Nos. 19-70213, 19-70124, 19-70125, 19-70136, 19-70144, 19-70145, 19-70146, 19-70147, 19-70326, 19-70339, 19-70341, and 19-70344

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

SPRINT CORPORATION,

Petitioner,

v.

FEDERAL COMMUNICATIONS COMMISSION and UNITED STATES OF AMERICA,

Respondents.

On Petitions for Review of Orders of the Federal Communications Commission

RESPONDENTS' EXCERPTS OF RECORD
VOLUME THREE (Pages 530 to 672)

Makan Delrahim
Assistant Attorney General

Andrew C. Finch
Principal Deputy Assistant Attorney General

Michael F. Murray
Deputy Assistant Attorney General

Robert B. Nicholson
Adam D. Chandler
Attorneys

U.S. DEPARTMENT OF JUSTICE
950 Pennsylvania Ave. NW
Washington, DC 20530

Thomas M. Johnson, Jr.
General Counsel

Jacob M. Lewis
Associate General Counsel

Sarah E. Citrin
Scott M. Noveck
Counsel

FEDERAL COMMUNICATIONS COMMISSION
445 12th Street SW
Washington, DC 20554
(202) 418-1740
fcclitigation@fcc.gov

TABLE OF CONTENTS

Description: **Page**

Volume One

Moratoria Order:
Third Report and Order and Declaratory Ruling, *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, 33 FCC Rcd. 7705 (2018) ..... RER 1

Small Cell Order:
Declaratory Ruling and Third Report and Order, *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, 33 FCC Rcd. 9088 (2018) ..... RER 121

Volume Two

Wireless Infrastructure Notice:
Notice of Proposed Rulemaking and Notice of Inquiry, *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, 32 FCC Rcd. 3330 (2017) ..... RER 237

Wireline Infrastructure Notice:
Notice of Proposed Rulemaking, Notice of Inquiry, and Request for Comment, *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, 32 FCC Rcd. 3266 (2017)..... RER 297

AT&T Wireless Comments..... RER 361

AT&T Wireline Comments..... RER 374

Conterra Broadband et al. Comments..... RER 376

Crown Castle Wireless Comments ..... RER 380

Crown Castle Wireline Comments ..... RER 401

TABLE OF CONTENTS
(continued)

Description: **Page**

CTIA Comments ..... RER 412

Attach. 1—CTIA Comments in WT Docket No. 16-421 ..... RER 419

EMF Safety Network/Ecological Options Network Comments... RER 431

Lightower Wireline Comments ..... RER 433

Mobilitie Comments ..... RER 442

Attach. 1—Mobilitie Petition for Declaratory Ruling ..... RER 447

Attach. 2—Mobilitie Comments in WT Docket No. 16-421 ..... RER 459

Attach. 3—Mobilitie Reply Comments in WT Docket No. 16-421 ..... RER 469

Public Power Comments ..... RER 473

Smart Communities Wireless Comments ..... RER 476

Sprint Comments..... RER 480

T-Mobile Comments ..... RER 484

Attach. B—T-Mobile Reply Comments in WT Docket No. 16-421 ..... RER 488

Verizon Wireless Comments ..... RER 493

Wireless Infrastructure Ass'n Comments ..... RER 503

Attach. 1—Wireless Infrastructure Ass'n Comments in WT Docket No. 16-421..... RER 507

Attach. 2—Wireless Infrastructure Ass'n Reply Comments in WT Docket No. 16-421..... RER 515

TABLE OF CONTENTS
(continued)

Description: **Page**

Public Power Reply Comments ..... RER 526

Smart Communities Reply Comments ..... RER 528

Volume Three

Uniti Fiber 10/30/17 Letter:
Letter from Ronald W. Del Sesto, Jr. to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Oct. 30, 2017) ..... RER 530

Ex. A—List of Local Jurisdictions in Florida that Have Implemented Moratoria ..... RER 533

Crown Castle 11/10/17 Letter:
Letter from T. Scott Thompson to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Nov. 10, 2017) ..... RER 535

Attach.—Small Cell Deployment Photos ..... RER 538

Corning 1/25/18 Letter:
Letter from Thomas J. Navin to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Jan. 25, 2018) ..... RER 544

Attach. B—Corning Study ..... RER 546

AT&T 2/23/18 Letter:
Letter from Henry G. Hultquist to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Feb. 23, 2018) ..... RER 570

Attach.—"What is a Small Cell?" Presentation ..... RER 573

Mayor Scott Neisler 6/4/18 Letter:
Letter from Scott Neisler, Mayor, City of Kings Mountain, N.C., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (June 4, 2018) ..... RER 582

TABLE OF CONTENTS
(continued)

Description: **Page**

AT&T 6/8/18 Letter:
Letter from Henry G. Hultquist to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (June 8, 2018) ..... RER 583

Mayor Ashton J. Hayward III 6/8/18 Letter:
Letter from Ashton J. Hayward III, Mayor, Pensacola, Fla., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (June 8, 2018) ..... RER 586

Verizon 6/21/18 Letter:
Letter from Katharine R. Saunders to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (June 21, 2018)..... RER 587

Elder Alexis D. Pipkins, Sr. 7/26/18 Letter:
Letter from Alexis D. Pipkins, Sr. to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (July 26, 2018) ..... RER 590

Comm'r Sal Pace 7/30/18 Letter:
Letter from Sal Pace, Pueblo Cnty. Comm'r, to Ajit Pai, Chairman, Fed. Commc'ns Comm'n (July 20, 2018) ..... RER 591

Sen. Duane Ankney 7/31/18 Letter:
Letter from Duane Ankney, Mont. State Sen., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (July 31, 2018) ..... RER 593

Councilmember LaWana Mayfield 7/31/18 Letter:
Letter from LaWana Mayfield, City Council of Charlotte, N.C., to Fed. Commc'ns Comm'n (July 31, 2018) ..... RER 594

Chairwoman Carolyn A. Prince 8/3/18 Letter:
Letter from Dr. Carolyn A. Prince, Chairwoman, Marlboro Cnty. Council, S.C., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (Aug. 3, 2018)..... RER 596

TABLE OF CONTENTS
(continued)

Description: **Page**

AT&T 8/6/18 Letter:
Letter from Henry G. Hultquist to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Aug. 6, 2018) ..... RER 598

Rep. Terry Alexander 8/7/18 Letter:
Letter from Terry Alexander, S.C. House of Reps., to Fed. Commc'ns Comm'n (Aug. 7, 2018)..... RER 603

AT&T 8/10/18 Letter:
Letter from Henry G. Hultquist to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Aug. 10, 2018) ..... RER 605

Crown Castle 8/10/18 Letter:
Letter from Kenneth J. Simon to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Aug. 10, 2018) ..... RER 607

Verizon 8/10/18 Letter:
Letter from Tamara Preiss to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Aug. 10, 2018) ..... RER 611

Attach.—Verizon 8/10/18 White Paper ..... RER 613

Sprint 8/13/18 Letter:
Letter from Keith C. Buell to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Aug. 13, 2018) ..... RER 620

Wallowa Cnty. Comm'rs 8/20/18 Letter:
Letter from Todd Nash *et al.*, Wallowa Cnty. Comm'n, Or., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (Aug. 20, 2018)..... RER 622

Chairman Jeff Bohm 8/22/18 Letter:
Letter from Jeff. Bohm, Chairman, Bd. of Comm'rs, Cnty. of St. Clair, Mich., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (Aug. 22, 2018)..... RER 625

TABLE OF CONTENTS
(continued)

Description: **Page**

Verizon 8/23/18 Letter:
Letter from Tamara Preiss to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Aug. 23, 2018) ..... RER 626

Corning 8/29/18 Letter:
Letter from Thomas J. Navin to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Jan. 29, 2018) ..... RER 633

Attach. A—Corning Study Annex 2 ..... RER 635

Corning 9/5/18 Letter:
Letter from Thomas J. Navin to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Sept. 5, 2018) ..... RER 648

Attach. A—Corning Study Annex 3 ..... RER 650

Sheriff Fred A. Lamphere 9/11/18 Letter:
Letter from Fred A. Lamphere, Sheriff, Butte Cnty., S.C., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (Sept. 11, 2018) ..... RER 654

Mobilitie 9/12/18 Letter:
Letter from John T. Scott, III to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Sept. 12, 2018) ..... RER 655

Rep. Jason R. Saine 9/14/18 Letter:
Letter from Jason R. Saine, N.C. House of Reps., to Brendan Carr, Comm'r, Fed. Commc'ns Comm'n (Sept. 14, 2018) ..... RER 657

Crown Castle 9/19/18 Letter:
Letter from Kenneth J. Simon to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Sept. 19, 2018) ..... RER 660

T-Mobile 9/19/18 Letter:
Letter from David M. Crawford to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Sept. 19, 2018) ..... RER 664

TABLE OF CONTENTS
(continued)

Description: **Page**

Verizon 9/19/18 Letter:
Letter from Andre J. Lachance to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Sept. 19, 2018)..... RER 668

AT&T 9/20/18 Letter:
Letter from Henry G. Hultquist to Marlene H. Dortch, Sec'y, Fed. Commc'ns Comm'n (Sept. 20, 2018)..... RER 671

Certificate of Filing and Service ..... RER 672

Morgan Lewis

Ronald W. Del Sesto, Jr.
Partner
+1.202.373.6023
ronald.delsesto@morganlewis.com

October 30, 2017

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*; WT Docket No 17-79; *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*; WC Docket No. 17-84

Dear Ms. Dortch:

Uniti Group Inc. (Nasdaq: UNIT), an internally managed real estate investment trust, is engaged in the acquisition and construction of mission critical communications infrastructure and is a leading provider of wireless infrastructure solutions for the communications industry. Uniti Fiber is comprised of approximately five legacy companies including PEG Bandwidth, Tower Cloud, Hunt Telecommunications, Southern Light, and InLine. The company is a leading provider of infrastructure solutions, including cell site backhaul and small cell for wireless operators and, for telecommunications carriers and enterprises, Ethernet, wavelengths and dark fiber. As a follow-up to meetings that Uniti Fiber had with the Commission on September 21 and September 22, 2017, Uniti Fiber provides the Commission with the following information.

Uniti Fiber is at the forefront of the Nation's transformation of broadband wireline and wireless infrastructure including the rollout of next-generation 5G networks. The transition to 5G wireless networks promises to deliver even better wireless solutions to all Americans. In order to obtain all of the benefits associated with 5G networks, like faster speeds, better responsiveness, and enhanced scalability, massive new investment in wireless infrastructure is required. The wireless industry will likely invest $275 billion to deploy next-generation wireless networks, create three million new jobs and contribute $500 billion to U.S. Gross Domestic Product.[1] It is also

[1] Letter from Scott K. Bergmann, Vice President, Regulatory Affairs, to Marlene H. Dortch, Secretary, FCC at Attachment p.5 (Sept. 8, 2017).

estimated that 300,000 to 400,000 new small cells will be deployed in the next three to four years to support 5G services[2] and potentially up to 800,000 by 2026.[3]

While there is massive opportunity for all stakeholders in the wireless industry, along with concomitant benefits to users and localities alike, there are also tremendous challenges. Stumbling out of the gate simply is not an option if the Nation is to fast forward into the 5G future. But this is exactly what is occurring at the local level. Uniti Fiber is proud to be on the front lines of the 5G network deployment for the Nation's largest wireless carriers. Yet, it is confronting an unwieldly thicket of resistance at the local level in the form of moratoria on accessing the rights-of-way for installing wireless facilities, excessive obligations that require cash deposits in local banks, as well as cumbersome and expensive regulations regarding the type and placement of facilities in the public rights-of-way. And the challenges are multiplying as local governments tend to mirror ordinances adopted by other localities.

Despite federal law to the contrary, many localities have implemented moratoria, in name or in fact, on installing small cells in the public rights-of-way. Even when local officials – like county commissioners, city councils, staff, and attorneys – are provided copies of relevant federal rulings prohibiting moratoria, these parties feign ignorance or express their intention to violate federal law. Lest the Commission think that localities actively violating federal law are the exception not the rule, Uniti Fiber highlights that other parties in this proceeding have identified 26 jurisdictions in Florida alone that have been under moratoria for over a year.[4] But sadly the situation is much worse. Attached as **Exhibit A** is list of local jurisdictions that Uniti Fiber developed identifying ***44 jurisdictions*** that have implemented moratoria. And this list may not be comprehensive as Uniti Fiber did not actively research every locality in the state; instead, it is sharing what the company developed organically.

Uniti Fiber includes as **Exhibit B** one such ordinance from Jacksonville, Florida. True to its title, the ordinance establishes a moratorium barring the installation of any wireless facilities in the rights-of-way.[5] As a result, Jacksonville is not currently accepting, processing or approving any permits related to installing facilities in the public rights-of-way. Aside from the fact that the ordinance violates federal law, it was also passed on an emergency basis which eliminated the opportunity for public comment. The moratorium remains in place until December 31, 2017, unless repealed earlier by the Jacksonville City Council. Uniti Fiber includes this ordinance as a sample for the Commission's consideration but there are many more examples available.

Unfortunately, what is occurring at the local level in Florida is an unintended consequence of a state law. The Florida State Legislature passed the Advanced Wireless Infrastructure Deployment Act ("Infrastructure Deployment Act") earlier this year and it became effective July 1,

---

2 *Id.* at 6.

3 *See* S&P Global Market Intelligence, John Fletcher, Small Cell and Tower Projections through 2026, SNL Kagan Wireless Investor (Sept. 27, 2016).

4 *See, e.g.*, Letter from Cathleen A. Massey *et al.*, Vice President, Federal Regulatory Affairs, T-Mobile Letter, to Marlene H. Dortch, Secretary, FCC at Attachment, p. 10 (Sept. 21, 2017) (T-Mobile Letter).

5 The ordinance is titled "Establishing a Temporary Moratorium on the Acceptance, Processing or Approval of Any Wireless Communications Facilities in the City's Rights-of-Way; Requesting One Cycle Emergency Passage . . . . " *See* Exhibit B. It was passed on August 8, 2017.

rights-of-way is overly burdensome and not rationally related to the installation of small cells. Perhaps most importantly, it makes installing small cells economically infeasible.

In Florida alone there are 67 counties and over 400 incorporated municipalities. If each one were to adopt similar requirements, companies like Uniti Fiber would have to deposit millions of dollars across hundreds of different bank accounts (each at the localities' choosing).[17] And this would be just for the State of Florida. Even if security funds were established in only 50 localities, which would be slightly more than 10% of the localities in Florida, the massive capital required just for deposits, coupled with the administrative challenges of establishing and maintaining bank accounts in all of these localities, would substantially impair all companies' ability to devote capital to deployment of 5G wireless equipment. Instead of devoting capital to broadband deployment, companies subject to these requirements would have millions of dollars inefficiently locked up in thousands of bank accounts that serve no reasonable purpose relevant to installing small cell facilities in the relevant jurisdictions. And of course this does not even take into account what localities in other states may do. In short, security funds that require cash deposits or letters of credit in the place of bonds are clear impediments to broadband deployment.

Another obstacle that Uniti Fiber frequently encounters is overly complex regulations applicable to the installation of small cells. Many small cell projects constitute hundreds of "nodes" spread across potentially dozens of local jurisdictions. Thus, when planning, designing, and seeking permits for such facilities, companies must often navigate significantly varying requirements imposed by local cities, counties and departments of transportation. It is extremely difficult to deploy hundreds of small cells when localities have adopted differing and complex regulations governing small cell installations that may change on a block-by-block basis depending on which entity controls the rights-of-way. Additionally, cities often attempt to apply inapposite zoning requirements used for macro towers to the installation of small cells. Other requirements, like concealing small cell installations for all small cells installed within a city's limits, can vastly increase installation costs and extend deployment timelines. It is of little comfort that these obligations can be potentially waived upon request due to the time and costs associated with seeking waiver of such burdensome requirements.

The deployment impediments that Uniti Fiber is encountering, coupled with the proliferation of local ordinances that obstruct installing small cells, is not unique to Uniti Fiber. As detailed above, T-Mobile has notified the Commission of its own challenges in Florida.[18] Crown Castle has filed multiple lawsuits against localities for similar reasons.[19]

---

17 Note that some ordinances under consideration by localities would require a $50,000 cash deposit or letter of credit.

18 *See* T-Mobile Letter at Attachment p.10, *supra* n.4.

19 *See, e.g.,* Complaint, Crown Castle NG East LLC v. City of Charleston, D.S.C. (filed Sept. 22, 2017) (No. 2:17-cv-02562-DCN); Complaint, Crown Castle NG East LLC v. The Town of Oyster Bay, The Town of Oyster Bay Town Board and Richard Lenz in his official capacity as Commissioner of the Town of Oyster Bay Highway Department and Department of Public Works, and John Bishop in his official capacity as Deputy Commissioner of the Town of Oyster Bay Highway Department, E.D.N.Y. (filed June 8, 2017) (No. 17-cv-3445).

Exhibit A

Local Jurisdictions in Florida that Have Implemented Moratoria

Atlantic Beach	**Grant Valkaria**	**Miami Lakes**	**Polk County**
Charlotte County	**Greenacres**	**Minneola**	**Pompano Beach**
Citrus County	**Hillsborough County**	**New Port Richey**	**Redington Beach**
Coral Gables	**Hillsborough Beach**	**North Lauderdale**	**Royal Palm Beach Village**
Coral Springs	**Indian Harbour Beach**	**Oviedo**	**Sanford**
Daytona Beach	**Jacksonville**	**Palm Beach Gardens**	**Satellite Beach**
Deerfield Beach	**Lake Park**	**Palm Shores**	**St. Pete Beach**
Delray Beach	**Lantana**	**Parkland City**	**Vero Beach**
Dundee	**Largo**	**Pembroke Park**	**West Palm Beach**
Escambia County	**Lighthouse Pointe**	**Pensacola**	**Wilton Manors**
Gainesville	**Malabar**	**Pasco County**	**Winter Haven**

Davis Wright Tremaine LLP

Suite 800
1919 Pennsylvania Avenue N.W.
Washington, D.C. 20006-3401

T. Scott Thompson
202.973.4208 tel
202.973.4995 fax

scottthompson@dwt.com

November 10, 2017

VIA ECFS
Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: ***Ex Parte* Submission, *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Docket No. 17-84; *Broadband Deployment Advisory Committee*, GN Docket No. 17-83**

Dear Secretary Dortch:

On November 8, 2017, Scott Thompson of Davis Wright Tremaine LLP and Ken Simon, Monica Gambino, and Robert Millar of Crown Castle, met with Lisa Hone, Associate Bureau Chief, Wireline Competition Bureau; Dan Kahn, Division Chief; Adam Copeland, Assistant Division Chief; Michael Ray, Attorney-Advisor, and Annick Banoun, Attorney, of the Wireline Competition Bureau's Competition Policy Division. At the meeting, Crown Castle discussed its comments filed in the above referenced docket,[1] and its proposals to streamline deployment of wireline broadband infrastructure. In addition to the information outlined below, Crown Castle also provided photographic examples of small cell deployments, which are enclosed with this filing.

Crown Castle outlined the importance of aerial deployments, namely, overlashing and strand-mounted antennas, to expedited broadband deployment. As the FCC has recognized many times over, facilitating overlashing promotes the rollout of new, competitive broadband services. Furthermore, the benefits of overlashing are not limited to new wire bundles; many cable television amplifiers, splice boxes, and other necessary facilities have been deployed on the strand nationwide with no additional permitting or fees. Similarly, the reduced footprint of a wireless antenna mounted directly on the strand serves as an important tool in the deployment toolbox. In fact, strand-mounted antennas may be preferred by some pole owners, as they are not physically attached to the pole, as well as by communities, due to being less visually apparent. Strand-mounted antennas are of a similar size as traditional strand mounted equipment; while they may be slightly heavier than other strand-mounted equipment, at

[1] *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Docket No. 17-84, Notice of Proposed Rulemaking, Notice of Inquiry, and Request for Comment, 32 FCC Rcd 3266 (2017); *see* Comments of Crown Castle International Corp., WC Docket No. 17-84 (filed Jun. 15, 2017); Reply Comments of Crown Castle International Corp., WC Docket No. 17-84 (filed Jul. 17, 2017).

approximately 110 pounds for a three-panel strand-mounted antenna, they are still significantly lighter than overlashing copper or coaxial cable, which can weigh over twice as much for a 100 foot span.

The Crown Castle representatives encouraged the Commission to move as swiftly as possible to reaffirm its existing position that strand-mounted small cell antennas are permissible under existing the FCC's overlashing rules. As the draft Further Notice of Proposed Rulemaking in this Docket observes, "Commission precedent holds that 'neither the host attaching entity nor the third party overlasher must obtain additional approval from or consent of the utility for overlashing other than the approval obtained for the host attachment.'" *See In the Matter of Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Draft Report and Order, Declaratory Rulemaking, and Further Notice of Proposed Rulemaking, WC Docket No. 17-84 ¶ 159 (rel. Oct. 26, 2017) (citing *Amendment of Commission's Rules and Policies Governing Pole Attachments, CS Docket Nos. 97-98 and 97-151*, Consolidated Partial Order on Reconsideration, 16 FCC Rcd. 12103, 12141, para. 75 (2001) ("2001 Pole Recon Order"); *Cable Television Ass'n of Georgia, et al., Complainants, v. Georgia Power Co., Respondent*, File No. PA 01-002, Order, 18 FCC Rcd. 16333, 16340-41, para 13 (EB 2003)). Indeed, the Commission has long recognized the benefits of overlashing for promoting the deployment of competitive services and broadband. *See In the Matter of Implementation of Section 703(e) of the Telecommunications Act of 1996, Amendment of the Commission's Rules and Policies Governing Pole Attachments*, Report and Order 13 FCC Rcd. 6777, 6807 ¶ 62 (1998) ("We believe overlashing is important to implementing the 1996 Act as it facilitates and expedites installing infrastructure essential to providing cable and telecommunications services to American communities."); 2001 Pole Recon Order ¶ 73.

Based on this existing law, Crown Castle has already entered into agreements with dozens of utilities, has about 1,600 strand-mounted small cell antennas already in operation in California, and has a contract to deploy approximately 2,500 additional strand-mounted small cell antennas there in the next year. Although Crown Castle appreciates the FCC's desire to provide clarity on this issue, it is concerned that the notice could create ambiguity where none currently exists. Accordingly, Crown Castle requested that the Commission resolve any uncertainty created by the Further Notice, clarify that existing overlashing precedent extends to strand-mounted small cell antennas, and codify any rules it intends to adopt in this area as quickly as possible.

Crown Castle discussed other proposals to streamline the pole attachment process and speed broadband deployment by adopting one-touch make-ready ("OTMR") procedures. Crown Castle summarized the Broadband Deployment Advisory Committee ("BDAC") Competitive Access To Broadband Infrastructure Working Group, Methods and Practices Committee Proposals #1 and #2 regarding OTMR procedures, which was set forth in detail during the BDAC November 9, 2017 meeting, and stated its support for the proposal. Crown Castle

expressed its interest in participating in any pilot program should the Commission decide to adopt the BDAC recommendations.

Crown Castle underscored the point made in its comments that pole owners are inhibiting the deployment of broadband by imposing "construction standards" far in excess of National Electric Safety Code ("NESC") and other industry-wide standards.[2] These excessive standards can often trigger requirements to replace poles unnecessarily, which hamper the FCC's goal of swift deployment with no corresponding benefit.

Crown Castle also reiterated its prior comments regarding the importance of allowing approved contractors to complete make-ready work in the electric space to promptly deploy facilities. Currently, Crown Castle may only exercise this vital self-help remedy in the pole's communications space. Crown Castle posits that it would only use authorized electrical workers, and Crown Castle noted that it has agreed to allow utility company inspectors to be present during the electric space work by contractors. Without the ability to use authorized contractors in the electric space, Crown Castle cannot timely complete small cell deployments on utility poles, particularly pole-top antenna installations. Any safety concerns the pole owners may have should be resolved by the fact that these are the same contractors utilized by the electric company. As such, the Commission should close this gap in its rules and allow for make-ready using approved contractors in the electric space.

Crown Castle also reiterated its prior comments regarding the practice by electric utilities to either refuse, or fail, to timely complete electric power activation of attachments, which impedes the make-ready timeline. Crown Castle's equipment requires electricity to function, and because of its location on the poles, power connections – sometimes including power line extensions and meters or other methods to monitor power consumption - must be installed. If make-ready, and ultimately a guaranteed right to use poles under Section 224(f), are to be meaningful, at the end of the process, the attaching entity must have everything done at the pole that is necessary for it to provide service – including electricity. Therefore, Crown Castle urged the Commission to recognize electric power activation of all attachments as part of the make-ready work that must be completed within the Commission's defined timeframe.

Crown Castle also reiterated its prior comments noting the significant problem of pole owners seeking to thwart the Commission's timeline rules by requiring attaching parties to participate in "pre application" meetings and processes that the pole owner claims does not count against the Commission's timelines. Crown Castle asks that the Commission adopt a rule, clarifying its Section 1.1420 of its current rules, that states that a utility may not require a potential attaching party to participate in any meetings or submit any materials as a precondition to submitting an application to attach, or in the alternative that any meetings or submissions of

[2] *See* Letter from T. Scott Thompson, Counsel to Crown Castle, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 17-84 at 1-3 (filed Aug. 24, 2017).

documents or information required by a utility as a condition of attachment count as part of the "Survey" portion of the timeframe.

Finally, Crown Castle highlighted the persistent problem of moratoria imposed by local governments, whereby a local jurisdiction refuses to process or even accept applications to site new facilities or upgrade existing facilities. Moratoria continue to be prevalent even in states that have recently enacted legislation seeking to curtail this local abuse of process. For example, Crown Castle noted the many moratoria in Florida, even after the adoption of HB 687 (enacting Fla. Stat. § 337.401(7)) earlier this year. Crown Castle also noted that Miami-Dade County, Florida claims the new Florida statute, which became effective in July, does not apply to it. Others jurisdictions, like Austin, Texas, require pre-application meetings that thwart the start of the shot clock and creating de facto moratoria. Crown Castle noted that it has filed a lawsuit against Charleston, South Carolina, where Crown Castle has faced a delay for nearly three years. These moratoria, whether *de facto* or explicit, only serve to thwart deployment and cannot be justified as lawful under the Commission's shot clock rules. Accordingly, Crown Castle asks the Commission to adopt a rule that provides that any moratoria on the filing or processing of applications for the installation of telecommunications facilities by a local government constitutes an effective prohibition on the provision of telecommunications service in violation of 47 U.S.C. § 253, and, in the case of an application to install personal wireless services facilities, a failure to act on an application to install personal wireless facilities in a reasonable time in violation of 47 U.S.C. § 332(c)(7)(B)(II).

Pursuant to Section 1.1206(b) of the Commission's rules, this letter is being filed via ECFS and a copy sent to all participants.

Respectfully submitted,

/s/ T. Scott Thompson
T. Scott Thompson
Davis Wright Tremaine LLP
1919 Pennsylvania Avenue, N.W., Suite 800
Washington, D.C. 20006-3401

Counsel to Crown Castle

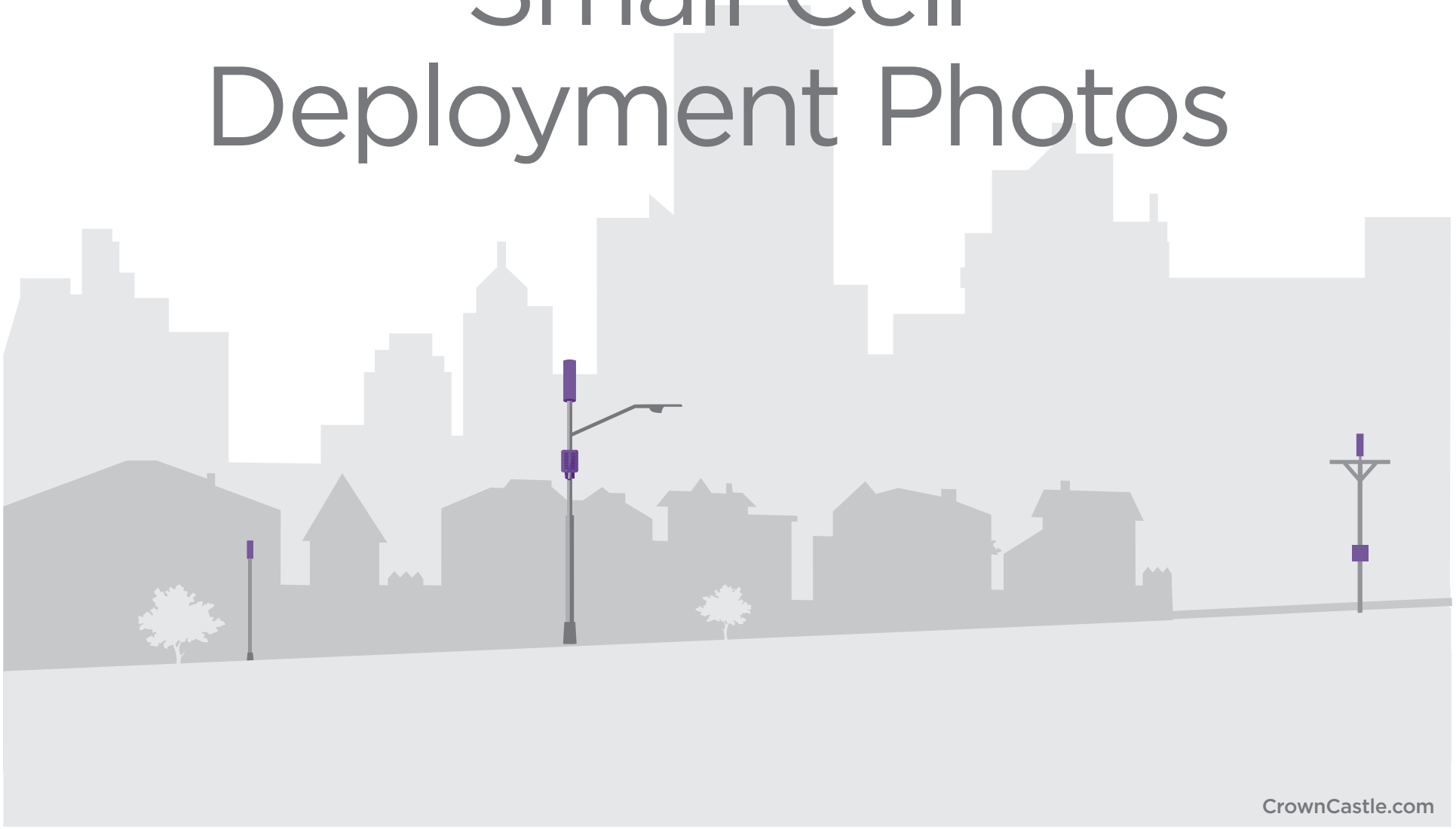
cc: Lisa Hone
Dan Kahn
Adam Copeland
Michael Ray
Annick Banoun

encl. "Small Cell Deployment Photos"

ATTACHMENT

CROWN CASTLE

Small Cell Deployment Photos



CrownCastle.com

Scottsdale, AZ

Suburban neighborhood

Camouflaged cactus (left)

Traffic pole

Battery Park in New York City, NY

Existing Condition

Proposed Condition

Existing Condition

Proposed Condition

Jersey City, NJ and Brooklyn, NY

Traffic light (Jersey City)

Street light (Brooklyn)

Doylestown, PA

1776 K STREET NW
WASHINGTON, DC 20006
PHONE 202.719.7000

www.wileyrein.com

January 25, 2018

Thomas J. Navin
202.719.7487
TNavin@wileyrein.com

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79

Dear Ms. Dortch:

Corning Incorporated ("Corning") submits the attached report, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 1, Model Sensitivities* ("Report"),[1] which follows-up on the report Corning submitted with its comments in the *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment* proceeding.[2]

This Report 1) investigates the potential effects of a nationwide change to one-touch make-ready (OTMR) on FTTP and 5G network deployments by isolating that change from other proposals, and 2) estimates the impact of higher-than-average municipality-imposed costs/fees on nationwide 5G wireless fixed broadband deployment if those fees became commonplace. Effects are measured in terms of total premises passed and dollars of capex investments in next generation networks. The Report concludes that allowing OTMR has the potential to enable wider deployment of next generation fiber and wireless networks in many areas of the country. But the Report also finds that higher costs/fees on next generation wireless network operators could significantly decrease investment in and further deployment of such networks.

Pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, a copy of this letter is being filed via ECFS. If you have any questions, please do not hesitate to contact me.

---

1 Attachment A.

2 Comments of Corning Incorporated, WC Docket No. 17-84 at Attach. A (filed June 15, 2017). These comments are included here as Attachment B.

Very truly yours,

/s/ Thomas J. Navin
Thomas J. Navin
Counsel to Corning, Inc.

cc: Tim Regan

Attachment B

Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment

June 2017

Hal Singer, Economists Incorporated

Economists INCORPORATED

Ed Naef, CMA Strategy Consulting

Alex King, CMA Strategy Consulting

CMA STRATEGY CONSULTING

FINAL REPORT

Dr. Singer is a Principal at Economists Incorporated, an Adjunct Professor at Georgetown's McDonough School of Business, and a Senior Fellow at George Washington's Institute for Public Policy. Ed Naef is a Partner at CMA Strategy Consulting, and has worked extensively evaluating broadband and fiber network deployment economics. Alex King is a Manager at CMA Strategy Consulting. The views expressed here are those of the authors and not those of their affiliated academic institutions. The authors would like to thank Corning Inc. for the funding to support this study.

Executive Summary

This study evaluates the estimated impact of the FCC's recent efforts to remove barriers to investment into next-generation wireless and wireline broadband networks, and thereby to accelerate the transition from legacy copper networks to next-generation services.

We estimate that these proposed changes could have a significant impact not only on new wireless and wireline broadband infrastructure investment, but could also positively impact job creation, economic output and consumer welfare. Our models forecast that with these new rules in place, up to an incremental 26.7 million premises would become economical to serve with next generation networks, driving up to $45.3 billion in capital investment. This investment would be made by incumbent service providers across the country and is expected to take place over at least five years. These incremental homes and small businesses that become economically viable for network deployment exist primarily in suburban and rural areas and include areas in all 50 states. The incremental investment unlocked by the proposed measures could generate up to about 358,000 jobs, support up to $28.4 billion per year in incremental economic output over the deployment period and drive consumer welfare improvements of up to $2.7 billion. We detail the assumptions, methodology and calculations used to derive these figures in this document. As we will discuss, there are a number of reasons why these estimates may be conservative.

The communications industry is entering its next phase of growth, and all communications service providers are currently assessing investment decisions for the deployment of the next generation of networks. Increasingly, these investments will take the form of new fiber-to-the-premises ("FTTP") and fifth-generation ("5G") wireless network investments. In this paper, we evaluate the impact of the FCC's proposed rule changes on the investment decisions of Incumbent Local Exchange Companies ("ILECs") regarding both next-generation wireless and wireline facilities. We evaluate in detail the business case for deploying these network facilities by modeling all of the financial inputs and costs in the same way that a service provider would when making these business decisions. We evaluate this business case for a specific set of geographic areas in the country that are representative of the country as a whole, by performing actual GIS analysis to estimate the costs to deploy both 5G and FTTP network facilities in those areas based on street miles and the distribution of households and businesses in those areas. We also assess only the incremental revenue potential of the new networks deployed in these specific areas and any associated changes to operating costs. This allows us to estimate the business case for deploying new networks in neighborhoods around the country for ILECs as a group within their own service territory.

In two recent Notices of Proposed Rulemakings ("NPRMs"), the FCC has outlined a range of potential actions to make it faster and less costly to deploy next-generation networks.[1] It is expected that these proposals will lower pole-attachment costs, reduce the time and cost of make-ready, reduce barriers to copper retirement, accelerate legacy time-division multiplexing ("TDM") product discontinuance, and reduce barriers to locating and deploying wireless infrastructure.

The reduction in costs anticipated in these NPRMs will help these network deployment business cases by reducing the cost of deployment and lowering operating costs for ILECs relative to keeping copper networks in place. This allows many marginal areas that could not previously pass the business case for next-generation wireless and wireline broadband deployment to become economically viable. The impact of this can be measured as the difference between how many households and small-to-medium businesses ("SMBs") would be economically profitable to serve under the current rules and how many additional customers could be profitably served with the lower costs and faster deployment times enabled by some of the proposals in these two NPRMs. Because we also estimate in these business cases the differences in investment by ILECs into capital expenditures, operating expenses and revenues, we can also assess how much additional capital will be invested given the proposed rule changes. Using broadband-specific multipliers, we then determine the impact of this increased investment on jobs and, ultimately, economic output. Finally, we estimate the associated consumer benefits flowing from enhanced broadband competition in areas that are currently have more limited competition.

It should be noted, that where the NPRM makes explicit allowances for certain modeling options, we have chosen the figures that we estimate have the most significant positive impact on the business case. However, in many ways, we feel that our analysis is conservative in its assessment of the impact. For instance, we did not model the potential impacts of a lower WACC that maybe derived from decreased risk in deployment models. We also did not model any potential cost savings from removing entire duplicative OSS/BSS systems that are used to support the legacy copper infrastructure. In the 5G scenarios, we only modeled the fixed wireless and M2M benefits, but did not model the benefits for non-M2M mobile applications. Lastly, we also did not model multiple competitors each deploying FTTP or 5G in a given area – we only modeled the ILECs deploying facilities collectively in their own service territories

The key findings of this study are as follows:

[1] "Accelerating Wireline Broadband Deployment by removing Barriers to Infrastructure Investment", WC Docket No. 17-84 and "Wireless Infrastructure NPRM", WC Dockets 17-79 and 15-180.

- Consumer fixed-internet usage is forecasted to grow dramatically at a rate of 23% per year for the next five years. At this time, the average household will consume nearly 400 gigabytes of data per month over their fixed connection.

- Broadband adoption has slowed in recent years; however, it is estimated to have grown to around 73% of the population today from 68% five years ago. Currently, there are approximately 19M homes with only one provider of wireline broadband at speeds greater than 3 Mbps, and 46M homes with only one provider greater than 25 Mbps.

- While 5G is still being standardized and deployment models are still taking shape, we estimate that these networks will be much denser, with wireless sites much closer to homes and SMBs than the networks of today. This will unlock new broadband, M2M and smart city use cases and new incremental revenues streams

- The NPRM may improve network deployment economics in four ways: (1) speeding the time to deploy both wireless and wireline next generation broadband networks; (2) lowering the costs of make-ready substantially; (3) reducing the operating costs of pole attachments; and lastly (4) removing many additional costs of operating a duplicative copper networks

- We ran four scenarios to capture the before and after effects of the proposed rulemaking: “FTTP Base”, “FTTP NPRM”, “5G Base”, and “5G NRPM”. The FTTP Base scenario uses the current regulatory regime to estimate the likely capital costs and potential revenue that could be derived from an FTTP rollout. The FTTP NPRM scenario then tests the impact to the FTTP Base scenario using new assumptions that would be enacted by the FCC’s proposed rules. Understanding that 5G has not been yet completely defined, the 5G Base scenario uses the current regulatory rules to determine what a reasonable 5G deployment might look like given current industry consensus, and lastly, the 5G NPRM scenario compares the business case with the rule changes to the 5G Base scenario. The FTTP and 5G scenarios should be treated as alternatives scenarios, despite the fact that many areas may receive investment in both technologies, and our results across these two scenarios should be treated as a range of estimated outcomes depending on industry evolution

    - Under the FTTP Base Scenario, 74.3M premises or roughly 53% of the housing units and small-to-medium businesses (SMBs) are economically profitable to serve with fiber. These include a wide variety of areas, but are predominantly found in metro areas.

- Under the FTTP NPRM Scenario, an incremental 26.7M premises become profitable to serve with fiber. The incremental capex required to reach these 26.7M premises would be $45.3B, both in terms of build capex and connection costs. This amount would, in practice, be invested over time and would represent the collective impact of investment by ILECs within their own service territory

- A significant amount of the incremental benefit in the FTTP NPRM scenario would be in less dense areas under the NPRM rules. The morphology distribution of premises in these incremental regions, which become profitable to serve once barriers are removed, are 52% rural and 43% suburban.

- New passings under the FTTP NPRM scenario are also geographically diverse, representing all 50 states. A number of cities such as Birmingham (AL), Dover (NH), and Santa Clara Valley (CA) all experience a significant increase in the percentage of economically viable areas under the rule changes

- 5G is estimated to economically serve 65% of premises, or 91.5M housing units and SMBs under current rules. The NPRM would create incentives for an incremental 14.9M premises to be covered, generating nearly $23.9B of incremental capital to do so.

- These incremental premises covered under the 5G NPRM scenario are in significantly less dense areas – roughly two thirds of them are in rural areas, and all 50 states would have areas that are positively impacted.

- The incremental capex from the FTTP NPRM scenario would drive 178.9K directly related jobs, another 178.9K "spillover" jobs, and would drive incremental economic output of nearly $28.4B per year over a five-year period.

- The incremental capex from the alternative 5G NPRM scenario would drive an incremental 70.1k directly related jobs, another 70.1k of "spillover" jobs, and would drive an incremental economic output of $13.7B per year over a five-year period.

- The incremental FTTP passings will also drive a significant amount of consumer welfare from the increase in broadband competition. We estimate that the annual total welfare gains generated by this incremental investment will range from $150.8M to $2.7B per year, depending on the magnitude of the price effect.

Table of Contents

Introduction and Key Assumptions 7
Current State of Broadband Access, Competition & FTTP 9
Broadband Access & Usage 9
Competition 10
FTTP Access 11
Economics of FTTP Deployments 14
The Future of 5G and Potential Impacts 14
Model Methodology & Sample Selection 16
Network Operator Perspective 16
Business Model Creation 16
Scenario Selection 17
Sample Selection 17
Network Build Out 20
Model Assumptions 21
Base Model – Capex Assumptions 21
Base Model – Revenue Assumptions 25
NPRM Assumptions 27
Model Results 32
FTTP – Model Results 32
5G – Model Results 34
Economic Impact & Analysis: Translating the Investment Gain into Employment and Output Effects 35
Job Impact 36
Total Multiplier Effects 36
Spillover Effects 38
Economic Output 41
Consumer Welfare Effect 42
Conclusion 45

forecasted an initial 2.3M 5G devices globally in 2020, growing to 25M in 2021, about 2% of which will be M2M devices. The United States is expected to be a leader in this area, accounting for over 40% of 2021 global 5G devices.[12] [13]

Model Methodology & Sample Selection

To test the impact of potential rule changes, we first built models for FTTP and 5G, reflecting the current regulatory regime.

Network Operator Perspective

We begin by establishing the construct of a single, uniform "generic ILEC," which assists in excluding the effects of any possible idiosyncratic behaviors of one particular ILEC from entering our analysis (for example, Verizon, AT&T, or CenturyLink). For simplicity, we assume that our "generic ILEC" deploys FTTP in its own legacy service area. While other competitors may offer a similar service via DOCSIS, for the purpose of our analysis we assume there is no competitive overbuilding of FTTP. Conversely, this means that our analysis ignores the potential additional benefits that may come from the increased capex spend of these other market entrants. As a real-world example, we have modeled a player like Verizon deploying FTTP in Boston (where it is the ILEC), but have assumed that AT&T does not overbuild. In San Francisco, our model assumes that a player like AT&T would deploy FTTP, but CenturyLink would not overbuild. Particularly when viewed through the lens of a 5G world, where carriers operate nationwide, this is likely a very conservative view.

Business Model Creation

The model operates as a straightforward localized business case, whereby a network operator, in our case the "generic ILEC," expends capital to deploy FTTP or 5G and then attempts to monetize that asset by convincing its current customers to switch from a legacy service, or by winning customers from other competitors in the area, whether they be churners or new entrants. To prevent existing ILEC revenue streams from being attributed to the new infrastructure build, we consider only incremental revenues gained by the fiber in comparison to a "but-for" scenario, using the expected revenues the existing copper plant could generate in the absence of any fiber. These new FTTP or 5G services also have incremental costs associated with them beyond what is required to run the copper network. These too are "net-out," leaving us with a stream of net cash flows, which are discounted to present value to assess whether incremental new earnings inflows can justify the upfront capex outflows of deploying fiber.

[12] Cisco Visual Networking Index; Global Mobile Data Traffic Forecast Update, 2016-2021 Whitepaper, 2017, available at: http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/mobile-white-paper-c11-520862.html#DefiningCellNetworkAdvances

[13] Cisco VNI Mobile Forecast Highlights 2016-2021, 2017, available at: http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/

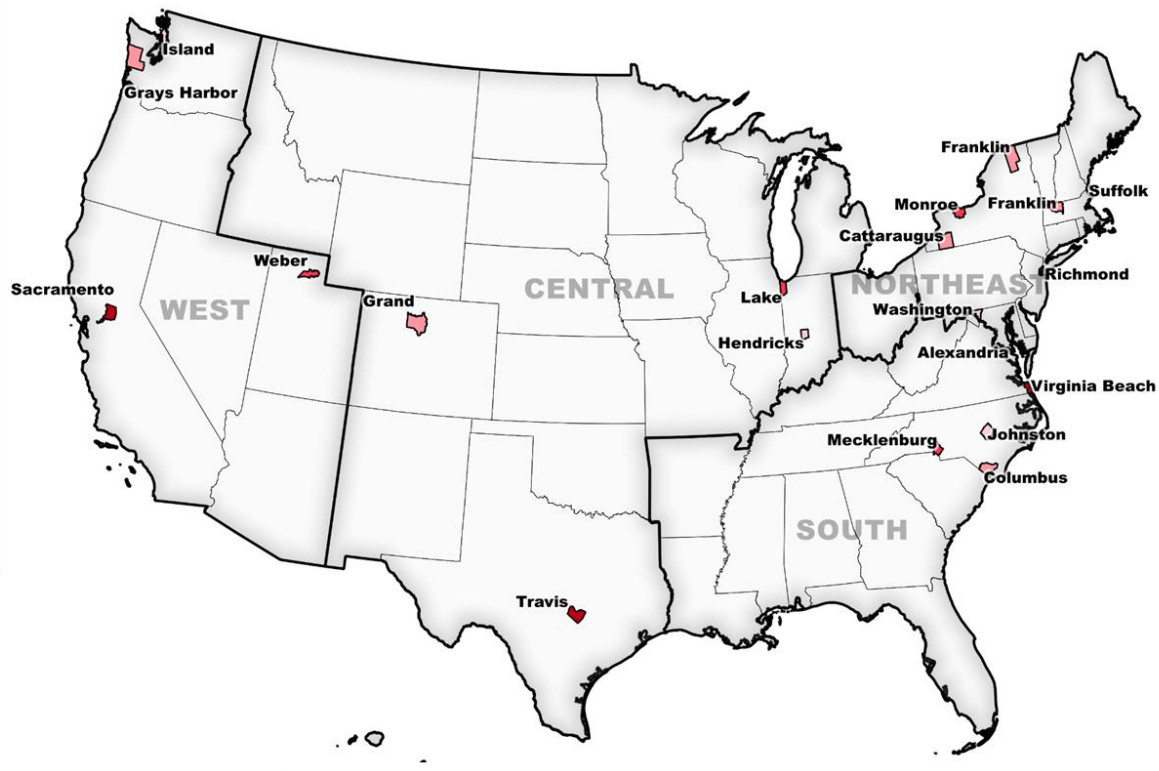
Scenario Selection

Employing varying assumptions, this business model is utilized to calculate discounted cash flows under four scenarios, each constructed around different sets of FCC rules and the technology deployed: first considering today's prevailing FCC rules and regulations versus potential NPRM changes and again considering the use of either FTTP or 5G. Thus, we examine (1) the FTTP Base Case Scenario assuming prevailing FCC rules, (2) the FTTP NPRM Case Scenario assuming that new FCC regulations proposed in the NPRM are enacted, (3) the 5G Base Case Scenario assuming prevailing FCC rules, and lastly (4) the 5G NPRM Scenario assuming new FCC regulations from the NRPM are enacted.

Sample Selection

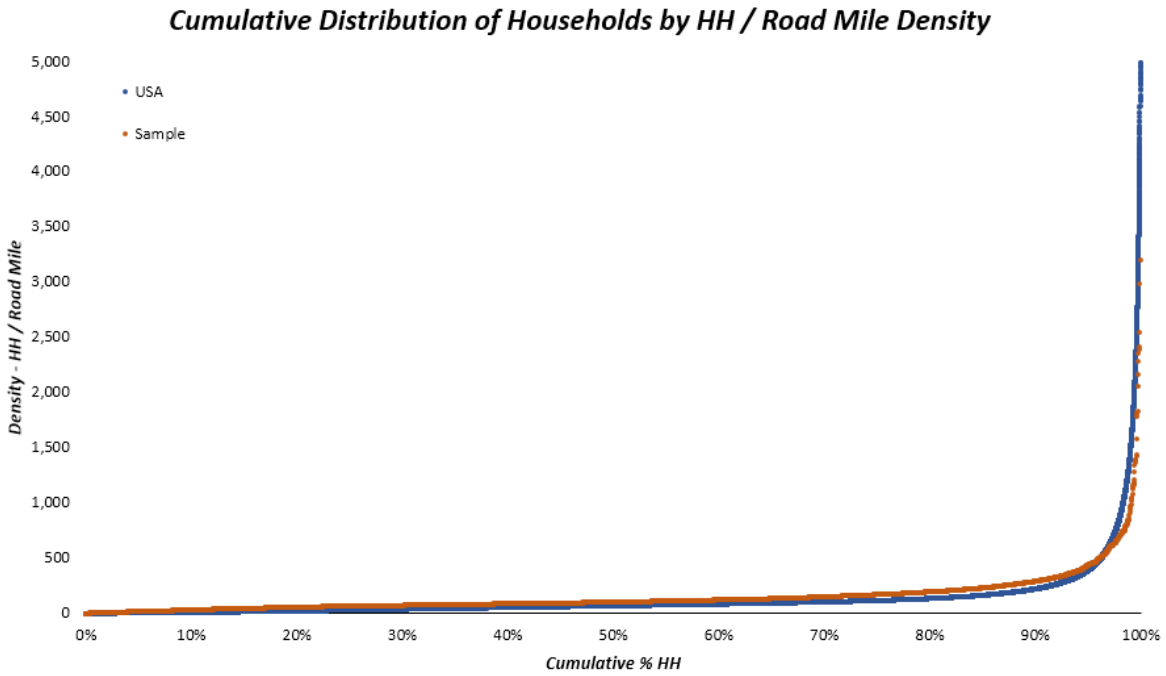
To calculate the incremental cash flows for the nation as a whole, we modeled a set of sample geographies that represent a reasonable proxy for the United States, then extrapolated the sample results to the country as a whole. We chose 20 counties around the United States, comprised of 5,158 Census Block Groups (CBGs). These census block groups have an average of roughly 624 Housing Units and 38 small-to-medium businesses (SMBs) per geographic unit, and as such, are roughly 2.4% of the total United States.

FIGURE 7: COUNTIES IN SAMPLE SELECTION



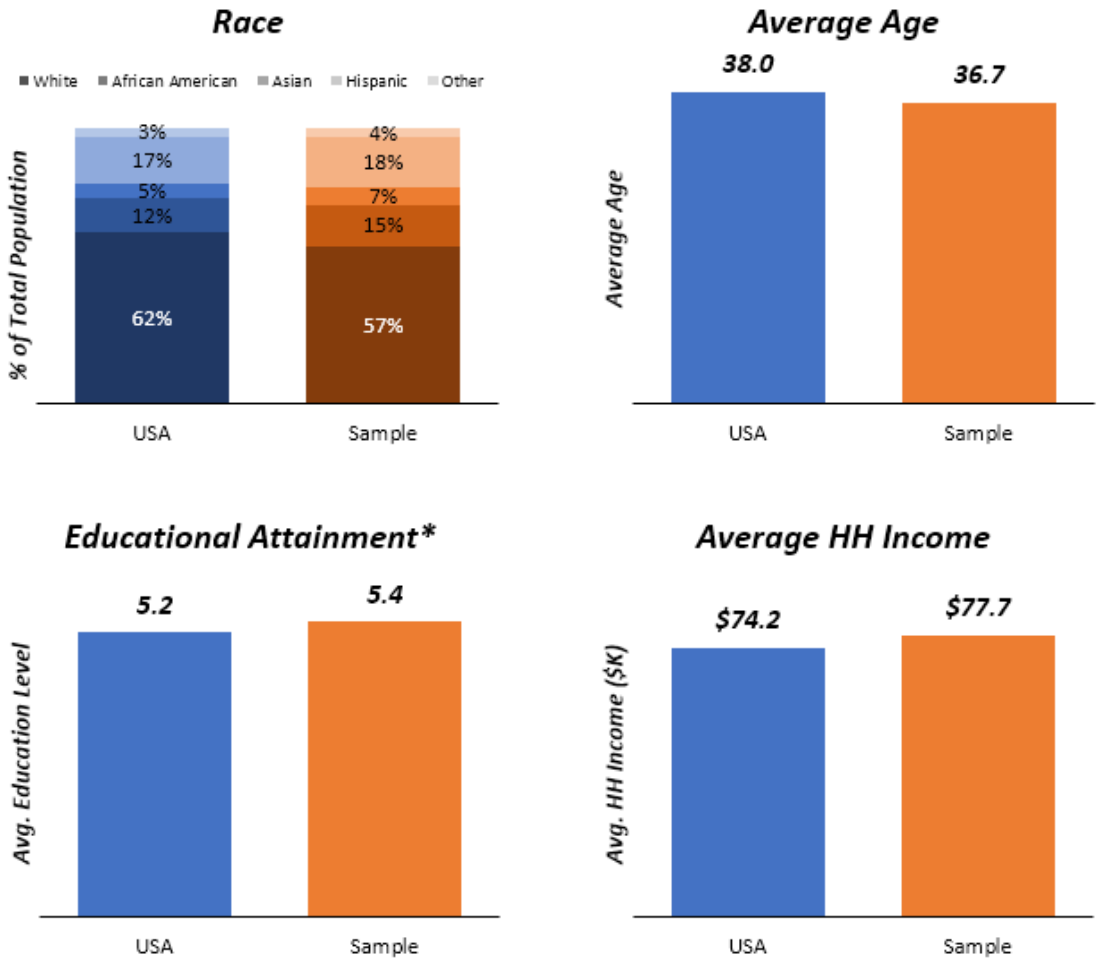
To ensure that the sample represented a reasonable cross section of the country, we examined three factors: (1) the relative density distribution of the sample to the United States; (2) the relative demographic distribution of the sample; and (3) the distribution of SMBs and SMB employees relative to the United States. As illustrated below, the sample closely approximates the country on a distribution of household-to-road-mile density, from a demographics perspective, and from an SMB-distribution perspective.[14] [15] [16]

FIGURE 8: CUMULATIVE DENSITY DISTRIBUTIONS



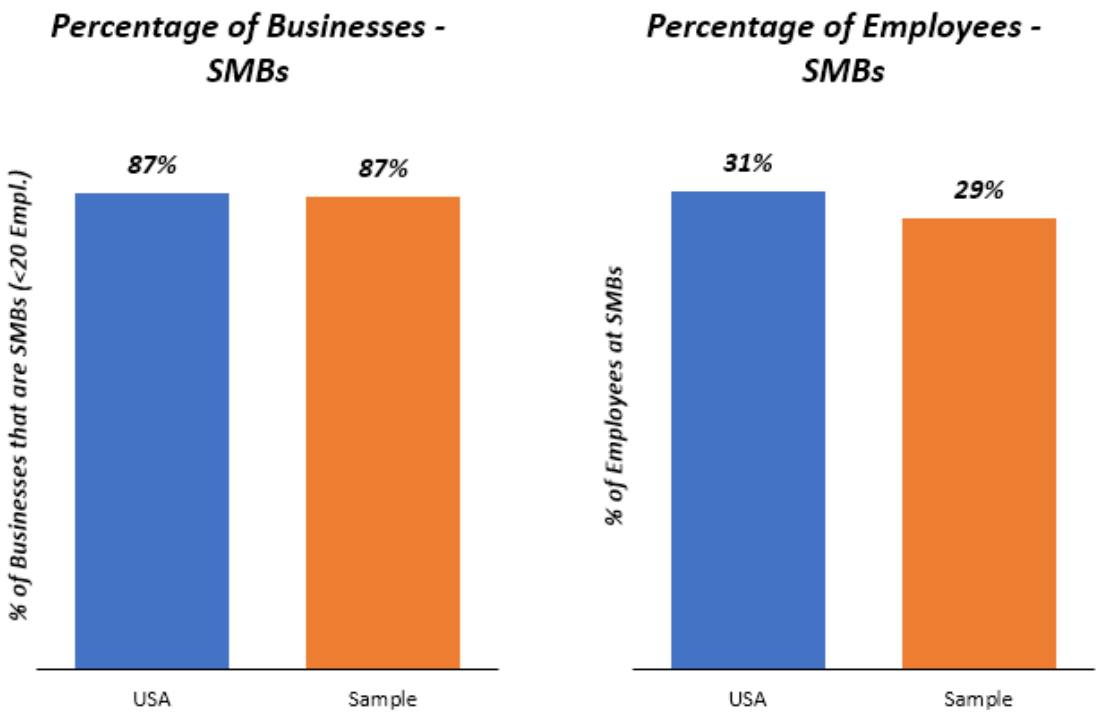
[14] US Census
[15] TIGER Road Data
[16] Business data from InfoUSA

FIGURE 9: DEMOGRAPHIC COMPARISONS [17]



[17] Educational attainment is calculated by assigning a score to various levels of schooling, from no high school through graduate school

FIGURE 10: SMALL TO MEDIUM BUSINESS DISTRIBUTION COMPARISON



Network Build Out

For each of the Census Block Groups ("CBGs") in the sample, parcel data or building data was collected with regards to where homes or businesses were located. We also collected road miles from the U.S. Census, and plotted both against each other. We then used the road miles and parcel data to build out a network, running through all local road miles to hit each and every business or residence in a CBG.

FIGURE 11: EXAMPLE DEPLOYMENT MAP

Model Assumptions

The model relies on three sets of assumptions to drive the study's outputs. The first involves capex assumptions and the amount of infrastructure that will need to be deployed to build out a region, and the second entails revenue that can be generated off of that infrastructure. The last set of assumptions involves how the NPRM rulemaking would shift either capex or opex plans for these builds. In this section, we will detail the most significant assumptions that impact the model.

Base Model – Capex Assumptions

To model the necessary up-front investment capex required by the "generic ILEC" to reach all NPV-positive areas, we used a variety of public sources to build up to all-in "passing" and "cost-to-connect" costs. The "passing" cost is the cost needed to run fiber down the street in front of a home, while the "cost-to-connect" is the cost of a fiber lateral or 5G connection that actually allows an end-customer to have services delivered over the last-mile distribution network. These include all the requisite materials, equipment, labor, permitting, and engineering expenditures that a project would incur on a per-premise basis.

To build up to these costs, we looked to public benchmarks and validated against internal benchmarks. While we recognize that these costs can vary significantly by where and how the fiber network is built, we relied upon averages to the best extent possible to try to approximate a true national representation. Because we model a large set of sample regions, which are then extrapolated to the nation, our total figures will necessarily include areas that are less attractive than those that have already been built out. This will manifest in somewhat higher capex per passing figures than recent benchmarks for past deployments might otherwise suggest.

For example, a dense urban build will have a higher proportion of buried fiber, which may require difficult and expensive directional boring work while a suburban build will often have a higher percentage of aerial construction. An ILEC may not have built out the complicated dense urban network, instead choosing to focus on low-hanging fruit where they can economically and easily deploy fiber.

The headline materials cost includes all of the materials required for an outside plant network to pass a premise. This includes all fiber, messenger strands, snowshoes, strand and lash materials, splice cases, fiber trays, MSTs, and splitters. Additional to the OSP material cost is the non-premise networking equipment costs associated with the passing build, which include distribution chassis, SCP cards, GPON line cards, multimode SFP transceivers, optical-interface modules, and associated install costs.

We have split overall aerial costs into (1) general aerial costs associated with the actual installation labor of fiber such as splicing, lashing, strand placing, and MST installation, as well as (2) the make-ready costs associated with preparing a pole for fiber installation. The make-ready cost varies by morphology, as pole density increases in urban areas and there are an increased number of "attachers" per pole that may need to be moved in these morphologies. [18]

Underground labor cost also varies by morphology as it often becomes more difficult to bury fiber as population density increases. Underground labor alone can cost from $48,000 per mile for relatively simple soil trenching to $150,000 per mile for directional boring through rock or in a downtown central business district. However, it is important to note that while the per mile cost for both aerial and underground construction increases as density increase, the per-premise passed cost decreases due to the higher density of building units.

In addition to the cost of extending the network to pass a building, there are assumptions for the cost to connect a building (including entry material, labor, and electronics). The largest components of this cost-to-connect are the drop labor and materials, which increase as the

[18] An "attacher" is an organization who rents space on a pole: for instance, the utility itself, the cable company, the municipality and the telco.

average distance from the curb to the home, or the curb set-back, increases.[19] This average set-back is larger in more rural communities, where land is more readily available and homes are further from the road, driving drop labor and materials costs higher in rural areas. The on-premise electronics required to connect include the ONT, the ONT shell and the unit's UPS. These costs are kept uniform for all single tenant buildings but for MDUs and larger business-focused buildings there is often a more costly build required to connect/deploy. For ease of comparison, we do not include CPE costs in these costs-to-connect for the numbers shown below, however they are included in the business case calculations.

The key capex assumptions within the model are presented below, and the ranges reflect varying costs by morphology:

[19] We conducted an analysis of buildings in the greater Boston area to determine how curb-set back varies by morphology.

TABLE 1: KEY CAPEX ASSUMPTIONS USED IN BUSINESS CASE MODEL

Metric	Value	Description	Source
Per Mile Materials Cost	$14k/mi	All fiber, messenger strands, strand and lash materials and other associated materials costs for the OSP	*Tilson*
Per Prem Materials Cost	$25/prem	Includes the MST	*Tilson*
Non-Premise Network Equipment Costs	$99/premise passed	All CO and distribution cabinet costs, including labor	*Tilson*
Aerial Labor Cost	$39k/mi	Labor cost to deploy aerial fiber. Includes: splicing, lashing, anchoring / guying, MST and strand placing	*Tilson*
Underground Labor Cost	$48k-$150k/mi	Cost for deploying underground fiber across different morphologies including soil trenching, directional boring and rod and rope	*Telmarc, CMA, Tilson*
Percentage Aerial Construction	35%-75%	Split of aerial fiber construction for deployments across morphologies. Denser areas tend to have more underground fiber	*CTC, CMA*
Make Ready Cost - Current	$4k-$35k/mi	Cost to move other pole attachers, replace poles, etc. across morphologies - current rules	*FCC, CTC, Florida Public Services Commission*
Building Connect Costs - Small Residential	$832-$1,871/per premise connected	Cost-to-connect a customer premise to distribution network. Includes drop labor, materials and ONT, but excludes CPE	*CTC, Tilson, CMA*
Building Connect Costs - Large MDU / Building	$5k/per premise connected	Cost-to-connect a customer premise (MDU) to distribution network	*CTC, Tilson, CMA*
Engineering and Permitting Cost	$2k/mi	Required permitting and engineering costs per mile	*CTC, McLean Engineering*

In the 5G case, we assumed that operators must deploy fiber to reach close enough to the curb of every home, similar to "passing" the home with fiber in the FTTP scenario. However, instead of providing a fiber drop to each home, we assumed that 5G radios are placed at varying increments along the network to provide wireless service. Because the spectrum to be used for 5G is not yet defined, we used the 3.5Ghz spectrum as a point of reference and we have not

modeled any incremental spectrum acquisition costs that may be associated with leasing the 3.5Ghz range.[20]

Industry sources note that the 3.5Ghz wireless signal propagation distance is between roughly 1,800 meters to 3,500 meters, depending on the area being deployed and the obstacles that may impede the signal.[21] Thus, a single node can serve households 1,800+ meters on either side of the cell site, and new nodes will be placed roughly 3,600 meters apart from node to node depending on the area being served. Because additional capex is required to "pass" a home with 5G, but no additional fiber or labor cost is incurred to "drop" the home, the 5G scenario has a higher cost per passing but a much lower cost per connect, driving net incremental benefits.

TABLE 2: OTHER 5G ASSUMPTIONS USED IN BUSINESS CASE MODEL

Metric	Value	Description	Source
5G Addtl. Capex	$2.5k-$5k/mi	All equipment (including 5G radio and backhaul), planning, install and commissioning costs	*Ericsson, Senza Fili Consulting*
5G Addtl. Opex	$1.3k/node /year	Annual Power and Maintenance costs	*Ericsson, Senza Fili Consulting*

Base Model – Revenue Assumptions

Turning to the revenue side of the study, we modeled typical broadband customers of both new services enabled by the FTTP and 5G builds, as well as legacy services (DSL). It is important to note that M2M revenues are only assumed to occur in the 5G cases. A more detailed breakdown of our revenue assumptions can be found below:

[20] The FCC has ruled that 150MHz of the 3.5Ghz spectrum will be shared for commercial purposes. FierceWireless, "FCC puts final rules in place for spectrum sharing in 3.5 GHz band", April 2016, accessible at: http://www.fiercewireless.com/wireless/fcc-puts-final-rules-place-for-spectrum-sharing-3-5-ghz-band

[21] Ericcson, "Fixed wireless access on a massive scale with 5G", December 2016, accessible at: https://www.ericsson.com/en/publications/ericsson-technology-review/archive/2016/fixed-wireless-access-on-a-massive-scale-with-5g

TABLE 3: KEY REVENUE ASSUMPTIONS USED IN BUSINESS CASE MODEL

Metric	Value	Description	Source
Revenue per Broadband Sub - New Service	$169/mo	Blended ARPU of a broadband subscriber purchasing the FTTP or 5G solution (includes implied take rates of voice, broadband and video)	*Verizon, CMA*
New Service ARPU Growth	0%	Assumption of no ARPU growth due to increasing mix-shift away from linear video toward OTT that requires higher bandwidth	*CMA*
Revenue per Broadband Sub - DSL	$82/mo	Blended ARPU of a broadband subscriber who is purchasing voice and broadband	*Verizon, CMA*
DSL ARPU Growth	-8%	Historical pricing degradation Y-o-Y	*Verizon, CMA*
DSL ARPU Floor	$50/mo	Breakeven ARPU minimum to cover costs of providing legacy copper services	*Frontier, Verizon*
M2M MB Consumed Per Month	357 MB/mo	Data consumption of non-LPWA M2M devices per month	*Cisco VNI*
M2M MB Consumed Growth	37%	Annual data consumption growth per device	*Cisco VNI*
$ / MB	$0.01	Current price per MB of data	*Cisco VNI, GSMA Wireless Intelligence*
$ / MB Growth	-27%	Price per MB of data decline	*Cisco VNI, GSMA Wireless Intelligence*
M2M ARPU	$4	Transport revenue per M2M device / month	*Cisco VNI, GSMA Wireless Intelligence, CMA*

The model uses a blended revenue per broadband subscriber, which includes implied take rates of various services (sometimes referred to as RGUs). This calculation has been completed for both FTTP as well as legacy copper services. New service ARPU growth is flat due to an increasing mix-shift away from linear video, but a corresponding increase in bandwidth revenue as Over-the-Top (OTT) adoption becomes stronger. In the "But-For" legacy revenue modeling, DSL services are assumed to continue their historical decline to a price floor at a point of $50. For customers who switch to the new FTTP service from DSL, a revenue-growth assumption is applied as customers increase spend over time for services now enabled by the new broadband technology such as linear video or increased bandwidth. In the 5G case, M2M ARPU is relatively flat over time, with declining per MB pricing offset by increased data consumption. In all scenarios, we assume varying gross service margins to account for additional costs like content, backhaul and other operating concerns.

NPRM Assumptions

While all of the above assumptions are reflective of the current regulatory paradigm, the deregulated case modeled here also incorporates assumptions around capex and opex savings. Because the NRPM allows for a wide range of potential outcomes, when possible, we tried to root the modeled values as closely as possible to what is stated in the NPRM. For instance, the NRPM allows for a standard make-ready fee of $300-500 per pole; thus, we chose $300 instead of trying to estimate how much a third-party independent contractor might charge in each situation.

Broadly the NRPM benefits that we model in this study can be divided into four categories: (1) speeding the time to deploy fiber in a particular community by upwards of 90 days; (2) lowering the costs associated with a fiber deployment, primarily via the reduction of make-ready costs; (3) reducing the operating costs of pole attachment rates; and lastly (4) removing the costs of operating a duplicative copper network.

Timing Based Assumptions

The NPRM lays out a number of timing-based reductions that would speed up the deployment process of an FTTP or 5G build. In some cases, the NPRM notes where there is a range of potentially acceptable solutions. In these instances, we model the lower bound of the range. The FCC has floated the possibility of adopting a "One-Touch Make-Ready" approach that would effectively lower the time for new attachers to access a pole by consolidating make-ready work. To model the potential time reductions of a one-touch make-ready approach, we used the most aggressive proposals in the NPRM without evaluating whether those proposals are feasible: (1) lowering the application review period from 45 days to 15 days; (2) lowering the survey period, cost estimate and acceptance period from 28 days to less than 2 weeks; and (3) lowering make-ready timing from roughly 60-75 days to less than 30 days. The FCC does make exceptions for "large orders" and does potentially allow for 30 days of post make-ready review for existing attachers on a pole. All told, we modeled timing reductions of around 90 days to account for the NRPM timing around deployment, which results in revenue accruing to the new network roughly one fiscal quarter earlier than in the Base scenario. We also note that these timing assumptions will likely have a small, but meaningful, impact on engineering and permitting costs, as the general process will likely run much smoother and less engineering time will be wasted. As such, we have estimated that these timing changes will result in a 10% improvement to engineering and permitting costs.

Further, the FCC has spelled out a number of potential timing reductions around the 214 Discontinuance and Copper Retirement Process. In instances of a Discontinuance, the NPRM would (1) reduce the public comment period to less than 10 days for grandfathered data and

voice application;[22] (2) auto-grant requests within 25 days; (3) allow for Data Discontinuance within 31 days for all services which have been grandfathered for at least 180 days; and (4) potentially allow for an entire 214 process bypass in the event that there is an alternative fiber or wireless service accessible.

For services that have not been, or will not be grandfathered, the NRPM allows for a quicker copper retirement process. First, the retirement process would be sped up from 180 days to less than 90 days. Second, the ruling would eliminate the need for ILECs to provide direct notice to all retail customers, including those they serve via CLECs, eliminate the requirement to provide notice to all customers simultaneously in a public notice, and remove the requirement to provide notice where a customer's existing equipment is incompatible with the new network. To account for the deregulated approach to copper retirement, we assumed that the copper retirement begins alongside the FTTP or 5G network build, and that by the time the new fiber services are available, the copper network can be retired.

Capex Based Assumptions

Make-ready is a non-trivial cost center in a given build. In a recent study completed by Tilson Tech, an engineering firm based in the northeast, make-ready comprised $3.5M of a $179M build, or roughly 2%.[23] A study of Verizon FiOS by Telmarc concluded that make-ready could reach as high as 8% of project costs.[24] A significant portion of the NPRM is dedicated towards a discussion around the role of make-ready and proposes a number of potential ways to limit make-ready costs beyond the timing improvements previously touched upon. Make-ready is expensive because as new equipment gets added to a pole, the existing attachers on that pole often need to make room. The Utilities Telecom Council estimates that between 22-30% of all poles require make-ready for a new attachment.[25] Further, due to their size or condition, between 1%-20% of poles need to be entirely replaced to accommodate any new attachments, a meaningful additional cost.[26] Lastly, in the status-quo, every attacher currently sends their own employees or a contractor to move their own gear. This means that for a pole with four attachers, four different parties are often completing the work at four different times, a

[22] "Grandfathered" products are those products which the ILEC is no longer required to sell to new customers, but is still required to maintain service for existing customers

[23] Tilson Tech, "Phase 1 Conclusions and Recommendations of the Broadband Task Force", August 2016, accessible at: https://www.cambridgema.gov/~/media/Files/citymanagersoffice/files/broadbandtaskforce/Broadband-Task-Force-Reccomendations-and-Tilson-Report-92216.pdf

[24] Telmarc, "FTTP; Capital Costs and the Viability of Verizon's FiOS", 2006, accessible at: http://www.telmarc.com/Documents/Papers/2006%2009%2001%20FTTP%20Capital%2001.pdf

[25] Utilities Telecon Council, "The Problem with Pole Attachments", 2007, accessible at: https://ecfsapi.fcc.gov/file/6519864708.pdf

[26] Depending on the region, this can vary between 1%-20% of all poles touched. Banerjee and Sirbu, Carnegie Mellon, "Towards Technologically and Competitively Neutral FTTP (FTTP Infrastructure)", accessible at: http://www.andrew.cmu.edu/user/sirbu/pubs/Banerjee_Sirbu.pdf

wasteful process as each touch can add up to $450 in costs[27]. As such, the FCC has floated a number of different solutions to rectify the current situation. First, they have suggested that an independent, utility-approved contractor could perform the make-ready for not only the utility, but also, potentially, for other attachers, an approach they call "One-Touch Make-Ready." Second, the FCC has floated the use of a structured cost-schedule of $300-500 per make-ready pole to standardize the process. At average status-quo costs, this standard fee structure would reduce make-ready costs from as high as $2,200 per pole to as low as $300 per pole (charged by the utility), a significant savings. To capture the entire effect of the FCC ruling, we have modeled the new make ready costs at this $300 per pole rate.

Operating Expense Assumptions

From an operations perspective, the NRPM allows for primarily two changes. The first involves freer access to poles and a reduction/harmonization of the annual pole attachment fee that is paid by the ILEC to the utility. In some instances, getting access to poles may be arduous or costly. For example, CenturyLink notes that it lacks "any meaningful leverage in dealing with electric utilities."[28] The ILEC laments that "joint use agreements give [electric companies] largely unfettered power over ILEC attachers."[29] It concludes that a "low, unified rate cap will promote broadband investment, especially in low density areas."[30] In 2015, Verizon claimed that a Virginia Electric Power Company, a subsidiary of Dominion, had been unfairly charging pole attachment rates well above levels set in the FCC's 2011 regulatory order.[31] According to the FCC, the average rate paid by the ILEC per vertical foot is $20, while the average rate paid by the cable company is $7.[32]

The second rule change affecting opex that is contemplated in the NPRM involves significantly easing the transition from legacy copper networks to fiber networks. When it comes to voice services, the regulatory obligation that is now under consideration in the NPRM is the duty to provide universal telephone service over the old copper network. Based on the original social compact, that duty falls uniquely on the telcos. Cable, wireless, and satellite providers are free to provide voice service (or not) over the network of their choosing, and they are free to pick and choose which homes to serve. In contrast, telcos must operate two networks at once—an

[27] CTC Technology & Energy, "City of Seattle FTTPs Feasibility Study", June 2015, accessible at: https://www.seattle.gov/Documents/Departments/Broadband/2016-6SeattleReport-Final.pdf
[28] CenturyLink, Pole Attachments: Just and Reasonable Rates, Terms, and Conditions for All Attachers, WC Dkt. No. 07-025, at 2, *available at* https://ecfsapi.fcc.gov/file/7021034686.pdf.
[29] Id. at 8.
[30] Id. at 14.
[31] Bryan Koenig, Verizon Says Utility Co. Overcharging For Pole Attachment, LAW 360, Aug. 5, 2015, available at https://www.law360.com/articles/687196/verizon-says-utility-co-overcharging-for-pole-attachment.
[32] FCC, National Broadband Plan, accessible at: http://www.broadband.gov/plan/6-infrastructure/

outdated, copper-based legacy network that provides service to a shrinking customer base and a modern, IP-based network that supports data, video, and voice applications

If supporting two separate networks imposed trivial costs on the telcos, then consumers would not be impacted. However, telcos invest a significant amount of resources to maintain the legacy network. One study by the Columbia Institute for Tele-Informations estimated that nearly half of telcos' capital expenditures are tied up in this area.[33] Freed from these obligations, telcos could deploy these resources to higher value services, including expanding the reach of their IP-based networks. Broadband consumers, particularly those living in areas served by a single wireline provider of broadband services, would benefit from the enhanced competition with cable operators.

To demonstrate these costs, we can isolate three areas where running two networks leads to a significant resource redundancy.

First, an ILEC must maintain a significant amount of space dedicated towards legacy switching gear and peripheral equipment. Reducing the copper footprint can save upwards of 80% of central office space as a carrier can remove the gear and consolidate into a much smaller footprint.[34] Assuming commercial real estate prices of around $25/foot per year across an ILEC's CO footprint of 50 million square feet and roughly 25 million homes in footprint, that equates to a savings of roughly $35 per home passed per year of real estate expense.

Second, electrifying the copper network and equipment takes a significant amount of electricity to operate, estimated at $1.49 per home passed per year of electricity expense. [35]

Lastly, there is a large amount of incremental maintenance for the copper network. These include replacing drops, repairing wiring, resolving customer complaint tickets, and rolling trucks to resolve any issues. In 2013, Verizon estimated that in areas where both FiOS and copper existed, they were spending more than $200 million annually on the copper network, or roughly $10 per home passed with both fiber and copper per year of maintenance expense.[36]

---

[33] Robert Atkinson & Ivy Schultz, Broadband in America: Where It Is and Where Is It Going?, Nov. 11, 2009, available at http://www.broadband.gov/docs/Broadband_in_America.pdf

[34] Verizon claims they could save 60-80% across 50 million square feet of CO space, by retiring copper. LightReading, "Verizon Saves 60% Swapping Copper for Fiber", May 2015, accessible at: http://www.lightreading.com/ethernet-ip/new-ip/verizon-saves-60--swapping-copper-for-fiber/d/d-id/715826

[35] Verizon notes that in six wirecenters where copper was entirely retired in favor of fiber, 1 million kilowatt hours of energy were saved per year. We estimate that there are roughly 70,440 homes in the affected wirecenters. Verizon Ex Parte, May 2015, "Technology Transitions, GN Docket No. 13-5; Ensuring Customer Premises Equipment Backup Power for Continuity of Communications, PS Docket No. 14-174; Policies for Rules Governing the Retirement of Copper Loops by Incumbent Local Exchange Carriers, RM-11358; Special Access for Price Cap Local Exchange Carriers, WC Docket No. 05-25"

[36] FCC WC DOCKET NO. 12-353, Comments of Verizon and Verizon Wireless, "Technological Transition of the Nation's Communications Infrastructure"

Given this benefit accrues even in a non-full copper retirement scenario, we have assumed that 50% of the benefit would be achieved in the base-case scenario and another 50% would be achieved with an accelerated copper retirement.

All told, copper retirement can result in savings of $45-50 per home passed per year. This too, may be conservative, as in 2006 Verizon estimated that in a full decommissioning scenario they may be able to save $110 of opex per line per year.[37]

A simple table of the modeled changes from the NPRM is shown here below:

TABLE 4: NRPM MODELED RULE CHANGES

Category	Description	Change
Limit Attachment Fees	Normalize ILECs to the most recent telecommunications rate; doing this will also ensure that capital costs that utilities already recover via make-ready fees from pole attachment rates are excluded from carrier capex	65% Reduction (Avg. Pole Attachment Rates)
Limit Make Ready Fees	Allow utilities set a standard charge per pole ($300-$500) that the new attacher may choose in lieu of cost-allocated charge	60-80% Reduction
Limit Engineering/ Make-Ready Timing	Wireline: Drop from ~150 days to ~60 days (application review, survey, cost estimation, make-ready work); use other utility approved contractors to speed provisioning; post-make ready timeline of 14 days Wireless: Assumes drop from 135 days (for large wireless attachment orders) to 45 days We assume savings in permitting/engineering costs	10% Reduction (Permitting/Engineering Costs) 1Q revenue shift forward
Copper Retirement	Assumes all copper plant will be retired in favor of fiber; cost savings from maintenance, responding to trouble tickets, operating care centers, structure costs for pole rental/conduit, maintaining OSS, property taxes and costs from damaged / cut cables, reduced CO footprint and energy savings	• **Maintenance:** $0.50/ Prem Passed / Month Savings • **Power:** $1 - 2 / Prem Passed / Year Savings • **Space:** 70% Reduction in CO Space. $35/Prem/Yr
214 Discontinuance	Assumes all legacy products can be discontinued more rapidly, equating to more immediate OSS and Back Office savings	

Other Non-Modeled Benefits

While we have modeled a number of direct benefits from the NPRM rulemaking process, there are a number of other indirect benefits that we did not explicitly model, but from which one could reasonably expect to derive economic gain. For instance, the 214 Discontinuance and

[37] Verizon Communications FiOS Briefing Session, September 2006

Copper Retirement process will remove the need to maintain entire billing systems, IT resources, trouble ticketing systems, and other dedicated on-staff engineering resources.

An argument could also be made that deregulating a fiber deployment and lowering barriers to deployment would also result in a lower risk profile for investors in these companies. A lower risk profile could result in an ILEC being rewarded with cheaper access to debt via a higher credit rating, or access to equity via a lower cost of capital. This lower cost of capital would actually push more modeled areas to a positive economic return, and more capital would be deployed to serve these regions.[38]

Additionally, there are a number of potential cost savings from a streamlined screening process for wireless deployments – particularly on tribal lands or areas with historical significance. The NPRM language sets the stage for removing "local barriers" to deployments by: 1) establishing a 60 day shot clock for local governments 2) reducing the survey, cost estimate and acceptance period from 28 days to less than two weeks 3) potentially reducing or standardizing tribal fees and shortening the SHPO/NEP compliance review by setting a 30 day timeline for an initial response 4) excluding small cells from historical or tribal review for replacement poles if the pole is not substantially larger than what existed before and the construction is minimal 5) excluding review of collocations within 50-250 feet of historic districts, structures within industrial zones or within 50 feet of a utility ROW 6) excluding towers built between 2001 and 2005 from review unless the new antenna would result in a substantial size increase or the tower has an adverse effect on the historic property 7) Reducing fees which are "prohibitive" by tying fees to costs and lastly 8) removing barriers to deploying on lamp posts, water towers, utility conduit and other rights of way. Again, we have not modeled any of these potential benefits, but note that they could allow for a lower burden to deployment for a wireless carrier.

Model Results

FTTP – Model Results

When run for the FTTP Base scenario (FTTP deployment under prevailing FCC rules), our model estimates a total of 74.3M, or 53% of housing units and SMBs nationwide are in areas with an NPV positive business case. As these areas are profitable for a fiber deployment, the associated premises could be viably served under the current rules. Enacting the proposed changes in the FTTP NPRM Scenario, our model estimates an incremental 26.7M premises become profitable to pass with fiber, resulting in a total of 100.9M, or 71% of premises in the US being potentially economically viable for fiber deployment. To reach these 26.7M premises, an associated

[38] FCC WC DOCKET NO. 10-90, "Prescribing the Authorized Rate of Return", May 16, 2013. The FCC ruling notes that the WACC is a function of risk, and that businesses of similar risk should receive a similar "risk premium". Increasing the risk of an investment serves to increase the required return and will lower the discounted value of future returns.

Henry Hultquist
Vice President
Federal Regulatory

AT&T Services, Inc.
1120 20th Street, NW
Suite 1000
Washington, DC 20036

T : 202.457.3821
F : 214.486.1592
henry.hultquist@att.com
att.com

February 23, 2018

Via Electronic Filing

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW – Lobby Level
Washington, DC 20554

Re: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment,* WT Docket No. 17-79

Dear Ms. Dortch:

AT&T is pleased with the Federal Communications Commission's continuing focus on removing regulatory barriers to wireless infrastructure investment. To meet sky rocketing consumer demand for fast, reliable broadband service, carriers must quickly and efficiently deploy wireless infrastructure without outdated and counterproductive regulations. The Commission's efforts in this docket to modernize National Environmental Policy Act ("NEPA") and National Historic Preservation Act ("NHPA") reviews of small cell facilities are an example of how the Commission can promote broadband build out and pave the way for the United States to become the world leader in 5G deployment. This letter and the attached presentation are filed in this docket in support of those Commission efforts.

Modernizing NEPA and NHPA regulations—originally designed for large macrocell towers—to eliminate review of small cell equipment and support structures that minimally impact the environment and to streamline processes when review is required, would reduce the time it takes to deploy small cell facilities, reduce the cost of deploying small cell facilities, and facilitate an increase in small cell investment. With each antenna comprising only about 3 cubic feet in volume, small cells indeed are unobtrusive and in harmony with the poles, street furniture, and other structures on which they are typically deployed. Moreover, the vast majority of small cell antennas are placed at a height of less than 60 feet on structures located near similarly sized structures in previously disturbed rights-of-way, greatly reducing the likelihood of adversely impacting the surrounding environment. Thus, small cell deployments have at worst minimal potential to disturb historic properties or tribal resources.

Yet, under existing processes, AT&T will spend millions needlessly conducting NEPA and NHPA review on thousands of small cell facilities. In fact, 17% of AT&T costs to deploy each small cell node are directed to NEPA and NHPA compliance, an astonishingly high

percentage. And, because small cell projects can include hundreds of nodes, compliance costs can rise into the millions for each project. In 2018, AT&T predicts combined NEPA and NHPA compliance costs of about $45 million, a figure that would likely increase in future years as small cell projects increase. These resources would otherwise be redirected to expand existing small cell projects over a larger geographic area or to add new small projects in other cities and towns. Simply put, NEPA and NHPA compliance costs have a direct effect on broadband deployment initiatives.

The tribal review process is a significant contributor to those costs. Standard fees charged by Tribal Nations have increased by 1400% in the Northeast and by 2500% in the Southeast in just the last 7 years. Many projects that implicate no tribal interests, such as collocations on existing structures, nevertheless generate significant tribal fees. For example, 36 tribes assessed AT&T $13,525 to review a collocation on a Marriott hotel in Hannepin, Minnesota, 13 tribes assessed $8,000 in fees to review a collocation on the Civic Center in Denver, Colorado and another $8,000 to review a collocation on a 10-story apartment building in the same city, and 14 tribes assessed $7,750 to review a collocation on the County Court House in Suak, Wisconsin. Partly as a result of these needless reviews, over the last three years AT&T has spent over $13 million in tribal fees and up to $8 million in one year alone. And, current regulations would allow tribal fees to rise exponentially for the placement of small cell poles and facilities due to the density of those build plans. For example, a 200-node project in Atlanta, Georgia generated $1.1 million in fees from 12 tribes (with no finding of adverse effect) and the initial 23 nodes of a project in Arkansas generated fees of $125,000 from 23 tribes (with tribal review ongoing). Based upon these and similar experiences from other small projects to date, AT&T expects to spend up to $29 million in tribal fees alone for small cells in 2018, equivalent to the cost of multiple 100+ node projects.

And, this is just the beginning. Two tribes recently stopped accepting batched applications. As a result, every node, even if on the same block in a right-of-way, requires a separate number in the Tower Construction Notification System ("TCNS") and thus, generates a separate fee, just as would a macrocell tower. Unnecessary NHPA reviews, and especially tribal reviews, which are consistently the longest part of any review, also significantly delay broadband deployment. CTIA and WIA have explained that tribal review takes, on average, about 110 days,[1] 80 days more than the presumptively reasonable 30-day response time contemplated by the Section 106 Nationwide Programmatic Agreement. Moreover, a 110-day average means that some tribes take much longer than 110 days to response. For example, some tribes routinely delay for 180 days before responding. Another tribe, evidently facing workforce shortages, currently responds only upon Commission escalation and even then, only to express its intention to eventually review the deployment at an unstated future date.

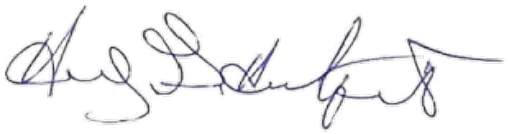
These examples, along with the abundant record in this docket, clearly justify reform of the tribal review process. The Commission can reform the process and accelerate broadband

[1] Joint Comments of CTIA and WIA, WT Docket No. 17-79 at 6 (filed June 15, 2017).

deployment by (1) excluding from NEPA and NHPA review the placement of small cell facilities (i.e., antennas up to 3 cubic feet in volume plus associated equipment) and poles installed at up to 60 feet in height that support those facilities, which would reduce deployment timelines by around 60-90 days, (2) clarifying that tribes do not act as a contractor or consultant (and are not owed fees) when performing their statutory duty of review in the NHPA process, (3) imposing a "shot clock" for completion of tribal review of a project; (4) requiring tribes to declare with specificity why contractor review is needed for any small cell project, even if disclosed solely to the Commission, and (5) performing other streamlining efforts supported by the record. These steps would allow AT&T (and other wireless providers) to focus on small cell deployment and redirect a significant portion of the $45+ million in expected annual NEPA and NHPA compliance costs over the next few years to expanded broadband build-out.

Pursuant to Section 1.1206 of the Commission's rules, an electronic copy of this letter is being filed for inclusion in this docket.

Sincerely,



Henry G. Hultquist

CC:
Will Adams

What is a Small Cell?

February 23, 2018

Regulatory Treatment

NEPA/NHPA Exclusion

- New or replacement poles up to 60 feet AGL installed to support wireless facilities and other existing structures increased in height up to 10 feet.
- Alternatively, new poles up to 60 feet AGL and replacement poles and other existing structures increased in height by greater of 10% or 5 feet.

Small Cell Definition

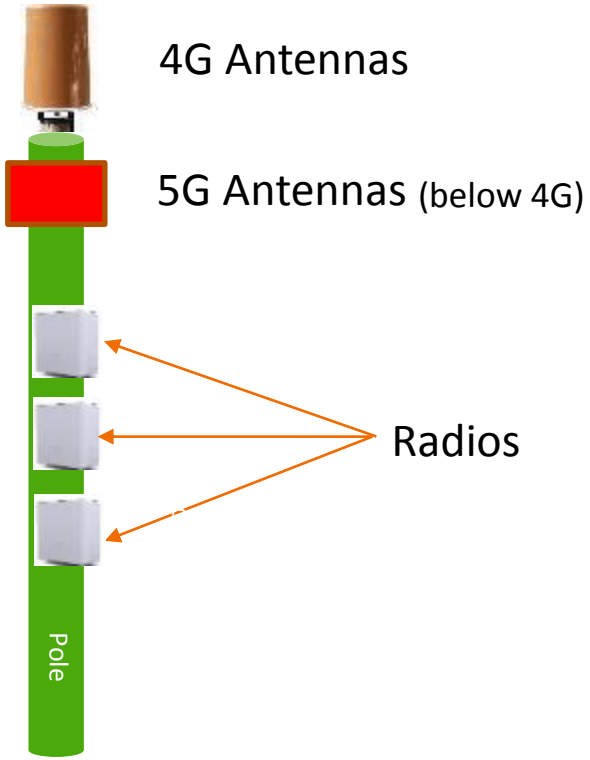
A wireless facility where each antenna, excluding associated equipment, comprises no more than three cubic feet in volume.

Small Cell Antennas

Typical Urban Deployment

4G Antennas: ≈3 ft^3/ea

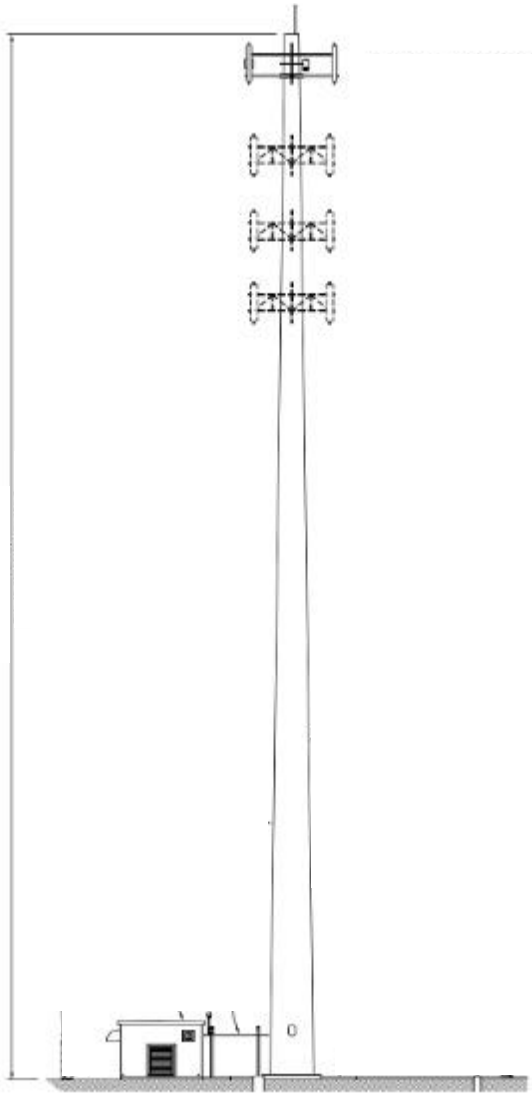
5G Antennas: <3 ft^3/ea



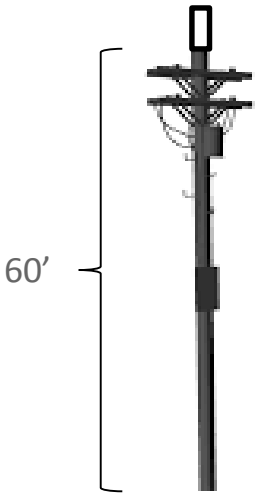
Comparisons- Macro cell vs. 30’ & 60’ Small Cell

(approximately scaled)

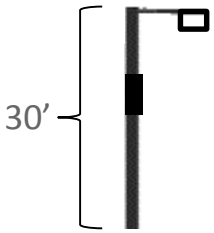
Macro Cell Height- 70’ - 300’



Small Cell Height - 60’



Small Cell Height - 30’



Small Cell Examples

Boston

Dallas

Small Cell Examples

Los Angeles

Atlanta

Small Cell Examples

Baltimore (Crown)

Indianapolis

Small Cell Examples

Indianapolis

New York City

Small Cell Examples

San Francisco

New Jersey Shore (Bldg Side)

Via Electronic Filing
Commissioner Brendan Carr
Federal Communications Commission
445 12th Street, SW
Washington, DC

RE: WT Docket No. 17-79

June 4, 2018

Dear Commissioner Carr,

Advanced communications technology has long been an integral part of my community's vision of the future, both for the City of Kings Mountain and for Cleveland County. The construction of many large data centers, and the fiber optic facilities serving them, have been an economic boon to our community west of Charlotte.

Looking to the future, we see the importance of advanced wireless communications. A strong wireless network helps keep the community overall connected, while enabling small businesses to grow their customer base, expand their reach and potentially increase revenue and create jobs.

So, I was encouraged to see the FCC taking definitive steps to encourage and facilitate the investment of capital in upgrading wireless infrastructure. As the demand for wireless technologies and applications continues to grow, the pressure on existing wireless networks will grow as well. A small-cell network design will complement the traditional, pre-existing cell towers to address capacity issues.

We understand that larger metro areas, such as Charlotte, may feel this network congestion before we do. But in today's Internet of Things economy and society, wireless connectivity is vital, regardless of the size of the community in which one lives.

Under the leadership of Speaker of the House Time Moore, who is from Kings Mountain, the North Carolina General Assembly has enacted legislation to encourage the deployment of small cell technology to limit exorbitant fees which can siphon off capital from further expansion projects. I was encouraged to see the FCC taking similar steps to enact policies that help clear the way for the essential investments that will promote necessary upgrades to network infrastructure to ensure that Kings Mountain remains a great place to both live and do business.

Thank you for all your efforts to support reforms that remove barriers to the deployment of wireless infrastructure. I hope you will continue to do so, and that your FCC colleagues will do the same.

Sincerely,

Scott Neisler
Mayor, City of Kings Mountain

at&t

Henry Hultquist
Vice President
Federal Regulatory

AT&T Services Inc.
1120 20th Street, NW
Suite 1000
Washington, DC, 20036

T: 202.457.3821
F: 202.457.3072

June 8, 2018

VIA ELECTRONIC SUBMISSION

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW – Lobby Level
Washington, DC 20554

Re: **Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79**

Dear Ms. Dortch:

The Federal Communications Commission has acted in this docket to remove needless federal impediments to broadband deployment by eliminating tribal, historic, and environmental reviews for small cell facilities. Once effective, these actions will reduce deployment timelines and allow carriers to accelerate broadband deployment, thus expanding access to broadband for more Americans. But, removing unnecessary federal impediments to broadband deployment is only part of what's needed. Particularly in states that have not passed small cell legislation, municipalities continue to impede the placement of small cell facilities in the rights of way (ROW) by charging excessive fees, refusing placement outright, and imposing other unreasonable barriers. The Commission should act to address these problems. AT&T encourages the Commission to clarify the limits on a municipality's authority to restrict wireless providers' access to the ROW and ROW infrastructure.

The Commission is authorized under Sections 253 and 332(c)(7) of the Communications Act to promote broadband services, and the Commission is well within its authority to interpret those statutes. These two sections contain almost identical language barring state and local actions that "prohibit or have the effect of prohibiting" service. The Commission should affirm that the Sections 253 and 332 "effective prohibition" standard is met whenever state or local action materially inhibits or limits the ability of any competitor or potential competitor to provide telecommunications services. For small cells, the Commission should make clear that, absent unusual circumstances (such as collocation in a historic district), refusal of a municipality to accept a standard form deployment as set forth in the Commission's Second Report and Order would constitute a "prohibition of service." Under these standards the Commission and providers can establish a solid framework to accelerate the expansion of broadband. Moreover, the municipal safe harbors in Sections 253(b) and (c) protect against concerns about overreach.

The Commission should likewise find that unreasonable fees imposed for access to the ROW effectively prohibit carriers from providing service. When municipalities charge

prohibitively high fees to place new poles in the ROW or access existing ROW infrastructure, they discourage broadband providers from deploying. Even when providers agree to unreasonable municipal demands, the excessive ROW fees have the effect of prohibiting the construction of or reducing the number of nodes providers can afford to build, thereby significantly reducing the provision of broadband service and preventing deployment in downstream communities. All providers have limited capital dollars to invest, funds that are quickly depleted when drained by excessive ROW fees. Bringing ROW fees in line with the costs incurred by the municipality to process applications and manage the ROW would make those fees fair and reasonable, allowing AT&T and other providers to stretch finite capital dollars to additional communities. Even fees that only slightly exceed a municipality's costs harm deployment due to the sheer number of expected small cell deployments over the next few years. While the Commission recently noted the harm of excessive non-recurring fees for tribal reviews, *annually* recurring fees are even more harmful because of their continuing and compounding nature.

In its comments, AT&T proposed that the Commission adopt presumptively reasonable safe harbor fees that municipalities can charge for access to the ROW and ROW infrastructure, including a $50 recurring annual fee per small cell node. The Commission should also adopt a safe harbor for nonrecurring fees, such as $500 for up to five nodes, plus $50 per additional node submitted. These fees are in the range of those fees approved in state small cell bills and substantially more than fees paid to utilities under the Commission's pole attachment rate formula for the placement of equipment on comparable structures. The establishment of safe harbor fees set by category (i.e., recurring vs. nonrecurring) will help to avoid controversies that could arise if some municipalities attempted to circumvent safe harbors by changing the name of their fees or adopting new fees.

The Commission should also adopt a 60-day shot clock under Section 332 for small cells collocated on existing poles, which is consistent with Section 6409, and 90 days for small cells placed on new poles. Clear and consistent shot clock deadlines would simplify deployment processes for municipalities and carriers alike, eliminate confusion, and prevent unnecessary delay in small cell deployments. It should also include any mandated pre-application review periods. Pre-application review meetings provide valuable insight to municipalities and providers, but some municipalities use these meetings to mandate the submission of voluminous documentation and to impose expensive changes in the proposal in order to delay action, all outside the shot clock. A shot clock that begins upon the earlier of a notice of a pre-application review meeting or the filing of the permit application would close this gap. And, if a municipality fails to act within the applicable Section 332 shot clock, providers should be able to invoke a deemed granted remedy to facilitate timely deployment. Even if a provider decides not to begin construction in a manner allowed when an application is deemed granted, the existence of the remedy is nevertheless important. In AT&T's experience, the mere threat of the deemed granted remedy encourages municipalities to take action within the shot clock period or to work out a reasonable extension and amicable resolution with the carrier.

Pursuant to Section 1.1206 of the Commission's rules, an electronic copy of this letter is being filed for inclusion in this docket.

Sincerely,

Henry G. Hultquist

CC: Commissioner Brendan Carr
Will Adams

PENSACOLA
THE UPSIDE of FLORIDA

ASHTON J. HAYWARD
MAYOR

June 8, 2018

Via Electronic Filing
Commissioner Brendan Carr
Federal Communications Commission
445 12th Street, SW
Washington, DC

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79

Dear Commissioner Carr:

I appreciate the FCC's recent Orders that removed cumbersome federal hurdles to broadband. Your work is helping open the door to increased investment and innovation in our community.

I also appreciate your efforts to establish some common-sense standards insofar as it relates to fees associated with the deployment of small cells. Unfortunately, we have seen a cottage industry of consultants emerge who have wrongly counseled communities to adopt excessive and arbitrary fees.

This approach results in nothing more than telecom providers being required to spend limited investment dollars on fees as opposed to spending those limited resources on the type of high-speed infrastructure that is so important in our community.

Much like city leaders and planners, our industry partners who are helping to grow our economies are looking for consistency and stability as they make investment decisions.

Your work with your colleagues on the Commission is key to establishing that consistency and stability, and I applaud your efforts to limit exorbitant fees and needlessly lengthy review processes.

I look forward to working with broadband providers to enhance our community, and I appreciate your leadership on this important debate.

Sincerely,

Ashton J. Hayward III
Mayor

verizon

Katharine R. Saunders
Managing Associate General Counsel
Federal Regulatory and Legal Affairs

1300 I Street, NW, Suite 500 East
Washington, DC 20005
Phone 202.515.2462
katharine.saunders@verizon.com

June 21, 2018

Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84

Dear Ms. Dortch:

On June 19, 2018, Beth Drohan, Vice President, Wireless Field Operations and Assurance, Will Johnson, Tamara Preiss, and I of Verizon met with Rachael Bender, Wireless and International Advisor, of the Chairman's office; Erin McGrath, Wireless, Public Safety, and International Legal Advisor, and Amy Bender, Wireline Legal Advisor, of Commissioner O'Rielly's office; Will Adams, Legal Advisor, and Connor Glisson, Intern, of Commissioner Carr's office; and Travis Litman, Chief of Staff and Senior Wireline and Public Safety Legal Advisor, and Umair Javed, Wireless and International Legal Advisor, of Commissioner Rosenworcel's office. We discussed issues raised in the Commission's *Wireless Notice*[1] on streamlining wireless infrastructure deployment. We also discussed issues raised in the Commission's *Wireline Notice*[2] on streamlining wireline infrastructure deployment. Our remarks were consistent with our filed comments and prior ex partes in these proceedings.[3]

Ms. Drohan explained that rapid growth in wireless usage demands continued investment in fiber facilities and small cells to support users' needs. Today, providers are increasing

[1] *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Notice of Proposed Rulemaking and Notice of Inquiry, 32 FCC Rcd 3330 (2017) ("*Wireless Notice*").
[2] *See Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Notice of Proposed Rulemaking, Notice of Inquiry, and Request for Comment, 32 FCC Rcd 3266 (2017) ("*Wireline Notice*").
[3] *See, e.g.*, Verizon Comments (June 15, 2017) and Reply Comments (July 17, 2017), WC Docket No. 17-84; Verizon Comments (June 15, 2017) and Reply Comments (July 17, 2017), WT Docket No. 17-79 & WC Docket No. 17-84; Ex Parte Letter from Katharine Saunders, Verizon, to Marlene Dortch, FCC, WT Docket No. 17-79 & WC Docket No. 17-84 (Mar. 8,

capacity by densifying their 4G LTE networks. At the same time, the move toward 5G also requires small cells and more ubiquitous fiber deployment. Ms. Drohan emphasized the need to deploy quickly to satisfy consumer demand and to ensure that the United States leads the world in 5G.

Ms. Drohan emphasized the need for Commission action to address state and local barriers to small cell deployment. Ms. Drohan reiterated that Verizon works closely with cities and localities in an effort to reach reasonable and mutually beneficial arrangements that facilitate wireless deployment. In many instances, these arrangements may also help to address other needs of local governments, such as enhancing smart city capabilities. While this collaborative approach has been successful in some cases, many municipalities unfortunately continue to demand exorbitant fees for access to rights-of-way and structures within them, including, for example, attachment fees that exceed $4,000 per year. Some cities, where providers may have a competitive necessity to offer service, continue to use their considerable leverage to seek fees that far exceed their costs. Given the finite nature of capital budgets and the need to manage expense budgets, the resulting higher costs mean fewer resources are available for network infrastructure deployment in other parts of the country. Similarly, local permitting delays continue to stymie deployments. Ms. Drohan explained that a number of Florida cities have imposed moratoria on small cell applications, and other cities' refusal to accept or process applications results in *de facto* moratoria. A policy that ensures that fees are reasonable and cost-based and that localities act quickly on applications will best further the Commission's goals of ensuring fast and far-reaching deployment of advanced wireless services.

We also noted that many utilities charge a premium for access to utility-owned light poles or deny access altogether, taking the position that the pole attachment statute requires access only to electric distribution poles. Access to light poles is crucial to wireless infrastructure deployment in some locations. The Commission can resolve this uncertainty by declaring that the pole attachment statute requires access to all poles, including light poles, owned by covered utilities.[4]

Further, Ms. Drohan explained that another barrier to rapid and efficient deployment is the existing make-ready process that slows providers' ability to attach new network facilities to poles. She noted that the sequential nature of make-ready work under the current system means that one party's delay in completing its make-ready work delays other parties' ability to begin their make-ready work, and that existing attachers often have no incentive to prioritize make-ready above other customer-facing work. Ms. Drohan described her experience on prior projects where existing attachers' delays in completing make-ready significantly delayed or slowed our broadband deployment. As an example, she discussed issues Verizon faced in West Virginia as we built backhaul for our LTE network. Verizon used a third party to help with the build – but that third party faced multiple and extensive delays at every step of the make-ready process as existing attachers repeatedly missed deadlines. This meant that there were often teams of workers ready to complete the build who were sidelined as they waited for existing attachers to

---

2018); and Ex Parte Letter from Andre Lachance, Verizon, to Marlene Dortch, FCC, WT Docket No. 17-79 & WC Docket No. 17-84 (May 23, 2018).

[4] *See* 47 U.S.C. § 224(f)(1) ("A utility shall provide a cable television system or any telecommunications carrier with nondiscriminatory access to *any pole*, duct, conduit or right-of-way owned or controlled by it.") (emphasis added).

finish their respective moves. This not only delayed deployment significantly but also drove up our costs as we waited for the ability to build. Ms. Drohan explained that based on her experience, the unpredictable timing and high costs of the existing make-ready system can reduce a new attacher's planned broadband deployment radius because every dollar spent on one broadband project is a dollar that cannot be spent elsewhere.

To address these delays and costs, Ms. Drohan reiterated our strong support for one-touch make-ready (OTMR) which would allow attachers, as well as pole owners, the option to use pole-owner-approved contractors to coordinate and do all work to add a new attachment. Instead of multiple parties performing sequential make-ready work on the pole, a new attacher could use a single pole-owner-approved contractor to complete all of the work at one time. She explained that by reducing the time and cost to deploy, OTMR would enable companies to consider a broader potential deployment. Ms. Drohan rejected the idea of imposing shorter deadlines on existing attachers since parties struggle to meet the existing make-ready deadlines; instead, she underscored that the best approach was to have a single, approved contractor complete all make-ready at one time.

Please contact me if you need any additional information.

Very truly yours,

Katharine R. Saunders

cc: Rachael Bender
Erin McGrath
Amy Bender
Will Adams
Connor Glisson
Travis Litman
Umair Javed

Elder Alexis D. Pipkins, Sr.
PO Box 536
Florence, SC 29503
alexispipkins@aol.com or 843-615-0229

July 26, 2018

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

RE: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment (WT Docket No. 17-79)

Dear Commissioner Carr,

Mobile technology breathes opportunity – the opportunity to connect, to learn, to work, to entertain, to get involved in community, and so much more. Unfortunately, not everyone benefits from those opportunities because they're on the wrong side of the digital divide. Thank you for your efforts to bridge the divide and expand access and therefore opportunity.

I'm writing you today to talk specifically about the next generation of mobile, 5G. These networks and the revolutionary technologies they'll enable stand to power more inclusive communities – connecting people to opportunities and services that may not have otherwise been available to them and position them for success. I strongly urge you to continue pursuing common-sense rulemakings that will bring 5G and a new wave of opportunity to communities regardless of their location.

From my vantage point as a teacher and administrator, a Florence School District One Board Member and a past Chair of the SC Black Caucus of School Board Members a huge area of opportunity with 5G is in our schools. Kids are growing up in a digital age and need to be prepared to thrive in it. They need a solid foundation in STEM curriculum, and their learning should not be confined to their classroom walls. A 5G platform and the technology that's enabled by it will be a launching pad that will introduce them to new people, skills, and experiences so they can learn from the best, prepare for the future, and "go to" significant places and events.

But in order for 5G to deliver on those expectations, the right network infrastructure must be in place. This infrastructure includes new and old components ranging from small cells to traditional towers. Yet, outdated rules from all levels of government will slow the process down and delay the benefits of 5G. With that in mind, the question that regulators and policymakers should be asking is what can I do to speed it up?

At the end of the day, the race to 5G is global. South Carolina wins if the U.S. wins. So instead of each city or state for itself, we should be working towards aligned, streamlined frameworks that benefit us all. If we take that approach, investment will more easily flow from one community to the next, and smaller, rural communities in South Carolina, for example, won't be stuck in line as long while larger communities elsewhere monopolize resources.

5G will present exciting opportunities for South Carolina and its students. With proper streamlining and preparedness, they can experience its benefits sooner rather than later.

Regards,

Elder Alexis D. Pipkins, Sr., Ed.S.

Pueblo Board of County Commissioners

Terry A. Hart
Chairman
District 1

Garrison M. Ortiz
Pro-tem
District 2

Sal Pace
Commissioner
District 3

July 30, 2018

Honorable Chairman Ajit Pai
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Chairman Pai:

As you know, the race to 5G is on across the globe, and many nations are racing to lead it. Our country's leadership in 4G resulted in tremendous economic growth, and winning the race to 5G will bring even more economic success: 5G will contribute hundreds of billions of dollars to our economy and generate millions of new jobs. But America's success is not assured. Today, China and South Korea are leading this critical race, which is why we need smart, efficient Federal Communications Commission (FCC) regulations that promote investment so the U.S. ultimately wins the race to 5G.

Congress declared in the 1996 Telecommunications Act that a "pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans." That policy reflects Congress' decision that removing unwarranted regulation while balancing the important role of localities in the siting process will benefit our economy and help our citizens. We urge the FCC to do more to create guardrails that promote local deployment of advanced communications services and help the country win the race to 5G. As you undertake this effort, we are hopeful the FCC will take the following principles into consideration.

First, the FCC should recognize localities' historic and ongoing role in managing rights of way to ensure safe deployment and achieve aesthetic goals. Reasonable, objective requirements should be permitted and should be published in advance so that providers know how to design their facilities.

Second, the FCC should establish "guardrails" to delineate where local regulations either promote or effectively prohibit the construction of the networks urgently needed for 5G and broadband. Such guardrails will benefit both localities and providers by clarifying what types of restrictions are appropriate or improper. For instance, requirements that all wireless facilities be placed underground (a physical impossibility for wireless) are the kind of regulations that are inconsistent with the national priority to deploy broadband to reach all Americans.

Pueblo County Courthouse
215 W. 10th Street
Pueblo, CO 81003
719.583.6000 | county.pueblo.org

Third, the FCC should ensure that localities are fully compensated for their costs in issuing permits, overseeing deployment, and where necessary, managing the rights of way for use by communications providers. Such fees should be reasonable and non-discriminatory, and should ensure that localities are made whole.

Lastly, the FCC should set reasonable and enforceable deadlines for localities to act on wireless permit applications. The lengthy reviews for 200-foot cell towers are clearly not appropriate for the small cells that will be used to increase capacity and promote next-generation deployments. The distinction between siting large maco-towers and small cells should be reflected in any rulemaking. Reasonable deadlines should also be accompanied by reasonable enforcement of those deadlines.

We urge you to act swiftly to clear the way for more investment in our nation's vital communications infrastructure. The FCC should take steps this year to ensure capital is being invested in deploying broadband, not being spent on burdensome regulations that make investing in higher cost areas, particularly in rural America, less feasible.

We look forward to working with you in this important effort to ensure that the U.S. leads the way in 5G and reaps the economic and other benefits that advanced communications networks will provide to all Americans.

Sincerely,

Sal Pace
Pueblo County Commissioner
District 3

Montana State Senate

SENATOR DUANE ANKNEY
SENATE DISTRICT 20

HELENA ADDRES
POBOX 200500
HELENA MT 59620-0500
PHONE (406) 444-4800

COMMITTEES
ENERGY AND TELEGOMMUNICATIONS - CHAIR
FINANCE AND CLAIMS
NATURAL RESOURCES

HOME ADDRESS
PO BOX 138
COLSTRIP, MT
(406) 740-0629

July 31,2018

Commissioner Brendan Carr
Federal Communications Commission
445 12th Street, SW
Washington, DC

RE. WT Docket No. 17-79

Dear CommiS5ioner Carr

As a State Senator of a large rural Senate district in Montana, I would urge the commission to support polices that will build out our rural wireless and broadband network.

As the economy swings way from a more traditional natural resource economy, broadband and wireless become of the utmost importance to rural Montana. The first thing a potential company will ask is, Do you have broadband?

My Senate District borders on two Indian reservations, Crow and Cheyenne, where unemployment often reaches 50-60 percent. So bringing the modern world to rural areas is a matter of survival for many rural communities.

Where I see the problem is, that most of investment capital is spent in the larger urban areas. This is primarily due to the high regulatory cost and the cost recovery can be made in those areas. This leaves the rural areas out. I believe that by reducing the high regulatory costs in the urban areas would leave more dollars to development in the rural areas. Establishing timelines by modernizing the permitting process would also help in building out into the rural areas.

Respectfully,

Senatôr Dñane Ankney

Chairman Energy, Telecommunications Committee

CHARLOTTE

July 31, 2018

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

RE: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment (WT Docket No. 17-79)

Dear FCC Commissioners, I write to you today as a member of the City Council of Charlotte, North Carolina.

Charlotte is one of America's fastest growing cities. As a member of the Economic Development Committee for the city, I am working every day to ensure Charlotte thrives with diverse businesses and economic opportunity for all. This work ranges from job training programs to targeted business and neighborhood development, all with a focus on fostering economic success for everyone in our communities.

Technology is an increasingly important component in our work. One of the city's initial smart city projects, Envision Charlotte, used sensors and data to reduce energy usage in our urban core buildings by almost 20 percent in the last eight years, the equivalent of taking over 11,000 cars off North Carolina's roads.

Office of the City Council 600 East Fourth Street Charlotte, NC 28202-2843 704/336-2241

This is just one of the many upgrades and technological improvements we're seeing in Charlotte. Among others is the addition of small cells to our streetlights, phone poles, et cetera. This modern wireless infrastructure is a critical part of the backbone of the next- generation of wireless, which will help make us a more sustainable city – allowing us to better manage the flow of traffic and solve problems like people circling the block to find parking spots among others.

However, getting this infrastructure out in a timely manner can be a challenge that involves considerable time and financial resources. The solution is to streamline relevant policies – allowing more modern rules for modern infrastructure.

I am encouraged that the FCC is focused on this, but it can't act alone. Updating and modernizing rules at the federal, state, and local levels – along with public-private partnerships – will help residents, tourists, and businesses experience the benefits of 5G.

Thank you for taking comments on this issue. We would welcome a visit from the Commission to Charlotte to show and discuss some of our upcoming initiatives.

Sincerely,

LaWana Mayfield

Office of the City Council 600 East Fourth Street Charlotte, NC 28202-2843 704/336-2241

COUNTY OF MARLBORO

Dr. Carolyn A. Prince, Chair
Marlboro County Council

J. Ronald Munnerlyn, Jr.
County Administrator

www.marlborocounty.sc.gov

Post Office Box 419
Bennettsville, South Carolina 29512
Phone: (843) 479-5600
Fax: (843) 479-5639

August 3, 2018

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

RE: WT Docket No. 17-79: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment

Dear Commissioner Carr:

As the Chairwoman of the Marlboro County Council and the South Carolina African American Elected Officials Office, I write to you on an important issue that effects not only members of my community, but the rest of South Carolina, and the United States.

That issue is prioritizing fifth generation "5G" network implementation. Your leadership on this issue is much appreciated, and I hope you will continue to push for more reforms that will streamline infrastructure rules from coast to coast. A national model will help spur investment and make it go further – allowing more people in more communities to experience the benefits of 5G sooner.

Currently, we are faced with outdated regulations that will slow down and eat up investment in next-generation networks. For example, modern wireless infrastructure called small cells that cover short distances are being subjected to the same permitting processes and fee structures that were meant for 100-foot towers that can serve communities. Thousands upon thousands of small cells are needed for 5G. With that in mind, it's easy to see how old regulations could hinder the timely arrival of 5G throughout the country.

Modernizing regulations is a perennial issue, but it's especially critical here because 5G is not just about faster wireless service. It's about revolutionary opportunity. Because of that, we don't want to be left behind.

This is important for our students in particular. With 5G technologies, the classroom experience can be transformed. Between STEM education opportunities on next-generation networks and virtual reality driven lessons, students will be able to interact with people and experience places far beyond Marlboro. These opportunities will better prepare them to thrive in a digital world.

I've recently seen announcements about 5G coming to various cities later this year. That's great, and I hope to see more announcements soon – especially announcements that show the buildout going beyond urban areas. Making that a reality will take leaders at all levels of government stepping up to greenlight policies that remove outdated regulatory barriers. The FCC has and should continue to lead – laying a consistent framework for deployment that will make more areas 5G ready and help the U.S. win the race to 5G.

Sincerely,

Dr. Carolyn A. Prince

Dr. Carolyn A. Prince, Chairwoman
Marlboro County Council

CAP/pmb

Henry Hultquist
Vice President
Federal Regulatory

AT&T Services, Inc.
1120 20th Street, NW
Suite 1000
Washington, DC 20036

T: 202.457.3821
F: 214.486.1592
henry.hultquist@att.com
att.com

August 6, 2018

Ex Parte Communication

VIA ELECTRONIC SUBMISSION
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW – Lobby Level
Washington, DC 20554

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79
Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84

Dear Ms. Dortch:

In its recent *Declaratory Ruling*, the Federal Communications Commission ("Commission") declared that, with rare exceptions, moratoria on the acceptance, processing, or approval of applications or permits for telecommunications services or facilities violate Section 253 of the Communications Act.[1] AT&T urges the Commission to further use its authority to interpret Sections 253 and 332(c)(7) to clarify the types of municipal regulations that "have the effect of prohibiting" the provision of wireless service, primarily as they affect small cell deployments. Unreasonable municipal regulations on small cell placement continue to act as barriers to entry, reduce competition, and materially impede a provider's ability to deploy wireless services. Commission action is needed now to remove those barriers. Carriers are scaling up their small cell deployments in rights-of-way ("ROW"), including on municipal vertical structures, to add capacity in high demand areas. Those small cell sites will serve as the foundation of initial 5G networks, allowing for quick overlay and activation of 5G equipment as soon it becomes available. But, this foundation is threatened, promising to harm 5G deployment. Many municipalities continue to impose unreasonable barriers that would delay or discourage carriers from upgrading networks with more capacity and from building this 5G infrastructure. As with municipal moratoria, only Commission action will remove these deployment barriers.

[1] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79, WC Docket No. 17-84, Third Report and Order and Declaratory Ruling, FCC 18-111, at 73-82 (released August 3).

Unreasonably high municipal fees are a substantial barrier to the provision of service

Non-cost based fees[2] that many municipalities charge to access the ROW and/or municipally-owned ROW structures are the highest barrier to small cell deployments. The Commission can have the greatest impact by clarifying that the portion of such fees in excess of costs violates Section 253. Competitive demands will force carriers to deploy small cells in the largest cities. But, when those largest cities charge excessive fees to access ROWs and municipal ROW structures, carriers' finite capital dollars are prematurely depleted, leaving less for investment in mid-level cities and smaller communities. Larger municipalities have little incentive to not overcharge, and mid-level cities and smaller municipalities have no ability to avoid this harm.

Unfortunately, many mid-level cities and smaller communities also charge excessive ROW and ROW infrastructure access fees on the faulty premise that they are matching the so-called "market rate" demanded by the large cities. In reality, there is no competitive "market" for ROW access, as municipalities have a monopoly over ROWs and municipally-owned ROW infrastructure; these are monopoly rates. Faced with demands for excessive fees and the need to move forward to meet customer needs, AT&T and other carriers freeze or scale back their deployments while working for a reasonable investment environment and/or reassign their limited resources to communities with reasonable access rates that are more open to broadband deployment. The following examples demonstrate the point:

> Lincoln, NE: AT&T has paused its 2018 small cell deployment plans in large part due to the city's demand for an annual recurring fee of $1,995 per node.
>
> Howard County, Baltimore City, and Montgomery County, MD: AT&T has pushed its 2018 project to deploy small cells in these Maryland jurisdictions to at least 2019 due to multiple excessive fees to deploy small cells, such as follows.
>
> - Howard County demands nonrecurring fees of $10,000 upon execution of an agreement and $1,800 per permit and annual recurring fees of $25,000 for ROW rights and $1,000 per node.
> - Montgomery County reserves the right to charge an access fee of 5% of gross revenues or such other amount set by County law.
> - Baltimore City demands annual recurring fees of up to $5,000 per pole.
>
> Oakland, CA: AT&T is at an impasse after nine months of negotiations with the city for an initial deployment of about 60 nodes due to the city's demand for recurring rate of $2300 per node.

[2] Non-cost based fees include, but are not limited to, revenue-based fees (e.g., franchise type fees), monopoly (e.g., so called "market-rate") fees, and cost-plus fees (i.e., fees reflecting charges for overly burdensome or inefficient processes).

Citrus Heights, CA: AT&T's has put its small cell deployment plans on hold due to the city's demand for an annual recurring fee of $2,000 per node.

Lowell, MA: AT&T has limited its small cell build to only the few most capacity constrained locations due to the city's demand for a nonrecurring fee of $20,000 and an annual recurring fee of $6,000.

Escondido, CA: AT&T reduced its deployment plans from 98 nodes to approximately 25 nodes due to the city's continued demand that AT&T waive its rights under any federal or state law that would invalidate the city's annual recurring fee of $1,650 per node or small cell design or location requirements.

These examples are just the tip of the iceberg and are representative of the fee demands in states without small cell legislation and the decisions that carriers must make in response to those demands. Commission clarification that fees to access ROW and municipal ROW infrastructure must be cost-based to survive scrutiny under Section 253 would remove fees as barriers to deployment and municipalities could no longer use ROW fees to fund activities other than management of the ROW.

Non-fee restrictions can similarly impede broadband deployment.

Non-fee restrictions on small cell deployment also continue to arise. For example, many municipalities demand that carriers needlessly replace or undertake multi-year maintenance responsibility for street light or traffic poles, even if not needed to insure the structural integrity of the pole or to care for the carrier's equipment. Other local governments demand a variety of bartered good or services, such as carriers supplying or reserving dark fiber for municipal use. These so-called in-kind contributions typically require onerous one-off negotiations, substantially complicating and lengthening the siting process, and are rarely valued properly, if at all, for determining what is "fair and reasonable." Moreover, in-kind contributions undermine the Section 253 obligation to make compensation public.

Some municipalities require carriers to paint[3] small cell cabinets a particular color when like requirements were not imposed on similar equipment placed in the ROW by electric incumbents, competitive telephone companies, or cable companies. Other cities require that carriers place all fiber underground if it supports a small cell facility, a requirement not imposed on other services

[3] Painting, while seemingly mundane, is highly burdensome to maintain non-factory paint schemes over years or decades, including changes to the municipal paint scheme. Often there are technical constraints as well such as manufacture warranty or operating parameters, such as heat dissipation, corrosion resistance, that are inconsistent with changes in color, or finish.

using the ROW. These non-fee restrictions are not only discriminatory, but also impede broadband deployment. For example, one of AT&T's backhaul providers has cancelled multiple fiber installs for AT&T's small cell facilities due to these types of local requirements, causing substantial delay in completing (and the potential for AT&T to cancel) those small cell projects. For carriers deploying nationwide over thousands of different municipalities, the cumulative effect of these operational constraints and administrative burden is a material barrier to provisioning service.

Municipal contractors are bound by Section 253 to the same extent as the municipality.
The Commission should also clarify that municipalities cannot avoid their Section 253 obligations by contracting the administration and/or management of the ROW and municipal ROW infrastructure to a third party. Third-party contractors retained by municipalities to lease or manage municipality-owned ROW infrastructure often argue, with the support of the municipality they represent, that they are not subject to the limits of Sections 253 and 332 (or of state small cell legislation) and thus can charge any fee they choose for access to the ROW and municipal ROW infrastructure. Contractors that only manage, but do not lease, ROWs and municipal ROW infrastructure on behalf of a municipality often charge exorbitant fees to manage the ROW or its municipal infrastructure, which the municipality typically passes through to carrier applicants as part of its "cost." The Commission should clarify that the third-party contractor stands in the shoes of, and has no greater rights or lesser responsibility than, the municipality with which it has contracted. As an agent of the municipality, the third-party contractor's activities are also covered by Section 253.

Macrocell coverage gap concepts are inapposite to small cell deployments.
Other municipalities also refuse to approve or delay approving small cell placements unless the carrier can show a significant gap in coverage, as if this were a macro cell application. Overwhelming, small cells are deployed to overlay ***capacity*** to an area that already has network coverage. And, to be sure, network congestion can and does adversely affect network performance, preventing customers from using demanding applications. Of course, carriers cannot wait until after the network is congested to begin a multiyear process to deploy small cells, all while network performance continues to degrade and customer impact increases. Typically, carriers forecast where and when capacity will begin to exhaust and seek to augment capacity in that localized area. Blocking small cells, or materially interfering with their deployment, merely because a carrier already provides some level of service in the area will act as a barrier to this process and ultimately to the provision of services. Also, local governments have neither the expertise nor the authority to analyze the technical network issues associated with small cell builds.

Pursuant to Section 1.1206 of the Commission's rules, an electronic copy of this letter is being filed for inclusion in this docket.

Sincerely,

Henry G. Hultquist

Terry Alexander
District No. 59 –Darlington &
Florence Counties
1646 Harris Court
Florence, SC 29501

Committees:
Education and Public Works
Regulations and Administrative Procedures
SC Education Oversight

Subcommittees:
Higher Education
Public Safety
Business, Commerce and Administrative

House of Representatives
State of South Carolina

314-C Blatt Building
Columbia, SC 29201

Tel. (803) 734-3004

August 7, 2018

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

RE: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment (WT Docket No. 17-79)

Dear FCC Commissioners:

As a member of the South Carolina House of Representatives, I'm always thinking about the future of the community I'm honored to serve and what can be done to improve its outlook. A particular area of interest of mine is the future of wireless connectivity and ensuring outdated infrastructure policies are updated now so that my region and others are ready for 5G, the next generation of wireless.

5G will have tremendous implications for everyone. The speed and strength of the network will allow residents, businesses, and visitors alike to benefit from nearly instantaneous connections while enabling innovative new technologies, like autonomous cars, smart cities, and telehealth, to come to fruition in a big way.

But to experience the benefits of this next generation of wireless and the economic boost that will accompagny it, policymakers at all levels of government must streamline complex siting stipulations that will otherwise slow down 5G buildout for small cells in particular. As you well know, small cells will be instrumental to the operation of 5G, so the goal should be to speed up the process to get them out; not slow it down.

It's communities like mine that feel the impact of the latter scenario the most. That's because if the investment that goes into deploying 5G on the front end is consumed by big, urban areas, it will take longer for it to flow outwards in the direction of places like Florence.

I appreciate the FCC's efforts to date in identifying opportunities to streamline 5G rollout and urge you to do more to ensure a more level playing field across the country. The vitality of communities like ours hinges on coordination between policymakers across all levels of government to make the U.S. 5G-ready.

Sincerely,

Terry Alexander

Enclosure: Letter to the editor

LETTER TO THE EDITOR: Digital infrastructure needs a look

It's summer, and as more folks go on vacation, they're reminded of infrastructure deficiencies. While that thought conjures up images of roads and bridges in need of repair, we should think broader.

Like roads and bridges, digital infrastructure requires our attention. We need to modernize it to improve quality of life and economic opportunity for residents, businesses and visitors.

Now is an important time as ever as next-generation networks – also known as 5G – will start to "turn on" in select markets later this year. 5G is not just going to be faster and better than what we have today, but it will be built to support the "next-generation" technologies that are just starting to seem realistic in a big way, such as autonomous cars, smart cities and telehealth.

For all of this to come to fruition, the right infrastructure must be in place. It's not as simple as just laying fiber or putting a small cell antenna on a light pole. There are regulations to follow – and for good reason. However, outdated regulations that amount to excessive fees, stacks of papers and long wait times could make us wait longer for 5G. That's not an outcome we want – especially if we get held up because resources were held up elsewhere.

All levels of government can re-evaluate their current processes and find places to streamline. The Federal Communications Commission has shown leadership, but more needs to be done. With smart policy choices, communities throughout South Carolina can reap the benefits of 5G.

S.C. REP. TERRY ALEXANDER

Florence

Henry Hultquist
Vice President
Federal Regulatory

AT&T Services, Inc.
1120 20th Street, NW
Suite 1000
Washington, DC 20036

T: 202.457.3821
F: 214.486.1592
henry.hultquist@att.com
att.com

August 10, 2018

Ex Parte Communication

VIA ELECTRONIC SUBMISSION
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW – Lobby Level
Washington, DC 20554

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79
Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84

Dear Ms. Dortch:

AT&T's August 6, 2018, *ex parte* filing in these dockets explains how excessive fees charged by many municipalities to access rights-of-way ("ROW") and/or municipally-owned ROW structures are barriers to small cell deployments. AT&T provided multiple supporting examples, including its experience with the City of Lincoln, Nebraska, where high fees have delayed its residents the benefits of AT&T's small cell deployments—improved network capacity, expanded broadband deployment in difficult to serve areas, and the foundation for 5G. The high fees in Lincoln and the generalized inertia in negotiations and unpredictable permitting processes for small cell deployments in Omaha and other Nebraska cities arise from faulty policy. As a result, AT&T has for now focused more of its small cell operational resources in the region on Des Moines and other Iowa communities, where cost-based fees and other predictable benefits of small cell legislation have created a more favorable environment for small cell deployments. As another example, AT&T has not deployed any small cell sites in Portland, Oregon due to its annual recurring ROW access fee of $7,500 per node plus annual recurring fee to attach to city-owned infrastructure in the ROW in the amount of $5,500 per node downtown/$3,500 per node in other areas of the City.

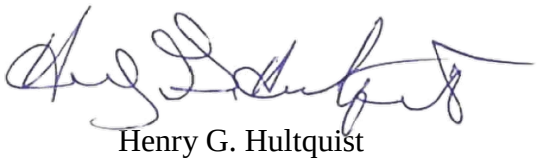
The Commission should also adopt a 60-day shot clock under Section 332 for small cells collocated on existing poles and 90 days for small cells placed on new poles. The shot clock should begin at the first action the municipality requires the carrier to perform to file a siting application, such as notice of a pre-application meeting or filing the siting application. Failure of a municipality to take action during this shot clock period should trigger a deemed granted remedy. Absent such a remedy, carriers must resort to litigation to obtain relief, which injects unnecessary expense and delays. This gives substantial leverage to municipalities, many of which will not take action until litigation occurs. In the past, AT&T has brought suit for violation of the Section 332 shot clock against the Village of Islandia, New York, which resolved the dispute after the suit was brought. In other situations, AT&T must retain outside counsel to draft litigation complaints or demand letters. Forcing carriers to threaten or bring suit to lawfully deploy wireless facilities undermines

broadband deployment and the competitive framework that the Communications Act seeks to promote. Instead, the Commission should allow carriers to invoke a deemed granted for shot clock violations. The mere threat that a carrier can deem an application as granted would encourage municipalities to take action within the shot clock period or to work out a reasonable extension and amicable resolution with the carrier.

Moreover, the Commission should clarify that in municipalities with multi-stage administrative processes, e.g., review by a combination of planning board, zoning board, architectural board, and/or appellate boards, Section 332 imposes a single shot clock on siting applications, not a shot clock for each stage.[1] For example, the Town of East Hampton, NY applies sequential shot clocks by refusing to deem an application submitted to the Town Planning Board as "complete" until the Town Zoning Board has rendered its determination. This can result in Planning Board reviews that are completed beyond the applicable shot clock. Similar fact patterns play out in South Nyack, Clarkstown, Rye, Greenburgh, and other New York municipalities and in municipalities across the country that bifurcate jurisdiction over cell siting between different agencies. AT&T typically seeks concurrent approval from each agency. Where concurrent approval is not possible because one agency's review is dependent on approval by the other agency, agencies in some instances can still work together to meet a single shot clock. For example, although most municipalities in Connecticut will not process a building permit application concurrent with review by the Connecticut Siting Council ("CSC"), AT&T has not experienced a problem with sequential shot clocks because the CSC and municipalities tend to resolve pending applications in a total of 60-90 days. Unfortunately, many municipalities are unable, unwilling, or do not make it a priority to act on applications within the shot clock period. Commission clarification that a single shot clock applies would resolve this question and incent those municipalities to act on siting applications within a reasonable time.

Pursuant to Section 1.1206 of the Commission's rules, an electronic copy of this letter is being filed for inclusion in this docket.

Sincerely,



Henry G. Hultquist

[1] *See, e.g., Global Tower Assets, LLC v. Town of Rome*, 810 F.3d 77, 85-86 (1st Cir. 2016) ("[T]hat presumptive time-limit applies no matter how cumbersome or streamlined a state or local government (or an instrumentality thereof) chooses to make its administrative process.")

August 10, 2018

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *In the Matter of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Development*, WT Docket No. 17-79; *In the Matter of Comment Sought on Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Facilities Siting Policies; Mobilitie, LLC Petition for Declaratory Ruling*, WT Docket No. 16-421

Dear Ms. Dortch:

Pursuant to Section 1.1206 of the Commission's rules,[1] Crown Castle hereby submits these *ex parte* comments to supplement the record regarding the need for the FCC to take swift and decisive action to enforce Sections 253 and 332 of the Communications Act and Section 6409 of the Spectrum Act to facilitate rapid deployment of the infrastructure necessary to support next generation wireless networks.

Crown Castle is at the forefront of our country's broadband revolution, deploying fiber optic and wireless infrastructure and developing the small cell networks[2] that will serve as the backbone for the broadband networks of the future. With more than 40,000 towers, 60,000 small cells constructed or under contract, and over 60,000 miles of fiber, Crown Castle is the country's largest independent owner and operator of shared wireless infrastructure. Notably, Crown Castle does not hold commercial mobile radio service ("CMRS") licenses, and does not itself provide personal wireless services; rather its network offerings are predominantly wireline. Utilizing its fiber networks, Crown Castle provides (among other service offerings) wholesale wireline transport services to its wireless carrier customers.[3] These fiber networks provide the necessary

[1] 47 C.F.R. § 1.1206.

[2] Except as otherwise specified, the term "small cell" as used herein includes both small cells and distributed antenna systems ("DAS").

[3] Crown Castle entities currently hold utility certifications in 47 states, the District of Columbia, and Puerto Rico. In all of these jurisdictions, utility commissions have issued Crown Castle entities certificates to provide its wholesale transport services. Although some states have called the status of Crown Castle's service offerings into question, a recent decision by the Commonwealth Court of Pennsylvania reaffirmed that Crown Castle's DAS operations qualify it as a public utility. *Crown Castle NG East LLC v. Pennsylvania Public Utility Commission*, No. 697 C.D. 2017 (June 7, 2018).

carriage of the signals to and from radios used by the wireless carrier customers in a manner often referred to as "wireless backhaul." These service offerings are a key component to every small cell deployment, and thus Crown Castle and other network providers like it are a critical piece of this country's broadband ecosystem, supporting the deployment of next-generation wireless services.

Crown Castle has worked cooperatively with many jurisdictions and has successfully deployed small cell networks in hundreds of places, taking advantage of densification to boost network capacity and throughput and provide millions of Americans with access to networks that are ready to meet the needs of an increasingly wireless future. The number of small cell deployments is expected to grow exponentially—carriers plan to install "hundreds of thousands of new small cells" around the country over the next few years.[4] Indeed, cities such as Cincinnati, Chicago, Charlotte, Houston, Orlando, Los Angeles, Long Beach, Pittsburgh, Minneapolis and the Louisville-Jefferson County Metro Government, along with smaller jurisdictions such as State College, Pennsylvania, Brookfield, Wisconsin, Little Elm, Texas, The Colony, Texas, and Texas City, Texas, have already facilitated the deployment of these networks to bring these services to their residents.

While Crown Castle's successful partnerships in many cities have allowed broadband networks to expand, still jurisdictions have continued to impose obstacles to the deployment of next-generation wireless systems in the public right-of-way ("ROW"). A number of jurisdictions impose unreasonable fees and conditions on wireless facilities that are particularly inappropriate in the context of small cells, which are a fraction of the size of macro towers and typically have minimal impact on the surrounding area. These fees, in particular, which lack any rational relation to the cost of approving applications or maintaining the ROW, can make deploying networks to serve consumers and businesses in these jurisdictions cost prohibitive. Even where the fees do not result in a direct lack of service in a high-demand area like a city or urban core, the high cost of building and operating facilities in these jurisdictions consume capital and revenue that could otherwise be used to expand wireless infrastructure in higher cost areas. This impact of egregious fees is prohibitory, and should be taken into account in any prohibition analysis.

Other jurisdictions, meanwhile, discriminate against wireless installations in the ROW. These jurisdictions apply one set of rules to installations of wireline facilities, while holding infrastructure used for wireless services to a much different and higher standard. In some cases, jurisdictions apply zoning rules to small cells in the right of way while permitting wireline facilities with similar or even greater physical impact to proceed without any discretionary review. These discriminatory practices are inconsistent with the language and intent of the Communications Act, and have the effect of stifling competition and slowing broadband deployment.

Finally, in some cases, municipalities have unjustifiably prohibited installations of equipment to facilitate wireless telecommunications or imposed moratoria that have the effect of prohibiting

[4] Comments of CTIA, WT Docket No. 16-421 at 2 (filed Mar. 8, 2017).

wireless small cell installations in the public ROW. These are the simplest and most direct forms of prohibition.

In the sections below, Crown Castle provides additional information regarding the challenges that it faces in deploying infrastructure for next generation wireless networks and enforcing its rights under Sections 253, 332, and 6409.

I. CROWN CASTLE CONTINUES TO ENCOUNTER FEES IN SOME JURISDICTIONS THAT SERVE AS A BARRIER TO DEPLOYMENT.

Many jurisdictions continue to impose onerous and discriminatory fees and related restrictions upon Crown Castle's small cell deployments. When faced with such unreasonable fee demands, Crown Castle is forced to choose between three undesirable options: (1) engaging in costly and time-consuming litigation over whether the fees are an effective barrier to the provision of telecommunications services; (2) allocating a disproportionate amount of resources to deploying in the unreasonably expensive jurisdiction at the expense of deployment in other areas; or (3) abandoning its planned deployment in the relevant jurisdiction because the costs are not economically feasible. The Commission can and should remove this barrier by clarifying that fees that are not cost-based are an effective barrier to competition.

A. Excessive Fees for Small Cell Deployments Hinder Deployment of Broadband Infrastructure.

The record is replete with examples of unreasonable fees charged by some municipalities. In its initial comments in this proceeding, Crown Castle identified a number of jurisdictions whose fees go beyond reasonable compensation for ROW management and appear designed either to deter small cell deployment or to merely generate revenue for the municipality.[5] Other commenters identified egregious examples, as well—perhaps none more so than the City of Cottleville, Missouri, which has recently interpreted its 20 year old business license fee as requiring an annual $6,000 payment *per antenna* in the jurisdiction.[6] Not only do fees like this have the effect of delaying or preventing the deployment of next generation broadband infrastructure, they are unreasonable and thus cannot be justified under Section 253(c).

The prohibitory effect of unreasonable fees is exemplified by the speed at which Crown Castle and others have moved to construct their networks once those fees have been removed. In Texas, infrastructure providers have faced extreme difficulty deploying small cell networks. Some jurisdictions simply denied requests for permits, while others imposed outrageous fees or permitting conditions that served as a de facto barrier to small cell deployment.

In Dallas, Crown Castle built a small network near Love Field in 2014, with each site subject to an annual license fee of $350. In early 2015, Crown Castle approached the City about

---

[5] *See* Comments of Crown Castle Int'l, WT Docket No. 17-79, at 10-13 (June 15, 2017).

[6] *See* Reply Comments of T-Mobile USA, Inc., WT Docket No. 17-79, WC Docket No. 17-84, at 12 (July 17, 2017).

constructing a similar network of 23 nodes to address congestion in the Dallas central business district area. Crown Castle filed its permit applications for the proposed network in April 2015, which the City summarily denied in June. After weeks of discussions and negotiations, Dallas offered to issue the permits only if Crown Castle paid annual license fees of $2,500. After explaining to city staff that the proposed fee was not economically viable, Crown Castle was told that Dallas would develop a new small cell policy by the end of the summer, and Crown Castle could reapply for its permits to build the proposed network at that time. When the City staff finally presented a small cell policy to the City Council in November 2015, it would have required Crown Castle to pay a $2,500 annual node fee and an undisclosed fiber fee for all fiber used to support the proposed nodes. City staff also proposed that certain "high value" intersections in the central business district be subject to a bidding process to ensure the City obtained the highest value possible (notwithstanding the fact that, to the best of Crown Castle's knowledge, no other party had submitted applications to enable deployment at the same intersections Crown Castle had proposed). Based on the final proposed fiber fees, this compact network in the central business district would have been subject to annual fees totaling in excess of $280,000 per year.

In late December 2015, Crown Castle filed a complaint against the City of Dallas at the Texas Public Utilities Commission. The complaint was still being reviewed by the Texas PUC when Texas' small cell legislation passed in June 2017.

As a result of the state legislation, nearly 3.5 years after initially proposing this network, Crown Castle has finally received all permits for the proposed central business district network and expects to begin construction in August 2018. Additionally, Crown Castle is now preparing to submit permits for nearly 200 more small cell nodes in Dallas. While Crown Castle appreciates the work of Dallas City staff to rapidly change its policy to comply with the Texas small cell bill, statewide legislation should not be required to ensure a level playing field for deployment of small cell infrastructure.

In those states, however, without small cell legislation, municipalities continue to enact ordinances establishing excessive fees. For example, the Vacaville, California Planning Commission has reportedly approved an ordinance amendment requiring an initial application fee of $4,000 to install small cell facilities on city-owned light poles, plus an annual rental fee of $1,500 with an annual three percent escalator. Similarly, Philadelphia's recently enacted ordinance requires an annual payment of $3,000 per city-owned for 1500 poles with an annual escalator. A copy of the Philadelphia ordinance is attached hereto as Exhibit A.

B. The Commission Should Clarify That Fees Exceeding Reasonable Costs and Expenses Constitute an Effective Prohibition.

Given the extensive evidence not only that many municipalities charge unreasonable fees for small cell facilities, but that such fees interfere with the Federal interest in rapid deployment of next generation broadband networks, it is imperative that the FCC act to prohibit these unreasonable fees. First, the Commission should clarify that for a fee to constitute "fair and reasonable compensation" under Section 253(c), the fee must directly relate to costs reasonably

verizon

Tamara Preiss
Vice President
Federal Regulatory and Legal Affairs

1300 I Street, NW, Suite 500 East
Washington, DC 20005
Phone 202.515.2540
Fax 202.336.7922
tamara.preiss@verizon.com

August 10, 2018

Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84; Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79**

Dear Ms. Dortch:

On August 9, 2018, Will Johnson, Rudy Reyes, and Tamara Preiss of Verizon met separately with Nick Degani, Senior Counsel to Chairman Pai; Erin McGrath, Legal Advisor to Commissioner O'Rielly; Will Adams, Legal Advisor to Commissioner Carr; and Umair Javed, Legal Advisor to Commissioner Rosenworcel. During those meetings, Mr. Reyes discussed Verizon's small cell and fiber deployment plans to support both 4G LTE densification and 5G services. He described how Verizon works collaboratively with state and local leaders to modernize siting processes and fees to facilitate that deployment, while noting continued need for federal action to ensure that unreasonable processes and fees at the local level do not undermine the goal of ensuring that the U.S. wins the global race for 5G.

Although some states and localities have taken useful steps to establish reasonable processes for addressing siting requests and for ensuring reasonable fees, others unfortunately continue to slow deployment or block it altogether by demanding fees that far exceed costs. Verizon provides the attached analysis to support the Commission's authority to require states and localities to charge cost-based rates for siting applications, to access state or locally-controlled rights-of-way, and to attach to structures within the rights-of-way.

Should you have any questions, please contact the undersigned.

Sincerely,

Attachment

cc: (via e-mail)

Nicholas Degani
Michael Carowitz
Erin McGrath
Will Adams
Umair Javed
Donald Stockdale
Suzanne Tetreault
Garnet Hanly

The Proper Interpretation of the "Substantial Barrier" Standard Under Section 253(a): A Legal Analysis

William H. Johnson
Of Counsel

Tamara L. Preiss
Andre J. Lachance
1300 I Street, N.W.
Suite 500 East
Washington, D.C. 20005
(202) 515-2540

Henry Weissmann
Munger, Tolles & Olson LLP
350 Grand Avenue
Suite 5000
Los Angeles, CA 90071
(213) 683-9150

Jonathan Meltzer
Munger, Tolles & Olson LLP
1155 F Street, N.W.
Washington, DC 20004
(202) 220-1105

Dated: August 10, 2018

I. INTRODUCTION

This paper elaborates on the proper interpretation of 47 U.S.C. § 253(a), as discussed in Verizon's Comments to the Commission's *Wireless Infrastructure Notice*.[1] There, Verizon explained that the Commission should not permit any state or local legal requirement to act as a "substantial barrier" to the provision of wireless telecommunications service, including new 5G services that will soon be coming to market.[2] This filing further explains that, for purposes of Section 253(a), fees to access state or locally controlled rights-of-way or attach to structures within them impose a "substantial barrier" where they are not cost-based. Excessive rates pose a particular threat to the future availability of 5G services, given the high volume of small cells that must be deployed to enable these services. Although some states and localities have worked productively with industry to establish reasonable siting processes and rates, others continue to slow deployment or block it altogether by demanding rates far in excess of their costs.

Section 253(a) prevents state and local governments from erecting barriers to the provision of service in the market for telecommunications. Because state and local governments control an essential input to providing telecommunications – access to rights-of-way and poles within those rights-of-way – they erect a barrier to providing service when they charge rates designed to produce additional revenues, rather than merely recover their costs. In other analogous contexts, regulators impose cost-based rates to constrain the monopoly power of those entities that control an essential resource. Construing Section 253(a) to preclude rates that exceed a locality's costs for access to public rights-of-way and poles within them is not only consistent with the language of that provision, but also with the structure of Section 253 as a whole.

The paper concludes by proposing a process by which the Commission could limit fees to those that recover reasonable costs and establish presumptively reasonable charges and fees based on fees reflected in state legislation and derived from the federal pole attachment rate formula. By limiting the fees that carriers incur to deploy infrastructure, the Commission will take a critical step in ensuring that American providers can deploy the world's most advanced wireless networks and that American consumers are the first to reap the benefits of cutting edge 5G services.

II. THE COMMISSION HAS AUTHORITY TO REQUIRE COST-BASED RATES UNDER SECTION 253(a).

A. Non-Cost Based Fees Prohibit Wireless Broadband Service.

The record in this proceeding makes clear that exorbitant fees are a substantial barrier to wireless broadband deployment. Some jurisdictions (or their consultants) continue to view access to rights-of-way and municipal poles as opportunities to generate revenues, rather than as

[1] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Notice of Proposed Rulemaking and Notice of Inquiry, 32 FCC Rcd 3330 (2017).

[2] *See* Verizon Comments, WT Docket No. 17-79 (Jun. 15, 2017) ("Verizon Infrastructure Comments") at 13-18.

critical inputs for encouraging investment and deployment to bring robust wireless services to their communities.[3] Verizon's comments included examples of right-of-way access fees of $5,000 and five percent of revenues, and pole attachment fees ranging from $1,800 up to $37,000 per year.[4] Many other commenters offered evidence of excessive fees that prevent or limit wireless broadband deployment. AT&T provided examples of unreasonably high right-of-way access, application, administrative, and pole attachment fees that discourage providers from investing in or expanding their networks.[5] CTIA also provided examples of exorbitant access, application, and pole attachment fees.[6] And the Competitive Carrier Association ("CCA") provided examples of right-of-way access, consultant, and pole attachment fees that significantly raise deployment costs, harm consumers and economic growth, and disproportionately burden smaller carriers.[7] Communities throughout the country bear the cost of these excessive fees as providers limit or delay broadband deployment. Capital budgets are finite. When providers are forced to spend more to deploy infrastructure in one locality, there is less money to spend in others. The leverage that some cities have to extract high fees means that other localities will not enjoy next generation wireless broadband services as quickly, if at all.

The record contains a study that illustrates this point by quantifying the impact of excessive fees on wireless broadband deployment.[8] The CMA Strategy Report filed by Corning in this proceeding compares 5G coverage and investment when fees are at low baseline levels and when fees are high.[9] For attachments to municipally owned poles, the baseline fee was derived from fees produced by the Commission's pole attachment formula, which is designed to produce cost-based rates.[10] The baseline fees for applications and right-of-way access were $0, reflecting that a number of jurisdictions do not impose access fees – choosing instead to recover right-of-way management costs through pole attachment fees[11] – and some jurisdictions either do not assess application fees or charge only nominal amounts.[12] Although jurisdictions may use

[3] Verizon Comments, WT Docket No. 16-421 (Mar. 8, 2017) ("Verizon Small Facility Comments") at 8; *see also* Verizon Infrastructure Comments at 6-7.

[4] Verizon Small Facility Comments at Appendix A.

[5] AT&T Comments, WT Docket No.17-79 (Jun. 15, 2017) at 17-21.

[6] CTIA Comments, WT Docket No. 17-19 (Jun. 15, 2017) at 30.

[7] CCA Comments, WT Docket No. 16-421 (Mar. 8, 2016) at 15-20).

[8] Letter from Tom Navin, Wiley Rein LLP, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Jan. 25, 2018), attaching *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 1, Model Sensitivities*, CMA Strategy Consulting (Jan. 2018) ("CMA Strategy Report").

[9] The baseline and high fees are all based on fees observed in some jurisdictions. *See id* at 6-9.

[10] *Id.* at 7.

[11] For example, the small facility laws enacted in Delaware and Ohio allow access to rights-of-way for wireless facilities without a separate fee. Ohio Rev. Code Ann. § 4939.0322(C); Del. Code Ann. tit. 17, § 1605.

[12] For example, small facility legislation adopted in Kansas forbids application fees unless such fees are assessed on all attachers to municipal poles. Kan. Stat. Ann. § 66-2019(c)(1). Several

different rate structures, it is reasonable to assume that the rates, in total, are sufficient to recover their costs.[13] The study concludes that an increase from the baseline municipal pole attachment annual fee ($20) to the high fee ($12,000) would reduce 5G coverage by over 28 million premises passed and investment by almost $38 billion. Similarly, a $500 increase in application fees would reduce 5G coverage by almost 8 million premises passed and investment by $11.6 billion. And increasing right-of-way access fees from zero to five percent of gross revenues would reduce coverage by 9.4 million premises passed and investment by $13.6 billion.[14] The study both establishes and quantifies a direct nexus between increases in fees carriers may be required to pay to construct 5G wireless facilities and investment in 5G wireless broadband facilities. Said another way, the CMA Strategy Report confirms that fees that exceed cost will have the effect of prohibiting 5G service for millions of American consumers.

Fortunately, Congress empowered the Commission to address state and local barriers to providing broadband wireless service. Section 253 of the Communications Act prohibits state and local governments from taking actions that "prohibit or have the effect of prohibiting" service.[15] The provision also requires preemption of any requirement determined to prohibit service.[16] As discussed below, the Commission should exercise this authority to bar requirements, including excessive fees, that create a substantial barrier to providing service, and to establish a process for determining when fees violate Section 253.

B. Section 253(a) Prevents State and Local Governments from Erecting "Substantial Barriers" to the Provision of Wireless Service, Including Barriers to Entry.

Congress passed the Telecommunications Act of 1996 to "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."[17] To prevent state and local governments from impeding its efforts to foster competition, Congress enacted Section 253, entitled "Removal of Barriers to Entry."[18] Section 253(a) implements this general purpose by stating: "No State or local statute or regulation, or

other state laws limit application fees to $100 per node for the first five nodes in a batch, then $50 per node for other nodes in the batch. *See* Ariz. Rev. Stat. Ann. § 9-593(J); Va. Code Ann. § 15.2-2316.4(B)(2).

[13] The charges and fees set forth in state small facility laws can be presumed to cover the costs incurred by the local governments for processing applications, managing the rights-of-way, and allowing attachments to municipally owned poles.

[14] *Id.*

[15] 47 U.S.C. § 253(a).

[16] 47 U.S.C. § 253(d).

[17] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified at scattered sections of 47 U.S.C.).

[18] 47 U.S.C. § 253.

legislation because they determined that rate relief was necessary to ensure wireless deployment. In North Carolina, for example, the preamble to the legislation states that "[e]xpeditious processes and reasonable and non-discriminatory rates, fees, and terms … are essential to the construction and maintenance of wireless facilities."[38] When San Jose announced agreements with a number of providers to promote deployment of next generation networks, it explicitly recognized that its previous small cell fee structure ($2,500-$3,500) "is not competitive or fully responsive to market conditions."[39] Indeed, the city observed that those rates resulted in San Jose "being unable to secure the necessary private sector investment in our broadband infrastructure" and that it "had not approved a single small cell permit nor collected any small cell lease revenue largely due to the existing Usage Fee Structure…."[40] It consequently reduced the recurring annual attachment fee to $175 per structure and took other steps to encourage deployment.[41]

Providers' deployment decisions supply further empirical evidence that high fees "effectively prohibit" the provision of service. Verizon recently concluded that it would not deploy additional small cells in Lincoln, NE, at this time because of the $1,995/year attachment rate. In contrast, deployment is proceeding apace in Des Moines, IA, where city officials have worked with Verizon since 2013 to establish a reasonable process and rates for small cell deployment. When Iowa adopted small cell legislation in 2017, Des Moines moved quickly to lower application fees to comply with the new law. Verizon has placed 56 small cells in service in Des Moines, with another 57 projects in the planning stage. Other Iowa cities, however, including Altoona, University Heights, and Iowa City, have been slow to comply, which in turn

[38] *See, e.g.*, N.C. Sess. Laws 2017-159, Section 1(5) ("Expeditious processes and reasonable and nondiscriminatory rates, fees, and terms … are essential to the construction and maintenance of wireless facilities."); *see also, e.g.*, Tex. Local Gov't Code § 284.001(5) ("expeditious processes and reasonable and nondiscriminatory terms, conditions, and compensation for use of the public right-of-way for network node deployments are essential to state-of-the-art wireless services"); Del. Code Ann. tit. 17, § 1602(6) ("expeditious processes and reasonable and nondiscriminatory rates and terms related to such [small wireless facilities] deployments are essential to the construction and maintenance of wireless facilities"). In other words, these legislatures recognized that unreasonable fees "effectively prohibit" deployment.

[39] *See* City of San Jose, Press Release (June 15, 2018) (http://www.sanjoseca.gov/DocumentCenter/View/78342) ("San Jose June Press Release") (including link to Memorandum on Verizon Small Cell Master Lease Agreement, at 3).

[40] *See* City of San Jose, Press Release (April 23, 2018) (http://www.sanjoseca.gov/documentcenter/view/76522) ("San Jose April Press Release) (including link to Memorandum on AT&T Small Cell Amendments and Agreement, at 4). In its Memorandum, the city also cited the "lack of centralized broadband governance" and the "private sector burden of remediating the City's poles." *Id.* The lack of private sector investment "has resulted in the City ranking in the bottom quartile of peer cities for internet speeds, connection rates, and input/output data processing capacity" and "a deep digital divide has opened…." *Id.* at 2.

[41] *See* San Jose June Press Release (link to Memorandum on Verizon Small Cell Master Lease Agreement at 3).

has slowed Verizon's deployment efforts in other parts of the state. Turning to the Pacific Northwest, Seattle is seeking $1,872/pole/year, with a four percent annual escalator, and Portland wants to charge between $1,200 and $3,500/pole/year and annual right-of-way fees as high as $7,500,[42] resulting in minimal small cell deployment in both cities. Finally, although Verizon has reached 5G deployment agreements with some cities in California, like Los Angeles and Sacramento, prohibitively high fees have blocked deployment elsewhere in the state. Rancho Cordova, not even 15 miles from Sacramento, is demanding $4,300/pole/year, and Fresno wants $1,800 - $2,200/pole/year. In short, excessive fees can and do "have the effect of prohibiting" the provision of service, as wireless carriers routinely take fees into account when deciding whether and where to deploy service.

D. Section 253(c) Supports Application of the Substantial Barrier Standard under Section 253(a) to Require Cost-Based Rates.

Although *any* fee could be said to raise the cost of providing service, Section 253(a) requires the Commission to determine when a fee imposes a "substantial barrier" to the provision of service. This is precisely the sort of "gap-filling" role that the Commission, as the expert agency, is uniquely positioned to fill.[43] Courts have struggled to articulate a practical standard;[44] phrases like "substantial" and "significant" may not lend themselves to consistent application. Fortunately, the statute offers guidance to inform this inquiry. Section 253(c) states that "[n]othing in this section affects the authority of a State or local government to manage the public rights-of-way or to require *fair and reasonable compensation* from telecommunications providers, on a competitively neutral and nondiscriminatory basis, for use of public rights-of-way on a nondiscriminatory basis."[45] As Verizon explained previously, the Commission has authority to interpret the ambiguous phrase "fair and reasonable compensation." [46]

Compensation means "[r]emuneration…in return for services rendered" or a payment that "makes the injured person whole," [47] which in the context of fees indicates the recoupment of costs as opposed to fees untethered to the service provided. Thus "fair and reasonable compensation" is best read as allowing state and local governments to recover the costs of managing the rights-of-way they control, but not permitting fees that generate additional revenues. This interpretation is consistent with cases where the Commission and other agencies

[42] The Portland rates apply only to limited city assets; it has imposed a moratorium on attachments to city light poles.

[43] *See Nat'l Cable and Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 980 (2005).

[44] *See, e.g., Puerto Rico Tel. Co.*, 450 F.3d at 19 (five percent franchise fee would lead to "a substantial increase in costs" to the carrier, "negatively affect [its] profitability", "place a significant burden on" the carrier, and "strain [its] ability to provide telecommunications services").

[45] 47 U.S.C. § 253(c) (emphasis added).

[46] *See* Verizon Small Facility Comments at 14-18; Verizon Infrastructure Comments at 13-15.

[47] *Compensation*, Black's Law Dictionary (10th ed. 2014).

have found that cost-based rates are reasonable.[48] And it is particularly apt where, as here, the fees are set by a provider that does not face competition, like the municipalities that control access to rights-of-way and structures therein – there is no alternative "right-of-way" provider. Having established that Section 253(c) entitles states and localities to cost-based fees, but no more, for managing rights-of-way, the Commission should adopt a consistent construction of Section 253(a): By requiring cost-based fees for applications, use of rights-of-way, and attachments to municipally-owned poles, the Commission can ensure that those fees do not erect barriers to entry that violate the pro-competitive mandate of Section 253.

E. The Commission Should Adopt Presumptively Reasonable Fee Limits for Small Cells Mounted on State and Local Government Owned Poles.

Because localities erect a "substantial barrier" to the provision of wireless service under Section 253(a) when they impose above-cost fees for access to rights-of-way and structures within them, the Commission should adopt a methodology for determining when a fee is cost-based. The sheer number of states and localities makes it infeasible for the Commission to review the rates set by governments on a case-by-case basis.[49] Instead, to implement the cost-based fees standard required by the "substantial burden" framework, the Commission can examine evidence of existing fees that are either cost-based or are reliable proxies for cost-based fees. It should use these proxy fees to establish presumptively reasonable, cost-based fees for access to rights-of-way and attaching to municipally owned structures. Fees at or below the proxy fees would be presumptively reasonable and lawful under Section 253(a). Any entity wishing to challenge that presumption would bear the burden of proving that fees at or below the presumptively reasonable fees are not cost-based. Fees above the presumptively reasonable limit would be presumed not to be cost-based and thus to prohibit or have the effect of prohibiting service and violate Section 253(a). But a state or local authority could overcome that presumption by exercising its rights under the statute to demonstrate that the fee charged is cost-based and is otherwise reasonable and nondiscriminatory. By adopting proxies for cost-based fees, the Commission can simplify the process of implementing a cost-based rate requirement under Section 253(a) while preserving and protecting state and local rights guaranteed under Section 253(c).

[48] *See* Verizon Small Facility Comments at 13-14; *Unbundled Access to Network Elements*, Order on Remand, 20 FCC Rcd 2533, 2537 at ¶ 6 (2005), *aff'd, Talk Am., Inc. v. Mich. Bell Tel. Co.*, 564 U.S. 50 (2011) (requiring that a local exchange carrier provide access to entrance facilities at cost-based rates where the statute states that rates must be "just, reasonable, and nondiscriminatory"); *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591 (1944) (upholding a Federal Power Commission order setting "just and reasonable" rates as a method of cost recovery); *Missouri ex rel. Sw. Bell Tel. Co. v. Pub. Serv. Comm'n of Mo.*, 262 U.S. 276, 291 (1923) (espousing that a utility obliged to provide service to the public ought to be able to recover "the reasonable cost of conducting the business").

[49] *Cf. In re Permian Basin Area Rate Cases*, 390 U.S. 747, 757 (1968) (noting that, in the context of the large number of producers of and transactions involving natural gas, "the administrative burdens placed upon the [Federal Power] Commission by an individual costs-of-service standard were therefore extremely heavy").

Sprint

August 13, 2018

Via Electronic Submission

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th St., SW, Room TW-A325
Washington, DC 20554

Re: Ex Parte Communication
Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79

Dear Ms. Dortch:

Sprint continues to support the Federal Communications Commission's efforts to reduce barriers to the deployment of wireless infrastructure. In its initial comments in a related proceeding, Sprint discussed the negative effects of excessively high pole attachment rates and access to municipal rights-of-way, as well as the time-consuming delays wireless carriers face when deploying small cells and densifying their wireless networks.[1] These costs and delays have real world impacts. Below, Sprint outlines one example of the consequences these barriers have on on-going deployments.

The adjacent jurisdictions of the City of Los Angeles and Los Angeles County have dramatically different fees and processes. These differences have had a direct effect on Sprint's small cell deployment in these two jurisdictions. In the City of Los Angeles, the entire application process from start to finish is approximately six months. This includes obtaining a site reservation and building permit. The total application fee per site is $350. In contrast, Los Angeles County's process is protracted and costly. The entire process, which includes many sequential steps, takes a year or more and imposes application fees of $9,820. Moreover, these fees are only the upfront, one-time costs. The annual recurring fees vary based on who owns the poles. Under California law, Sprint does not pay any right-of-way access fees for its own poles but does pay rent to the pole owner, whether it's the local government, an electric company, or a wireline telephone company.

Sprint began its small cell planning in these areas more than two years ago by identifying gaps in its network capacity and coverage that would benefit from small cell installation. These locations were identified without consideration of the permitting costs or timelines. But the deployment process certainly takes into account these factors.

Sprint has deployed more than 500 small cells in the City of Los Angeles that are now active, which is more than 1/3 the total number planned. But due to the higher costs and longer

[1] In the Matter of Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Facilities Siting Policies; Mobilitie LLC Petition for Declaratory Ruling, Comments of Sprint Corporation, WT Docket No. 16-421 (March 8, 2017).

delays in Los Angeles County, Sprint has yet to activate a single small cell in that jurisdiction even though Sprint planned many fewer total small cells. As a result, service in the City of Los Angeles has been substantially improved, while there has been no corresponding benefits to Los Angeles County.

This is only one example of the disparities that wireless carriers face as they attempt to develop networks with the speed and capacity that consumers demand. Without direction from the FCC, carriers will be required to continue these patch-work deployments, diverting resources to those areas that welcome increased broadband speeds from those areas that view increased connectivity as a revenue opportunity.

Pursuant to Section 1.1206 of the Commission's Rules, a copy of this letter is being filed electronically in the above-referenced docket. If you have any questions, please feel free to contact me at (703) 592-2560.

Sincerely,

/s/ Keith C. Buell

Keith C. Buell
Senior Counsel

State of Oregon
WALLOWA COUNTY
BOARD of COMMISSIONERS
101 S. River Street #202
Enterprise, Oregon 97828

541-426-4543 ext#130
Fax: 541-426-0582
Email: commissioners@co.wallowa.or.us

CHAIRMAN, TODD NASH
COMMISSIONER, SUSAN ROBERTS
COMMISSIONER, PAUL CASTILLEJA

August 20, 2018

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

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Siting Policies, WT Docket No. 16-421

Dear Commissioner Carr:

Fast, reliable broadband has the potential to transform rural America. As leaders in rural communities, we are excited about the many benefits that broadband can deliver to our residents. We thus commend the FCC's actions to lower regulatory barriers to broadband investment, and urge that you continue to remove the red tape that impedes broadband's promise.

Broadband, including next-generation wireless technologies, will not only strengthen the economy of rural areas – it will become a lifeline for our nearly 50 million citizens. Next-generation wireless access in schools and homes will allow students to become more connected with the rest of the world. Learning tools enabled by high-speed access will allow students to more fully engage in an immersive learning experience. Farmers and ranchers will be able to use wireless devices to be more efficient and more connected with marketplaces, save resources and energy, lower production costs, and protect against plant diseases or poor growing seasons. And, as other community leaders have noted, broadband will help make our communities more prosperous and more attractive to young individuals, tourists, and new businesses.

Where we serve in Wallowa County, precision agriculture tools are crucial to effectiveness of farming and ranching. As our farmers and ranchers have informed us, in today's agriculture they utilize GPS and wireless datalink technology tools in tractors and other equipment in an effort to be accurate and efficient. For example, data-links can be sent direct from the equipment to the farmer with real-time information on fuel consumption, idle time, gauge readings, etc. that help keep a record of operation uses. Additionally, equipment settings can be adjusted remotely to increase efficiency. With precision agriculture, farmers and ranchers have the ability to participate in soil mapping, fertilizer and seed prescriptions, grazing management plans and many more proactive measures. Having the ability to utilize these tools properly enables them to not only be economically viable, but also environmentally responsible through the most efficient practices.

With the expansive geographic terrain and long distances between irrigated pastures in Wallowa County, farmers and ranchers utilize technology tools such as smartphone apps to control the movement of their irrigation. This increases operation efficiency as there is a reduced need to travel to the long distance locations and manually control irrigation. This decreases both their fuel consumption and required manual labor, ultimately increasing time productivity.

Telehealth services are also crucial in rural communities like Wallowa County, particularly because statistics show that war veterans often relocate to rural communities following their service. This issue is close to home, as Commissioner Todd Nash's son, who is a retired Marine and has been awarded multiple Purple Hearts, relies on access to telehealth services from his home in Wallowa County. It is imperative that veterans in rural areas have access to reliable telecommunications services to access health services that are critically important to their mental health. Many veterans suffer from Post-Traumatic Stress Disorder and telehealth services can provide vital security to their well-being, especially when considering the high rates of suicide among veterans. We encourage the Commission to take actions that will help speed construction of expanded networks to support access to telehealth services.

Despite the many benefits from broadband, the cost of building it in rural areas is very high given the immense amount of land that must be covered: rural America encompasses fully 72 percent of the nation. Wallowa County faces additional challenges related to the influx of tourists during summer months, which can overwhelm broadband networks and render remote irrigation control applications ineffective. Where every dollar matters, reducing regulatory barriers can make a big difference in how fast and how extensively broadband is deployed to our communities. This is why we encourage the FCC to take steps to streamline regulatory processes, which can help rural America reap these benefits sooner. For example, tightening the deadlines for states and localities to approve new network facilities, and limiting government fees charged on such facilities, will promote more investment.

Lowering deployment costs in rural areas by reducing siting fees and regulatory requirements will make investment in new rural infrastructure more economically viable. In addition, similarly decreasing the cost of urban deployment will indirectly promote more rural investment, because the capital that is no longer diverted toward buildout in urban areas is available for investment in rural areas. In short, allowing cities to demand fees without limits harms the FCC's policy objective to foster more broadband in rural areas.

Rural residents have a tremendous amount to gain from the deployment of broadband and next-generation wireless services. We urge the Commission to continue its efforts, and we look forward to working with you to adopt streamlined regulatory processes that will deliver state-of-the-art broadband services across rural America.

WALLOWA COUNTY BOARD OF COMMISSIONERS

Todd Nash	Susan Roberts	Paul Castilleja
Chairman	Commissioner	Commissioner

COUNTY OF ST.CLAIR

Board of Commissioners

JEFFREY L. BOHM
Chairperson
District 5
3453 St. Clair Shores Blvd.
East China, MI 48054
Cell: 810-874-6554
jbohm@stclaircounty.org

BILL GRATOPP
Vice-Chairperson
District 7
9200 N. River Road #6
Algonac, MI 48001
Cell: 810-434-1516
bgratopp@stclaircounty.org

GREG MCCONNELL
District 1
P.O. Box 160
Capac, MI 48014
Work: 810-300-3368
gmcconnell@stclaircounty.org

KARL TOMION
District 2
2829 West Village Lane
Port Huron, MI 48060
Cell: 810-300-8118
ktomion@stclaircounty.org

HOWARD T. HEIDEMANN
District 3
833 North Pointe Drive
Port Huron, MI 48060
Home: 810-984-3053
hheidemann@stclaircounty.org

DUKE DUNN
District 4
755 Victorian Woods Ct.
Marysville, MI 48040
Cell: 810-355-5226
ddunn@stclaircounty.org

DAVID RUSHING
District 6
12618 Masters Road
Riley, MI 48041
Home: 810-392-2127
drushing@stclaircounty.org

OFFICE ADDRESS:
200 Grand River Avenue
Suite 203
Port Huron, MI 48060
Phone: 810-989-6900
Fax: 810-985-3463
www.stclaircounty.org

VISION: We are the leader in innovative, customer-centered government.

MISSION: To continually improve public services that enhance the community for citizens and future generations of St. Clair County

August 22, 2018

Honorable Brendan Carr
Commissioner, Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: WT Docket No. 17-79

Dear Commissioner Carr:

Thanks to a changing and more diverse economy, St. Clair County is increasingly able to provide quality jobs and improving living standards for our residents. We have accomplished this by overcoming real-world problems with practical solutions — or as Crain's Detroit Business recently put it, "A collaborative approach to economic development pays off for St. Clair County."

The FCC can do its part to help St. Clair County continue our forward-looking efforts by supporting policies that encourage the rapid deployment of better and faster wireless Internet service. Specifically, we support the Commission's effort at its September 2018 meeting to speed deployment of 5G mobile Internet service, which will create new opportunities for economic growth, home healthcare and an overall better quality of life.

An important step in this process is for the Commission to streamline the process for deploying the small-cell technology. Smaller communities such as those located in St. Clair County would benefit by having the Commission reduce the costly and unnecessary fees that some larger communities place on small cells as a condition of deployment. These fees, wholly disproportionate to any cost, put communities like ours at an unfair disadvantage.

By making small cell deployment less expensive, the FCC will send a clear message that all communities, regardless of size, should share in the benefits of this crucial new technology.

Thank you for remembering St. Clair County's mobile Internet needs as you consider this issue at the FCC's September meeting.

Sincerely,

Jeff Bohm
Chairman

verizon

Tamara Preiss
Vice President
Federal Regulatory and Legal Affairs

1300 I Street, NW, Suite 400 West
Washington, DC 20005
Phone 202.515.2540
Fax 202.336.7922
tamara.preiss@verizon.com

August 23, 2018

Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79

Dear Ms. Dortch:

The Commission should reject claims by some localities that Sections 253 and 332(c)(7) do not apply to decisions regarding access to state- and city-owned light, traffic, and utility poles.[1] Verizon previously submitted Comments and Reply Comments in this proceeding to explain that Sections 253 and 332(c)(7) apply fully to local siting decisions regarding these poles.[2] Verizon writes now to provide further support for this position.

Some parties claim that Sections 253 and 332(c)(7) do not apply to a locality's decisions, including fee decisions, regarding access to government-owned light, traffic, and utility poles because the locality is acting in its proprietary, rather than regulatory, capacity.[3] Those claims

[1] 47 U.S.C. §§ 253, 332(c)(7).

[2] *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79, Notice of Proposed Rulemaking and Notice of Inquiry, 32 FCC Rcd 3330 (2017) ("Notice") , at ¶ 96; Comments of Verizon at 25-29, WT Docket 17-79 and WC Docket 17-84 (June 15, 2017); Reply Comments of Verizon at 16-21, WT Docket 17-79 and WC Docket 17-84 (July 17, 2017).

[3] *See, e.g.,* Letter from Gerard Lederer, counsel to Smart Communities and Special Districts Coalition, to Marlene H. Dortch, FCC, WT Docket No. 17-79, at 5 (filed July 16, 2018) (contending that "a municipality exercises it proprietary authority as a landlord," rather than its regulatory powers, when it permits entities to use publicly owned structures such as street lights, street furniture, poles and traffic signals).

are misguided for two reasons. First, neither Section 253 nor Section 332(c)(7) distinguishes between states and localities acting in their proprietary versus regulatory capacities.[4] Congress was well aware that state and local governments act in both capacities when Sections 253 and 332(c)(7) were passed, but it did not create any exception in the statutes for governments acting in their proprietary capacities.[5] This implies that Congress intended for the Act to apply to actions taken by state and local governments, even where they operate in a proprietary capacity.[6] At minimum, Congress did not unambiguously indicate that the Communications Act applies only to state and local governments acting in their regulatory capacity, and the Commission should reasonably interpret Sections 253 and 332(c)(7) as applying to state and local governments regardless of whether they act in a proprietary or regulatory capacity.[7]

Second, even if the Commission determines that Sections 253 and 332(c)(7) apply only to state and local governments acting in their regulatory capacity, it should make clear that states and localities act in a regulatory capacity – and Sections 253 and 332(c)(7) apply – when they make siting decisions regarding their utility, light, and traffic poles. To the extent that preemptive federal statutes like the Communications Act do not apply to government action, courts have made clear that can be the case only where "a State acts as a 'market participant with

---

[4] Generally speaking, governments act in a regulatory capacity when they perform functions that are sovereign or governmental in nature, while they act in a proprietary capacity when they interact with other entities as a private party would. *See, e.g.*, *Chamber of Commerce of U.S. v. Brown*, 554 U.S. 60, 70 (2008) (distinguishing between situations in which the government acts as a "regulator" and those in which it acts as a "market participant with no interest in setting policy" (internal quotation marks omitted)). For example, a locality acts in a regulatory capacity when it enacts and enforces rules requirements for employment contracts signed within its limits, while it may act in a proprietary capacity when it enters into employment contracts with its own employees.

[5] *See, e.g., In re Continental Airlines*, Memorandum Opinion and Order, 21 FCC Rcd 13201, 13214 at ¶ 32 (2006) ("The OTARD rules have no express exception for governmental entities, and we find no reason to withhold application of the OTARD rules, as a general matter, to state and local government entities that are acting in a proprietary capacity as landlords.").

[6] *See Bldg. & Constr. Trades Council of Metro. Dist. v. Associated Builders & Contractors of Mass./R.I., Inc.*, 507 U.S. 218, 231-32 (1993) (where Congress provides an "implied indication … that a State may not manage its own property when it pursues its purely proprietary interests," such a restriction is proper).

[7] For similar reasons, the Commission's previous determination that Section 6409 of the Spectrum Act does not apply to state and local actions on siting applications when the local governments act in their proprietary, as opposed to regulatory, capacity is incorrect. *See* Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, § 6409(a), 126 Stat. 156 (2012) (codified at 47 U.S.C. § 1455(a)) ("Section 6409"); *In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies,* Report and Order, 29 FCC Rcd. 12865, 12964-65 at ¶¶ 239-40 (2014), erratum, 30 FCC Rcd 31 (2015), *aff'd, Montgomery Cnty. v. FCC*, 811 F.3d 121 (4th Cir. 2015).

no interest in setting policy.'"[8] Applying this principle to the Communications Act, courts inquire whether a state or municipality's "interactions with the market [are] so narrowly focused, and so in keeping with the ordinary behavior of private parties, that a regulatory impulse can be safely ruled out."[9] The Second Circuit applied this principle to establish the following test for whether a municipality engages in a predominantly proprietary manner under the Communications Act: "(1) whether 'the challenged action essentially reflect[s] the entity's own interest in its efficient procurement of needed goods and services, as measured by comparison with the typical behavior of private parties in similar circumstances,' and (2) whether 'the narrow scope of the challenged action defeat[s] an inference that its primary goal was to encourage a general policy rather than address a specific proprietary problem.'"[10]

Public rights-of-way, which are held and managed by state or local governments for the public good, are held in a regulatory capacity under this test.[11] The Commission previously explained that "municipalities generally do not have a compensable 'ownership' interest in public rights-of-way, but rather hold the public streets and sidewalks in trust for the public,"[12] which is consistent with the determination adopted widely by courts that "the ownership interest municipalities hold in their streets is 'governmental,' and not 'proprietary.'"[13] The light poles, traffic lights, and utility poles that are within these rights-of-way are held by governments in their regulatory capacity for the same reason that the rights-of-way themselves are: they are held for public purposes, such as public safety and the provision of public services. Just as governments possess and control the streets to ensure the public good and not to "address a

---

[8] *Brown*, 554 U.S. at 70 (quoting *Associated Builders*, 507 U.S. at 229).

[9] *Sprint Spectrum L.P. v. Mills*, 283 F.3d 404, 420 (2d Cir. 2002) (quoting *Cardinal Towing & Auto Repair, Inc. v. City of Bedford*, 180 F.3d 686, 693 (5th Cir. 1999)) (internal quotation marks omitted).

[10] *Id*. (alteration in original) (quoting *Cardinal Towing*, 180 F.3d at 693).

[11] *See* Comments of Verizon at 26-28, WT Docket 17-79 and WC Docket 17-84; Reply Comments of Verizon at 18-19, WT Docket 17-79 and WC Docket 17-84.

[12] *See In the Matter of Implementation of Section 621(A)(1) of the Cable Commc'ns Policy Act of 1984 as Amended by the Cable Television Consumer Prot. and Competition Act of 1992*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 5101, 5160 at ¶ 134 (2007) ("*Cable Franchising Report and Order*"), *petition for review denied*, *Alliance for Cmty. Media v. FCC*, 529 F.3d 763 (6th Cir. 2008).

[13] *Liberty Cablevision of Puerto Rico, Inc. v. Municipality of Caguas*, 417 F.3d 216, 221-22 (1st Cir. 2005) (citing *City & County of Denver v. Qwest Corp.*, 18 P.3d 748, 761 (Colo. 2001) (en banc)); *see also American Tel. & Tel. Co. v. Village of Arlington Heights*, 620 N.E.2d 1040, 1044 (Ill. 1993); *City of N.Y. v. Bee Line, Inc.*, 284 N.Y.S. 452, 456 (App. Div. 1935), *aff'd*, 3 N.E.2d 202 (N.Y. 1936)); *City of Zanesville v. Zanesville Tel. & Tel. Co.*, 59 N.E. 781, 785 (Ohio 1901); *Hodges v. Western Union Tel. Co.*, 18 So. 84, 85 (Miss. 1895).

specific proprietary policy," so too they possess and control the traffic lights, light poles, and utility poles within those rights-of-way in their regulatory capacity.[14]

Even if the Commission were to evaluate government-owned poles within the rights-of-way independently of the rights-of-way themselves, it should find that cities act within their regulatory capacity when they make decisions regarding the siting of wireless facilities on municipal poles. This is true because both prongs of the *Mills* test outlined above make clear that governments manage their poles and the wireless siting decisions regarding them in their role as regulators. At minimum, municipalities' actions with regard to the poles they own are not "so in keeping with the ordinary behavior of private parties, that a regulatory impulse can be safely ruled out," as is required to find that a municipality acts in a proprietary capacity.[15]

First, in making wireless siting decisions regarding the poles they own, state and local governments do not act like "private parties [would] in similar circumstances" to "procure[] … needed goods and services."[16] There is no private party that provides the same good – access to light poles, traffic lights, and utility poles – in "similar circumstances."[17] Governments face no meaningful competition for placement of wireless facilities on their poles, because no private party is similarly situated in owning dozens, hundreds, or thousands of poles throughout an individual city. At its core, the regulatory/proprietary distinction is a question of whether a governmental entity "is more powerful than private parties," or is merely another "market participant."[18] Because a state or local government is often the only entity that controls large numbers of poles within its confines, it is substantially more powerful than any private parties.[19] It thus occupies a distinctive position that sets it apart from private parties and cannot fairly be

---

[14] *See In the Matter of Petition of the State of Minnesota for a Declaratory Ruling Regarding the Effect of Section 253 on an Agreement to Install Fiber Optic Wholesale Transport Capacity in State Freeway Rights-of-Way*, Memorandum Opinion and Order, 14 FCC Rcd 21697, 21707-08 at ¶ 19 (1999) (noting that preemption under Section 253 was appropriate because "Minnesota is not merely acquiring fiber optic capacity for its own use," but also for use by the State's residents).

[15] *Mills*, 283 F.3d at 420 (quoting *Cardinal Towing*, 180 F.3d at 693).

[16] *Id.*

[17] In some cases, private utilities own utility poles and may lease them to third parties. But it is unlikely that private utilities will own utility poles in the same jurisdiction where the local government owns utility poles. This is because, for example, if a local government owned entity provides electric power in the jurisdiction, it is unlikely a private electric utility will have poles in the area. Even where privately-owned utility poles and government-owned utility poles co-exist, privately-owned poles are not similarly situated to government-owned poles because public and private entities have different interests in owning such poles. Governments own poles for the public good, while private entities own poles solely for financial gain.

[18] *Associated Builders*, 507 U.S. at 229.

[19] Telephone companies and electric utilities must charge regulated rates for attachments to their poles. *See* 47 U.S.C. § 224.

analogized to merely another market participant. Courts of appeals have recognized this very distinction. In *Selevan v. New York Thruway Authority*, for example, the Second Circuit rejected a claim that a highway authority was acting in a proprietary capacity "in the local highway transportation market" when it set its toll rates, because there was "no evidence in the record that [the highway authority] competes with other entities that are also seeking to build and maintain highway systems."[20]

State and local governments also do not construct and own these poles to advance their own economic agendas; they instead do so to enhance public safety and the public interest. Government entities would build and operate street lights, traffic lights, and utility poles – in their regulatory capacity to support the public good – even if they could not lease space on them to a third party for pecuniary gain. Indeed, for decades, governments have built and operated these poles, even absent the ability to charge rent for pole attachments. State and local governments' interest in those poles do not suddenly transform from a regulatory to a proprietary one simply because cities now have the opportunity to lease access to them. Their actions with regard to these poles, which are within their control solely because the localities are governmental entities, thus cannot by their very nature be "in keeping with the ordinary behavior of private parties" in "similar circumstances,"[21] for there are no similarly situated private parties.[22] Governments can grant access to the good at issue – their networks of poles – only by virtue of their status as regulators, and as a result they necessarily operate in their regulatory capacity in managing access to these poles.

Second, in managing access to the poles they own, governments do not act with such "narrow scope" that adjudication of siting applications "defeat[s] an inference that its primary goal was to encourage a general policy rather than address a specific proprietary problem."[23] States and localities negotiating access to light poles, streetlights, and utility poles with wireless providers generally act not on a case-by-case basis, but instead pursuant to master lease or license agreements and local zoning ordinances.[24] These master agreements, in which localities provide for access to the poles they own by the hundreds or thousands, leave little doubt that state and local governments are engaging in broad-based regulation of access to poles for wireless companies, as opposed to the kind of individualized leasing transactions that a private party would undertake.

Case law confirms this common sense distinction. A court in the Southern District of New York explained that where a city "implement[s] a general franchising scheme," the city's

---

[20] *Selevan v. New York Thruway Authority*, 584 F.3d 82, 93 (2d Cir. 2009).

[21] *Mills*, 283 F.3d at 420 (quoting *Cardinal Towing*, 180 F.3d at 693).

[22] *See* note 17, *supra.*

[23] *Id.*

[24] *See* Comments of Verizon at 7-8, 18-19, WT Docket No. 16-421 (Mar. 8, 2017) ("Verizon Small Facility Comments") (noting Verizon's experience that negotiating with local governments generally involves master lease agreements and zoning ordinances).

"actions … are not of a purely proprietary nature, but rather, were taken pursuant to regulatory objectives or policy."[25] Thus, where a city made siting decisions that aimed to "support the availability of robust, reliable, high-quality mobile services while also protecting the public interest in a streetscape that is safe, not excessively cluttered in appearance, and otherwise consistent with City use of the relevant facilities and their surroundings," those decisions were regulatory in nature.[26] As the court explained, the city's franchising scheme could not "readily be described as 'narrow' or as 'address[ing] a specific proprietary problem' where access to three thousand City lightpoles is at issue."[27] When states and localities negotiate access to their poles with Verizon, they typically negotiate agreements that establish the terms of access to hundreds or thousands of poles, confirming the *NextG Networks* court's determination that the city was not dealing in narrow terms, but instead on a broad scale to effect its chosen policy.[28]

State and local governments themselves confirm as much. They contend that the Commission should not limit local authority over wireless siting decisions precisely because state and local governments need to balance the benefits of providing wireless technology with the impact of the placement of wireless facilities on aesthetics and other municipal interests. Indeed, unlike private parties, in negotiating access to poles they own, state and local governments maintain a strong "interest in setting policy," a hallmark of a "regulator."[29] The effort to balance public benefits and public harms that governments undertake is precisely the

---

[25] *NextG Networks of New York, Inc. v. City of New York*, No. 03 CIV. 9672 (RMB), 2004 WL 2884308, at *5 (S.D.N.Y. Dec. 10, 2004).

[26] *Id.* (internal quotation marks omitted).

[27] *Id.* n.9.

[28] This distinction between individualized decisions regarding the leasing of space on traditional government property such as municipal buildings and broad-based decisions regarding access to government owned poles explains how courts have analyzed the proprietary/regulatory distinction. *Compare Mills*, 283 F.3d at 420 (finding that a city entity acted in a proprietary capacity when it "entered into a single lease agreement with respect to a single building," and in which the city did not have any broader guidelines respecting the lease at issue), *and Superior Commc'ns v. City of Riverview, Michigan*, 881 F.3d 432, 445 (6th Cir. 2018) (finding that a city acted in a proprietary capacity in enforcing the terms of a single lease on a city owned cellular tower built on city property), *and Omnipoint Commc'ns, Inc. v. City of Huntington Beach*, 738 F.3d 192, 201 (9th Cir. 2013) (finding that a city acted in a proprietary capacity when it determined that it could not license the use of a city-owned park to a provider to build a cellular tower), *with NextG Networks*, 2004 WL 2884308, at *5 & n.9 (finding that a city acted in its regulatory capacity when it negotiated access to 3000 poles in order to promote the public interest and pursuant to a franchise agreement), *and Freeman v. Burlington Broadcasters, Inc.*, 204 F.3d 311, 325 (2d Cir. 2000) (finding a zoning restriction on the use of radiofrequency radiation, which was applied to several operators of radiofrequency, was preempted by Section 253).

[29] *Brown*, 554 U.S. at 70.

kind of regulatory function that governmental entities acting as regulators perform, and those acting as market participants do not.[30]

For these reasons, the Commission should find that states and localities act in a regulatory capacity when they make decisions regarding the placement of wireless facilities on city-owned poles, triggering the application of Sections 253 and 332(c)(7) to their actions.

Sincerely,

cc: (via e-mail)

Donald Stockdale
Suzanne Tetreault
Garnet Hanly

[30] *Cf. New England Health Care Employees Union, Dist. 1199, SEIU/AFL-CIO v. Rowland,* 204 F.Supp.2d 336, 344-45 (D.Conn.2002) ("unlike the 'purely proprietary' interests of the defendants in [*Associated Builders*], the defendants in this case ... acted within a regulatory scheme that focused on insuring the health and safety of the public, not on regulating the bargaining relationship between labor and management").

Thomas J. Navin
202.719.7487
tnavin@wileyrein.com

VIA ELECTRONIC FILING

August 29, 2018

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79

Dear Ms. Dortch:

Corning Incorporated ("Corning") submits the attached report, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 2, 5G Attachment and Application Fee Scenarios* ("Report"),[1] which supplements previous reports submitted by Corning in this proceeding and the Commission's *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment* proceeding.[2]

This report assesses the impact of small cell attachment and application fees in two ways: (1) calculating the cost savings from capping fees at a level in line with the median of recent state regulations documented in a recent report published by CTIA and WIA; and (2) estimating the new capital investment that could occur due to these cost savings making more neighborhoods economically viable for 5G fixed wireless deployment. The report concludes that reducing small cell attachment and application fees could reduce deployment costs by $2.1 billion over five years, or $7,900 per small cell built. These cost savings could lead to an additional $2.6 billion in capital expenditure due to additional neighborhoods moving from being economically unviable to becoming economically viable, with 97% of this capital expenditure going towards investment in rural and suburban areas.

Pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, a copy of this letter is being filed via ECFS. Should you have any questions, please do not hesitate to contact me.

[1] *See* Attachment A.
[2] *See* Letter from Thomas J. Navin, Counsel to Corning, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Jan. 25, 2018), at Attachments A and B.

Respectfully Submitted,

/s/ Thomas J. Navin

Thomas J. Navin
Counsel for Corning Incorporated

Tim Regan
Senior Vice President, Global Government Affairs, Corning Inc.

Attachment A

Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 2, 5G Attachment and Application Fee Scenarios

August 2018

Ed Naef, CMA Strategy Consulting

Micah Sachs, CMA Strategy Consulting

Ed Naef is a Partner at CMA Strategy Consulting and Micah Sachs is a Principal at CMA Strategy Consulting. The authors would like to thank Corning for the funding to support this study.

Table of Contents

Introduction 3
Context and Objective 3
Methodology 4
Revised Assumptions 5
Revised Base Case Assumptions 6
Reduced Small Cell Fees Case Assumptions 9
Comparison with June 2017 Base Case 9
Impact Assessment of Reduced Small Cell Fees 9
Cost Savings 9
New Investment 9
Conclusion 10
Appendix 11

Introduction

Context and Objective

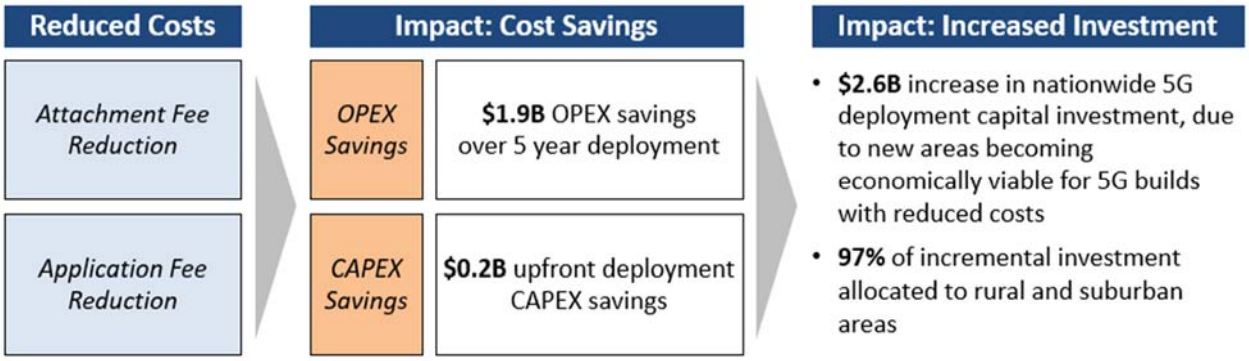
In our June 2017 study co-authored with Economists Incorporated, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment*, CMA estimated the deployment and economic benefits of reducing regulatory barriers to fiber-to-the-home and 5G fixed wireless broadband deployment. In light of new information published by CTIA and WIA[1] and recent filings from developers of wireless infrastructure, CMA has revised its original national 5G fixed wireless model to reflect the potential impact of these new data on small cell pole attachment and application fees, and estimated the potential impact on 5G fixed wireless deployment of instituting a cap on these fees. For purposes of this analysis, the term "attachment" fees include recurring annual charges both for right-of-way (ROW) access and for attaching to poles.

CMA has assessed the impact of reducing small cell fees in two ways: 1) calculating the cost savings from capping fees at a level in line with the median of recent state regulations documented in CTIA/WIA's report and 2) estimating the new capital investment that could occur due to these cost savings making more neighborhoods economically viable for 5G fixed wireless deployment. The first assessment is a straight calculation of forgone cost (e.g., if attachment fees drop from $2,500 a year to $150 a year, how much could be saved across the country?), while the second assessment leverages our 2017 5G fixed wireless model to evaluate the economic viability of 5G fixed wireless deployment in every neighborhood in the country.

Key findings from this report are:

- Reducing small cell attachment and application fees could reduce deployment costs by $2.1 billion over five years, or $7,900 per small cell built. $1.9 billion would be operating expenditure reductions due to lower annual attachment fees, and $200 million in cost reductions would be attributable to lower application fees, which are required prior to building out a small cell network.
- These cost savings could lead to an additional $2.6 billion in capital expenditure due to additional neighborhoods moving from being economically unviable to becoming economically viable. 97% of this capital expenditure would go towards investment in rural and suburban areas.

[1] *See* Ex Parte Letter from Kara Graves, CTIA, and Zachary Champ, WIA, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 17-84 and WT Docket No. 16-421 (Aug. 10, 2018).



Methodology

In its initial report[2] and a follow-up analysis,[3] CMA evaluated the business case for deploying next-generation broadband throughout the United States to predict how many homes and small businesses could be served with current regulation, and with future regulatory reforms. CMA examined two types of next-generation deployments: fully wired fiber-to-the premises (FTTP) and fifth generation (5G) fixed wireless broadband. For both FTTP and 5G fixed wireless, CMA constructed a full business case for next-generation network deployment for every inhabited census block group in the country,[4] which allowed us to calculate the economic net present value (NPV) for each census block group.[5] Those census block groups with a positive NPV were considered economically viable for broadband deployment, and those with a negative NPV were considered economically unviable. As costs were reduced or deployment timelines shortened due to modeled regulatory reforms, additional census block groups moved from being economically unviable to being economically viable.

The assumed builder and operator of the FTTP or 5G fixed wireless network in our model is an ILEC evaluating network expansion in its own traditional wireline service territory. Therefore, our business case only considered the *incremental* benefits and costs of next-generation network deployment, excluding revenues from customers already using legacy services and costs to serve them and to maintain the existing copper network.

---

[2] *See* Comments of Corning Inc., WC Docket No. 17-84 (June 15, 2017), at Attachment A (Hal Singer, Economists Incorporated, and Ed Naef and Alex King, CMA Strategy Consulting, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment* (June 2017) ("Initial Report")).

[3] *See* Letter from Thomas J. Navin, Counsel to Corning Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Jan. 25, 2018), at Attachment A (Ed Naef and Alex King, CMA Strategy Consulting, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 1, Model Sensitivities* (Jan. 2018) ("Annex 1")); CMA examined the impact of a nationwide change to "one-touch make-ready" procedures on both FTTP and 5G network deployments. CMA also estimated the impact of higher municipality-imposed costs on a nationwide 5G deployment. Both impacts were measured in relation to the June 2017 Base Case scenario.

[4] Census block groups on average contain ~650 homes and small businesses, and are therefore roughly the size of neighborhoods as commonly understood.

[5] See Initial Report for methodology and assumptions used.

While FTTP economics are well understood from numerous deployments in the U.S. and the rest of the world, the business case for 5G fixed wireless network deployment is still being evaluated. Almost every key driver of 5G fixed wireless economics, including small cell cost, ARPUs and expected take rate (as well as lesser drivers like attachment and application fees), have yet to be proven out on any scale. Thus, CMA's initial analyses of 5G deployment was a higher level analysis and reflected more assumptions about potential market evolution.[6] For our "June 2017 Base Case" for 5G fixed wireless, we assumed small cell attachment fees were equivalent to typical wireline attachment fees and assumed no upfront small cell application fees.[7]

For this report, CMA revised the June 2017 Base Case to account for new data on current small cell attachment and application fees, leaving other assumptions unchanged—creating what we term the "Revised Base Case" in this report. CMA then estimated the impact of reducing these fees to levels in line with recent state legislation detailed in CTIA/WIA's survey by creating a new "Reduced Small Cell Fees Case," with reduced fees, and contrasting the outputs with those of the Revised Base Case.

Revised Assumptions

For the Revised Base Case, CMA developed state-level assumptions for annual small cell attachment fees and application fees. For states with caps documented by the CTIA/WIA survey, CMA used the documented caps, under the assumption that most municipalities will charge the maximum fee allowed. For other states (or states included in the CTIA/WIA survey that did not have caps on one of the two categories of fees), CMA used national benchmarks drawn from recent filings[8] from developers of wireless infrastructure as part of the proceedings Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84; and Streamlining Deployment of Small Cell Infrastructure, WT Docket No. 16-421.

The fees reported by small cell developers largely only cover municipally owned non-utility poles such as streetlights and traffic lights, not utility poles used for electrical wires and telecommunications wires,

[6] *See* Initial Report and Annex 1.

[7] Our January 2018 follow-on did not revise the base case assumptions for attachment fees and application fees. It did, however, illustrate several sensitivities on the base case model, including higher application fees and higher attachment fees. Those sensitivities reflected values within the ranges observed in the limited number of comments that were on the record at the time, including comments from Verizon, Crown Castle International and ExteNet Systems. *See* Annex 1.

[8] Christopher Yoo of the University of Pennsylvania recently conducted a study looking at 1,204 pole attachment agreements to determine typical rates for different types of regulatory regimes and different types of pole owners. *See* "Survey of Rates for Pole Attachments and Access to Right of Way" (Apr. 24, 2018), *available at:* https://www.fcc.gov/sites/default/files/ad-hoc-commitee-survey-04242018.pdf). CMA did not use this study for two reasons: (1) it was not clear how prevalent municipally owned non-utility pole agreements were in the data collection and (2) because the Broadband Development Advisory Committee publicly expressed concerns about outliers in the data (*see* BDAC Rates & Fees Ad Hoc Committee, Preliminary Report (Apr. 25, 2018), at 9, *available at* https://www.fcc.gov/sites/default/files/ad-hoc-committee-presentation-04242018.pptx) and did not use the data to fashion its recommendations in its draft final report. *See* Broadband Deployment Advisory Committee Rates and Fees Committee, DRAFT – Final Report to the BDAC (v 2.5) (July 2018), *available at* https://www.fcc.gov/sites/default/files/bdac-07-2627-2018-rates-fees-wg-report-07242018.pdf.

whether the owner is the municipality[9] or another party.[10] Because most small cells today are located on municipally owned non-utility poles, we assumed in both the Revised Base Case and the Reduced Small Cell Fees Case that small cells would be deployed on municipally owned poles or other poles with similar fee structures. The higher fees in these scenarios apply only to the small cells, not the fiber backhaul.

Revised Base Case Assumptions

For the Revised Base Case, the following state-wide caps were provided by the CTIA/WIA survey:

TABLE 1: BASE CASE STATE-LEVEL FEE ASSUMPTIONS USED IN REVISED BASE CASE

		Revised Base Case		
		Annual Attachment Fee *(per small cell)*	**One-Time Application Fee** *(per small cell)*	**Legislation Year**
States in CTIA/WIA Survey	**AZ**[11]	$100	$50	2017
	CO	N/A	N/A	2017
	DE	N/A	$100	2017
	FL	$150	N/A	2017
	HI	N/A	N/A	2018
	IA[12]	N/A	$50	2017
	IL[13]	$200	$350	2017
	IN[14]	$50	$100	2017

[9] It is important to make the distinction between municipal utility poles and municipally owned non-utility poles. Municipal utility poles carry electrical and telecommunications wires and equipment for the municipality and other third parties such as the ILEC, the local cable company or an investor-owned electrical utility. Third parties attach to these poles based on pole agreements that were typically first drawn up decades ago and revised over the years. Municipally owned *non*-utility poles, on the other hand, have not historically provided collocation for any other parties' infrastructure. Collocating small cells on these types of poles, such as traffic lights and streetlights, is a new use of these poles, and municipalities therefore are charging a range of prices for accessing these poles.

[10] Other common owners of utility poles include investor-owned utilities, cooperative utilities, the ILEC and the local cable company.

[11] Arizona's attachment fee is the combined total of the attachment fee ($50) and ROW access fee ($50) listed in the CTIA/WIA survey. The fees in the table apply for networks built in the city. For networks built in counties, the state charges a $60 application fee, $20 attachment fee and $50 ROW access fee. The small differences between city and county fee levels change the number of economically viable locations only slightly.

[12] Iowa charges a $500 application fee per small cell for an application with 5 or less small cells. Every small cell after the fifth small cell is charged a $50 application fee. We used the lower $50 application fee because we assumed most small cell applications from ILECs will have far more than five nodes, and therefore the average application fee per small cell will trend towards $50.

[13] Illinois charges a $650 application fee for the first small cell and $350 for each after. The state also charges a $1,000 application fee for an application that includes the installation of a new utility pole. We used the lower $350 application fee because we assumed most small cell applications from ILECs will be for far more than one node, and therefore the average application fee per small cell will trend towards $350.

[14] Indiana charges an application fee that is the lesser of $100 or the amount charged by the permit authority for a building permit. We assumed $100 for simplicity's sake.

	KS[15]	N/A	$500	2016
	MN	$175	N/A	2017
	MO[16]	$150	$100	2019
	NC[17]	$50	$50	2017
	NM[18]	$270	$50	2018
	OH[19]	$200	$250	2018
	OK[20]	$40	$100	2018
	RI[21]	$150	N/A	2017
	TN[22]	$100	$50	2018
	TX[23]	$270	$250	2017
	UT[24]	$50	$100	2018

[15] Kansas has no application, attachment and ROW access fee if other providers do not pay a fee.
[16] Missouri has a $500 application fee for each small cell on a new, modified or replacement utility pole. The ROW access rate is variable based on actual ROW management costs for each pole-owner and therefore not included in our assumption.
[17] North Carolina charges an application fee that is the lesser of 1) actual cost to review an application, 2) amount charged for permitting similar activities or 3) $100 for each small cell up to 5 and $50 for each afterwards. We used the lower $50 application fee because we assumed most small cell applications from ILECs will be for far more than five nodes, and therefore the average application fee per small cell will trend towards $50.
[18] New Mexico's attachment fee is the combined total of the attachment fee ($20) and ROW access fee ($250) listed in the CTIA/WIA survey. New Mexico charges a $100 application fee for each small cell up to 5 and $50 for each afterwards. The state charges a $750 application fee for each small cell if it involves the installation of a new, replacement or modified utility pole. The ROW access rate ($250 per small cell) applies only if other providers are charged. We used the lower $50 application fee because we assumed most small cell applications from ILECs will be for far more than five nodes, and therefore the average application fee per small cell will trend towards $50.
[19] Ohio's attachment fee is the combined total of the attachment fee ($200) and ROW access fee ($0) listed in the CTIA/WIA survey.
[20] Oklahoma's attachment fee is the combined total of the attachment fee ($20) and ROW access fee ($20) listed in the CTIA/WIA survey. Oklahoma charges a $200 application fee for each small cell up to 5 and $100 for each afterwards. The state charges a $350 application fee for each small cell that involves the installation, modification or replacement of a pole. We used the lower $100 application fee because we assumed most small cell applications from ILECs will be for far more than five nodes, and therefore the average application fee per small cell will trend towards $100.
[21] Rhode Island's attachment fee is the combined total of the attachment fee ($150) and ROW access fee ($0) listed in the CTIA/WIA survey.
[22] Tennessee's attachment fee is the combined total of the attachment fee ($100) and ROW access fee ($0) listed in the CTIA/WIA survey. Tennessee charges a $100 application fee for each small cell up to 5 and $50 for each afterwards. There is a $200 one-time application fee for the first application. We used the lower $100 application fee because we assumed most small cell applications from ILECs will be for far more than five nodes, and therefore the average application fee per small cell will trend towards $100.
[23] Texas' attachment fee is the combined total of the attachment fee ($20) and ROW access fee ($250) listed in the CTIA/WIA survey. Texas charges an application fee that is the lesser of 1) actual cost to process an application or 2) $500 per small cell up to 5 and $250 for each afterwards. We used the lower $250 application fee because we assumed most small cell applications from ILECs will be for far more than five nodes, and therefore the average application fee per small cell will trend towards $250.
[24] Utah's attachment fee does not include the ROW access fee ($250) listed in the CTIA/WIA survey because the ROW access fee only applies to entities who do not pay the state's Municipal Telecom License Tax, which we

	VA[25]	N/A	$50	2017

For states where information was not provided in the CTIA/WIA survey, CMA used assumptions that are below the averages and medians of rates reported by developers of wireless infrastructure so as to better account for reporting bias.[26] There is still significant uncertainty around what "typical" rates are, and the lack of federal regulation and limited current deployment of small cells in suburban and rural areas means that only the mostly urban benchmarks provided by developers of wireless infrastructure are available. CMA therefore used benchmarks from the lower end of ranges provided by operators. Our Revised Base Case illustrates the impact on our 5G deployment model if these observed costs are prevalent across states without fee caps.

TABLE 2: NATIONWIDE SMALL CELL FEE ASSUMPTIONS USED IN REVISED BASE CASE

	Annual Attachment Fee	**Application Fee**
Assumption Used in Revised Base Case	$2,500	$1,000
Average of Sources	$4,784	$5,284
Median of Sources	$3,250	$2,400
Min and Max of Sources	$0 to $37,000	$100 to $24,000
Standard Deviation of Sources	$6,636	$6,333
Sources	AT&T, Verizon, Crown Castle, CCA, Mobilitie, T-Mobile, Uniti, Verizon, WIA[27]	AT&T, Sprint, Crown Castle, CCA, Mobilitie, T-Mobile, Uniti, WIA, Xcel Energy[28]

For states in the CTIA/WIA survey with recently enacted legislation (2018 or later), CMA used a blended average of the survey fees in TABLE 1 and the assumptions used in the Revised Base Case in TABLE 2. The blended average was calculated by weighting one year of the assumptions in TABLE 2 and four years of CTIA/WIA fees together to reflect the fact that operators may still face high fees in states where new legislation is being rolled out.

assume ILECs already pay. Utah charges a $250 application fee for each small cell that involves the installation, modification or replacement of a pole.

[25] Virginia charges a $100 application fee for each small cell up to 5 and $50 for each afterwards. We used the lower $50 application fee because we assumed most small cell applications from ILECs will be for far more than five nodes, and therefore the average application fee per small cell will trend towards $50.

[26] CMA chose a range of large operators, industry organizations and utilities to identify representative benchmarks. While CMA was not able to document every data point from the record, we feel that the data points we collected are representative of operators' experience in significant portions of the country.

[27] For operator-specific sources, refer to Table 4 in the Appendix.

[28] For operator-specific sources, refer to Table 4 in the Appendix.

Reduced Small Cell Fees Case Assumptions

For the Reduced Small Cell Fees Case, CMA assumed a nationwide cap on small cell attachment and application fees. Since there is not a specific proposal to analyze, CMA used the median attachment and application fees, $150 and $100 respectively, of the states reported in the CTIA/WIA survey.[29] The median values were used instead of the average to exclude outliers in the survey. For states with lower caps than these median figures, the lower cap was used in this scenario.

Comparison with June 2017 Base Case

CMA's June 2017 Base Case assumed a $20 attachment fee and $0 application fee for all network elements based on the available data at that time. Assuming new higher attachment and application fees in the Revised Base Case lowers the total number of viable premises from the June 2017 Base Case. The total number of viable premises decreases by approximately 4.5 million from 91.5 million in the June 2017 Base Case to 87 million in the Revised Base Case.

Impact Assessment of Reduced Small Cell Fees

Cost Savings

CMA assessed the total deployment cost reduction that could occur if operators were to face lower attachment and application fees than the fees assumed in the Revised Base Case. It is estimated that deployment costs would be reduced by $1.9 billion in attachment fees over a five-year period and $0.2 billion in one-time application fees for a total of $2.1 billion over five years, if all economically viable areas were built. Using total savings and the total number of expected small cells in the Revised Base Case (~270,000 small cells), CMA estimates that operator deployment costs would be reduced by $7,900 per small cell due to lower fees.

New Investment

By lowering application and attachment fees, CMA estimates an additional $2.6 billion of capital expenditure would be spent to build small cells in areas that were previously not economically viable in the Revised Base Case, assuming all economically viable areas were built. CMA estimates that 97% of total incremental capital expenditure would flow into rural and suburban areas. More specifically, 63% ($1.6 billion) of incremental capital expenditure would flow to rural areas and 34% ($0.9 billion) would flow to suburban areas. In these areas a lower set of fees has the effect of pushing a large number of slightly negative NPV premises towards positive NPVs over a five-year period.

[29] The fees in the CTIA/WIA survey are often judged as fair prices by operators deploying 5G in the U.S. For example, in Sprint's ex parte communication to the FCC on August 13, 2018, Sprint mentions that the City of Los Angeles charges a reasonable application fee of $350 per small cell while Los Angeles County charges a higher application fee of $9,820 per small cell. *See* Letter from Keith C. Buell, Sprint, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Aug. 13, 2018).

TABLE 3: INCREMENTAL CAPEX BY MORPHOLOGY

	Sparse	Rural	Suburban	Urban	Dense Urban	Total
Incremental CAPEX ($M)	$0	$1,616	$880	$67	$2	$2,565

Finally, CMA examined the impact of lower fees on the number of viable premises in the U.S. Similar to the distribution of capex, 97% of the total increase in viable premises (1.9M additional premises total) would occur in rural and suburban areas.

Conclusion

Reductions in small cell attachment and application fees could have a multibillion-dollar impact on operator investment in fixed wireless 5G networks. Imposing fee caps in line with some state regulations could save operators $2.1 billion over five years in operating and capital expenses above currently observed costs. These savings would improve the business case for millions of marginal homes and businesses that would otherwise not be economically viable for 5G fixed wireless. These newly viable neighborhoods would require $2.6 billion in capital investment to cover in our model. Virtually all (97%) of this incremental investment would take place in rural and suburban areas.

Appendix

TABLE 4: OPERATOR-REPORTED ATTACHMENT AND APPLICATION FEES

Filer	City	State	Attachment Fee	Application Fee
AT&T[30]	Howard County	MD	$1,000	$1,800
AT&T	Baltimore County	MD	$5,000	N/A
AT&T	Oakland	CA	$2,300	N/A
AT&T	Citrus Heights	CA	$2,000	N/A
AT&T	Lowell	MA	$6,000	$20,000
AT&T	Escondido	CA	$1,650	N/A
CCA[31]	San Francisco	CA	$4,000	N/A
CCA	New York	NY	$4,000	N/A
CCA	Hempstead	NY	N/A	$900
CCA	New York	NY	$4,000	N/A
CCA	Chicago	IL	$4,000	N/A
CCA	San Francisco	CA	$4,000	N/A
CCI[32]	Vacaville	CA	$1,500	$4,000
CCI	Dallas	TX	$2,500	N/A
CCI	Philadelphia	PA	$3,000	N/A
CCI	Cottleville	MO	$6,000	N/A
CCI	Newport Beach	CA	$10,800	N/A
CCI	Montgomery County	MD	N/A	$1,000
CCI	Gaithersburg	MD	$500	$500
CCI	Hempstead	NY	N/A	$650
CCI	Brookville	NY	N/A	$4,000
CCI	Laurel Hollow	NY	N/A	$900
CCI	Unspecified	VA	$12,000	N/A
CCI	Fairfax County	VA	N/A	$15,000
Mobilitie[33]	Unspecified	NY	$2,000	N/A
Mobilitie	Unspecified	NV	N/A	$2,400
Mobilitie	Unspecified	GA	N/A	$2,800
Sprint[34]	City of Los Angeles	CA	N/A	$350
Sprint	Los Angeles County	CA	N/A	$9,820
Sprint	Anytown	IL	$2,000	$1,000

[30] *See* Ex Parte Letter from Henry Hultquist, AT&T, to Marlene Dortch, FCC, WT Docket No. 17-79 and WC Docket No. 17-84 (Aug. 6, 2018).
[31] *See* Comments of CCA, WT Docket No. 17-79, WT Docket No. 15-180, and WC Docket No. 17-84 (June 15, 2017); Ex Parte Letter from Courtney Neville, CCA, to Marlene Dortch, FCC, WT Docket No. 17-79, WT Docket No. 15-180, and WC Docket No. 17-84 (July 16, 2018).
[32] *See* Ex Parte Letter from Kenneth Simon and Monica Gambino, Crown Castle, to Marlene Dortch, FCC, WT Docket No. 16-421 (Aug. 10, 2018); Comments of Crown Castle International Corp., WT Docket No.17-79 (June 15, 2017).
[33] *See* Comments of Mobilitie, LLC USA, Inc., WT Docket No. 17-79 and WC Docket No. 17-84 (June 15, 2017).
[34] *See* Comments of Sprint, WT Docket No. 17-79 and WC Docket No. 17-84 (July 15, 2017); Ex Parte Letter from Keith Buell, Sprint, to Marlene Dortch, FCC, WT Docket No. 17-79 (Aug. 13, 2018).

T-Mobile[35]	Unspecified	MO	N/A	$6,000
T-Mobile	Unspecified	Unspecified	N/A	$9,500
T-Mobile	Unspecified	Unspecified	N/A	$350
T-Mobile	Unspecified	Unspecified	$24,000	N/A
T-Mobile	"31 Jurisdictions"	Unspecified	N/A	$3,500
T-Mobile	"43 Jurisdictions"	Unspecified	$3,500	N/A
T-Mobile	Unspecified	VA	N/A	$12,000
T-Mobile	Unspecified	VA	N/A	$15,000
T-Mobile	Montgomery County	MD	N/A	$2,000
Uniti[36]	Unspecified	AZ	N/A	$750
Uniti	Unspecified	AZ	$50	$100
Uniti	Unspecified	DE	$0	$100
Uniti	Unspecified	FL	$150	N/A
Uniti	Unspecified	IL	$200	$650
Uniti	Unspecified	IA	N/A	$100
Uniti	Milwaukee	WI	N/A	$15,500
Verizon[37]	San Jose	CA	$175	N/A
Verizon	Lincoln	NE	$1,995	N/A
Verizon	Seattle	WA	$1,872	N/A
Verizon	Portland	OR	$2,350	N/A
Verizon	Rancho Cordova	CA	$4,300	N/A
Verizon	Fresno	CA	$2,000	N/A
Verizon	Unspecified	Midwest	$6,000	N/A
Verizon	Unspecified	Northeast	$6,000	N/A
Verizon	Unspecified	Northeast	$9,000	N/A
Verizon	Unspecified	Northeast	$37,000	N/A
WIA[38]	Chicago	IL	$4,000	N/A
WIA	San Francisco	CA	$4,000	N/A
WIA	New York	NY	$4,000	N/A
WIA	Unspecified	VA	N/A	$24,000
WIA	Unspecified	MN	N/A	$5,000
WIA	Unspecified	MN	N/A	$4,000
WIA	Unspecified	NC	N/A	$10,000
WIA	Unspecified	TX	$2,500	N/A
Xcel Energy[39]	Unspecified	CO	N/A	$707

Note: filer-specific footnotes apply to all fees listed for the filer

[35] *See* Comments of T-Mobile USA, Inc., WT Docket No. 16-421 (March 8, 2017); Comments of T-Mobile USA, Inc., WT Docket No. 17-79 and WC Docket No. 17-84 (June 15, 2017); Reply Comments of T-Mobile USA, Inc., WT Docket No. 17-79 and WC Docket No. 17-84 (July 17, 2017); Comments of Mobilitie, LLC USA, Inc., WT Docket No. 17-79 and WC Docket No. 17-84 (June 15, 2017).

[36] *See* Ex Parte Letter from Jeffrey Strenkowski and Kelly McGriff, Uniti, to Marlene Dortch, FCC, WT Docket No. 17-79 and WC Docket No. 17-84 (Aug. 22, 2018); Ex Parte Letter from Ronald Del Sesto, Jr., Uniti, to Marlene Dortch, FCC, WT Docket No. 17-79 and WC Docket No. 17-84 (March 1, 2018).

[37] *See* Ex Parte Letter from Tamara Preiss, Verizon, to Marlene Dortch, FCC, WT Docket No. 17-79 (Aug. 10, 2018); Comments of Verizon, WC Docket No. 16-421 (March 8, 2017).

[38] *See* Reply Comments of the Wireless Infrastructure Association, WT Docket No. 17-79 and WC Docket No. 17-84 (July 17, 2017); Ex Parte Letter from Scott Houston, Texas Municipal League, to Marlene Dortch, FCC, WT Docket No. 17-79 (July 17, 2017).

[39] *See* Comments of Xcel Energy Services Inc., WT Docket No. 17-79 (June 15, 2017).

Thomas J. Navin
202.719.7487
tnavin@wileyrein.com

VIA ELECTRONIC FILING

September 5, 2018

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79

Dear Ms. Dortch:

On August 29, 2018, Corning Incorporated ("Corning") submitted a report, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 2, 5G Attachment and Application Fee Scenarios* ("Report"),[1] estimating the potential impact on 5G fixed wireless deployment of instituting a cap on small cell pole attachment and application fees.

On September 5, 2018, the Commission released a draft Declaratory Ruling in which annual attachment fee caps were set at $270 per small cell and the application fee cap was set at $100.[2] In response, Corning respectfully submits the attached supplemental sensitivity analysis, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 3*.[3] The sensitivity analysis concludes that reducing small cell and application fees could reduce deployment costs by $2.0 billion over five years, or $7,500 per small cell built. These cost savings could lead to an additional $2.4 billion in capital expenditure due to additional neighborhoods moving from being economically unviable to becoming economically viable, with 97% of this capital expenditure going towards investment in rural and suburban areas.

[1] *See* Letter from Thomas J. Navin, Counsel to Corning, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Aug. 29, 2018), at Attachment A. The Report supplements previous reports submitted by Corning in this proceeding and the Commission's *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment* proceeding. *See* Letter from Thomas J. Navin, Counsel to Corning, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Jan. 25, 2018), at Attachments A and B.

[2] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, FCC-CIRC1809-02, at ¶ 76 (Sept. 5, 2018), *available at* https://docs.fcc.gov/public/attachments/DOC-353962A1.pdf.

[3] *See* Attachment A.

Pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, a copy of this letter is being filed via ECFS. Should you have any questions, please do not hesitate to contact me.

Respectfully Submitted,

/s/ Thomas J. Navin

Thomas J. Navin
Counsel for Corning Incorporated

Tim Regan
Senior Vice President, Global Government Affairs, Corning Inc.

Attachment A

Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 3

September 2018

Ed Naef, CMA Strategy Consulting

Micah Sachs, CMA Strategy Consulting

Ed Naef is a Partner at CMA Strategy Consulting and Micah Sachs is a Principal at CMA Strategy Consulting. The authors would like to thank Corning for the funding to support this study.

Recently, CMA published a study ("*Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 2, 5G Attachment and Application Fee Scenarios*," henceforth: Annex 2) estimating the potential impact on 5G fixed wireless deployment of instituting a cap on small cell pole attachment and application fees[1]. CMA assessed the impact of reducing small cell fees in two ways: 1) calculating the cost savings from capping fees at a level in line with the median of recent state regulations[2] and 2) estimating the new capital investment that could occur due to these cost savings making more neighborhoods economically viable for 5G fixed wireless deployment. In this new brief annex (Annex 3), we share our findings from a sensitivity analysis modeling the impact if pole attachment fees were capped at a slightly higher level than the assumption used in Annex 2. For purposes of this analysis, the term "attachment" fee includes recurring annual charges both for right-of-way (ROW) access and for attaching to poles.

In Annex 2, we assumed a $150 small cell annual attachment fee cap and a $100 (one-time) small cell application fee cap. For Annex 3, we were requested by the sponsor of this study, Corning, to model a sensitivity if annual attachment fee caps were set at $270 per small cell and the application fee cap were set at $100. We calculated cost savings and other incremental benefits relative to our Revised Base Case as described in Annex 2, which modeled potential 5G fixed wireless deployment assuming no change in regulations and average small cell attachment and application fees in line with what deployers of wireless infrastructure have recently observed[3]. The key findings of this new sensitivity analysis are:

- Reducing small cell attachment and application fees could reduce deployment costs by $2.0 billion over five years, or $7,500 per small cell built. $1.8 billion would be operating expenditure reductions due to lower annual attachment fees, and $200 million in cost reductions would be attributable to lower application fees, which are required prior to building out a small cell network.
- These cost savings could lead to an additional $2.4 billion in capital expenditure due to additional neighborhoods moving from being economically unviable to becoming economically viable. 97% of this capital expenditure would go towards investment in rural and suburban

[1] *See* Letter from Thomas J. Navin, Counsel to Corning Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79 (Aug. 29, 2018), at Attachment A (Ed Naef and Micah Sachs, CMA Strategy Consulting, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment: Annex 2, 5G Attachment and Application Fee Scenarios* (Aug. 2018)); the study includes a detailed explanation of CMA's sources, methodology and conclusions.

[2] *See* Ex Parte Letter from Kara Graves, CTIA, and Zachary Champ, WIA, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 17-84 and WT Docket No. 16-421 (Aug. 10, 2018).

[3] For the Revised Base Case, CMA developed state-level assumptions for annual small cell attachment fees and application fees. For states with caps documented by the CTIA/WIA survey, CMA used the documented caps, under the assumption that most municipalities will charge the maximum fee allowed. For other states (or states included in the CTIA/WIA survey that did not have caps on one of the two categories of fees), CMA used national benchmarks drawn from recent filings from developers of wireless infrastructure as part of the proceedings *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79*; *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84*; and *Streamlining Deployment of Small Cell Infrastructure, WT Docket No. 16-421*. See Annex 2 for full list of sources.

areas. These newly economically viable neighborhoods contain 1.8 million homes and businesses.

BUTTE COUNTY SHERIFF'S OFFICE

Butte County Courthouse
839 5th Avenue
Belle Fourche, SD 57717

Phone (605) 892-3324
Fax (605) 723-3327
www.buttecountysd.org

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

Re: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Siting Policies, WT Docket No. 16-421*

Dear Commissioner Carr:

As Sheriff of Butte County, South Dakota, the safety and welfare of Butte County residents and visitors is my main focus. I commend the FCC for taking actions to eliminate regulatory barriers to constructing needed new wireless facilities, because expanded wireless broadband will benefit the safety and welfare of all Butte County residents and visitors.

The benefits of advanced wireless broadband services will be two-fold. First, they will touch every aspect of daily life and each sector of our economy. They will create new jobs, enable better access to quality healthcare, and improve education opportunities. As the economic condition of a community improves, crime tends to decrease, resulting in a safer community. Second, advanced wireless broadband services will dramatically change the way in which public safety communicates and responds in the event of a crime or an emergency. Tools such as online crime reporting, more advanced home security, and gunshot detection systems are just a few of the new crime-fighting tools that are being introduced thanks to faster and better connectivity. New technologies that we have not yet even imagined will only allow the precision and efficiency in which we respond to improve.

While the Commission's actions to-date have lowered some barriers to deployment, it is critical that the Commission continue to remove those barriers to reduce the costs of building new wireless infrastructure by requiring regulatory fees to be based on costs, setting reasonable timelines to review applications, and prohibiting unreasonable restrictions on deployment. Reducing deployment costs will particularly benefit rural areas such as Butte County by freeing up more investment capital which will then be available for those areas. I thus support your proposal and urge that you continue to promote faster deployment of the services that will clearly benefit our communities.

Respectfully submitted,

Fred A. Lamphere

Fred A. Lamphere
Butte County Sheriff

WILKINSON BARKER KNAUER LLP

1800 M STREET, NW
SUITE 800N
WASHINGTON, DC 20036
TEL 202.783.4141
FAX 202.783.5851
WWW.WBKLAW.COM

JOHN T. SCOTT III
DIRECT 202.383.3393
JSCOTT@WBKLAW.COM

September 12, 2018

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: **Ex Parte Presentation,** *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment,* WT Docket No. 17-79; *Accelerating Wireline Barriers to Broadband Deployment by Removing Barriers to Infrastructure Investment,* WC Docket No. 17-84; *Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Siting Policies, Mobilitie, LLC Petition for Declaratory Ruling,* WT Docket No. 16-421

Dear Ms. Dortch:

On September 10, 2018, D. Kirk Jamieson, Senior Vice President for Government Affairs of Mobilitie, LLC, had separate meetings with Commissioner Brendan Carr and Will Adams, Legal Advisor to Commissioner Carr; with Michael Carowitz, Special Counsel to Chairman Ajit Pai; and with Umair Javed, Legal Advisor to Commissioner Jessica Rosenworcel. On September 11, Mr. Jamieson met with Commissioner Michael O'Rielly, Erin McGrath, Legal Advisor to Commissioner O'Rielly, and Kagen Desapin, Intern in the O'Rielly office. The undersigned accompanied Mr. Jamieson at each of the four meetings; Bryan Tramont of Wilkinson Barker Knauer LLP also attended the meeting with Commissioner Carr. Mr. Jamieson's presentation at each meeting was consistent with Mobilitie's Petition for Declaratory Ruling and its comments in these proceedings.[1]

[1] Petition for Declaratory Ruling, *Promoting Broadband for All American by Prohibiting Excessive Charges for Access to Public Rights of Way* (filed Nov. 15, 2016) ("Petition"); Comments of Mobilitie, LLC, WT Docket No. 16-421 (filed Mar. 8, 2017); Reply Comments of Mobilitie, LLC, WT Docket No. 16-421 (filed Apr. 7, 2017); Comments of Mobilitie, LLC, WT Docket No. 17-79 (filed June 15, 2017); Reply Comments of Mobilitie, LLC, WT Docket No. 17-79 (filed July 17, 2017).

In each of the meetings, Mr. Jamieson described Mobilitie's mission to deploy small cells and other infrastructure in small and large jurisdictions nationwide, in order to meet the public's rapidly growing demand for wireless services. He commended the Commission's prior orders in these proceedings for enabling needed infrastructure to be deployed faster and to more locations.

The order streamlining federal environmental and historic preservation review processes has had a particularly beneficial impact.[2] Because more than 85 percent of Mobilitie's facilities qualify as small wireless facilities, that order has enabled the company to reduce the regulatory review period for each of its thousands of small cells from months to a day or two for sites that meet the definition. At the same time the order has substantially reduced Mobilitie's processing costs, since a single test replaces multiple processes, each with its own paperwork and multiple steps.

Mr. Jamieson stated that Mobilitie has successfully partnered with many localities to build thousands of wireless facilities, and that it supports policies ensuring that localities can charge fees to compensate them for their reasonable costs in managing deployment. Fees that provide localities with the funding to act efficiently on applications benefit localities and their residents by enabling faster and more robust service to those communities.

Mobilitie filed its Petition in the fall of 2016, however, because outliers had been imposing exceedingly high fees. Mr. Jamieson noted that there is no competitive market for fees because each locality has monopoly/exclusive control of access to rights of way. He reinforced that high fee demands and agreements continue today. He identified as examples a northwestern city that charges an $8,000 annual fee for each pole attachment, even for poles that are not city-owned, and a California jurisdiction that charges an $18,000 conditional use permit fee. Mr. Jamieson also noted that high fees imposed by some cities hurt other cities that have reasonable fees, because they reduce capital resources that might have gone to those cities, and because they pressure other financially strapped cities not to turn away what appears to be a revenue opportunity.

Mr. Jamieson stated that Mobilitie strongly supports the draft Order's ruling (consistent with the company's Petition) that the Communications Act requires fees to be based on a locality's reasonable costs.[3] The Order should emphasize that fees must be transparent to all providers by being publicly disclosed, and that fees be based on the locality's right-of-way management costs that are incurred due to wireless deployment.

---

[2] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79; Second Report and Order, FCC 18-30 (rel. Mar. 3, 2018).

[3] *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79; *Accelerating Wireline Barriers to Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Docket No. 17-84; Declaratory Ruling and Third Report and Order, WT Docket No. 17-79, WC Docket No. 17-84, FCC-CIRC1809-02 (Sept. 5, 2018) ("Order").

Mr. Jamieson also addressed delays in approving small cell applications. He noted that while some localities act on Mobilitie's applications within reasonable time periods, others do not, resulting in substantial delays of months or years. For example, one Texas city caps the number of applications it will accept, refuses to accept new applications that would exceed that number, requires nearly a dozen separate reviews by different city departments, and took over a year to approve a single application. He endorsed the draft Order's revisions to the shot clock periods for small cells, and its adoption of a presumption that failure to act within those time periods is an effective prohibition on service.

Mr. Jamieson also supported the draft Order's ruling that all mandatory local permits should be acted on within the applicable shot clock period. He stated that some localities require a master licensing agreement or franchising agreement above and beyond site-specific permits. These complex and lengthy agreements typically take many months or years to negotiate and then require local approvals, and they impose multiple conditions and obligations on rights of way access. Mr. Jamieson recommended that the Order explicitly state that licensing and franchising agreements, like permits, must be completed within the shot clock periods. If not, the failure to do so will be presumed to be an effective prohibition on service.

This letter is being filed electronically pursuant to Section 1.1206 of the Commission's rules. Should you have any questions, please contact the undersigned.

Sincerely,

/s/ John T. Scott, III
John T. Scott, III

cc: Commissioner Brendan Carr
Commissioner Michael O'Rielly
Michael Carowitz
Will Adams
Umair Javed
Erin McGrath

Office of Rep. Jason Saine
1326 Legislative Building
16 W. Jones St. Raleigh NC, 27601

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

To Whom It May Concern:

I write today to support Commissioner Carr's proposed 5G order. Just like 3G and 4G wireless technology before it, 5G wireless broadband will offer huge new capabilities to citizens in the United States. 5G will be the first wireless infrastructure built from the ground up to power not just cellular communication but a true Internet of Things. With significant decreases in latency and speeds up to 100 times faster than 4G wireless, 5G promises to bring forward a truly interconnected world.

The benefits of the 5G wireless roll out will be vast. It will enable new advances in telemedicine, smart grid technology, autonomous vehicles, and edge computing. CTIA estimates that 5G technology will create over 3 million new jobs and $500 billion in economic growth in the United States alone. Globally, the economic value of 5G technology is easily measured in the trillions of dollars. Right now, deployment of 5G technology is beginning in the United States, China, and South Korea. Just as we did with 4G, it is critically important that the United States win the race to be the first 5G ready economy in the global economy.

While the benefits of 5G technology are vast, there are unique challenges to deployment of 5G technology. Our current wireless infrastructure is based on the use of large scale macrocell towers that can deliver service over areas of up to 10 miles. Our regulations and permitting across the United States were created for that world. 5G will require the use of millimeter wave technology with a service area of around 1000 feet per installation. This will necessitate the siting of millions of small cell towers throughout the country. These new technologies will require an entirely new regulatory approach that lowers fees per tower and streamlines the process of permitting in order to expedite buildout across the country.

These challenges, and opportunities, are why I authored, and passed, HB 310 in the North Carolina House in 2017. HB 310 reduced regulation on permitting in public rights of way, restricted permit fees for small cell sites, and capped consulting fees for applications. It also created a shot clock for permits for small cell sites to be approved once they had filed. The Act also streamlined the process for DOT approval of small cell sites across North Carolina's highways.

By creating a statewide regulatory climate that is favorable for 5G and small cell technology North Carolina is already reaping the benefits. Raleigh and Charlotte, NC were announced as two of the first seven cities to be upgraded to 5G wireless by AT&T, and other carriers are following their lead and building out in NC as well. These buildouts will bring millions in news jobs and economic opportunity to North Carolina. Simply put, we know that creating fair and uniform regulatory standards for 5G technology works.

Commissioner Carr's 5G order will create a similar minimal regulatory standard across the United States. Such a standard is critical to ensure that the United States can win the race to be the first 5G economy. Keeping a confusing patchwork of local regulations for cell siting, many of which were designed for previous generations of wireless technologies risks delaying or even stopping the benefits of this revolutionary technology.

Commissioner Carr's order builds upon the framework set up by North Carolina and the 20 other states that have passed similar provisions. It clarifies the scope and meaning of Sections 253 and 332(c)(7) of the Communications Act, establishes shot clocks for state and local approvals for the deployment of small wireless facilities, and provides guidance on streamlining state and local requirements on wireless infrastructure deployment.

I strongly urge the FCC to adopt Commissioner Carr's order at their September 2018 meeting.

Sincerely,

Rep. Jason R. Saine
North Carolina House of Representatives

September 19, 2018

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *In the Matter of Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Development*, WT Docket No. 17-79; *In the Matter of Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Docket No. 17-84

Dear Ms. Dortch:

Pursuant to Section 1.1206 of the Commission's rules,[1] Crown Castle hereby submits this notice of *ex parte* communications and additional *ex parte* comments regarding the FCC's draft *Declaratory Ruling and Third Report and Order* in the above-reference proceedings, which the Commission released on September 5, 2018 (the "*Draft Order*").

On Monday, September 17, 2018, Joshua Turner of Wiley Rein and Roger Sherman of Waneta Strategies, LLC met with Erin McGrath and Kagen Despain of Commissioner O'Rielly's office. On Tuesday, September 18, 2018, Mr. Turner and Mr. Sherman met with Nicholas Degani and Rachael Bender with Chairman Pai's office, and on that same day Mr. Sherman and Monica Gambino of Crown Castle (by telephone) met with Umair Javed with Commissioner Rosenworcel's office, and Mr. Turner spoke via telephone with Will Adams in Commissioner Carr's office. In each meeting, the Crown Castle representatives discussed Crown Castle's remaining concerns with the *Draft Order*; the points of discussion were in line with Crown Castle's previous comments and *ex partes*, as well as the points laid out below.

Crown Castle appreciates the Commission's continued efforts to streamline the process for deploying infrastructure to support advanced broadband networks. The *Draft Order* includes a number of proposals that will advance this objective, and Crown Castle looks forward to their prompt adoption and implementation. Although Crown Castle applauds the Commission for adopting a balanced approach that will expedite deployment of next generation wireless networks while respecting the authority of states and localities, it also provides the following additional information and requests for clarification, in order to improve the *Draft Order*.

Crown Castle notes that the FCC's proposed action to limit application fees is both timely and necessary. To illustrate that, Crown Castle provides the following additional information: In

[1] 47 C.F.R. § 1.1206.

Hillsborough, California, Crown Castle submitted applications covering 16 nodes, and was assessed $60,000 in application fees. Not only did Hillsborough go on to deny these applications, following that denial it also then sent Crown Castle an invoice for an additional $351,773 (attached as Exhibit A), most of which appears to be related to outside counsel fees—all for equipment that was not approved and has not yet been constructed.

As it has said in its previous filings, Crown Castle continues to believe that it is urgent for the Commission to clarify the application of certain rules that it has adopted to implement Section 6409. To the extent that the Commission cannot address those issues in the *Draft Order,* the company urges the agency to move promptly in issuing a further declaratory ruling on these questions. In that regard, Crown Castle reiterates the points that it set out in its August 10, 2018 *ex parte*, and urges the FCC to take note of the various examples provided therein.[2]

Finally, Crown Castle offers the following comments and suggestions to clarify certain ambiguities in the *Draft Order* and ensure that the final order achieves the FCC's stated purpose of "remov[ing] regulatory barriers that would unlawfully inhibit the deployment of infrastructure necessary to support these new services."[3]

Aesthetic Standards/Undergrounding/Minimum Spacing

Crown Castle understands the desire of local governments to maintain the appearance of the right-of-way, and has previously detailed its efforts to utilize facilities that are aesthetically pleasing and consistent with their surroundings.[4] At the same time, Crown Castle has encountered communities that utilize aesthetic concerns as a pretense to delay wireless infrastructure projects and others that impose aesthetic standards in an unreasonable and discriminatory manner. Accordingly, Crown Castle supports the Commission's efforts to establish guidelines for when aesthetic standards constitute reasonable ROW management and when they constitute an effective barrier to telecommunications service. The three-pronged approach that the FCC proposes in the *Draft Order* will help ensure that aesthetic standards are transparent, reasonable, and applied on a non-discriminatory basis.[5]

As drafted, however, the second prong of the Commission's test—that aesthetic requirements must be "no more burdensome than those applied to other types of infrastructure deployments"—could permit the imposition of standards more appropriate for other forms of infrastructure in the ROW on small wireless facilities. In addition, the lack of a requirement for objectivity in the standards may significantly undercut the effectiveness of the standards that the Commission adopts here. For example, a municipality may argue that even existing zoning

---

[2] *See, e.g.*, Comments of Crown Castle Int'l Corp., WT Docket No. 17-79, at 47-49 (June 15, 2017) ("Crown Castle Comments"); Letter from Kenneth J. Simon, Senior Vice President and General Counsel, Crown Castle, to Marlene H. Dortch, WT Docket Nos. 17-79, 16-421, at 10-15 (Aug. 10, 2018).

[3] *Draft Order* ¶ 1.

[4] *See* Reply Comments of Crown Castle Int'l Corp., WT Docket No. 17-79 at iii (July 17, 2017).

[5] *Draft Order* ¶ 83.

EXHIBIT A

INVOICE

Town of Hillsborough
1600 Floribunda Avenue
Hillsborough, CA 94010-6418
Phone: (650) 375-7490
Fax: (650) 375-7417

Due Date	Invoice Date	Total Due	Payment Amount
7/20/2018	6/20/2018	$351,773.25	
Invoice No.	**Reference No.**	**Customer No.**	**Page**
2006246	6163	CROWN	1

CUSTOMER

SHARON JAMES, GOVT REL MANAGER
CROWN CASTLE
SMALL CELL & FIBER SOLUTIONS
NORTHERN CALIFORNIA DISTRICT
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134-

REMIT TO

Town of Hillsborough
1600 Floribunda Avenue
Hillsborough, CA 94010-6418

UNDERPAYMENT OF DEPOSIT FOR DAS CELL SITES WCF16-0002.SEE ATTACHED.

----------Please Return Top Portion of Invoice with Payment----------

Quantity	Item Code	Description	Price	Amount
1.000	WAD	WIRELESS APPLICATION DEPOSIT-	$351,773.25	$351,773.25

Subtotal:	**$351,773.25**
Discount:	**$0.00**
Tax:	**$0.00**
Total Due:	**$351,773.25**

Please make checks payable to Town of Hillsborough

TOWN OF HILLSBOROUGH

Deposit Tracking Log

Crown Castle DAS Cell Sites - WCF16-0002 / ENC17-0013- ENC17-0028

DEPOSIT	*Deposit Subtotal:*	$60,000.00
PAYMENTS	*Payment Subtotal*	$333,232.65
STAFF TIME	*Staff Time Subtotal:*	$78,540.60
	DEPOSIT BALANCE:	($351,773.25)

September 19, 2018

EX PARTE NOTICE VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Ex Parte* Presentation,
Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Dkt. No. 17-79; *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, WC Dkt. No. 17-84; *Streamlining Deployment of Small Cell Infrastructure*, WT Dkt. No. 16-421

Dear Ms. Dortch:

T-Mobile USA, Inc. ("T-Mobile") strongly supports the Commission's efforts to promote the deployment of wireless network infrastructure and to deliver on the promise of 5G, including through the issuance of the draft *Declaratory Ruling and Third Report and Order* in these dockets.[1] T-Mobile commends the Draft Item for removing barriers to small wireless deployments, while protecting localities' valid interests in overseeing deployment of wireless facilities. The Draft Item provides guidance and clarity that will facilitate deployment and benefit Americans, localities, and service providers alike.

T-Mobile supports the Draft Item's efforts to facilitate small wireless facility deployments, which are critical to both traditional and new 5G services. Small wireless deployments are needed to densify networks, enhance capacity, and support the 5G evolution – all of which will create jobs, boost the economy, and support new life-saving services.[2] Small wireless facilities are a critical component of T-Mobile's network deployment plans to support both the 5G evolution of wireless services, as well as more traditional services such as mobile broadband and even voice calls. T-Mobile, for example, uses small wireless facilities to densify our network to provide better coverage and greater capacity, and to provide traditional services such as voice calls in areas where our macro site coverage is insufficient to meet demand.

[1] Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Declaratory Ruling and Third Report and Order, FCC-CIRC1809-02 (White Copy draft rel. Sept. 5, 2018) ("Draft Item").

[2] *See id.* at ¶¶ 2, 23.

Accordingly, T-Mobile agrees that the removal of barriers to the deployment of small wireless facilities is critically important, as the Draft Item recognizes.[3]

Small facilities are part of a deployment strategy that continues to rely heavily on macro facilities. Small wireless facility deployments are important, but they are not a substitute for facilities that do not meet the definition of small wireless facilities – *i.e.*, macro sites. Deploying macro sites is necessary for reaching the Nation's 5G goals. This is particularly true for covering rural areas and addressing the FCC's goal of closing the digital divide,[4] as one infrastructure provider recently explained.[5] In addition, macro sites are the backbone for adding 5G small cells in urban and suburban areas. Yet the record reflects that *both* macro and small deployments are subject to continuing shot clock delays.[6] In order to promote the Commission's goal to facilitate deployment of the networks that can deliver the promise of faster and more advanced services to all Americans, T-Mobile encourages the Commission to extend the remedy available at the expiration of its two new shot clocks (presumption that a failure to act within the relevant shot clock period is a prohibition of service, with an expectation of injunctive relief)[7] to the Section 332 shot clocks for *all* facilities, and not only small wireless facilities. At a minimum, the Commission should make clear that even though it is expressly adopting a new remedy for violations of its small wireless facility shot clocks, this action does not mean that injunctive relief is inappropriate for violations of the shot clocks applicable to macro sites.

[3] *See id.* at ¶ 23 ("As more Americans use more wireless services, demand for new technologies, coverage and capacity will necessarily increase, making it critical that the deployment of wireless infrastructure, particularly Small Wireless Facilities, not be stymied by unreasonable state and local requirements.").

[4] *See id.* at ¶¶ 7, 23.

[5] *See, e.g.*, Letter from Michael H. Pryor, Counsel for American Tower, to Marlene H. Dortch, FCC, WT Dkt. No. 17-79, at 1 (Sept. 13, 2018) (recommending that the FCC make clear that "[a]lthough the bulk of new deployment will consist of small cells, the existing macro cell network infrastructure continues to be the foundation of the network and a key component of its overall efficiency and resiliency").

[6] *See* Draft Item at ¶ 26 & n.48, citing Comments of T-Mobile USA, Inc., WT Dkt. No. 17-79 & WC Dkt. No. 17-84, at 8 (June 15, 2017) (stating that "roughly 30% of *all* of its recently proposed sites (including small cells) involve cases where the locality failed to act in violation of the shot clocks") (emphasis added); *see also Up State Tower Co., LLC v. Town of Kiantone*, 2016 U.S. Dist. LEXIS 170827 (W.D.N.Y. 2016), *aff'd*, 718 Fed. Appx. 29 (2d Cir. 2017) (case involving a locality's failure to act on a tower application within the 150-day shot clock, resulting in multi-year litigation).

[7] *See* Draft Item at ¶ 112-23. Specifically, the Draft Item would find that a violation of two new small wireless facility shot clocks constitutes a presumptive prohibition of service contrary to Section 332(c)(7)(B)(i)(II), with an expectation courts will grant injunctive relief in those cases. *See id*. at ¶¶ 13, 116-17, 119.

The Draft Item carefully balances interests and provides useful parameters for consideration of other requirements applicable to deployments. The Draft Item balances localities' role in overseeing deployment, including the impact on aesthetics that such deployment may have, with the goal of promoting broadband deployment. The Draft Item sets out a standard to be applied when considering whether an aesthetic requirement may constitute an effective prohibition of service contrary to Section 253(a) – specifically, the requirement must be (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) published in advance.[8] The Draft Item provides further elucidation, noting that aesthetic requirements are reasonable if "they are reasonably directed to avoiding or remedying the intangible public harm of unsightly or out-of-character deployments."[9] This standard and the Commission's further explanation should provide some clarity and reduce disputes regarding local aesthetic requirements.

The Draft Item states that this standard also applies to specific types of requirements, such as minimum separation distance requirements, but does not provide additional explanation and only notes that some of these requirements may be permissible and some may not.[10] Accordingly, T-Mobile recommends that the Commission provide additional clarification concerning when a minimum separation or undergrounding requirement violates Section 253(a) versus when it is a "reasonable" aesthetic requirement. With respect to separation distances, the Commission should confirm that where a minimum separation requirement prohibits or effectively prohibits service, taking into consideration the smaller coverage area of small wireless deployments and that multiple providers may not be able to occupy the same location because of loading, interference, or other restrictions, that requirement is not "reasonable" and is thus prohibited by Section 253(a). In addition, the Commission should find that application of a minimum separation distance requirement to collocation applications to attach to existing structures or replace existing structures with comparable structures is not reasonable, because it is not "reasonably directed to avoiding or remedying the intangible public harm of unsightly or out-of-character deployments." The existing structure is already part of the physical character of a particular area, so adding to it or replacing it would not create out-of-character deployments.

Similarly, with respect to undergrounding, the Commission appropriately finds that "a requirement that *all* wireless facilities be deployed underground would amount to an effective prohibition given the propagation characteristics of wireless signals."[11] The Draft Item does not address, however, similarly prohibitive requirements that certain pieces of wireless equipment be undergrounded. Such requirements can be equally problematic from a deployment perspective, as the vaulting of sensitive transmission equipment can interfere with the proper operation of such equipment. Particularly for equipment operating over high-band spectrum, an antenna must be located within close proximity to the transmitter for it to function properly. So a requirement that a transmitter be located below-grade while the antenna is placed at the top of a pole would

[8] *See id.* at ¶¶ 83, 87.

[9] *See id.* at ¶ 84.

[10] *See id.* at ¶ 87.

[11] *See id.* at ¶ 86.

entirely frustrate the purpose of the deployment. T-Mobile therefore urges the Commission to clarify that partial undergrounding requirements such as those described here can also operate as effective prohibitions by materially inhibiting the deployment of wireless service.

These additional targeted steps will help Commission meet its goal of "ensur[ing] that every community in the country gets a fair shot at the opportunity next generation wireless services can provide."[12]

Pursuant to Section 1.1206 of the Commission's rules, we are filing an electronic copy of this letter in the above-captioned dockets. Please direct any questions regarding this filing to me.

Respectfully submitted,

/s/ David M. Crawford

David M. Crawford
Sr. Corporate Counsel, Federal Regulatory Affairs
T-Mobile USA, Inc.
(202) 654-5941

[12] *See id.* at ¶ 8.

verizon

Andre J. Lachance
Associate General Counsel
Federal Regulatory and Legal Affairs

1300 I Street, NW, Suite 500 East
Washington, DC 20005
Phone 202.515.2439
andy.lachance@verizon.com

September 19, 2018

Ex Parte

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Deployment, WT Docket No. 17-79; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Deployment, WT Docket No. 17-84

Dear Ms. Dortch:

On September 17, 2018, Tamara Preiss and Andy Lachance of Verizon met separately with Erin McGrath, legal advisor to Commissioner O'Reilly, and with Michael Carowitz, legal advisor to Chairman Pai, and Suzanne Tetreault, Deputy Chief of the Wireless Telecommunications Bureau. On September 18 and 19, 2018, Tamara Preiss and Andy Lachance met with Will Adams, legal advisor to Commissioner Carr, and Umair Javed, legal advisor to Commissioner Rosenworcel, respectively. Will Johnson of Verizon also met with Mr. Javed on September 18. At each meeting we discussed issues raised in the above-referenced proceedings and in the draft Declaratory Ruling and Third Report and Order (FCC-CIRC 1809-02) ("draft item") in those proceedings.

Verizon's supports the Commission's continued efforts to modernize wireless facilities siting and pave the way for enhanced 4G and 5G networks. The Commission's recent infrastructure reforms have made significant progress in addressing regulatory barriers to broadband deployment. For example, with the benefit of the Second Report and Order and its reduction in the scope of required federal historic preservation and environmental reviews, providers are able to deploy 5G more quickly and at lower cost. Verizon's experience so far has shown 5G deployment timelines reduced by 60-90 days, and that at least 60 percent of 5G deployments do not require historic preservation or environmental reviews. The draft item that the Commission will consider next week takes the critical next step of addressing state and local processes that may impede the deployment of advanced wireless networks. Building on the work of many states to update processes for reviewing small cell deployments, the draft item would establish meaningful guidance for state and local governments, while preserving their role in those reviews.

In the meetings, we recommended targeted changes to the draft item and rules. First, consistent with our prior advocacy, we asked the Commission to adopt a "deemed granted"

remedy when localities fail to act on applications before expiration of the relevant shot clock.[1] We also explained that the new remedy for violations of the small wireless facility shot clocks – the Commission's determination that allowing the shot clock to lapse without action is a presumptive prohibition of service – should apply to all of the Section 332(c)(7) shot clocks.

Second, we asked the Commission to clarify that the declaratory ruling applies to terms in signed agreements (not just demands in the context of negotiations) that violate federal law. As we have explained elsewhere,[2] providers may be compelled to enter into agreements with states or localities that contain non-negotiable terms and conditions, including, for example, price terms. Providers may have little choice but to sign these "take it or leave it" agreements, similar to contracts of adhesion, as the only practical means of entering a market. The Commission should make clear that signatories may challenge unlawful terms in these agreements, which could be found to prohibit or have the effect of prohibiting the provision of service.[3]

Third, consistent with our *ex parte* letter addressing cost-based rates, we discussed record evidence that supports a safe harbor recurring fee limit well below the $270 per small wireless facility per year limit in the draft item.[4] By adopting a safe harbor at the high end of recurring charges reflected in state legislation, the draft item more than ensures adequate cost recovery by state and local governments; there should be few instances where a state or local government seeks to demonstrate that a fee above the limit is cost-based. We also discussed, in response to a question about whether a higher non-recurring charge should apply to applications proposing new poles, that only seven of the 20 states that adopted small wireless facility legislation treat new pole applications differently than other small facility applications. Thus, the weight of the record evidence does not support a higher new pole fee.

Fourth, we proposed a few edits and clarifications to the language in the draft item:

[1] *See* Letter from Tamara Preiss, Verizon, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79, WC Docket No. 17-84 (filed Jul. 26, 2018).

[2] *See* Letter from Tamara Preiss, Verizon, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-79, WC Docket No. 17-84 (filed Aug. 10, 2018), Attachment at 2-3 ("Verizon Cost Ex Parte").

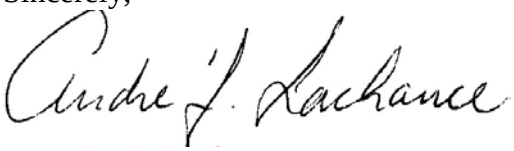
[3] This is analogous the Commission's "sign and sue" rules for pole attachments subject to Section 224 of the Act. *See, e.g.*, 47 C.F.R. § 1.1410 (allowing the Commission, after determining that a pole attachment rate, term, or condition is unjust or unreasonable, to "(a) [t]erminate the unjust and unreasonable rate, term, or condition; and (b) [s]ubstitute in the pole attachment agreement the just and reasonable rate, term, or condition established by the Commission . . . "); *Implementation of Section 224 of the Act*, WC Docket No. 07-245, Report and Order and Order on Reconsideration, 26 FCC Rcd 5240, ¶ 119 (2011) (referring to "the Commission's long-standing 'sign and sue' rule" that "allow[s] an attacher to challenge the lawfulness of terms in an execut[ed] pole attachment agreement that the attacher claims it was coerced to accept in order to gain access to utility poles").

[4] *See* Verizon Cost Ex Parte, Attachment at 11-12.

- Eliminate the requirement in the definition of small wireless facility (in note 3 and draft rule Section 1.6002(l)) that the structure does not require antenna structure registration under part 17 of this chapter;
- Delete the phrase "Relevant to Small Wireless Facility Deployment" from the title of Section III.A;
- Make clear that the safe harbor limit for application fees in paragraph 76 applies to all non-recurring fees;[5]
- Make clear in paragraph 77 that a carrier can challenge a fee that is at or below the safe harbor fee limits if it can show that the fee is not based on reasonable costs or is applied in a discriminatory manner;[6]
- Take care not to suggest in paragraph 86 that an undergrounding requirement that falls short of requiring all small wireless facilities to be placed underground cannot be found to have the effect of prohibiting wireless service; and
- Modify paragraph 88 so that the end of the first sentence reads, ". . . such ROW, such as new, existing, or replacement light poles, traffic lights, utility poles, and similar property suitable for hosting Small Wireless Facilities."

Finally, Verizon confirmed that telecommunications services can be provided over small cells, and Verizon has deployed Small Wireless Facilities in its network that provide telecommunications services.

Sincerely,



cc: (via e-mail)

Michael Carowitz
Erin McGrath
Will Adams
Umair Javed
Suzanne Tetreault

[5] *See id.*, Attachment at 11.

[6] *Id.*, Attachment at 12.

Henry Hultquist
Vice President
Federal Regulatory

AT&T Services, Inc.
1120 20th Street, NW
Suite 1000
Washington, DC 20036

T: 202.457.3821
F: 214.486.1592
henry.hultquist@att.com
att.com

September 20, 2018

Ex Parte Communication

VIA ELECTRONIC SUBMISSION
Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW – Lobby Level
Washington, DC 20554

Re: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79
Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84

Dear Ms. Dortch:

On September 19, 2018, I discussed by telephone with Will Adams, Wireless Advisor to Commissioner Carr, the Federal Communications Commission's *Draft Declaratory Ruling and Third Report and Order* ("*Draft Ruling and Order*") in the above-referenced dockets. In particular, I discussed AT&T's support for the actions that the Commission has undertaken in the proceeding. Consistent with prior submissions in the proceeding, I recommended that the Commission clarify several aspects of the *Draft Declaratory Ruling and Third Report and Order*.

AT&T continues to encourage the Commission to rule that any wireless siting application that is not acted upon with the Section 332(c)(7) shot clock is "deemed granted." This is consistent with our comments that we have filed in the above referenced docket.

I also discussed AT&T's use of small wireless facilities for existing services as well as 5G services. I explained that AT&T has operated and continues to operate commercial mobile radio services as well as information services from small wireless facilities, as defined by Commission Rule Section 1.1312(e)(2).

Pursuant to Section 1.1206 of the Commission's rules, an electronic copy of this letter is being filed for inclusion in this docket.

Sincerely,

Henry G. Hultquist

CERTIFICATE OF FILING AND SERVICE

I, Scott M. Noveck, hereby certify that on August 8, 2019, I filed the foregoing Respondents' Excerpts of Record (three volumes) with the Clerk of Court for the United States Court of Appeals for the Ninth Circuit using the electronic CM/ECF system. I further certify that all participants in the case are registered CM/ECF users and will be served electronically by the CM/ECF system.

/s/ *Scott M. Noveck*
Scott M. Noveck
Counsel for Respondents