

**DESIGN STANDARDS FOR  
SMALL WIRELESS FACILITY PLACEMENT IN  
THE PUBLIC RIGHT-OF-WAY**

**1. Intent**

These standards are intended to cover the requirements and aesthetics for the design and installation of Small Wireless Facilities and similar technology in the City of Somerville. It is the intent of this document to establish uniform standards to address issues presented by Small Wireless Facilities' installations including, but not limited to:

- a. Prevention of interference with the use of streets, sidewalks, alleys, parkways, traffic light poles or other light poles, and other public ways and places; and,
- b. Prevention of the creation of visual and physical obstructions and other conditions that are hazardous to vehicular and pedestrian traffic; and,
- c. Prevention of interference with public safety communications facilities located in City rights-of-way or public property; and,
- d. Protection against environmental damage, including damage to trees or shrubbery, including but not limited to those items planted pursuant to City landscaping, zoning, tree preservation, or other City policies;
- e. Preservation of the character of neighborhoods, by preventing visual blight from the installation of such Small Wireless Facilities; and,
- f. Preservation of the historical character of historic structures, or historic neighborhoods, including but not limited to such structures or neighborhoods that are Local Historic Districts or on the National Register of Historic Places.

**2. Definitions**

Certain terms used in these Design Standards shall be defined as they appear in the Ordinance Relative to Small Wireless Facilities in the Public Right of Way (Ordinance 2019-xx).

**3. Siting**

A. General:

- a. No installation shall be attached to a traffic signal or its equipment.

- b. No installation shall in any way interfere with the use and operation of an existing and operational Small Wireless Facility for which the City has previously issued a permit.
- c. No installation shall be located closer than 150 feet radially from another Installation.
- d. No installation shall be placed less than 15 feet from a residence's window, door opening, porch or balcony.
- e. In Residential Districts, as set forth in the Somerville Zoning Ordinance, the Small Wireless Facility applicant shall use a passive cooling system. In the event that a fan is needed, the Small Wireless Facility applicant shall use a cooling fan with the lowest noise profile commercially available. In any event, no small wireless facility shall emit noise greater than 40 dBA at the property line at any time.
- f. No installation shall be placed where, in the determination of the City, it would limit the City's ability to plant future street trees based upon any existing City standards or guidelines for planting of street trees.
- g. No installation shall visually obstruct traffic signals, signage, or sight distances.
- h. Pole-mounted equipment minimum heights to the bottom of the equipment shall be 15 feet above sidewalk elevation.
- i. Maximum extent of the outside edge of all equipment shall be 24 inches from the pole surface.
- j. Antennas shall be limited to snug-mount, canister-mount, and concealed, and shall be mounted at the top of the pole with a diameter of no more than 6 inches greater than the diameter of the pole. Where conditions do not permit a top mounted antenna, the antenna may be side mounted with a minimum height of 15 feet above sidewalk elevation. .
- k. Pole mounted equipment and antenna shall not be located within 12 inches of the edge of the public Right-of-Way.
- l. All cables or wires for the attached wireless equipment shall be located inside the pole, except where such cables or wires attach to the ports in the antenna, or existing wood poles.
- m. All other wireless equipment shall be located underground in handholes, valves, or duct banks for poles with no existing overhead wires. No ground-mounted equipment or cabinets shall be permitted for any poles.

- n. No additional cables or wires shall be brought over-head from other poles to a new or city-owned pole. Any additional cables or wires to a new or city-owned pole must be brought in from underground via conduit.
- o. Poles or equipment shall not obstruct ADA access and circulation of pedestrians in the public way including maintaining clear areas at the top of the crosswalk curb ramps and minimum distances between the pole or installation and any other obstruction, such as building walls or other elements.
- p. Poles shall be placed consistent with the most current Manual on Uniform Traffic Control Devices.
- q. No utility meters shall be added to any pole except as approved by the Superintendent of Highways, Lights and Lines
- r. Where the City has planned a redevelopment or change to a street, sidewalk, square or other area of City right-of-way, no pole or equipment shall be placed prior to coordination with the master plan, neighborhood plan, or other document governing the vision and implementation for that area.
- s. Any installation within or in front of a local Historic District shall obtain written authorization from the Historic Preservation Commission.
- t. Subject to the requirements stated elsewhere in these standards including, without limitation, subsections d and e above, a Small Wireless Facility on existing, replacement, or new poles shall be located a minimum of 10 feet, measured horizontally, from any above grade building face, including bay windows, show windows, oriel windows and building projections or overhangs.
- u. Where feasible, as new technology becomes available, the applicant shall replace larger Small Wireless Facilities with smaller ones, after receiving all necessary permits from the City. Also, where feasible, as new technology becomes available, the applicant shall replace the Small Wireless Facilities with quieter ones.
- v. The City reserves the right to propose an alternate location for a Small Wireless Facility and/or support structure to the location proposed in the application within one hundred feet of the proposed location or within a distance that is equivalent to the width of the right of way or structure in or on which the Small Wireless Facility and/or wireless support structure is proposed, whichever is greater, which the operator shall use if it has the right to use the alternate location on reasonable terms and conditions and the alternate location does not impose significant technical limits or commercially unreasonable additional costs.

B. Existing poles:

- a. Antenna equipment shall be permitted on existing poles that can structurally accommodate the total weight of existing and previously approved equipment, as certified by a Structural Professional Engineer currently licensed in Massachusetts. Said certification must be supplied with application materials.
- b. Applicant may supply and install replacement poles to accommodate total loads. Thereafter, replacement poles shall be the property of the city. It shall be the responsibility of the applicant to demonstrate that replacement poles meet City standards, and that engineering calculations demonstrate compliance with loading requirements.
- c. The wireless equipment shall not be permitted to protrude more than 6 feet above the utility pole streetlight luminaire, mast arm, utility wires or other existing top-of-pole use.
- d. Where antenna equipment is proposed on an existing, privately-owned pole, applicant shall provide documentation from the owner of the pole showing permission to locate antenna equipment on that pole.

C. New and replacement poles:

- a. A structural analysis report shall be required for new and replacement poles certified by a Professional Structural Engineer currently licensed in Massachusetts. Said certification must be supplied with application materials.
- b. Poles shall not be less than 45 feet in length and of not more than 14 inches in diameter at the surface of the ground and shall be erected to have a pole length of at least 35 feet above the ground.
- c. Small Wireless Facilities and poles shall be located equidistant between trees when possible, with a minimum of 15 feet separation such that no proposed disturbance shall occur within the critical root zone of any tree. Any proposed pole that cannot meet this spacing must be reviewed by the Senior Urban Forester.
- d. Small Wireless Facilities and wireless support structures shall be located with appropriate clearance from existing utilities as dictated by the National Electrical Safety Code.
- e. Small Wireless Facilities and wireless support structures shall be located so as not to be located along the frontage of any building deemed to be of historic significance on a federal, state, or local level.

- f. Small Wireless Facilities shall not be attached to an existing decorative pole unless the required structural analysis shows that the existing pole can support the additional facility. The equipment may be mounted on a replacement decorative pole. New decorative poles on streets with existing decorative poles shall match the existing decorative poles.
- g. All replacement and new poles shall match the existing poles or streetlight poles in appearance (color and surface treatment), material, and function.
- h. The mounting height of the luminaires on replacement streetlight poles shall match the existing mounting height.
- i. When Small Wireless equipment is attached to a replacement pole, the primary purpose of the pole shall remain as a pole structure supporting a streetlight luminaire, or power facilities, and related fixtures as originally established.
- j. New and replacement poles shall comply with all Americans with Disabilities Act requirements and standards for sidewalks.
- k. New and replacement poles shall maintain a minimum 48 inches of clear sidewalk width.
- l. For each replacement pole used to support the Small Wireless equipment, one spare replacement pole of the same type or style shall be provided by the wireless service provider to the City at the end of the project so that the pole can be replaced promptly in case of a knockdown.
- m. A guy wire or other support wire shall not be used in connection with an antenna, antenna array, or a non-tower support structure except when used to anchor the antenna, antenna array, or non-tower supports structure to an existing building or ground to which such antenna, antenna array, or non-tower support structure is attached.
- n. Where an existing pole or support structure can potentially accommodate collocation of a new Small Wireless Facility, collocation shall be required unless (A) the applicant submits substantial evidence supporting the unsuitability of collocation; or (B) the owner of the support structure is unwilling to accommodate the applicant's equipment and cannot be required to cooperate; or (C) the City Engineer determines that installing a new support structure or collocation with a City facility is preferable.

D. New pole location requirements:

- a. Minimum wireless equipment pole separation: 150 feet.
- b. Minimum separation from intersection curb line: 50 feet.
- c. Minimum separation from hydrant: 10 feet.
- d. Minimum separation from existing tree: 15 feet.
- e. Minimum separation from proposed tree locations as identified by the City: 15 feet.
- f. Minimum separation from existing water and sewer mains and laterals: 4 feet.

4. Aesthetic Requirements for Small Wireless Facilities

- a. Standalone poles shall be aligned with existing streetlights, third party poles, and street trees as applicable to maintain a visual and physical organization of structures within the right-of-way, as measured from the center of the base of the pole. When streetlight and street tree alignment are offset within the amenity or curbside zones, the applicant shall prioritize alignment of the small wireless facility with streetlights.
- b. Poles shall be located, to the maximum extent possible, to minimize impact on businesses and residential mixed-use developments by avoiding placement directly in front of building entrances, alignment with windows, primary entry walks, or delivery zones or entrances.
- c. No small wireless facility shall have lights on the facility unless the lights are required by other laws and consistent with the requirements of law.
- d. No Installation shall be placed where, in the determination of the City, it might limit the City's ability to install any city infrastructure, transportation elements or street furniture based upon any existing City plans for the installation of such facilities.
- e. No small wireless facility shall be fenced.
- f. Small Wireless Facilities shall be installed using stealth technology to the greatest extent practicable including without limitation the following:
  - i. Reduced visibility. Antenna arrays, cables, and other accessory facilities used for providing the wireless service shall not be obtrusive.

- ii. Color. All pole-mounted equipment shall match the color of the pole or its luminaire. The color of the facility shall be compatible with that of the pole.
- g. Tree “topping” or tree pruning, or other landscaping is prohibited unless stated in the application and approved by the Senior Urban Forester.
- h. No small wireless facility shall display a sign unless the sign displays emergency information, owner contact information, warning instructions, safety instructions, or is otherwise required by a federal, state, or local agency. An allowed sign on a small wireless facility shall not exceed 1 square foot in area. A 2-inch by 2-inch sign shall be placed on each pole located 6-feet above sidewalk elevation and shall include company logo or name, and pole identification number.
- i. If a streetscape is redesigned in the future, including, but not limited to the location and type of streetlights, small cell providers shall be required to remove their infrastructure at their own cost and apply to reinstall small wireless infrastructure in accordance with these guidelines and the new streetscape.

#### 5. Miscellaneous provisions

- A. All Installations shall comply with all local, state and federal rules, laws and regulations.
- B. If an application is granted or granted with conditions, the applicant may be required to comply with certain conditions or be required to obtain additional permits from other City Departments prior to the Installation. Failure to comply with any conditions or the good faith application for required permits from necessary City Departments may be the basis for the revocations of a grant of location or may render a finding that the applicant is in non-compliance with these standards and the installation(s) will be not allowed or will have to be removed, and the applicant will have to restore the public way to the condition prior to the Installation, in accordance with all City standards, and at the applicant’s expense.
- C. An application may be granted by the City inconsistent with the requirements above when necessary to avoid a violation of applicable law. Where an applicant submits an application it knows is inconsistent with one or more requirements of these Standards, or the City ordinance pertaining to small wireless facility installations, such application must specify those provisions for which it seeks a waiver, and must include specific explanations as to the need for waiver of each, including an explanation of why compliance with the requirement(s) would prohibit or effectively prohibit the provision of services as protected by applicable law.
- D. If any small wireless facility standard is deemed inapplicable because the applicant shows that the application of the standard results in an effective prohibition, the City shall be permitted to impose additional reasonable conditions that comply with all local, state and federal rules, laws and regulations relating to the impacts of the condition.