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September 24, 2018

REF: EXE-172-18

Honorable Members of the City Council
City of Los Angeles
Room 395, City Hall
Los Angeles, CA 90012

Attn: Innovation, Technology and General Services Committee

SUBJECT: RESPONSE TO CF#17-1169-S1 ON TELECOMMUNICATIONS DISCUSSIONS

This report is submitted in response to City Council's motion instructing, "the Information Technology Agency (ITA) to report on the status of any ongoing negotiations between the City or any of its staff or departments, and any wireless telecommunications service providers for the use of the city's light poles or other vertical infrastructure, or co-location of wireless telecommunications infrastructure on any other city property." In response, ITA sets forth the requested information below.

We are in the first days of 5G wireless deployment across the City of Los Angeles. As wireless telecommunication vendors work to expand and upgrade their networks, there are opportunities for the City to benefit from the capabilities of this emerging technology, while also addressing the needs for greater digital inclusion and minimizing impact on the public rights-of-way. The ITA is currently facilitating discussions with wireless telecommunication service providers (with the assistance of City Attorney and other impacted departments) to identify potential opportunities for the City of Los Angeles during the 5G deployments. Additionally, ITA will be looking to engage a consultant or consulting firm through the upcoming budget process to further advise City departments and our elected officials on additional opportunities that would benefit the City. The consultant and/or consulting firm could be tasked with strategic advice around the deployment of small cells, street and traffic lighting pole usage, as well as annual lease rates. The timing to do this is important as 5G is already evolving and being deployed in the United States. It is advantageous for the City of Los Angeles to be one of the first cities to bring the benefits of 5G to its businesses and residents and strike the balance between the expedited buildout of an emerging technology while preserving the visual appearance of our City.

BACKGROUND

For decades, the City of Los Angeles (City) has been seeking methods to improve Internet access and speeds for L.A. businesses and residents, while preserving the esthetics of L.A. neighborhoods. Towards this end, the City of Los Angeles initiated the CityLinkLA Project in 2014 with the following guiding principles:

1. The City of Los Angeles should be the location of choice for businesses and residents – to attract businesses with good paying jobs, to entice graduates from our local universities to reside and work in Los Angeles, and to ensure the City remains a center for the digital economy and a global leader in technology and innovation.
2. The City should encourage, to the extent feasible, rapid deployment of networks that can deliver world-class broadband Internet access – at speeds of 1 Gbps or higher – to all residences, multi-unit dwellings, and businesses through wireline and Wi-Fi connections.
3. The City should ensure that every Angeleno can access advanced communications networks, at an affordable, price that provide high-speed, high-quality broadband connections to the Internet, where Angelenos live, work and play, indoors and outdoors.
4. The City should ensure that areas that are currently underserved are promptly served.
5. The City should work to ensure that City residents and businesses are served by an open network, so no one is prevented or blocked from taking full advantage of the Internet's capabilities.
6. The City should ensure that every Angeleno can enjoy the benefits of broadband regardless of income or the area in which they reside.

While the City received multiple bid proposals for the CityLinkLA Request for Proposal (RFP), none of them ultimately satisfied the City's objectives. To continue the work of CityLinkLA and the City's goals (listed above), ITA, with the support of the Mayor's Office, facilitated the Connectivity and Digital Inclusion Working Group comprising various City departments and elected officials. Absent the larger CityLinkLA efforts, the group meets on a monthly basis to identify tactical opportunities to improve connectivity for L.A. communities and includes City staff from the CLA, CD 3, CD 7, CAO, BOE, BSL, RAP, City Attorney, LADWP, GSD, ITA and other departments. This group has worked to also identify opportunities to streamline the City's telecommunications permitting processes and coordinate budget requests between City departments.

CHANGES IN TELECOMMUNICATIONS INFRASTRUCTURE

From dial-up Internet to DSL to high-speed cable networks, the broadband Internet discussion has traditionally been focused on home Internet use. By 2017, Americans reached 77% smartphone ownership¹, representing a combination of solutions for how Angelenos access the Internet (home, mobile device, vehicle, etc.) through a variety of wired and wireless infrastructure investments made by telecommunications companies. In 2017, major telecommunications providers and builders began to approach the Mayor's Office to discuss various issues that were arising with their deployment of new equipment and telecommunications upgrades to existing equipment on the City's street lights and other assets. These companies expressed substantial concerns regarding the build out of their new small cell equipment and permitting and use issues involving the City's properties and the City's public rights-of-way.

Most of the concerns of the telecommunications operators and builders continue to center around the timeliness of City departments' approval of their applications to build out and upgrade their

¹ <http://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/>

wired and wireless systems that utilize the City's light and traffic poles, as well as construction cost issues when trenching in the City's streets and other public rights-of-way. The latter issue is one of the major concerns that the City is being asked to address by the telecommunications operators and builders at this time and specifically how the Bureau of Street Services intends to permit construction in the City's streets in a timely and cost-effective manner. Another one of the major concerns raised by that industry is how the City's Above-Ground Facilities (AGF) ordinance generally impacts how slowly the application approval process is addressed by the City's affected permitting departments. In turn, the City's permitting departments respond in kind to those concerns that they are bound by City ordinance to follow the current procedures that effectuate that AGF ordinance.

The Connectivity and Digital Inclusion Working Group continue to discuss expedited permitting, community standards for small cell deployment, batch permit approvals, underserved and unserved community benefits, and changes to the existing AGF ordinance, as just some of the potential ways to facilitate the modernization of telecommunications infrastructure while benefiting the key stakeholders (see Appendix A for Summary List of Key Stakeholders). Other short and long-term considerations under discussion include:

- Taking into account additional technology trends and changes (5G now, what next?)
- Practical suggestions for expedited and responsible permitting processes
- Pricing recommendations (annual cost per pole, leasing City properties and infrastructure)
- Timeliness of policy, partnerships, and/or pilots as development and deployment of 5G networks that are already under way

PENDING LEGISLATION: CITY CONTROL OF INFRASTRUCTURE OR RIGHTS-OF-WAY

In 2017, the City of Los Angeles led the opposition to the California State Legislature's passage of SB 649 that would have, if signed by Governor Brown, preempted the City's control of the pole rates and usage under state law. The City, along with the support of most California cities and counties that opposed the bill, were able to convince Governor Brown to veto SB 649.

On June 28, 2018, U.S. Senator John Thune (R-South Dakota) introduced S.3157, The Streamline Small Cell Deployment Act, which would essentially preempt a local entity's control of its permitting processes that affect its vertical infrastructure, public rights-of-way and annual pole usage and rate setting authority much like CA SB 649 would have done if signed by Governor Brown last year. The Hon. Mayor Eric Garcetti, has already publicly opposed S.3157 and a proposed resolution opposing this bill for City Council consideration and approval is pending.

In addition the Federal Communications Commission (FCC) has issued a Report and Order, Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, (WC Docket No.1784 and 17-79) that would preempt a local entities control of its poles and allow new attachers to, "...[C]ontrol the surveys, notices and make-ready work necessary to attach their equipment to those poles." ITA is in discussions with the City Attorney's Office to determine the potential impact of this FCC Report and Order to the City's permitting processes and annual pole lease rates. It is against this legislative and administrative backdrop at the state and federal level that the City's telecommunication permitting departments have been laboring to satisfy the City's telecommunications' operators and builders' need for increased growth and timeliness in the latest deployment of their upgraded and new telecommunications equipment and facilities.

It should be noted that none of the City's telecommunications industries operators and builders have ever criticized or called out the City of Los Angeles before the FCC in any FCC proceedings involving the City's permitting processes in the area of telecommunications construction, build out and deployment of their wired and wireless facilities in the City's public rights-of-way involving the City's vertical infrastructure and permitting processes.

POTENTIAL OPPORTUNITIES WITH TELECOMMUNICATION PROVIDERS

Over the last year, the Connectivity and Digital Inclusion Working Group has sought to understand both the pain points of service providers, the needs of L.A. businesses and residents, and the digital equity gaps across City communities. The goal was to identify opportunities that could satisfy the infrastructure build out needs of private industry, the increasing demands of L.A. businesses and residents for better connectivity, and address digital inclusion issues across the City of Los Angeles. For example, the City is expecting an increase in permit applications for small cell and other pole attachment installations and is projecting an additional 8,000-10,000 new permit applications over the next five years alone; a 20-fold increase from today. The combination of existing wireline and wireless telecommunication infrastructure build-outs, expansion of existing 4G cellular infrastructure, and the impending 5G cellular small cell infrastructure build out, provide opportunities for the City of Los Angeles to both facilitate advanced telecommunication infrastructure in an environmentally pleasing manner and improve digital access across all communities.

A subset of the Connectivity and Digital Inclusion Working Group, comprising the Bureau of Street Lighting, Bureau of Engineering, City Attorney, and ITA have started discussions with telecommunications companies and others to understand and propose beneficial ways to create public good as companies deploy 5G networks and services.

In partnership with the Mayor's Office, a signed Non-Disclosure Agreement with Verizon (approved by the City Attorney) was employed to begin more detailed discussions to gain the perspective of a major telecommunications vendor. After approximately eight months of discussions, the following was agreed with Verizon:

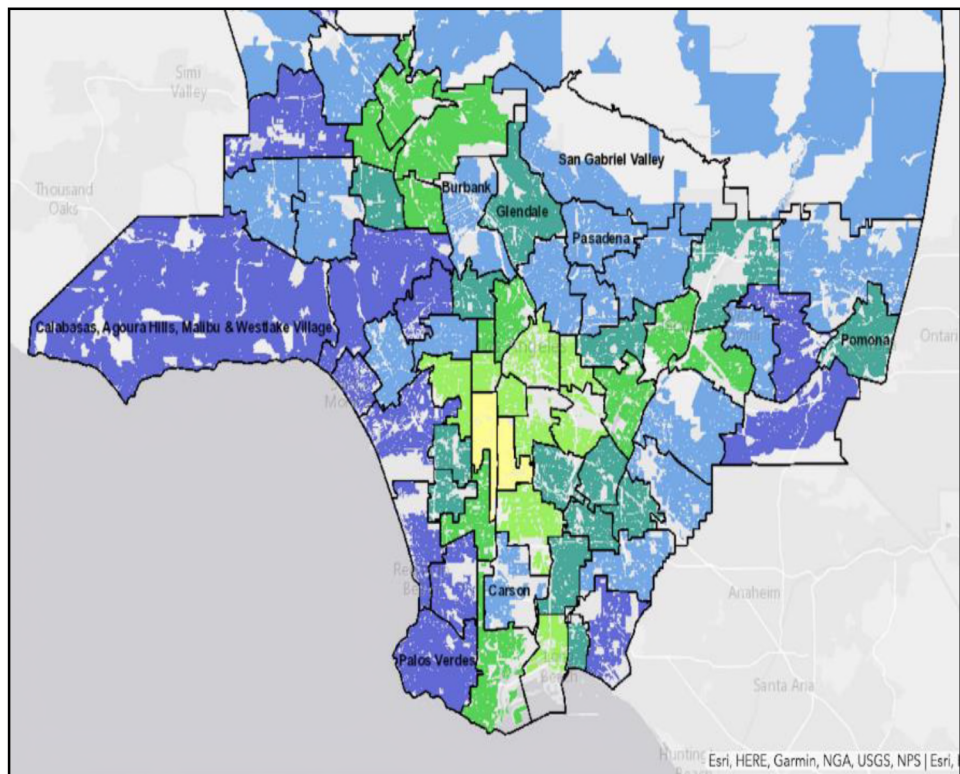
- A letter of agreement with Verizon was signed for a limited 5G pilot to measure the benefits of 5G to Angelenos and the impact on City departments for the necessary permitting and device installation for a citywide 5G network.
- A conditional amendment to the current pole attachment agreement between BSL and Verizon, *subject to the approval of the Council and Mayor*, at a later date when the agreed to conditions have been met by Verizon.
- A commitment by Verizon to support the City's priority for digital equity and inclusion.
- Appendix B to this report shows the term sheet for consideration of the benefits to the affected departments (such as BSL) and to Angelenos. This would form the initial basis for a recommended public-private partnership.

Similarly, discussions have been in progress with additional providers to identify opportunities for collaboration on a public-private partnership basis, to be ultimately approved by City Council and Mayor, which would benefit the City of Los Angeles and its varied stakeholders, as well as, the private sector telecommunication companies that deliver connectivity to Angelenos. An example of one of these from AT&T is also attached (see Appendix C), for which a Memorandum of Agreement was signed stating that AT&T and the City are in discussions. These discussions are held in a non-exclusive, non-discriminatory manner, in consultation with City Attorney, with no City-promised funding to be used in any such agreements.

A separate report has been filed to document all the processes by which the City is involved in expanding broadband access (C.F. 18-0305), including: permitting the installation of small cells and macro-cells on street lights, public buildings, and power poles; the installation of above-ground facilities (AGF) and related possible AGF ordinance update that will include the placement of towers and monopoles in public spaces.

CHANGES IN LOS ANGELES CONNECTIVITY AND BROADBAND ACCESS

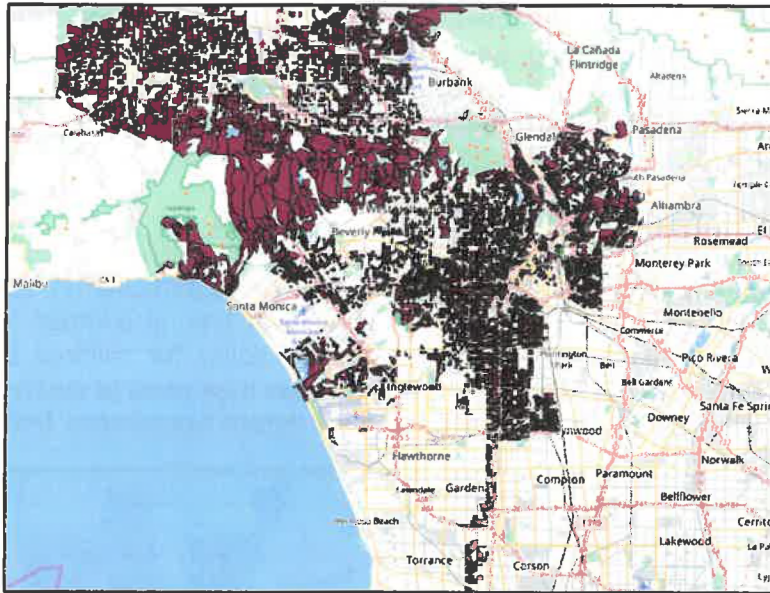
Many Angelenos now find it unaffordable to have high-speed broadband at home and this limits their opportunities in many ways. In some areas of the City (South LA and Watts particularly), the number of homes with broadband connections are actually decreasing over time in contrast to the rest of the City. This impacts social and economic opportunity, the ability for children to compete in class, and the ability for families to get services and information they need to survive and thrive. The lack of high-speed broadband Internet services also deters businesses from starting up or moving to underserved and unserved areas of the City. Working with USC's Annenberg School and ITA's Data Science Federation, the working group identified areas of the City in most need of broadband and connectivity. The Federal data showing the number of households paying for broadband landline wired access is online². An interactive map shows broadband areas and access by PUMA districts³.



Note that purple and blue areas indicate a relatively high number of households that are connected to broadband at home, while the lighter green is less. The yellow area of South LA and Watts is the lowest connectivity and a priority area for digital inclusion.

² <http://amicusc.org/publications/mapping-digital-exclusion-in-los-angeles-county/>

³ <https://usc-annenberg.maps.arcgis.com/apps/webappviewer/index.html?id=8f4cee8ba8fa478396e947cb595674f3>



This map shows the low areas of wired service⁴, where there is only one provider available, which may cause either higher prices or lower connectivity levels.

As investments in telecommunications infrastructure expands across various means, the City of Los Angeles should continue to focus on methods to expand the access, speed, and cost effectiveness of Internet connectivity for City businesses and residents.

Respectfully submitted,

Ted Ross
General Manager and Chief Information Officer

- cc: Honorable Councilmember & Chair, Monica Rodriguez
Honorable Councilmember & Chair, Paul Krekorian
Honorable Councilmember & Chair, Bob Blumenfield
Miguel Sangalang, Deputy Mayor
Emmett McOsker, Mayor's Office
Trina Unzicker, CAO
Cheryl Banares-Soriano, CLA
Mike Dundas, Office of the City Attorney
ITA Executive Team

⁴ https://cityoflosangeles.github.io/broadband-map/qgis2web_2017_08_17-13_38_48_119782/#10/34.0185/-118.4075

APPENDIX A – SUMMARY OF KEY STAKEHOLDERS

Key Stakeholder	Summary of Concerns
L.A. Residents	<ul style="list-style-type: none"> ● Low cost connectivity at home and on-the-go ● High speed connectivity to support modern living ● Urban blight concerns from growing telecommunication infrastructure in the cityscape
L.A. Businesses	<ul style="list-style-type: none"> ● High speed, reliable connectivity to support modern business ● Low cost Internet service
City of L.A. Departments	<ul style="list-style-type: none"> ● Staffing to accommodate increasing workload from telecommunication infrastructure requests ● Clarity on citywide Internet connectivity goals and objectives
Telecommunication Companies in the L.A. area	<ul style="list-style-type: none"> ● Fast throughput of permit approvals for new telecom infrastructure in the cityscape ● Access to poles and sites for telecom infrastructure ● Low cost access to property and poles

APPENDIX B – TERMS OF AGREEMENT AND PROPOSED PARTNERSHIP WITH VERIZON

Section 1 notes key aspects of an agreement that will be managed under the Bureau of Street Lighting, and is for the first 1000 small cell devices and would cover the attachment of those for 10 years. Section 2 is part of a proposed partnership being discussed. The parties expect a larger network build in the future, but that has not yet been negotiated and will come back to City Council at a later date.

High Level City Benefits

Section 1. Street Level Solutions

- a. **Copper Theft Detection.** Verizon will provide the City free of charge for a period of 24 months Verizon's Copper Theft Detection solution featuring its video nodes. Verizon will provide the City with a total of 200 video nodes and will leverage 200 Smart City Hubs, in order to deliver actionable near-real time analytics to Smart City applications.
- b. **Environmental Monitoring.** Verizon will provide the City free of charge for a period of 24 months Verizon's Environmental Monitoring solution. Verizon will provide the City with a total of 200 Environmental Monitoring sensor packs that will leverage Smart City Hubs deployed as part of the Intelligent Lighting solution.
- c. **Intelligent Lighting.** Verizon will provide the City free of charge for a period of 24 months Verizon's Intelligent Lighting solution. Verizon will provide 10,000 lighting control nodes, of which 300 will be Smart City Hubs that will enable lighting control with additional sensor expansion capabilities, with a management dashboard.
- d. **Digital Signage, Content, and Management.** Verizon will provide the City free of charge for a period of 36 months a digital signage solution. Verizon will provide 50 media players, a content management system, and a wireless data plan for a digital signage pilot.
- e. **Community Outreach and Consulting Services.** Verizon will provide to the City's Bureau of Street Lighting (BSL) free of charge for a period of 24 months consulting services so that City staff can conduct educational outreach and training in relation to the solutions provided pursuant to the agreement.
- f. **Verizon - Los Angeles Advanced Systems Partnership.** For a term of two years, Verizon and the City agree to collaborate on a development partnership, including participation by mutually agreed upon third parties, that will establish program goals, define demonstration areas within the City, and serve as a development vehicle for advanced systems to help facilitate, among other things, more efficient municipal asset management, advanced transportation development, emerging technologies, and public safety improvements.

Section 2. Connectivity and Community Engagement

- a. **Skid Row Wi-Fi.** Verizon will provide Wi-Fi coverage throughout Skid Row at as speed to be specified via its Managed Wireless LAN Service.
- b. **Indoor Wi-Fi.** Verizon will provide and manage 50 Mbps Indoor Wi-Fi at 18 community recreation center locations designated by Verizon free of charge for 60 months via its Managed Wireless LAN Service
- c. **Event Collaboration.** The Parties agree to negotiate on potential collaboration in preparation for the Super Bowl in 2022 and the Olympics 2028. The details to be agreed upon and defined later and, therefore, will be nonbinding on either party.
- d. **Innovation Lab.** Verizon shall provide indoor Wi-Fi via its Managed Wireless LAN Service at two innovation labs.
- e. **STEM and Job Training.** Verizon will partner with the City, led by the Information

Technology Agency and community organizations, which shall be determined by Verizon, to sponsor STEM workshops and job training programs throughout the City over a 5-year period. Verizon's contribution toward this effort will be approximately \$80,000 per year, with the total term investment not to exceed \$400,000, but no less than \$390,000.

High-Level Verizon Benefits

- a) **Attachment Fees.** BSL will amend the Master Permit dated December 29, 2012 as amended on May 14, 2018 to set an annual attachment rate of \$175 per pole for a maximum of 1,000 poles. The \$175 attachment rate shall be in effect for an initial term of 10 years for each pole.
- b) **BSL Permitting.** All applications for permits to attach Wireless Telecommunications Facilities to BSL street light poles at a given location shall be approved within 30 calendar days of receipt of a completed application.
- c) **Property Lease Agreements.** The City grants to Verizon the rent-free right to install and operate wireless communications facilities on a number of City-owned properties located outside of the public right-of-way for a term of 20 years.
- d) **Additional Streamlined Permitting.** The City will use best efforts to improve and consolidate wireline permit processes to shorten overall permitting timeframes and achieve streamlined processes. The City shall implement a number of mutually agreed upon measures to streamline wireline and wireless permitting and to facilitate Verizon's fiber and wireless infrastructure deployment.
- e) **Major Transit and Transportation Construction Traffic Management Committee Review.** Where construction by Verizon is to be scheduled in an area requiring scheduling review and approval by the Major Transit and Transportation Construction Traffic Management Committee, such approval shall be granted within 30 calendar days of issuance of the underlying permit.

APPENDIX C – TERMS FROM PROPOSED AT&T PARTNERSHIP

This is part of an early proposal for attachment of 1,750 small cell devices for a period of 10 years.

AT&T: AT&T would provide the City with each of the following, subject to the parties' mutual agreement as to equipment numbers, deployment locations, and length of term on a product-by-product basis.

1. **Digital Infrastructure.** AT&T would deploy a number of digital infrastructure nodes at locations in the City for a set term (not to exceed 5 years from the effective date of the Definitive Agreement).
 - a. **Potential Benefits:** Improved public services; economic growth through new business and job creation; increased visibility to public safety, pedestrian and vehicle traffic; cost avoidance through new operational efficiencies.
2. **Digital Kiosks.** AT&T would deploy a set number of digital kiosks from one of its strategic alliance members to locations in the City. The digital kiosks would incorporate two large touchscreen displays and cameras, alarms, and public Wi-Fi. AT&T would also provide a percentage of the advertising net revenue collected from such kiosks to the City. The kiosks would be provided by AT&T for a set term (not to exceed 5 years from the effective date of the Definitive Agreement).
 - a. **Potential Benefits:** The digital kiosks could provide the City with a new revenue stream and provide for new services for use by City's residents and visitors including things such as: (a) wayfinding; (b) city information, city services, and emergency notifications; (c) cellular phone charging; (d) Wi-Fi; (e) advertising; and (f) an expandable open platform for the addition of other services such as access to City services, 311, Census, and others.
3. **Structure Monitoring.** AT&T would provide infrastructure analysis and monitoring by providing the City with sensors to be installed on City infrastructure such as bridges and tunnels for a set term (not to exceed three (3) years from the effective date of the Definitive Agreement).
 - a. **Potential Benefits:** Improved safety and planning; a reduction in the number of manual inspections which may lower operations costs; ability to monitor structures in near real time via the Internet; a reliable, relocatable one-piece solution that may lead to a reduction in costs.
4. **FirstNet Solution.** AT&T would deploy its FirstNet Solution to City for City's Agency Paid Users (as defined in the FirstNet Solution Service Guide) (a) a set number of smartphones and routers to the Los Angeles Fire Department and the Los Angeles Police Department; and (b) discounted rates on the mobility and data plans for such smartphones and routers for a set term (not to exceed 5 years from the effective date of the Definitive Agreement).
 - a. **Potential Benefits:** High-speed, highly secure communications, connecting first responder organizations; priority and preemption features (subject to eligibility); increased emergency preparedness and public safety.

City of Los Angeles to Provide:

1. The City will facilitate AT&T deploying small cells to deliver flexible coverage everywhere people live, work and play. This investment in small cells will support the residents and visitors of LA and their growing desire for reliable, fast wireless and wired services.
2. In exchange for the value provided to the City by AT&T, the City would provide a discount on all recurring fees due from AT&T or its Affiliates to the City associated with licensing, permitting and maintenance of up to 1,750 Small Cell nodes for a period of ten (10) years from the effective date of the Definitive Agreement. For the avoidance of doubt, the Recurring Fee Discount would apply to any such recurring fees charged to AT&T or its Affiliates on or after January 1, 2018.
3. The City will also commit to a mutually agreed upon permitting review timeframe.