

Federal Regulations

Telecommunications Act of 1996

Section 253 of the Telecommunications Act (the Act) of 1996 guides the City's review of Wireless Communication Facilities (WCF). The Act states the City's review and approval or denial of WCF applications "shall not unreasonably discriminate among providers of functionally equivalent services," and "shall not prohibit or have the effect of prohibiting the provision of personal wireless services."

The Act requires the City to act on a permit application request within "a reasonable period of time", and states that any decision to deny a request to "place, construct, or modify a wireless communication facility shall be in writing and supported by substantial evidence contained in the written record."

The Act also prohibits the City from regulating the "placement, construction, and modification of [WCFs] on the basis of the environmental effects of Radio Frequency (RF) emissions to the extent that such facilities comply with the [FCC's] regulations concerning such emissions." Title 18.96.050 of Morgan Hill's Municipal Code requires that WCF applications provide a report, prepared by a qualified RF engineer, demonstrating that the WCF will comply with the FCC RF Guidelines.

Spectrum Act

Section 6409(a) of the Middle-Class Tax Relief and Job Creation Act of 2012 (Spectrum Act) states that "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station" and describes required timelines (60 days for modifications, 90 days for collocations). The associated FCC Report and Order 14-153 provides guidance on what may be considered an "eligible facilities request" and what constitutes "substantial change".

FCC Declaratory Ruling and Third Report and Order FCC 18-133 – "Accelerating Wireline and Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment" [WC Docket No. 17-84; WT Docket No. 17-79, FCC 18-111]

The FCC adopted Report and Order FCC 18-133 (the "Small Cell Order") to accelerate the deployment of both the current and next generations of wireless technology (known respectively 4G and 5G) using small cell antennas. Such antennas are typically placed on City streetlights or traffic signals in the right-of-way, although not exclusively. The Small Cell Order requires local jurisdictions to process applications for collocation of small cells on existing structures within 60 days and on new structures within 90 days. Right-of-way applications on City assets are reviewed by City staff and processed concurrently with a Small Cell License Agreement (SCLA).

The Small Cell Order also codifies processing timelines for non-small cell WCFs required by other federal policies: 90 days for collocations, and 150 days for new projects.

California State Regulations

Assembly Bill 57 (2015)

AB 57 added Section 65964.1 to the California Government Code, which “deems approved” applications for most types of wireless sites if the City does not act on an application within the FCC’s “shot clock” timeframe if the applicant has provided all required notices.

Shot Clocks and Processing Timelines

Federal laws and policies provide shot clocks for all types of WCF approved by the City of Morgan Hill. The City must decide on a project within the shot clock timeframes outlined below. Shot clocks are tolled while the City awaits resubmittal.

Required Shot clocks for WCF projects

Time Frame	Project Type(s)
60 days	• Small Cells proposed on existing City infrastructure
90 days	• All collocations and Small Cells proposed on new structures
150 days	• Non-Small Cell new projects (Third Report and Order Shot Clock)

The shot clocks codified by the Third Report and Order force the City to act quickly. Shot clocks do not require the City to approve an application, only to act on it. To facilitate project approval, the City needs a complete application early in the process. Otherwise, staff will be forced to deny an incomplete application to meet shot clock requirements. It is the applicant’s responsibility to ensure that they submit all the information that the City needs to decide on a project. This includes (but is not limited to) noise study, photo simulations, site development plans, evidence that the project complies with the Zoning code, engineering standards and requirements of these guidelines, etc.

Small Cells

This network of low-powered micro antennas provides cellular and data coverage to supplement the provider’s macro-cellular network. New small cell installations will improve the providers’ ability to meet current and future consumer cellular and data needs.

These design standards provide design and aesthetic requirements and specifications that all small wireless facilities installed within the right-of-way must meet prior to installation within Morgan Hill boundaries. Small cells installed within the right-of-way are bound to these design standards.

Providers shall consider the aesthetics of the existing street lights and other City infrastructure near proposed small cell locations, with special attention given to the details of neighborhoods with unique

street light assemblies. Unique assemblies may include mast arms, architectural luminaires, mounting heights, pole colors, etc.

SMALL CELL EQUIPMENT DESIGN STANDARDS FOR CITY OWNED POLES

AESTHETICS: Equipment should be of a color which reasonably matches the pole.

INTERNAL INSTALLS: Equipment shall be installed within an existing pole when technologically feasible. Any equipment installed within a pole may not protrude from the pole except to the extent technically necessary to connect to power or a wireline.

EXTERNAL SHROUDING: Whenever technically feasible, any pole mounted antenna shall be located at the top of the pole contained in an enclosure (ex. Radome Shroud), otherwise mounted as close to the pole as technically feasible in accordance with applicable standards. Any other equipment shall be contained in an enclosure on the pole, unless the visual impact can otherwise be reduced by its location on the pole including behind street signs on the pole. Maximum of 4 equipment enclosures are allowed on a single pole.

TESTED EQUIPMENT: Devices and associated equipment must be UL listed and FCC certified or authorized for the intended use.

INTERFERENCE: Antenna shall not cause any interference with operation of City facilities, including signs, banners and miscellaneous lighting or of any existing City telecommunication infrastructure.

DIMENSIONS: Individual antenna, excluding other associated wireless equipment, shall be no more than three (3) cubic feet in volume, and all other associated wireless equipment shall not cumulatively exceed 28 cubic feet in volume.

SIDEARM (OFF-SET) INSTALLS: May not allow the furthest point of the enclosure to extend more than 18 inches from the pole.

SOUND: Devices shall not emit audible sounds beyond 55 dB consistent with Municipal Code Chapter 8.28. In single family neighborhoods, noise limit to be 5dBA above ambient sound, not to exceed 30 dBA as measured at a property line.

CONDUITS: All cables shall be in conduits and shall be flush with the pole unless required to be installed inside the pole.

HARDWARE ATTACHMENT: All hardware attachments should be hidden. Welding onto existing equipment is not permitted.

COLOR: All equipment should be painted to match pole aesthetics. Paint should be powder coated over zinc paint. If a wood pole, the visible attachments and hardware shall match pole aesthetics.

CABLE: All cables should be clearly labeled for future identification.

POLE MOUNTED ANTENNA: Pole Mounted Antenna must be mounted directly on top of the pole, unless a side arm installation is required. A tapered transition between the upper pole and Antenna (including enclosure) is required when mounted on top of the pole. Antenna with enclosure shall not exceed 3 cubic feet in volume. Antenna and enclosure shall not exceed 40 inches in height when mounted on top of pole.

STICKERS/SIGNS: Any pole mounted enclosure or ground mounted utility box should be labeled a (1) RF warning sticker, background to match pole color, no larger than 4 x 6 inches. Facing to the street near the elevation of the antennae, (2) 4-inch by 6-inch (maximum) plate with the provider's name, location identifying information, and 24-hour emergency telephone number, and (3) no advertising, logos or decals, unless additional identification or signage is required by law.

LIGHTS: There shall be no lights on the equipment unless required by federal law.

GROUND MOUNTED EQUIPMENT: Must meet and follow existing City ordinances for ground mounted utility boxes and be attached to a concrete foundation. Ground mounted equipment must be placed in a location that does not obstruct pedestrian or vehicular traffic and in the least conspicuous location available within a reasonable distance from the pole. Ground mounted equipment should be installed within an existing or replacement street feature including, without limitation, bus stop shelters, trash bins, benches, kiosks, advertisement panels or other street furniture to conceal the equipment. Ground mounted equipment must comply with all ADA requirements.

HEIGHT OF EQUIPMENT ON POLE: The lowest point may not be lower than 8 feet from the grade directly below the equipment enclosure.

POWER METER: As required by PG&E and in a location that (1) minimizes its interference with other users of the public right-of-way including, but not limited to, pedestrians, motorists, and other entities with equipment in the right-of-way. Wireless meters are required where technically feasible.

POLE STYLE: Galvanized Steel Pole equal to Valmont DS30 8.0A300-8s-GV. City's Design Standards E-11.

POLE CONNECTION: Where technically feasible, attachment to the side of a pole must be placed perpendicular to the street away from the vehicular traffic.

INSTALLATION OF NEW OR REPLACEMENT STREETLIGHT POLES: Should new poles be needed; structural analysis will be per most recently adopted California Building code by City of Morgan Hill. Foundations requirements per City's Design Standards E-11. For City owned wood poles, if wood pole requires replacement to insure the pole can handle the load of the equipment, replacement wood poles will be allowed when served by existing overhead power. Should City owned wood pole have underground power and requires replacement, a new Galvanized Steel Pole equal to Valmont DS30 8.0A300-8s-GV. City's Design Standards E-11 will be the standard.

COLOR: A pole shall be painted to match existing street light aesthetics. Paint shall be powder coated over zinc paint (Pole shall be galvanized if metal pole).

HEIGHT: Any city owned metal and wood street light pole with collated small cell shall not exceed 35 feet including the equipment. Pole shall be measured from the top of the foundation to the top of the Pole Mounted Antenna.

DESIGN WIND VELOCITY: All structural components of small cell pole, standard, base, couplers, anchor bolts, luminaires, pole mounted antenna and other attachment to be used shall be designed for a minimum of 85 mph wind velocity.

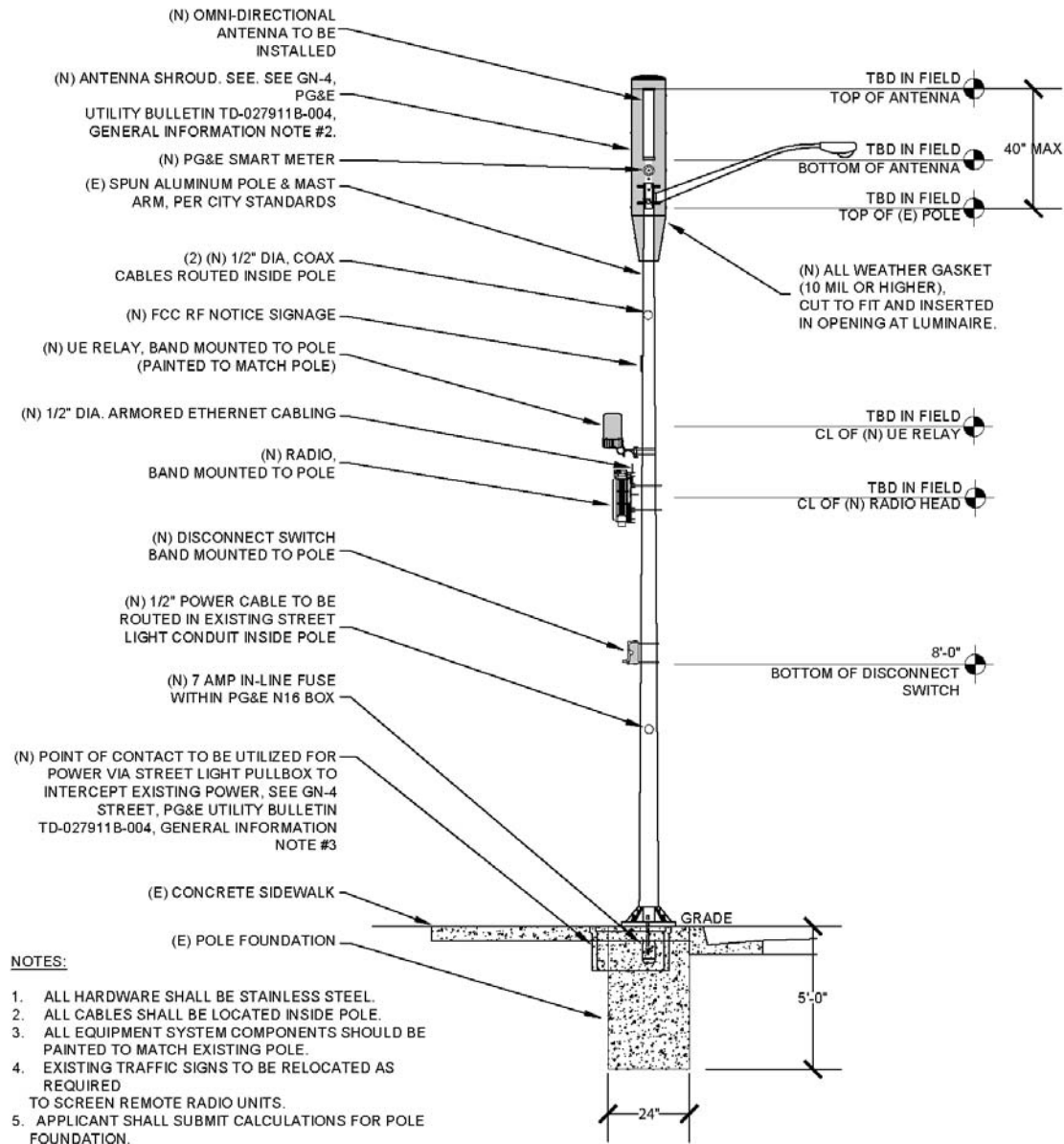
ELECTRIC SERVICE: If sharing service with City light pole, for each location, applicant shall: 1. Survey and document all loads connected to circuit involved, including any non-streetlight load. Circuit tracing shall be completed using proper circuit tracing equipment. 2. Conduct load analysis to evaluate loading level and voltage drop. Calculations shall be completed by an electrical engineer. 3. Reserve at minimum 40% of circuit load capacity (not breaker rating) for City's use. 4. Conductors shall be spliced at base of pole in pull box. If there is no existing pull box, installation of a new pull box will be required.

METERING: Applicant shall submit proof of approved service metering arrangements from PG&E (i.e. Absolving Service Agreement) to the City prior to acceptance.

COMMUNICATIONS/BACKHAUL SERVICE: Applicant shall secure their own communication/backhaul arrangements independent of City facilities.

ELECTRICAL CONDUIT: All new electrical conduit shall be separate.

CITY OWNED METAL AND WOOD POLES DESIGN STANDARDS



SMALL CELLS ON FREESTANDING POLES (MONOPOLES) DESIGN STANDARDS

AESTHETICS: Equipment should be of a color which reasonably matches surrounding poles.

POLE STYLE: Round.

INSTALLATION OF POLES: Structure analysis will be per most recently adopted California Building code by City of Morgan Hill. Foundations requirements per City's Design [City's Design Standards E-10](#)

COLOR: A pole and pole extension shall be painted to match existing street light aesthetics, paint shall be powder coated over zinc pain (Pole shall still be galvanized)

HEIGHT: Any pole with collated small cell shall not exceed 35 feet, pole shall be measured from the top of the foundation to the top of the antenna.

DESIGN WIND VELOCITY: All structural components of small cell pole, standard, base, couplers, anchor bolts, antenna and other attachment to be used shall be designed for a minimum of 85 mph wind velocity.

CONDUITS: All cables shall be in conduits within the pole.

STICKERS/SIGNS: Any pole, (1) RF warning sticker, background to match pole color, no larger than 4 x 6 inches. Facing to the street near the elevation of the antennae, (2) 4-inch by 6-inch (maximum) plate with the provider's name, location identifying information, and 24-hour emergency telephone number, and (3) No advertising, logos or decals. Additional stickers are only permitted if otherwise required by law.

ELECTRIC SERVICE: Per PG&E requirements.

COMMUNICATIONS/BACKHAUL SERVICE: Applicant shall secure their own communication/backhaul arrangements independent of City facilities.

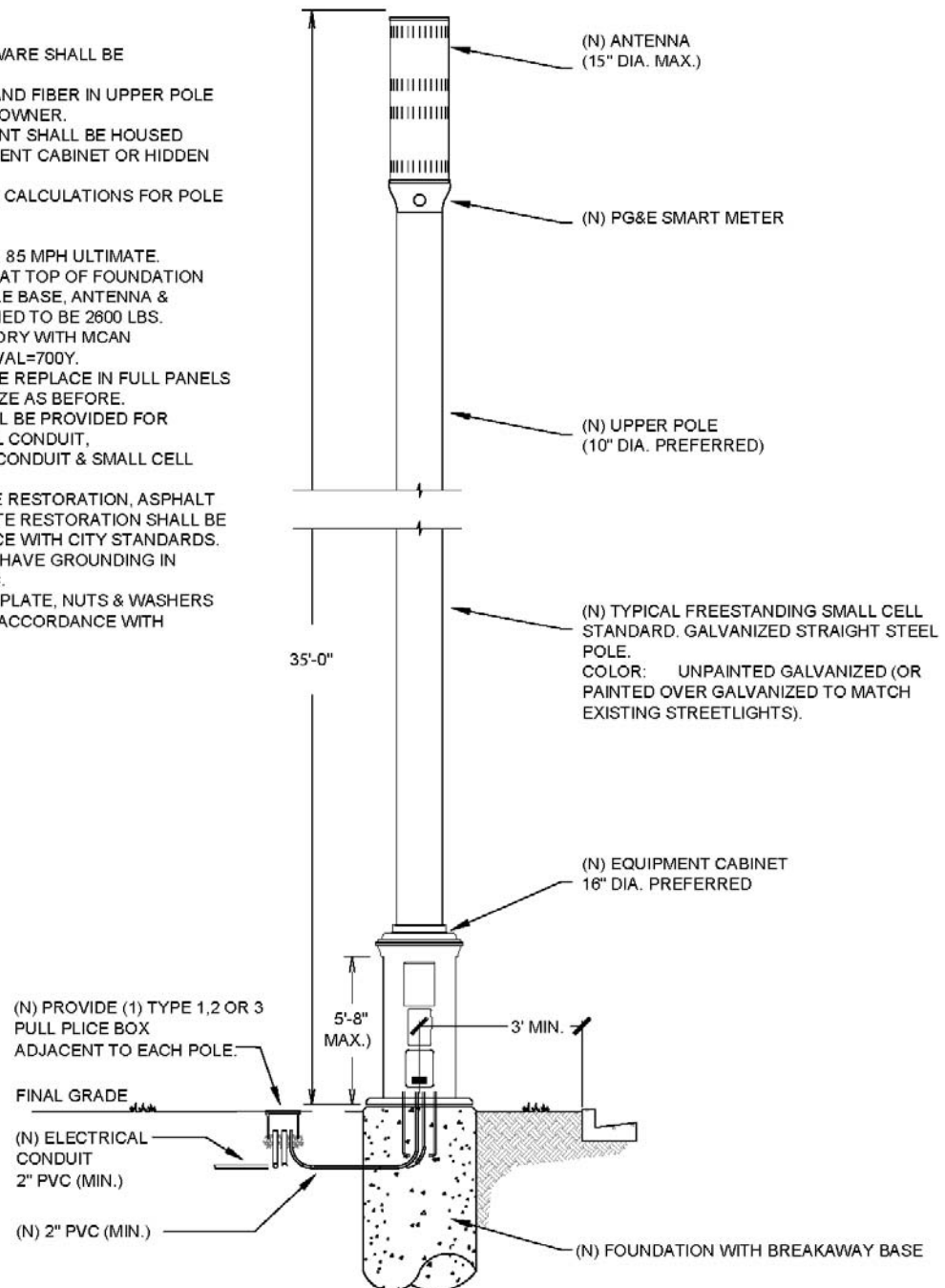
SMALL CELLS ON FREESTANDING POLES (MONOPOLES)

NOTES:

1. ALL ANCHOR BOLT HARDWARE SHALL BE CONCEALED.
2. ALL ELECTRICAL WIRING AND FIBER IN UPPER POLE SHALL BE SEPARATED BY OWNER.
3. ALL SMALL CELL EQUIPMENT SHALL BE HOUSED INTERNAL TO THE EQUIPMENT CABINET OR HIDDEN BEHIND THE ANTENNA.
4. APPLICANT SHALL SUBMIT CALCULATIONS FOR POLE FOUNDATION.

LOADS:

 - A. WIND LOAD SHALL BE 85 MPH ULTIMATE.
 - B. MAXIMUM DEAD LOAD AT TOP OF FOUNDATION (INCLUDING POLE, POLE BASE, ANTENNA & EQUIPMENT) IS ASSUMED TO BE 2800 LBS.
 - C. AASH TO RISK CATEGORY WITH MCAN RECURRENCE INTERVAL=700Y.
5. ANY HARDSCAPE SHALL BE REPLACE IN FULL PANELS OF SAME TYPE, COLOR, SIZE AS BEFORE.
6. SEPARATE CONDUIT SHALL BE PROVIDED FOR STREETLIGHT ELECTRICAL CONDUIT, SMALL CELL ELECTRICAL CONDUIT & SMALL CELL CARRIER FIBER.
7. ALL CONDUIT, LANDSCAPE RESTORATION, ASPHALT RESTORATION & CONCRETE RESTORATION SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS.
8. ALL FOUNDATIONS SHALL HAVE GROUNDING IN CONFORMANCE WITH NEC.
9. ANCHOR BOLTS, ANCHOR PLATE, NUTS & WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.



GENERAL APPLICABLE DESIGN STANDARDS

Any small cell facility must comply with the following requirements:

- All facilities should be installed and maintained in a workmanlike manner in compliance with the national Electric Safety Code and the National Electric Code, as applicable.
- So as not to obstruct vehicle or pedestrian sight lines in an unsafe manner
- Wherever possible, locate on poles at the intersection of property lines
- All facilities must have appropriate clearances from existing utilities.
- All equipment located within the public right-of-way shall be located such that it meets Americans with Disability Act (ADA) requirements and does not obstruct, impede, or hinder usual pedestrian or vehicular travel or interferes with the operation and maintenance of signal lights, signage, street lights, street furniture, fire hydrants, or business district maintenance.
- Any equipment within the public right-of-way that falls within the 100-year flood zone, needs to be protected from flood damage.

SMALL CELL EQUIPMENT SHALL BE MOUNTED ON OR HIDDEN INSIDE THE POLE AS FOLLOWS:

- Antenna: Where feasible inside an enclosure (ex. Radome Shroud).
- Utility poles and wood poles: All equipment located on poles if allowed by pole owner (City or PG&E), and anything not on the pole to be located in a ground mounted utility box. Fiber in conduits flush with pole.
- Traffic signal poles: All equipment in ground mounted utility box. Fiber inside pole in a conduit (if conduit is not available, pole cannot be used).
- New /replacement metal street light poles: all equipment inside pole in base cabinet.
- Decorative street lights – replace with equipment inside pole. Reusable deviations from these standards shall be approved by City of Morgan Hill prior to installation.
- Deviations from this guide may be approved if reasonable on a case-by-case basis by City of Morgan Hill prior to installation.
- Placed so as not to interfere with normal operation and maintenance of street light or other street appurtenances.
- City workers and contractors to have ability to easily shut off radio signals and power while working on pole. (And we have the right to turn off or disconnect for necessary operations).
- Attachments to a pole or any new or replacement pole should have a smooth transition between the small cell and the pole and shall not have any flat surface of more than 1.5 inches to prevent creation of a ledge.
- New small cell facility must be encased in a separate conduit than any City electronics.
- The specifications provided above are for single carrier with single technology installations within the right of way only. Dual carrier, dual technology installations, or small cell locations not in the public right of way need to conform to Zoning Code 18.96.

POWER AND GROUND MOUNTED UTILITY BOXES

- Back up batteries must be in a ground mounted utility box, or underground where feasible.
- A separate meter and disconnect is required for both the power and the cell signal that can be accessed and operated by street lighting maintenance personnel.
- Must have metered power.

LOCATION PREFERENCES:

- Attachment to city owned wood or metal street lights
- Attachment to traffic signal poles

PROCESS FOR SMALL CELLS LOCATED ON CITY OWNED POLES IN RIGHT OF WAY:

1. Contact the City about a Small Cell License Agreement:
 - Identify locations including poles within right of way
 - Provide renderings and simulations of equipment installation
2. Negotiate a Small Cell License Agreement
3. Agreement is executed by City Manager
4. Encroachment Permit is issued for Installation

PROCESS FOR SMALL CELLS LOCATED IN RIGHT OF WAY (MONOPOLE/TELECOMMUNICATION COMPANY OWNED)

1. Use Permit Application
2. Review in Conformance with Zoning Code 18.96 Wireless Communication Facilities

PROCESS FOR EXEMPTION OF SMALL CELL DESIGN STANDARDS

Any provider may apply for an exemption from design standards to the City Engineer. The provider must demonstrate to the reasonable satisfaction of the City Engineer that the design standard cannot be met due to technical infeasibility.