



## **Public Facilities Committee Agenda**

### **City of Newton** **In City Council**

**Thursday, December 17, 2020**

The Public Facilities Committee will hold this meeting as a virtual meeting on Thursday, December 17, 2020 at 7:00 pm. To view this meeting using Zoom use this link: <https://us02web.zoom.us/j/83049425959> or call 1-646-558-8656 and use the following Meeting ID: 830 4942 5959

#### **Item Scheduled for Discussion:**

##### ***Public Hearing***

**#508-20      Cellco Partnership petition for wireless grant of location on Dedham Street**  
CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS petitioning for a grant of location to mount a small cell antenna to pole 117/110 with associated equipment. The proposed installation of equipment consists of one small-antenna mounted to the side of the utility pole, two remote radio heads, an antenna bracket, a diplexer, a meter, a surge protector, an AC/DC converter, a power connection and fiber and coaxial cable located in conduit and mounted to the side of the pole. (60-day action date: 01/12/21)

##### ***Public Hearing***

**#509-20      Cellco Partnership petition for wireless grant of location on Beethoven Ave**  
CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS petitioning for a grant of location to mount a small cell antenna to pole 22 23 with associated equipment. The proposed installation of equipment consists of one small-antenna mounted to the side of the utility pole, two remote radio heads, an antenna bracket, a diplexer, a meter, a surge protector, an AC/DC converter, a power connection and fiber and coaxial cable located in conduit and mounted to the side of the pole (60-day action date: 01/12/21)

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The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: [jfairley@newtonma.gov](mailto:jfairley@newtonma.gov) or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.

- #396-20      Request for updates on HVAC and ventilation at Newton Public Schools**  
The President of the Council, on behalf of the City Council, requesting an update to the Public Facilities Committee from Commissioner Morse on current work on HVAC and air quality in the Newton Public Schools at each meeting of the Public Facilities Committee this fall until work is complete.  
**Public Facilities Held 8-0 on 12/09/20**
- #510-20      Reappointment to the Sustainable Materials Management Commission**  
HER HONOR THE MAYOR reappointing MARIAN RAMBELLE, 2 Harrington Street, Newton, as a member of the Sustainable Materials Management Commission for a term to expire on October 31, 2023. (60 Days: 02/05/21)
- #511-20      Reappointment to the Sustainable Materials Management Commission**  
HER HONOR THE MAYOR reappointing MILES SMITH, 30 Webster Street, Newton, as a member of the Sustainable Materials Management Commission for a term to expire on September 30, 2023. (60 Days: 02/05/21)
- #512-20      Reappointment of to the Sustainable Materials Management Commission**  
HER HONOR THE MAYOR reappointing SUNWOO KAHNG, 60 Garland Road, Newton, as a member of the Sustainable Materials Management Commission for a term to expire on November 15, 2023. (60 Days: 02/05/21)
- #513-20      Reappointment of to the Sustainable Materials Management Commission**  
HER HONOR THE MAYOR reappointing SETH PARKER, 26 Shornecliffe Road, Newton, as a member of the Sustainable Materials Management Commission for a term to expire on September 30, 2023. (60 Days: 02/05/21)

Respectfully submitted,

Alison M. Leary, Chair



# CITY OF NEWTON MASSACHUSETTS

RECEIVED

2020 NOV 13 PM 5:02

## APPLICATION FORM

CITY CLERK  
NEWTON, MA. 02459

This Application Form is to be used for the permitting of (1) Wireless Communication Facility attachments to an existing or replacement utility pole which is located in the public way and which does not have any pre-existing Wireless Communication Facility attachments; (2) Wireless Communication Facility attachments to an existing or replacement utility pole which is located in the public way and which does have pre-existing Wireless Communication Facility attachments, but does not satisfy the requirements under 47 U.S.C. §1455 and related Federal Communications Commission ("FCC") regulations; and (3) new pole construction in a public way primarily for purposes of providing Wireless Communication Services. Refer to City Council Wireless Grant of Location Standards & Procedures.

## Filing of Application & Fee:

Please provide to the City Clerk in paper format an original and two (2) copies of your application and 10 copies of all attachments and plans. Also provide a complete application and attachments in PDF format or in a digital format compatible with the City's systems. **The application must be complete per the attached check list in order to be filed with the City Clerk.**

**A filing fee of \$500 per location must accompany the application at the time of filing.**

## Applicant Contact Information:

Name: Michael S. Giaino as attorney for Cellco Partnership d/b/a Verizon Wireless

Phone: (617) 557-5959

Address: Robinson & Cole LLP, One Boston Place, Fl. 25, Boston, MA 02108

Email Address: mgaiaino@rc.com

## Owner(s) of the Utility Pole:

Name: Verizon and Eversource

Phone: \_\_\_\_\_

Address: 118 Flanders Road, Westborough, MA 01581 / One NSTAR Way, Westwood, MA 02090

Email Address: \_\_\_\_\_

Owner of the Proposed Wireless Communications Facilities and/or New Pole Primarily for Wireless Communications Purposes in whose name a Grant of Location order would be issued:

Name: Cellco Partnership d/b/a Verizon Wireless

Phone: (508) 330-3392

Address: 118 Flanders Road, Westborough, MA 01581

Email Address: sean.conway@verizonwireless.com

If different than the Owner, the User of the Proposed Wireless Communications Facilities and/or New Pole Primarily for Wireless Communications Purposes:

Name: N/A Phone: N/A

Address: N/A Email Address: N/A

If in residential area, is the location directly in front of a residence? ☒ Yes ☐ No

If yes, what is the distance between the proposed pole location and residence that it would front?

The proposed pole will be located approximately 40 feet in front of the closest residence.

If the location is within a Historic District, please identify the historic district and state whether the applicant has filed for a Certificate from the Historic District Commission and if so, the date of that filing:

N/A

Pole #: 117/110

#### Description of Proposed Wireless Communications Facilities

Narrative description of the proposed wireless communications facilities.

The proposed facility will be a "small cell" site designed to provide additional capacity and quality of service to this area of Newton. The proposed installation of equipment consists of one (1) small-cell antenna mounted to the side of the utility pole, two (2) remote radio heads, an antenna bracket, a diplexer, a meter, a surge protector, an AC/DC converter, a power connection, and fiber and coaxial cable located in conduit and mounted to the side of the pole. No equipment will be installed on the ground.

If an applicant proposes adding to the number of Wireless Communications Facilities or expanding the dimensions of the proposed wireless communications facilities (except with regard to replacement of existing wireless communications equipment with comparable equipment), the applicant must apply for a new wireless grant of location for the additional wireless communications equipment.



**Compliance Issues**

Identify any requirement or condition in the Standards with which the Applicant will not or cannot comply with and provide a complete explanation why it cannot or will not comply:

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Is the applicant requesting an exception to any standard under Section III.L.? If so, please specify the standard and provide factual support for the requested exception:

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Signature of Applicant: 

Name and Title and any Business Name: \_\_\_\_\_

Name of Principal or Client of Applicant: \_\_\_\_\_

Date Signed: \_\_\_\_\_

**TOWN OF NEWTON, MASSACHUSETTS  
CITY COUNCIL**

**STATEMENT IN SUPPORT OF  
GRANT OF LOCATION PETITION**

**Applicant:** Cellco Partnership d/b/a Verizon Wireless (“Verizon Wireless”)  
118 Flanders Road  
Westborough, MA 01581

**Nearest Street:** Dedham Street, Newton MA 02459

**Proposed Use:** Wireless Communications Facility Mounted to the Side of an Existing Pole

**BACKGROUND**

This statement is submitted on behalf of Cellco Partnership d/b/a Verizon Wireless (“Verizon Wireless” or “Applicant”) in support of its application for a grant of location, pursuant to Newton City Council Grant of Location Procedures and Standards for Wireless Communications Facilities to be Located in Public Ways (“Procedures and Standards”), adopted August 12, 2019, Chapter 23 of the Newton City Ordinances, M.G.L. c. 166, §§ 21 and 22, and other applicable state and federal laws, including 47 U.S.C. §§ 253 and 332(c)(7), to permit the installation of a wireless communications antenna and associated equipment on an existing utility pole #117/110 located on Dedham Street, at approximately 983 Dedham Street, Newton, MA, as described in the petition made to Newton City Council, dated November 13, 2020.

**DESCRIPTION OF PROPOSED FACILITY**

The proposed facility will be a personal wireless services facility within the meaning of the Federal Telecommunications Act (“TCA”), 47 U.S.C. § 332(c)(7)(C)(ii), and is a Wireless Communications Facility within the meaning of Section IV(A)(13) of the Procedures and Standards. The proposed facility will comply with all applicable federal and state regulations concerning such facilities.

The proposed facility will be a “small cell” site designed to provide additional capacity and quality of service to this area of Newton. It will improve service on the Verizon Wireless network for Newton residents and others living, working and traveling in the vicinity of the existing utility pole. The ability to reliably access wireless data and voice services is desirable for residents and businesses in Newton and enhances public safety by facilitating incident reporting and emergency response.

The proposed Verizon Wireless facility is depicted on the plans titled “Newton S MA SC03” prepared by Dewberry Engineers, Inc., last revised April 10, 2020 as submitted with this application (“Site Plans”).

The proposed installation of equipment consists of one (1) small-cell antenna mounted to the side of the utility pole, two (2) remote radio heads (“RRHs”), an antenna bracket, a diplexer, a meter, a surge protector, an AC/DC converter, a power connection, and fiber and coaxial cable located in conduit and mounted to the side of the pole. No equipment will be installed on the ground.

### GRANT OF LOCATION REQUIREMENTS

Verizon Wireless requests permission, pursuant to Section II of the Procedures and Standards and M.G.L. c. 166, § 22, to install the proposed facility as a wireless communications facility mounted to the top of an existing utility pole. According to § 23-6 of the Newton Ordinances, “every petition presented to the city council for permission to erect...abutments or other fixtures upon any public ways shall be accompanied by a plan showing the exact location of abutment or other fixture...the trees and other objects or structures in the immediate vicinity...and of the lines or wires such... abutments or other fixtures are designed to support.” Under Section IV of the Procedures and Standards, “all Wireless Communications Facilities shall be designed and maintained to minimize visual, noise and other impacts on the surrounding community, and to avoid any obstruction of the use of public ways, including sidewalks.” As demonstrated by the Site Plans, the proposed facility will comply with design standards as outlined in the Procedures and Standards. The proposed facility satisfies the applicable standards for such necessary approval, as follows:

<b>Personal Wireless Services Facilities — General Conditions</b>	
<b>Section III(A):</b> An Applicant must demonstrate that it is qualified and eligible under G.L.c. 166, § 21 to place its facilities on poles located in the public ways.	Applicant has submitted a copy of Verizon Wireless’ Business Certificate which is filed with the City of Newton and current FCC licenses to offer wireless communication services. ( <i>See Exs. A &amp; B</i> ).
<b>Section III(A):</b> The Applicant should demonstrate that its proposed facilities will be used to carry out the telecommunications services covered by its Statement of Business Operations and/or an applicable FCC license.	The proposed facility will be used to provide services pursuant to Verizon Wireless’ FCC licenses. ( <i>See Ex. B</i> ).
<b>Section III(A):</b> The Applicant should provide evidence of its authority to conduct in Massachusetts the business carried out through the proposed facilities.	Applicant has submitted a copy of Verizon Wireless’ Business Certificate which demonstrates its authority to conduct in Massachusetts the business utilizing the equipment. ( <i>See Ex. A</i> ).
<b>Section III(E):</b> The Applicant shall submit evidence of pole owner permission to attach its	Applicant has submitted a location - specific license from the pole owners Verizon Wireless

facilities to the specific pole or poles included in its application.	and Eversource Energy. ( <i>See</i> Ex. C). Applicant has also submitted an Engineer's Affidavit certifying that the pole owners have granted a license for the proposed location. ( <i>See</i> Ex. D).
<b>Section III(F):</b> The Applicant shall complete the tax attestation.	The City has not provided a tax attestation form and accordingly has advised the Applicant to request a waiver of this requirement.
<b>Section IV(B)(2):</b> Applicants are encouraged to avoid pole locations that would be (a) directly in front of, and in close proximity to, a residence, (b) on a scenic road, (c) in front of and on the same side of the street as an historic building listed in the Massachusetts Historic Register, (d) in an historic district; (e) at an entry point to a village center; or (f) within an existing underground utility district. Applicants are also encouraged to use existing Utility Poles which do not support existing Wireless Communications Facilities.	Applicant will comply with this requirement. The proposed antenna and radio equipment will be installed on an existing pole approximately 40 feet from the closest residence. ( <i>See</i> Ex. E, Sheet Number C-1).
<b>Section IV(C):</b> The Applicant shall provide a statement certifying that the proposed facility will comply with Federal Communications Commission ("FCC") regulations concerning the environmental effects of radio frequency emissions ("RFE").	The Engineer's Affidavit attached as Exhibit D certifies that proposed attachments will be in compliance with FCC RFE regulations. Verizon Wireless has also submitted an EME letter which was transmitted to the City of Newton and confirms that the equipment will comply with FCC RFE safety requirements. ( <i>See</i> Exs. D & G).
<b>Section IV(G)(1):</b> Only one (1) personal wireless service provider or DAS provider shall be allowed to own, attach and/or operate Wireless Communications Facilities which are attached to a single Utility Pole.	There is no other personal wireless service provider with facilities on this utility pole.
<b>Section IV(G)(2):</b> No Wireless Communications Facilities shall be mounted to City-owned infrastructure located in the public ways, including but not limited to streetlights and traffic signals, unless authorized in writing by the Commissioner of Public Works and Mayor or her authorized designee.	Not applicable.

<b>Personal Wireless Services Facilities — Design Guidelines</b>	
<b><u>Section IV(G)(7)(a):</u></b> The personal wireless service antenna, including antenna panels, whip antennas or dish-shaped antennas, shall be as small as practicable, taking into account aesthetic and public safety considerations.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(b):</u></b> The total combined volume of all above ground equipment and appurtenances serving a personal wireless service antenna shall be as small as practicable, taking into account aesthetic and public safety considerations.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(c):</u></b> The operator of Wireless Communications Facilities shall, whenever possible, locate the base of the equipment or appurtenances at a height of no lower than eight (8) feet above grade. No facilities may be installed at grade without the approval of the Commissioner of Public Works and the City Council. If the City prohibits electric meters on utility poles or the electric distribution company does not require an electric meter, the operator shall locate the base of the equipment or appurtenances no lower than 12 feet above grade.	The Applicant has requested a waiver of this requirement. The meter height will be determined by the electric company. Because of the configuration of existing utility lines attached to the pole, some equipment will be located below 12 feet above ground as shown on the plans. ( <i>See</i> Ex. E, Sheet Number C-2). The Applicant is not proposing to install any equipment at grade.
<b><u>Section IV(G)(7)(d):</u></b> The top of the highest point of the Utility Pole shall not exceed forty (40) feet and the combination of the height of the utility pole and personal wireless service antenna extension shall not exceed forty-four (44) feet above ground level.	The proposed facility will comply with this requirement. The top of the highest point of the utility pole is 33.9 feet above ground level. The proposed antenna is below the top of the highest point of the utility pole at 26.5 feet above ground level. ( <i>See</i> Ex. E, Sheet Number C-2).
<b><u>Section IV(G)(7)(e):</u></b> To the maximum extent practicable, the color of the Wireless Communications Facilities shall be similar to and blend with (a) the existing equipment on the Utility Pole and/or on other nearby Utility	The proposed facility will comply with this requirement. ( <i>See</i> Ex. E, Sheet Number C-4).

Poles, (b) the color of the Utility Pole, or (c) another color reasonably satisfactory to and directed by the City Council. The Wireless Communications Facilities shall have non-reflective materials.	
<b><u>Section IV(G)(7)(f):</u></b> Any wiring on the pole must be covered with an appropriate cover or cable shield.	The proposed facility will comply with this requirement. ( <i>See</i> Ex. E, Sheet Number C-2).
<b><u>Section IV(G)(7)(g):</u></b> Antenna elements and equipment shall be mounted as close to the surface of the pole as practical and feasible.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(h):</u></b> Personal wireless service antenna shall include a radome, cap or other antenna panel covering or shield and shall use a color that blends with the color of the utility pole on which it is mounted.	The proposed antenna is as depicted on the plans filed with this application. ( <i>See</i> Ex. E, Sheet Number C-4).
<b><u>Section IV(G)(7)(i):</u></b> Other than signs required by federal or state law or by the pole owner, Wireless Communications Facilities shall not have signs installed thereon. Identification tags may be utilized in accordance with governmental and/or pole owner requirements.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(j):</u></b> Wires and cables connecting the antenna and/or appurtenances shall be installed in accordance with the National Electrical Safety Code in force at the time of installation of the wires and cables or any stricter standards required by a pole owner, and TIA/EIA applicable codes.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(k):</u></b> The Wireless Communications Facilities shall be grounded in accordance with the National Electrical Safety Code in force at the time of installation of the wires and cables or any stricter standard required by a pole owner.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(l):</u></b> No guy wires or other support wires shall be used in connection	The proposed facility will comply with this requirement.

with Wireless Communications Facilities unless the facilities are proposed to be attached to an existing Utility Pole that incorporates guy wires prior to the date that the applicant has applied for a grant of location.	
<b><u>Section IV(G)(7)(m):</u></b> The proposed Wireless Communications Facilities shall be properly engineered to withstand wind loads required by applicable safety codes and pole owner requirements.	The proposed facility will comply with this requirement. Verizon Wireless has submitted a Structural Analysis letter to demonstrate the proposed installation's ability to withstand wind loads based on applicable state and local building codes. ( <i>See Ex. F</i> ).
<b><u>Section IV(G)(7)(n):</u></b> The Wireless Communications Facilities shall be located so as not to cause any physical or visual obstruction to pedestrian or vehicular traffic, cause safety hazards to pedestrians and motorists or otherwise incommode the public's use of the public way. The Facilities shall not interfere with snow plowing, side walk clearing, leaf removal or the maintenance of public shade trees.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(o):</u></b> All Wireless Communications Facilities shall be designed and located in such a manner as to avoid adverse impacts on traffic and pedestrian safety. Wireless Communications Facilities shall not project over the public way or sidewalk (beyond the berm or curb) in such a manner and at a height that will interfere with the public use of the public way or sidewalk. The Applicant shall comply with the Uniform Traffic Manual for Traffic Control at all times during construction or installation.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(p):</u></b> The Applicant's Wireless Communications Facilities shall not produce any lighting or blinking light that is not required by federal or state law or by an applicable industry safety code.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(q):</u></b> The Applicant shall	The proposed facility will comply with this

provide adequate security for its Wireless Communications Facilities in accordance with current industry practices and any applicable standards.	requirement.
<b><u>Section IV(G)(7)(r):</u></b> The Applicant shall employ Wireless Communications Facilities that are either silent or generate as little noise as is technically feasible and commercially practicable in light of industry standards and equipment specifications. In all cases, the Applicant shall comply with any applicable City noise ordinance. In the event that its facilities fail to comply with such ordinance, the Applicant shall provide noise suppression equipment as reasonably necessary to bring the facilities into compliance with such ordinance. In addition, the Applicant shall demonstrate that it is capable of promptly shutting down and repairing any equipment that is not in compliance with City noise regulations.	The proposed facility will comply with this requirement. ( <i>See Ex. D</i> ).
<b><u>Section IV(G)(7)(s):</u></b> The Applicant shall demonstrate that it is capable of promptly shutting down and repairing any equipment that vibrates excessively.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(t):</u></b> The Applicant and its facilities shall not interfere with the operation and maintenance of any wires, cables or equipment already attached to a utility pole. Signage already attached to a pole shall not be moved without the prior written consent of the City department that controls the placement of the signage.	The proposed facility will comply with this requirement.
<b>Other Grant of Location Requirements</b>	
<b><u>Section IV(G)(8)(f):</u></b> Under § 23-11 of the City Ordinance, a performance bond[...]is required for every person constructing, maintaining or operating a telegraph, telephone or other electrical line in the city in a penal sum of not less than ten thousand dollars	The applicant has not provided a performance bond with this application and requests that this requirement be a condition of approval

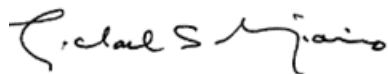


(\$10,000.00).	
<p><b>Section IV(G)(8)(g)(iii):</b> The City discourages the installation of Wireless Communication Facilities within the dripline of a Public Shade Tree or other City owned tree. If there is no alternative to the installation of a Wireless Communication Facility within the dripline of a Public Shade Tree or other City owned tree the installing party must comply with the City's Public Tree Regulation and obtain a Tree Permit from the Tree Warden.</p>	<p>The proposed facility will comply with this requirement.</p>

### CONCLUSION

For all of the foregoing reasons, and with full reservation of its rights under applicable federal, state and local law, Verizon Wireless submits that the proposed wireless communications facility satisfies the requirements of the Procedures and Standards, Chapter 23 of the Newton City Ordinance, M.G.L. c. 166, §§ 21 and 22, and applicable state and federal law, including 47 U.S.C. §§ 253 and 332(c)(7) and respectfully requests that the Newton City Council grant permission to Verizon Wireless pursuant to Section III (M) of the Procedures and Standards, as well as any other relief that may be necessary or appropriate, to allow the installation and operation of a Verizon Wireless wireless communications facility as described in this application and the accompanying materials and as will be further addressed at the hearing on this matter.

Respectfully submitted,  
 Cellco Partnership d/b/a Verizon Wireless  
 By its attorneys,




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Michael S. Giaimo, Esq.  
 Alicia R. Selman, Esq.  
 Robinson & Cole LLP  
 One Boston Place, 25th Floor  
 Boston, MA 02108  
 (617) 557-5959

Dated: November 13, 2020

**CITY OF NEWTON, MASSACHUSETTS  
CITY COUNCIL**

**STATEMENT IN SUPPORT OF  
GRANT OF LOCATION PETITION**

**EXHIBIT LIST**

**Exhibit A** – Verizon Wireless’ Business Certificate filed with the City of Newton City Clerk’s Office dated August 12, 2019;

**Exhibit B** – Copy of Verizon Wireless’ Federal Communications Commission Licenses;

**Exhibit C** – Verizon License dated February 12, 2019, Eversource Energy License dated February 17, 2017, and Eversource Energy’s Initial Authorization Letter dated November 19, 2020;

**Exhibit D** - Engineer’s Affidavit on Behalf of Verizon Wireless dated February 3, 2020;

**Exhibit E** – Site Plans prepared by Dewberry Engineers Inc. dated April 10, 2020;

**Exhibit F** – Structural Analysis of the Proposed Equipment Installation dated February 28, 2020; and

**Exhibit G** – City of Newton EME Letter dated February 6, 2020.

# EXHIBIT A



**City of Newton-City Clerk's Office**  
 1000 Commonwealth Ave. Newton, MA 02459

295

City Clerk's Use Only

**Business Certificate**  
**\$35.00 Filing Fee**  
**Requires Renewal Every 4 Years**

In conformity with the provisions of Massachusetts General Law Chapter 110, Section 5, the undersigned hereby declares that a business is being conducted under the name of: (Please Print)

Business Name	Verizon Wireless			
Proposed Use	wireless telecommunications			
Location of Business	13 Boylston Street	Chestnut Hill	MA	02467
	Address	City	State	Zip code

Full name and address of each person conducting such business:

Name	Celco Partnership			
Address	One Verizon Way			
	Basking Ridge	NJ	07920	
	City	State	Zip code	
Name	Signature (In presence of Notary or City Clerk Agent)			
Address				
	City	State	Zip code	
Name	Signature (In presence of Notary or City Clerk Agent)			
Address				
	City	State	Zip code	

On August 12, 2019 the above-named individual personally appeared before me and made oath that the foregoing statement is true.

Arlene C. Bell  
 Notary Public / City Clerk Agent

August 3, 2023

My Commission Expires/Seal:



Under the provisions of Chapter 337 of the Acts of 1985 and Chapter 110, Section 5 of the Mass. General Laws, business certificates shall be in effect for four years from the date of issue and shall be renewed each four years thereafter. A statement under oath must be filed with the City Clerk upon discontinuance or withdrawing from such business or partnership. Copies of such certificates shall be available at the address such business is conducted and shall be furnished upon request during regular business hours to any person who has purchased goods or services from such business. Violations are subject to a fine of not more than three hundred dollars, (\$300.00) for each month during which such violation occurs.

This certificate expires four [4] years from Date/Time stamp on back: AUGUST 30, 2023

*\*The issuance of this Business Certificate does not imply that all relevant licenses required to legally operate this business have been obtained or are current. This certificate only records that a business is being conducted.*

See Reverse



<b>Home Office Affidavit</b> (Circle)	No <span style="margin-left: 100px;">Yes</span>		
If the proposed business is located within a residence, you must file a " <u>Home Business Affidavit</u> " with the Inspectional Services Department thereby acknowledging compliance with Newton's Home Business Ordinance.			
<b>Inspectional Services Department Official:</b>			
I hereby certify that this business address is in the following zoning district, and is an allowed use in accordance with the revised zoning ordinances of the City of Newton.			
	BU 4 Zoning District	 Attest	
Received in the City Clerk's Office			
	58 Book	295 Page	
Entered in the records of business titles in the City Clerk's Office-City of Newton, Massachusetts			
 _____ David A. Olson Newton City Clerk		Date/Time Stamp:	AUG 30 AM 10:12

New	Renew <input checked="" type="checkbox"/>
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# EXHIBIT B

ULS License

**Cellular License - KNKA201 - Cellco Partnership**

Call Sign	KNKA201	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

**Market**

Market	CMA006 - Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	Channel Block	B
Submarket	0	Phase	2

**Dates**

Grant	08/26/2014	Expiration	10/01/2024
Effective	11/01/2016	Cancellation	

**Five Year Buildout Date**

08/27/1989

**Control Points**

**3** 500 W. Dove Rd., TARRANT, Southlake, TX  
P: (800)264-6620

**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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**Contact**

Cellco Partnership Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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**Ownership and Qualifications**

Radio Service Type	Mobile
Regulatory Status	Common Carrier      Interconnected      Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender





ULS License

**PCS Broadband License - KNLH242 - Cellco Partnership**

Call Sign	KNLH242	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	BTA051 - Boston, MA	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000-001895.00000000-001970.00000000-001975.00000000

**Dates**

Grant	06/02/2017	Expiration	06/27/2027
Effective	06/02/2017	Cancellation	

**Buildout Deadlines**

1st	06/27/2002	2nd	
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**Notification Dates**

1st	05/17/2002	2nd	
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**Licensee**

FRN	0003290673	Type	Joint Venture
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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**Contact**

Verizon Wireless Licensing - Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Ownership and Qualifications**

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government? No

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any foreign government? No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? No

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? Yes

The Alien Ruling question is not answered.

### **Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

### **Demographics**

Race

Ethnicity

Gender



## Universal Licensing System

[FCC](#) > [WTB](#) > [ULS](#) > [Online Systems](#) > License Search

[FCC Site Map](#)

ULS Lease

[? HELP](#)

### KNLF646 - L000026571 - Cellco Partnership

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[License Details](#) : [Leases](#) : [Lease Details](#)

MAIN	ADMIN	MARKET	MAP	TECHNICAL DATA
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Lease ID	L000026571	Radio Service	CW - PCS Broadband
Status	Active	Classification of Lease	Spectrum Manager Lease
		Term of Lease	Long

#### Dates

Grant/Accepted	03/08/2018	Expiration	01/03/2027
Commencement	02/16/2018	Cancellation	

#### Lessee

FRN	0003290673 ( <a href="#">View Ownership Filing</a> )	Type	General Partnership
-----	---	------	---------------------

#### Lessee

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
Real Party in Interest	Cellco Partnership FRN of Real Party in Interest 0003290673

#### Contact

Verizon Sarah Trosch 1300 I Street, NW - Suite 500 East Washington, DC 20005	P:(202)515-2453 E:sarah.trosch@verizon.com
---	---

#### Lessee Qualifications and Ownership Information

Radio Service Type	
Regulatory Status	Interconnected

#### Alien Ownership

The Applicant answered "No" to each of the [Alien Ownership](#) questions.

#### Basic Qualifications

The Applicant answered "No" to each of the [Basic Qualification](#) questions.

**Demographics**

Race

Ethnicity

Gender

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Washington, DC 20554

Phone: 1-877-480-3201  
TTY: 1-717-338-2824  
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ULS Lease

**WRBE696 - L000035329 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035329	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

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Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBE697 - L000035330 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035330	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
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ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

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Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBE848 - L000035481 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035481	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest Cellco Partnership

FRN of Real Party in Interest 0003290673

**Contact**

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P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBE849 - L000035482 - Cellco Partnership**[License Details](#) : [Leases](#) : **Lease Details**

Lease ID	L000035482	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

Verizon  
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Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender



ULS Lease

**WRBF488 - L000035921 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035921	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
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Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

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**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBF489 - L000035922 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035922	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership 5055 North Point Parkway, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
Real Party in Interest	Cellco Partnership
	FRN of Real Party in Interest 0003290673

**Contact**

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---	---

**Lessee Qualifications and Ownership Information**

Radio Service Type	
Regulatory Status	Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race	
Ethnicity	Gender

ULS Lease

**WRBF778 - L000036207 - Cellco Partnership**[License Details](#) : [Leases](#) : **Lease Details**

Lease ID	L000036207	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership 5055 North Point Parkway, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
Real Party in Interest	Cellco Partnership
	FRN of Real Party in Interest 0003290673

**Contact**

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---	---

**Lessee Qualifications and Ownership Information**

Radio Service Type	
Regulatory Status	Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race	
Ethnicity	Gender

ULS Lease

**WRBF779 - L000036208 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036208	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network  
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Alpharetta, GA 30022  
ATTN Regulatory

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Real Party in Cellco Partnership  
Interest

FRN of Real Party 0003290673  
in Interest

**Contact**

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Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBF954 - L000036377 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036377	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership 5055 North Point Parkway, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
--	--

Real Party in Interest	Cellco Partnership	FRN of Real Party in Interest	0003290673
------------------------	--------------------	-------------------------------	------------

**Contact**

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---	---

**Lessee Qualifications and Ownership Information**

Radio Service Type	
Regulatory Status	Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race	
Ethnicity	Gender

ULS Lease

**WRBF955 - L000036378 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036378	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
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ATTN Regulatory

P:(770)797-1070  
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Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

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Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBG414 - L000036637 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036637	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

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5055 North Point Parkway, NP2NE Network Engineering  
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ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

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P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBG415 - L000036638 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036638	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

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Real Party in Interest Cellco Partnership

FRN of Real Party in Interest 0003290673

**Contact**

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E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender



ULS License

## Common Carrier Fixed Point to Point Microwave License - WLW562 - Cellco Partnership

Call Sign	WLW562	Radio Service	CF - Common Carrier Fixed Point to Point Microwave
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Status	Active	Auth Type	Regular
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**Dates**

Grant	01/11/2011	Expiration	02/01/2021
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Effective	11/15/2016	Cancellation	
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**Control Points**

None

**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(678)259-1319 E:LicensingCompliance@verizonwireless.com
---	---

**Contact**

Verizon Wireless Licensing Manager - MANAGER 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(678)259-1319 E:LicensingCompliance@verizonwireless.com
--	---

**Microwave Data**

Oper Type	Permanent Fixed Point to Point	Station Class	FXO - Operational Fixed
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**Ownership and Qualifications**

Radio Service Type	Fixed
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Regulatory Status	Common Carrier	Interconnected	Yes
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**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government?	No
--	----

Is the applicant an alien or the representative of an alien?	No
--	----

Is the applicant a corporation organized under the laws of any foreign government?	No
--	----

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
---	----

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	Yes
---	-----

The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized. ✓

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Local Multipoint Distribution Service License - WPLM413 - Cellco Partnership

Call Sign	WPLM413	Radio Service	LD - Local Multipoint Distribution Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	B
Submarket	0	Associated Frequencies (MHz)	031000.00000000-031075.00000000-031225.00000000-031300.00000000

### Dates

Grant	07/25/2018	Expiration	06/17/2028
Effective	02/27/2019	Cancellation	

### Buildout Deadlines

1st	06/01/2012	2nd	
-----	------------	-----	--

### Notification Dates

1st	03/19/2012	2nd	
-----	------------	-----	--

### Licensee

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
---	--

### Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
---	--

### Ownership and Qualifications

Radio Service Type	Fixed		
Regulatory Status	Common Carrier, Non-Common	Interconnected	Yes

## Carrier

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Local Multipoint Distribution Service License - WPOH955 - Celco Partnership

Call Sign	WPOH955	Radio Service	LD - Local Multipoint Distribution Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	A
Submarket	1	Associated Frequencies (MHz)	029100.00000000- 029250.00000000- 031075.00000000- 031225.00000000

### Dates

Grant	09/11/2018	Expiration	10/06/2028
Effective	09/14/2018	Cancellation	

### Buildout Deadlines

1st	10/06/2008	2nd	
-----	------------	-----	--

### Notification Dates

1st	02/07/2008	2nd	
-----	------------	-----	--

### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
---	--

### Contact

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---	---

### Ownership and Qualifications

Radio Service Type	Fixed		
Regulatory Status	Common Carrier, Non-Common	Interconnected	No

Carrier

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

## AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGA900 - Cellco Partnership

Call Sign	WQGA900	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BEA003 - Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	Channel Block	B
Submarket	1	Associated Frequencies (MHz)	001720.00000000-001730.00000000-002120.00000000-002130.00000000

### Dates

Grant	11/29/2006	Expiration	11/29/2021
Effective	11/01/2016	Cancellation	

### Buildout Deadlines

1st	2nd
-----	-----

### Notification Dates

1st	2nd
-----	-----

### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

### Contact

Cellco Partnership Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

### Ownership and Qualifications

Radio Service Type    Mobile

Regulatory Status    Common Carrier    Interconnected    Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender



ULS License

**AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGB266 - Cellco Partnership**

Call Sign	WQGB266	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	CMA006 - Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	Channel Block	A
Submarket	0	Associated Frequencies (MHz)	001710.00000000-001720.00000000-002110.00000000-002120.00000000

**Dates**

Grant	11/29/2006	Expiration	11/29/2021
Effective	11/01/2016	Cancellation	

**Buildout Deadlines**

1st	2nd
-----	-----

**Notification Dates**

1st	2nd
-----	-----

**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

**Contact**

Cellco Partnership Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Ownership and Qualifications**

Radio Service Type	Mobile
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Regulatory Status	Common Carrier	Interconnected	Yes
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**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government?	No
--	----

Is the applicant an alien or the representative of an alien?	No
--	----

Is the applicant a corporation organized under the laws of any foreign government?	No
--	----

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
---	----

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	Yes
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If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	Yes
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**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

**700 MHz Upper Band (Block C) License - WQJQ689 - Cellco Partnership****PA** This license has pending applications: 0008938399

Call Sign	WQJQ689	Radio Service	WU - 700 MHz Upper Band (Block C)
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	REA001 - Northeast	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	000746.00000000- 000757.00000000- 000776.00000000- 000787.00000000

**Dates**

Grant	09/11/2019	Expiration	06/13/2029
Effective	09/11/2019	Cancellation	

**Buildout Deadlines**

1st	06/13/2013	2nd	06/13/2019
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**Notification Dates**

1st	06/20/2013	2nd	06/17/2019
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**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@VerizonWireless.com
---	--

**Contact**

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@VerizonWireless.com
--	--

**Ownership and Qualifications**

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Upper Microwave Flexible Use Service License - WRBA936 - Cellco Partnership

Call Sign	WRBA936	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	L1
Submarket	1	Associated Frequencies (MHz)	027500.00000000-027925.00000000

### Dates

Grant	09/11/2018	Expiration	10/06/2028
Effective	02/27/2019	Cancellation	

### Buildout Deadlines

1st	06/01/2024	2nd	
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### Notification Dates

1st		2nd	
-----	--	-----	--

### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
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### Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
---	--

### Ownership and Qualifications

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	No

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

# Upper Microwave Flexible Use Service License - WRBA937 - Cellco Partnership

Call Sign	WRBA937	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular

## Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

## Reserved Spectrum

Reserved Spectrum

## Market

Market	BTA051 - Boston, MA	Channel Block	L2
Submarket	1	Associated Frequencies (MHz)	027925.00000000-028350.00000000

## Dates

Grant	09/11/2018	Expiration	10/06/2028
Effective	02/27/2019	Cancellation	

## Buildout Deadlines

1st	06/01/2024	2nd	
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## Notification Dates

1st		2nd	
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## Licensee

FRN	0003290673	Type	General Partnership
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## Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
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## Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
---	--

## Ownership and Qualifications

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	No

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender



# EXHIBIT C

APPLICATION AND POLE ATTACHMENT LICENSE

Licensee Cellco Partnership, a Delaware Corporation, d/b/a Verizon Wireless  
 Street Address One Verizon Way, Mail Stop 4AW100  
 City, State and Zip Basking Ridge, New Jersey  
 Date 2/17/2017

In accordance with the terms and conditions of the Pole Attachment Agreement, application is hereby made for a license to make 1 Antenna, RRH/Cabinet and meter attachments to poles and 1 Power Supply(ies) located in the municipality of Newton in the State of MA

This request will be designated Pole Attachment License Application Number: Newton S MA SC03 - 430551. Attached are my power supply specifications if applicable. The cable's strand size is 0.5" and weight per foot of cable is 0.2.

☒ Communication Space

☐ Power / Supply Space

Licensee's Name (Print) Sean Conway

Signature

*Sean Conway*

EVERSOURCE

Power Company

Title Real Estate Manager

Tel. No. 508-330-3392

Fax No.

E-mail Sean.conway@verizonwireless.com

\*\*\*\*\*For licensor use, do not write below this line\*\*\*\*\*

Pole Attachment License Application Number \_\_\_\_\_ is hereby granted to make the attachments described in this application to \_\_\_\_\_ attachments to JO<sup>1</sup> poles, \_\_\_\_\_ attachments to FO<sup>2</sup> poles, \_\_\_\_\_ attachments to JU<sup>3</sup> poles, \_\_\_\_\_ Power Supplies and \_\_\_\_\_ other attachments located in the municipality of \_\_\_\_\_, in the State of \_\_\_\_\_ as indicated on the attached Form 3.

Licensor's Name (Print) *Steve Owen*

Signature

*Steve Owen*

(AGREEMENT ID #)

Title

*Supervisor*

Date

*4/27/18*

The Licensee shall submit an original copy of this application to EVERSOURCE Energy.

**AUTHORIZATION FOR FIELD SURVEY WORK**

Licensee: Bell Atlantic Mobile of MA, Ltd., a Bermuda corporation, d/b/a Verizon Wireless

In accordance with Article III & Appendix I of the Pole Attachment Agreement, following is a summary of the charges which will apply to complete a field survey covering Pole Attachment License Application Number Newton S MA SC03 - 430551 located in the municipality of Newton in the State of MA

**FIELD SURVEY CHARGES**

<u>Field Survey</u>	<u>#Poles</u>	<u>Unit Rate</u>	<u>Total</u>
Field Survey Application Fee (includes 1st pole)	1 pole	\$139.00	\$139.00
Field Survey 2 -200 Poles	_____	\$ 13.45 per Pole	\$ _____
Additional Travel Time*	_____	\$200.00 per Day	\$ _____
<b>TOTAL Charges</b>			<b>\$139.00</b>

\* Based on average of 75 poles surveyed per day, add \$200.00 travel time for each additional day required to complete survey.

Please note, if you calculated the cost incorrectly, your check will be returned and a new check for the correct amount must be received by this office in order to schedule the survey. If you need assistance, please call the **HOTLINE** on 800-340-9822. The required field survey covering Pole Attachment License Application # Newton S MA SC03 - 430551 is authorized. I am enclosing an advance payment in the amount of \$139.00.

Licensee's Name (Print) Sean Conway

Signature

*Sean Conway*

Title Real Estate Manager

Address 400 Friberg Pkwy Westborough MA, 01581

Tel. No. 508-330-3392

Date 6/3/2016

**The Licensee shall submit an original copy of this application to EVERSOURCE Energy.**

Revised 03/06/2015

Eversource Energy

[illegible]

# EVERSOURCE - Work Order Application

**FOR KEN KENDRICK:**

**Customer Request In-Service Date:** 10/21/2016 **WO Received Date:** \_\_\_\_\_

**Service Address:** Street: Dedham Street Suite: \_\_\_\_\_ Town: Newton Zip: 02458

**Customer Of Record:**

**Customer Responsible for Payment of Monthly Electric Bills**

Name to appear on Monthly Bill: Cellco Partnership (A Delaware Corporation)

DBA – C/O Name: Verizon Wireless

Billing Address: P.O. Box 2375, Spokane, WA 99210-2375

Telephone: \_\_\_\_\_ Tax ID Number: \_\_\_\_\_

Existing Account or Meter Number (if applicable): \_\_\_\_\_

**Property Owner Name (if different from above):** \_\_\_\_\_

Owner Address: \_\_\_\_\_

Owner Phone Number: \_\_\_\_\_

**Party Responsible for Construction costs associated with work order (if different from above)**

Name: Verizon Wireless

Address: 118 Flanders Road, Westborough MA 1581

Phone Number: 508-320-2017

**Please Note that Articles of Incorporation are required for new commercial EVERSOURCE Customers**

**Type of Service Requested: (Circle Appropriate)**

☒ **New Service**

☐ **Service Upgrade**

☐ **Service Relocation**

☐ **Temporary Service**

☐ **Pole Relocation**

☐ **Disconnect/Reconnect**

☐ **Service Removal**

☐ **Metering Only**

OH Service from Pole, Pole# : \_\_\_\_\_ UG Service from; Riser-Pole # : \_\_\_\_\_ Padmount # : \_\_\_\_\_

**Customer Loading**

Type of Load	New Connected Load in KVA	
	Single Phase	Three Phase
Lighting		
Electric heat		
Air Conditioning		
Refrigeration		
Cooking		
Electric Dryer		
Water Heater		
Computer		
Process Equip.	14.4	
Motors/Elevators		
Miscellaneous		
<b>Totals</b>	<b>14.4</b>	

**Brief Description of Work**

Verizon Small Cell Install – Attach 1 antenna 1 RRH/Cabinet and 1 meter to the pole. Requires single phase 60Amp Service

**Number of Meters Required:**

Residential: \_\_\_\_\_

Commercial: \_\_\_\_\_

Public: \_\_\_\_\_

Main Switch Voltage: \_\_\_\_\_

Amperage: \_\_\_\_\_

Phase: \_\_\_\_\_

Service Voltage: \_\_\_\_\_

Amperage: \_\_\_\_\_

Phase: \_\_\_\_\_

Facility Type (ie: school, hospital): \_\_\_\_\_ New Building Square Feet: \_\_\_\_\_

ALL 480V SERVICES REQUIRE COLD SEQUENCE METERING (DISCONNECT SWITCH ON THE LINE SIDE OF THE METER)

If more than 1 meter is required, how will meters be labeled? (ie: Unit 1, 2, etc, Unit A, B, etc.)

**Additional Equipment:**

**Generator:** KW: \_\_\_\_\_ Phase: \_\_\_\_\_ Purpose: \_\_\_\_\_

**Motor(S) :** Total # : \_\_\_\_\_ Largest HP: \_\_\_\_\_ Phase: \_\_\_\_\_ Locked Rotor AMP: \_\_\_\_\_

Type of Starting Compensation (choose one):    Hard                      Soft                      Capacitor                      VFD

\*See Article 802 of EVERSOURCE Information and Requirements Book for Maximum LR current and Three Phase Protection \*

**Contact Name (circle appropriate):**

Customer/Contractor/Consultant: Sean Conway

Street Address: 118 Flanders Road

City, State, Zip: Westborough, MA 01581

Telephone: 508-320-2017

Pager: \_\_\_\_\_

Cell: 508-330-3392

Best Time to Call: \_\_\_\_\_

Fax: \_\_\_\_\_

Electrician: TBD

License Number: \_\_\_\_\_

Business Name: Verizon Wireless

Street Address: 118 Flanders Road

City, State, Zip: Westborough MA 01581

Telephone: 508-320-2017

Pager: \_\_\_\_\_

Cell: \_\_\_\_\_

Best Time to Call: \_\_\_\_\_

Fax: \_\_\_\_\_

Please note that by Interconnecting with the EVERSOURCE Distribution System the Customer of Record acknowledges that they have reviewed and are in compliance with the EVERSOURCE Information & Requirements for Electric Service (Blue Book).

For New Commercial Services, New Residential Developments, New 13.8 kv Two Line Station Electric Service, please provide (2) copies of City/Town approved site plans that illustrates the new facility location and the proposed location of the new utilities (electric, gas, water, sewer, telecommunications) and a One-Line Diagram.

For Service Increases at existing facilities, please submit a One-Line Diagram if available.

For New Residential Services where a pole must be set, please provide (2) copies of a site plan that illustrates the proposed location of the new facilities.

For Temporary Service Requests, please provide (2) copies of a site plan illustrating service location.

You may Fax this Form or mail any additional correspondence to:

EVERSOURCE ENERGY Electric and Gas  
One NSTAR Way  
Westwood, MA, 02090  
Tel: (781) 441 - 3851  
Fax: (781) 441-3194  
Cell: 339-987-7059  
H. Kendrick SW340

**FOR NSTAR USE ONLY**

EVERSOURCE Revenue Allowance: \_\_\_\_\_

EVERSOURCE Rate: \_\_\_\_\_

**KVA or KW rating of Existing Loads (if applicable):**

Existing Winter Peak Demand: \_\_\_\_\_

Month/Date/Year: \_\_\_\_\_

Existing Summer Peak Demand: \_\_\_\_\_

Month/Date/Year: \_\_\_\_\_

## APPLICATION AND POLE ATTACHMENT LICENSE - FORM 1

<b>Licensee</b>	VERIZON WIRELESS
<b>Agreement No.</b>	AMA140012
<b>Pole Attachment License</b>	AMA1400121669
<b>Customer License Number</b>	Newton_S_MA_SC03_430551
<b>State of</b>	MA
<b>Municipality</b>	NEWTON

<b>Type of Attachment</b>	<b>Number of Attachments</b>	<b>Billing Description</b>
Anchor	0	
Antenna	1	MA CAE-ANTENNA-JO
Cable/ADSS	0	
Cable/Strand	0	
Decorative	1	MA CAE-POWER METER
Drop	0	
ERUV	0	
Misc	1	MA - JOINT OWNED URBAN TELECOM
Overlash	0	
Power supply	1	MA - PS URBAN TELECOM
Riser	0	

<b>Total Attachments</b>	4
<b>Total Attachments Billable</b>	4
<b>Total Attachments - No Bill</b>	0

<b>Licenser's Name (Print)</b>	DEBORAH TOBIN
<b>Signature</b>	Approved by DEBORAH TOBIN on 02/12/2019
<b>Date</b>	02/12/2019
<b>Title</b>	SUPERVISOR
<b>Phone</b>	857-415-5150

# EXHIBIT D





118 Flanders Road, 3<sup>rd</sup> Floor  
Westborough, MA 01581

#### AFFIDAVIT ON BEHALF OF VERIZON WIRELESS

The undersigned, in support of applications to install a wireless telecommunications facility consisting of antennas and associated radio equipment on existing wooden utility poles located in the City of Newton, Massachusetts states the following:

1. My name is Sean Conway. I am a Principal Engineer – RE/Regulatory for Verizon Wireless in Massachusetts.
2. Verizon Wireless is a federally licensed provider of wireless communications services with a national footprint.
3. As part of its network development to improve its service to users of its wireless network, Verizon Wireless is proposing to construct small cell wireless facilities on certain utility poles in the City of Newton. It has received the necessary permission from the owners of those utility poles to place antennas and radio equipment and other related cabling and equipment on the poles that are the subject of the applications.
3. Verizon Wireless certifies that its proposed facilities will be in compliance with applicable Federal Communications Commission standards and requirements including the standards for radio frequency emissions.
4. Verizon Wireless confirms that the attachments to be placed on the poles will not be reflective.
5. Verizon Wireless confirms that the proposed facilities will generate as little noise as is technically feasible and commercially practicable and will comply with the City of Newton noise ordinance.

Signed under the pains and penalties of perjury this 3rd day of February, 2020

A handwritten signature in blue ink, appearing to be "Sean Conway", written over a horizontal line.

Sean Conway  
Principal Engineer – RE/Regulatory

# EXHIBIT E

[illegible]

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE GOVERNING AUTHORITIES:  
MASSACHUSETTS STATE BUILDING CODE – 780 CMR, 9TH EDITION (AMENDMENTS TO IBC 2015)  
NATIONAL ELECTRIC SAFETY CODE (NEC) GRADE “C” CONSTRUCTION STANDARDS  
2017 NATIONAL ELECTRIC SAFETY CODE (NEC)

2. ALL ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE LOCAL UTILITY COMPANY SPECIFICATIONS AND CONSTRUCTION REQUIREMENTS FOR DISTRIBUTED ANTENNA SYSTEMS (DAS) IN COMMUNICATION SPACE TITLED DESIGN & APPLICATION STANDARD BY EVERSOURCE

GROUNDING SHALL COMPLY WITH THE LOCAL UTILITY COMPANY CODES & REQUIREMENTS & NEC ART. 250.

ALL GROUND CONNECTIONS TO BE BURIED. GROUND COMPRESSION TYPE CONNECTORS OR CAMELO EXOTHERMIC WELD TO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL. ROUTE CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. EXCEPT AS OTHERWISE INDICATED, GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS; #6 WIRE CAN BE BENT AT 90° RADIUS WHEN NECESSARY.

TEST COMPLETING GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PRODUCT CLOSE-OUT

1. NORTH IS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. DOWN AND FLOW ON CROWN OVERFLOWERS SHALL BE DETERMINED.  
SEE ONE ENGINEERING SHEET FOR THE CONTRACTOR'S UTILITY COMPANY RESPONSIBILITIES.
4. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DEMBERY ENGINEERS INC.
5. UTILITY POLE M40B3 COORDINATES BASED ON GOOGLE EARTH.  
AERIAL & M40B3 MAPS BASED ON GOOGLE EARTH.

- APPROXIMATE ADDRESS REFLECTS THE CLOSEST STREET ADDRESS TO THE LUGUS POLE AND IS BASED ON NEWTON CITY VIEWER GIS MAP. NEAREST ADDRESS DOES NOT REFLECT THE E911 ADDRESS FOR THIS POLE.

STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

- [illegible]

RE-SUBMITTAL OF BID INVITES CONTRACTOR IS COVENANT OF ALL JOB SITE CONDITIONS AND CONTRACTOR SHALL PERFORM UNDER THIS CONTRACT.

2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER.

3. HEIGHTS SHALL BE VERIFIED WITH POLE OWNER PRIOR TO INSTALLATION.

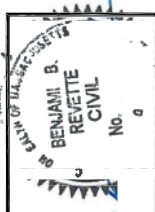
1. EACH COMPONENT OF ANY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL, BOARD, OR ELECTRICAL BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) 29 CFR 1910.269.
2. CONTRACTOR SHALL PROVIDE ALL LABOR MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPER, OPERATIVE SYSTEM IN ACCORDANCE WITH THE CODES AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
3. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CASE. CONTRACTOR SHALL COMPLY WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS FOR THE PROPER HANDLING AND DISPOSAL OF ALL HAZARDOUS MATERIALS SUBJECT TO SUPERVISOR'S APPROVAL. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER HANDLING AND DISPOSAL OF ALL HAZARDOUS MATERIALS LEFT WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL COVERING MATERIALS ESTABLISHED BY ASH, NEMA AND NECA.
4. ALL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS.
5. ALL CONDUIT SHALL CARRY OUT THE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL COMPLY WITH ALL WORK IN ACCORDANCE WITH ALL GOVERNING UTILITY, STATE, COUNTY AND LOCAL CODES & O.S.H.A.
7. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES.
8. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THE GUARANTEE PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
9. SPARE CONDUIT SHALL HAVE A PULL WIRE OR ROPE.
10. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB. SHOWING ALL FINAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
11. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
12. ALL WIRE #1/2 TO #6 SHALL BE STRIPPED COPPER TYPE THIN-WALL CONDUCTORS #4 AND LARGER SHALL BE COPPER TYPE XHHW.
13. ALL CROCK BRANCHES, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING OF 100 AMPERES MINIMUM. CONDUIT SHALL BE RATED 100 AMPERES MINIMUM AND SHALL BE RATED AND MANUFACTURED BY 25,000 A.C. UNLESS OTHERWISE INDICATED.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
15. REPAIR ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
16. IN DRILLING HOLES INTO CONCRETE MATERIALS FOR FASTENING OR ANCHORING BUSHINGS, OR PENETRATIONS THROUGH FLOOR, CEILING, WALLS, ROOF, ETC. SHALL BE CLEARLY MARKED AND IDENTIFIED. ANY REPAIRING STEEL WILL NOT BE DRILLED INTO CUT OR DAMAGED SURFACES.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES.

RIGID CONDUIT SHALL BE LVL LABEL GALVANIZED ZINC COATED WITH ZINC ING.  
 ELECTRICAL METALLIC TUBING SHALL BE LVL LABEL, FITTINGS SHALL BE GALD RING COMPRESSION  
 TYPE, EMT SHALL BE USED ONLY FOR INTERIOR RUNS.  
 FLEXIBLE METALLIC CONDUIT SHALL HAVE LVL LISTED LABS AND MAY BE USED WHERE PERMITTED  
 BY CODE. FITTINGS SHALL BE "JMC" OR "SQUETZ" TYPE SEAL RING FLEXIBLE CONDUIT. ALL  
 CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUNDING  
 CABLE.  
 HEAVY WALL CONDUIT SHALL BE USED FOR ALL GROUNDING CONDUITORS AND OTHER SPECIFIC  
 USES AS INDICATED BY THE DRAWINGS. HEAVY WALL PVC CONDUIT SHALL BE SCHEDULE 40, 90  
 DEGREES C, U. BATED, CONSTRUCTED OF POLYVINYL CHLORIDE AND CONFORMING TO NEMA TC-2  
 TYPE DIRECT BURIAL OR NON-FLAMMABLE GROUNDING CONDUIT. IT SHALL BE OF THE HEAVY WELD  
 TYPE.

27. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
28. THE ELECTRICAL SERVICE SHALL BE IDENTIFIED BY A PERMANENT ENGRAVED PLASTIC LABEL.
29. COORDINATE THE ELECTRICAL SERVICE WITH UTILITY PROVIDER.
30. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS GREATER THAN 5 OHMS, THE CONTRACTOR SHALL INVESTIGATE THE CAUSE OF THE EXCESSIVE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
31. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. OBTAIN PERMITS OF ALL DEBRS.

1. ALL TEMPORARY CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERSEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERIES, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.

3. ALL TRAFFIC SIGNALS, SIGN SUPPORTS, SIGNS, ROAD BLOCKS, AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR DIVERTED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
4. CONTRACTORS SHALL MAINTAIN ACCESS TO ALL EXISTING SIDEWALKS, DRIVEWAYS, AND ALLEYS AT ALL TIMES THROUGHOUT CONSTRUCTION.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELLED WAY CHANGING DIRECTIONS, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES," AND/OR MANUAL FOR ASSESSING STREET HUMANITIES (MASH).
6. CONTRACTORS SHALL COORDINATE WITH THE ABUTTING PROPERTIES NEAR THE POLE AT LEAST 7-24 HOURS BEFORE ANY WORK IS INITIATED TO DISCUSS THE LOCATION OF THE TRAFFIC SIGNALS, THEIR PLACEMENT, AND ANY SPECIAL OPERATIONS.
7. THE FIRST FIVE PSLIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
8. MINIMUM SPACING OF TRAFFIC DEVICES IN A TAPEX (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
9. MINIMUM LANE WIDTH IS TO BE 11 FEET (3.0m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE ACQUIRED FROM THE EDGE OF DRAINAGE OR MEDIAN CENTER.
10. EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES THROUGH A COMBINATION OF TEMPORARY SIDEWALKS, CLOSURE STRIPS, AND/OR PEDESTRIAN ROUTES SHALL BE APPLICABLE ACCESSIBILITY REQUIREMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF ALL EXISTING CONSTRUCTION AT THIS LOCATION. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC SIGNS, DRUMS, CONES, OR OTHER TRAFFIC CONTROL DEVICES TO DIRECT VEHICLES AND PEDESTRIANS AROUND THE

[illegible]

SK	JCM	BBR	50121487
PROJECT NUMBER:			
JOB NUMBER:			50121590
POLE ID:			

117/110

COORDINATES:	N 42.295119° W 71.179381°
APPROXIMATE ADDRESS**	

DEDHAM STREET  
NEWTON, MA 02458

SHEET TITLE  
GENERAL NOTES  
SHEET NUMBER  
508

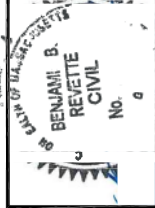
**508-20**


15

NEWTON S MA SC03  
LOCATION CODE:  
430551  
FUZE ID:  
2505837

CONSTRUCTION DRAWINGS	
0	04/10/20 FOR SUBMITTAL
A	03/24/20 FOR COMMENT

**Dewberry®**  
Dewberry Engineers Inc.  
99 SUMMER STREET  
SUITE 700  
BOSTON, MA 02110  
PHONE: 617.695.3400  
FAX: 617.695.3310



DRAWN BY: 	SK
REVIEWED BY: JCM	
CHECKED BY: BBR	
PROJECT NUMBER: 50121487	
JOB NUMBER: 50121590	
POLE ID:	

117/110

COORDINATES: N 42.295119°  
W 71.179381°

APPROXIMATE ADDRESS\*\*

DEDHAM STREET  
NEWTON, MA 02458

SHEET TITLE	LOCUS AERIAL MAP	508	SHEET NUMBER
-------------	---------------------	-----	--------------

**508-20**

10



AERIAL MAP  
SCALE: N.T.S.



- NOTES:
1. NORTH ARROW SHOWN AS APPROXIMATE.
2. SAME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. ALL DATA TO BE OBTAINED FROM OVERSPOKE WHEELS. SERVICE SOURCES TO BE DETERMINED BY OTHERS.
4. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DEVERLY ENGINEERS INC. ON 02/12/2017
5. AERIAL MAP, NAD83 COORDINATES & NAVD83 ELEVATIONS BASED ON GOOGLE EARTH, OBTAINED ON 01/16/2017.
6. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY REQUIREMENTS & VERRAAN WHEELS SPECIFICATIONS.
7. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH ILLINOIS STATE CODES 90.05-91 SUBMITS BY ENGINEERS INC. 02/23/2017.

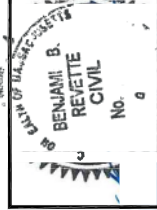



## CONSTRUCTION DRAWINGS

0	04/10/20		FOR SUBMITTAL	
A	03/24/20		FOR COMMENT	



**Dewberry Engineers Inc.**  
99 SUMMER STREET  
SUITE 700  
BOSTON, MA 02110  
PHONE: 617 695 3400  
FAX: 617 695 3310



DRAWN BY:		SK
REVIEWED BY:	JCM	
CHECKED BY:	BBR	
PROJECT NUMBER:	50121487	
JOB NUMBER:	50121590	
SHEET NO.		

117/110

**COORDINATES:**

N 43 30 E 110°

N 42.295119  
W 71.179381

APPROXIMATE ADDRESS\*\*

DEDHAM STREET  
NEWTON MA 02458

SHEET TITLE

POLE PHOTO & ELEVATION

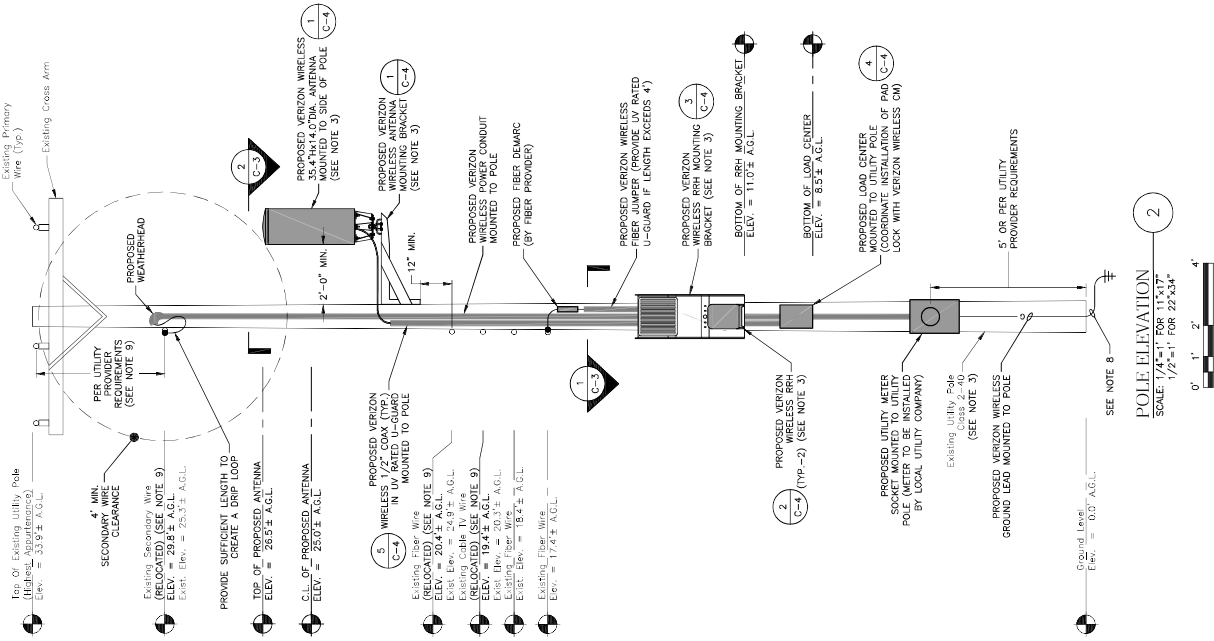
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SHEET NUMBER

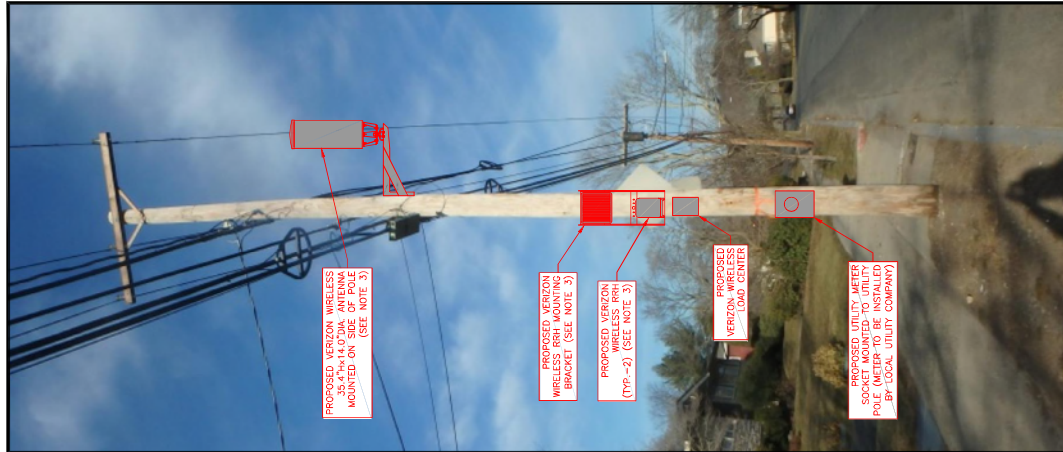
C-2

SHEET NUMBER

2-



1. ELEVATION SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DENEWERY ENGINEERS INC. DATED 02/28/2020.
4. POWER & FIBER TO COME FROM OVERHEAD WIRLESS SERVICE SOURCES TO BE DETERMINED.
5. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DENEWERY ENGINEERS INC. ON 02/12/2020.
6. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY PROVIDER REQUIREMENTS & WIRELESS WIRELESS SPECIFICATIONS.
7. A.G.L.= ABOVE GROUND LEVEL.
8. C.L.L.= CENTER LINE.
9. CONTACT DTE SUE (888)-444-7233 FOR VERIFICATION OF UNDERGROUND UTILITIES PRIOR TO EQUIPMENT INSTALLATION.
10. OVERHEAD WIRLESS TO BE INSTALLED/RELOCATED BY UTILITY COMPANY PER UTILITY PROVIDER REQUIREMENTS.
11. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY PROVIDER REQUIREMENTS.



POLE PHOTO  
SCALE: N.T.S.

1

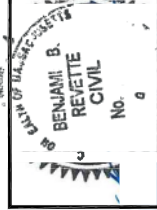


VERIZON WIRELESS  
118 FLANDERS ROAD  
WESTBOROUGH, MA 01581-3956

NEWTON S MA SC03  
LOCATION CODE:  
430551  
FUZE ID:  
2505837

CONSTRUCTION DRAWINGS	
0	04/10/20 FOR SUBMITTAL
A	03/24/20 FOR COMMENT

**Dewberry**  
Dewberry Engineers Inc.  
100 PARK STREET  
SUITE 700  
BOSTON, MA 02110  
TEL: 617.662.8600  
FAX: 617.662.3310



DRAWN BY:	SK
REVIEWED BY:	JCM
CHECKED BY:	BBR
PROJECT NUMBER:	5021487
JOB NUMBER:	5021590
POLE ID:	

117/110

CORINATES:

N 42.295119°  
W 71.179381°

APPROXIMATE ADDRESS\*\*

DEHAM STREET  
NEWTON, MA 02458

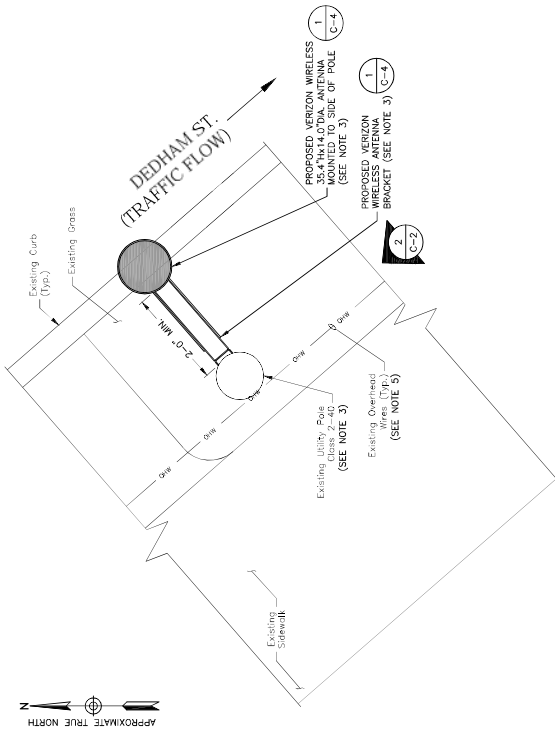
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EQUIPMENT & ANTENNA  
PLANS

SHEET NUMBER

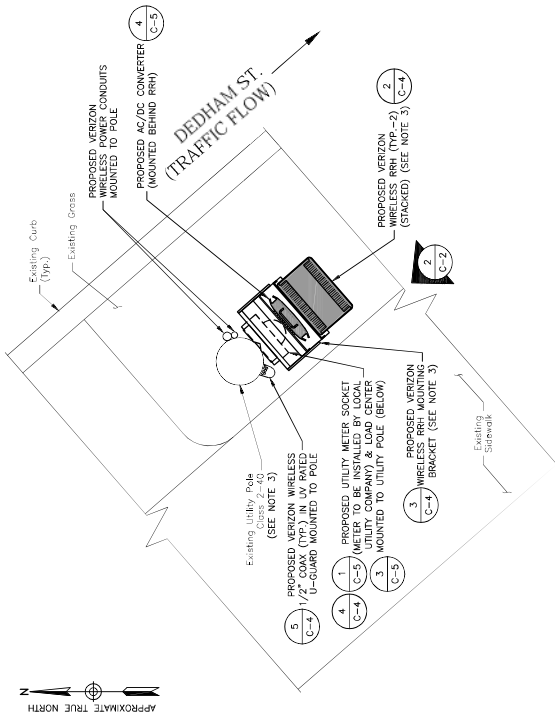
C-3

508-20



NOTE:  
1. SOME EXISTING/PROPOSED EQUIPMENT NOT SHOWN FOR CLARITY.

ANTENNA PLAN  
SCALE: 3/8"=1' FOR 11'x17'  
3/4"=1' FOR 22'x34'



NOTE:  
1. SOME EXISTING/PROPOSED EQUIPMENT NOT SHOWN FOR CLARITY.

EQUIPMENT PLAN  
SCALE: 3/8"=1' FOR 11'x17'  
3/4"=1' FOR 22'x34'

- NOTES:
1. NORTH ARROW SHOWN AS APPROXIMATE.
  2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  3. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ANALYSIS OF DEWBERRY ENGINEERS INC. DATE 02/28/20.
  4. POWER & FIBER TO COME FROM OVERHEAD WIRES. SERVICE SOURCES TO BE DETERMINED.
  5. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DEWBERRY ENGINEERS INC. ON 02/17/20.
  6. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY PROVIDER REQUIREMENTS & VERIZON WIRELESS SPECIFICATIONS.
  7. A.G.L.= ABOVE GROUND LEVEL.  
C.L.= CENTER LINE.
  8. CONTACT DIS SITE (888-344-7233) FOR VERIFICATION OF UNDERGROUND UTILITIES PRIOR TO EQUIPMENT INSTALLATION.
  9. OVERHEAD WIRES TO BE INSTALLED/RELOCATED BY UTILITY COMPANY PER UTILITY PROVIDER REQUIREMENTS.
  10. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY PROVIDER REQUIREMENTS & VERIZON WIRELESS SPECIFICATIONS.





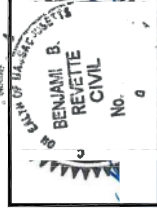


VERIZON WIRELESS  
118 FLANDERS ROAD  
WESTBOROUGH, MA 01581-3956

NEWTON S MA SC03  
LOCATION CODE:  
430551  
FUZE ID:  
2505837

CONSTRUCTION DRAWINGS	
0	04/10/20 FOR SUBMITTAL
A	03/24/20 FOR COMMENT

**Dewberry**  
Dewberry Engineers Inc.  
1000 DEER STREET  
BOSTON, MA 02110  
TEL: 617.660.8600  
FAX: 617.660.3310



DRAWN BY:	SK
REVIEWED BY:	JCM
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121590
POLE ID:	

117/110

CORNINATES:	
N	42.295119°
W	71.179381°
APPROXIMATE ADDRESS**	

DEDHAM STREET  
NEWTON, MA 02458

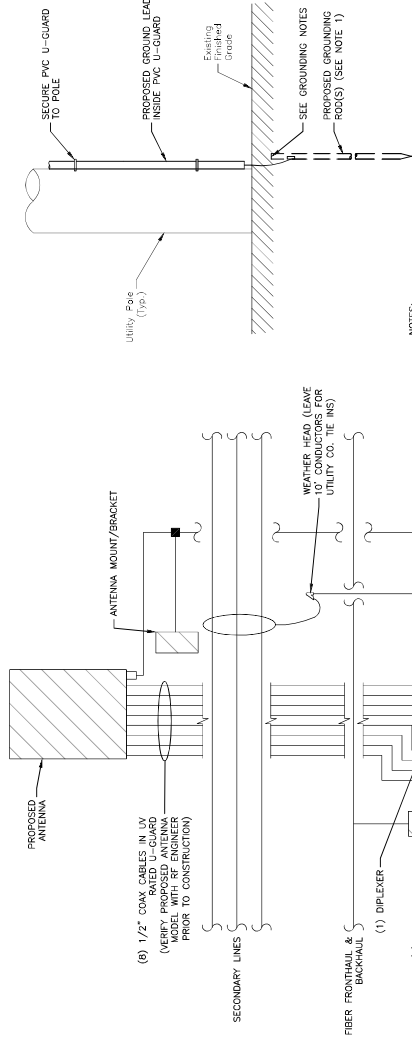
SHEET TITLE

WIRING DIAGRAM &  
DETAILS

SHEET NUMBER

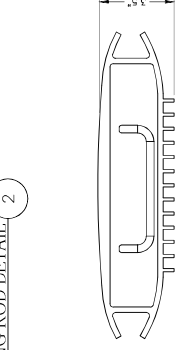
C-5

508-20



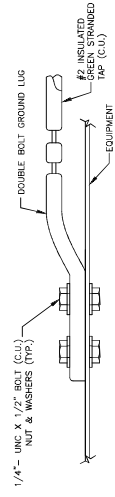
- NOTES:
- GROUND ROD(S) SHALL BE INSTALLED IN UNDISTURBED SOIL, 12" MIN. AWAY FROM THE POLE, TOP OF GROUND ROD(S) SHALL BE 4" MIN. BELOW FINISHED GRADE. THE GROUNDING RESISTANCE SHALL BE PER THE UTILITY PROVIDER REQUIREMENTS.
  - GROUND PER REQUIREMENTS OF THE AUTHORITY, HAVING JURISDICTION & UTILITY COMPANY REQUIREMENTS. SEE NATIONAL ELECTRICAL CODE (NEC), SECTION 250.

GROUNDING ROD DETAIL 2  
SCALE: N.T.S.



AC/DC CONVERTER SPECIFICATION
DIMENSIONS: 14.1\"H x 8.3\"W x 3.5\"D
WEIGHT: 14.1 LBS.

AC/DC CONVERTER DETAIL 4  
SCALE: N.T.S.



GROUNDING DETAIL 5  
SCALE: N.T.S.

- NOTES:
- FINAL ELECTRICAL AND FIBER SOURCE PENDING FINAL DESIGN & UTILITY APPROVAL.
  - VERIZON WIRELESS TO FIELD TEST AND TIE INTO EXISTING GROUNDING SYSTEM. IF GROUNDING SYSTEM DOES NOT MEET VERIZON WIRELESS STANDARDS, VERIZON WIRELESS WILL PROVIDE THE NECESSARY GROUNDING SYSTEM PER UTILITY THROUGH VERIZON WIRELESS REQUIREMENTS AND SPECIFICATIONS.
  - VERIFY FINAL ANTENNA DESIGN WITH RF ENGINEER.
  - CONTACT DIG SAT (888-344-7233) FOR VERIFICATION OF UNDERGROUND UTILITIES PRIOR TO EQUIPMENT INSTALLATION.

WIRING DIAGRAM 1  
SCALE: N.T.S.

# EXHIBIT F

February 28, 2020

Verizon Wireless  
118 Flanders Road  
Westborough, MA 01581

**Re:   Newton S MA SC03  
      42°17'42.43"N 71°10'45.77"W  
      Dedham Street  
      Newton, MA 02458**

To Whom It May Concern:

Dewberry Engineers Inc. (Dewberry) has evaluated the proposed equipment installation by Verizon at the above referenced site. The existing pole is a Class 2-40 southern pine timber utility pole set approximately 7'-0" into the ground. See latest Construction Drawings by Dewberry for line elevations and equipment specifications.

The existing utility pole was analyzed in accordance with National Electric Safety Code (NESC) Grade "C" construction standards and Massachusetts State Building Code – 780 CMR (Amendments to IBC 2015). Analysis assumes wire types and wire diameters using photos of the existing pole. Per our analysis, **the existing pole is adequate** to support the proposed installation as shown in Construction Drawings by Dewberry.

Our assessment is based on the assumption that the utility pole and associated accessories are constructed in conformance with all applicable state and local building codes. If during construction any damage or deterioration is noticed, Dewberry is to be notified to assess any deviation from the assumed condition. The addition or reconfiguration of any new equipment not accounted for in this assessment will require further analysis and design.

If you have any questions, please do not hesitate to call me at 617-531-0810.

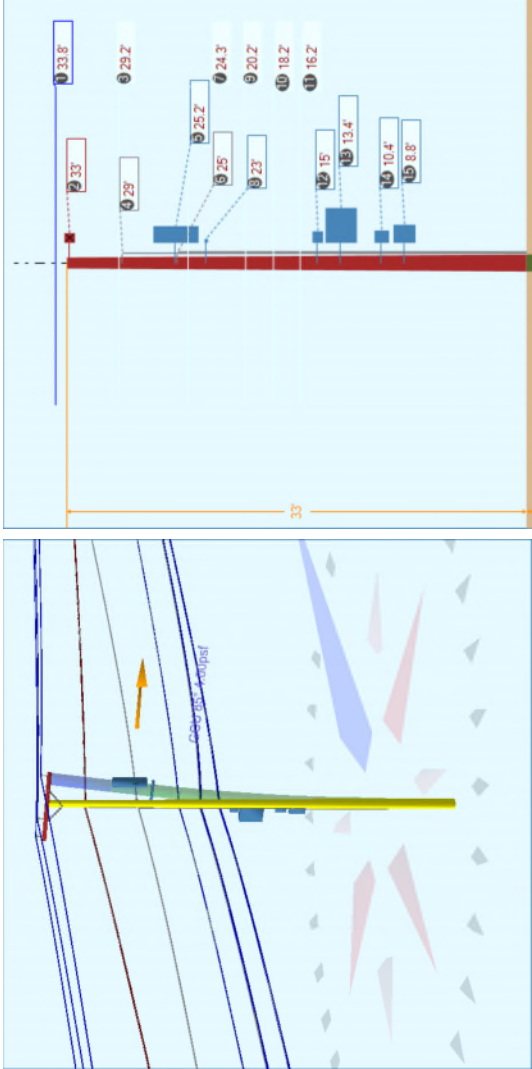
Sincerely,  
**Dewberry Engineers Inc.**

  
  
Sahnoune Abed, P.E.  
Structural Project Engineer

Pole Num:	117/110	Pole Length / Class:	40 / 2	Code:			
Street Address	Dedham Street	Species:	SOUTHERN PINE	NESC Rule:	NESC Rule 250B	Structure Type:	Unguyed Tangent
City, State	Newton, MA	Setting Depth (ft):	7.00	Construction Grade:	C	Pole Strength Factor:	0.85
Zip Code	02458	G/L Circumference (in):	38.10	Loading District:	Heavy	Transverse Wind LF:	1.75
Designer	SMS	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.50	Wire Tension LF:	1.00
Checker	SA	Allowable Stress (psi):	6,800	Wind Speed (mph):	39.53	Vertical LF:	1.90
Approver	SA	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	4.00		
Latitude:	42 Deg 17 Min 42.430000	Sec N	Longitude:	71 Deg 10 Min 45.770000	Sec W	Elevation:	0 Feet

Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Maximum	33.5	84.8
Groundline	33.5	84.8
Vertical	15.6	84.8

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Max Cap Util	32,444	84.8
Groundline	32,444	84.8
GL Allowable	99,255	
Overturn	96,000	



508-20

**O-Calculc® Pro Analysis Report**

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 67.9°										
	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	857	63.1	22,843	70.4	23.0	1,568	2,536	22	1,590	23.4
Comms	216	15.9	4,743	14.6	4.8	326	839	7	333	4.9
GenericEquipments	57	4.2	995	3.1	1.0	68	468	4	72	1.1
Pole	185	13.6	3,115	9.6	3.1	214	2,099	18	232	3.4
Crossarms	2	0.2	57	0.2	0.1	4	101	1	5	0.1
Risers	36	2.7	613	1.9	0.6	42	103	1	43	0.6
Insulators	4	0.3	79	0.2	0.1	5	91	1	6	0.1
Pole Load	1,357	100.0	32,444	100.0	32.7	2,227	6,236	54	2,281	33.5
Pole Reserve Capacity			66,811		67.3	4,573			4,519	66.5

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 67.9°										
	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Exist.	1,079	79.5	27,721	85.4	27.9	1,903	3,566	31	1,933	28.4
Prop.	93	6.9	1,607	5.0	1.6	110	570	5	115	1.7
Pole	185	13.6	3,115	9.6	3.1	214	2,099	18	232	3.4
Totals:	1,357	100.0	32,444	100.0	32.7	2,227	6,236	54	2,281	33.5

**Detailed Load Components:**

Power	Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Unknown	CATV .50	16.23	7.82	0.5700		0.600	100.0	0.0	100.0			-55	197	142
Unknown	TELE 1.25	16.21	7.08	1.2500		0.600	100.0	0.0	100.0			-49	197	148
Unknown	CATV .50	16.16	7.57	0.5700		0.600	100.0	0.0	100.0			-53	196	143
Unknown	CATV .50	16.23	7.82	0.5700		0.600	101.0	180.0	101.0			-56	199	143
Unknown	TELE 1.25	16.21	7.08	1.2500		0.600	101.0	180.0	101.0			-50	198	148
Unknown	CATV .50	16.16	7.57	0.5700		0.600	101.0	180.0	101.0			-54	198	148
Unknown	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	18.08	7.81	0.8300		0.275	100.0	0.0	100.1			-34	205	175
Unknown	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	18.08	7.03	0.8300		0.275	100.0	0.0	100.1			-30	205	175

Unknown	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.02	7.42	0.8300	0.275	100.0	0.0	100.1	-32	204	172
Unknown	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.08	7.81	0.8300	0.275	101.0	180.0	101.0	-34	207	173
Unknown	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.08	7.03	0.8300	0.275	101.0	180.0	101.0	-30	207	177
Unknown	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.02	7.42	0.8300	0.275	101.0	180.0	101.0	-32	206	174
Unknown	CATV .50	Exist.	20.14	7.55	0.5700	0.600	100.0	0.0	100.0	-52	208	156
Unknown	CATV .50	Exist.	20.14	7.02	0.5700	0.600	100.0	0.0	100.0	-48	208	161
Unknown	CATV .50	Exist.	20.14	7.55	0.5700	0.600	101.0	180.0	101.0	-53	210	157
Unknown	CATV .50	Exist.	20.14	7.02	0.5700	0.600	101.0	180.0	101.0	-49	210	162
Secondary	TRIPLEX 6 AWG	Exist.	29.22	6.72	0.5800	0.113	100.0	0.0	100.0	-23	356	333
Secondary	TRIPLEX 6 AWG	Exist.	29.28	6.72	0.5800	0.113	100.0	0.0	100.0	-23	357	334
Secondary	TRIPLEX 6 AWG	Exist.	29.22	6.72	0.5800	0.113	101.0	180.0	101.0	-24	360	336
Secondary	TRIPLEX 6 AWG	Exist.	29.28	6.72	0.5800	0.113	101.0	180.0	101.0	-24	361	337
Primary	ACSR 1/0 AWG 6/1 RAVEN	Exist.	33.81	44.37	0.3980	0.87	101.0	180.0	101.0	-311	1,285	-18,775
Primary	ACSR 1/0 AWG 6/1 RAVEN	Exist.	33.81	44.37	0.3980	0.54	100.0	0.0	100.0	-588	1,273	20,392
Primary	ACSR 1/0 AWG 6/1 RAVEN	Exist.	33.81	18.89	0.3980	0.87	101.0	178.0	101.0	-137	1,306	-16,870
Primary	ACSR 1/0 AWG 6/1 RAVEN	Exist.	33.81	18.89	0.3980	0.54	100.0	0.0	100.0	-258	1,273	20,722
Primary	ACSR 1/0 AWG 6/1 RAVEN	Exist.	33.81	44.37	0.3980	0.87	101.0	180.0	101.0	280	1,285	-18,183
Primary	ACSR 1/0 AWG 6/1 RAVEN	Exist.	33.81	44.37	0.3980	0.54	100.0	0.0	100.0	529	1,273	21,509
Twist/Braid Bundle	6M	Exist.	29.25	6.72	0.2420	0.45	100.0	0.0	100.0	-23	1,144	32,941
Twist/Braid Bundle	6M	Exist.	29.25	6.72	0.2420	0.58	101.0	180.0	101.0	-23	1,155	-22,741
Totals:									9,533	-1,334	14,684	22,883

Comm	Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at Gl* (ft-lb)
Overlashed Bundle	6M	Exist.	16.25	7.54	0.2420	1.10	100.0	0.0	100.0	2,837	17,347	-25	634	17,955
Overlashed Bundle	6M	Exist.	16.25	7.54	0.2420	1.10	101.0	180.0	101.0	2,881	-17,614	-26	641	-16,999
Overlashed Bundle	6M	Exist.	18.17	7.42	0.2420	1.97	100.0	0.0	100.1	1,761	12,036	-22	695	12,708
Fiber	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.15	7.86	0.8300	0.275	100.0	0.0	100.1			-34	206	1508-20
Fiber	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.15	6.97	0.8300	0.275	100.0	0.0	100.1			-29	206	1508-20
Overlashed Bundle	6M	Exist.	18.17	7.42	0.2420	1.13	101.0	180.0	101.0	2,466	-16,856	-23	702	-16,178

Fiber	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.15	7.86	0.8300	0.275	101.0	180.0	101.0	-35	208	173
Fiber	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	18.15	6.97	0.8300	0.275	101.0	180.0	101.0	-30	208	178
Overlashed Bundle	6M	Exist.	20.17	7.29	0.2420	0.98	100.0	0.0	100.0	2,311	17,534	18,262
Overlashed Bundle	6M	Exist.	20.17	7.29	0.2420	1.11	101.0	180.0	101.0	2,124	-16,119	-15,384
Overlashed Bundle	6M	Exist.	24.30	7.03	0.2420	1.25	100.0	0.0	100.0	1,291	11,806	12,784
Fiber	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	24.27	6.89	0.8300	0.275	100.0	0.0	100.0	12	313	325
Fiber	BELOPTIX MLD6072 - 72 FIBERS - OUTDOOR (0.593)	Exist.	24.28	7.15	0.5930	0.130	100.0	0.0	100.0	13	313	325
Overlashed Bundle	6M	Exist.	24.30	7.03	0.2420	1.30	101.0	180.0	101.0	1,238	-11,318	-10,352
Fiber	BELOPTIX MLD6144 - 144 FIBERS - OUTDOOR (0.83)	Exist.	24.27	7.19	0.8300	0.275	101.0	180.0	101.0	-16	316	299
Fiber	BELOPTIX MLD6072 - 72 FIBERS - OUTDOOR (0.593)	Exist.	24.28	6.92	0.5930	0.130	101.0	180.0	101.0	-10	316	306
<b>Totals:</b>										<b>-3,184</b>	<b>-274</b>	<b>8,209</b>
<b>Totals:</b>										<b>4,751</b>		

Generic Equipment	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Box	Prop.	23.00	18.61	90.0	0.0	15.40	3.00	28.00	--	3.00	42	20	62
Cylinder	Prop.	25.25	30.61	90.0	0.0	33.70	38.70	--	12.00	--	151	497	648
Box	Prop.	15.00	9.12	180.0	0.0	12.00	9.00	5.00	--	8.30	-7	51	45
Box	Prop.	13.37	13.22	180.0	0.0	150.00	27.00	10.00	--	25.00	-118	283	165
Box	Prop.	10.42	8.91	180.0	0.0	20.00	12.65	4.00	--	8.90	-11	41	30
Box	Prop.	8.80	9.01	180.0	0.0	15.00	19.00	4.00	--	13.00	-8	54	46
<b>Totals:</b>										<b>996</b>			<b>946</b>

Crossarm	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Normal	Exist.	33.00	5.73	180.0	180.0	53.00	4.50	3.50	96.00	-18	75	57
<b>Totals:</b>										<b>-18</b>	<b>75</b>	<b>57</b>

Riser	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Riser 230.0°	Prop.	29.00	6.25	230.0	230.0	29.00	348.00	1.00	1.00	348.00	-14	178	1,082
Riser 160.0°	Prop.	25.00	6.25	160.0	160.0	25.00	300.00	2.00	2.00	300.00	0	450	418
<b>Totals:</b>										<b>-14</b>	<b>628</b>	<b>60</b>	<b>1,500</b>

# O-Calculc® Pro Analysis Report

Insulator	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Bolt	Exist.	16.25	0.00	270.0	0.0	5.00	3.00	0.00	-6	0	-6
Bolt	Exist.	18.17	0.00	270.0	0.0	5.00	3.00	0.00	-5	0	-5
Bolt	Exist.	20.17	0.00	270.0	0.0	5.00	3.00	0.00	-5	0	-5
Bolt	Exist.	24.30	0.00	0.0	0.0	5.00	3.00	0.00	2	0	2
Bolt	Exist.	24.30	0.00	180.0	180.0	5.00	3.00	0.00	-2	0	-2
Bolt	Exist.	29.25	0.00	270.0	0.0	5.00	3.00	0.00	-5	0	-5
Pin	Pin Insulator - 5 kV	33.19	44.00	262.6	0.0	6.00	3.50	7.50	-41	41	0
Pin	Pin Insulator - 5 kV	33.19	18.00	252.3	0.0	6.00	3.50	7.50	-18	41	23
Pin	Pin Insulator - 5 kV	33.19	-44.00	97.4	0.0	6.00	3.50	7.50	37	41	77
Totals:										122	79

Pole Buckling													
Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
2.00	21.31	33.33	11.23	18.52	7.96	12.13	1.60e+6	60.00	57.00	33.00	40.086	399.73	6.41

508-20



## **ASSUMPTIONS & LIMITATIONS**

This report was developed using general project information provided by general field observations, reference information and utility companies' guidelines. All pole information is based on a visual ground inspection. All recommendations pertain to the existing and the proposed pole construction, location, and loading as described in this report. Dewberry assumes no responsibility for failures caused by factors not considered in our report. These include but are not limited to the following:

1. Improper pole maintenance
2. Improper pole manufacturing and/or construction
3. Improper pole installation & associated equipment (Out of plumb)
4. Missing, corroding, decaying and/or deteriorating components
5. Improper original construction and/or soil preparation with the proper base embedment

Dewberry assumes no responsibility for modifications completed prior to or hereafter in which Dewberry was not directly involved. These modifications include but are not limited to the following:

1. Replacing or strengthening pole components
2. Installing or removing antenna mounting components
3. Installing or removing utility components
4. Changing loading configurations

Utility companies are responsible for verifying the proposed loading on the pole is consistent with the loading applied to the pole within this report.

# EXHIBIT G



2/6/2020

To: City of Newton

Transmitted via email

RE: Verizon Wireless Small Cell Sites

Dear City of Newton,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: <http://www.fcc.gov/oet/rfsafety/rf-faqs.html>.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to [VZWRFCompliance@verizonwireless.com](mailto:VZWRFCompliance@verizonwireless.com). Please contact your local Verizon Wireless resource below if you have any additional questions.

Contact Name	Contact Email	Contact Phone
Luis Teves	<a href="mailto:Luis.Teves@VerizonWireless.com">Luis.Teves@VerizonWireless.com</a>	508-479-3197

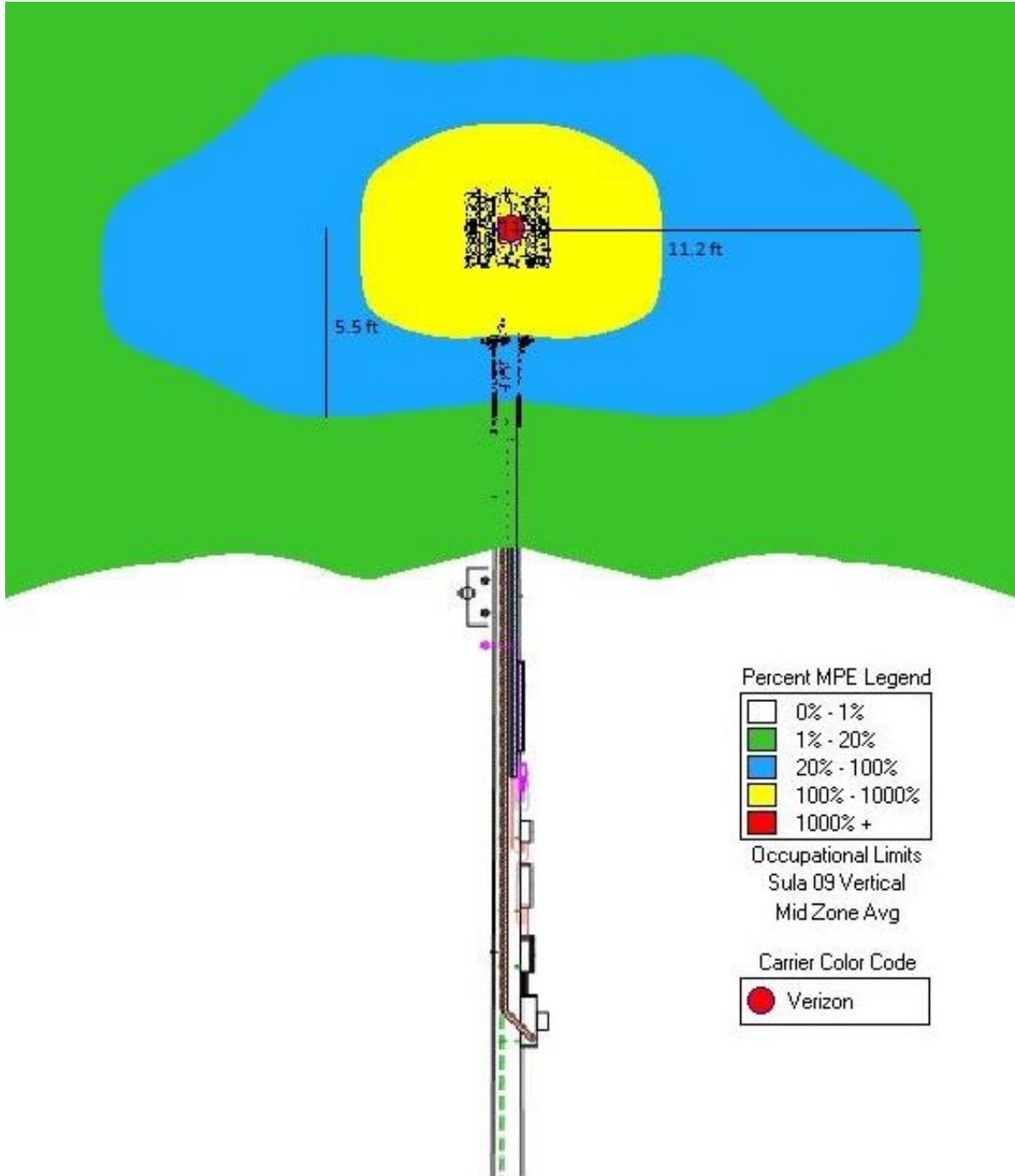
Sincerely,

Michael Creamer  
Sr Manager - RF Design  
Verizon Wireless

## Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

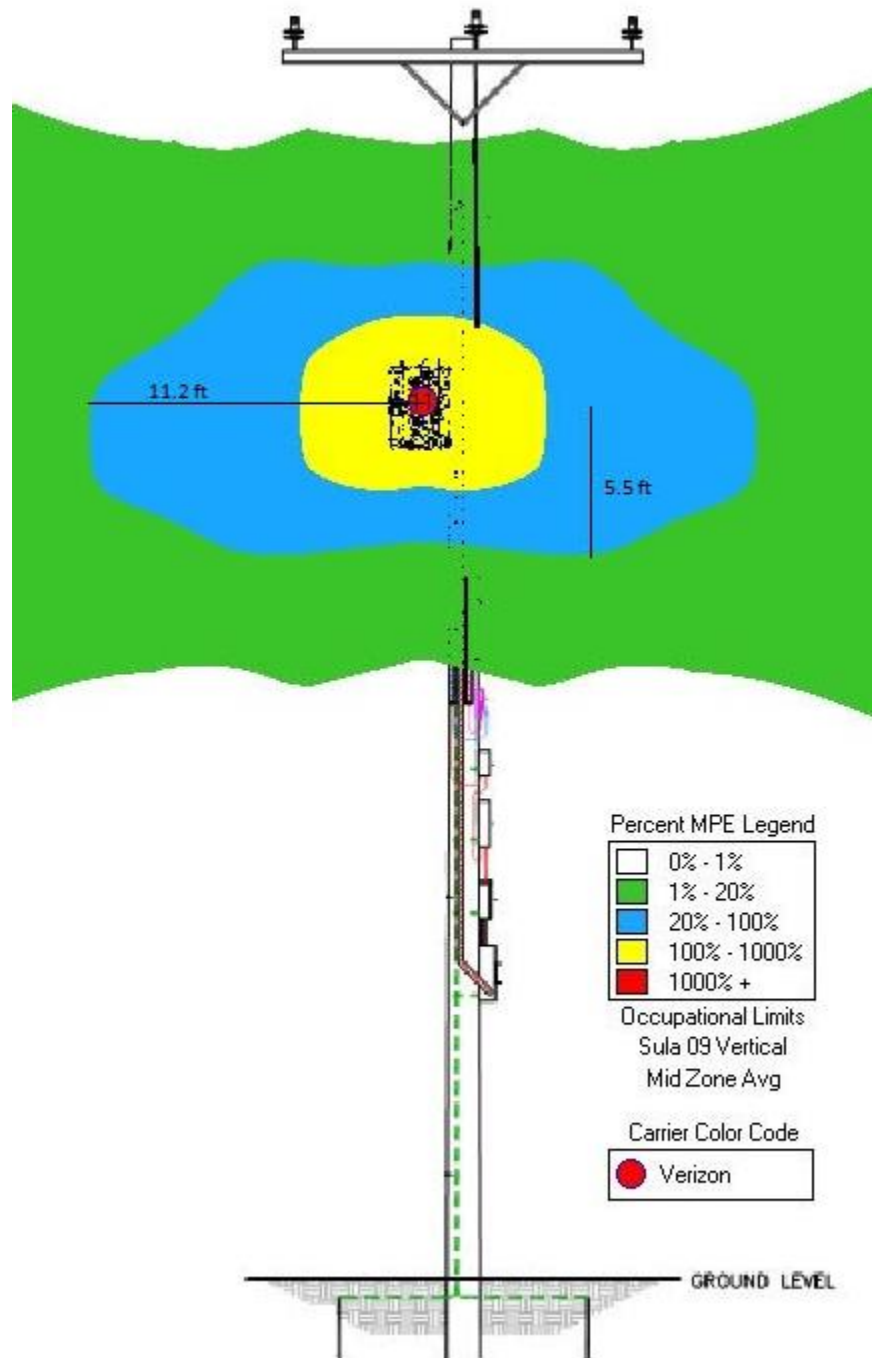
The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.

Top Mount:



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	
	Greater Than 100	
	Greater Than 1000	

Side Mount:



Color	% Occupational MPE	Instructions
Green	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
Blue	20 to 100	
Yellow	Greater Than 100	
Red	Greater Than 1000	

## Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

- ⇒ **M**aintaining all necessary wireless licensee contact information.
- ⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.
- ⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance**.
- ⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.



### For General RF Safety & Awareness Questions

Verizon Wireless

E-mail: [VZWRFCCompliance@vzw.com](mailto:VZWRFCCompliance@vzw.com)

E-mail Subject: "ATTN: RF Compliance"

### In The Event That Emergency Maintenance Is Required

24-Hour Network Operations Center:

**1-800-264-6620**

### RF Safety & Awareness Training Contacts

Dtech Communications

([michelle@dtechcom.com](mailto:michelle@dtechcom.com).)

EBI Consulting

[spenta@ebiconsulting.com](mailto:spenta@ebiconsulting.com)

SiteSafe

( [cbagley@sitesafe.com](mailto:cbagley@sitesafe.com) )

Waterford Consultants

[Sbaier-  
anderson@waterfordconsultants.com](mailto:Sbaier-anderson@waterfordconsultants.com)

## Radio Frequency (RF) Emissions

SAFETY  
&  
AWARENESS





## Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

### Classifications for Exposure Limits

#### Occupational

Persons are "exposed as a consequence of their employment" and are "fully aware of the potential for exposure and can exercise control over their exposure".

#### General Population

Any persons that "may not be made fully aware of the potential for exposure or cannot exercise control over their exposure".

Those in this category do not have RF Safety & Awareness Training.

### Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

## Compliance Materials

### Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.



**Information** - Provides relevant contact information for any questions or requests.



(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.



(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.



(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

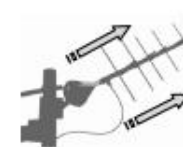
### Indicative Barriers

In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.



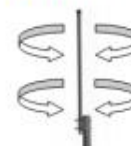
## Antenna Safety

### Antenna Types



**Yagi** - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

**Panel** - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



**Whip** - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

**Microwave** - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



### When In An Environment With Antennas:

- ⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.
- ⇒ Never touch an antenna. Assume all are active.
- ⇒ Read and obey ALL signs on an access point.
- ⇒ Read and obey ALL signs in the environment with antennas.
- ⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.
- ⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.
- ⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.



February 3, 2020

City of Newton

1000 Commonwealth Ave

Newton Centre, MA 02459

Re: Authorization to Represent Cellco Partnership

To Whom It May Concern:

Cellco Partnership, a Delaware general partnership, d/b/a Verizon Wireless ("Verizon Wireless") hereby authorizes its attorneys, Robinson & Cole, LLP, to represent Verizon Wireless before the City of Newton City Council and any other Town boards or offices, in applying for any and all necessary approvals for proposed small cell wireless facilities on utility poles in the City of Newton, and to complete and sign any related applications on its behalf.

A copy of this letter shall be regarded as having the same effect as the original.

Sincerely,

A handwritten signature in blue ink, appearing to be "SC", written over a horizontal line. The signature is stylized and loops around the line.

[Sean Conway, Principal Engineer – RE/Regulatory]

Cellco Partnership  
d/b/a Verizon Wireless  
118 Flanders Road  
Westborough, MA 01581



ALICIA R. SELMAN

One Boston Place, 25th floor  
Boston, MA 02108-4404  
Main (617) 557-5900  
Fax (617) 557-5999  
aselman@rc.com  
Direct (617) 557-5923

November 13, 2020

Cassidy Flynn  
Committee Clerk  
Newton City Council  
1000 Commonwealth Avenue  
Newton Centre, MA 02459

Re: Cellco Partnership d/b/a Verizon Wireless - Application Fee for Newton City Council Grant of Location Petitions

Dear Ms. Flynn:

As required by the Newton City Council Grant of Location Procedures and Standards dated August 12, 2019, and Section 17-3 of the Newton City Code, Verizon Wireless encloses a check in the amount of \$500 as the application fee for two Grant of Location Petitions that were filed on November 13, 2020 for proposed wireless communications facilities attachments to an existing utility pole located near 983 Dedham Street and an existing utility pole located near 30 Beethoven Avenue, Newton, MA.

Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Alicia R. Selmán', followed by a long horizontal line.

Alicia R. Selmán, Esq.  
Attorney for Cellco Partnership d/b/a Verizon Wireless

Enclosure

**Robinson+Cole**

Operating Account

LAW OFFICES

One Boston Place

Suite 2500

Boston, MA 02108-4404

BANK OF AMERICA

51-57/119 CT

Check Number

**303448**

Date:

November 9, 2020

Pay: Five hundred and 00/100\*\*\*\*\* \$ \*\*\*500.00\*\*\*

Void after 180 Days

PAY CITY OF NEWTON  
TO THE 1000 COMMONWEALTH AVE  
ORDER OF: NEWTON, MA 02459

⑈000303448⑈ ⑆011900571⑆ 000000154546⑈

CITY OF NEWTON  
Department of Public Works  
ENGINEERING DIVISION

Memorandum

To: Councilor Alison Leary, Facilities Committee Chair.

From: John Daghlia, Associate City Engineer

Re: Dedham Street Small Cell Antenna

Date: November 25, 2020

CC: Jim McGonagle, Commissioner  
Shawna Sullivan, Chief of Staff  
Lou Taverna, PE City Engineer  
Alan Mandl, Assistant City Solicitor  
Cassidy Flynn, Committee Clerk

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In reference to the above location, the following are my comments for a plan entitled:

***Verizon Wireless***

***Newton, MA SC03***

*Prepared by: Dewberry Engineers Inc.*

*Dated: 4/10/20*

*Received by Engineering: November 16, 2020*

*Executive Summary:*

This applicant is for a small cell antenna to be mounted to pole 117/110 with associated equipment as shown on the plans. The power source will be from the existing utility pole, my only concern is that the detail on sheet C-2 shows a proposed electric meter to be installed on the pole at a height of 5-feet from the base. I would request that this be changed to a minimum of 7-feet from the base of the pole so that it is out of reach of pedestrians and does not interfere with anyone walking near by the pole. If the application is approved the applicant should check with ISD for appropriate electrical permits that maybe required.

Conditions & Special Provisions:

1. I recommend that the installation of the small cell & associated equipment be installed during off peak commuter hours so that the installation does not interfere with traffic.
2. The contractor of record shall contact the Newton Police Department 48 hours in advanced and arrange for Police detail to help residents & commuters navigate around the construction activity.

If you have any questions or concerns, please call me at 617-796-1023.



## CITY OF NEWTON MASSACHUSETTS

### APPLICATION FORM

RECEIVED  
2020 NOV 13 PM 5:02

CITY CLERK  
NEWTON, MA. 02450

This Application Form is to be used for the permitting of (1) Wireless Communication Facility attachments to an existing or replacement utility pole which is located in the public way and which does not have any pre-existing Wireless Communication Facility attachments; (2) Wireless Communication Facility attachments to an existing or replacement utility pole which is located in the public way and which does have pre-existing Wireless Communication Facility attachments, but does not satisfy the requirements under 47 U.S.C. §1455 and related Federal Communications Commission ("FCC") regulations; and (3) new pole construction in a public way primarily for purposes of providing Wireless Communication Services. Refer to City Council Wireless Grant of Location Standards & Procedures.

#### Filing of Application & Fee:

Please provide to the City Clerk in paper format an original and two (2) copies of your application and 10 copies of all attachments and plans. Also provide a complete application and attachments in PDF format or in a digital format compatible with the City's systems. **The application must be complete per the attached check list in order to be filed with the City Clerk.**

**A filing fee of \$500 per location must accompany the application at the time of filing.**

#### Applicant Contact Information:

Name: Michael S. Giaimo as attorney for Cellco Partnership  
d/b/a Verizon Wireless

Phone: (617) 557-5959

Address: Robinson & Cole LLP, One Boston Place, Fl. 25,  
Boston, MA 02108

Email Address: mgiaimo@rc.com

#### Owner(s) of the Utility Pole:

Name: Verizon and Eversource

Phone: \_\_\_\_\_

Address: 118 Flanders Road, Westborough, MA 01581 / One  
NSTAR Way, Westwood, MA 02090

Email Address: \_\_\_\_\_

Owner of the Proposed Wireless Communications Facilities and/or New Pole Primarily for Wireless Communications Purposes in whose name a Grant of Location order would be issued:

Name: Cellco Partnership d/b/a Verizon Wireless

Phone: (508) 330-3392

Address: 118 Flanders Road, Westborough, MA 01581

Email Address: sean.conway@verizonwireless.com

If different than the Owner, the User of the Proposed Wireless Communications Facilities and/or New Pole Primarily for Wireless Communications Purposes:

Name: N/A Phone: N/A

Address: N/A Email Address: N/A

If in residential area, is the location directly in front of a residence? ☐ Yes ☒ No

If yes, what is the distance between the proposed pole location and residence that it would front?

N/A

If the location is within a Historic District, please identify the historic district and state whether the applicant has filed for a Certificate from the Historic District Commission and if so, the date of that filing:

N/A

Pole #: 22 23

#### Description of Proposed Wireless Communications Facilities

Narrative description of the proposed wireless communications facilities.

The proposed facility will be a "small cell" site designed to provide additional capacity and quality of service to this area of Newton. The proposed installation of equipment consists of one (1) small-cell antenna mounted to the side of the utility pole, two (2) remote radio heads, an antenna bracket, a diplexer, a meter, a surge protector, an AC/DC converter, a power connection, and fiber and coaxial cable located in conduit and mounted to the side of the pole. No equipment will be installed on the ground.

If an applicant proposes adding to the number of Wireless Communications Facilities or expanding the dimensions of the proposed wireless communications facilities (except with regard to replacement of existing wireless communications equipment with comparable equipment), the applicant must apply for a new wireless grant of location for the additional wireless communications equipment.

**Compliance Issues**

Identify any requirement or condition in the Standards with which the Applicant will not or cannot comply with and provide a complete explanation why it cannot or will not comply:

Is the applicant requesting an exception to any standard under Section III.L.? If so, please specify the standard and provide factual support for the requested exception:

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Signature of Applicant: Richard S. Marino

Name and Title and any Business Name: \_\_\_\_\_

Name of Principal or Client of Applicant: \_\_\_\_\_

Date Signed: \_\_\_\_\_

**CITY OF NEWTON, MASSACHUSETTS  
CITY COUNCIL**

**STATEMENT IN SUPPORT OF  
GRANT OF LOCATION PETITION**

**Applicant:** Cellco Partnership d/b/a Verizon Wireless (“Verizon Wireless”)  
118 Flanders Road  
Westborough, MA 01581

**Nearest Street:** 30 Beethoven Avenue, Newton MA 02468

**Proposed Use:** Wireless Communications Facility Mounted to the Side of an Existing Pole

**BACKGROUND**

This statement is submitted on behalf of Cellco Partnership d/b/a Verizon Wireless (“Verizon Wireless” or “Applicant”) in support of its application for a grant of location, pursuant to Newton City Council Grant of Location Procedures and Standards for Wireless Communications Facilities to be Located in Public Ways (“Procedures and Standards”), dated August 12, 2019, Chapter 23 of the Newton City Ordinances, M.G.L. c. 166, §§ 21 and 22, and other applicable state and federal laws, including 47 U.S.C. §§ 253 and 332(c)(7), to permit the installation of a wireless communications antenna and associated equipment on an existing utility pole #22 23 located on Beethoven Avenue, at approximately 30 Beethoven Avenue, as described in the petition made to the Newton City Council, dated November 13, 2020.

**DESCRIPTION OF PROPOSED FACILITY**

The proposed facility will be a personal wireless services facility within the meaning of the Federal Telecommunications Act (“TCA”), 47 U.S.C. § 332(c)(7)(C)(ii), and is a Wireless Communications Facility within the meaning of Section IV(A)(13) of the Procedures and Standards. The proposed facility will comply with all applicable federal and state regulations concerning such facilities.

The proposed facility will be a “small cell” site designed to provide additional capacity and quality of service to this area of Newton. It will improve service on the Verizon Wireless network for Newton residents and others living, working and traveling in the vicinity of the existing utility pole. The ability to reliably access wireless data and voice services is desirable for residents and businesses in Newton and enhances public safety by facilitating incident reporting and emergency response.

The proposed Verizon Wireless facility is depicted on the plans titled “Verizon Wireless Newton MA SC01” prepared by Dewberry Engineers, Inc., last revised on April 10, 2020 as submitted with this application (“Site Plans”).



The proposed installation of equipment consists of one (1) small-cell antenna mounted on a bracket extending from the side of the utility pole, two (2) remote radio heads (“RRHs”), an, a diplexer, a meter, a surge protector, an AC/DC converter, a power connection, and fiber and coaxial cable located in conduit, all affixed to the side of the pole. No equipment will be installed on the ground.

### GRANT OF LOCATION REQUIREMENTS

Verizon Wireless requests permission, pursuant to Section II of the Procedures and Standards and M.G.L. c. 166, § 22, to install the proposed facility as a wireless communications facility mounted to the side of an existing utility pole. According to § 23-6 of the Newton Ordinances, “every petition presented to the city council for permission to erect...abutments or other fixtures upon any public ways shall be accompanied by a plan showing the exact location of abutment or other fixture...the trees and other objects or structures in the immediate vicinity...and of the lines or wires such... abutments or other fixtures are designed to support.” Under Section IV of the Procedures and Standards, “all Wireless Communications Facilities shall be designed and maintained to minimize visual, noise and other impacts on the surrounding community, and to avoid any obstruction of the use of public ways, including sidewalks.” As demonstrated by the Site Plans, the proposed facility will comply with design standards as outlined in the Procedures and Standards. The proposed facility satisfies the applicable standards for such necessary approval, as follows:

<b>Personal Wireless Services Facilities — General Conditions</b>	
<b>Section III(A):</b> An Applicant must demonstrate that it is qualified and eligible under G.L.c. 166, § 21 to place its facilities on poles located in the public ways.	Applicant has submitted a copy of Verizon Wireless’ Business Certificate which is filed with the City of Newton and current FCC licenses to offer wireless communication services. ( <i>See Exs. A &amp; B</i> ).
<b>Section III(A):</b> The Applicant should demonstrate that its proposed facilities will be used to carry out the telecommunications services covered by its Statement of Business Operations and/or an applicable FCC license.	The proposed facility will be used to provide services pursuant to Verizon Wireless’ FCC licenses. ( <i>See Ex. B</i> ).
<b>Section III(A):</b> The Applicant should provide evidence of its authority to conduct in Massachusetts the business carried out through the proposed facilities.	Applicant has submitted a copy of Verizon Wireless’ Business Certificate which demonstrates its authority to conduct in Massachusetts the business utilizing the equipment. ( <i>See Ex. A</i> ).
<b>Section III(E):</b> The Applicant shall submit	The pole is jointly owned by Verizon. The

evidence of pole owner permission to attach its facilities to the specific pole or poles included in its application.	Applicant has also submitted an Engineer's Affidavit certifying that the pole owner has granted a license for the proposed location. ( <i>See Ex. C</i> ).
<b>Section III(F):</b> The Applicant shall complete the tax attestation.	The City has not provided a tax attestation form and accordingly has advised the Applicant to request a waiver of this requirement.
<b>Section IV(B)(2):</b> Applicants are encouraged to avoid pole locations that would be (a) directly in front of, and in close proximity to, a residence, (b) on a scenic road, (c) in front of and on the same side of the street as an historic building listed in the Massachusetts Historic Register, (d) in an historic district; (e) at an entry point to a village center; or (f) within an existing underground utility district. Applicants are also encouraged to use existing Utility Poles which do not support existing Wireless Communications Facilities.	Applicant will comply with this requirement. The proposed antenna and radio equipment will be installed on an existing pole which will be on the opposite side of Beethoven Avenue and approximately 60 feet from the nearest residence as depicted on the Locus Aerial Map in the Site Plans. ( <i>See Ex. D, Sheet Number C-1</i> ).
<b>Section IV(C):</b> The Applicant shall provide a statement certifying that the proposed facility will comply with Federal Communications Commission ("FCC") regulations concerning the environmental effects of radio frequency emissions ("RFE").	The Engineer's Affidavit attached as Exhibit C certifies that proposed attachments will be in compliance with FCC RFE regulations. Verizon Wireless has also submitted an EME letter which was transmitted to the City of Newton and confirms that the equipment will comply with FCC RFE safety requirements. ( <i>See Exs. C &amp; F</i> ).
<b>Section IV(G)(1):</b> Only one (1) personal wireless service provider or DAS provider shall be allowed to own, attach and/or operate Wireless Communications Facilities which are attached to a single Utility Pole.	There is no other personal wireless service provider with facilities on this utility pole.
<b>Section IV(G)(2):</b> No Wireless Communications Facilities shall be mounted to City-owned infrastructure located in the public ways, including but not limited to streetlights and traffic signals, unless authorized in writing by the Commissioner of Public Works and Mayor or her authorized designee.	Not applicable.

<b>Personal Wireless Services Facilities — Design Guidelines</b>	
<b><u>Section IV(G)(7)(a):</u></b> The personal wireless service antenna, including antenna panels, whip antennas or dish-shaped antennas, shall be as small as practicable, taking into account aesthetic and public safety considerations.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(b):</u></b> The total combined volume of all above ground equipment and appurtenances serving a personal wireless service antenna shall be as small as practicable, taking into account aesthetic and public safety considerations.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(c):</u></b> The operator of Wireless Communications Facilities shall, whenever possible, locate the base of the equipment or appurtenances at a height of no lower than eight (8) feet above grade. No facilities may be installed at grade without the approval of the Commissioner of Public Works and the City Council. If the City prohibits electric meters on utility poles or the electric distribution company does not require an electric meter, the operator shall locate the base of the equipment or appurtenances no lower than 12 feet above grade.	The Applicant has requested a waiver of this requirement. The meter height will be determined by the electric company. Because of the configuration of existing utility lines attached to the pole, some equipment will be located below 12 feet above ground as shown on the plans. ( <i>See</i> Ex. D, Sheet Number C-2). The Applicant is not proposing to install any equipment at grade.
<b><u>Section IV(G)(7)(d):</u></b> The top of the highest point of the Utility Pole shall not exceed forty (40) feet and the combination of the height of the utility pole and personal wireless service antenna extension shall not exceed forty-four (44) feet above ground level.	The proposed facility will comply with this requirement. The top of the highest point of the utility pole is 38.6 feet above ground level. The proposed antenna is below the top of the highest point of the utility pole at 27.8 feet above ground level. ( <i>See</i> Ex. D, Sheet Number C-2).
<b><u>Section IV(G)(7)(e):</u></b> To the maximum extent practicable, the color of the Wireless Communications Facilities shall be similar to and blend with (a) the existing equipment on the Utility Pole and/or on other nearby Utility Poles, (b) the color of the Utility Pole, or (c) another color reasonably satisfactory to and directed by the	The proposed facility will comply with this requirement. ( <i>See</i> Ex. D, Sheet Number C-4).

City Council. The Wireless Communications Facilities shall have non-reflective materials.	
<b><u>Section IV(G)(7)(f):</u></b> Any wiring on the pole must be covered with an appropriate cover or cable shield.	The proposed facility will comply with this requirement. ( <i>See</i> Ex. D, Sheet Number C-2).
<b><u>Section IV(G)(7)(g):</u></b> Antenna elements and equipment shall be mounted as close to the surface of the pole as practical and feasible.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(h):</u></b> Personal wireless service antenna shall include a radome, cap or other antenna panel covering or shield and shall use a color that blends with the color of the utility pole on which it is mounted.	The proposed antenna is as depicted on the plans filed with this application. ( <i>See</i> Ex. D, Sheet Number C-4).
<b><u>Section IV(G)(7)(i):</u></b> Other than signs required by federal or state law or by the pole owner, Wireless Communications Facilities shall not have signs installed thereon. Identification tags may be utilized in accordance with governmental and/or pole owner requirements.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(j):</u></b> Wires and cables connecting the antenna and/or appurtenances shall be installed in accordance with the National Electrical Safety Code in force at the time of installation of the wires and cables or any stricter standards required by a pole owner, and TIA/EIA applicable codes.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(k):</u></b> The Wireless Communications Facilities shall be grounded in accordance with the National Electrical Safety Code in force at the time of installation of the wires and cables or any stricter standard required by a pole owner.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(l):</u></b> No guy wires or other support wires shall be used in connection with Wireless Communications Facilities unless the facilities are proposed to be attached to an existing Utility Pole that incorporates guy wires prior to the date that the Applicant has applied for a grant of location, or unless the use of guy	The proposed facility will comply with this requirement.

wires or support wires allows for an installation that furthers the objectives of these procedures and standards better than other practical alternatives that do not include the use of such wires.	
<b><u>Section IV(G)(7)(m):</u></b> The proposed Wireless Communications Facilities shall be properly engineered to withstand wind loads required by applicable safety codes and pole owner requirements.	The proposed facility will comply with this requirement. Verizon Wireless has submitted a Structural Analysis letter to demonstrate the proposed installation's ability to withstand wind loads based on applicable state and local building codes. (See Ex. E).
<b><u>Section IV(G)(7)(n):</u></b> The Wireless Communications Facilities shall be located so as not to cause any physical or visual obstruction to pedestrian or vehicular traffic, cause safety hazards to pedestrians and motorists or otherwise incommode the public's use of the public way. The Wireless Communications Facilities shall not interfere with snow plowing, side walk clearing, leaf removal or the maintenance of public shade trees.	The proposed facility will comply with this requirement.
<b><u>Section IV(G)(7)(o):</u></b> All Wireless Communications Facilities shall be designed and located in such a manner as to avoid adverse impacts on traffic and pedestrian safety. Wireless Communications Facilities shall not project over the public way or sidewalk (beyond the berm or curb) in such a manner and at a height that will interfere with the public use of the public way or sidewalk. The Applicant shall comply with the Uniform Traffic Manual for Traffic Control at all times during construction or installation.	The proposed facility will comply with this requirement. As requested on the site walk with the Department of Public Works, the RRH units will not protrude over the roadway. (See Ex. D, Sheet Number C-2).
<b><u>Section IV(G)(7)(p):</u></b> The Applicant's Wireless Communications Facilities shall not produce any lighting or blinking light that is not required by federal or state law or by an applicable industry safety code.	The proposed facility will comply with this requirement.

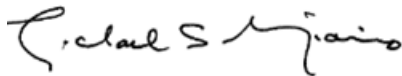
<p><b><u>Section IV(G)(7)(q):</u></b> The Applicant shall provide adequate security for its Wireless Communications Facilities in accordance with current industry practices and any applicable standards.</p>	<p>The proposed facility will comply with this requirement.</p>
<p><b><u>Section IV(G)(7)(r):</u></b> The Applicant shall employ Wireless Communications Facilities that are either silent or generate as little noise as is technically feasible and commercially practicable in light of industry standards and equipment specifications. In all cases, the Applicant shall comply with any applicable City noise ordinance. In the event that its facilities fail to comply with such ordinance, the Applicant shall provide noise suppression equipment as reasonably necessary to bring the facilities into compliance with such ordinance. In addition, the Applicant shall demonstrate that it is capable of promptly shutting down and repairing any equipment that is not in compliance with City noise regulations.</p>	<p>The proposed facility will comply with this requirement. (<i>See</i> Ex. C).</p>
<p><b><u>Section IV(G)(7)(s):</u></b> The Applicant shall demonstrate that it is capable of promptly shutting down and repairing any equipment that vibrates excessively.</p>	<p>The proposed facility will comply with this requirement.</p>
<p><b><u>Section IV(G)(7)(t):</u></b> The Applicant and its facilities shall not interfere with the operation and maintenance of any wires, cables or equipment already attached to a utility pole. Signage already attached to a pole shall not be moved without the prior written consent of the City department that controls the placement of the signage.</p>	<p>The proposed facility will comply with this requirement.</p>
<p style="text-align: center;"><b>Other Grant of Location Requirements</b></p>	
<p><b><u>Section IV(G)(8)(f):</u></b> Under § 23-11 of the City Ordinance, a performance bond[...]is required for every person constructing, maintaining or operating a telegraph, telephone or other electrical line in the city in a penal sum of not less than ten thousand dollars (\$10,000.00).</p>	<p>The applicant has not provided a performance bond with this application and requests that this requirement be a condition of approval</p>

<p><b>Section IV(G)(8)(g)(iii):</b> The City discourages the installation of Wireless Communication Facilities within the dripline of a Public Shade Tree or other City owned tree. If there is no alternative to the installation of a Wireless Communication Facility within the dripline of a Public Shade Tree or other City owned tree the installing party must comply with the City's Public Tree Regulation and obtain a Tree Permit from the Tree Warden.</p>	<p>The proposed facility will comply with this requirement.</p>
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### CONCLUSION

For all of the foregoing reasons, and with full reservation of its rights under applicable federal, state and local law, Verizon Wireless submits that the proposed wireless communications facility satisfies the requirements of the Procedures and Standards, Chapter 23 of the Newton City Ordinance, M.G.L. c. 166, §§ 21 and 22, and applicable state and federal law, including 47 U.S.C. §§ 253 and 332(c)(7) and respectfully requests that the Newton City Council grants permission to Verizon Wireless pursuant to Section III (M) of the Procedures and Standards, as well as any other relief that may be necessary or appropriate, to allow the installation and operation of a Verizon Wireless “small cell” wireless communications facility as described in this application and the accompanying materials and as will be further addressed at the hearing on this matter.

Respectfully submitted,  
Cellco Partnership d/b/a Verizon Wireless  
By its attorneys,




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Michael S. Giaimo, Esq.  
Alicia R. Selman, Esq.  
Robinson & Cole LLP  
One Boston Place, 25th Floor  
Boston, MA 02108  
(617) 557-5959

Dated: November 13, 2020.

**CITY OF NEWTON, MASSACHUSETTS  
CITY COUNCIL**

**STATEMENT IN SUPPORT OF  
GRANT OF LOCATION PETITION**

**EXHIBIT LIST**

**Exhibit A** – Verizon Wireless’ Business Certificate filed with the City of Newton City Clerk’s Office dated August 12, 2019;

**Exhibit B** – Copy of Verizon Wireless’ Federal Communications Commission Licenses;

**Exhibit C** – Eversource Energy’s Initial Authorization Letter dated November 19, 2020;

**Exhibit D** - Engineer’s Affidavit on Behalf of Verizon Wireless dated February 3, 2020;

**Exhibit E** – Site Plans prepared by Dewberry Engineers Inc. dated April 10, 2020;

**Exhibit F** – Structural Analysis of the Proposed Equipment Installation dated February 28, 2020;  
and

**Exhibit G** – City of Newton EME Letter dated February 6, 2020.



# EXHIBIT A



**City of Newton-City Clerk's Office**  
 1000 Commonwealth Ave. Newton, MA 02459

295


City Clerk's Use Only

**Business Certificate**  
**\$35.00 Filing Fee**  
**Requires Renewal Every 4 Years**

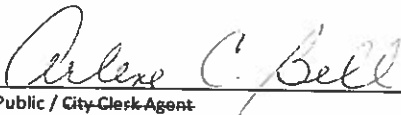
In conformity with the provisions of Massachusetts General Law Chapter 110, Section 5, the undersigned hereby declares that a business is being conducted under the name of: (Please Print)

Business Name	Verizon Wireless			
Proposed Use	wireless telecommunications			
Location of Business	13 Boylston Street	Chestnut Hill	MA	02467
	Address	City	State	Zip code

Full name and address of each person conducting such business:

Name	Celco Partnership			
	 Karen M. Shipman, Assistant Secretary Signature (In presence of Notary or City Clerk Agent)			
Address	One Verizon Way	Basking Ridge	NJ	07920
		City	State	Zip code
Name	Signature (In presence of Notary or City Clerk Agent)			
Address		City	State	Zip code
Name	Signature (In presence of Notary or City Clerk Agent)			
Address		City	State	Zip code

On August 12, 2019 the above-named individual personally appeared before me and made oath that the foregoing statement is true.

  
 Notary Public / City Clerk Agent

August 3, 2023

My Commission Expires/Seal:



Under the provisions of Chapter 337 of the Acts of 1985 and Chapter 110, Section 5 of the Mass. General Laws, business certificates shall be in effect for four years from the date of issue and shall be renewed each four years thereafter. A statement under oath must be filed with the City Clerk upon discontinuance or withdrawing from such business or partnership. Copies of such certificates shall be available at the address such business is conducted and shall be furnished upon request during regular business hours to any person who has purchased goods or services from such business. Violations are subject to a fine of not more than three hundred dollars, (\$300.00) for each month during which such violation occurs.


This certificate expires four [4] years from Date/Time stamp on back: AUGUST 30, 2023

*\*The issuance of this Business Certificate does not imply that all relevant licenses required to legally operate this business have been obtained or are current. This certificate only records that a business is being conducted.*

See Reverse



<b>Home Office Affidavit</b> (Circle)	No <span style="margin-left: 100px;">Yes</span>		
If the proposed business is located within a residence, you must file a " <u>Home Business Affidavit</u> " with the Inspectional Services Department thereby acknowledging compliance with Newton's Home Business Ordinance.			
<b>Inspectional Services Department Official:</b>			
I hereby certify that this business address is in the following zoning district, and is an allowed use in accordance with the revised zoning ordinances of the City of Newton.			
	BU 4 Zoning District	 Attest	
Received in the City Clerk's Office			
	58 Book	295 Page	
Entered in the records of business titles in the City Clerk's Office-City of Newton, Massachusetts			
 _____ David A. Olson Newton City Clerk		Date/Time Stamp: <div style="text-align: right; font-family: monospace; font-size: 1.2em;">           019 AUG 30 AM 10:12         </div>	

New	Renewal
	

# EXHIBIT B

ULS License

**Cellular License - KNKA201 - Cellco Partnership**

Call Sign	KNKA201	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

**Market**

Market	CMA006 - Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	Channel Block	B
Submarket	0	Phase	2

**Dates**

Grant	08/26/2014	Expiration	10/01/2024
Effective	11/01/2016	Cancellation	

**Five Year Buildout Date**

08/27/1989

**Control Points**

**3** 500 W. Dove Rd., TARRANT, Southlake, TX  
P: (800)264-6620

**Licensee**

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

**Contact**

Cellco Partnership Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Ownership and Qualifications**

Radio Service Type	Mobile
Regulatory Status	Common Carrier      Interconnected      Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender



ULS License

**PCS Broadband License - KNLH242 - Cellco Partnership**

Call Sign	KNLH242	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	BTA051 - Boston, MA	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000-001895.00000000-001970.00000000-001975.00000000

**Dates**

Grant	06/02/2017	Expiration	06/27/2027
Effective	06/02/2017	Cancellation	

**Buildout Deadlines**

1st	06/27/2002	2nd	
-----	------------	-----	--

**Notification Dates**

1st	05/17/2002	2nd	
-----	------------	-----	--

**Licensee**

FRN	0003290673	Type	Joint Venture
-----	------------	------	---------------

**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

**Contact**

Verizon Wireless Licensing - Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Ownership and Qualifications**

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government? No

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any foreign government? No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? No

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? Yes

The Alien Ruling question is not answered.

### **Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

### **Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

### **Demographics**

Race

Ethnicity

Gender





## Universal Licensing System

[FCC](#) > [WTB](#) > [ULS](#) > [Online Systems](#) > License Search

[FCC Site Map](#)

ULS Lease

[? HELP](#)

### KNLF646 - L000026571 - Cellco Partnership

[New Search](#) [Refine Search](#) [Return to Results](#) [Printable Page](#) [Reference Copy](#)
[License Details](#) : [Leases](#) : [Lease Details](#)

MAIN	ADMIN	MARKET	MAP	TECHNICAL DATA
------	-------	--------	-----	----------------

Lease ID	L000026571	Radio Service	CW - PCS Broadband
Status	Active	Classification of Lease	Spectrum Manager Lease
		Term of Lease	Long

#### Dates

Grant/Accepted	03/08/2018	Expiration	01/03/2027
Commencement	02/16/2018	Cancellation	

#### Lessee

FRN	0003290673 ( <a href="#">View Ownership Filing</a> )	Type	General Partnership
-----	---	------	---------------------

#### Lessee

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
Real Party in Interest	Cellco Partnership FRN of Real Party in Interest: 0003290673

#### Contact

Verizon Sarah Trosch 1300 I Street, NW - Suite 500 East Washington, DC 20005	P:(202)515-2453 E:sarah.trosch@verizon.com
---	---

#### Lessee Qualifications and Ownership Information

Radio Service Type	
Regulatory Status	Interconnected

#### Alien Ownership

The Applicant answered "No" to each of the [Alien Ownership](#) questions.

#### Basic Qualifications

The Applicant answered "No" to each of the [Basic Qualification](#) questions.

**Demographics**

Race

Ethnicity

Gender

**ULS Help**[ULS Glossary](#) - [FAQ](#) - [Online Help](#) - [Technical Support](#) - [Licensing Support](#)**ULS Online Systems**[CORES](#) - [ULS Online Filing](#) - [License Search](#) - [Application Search](#) - [Archive License Search](#)**About ULS**[Privacy Statement](#) - [About ULS](#) - [ULS Home](#)**Basic Search**

By Call Sign ▼ =

**SEARCH**[FCC](#) | [Wireless](#) | [ULS](#) | [CORES](#)[Help](#) | [Tech Support](#)

Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Phone: 1-877-480-3201  
TTY: 1-717-338-2824  
[Submit Help Request](#)

ULS Lease

**WRBE696 - L000035329 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035329	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBE697 - L000035330 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035330	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
-----	------------	------	---------------------

**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBE848 - L000035481 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035481	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
 5055 North Point Parkway, NP2NE Network Engineering  
 Alpharetta, GA 30022  
 ATTN Regulatory

P:(770)797-1070  
 E:licensingcompliance@verizonwireless.com

Real Party in Interest	Cellco Partnership	FRN of Real Party in Interest	0003290673
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**Contact**

Verizon  
 Sarah Trosch  
 1300 I Street, NW - Suite 500 East  
 Washington, DC 20005

P:(202)515-2453  
 E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBE849 - L000035482 - Cellco Partnership**[License Details](#) : [Leases](#) : **Lease Details**

Lease ID	L000035482	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBF488 - L000035921 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035921	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership 5055 North Point Parkway, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
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Real Party in Interest	Cellco Partnership	FRN of Real Party in Interest	0003290673
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**Contact**

Verizon Sarah Trosch 1300 I Street, NW - Suite 500 East Washington, DC 20005	P:(202)515-2453 E:sarah.trosch@verizon.com
---	---

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBF489 - L000035922 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000035922	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

Lessee

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network  
Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest

FRN of Real Party in Interest 0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

Lessee Qualifications and Ownership Information

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity

Gender



ULS Lease

**WRBF778 - L000036207 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036207	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
 5055 North Point Parkway, NP2NE Network Engineering  
 Alpharetta, GA 30022  
 ATTN Regulatory

P:(770)797-1070  
 E:licensingcompliance@verizonwireless.com

Real Party in Interest Cellco Partnership

FRN of Real Party in Interest 0003290673

**Contact**

Verizon  
 Sarah Trosch  
 1300 I Street, NW - Suite 500 East  
 Washington, DC 20005

P:(202)515-2453  
 E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBF779 - L000036208 - Cellco Partnership**[License Details](#) : [Leases](#) : **Lease Details**

Lease ID	L000036208	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest Cellco Partnership

FRN of Real Party in Interest 0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBF954 - L000036377 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036377	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership 5055 North Point Parkway, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
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Real Party in Interest	Cellco Partnership	FRN of Real Party in Interest	0003290673
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**Contact**

Verizon Sarah Trosch 1300 I Street, NW - Suite 500 East Washington, DC 20005	P:(202)515-2453 E:sarah.trosch@verizon.com
---	---

**Lessee Qualifications and Ownership Information**

Radio Service Type	
Regulatory Status	Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race	
Ethnicity	Gender

ULS Lease

**WRBF955 - L000036378 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036378	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBG414 - L000036637 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036637	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest Cellco Partnership

FRN of Real Party in Interest 0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS Lease

**WRBG415 - L000036638 - Cellco Partnership**License Details : Leases : **Lease Details**

Lease ID	L000036638	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Classification of Lease	De Facto Transfer Lease
		Term of Lease	Long

**Dates**

Grant/Accepted	04/01/2019	Expiration	10/18/2020
Commencement	04/02/2019	Cancellation	

**Lessee**

FRN	0003290673	Type	General Partnership
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**Lessee**

Cellco Partnership  
5055 North Point Parkway, NP2NE Network Engineering  
Alpharetta, GA 30022  
ATTN Regulatory

P:(770)797-1070  
E:licensingcompliance@verizonwireless.com

Real Party in Interest      Cellco Partnership

FRN of Real Party in Interest      0003290673

**Contact**

Verizon  
Sarah Trosch  
1300 I Street, NW - Suite 500 East  
Washington, DC 20005

P:(202)515-2453  
E:sarah.trosch@verizon.com

**Lessee Qualifications and Ownership Information**

Radio Service Type

Regulatory Status      Interconnected

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Common Carrier Fixed Point to Point Microwave License - WLW562 - Cellco Partnership

Call Sign	WLW562	Radio Service	CF - Common Carrier Fixed Point to Point Microwave
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Status	Active	Auth Type	Regular
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**Dates**

Grant	01/11/2011	Expiration	02/01/2021
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Effective	11/15/2016	Cancellation	
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**Control Points**

None

**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(678)259-1319 E:LicensingCompliance@verizonwireless.com
---	---

**Contact**

Verizon Wireless Licensing Manager - MANAGER 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(678)259-1319 E:LicensingCompliance@verizonwireless.com
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**Microwave Data**

Oper Type	Permanent Fixed Point to Point	Station Class	FXO - Operational Fixed
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**Ownership and Qualifications**

Radio Service Type	Fixed
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Regulatory Status	Common Carrier	Interconnected	Yes
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**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government?	No
--	----

Is the applicant an alien or the representative of an alien?	No
--	----

Is the applicant a corporation organized under the laws of any foreign government?	No
--	----

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
---	----

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	Yes
---	-----

The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized. ✓

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Demographics**

Race

Ethnicity

Gender



ULS License

## Local Multipoint Distribution Service License - WPLM413 - Cellco Partnership

Call Sign	WPLM413	Radio Service	LD - Local Multipoint Distribution Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	B
Submarket	0	Associated Frequencies (MHz)	031000.00000000-031075.00000000-031225.00000000-031300.00000000

### Dates

Grant	07/25/2018	Expiration	06/17/2028
Effective	02/27/2019	Cancellation	

### Buildout Deadlines

1st	06/01/2012	2nd	
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### Notification Dates

1st	03/19/2012	2nd	
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### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
---	--

### Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
---	--

### Ownership and Qualifications

Radio Service Type	Fixed		
Regulatory Status	Common Carrier, Non-Common	Interconnected	Yes

## Carrier

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Local Multipoint Distribution Service License - WPOH955 - Celco Partnership

Call Sign	WPOH955	Radio Service	LD - Local Multipoint Distribution Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	A
Submarket	1	Associated Frequencies (MHz)	029100.00000000- 029250.00000000- 031075.00000000- 031225.00000000

### Dates

Grant	09/11/2018	Expiration	10/06/2028
Effective	09/14/2018	Cancellation	

### Buildout Deadlines

1st	10/06/2008	2nd	
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### Notification Dates

1st	02/07/2008	2nd	
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### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
---	--

### Contact

Verizon Sarah Trosch 1300 I Street, NW - Suite 500 East Washington, DC 20005	P:(202)515-2453 E:sarah.trosch@verizon.com
---	---

### Ownership and Qualifications

Radio Service Type	Fixed		
Regulatory Status	Common Carrier, Non-Common	Interconnected	No

## Carrier

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

**AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGA900 - Cellco Partnership**

Call Sign	WQGA900	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	BEA003 - Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	Channel Block	B
Submarket	1	Associated Frequencies (MHz)	001720.00000000-001730.00000000-002120.00000000-002130.00000000

**Dates**

Grant	11/29/2006	Expiration	11/29/2021
Effective	11/01/2016	Cancellation	

**Buildout Deadlines**

1st	2nd
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**Notification Dates**

1st	2nd
-----	-----

**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
---	---

**Contact**

Cellco Partnership Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Ownership and Qualifications**

Radio Service Type    Mobile

Regulatory Status    Common Carrier    Interconnected    Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

**AWS (1710-1755 MHz and 2110-2155 MHz) License - WQGB266 - Cellco Partnership**

Call Sign	WQGB266	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	CMA006 - Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	Channel Block	A
Submarket	0	Associated Frequencies (MHz)	001710.00000000-001720.00000000-002110.00000000-002120.00000000

**Dates**

Grant	11/29/2006	Expiration	11/29/2021
Effective	11/01/2016	Cancellation	

**Buildout Deadlines**

1st	2nd
-----	-----

**Notification Dates**

1st	2nd
-----	-----

**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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**Contact**

Cellco Partnership Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Ownership and Qualifications**

Radio Service Type	Mobile
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Regulatory Status	Common Carrier	Interconnected	Yes
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**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government?	No
--	----

Is the applicant an alien or the representative of an alien?	No
--	----

Is the applicant a corporation organized under the laws of any foreign government?	No
--	----

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
---	----

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	Yes
---	-----

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?	Yes
---	-----

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender



ULS License

**700 MHz Upper Band (Block C) License - WQJQ689 - Cellco Partnership****PA** This license has pending applications: 0008938399

Call Sign	WQJQ689	Radio Service	WU - 700 MHz Upper Band (Block C)
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	REA001 - Northeast	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	000746.00000000- 000757.00000000- 000776.00000000- 000787.00000000

**Dates**

Grant	09/11/2019	Expiration	06/13/2029
Effective	09/11/2019	Cancellation	

**Buildout Deadlines**

1st	06/13/2013	2nd	06/13/2019
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**Notification Dates**

1st	06/20/2013	2nd	06/17/2019
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**Licensee**

FRN	0003290673	Type	General Partnership
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**Licensee**

Cellco Partnership 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@VerizonWireless.com
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**Contact**

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@VerizonWireless.com
--	--

**Ownership and Qualifications**

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Upper Microwave Flexible Use Service License - WRBA936 - Cellco Partnership

Call Sign	WRBA936	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	L1
Submarket	1	Associated Frequencies (MHz)	027500.00000000-027925.00000000

### Dates

Grant	09/11/2018	Expiration	10/06/2028
Effective	02/27/2019	Cancellation	

### Buildout Deadlines

1st	06/01/2024	2nd	
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### Notification Dates

1st		2nd	
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### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
---	--

### Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
---	--

### Ownership and Qualifications

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	No

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

ULS License

## Upper Microwave Flexible Use Service License - WRBA937 - Cellco Partnership

Call Sign	WRBA937	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular

### Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

### Reserved Spectrum

Reserved Spectrum

### Market

Market	BTA051 - Boston, MA	Channel Block	L2
Submarket	1	Associated Frequencies (MHz)	027925.00000000-028350.00000000

### Dates

Grant	09/11/2018	Expiration	10/06/2028
Effective	02/27/2019	Cancellation	

### Buildout Deadlines

1st	06/01/2024	2nd	
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### Notification Dates

1st		2nd	
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### Licensee

FRN	0003290673	Type	General Partnership
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### Licensee

Cellco Partnership 5055 North Point Pkwy, NP2NE Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 E:LicensingCompliance@verizonwireless.com
---	--

### Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022	P:(770)797-1070 E:licensingcompliance@verizonwireless.com
---	--

### Ownership and Qualifications

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	No

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

# EXHIBIT C



One NSTAR Way, SE280  
Westwood, Massachusetts 02090

November 19, 2020

Attention: City of Newton

Re: Initial Authorization for Verizon Wireless to Attach to Eversource Energy Poles

To Whom It May Concern:

NSTAR Electric Company d/b/a Eversource Energy ("Eversource") is aware that Verizon Wireless is in the process of permitting for the installation of necessary telecommunications equipment and corresponding aerial fiber optic cable in various locations on Eversource-owned poles throughout the City of Newton. As part of the approval process, we understand that there is a requirement for Eversource to review these locations and provide the City of Newton with confirmation of its approval in advance of Verizon Wireless's proposed attachments.

Newton_S_MA_SC03-A	983 Dedham St	Pole 117/110
Netwon_SC01-MA	30 Beethoven Ave	Pole 22/23

Accordingly, Eversource hereby submits its initial authorization for Verizon Wireless to install its equipment and corresponding aerial fiber routes to Eversource poles in the geographic locations as depicted on the plans submitted by Verizon Wireless and on file with the City of Newton. The installations on Eversource poles will be subject to the underlying terms and conditions of agreements by and between Eversource and Verizon Wireless, as the same may be in effect from time to time.

If there is anything further that I can provide you with for your analysis, please do not hesitate to contact me at 781-441-8162.

Sincerely,

***Richard A Comeau***

Richard Comeau  
Lead Engineer – Distribution Technical Engineering – Pole Administration  
NSTAR Electric Company d/b/a Eversource Energy  
One NSTAR Way, SE280  
Westwood, MA 02090  
Ph: (781) 441-8162



# EXHIBIT D



118 Flanders Road, 3<sup>rd</sup> Floor  
Westborough, MA 01581

#### AFFIDAVIT ON BEHALF OF VERIZON WIRELESS

The undersigned, in support of applications to install a wireless telecommunications facility consisting of antennas and associated radio equipment on existing wooden utility poles located in the City of Newton, Massachusetts states the following:

1. My name is Sean Conway. I am a Principal Engineer – RE/Regulatory for Verizon Wireless in Massachusetts.
2. Verizon Wireless is a federally licensed provider of wireless communications services with a national footprint.
3. As part of its network development to improve its service to users of its wireless network, Verizon Wireless is proposing to construct small cell wireless facilities on certain utility poles in the City of Newton. It has received the necessary permission from the owners of those utility poles to place antennas and radio equipment and other related cabling and equipment on the poles that are the subject of the applications.
3. Verizon Wireless certifies that its proposed facilities will be in compliance with applicable Federal Communications Commission standards and requirements including the standards for radio frequency emissions.
4. Verizon Wireless confirms that the attachments to be placed on the poles will not be reflective.
5. Verizon Wireless confirms that the proposed facilities will generate as little noise as is technically feasible and commercially practicable and will comply with the City of Newton noise ordinance.

Signed under the pains and penalties of perjury this 3rd day of February, 2020

A handwritten signature in blue ink, appearing to be "Sean Conway", written over a horizontal line.

Sean Conway  
Principal Engineer – RE/Regulatory

# EXHIBIT E



1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE GOVERNING AUTHORITIES:  
MASSACHUSETTS STATE BUILDING CODE – 780 CMR, 9TH EDITION (AMENDMENTS TO IBC 2015)  
NATIONAL ELECTRIC SAFETY CODE (NEC) GRADE “C” CONSTRUCTION STANDARDS  
2017 NATIONAL ELECTRIC SAFETY CODE (NEC)

2. ALL ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE LOCAL UTILITY COMPANY SPECIFICATIONS AND CONSTRUCTION REQUIREMENTS FOR DISTRIBUTED ANTENNA SYSTEMS (DAS) IN COMMUNICATION SPACE TITLED DESIGN & APPLICATION STANDARD BY EVERSOURCE

GROUNDING SHALL COMPLY WITH THE LOCAL UTILITY COMPANY CODES & REQUIREMENTS & NEC ART. 250.

ALL GROUND CONNECTIONS TO BE BURIED HYDRANT COMPRESSION TYPE CONNECTORS OR CRAWLED EXOTHERMIC WELD TO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL. ROUTE CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS; #6 WIRE CAN BE BENT AT 90° BENDS WHEN NECESSARY.

GROUNDING SYSTEM SHALL BE SECONDARY TO THE SECONDARY VALUES FOR PRODUCT CLOSE-OUT DOCUMENTATION. GROUNDING SYSTEM SHALL BE SECONDARY TO THE SECONDARY VALUES FOR PRODUCT CLOSE-OUT DOCUMENTATION.

1. NORTH IS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. POINTS AND LINE SEGMENTS OF THE PROPOSED HIGHWAY SCHEME COURSE TO BE DETERMINED BY THE ENGINEER BASED ON THE FIELD SURVEY DATA AND THE PROPOSED UTILITY COMPANY RESPONSIBILITIES.
4. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DERBERRY ENGINEERS INC.
5. UTILITY POLE IN04B3 COORDINATES BASED ON GOOGLE EARTH.
6. AERIAL & VOLUME MAPS BASED ON GOOGLE EARTH.

- APPROXIMATE ADDRESS REFLECTS THE CLOSEST STREET ADDRESS TO THE LOGUS POLE AND IS BASED ON NEWTON CITY VIEWER GIS MAP. NEAREST ADDRESS DOES NOT REFLECT THE E911 ADDRESS FOR THIS POLE.

STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

2. CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE FOLLOWING ASTM SPECIFICATIONS:
  - A. STEEL PLATE: A36
  - B. OTHER ROLLED SHAPES: A572 GR50 OR A588
  - C. WELD METALS: E70T1-1 OR E70T1-2
  - D. ANCHOR BOLTS: A307
  - E. GROUND BARS: A36
  - F. REINFORCING BARS: A615 GR60
  - G. CONCRETE: AC308
3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AWS D1.1 "MANUAL OF STEEL CONSTRUCTION," 14TH EDITION. WELD LENGTH IS NOT INDICATED; USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTMA A325 BOLTS (3/4") SUPPLIED WITH A NUT AND WASHERS UNLESS TIGHTENED END SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. DO NOT APPLY UNDER-TIGHTENING TORQUE TO ANY BOLTS EXCEPT AS SHOWN AND DETAIL ON DRAWINGS.
5. NON-SPECIFICATION CONNECTIONS FOR STEEL CORING MAY USE 5/8" DIA. GALVANIZED ASTMA A 307 BOLTS UNLESS NOTED OTHERWISE.
6. USE PRECAUTIONS AND PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
7. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTORS PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DOMBERY ENGINEER IMMEDIATELY.
8. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
9. ALL EXTERIOR STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 FOR HOT-DIP GALVANIZED SHEET PILE. OTHERWISE, NOTED GALVANIZING SHALL BE PERFORMED AFTER SHOWN AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED TEARS WITH GALVANIZED STEEL TOUCHUP. ALL DAMAGED GALVANIZED STEEL WITH IMPROVED COLD ZINC "DANOWAY," 30% GALT, "ZINC-IT" OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS' GUIDELINES. TOUCHUP DAMAGED GALVANIZED STEEL WITH SAME PAINT EQUIPMENT IN SHOP OR ON SITE.
10. DEMONSTRATION OF PROPOSED EQUIPMENT AND METHODS TO INSURE ON SITE WELDING ACTIVITIES IS PERMITTED.

RE-SUBMITTAL OF BID INVOLVES CONTRACTOR IS COVENANT OF ALL JOB SITE CONDITIONS AND CONTRACTOR SHALL PERFORM UNDER THIS CONTRACT.

2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER.

3. HEIGHTS SHALL BE VERIFIED WITH POLE OWNER PRIOR TO INSTALLATION.

1. EACH COMPONENT OF ANY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL, BOARD, OR ELECTRICAL BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) 29 CFR 1910.269.
2. CONTRACTOR SHALL MAINTAIN RECORDS OF ALL LABOR MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPER OPERATIVE SYSTEM RECORDS. EQUIPMENT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
3. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CASE. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR THE PROPER HANDLING AND STORAGE OF ALL HAZARDOUS MATERIALS SUBJECT TO SUPERVISOR'S APPROVAL. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FOR THE PROPER HANDLING AND STORAGE OF ALL HAZARDOUS MATERIALS SUBJECT TO SUPERVISOR'S APPROVAL OF THE DESIGN OF INDUSTRIAL SAFETY AND ALL COVERING MATERIALS MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NECA.
4. ALL CONDUIT SHALL CARRY OUT THE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL COMPLY WITH ALL WORK IN ACCORDANCE WITH ALL GOVERNING UTILITY, STATE, COUNTY AND LOCAL CODES & O.S.H.A.
6. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES.
7. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT DUE TO FAULT DURING THE GUARANTEE PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
8. SPARE CONDUIT SHALL HAVE A PULL WIRE OR ROPE.
9. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB. SHOWING ALL EQUIPMENT, DIMENSIONS, ROUTINGS, AND CIRCUITS.
10. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
11. ALL WIRE #12 TO #6 SHALL BE STRIPPED COPPER TYPE THIN-WALL CONDUCTORS #4 AND LARGER SHALL BE COPPER TYPE XHHW.
12. ALL CROBT BATTERIES, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING OF 20,000 A.M.P. UNLESS OTHERWISE SPECIFIED. ALL WIRE SHALL BE SELECTED AND MANUFACTURED BY 20,000 A.M.P. UNLESS OTHERWISE INDICATED.
13. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
14. REPAIR ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
15. IN DRILLING HOLES INTO CONCRETE MATERIALS FOR FASTENING OR ANCHORING BURGERS, OR PENETRATIONS THROUGH THE FLOOR OF BUILDING, WIRE DRAIN, ETC. WILL BE CLEARLY MARKED AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINFORCING STEEL WILL NOT BE DRILLED INTO CUT OR DAMAGED. CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE CONCRETE.
16. ALL MATERIALS SHALL BE PERMANENTLY TAGGED IN EACH PANEL, BOARD, OR ELECTRICAL BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) 29 CFR 1910.269.

RIGID CONDUIT SHALL BE LVL LABEL GALVANIZED ZINC COATED WITH ZINC ING.  
 ELECTRICAL METALLIC TUBING SHALL BE LVL LABEL, FITTINGS SHALL BE GALD RING COMPRESSION  
 TYPE, EMT SHALL BE USED ONLY FOR INTERIOR RUNS.  
 FLEXIBLE METALLIC CONDUIT SHALL HAVE ALL LISTED LABS AND MAY BE USED WHERE PERMITTED  
 BY CODE. FITTINGS SHALL BE "JMC" OR "SQUETZ" TYPE SEAL RING FLEXIBLE CONDUIT. ALL  
 CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL HAVE SIZE MARKED ON IT.  
 NEARLY WALL CONDUIT SHALL BE USED FOR ALL GROUNDS CONDUITS AND OTHER SPECIFIC  
 USES AS INDICATED BY THE DRAWINGS. HEAVY WALL PVC CONDUIT SHALL BE SCHEDULE 40, 90  
 DEGREES C, U. BATED, CONSTRUCTED OF POLYVINYL CHLORIDE AND CONFORMING TO NEMA TC-2  
 TYPE DIRECT BURIAL OR NON-FLAMMABLE. ALL CONDUIT SHALL BE OF THE HEAVY WELD  
 TYPE.

27. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
28. THE ELECTRICAL EQUIPMENT SHALL BE LABELED WITH THE FOLLOWING INFORMATION:
29. GROUNDING THE ELECTRICAL SERVICE WITH UTILITY PROVIDER.
30. COORDINATE SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS GREATER THAN 5 OHMS, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL GROUNDING POINT TO THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
31. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR ALL ELECTRICAL EQUIPMENT. PROVIDE A COMPLETE AND UNDAUNTED CONDITION REPORT RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAUNTED CONDITION.

1. ALL TEMPORARY CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERSEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERIES, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.

3. ALL TRAFFIC CONTROL DEVICES, BARRIERS, AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE PLACED IN POSITION WHEN THEY ARE REQUIRED FOR CONTROL OF TRAFFIC.
4. CONTRACTORS SHALL MAINTAIN ADEQUATE TRAFFIC CONTROL THROUGHOUT THE PROJECT.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELLED WAY, CHOWLING DEVICES, BARRIERS, AND ORIGINATORS MUST PASS THE CRITERIA SET FORTH IN HIGH-ROAD DESIGN RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES AND/OR MANUAL FOR ASSESSING STREET PRIORITY. (405F)
6. CONTRACTORS SHALL COORDINATE WITH THE ABUTTING PROPERTIES NEAR THE POLE AT LEAST 72 HOURS BEFORE THE PLACEMENT OF ANY TRAFFIC CONTROL DEVICES, BARRIERS, OR ORIGINATORS. CONTRACTORS SHALL COORDINATE WITH THE ADJACENT PROPERTY OWNERS, TEMPORARY ORIGINARY PLACEMENT, AND SPECIAL OPERATIONS.
7. THE FIRST FIVE PLASTIC DRUMS OF A PILET SHALL BE MOUNTED WITH TYPE A LIGHTS.
8. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPPI (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
9. MINIMUM LANE WIDTH IS TO BE 11 FEET (3.1m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MAINTAINED FROM THE EDGE OF DRIVE OR MEDIAN BARRIER.
10. PAVING PRESTRICTION ACCESS SHALL BE MAINTAINED AT ALL TIMES THROUGH A COORDINATE OF PRESTRICTION LOCATIONS OR PROHIBITED SAFE ROUTES. ALL PRESTRICTION ROUTES SHALL MEET APPLICABLE ACCESSIBILITY REQUIREMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC THROUGHOUT CONSTRUCTION AT THIS LOCATION. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC SIGNS, DRUMS, CONES, AND OTHER TRAFFIC CONTROL DEVICES TO DIRECT VEHICLES AND PRESTRICTIONS AROUND THE WORK ZONE.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC THROUGHOUT CONSTRUCTION AT THIS LOCATION. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC SIGNS, DRUMS, CONES, OR OTHER TRAFFIC CONTROL DEVICES TO DIRECT VEHICLES AND PEDESTRIANS AROUND THE WORK ZONE.

BENJAMI B.  
REVETTE  
CIVIL  
No. 6

DRAWN BY:	SK
REVIEWED BY:	JCM
CHECKED BY:	BBR
PROJECT NUMBER:	50121497
JOB NUMBER:	50121590
POLE ID:	22 23

N 42.329406° W 71.218464°	APPROXIMATE ADDRESS**	30 BEETHOVEN AVE. NEWTON, MA 02468	SHEET TITLE
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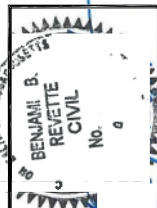


VERIZON WIRELESS  
118 FLANDERS ROAD  
WESTBOROUGH, MA 01581-3956

NEWTON MA SC01  
LOCATION CODE:  
498829  
FUZE ID:  
2579688

[illegible]

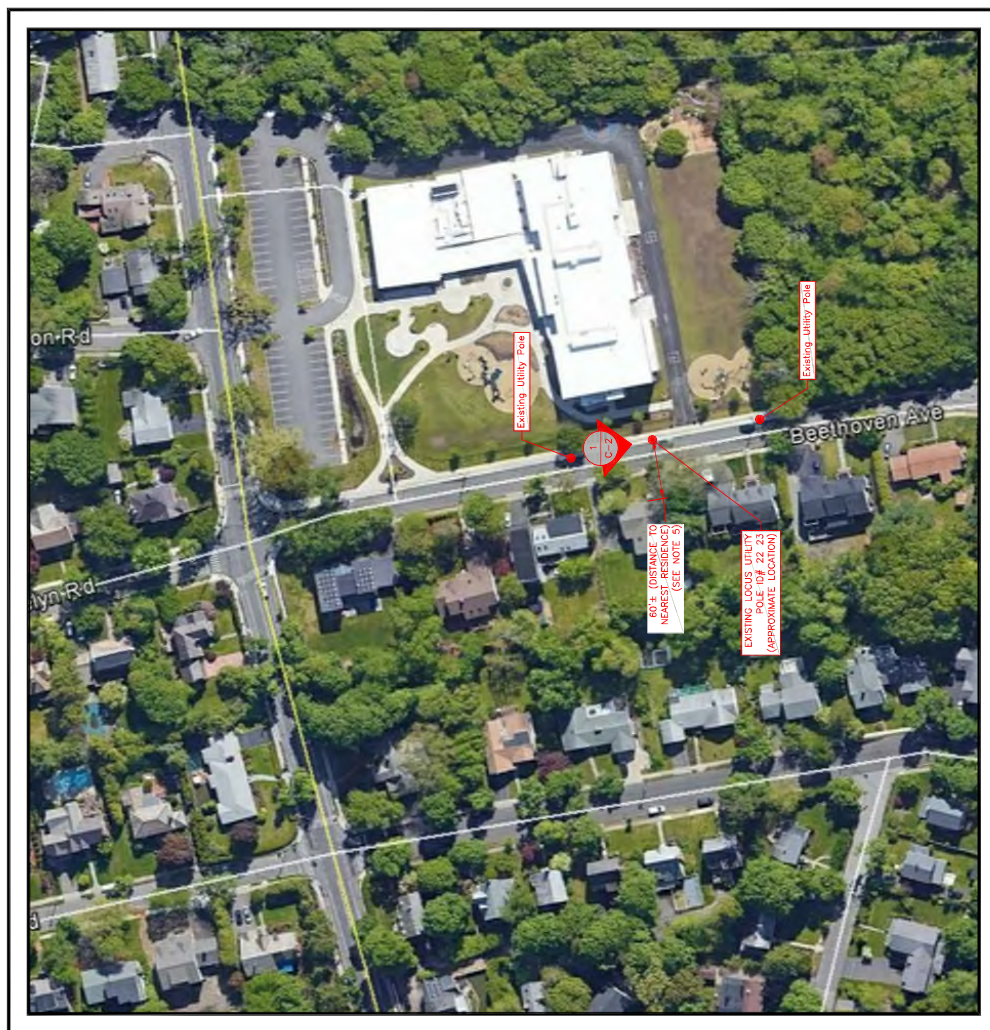
**Dewberry Engineers Inc.**  
99 SUMMER STREET  
SUITE 700  
BOSTON, MA 02110  
PHONE: 617.695.3400  
FAX: 617.695.3310



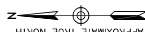
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**509-20**

1



AERIAL MAP  
SCALE: N.T.S.



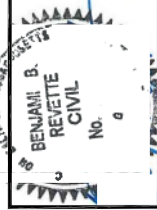
- NOTES:
1. NORTH ARROW SHOWN AS APPROXIMATE.
  2. SOME EXISTING AND PROPOSED INFORMATION NOT POWER LINES TO BE COME FROM OVERHEAD WIRES.
  3. POWER & FIBER TO BE DETERMINED BY OTHERS.
  4. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DEWEY ENGINEERS INC. ON 02/12/20.
  5. AERIAL MAP, NAD83 COORDINATES & NAVD83 ELEVATIONS ON THE BASIS OF INFORMATION ON 02/12/20. DISTANCE FROM FENCE TO APPROPRIATE AND BASED ON GOOGLE EARTH IMAGERY.
  6. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY SPECIFICATIONS.
  7. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH THE SPECIFICATIONS BY DEWEY ENGINEERS INC. DATED 02/26/20.

## CONSTRUCTION DRAWINGS

0	04/10/20		FOR SUBMITTAL	
A	03/20/20		FOR COMMENT	



**Dewberry Engineers Inc.**  
99 SUMMER STREET  
SUITE 700  
BOSTON, MA 02110  
PHONE: 617 695 3400  
FAX: 617 695 3310



DRAWN BY:	SK
REVIEWED BY:	JCM
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121590
POLE ID:	

COORDINATES:

NI 43 330406\*

N 42.329406  
W 71.218464

W 71.210404

APPROXIMATE ADDRESS\*\*

30 BEETHOVEN AVE.

NEWTON, MA 02468

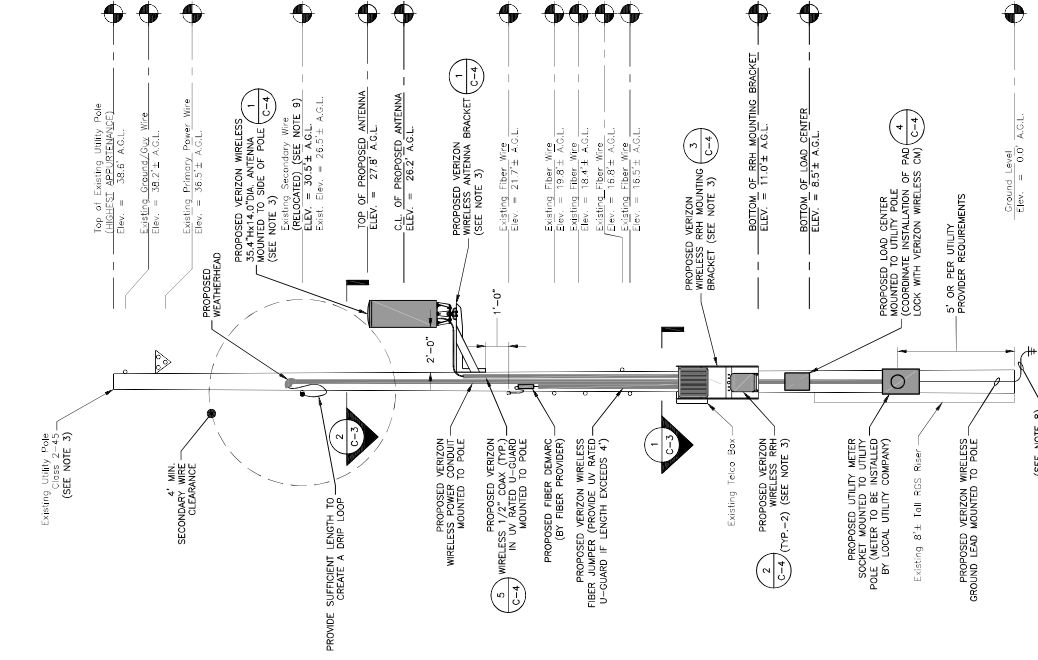
.....

POLE PHOTO & ELEVATION

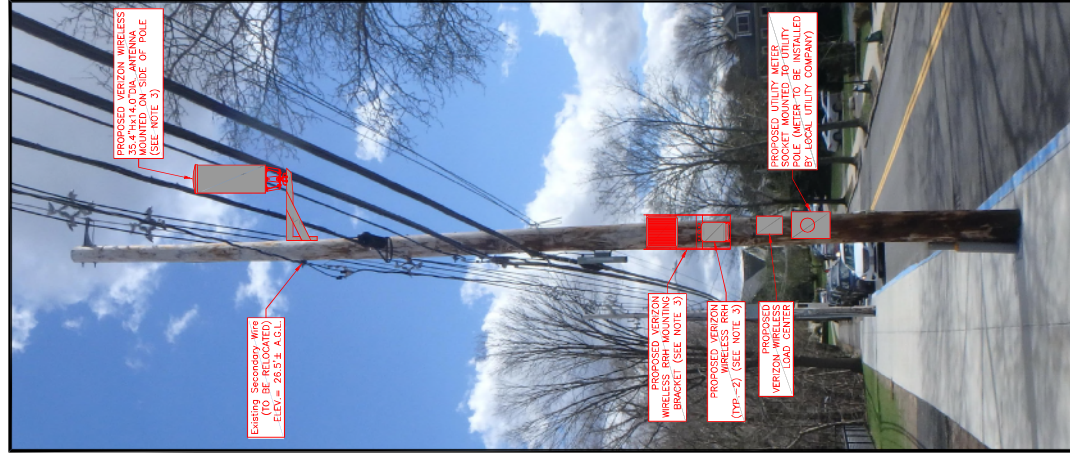
509-20

SHEET NUMBER

C-2



POLE ELEVATION  
SCALE:  $\frac{3}{16}"=1'$  FOR  $11' \times 17'$   
 $\frac{3}{8}"=1'$  FOR  $22' \times 34'$



POLE PHOTO  
SCALE: N.T.S.

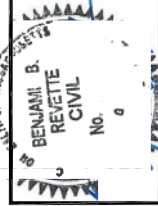


VERIZON WIRELESS  
118 FLANDERS ROAD  
WESTBOROUGH, MA 01581-3956

NEWTON MA SC01  
LOCATION CODE:  
498829  
FUZE ID:  
2579688

CONSTRUCTION DRAWINGS			
0	04/10/20	FOR SUBMITTAL	
A	03/20/20	FOR COMMENT	

**Dewberry**  
Dewberry Engineers Inc.  
100 WASHINGTON STREET  
SUITE 700  
BOSTON, MA 02110  
TEL: 617.552.8600  
FAX: 617.552.3310



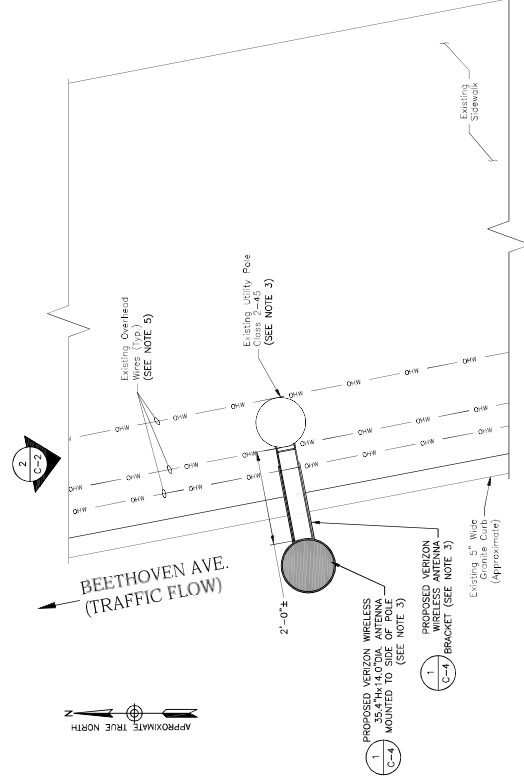
DRAWN BY:	SK
REVIEWED BY:	JCM
CHECKED BY:	BBR
PROJECT NUMBER:	5021487
JOB NUMBER:	5021590
POLE ID:	22
	23

CORRELATES:  
N 42.329406°  
W 71.218464°

APPROXIMATE ADDRESS\*\*  
30 BEETHOVEN AVE.  
NEWTON, MA 02468

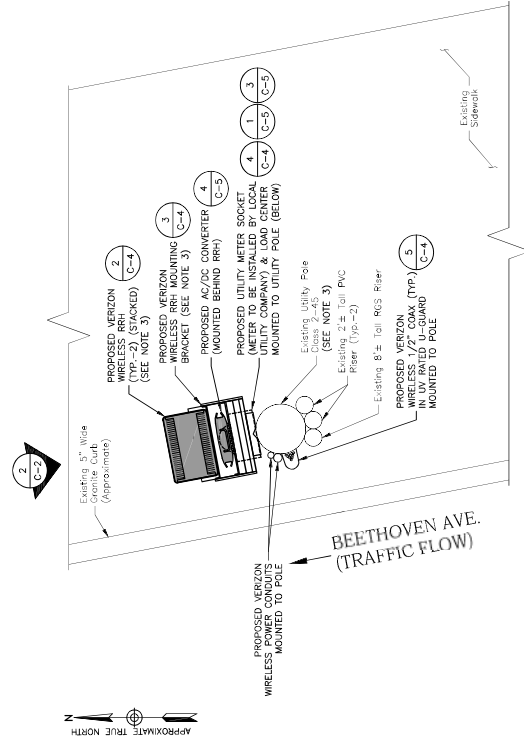
SHEET TITLE  
EQUIPMENT & ANTENNA  
PLANS  
SHEET NUMBER

509-20  
C-3



NOTE:  
1. SOME EXISTING/PROPOSED EQUIPMENT NOT SHOWN FOR CLARITY.

ANTENNA PLAN  
SCALE: 3/8"=1' FOR 11'x17"  
3/4"=1' FOR 22'x34"  
0' 1' 2' 3'

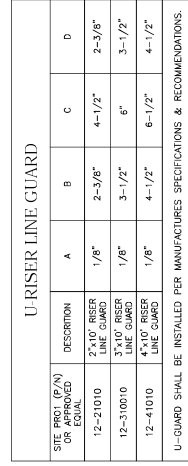


NOTE:  
1. SOME EXISTING/PROPOSED EQUIPMENT NOT SHOWN FOR CLARITY.

EQUIPMENT PLAN  
SCALE: 3/8"=1' FOR 11'x17"  
3/4"=1' FOR 22'x34"  
0' 1' 2' 3'

- NOTES:
1. NORTH ARROW SHOWN AS APPROXIMATE.
  2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  3. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ANALYSIS OF DEWBERRY ENGINEERS INC. DATED 02/28/20.
  4. POWER & FIBER TO COME FROM OVERHEAD WIRES. SERVICE SOURCES TO BE DETERMINED.
  5. SITE PLAN & ELEVATIONS BASED ON SITE VISIT BY DEWBERRY ENGINEERS INC. ON 02/17/20.
  6. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY PROVIDER REQUIREMENTS & VERIZON WIRELESS SPECIFICATIONS.
  7. A.G.L.= ABOVE GROUND LEVEL.
  8. CONTACT DIS SITE (888-344-7233) FOR VERIFICATION OF UNDERGROUND UTILITIES PRIOR TO EQUIPMENT INSTALLATION.
  9. OVERHEAD WIRES TO BE INSTALLED/RELOCATED BY UTILITY COMPANY PER UTILITY PROVIDER REQUIREMENTS.
  10. ALL EQUIPMENT TO BE INSTALLED PER LOCAL UTILITY PROVIDER REQUIREMENTS & VERIZON WIRELESS SPECIFICATIONS.







VERIZON WIRELESS  
118 FLANDERS ROAD  
WESTBOROUGH, MA 01581-3956

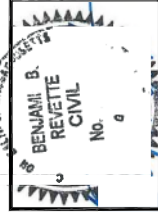
NEWTON MA SC01  
LOCATION CODE:  
498829

FUSE ID:  
2579688

CONSTRUCTION DRAWINGS	
0	04/10/20 FOR SUBMITTAL
A	03/20/20 FOR COMMENT



Dewberry Engineers Inc.  
1000 DEER STREET  
SUITE 700  
BOSTON, MA 02110  
TEL: 617.660.4600  
FAX: 617.660.3310



DRAWN BY:	SK
REVIEWED BY:	JCM
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121590
POLE ID:	22
	23

CORINATES:

N 42.329406°  
W 71.218484°

APPROXIMATE ADDRESS\*\*

30 BEEHTOVEN AVE.  
NEWTON, MA 02468

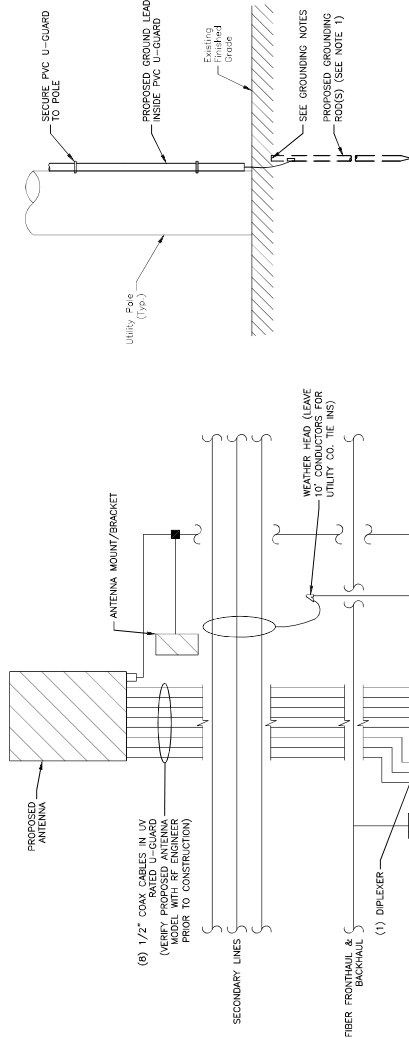
SHEET TITLE

WIRING DIAGRAM &  
DETAILS

SHEET NUMBER

C-5

509-20



NOTES:

- GROUND ROD(S) SHALL BE INSTALLED IN UNDISTURBED SOIL, 12" MIN. AWAY FROM THE POLE, TOP OF GROUND ROD(S) SHALL BE 4" MIN. BELOW FINISHED GRADE. THE GROUNDING RESISTANCE SHALL BE PER THE UTILITY PROVIDER REQUIREMENTS.
- GROUND PER REQUIREMENTS OF THE AUTHORITY, HAVING JURISDICTION & UTILITY COMPANY REQUIREMENTS. SEE NATIONAL ELECTRICAL CODE (NEC), SECTION 250.

LOAD CENTER SCHEDULE

SCALE: N.T.S.

GROUNDING ROD DETAIL

SCALE: N.T.S.

LOAD CENTER SCHEDULE

SCALE: N.T.S.

3

8.3"

1.7"

FRONT

BACK

AC/DC CONVERTER SPECIFICATION

DIMENSIONS: 14.1"H x 8.3"W x 3.5"D

WEIGHT: 14.1 LBS.

AC/DC CONVERTER DETAIL

SCALE: N.T.S.

4

1/4" - UNC X 1/2" BOLT (C.U.)

NUT & WASHER (TYP.)

DOUBLE BOLT GROUND LUG

#2 INSULATED CABLE BUNDLED TAP (C.U.)

EQUIPMENT

GROUNDING DETAIL

SCALE: N.T.S.

5

- NOTES:
- FINAL ELECTRICAL AND FIBER SOURCE PENDING FINAL DESIGN & UTILITY APPROVAL.
  - VERIZON WIRELESS TO FIELD TEST AND TIE INTO EXISTING GROUNDING SYSTEM, IF GROUNDING SYSTEM DOES NOT MEET VERIZON WIRELESS STANDARDS. IF NOT FOUND, VERIZON WIRELESS TO PROVIDE AND INSTALL GROUNDING SYSTEM PER UTILITY THROUGH & VERIZON WIRELESS REQUIREMENTS AND SPECIFICATIONS.
  - VERIFY FINAL ANTENNA DESIGN WITH RF ENGINEER.
  - CONTACT DIG SAT (888-344-7233) FOR VERIFICATION OF UNDERGROUND UTILITIES PRIOR TO EQUIPMENT INSTALLATION.

WIRING DIAGRAM

SCALE: N.T.S.

1

# EXHIBIT F

February 28, 2020

Verizon Wireless  
118 Flanders Road  
Westborough, MA 01581

**Re:   Newton MA SC01  
      42°19'45.86"N 71°13'06.47"W  
      30 Beethoven Ave.  
      Newton, MA 02468**

To Whom It May Concern:

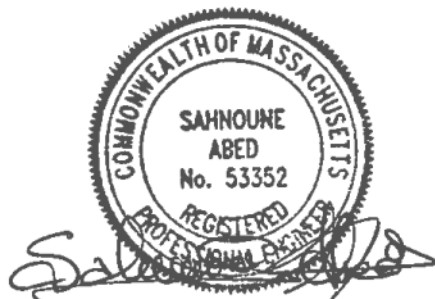
Dewberry Engineers Inc. (Dewberry) has evaluated the proposed equipment installation by Verizon at the above referenced site. The existing pole is a Class 2-45 southern pine timber utility pole set approximately 6'-6" into the ground. See latest Construction Drawings by Dewberry for line elevations and equipment specifications.

The existing utility pole was analyzed in accordance with National Electric Safety Code (NESC) Grade "C" construction standards and Massachusetts State Building Code – 780 CMR (Amendments to IBC 2015). Analysis assumes wire types and wire diameters using photos of the existing pole. Per our analysis, **the existing pole is adequate** to support the proposed installation as shown in Construction Drawings by Dewberry.

Our assessment is based on the assumption that the utility pole and associated accessories are constructed in conformance with all applicable state and local building codes. If during construction any damage or deterioration is noticed, Dewberry is to be notified to assess any deviation from the assumed condition. The addition or reconfiguration of any new equipment not accounted for in this assessment will require further analysis and design.

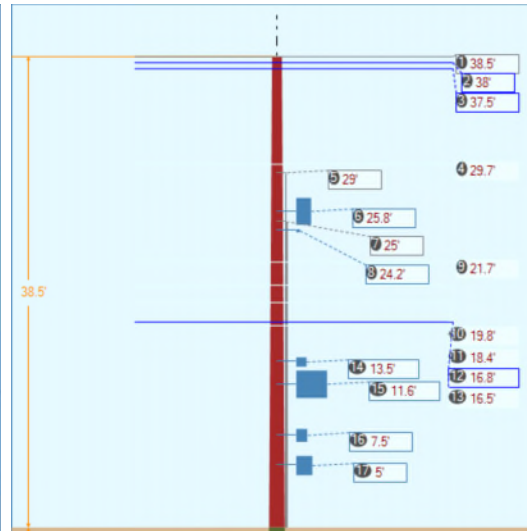
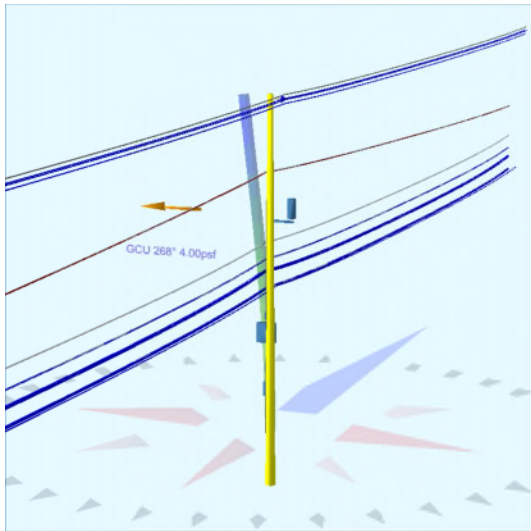
If you have any questions, please do not hesitate to call me at 617-531-0810.

Sincerely,  
**Dewberry Engineers Inc.**



Sahnoune Abed, P.E.  
Structural Project Engineer

Pole Num:	22/23	Pole Length / Class:	45 / 2	Code:	NESC	Structure Type:	Unguyed Tangent
Street Address	Beethoven Ave.	Species:	SOUTHERN PINE	NESC Rule:	Rule 250B	Status	Unguyed
City, State	Newton, MA	Setting Depth (ft):	6.50	Construction Grade:	C	Pole Strength Factor:	0.85
Zip Code	02468	G/L Circumference (in):	40.30	Loading District:	Heavy	Transverse Wind LF:	1.75
Designer	SMS	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.50	Wire Tension LF:	1.00
Checker	SA	Allowable Stress (psi):	6,800	Wind Speed (mph):	39.53	Vertical LF:	1.90
Approver	SA	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	4.00		
Latitude:	42 Deg 19 Min 45.860000 Sec N	Longitude:	71 Deg 13 Min 6.470000 Sec W	Elevation:			0 Feet



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	37.4	0.0	267.9
Groundline	37.4	0.0	267.9
Vertical	15.7	21.0	267.9

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	42,843	256.2	267.9
Groundline	42,843	256.2	267.9
GL Allowable	117,445		
Overturn	73,814		

**Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 256.2°**

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	1,004	55.1	27,095	63.2	23.1	1,572	4,325	33	1,606	23.6
Comms	499	27.3	9,907	23.1	8.4	575	654	5	580	8.5
GenericEquipments	50	2.7	638	1.5	0.5	37	481	4	41	0.6
Pole	229	12.5	4,416	10.3	3.8	256	2,633	20	277	4.1
Risers	37	2.0	661	1.5	0.6	38	103	1	39	0.6
Insulators	5	0.3	127	0.3	0.1	7	101	1	8	0.1
Pole Load	1,823	100.0	42,843	100.0	36.5	2,486	8,297	64	2,550	37.5
Pole Reserve Capacity			74,602		63.5	4,314			4,250	62.5

**Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 256.2°**

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Exist.	1,484	81.4	36,381	84.9	31.0	2,111	4,993	39	2,150	31.6
<Undefined>	24	1.3	748	1.8	0.6	43	87	1	44	0.6
Prop.	87	4.8	1,299	3.0	1.1	75	584	5	80	1.2
Pole	229	12.5	4,416	10.3	3.8	256	2,633	20	277	4.1
<b>Totals:</b>	1,823	100.0	42,843	100.0	36.5	2,486	8,297	64	2,550	37.5

**Detailed Load Components:**

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Unknown	CATV .50	Exist.	16.48	8.17	0.5700		0.600	100.0	0.0	100.0			69	310	379
Unknown	TELE 2.0	Exist.	16.43	7.10	2.0000		2.000	100.0	0.0	100.0			134	310	444
Unknown	CATV .50	Exist.	16.35	7.90	0.5700		0.600	100.0	0.0	100.0			66	308	374
Unknown	CATV .50	Exist.	16.48	8.17	0.5700		0.600	102.0	180.0	102.0			70	317	387
Unknown	TELE 2.0	Exist.	16.43	7.10	2.0000		2.000	102.0	180.0	102.0			137	316	453
Unknown	CATV .50	Exist.	16.35	7.90	0.5700		0.600	102.0	180.0	102.0			68	314	382
Unknown	SS 26 GA 25 PR (0.51)	Exist.	16.80	7.85	0.5100	1.74	0.260	100.0	0.0	100.0	1,173	-4,704	-54	718	-4,039
Unknown	SS 26 GA 25 PR (0.51)	Exist.	16.80	7.85	0.5100	1.78	0.260	102.0	180.0	102.0	1,172	4,701	-55	732	5,378

509-20

Unknown	SS 26 GA 25 PR (0.51)	Exist.	16.80	7.85	0.5100	1.74	0.260	100.0	0.0	100.0	1,173	-4,704	-54	718	-4,039
Unknown	SS 26 GA 25 PR (0.51)	Exist.	16.80	7.85	0.5100	1.78	0.260	102.0	180.0	102.0	1,172	4,701	-55	732	5,378
Unknown	CATV 1.0	Exist.	18.31	7.73	1.3300		1.200	100.0	0.0	100.1			97	313	410
Unknown	CATV 1.0	Exist.	18.37	6.76	1.3300		1.200	100.0	0.0	100.1			83	314	397
Unknown	CATV 1.0	Exist.	18.48	7.15	1.3300		1.200	100.0	0.0	100.1			89	316	404
Unknown	CATV 1.0	Exist.	18.48	8.38	1.3300		1.200	100.0	0.0	100.1			106	316	421
Unknown	CATV 1.0	Exist.	18.37	8.74	1.3300		1.200	100.0	0.0	100.1			110	314	424
Unknown	CATV 1.0	Exist.	18.31	7.73	1.3300		1.200	102.0	180.0	102.1			99	319	418
Unknown	CATV 1.0	Exist.	18.37	6.76	1.3300		1.200	102.0	180.0	102.1			85	320	405
Unknown	CATV 1.0	Exist.	18.48	7.15	1.3300		1.200	102.0	180.0	102.1			90	322	413
Unknown	CATV 1.0	Exist.	18.48	8.38	1.3300		1.200	102.0	180.0	102.1			108	322	430
Unknown	CATV 1.0	Exist.	18.37	8.74	1.3300		1.200	102.0	180.0	102.1			113	320	433
Unknown	CATV .75	Exist.	19.75	7.66	1.0700		0.900	100.0	0.0	100.0			86	370	456
Unknown	CATV .75	Exist.	19.75	7.66	1.0700		0.900	102.0	180.0	102.0			88	377	466
Secondary	TRIPLEX 6 AWG		29.66	7.30	0.5800		0.113	100.0	0.0	100.0			26	350	376
Secondary	TRIPLEX 6 AWG		29.66	6.77	0.5800		0.113	100.0	0.0	100.0			24	350	374
Secondary	TRIPLEX 6 AWG	Exist.	29.66	7.30	0.5800		0.113	102.0	180.0	102.0			26	357	383
Secondary	TRIPLEX 6 AWG	Exist.	29.66	6.77	0.5800		0.113	102.0	180.0	102.0			24	357	381
Neutral	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	38.50	20.76	0.5630	1.16	0.292	100.0	0.0	100.0	2,409	-22,152	-152	1,704	-20,600
Neutral	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	38.50	20.76	0.5630	1.18	0.292	102.0	180.0	102.0	2,409	22,152	-155	1,738	23,735
Primary	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	37.50	20.76	0.5630	1.16	0.291	100.0	0.0	100.0	2,409	-21,577	-152	1,660	-20,069
Primary	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	37.50	20.76	0.5630	1.19	0.291	102.0	180.0	102.0	2,409	21,577	-155	1,693	23,115
Primary	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	38.00	18.15	0.5630	1.16	0.291	100.0	0.0	100.0	2,409	-21,864	-136	1,682	-20,318
Primary	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	38.00	18.15	0.5630	1.19	0.291	102.0	180.0	102.0	2,409	21,864	-139	1,716	23,441
Primary	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	38.00	23.76	0.5630	1.16	0.291	100.0	0.0	100.0	2,409	-21,864	-168	1,682	-20,350
Primary	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	38.00	23.76	0.5630	1.19	0.291	102.0	180.0	102.0	2,409	21,864	-171	1,716	23,409
Twist/Braid Bundle	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	29.70	7.04	0.5630	0.63	0.242	100.0	0.0	100.0	3,326	-23,563	32	1,191	-22,340
Twist/Braid Bundle	ACSR 4/0 AWG 6/1 PENGUIN	Exist.	29.70	7.04	0.5630	0.63	0.242	102.0	180.0	102.0	3,415	24,194	32	1,215	25,441
											<b>Totals:</b>	<b>625</b>	<b>418</b>	<b>26,109</b>	<b>27,153</b>

Comm	Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Overlashed Bundle 10M	Exist.	16.50	7.87	0.3060	1.09	0.165	100.0	0.0	100.0	4,863	-19,151	40	778	-18,334

509-20

Overlashed Bundle	10M	Exist.	16.50	7.87	0.3060	1.11	0.165	102.0	180.0	102.0	4,950	19,494	41	793	20,328
Overlashed Bundle	12.5M	Exist.	18.40	7.75	0.3430	1.34	0.208	100.0	0.0	100.1	7,039	-30,912	38	835	-30,039
Overlashed Bundle	12.5M	Exist.	18.40	7.75	0.3430	1.34	0.208	102.0	180.0	102.1	7,288	32,008	39	852	32,899
Overlashed Bundle	8M	Exist.	19.80	7.66	0.2720	1.21	0.131	100.0	0.0	100.0	1,848	-8,732	41	931	-7,759
Overlashed Bundle	8M	Exist.	19.80	7.66	0.2720	1.24	0.131	102.0	180.0	102.0	1,877	8,870	42	950	9,862
Overlashed Bundle	6M	Exist.	21.70	7.54	0.2420	1.36	0.104	100.0	0.0	100.0	1,029	-5,327	26	860	-4,441
Fiber	BELOPTIX MLD6072 - 72 FIBERS - OUTDOOR (0.593)	Exist.	21.67	7.81	0.5930		0.130	100.0	0.0	100.0			29	245	274
Fiber	BELOPTIX MLD6072 - 72 FIBERS - OUTDOOR (0.593)	Exist.	21.67	7.27	0.5930		0.130	100.0	0.0	100.0			27	245	272
Overlashed Bundle	6M	Exist.	21.70	7.54	0.2420	1.39	0.104	102.0	180.0	102.0	1,043	5,404	27	877	6,308
Fiber	BELOPTIX MLD6072 - 72 FIBERS - OUTDOOR (0.593)	Exist.	21.67	7.81	0.5930		0.130	102.0	180.0	102.0			30	250	280
Fiber	BELOPTIX MLD6072 - 72 FIBERS - OUTDOOR (0.593)	Exist.	21.67	7.27	0.5930		0.130	102.0	180.0	102.0			27	250	278
<b>Totals:</b>											<b>1,655</b>	<b>406</b>	<b>7,868</b>	<b>9,929</b>	

Generic Equipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Box	Side Mount	Prop.	24.25	18.88	90.0	0.0	15.40	3.00	28.00	--	3.00	-45	18	-27
Cylinder	Antenna	Prop.	25.75	30.88	90.0	0.0	30.90	26.40	--	12.00	--	-147	366	219
Box	Diplexer	Prop.	13.50	9.56	180.0	0.0	12.00	9.00	5.00	--	8.30	4	47	51
Box	RRH Mount	Prop.	11.63	13.68	180.0	0.0	160.00	27.00	10.00	--	25.00	83	242	325
Box	Load Center	Prop.	7.50	9.44	180.0	0.0	20.00	12.65	4.00	--	8.90	7	29	36
Box	Utility Meter	Prop.	5.00	9.60	180.0	0.0	15.00	19.00	4.00	--	13.00	5	30	35
<b>Totals:</b>												<b>-92</b>	<b>731</b>	<b>639</b>

Riser		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Riser 160.0°	Riser	Prop.	25.00	6.57	160.0	160.0	25.00	300.00	2.00	2.00	300.00	-1	453	452
Riser 230.0°	Riser	Prop.	29.00	6.57	230.0	230.0	29.00	348.00	1.00	1.00	348.00	14	197	211
<b>Totals:</b>												<b>12</b>	<b>650</b>	<b>662</b>

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Bolt	Single Bolt	Exist.	16.50	0.00	270.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Single Bolt	Exist.	16.80	0.00	90.0	0.0	5.00	3.00	0.00	-6	0	-6
Bolt	Single Bolt	Exist.	18.40	0.00	270.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Single Bolt	Exist.	19.80	0.00	270.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Single Bolt	Exist.	21.70	0.00	270.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Single Bolt	Exist.	29.70	0.00	270.0	0.0	5.00	3.00	0.00	5	0	5
Post	Post Insulator - 35 kV	Exist.	38.00	0.00	90.0	90.0	23.00	5.75	16.75	-73	177	104
									Totals:	-50	177	127



Pole Buckling													
Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
2.00	21.02	33.11	11.95	21.34	7.96	12.83	1.60e+6	60.00	57.00	38.50	52,768	528.47	6.37

## **ASSUMPTIONS & LIMITATIONS**

This report was developed using general project information provided by general field observations, reference information and utility companies' guidelines. All pole information is based on a visual ground inspection. All recommendations pertain to the existing and the proposed pole construction, location, and loading as described in this report. Dewberry assumes no responsibility for failures caused by factors not considered in our report. These include but are not limited to the following:

1. Improper pole maintenance
2. Improper pole manufacturing and/or construction
3. Improper pole installation & associated equipment (Out of plumb)
4. Missing, corroding, decaying and/or deteriorating components
5. Improper original construction and/or soil preparation with the proper base embedment

Dewberry assumes no responsibility for modifications completed prior to or hereafter in which Dewberry was not directly involved. These modifications include but are not limited to the following:

1. Replacing or strengthening pole components
2. Installing or removing antenna mounting components
3. Installing or removing utility components
4. Changing loading configurations

Utility companies are responsible for verifying the proposed loading on the pole is consistent with the loading applied to the pole within this report.

# EXHIBIT G



2/6/2020

To: City of Newton

Transmitted via email

RE: Verizon Wireless Small Cell Sites

Dear City of Newton,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: <http://www.fcc.gov/oet/rfsafety/rf-faqs.html>.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to [VZWRFCompliance@verizonwireless.com](mailto:VZWRFCompliance@verizonwireless.com). Please contact your local Verizon Wireless resource below if you have any additional questions.

Contact Name	Contact Email	Contact Phone
Luis Teves	<a href="mailto:Luis.Teves@VerizonWireless.com">Luis.Teves@VerizonWireless.com</a>	508-479-3197

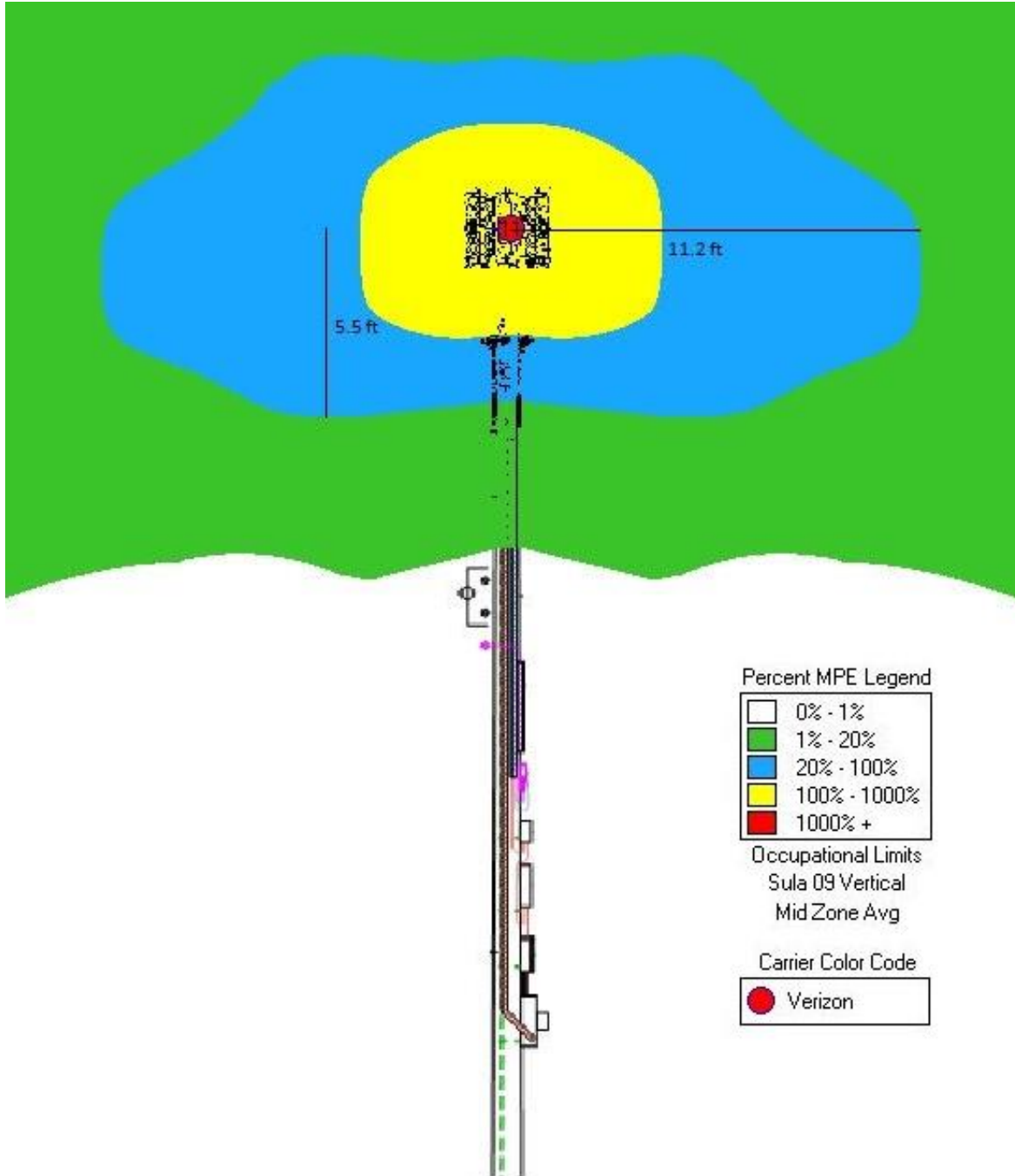
Sincerely,

Michael Creamer  
Sr Manager - RF Design  
Verizon Wireless

## Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

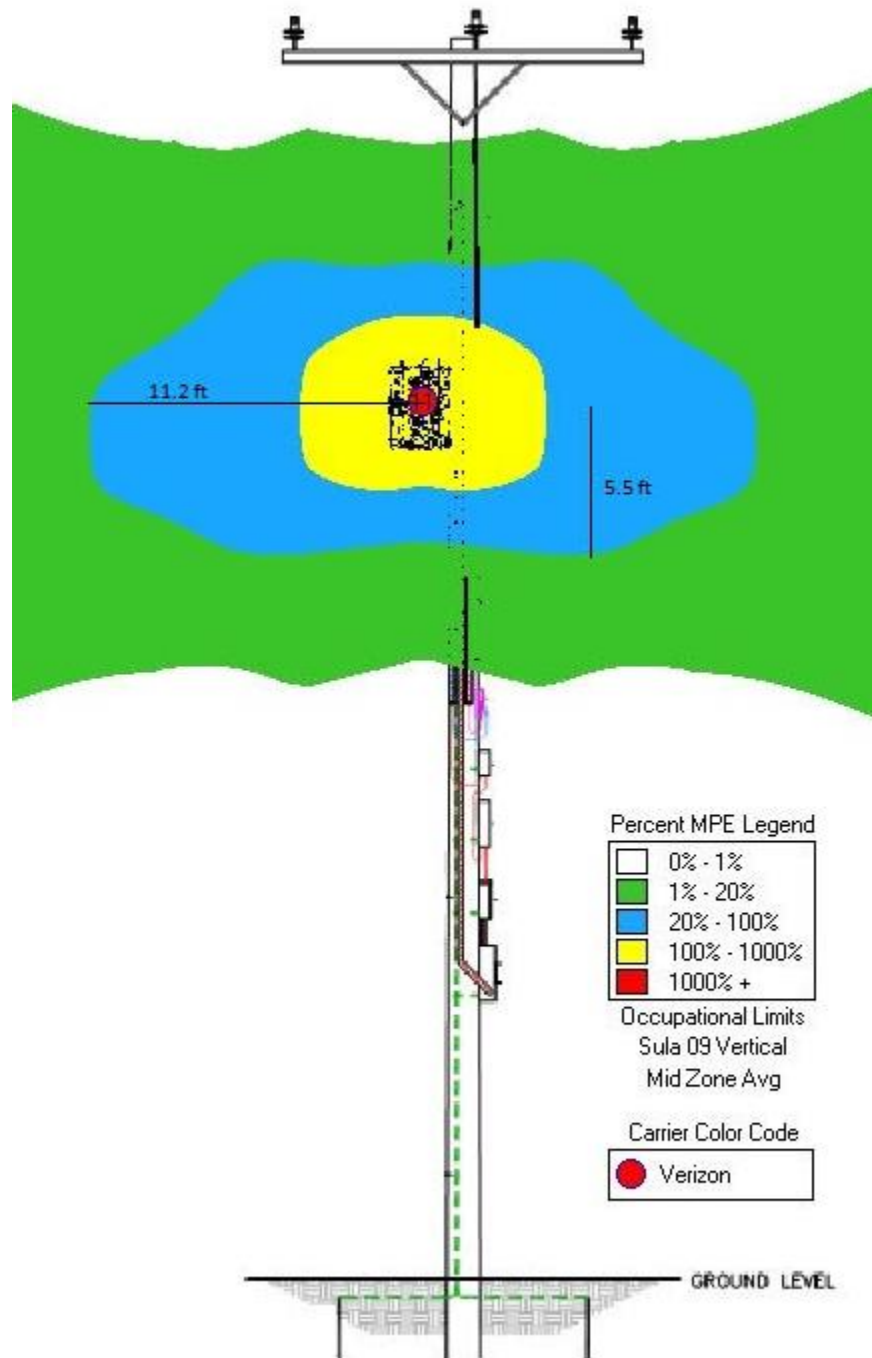
The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.

Top Mount:



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	
	Greater Than 100	
	Greater Than 1000	

Side Mount:



Color	% Occupational MPE	Instructions
Green	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
Blue	20 to 100	
Yellow	Greater Than 100	
Red	Greater Than 1000	

## Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

- ⇒ **Maintaining** all necessary wireless licensee contact information.
- ⇒ **Enforcing** restricted access (help maintain a Controlled Environment). **Ensuring** all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.
- ⇒ **Notifying** all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance**.
- ⇒ **Understanding** that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.



### **For General RF Safety & Awareness Questions**

Verizon Wireless

E-mail: [VZWRFCCompliance@vzw.com](mailto:VZWRFCCompliance@vzw.com)

E-mail Subject: "ATTN: RF Compliance"

### **In The Event That Emergency Maintenance Is Required**

24-Hour Network Operations Center:

**1-800-264-6620**

### **RF Safety & Awareness Training Contacts**

Dtech Communications

([michelle@dtechcom.com](mailto:michelle@dtechcom.com).)

EBI Consulting

[spenta@ebiconsulting.com](mailto:spenta@ebiconsulting.com)

SiteSafe

( [cbagley@sitesafe.com](mailto:cbagley@sitesafe.com) )

Waterford Consultants

[Sbaier-  
anderson@waterfordconsultants.com](mailto:Sbaier-anderson@waterfordconsultants.com)

## Radio Frequency (RF) Emissions

SAFETY  
&  
AWARENESS





## Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

### Classifications for Exposure Limits

#### Occupational

Persons are "exposed as a consequence of their employment" and are "fully aware of the potential for exposure and can exercise control over their exposure".

#### General Population

Any persons that "may not be made fully aware of the potential for exposure or cannot exercise control over their exposure".

Those in this category do not have RF Safety & Awareness Training.

### Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

## Compliance Materials

### Notification Signage

**(Notice) RF Guidelines** - Informs viewer of the basic safety guidelines for working in an RF Environment.

**Information** - Provides relevant contact information for any questions or requests.



**(Blue) Notice** - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.



**(Yellow) Caution** - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.



**(Red) Warning** - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

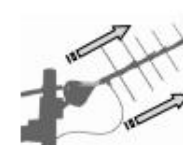
### Indicative Barriers

In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.



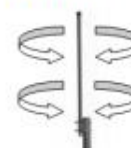
## Antenna Safety

### Antenna Types



**Yagi** - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

**Panel** - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



**Whip** - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

**Microwave** - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



### When In An Environment With Antennas:

- ⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.
- ⇒ Never touch an antenna. Assume all are active.
- ⇒ Read and obey ALL signs on an access point.
- ⇒ Read and obey ALL signs in the environment with antennas.
- ⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.
- ⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.
- ⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.





February 3, 2020

City of Newton

1000 Commonwealth Ave

Newton Centre, MA 02459

Re: Authorization to Represent Cellco Partnership

To Whom It May Concern:

Cellco Partnership, a Delaware general partnership, d/b/a Verizon Wireless ("Verizon Wireless") hereby authorizes its attorneys, Robinson & Cole, LLP, to represent Verizon Wireless before the City of Newton City Council and any other Town boards or offices, in applying for any and all necessary approvals for proposed small cell wireless facilities on utility poles in the City of Newton, and to complete and sign any related applications on its behalf.

A copy of this letter shall be regarded as having the same effect as the original.

Sincerely,

A handwritten signature in blue ink, appearing to be "SC", written over a horizontal line. The signature is stylized and fluid.

[Sean Conway, Principal Engineer – RE/Regulatory]

Cellco Partnership  
d/b/a Verizon Wireless  
118 Flanders Road  
Westborough, MA 01581

ALICIA R. SELMAN

One Boston Place, 25th floor  
Boston, MA 02108-4404  
Main (617) 557-5900  
Fax (617) 557-5999  
aselman@rc.com  
Direct (617) 557-5923

November 13, 2020

Cassidy Flynn  
Committee Clerk  
Newton City Council  
1000 Commonwealth Avenue  
Newton Centre, MA 02459

Re: Cellco Partnership d/b/a Verizon Wireless - Application Fee for Newton City Council Grant of Location Petitions

Dear Ms. Flynn:

As required by the Newton City Council Grant of Location Procedures and Standards dated August 12, 2019, and Section 17-3 of the Newton City Code, Verizon Wireless encloses a check in the amount of \$500 as the application fee for two Grant of Location Petitions that were filed on November 13, 2020 for proposed wireless communications facilities attachments to an existing utility pole located near 983 Dedham Street and an existing utility pole located near 30 Beethoven Avenue, Newton, MA.

Thank you.

Sincerely,

A handwritten signature in blue ink, appearing to be 'AS', followed by a long horizontal line.

Alicia R. Selman, Esq.  
Attorney for Cellco Partnership d/b/a Verizon Wireless

Enclosure

**Robinson+Cole**

Operating Account

LAW OFFICES

One Boston Place

Suite 2500

Boston, MA 02108-4404

BANK OF AMERICA

51-57/119 CT

Check Number

**303448**

Date:

November 9, 2020

Pay: Five hundred and 00/100\*\*\*\*\* \$ \*\*\*500.00\*\*\*

Void after 180 Days

PAY CITY OF NEWTON  
TO THE 1000 COMMONWEALTH AVE  
ORDER OF: NEWTON, MA 02459

⑈000303448⑈ ⑆011900571⑆ 000000154546⑈

CITY OF NEWTON  
Department of Public Works  
ENGINEERING DIVISION

Memorandum

To: Councilor Alison Leary, Facilities Committee Chair.

From: John Daghljan, Associate City Engineer

Re: #30 Beethoven Avenue Small Cell Antenna

Date: November 25, 2020

CC: Jim McGonagle, Commissioner  
Shawna Sullivan, Chief of Staff  
Lou Taverna, PE City Engineer  
Alan Mandl, Assistant City Solicitor  
Cassidy Flynn, Committee Clerk

---

In reference to the above location, the following are my comments for a plan entitled:

***Verizon Wireless***

***Newton, MA SC01***

*Prepared by: Dewberry Engineers Inc.*

*Dated: 4/10/20*

*Received by Engineering: November 16, 2020*

*Executive Summary:*

This applicant is for a small cell antenna to be mounted to pole 22 23 with associated equipment as shown on the plans. The power source will be from the existing utility pole, my only concern is that the detail on sheet C-2 shows a proposed electric meter to be installed on the pole at a height of 5-feet from the base. I would request that this be changed to a minimum of 7-feet from the base of the pole so that it is out of reach of pedestrians and does not interfere with anyone walking near by the pole. If the application is approved the applicant should check with ISD for appropriate electrical permits that maybe required.

*Conditions & Special Provisions:*

1. I recommend that the installation of the small cell & associated equipment be installed during off school hours or during a vacation period so that the installation does not interfere with school bus & student drop off/pick periods.
2. The contractor of record shall contact the Newton Police Department 48 hours in advanced and arrange for Police detail to help residents & commuters navigate around the construction activity.

If you have any questions or concerns, please call me at 617-796-1023.



Ruthanne Fuller  
Mayor

City of Newton, Massachusetts  
Office of the Mayor

**510-20**

Telephone  
(617) 796-1100  
Fax  
(617) 796-1113  
TDD/TTY  
(617) 796-1089  
Email  
rfuller@newtonma.gov

October 1, 2020

Honorable City Council  
Newton City Hall  
1000 Commonwealth Avenue  
Newton, MA 02459

To the Honorable City Councilors:

I am pleased to reappoint Marian Rambelle of 2 Harrington Street, Newton as a member of the Sustainable Materials Management Commission. Her term of office shall expire on October 31, 2023 and her appointment is subject to your confirmation.

Thank you for your attention to this matter.

Warmly,

Ruthanne Fuller  
Mayor

RECEIVED  
2020 NOV 30 PM 2:10  
CITY CLERK  
NEWTON, MA. 02459

## Application Form

### Profile

Marian

First Name

Middle Initial

Rambelle

Last Name

Email Address

2 Harrington St.

Home Address

Suite or Apt

Newton

City

MA

State

02460

Postal Code

### What Ward do you live in?

☒ Ward 3

Primary Phone

Alternate Phone

CDW Consultants, Inc.

Employer

Senior Environmental Engineer

Job Title

### Which Boards would you like to apply for?

Solid Waste Commission: Submitted

### Interests & Experiences

Please tell us about yourself and why you want to serve.

**Why are you interested in serving on a board or commission?**

As an environmental engineer, I have both personal interest and professional experience in areas such as the effects of waste on the environment, waste stream reduction/recycling, and monitoring federal and state laws and regulations. I am interested in continuing to serve on the Solid Waste Commission (currently serving as Chair) and continue the Commission's work in evaluating, monitoring and advising the City regarding its solid waste, recycling and related activities. The Commission is made up of a highly engaged and committed group of residents that has accomplished much in the recent past, including: • Recommendations for changes to several curbside collection policies (subsequently adopted); • Recommendation for a new subscription-based City partnership for household food waste curbside collection (which began in Fall 2019); • Recommendations for changes to the City's new trash/recycling hauling and recyclables processing contract (which took effect July 1, 2020); • Community surveys, recommendations and assistance in drafting ordinances for the adopted revised plastic bag ban and new polystyrene packaging ban; • Recommendations/feedback on reducing and maintaining the City's low 'contamination' rate of recyclables in household and public receptacles, which eliminated the City's additional fees imposed for exceeding the contractual 'contamination' threshold; and • An ordinance change for the Commission's structure, name (Sustainable Materials Management Commission), and areas of interest (recently adopted), and the Commission's development and adoption of by-laws. The Commission has recently formed several subcommittees to focus its work on long-term goals, including planning for new City trash reduction goals; evaluation of statewide dwindling trash disposal capacity as well as global recyclables markets; and preparation for the City's next two contracts for trash/recycling hauling and recyclables processing, and for trash disposal. I believe my interests and experience will help contribute to the advancement of these goals. At the state level, I previously served as a member of MassDEP's Third Party Inspector/Waste Bans Stakeholder advisory committee. I have attended many MassDEP Solid Waste Advisory Committee (SWAC) meetings, as well as several Environmental Business Council of New England (EBC) 'Talking Trash' and other conferences. I work as an environmental engineering consultant, with broad experience in environmental permitting/compliance, hazardous waste, solid waste, hazardous materials, environmental site assessments, and state and EPA-regulated hazardous waste sites, including as the EPA Oversight Representative on several Superfund site cleanups. I also hold a B.S. in Civil and Environmental Engineering from Cornell University. I would be pleased to have the opportunity to continue to serve as a Commission member in its work advising the Mayor and City Council on all aspects of municipal waste, recycling and related areas.

[MRambelle Resume Oct 2020.pdf](#)

Upload a Resume



## Marian Rambelle

2 Harrington Street, Newton MA 02460 ~ [REDACTED]  
[REDACTED]

### QUALIFICATIONS

Ms. Rambelle has over 20 years of wide-ranging experience in environmental engineering consulting and planning for both public and private sector clients. She is currently responsible for all aspects of federal, state and local permitting and regulatory compliance for planning, construction, and long-term operation of industrial facilities, including stormwater/wastewater management, hazardous materials/waste management, wetlands, industrial hygiene, rare and endangered species, and historic resources.

Ms. Rambelle's experience also includes the management of complex environmental sampling programs, preparation of environmental construction specifications, environmental due diligence/site assessments, Superfund and MA hazardous waste site investigations/remediation, and MA waste bans compliance.

- Permit analysis and federal, state and local permits/approvals
- Permit/regulatory compliance, including management of stormwater monitoring and inspection programs
- NPDES Notices of Intent (NOIs) and Storm Water Pollution Prevention Plans (SWPPPs) for industrial facilities and construction projects
- Spill Prevention, Control, and Countermeasures (SPCC) Plans
- EPA Oversight Representative at Superfund (CERCLA) site investigations and cleanup (including 1<sup>st</sup> 'Construction Completed' site in Region I (Cannon Bridgewater Site))
- ASTM/21E environmental site assessments of commercial/industrial properties
- 3<sup>rd</sup> party reviews of MCP and RCRA Corrective Action submittals
- MA waste ban compliance plans and Third-Party Inspector reports
- Investigative file reviews and preparation of documents for public hearings testimony

### REPRESENTATIVE PROJECTS MANAGED

- Environmental Compliance/Stormwater Management/Permitting – Keolis Commuter Services/MBTA: Compliance programs at 15+ commuter rail maintenance and layover facilities in MA and RI, including inspections, discharge monitoring, reporting to agencies, and regulatory compliance evaluations.
- Environmental Permitting – Regional transit authority, MA: Bank stabilization project at a tidal river with critical endangered fish species considerations.
- Environmental Sampling Programs – Boston Water and Sewer Commission, Urban Water Quality Study, Boston, MA: 1-year weekly/monthly sampling program to determine indicators and sources of bacterial and other stormwater pollutants of concern. Wet weather and dry weather sampling at outfalls, manholes and catch basins throughout Boston, involving multiple sampling teams, field test kit analyses, and shipments to several laboratories across the country.

### EDUCATION/AFFILIATIONS

B.S., Civil and Environmental Engineering, Cornell University, Ithaca, NY  
MassDEP - Waste Ban Compliance Third Party Inspector training  
Licensed Site Professionals Association (LSPA)  
Society of Women Environmental Professionals (SWEP)  
City of Newton (MA) Solid Waste Commission, Chair

### PUBLICATIONS

*Development of MassDEP "Best Management Practices" for the Gardening Pathway Condition* – LSPA newsletter (June 2013): <http://archive.constantcontact.com/fs114/1102602054171/archive/1113927127702.html>

*The New ASTM E 1417-13 Standard Practice for Phase I Environmental Site Assessments (and the MassDEP Zeitgeist)* – LSPA newsletter (two-part series, 2014-15)

### WORK HISTORY

2014 - Present	CDW Consultants, Inc., Natick, MA
2011-2014	Environmental Consultant, Newton, MA
1990-1998	Raytheon Engineers and Constructors, Cambridge, MA
1986-1990	ENSR, Acton, MA



Ruthanne Fuller  
Mayor

City of Newton, Massachusetts  
Office of the Mayor

511-20

Telephone  
(617) 796-1100  
Fax  
(617) 796-1113  
TDD/TTY  
(617) 796-1089  
Email  
rfuller@newtonma.gov

October 1, 2020

Honorable City Council  
Newton City Hall  
1000 Commonwealth Avenue  
Newton, MA 02459

To the Honorable City Councilors:

I am pleased to reappoint Miles Smith of 30 Webster Street, Newton as a member of the Sustainable Materials Management Commission. His term of office shall expire on September 30, 2023 and his appointment is subject to your confirmation.

Thank you for your attention to this matter.

Warmly,

A handwritten signature in black ink that reads "Ruthanne Fuller".

Ruthanne Fuller  
Mayor

CITY CLERK  
NEWTON, MA. 02459

2020 NOV 30 PM 2:10

RECEIVED

**Application Form****Profile**

Miles

First Name

Smith

Middle Initial

Last Name

Email Address

30 Webster Street

Home Address

Suite or Apt

Newton

City

MA

State

02465

Postal Code

**What Ward do you live in?**☒ Ward 3

Primary Phone

Alternate Phone

Freelance

Employer

Audio Engineer

Job Title

**Which Boards would you like to apply for?**

Solid Waste Commission: Submitted

**Interests & Experiences**


Please tell us about yourself and why you want to serve.

**Why are you interested in serving on a board or commission?**

Continue membership on the Solid Waste Commission. Thanks!

Solid Waste Commission -Smith Miles.pdf

Upload a Resume

Miles B. Smith  
Audio Engineer  
30 Webster St.  
West Newton, MA 02465  


Miles B. Smith is a freelance audio engineer based in the Boston area. He has engineered live radio broadcasts and live-to-stereo recordings in literally hundreds of East coast venues, including three Grammy nominated albums. Miles has been tech director of several radio conferences and music festivals. He has worked on award winning live music broadcasts (such as Newport Jazz Festival, Newport Folk Festival, New Music America, New Orleans Jazz & Heritage Festival), satellite broadcasts from marathon Bloomsday readings, demonstrations, National Political Conventions and theaters. He is the recording engineer for the NPR program Selected Shorts, and Audio Supervisor for The Moth recordings done around the world.

He has worked on many radio dramas including The Midwest Radio Theatre Workshop, WBAI's live Shakespeare productions WNYC's 'Radio Stages' series, the serialized radio drama "Our Life Together Amongst The Works of Art", L.A. Classical Radio Theatre Productions, and the SciFi channel's 'Seeing Ear Theatre'.

Miles has also done stereo sound gathering for radio production in Wyoming, Texas, Vermont, Kenya, Zimbabwe, Ethiopia, Pakistan, India, and many other locales.

Miles Smith has been involved in the design and construction of dozens of studios, including radio broadcast studios, recording studios, and post-production facilities in New York, Boston, Washington DC, Haiti and Grenada, including This American Life's studios in NYC, and the PRX Podcast Garage in Boston.

Miles' day gig is as a tech at WGBH Radio in Boston. In 2019 he won the National Corwin Award for Excellence in Audio Theatre.



Ruthanne Fuller  
Mayor

City of Newton, Massachusetts  
Office of the Mayor

512-20

Telephone  
(617) 796-1100  
Fax  
(617) 796-1113  
TDD/TTY  
(617) 796-1089  
Email  
rfuller@newtonma.gov

October 1, 2020

Honorable City Council  
Newton City Hall  
1000 Commonwealth Avenue  
Newton, MA 02459

To the Honorable City Councilors:

I am pleased to reappoint Sunwoo Kahng of 60 Garland Road, Newton as a member of the Sustainable Materials Management Commission. Her term of office shall expire on November 15, 2023 and her appointment is subject to your confirmation.

Thank you for your attention to this matter.

Warmly,

A handwritten signature in cursive script that reads "Ruthanne Fuller".

Ruthanne Fuller  
Mayor

CITY CLERK  
NEWTON, MA. 02459

RECEIVED  
2020 NOV 30 PM 2:10

**Application Form****Profile**

Sunwoo

First Name

Middle Initial

Kahng

Last Name

Email Address

60 Garland Road

Home Address

Suite or Apt

Newton

City

MA

State

02459

Postal Code

**What Ward do you live in?**☒ Ward 6

Primary Phone

Home:

Alternate Phone

Employer

Job Title

**Which Boards would you like to apply for?**

Solid Waste Commission: Submitted

**Interests & Experiences**

Please tell us about yourself and why you want to serve.

**Why are you interested in serving on a board or commission?**


Reappointment for 2nd term. I am deeply committed to reduction of waste and promotion of reuse and recycling in the city. I hope to continue my work on the commission towards a 'zero waste' policy for the city.

Solid Waste Commission-Sunwoo\_kahng.pdf

Upload a Resume

---

**SUNWOO KAHNG**

  
60 Garland Road  
Newton, MA 02459

**Objective**

Member of the City of Newton Solid Waste Commission.

**Experience****Board Member, Green Newton; Newton, MA — 2010-Present**

Responsible for organizing Organic Garden Tours, connecting 'green teams' at various schools in the Newton Public Schools, organizing Green Expo in Newton Centre, fundraising, website development, and weekly communication to members.

**Website Manager and E-Newsletter Editor, Green Newton; Newton, MA — 2016-Present**

Member of team that redesigned the Green Newton website and established a weekly e-newsletter that publishes posts about sustainable events and news in Newton and surrounding areas. Currently manage content of Website and e-newsletter.

**PTO Co-President, Mason-Rice Elementary; Newton, MA — 2011-2013**

With two co-presidents, responsible for coordinating various PTO functions for the community of 300 plus families, fundraising, and communications to faculty and parents. Also represented school community at Newton PTO Council.

**Green Team, Mason-Rice Elementary; Newton, MA — 2009-2016**

Founding member of the school PTO 'green team'. Created and maintained a program for composting and recycling at large PTO events (500 plus people)—diverting over 80% of waste generated. Awarded grant to rebuild school garden.

**Education**

University of Michigan, M.A. in Information Studies 1997-1998

University of Michigan, B.A. in History and East Asian Studies 1984-1989

**References**

Marcia Cooper, President of Green Newton - [marcia@greennewton.org](mailto:marcia@greennewton.org)

Julia Hamilton, Former Co-President Mason-Rice Elementary School - [jbhorjmh@yahoo.com](mailto:jbhorjmh@yahoo.com)

---



Ruthanne Fuller  
Mayor

City of Newton, Massachusetts  
Office of the Mayor

513-20

Telephone  
(617) 796-1100  
Fax  
(617) 796-1113  
TDD/TTY  
(617) 796-1089  
Email  
rfuller@newtonma.gov

October 1, 2020

Honorable City Council  
Newton City Hall  
1000 Commonwealth Avenue  
Newton, MA 02459

To the Honorable City Councilors:

I am pleased to reappoint Seth Parker of 26 Shornecliffe Road, Newton as a member of the Sustainable Materials Management Commission. His term of office shall expire on September 30, 2023 and his appointment is subject to your confirmation.

Thank you for your attention to this matter.

Warmly,

A handwritten signature in black ink that reads "Ruthanne Fuller".

Ruthanne Fuller  
Mayor

RECEIVED  
2020 NOV 30 PM 2:10  
CITY CLERK  
NEWTON, MA. 02459



**Application Form****Profile**

Seth

First Name

Parker

Last Name

[REDACTED]  
Email Address

26 Shornecliffe Road

Home Address

Suite or Apt

Newton

City

MA

State

02458

Postal Code

**What Ward do you live in?**☒ Ward 7[REDACTED]  
Primary PhoneLevitan & Associates, Inc.  
(specializing in the energy  
industry)

Employer

[REDACTED]  
Alternate Phone

VP

Job Title

**Which Boards would you like to apply for?**

Solid Waste Commission: Submitted

**Interests & Experiences**

Please tell us about yourself and why you want to serve.

**Why are you interested in serving on a board or commission?**

I am committed to wise energy and environmental choices and want to help Newton.

SGParker\_Jul2017.doc

Upload a Resume

## SETH G. PARKER

---

### SUMMARY

A senior manager with an international background in competitive markets, the development / evaluation / financing of generation and transmission projects, and mergers / divestitures / acquisitions. Conducted the first U.S. competitive solicitation of offshore wind power. Key experience includes market design, transaction support, risk management, power contracts, cogeneration / microgrids, economics of conventional and renewable power resources, inter-regional transmission projects, and asset valuation.

### PROFESSIONAL EXPERIENCE

- |           |  |
|-----------|--|
| 1998 -    | <b>Levitan &amp; Associates, Inc.</b><br>Principal & Vice President<br>Managing Consultant   |
| 1988-1998 | <b>Stone &amp; Webster Management Consultants (U.S. and U.K.)</b><br>Vice President<br>Assistant Vice President<br>Executive Consultant<br>Senior Consultant |
| 1984-1988 | <b>J. Makowski Associates, Inc.</b><br>Financial Manager - Ocean State Power   |
| 1981-1983 | <b>ThermoElectron Energy Systems</b><br>Senior Financial Analyst   |
| 1978-1981 | <b>Pacific Gas and Electric Co.</b><br>Project Financing Analyst   |

### CONSULTING ASSIGNMENTS

#### RENEWABLE ENERGY

Advising the New York State Energy Research and Development Authority (NYSERDA) to solicit and evaluate offshore wind proposals, design offtake agreements to optimize ratepayer value consistent with State's Clean Energy Standard, and recommend the timing and quantity of offshore wind resources.

Administered the first U.S. offshore wind evaluation / selection process for Maryland Public Service Commission; managed three subcontractors on cost, rate, technical, environmental, risk, and regulatory factors for the 248 MW US Wind and 120 MW Skipjack proposals, testified before the Commission which accepted both proposals.

Forecasted power market, emission, and rate impacts of New England Clean Power Link, a proposed 1,000 MW u/w and u/g HVDC cable to import renewable hydroelectric and wind energy from Quebec for TDI-NE's Certificate of Public Good application to, and testified before, the Vermont Public Service Board.

Assisted NRG with economic analysis, financing structure, debt and equity sources, finance rates, PPA terms, and credit issues for the proposed Great Lakes Offshore Wind project in Lake Erie.

Prepared comprehensive offshore wind report defining application requirements, recommending price parameters, establishing threshold qualifications, and specifying evaluation criteria and procedures adopted in Regulations to implement the Offshore Wind Energy Act of 2013; testified before the Maryland Public Service Commission.

Conducted economic evaluation of the Deepwater Block Island offshore wind project for the Rhode Island Economic Development Corporation, including PPA pricing, risk allocation, price suppression, regional economic impacts, and other issues; submitted written testimony and testified before the Rhode Island Public Utility Commission.

Assessed economics of hydroelectric purchase and underwater cable cost-sharing per the Nova Scotia Power Maritime Link Compliance Filing, including proposed Energy Access Agreement, for the Consumer Advocate and Small Business Advocate; submitted written testimony and testified before the Utility and Review Board.

#### **MICROGRIDS**

Evaluated 100+ MW Transitgrid generation plus flywheel options for New Jersey Transit to ensure reliable train service after Superstorm Sandy; preparing PJM interconnection application and supervising progress; arranging fuel supply and power sales.

Responsible for commercial and financial analysis of New York University's 13.4 MW cogeneration / microgrid project, including economic feasibility, contract terms, and utility backup power. The project "kept the lights on" during Superstorm Sandy, saves \$5-\$8 million/year, and reduces New York City (NYC) NO<sub>x</sub>, SO<sub>2</sub>, and CO emissions.

Advised New York University on nearby wind project development and contracts; evaluated microgrid proposal for NYU's Brooklyn campus post-Superstorm Sandy.

#### **MERGERS, ACQUISITIONS, & DIVESTITURES**

Evaluated proposed spin-off of Entergy transmission assets and merger with ITC Holdings for the Mississippi Public Utilities Staff including financial effects, business risk, and impacts on credit ratings, transmission planning / operations, MISO regulation, and customer rates; submitted written testimony.

Advised the Vermont Department of Public Service (DPS) on financial, operational, decommissioning funding, and ratepayer risk issues of Entergy's application to restructure

the ownership of its merchant nuclear plants, including Vermont Yankee; submitted written testimony and testified before the Vermont Public Service Board.

Advised the Connecticut Public Utilities Regulatory Authority (PURA, previously the DPUC) on financial policy issues of proposed Northeast Utilities / NStar merger.

Prepared comprehensive descriptions of Southern California Edison thermal generation (12 plants, 10,000 MW) and Commonwealth Edison coal stations (6 plants, 6,000 MW) for Divestiture Offering Memorandum.

Technical and economic advisor to Maine Public Service, Fitchburg Gas and Electric, and Unitil Corp for hydro, thermal, and power purchase agreement divestiture.

Commercial and contract advice to Empresa Electrica de Guatemala, S.A. for power plant divestiture.

Commercial advice (including forward pricing) to a confidential bidder for the New England Electric System divestiture (2800 MW thermal & 1200 MW hydro).

Provided technical / environmental advice to the Government of Pakistan for the 1600 MW Kot Addu plant privatization; developed capacity / energy contract pricing structure adopted in final sales documents.

#### **PROJECT FINANCING AND FINANCIAL ANALYSIS**

Conducted financial analysis of rival NYU cogeneration projects, including operating cost savings, tax-exempt debt terms, and credit rating impacts; prepared project pro forma and valuation documents for Financial Committee approval and financing.

Worked with New York Power Authority VP of Finance to structure tax-exempt debt terms and repayment schedule for proposed inter-market cable project.

Developed capital structure and cost of capital values for a MISO coal plant divestiture; evaluated depreciation assumptions and alternative (replacement cost less depreciation and comparable sale) valuations in support of state commission testimony.

Advised multiple clients on off-balance sheet financing structures, including tax-exempt operating leases and third-party ownership of CHP and cogen facilities.

Advised clients and conducted studies of merchant gas turbine and combined cycle financing assumptions filed at state commissions and FERC.

Established economic value and financing plan for existing 43 MW Massachusetts hydroelectric power plant in support of acquisition and financing by a municipal utility.

Advised The Stanley Works on business strategy / financing of 8 MW hydro plant.

Structured non-recourse construction and permanent debt financing for Ocean State Power, the first domestic IPP; liaison between investors and financial advisor.

Developed off-balance sheet financing plans for ThermoElectron cogen projects.

Applied to the US Synthetic Fuels Corporation for price supports and loan guarantees.

Managed Pacific Gas and Electric's \$60 million pollution control Industrial Development Bond financing for Geysers dry steam geothermal power plants; structured financing terms with bond counsel, investment banks, and corporate staff.

Recommended financing and contract support structures for Pacific Gas and Electric subsidiaries & joint venture projects, including coal mine, power plants, gas production, and residential conservation.

#### **MARKET & POLICY ANALYSIS**

Represented Long Island Power Authority (LIPA) at PJM Members Committee, Markets and Reliability Committee, and Market Reliability Committee meetings and at NYISO Credit Policy Working Group meetings.

Assisted the Vermont DPS on power market, reliability, environmental, and socio-economic issues regarding extending Vermont Yankee's Certificate of Public Good; testified before the Vermont Public Service Board.

Evaluated alternative resource options and the market price and socio-economic impacts associated with the potential retirement of Vermont Yankee on behalf of the Vermont DPS; submitted written testimony and testified before the Vermont Public Service Board and in US District Court.

Assessed the economic costs and benefits of the proposed Cape Cod HVAC transmission line versus generation and demand-side alternatives; utilized in filings to the Massachusetts Energy Facilities Siting Board on behalf of project sponsor NStar.

Advised the Virginia State Corporation Commission Staff on commercial and technical issues for the HVAC Potomac-Appalachian Transmission Highway (PATH) project, including need, cost, timing, market impacts, and alternative transmission solutions.

Advised three NYC generators on NYISO's capacity demand curve reset process for 2011/12 – 2013/14 focusing on peaker proxy technology / cost, transmission deliverability, site requirements, and net energy & ancillary service revenues.

Provided written testimony on resource options and economics on behalf of Shell Energy NA regarding Dominion Virginia Power's (DVP's) 2009 Integrated Resource Plan; testified before the Virginia State Corporation Commission.

Prepared expert report and testimony on the DVP 2007 Solicitation for 2011 Unit Capacity for Shell Energy NA that addressed capacity needs, bidder qualifications, best competitive procurement practices, and bid evaluation methodology.

Prepared major deregulation study for the Maryland Public Service Commission that evaluated new generation, transmission, and demand-side options; evaluated divestiture's financial impact on generation fleet and to parent company; updated study for rate-base utility or power authority generation ownership.

Advised New York Power Authority on inter-market transactions, including power economics, interconnection requirements, grid upgrades, reliability impacts, permit issues, and regulatory considerations.

Advised generator group on PJM's proposed Reliability Pricing Model capacity valuation mechanism, including gas turbine capital & operating costs, net revenues, financing charges, etc.; represented group's interests at FERC.

Assessed market prices and congestion costs relative to competing generation and transmission project bids for LIPA; prepared ICAP forecasts across northeast markets and commercial analysis of HVDC cable proposals.

Evaluated market potential of PJM cable exports into NYC for potential purchaser of Linden simple / combined cycle project, including cable expansion issues.

Managed the update of NYISO's capacity market demand curve parameters for 2005/06 - 2007/08 based on levelized costs of gas turbine peaker capacity (CONE), including net energy revenues from multi-regional simulation model with stochastic treatment of hourly loads; evaluated demand curve slope and zero-crossing point; achieved consensus with stakeholder group; submitted report to FERC for approval.

Advised counsel for Mirant Equity Committee regarding NYISO, ISO-NE, and PJM capacity markets and the demand curve mechanisms used to forecast ICAP prices.

Established feasibility of inter-pool wheeling into load pocket to reduce congestion costs; quantified maximum benefit and reliability / portfolio effects for LIPA.

Evaluated alternatives to the Indian Point Nuclear Power Station for Westchester County and its Public Utility Service Agency, including power and local economic implications of shut-down, repowering, replacement with transmission / conventional / renewable resources, continued operation, and license extension.

Estimated market value of incremental energy and capacity from the Bonanza coal plant owned by the Deseret Generation and Transmission Cooperative in Utah; submitted expert report and testified in US District Court.

Prepared analysis of US power markets and merchant plant business structures for overseas investor; recommended target areas and distressed asset screening model.

Advised stakeholder group on technical, environmental, operational, and regulatory issues of power and gas infrastructure projects across Long Island Sound and in southwest Connecticut for the Institute for Sustainable Energy; facilitated revised guidelines for Connecticut Siting Council.

Prepared long-term market price forecasts by sub-regions in New England, New York, and PJM to capture congestion effects for PECO Energy's acquisition of Sithe assets.

Power market analysis of Salem Harbor conversion to gas for ISO-NE White Paper.

Assessed market potential for independent power producers throughout the US; identified competitive capabilities of utility and non-utility developers and of engineering firms.

ISO-NE cogeneration marketing and permitting assistance for Unitil gas utility.

Assessed state-by-state future demands for cogeneration systems based upon industrial activities, fuel costs, utility purchase and sales rates, and regulatory climates.

## **PROJECT DEVELOPMENT**

Conducting power market analysis of a proposed 1,500 MW gas-fired combined cycle project in support of siting approvals in New Jersey for Genesis Power LLC, including impacts on wholesale energy prices, capacity prices, and air emissions in PJM.

Advised a confidential client on commercial / operational issues for an inter-market HVDC cable system, including scheduling, performance risks, O&M issues, and converter technology.

Advised Maine Department of Transportation on proposed LNG terminal project, including feasibility, site, safety, comparative economics, and pipeline routing.

Formulated economic / regulatory basis and completed pre-financing development work (permits, construction, and financing) for the 225 MW Ocean State Power Phase I combined cycle plant in Rhode Island, the nation's first IPP.

## **PROJECT & DUE DILIGENCE EVALUATIONS**

Prepared expert report for the Rhode Island Division of Public Utilities and Carriers (DPUC) on the proposed 1,000 MW dual-fueled combined cycle Clear River Energy Center Application to the Energy Facility Siting Board on need and cost issues.

Advised Simpson Senior Services on termination payment and other contract terms with a third party cogeneration developer / operator for their assisted living facility.

Evaluated the status of proposed nuclear plant upgrades for the New Jersey Board of Public Utilities in support of its Long-Term Capacity Agreement Pilot Program (LCAPP), including Nuclear Regulatory Commission decisions on uprate applications.

Forecasted expected operating regime and changes in market power prices and regional air emissions for Bayonne 512 MW gas turbine peaker plant with HVAC underwater cable lead into NYC; report was used for Bayonne's Article VII Certificate application.

Prepared revenue and operating expense projections of PJM coal and combined cycle plants being sold by AES, including capacity revenues under alternative scenarios.

Advised the New York State Housing Finance Agency as lender to a cogeneration project, including project review, contract negotiation, and financing terms.

Managed due diligence review, construction monitoring, and acceptance testing of cogeneration, combined cycle, fluidized bed, and industrial projects for commercial lenders, investment banks, and government, bilateral & multilateral agencies:

- Brooklyn Navy Yard, 220 MW cogeneration plant, New York
- Derwent Cogeneration Project, 210 MW cogeneration plant, England
- East Java Power, 500 MW combined cycle plant, Indonesia
- EES Coke Battery, 900,000 ton per year coke facility, Michigan
- Guna Power Project, 347 MW naphtha / gas combined cycle plant, India
- Hadley Falls, 43 MW hydroelectric plant, Massachusetts
- Hub Power, 1,200 MW, \$1.8 billion, World Bank-supported plant, Pakistan
- Indiana Harbor Coke Battery, 1.3 million ton per year facility, Indiana
- Kot Addu, 1,600 MW oil / gas combined cycle plant, Pakistan
- Midland Cogen Venture, 1,370 MW \$2.3 billion cogen plant, Michigan
- Niagara Falls Resource Recovery, 800,000 ton per year plant, New York
- Panther Creek, 80 MW fluidized bed power plant, Pennsylvania
- Warrior Run, 180 MW fluidized bed power plant, Maryland
- York Research, financing of four plants, Texas, New York, and Trinidad

Evaluated operating characteristics and economics of cogeneration expansion plans for the Massachusetts Institute of Technology, and recommended phased-in scheduling.

Managed due diligence reviews of US coal and gas-fired power plants in support of Manweb (UK) equity investments; helped negotiate transaction modifications.

Recommended cogen plant design and financing plan for Turkish Industrial Zone.

Evaluated the feasibility of converting the Bataan nuclear power station in The Philippines to a gas-fired combined cycle plant for Shell Oil Company.

## **AUCTIONS & PROCUREMENTS**

Independent monitor on behalf of the California Public Utilities Commission for Southern California Edison's Fixed Price Request for Offers from non-gas fired Qualifying Facilities; authored Independent Evaluator Report for the Commission.



LCAPP Agent role for the New Jersey Board of Public Utilities to develop 2,000 MW of new capacity; responsible for evaluating bidder financial strength / development expertise, contract drafting, and security (letter of credit and escrow) provisions.

Retained by the Illinois Power Authority as Procurement Administrator for the 2008, 2009, 2010, and 2011 competitive procurements of energy, capacity, and RECs, the 2010 procurement of long-term renewable resources, and the 2012 Rate Stability energy and RECs procurement for the Ameren Illinois Utilities; responsible for benchmark pricing, finance, credit, security, performance, and related contract issues.

Advised the Connecticut PURA on economic costs / benefits, credit / collateral terms, and other contract conditions for long-term PPAs.

Conducted power and fuel price forecasts and financial analysis for a confidential equity investor in the auction of the 2,480 MW Ravenswood Facility in NYC.

Assisted Allegheny Electric Cooperative to identify power purchase and equity investment opportunities in PJM; evaluated economics and risk parameters of PPA, tolling, market purchases, and ownership options; reviewed ISDA and EEI agreements.

Part of the Procurement Monitor team for PURA to oversee Connecticut Light & Power and United Illuminating 2006-2012 supply procurements; responsible for credit issues and financial barrier options to protect against unanticipated price movements.

Advised LIPA on commercial and financial issues associated with multiple solicitations for on-island and off-island capacity and energy; refined contract terms on risk and credit.

Evaluated 3<sup>rd</sup> party contracts and on-site generation alternatives for Visy Paper, NYC.

Evaluated design-build proposals for Central Heating Plant (CHP) at Rochester Institute of Technology, including engineering / construction qualifications, O&M strategy, financial structure, utility interconnection, and lifecycle cost / ROI results.

Evaluated strategic electric and gas procurement strategy options for the Buffalo Fiscal Stability Authority; made procurement recommendations to BFSA and City officials.

Evaluated bidders for Indianapolis Power & Light's 1992 competitive power solicitation.

## **GAS & FUEL PROJECTS**

Estimated capital cost differentials and operational differences for gas-fired and dual-fueled power plants; assessed regional fuel-switching requirements and cost recovery rules for the Eastern Interconnection Planning Collaborative Gas-Electric Study.

Developed integrated gas supply, storage, and forward haul gas project concept for utilities in metropolitan New York / New Jersey to expand winter deliveries.

Evaluated equity return / risk profiles and prepared cash flow forecasts of interstate gas pipelines and storage projects for independent power plants in the Northeast.

Prepared testimony on risk, financing, and capital cost for the Endicott Pipeline Co.

Evaluated throughput and rate impacts on financial returns of competing gas pipeline proposals to support the development of Iroquois Gas Pipeline.

Commercial Advisor to the Pakistan Government for privatization of the Sui Northern Gas Pipeline Company (approx. 200 bcf annual sales with 24,000 km of pipe).

Determined distribution links between major domestic gas production basins and markets to allocate exploration and development funds of Sohio Petroleum.

World Bank advisor for Asia Pacific Ltd. oil storage & pipeline projects, Pakistan.

#### **ENERGY & POWER PLANT OPTIMIZATION**

Evaluated contract terms and conditions governing energy options for Nassau County Hub commercial district including cogeneration, spot market purchases, etc.

Assisted NYC industrial firm with cogeneration development; drafting steam purchase, power purchase option, site lease, and development contracts.

Developed cost-effective energy strategy with asset reconfiguration, contract restructuring, and permit modifications for Massachusetts Water Resources Authority; plant now participates in ISO-NE energy and capacity markets.

Implemented direct gas service via Algonquin Gas Transmission and evaluated cogeneration options for Phelps Dodge copper plant in Connecticut.

Developed inside-the-fence cogeneration and fuel strategy for Arizona paper mill.

Identified optimal cogeneration plant configuration and fuel supply for City of Holyoke municipal utility.

#### **FINANCIAL ANALYSIS & VALUATION**

Estimated ratepayer damages due to questionable inclusion of costs in the Environmental and Ecological Adjustment component of Cleveland Public Power retail rates for residential and commercial plaintiffs.

Compared power plant economics of dual-fuel capability versus firm transportation supply and documented fuel switching experience for the Eastern Interconnection Planning Collaborative (ISO-NE, PJM, TVA, MISO, and IESO) funded by U.S. DOE.

Financial and business evaluation of proposed electrical microgrid / cogeneration system in Brooklyn NY using innovative non-synchronous interconnection technology.

Assessed gas turbine market dynamics, commercial issues, and financial damages for lawsuit regarding turbine inlet fogging systems for enhancing output and efficiency.

Evaluated intended financing plan and resulting credit strength of proposed new owner of Entergy's merchant nuclear plants, including Vermont Yankee, for the Vermont DPS; prepared information requests and rebuttal testimony.

Prepared cogen investment analysis for Massachusetts Institute of Technology.

Co-authored fair market value appraisals of five 22 MW GWF Bay Area fluidized bed coke-fired power projects and the 209 MW Kalaeloa oil-fired cogeneration plant in support of financial transactions.

Advised lessor on buyout offer of wood-fired plant including future residual value.

Quantified the financial implications of purchasing an undivided equity interest in the River Bend nuclear plant in light of revised operating & maintenance expenses, revised administrative & general expenses, and changing market conditions for PECO Energy.

Evaluated pro forma assumptions and risk / returns of Malaysian power projects.

Reviewed financial feasibility of clean coal demonstration projects for DOE.

Managed steam purchase contract evaluation and internal cogeneration feasibility study for petrochemical producer in The Netherlands.

Proposed project financing options for Elektrenai plant modernization in Lithuania.

Power and fuel negotiation support for Cumbria Power, Ltd., the first English IPP.

Developed economic assumptions, financial pro formas, and equity return / risk profiles for numerous proposed power projects for ThermoElectron and clients.

Prepared long-term financial and rate forecasts of Pacific Gas & Electric for state commission filing.

Demonstrated economic viability of 10 MW diesel-based cogeneration system constructed for Hoffman Laroche in New Jersey.

#### **GENERATION PLANNING / RESOURCE ECONOMICS**

Audited Florida Power & Light's resource plan, including fuel, load, and generation.

Techno-economic cogeneration feasibility study for Algonquin Gas Transmission.

Valued existing generating plant based on alternative peaking capacity for Delmarva Power & Light.

Forecasted avoided energy / capacity costs for domestic third-party generators.

Supervised life cycle power plant economic analysis for a Fuel Use Act application.

Compared historic and projected electric use by manufacturing industry for EPRI.

## **LITIGATION SUPPORT AND EXPERT TESTIMONY**

Submitted expert report, Evaluation and Comparison of US Wind and Skipjack Proposed Offshore Wind Project Applications, and testified before the Maryland Public Service Commission on power, economic, and environmental impacts (Case 9431).

Submitted Prefiled Testimony and testified before the Rhode Island Public Utilities Commission on the proposed Clear River Energy Center on behalf of the DPUC; addressed need and cost issues as directed by the Energy Facility Siting Board (Commission Docket 4609).

Direct and Supplemental Testimony filed with the Vermont Public Service Board on forecasted power market, air emission, and electric rate impacts due to renewable energy imports via the proposed 1,000 MW HVDC New England Clean Power Link for TDI-NE's application for a Certificate of Public Good (Docket No. 8400).

Testified before the Maryland Public Service Commission on LAI's comprehensive procurement report and recommended revisions to the Code of Maryland Regulations to implement the Offshore Wind Energy Act of 2013 (Docket RM51).

Submitted written testimony on financial, rate, operational, and regulatory impacts to the Mississippi Public Service Commission on the proposed spin-off of Entergy transmission assets and merger with ITC Holdings for the Mississippi Public Utilities Staff (Docket No. 2012-UA-358).

Submitted Supplemental Testimony and testified on economics and risk allocation of the NSP Maritime Link Compliance Filing, including the proposed Energy Access Agreement, before the Nova Scotia Utility and Review Board (Matter No. M05419).

Submitted Testimony and testified on behalf of the Vermont DPS addressing the reliability, market price, socio-economic, and environmental impacts of Vermont Yankee's potential retirement to the Vermont Public Service Board (Docket No. 7862).

Provided expert witness report on the gas turbine power market and turbine inlet cooling competition in legal malpractice suit concerning inlet fogging systems in the Ninth Judicial Court, Orange County, Florida (Case No. 2011-CA-004008-O).

Submitted expert report on alternative resource options, system reliability, market price, and socio-economic impacts of Vermont Yankee's potential retirement for the Vermont DPS in US District Court, District of Vermont (Civil Action No. 11-cv-99).

Submitted Affidavit to FERC on NYISO Demand Curve Reset parameters (excess capacity, system deliverability upgrades, and cost escalation rate) for Capability Years 2011/12 - 2013/14 on behalf of NYC generators (Docket ER11-2224-0000).

Provided an Expert Report on the Deepwater Block Island offshore wind farm contract price and electric impacts and an Advisory Opinion on regional economic impacts for the Rhode Island Economic Development Corporation; testified before the Rhode Island Public Utility Commission (Docket No. 4185).

Testified before the Virginia State Corporation Commission on behalf of Shell Energy NA regarding DVP's 2009 Integrated Resource Plan (Case No. PUE-2009-00096).

Submitted expert report and testified before the Virginia State Corporation Commission on behalf of Shell Energy NA regarding Dominion Virginia Power's 2007 Solicitation for 2011 Unit Capacity on RFP structure and bid evaluation issues (Case PUE-2008-00014).

Prepared information requests, submitted expert testimony, and testified before the Vermont Public Service Board on behalf of the Vermont DPS regarding the proposed restructuring of Entergy's merchant nuclear generation assets (Docket No. 7404).

Submitted expert report on behalf of generator group; participated in FERC Technical Conference on proposed Reliability Pricing Model mechanism to set PJM market capacity prices (FERC Dockets Nos. EL05-148 and ER05-1410).

Prepared expert report on New York and New England capacity market mechanisms and plant valuation impacts for the Mirant Corporation Equity Committee in US Bankruptcy Court (Case No. 03-46590).

Submitted FERC affidavit regarding gas turbine engineering and economic parameters to reset locational ICAP demand curve; represented NYISO at FERC Technical Conference (FERC Docket No. ER05-428).

Expert witness regarding Salton Sea binary cycle geothermal EPC contract performance and consequential damages based on plant production and market power rates before the American Arbitration Association.

Expert witness testimony for the Bridgeport RESCO waste-to-energy facility at the Connecticut PURA re avoided cost pricing in the deregulated energy market (Docket 99-03-35REO3).

Tax valuation support for gas and electric assets for Yankee Gas Company and The Connecticut Light and Power Company in Connecticut Superior Court (Docket No. CV 95-0072561S).

Expert witness report supporting PECO Energy (Exelon) decision to cancel purchase of equity interest in the River Bend nuclear plant in US District Court for the Middle District of Louisiana (Adversary Proceeding No. 98-477-B-M3).

Provided expert witness report and testified regarding contractual benefits of major coal plant turbine upgrade for Mechanical Plant Services, Inc. based on future power market values in US District Court for the Middle District of Florida, Orlando Division, (Case No. 6:99-CV-

76-ORL-22A); accepted as an expert in “power project cost analysis and power price forecasting.”

Expert witness regarding economic feasibility, financing, and profitability of Mid-Atlantic Energy’s proposed cogeneration plant in West Virginia Circuit Court (Civil Action No. 95-C-214M).

Presented testimony on the relationship of independent power development fees to project capital costs before the American Arbitration Association.

## **PRESENTATIONS & PUBLICATIONS**

“Competitive Power System Design & Operation” lecture at Zürcher Hochschule für Angewandte Wissenschaften (ZHAW) Department of Applied Sciences, May 2014-2017 and at the Hochschule Luzern (HSLU) 2014.

“East Coast Policies, Procurements, and Lessons Learned,” International Offshore Wind Partnering Forum, Newport, RI, October 2016.

“A Closer Look at Transmission Drivers in New England,” TransForum East Conference, December 2015.

“Electric System Operations and Structures” lecture at Merrimack College, November, 2015.

“Surprising Takeaways from a New Power Market Analysis” article on onshore and offshore wind economics with Dr. Angeliki Rigos, published in North American Windpower, September 2015.

“Wind Power: Economic, Environmental, Technical, and Geopolitical Considerations” lecture at HSLU, May 2015.

Presentation on “Project Application Requirements, Evaluation Criteria, and Selection” to the International Offshore Wind Partnering Forum sponsored by the Business Network for Maryland Offshore Wind, November 13, 2014.

“Power Project Economic Evaluation” lecture at Merrimack College, November 2013.

Co-authored article “Working Jointly to Develop Offshore Wind” on socio-economic benefits and coordinating offshore wind development policies, published in North American Windpower, October 2012.

Speaker on cross-industry panel: “Let’s Talk Transmission: Unplugged!” at the NARUC 2012 Summer Committee Meetings, July 2012.

Primary author of “Green Gridworks” lead article on transmission integration of renewable resources, Public Utilities Fortnightly, February 2012.

Panelist at the Northeast Offshore Wind Summit addressing renewable resource penetration and outlook in the ISO-NE electricity market, 2010.

Presentation to NYISO Installed Capacity Working Group on peaker proxy technology / cost / performance, deliverability, site requirements, availability, etc, 2010.

Moderated panel on ISO-NE's Forward Capacity Market mechanism at the Northeast Energy & Commerce Association's 2009 Power Markets Conference.

Gas and electric market interdependency panel moderator at Platt's 4<sup>th</sup> Annual Northeast Power Forum, 2009.

Sponsor for the Northeast Energy and Commerce and Association conference "Northeast Capacity Markets"; panel moderator on generation entry / attrition, 2007.

Conference organizer and moderator for "Capacity Markets – Impacts on Assets and Power Pricing" regarding generation and transmission investment in ISO-NE, NYISO, and PJM, 2007.

Conducted workshop "Forecasting Capacity Prices in the Northeast" and moderated panel on generation financing at Infocast Northeast Power Supply Forum, 2006.

"Financing Projects with ICAP Revenues", Infocast Power Financing conference, 2004.

Panel moderator on "New England and Canadian LNG Projects", Infocast Atlantic Coast LNG Conference, 2004.

Speaker, "Power Sales Contract Restructuring Issues", at Infocast Asset Optimization and Portfolio Management Conference, 2003.

Panelist on "Southwest Connecticut Congestion", 10<sup>th</sup> Annual New England Energy Conference, 2003.

"Fuel and Power Contracting", Int'l District Energy Association Conference, 2002.

"Contract Restructuring", Infocast QF & IPP conference, 2001.

"Successful Valuation and Value-Creation of Transmission Assets", Infocast Electric Asset & Portfolio Valuation conferences, 2001.

"Evaluation of Repowering the Cabot Street Steam Station" using gas turbine technology, International District Energy Association conference, 2001.

"Plant Repowering" at the Infocast Plant Acquisition conference, 2000.

"Equipment Performance Impacts", Infocast Merchant Peaking Plant conference, 2000.

"The Pros and Cons of Repowering" in Competitive Utility, 2000.

"The First Wave" (initial divestiture results) 1998 and "Gas versus Coal" (techno-economic study) 1995, Independent Energy magazine.

"Evaluating Technical and Construction Risk" and "The Due Diligence Process", classes and case studies on for the Infocast Project Finance Institute, 1996-1998.

Non-utility generation and project financing classes at Stone & Webster Utility Management Development Program, 1989-96; General Electric, 1991-94; IBM 1994.

"Self Generation under Competitive Bidding", 1989 Cogen & IPP Congress.

## EDUCATION

International Gas Turbine Institute course  
Basic Gas Turbine Technology, 1996

Kennedy School (Harvard University) courses  
International Political Economy, 1993  
International Geopolitics of Oil, 1982

Wharton Graduate School (Univ. of Pennsylvania)  
MBA in Finance / Operation Research, 1978

Brown University  
Sc.B. in Applied Mathematics / Economics, 1976

## MISCELLANEOUS

Member of the Newton Solid Waste Commission, 2011-2015

Board of Directors, Northeast Energy and Commerce Association, 2007-2011.

President and volunteer, Watertown Recycling Center; served on Watertown Trash and Recycling Committee that initiated curbside pickup 1990-1996.

Adjunct faculty lecturer in finance, Golden Gate University, 1979-1980.

Optimum yield resource management, National Oceanic and Atmospheric Administration, 1977.

Member of Mayor's Waterfront Development Committee and Interface: Providence urban design team, 1974-1976.