



Ratification
Number 2018-154

AN ORDINANCE

ESTABLISHING REQUIREMENTS IN THE CITY OF CHARLESTON FOR SMALL WIRELESS FACILITY/PERMITTING AND PLACEMENT IN RIGHTS OF WAY AS AMENDED

Section 1. Findings.

WHEREAS, the City of Charleston ("City") finds it necessary to establish general standards for Wireless Infrastructure Providers or Wireless Service Providers to deploy and maintain wireless networks in the City's Public Right of Way ("ROW") using Small Wireless Facilities; and

WHEREAS, The City must balance competing interest of its citizens and State and Federal laws concerning the rights of all parties; and

WHEREAS, the City specifically finds that this Ordinance will:

1. Minimalize visual impact and bulk in the ROW and architecturally integrate Small Wireless Facilities with its surroundings;
2. Preserve unobstructed and ADA compliant walkways, roadways, and paths of travel while accommodating electrical, water, sewer, and communications services;
3. Ensure that Small Wireless Facilities will conform to all applicable health and safety regulations to protect the public;
4. Enhance the ability of Wireless Service Providers or Wireless Infrastructure Providers to deploy wireless infrastructure quickly, effectively, and efficiently so that

residents, businesses, and visitors benefit from ubiquitous and robust wireless service availability;

5. Provide standards for Small Wireless Facilities in the City's ROW to provide a uniform look and feel, and ensure that applicants are treated equally; and

6. Provide the City with sufficient information to make an informed and timely decision on applications.

Section 2. No person or entity shall locate Small Wireless Facilities, as defined in the Small Wireless Facility Right of Way Guidelines ("Design Guidelines"), in rights of way owned or controlled by the City without first:

1. Obtaining a Franchise Agreement from the City for the use of any ~~rights-of-way~~ ROW owned or controlled by the City of Charleston ("City") if the person or entity locating the Small Wireless Facilities also will be owning or operating fiber optic cables in the right-of-way;

2. Obtaining approved Engineering Permits, a City Small Wireless Facilities Application ("WFA") and other required permits from the City, as well as provide all plans, documentation, drawings ~~or~~ and information required by the City as set forth in its ordinances and laws. Without limiting any requirements, all excavations of any type shall comply with the City of Charleston Department of Public Service Engineering Division's "Steel Plates Requirements used in Connection with Roadway Utility Excavations" (April 2013) and City of Charleston Department of Public Service Engineering Division's "Utility Pavement Cut and Repair Guidelines" (October 2015). Details and additional required documents are noted on the Engineering Permit Application. Additional conditions, limitations ~~or~~ and requirements may be found on the "PERMIT CONDITIONS" document

or other requirements on file with the City's Department of Public Service and on the Engineering Permit Application;

3. ~~Obtaining and providing~~ Certifying to the City ~~in written writing~~ confirmation of that, for each co-location of a Small Wireless Facility, permission from the owner of the pole or other structure has provided permission to co-locate the Small Wireless Facility on its pole or other structure for which the Small Wireless Facility is being requested;

4. Providing a completed WFA, a copy of which is attached hereto and incorporated herein by reference as Exhibit A with attachments 1 and 2 along with all required information or documentation;

5. Obtaining approval of a WFA for each proposed location. Each WFA shall include:

- a) Sealed drawings showing proposed installation(s);
- b) A ~~MPE~~ Maximum Permissible RF Exposure report as set forth in Section VI (E) of the Design Guidelines; and
- c) All other information required by the WFA;

6. Meeting the requirements of the ~~Small Cell Infrastructure Right of Way Design Guidelines~~ ("Design Guidelines") attached hereto and incorporated herein by reference as Exhibit B; and

7. Paying all fees for reviews, inspections, and compliance as set forth in Attachment 2 and possessing a valid business license.

Section 3. All WFA, ~~and~~ Engineering Permits, and other requirements set forth in this Ordinance shall be reviewed and approved or denied based upon the City's requirements as set forth or incorporated into this Ordinance by the City's Design Review Committee ("DRC"). The DRC shall act on each application WFA within the time frames mandated by applicable federal law. Incomplete or batched applications shall likewise be processed in

accordance with applicable federal laws as to time periods for acting on such permits or holding them in abeyance.

Section 4. An adverse decision shall be subject to litigation in the Court of Common Pleas for Charleston County or federal district court for the District of South Carolina (Charleston Division).

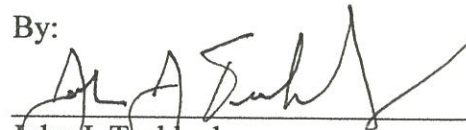
Section 5. Poles, equipment, or related construction relating to a Small Wireless Facility shall not cause any violations of the Americans with Disabilities Act or interfere with any accessibility to public walkways;

Section 6. In the event of any conflicts in any Small Wireless Facility permitting and placement requirements and any other applicable law, the more restrictive shall apply. ~~Where applicable, "more restrictive" includes restrictions against the City and others on what may be required of Small Wireless Facilities Providers.~~

Section 7. This Ordinance shall become effective upon ratification.

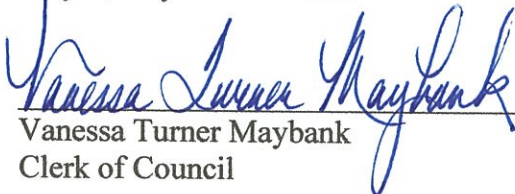
Ratified in City Council this 27th day of November in the Year of Our Lord 2018, and in the 243rd year of the Independence of the United States of America.

By:



John J. Tecklenburg
Mayor, City of Charleston

ATTEST:



Vanessa Turner Maybank
Clerk of Council

City of Charleston

Small Wireless Facilities Application



			Existing Height	Proposed Height
APPLICATION TYPE	☐	New Support Structure		
	☐	Collocation on Eligible Support Structure		
	☐	Replace Existing Structure		
	☐	Other		

Applicant or Lessee Name	
Applicant or Lessee Address	
Applicant or Lessee Phone Number	
Applicant or Lessee Email Address	

Wireless Service Provider (WSP) Company Name	
WSP Contact Name	
WSP Address	
WSP Phone Number	
WSP Email	
In Case of Emergency Contact Name (NOCC)	
In Case of Emergency Contact Phone Number (NOCC)	

Proposed Structure Type	
Site Location-Address	
Nearest Intersection	
Utility Pole Number	
Site Location-Latitude/Longitude	
Support Structure Owner Name	
Structure Owner Address	
Structure Owner Email	

City of Charleston Small Wireless Facilities Application



Antenna Information		Equipment Information	
Antenna Manufacturer(s)		Equipment Enclosure(Shroud)- (LxWxH in ft)	
Antenna Type(s)		Transmitting or Wireless Equipment Manufacturer	
Antenna Model Number(s)		Transmitting or Wireless Equipment Model Number	
Antenna Dimensions (LxWxD in inches)		Battery Type/Quantity	
Antenna Weight (lbs.)		Electric Service (Volts and Amps)	
Antenna Configuration (Omni, Sector, Directional)		Separate Electric Meter Required (yes or No)	
Azimuth(s) (degrees) <i>if not omni</i>		Required Backhaul (Wireless, Fiber, Copper)	
Antenna RAD Center (feet above grade level)		If wireless backhaul	
Transmit Frequency(ies)		Antenna Manufacturer and Model	
Receive Frequency (ies)		Antenna Dimensions	

Supporting Documents (uploaded Y/N)	Comments
Validation of property interest (i.e. certification of obtained approval from 3 rd party PSS owner)	
Antenna, Equipment, Pole or Shroud/Radome Specification Sheets. Can be included as part of the Construction Drawings	
Construction drawings with site plan with sufficient detail to adequately identify lease/license area on pole and on ground and determine consistency with applicable safety and design requirements (stamped and sealed by a South Carolina licensed professional engineer as to standards relevant to engineering)	
Elevation drawing of pole or tower	
Structural Analysis (calculations or certification showing applicable engineering materials, electrical and safety standards are met including structural integrity and weight bearing capacity from PSS owner or by a licensed	

City of Charleston
Small Wireless Facilities Application



professional engineer as to standards relevant to engineering)	
Photo Simulations (minimum of 3 sides)	
Other documents submitted	
Applicable fees paid	

As an Authorized Signatory of Applicant/Carrier

Date

Application Approved

Date

☐ Check if subject to special conditions

Special Conditions:

ATTACHMENT 1 TO CITY OF CHARLESTON SMALL WIRELESS FACILITY APPLICATION

A) **Indemnification.** To the maximum extent permitted by South Carolina law, the Applicant shall indemnify, save harmless, and defend the City, its officers and employees, individually and collectively, from all damages, fines, liens, suits, claims, demands, actions, reasonable costs of investigation and litigation, reasonable attorneys' fees and expenses, reasonable consultants' fees and expenses, and reasonable expert witnesses' fees and expenses, judgment or liability of any kind arising out of Applicant's agent or any person or entity acting on Applicant's behalf for or relating to Applicant's ~~with the~~ installation, construction, operations, maintenance, or condition of the Small Wireless Facility. The Applicant is not required to indemnify or hold harmless the City, its officers and employees, as provided herein, to the extent caused by, resulting from, or arising out of the active negligence or intentional actions of one or more officers or employees of the City or others acting ~~through them or~~ on their behalf.

B) **Assumption of Risk by Applicant.** Except as ~~qualified and limited in A)~~ set forth above, the Applicant shall assume all risks in the operation of the Small Wireless Facilities and shall be solely responsible and answerable for any and all injuries to persons or property arising out of the existence of the Small Wireless Facilities approved and installed pursuant to the appropriate permits. The amounts and types of required insurance coverage, as set forth below shall in no way be construed as limiting the scope of indemnity set forth in this section.

C) **Insurance.**

General Liability and Commercial Automobile Insurance Required. Applicant shall obtain and maintain, at all times during the term of its Small Wireless Facilities permit(s), ~~approved and installed pursuant to appropriate permits or~~ General Liability insurance and Commercial Automobile Liability insurance protecting Applicant in an amount not less than One Million (\$1,000,000) Dollars per occurrence (combined single limit), including bodily injury and property damage, and in an amount not less than One Million, Two Hundred Thousand (\$1,200,000) Dollars annual aggregate for each personal injury liability and products-completed operations. The Commercial General Liability insurance policy shall name the City, its officers, and employees as additional insureds with regard to ~~as respects~~ any covered liability arising out of Applicant's performance of work related to Small Wireless Facilities approved and installed pursuant to appropriate permits. Coverage shall be in an occurrence form and in accordance with the limits and provisions specified herein. Claims-made policies are not acceptable. Such insurance shall not be canceled, nor shall the occurrence or aggregate limits set forth above be reduced, until the City has received at least thirty (30) days' advance written notice of such cancellation or change. Applicant shall be responsible for notifying the City of such change or cancellation.

Workers' Compensation Insurance. Regardless of the number of employees, Applicant shall comply with the provisions of the South Carolina Workers' Compensation Act and maintain coverage for employees. Applicant shall obtain and maintain, at all times during the term of this WFA permit, statutory workers' compensation and employer's liability insurance in an amount not less than the greater of (a) any amounts required by South Carolina state law.

Insurer Criteria. Any insurance provider of Applicant shall be admitted and authorized to do business in the State of South Carolina and shall carry a minimum rating assigned by *A.M. Best & Company's Key Rating Guide* of "A" Overall and a Financial Size Category of "X" (*i.e.*, a size of \$500,000,000 to \$750,000,000 based on capital, surplus, and conditional reserves). Insurance policies and certificates issued by non-admitted insurance companies are not acceptable.

Filing of Certificates and Endorsements. Prior to the commencement of any work pursuant to this WFA, Applicant shall file with the City the required original certificate(s) of insurance with endorsements, which shall state the following: (a) the policy number; name of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) that Applicant's Commercial General Liability insurance policy is primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance; (c) that Applicant's Commercial General Liability insurance policy waives any right of recovery the insurance company may have against the City; and (d) the certificate(s) of insurance with endorsements and notices shall be mailed to the City's Corporation Counsel.

Severability of Interest. Any deductibles or self-insured retentions must be stated on the certificate(s) of insurance, which shall be sent to and approved by the City. "Severability of interest" or "separation of insureds" clauses shall be made a part of the Commercial General Liability and Commercial Automobile Liability policies.

D) **Successors.** All provisions shall be binding upon the Applicant, its successors, or and assignees.

E) This permit shall continue in effect for a period of 5 years from its date of issuance.

DATED: _____

Agreed to As an Authorized Signatory of
Applicant

**ATTACHMENT 2 TO CITY OF CHARLESTON SMALL WIRELESS FACILITY
APPLICATION**

(a) \$500 for a single up-front processing application that includes up to five Small Wireless Facilities, with an additional \$100 for each Small Wireless Facility beyond five, and (b) \$270 per Small Wireless Facility per year for managing deployments in the Right of Way, and (c) all applicable business license fees.

Small Cell Infrastructure Right-of-Way Design Guidelines



City of Charleston

I. Background and Purpose

The purpose of these guidelines is to establish general standards for Wireless Infrastructure Providers or Wireless Service Providers to deploy and maintain wireless networks in the City of Charleston (“City”) Public Right of Way (“ROW”) using Small Wireless Facilities. In addition to the standards set forth in these guidelines, applications must follow all Applicable Codes. The guidelines address federal and state laws for the siting, construction, installation, collocation, modification, operation, and removal of wireless communications facilities in the ROW. The goals are to:

A. Preserve The Character Of Neighborhoods, Corridors, And Districts

To the extent possible, minimize visual impact and bulk in the ROW by architecturally integrating the Small Wireless Facility with its surroundings.

B. Preserve the Right-of-Way

The primary purpose shall be unobstructed and ADA compliant, walkways, roadways, and paths of travel while accommodating electrical, water, sewer, and communications services.

C. Ensure Health and Safety

Ensure that wireless communications facilities will conform to all applicable health and safety regulations to protect the public.

D. Enhance Deployment of Technology

Enhance the ability of Wireless Service Provider or Wireless Infrastructure Provider to deploy wireless infrastructure quickly, effectively, and efficiently so that residents, businesses, and visitors benefit from ubiquitous and robust wireless service availability.

E. Standards and Consistency

Provide standards for the design of wireless communications facilities in the City’s ROW to provide a uniform look and feel and that applicants are treated equally; and

F. Establish Application requirements

Provide the City with sufficient information to make an informed and timely decision on applications.

II. Definitions

Definitions of terms in Design Guidelines shall be the same as those definitions listed in An Ordinance Addressing City of Charleston Cell Permitting and Placement as may be amended from time to time. In addition to those definitions the following definitions are used in this document:

A. “Antenna”

means communications equipment that transmits and/or receives electromagnetic signals used for the provision of Wireless Services or other wireless communications. This definition does not apply to broadcast antennas, antennas designed for amateur radio use, or satellite dishes for residential or household purposes;

B. “Applicable Codes”

means uniform building, fire, safety, electrical, plumbing and mechanical codes adopted by a recognized national code organization to the extent such codes have been adopted by the City or otherwise are applicable in the City;

C. “Collocate”

means to install, mount, maintain, modify, operate and/or replace a Communications Facility on an existing Support Structure, Pole, or Tower or any other structure capable of supporting such Communications Facility. “Collocation” has a corresponding meaning;

D. “Communications Facility”

means, collectively, the equipment at a fixed location or locations that enables FCC-licensed or FCC-authorized communications between user equipment and a communications network, including: (i) radio transceivers, Antennas, coaxial or fiber-optic cable, regular and backup power supplies, and comparable equipment, regardless of technological configuration; and (ii) all other equipment associated with any of the foregoing;

E. “Communications Service Provider”

means a cable operator, as defined in 47 U.S.C. § 522(5), a provider of information service, as defined in 47 U.S.C. § 153(24); or a provider of telecommunications service, as defined in 47 U.S.C. § 153(53);

F. “Decorative Pole”

means a City owned Pole that is specially designed and placed for aesthetic purposes, or that has specifically designed aesthetic characteristics such as shape, color, or texture, other than plain wood poles as commonly may be used in ROW for general utility or lighting services;

G. “FCC”

means the Federal Communications Commission of the United States.

H. “Historic Property”

means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register maintained by the United States Secretary of the Interior (in accordance with Section VI.D.1.a.i-v of the Nationwide Programmatic Agreement codified at 47 C.F.R. Part 1, Appendix C). Additionally, any district or building defined as Historic in its zoning classification or relevance to the history of the City;

I. “Permit”

means a written authorization (in electronic or hard copy format) required by the City to perform an action or initiate, continue, or complete installation of a Communications Facility, or an associated Support Structure, Pole, or Tower;

J. “Pole”

means a pole, such as a utility, lighting, streetlight Pole, traffic, or similar pole, not exceeding fifty (50) feet in height above grade, made of wood, concrete, metal or other material, located or to be located within the Public ROW. A Pole does not include a Tower or Support Structure;

K. “Replacement”

means, in connection with an existing Pole, Support Structure or Tower, replacement of same with a new structure, similar in design, size and scale to the existing structure and in conformance with current City regulations, in order to address limitations of the existing structure to structurally support Collocation of a Communications Facility. In connection with replacement of a Pole or Tower to support Collocation of a Wireless Facility, similarity in size and scale shall be evaluated consistent with 47 C.F.R. 1.40001 Subpart b(7);

L. “Small Wireless Facility”

means a Wireless Facility installed by a Wireless Services Provider or Wireless Infrastructure Provider Communications Facility (including, without limitation, any strand-mounted Antenna) that has a volume of no more than twenty-eight (28) cubic feet in volume. The following types of associated, ancillary equipment are not included in the calculation of equipment volume: electric meter, concealment elements, telecommunications demarcation box, grounding equipment, power transfer switch, cut-off switch, and vertical cable runs for connection of power and wired telecommunications services;

M. “State”

means the State of South Carolina;

N. “Support Structure” or “Structure”

means a building, a billboard, a water tank or any other structure to which a Communications Facility is or may be attached. Support Structure does not include a Pole or a Tower;

O. “Tower”

Means any structure in the ROW of which sole purpose is to support Wireless Services;

P. “Wireless Infrastructure Provider”

means any Person, including a Person authorized to provide telecommunications service in the State, that builds or installs and/or operates Wireless Facilities or Poles, Towers or Support Structures on which Wireless Facilities are or are intended to be used for Collocation, but that is not a Wireless Services Provider;

Q. “Wireless Services”

means personal wireless services as that term is defined in 47 U.S.C. § 332(c)(7)(C)(i); and

R. “Wireless Services Provider”

means a Person who provides Wireless Services.

III. Categories of Public Right of Way Design Districts

A Public Right of Way Design Districts ("District") is determined by the zoning designation that is closest to the Public ROW where a Small Wireless facility is proposed to be located. In the event that a Public ROW is adjacent to multiple zoning districts, the zoning district that is closest to the proposed Small Wireless Facility shall be applied to the proposed installation. In order to classify and regulate the use and implement development and design guidelines for Small Wireless Facilities in the ROW, the City is divided into the following ROW Design Districts as follows:

A. Peninsula

For the purpose of these Design Guidelines, the Peninsula shall include those areas adjoining and or defined on the City Zoning map as

- Old City Height District
- Areas South of the Old City District Boundary
- Old and Historic District
- Landmark Overlay
- Old City District

B. DRB Corridors

For the purpose of these Design Guidelines, DRB Corridors shall be defined as those corridors and ROW adjoining those corridors that are listed by the Design Review Board Official List of Corridors Under Review as posted on the City website and may be updated from time to time.

C. Parks

For the purpose of these Design Guidelines, Parks shall be defined as ROW adjoining properties zoned as parks, any greenway, exclusive walkways, and/or bikeways.

D. Residential District.

For the purposes of these Design Guidelines, Residential Districts include any ROW that are adjacent to properties that have the following current zoning designations:

RR-1	Rural residential district (single family detached dwellings only)
SR-1	Single family (detached dwellings only) residential district
SR-2	Single family (detached dwellings only) residential district
SR-3	Single family residential district
SR-4	Single family residential district
SR-5	Single family residential district

SR-6	Single family (detached dwellings only) residential district
SR-7	Single family (detached dwellings only) residential district
SR-8	Single family (detached dwellings only) residential district
STR	Single and two family residential district
DR-6	Diverse residential (front yards required) district
DR-9	Diverse residential (front yards required) district
DR-12	Diverse residential (front yards required) district
DR-1F	Diverse residential (front yards required) district
DR-1	Diverse residential (front yards not required) district
DR-2F	Diverse residential (front yards required) district
DR-2	Diverse residential (front yards not required) district
DR-3	Diverse residential (single manufactured homes, mobile homes, mobile home parks or non-mobile home dwellings) district
DR-4	Diverse residential (elderly housing) district
RO	Residential office district
GP	Gathering place district
N	Neighborhood district

E. Commercial District.

For the purposes of these Design Guidelines, Commercial Districts include any ROW that are adjacent to properties that have the following current zoning designations:

GO	General office district
CT	Commercial transitional district

LB	Limited business district
GB	General business district
UC	Urban commercial district
MU-1	Mixed use district
MU-2	Mixed use district
JC	Job Center district
BP	Business park district

F. Industrial District.

For the purposes of these Design Guidelines, Industrial Districts include any ROW that are adjacent to properties that have the following current zoning designations:

LI	Light industrial district
HI	Heavy industrial district

G. Special Districts.

For the purposes of these Design Guidelines, Special Districts include any ROW that are adjacent to properties that fall within the following current zoning districts:

1. Overlay Zones.
2. Daniel Island District.
3. Canterbury Woods District.
4. Cainhoy District.
5. Neighborhood District.

IV. Design Guidelines

This Section contains the Design Guidelines for the development of Small Wireless Facilities in the ROW. The specific design guidelines applicable to a proposed Small Wireless Facility are determined by the District designation in which the Small Wireless Facility is proposed to be located. Section V explains which of the general guidelines contained in this Section apply to each District.

A. General Guidelines

No portion of a Small Wireless Facility shall interfere with lighting, pedestrian or vehicular clearances, or sight lines for traffic signs, signals, or intersection sight distance. Designs shall also conform with any conditions

contained in any Master Wireless Use License Agreements and Wireless Site License Agreements. The following guidelines are applicable to the specific components of a Small Wireless Facility:

1. Antenna

a) *Pole top Cannister*

Preferred antennas shall be cannister type mounted to the top of pole, shrouding shall be used to conceal cable connections and transition to the pole creating a uniform look. Pole top cannisters shall not exceed three (3) cubic feet in volume.

b) *Panel*

Not Preferred but, where necessary, panel antennas may be approved. Panel antennas shall be either cylindrical in shape or shrouded in a common cylinder or three-sided banner to conceal connections and cabling. Panel antennas shall be mounted as close to the Pole or Tower as possible to minimize visual impact. Panel Antennas shall not exceed three (3) cubic feet in volume.

c) *Microwave antennas*

Shall be concealed and not exceed the overall dimensions of Pole top Cannisters

d) *Omni directional "Whip" Antenna*

Omni Antennas shall not exceed three (3) cubic feet in volume.

2. Radio/Network Interface Equipment ("Radio")

All radio and network interface equipment shall be concealed in the Pole, on the Pole where allowed as set forth in these Guidelines, or underground in a vault. The City will work with the Wireless Service Provider to accommodate their choice to the extent possible. Radio equipment may be mounted in ground mounted cabinets outside of the ROW such that the cabinets do not interfere with the existing pedestrian paths, traffic sight lines, or other clearance requirements for vehicle or pedestrian traffic, or where the ROW lacks formal existing or planned pedestrian walkways as determined by the City.

3. Cabling

Cabling shall be neatly trained and concealed in conduit, duct, shrouded, or within the structure of the Pole. Connections at the antenna and radio equipment shall be concealed within the Pole and/or by shrouding. Figure 2 shows unacceptable cabling practice.

4. Appurtenances

a) *Electric meter*

Where electricity is not provided by the existing infrastructure or where metered, meters shall either be single pole mount unit, mounted within the Pole, or a pedestal located off the ROW on private property subject to Planning. Electric meters and disconnects shall be allowed provided they comply with local and state electric codes, and shall not interfere with pedestrian or vehicular clearances or sight lines for traffic signs, signals, or intersection sight distance.

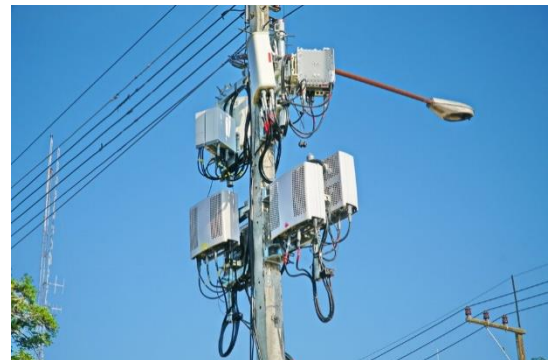


Figure 1 Example of unacceptable cabling and shrouding

b) Fiber, Cable, or Network Interface Equipment

Fiber or cable to the Radio shall be over existing overhead routes or underground. Demarcation points between the provider of services and the user of the service for fiber or cable services (“Demarcation Facility”) shall either be in a vault or a pedestal. Alternatively, if the Radio equipment is allowed to be mounted on a Pole, the Demarcation Facility may be included in the shrouding or within the pole. Pedestals shall not interfere with pedestrian or vehicular clearances or sight lines for traffic signs, signals, or intersection sight distance.

5. Shrouding or Stealth

Antenna, radio equipment, cabling and connections shall be shrouded and or concealed to minimize visual impact from the sidewalk and roadway and adjacent structures. The equipment or antenna may be considered shrouded if the design meets aesthetic requirements and cabling is neatly trained and shrouded. Maximum shrouding for equipment shall be no more than twenty-eight (28) cubic feet.

The Shrouding and equipment shall not interfere with pedestrian or vehicular clearances or sight lines for traffic signs, signals, or intersection sight distance. Shrouding at the option of the City, and with agreement of the Wireless Service or Infrastructure Provider, may include either banner or street signage.

6. New or Replacement Poles

A Replacement Pole shall look substantially like existing Poles including exact replacement of lighting fixture. Replacement Poles shall be painted to match if painted or be made of the same material as the original Pole. In the case of concrete or exposed granite finishes a faux finish may be used with either paint or a photorealistic wrap, subject to review and approval of the City.

Replacement Poles in a District with contiguous zones shall all match and be of the same height, material, dimensions and manufacture to the extent possible as determined by the City.

New Poles shall be of similar architectural features and color as existing Poles in the vicinity as determined by the City.

7. Identification Markers

A 4-inch by 6-inch (maximum) plate or sticker with the Wireless Service or Infrastructure Provider’s name, location identifying information, and emergency telephone number shall be permanently fixed to the base of the Pole or the bottom of the attached shrouding. Other attachment locations may be used so long as the Identification Marker is visible and readable from street level.

B. Pole/Attachment Guidelines

1. Collocation

To prevent overloading of Poles, overcrowding of the ROW, and excessive attachments to a limited number of Poles in the ROW, no more than one Wireless Service Provider’s Small Cell Wireless Facility is allowed per Pole if there are other unoccupied Poles that can accommodate a Small Wireless Facility within a 300-foot radius from the proposed installation. Where Wireless Service Providers share an antenna(s) and common shrouding or stealthing, as may be the case with Wireless Infrastructure providers, collocation shall be allowed in all Districts. In cases where an unoccupied structure Pole does not exist within a 300-foot radius, a new Type 3 Structure maybe installed unless otherwise provided in Section V. The new Type 3 structure shall be designed to accommodate at least two Wireless Service Providers’ Radios and either two antenna bays or by using a shared antenna. Nothing in this section shall prohibit a Wireless Service Provider or Wireless Infrastructure Provider

from operating, occupying, broadcasting from or otherwise using a Small Wireless Facility or any other Wireless Facility from areas other than the ROW.

2. ROW Separation Requirements

A Wireless Service Provider or Wireless Infrastructure Provider shall not operate, occupy, broadcast from, or otherwise use a Small Wireless Facility in the ROW located within a 300-foot radius of another Small Wireless Facility that said Wireless Service Providers or Wireless Infrastructure Provider is operating, occupying, broadcasting from, or otherwise using. Table 1 provides the required distances between installations for various Districts categories in the ROW. Nothing in this section shall prohibit a Wireless Service Provider or Wireless Infrastructure Provider from operating, occupying, broadcasting from or otherwise using a Small Wireless Facility or any other Wireless Facility from areas other than the ROW. If a Wireless Services or Infrastructure Provider desires to locate closer than 300 feet, then sufficient evidence shall be provided to the City to show there are sufficient structures available for competitors, and that the coverage is necessary showing capacity and coverage details and or metrics.

3. Type 1: Attachment to an Existing Pole in the Right-of-Way

To the extent allowed by the owner of the Pole, If any existing Pole that Small Wireless Facility equipment is proposed upon requires replacement the applicant shall be required to replace said Pole with a Type 2 installation.

a) Utility Wood Pole Strand Mounted

Aerial fiber and power strand installations are allowed; however, coiling of excess fiber or other cables is not allowed. All lines shall be neatly trained and secured. See Figure 2 for a schematic example.

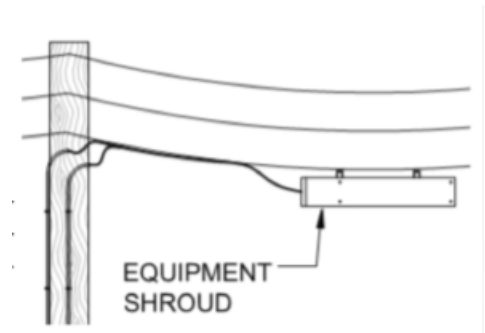


Figure 2 Schematic of Strand Mounted equipment

b) Wood Pole With or Without Lighting Mast(s)

All Small Wireless Facility equipment shall be mounted behind a shroud. No more than two shrouds may be installed at each location. No Small Wireless Facility devices shall be installed without confirming that the intended installation has no impact on the streetlight's operational performance.

The lighting design shall meet the luminaire specifications and design requirements set forth in the City's Street Lighting Design Guidelines. These guidelines provide information about luminaire aesthetics, lighting criteria, typical streetlight spacing, specifications and details. The Wireless Service or Infrastructure Provider shall provide all documentation required by the Street Lighting Design Guidelines to City during the permitting process. See Figure 3 for a schematic example.

c) Decorative Pole With Luminaire

All Small Wireless Facility equipment shall be mounted behind a shroud. No more than two shrouds shall be installed at each location. No Small Wireless Facility devices shall be installed without confirming that the intended installation has no impact on the operational performance of a streetlight.

The lighting design shall meet the luminaire specifications and design requirements set forth in the City's Street Lighting Design Guidelines. These guidelines provide information about luminaire aesthetics, lighting criteria, typical streetlight spacing, specifications and details. The network provider shall provide all documentation required by the Street Lighting Design Guidelines to the City during the permitting process.

d) Traffic Pole With or Without Luminaire

All Small Wireless Facility equipment shall be mounted behind a shroud. No more than two shrouds shall be installed at each location. No Small Wireless

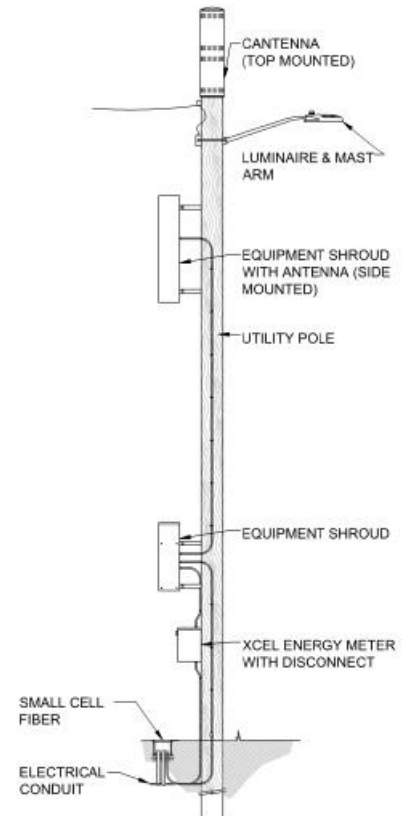


Figure 3 Schematic of Small Cell on Wood Pole with Luminaire

Facility devices shall be installed without confirming that the intended installation has no impact on the streetlight's operational or electrical performance.

The lighting design shall meet the luminaire specifications and design requirements set forth in the City's Street Lighting Design Guidelines. These guidelines provide information about luminaire aesthetics, lighting criteria, typical streetlight spacing, specifications and details. The network provider shall provide all documentation required by the Street Lighting Design Guidelines to City during the permitting process.

4. Type 2: Integrated Right-of-Way Poles

To the extent allowed by the owner of the pole, In cases where the District or other criteria dictate replacement of an existing Pole to accommodate a Small Wireless Facility, the equipment cabinet, upper pole, luminaire, mast arm, luminaire control node if applicable, antenna enclosure, and all hardware and electrical equipment necessary for a complete assembly shall be integrated into a single Pole. Mast Arm and Luminaire must be same make and model as unit(s) being replaced to the extent possible as determined at the City's discretion. Pole shall be of similar architectural features (ie Square, round, fluted) as the original Decorative Pole.

a) *Integrated Design with Luminaire*

A Type 2 Integrated ROW Pole should only be located where an existing Pole can be removed and replaced, or at a new location where it has been identified that a streetlight is necessary. See Figure 4 for a schematic Example. Type 2 Poles replacing poles owned by the City shall be owned by the City and maintained by the Wireless Service Provider during the term of occupancy excepting maintenance and replacement of the luminaire. In cases where an integrated pole with luminaire is damaged, knocked down, or otherwise rendered ineffective as a street light, the Owner shall have the right to immediately replace the luminaire with a temporary light until such time as the Small Wireless Facility is replaced.

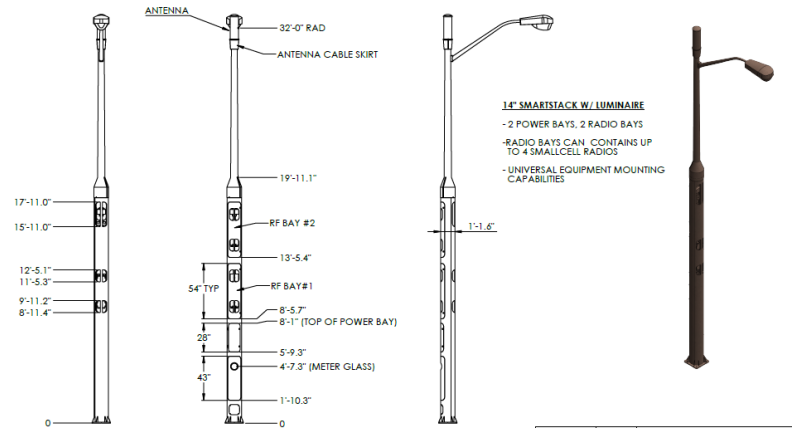


Figure 4 Schematic of Integrated Lighting Pole Design

When submitting to City, the Pole design and configuration shall be per City Standards. In no case shall these Poles exceed 15" in diameter, unless in the discretion of the City, the proposed dimensions materially conform to the intent of these Design Guidelines.

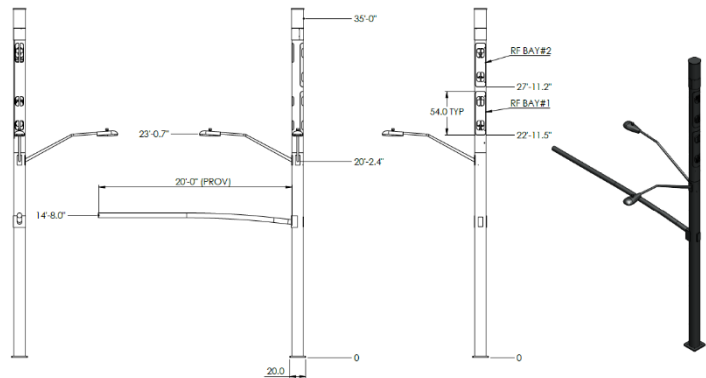


Figure 5 Schematic of Integrated Traffic Pole

b) *Integrated Traffic Pole with or without Luminaire*

In cases where the existing structural integrity or other conditions prevent a Type 1 attachment to a traffic standard, an Integrated Pole must be used. In no case shall these Poles exceed 20 inches in diameter unless the existing Pole being replaced has a greater diameter. Reinforcement of an existing Pole is not permitted. See Figure 5 for a schematic example.

5. *Type 3: New Freestanding Single Purpose Towers*

New Towers are strongly discouraged, and will only be considered in cases where there are no existing unoccupied poles within 300 feet radially of the proposed location. New Towers shall match or exceed the aesthetics of existing streetlights installed within 1000 feet to the proposed Tower. The Wireless Service OR Infrastructure Provider shall perform a visual inspection (Online street images are considered sufficient unless the pole standards were updated after the images were published) prior to submitting a permitting application to determine existing aesthetics.

a) *New Tower*

New Towers are strongly discouraged where existing Poles exist.

New Towers shall be fully integrated to include the equipment cabinet, upper pole, antenna enclosure, and all hardware and electrical equipment necessary for a complete assembly shall be integrated into a single structure. Tower shall be of similar architectural features (i.e. square, round, fluted) as the nearest Decorative Pole in the vicinity or as determined by the City.

b) New Wood Tower

New Wood Towers are discouraged over an integrated Pole or Tower. Wood may only be used in specific Districts where no other structure is available within a 300 feet radius of the Wireless Service Provider's proposed location and the nearest Poles are made of wood.

All Small Wireless Facility equipment shall be mounted behind a shroud. Only two shrouds, including the disconnect and antenna, shall be installed at each location. No ground mounted equipment, including backup power supply, shall be allowed except in District Categories where it is allowed.

V. Design Guidelines Applied to Districts

A summary of the Design Guidelines applied to Districts is in Table 1.

Districts	Guidelines				
		Separation	Type of Structure Allowed	Height Limit	
	Peninsula	300 ft	1,2	5 ft above existing; Never exceed 40 ft	
	DRB				
	Corridors	300 ft	1,2	5 ft above existing; Never exceed 40 ft	
	Parks	300 ft	1,2	5 ft above existing; Never exceed 40 ft	
	Residential	300 ft	1,2	5 ft above existing; Never exceed 40 ft	
	Commercial	300 ft	1,2,3	5 ft above existing; Never exceed 40 ft	
	Industrial	300 ft	1,2,3	5 ft above existing; Never exceed 40 ft	
	Special	300 ft	1,2	5 ft above existing; Never exceed 40 ft	

Table 1 Design guidelines summary

A. Peninsula

1. Pole Type Allowed

Type 1 installations may be allowed on existing wood poles subject to i) Antennas being shrouded or sufficiently concealed, ii) no more than one shrouded equipment and radio enclosure per pole, iii) subject to pole owner installation and/or design guidelines, and iv) equipment shall not impinge on view from windows or view from adjacent buildings within 10 feet of the installation. Type 2 integrated Poles are preferred in the Peninsula. All integrated Poles shall match existing fixtures being replaced to the extent possible as determined by the City. Regardless of equipment location, where possible, the integrated Poles in a contiguous area of similar structures shall all be identical height, material, and manufacture.

2. Height Limit:

Integrated Poles replacing City owned lighting fixtures shall not exceed 5 feet above the existing height of the Pole being replaced. Luminaires, if any, shall be mounted at the same height above ground as others within 500 feet in the District and, where possible, shall be of the same make and model using the same lamps as those existing in the District. If multiple types of luminaires or Poles exist, the City will determine which design shall be used. No small wireless shall exceed 40 feet in height.

B. DRB Corridors

Type 1 installations may be allowed on existing wood poles subject to i) Antennas being shrouded or sufficiently concealed, ii) no more than one shrouded equipment and radio enclosure per pole, iii) subject to pole owner installation and/or design guidelines, and iv) equipment shall not impinge on view from windows or view from adjacent buildings within 10 feet of the installation. Type 2 integrated Poles are preferred in the DRB Corridors. All integrated Poles shall match existing fixtures being replaced to the extent possible as determined by the City. Regardless of equipment location, where possible, the integrated Poles in a contiguous area of similar structures shall all be identical height, material, and manufacture.

1. Height Limit

Integrated Poles shall not exceed 5 feet above the existing height of the Pole being replaced. Luminaires, if any, shall be mounted at the same height above ground as others within 500 feet in the District and shall be of the same make and model using the same lamps as those existing in the District. No small wireless facility shall exceed 40 feet in height.

C. Parks

Type 1 installations may be allowed on existing wood poles subject to i) Antennas being shrouded or sufficiently concealed, ii) no more than one shrouded equipment and radio enclosure per pole, iii) subject to pole owner installation and/or design guidelines, and iv) equipment shall not impinge on view from windows or view from adjacent buildings within 10 feet of the installation. Type 2 integrated Poles are preferred in Parks. All integrated Poles shall match existing fixtures being replaced to the extent possible as determined by the City. Regardless of equipment location, where possible, the integrated Poles in a contiguous area of similar structures shall all be identical height, material, and manufacture.

1. Height Limit

Integrated Poles shall not exceed above the existing height of the Pole being replaced. Luminaires, if any, shall be mounted at the same height above ground as others within 500 feet in the District and to the extent possible as determined by the City, and shall be of the same make and model using the same lamps as those existing in the District. No small wireless facility shall exceed 40 feet in height.

D. Residential

Type 2 integrated poles are required in residential areas subject to the exception below. All Integrated Poles shall match the first installation under these guidelines in a given District of contiguous zone or zones. Regardless of equipment location, the integrated Poles in contiguous Residential District. Poles shall all be of identical height, material and manufacture to the extent possible as determined by the City. Type 1 installations may be allowed on existing wood poles subject to i) Antennas being shrouded or sufficiently concealed, ii) no more than one shrouded equipment and radio enclosure per pole, iii) subject to pole owner installation and/or

design guidelines, and iv) equipment shall not impinge on view from windows or view from adjacent buildings within 10 feet of the installation.

1. Height Limit

Integrated Poles shall not exceed 5 feet in height over the Pole being replaced. Luminaires, if any, shall be mounted at the same height above ground as others within 500 feet in the District and shall, where possible, be of the same make and model using the same luminaires as existing in the District. No small wireless facility shall exceed 40 feet in height.

E. Commercial District

Type 2 integrated structures are preferred; however, Type 1 structures are allowed. When there are no vertical structures within 750 feet of a given location Type 3 Towers are allowed. Type 1 installations may be allowed on existing wood poles subject to i) Antennas being shrouded or sufficiently concealed, ii) no more than one shrouded equipment and radio enclosure per pole, iii) pole owner installation or Design Guidelines, and iv) equipment not impinge on view from windows or view from adjacent buildings within 10 feet of the installation.

1. Height Limit

For Type 1 and 2 Poles maximum height shall not exceed 5 feet over adjacent Poles in the ROW that are similar to the Pole being used or replaced. In the case of type 3 Towers, height shall be limited by the most restrictive District adjacent to the subject location. No small wireless facility shall exceed 50 feet in height.

F. Industrial District.

1. Pole or Tower Type Allowed

Type 2 integrated Poles are preferred; however, Type 1 Poles are allowed. When there are no poles within 300 feet of a given location, Type 3 Towers are allowed.

2. Height Limit:

For type 1 and 2 Poles maximum height shall not exceed 5 feet over adjacent existing Poles in the ROW that are similar to the Pole being used or replaced. In the case of type 3 Towers, height shall be limited by the most restrictive height adjacent to the subject location. No small wireless facility shall exceed 50 feet in height.

G. Special District.

1. Pole Type Allowed

Only Type 2 integrated Poles are allowed in Special Districts. All integrated Poles shall match the first installation under these guidelines in a given District of contiguous zone or zones. Regardless of equipment location, the integrated Poles in a contiguous residential District shall all be of identical height, material, and manufacture. Type 1 installations may be allowed on existing wood poles subject to i) Antennas being shrouded or sufficiently concealed, ii) no more than one shrouded equipment and radio enclosure per pole, iii) pole owner installation or Design Guidelines, and iv) equipment not impinge on view from windows or view from adjacent buildings within 10 feet of the installation.

2. Height Limit:

Integrated Poles shall not exceed 5 feet in height over the replaced Pole. Luminaires, if any, shall be mounted at the same height above ground as others proximate in the District and shall be, to the extent possible as

determined by the City, of the same make and model using the same lamps as the existing in the District. No small wireless facility shall exceed 40 feet in height.

VI. Application Requirements

- A. Public Works Small Wireless Facility Application form
- B. Scaled drawings showing the proposed installation and existing installation
- C. Structural Calculations
- D. Photo simulation showing the Existing site and Proposed installation unless that installation has been previously approved in the subject District
- E. A Maximum Permissible RF Exposure Report

The Maximum Permissible RF Exposure report shall be endorsed by a licensed radio frequency engineer or an electric engineer in the State where the Small Wireless Facility is located. It shall specify minimum approach distances to the general public as well as electrical and communication workers that are not trained for working in an RF environment (uncontrolled) when accessing the strand or Small Wireless Facility by ladder, climbing or bucket truck. The Report may be generic for a common installation type that matches the proposed site type depicted in the application.