



City of San Mateo

Public Works: Right-of-Way
330 West 20th Avenue
San Mateo, CA 94403

SMALL WIRELESS FACILITY INSTALLATION SPECIFICATIONS

General Information

All small wireless facility (SWF) installations and/or modifications in the public right-of-way shall conform to the installation standards defined in this document unless otherwise determined by the Director of Public Works or their designee.

Small wireless facility project plans shall incorporate the City Standard General Notes into the plan set prior to approval.

Compliance with any of the following standards shall be at the sole cost of the applicant.

City Standard General Notes

- 1 No work shall commence until (1) the associated Small Wireless Facility Permit has received approval and the appeal period has ended and (2) the associated Encroachment Permit has been issued. All work shall comply with the approved plans, San Mateo Municipal Code ("SMMC") Chapter 17.10, Small Wireless Facility Installation Standards, Encroachment Permit General Conditions, and any special conditions applied to the approved permits.
- 2 Prior to start of work, Permittee shall locate and protect in place all existing underground utilities. Forty-eight (48) hours before commencing work, the Permittee shall contact Underground Service Alert (U.S.A.) at 1-800-227-2600 to verify elevations and locations of all existing utilities. Permittee shall remove all paint utility markings associated with the project when the work is complete.
- 3 The Permittee and/or Contractor shall schedule Public Works inspections by emailing pwinspection@cityofsanmateo.org a minimum of 72 hours prior to starting work. At a minimum, the inspector shall be scheduled for (1) pre-construction, (2) antenna installation, (3) ground-mounted equipment installation, (4) completion of restoration prior to installation of an electric service meter, and (5) post-install of the electric service meter. The PW Inspector shall not issue permit final sign-off until all inspection has been 'passed'.
- 4 A meter release is required in order to schedule the electric meter to be installed by PG&E. The meter release request to PG&E shall be done in the form of a Self-Inspection form signed by a certified electrician per PG&E requirements.
- 5 The Permittee and/or Contractor shall not energize and/or turn on the antenna(s) without having received final sign-off from the PW Inspector.
- 6 All restoration shall conform to current City Standards unless otherwise noted and/or approved by Public Works. The City Standards may be found online at <https://www.cityofsanmateo.org/2081>
- 7 To ensure proper color matching if the pole has deteriorated paint, prior to install on an existing City-owned pole as directed by the PW Inspector during the pre-construction meeting, Permittee shall repaint the pole. For repainting, (1) remove flaking raised, and bubbling paint, (2) collect, remove, and dispose of scraped paint debris in accordance with applicable laws and regulations, (3) prepare and clean pole, and (4) paint pole with two coats of gloss, oil-based paint.
- 8 Prior to any drilling or welding on an existing pole, all wiring shall be removed. All wiring shall be reinstalled after the drilling or welding has finished.
- 9 Permittee and its Contractor shall comply with all provisions of the Protected Trees Ordinance per SMMC Chapter 13.40. Violations of the Protected Trees Ordinance may result in penalties of up to \$10,000 per tree. Storage and operation of motorized equipment is prohibited beneath the dripline of Protected Trees as defined in SMMC 13.04.030(o). Contact the Department of Parks and Recreation (650-522-7420, trees@cityofsanmateo.org) to obtain a permit which is required under any of the following situations:
 - Cutting or damaging any roots of a Street Tree as defined in SMMC Section 13.40.030(t);
 - Cutting or damaging any roots of a Heritage Tree as defined in SMMC Section 13.40.030(k) that are within a distance of six times the trunk diameter;
 - Removal of any Protected Tree; or
 - Pruning of any Street Tree or removing more than 25% of the foliage of a Heritage Tree.
- 10 Contractor shall store any and all excess cables or wiring within equipment cabinets or shrouds. No excess cables or wiring shall be spooled, coiled, or otherwise stored on the support structure's exterior.
- 11 All associated equipment mounted to a pole (including conduit elbows) shall provide a 7-ft vertical clearance to the adjacent walking surface.



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Aesthetics

Finishes	All antennas, shrouds, and associated equipment on the support structure shall be treated, painted, or finished to match the existing color and finish of the pole. <i>The following color codes shall be utilized to match support structure aesthetics:</i> <ul style="list-style-type: none">Aluminum/Grey: RAL 7038Green Decorative: RAL 6012Wood Utility: RAL 8003 (light to medium) or RAL 8015 (medium to dark)
Concealment	All cabling and wiring shall be hidden or housed within the pole (if hollow) or within vertical risers (if solid). No excess cables or wiring will be allowed to be spooled, coiled, or stored on the support structure’s exterior. For omni-directional antennas, a single canister “cantenna” shroud shall be used. For directional antennas pole-mounted, each individual antenna shall be shrouded to include the portion where cables and wiring connect the antenna to the support. For directional antennas pole-top or side-arm mounted in an array configuration, the array shall be shrouded in a single canister “cantenna” shroud.
Lights	All antennas and associated equipment with indicator or status lights must be installed or positioned such that there are no illumination impacts visible from publicly accessible areas.
Signage	Any on-pole cabinet or housing and any ground mounted equipment shall be labeled with a 4-inch by 6-inch (maximum) plate or decal with the owner/operator’s name, owner/operator’s site identification, and a toll-free number to the owner/operator’s network operations center. Support structures may include RF warning signage, as recommended by an RF/EME Report, no larger than 4-inches by 6-inches. No advertising, logos, or other similarly natured materials shall be provided.

City-Owned Poles

Pole Type	City streetlight poles shall conform to the published City Standards Drawings for typical streetlights or traffic signal poles. Authorized Decorative Poles for SWF Support Structures: <ul style="list-style-type: none">Streetlights conforming to Type T6 “Tear Drop Long”Green painted streetlight poles with LED cobra-head luminaires
Luminaire	Luminaires shall conform to the published City Standard Drawings. Any relocation or addition of street lighting requires a photometric study to be reviewed and approved.
Signal Heads	Signal Heads shall not be relocated or repositioned to accommodate a proposed SWF.
Signage	All existing signage shall remain in approximately the same location and orientation unless otherwise approved by the Director or their designee, except traffic signage may be relocated vertically when appropriate to screen proposed SWF associated equipment. Pole ID number labels shall be reinstalled if missing or degraded.
Base	Pole bases shall conform to the published City Standard Drawings .
Foundation	Pole foundations shall conform to the published City Standard Drawings. Existing foundations without conduit shall be replaced to include conduit.
Attachment	All new equipment associated with the SWF (except for the antenna and smart meter housing) shall be affixed to the pole with stainless steel mounting straps.
Handholes	A hand hole shall be provided at the top of the pole to maintain fiber and electrical service for streetlights.
Other City Equipment	All existing City-owned equipment affixed to the support structure shall remain in the approximately the same location and orientation unless otherwise approved by the Director or their designee.



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Electrical	
Service Connections	Electrical service connections shall conform to the published City Standard Drawings .
Circuit Layout	Typical unmetered circuit layouts Conduits shall conform to the published City Standard Drawings.
Circuit Modifications	<p>The maximum voltage drop allowed for the entire streetlight circuit is 3% (cumulative).</p> <p>A minimum of 40% of circuit load capacity (not breaker rating) shall be reserved for City's use.</p> <p>Modifications that affect an entire conduit run between pull boxes shall add a bare ground conductor and ground rods in each of the pull boxes and make all necessary connections.</p> <p>#8 wires shall be used when the maximum voltage drop can be met. Maximum wire size up to #6 may be approved if needed to meet the maximum voltage drop and avoid adding a new separate meter pedestal.</p> <p>When #6 wires are proposed, applicant shall provide additional 1,000-ft to 5,000-ft reels (of each red, black, and bare) to the City as determined by Public Works.</p>
Conduits	<p>Conduits shall conform to the published City Standard Drawings.</p> <p>Any existing conduit that is damage or unusable shall be replaced with new conduit.</p> <p>All new electrical conduit shall be separate and enclosed in a braided sleeve.</p>
Pull Boxes	<p>Pull Boxes shall conform to the published City Standard Drawings.</p> <p>If there is no existing pull box, installation of a new pull box will be required.</p> <p>Grounding rod shall be located in the pull box.</p>
Splicing	Conductors shall be spliced at the base of the pole in a pull box.
Fuses	<p>Fuses shall conform to the published City Standard Drawings.</p> <p>Fuses shall be located behind a hand hole or in a pull box.</p>
Electric Meter	Electric Meters shall be installed in accordance with the service provider's (currently PG&E) specifications.
Protection	All electrical equipment, boxes, and other appurtenances shall have an appropriate National Electrical Manufacturers Association (NEMA) rating for outdoor uses and proved adequate protection.



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Examples of Authorized Decorative Poles

Type T6 “Tear Drop Long “



Green painted streetlight with LED cobrahead

