



**Design and Development Standards  
for Wireless Facilities  
in the Public Right-of-Way**

July 24, 2019

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**CITY OF ONTARIO  
DESIGN AND DEVELOPMENT STANDARDS  
FOR WIRELESS FACILITIES IN THE PUBLIC RIGHT-OF-WAY**

**SECTION 1: PURPOSE.** The purpose of these Design Standards for Wireless Facilities in the Public Right-of-Way (hereinafter referred to as "Standards") are to establish general aesthetic requirements and design standards that all wireless telecommunications facilities installed within the City of Ontario's public rights-of-way must meet. These Standards are intended to complement and augment the land use criteria set forth in Ontario Development Code Section 5.03.420 (Wireless Telecommunications Facilities).

**SECTION 2: DEFINITIONS.** The definitions set forth in Ontario Development Code Chapter 9 (Definitions and Glossary) are incorporated by reference into these Standards.

**SECTION 3: EXISTING STRUCTURES IN THE PUBLIC RIGHT-OF-WAY.** The City of Ontario does not own all existing streetlight or utility poles located within the public right-of-way (ROW). Most existing utility poles in the public ROW are the property of Southern California Edison (SCE) and/or other utility companies. It is the responsibility of applicants to obtain final agreements from the owners of existing street infrastructure in order to utilize these structures for attaching and operating a wireless facility.

**SECTION 4: CITY REVIEW OF WIRELESS FACILITIES IN THE PUBLIC RIGHT-OF-WAY.** The City's Engineering Department is responsible for the permitting of any infrastructure, object, or construction in the public ROW. However, out of concern that the design of wireless facilities installed in the public right-of-way are aesthetically acceptable to the City, all applications for these facilities are subject to the review and approval of a Development Plan, pursuant to the requirements of Development Code Sections 4.02.025 (Development Plans), by the City's Zoning Administrator.

**A. City-Owned Poles/Structures:** In addition to obtaining Development Plan approval by the Zoning Administrator, wireless facilities and equipment proposed to be attached on new or existing City-owned structures/facilities require a Master License Agreement with the City, as well as the issuance of an encroachment permit, and a Construction Permit and Building Permit (if applicable) issued by the City.

**B. Privately-Owned Poles/Structures:** In addition to obtaining Development Plan approval, wireless facilities and equipment proposed to be attached to privately-owned utility poles require written proof of approval from the owner(s) of the affected pole/structure, as-well-as the issuance of an encroachment permit, and a Construction Permit and Building Permit (if applicable) issued by the City.

**C. Structural Analysis Required for New Wireless Facilities Installed on Existing Poles:** As a requirement of Development Plan application submittal, the applicant is responsible for determining that existing poles or other structures are of appropriate size and have sufficient strength to accommodate any new equipment loads to existing poles. Consequently, all Development Plan applications for new wireless facilities installed on existing poles must include a structural analysis prepared by a structural engineer licensed in the State of California.

**D. Maximum 10 Poles Per Bundled Application Request.** A Development Plan application for wireless facilities approval may bundle multiple pole locations into a single application request; however, a request for approval of no more than 10 poles shall be bundled

into a single application request. Furthermore, the wireless facility proposed for each pole must be substantially similar in terms of the antenna and equipment design and placement, and must utilize the same type of pole (e.g. all existing utility poles, all new poles, etc.).

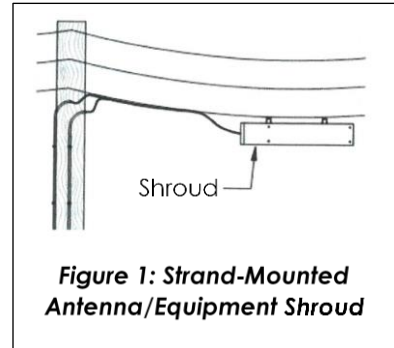
#### **SECTION 5: PROHIBITED LOCATIONS, POLES, ATTACHMENTS, AND EQUIPMENT.**

**A.** No wireless facility or equipment of any kind shall be located on traffic signal/control poles.

**B.** The use of strand-mounted wireless facilities attachments are prohibited (see Figure 1, right).

**C.** New freestanding wood poles are prohibited.

**D.** Generators are prohibited in the public ROW. If backup batteries are proposed, they must be located underground.



**Figure 1: Strand-Mounted Antenna/Equipment Shroud**

**SECTION 6: DEVIATIONS FROM STANDARDS.** Minor deviations from the Standards may be granted by the Zoning Administrator, on a case-by-case basis, in conjunction with the review and approval of a Development Plan application, based on compelling reasons or demonstrable practical difficulties; otherwise, all requirements of these Standards shall be observed. Economic hardship is not an acceptable practical difficulty or compelling reason for granting deviations from these Standards.

**SECTION 7: GENERAL DESIGN REQUIREMENTS.** The following general design requirements shall apply to all wireless facilities proposed in the public ROW, except for eligible facilities requests:

**A. Visual Criteria.**

**1. Generally.**

**a.** All wireless facilities in the ROW, including each piece of equipment, shall be located and placed in a manner so as to not interfere with the use of the ROW; impede the flow of vehicular or pedestrian traffic; impair the primary use and purpose of poles/signs/traffic signals or other infrastructure; interfere with outdoor dining areas or emergency facilities; or otherwise obstruct the accessibility of the ROW.

**b.** The City strongly encourages site operators to use flat-rate electric service when it would eliminate the need for a meter. Due to ever-increasing crowding of the public ROW and potential line-of-sight safety concerns, ground-mounted enclosures and meter pedestals, including backup power supply, are strictly prohibited, unless otherwise required by State or federal laws, or if there is no technically feasible alternative.

**2. Maximum Height.** Wireless facilities shall be located no higher than 10 percent or 10 feet, whichever is greater, than the average height of existing poles in the public ROW that are in relatively close proximity to the proposed wireless facility location, not to exceed the maximum height otherwise permitted in Development Code Section 5.03.420.E.6, except as necessary to comply with California Public Utilities Commission (CPUC) General Order 95.

**3. Concealment.** To avoid additional visual clutter particularly in areas with undergrounded utilities, the preferred method of concealment for wireless facilities is placement of equipment underground to the maximum extent feasible. The wireless facility and pole-mounted accessory equipment shall be camouflaged by use of one or more concealment elements to blend the facility with surrounding materials and colors of the adjacent streetlight or utility pole to which it is mounted. Acceptable concealment elements include the following:

- a.** Radio frequency transparent screening;
- b.** Approved, specific colors;
- c.** Non-reflective materials;
- d.** Minimize the size of the site;
- e.** Integrated installation into existing or replacement utility infrastructure;
- f.** Install new infrastructure that matches existing infrastructure in the area surrounding the proposed site; and
- g.** Antennas, brackets (mounting), PVC or steel risers, and cabling shall match the color of the adjacent structure.

**4. Materials.** Materials shall be non-flammable and non-reflective.

**5. Equipment Stealthing.** Any modifications to existing wireless facilities or collocations shall not defeat the concealment elements of the existing structure/facility.

**6. Cables and Wiring.** Cables and wiring shall be run internally within all poles to the maximum extent feasible. Where it is not feasible to run cabling and wiring internally, then all cabling and wiring shall be contained in conduit, affixed directly to the face of the pole, for as long as it is technically feasible. Exposed slack or extra cable is prohibited, and any existing exposed slack or extra cable shall be concealed or eliminated, where feasible.

**B. Location Criteria.** The City recognizes that the siting of wireless facilities is largely dictated by wireless providers in response to customer need, terrain, and radio frequency modeling results. Nevertheless, the City seeks to minimize the amount of new infrastructure placed in the public ROW. To that end, the following criteria shall be followed when requesting approval to locate wireless facilities within the public ROW:

**1. Generally.** All wireless facilities in the public ROW, including each piece of equipment, shall be located and placed in a manner so as to not interfere with the use of the public ROW; impede the flow of vehicular or pedestrian traffic; impair the primary use and purpose of poles/signs/traffic signals or other infrastructure; interfere with outdoor dining areas or emergency facilities; or otherwise obstruct the accessibility of the public ROW.

**2. Allowed Locations.**

**a.** The City encourages network providers to collocate new equipment onto existing poles and infrastructure in the public ROW wherever technically feasible.

The City recognizes each carrier owns rights to a spectrum of operating frequency and requires some separation with competing antennas to avoid signal interference.

**b.** When locating in an alley, the wireless facility shall be placed at a height above the roof line of adjacent buildings to avoid being placed adjacent to a window.

**c.** Wireless facilities should be located between occupiable buildings rather than immediately adjacent to an occupiable building, and not adjacent to windows.

**d.** Wireless facilities should utilize existing utility structures for wireless networks to the maximum extent possible, as existing utility poles are already standing, are of adequate height, in most cases, for antennas, and have electrical power nearby.

**e.** In locations where streetlight or utility poles are not present, or are not capable of accepting new equipment, a provider may request to **[i]** remove and replace an existing combination streetlight/antenna pole with a new one; or **[ii]** construct a new freestanding pole, pursuant to criteria for freestanding poles in Section 8 (Design Requirements for Pole-Mounted Facilities).

**f.** Pole mounted or freestanding wireless facilities and/or equipment shall be located such that they do not: impede, obstruct, or hinder the usual pedestrian or vehicular travel; affect public safety; obstruct the legal access to or use of the public ROW; violate applicable law; violate or conflict with public ROW design standards, specifications, or design district requirements; violate Americans with Disabilities Act (ADA) requirements; or in any way create a risk to public health, safety or welfare.

**g.** In a specific plan area; special district, or a neighborhood with unique streetlight assemblies, new wireless facilities may be allowed to be mounted on a streetlight only if the applicant can demonstrate that the installation can effectively match the existing streetlight aesthetics in terms of the design, colors, height and size. Unique assemblies may include, without limitation, mast arms, decorative pole bases, architectural luminaires, mounting heights, and pole colors.

**3. Alternate Locations.** The Applicant must identify alternative locations in the vicinity of the proposed wireless facility and explain why the proposed location was selected. The City may propose an alternative location to the one proposed in the application if the alternative location:

**a.** Is substantially similar in physical characteristics to the proposed structure;

**b.** The visual impacts that may be suffered by the public are no greater than the impact if installed on the proposed structure;

**c.** The alternative infrastructure can accommodate the proposed wireless facility without creating any risk to the public health or safety; and

**d.** Allows for an installation that is technically feasible.

**C. Security.** Wireless facilities located within the public ROW shall be designed to prevent unauthorized access to antennas and equipment.

**D. Safety.** The facility shall not interfere with the use of the public ROW; impede the flow of vehicular or pedestrian traffic; impair the primary use and purpose of poles/signs/traffic signals or other infrastructure within the public ROW; interfere with outdoor dining areas or emergency facilities; or otherwise obstruct the accessibility of the public ROW.

**E. Noise.** All wireless facilities shall be designed to be compliant with the City Noise Ordinance pursuant to Ontario Municipal Code Title 5 (Public Welfare, Morals and Conduct), Chapter 29 (Noise), and all other applicable federal, State and local laws.

**F. Lighting.** Lighting of wireless facilities is prohibited unless otherwise required by the Federal Aviation Administration or other applicable federal, State or local law.

**G. Signs.**

**1.** The facility shall contain a site identification sticker provided on the, pole with a valid wireless encroachment permit number.

**2.** The facility shall not bear any signs or advertising devices other than the site identification sticker with a valid wireless encroachment permit number, certification, public safety warning, or other required seals or required signage.

**3.** Remove or paint over unnecessary equipment manufacturer decals and fill-in any visibly depressed manufacturer logos on equipment.

**4.** Utilize the smallest and lowest visibility stickers required by government or electric utility regulations. Use sticker colors that are more muted.

**5.** Signage shall be maintained in legible condition and the carrier will be required to replace any faded signage within 30 days of receiving written notification from the City that it is in need of replacing.

**H. Landscaping.**

**1.** Any existing landscaping within a public ROW location, and which is proposed to be removed, must be replaced with like kind and size (or better) as deemed acceptable by the Planning Director and City Engineer.

**2.** Ground-mounted wireless equipment that is proposed to be placed in the public ROW shall be screened with landscaping to the maximum extent feasible, and shall be provided with an automatic irrigation system, as deemed acceptable by the Planning Director and City Engineer.

**I. Modifications.** Modifications or collocations to existing wireless facilities shall not defeat the stealthing elements of the existing structure or facility.

**SECTION 8: DESIGN REQUIREMENTS FOR POLE-MOUNTED FACILITIES.** Wireless facilities within the City may be allowed as attachments to existing utility poles (with or without streetlights), attachments to streetlight poles, or attachments to new freestanding poles located within the public ROW. An overview of each type is provide below. All installations on utility poles shall fully comply with the California Public Utilities Commission general orders, including, but not limited to, CPUC General

Order 95. None of the following design standards are meant to conflict with or cause a violation of CPUC General Order 95, including, but not limited to, its standards for a safe installation on a utility pole. Accordingly, size limits may be adjusted at the Planning Director's and the City Engineer's discretion, to ensure compliance with CPUC rules on safety.

In addition to the general requirements set forth in Section 7, the design requirements for pole-mounted facilities in the public right-of-way are as follows:

**A. Definition of "Pole-Mounted Facility."** For purposes of these Standards, the term "pole-mounted facility" means a wireless facility that is, or is proposed to be, attached to, contained in or on, or otherwise mounted to, in, or on a pole.

**B. Wireless Facility Attachment to Existing Private Utility Poles.** Wireless antennas and equipment may be installed on existing utility poles in either a top-mount or side-mount configuration (see Figure 2: Typical Wireless Facilities Attachment to Existing Private Utility Pole, page 9), or underground. The applicant shall ensure that the supporting poles are appropriately sized and have sufficient strength to accommodate the additional wireless facility equipment loads. All installations shall meet or exceed all applicable structural standards, clearance standards, and provisions of the latest National Electrical Safety Code and City construction standards. In case of conflict, the most stringent requirements shall prevail.

**1.** All Antennas, cabling, wiring, and accessory equipment shall be enclosed and screened from view by means of a shroud, to the greatest extent technically feasible. No more than one shroud shall be installed at each pole location.

**2.** Placement of a pole-top antenna on an existing utility pole is permitted, provided that the antenna:

**a.** Is mounted on a structure 50 feet or less in height, including antennas, as defined in 47 CFR Section 1.1320(d); or

**b.** Is mounted on a structure no more than 10 percent taller than other adjacent structures; or

**c.** Does not extend existing structures on which it is located to a height of more than 55 feet (including antennas) or by more than 10 percent, whichever is greater.

**3.** The maximum dimensions for antennas shall not be more than 3 cubic feet in volume, including any necessary shroud or enclosure for the antenna.

**4.** No protrusions from the outer circumference of the existing structure or pole shall be more than 3 feet in any direction. The City, at its option, may waive the 3-foot limit for cause.

**5.** No loose, exposed, or dangling wiring or cables shall be allowed. All external cables or wiring shall be sheathed (or enclosed) within a durable tubing material (e.g., conduit) of the smallest diameter necessary to protect and provide the shortest and direct route between elements of the facility.



6. All points of connection for power or data shall be placed underground. No ground-mounted enclosures or meter pedestals, including backup power supply, are permitted.

7. All elements of the wireless facility and associated equipment shall be painted or finished to match the color of the existing support pole/structure to which they are attached, to the greatest extent possible. Paint colors are subject to City approval.

8. For utility poles with a streetlight, no wireless facility shall compromise the performance of the streetlight.

9. No wireless facility shall be mounted on a new or existing wood pole, excepting wireless facilities mounted on existing wood utility poles owned by private utility companies.

**C. Wireless Facility Attachment to Streetlight Poles.**

1. All Antennas, cabling, wiring, and accessory equipment shall be installed in a pole-top or side-mount configuration (see Figure 3: Typical Wireless Facilities Attachment to Streetlight Poles, page 10), or underground. No more than one shroud shall be installed at each pole location.

2. It is preferred that Antennas are installed in a tubular/cylindrical pole-top shroud that is no wider than the streetlight pole. A pole-top shroud shall be of a tubular/cylindrical form, having a maximum diameter of 12 inches and a maximum height of 6 feet, measured from the top of the streetlight pole to the top of the shroud.

3. The use of base shrouds and backpacks are prohibited.

4. If an existing streetlight pole is proposed to be replaced with a new streetlight pole to accommodate a wireless facility, the replacement streetlight pole shall match existing streetlight poles in the public right-of-way near the proposed location, with respect to size, height, color, materials, and style. The use of new wooden poles shall not be permitted. A replacement streetlight pole shall be installed pursuant to all applicable City standards.

5. All ventilation on the streetlight structure must be via flush vents. Vents must be designed to maximally blend with the overall streetlight structure.

6. All shrouds shall be colored to match the streetlight pole.

7. All equipment shall be installed in pole-mounted shrouds as permitted herein, and underground.

8. All cabling, wires, and conduit shall be concealed completely within the pole and applicable shrouds. Cabling and wires shall enter/exit the streetlight pole through conduit sweeps within the streetlight footing.

9. All points of connection for power or data shall be placed underground. No ground-mounted enclosures or meter pedestals, including backup power supply, are permitted.

**D. Wireless Facility Attachment to New Freestanding Poles.** In locations where existing utility or streetlight poles within the public ROW are not available, a freestanding pole to support a wireless facility may be considered (see Figure 4: Typical Wireless Facilities Attachment to Freestanding Poles, page 11). As with wireless facilities mounted to existing utility poles or streetlight structures, the design of a new freestanding pole shall meet the following criteria:

**1.** New freestanding poles shall align with and/or match the predominant pattern, distribution, and heights of existing streetlights and/or utility poles in the adjacent public ROW.

**2.** New freestanding poles adjacent to dwellings or commercial establishments should not create a visually negative impact. For example, a new freestanding pole with a wireless facility and equipment shall not be located directly in front of storefront windows, primary walkways, or primary entrances or exits. In residential areas, new freestanding poles should be located between properties (adjacent to side property lines).

**3.** All freestanding poles with wireless facilities and equipment shall be properly maintained by the owner at all times.

**4.** Freestanding poles shall match the aesthetics of existing streetlights (and any component thereon, including, but not limited to, mast arm, luminaire, and decorative hardware) installed in proximity to the pole to maintain a cohesive appearance.

**a.** New freestanding poles shall be metal, concrete, or decorative, as determined by the City. No new wood poles for the sole purpose of mounting a wireless facility shall be permitted.

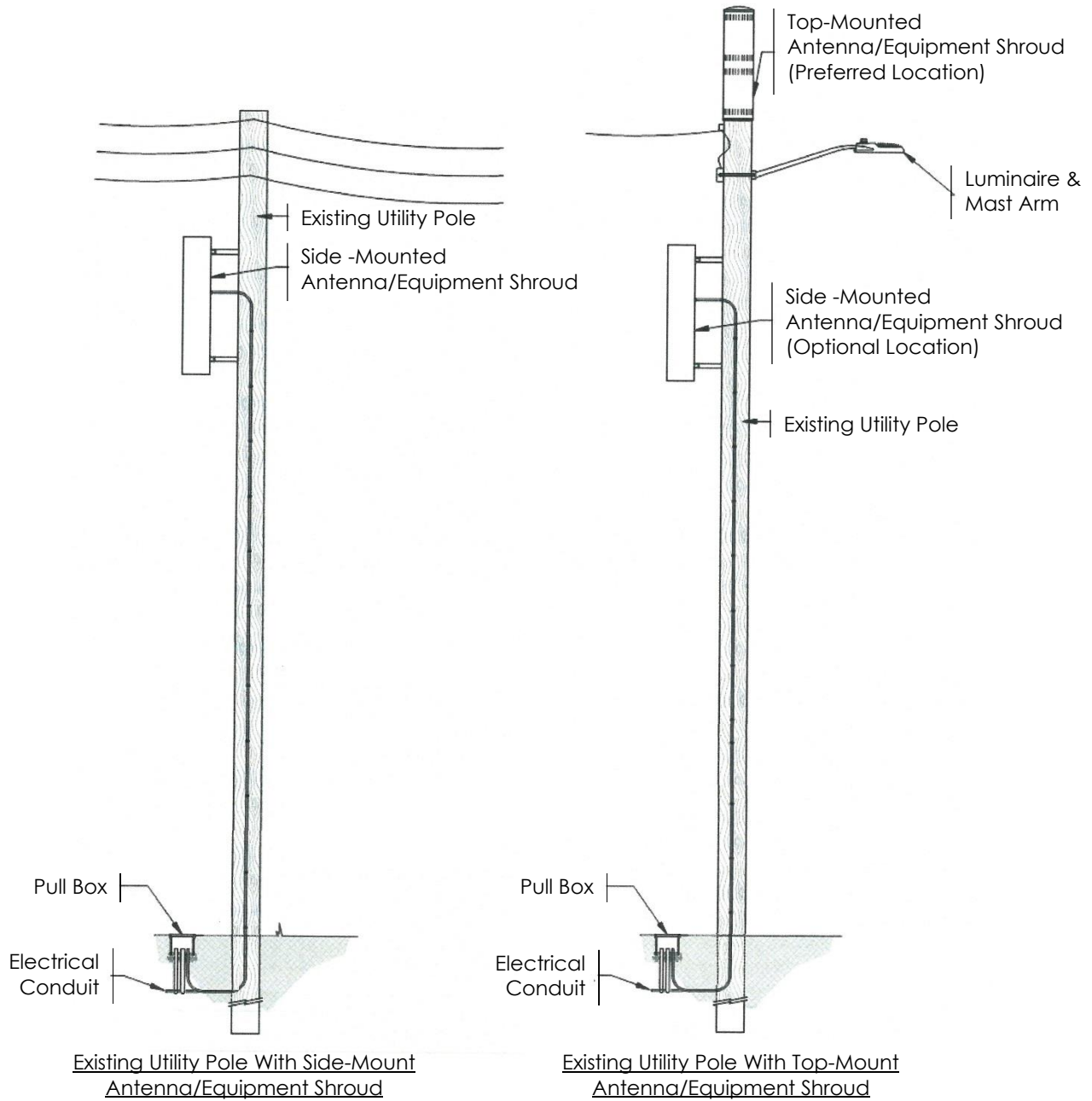
**b.** Within any neighborhood having unique streetlight assemblies (such as historic districts, the Downtown Mixed Use District, and specific plan areas), new wireless facilities may be allowed if the applicant can demonstrate that the wireless facility and equipment can effectively match the existing streetlight aesthetic, subject to the satisfaction of the Planning Director and City Engineer.

**5.** All Antennas, cabling, wiring, and accessory equipment shall be installed in a decorative pole-top shroud or underground. No more than one shroud shall be installed at each pole location.

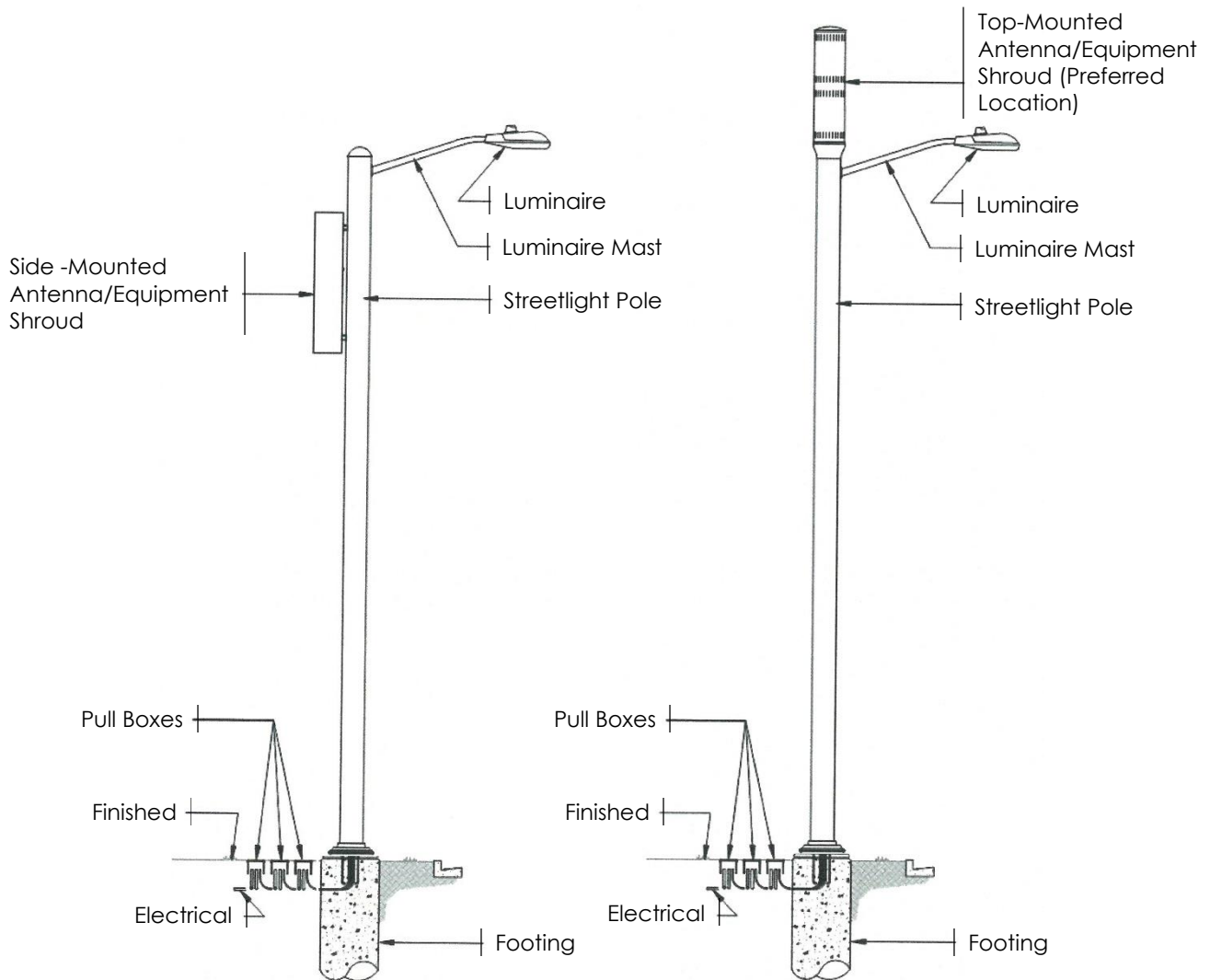
**6.** No element of the wireless facility not covered by a shroud or concealment element shall be placed, mounted, or strapped to the outside of a new freestanding pole. All antennas shall be enclosed within a decorative shroud that meets the requirements of these Standards, and all wires, cables, and conduits associated with the facility shall be routed directly through the new pole, with all points of connection for power or data being placed underground.

**7.** All hardware connections shall be hidden from view.

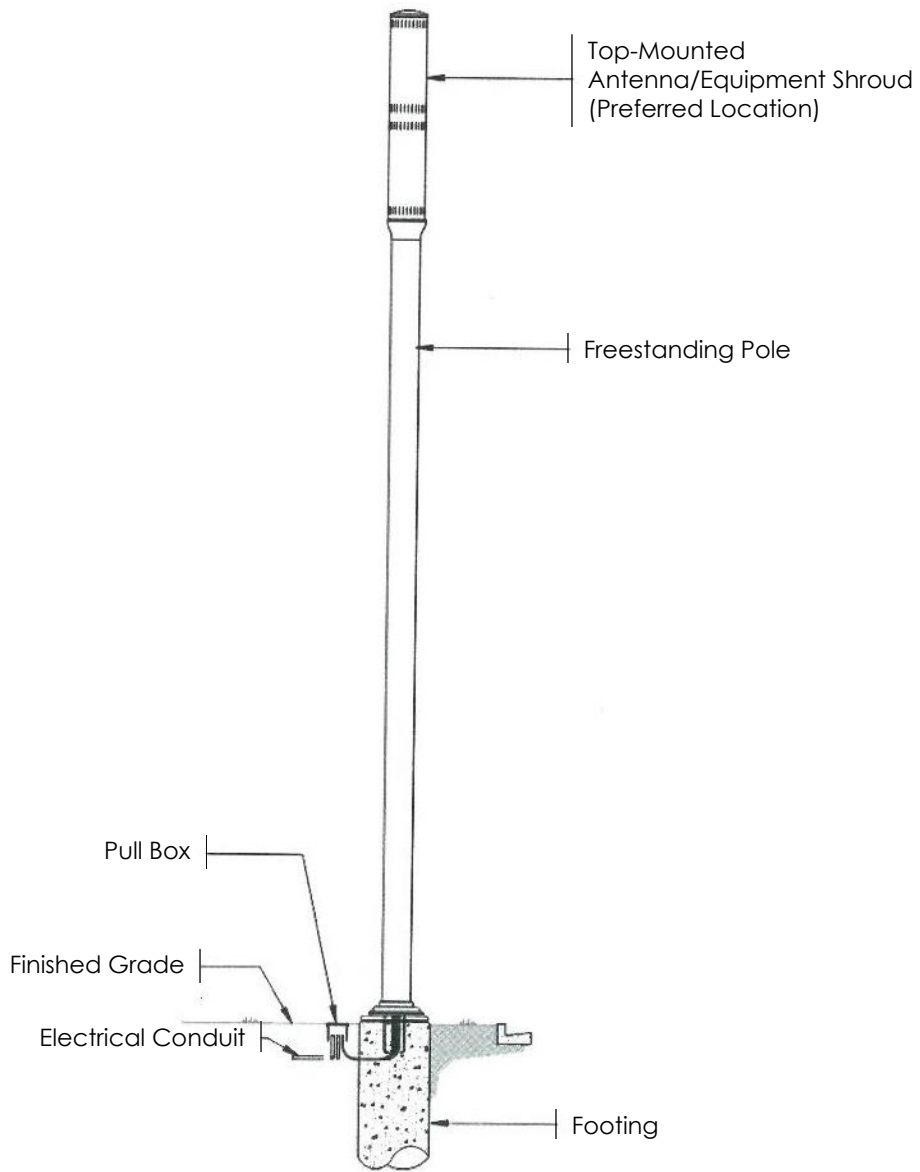
**8.** All points of connection for power or data shall be placed underground. No ground-mounted enclosures or meter pedestals, including backup power supply, are permitted.



**Figure 2: Typical Wireless Facilities Attachment to Existing Private Utility Poles**



**Figure 3: Typical Wireless Facilities Attachment to Streetlight Poles**



**Figure 4: Typical Wireless Facilities Attachment to Freestanding Poles**

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