Frequently Asked Questions (FAQs)
5G and Small Wireless Facilities (SWF) on Seattle Poles

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Why the need for more wireless antennas?

Seattle residents, businesses, and visitors have an expectation of access to fast, reliable mobile technology. Carriers that provide wireless services are deploying more wireless antennas with smaller coverage areas ("small cells") and using new spectrum channels to give more network capacity to places with a lot of mobile traffic. This densification of cellular wireless networks improves the mobile connectivity experience for any customer on a carrier's network, without having to upgrade a phone or buy a different service plan. This benefits all residents, especially those who rely on mobile phones for

internet connectivity, which data [1] tells us is often community members of lower income. The development of the next generation of mobile broadband networks (5th Generation wireless networks or "5G") also includes the use of many low-powered wireless antennas to enhance connectivity capacity and speeds.

What is the City of Seattle's stance on 5G implementation?

One of City's top priorities is ensuring that we are making smart, safe, and equitable investments in the technology of the future. The City of Seattle collaborates with wireless carriers to provide efficient and stable processes when developing and deploying next generation wireless infrastructure, including infrastructure that will support 5th Generation ("5G") network technologies.

Where can small cells be installed?

The City does not direct the placement of wireless industry deployments. Carriers determine their network engineering needs and where to place equipment to meet current and projected capacity demands.

Can residents have a say in the placement of wireless antennas?

The City doesn't direct locations for wireless industry deployments. Carriers request locations to place their equipment that will meet their system capacity demands. The City reviews pole attachment applications to ensure an installation meets all engineering and safety standards, and that it will meet the design standards. Other than ensuring all standards and codes are met for each proposed placement, cities, counties and states are specifically prohibited by federal law (the Telecommunications Act of 1996) from taking any action that would prohibit (or have the effect of prohibiting) the deployment of wireless systems.

If you have questions about wireless equipment in your neighborhood, you can contact the City's Wireless Telecommunications Line at (206) 727-8700 or email **telecom.wireless@seattle.gov**

Is a City permit required for wireless pole attachments?

Yes. Seattle City Light issues a permit for each installation of wireless facilities on poles the utility owns (for example, wood and metal utility poles, light poles). The Seattle Department of Transportation also issues a permit for the installation of wireless facilities in the public right-of-way.

What is the notification process for a wireless attachment on a pole?

For attachments to utility poles, **Seattle City Light** requires carriers to mail a project notification to residents and businesses within 300 feet of the project a minimum of 5 days prior to installation. The notice includes information on the equipment attachments, the project timing, and contact information for residents to submit questions related to the construction. A sample public notification form about construction of small cell facilities is here.

[1] See City of Seattle 2023 Seattle Technology Access and Adoption Study Technical Report

The installation of wireless equipment in the public street right-of-way also requires a Street Use permit from the **Seattle Department of Transportation** (SDOT). If a mode of travel (e.g. pedestrian, bicycle, or vehicle closures) in the public street right-of-way will be disrupted by construction there are notification requirements. The requirements vary by project type and duration and detail is available in SDOT's Client Assistance Memo 2217: Notification Requirements For Street Use Permittees.

Can I protest the approval of a wireless attachment permit?

There is no City appeal process related to wireless attachment permit approval. Under federal law, the City must allow telecommunication carriers to attach wireless facilities to poles. Once a carrier's attachment application is found to meet all engineering, safety, and design standard requirements, the City cannot deny a permit for the placement of wireless attachments.

Can I request the relocation of a small cell site?

While the City can't deny a permit to place small cell equipment on a pole based on health concerns or aesthetic impacts beyond pole design requirements, residents can contact the mobile carrier to request reconsideration of the site location. For help determining which carrier(s) have equipment on a specific pole, please provide the pole number to the City's Wireless Telecommunications Line at (206) 727-8700 or email **telecom.wireless@seattle.gov.** Staff will identify the appropriate carrier for you to contact regarding location concerns.

Can the City deny the aesthetic appearance of wireless attachments?

Yes, the City can deny applications for wireless attachment that do not meet locally approved design standards. However, federal law (the Telecommunications Act of 1996), administered by the Federal Communications Commission (FCC), governs the telecommunications industry and specifically prohibits cities, counties or states from enacting any moratorium or prohibition on the installation of small cell wireless equipment.

Why are pole extensions sometimes used to accommodate wireless antennas?

Pole extension brackets are allowed only on wood poles. They are used only as needed, to avoid having to fully replace an otherwise newer or strong pole. Instead, bracket extensions can increase the height of the pole to accommodate wireless attachments and electrical clearance requirements. Along with preventing the removal of sound wood poles, use of pole extension brackets avoids customer power outages and improves worker safety by eliminating the construction time and effort needed for a full pole replacement.

Why did the City adopt design standards for wireless technology?

Wireless technology deployed in our City should safely and effectively meets the needs of residents, businesses, and visitors. The wireless industry is increasing the capacity of its networks to meet the growing demand placed on current mobile networks. The network expansion includes placing wireless antennas with smaller coverage areas than traditional cell towers. Poles located in the public street right-of-way are prime locations for this wireless equipment and the number of pole attachment applications

has greatly increased in volume and is expected to remain high for the next few years. In April 2020 the City adopted design standards for wireless equipment as part of process improvements to help City staff more effectively review the high volume of pole attachment applications and balance the aesthetics of wireless deployments with the technical necessities of equipment placement. Updates to the design standards were made in 2024 to reflect changes that have come with the continuing evolution of wireless technologies. For the current design standards, see SDOT Director's Rules 01-2024.

Who is subject to the City's design standards for small cell facilities on poles?

Any private company seeking to place wireless equipment on poles in the public street right-of-way.

Why do the City design standards allow for a combination canister and panel antenna option?

The ability to have canister and panel antennas combined onto a single arm bracket is a wireless technology advancement that was not an option when the City's design guidelines were first written. The combination option offers an aesthetic improvement by eliminating the need for a pole top extension, or a new taller pole with side conduits running all the way up to the pole top canister. The new option also provides other significant benefits, such as improving worker safety through eliminating equipment deployment work around high voltage lines, and reducing large area power outages required for pole replacement or pole top work to accommodate wireless facilities.

Can the City protect the unique aesthetic character of special areas, such as historic areas, the waterfront, or park boulevards?

Yes. Applications to deploy wireless facilities in poles in the public right-of-way are required to meet the City's design standards set in SDOT's Director's Rules 01-2024 regarding Small Wireless facilities. The design standards serve as minimum requirements and additional requirements may be applied to proposals to place facilities on poles in the Waterfront Seattle Project Area, Parks' Boulevards, or Historic or Landmark Districts. In these special areas of the city, wireless carriers must develop an acceptable design for the area and receive final design approval from the applicable department to be submitted as part of their deployment application.

Why does the Seattle Waterfront Project Area have a separate type of pole for wireless facilities?

Unlike the rest of the city where utility poles were already constructed, Seattle's waterfront redevelopment included a special design effort to create a new aesthetic for the Seattle Waterfront Project Area. This included a unique style of utility poles for the Seattle Waterfront Project Area. To protect the overall design goals, the Office of the Waterfront and Civic Projects (OWCP) worked with wireless industry carriers to achieve a uniform utility pole design that would align with the Seattle Waterfront Project Area's overall pole aesthetic while also being able to accommodate the wireless facilities of all carriers.

When can we expect 5G to be fully implemented in Seattle?

There is currently no specific timeline for fully implemented 5G network deployments in Seattle. The telecommunications industry has and continues to make significant investments in 5G technology and is actively rolling it out across cities like Seattle.

While the City works closely with telecommunications companies and recognizes the opportunities that the 5G industry brings with it, we must balance a desire to achieve superior telecommunications services while prioritizing the safety, security, and reliability of our critical electrical infrastructure and protecting the City's limited public resources.

What is the process for getting a 5G antenna installed in Seattle?

To attach equipment to City owned utility poles, wireless providers must first submit an application confirming that the City's standards have been satisfied. The City processes a large number of these applications each year, and the application process is the same regardless of the type of equipment a carrier intends to install.

I have more questions about wireless deployments and 5G networks.

The City of Seattle IT department has set up a direct line to help address any additional questions you may have.

City of Seattle Wireless Telecommunications Line: **206-727-8700**

Alternatively, you can contact the Federal Communications Commission directly if you have concerns about RF emission standards or the possible health ramifications of new 5G networks:

Federal Communications Commission: **1-888-225-5322** or **rfsafety@fcc.gov**

For general questions about City of Seattle programs or policies, please reach out to the Customer Service Bureau at **206-684-2489 (CITY)** or you can submit a question at the City's Customer Service Requests portal

What is "6G" and when will that be implemented in Seattle?

"6G" is an abbreviation for the *Sixth Generation* of wireless communications technology. 6G would be the next generation evolution from the "5G" networks that are currently being deployed by the wireless industry. 6G wireless technology is still in the earliest stages of development. Technology research and global standardization efforts are beginning but 6G does not yet have specific definitions or standards. Current industry estimations are that 6G technologies could be developed enough for commercialization to begin by 2030.

Are small cells safe?

The Federal Communications Commission (FCC), in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration, developed the safety standards that govern radio frequency (RF) emissions for small cells. The FCC notes that its standards "*incorporate prudent margins of safety*" and that "*radio frequency emissions from antennas used for cellular and PCS [personal communications*

services] transmissions result in exposure levels on the ground that are typically thousands of times below safety limits." Any wireless technologies deployed in the City are required to meet the FCC's radio frequency (RF) emissions standards.

The FCC provides information about the safety of RF emissions from wireless telecommunications facilities on its website www.fcc.gov (specifically, www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety). You can contact the FCC directly if you have concerns about RF emission standards or the safety of new wireless networks.

Federal Communications Commission: **1-888-225-5322**

What are the health ramifications of 5G technology?

Any wireless technologies deployed in the City are required to meet radio frequency (RF) emissions standards set by the Federal Communications Commission (FCC). Questions on RF emissions safety can be answered here: www.fcc.gov/general/radio-frequency-safety-0

Federal law (the Telecommunications Act of 1996) expressly preempts state and local governments from addressing health concerns over RF emissions. This means that the City cannot deny a permit to construct a wireless facility on that basis; the City can only require the facility to comply with the emissions standards set by the Federal Communications Commission. As part of the City's review of an application for a wireless facility, the City requires an RF emissions study for each type of equipment.

You can contact the Federal Communications Commission (FCC) directly if you have concerns about RF emission standards or the possible health ramifications of new 5G networks. Contact the *FCC's RF Safety Program* at **rfsafety@fcc.gov** or **1-888-225-5322.**

I have other questions on wireless facilities in the City

The City of Seattle Information Technology Department has set up a direct line to help address any additional questions you may have:

*City of Seattle Wireless Telecommunications Line***: 206-727-8700**

Alternatively, you can contact the Federal Communications Commission directly if you have concerns about federal authority over wireless network deployments, RF emission standards, or new 5G networks:

Federal Communications Commission: **1-888-225-5322**