

## **Terms and Conditions of Small Cell Permits:**

Pursuant to Federal Communications Commission (FCC) Declaratory Ruling and Third Report and Order, FCC 18-133, released on September 27, 2018 and FCC 20-75 Declaratory Ruling released on June 10, 2020 (“FCC Order”) clarifying provisions of its rules implementing section 6409(a) of the 2012 Spectrum Act - wireless service providers and wireless infrastructure providers are permitted to locate Small Wireless Facilities (as defined in the FCC Order) in public Right-of-Way (ROW) in accordance with the FCC Order. Utility/Special Use Permit for Small Cell Facilities applicants must comply with the following terms and conditions for each Utility/Special Use Permit for Small Cell Facilities issued by the CDOT.

The applicant is responsible for the following functions:

- Apply for and obtain the applicable CDOT Region Utility/Special Use Permit for Small Cell Facilities and comply with all applicable provisions, terms, and conditions of the applicable CDOT Region Utility/Special Use Permit for Small Cell Facilities.
- Be in compliance with CDOT’s Small Cell Infrastructure in Public Right-of-Way Design Guidelines, as amended from time to time.
- Pay applicable initial and recurring fees. Payments shall be made via Paypal in Salesforce or may be made by providing a check or money order made payable to “CDOT” at:  
Colorado Department of Transportation  
C/O ITS Small Cells  
425C Corporate Circle  
Golden, CO 80401

Or at such place as CDOT from time to time designates by notice.

The Colorado Department of Transportation is responsible for the following functions:

- Upon receipt of payment and all other necessary information/documentation, issue the applicable CDOT Region Utility/Special Use Permit(s) for Small Cell Facilities according to the FCC Shot Clock requirements as established by the FCC Order after receiving applicant’s properly completed and compliant application.

\_\_\_\_\_ I have read, reviewed and understand CDOT’s Terms and Conditions of Small Cell Permits (“Terms and Conditions”) in their entirety and expressly agree to fully comply with all Terms and Conditions.

# Small Cell Infrastructure in Public Right-of-Way Design Guidelines

Publication Date: July 26, 2021

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## 1. Background and Purpose

This document provides guidance on the application process, placement requirements, aesthetic requirements, and general requirements that all Small Cell Facilities installed within CDOT ROW shall follow. All Small Cell Facilities proposed to be installed within CDOT ROW are bound to the requirements set forth in this document. Deviation from these Design Guidelines, if allowed, shall be expressly approved in writing by an authorized representative from the respective Region Permit Office prior to installation. **Please note this is considered a living document and subject to change. The latest version may be found at: <https://www.codot.gov/business/permits/utilitiesspecialuse>.**

Pursuant to Federal Communications Commission (FCC) Declaratory Ruling and Third Report and Order, FCC 18-133, released on September 27, 2018 and FCC 20-75 Declaratory Ruling released on June 10, 2020 (“Order”) clarifying provisions of its rules implementing section 6409(a) of the 2012 Spectrum Act - wireless service providers and wireless infrastructure providers are permitted to locate small wireless facilities in the public Right-of-Way (ROW). These new small cell installations are expected to improve the providers’ ability to meet current and future consumer cellular and data needs.

Small Cell Facilities are defined by Federal and State legislation as a personal wireless service facility as defined by the Federal “Telecommunications Act of 1996,” as amended as of August 6, 2014; or a wireless facility that meets the following conditions:

1. The facilities—
  - (i) are mounted on structures 50 feet or less in height including their antennas as defined under 47 CFR section 1.1320(d), or
  - (ii) are mounted on structures no more than 10 percent taller than other adjacent structures, or
  - (iii) do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;
2. Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of antenna under 47 CFR section 1.1320(d)), is no more than three cubic feet in volume;
3. All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;
4. The facilities do not require antenna structure registration under 47 CFR part 17;
5. The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and
6. The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in section 1.1307(b).

See Order, fn. 9.

Small Cell Facilities are subject to the height, siting, and Design Guidelines as defined in this document.

## 2. Definitions

**AASHTO LRFD LTS:** Current Edition of the American Association of State Highway and Transportation Officials (AASHTO) LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

**ADA:** Americans with Disabilities Act.

**Antenna:** Communication equipment transmitting or receiving electromagnetic radio frequency signals used in providing Wireless Service.

**Base Station:** A structure consisting of radio transceivers, antennas, coaxial cable, a regular and backup power supply, and other associated electronics.

**Cantenna:** A waveguide antenna, directional in nature, used to better detect or broaden a wireless network's range.

**CDOT:** Colorado Department of Transportation.

**Collocation:** The installation, mounting, maintenance, modification, operation, or replacement of Small Cell Facilities in public right-of-way.

**Concealed:** Any Small Cell Facility that is covered, blended, painted, disguised, camouflaged such that the Small Cell Facility blends into the surrounding environment and is visually unobtrusive.

**Contractor:** Network provider representative or authorized designee for construction activities. Contractor may represent the wireless service provider(s).

**Design Guidelines or Guidelines:** These guidelines adopted by CDOT as amended or modified from time to time.

**Equipment Cabinets:** Physical containers for smaller, distinct devices.

**FCC:** Federal Communications Commission.

**ITS:** Intelligent Transportation Systems.

**LRFD:** Load and Resistance Factor Design Specification.

**(CDOT) M&S Standards:** Miscellaneous & Safety Standards.

**Monopole:** A freestanding pole supporting a Small Cell Facility, lighting, or signage installed within the CDOT ROW.

**MUTCD:** Manual on Uniform Traffic Control Devices.

**Provider:** Wireless network service provider or wireless infrastructure provider.

**ROW:** The area on, below, or above state right-of-way as defined in CDOT's Right of Way Manual.

**RF:** Radio Frequency.

**Shot Clock:** FCC's new presumptively reasonable permit review timelines.

**Small Cell Equipment:** A subset of Small Cell Facilities including cabinets, wiring, etc.

**Standard Specifications:** Current edition of the CDOT Standard Specifications for Road and Bridge Construction.

**Utility Pole:** A utility pole owned by a third party utility company such as Xcel Energy or CenturyLink, etc.

**Wireless Tower:** Any structure built for the sole or primary purpose of supporting FCC-licensed antennas and their associated facilities.

### 3. FCC Declaratory Ruling 20-75 (June 9, 2020):

The Declaratory Ruling 20-75 clarifies provisions of its rules implementing Section 6409(a) of the 2012 Spectrum Act. Section 6409(a) applies to the collocation, removal, or replacement of equipment on an existing wireless tower or base station. It provides that modifications to certain existing wireless facilities must be approved within 60 days or the permit is deemed granted.

FCC 20-75 interprets several provisions in FCC Rulemaking that implement Section 6409(a). A general summary of the changes is provided below<sup>1</sup>

#### **60 Day Shot Clock:**

Existing rules require approval of 6409(a) “eligible facilities requests” within 60 days from the date the application is filed. If a request to modify an existing facility is not acted upon within 60 days, it is deemed granted, unless the application is determined to not be an eligible facility under the act.

The Ruling clarifies that the shot clock begins when an applicant “takes the first procedural step” as a part of the review process and “submits written documentation showing that a proposed modification is an eligible facilities request.”

#### **Eligible Facilities Request:**

The “eligible facilities request” is defined as “any request for modification of an existing tower or base station that does not “substantially change” the physical dimensions of such tower or base station, involving (i) Collocation of new transmission equipment; (ii) Removal of transmission equipment; or (iii) Replacement of transmission equipment.”

#### **Substantial Change:**

The “substantial change” is defined as any changes that exceed defined limits on increases in the height or girth of the structure or the number of associated equipment cabinets, involve excavation or deployment on ground outside a structure’s current site, defeat the concealment elements of the preexisting structure, or violate conditions previously imposed by the local zoning authority.”

A substantial change occurs if:

- (a) The mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10% or create more than twenty feet of separation between a new antenna and the nearest existing antenna. However, a new antenna may increase tower height by 10% without being considered a substantial change provided this design is “necessary to avoid interference with existing antennas.”; or
- (b) The mounting of the proposed antenna would involve the installation of more than four equipment cabinets or more than one new equipment shelter. However, mere protective housing does not transform transmission equipment into equipment cabinets; or
- (c) Modifications to the concealment elements (elements of a stealth-designed facility) intended to make the facility look like something else other than a wireless tower or base station; or
- (d) The mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; or

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<sup>1</sup> This general summary is provided for informational purposes only. Applicants are strongly encouraged to review FCC 20-75 prior to submitting an application.

- (e) The mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.

## 4. Application Process

Follow these steps for the installation of Small Cell Facilities to be located within CDOT ROW.

### **STEP 1: Determine the type of project**

Before applying for the permits required for installation of Small Cell Facilities within CDOT ROW, determine if your project meets the above definition of Small Cell Facility.

**STEP 2: Submit required application and supporting documents to respective Region's Permit Office Provider** shall complete and submit to CDOT the following items:

1. Completed Utility/Special Use Permit Form – one (1) permit application per day, maximum of 10 locations per permit per highway corridor, per Region. If submitting for multiple locations, the application shall be of the same type – new pole, collocating on existing infrastructure (non- CDOT), or collocating on existing infrastructure (CDOT-owned). This is an attempt to expedite the permit review process by combining similar type of applications.
2. Completed Shot Clock Checklist (Refer Appendix A)
3. Application Fee (Paid via Paypal in Salesforce or a check or money order made payable to “CDOT”):
  - a. The Provider shall submit the following permit fee:
    - i. \$500 non-recurring fees for up to five small wireless facilities, an additional \$100 for each Small Cell Facility beyond five, or
    - ii. \$1,000 for non-recurring fees for a new pole (i.e. not a collocation) intended to support one or more Small Cell Facilities
    - iii. \$270 per Small Cell Facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to CDOT owned structures in the ROW

These fees shall not be construed as granting applicant a property interest in the permitted location.

4. Proof of agent authorization, if any (to act on provider's behalf)
5. Third Party Lease agreements, if any, for attachment(s) to non-CDOT owned structures within public ROW
6. Provider's billing address and contact information for initial and recurring fees.
7. Technical Plans or Construction Documents signed and sealed by appropriate qualified professional(s) of the proposed installation(s) with new and existing equipment labeled as applicable. The plans must be drawn to scale with a north arrow and include the following:
  - a. If multiple facilities are requested (consolidated application with a single permit), a master site map, which includes the location of all Small Cell Facilities proposed with the application and an identification system for each site (site names, numbering, etc.).
  - b. Aerial Map showing the location of the proposed or existing pole(s) to which the Small Cell Facility is proposed to be attached, and a street view image.
  - c. Detailed drawings for each facility including the following: Site plan that includes clear zone lines, adjacent streets, approximate property lines, curb cuts, and use of adjacent properties. Include the location of all transmission equipment related to the facility, including antennas, radio transceivers, coaxial or fiber-optic cable, and regular

and backup power supply. Include all existing and proposed features in the ROW and within 20 feet of facility on adjacent properties (landscaping, trees, bike racks, tree grates, parking meters, benches, awnings, signs, doors, lights, hydrants, fencing, manholes, fire hydrants, etc.). Include any proposed tree removal locations. The proposed separation of the facility from all other adjacent wireless communication facilities and Small Cell Facilities within the ROW shall also be shown. The latitude and longitude information of the proposed location is desired.

- d. Elevation drawings of proposed facility that call out the height of the vertical infrastructure, antenna(s), and all exposed elements from grade and clearance to sidewalk, if applicable. Include below grade equipment vaults and the location of all transmission equipment related to the facility, including antennas, radio transceivers, coaxial or fiber-optic cable, and regular and backup power supply. Include the dimensions of each antenna enclosure and of all exposed elements.
- e. Detailed plans for the screening of antenna and other transmission equipment, including equipment enclosures, other transmission equipment and vaults. Plans shall include proposed material finish and colors.
- f. If below grade equipment vaults are proposed, specifications on proposed vault and cover and plans showing the horizontal and vertical distances from all existing utilities, property lines and easement boundaries. Include details on materials removed and/or replaced in the ROW (concrete, asphalt, masonry, etc.).
- g. Attachment details and specifications.
- h. Placement of Small Cell Facilities on traffic signals shall be considered only if, after the provider performs reasonable diligence, no other suitable alternative is available in the vicinity of the proposed location (refer to **Section 6** for additional information). Generally, the existing signal poles do not have the structural capacity to handle the weight of the small cell equipment. The size of most existing poles also do not allow for the camouflaging of the equipment within the pole. If the application requests installation of Small Cell Facilities on traffic signal(s), provider shall include a statement explaining the non-availability of a suitable alternative location. Refer to **Section 5** of this document outlining the order of preference for the location of Small Cell Facilities.
- i. If a facility is proposed to be located on an existing traffic signal or light pole, the work will be performed by International Municipal Signal Association (IMSA) certified employees to include Licensed Journeyman electricians for all electrical work exceeding 50 volts.
- j. **Traffic Signal or Overhead Sign Structure (New or Existing):** If no suitable alternative location is available and if a facility is proposed to be located on an existing traffic signal or an overhead sign structure, a stamped letter from a qualified Colorado licensed professional engineer (P.E.) certifying that the antenna installation(s) will be placed in a manner so that the size, appearance, and function of the traffic signal or an overhead sign structure will not be considerably altered and structure has sufficient strength for additional loading. Structural design calculations and independent design calculations per AASHTO LRFD LTS shall be provided and stamped by a professional engineer licensed in the State of Colorado. Shop drawings that conform to CDOT Standard Specifications 105, Table 105-1 (614 Overhead Sign Structures or Traffic Signal Poles), shall be submitted. The shop drawings shall be stamped by a professional engineer licensed in the State of Colorado. New/replacement structures shall be designed with details in accordance to the current CDOT M&S Standards, unless otherwise directed by the CDOT Staff Bridge branch.
- k. **Light Pole or Monopole(New):** If a new/replacement light pole or monopole is





subsequent determinations of incompleteness, the Shot Clock would toll – not reset – if the Region Permit office provides written notice within 10 days that the supplemental submission did not provide the requested information.

For non-Small Cell Facilities, the Shot Clock begins to run when an application is first submitted, and can be paused – not reset – if the Permit office notifies the applicant within 30 days that the application is incomplete. For subsequent determinations of incompleteness, the process is the same as described above for Small Cell Facilities.

## 5. Placement Requirements

1. The order of preference for the location of Small Cell Facilities is:
  - a. Installation on monopoles
  - b. On-strand attached to a utility pole
  - c. Attachments to utility poles
  - d. Attachment to plain wood or metal street lights
  - e. Other attachments
  - f. Attachment to traffic signal poles
2. All small cell equipment located within the public ROW shall be located such that it meets the ADA requirements and does not obstruct, impede, or hinder usual pedestrian or vehicular travel or interfere with the operations and/or maintenance of traffic signals and other traffic control devices, camera views, signage, street lights, street furniture, fire hydrants, or CDOT, local agency, or business district maintenance.
3. To the extent possible, all small cell equipment should be located:
  - a. On property lines between properties adjacent to the ROW to avoid interference with building face, views, business signage, pedestrian flow, etc.
  - b. In alignment with existing trees, utility poles and street lights.
  - c. In a manner that does not significantly create new obstructions to property sight lines.
  - d. Within two feet of the outer edge of the ROW line to minimize any obstruction, impediment, or hindrance to the usual travel or public safety on a public ROW.
  - e. If placed on the side of a pole, attachments must be perpendicular to the street away from vehicular traffic at a minimum of twenty (20) feet above ground.
  - f. To the extent possible, spaced equidistant from other poles supporting Small Cell Facilities to minimize visual clutter and distractions to vehicular traffic; and to minimize the effect on property values and aesthetics of the area.
  - g. No protrusion from the outer circumference of the existing structure or pole shall be more than two (2) feet.
  - h. Appropriate clearance from existing utilities and CDOT equipment shall be maintained.
  - i. In a location that does not adversely impact motorist sight triangles at intersections and is in accordance with the latest edition of the AASHTO A Policy on Geometric Design of Highways and Streets. Poles shall not be located within a thirty (30) feet by thirty (30) feet sight distance triangle at any intersections, if ROW are one hundred and twenty (120) feet or less. A fifty (50) feet by fifty (50) feet sight triangle is required for ROW greater than one hundred and twenty (120) feet.
  - j. A minimum distance of fifteen (15) feet from driveways, measured from the edge line of the driveway.
  - k. A minimum distance of ten (10) feet from any above grade building face, including projecting windows.
  - l. In a manner that shall not violate any applicable local, state or federal law, including the 1990 Americans with Disabilities Act.
  - m. A minimum distance of fifteen (15) feet from existing signal poles.
  - n. A minimum distance of twenty (20) feet from existing streetlights.
  - o. A minimum distance of fifteen (15) feet from tree trunks, measured from the outside of the tree.

- p. A minimum distance of six (6) feet from an existing fire hydrant or a building's fire connections.
- 4. A replacement traffic signal pole shall be placed approximately in the same location as the pole it replaces except as approved by CDOT.

## 6. General Requirements

1. Small cell equipment shall be mounted on or hidden inside the pole as follows:
  - a. Antenna: contained in a cantenna
  - b. Other equipment: contained in an equipment cabinet
  - c. Monopole installations: all equipment inside monopole in base cabinet
  - d. Utility poles and wood poles: all equipment located on poles if allowed by pole owner, and anything not on the pole to be located in a ground mounted utility box. Fiber in conduits inside of or flush with pole.
  - e. If, after performing reasonable diligence, no suitable alternative location is available and the small cell equipment is to be located on CDOT owned traffic signals and standard light poles, all equipment must be in a ground mounted utility box. Fiber and other wiring inside pole in a conduit (if conduit is not available, pole cannot be used). Conduit shall be accessed through separate hand hole. If separate hand hole is not available, replacement pole is required.
  - f. Attachments to a CDOT-owned pole or any new replacement pole should have a smooth transition between the small cell and the pole and (except for the top of a cantenna) shall not have any flat surface more than 1.5 inches to prevent the creation of a ledge.
  - g. New/replacement metal street light poles: all equipment inside pole.
  - h. Decorative street lights: replace with equipment inside pole.
  - i. All other locations not specified herein are prohibited.
2. Only one enclosure shall be installed at each location, no more than 28 cubic feet in volume as required in the FCC 18-133 Ruling.
3. If attached to CDOT equipment, power to the Small Cell Facility shall be provided by a separate isolated metered branch circuit. The separate metered branch circuit shall include a metered disconnect from the service supplying power to the CDOT owned device that the Small Cell Facility is attached to. The power disconnect shall be accessible to CDOT maintenance staff and only disconnect the Providers' power.
4. Following installation or modification of a Small Cell Facility, CDOT may require Provider to test the Small Cell Facility's radio frequency (RF) and other functions to confirm it does not interfere with CDOT's operations. CDOT reserves the right to disconnect any and all equipment that causes interference with any and all traffic control and ITS devices.
5. The protocol for responding to events of interference will require Provider to provide CDOT an Interference Remediation Report (IRR) that includes the following items:
  - a. Remediation Plan. Devise a remediation plan to stop the event of interference;
  - b. Time Frame for Execution. Provide the expected time frame for execution of the remediation plan; and
  - c. Additional information. Include any additional information relevant to the execution of the remediation plan.
  - d. In the event that interference with CDOT facilities cannot be eliminated, Provider shall shut down the Small Cell Facility and remove or relocate the Small Cell Facility that is the source of the interference within 48 hours to a suitable alternative location approved by CDOT.

6. As-Built maps and records
  - a. Provider shall maintain accurate maps and other appropriate records of its Small Cell Facilities and related ground equipment as they are actually constructed in the ROW. Provider shall maintain a list of its Small Cell Facilities and provide CDOT an inventory of locations within ten (10) days of installation. The inventory of Small Cell Facilities shall include GIS coordinates, date of installation, pole ID number (if applicable), type of pole used for installation, pole owner, and description/type of installation for each Small Cell Facility installation. Provider will provide additional maps to CDOT upon request.
  - b. Upon CDOT's written request, Provider shall provide a cumulative inventory within thirty (30) days of CDOT's request. Concerning Small Cell Facilities that become inactive, the inventory shall include the same information as active installations in addition to the date the Small Cell Facility was deactivated and the date the Small Cell Facility was removed from the ROW. CDOT may compare the inventory to its records to identify any discrepancies.
7. Design Manual/Technical Specifications
  - a. Placement or modification of Small Cell Facilities and related ground equipment shall comply with the latest technical requirements set forth in this document and/or local agency design guidelines/requirements. If local agency requirements conflict with the requirements set forth in this document, the requirements set forth in this document apply unless approved by CDOT.
8. Installations shall not affect accessibility or inspectability of existing or new/replacement structures.
9. CDOT Region Traffic Engineer or designee shall provide guidance on all issues related to the operation and function of traffic signals and traffic control devices including but not limited to typical traffic signal placement, signal specifications, street signs or other signage (where applicable).

## 7. Aesthetic Requirements

1. Providers shall match the aesthetics of the existing unique assemblies and other CDOT infrastructure near proposed small cell locations, with special attention given to the details of the unique neighborhood assemblies.
  - a. CDOT infrastructure and unique neighborhood assemblies may include street lights, traffic signals, mast arms, decorative pole bases, architectural luminaires, mounting heights, pole colors, etc.
  - b. Aesthetics may include style, color, patterns, sizes, scale, and heights. In some instances, contrast may be warranted (i.e. urban context). In other instances, contrast shall be minimized (i.e. open space or rural setting).
  - c. Equipment shall minimize impacts to the surrounding aesthetics. All equipment shall be colored to match pole aesthetics.
  - d. If equipment is mounted to a wood pole, the visible attachments and hardware shall be colored to match the pole unless a variation is expressly allowed in writing an authorized representative of the local agency or CDOT Region Permit Office. Typically, US Forest Service Brown, FS 20059, matches wood coloring.
  - e. Poles shall match the aesthetics of the surrounding poles. In instances of zinc poles, they shall be powder-coated instead of painted.
  - f. Equipment on CDOT infrastructure shall reside above the signal arm, internal to the pole or hidden behind an exterior shroud. Provider shall mount no equipment to the exterior of the pole unless covered by an exterior shroud. Exterior shroud shall be colored to match existing pole and equipment.
  - g. CDOT aesthetic guidelines, policies, and/or standards shall be followed. The Provider shall contact the Region Planning and Environmental Manager (or designee) for aesthetic guidelines, policies, and/or standards.
  - h. Special attention should be given to the details of neighborhoods with unique street light assemblies. Unique assemblies may include mast arms, decorative pole bases, architectural luminaires, mounting heights, pole colors, etc.
  - i. Local agency and historic district design guidelines, policies, and/or standards, including cultural resources, shall be followed.
  - j. Per Section 6409(a) of the Spectrum Act of 2012, an environmental assessment may not be required under section 1.1307(a)(4) when the FCC, an applicant, and other affected parties have entered into a memorandum of agreement to mitigate effects on historic properties.
  - k. There shall be no lights on the equipment unless required by federal law.
  - l. Aesthetics shall maintain the primary function of the traffic control device(s) for safe and effective traffic control & management.
  - m. If after performing reasonable diligence, no suitable alternative location is available and the small cell equipment is to be located on CDOT-owned traffic signal pole, all small cell equipment shall reside above the signal arm, internal to the pole or hidden behind an exterior shroud. Providers shall mount no equipment to the exterior of the pole unless covered by a shroud.

## 8. Electrical Service Requirements

1. Provider shall be responsible for obtaining any required electrical power service to the Small Cell Facilities. The method of providing electric service shall be approved by CDOT. Provider is required to obtain all necessary permits.
2. Electrical service shall be in accordance to the electrical service provider's current requirements and the current National Electrical Safety Code (NEC). Inspections shall be conducted by a State inspector.
3. Grounding shall be per the electric service provider's requirements and shall be contained in a separate conduit from CDOT or local agency equipment.
4. Provider shall provide CDOT with a copy of the electrical permit(s) and provide sealed engineered drawings for conduit size, circuit size, calculations for Amp, distances running, etc.
5. Provider's electrical supply shall be separately metered from CDOT or local agency electric supply. A separate service meter and disconnect is required for the power to Small Cell Facility that can be accessed and operated by CDOT personnel. The electrical service meter shall not be mounted on CDOT poles or structures. Provider shall use single phase 120/240V when connecting to any CDOT infrastructure and provide access to service meter upon inspection.
6. CDOT shall not be liable to the Provider for any stoppages or shortages of electrical power furnished to the Small Cell Facility or ground equipment, including without limitation, stoppages or shortages caused by any act, omission, or requirement of the public utility serving the structure or the act or omission of any other tenant or Provider of the structure, or for any other cause beyond the control of CDOT.
7. Provider shall not allow or install generators or back-up generators unless expressly approved in writing by an authorized representative from the Region Permit Office. Generators may be allowed for testing, emergency outages, and restoration purposes, on a case-by-case basis, with prior, written approval from Region Permit Office.
8. Electric service meters shall be placed in a location that minimizes interference with other users for CDOT's ROW including but not limited to, pedestrians, motorists, and other entities with equipment in the ROW and minimizes its aesthetic impact within 25 feet and clear line of sight.



## 9. Conduits, Cables, Equipment Cabinets and Cantennas

1. All hardware attachments should be hidden.
2. Welding or drilling/punching holes into existing metal equipment or structures is not permitted.
3. All fiber and cabling shall be encased in conduits, unless otherwise approved by CDOT.
4. All metal pole installation requires cables to be installed inside of a pole. All cabling and raceways shall be concealed within the pole.
5. All cables shall be clearly labeled for future identification.
6. All cables shall be separated from CDOT's conduit, cabling and underground infrastructure. No Small Cell Facility wiring or electronics shall be placed in CDOT conduits.
7. If Small Cell Facility is proposed on a traffic signal pole or other CDOT owned poles or structures, they shall have a separate access hand hole for the provider, other than CDOT access hand hole.
8. The term "equipment cabinets" does not include relatively small electronic components if they are not used as physical containers for smaller devices, and the maximum number of additional equipment cabinets is measured for each separate eligible facilities request.
9. Equipment cabinets shall:
  - a. Have a lockable access door sized to install, maintain, and remove all small cell equipment as needed and shall meet the provider's requirements.
  - b. Be ground mounted
  - c. Meet CDOT's requirements for ground mounted utility boxes and be attached to a concrete foundation.
10. Cantennas shall:
  - a. Be mounted directly on top of the pole unless a side arm installation is required by the pole owner.
  - b. Have a tapered transition between the upper pole and cantenna.

## 10. Requirements for Removal, Replacement, Maintenance and Repair

1. Maintenance Work on the Small Cell Facility
  - a. The Provider shall obtain the applicable Region's maintenance permit to perform any maintenance activity on the Small Cell Facility.
  - b. Routine, periodic maintenance and emergency repairs may be performed in compliance with an approved maintenance permit from the applicable Region Permit Office.
2. Removal or relocation by Provider
  - a. The Provider shall obtain a utility/special use permit prior to removal or relocation of any equipment located within CDOT ROW
  - b. CDOT shall not issue any refunds for any amounts paid by Provider for Small Cell Facility that have been removed.
3. Removal or Relocation Required for Highway Construction
  - a. Except as provided in existing state and federal law, a Provider shall relocate or adjust any Small Cell Facilities and related ground equipment in a public ROW within 30 days of written notification by CDOT, and without cost to CDOT.
  - b. The Provider shall, at CDOT's direction, remove or relocate its Small Cell Facilities and related ground equipment at the Provider's sole cost and expense, except as otherwise provided in existing state and federal law, whenever CDOT reasonably determines that the relocation or removal is needed for any of the following purposes: the construction, completion, repair, widening, relocation, or maintenance of, or use in connection with, any CDOT construction or maintenance project of a street or public ROW for the purpose of enhancing the traveling public's travel and transportation uses.
  - c. If the Provider fails to remove or relocate the Small Cell Facilities and related ground equipment, or portion thereof as requested by CDOT within 90 days of the Provider's receipt of the request, then CDOT shall be entitled to remove the Small Cell Facilities and related ground equipment, or portion thereof at Provider's sole cost and expense, without further notice to Provider. CDOT will not be responsible for damage to the equipment when removing the Small Cell Facility.
  - d. The Provider shall, within 30 days following issuance of invoice for the same, reimburse CDOT for its reasonable expenses incurred in the removal (including, without limitation, overhead and storage expenses) of the Small Cell Facilities and related ground equipment, or portion thereof.
4. Allocation of Funds for Removal and Storage
  - a. CDOT has appropriated \$0 to pay for the cost of any removal or storage of Small Cell Facilities and related ground equipment and no other funds are allocated.
5. Tree Maintenance
  - a. Provider, its contractors, and agents shall obtain prior written permission from Region Permit office before trimming trees hanging over its Small Cell Facilities to prevent branches of such trees from contacting attached Small Cell Facilities. When directed by the Region Permit office, Provider shall trim under the supervision and direction of the CDOT inspector. CDOT shall not be liable for any damages, injuries, or claims arising from Provider's actions under this section.
6. Signage
  - a. Provider shall post its name, location identifying information, and emergency telephone number in an area on the cabinet of the Small Cell Facility that is visible to the public.

Signage required under this section shall not exceed 4" x 6," unless otherwise required by law (e.g. RF ground notification signs).

- b. Except as required by Law, Provider shall not post any other signage or advertising on the Small Cell Facilities without written approval from CDOT.
- c. Provider shall follow current CDOT Outdoor Advertising regulations in developing the signage.

#### 7. Graffiti Abatement

- a. As soon as practical, but not later than fourteen (14) calendar days from the date Provider receives notice thereof, Provider shall remove all graffiti on any of its Small Cell Facilities and related ground equipment located in the ROW.

#### 8. Restoration

- a. Provider shall repair any damage to the ROW, or any facilities located within the ROW, and the property of any third party resulting from Provider's removal or relocation activities or any other of Provider's activities within 10 calendar days following the date of such removal or relocation, at Provider's sole cost and expense, including restoration of the ROW and such property to substantially the same condition as it was immediately before the date Provider was granted a Permit for the applicable location, or did the work at such location (even if Provider did not first obtain a Permit), including restoration or replacement of any damaged trees, shrubs, or other vegetation.

#### 9. Provider's responsibility

- a. Provider shall be responsible and liable for the acts and omissions of Provider's employees, temporary employees, officers, directors, consultants, agents, affiliates, subsidiaries, sub-Provider's and subcontractors in connection with the installations of any Small Cell Facilities and related ground equipment, as if such acts or omissions were Provider's acts or omissions.

#### 10. Reservation of Rights

- a. CDOT reserves the right to install, and permit others to install, utility facilities in the ROW. In permitting such work to be done by others, CDOT shall not be liable to Provider for any damage caused by those persons or entities.
- b. CDOT reserves the right to locate, operate, maintain, and remove CDOT traffic signal poles, light poles or monopoles, overhead sign structures and other traffic control and ITS devices in the manner that best enables the operation of its systems and protect public safety.
- c. CDOT reserves the right to locate, operate, maintain, and remove any CDOT assets, including poles and structures, located within the ROW in the manner that best enables CDOT's operations.
- d. CDOT reserves the right to disconnect any and all equipment that causes interference with any and all traffic control and ITS devices or systems.
- e. CDOT reserves the right to limit access to the facilities according to CDOT's Lane Closure Strategy Guide.

#### 11. Ownership

- a. No part of a Small Cell Facility and related ground equipment erected or placed on the ROW by Provider will become, or be considered by CDOT as being affixed to or a part of, the ROW. All portions of the Small Cell Facility and related ground equipment constructed, modified, erected, or placed by Provider on the ROW will be, and remain the property of Provider, and may be removed by Provider at any time, provided the Provider shall notify the CDOT Region Permit office prior to any work in the ROW.

## 11. Abandonment of Facilities

Provider shall remove its Small Cell Facilities and related ground equipment when such facilities are abandoned regardless of whether or not it receives notice from CDOT. Unless CDOT sends notice that removal must be completed immediately to ensure public health, safety, and welfare, the removal must be completed within the earlier of 30 days of the Small Cell Facilities and related ground equipment being abandoned or within 30 days of receipt of written notice from CDOT. When Provider removes, or abandons permanent structures in the public ROW, the Provider shall notify CDOT in writing of such removal or abandonment and shall file with CDOT the location and description of each Small Cell Facility and related ground equipment removed or abandoned. CDOT may require the Provider to complete additional remedial measures necessary for public safety and the integrity of the public ROW in accordance with all applicable CDOT requirements and state and federal law.

\_\_\_\_\_ I have read, reviewed and understand CDOT’s Small Cell Infrastructure in Public Right-of-Way Design Guidelines “Guidelines” in their entirety and expressly agree to follow the Guidelines.

## Appendix A

### Federal Shot-Clock Checklist

Required for all wireless communication facility applications

Street Address (or general locations if not addressed):

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(Attach separate location sheet if necessary)

**This project is:**

- Collocation of small wireless facilities on existing structures: Agency has 60-days to act upon to an application
- Collocation of facilities other than small wireless facilities: 90 days
- New wireless communications facility where none currently exists: 90 days
- Construction of new facilities other than small wireless facilities: 150 days
- 'Eligible Facilities Request' without 'Substantial Change' for an existing wireless tower or base station: 60 days
- 'Eligible Facilities Request' with 'Substantial Change' for an existing tower or base station: 90 days

**Which federal "shot clock" applies to this application?**

- 60-day shot clock
- 90-day shot clock
- 150-day shot clock

For Small Cell Facilities, applicants will be notified by the Region's Permit office within 10 days whether the Small Cell Facility installation permit application is incomplete and what specific information is needed. For Small Cell Facilities, shot clocks are reset, not just tolled, if the Permit office notifies the applicants within 10 days after submission that the application is incomplete. For subsequent determinations of incompleteness, the shot clock would toll – not reset – if the Region Permit office provides written notice within 10 days that the supplemental submission did not provide the requested information.

For non-Small Cell Facilities, shot clock begins to run when an application is first submitted, and can be paused – not reset – if the Permit office notifies the applicant within 30 days that the application is incomplete. For subsequent determinations of incompleteness, the process is the same as described above for Small Cell Facilities.

**CDOT Permit Office Staff Use Only**

	Date
Application submittal	
Notify applicant by	
Request information	
Must notify applicant by	
Final Decision	