



Board Summary Report

Date: March 27, 2019

To: Board of County Commissioners

Through: Chuck Haskins, Engineering Division Manager, PWD
Bryan Weimer, Director, PWD

From: Jason Reynolds, Current Planning Program Manager, PWD

Subject: Case No. E19-024: Design Standards for Small Cell Facilities in the Right-of-Way

Request and Recommendation

Arapahoe County staff recommends approval of a resolution updating the Infrastructure Design and Construction Standards (IDCS) manual with standards for small cell facilities in public right-of-way. The proposed amendment would add a new Chapter 14 for Wireless Communication Facilities to the IDCS, which details the process and design requirements for facilities in the right-of-way.

Background

Small cellular facilities supplement the larger cellular towers and antennas installed in previous years. Small cell equipment tends to be about the size of a small backpack and are defined in the Colorado Revised Statutes as consisting of antenna equipment that can be located within an enclosure of no more than three (3) cubic feet in volume. Associated primary equipment enclosures are no larger than 17 cubic feet. These types of facilities will be used to supplement existing networks and to provide 5G service, which will require a higher density of antennas than previous generations of wireless service.

In 2017, the General Assembly passed and the Governor signed into law HB17-1193, which authorizes the installation of small wireless service infrastructure within local government owned and controlled rights of way. The Bill also provides for an expedited permitting process for such small cell facilities and limits the fees that the local government can charge in accordance the limitations specified in federal Telecommunications Act of 1996, as amended.

In September 2018, the FCC issued a declaratory ruling and order (FCC18-133) interpreting the federal Telecommunications Act of 1996, as amended, and a number of small cell requirements and limiting local governments' ability to restrict small cell facilities. The order interprets the Telecommunications Act, essentially requiring local governments to allow small cell facilities in the public right-of-way. It establishes "shot clocks" which limit the amount of time that a local government can take to review applications to locate small cell facilities within the right of way, whether the facility will be collocated on an existing structure within the right of way (60 days) or

whether the installation involves erecting a new pole within the ROW (90 days). It also limits fees/rents that can be charged, establishes maximum review times, and requires local governments to adopt design requirements within 180 days of the order (April 15, 2019).

Because of the short time frame specified under the FCC order to adopt any design standards and because these standards will only apply within public ROW, staff is proposing adopting these as a new Chapter (14) to the County's Infrastructure Design and Construction Standards. This allows for adoption of the standards independent of the Land Development Code which would require hearings before both the Planning Commission and the BOCC. The County's regulations for wireless communication facilities on private property are currently provided for in Chapter 12, Section 12-1100 of the Land Development Code, relating to Commercial Mobile Radio Service Facilities (CMRS). However, with recent changes in technology as well as the new provisions of federal law, the next step in the overall process is to review and update the existing CMRS regulations.

On March 12, 2019, the Board of County Commissioners held a study session to discuss options for small cell facilities in the right-of-way and the Board supported preparing design standards for those facilities, with a goal of having standards in place before the April 15, 2019 FCC deadline.

The proposed change was noticed in the April 4, 2019 edition of the Villager and staff forwarded the proposed amendments to both outside legal counsel and to wireless providers.

Links to Align Arapahoe

Quality of Life – Creating design standards for small cell facilities in the right-of-way would promote public safety by requiring designs that are compatible with traffic and pedestrian uses.

Discussion

Both the State of Colorado, through HB17-1193, and Congress and the FCC through the federal Telecommunications Act of 1996, as amended and interpreted by the FCC, have authorized the use of public right-of-way for small cell wireless facilities. Local government retains the authority to review and approve such locations for public safety and aesthetic reasons, provided that such review and approval does not unduly burden the deployment and distribution of such wire communication services. In this regard, per those regulations and rulings, Arapahoe County effectively must accommodate small cell facilities in the right-of-way. Under the FCC order regulations through design standards, including aesthetic regulations, as proposed here must be published and adopted by April 15, 2019. Adopting design standards for these facilities will provide for small cell facilities in an efficient and economical manner without negatively impacting the County's control, use, operation, and maintenance of the right-of-ways, as well as provide for some consistency of how and where the facilities are located for both reasonable aesthetic and public safety purposes.

The proposed new Chapter 14 to the County's Infrastructure and Design Standards establishes a review process and design standards that are intended to comply with the state and federal law allowing these facilities into the ROW without creating barriers to the deployment of wireless communication as are prohibited under such laws.

Staff proposes an initial step of updating the Infrastructure Design and Construction Standards manual to provide location and design standards for small cellular facilities. The draft standards identify location standards, separation requirements, height limits, and aesthetic design requirements for structures in the public right-of-way. The draft standards also clarify the permitting requirements for these sorts of facilities.

The draft IDCS Chapter 14 provides definitions, clarifies the permitting process, and includes location preferences. This section summarizes the proposed changes.

Definitions (14.1A) – The draft defines “small cell” in compliance with Colorado Revised Statutes: antennas no larger than three (3) cubic feet and primary equipment enclosures no more than seventeen (17) cubic feet in volume.

Application Process (14.2) – This section outlines the staff review process, including a recommended presubmittal meeting. Per the FCC order, mandatory presubmittal meetings can trigger the review “shot clock,” which limits the number of days local governments have to review small cell applications.

Design Standards (14.3) – The design standards identify location preferences for small cell facilities. In order of preference, they can be collocated on an existing structure in the right-of-way (such as telephone poles, street lights, wireless communication facility poles, or traffic signals), attached as a strand-mounted facility on existing overhead lines, installed on a new street light, or on a new freestanding structure.

For small cell facilities attached to existing structures, the facility can increase the existing structure height by up to ten (10) feet. For new structures, the maximum height is 40 feet in non-residential areas and 30 feet in residential areas.

The draft standards include provisions intended to promote both safety and aesthetic quality. For example, new small cell poles must be compatible with other vertical infrastructure in the area or must be galvanized steel painted to match Arapahoe County’s standard traffic signal colors. New freestanding small cell poles must be at least 600 feet from other freestanding small cell poles, must be outside site triangles, and must be placed on common property lines or at intersections.

Engineering Review (14.4) – This section describes engineering standards, construction document formatting requirements, license agreement requirements, and the permitting/inspection process.

Administrative Waiver – This section allows applicants to seek administrative waivers to the design standards. The administrative waiver process allows applicants to request amendments to separation, height, or design requirements and have those approved by staff if they are justified. For example, an applicant could request a reduction in the 600’ minimum separation and potentially justify the reduction based on wireless network demands in that area. The administrative process would provide a way to evaluate waiver requests within the FCC-mandated timelines.

Alternatives

The Board of County Commissioners has three alternatives:

1. Approve the proposed amendment to the Infrastructure Design and Construction Manual;
2. Continue to a date certain for more information; or
3. Deny the proposed amendment.

Fiscal Impact

The FCC order specifies acceptable fees for these types of right-of-way installations. Our goal is to create a set of standards that will allow Arapahoe County to issue permits for these sorts of facilities without incurring costs beyond what we can collect.

Concurrence

Public Works and Development staff, including Engineering Services, Planning, and Transportation recommend drafting small cell standards before the April 15, 2019 FCC deadline.

Reviewed By:

Jason Reynolds, Current Planning Program Manager

Chuck Haskins, Engineering Division Manager

Bryan Weimer, PWD Department Director

Todd Weaver, Finance Department

Robert Hill, County Attorney

BOCC DRAFT MOTIONS Case No. E19-024 - Design Standards for Small Cell Facilities in the Right-of-Way

Conditional Approval

In the case of E19-024, Design Standards for Small Cell Facilities in the Right-of-Way, I have reviewed the staff report, including all exhibits and attachments and have listened to the staff presentation and hereby move to approve the proposed amendment based on the findings in the staff report, subject to the following condition:

1. Staff will make corrections and revisions to the proposed language as directed by the County Attorney prior to incorporating the approved amendment into the Infrastructure Design and Construction Standards manual.

Staff provides the following Draft Motions listed below as general guidance in preparing an alternative motion if the Board reaches a different determination:

Denial

In the case of E19-024, Design Standards for Small Cell Facilities in the Right-of-Way, I have reviewed the staff report, including all exhibits and attachments and have listened to the staff presentation and hereby move to deny this amendment based on the following findings:

1. *State new findings in support of denial as part of the motion.*

Continue to Date Certain:

In the case of E19-024, Design Standards for Small Cell Facilities in the Right-of-Way, I move to continue the hearing to [*date certain*], 9:30 a.m., to obtain additional information and to further consider the information presented.

RESOLUTION NO. [reso #] It was moved by Commissioner ___ and duly seconded by Commissioner ___ to adopt the following Resolution:

WHEREAS, pursuant to Section 30-11-107(1)(f), the Board of County Commissioners of Arapahoe County (the Board) has the power to “To lay out, alter, or discontinue any road running into or through such county and to perform such other duties respecting roads as are or may be required by law;” and

WHEREAS, consistent with this authority the Board has adopted the Arapahoe County Infrastructure Design and Construction Standards which, among other things, provide for regulations, restrictions and standards for access to County owned and controlled public road rights of way (ROW); and

WHEREAS, the Board has the power to amend the Arapahoe County Infrastructure Design and Construction Standards from time to time; and

WHEREAS, Sections 29-27-401, *et seq.* and 38-5.5-101, *et seq.*, Colorado Revised Statutes, require local governments to allow telecommunications providers to access and locate wireless communication facilities for small cell wireless service technology within the local government owned or controlled public road ROW with the consent of the local government; and

WHEREAS, the federal Telecommunications Act of 1996, as amended August 6, 2014, and as interpreted by Federal Communications Commission (FCC) Declaratory Ruling Order (FCC 18-133) also allows such small cell wireless facilities to locate in the public right-of-way and sets certain restrictions for a County’s review of such facilities and consent to such facilities to occupy the ROW; and

WHEREAS, the FCC Order allows local governments to adopt design standards for small cell wireless facilities proposed to be located within the local governments’ ROW, but requires such local governments to publish and adopt such standards by April 15, 2019; and

WHEREAS, the Arapahoe County Infrastructure Design and Construction Standards do not currently include standards for small cell facilities in the public right-of-way; and

WHEREAS, in order to accommodate such small cell wireless facilities in County ROW in accordance with state and federal law requirements and to facilitate public access to wireless communication in a manner that does not create a safety concern for the traveling public or otherwise create the unsightly or overly congested use of the ROW by such facilities, the Board finds that certain design standards should be established for such facilities; and

WHEREAS, Public Works and Development, Engineering, Transportation, and Planning staff have proposed design standards for small cell wireless communication facilities that are proposed for location within County ROW, which standards are proposed for inclusion in the County Infrastructure Design and Construction Standards as a new Chapter 14; and

WHEREAS, the Board finds that the proposed new Chapter 14 design standards and procedures for location of such small cell wireless facilities in County ROW will ensure a complete, thorough, and consistent review of such ROW location proposals, without creating barriers to the deployment of wireless communication services and are in accordance with state and federal law and will serve to provide for the efficient, safe and appropriate function of the public ROW; and

WHEREAS, the Board further finds that establishing small cell facility design standards, as set forth in the proposed new Chapter 14, are necessary to promote the health, safety, and welfare of the citizens, residents of Arapahoe County as well as of the users of County ROW; and

WHEREAS, Notice of the proposed Design Standards and the hearing on the proposed Design Standards was published in The Villager, a newspaper of general circulation in the County, on ____; and

WHEREAS, the proposed Design Standards were sent in advance to certain telecommunication providers operating within Arapahoe County; and

WHEREAS, on ____ at 9:30a.m., the Board of County Commissioners conducted a hearing concerning the proposed amendment to Infrastructure Design and Construction Standards to adopt new Chapter 14 establishing Design Standards for small wireless cell facilities in county ROW; and

WHEREAS, at the hearing, County Engineering staff presented and explained the proposed small cell Chapter of Infrastructure Design and Construction Standards, and were questioned about the particulars by the members of the Board of County Commissioners; and

WHEREAS, following the summary presentation by County staff, the Chairman asked for and provided members of the public opportunity to comment on the proposed Standards.

NOW, THEREFORE, the Board of County Commissioners of Arapahoe County, Colorado hereby resolves as follows:

1. That the Board approves and adopts the addition of Chapter 14 of the Infrastructure Design and Construction Standards as proposed by Planning and Engineering Division staff.
2. That the Infrastructure Design and Construction Standards be amended to add the following text of Chapter 14, Wireless Communication Facilities:

[Chapter 14 text to be inserted here]

3. That the above amendment to the Infrastructure Design and Construction Standards shall take effect immediately and shall apply to all projects submitted on or after this date.

The vote was:

Commissioner Baker, ___; Commissioner Conti, ___; Commissioner Holen, ___; Commissioner Jackson, ___; Commissioner Sharpe, ___.

The Chair declared the motion carried and so ordered.

March 28, 2019

CHAPTER 14 – WCF REGULATIONS

INDEX

| Section | Topic | Page |
|---------|---------------------------------|------|
| 14.1 | Introduction | 14-1 |
| 14.2 | Definitions | 14-1 |
| 14.3 | Application Process | 14-2 |
| 14.4 | WCF in the ROW Design Standards | 14-3 |
| 14.5 | Engineering Review | 14-6 |
| 14.6 | Administrative Waiver | 14-9 |
| 14.7 | Fees | 14-9 |
| 14.7 | WCF Submittal Checklist | 14-9 |

CHAPTER 14 – WIRELESS COMMUNICATION FACILITIES

14.1 Introduction

This Chapter 14 sets forth and establishes Design Standards for location of Wireless Communication Facilities (WCF) within Arapahoe County rights of way (ROW). In order to facilitate public access to a wide range of telecommunication, broadband and wireless services and in accordance with Sections 29-27-401, *et seq.*, Colorado Revised Statutes (CRS), Sections 38-5.5-101, *et seq.*, CRS, and the applicable provisions of the Telecommunications Act of 1996, including Sections 253 and 332, and as interpreted by Federal Communications Commission Order 18-133 (Sept. 26, 2018), WCF are authorized to be located within publicly owned or controlled public ROW, subject to the consent of the jurisdiction controlling the ROW.

In order to accommodate such WCF and facilitate public access to wireless communication in a manner that does not create a safety concern for the traveling public or otherwise create the unsightly or overly congested use of the ROW by such facilities, the Arapahoe County Board of County Commissioners hereby establish the following design standards for such facilities proposed to be located in County owned or controlled public road ROW.

The following design standards and procedures for location of WCF within the ROW are intended to ensure a complete, thorough, and consistent review of these proposals, without creating barriers to the deployment of wireless communication services in accordance with state and federal law. These design standards may be revised as appropriate and in accordance with State and federal law to address technological changes in the Telecommunication Industry or as necessary to provide for the efficient, safe and appropriate function of the public ROW.

14.2 Definitions

As used in this Chapter 14, WCF mean and include small cell facilities as defined in Section 29-27-402(4), CRS, as amended. This Section currently provides:

(4)(a) "Small cell facility" means either:

(I) A personal wireless service facility as defined by the federal "Telecommunications Act of 1996", as amended as of August 6, 2014; or

(II) A wireless service facility that meets both of the following qualifications:

(A) Each antenna is located inside an enclosure of no more than three cubic feet in volume or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements could fit within an imaginary enclosure of no more than three cubic feet; and

(B) Primary equipment enclosures are no larger than seventeen cubic feet in volume. The following associated equipment may be located outside of the primary equipment enclosure and, if so located, is not included in the calculation of equipment volume: Electric meter, concealment, telecommunications demarcation box, ground-based enclosures, back-up power systems, grounding equipment, power transfer switch, and cut-off switch.

(b) "Small cell facility" includes a micro wireless facility.

14.3 Application Process

14.3.1 Prior to submitting an application, the applicant is encouraged to initiate a pre-submittal meeting through the Planning Division for all WCF facilities proposed within the ROW.

14.3.1.1 If the applicant participates in Pre-submittal meeting, the Staff Engineer shall prepare and provide to the applicant a Pre-submittal form to document all applicable requirements for the proposed application under these Standards.

14.3.2 The application will be submitted through the Engineering Division and assigned to a Staff Engineer. Applicant shall pay all applicable fees as authorized under federal, state and county law and regulation. Review fees must accompany the application.

14.3.3 The Staff engineer will review the application for completeness and shall respond to the applicant within ten (10) days of the date of submission of the application with a report identifying any items missing from the application. The mandatory review periods of sixty (60) or ninety (90) days, respectively, provided below shall be deemed tolled pending the applicant's complete submission of all the missing items identified in the Staff Engineer's completeness report.

14.3.4 The Staff engineer shall refer the application to the Planning Division for comment.

14.3.5 The County shall complete its review and either approve, conditionally approve, or deny the application within sixty (60) days from the date of submission of an application for the collocation of any new WCF or from the date of submission of the complete application, if tolled due to an incomplete submission as provided above, whichever is the later date. The County shall complete its review and either approve, conditionally approve or deny the application within ninety (90) days of submission of an application for any new WCF on a new structure in the ROW or if a new WCF is proposed to be located on any County owned traffic signal or other County owned structure if a replacement structure is required to accommodate the WCF within the ROW or from the date of submission of the complete application, if tolled due to an incomplete submission as provided above, whichever is the later date.

14.3.6 Such approval of any WCF location or locations shall be completed and evidenced by the execution of a license agreement or Site Supplement as provided below in 14.4.5 between the applicant and the County.

14.3.7 Following final approval of the application, including construction plans and the execution of the applicable license agreement or Site Supplement, Building Permit and Street Cut/ ROW Use Permit will be required as applicable under the Building Code and these Infrastructure Design and Construction Standards.

14.4 WCF in the ROW Design Standards

14.4.1. The following design standards shall apply to all WCF (also sometimes referred to herein as small cell facilities) proposed to be located within Arapahoe County owned or controlled public ROW.

14.4.2. Any new WCF proposed for location in the ROW, the WCF shall be located in accordance with and County approval for deployment within the ROW is subject to the following hierarchy of location for deployment:

(a). First, the WCF shall be collocated and attached to an existing structure in the ROW;

(b). Second, if available in the area, the WCF shall be attached as a strand mounted WCF between existing utility poles or other structure in the ROW that have utility or power line connections between those structures (this may require a separate cable attachment and permission of the utility company);

(c). Third, if the staff engineer with input from the County Transportation Division determines that there is a public safety need for a street light at the particular location, the WCF shall be mounted on a new free standing structure with an integrated streetlight; and

(d). Fourth, if the staff engineer with input from the County Transportation Division determines that there is a no public safety need for street light at the particular location the WCF shall be mounted on a new free standing structure but no integrated streetlight will be required. New free standing structure shall be a collocation pole.

14.4.3. Subject to the above hierarchy of deployment options, all WCF to be located within ROW shall also comply with the applicable standards provided below in 14.3.4(a)-(d). Applicants may apply for waivers or variances from the strict application of the above hierarchy or the specific design standards specified below in Section 14.3.4.

14.4.4. Specific Design Standards Applicable to the Type of Attachment or Location of Attachment:

(a). Attachment to or replacement of existing light pole, utility pole, traffic signal, or other vertical infrastructure:

- 1). Owner of vertical infrastructure must approve use
- 2). Facility must not exceed height of existing infrastructure by more than ten feet
- 3). Maximum antenna/equipment enclosure of 3.0 cubic feet, whether pole- or strand-mounted
- 4). A single pole/strand mount may have up to two antenna/equipment enclosures
- 5). If mounted above the existing pole, antenna must be concealed within a shroud ("cantenna") with a tapered transition from antenna shroud to pole
- 6). If replacing existing pole or if existing pole accommodates internal wiring, all wiring shall be internal to the pole
- 7). Facility, including ground-mounted equipment must not conflict with traffic operations.

- 8). Located outside sight triangles.
- 9). Shall avoid existing conduit/fiber.
- 10). Shall not interfere with traffic operations.
- 11). Shall not encroach into pedestrian ways such as sidewalks, trails, or transit stops.

(b). Strand-Mounted Small Cell:

- 1). Equipment attached to vertical infrastructure must be less than 3 cubic feet in volume.
- 2). Equipment attached to strands must be less than 3 cubic feet in volume.
- 3). Owner of vertical infrastructure must approve use.
- 4). No supplemental small cell permit is required; applicant must still apply for and receive a street cut/right-of-way use permit.

(c). Freestanding Small Cell Pole (with integrated street light):

- 1). Pole construction shall match street lighting in the area, generally:
 - i). Round, straight, galvanized steel (or similar to other street lighting in area).
- 2). Equipment cabinet and pole shall be galvanized in accordance with AASHTO standards.
- 3). Equipment cabinet shall be integrated in base of pole.
- 4). Equipment cabinet shall be round.
- 5). Pole shall be painted to match existing streetlights or traffic signal poles or shall be painted black with a finish spec F264A if no other vertical poles in the area.
- 6). Antennas must be concealed within a shroud ("cantenna") and must include tapered transition from antenna shroud to pole.
- 7). Antenna/shroud shall be a maximum of 6'-0" in height.
- 8). Maximum antenna/equipment enclosure of three (3) cubic feet.
- 9). Breakaway design is required for total weight less than 1,000 pounds.
- 10). Maximum total pole height (including antenna).
 - i). 40' in non-residential areas (or height of other street lights).
 - ii). 30' in residential areas.
- 11). Maximum equipment cabinet height: 6'-0".
- 12). Pole location (with integrated street light):
 - i). Shall only be placed where a street light is specified by the Staff Engineer and as provided in these Standards (generally, unless specified otherwise by the Staff Engineer for public safety purposes, lighted locations will be at street intersections or commercial/multi-family access drives).
 - ii). Existing infrastructure shall be used if available.
 - iii). No minimum spacing required if replacing existing vertical infrastructure.
 - iv). Placed on common property lines separating properties or located at a street intersection.
 - v). Outside any sight triangles.
 - vi). At least 15 feet from existing trees.
 - vii). Shall not interfere with traffic operations.

viii). Shall not encroach into pedestrian ways such as sidewalks, trails, or transit stops.

(d). Freestanding Small Cell Pole (without integrated street light):

- 1). Pole design and manufacture:
 - i). If no other vertical infrastructure present in area: round, straight, galvanized steel, painted with black gloss with a finish spec F264A.
 - ii). If other vertical infrastructure is present in area: design must be compatible with nearby poles (similar color/appearance).
 - iii). Pole shall be designed to accommodate two small cell antennas in order to promote collocation.
- 2). Equipment cabinet and pole shall be galvanized in accordance with AASHTO standards.
- 3). Equipment cabinet shall be integrated in base of pole.
- 4). Equipment cabinet shall be round.
- 5). Wiring shall be internal to the pole.
- 6). Pole shall be painted to match existing streetlights or traffic signal poles.
- 8). Antenna must be concealed within a shroud ("cantenna").
- 9). Must include tapered transition from antenna shroud to pole.
- 10). Antenna/shroud shall be a maximum of 6'-0" in height.
- 11). Maximum antenna/equipment enclosure of three (3) cubic feet.
- 12). Breakaway design is required for total weight less than 1,000 pounds.
- 13). Maximum total pole height (including antennas):
 - i). 40' in non-residential areas.
 - ii). 30' in residential areas.
- 14). Maximum equipment cabinet height: 6'-0".
- 15). Pole separation:
 - i). Freestanding small cell poles (that are not traffic signal pole replacements or fitted with integrated street lights) shall be separated from other freestanding small cell poles by at least 600 feet.
 - ii). Freestanding small cell poles shall be staggered on alternating sides of the street where feasible.
- 16). Pole placement:
 - i). Placed on common property lines separating properties or located at a street intersection.
 - ii). Outside any sight triangles.
 - iii). At least 15 feet from existing trees.
 - iv). Shall not interfere with traffic operations.
 - v). Shall not encroach into pedestrian ways such as sidewalks, trails, or transit stops.
 - vi). In accordance with the provision of 14.6 below, pole location variances of up to 50 feet may be authorized with justification based on meeting other technical

requirements (sight triangles, trees, traffic operations, need to place on common property lines).

14.5 Engineering Review

14.5.1 Pole location

- a) Confirm with all utility districts for any crossing restrictions
- b) Confirm location does not obstruct, impede, or hinder pedestrian or vehicular traffic
- c) Avoid planned roadway improvements/ development/ bike path
- d) Avoid drainage constraints (swale, roadside drainage, drainage easement)
- e) Preferably close to corner of two intersecting streets or closest to common side yard property line between adjacent adjoining properties
- f) Not to be located within 600' radially from an existing freestanding Small Cell
- g) Not to be located along the frontage of a historical landmark
- h) Not to be located in a manner that obstructs an adjacent property
- i) Not to be located in a valuable sightline of an adjacent property (window of a residence, mountain view, etc.)
- j) In alignment with existing street trees, utility/ street light poles
- k) Minimum 15' from existing trees so as not to disturb the root zone
- l) Minimum 5' from low pressure gas line or 15' from high pressure gas line

14.5.2 Construction Document Requirements

| |
|---|
| Cover Sheet |
| Arapahoe County Case NO. WCF-XX-XXX |
| Pole title, name, location, information, and photograph of the proposed location of pole |
| Standard Notes |
| Vicinity map with scale |
| Project description |
| Contact information including representative name, address, telephone number |
| Sheet index |
| PE stamp |
| UNCC/811 Call Before You Dig |
| An approval block, as shown in Figure 3.1 of the Arapahoe County IDCS shall be placed in the lower, right hand corner |
| Location Map |
| Proposed pole location on Arapamap background |
| ROW lines, property lines |
| Adjacent property owners and/or easements |
| Streetnames, floodplain, parks |
| Distance to back of curb, sidewalk, ROW |

| |
|---|
| Latitude and longitude of pole location |
| Existing utilities including dry utilities, stormline, waterline, sewerline |
| Existing vegetation |
| Existing signage |
| Sight triangles - not to be located within 30' sight triangle |
| Proposed vault and route to power source |
| Elevation Plan |
| Labeled and dimensioned |
| Depth and diameter of foundation |
| Pole dimension and height |
| Distance to back of curb, sidewalk, ROW |
| Existing vegetation |

14.5.3 Clear Zone Analysis

| |
|---|
| Clear Zone Analysis Requirement |
| Arapahoe County Case NO. WCF-XX-XXX |
| Vicinity map |
| PE stamp |
| Project description |
| Clear Zone Parameters - see AASHTO Roadside Design Guide for recommended clearances based on speed, traffic volume, and roadside conditions |
| Breakaway connection description if required |
| Elevation Plan with distance to back of curb shown |
| Site Plan with distance to back of curb shown |
| Conclusion paragraph |
| Photo simulation of pole at proposed location |

14.5.4 Attachment to County Owned Structure

14.5.4.1 For any WCF proposed to be located on any County owned structure within the ROW, the application submittal materials shall include all appropriate engineering plans and specifications showing such detail of the WCF and its location as is reasonably required by the County to evaluate the impacts of the Facility to the ROW and the County structure. The engineering plans and specifications shall also include appropriate Professional Engineer stamped certification(s) that: (1). the WCF's operation will not interfere with the proper function of the particular County structure upon which it is proposed for attachment, and (2). that the structural and loading capacity of that Infrastructure will support the Facility proposed to be attached. The manner of attachment and construction of such Facility and the Facility's operations shall comply with the approved plans and specifications.

14.5.5 License Agreement

- 14.5.5.1 Applicant shall enter into a Master License Agreement (MLA) with the County or enter into a License Agreement for each location. The Master License Agreement will require a Site Supplement to evidence the County's approval of WCF location and attachment within the ROW. Unless otherwise provided in the MLA, the County will issue an approved Site Supplement for attachment to a third-party owned structure that the County has previously authorized within the ROW will be granted provided the applicant supplies the County with a letter or other written authorization from the owner of the third-party structure and provided that the WCF does not involve any ground-based equipment or otherwise increase the footprint of the third-party structure.
- 14.5.5.2 License Agreements for a single location or Site Supplements under a Master License Agreement or for attachment to a third-party owned structure, once approved and executed by the Director of the Arapahoe Department of Public Works and Development, shall constitute the applicant's permit to locate the proposed WCF within the ROW at the approved location.
- 14.5.5.3 The County's approved form for a License Agreement and Master License Agreements Draft License Agreement are available from the County Engineering Service Division and will be sent to applicant for review with 1st submittal redline comments.

14.5.6 Other Permitting and Inspection

- 14.6.5.1 Street Cut / ROW Use Permit
- a) Permit will be required for all equipment and conduit associated with the WCF facility that is within the ROW
 - b) \$20,000 License and Permit bond required
- 14.6.5.2 Building/Electrical Permits
- a) Appropriate building and electrical permits will be required for each small cell as required under the Arapahoe Building Code. Applicant shall submit such building and electrical permit application(s) separately to the Arapahoe County Building Department for review and approval.
- 14.6.5.3 Acceptance
- a) GIS Shapefile must be submitted to the County with the following information.

- a. Address
- b. Owner
- c. Facility description (freestanding, collocation, etc.)
- d. Pole height
- e. Survey grade shape file

14.6 Administrative Waiver

14.6.1 Any of the above design standards may be waived by the Director of the Arapahoe County Department of Public Works and Development upon written application that demonstrates the following waiver criteria:

- a) The design standard prohibits or has the effect of prohibiting the provision of wireless service through the WCF at the particular location because the particular standard will not allow the technology to function at that location; and
- b) There is no existing nearby alternate structure for collocation or attachment that will provide the technological functionality and which otherwise meets the design standard sought to be waived; and
- c) The proposal for varying from the design standard represents a reasonable and best approximation of the particular standard sought to be waived; and
- d) The proposed alternative does not and will not constitute or create any public safety, health or welfare concern.

14.6.2 If any particular design standard is approved for waiver, the WCF proposed shall nevertheless meet all other applicable design standards not approved for waiver.

14.6.3 If a waiver request is denied for failure to meet any of the criteria specified above and there is no alternative for installation of the small cell facility at the particular location in a manner that meets the applicable design standards, then such application for the WCF for such specific location shall be denied.

14.7 Fees

14.7.1. Fees for ROW access for attachment of WCF to County owned property in the ROW and fees for review of applications for WCF proposed for location within County ROW shall be paid in accordance with the Engineering Services Division schedule of fees as is established and approved from time to time by the Arapahoe County Board of County Commissioners. Such fees shall be no more than the amounts reasonably necessary to recoup the County's costs.

14.8 WCF Submittal Checklist – to be included with submittal packet

| WCF Submittal Checklist | | | |
|---------------------------------|-----------|------------|---|
| Application Requirements | | | |
| Yes | No | N/A | |
| | | | 581 Form - with every submittal |
| | | | License Agreement - to be provided by County with first round of comment |
| | | | Review fee |
| | | | Building Permit - separate submittal |
| | | | Street Cut/ROW Use Permit - separate submittal |
| Pole Location | | | |
| Yes | No | N/A | |
| | | | Confirm with all utility districts for any crossing restrictions |
| | | | Confirm location does not obstruct, impede, or hinder pedestrian or vehicular traffic |
| | | | Avoid planned roadway improvements/ development/ bike path |
| | | | Avoid drainage constraints (swale, roadside drainage, drainage easement) |
| | | | Preferably close to corner of two intersecting streets or closest to common side yard property line between adjacent adjoining properties |
| | | | Not to be located within 300' radially from an existing freestanding Small Cell |
| | | | Not to be located along the frontage of a historical landmark |
| | | | Not to be located in a manner that obstructs an adjacent property |
| | | | Not to be located in a valuable sightline of an adjacent property (window of a residence, mountain view, etc.) |
| | | | In alignment with existing street trees, utility/ street light poles |
| | | | Minimum 15' from existing trees so as not to disturb the root zone |
| | | | Minimum 5' from low pressure gas line or 15' from high pressure gas line |
| Construction Document | | | |
| Yes | No | N/A | Cover Sheet |
| | | | Arapahoe County Case NO. CMRS-XX-XXX |
| | | | Pole title, name, location, information, and photograph of the proposed location of pole |
| | | | Standard Notes |
| | | | Vicinity map with scale |
| | | | Project description |
| | | | Contact information including representative name, address, telephone number |
| | | | Sheet index |
| | | | PE stamp |
| | | | UNCC/811 Call Before You Dig |
| | | | An approval block, as shown in Figure 3.1 of the Arapahoe County IDCS shall be placed in the lower, right hand corner |
| Yes | No | N/A | Location Map |
| | | | Proposed pole location on Arapamap background |
| | | | ROW lines, property lines |
| | | | Adjacent property owners and/or easements |
| | | | Streetnames, floodplain, parks |
| | | | Distance to back of curb, sidewalk, ROW |
| | | | Latitude and longitude of pole location |
| | | | Existing utilities including dry utilities, stormline, waterline, sewerline |
| | | | Existing vegetation |
| | | | Existing signage |
| | | | Sight triangles - not to be located within 30' sight triangle |
| | | | Proposed vault and route to power source |

| Yes | No | N/A | Elevation Plan |
|---------------------|----|-----|---|
| | | | Labeled and dimensioned |
| | | | Depth and diameter of foundation |
| | | | Pole dimension and height |
| | | | Distance to back of curb, sidewalk, ROW |
| | | | Existing vegetation |
| Clear Zone Analysis | | | |
| Yes | No | N/A | |
| | | | Arapahoe County Case NO. CMRS-XX-XXX |
| | | | Vicinity map |
| | | | PE stamp |
| | | | Project description |
| | | | Clear Zone Parameters - see AASHTO Roadside Design Guide for recommended clearances based on speed, traffic volume, and roadside conditions |
| | | | Breakaway connection description if required |
| | | | Elevation Plan with distance to back of curb shown |
| | | | Site Plan with distance to back of curb shown |
| | | | Conclusion paragraph |
| | | | Photo simulation of pole at proposed location |