Cellco customer utilizing LTE services transfer seamlessly between Cellco's operating frequencies during handoff between cell sites. Handoff can also occur between frequencies at an individual cell site for load balancing purposes. Subject to availability at a particular cell site, LTE frequencies can also be used together (a feature called "carrier aggregation") making more of the existing bandwidth available to a particular user.

Question No. 4

What is Cellco's service design threshold for each frequency?

Response

Cellco's minimum design threshold for CDMA signal strength is -85 dBm Receive Signal Strength Indicator (RSSI) for in-vehicle service and -75 dBm RSSI for in-building service. For

LTE signal strength, Cellco's minimum design threshold is -105 dBm Reference Signal Received Power (RSRP) for highway in-vehicle/rural in-building; -95 dBm RSRP for suburban residential in-building and; -85 dBm RSRP for urban/commercial in-building.

Question No. 5

Could the proposed coverage be met by a series of small cell facilities or a distributed antenna system instead of the proposed macro-tower facility? If small cells are feasible, approximately how many would be required, assuming optimum placement.

Response

It may be theoretically and technically possible to install a large number of small cell facilities in the area that could match or closely match the coverage footprint of the proposed Canterbury South macro cell. Such an approach, however, is not economically feasible and is not consistent with good RF Engineering practice. Typically, small cell facilities utilize existing infrastructure (i.e. electric distribution poles) along public rights of way in areas where coverage and/or capacity problems exist. In areas where this existing infrastructure does not exist, for example, along private roads or on private and municipal property, property rights would need to be obtained and new poles would need to be installed.

The actual number of small cell facilities that would be needed to provide a service comparable to that from the proposed Canterbury South Facility is not known but would be significant given the overall size of the area that Cellco is attempting to serve.

Question No. 6

Would flush-mounted antennas provide the required coverage? Would the flush-mount configuration result in reduced coverage and/or necessitate greater antenna height with multiple levels of antennas?

Response

Flush-mounted antennas utilizing one antenna per sector attached directly to the tower mast could provide the coverage needed to the area around the Canterbury South cell site. This approach, however, is not consistent with good RF Engineering practice. If Cellco were required to utilize flush-mounted antennas, it would need to use two or possibly three mounting levels of antennas on the tower, thereby limiting the amount of available space on the tower for other wireless carriers or emergency service entities. The use of flush-mounted antennas could also limit Cellco's ability to install new technologies and make other cell site enhancements in the future.

Question No. 7

Can the proposed facility support text-to-911 service? Is additional equipment required for this purpose? Is Cellco aware of any Public Safety Answering Points in the area of the proposed site that are able to accept text-to-911?

Response

Yes, the proposed Canterbury South Facility will support text-to-911 as soon as the Public Safety Answering Point (PSAP) is capable of receiving text-to-911. No additional cell site equipment is necessary to support this service. Cellco is not aware of any Public Safety Answering Points in the area of the proposed Canterbury South Facility that are about to accept text-to-911 at this time.

Question No. 8

Would Cellco's installation comply with the intent of the *Warning, Alert and Response Network Act of 2006*?

Response

Yes.

Question No. 9

What measures are proposed to ensure site security?

Response

The tower and related equipment would be surrounded by an eight-foot security fence and a locked gate. Cellco's radio equipment cabinets are equipped with silent intrusion alarms. If someone attempts to tamper with or break-in to the cabinets, cell site technicians monitoring the site will be alerted and local police will be contacted.

Question No. 10

Identify the safety standards and/or codes by which equipment, machinery, or technology would be used or operated at the proposed facility.

Response

- 2012 International Building Code with the 2016 CT Building Code Amendments.
- National Electric Code (NFPA70).
- 2005 CT State Fire Safety Code with the 2009 Amendments.
- TIA-222-G-05 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".
- Occupational Safety and Health Administration (OSHA).

Question No. 11

Application Attachment 1, p. 6 states the tower will be designed per Connecticut Building Code/EIA-TIA-222-G. Does this structural code also apply to the tower mount/tower interface and the antenna/tower mount interface? If not, please provide the relevant structural design code

for these interface areas.

Response

Yes, the Telecommunications Industry Association (TIA) structural standards for antennas supporting structures and antennas, TIA-222-G-05 applies to the mount/tower interface and the antenna/tower mount interface.

Question No. 12

Could the tower be designed with a yield point to ensure that the tower setback radius remains within the boundaries of the subject property?

Response

Not in this instance. Typically, towers can be designed with a yield point anywhere above the mid-point of the monopole structure; in this case that would be at or above the 80 foot level on the tower. The Canterbury South tower is located approximately 40 feet from the southern property boundary. Shifting the tower to the north to increase the setback distance could impact several large trees that the property owner and Cellco would like to preserve.

Question No. 13

Submit tower profile/compound layout drawings that depict Cellco's proposed antenna installation, locations for potential tower/compound sharing by other carriers, and a tower yield point location.

Response

The compound layout drawing requested is included in Attachment 1.

Question No. 14

Is the proposed facility within a Department of Energy and Environmental Protection-designated Aquifer Protection Area?

Response

No. The nearest Aquifer Protection Area to subject parcel is located approximately 3.7 miles to the southeast in the towns of Canterbury, Plainfield and Griswold. Please refer to the enclosed Aquifer Protection Area Map provided in Attachment 2.

Question No. 15

Has the State of Connecticut Department of Agriculture purchased any development rights for the proposed site as part of the State Program for the Preservation of Agricultural Land? Is the site parcel part of the Public Act 490 Program?

Response

There is no indication in the title report or in the Town Assessor's records that the Department of Agriculture has acquired development rights on any portion of the Property, or that the parcel is a part of the Public Act 490 Program.

ATTACHMENT 1



LICENSURE



DAVID WEINPAAL, P.E.
CT LIC. NO. 22144

NO.	DATE	SUBMISSIONS
0	06.06.17	REVIEW SET
1	06.29.17	REVISED PER ATTORNEY COMMENTS
2	08.01.17	REVISED PER COMMENTS
3	11.14.17	REVISED PER CSC COMMENTS

DRAWN BY:	CHECKED BY:
MF	DW

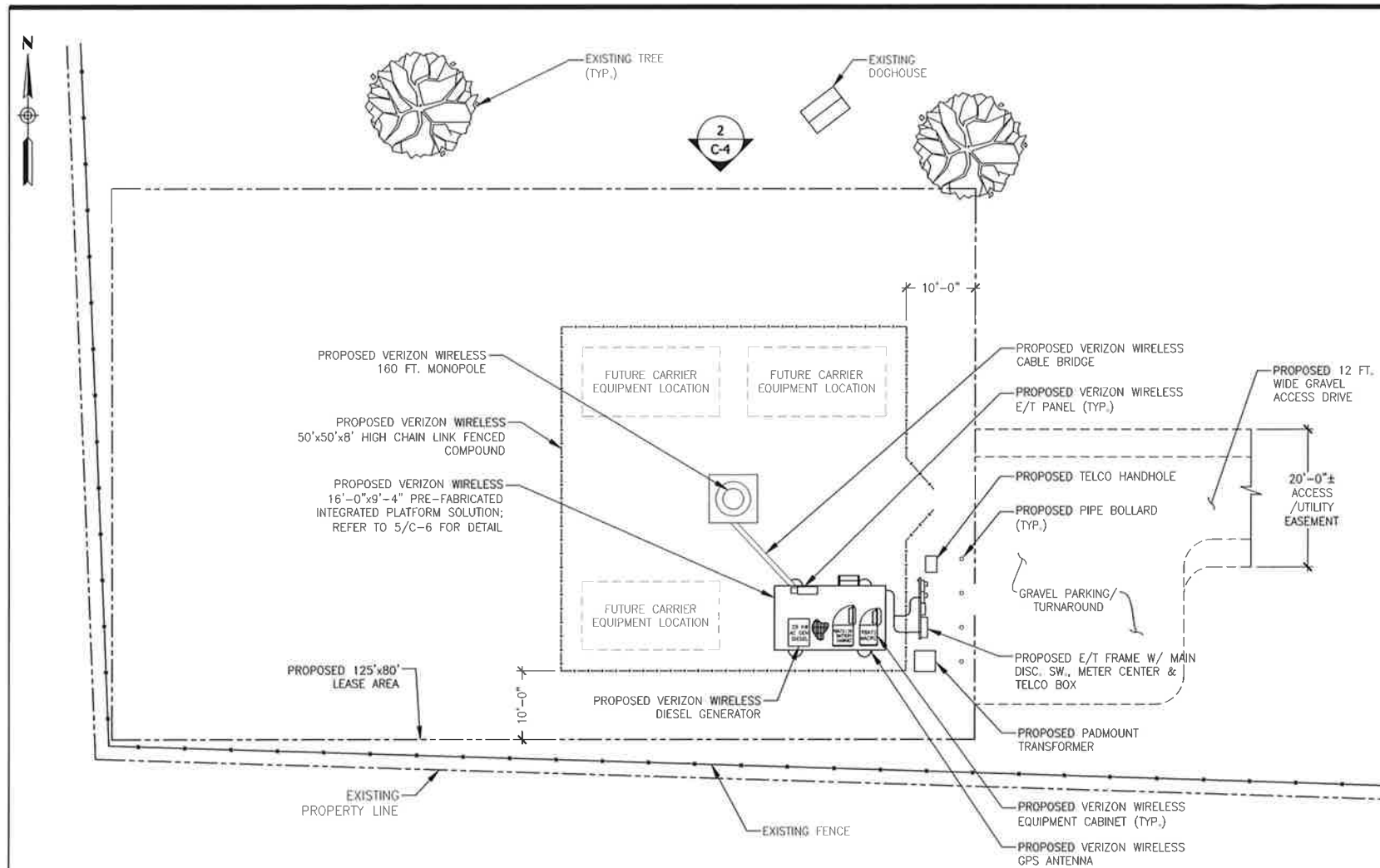
PROJECT TYPE:
NEW BUILD MACRO

SITE NAME:
CANTERBURY SOUTH CT

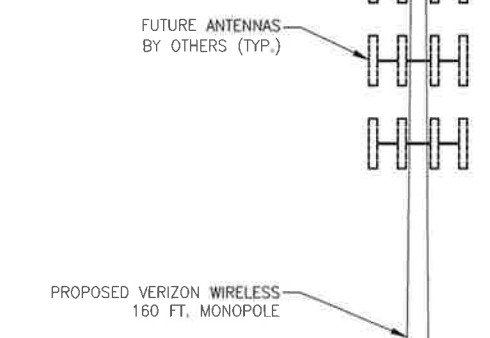
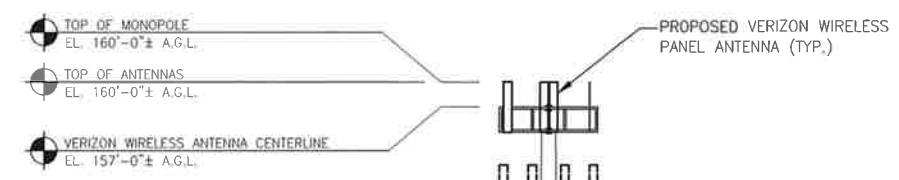
PROJECT INFORMATION:
**46 CEMETERY RD.
CANTERBURY, CT 06331**

DRAWING TITLE:
**COMPOUND PLAN,
NORTH ELEVATION
& ANTENNA PLAN**

SHEET NUMBER:
C-4

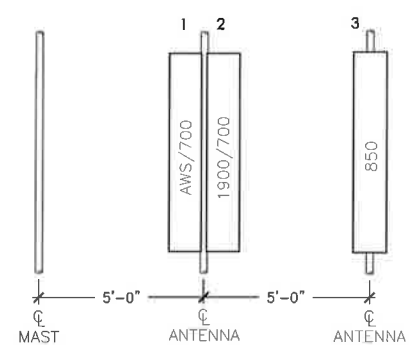


1
C-4 COMPOUND PLAN
Scale: 3/32" = 1'-0"

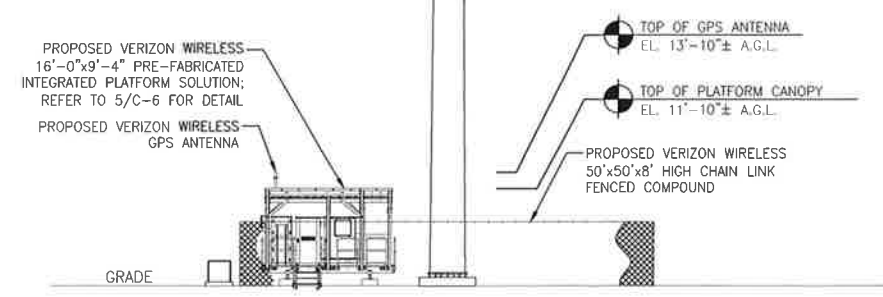


ANTENNA SPECIFICATIONS (TYP. AT 3 SECTORS)

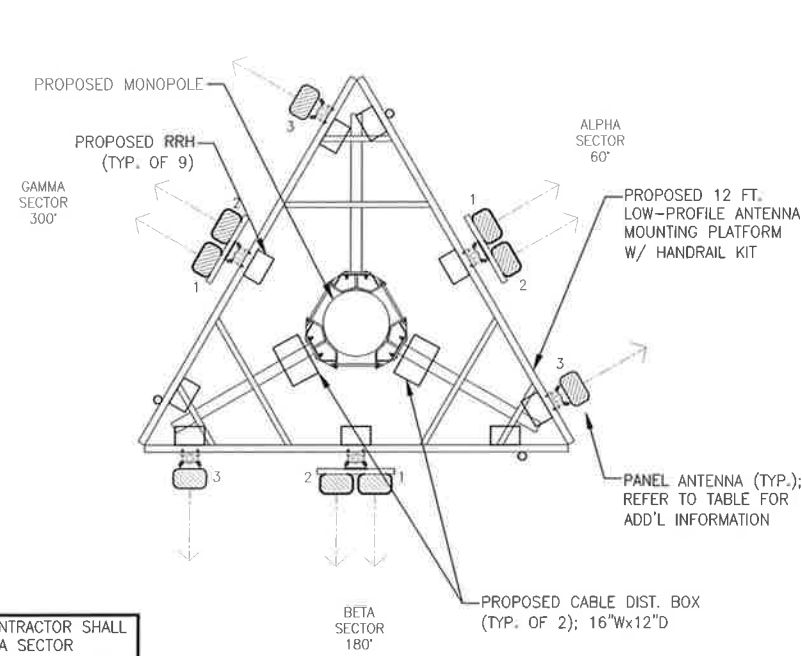
POS.	ANTENNA BAND	MODEL #	SIZE	ACCESSORY EQUIPMENT
1	1900/700	SBNHH-1D65C	72"Hx11.9"Wx7.1"D; 40.6 LBS.	ALU RRH_2x45-AWS ALU B13 RRH2x60
2	1900/700	SBNHH-1D65C	72"Hx11.9"Wx7.1"D; 40.6 LBS.	ALU RRH_2x60-PCS
3	850	LNx-6514DS-A1M	72.9"Hx11.5"Wx7.1"D; 38.4 LBS.	



4
C-4 TYPICAL ANTENNA ELEVATION
Scale: N.T.S.



2
C-4 NORTH ELEVATION
Scale: 3/32" = 1'-0"



3
C-4 ANTENNA PLAN @ 157 FT. A.G.L.
Scale: 3/8" = 1'-0"

NOTE: CONTRACTOR SHALL SET ALPHA SECTOR PLATFORM FACE TO AN AZIMUTH OF 60°

ATTACHMENT 2

Aquifer Protection Area Map
Proposed Wireless Telecommunications Facility
Canterbury South CT
Holloway Property
46 Cemetery Road
Canterbury, Connecticut



Legend

- Proposed Monopole Tower
- ◻ Subject Property
- ◻ Final Adopted Aquifer Protection Area
- ◻ Final Aquifer Protection Area*
- ◻ Preliminary Aquifer Protection Area*



Map Source:
 Ortho Base Map: ESRI World Street Map
 CTDEEP data library (<http://www.ct.gov/ctdeep>)
 Data layers are maintained and updated by CTDEEP and represent the most recent publications.
 Map Date: November 2017

