Public Space Committee 14 March 2019
c/o DDOT Public Space Regulation Division
1100 4th Street SW, Room E-360
Washington, D.C. 20024

RE: Comments on the Small Cell Guidelines

To the District Public Space Committee,

My name is Commissioner James Harnett — I represent SMD 2A08, the district that encompasses most of the George Washington University campus in Foggy Bottom. I submit the following comment on behalf of my district and in my official capacity as a Commissioner in the Government of the District of Columbia.

I support broadband infrastructure deployment with the goal of ensuring that residents, businesses, and public safety operations in the District of Columbia have reliable access to the latest wireless telecommunications network technology and broadband communication services. Advancements, as they relate to 5G technology, are exciting and should be widely adopted for everyone in the District to take advantage of such networks. Small Cell technology promises to be incredibly dynamic and offer unparalleled network connectivity, but the technology is still undergoing rapid evolution as we find ourselves heading towards implementation. Outlined in this document are the reasonable considerations I believe the District Department of Transportation ("DDOT") Public Space Committee should make before adopting the proposed Second Draft Small Cell Design Guidelines ("Guidelines").

The Public Space Committee and the Office of the Chief Technology Officer ("OCTO") should, before the Guidelines are adopted, seek comments and recommendations from the D.C. Urban Forestry Advisory Council on the effects of small cell deployment on the District's tree canopy goals. The proposed Guidelines should additionally be submitted to the Historic Preservation Review Board, the United States Commission of Fine Arts, and the National Capital Planning Commission, for reviews within their jurisdictional authority. The Public Space Committee should review reasonable alternatives for locating Small Cell 5G network facilities outside of creating new standalone poles, including consideration of the use of rooftops, street and sidewalk manholes.

The Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Declaratory Ruling and Third Report and Order, September 26, 2018 ("FCC Order") states:

> "These new services can unleash a new wave of entrepreneurship, innovation, and economic opportunity for communities across the country. The FCC is committed to doing our part to help ensure the United States wins the global race to 5G to the benefit

of all Americans. We proceed by drawing on the balanced and commonsense ideas generated by many of our state and local partners in their own small cell bills. Some states and local governments have acted to facilitate the deployment of 5G and other next-gen infrastructure, looking to bring greater connectivity to their communities through forward-looking policies.";

The Public Space Committee should incorporate of reasonable design alternatives in keeping with goals outlined by the Federal Communications Commission. The use of standalone poles, in Foggy Bottom and the West End, should be a last resort for Small Cell 5G network coverage. MLA signers asserting a need for additional Small Cell 5G network facilities for a specific area should be required to demonstrate a good faith effort:

1. By conducting a wireless site survey, Small Cell 5G networks and their spectrums need to be designed, tested, and deployed carefully and efficiently;
2. Overlapping coverage areas result in interference that reduces the Quality of Experience;
3. Hoteling shall be encouraged as it's the most efficient use of standalone poles in providing Small Cell 5G network coverage;
4. As interference, generated by passive network components such as antennas and cables, may also reduce data speeds and therefore the entire delivery of Small Cell 5G to the Foggy Bottom and West End community; and
5. In the event the applicant seeks to install a wireless telecommunications facility to address service coverage concerns, full-color signal propagation maps with objective units of signal strength measurement that show the applicant's current service coverage levels from all adjacent sites without the proposed site, predicted service coverage levels from all adjacent sites with the proposed site, and predicted service coverage levels from the proposed site without all adjacent sites.

The Public Space Committee should set the maximum height of standalone poles to not exceed the height of any prevailing streetlights. The preferred locations for Small Cells infrastructure, in order, should be set as:

1. Rooftop locations;
2. Existing locations of non-Small Cell 5G network facilities;
3. Below streets such as manhole covers; and
4. Standalone poles on streets or in alleys.

The Public Space Committee should also incorporate the following stipulations into the Guidelines:

1. A 3-month deadline shall be set by the Public Space Committee for the MLA signers to file for a permit to install Small Cell 5G facilities. No new applications should be considered for six months thereafter. The District should seek to avoid a slow series of applications over multiple months which renders it impossible to assess total impact;

2. A full-scale mockup of Small Cell 5G installations (including any OCTO WiFi equipment) by each MLA signer should be constructed for review, comments, and CFA approval prior to consideration of initial applications for Foggy Bottom and the West End, including alleys, which are important in defining the overall historic character of the setting of historic districts. View-sheds and visual relationships are important features which should be preserved. Therefore all pole mounted equipment (including any OCTO WiFi equipment) should be located taking into consideration visibility from the properties surrounding the alleys;
3. Photo Simulations: For all applications, photo simulations from at least three reasonable line-of-site locations near the proposed project site (including any OCTO WiFi equipment);
4. The exact specifications, size, color, diameter, and finish of all Small Cell 5G equipment, including antennas, antenna-related equipment, cabinets, shrouds, and conduit (no exposed wiring), should be specified and mounting hardware should not exceed the dimensions of the approved mock-up (including any OCTO WiFi equipment);
5. All Small Cell equipment shall be painted to match the color of the poles;
6. MLA signers be required to submit yearly photographs of all Small Cell 5G installations to ensure compliance;
7. Real-time colored maps of all proposed and existing Small Cell 5G pole locations shall be made publicly available. The Guidelines shall require the MLA signers to utilize the District of Columbia's ArcGIS online tool ("DC AGO");
8. The maps of Small Cell 5G network facilities shall contain detailed information on each location and shall include the MLA signer, date of installation and a link to dated photographs of the Small Cell 5G equipment, pole, antennas and other equipment (including any OCTO WiFi equipment);
9. Height, diameter, and design of the facility, including technical engineering specifications, economic and other pertinent factors governing the selection of the proposed design, together with evidence that demonstrates that the proposed facility has been designed to be the least visible equipment within the particular technology the carrier chooses to deploy. A layout plan, section, and elevation of the tower structure shall be included;
10. When seeking the encroachment permit, the applicant shall provide address labels for use by the city in noticing all property owners within 500 feet of the proposed installation. The city shall mail a notice regarding installation of the mock-up at least five business days prior to the installation of any new standalone infrastructure;
11. All Small Cell 5G facilities (including any OCTO WiFi equipment) shall be required to perform pre-and post-installation radio frequency emission measurements on a minimum of three selected nodes, yearly, within the small cell system to confirm compliance with Federal Communications Commission (FCC) regulations, as the Foggy Bottom and West End community will be subjected to involuntary radio frequency (RF) exposure and this exposure may have negative effects for people with radio frequency emission disabilities or sensitivities. Therefore the signers of the MLA shall specify minimum approach distances to the general public as well as electrical and

communication workers that are not trained for working in a radio frequency emission environment (uncontrolled) when accessing the pole by climbing or bucket;

12. For a Small Cell facility that is not categorically excluded under the FCC regulations for RF emissions, the applicant shall submit an RF exposure compliance report prepared and certified by an RF engineer acceptable to the city that certifies that the proposed Small Cell facility, as well as any Small Cell facilities that contribute to the cumulative exposure in the subject area, will comply with applicable federal RF exposure standards and exposure limits;
13. The RF report shall include the actual frequency and power levels (in watts effective radio power "ERP") for all existing and proposed antennas at the site and exhibits that show the location and orientation of all transmitting antennas and the boundaries of areas with RF exposures in excess of the uncontrolled/general population limit (as defined by the FCC) and also the boundaries of areas with RF exposures in excess of the controlled/occupational limit (as defined by the FCC). Each such boundary shall be clearly marked and identified for every transmitting antenna at the project site;
14. The DDOT Associate Director of Public Space shall be authorized to retain on behalf of the city an independent, qualified consultant to review any application for a Permit for Small Cell 5G equipment. The review is intended to be a review of technical aspects of the proposed wireless telecommunications facility and shall address any or all of the following:
    a. Compliance with applicable radio frequency emission standards;
    b. Whether any requested exception is necessary to close a significant gap in coverage and is the least intrusive means of doing so;
    c. The accuracy and completeness of submissions;
    d. Technical demonstration of the unavailability of alternative sites or configurations and/or coverage analysis;
    e. The applicability of analysis techniques and methodologies;
    f. The validity of conclusions reached or claims made by the applicant;
    g. The viability of alternative sites and alternative designs; and
    h. Any other specific technical issues identified by the consultant or designated by the city.
15. The cost of this review shall be paid by the applicant through a deposit pursuant to an adopted fee schedule resolution. No Permit shall be issued to any applicant which has not fully reimbursed the city for consultant costs;
16. Ensuring the Health and Safety of our Community is not a prohibition on any interstate or intrastate telecommunications service, but rather the exact, proper and foreseeable function of the Public Space Committee. Indeed the Public Space Committee has disclosed regulations for the use of public rights-of-way on a nondiscriminatory basis. All MLA signers and competing wireless services shall be treated equally, in furtherance of the application of the FCC Order;
17. Small Cell 5G facilities or installations should be located at intersecting residential property lines (including any OCTO WiFi equipment);

18. Small Cell 5G facilities or installations in residential neighborhoods shall be located to reduce any obstructions to property sightlines as much as possible (including any OCTO WiFi equipment);
19. When installed in a business, commercial district, and/or mixed-use zoned area, care should be taken to locate the Small Cell 5G network facilities (including any OCTO WiFi equipment) or installations so as to avoid negatively impacting businesses;
20. Small Cell 5G facilities (including any OCTO WiFi equipment) or installations should not be located in front of storefront windows, sidewalk cafes, outdoor patio seating, primary walkways, primary entrances, or exits, or in such a way that would impede deliveries to the establishment. Small Cell 5G network facilities or installations shall be located between properties as much as possible;
21. Do not locate facilities to block views to and from buildings windows;
22. Any additional poles that are installed in Foggy Bottom and the West End (including any OCTO WiFi equipment) should be required to conform to the illustrations and specifications set forth in the Guidelines, unless any modifications are approved on an individual case-by-case basis by the Public Space Committee, the United States Commission of Fine Arts, and the Historic Preservation Review Board (if necessary), as appropriate;
23. When Small Cell 5G technology becomes obsolete and/or the pole owners cease conducting business in the District of Columbia, any additionally constructed poles shall be removed within 60 days (including any OCTO WiFi equipment);
24. Landscape plans that involve disturbing our brick pavers shall include detailed information and if any brick pavers are replaced the MLA signers shall be required to reuse the existing pavers or replaced with molded brick pavers. These landscape plans shall have to be considered by the affected ANC before any Small Cell 5G installation work can begin;
25. The Public Space Committee shall closely examine all soil sites to determine whether the installation of Small Cell 5G Poles, including but not limited to; structural components, base, equipment cabinet, couplers, anchor bolts, and other attachments to be used shall be designed for a minimum of 115 MPH wind velocity. These specifications should be included in the Guidelines;
26. Vehicular Crash Protection: Just as ensuring these poles placed poles in our neighborhoods will not fall and crash into our townhomes, in wind gusts, the Public Space Committee must ensure the crashworthiness, as these poles could be placed very near our outdoor restaurant patios and sidewalk cafes. All specifications shall be included in the Guidelines;
27. The Public Space Committee should incorporate, in the Guidelines, that the Office of the Chief Technology Officer (OCTO) WiFi hardware concept design for the hardware that is proposed to attach to the small cell poles:
    a. Use of exact measurements;
    b. Context will be provided to understand the relationship of the WiFi attachment to the surrounding area;

    c. The surrounding area shall be shown using color photos, computer simulations and detailed color maps; and
    d. All technical specifications shall be presented such as attaching hardware, wiring or conduit (no exposed wiring or conduit allowed), shielding, power supply, and antenna configurations.

28. The following shall require a 30-day notice to the affected ANC and the specific single member district commissioner:
    a. Review of the first wireless facility in a neighborhood;
    b. DDOT notice all adjacent property owners on both sides of the block;
    c. Subsequent small cell facility installations;
    d. All small cell facility maintenance;
    e. All small cell facility upgrades;
    f. Any location changes to existing small cell facility deployments; and
    g. The Permit application should require a certification applicant that it has complied with these notification requirements.

Any other future changes to the Guidelines should require a 30-day notice to ANCs and the public. The PSC should incorporate the recommendations contained in this comment into the revised Second Draft Small Cell Design Guidelines, and then hold public hearings for community input, as soon as possible.

Thank you for your time and consideration.

Sincerely,

/s/

James Harnett
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Government of the District of Columbia
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