

Additional handouts
presented at Small Cell
Meeting

15 October 2018

Public Space Committee
DDOT Public Space Permit Office
100 4th St SW
Room 360
Washington, DC 20024

RE: Small Cells Draft Design Guideline Comments – Citizens Association of Georgetown

I am a Director, of the Citizens Association of Georgetown, and the Chair of its Historic Preservation and Zoning Committee. We support the Resolution the ANC 2E submitted re the Design Guidelines (October 3, 2018), and offer the Comments CAG submitted about the Design Guidelines (October 1, 2018), and the Resolution CAG submitted to DDOT (dated April 24, 2018) requesting DDOT to encourage applicants to seek CFA approval prior to installation of Small Cells in Georgetown. The Citizens Association of Georgetown (CAG) Board of Directors approved the latter two during two separate meeting of its Board.

The Citizens Association of Georgetown (CAG) is dedicated to the preservation, maintenance, and protection of the historic character of Georgetown, particularly the setting and the architectural features of buildings, historic sites, and landmarks in our National Historic Landmark historic district.

Georgetown remains a unique historic district defined by its architecture and that of its streetscape. Its relatively few street lamp poles and abundance of trees significantly characterize its streetscape setting. As in early preservation efforts, preservation of Georgetown today must extend beyond the built environment to its setting.

In finalizing the Small Cells Design Guidelines please consider the following comments – which represent my own views – in addition to CAG's formal comments to preserve Georgetown's unique character:

First, in response to a comment submitted by others stating a preference of a 20 ft. height maximum for small cells for "visual consistency with street lamps". I'm concerned that locating the bulky antennas at this height will detract from and obscure, the globes of the street lamps. They will also obscure cornice and entablature details that are considered highly significant characteristics of Georgetown's historic architecture. This would be damaging to perspectival streetscape views and also obscure views out to the streetscape from the second story windows. Locating the bulk of the antennas well above the 20-foot height instead, will mitigate those adverse effects, placing the bulk of the small cells above the parapets and eaves of the majority of Georgetown's houses.

I worry that the resulting potential visual and health concerns of small cells could drastically adversely affect the value of the individual properties adjacent to the small cells – this is backed by numerous studies which conclude up to a 20% drop in property values adjacent to cell towers. Could this potential deleterious effect be considered a "taking" because the potential future value of the property is constrained by the installation of a small cell?

I support the comments submitted by the ANC2E, CAG, Mr. Wilcox, and the Environmental Health Trust (on October 5, 2018) about health issues related Smalls Cells. EHT's comment that worldwide many regions are investing in wired fiber optic connections as a healthier, more cyber-secure alternative that offers faster service and increased capacity seems to be buttressed by Comcast's decision to stay out of the Small Cells race because their position is that they can offer what the other providers are promising using their existing infrastructure.

Finally. I support Commissioner Wilcox's comments about pursuing the feasibility of roof mounted 5G as an alternative to pole-mounted antennas prior to deployment of small cells in Georgetown. The 5G towers with a coverage range of 2000-3000 ft. that Verizon is touting and testing seemingly could well provide 5G access throughout the less than 6000 ft. x 4000 ft. area that Georgetown occupies. Benefits of roof mounted 5G towers over numerous added antenna poles include providing income streams to property

owners, preserving the setting of our historic community, and perhaps even our community's health.

Please make our support of the ANC's 2E's Resolution, CAG's Resolution and Small Cells Design Guidelines Comments, as well as those by Trees for Georgetown, and my own comments here, part of the formal record before the Public Space Committee.

U.S. COMMISSION OF FINE ARTS

ESTABLISHED BY CONGRESS 17 MAY 1910

401 F STREET NW SUITE 312 WASHINGTON DC 20001-2728 202-504-2200 FAX 202-504-2195 WWW.CFA.GOV

27 July 2018

Dear Mr. Acosta:

In its meeting of 19 July, the Commission of Fine Arts was pleased to hear an information presentation regarding the anticipated installation of small-cell telecommunications infrastructure throughout the District of Columbia. The Commission provided comments to assist in the development of guidelines intended to regulate the location and appearance of this equipment.

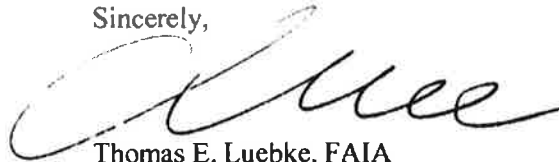
In their discussion, the Commission members commented on the great potential impact of this new infrastructure—a vast array of thousands of new poles, antennas, and associated equipment in public space across the city; they cautioned that many members of the community may be alarmed by this impact unless it is well controlled. They noted that this proposal for privately operated public infrastructure should be considered similar to other publicly regulated utilities, such as electricity, natural gas, water, and sewers; they emphasized that the small-cell project requires a public advocate to protect public values, not just a facilitator to implement private-sector enterprise. They requested the development of context-sensitive guidelines, such as those used by federal and local transportation agencies that modify standard engineering practices as appropriate for historic districts or sensitive environmental conditions.

The Commission members also raised the concern that this initiative is based on accommodating current technology that may soon become obsolete, leaving communities burdened with unnecessarily large and outmoded infrastructure. They emphasized that successful integration of this new technology into the public realm is a holistic design problem, and they encouraged the direct engagement of artists, architects, industrial designers, and other design professionals, both in the development of guidelines and in the design of the poles and equipment; they suggested that the project sponsors hold a design competition to develop the best solution.

For development of the guidelines, the Commission members supported the use of dedicated poles for this infrastructure and encouraged the maximum use of hoteling, where several vendors share installation sites to reduce the number of new poles; they noted the great impact from multiple poles in public space, especially on streets with narrow sidewalks. Likewise, they recommended that new infrastructure be located first in alleyways, not streets, to reduce visual impact; they also requested further study of the impact of equipment installed in close proximity to residential structures.

The Commission anticipates reviewing the work of the interagency committee as it is developed, as well as further submissions of small-cell installations that fall within its jurisdiction, as required by federal law, including the Shipstead-Luce Act and Old Georgetown Act. As always, the staff is available to assist you.

Sincerely,



Thomas E. Luebke, FAIA
Secretary

Marcel Acosta, Executive Director
National Capital Planning Commission
401 9th Street, NW, Suite 500-N
Washington, DC 20004

cc: Jeff Marootian, D.C. Department of Transportation
Eric Shaw, D.C. Office of Planning

U.S. COMMISSION OF FINE ARTS

ESTABLISHED BY CONGRESS 17 MAY 1910

401 F STREET NW SUITE 312 WASHINGTON DC 20001-2728 202-504-2200 FAX 202-504-2195 WWW.CFA.GOV

27 September 2018

Dear Mr. Marootian:

In its meeting of 20 September, the Commission of Fine Arts reviewed a proposal for draft guidelines addressing the installation of small-cell telecommunications infrastructure throughout the District of Columbia. The Commission endorsed a programmatic approach for the review of this initiative but did not take an action, providing the following comments to assist in the refinement of these guidelines.

The Commission members expressed appreciation for the continued development of the guidelines intended to regulate the location and appearance of small-cell installations, and they acknowledged the important comments provided by the public—which include concerns regarding aesthetics, public health, and the local and federal review process for this infrastructure. They noted the fundamental inconsistency between the elegance and precision of contemporary consumer cellular devices and the obtrusive appearance of the infrastructure systems required to support them; while most residents would welcome increased service capacity, there is little apparent support from the community for the imposition of more visual clutter in the public realm. They observed that the city's existing lampposts and fixtures were developed at particular times with particular performance standards, ranging from iconic early twentieth-century Beaux-Arts designs to more functional modern designs; they affirmed that these are not suitable for small-cell equipment installations. They therefore advised the development of an elegant and holistic design typology for the small-cell installations, rather than allowing a discordant kit of parts—antennas, equipment cabinets, and cables—to be clumsily attached to existing or new streetlight poles. They encouraged a more expansive study of best practices and design approaches for similar infrastructure in the U.S. and abroad to help develop a forward-looking solution that is not merely expedient but which appropriately integrates this technology into the public realm.

The Commission members offered several additional suggestions for the guidelines as they are refined, such as incorporating the matrix of allowable small-cell installations developed by the Commission staff. They also commented that the draft guidelines require further changes to meet the stated goal of treating all areas of the city equitably; they suggested consideration of applying consistent standards across the entire city, such as requiring underground equipment vaults in all locations. They noted that the city is composed of numerous types of public spaces with unique experiential qualities, and they advised the development of three-dimensional, parametric design drawings to test the proposed pole type, location, and spacing matrices set forth in the guidelines. They also requested the construction of full-scale mockups to evaluate the design details and overall impact of the complete assemblies.

The Commission anticipates the continued review of the guidelines for this major public infrastructure project and encourages discussions with other stakeholders as the project progresses through the review process. As always, the staff is available to assist you.

Sincerely,

A handwritten signature in dark ink, appearing to read 'T. Luebke', written in a cursive style.

Thomas E. Luebke, FAIA
Secretary

Jeff Marootian, Director
D.C. Department of Transportation
55 M Street, SE, Suite 400
Washington, DC 20003

cc: Marcel Acosta, National Capital Planning Commission
Peter May, National Park Service
Mina Wright, General Services Administration
Eric Shaw, D.C. Office of Planning



IN REPLY REFER TO:
NCPC File No. 7994

October 15, 2018

Public Space Committee
Government of the District of Columbia
Department of Transportation
Public Space Regulation Administration
1100 4th Street, SW
Washington, DC 20024

Re: Small Cell Infrastructure Design Guidelines – NCPC Staff Comments

To Whom It May Concern:

Thank you for the opportunity to provide comments on the draft Small Cell Design Guidelines, dated August 24, 2018. We appreciate the close collaboration of the District Department of Transportation (DDOT) staff, and other local and federal agencies through this process. Their thoughtful questions and insight, along with NCPC staff analysis, have informed our comments today. These comments do not reflect the Commission's official position but are a preview of the issues staff will bring to the Commission in a few weeks at its November meeting.

NCPC staff recognize the growing demand for wireless technology, and more importantly, that the need to relieve congestion on existing networks is essential for people living and working in Washington, DC. We are also aware that the installation of small cell infrastructure will affect the function and aesthetics of the public spaces we experience every day. There are multiple applications for this infrastructure, such as attaching to existing streetlights or utility poles, integrating the equipment into some types of street furniture, employing standalone pole installations and possibly above ground equipment cabinets. There are also multiple providers, who need to install such infrastructure, increasing the overall demand on our public spaces.

Balancing the need to accommodate increasing cellular demand while preserving public space character and function is critically important, as is the need to design and place the proposed infrastructure in an appropriate way. This is especially true in Washington, DC, the nation's capital, where the public spaces, both streets and reservations, are defining elements of the city.

As the federal planning agency for the nation's capital, NCPC has a focused interest on preserving and enhancing the form, character and experience of the nation's capital, particularly within the historic L'Enfant City and around the significant concentration of federal interests and prominent national resources found in the core of Washington, DC. These include the views and setting of the U.S. Capitol, White House and National Mall, nationally significant civic spaces and institutions, national memorials and parks, and those streets, avenues and reservations (and the experiences) that link these elements and reflect the framework of the original Plan of the City of Washington.

Study Area of Federal Interest around the National Mall

Given this context, over the past month, NCPC staff undertook an evaluation of the Small Cell Design Guidelines as currently drafted, to understand potential impacts to the federal interest. We selected a study area (see attached map), that focuses on the area around the National Mall and those areas with the highest concentration of federal facilities and other areas of national importance, including museums, memorials and open spaces. The study area also includes a number of important streets that provide critical views and vistas to and between landmarks, such as the White House and U.S. Capitol.

Through field visits and geographic information system (GIS) analysis, staff evaluated potential small cell infrastructure locations as would be permitted by the guidelines, including installations on existing poles and well as new standalone poles. The attached map shows the results of this work. The sequence of steps that NCPC staff used (including field studies and GIS analysis) to map the draft guidelines are described in Appendix A. A summary of the draft guidelines regulating criteria that we used to determine the allowable locations of small cell infrastructure is also described in Appendix A. This process informed our initial observations, identified below, which will form the basis for additional recommendations in the future.

Initial Observations of the Draft Guidelines

As DDOT has recognized with the protection of federal buildings and reservations in the draft guidelines, the study area in the attached map is inherently unique in the District due to the unprecedented number of monumental beaux art buildings, historic Washington Globe and Twin-20 light fixtures, landscaped building yards, terminating viewsheds, integrated perimeter security, and tree coverage. Every aspect of the public realm is purposely planned to reflect its role as the seat of the nation's capital, which reflects its national importance. We truly appreciate the sensitivity that the draft guidelines show for federal properties, both buildings and reservations. We also note that this might result in areas without enough small cell coverage based upon statements by providers indicating they need increased coverage downtown due to demand.

Overall, the application of the draft guidelines indicates that there are possible coverage gaps around the National Mall, including the Federal Triangle, portions of the Northwest Rectangle, as well as the Southwest Federal Center. This is largely because the draft guidelines do not allow small cell infrastructure in front of federal buildings or adjacent to reservations. Such infrastructure is also not allowed on Washington Globe or Twin-20 light fixtures (a guideline that staff strongly supports) which are the predominant light pole in the study area. Therefore, the challenge is how to create a set of guidelines for this unique area around the National Mall that allows for modern technology and innovation while preserving the defining characteristics of the nation's most important public realm and buildings. In preparation for our Commission's review of the guidelines on November 1, NCPC staff will analyze the guidelines with regard to the following:

- *Spacing and Frequency of Standalone Poles* – Our analysis indicates that new standalone poles tend to cluster along certain block faces, while other block faces may have less due to a combination of the various criteria regarding setback and spacing. The introduction of new poles in this study area, in conjunction with existing streetscape elements, could contribute to additional visual clutter in front of buildings and within view corridors. The size and repetition of the new poles may also feel intrusive to pedestrians and can appear quite relentless when interspersed with existing light poles. This may be particularly true in the study area due to the frequency of highly-designed streetscapes, perimeter security and other features that occupy the public spaces around most federal buildings.
- *Location of Standalone Poles with regard to Building Architecture and Entrances* – If the current guidelines allowed standalone poles in front of federal buildings, many could be located at the entrances to significant buildings, such as the National Archives, Department of Commerce, Portrait Gallery, and National Building Museum (if other criteria are met). This is largely because there are no trees in areas that are left open to preserve views to the building entrance and to accommodate high volumes of pedestrian traffic. The guidelines may also need to address how placement might affect or relate to the architectural style or features of our important civic buildings and public spaces.
- *Cabinetry and Related Equipment* – Given the unique historic setting of much of central Washington, DC and the presence of many nationally significant buildings and landscapes, we strongly support undergrounding cabinetry and other support equipment. Above-grade cabinetry would unnecessarily distract from the view of the many significant historic federal buildings and sites in and around the National Mall. It is our understanding that the providers have significant concerns regarding the vaulting of equipment. NCPC staff will look at the possible impacts of equipment above ground in this area.
- *Pole Attachments* – We understand that each telecommunication provider may have a unique antenna style and configuration. For example, antennae may be top-mounted or installed as a collar. Installations of varying designs on multiple poles within a block face may look disjointed or cluttered, particularly when set against the backdrop of monumental federal buildings. We reiterate the recent points made by the U.S. Commission of Fine Arts at their September 27, 2018 meeting when they “advised the development of an elegant and holistic design typology for the small cell installations...”

Additional Comments and Next Steps

Our Commission will provide a formal analysis and recommendations on the draft guidelines at their November 1, 2018 meeting. We anticipate that the Commission will make recommendations regarding potential revisions or clarifications to the guidelines informed by this analysis. Given the unique setting we have described, alternative solutions may be necessary, including a map designating allowable standalone pole locations to meet future coverage needs and to protect the nation’s most important

Public Space Committee

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public spaces. Thank you for the opportunity to provide comments on the draft guidelines. If you have any questions, please contact Matthew Flis at (202) 482-7236 or matthew.flis@ncpc.gov, or consult the NCPC website (www.ncpc.gov) for further information on our legislative authorities, Comprehensive Plan, or project submission/review process.

Sincerely,



For Diane Sullivan

Director, Urban Design and Plan Review Division

cc: Jeff Marootian, District Department of Transportation
Thomas Luebke, U.S. Commission of Fine Arts
Peter May, National Park Service
Mina Wright, General Services Administration
Eric Shaw, District of Columbia Office of Planning

APPENDIX A

NCPC Mapping Approach

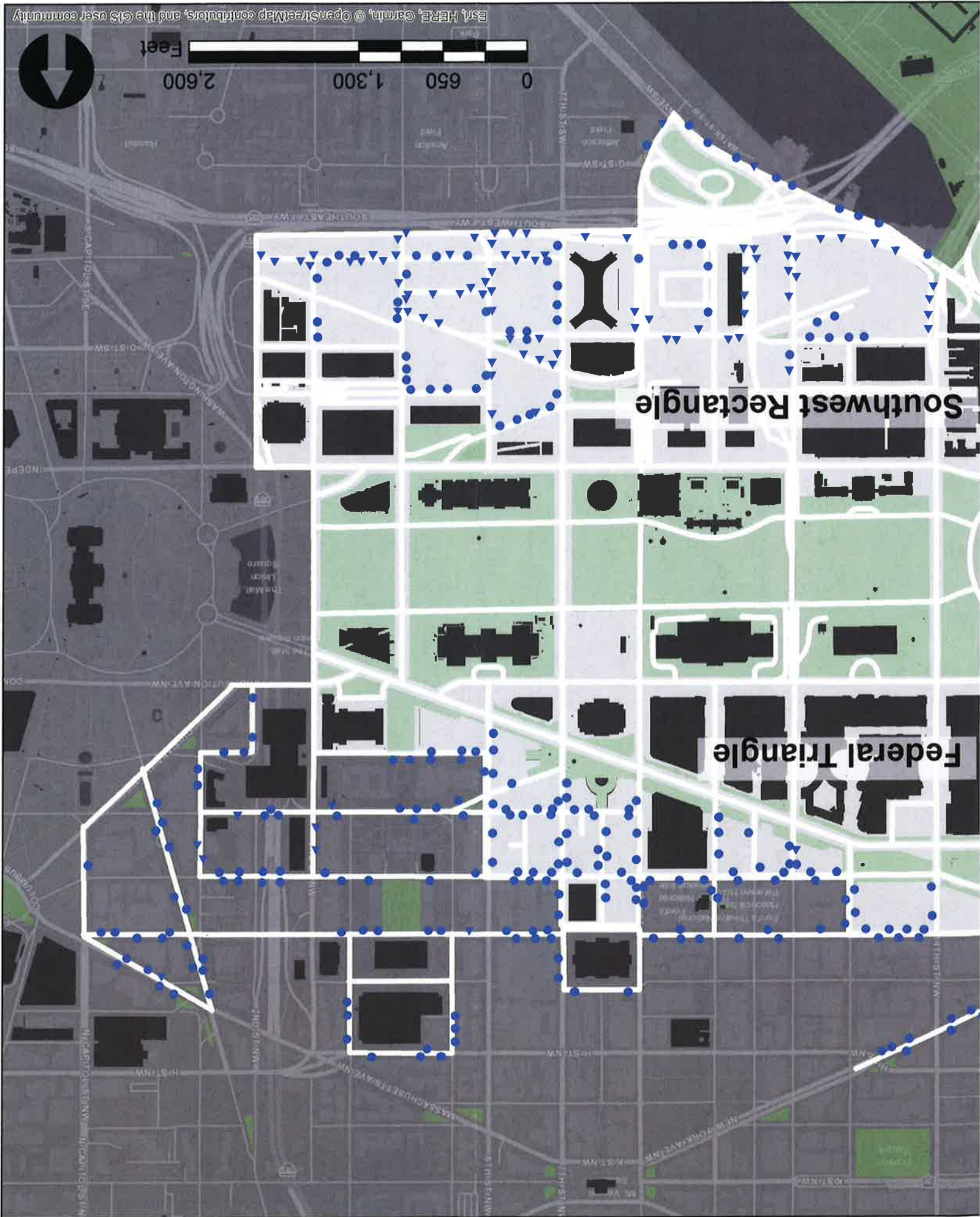
- To inform the study, a GIS base map was created, including information regarding building footprints, streets, trees and existing light poles.
- Staff then documented the block lengths within the study area, identified the number of small cell facilities that would be permitted in each block face, as well as the spacing requirement to be applied.
- Using the available data, as well as site visits, potential locations for facilities were identified, prioritizing the use of existing cobra poles or third-party poles with traffic signals, and then the placement of stand-alone poles.
- For the purposes of the study, NCPC staff did not look at poles in un-named alleys, as there were relatively few and based upon our understanding, they are not likely to be useful for coverage in high-density areas like downtown Washington, DC.
- To site new stand-alone poles, a number of important criteria were applied (see Summary of Criteria from the Draft Guidelines below)
- In addition to GIS data, staff utilized field visits to generally verify potential facility placement. However, given the broad nature of the study, some placement factors could not be evaluated, such as the presence of underground utilities. As such, the resulting analysis, shown in Map 2, represents a best estimation of where small cell infrastructure might be placed given the information currently available.

Summary of Criteria from the Draft Guidelines

- A. Small cell facility locations were evaluated with priority for existing poles, then moving to new stand-alone poles
- B. The following provisions apply to All Poles, Existing (Combinations) and New Standalone Poles:
 - Number, spacing and carrier limit – per blockface requirements in guidelines
 - Historic Preservation: poles not allowed within twenty feet (20') of a boundary line (property line) of a D.C. Landmark, a National Historic Landmark, or a property individually listed in the National Register of Historic Places.
 - Federal property: Poles not allowed within twenty feet (20') of a boundary line (property line) of a federal property.

C. New standalone poles must meet the following criteria:

- Alignment - align w/ existing streetlights and street trees as to maintain organization, keep out of pedestrian path
- Distance from building face - Maintain a minimum of ten feet (10') from any above grade building face, including projecting windows
- ADA - Do not violate applicable local or federal law, including the 1990 Americans with Disabilities Act
- Trees: a minimum of fifteen feet (15') from the tree trunk, measured from the outside of the tree
- Fire safety - minimum of six feet (6') from existing fire hydrants or buildings' fire connections.
- Light and traffic signal poles: a minimum distance of 10 feet (10') (8.2.8.2 pg. 14)
- Bike racks: a minimum of 3 feet (3') from bicycle racks and shall not impede the attachment of bicycles.
- Bikeshare stations – minimum of four feet (4') from the rear wheel of a docked bicycle rack, five feet (5') from each end of a station, do not install to prevent solar access to the solar panel.
- Clear Sight Line Distances Poles shall not be located within a 30' x 30' sight distance triangles at intersections, if rights-of-way are than 120' or less. A 50' x 50' sight triangle required for rights-of-way greater than 120'.
- Driveways – maintain a minimum of fifteen feet (15') as measured from the edge line of the driveway.



Public Space Committee
Hearing on Small Cell Wireless Facilities
October 15, 2018

Good afternoon. My name is Beth Purcell and I am testifying on behalf of the Committee of 100 on the Federal City. At the recent public hearings on small cells, many residents feared the proliferation of new poles on their blocks: one pole for each carrier. To respond to these concerns, this committee should encourage co-location or hotelling of small cell facilities -- that is, "mounting or installation of transmission equipment on a support structure for the purposes of transmitting and/or receiving radio frequency signals for communications purposes so that installation of a new support structure will not be required."¹ Co-location offers important benefits in reducing clutter, helping to preserve viewsheds, and reducing the risk to street trees.

Several years ago, when small cell was getting underway, other municipalities faced the challenge of small cell installations and developed licensing agreements and guidelines favoring co-location. For example, the Nashville, TN, Substitute Ordinance No. BL2016-415 (16 Nov. 2016) states:

Collocation [as defined above] or location on existing alternative structures is required where possible. Applicants for a new Telecommunications Facility must explore all collocation opportunities and opportunities to locate their antenna on existing alternative structures. Applicant shall utilize eligible support structures first and then alternative structures. Nashville ordinance No. BL2016-415, section 3.C.2.

Any carrier applying for a permit without co-location in Nashville must provide detailed justification:

- a. Such structure and technical information and other justifications as are necessary to document the reasons why collocation is not possible; and
- b. The applicant shall provide a list of all eligible support structures and alternative structures considered as alternatives to the proposed location. The applicant shall provide a written explanation why the alternatives considered were impossible due to technical or physical alternatives.
- c. Identification of any radio frequencies that would be utilized on the telecommunications facility. If any frequency is later changed, notice of the new frequency shall be provided to the Information Technology Services (ITS) Department.
- d. The applicant shall demonstrate that through location, construction, or stealthing, the proposed facility or network of facilities will have minimum visual impact upon the appearance of adjacent properties and the views and vistas from adjacent residential neighborhoods and pedestrian environment, while retaining viable opportunities for

¹ Nashville ordinance No. BL2016-415, section 1.
https://www.nashville.gov/mc/ordinances/term_2015_2019/bl2016_415.html

future collocation, provided applications for designs consistent with the design guidelines provided for in subsection 5.f of this section shall be deemed to have met the requirement of this subsection.

e. Documentation of the number of other users that can be accommodated within the design parameters of the telecommunications facility as proposed.

f. A statement indicating the owner's commitment to allow feasible shared use of the facility within its design capacity for collocation.

Nashville Ordinance No. BL2016-415, section 3 C.1.

- Crown Castle's installations in the District will co-locate Sprint and T-Mobile's small cell installations.
- In Ocean City, MD all four carriers on the boardwalk have co-located their small cell installations.
- While AT&T and Verizon have stated that they will not co-locate in Washington, they do co-locate in other cities.

Requiring co-location where feasible is consistent with the FCC's September 26, 2018 order in WT Docket No. 17-79, WC Docket No. 17-84.²

We urge the Committee to modify the Draft Design Guidelines to define co-location and work with the four carriers to amend the Master Licensing Agreement (MLA) to require co-location of small cell facilities unless carriers can justify separate installations. Even if technical barriers to co-location exist today, if co-location becomes feasible during the potential 20-year term of the MLA, District residents should receive the benefits of co-location.

Thank you for considering our views.

Beth Purcell, Chair, Parks and Environment Subcommittee
Committee of 100 on the Federal City

FCC WT Docket No. 17-79, WC Docket No. 17-84 (September 25, 2018), para. 87:

Like fees, compliance with aesthetic requirements imposes costs on providers, and the impact on their ability to provide service is just the same as the impact of fees. We therefore draw on our analysis of fees to address aesthetic requirements. We have explained above that fees that merely require providers to bear the direct and reasonable costs that their deployments impose on states and localities should not be viewed as having the effect of prohibiting service and are permissible. [footnote omitted]. Analogously, aesthetic requirements that are reasonable in that they are technically feasible and reasonably directed to avoiding or remedying the intangible public harm of unsightly or out-of-character deployments are also permissible. In assessing whether this standard has been met, aesthetic requirements that are more burdensome than those the state or locality applies to similar infrastructure deployments are not permissible, because such discriminatory application evidences that the requirements are not, in fact, reasonable and directed at remedying the impact of the wireless infrastructure deployment. For example, a minimum spacing requirement that has the effect of materially inhibiting wireless service would be considered an effective prohibition of service. [emphasis added]

Rebecca Medrano – resident of the Columbia Heights area

Good afternoon. My name is Rebecca Medrano and I am a Columbia Heights resident. Like many, I chose to live in Columbia Heights for its historic buildings, beautiful scenery, and lively streets.

We're lucky to live in DC because those descriptions happen to fit many of our city's neighborhoods. There's a lot of beauty and history throughout Washington, and it's our responsibility to preserve those aspects that make DC great.

That's why the transition to next-generation wireless infrastructure is so encouraging. Small cells are designed to be un-intrusive and blend into the existing surroundings. A DC resident or visitor would likely never notice these little devices unless they specifically went looking for them.

Historically, there has been a tradeoff between sacrificing community aesthetics for necessary network infrastructure. Thankfully, small cells eliminate the competition between a beautiful neighborhood and a well-functioning wireless network.

As with many urban residents, I also chose to live in DC for its forward-leaning culture. This means embracing the future, and 5G is certainly part of that future.

We want to see our city at the forefront of offering the latest in revolutionary technology. That's why I urge you to prioritize a speedy small cell deployment in developing standards for these necessary devices.

Thank you for your attention.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Rebecca Medrano', with a stylized, cursive script.

Rebecca Medrano
Resident, Columbia Heights

Kerb Technologies, Inc.
2055 L Street NW
Washington, DC 20036



Hello. My name is Stephen Buko and I am the Co-founder and CEO of Kerb, a DC-based startup that uses technology to measure sidewalk foot traffic for our local clients, identifying ways to grow their business.

Whether we're upgrading our platform, transferring data, or performing analytics, reliable and speedy connectivity is at the heart of our business. I wanted to speak today because 5G will be key to future online connectivity.

As an entrepreneur, I'm excited about the ways 5G could improve the way we – and technology in general – operate. Whether it's offering instantaneous data analysis or optimizing our foot traffic collection routes, there's a lot 5G can offer.

While our business relies on HD cameras to offer our service, 5G will rely on a dense network of small cells. Some people think the transition to 5G is somewhat straightforward – but small cell deployment has the potential to be a drawn-out process.

I believe it's important that we do what we can to expedite small cell buildout as much as we can. 5G will be integral to the health of DC's startup community, and we should strive to be among the first cities to offer a reliable 5G network.

Thank you for the opportunity to speak. I hope you will develop small cell standards that optimize, rather than impede, deployment.

A handwritten signature in black ink, reading "Stephen Buko". The signature is fluid and cursive, with a large, stylized "S" and "B".

Stephen Buko

Kerb - CEO

www.kerb.ai



October 5, 2018

DC Department of Transportation
Public Space Regulation Administration
1100 4th Street SW, Room 360
Washington DC, 20024

Dear DC Public Space Committee,

At the DC Chamber of Commerce, we're committed to advocating for business-friendly policies with the DC Council and the Office of the Mayor. Our goal is to work collaboratively to make the District more attractive and to remain competitive in the region, nationally and globally.

Just last week, thanks to the Mayor's leadership and the participation of so many individuals and organizations, the #WeDC Fest was held to "showcase collaboration and innovation in the world's most powerful global city."

The event created an opportunity to show the world that our City is the Best Start up hub, among the best places to live, best tech city for women, a top global city for entrepreneurs and many more accolades.

If we want to maintain our leadership position today and into the future, we need to make sure our government policies will welcome continued investment, especially in our technology infrastructure.

People are using their smartphones, tablets and mobile devices more than ever before. Data traffic on wireless networks has grown exponentially in the past decade – and it will continue to grow as more devices – from cars to trash cans to water pipes – are connected to the Internet and as businesses and individuals use their devices to stream video.

To meet this demand – and to prepare for future technologies - wireless carriers need to install equipment known as small cells. These antennae can be attached to existing utility poles, street lights or other structures to enhance mobile voice and data services in a defined area.

We know that District leaders have been working hard on establishing rules for this new technology, but the lengthy process is delaying investment in our City. We would welcome the opportunity to work with you to expedite this process so that we can help DC maintain its place as a global technology leader.

We thank you for considering this request. If you have any questions or need further clarifications, please contact Erika Wadlington, Director of Public Policy & Programs at ewadlington@dcchamber.org or 202-624-0613.

Sincerely,

Vincent B. Orange, Sr.
President & CEO



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