AGENDA
ASTORIA PLANNING COMMISSION

December 10, 2019
6:30 p.m.
2nd Floor Council Chambers
1095 Duane Street • Astoria OR 97103

1. CALL TO ORDER

2. ROLL CALL

3. MINUTES
   a) No new minutes to review

4. WORK SESSIONS
   a) Accessory Dwelling Units
   b) Temporary Warming Shelters
   c) Small Cell Wireless
   d) Columbarium

5. REPORT OF OFFICERS

6. STAFF/STATUS REPORTS
   a) Save the Dates:
      i. Monday, December 16, 2019 @ 6:00pm – Annual City Council Reception for all Commissioners and Board Members
      ii. Tuesday, January 28, 2020 @ 5:30pm – Next TSAC + APC Meeting
      iii. Thursday, January 30, 2020 @ 6:30pm – Annual Commissioner Training by Lisa Phipps of the State of Oregon Department of Land Conservation and Development, and Blair Henningsgaard, City Attorney

7. PUBLIC COMMENT (Non-Agenda Items)

8. ADJOURNMENT

THIS MEETING IS ACCESSIBLE TO THE DISABLED. AN INTERPRETER FOR THE HEARING IMPAIRED MAY BE REQUESTED UNDER THE TERMS OF ORS 192.630 BY CONTACTING COMM. DEVELOP. DEPT, 503-338-5183.

CITY OF ASTORIA
Founded 1811 • Incorporated 1856

COMMUNITY DEVELOPMENT

MEMORANDUM

DATE: November 19, 2019

TO: Astoria Planning Commission

FROM: Barbara Fryer, City Planner

SUBJECT: Work Session Item #1 Proposed Amendment (A19-03) for Accessory Dwelling Units

Legislation

On August 15, 2017, Senate Bill 1051 was signed into law concerning State requirements for cities to allow accessory dwelling units (ADU) in residential areas and became effective on July 1, 2018. The City of Astoria originally adopted an ADU code on November 1, 2004 (Ordinance 04-11) which allowed an ADU in larger, older homes, with owner occupancy on one of the units. The code was amended on April 17, 2017 (Ordinance 17-07) to expand the use to old or new construction, allowed the unit to be in a detached building, and other minor processing changes. The need for affordable housing continues to be an issue and the State has identified ADU's as one of the solutions. The new State law requires cities with a population over 2,500 to allow *". . . at least one ADU for each detached single-family dwelling, subject to reasonable local regulations relating to siting and design."* The State law does not specify any other requirements for ADU's; however, Department of Land Conservation and Development (DLCD) has issued a "Guidance on Implementing the Accessory Dwelling Units (ADU) Requirement" dated March 2018. This document is not regulatory and serves as suggestions for cities when adopting ADU regulations.

On August 8, 2019, Senate Bill 2001 was signed into law concerning State requirements for "missing middle housing". Most of the legislation applies to cities greater than 10,000 population. We are at 9,690 population according to the latest Portland State University population estimate. One section applies to any city with greater than 2,500 population. It applies to "Reasonable Local Regulations" for ADUs. This section of legislation is excerpted on the following page.

HB2001

(5)(a) A city with a population greater than 2,500 or a county with a population greater than 15,000 shall allow in areas within the urban growth boundary that are zoned for detached single-family dwellings the development of at least one accessory dwelling unit for each detached single-family dwelling, subject to reasonable local regulations relating to siting and design.

(b) As used in this subsection[,]:

(A) "Accessory dwelling unit" means an interior, attached or detached residential structure that is used in connection with or that is accessory to a single-family dwelling.

(B) "Reasonable local regulations relating to siting and design" does not include owner-occupancy requirements of either the primary or accessory structure or requirements to construct additional off-street parking.

(6) Subsection (5) of this section does not prohibit local governments from regulating vacation occupancies, as defined in ORS 90.100, to require owner-occupancy or off-street parking.

DLCD Staff Clarification

Staff queried DCLD staff with regard to ADU requirements with the following questions and answers:

- Are ADUs included in density of the underlying zone? ADUs are not factored into density. You have to allow them regardless.
- Is there a difference between detached and attached ADUs? Yes – you can look to building codes for guidance but in terms of allowance, there is no difference.
- Can you require the lot size to be increased to allow for the ADU? No. You can't require additional square footage. If a SFD is allowed on a 5,000 square foot lot, then so is the ADU.
- You cannot require owner occupancy or off-site parking for the ADU. You can still require your normal off-street parking for the SFD.
- You can allow manufactured dwellings if they meet your size limitations and are otherwise allowed in the zone.

Clatsop County Housing Strategies Report

The Report found that there is sufficient supply, but the housing supply serves the second-home and short-term rental market, leaving insufficient supply for year-round residents to both purchase and rent. The Report suggests that the missing middle housing types such as townhomes, cottage clusters, and medium-density housing can help meet the needs of the first-time homebuyers. Secondly, the report recommends increasing multi-family rentals for local service, tourism, and other working-class sectors.

Missing Middle Housing.

Source: Opticos Design

Four strategies are recommended:

Strategy 1: Ensure land zoned for higher density uses is not developed at lower densities by:

- Establishing minimum densities
- Update development codes to limit or prohibit new SF detached in high density zones
- Allow SF detached in medium density zones only if they meet minimum density or maximum lot sizes
- Allow continued use and repair of SFD in these zones and allow conversion of larger SFD into MFD (Duplex or Triplex)

Strategy 2: Further study the potential need for a UGB Amendment in Seaside to help meet South County Housing Needs. (Applies to Seaside and Cannon Beach)

Strategy 3: Refine BLI Data and Results in Astoria and Warrenton

Within Astoria, where are major constraints association with federally owned land within the UGB.

- Draft findings based on further consultation with Governmental agencies and analysis demonstrating that this land should not be considered as buildable within the 20-year planning period.
- Rezone the property to a resource designation that precludes future development
- Remove the land from the UGB through a UGB land swap which would allow inclusion of other land that could help meet future housing needs. UGB land exchanges of 50 acres or less are subject to less restrictive requirements than UGB expansion of over 50 acres.

Strategy 4: Further Assess and Address Infrastructure Issues in unincorporated Clatsop County and Gearhart.

Current Astoria Code:

The current code allows one ADU for each single-family dwelling (SFD), provided that you meet the additional lot size requirement, which is no longer legal. There is no design review except for historic areas. Astoria requires one additional off-street parking space for the ADU (SFD is required to have two spaces), which is no longer legal. Astoria prohibits separate utilities to maintain the SFD appearance.

Between 2005 and 2019, ten ADU permits were approved within the City but not all began operation.

Proposed Amendments:

The following are some of the proposed amendments to expand the feasibility of ADU's in Astoria.

1. Add ADU as a permitted outright use in zones where SFD are permitted.
2. Eliminate minimum lot sizes for ADUs in R-2, R-3 and CR zones
3. Delete ADU from conditional uses in the R-1 zone
4. Eliminate parking requirements for ADUs in the CR zone
5. Modify definition of Primary Dwelling in ADU section of Article 3.
6. Eliminate Conditional Use, Owner Occupancy, Lot Size, Off-Street Parking Requirements and Permit Expiration in ADU section of Article 3.
7. Consider adding 10 foot clear passage to ADU for emergency access.
8. Eliminate parking requirement for ADU in Article 7.
9. Eliminate ADU in R-1 as a Type II Conditional Use.

The above suggested amendments would comply with the State regulation.

Staff will conduct a work session to review the proposed changes.

ARTICLE 2

USE ZONES

R-1: LOW DENSITY RESIDENTIAL ZONE

2.015. PURPOSE.

The purpose of the R-1 Zone is to provide an area of low density single-family dwellings, at an average density of eight (8) units per net acre, their accessory uses, and certain public uses. The policies of the Comprehensive Plan, applicable overlay zone standards, and the standards listed below, will be adhered to.

2.020. USES PERMITTED OUTRIGHT.

The following uses and their accessory uses permitted in an R-1 Zone if the Community Development Director determines that the uses will not violate standards referred to in Section 2.030 through 2.050, additional Development Code provisions, Comprehensive Plan, and other City laws:

1. Single-family dwelling.
2. *(Section 2.020.2 deleted by Ordinance 04-10, 11-1-04)*
3. Family day care center.
4. Home occupation, which satisfies requirements in Section 3.095.
5. *(Section 2.020.5 deleted by Ordinance 04-10, 11-1-04)*
6. Manufactured home. See Section 3.140.
7. Residential home.
8. Transportation facilities.
   (Section 2.020.8 added by Ordinance 14-03, 4-21-14)
9. *Accessory Dwelling Unit*

(Adopted 10-8-92)

2.025. CONDITIONAL USE PERMITTED.

The following uses and their accessory uses are permitted in an R-1 Zone if the Planning Commission, after a public hearing, determines that the location and development plans comply with applicable standards referred to in Sections 2.030 through 2.050, additional Development Code provisions, Comprehensive Plan, and other City laws:

1. Bed and breakfast, or inn.

2. Congregate care facility.

3. Day care center.

4. Nursing home.

5. Public or semi-public use.

6. Temporary use meeting the requirements of Section 3.240.

7. ~~Accessory Dwelling Unit.~~

~~*(Section 2.025.7 added by Ordinance 04-10, 11-1-04)*~~

8. Home Stay Lodging, which satisfies requirements in City Code Sections 8.750 to 8.800.
(Section 2.025.8 amended by Ord 19-07, 7-1-2019; added by Ordinance 04-10, 11-1-04)

2.030. LOT SIZE.

Uses in an R-1 Zone which are part of a cluster development will comply with lot size requirements in Section 11.160. Other uses in an R-1 Zone will not violate the following requirements affecting lot size which are applicable to the particular use:

1. The minimum lot size for a single-family dwelling will be 5,000 square feet.

2. The minimum lot width for all uses will be 45 feet.

3. The minimum lot depth for all uses will be 90 feet.

2.035. YARDS.

The minimum yard requirements in an R-1 Zone will be as follows:

1. The minimum front yard will be 20 feet.

(Adopted 10-8-92)

2. The minimum lot size for a two-family dwelling will be 6,500 square feet. *An Accessory Dwelling Unit shall not be considered a two-family dwelling for the purposes of minimum lot size.*

3. The minimum lot size for a multi-family dwelling will be 5,000 square feet for the first unit plus 1,500 square feet for each unit in excess of one. *An Accessory Dwelling Unit shall not be considered a multi-family dwelling for the purposes of minimum lot size.*

4. The minimum lot width will be 45 feet.

5. The minimum lot depth will be 90 feet.

2.170. YARDS.

Uses in the R-3 Zone which are part of a cluster development will comply with the yard requirements in Section 11.160. Other uses in the R-3 Zone will comply with the following requirements:

A. The minimum yard requirements in an R-3 Zone will be as follows:

1. The minimum front yard will be 20 feet.

2. The minimum side yard will be five (5) feet, except on corner lots the side yard on the street side will be 15 feet.

3. The minimum rear yard will be 15 feet, except on corner lots the rear yard will be five (5) feet.

B. For minimum yard requirements in a manufactured dwelling park, refer to 11.120.

(Section 2.170 amended by Ordinance 95-05

2.175. LOT COVERAGE.

Buildings will not cover more than 50 percent of the lot area.

2.180. HEIGHT OF STRUCTURES.

No structure will exceed a height of 35 feet above grade.

2.185. OTHER APPLICABLE USE STANDARDS.

1. All uses will comply with applicable access, parking, and loading standards in Article 7.

2. The minimum lot size for a two-family dwelling will be 7,500 square feet. *An Accessory Dwelling Unit shall not be considered a two-family dwelling for the purposes of minimum lot size.*

3. The minimum lot size for a multi-family dwelling will be 5,000 square feet for the first unit plus 2,500 square feet for each dwelling unit in excess of one. *An Accessory Dwelling Unit shall not be considered a multi-family dwelling for the purposes of minimum lot size.*

4. The minimum lot width will be 45 feet.

5. The minimum lot depth will be 90 feet.

2.080. YARDS.

Uses in the R-2 Zone which are part of a cluster development will comply with the yard requirements in Section 11.160. Other uses in the R-2 Zone will comply with the following requirements:

A. The minimum yard requirements in an R-2 Zone will be as follows:

1. The minimum front yard will be 20 feet.

2. The minimum side yard will be five (5) feet, except on corner lots the side yard on the street side will be 15 feet.

3. The minimum rear yard will be 15 feet, except on corner lots the rear yard will be five (5) feet.

B. For minimum yard requirements in a manufactured dwelling park, refer to 11.120.

(Section 2.080 amended by Ordinance 95-05)

2.085. LOT COVERAGE.

Buildings will not cover more than 40 percent of the lot area.

2.090. HEIGHT OF STRUCTURES.

No structure will exceed a height of 28 feet above grade.

2.095. OTHER APPLICABLE USE STANDARDS.

(Adopted 10-8-92)

CR: COMPACT RESIDENTIAL ZONE

2.200. PURPOSE.

The purpose of the Compact Residential (CR) Zone is to provide opportunities for modest scale residential development, including single-family homes on smaller lots, two-family homes, and cottage cluster development, incorporating open space between homes and with a strong orientation to the Columbia River and adjacent commercial and other residential areas.

(Section 2.200 added by Ord 14-09, 10-6-14)

2.205. USES PERMITTED OUTRIGHT.

The following uses and their accessory uses are permitted in this CR Zone if the Community Development Director determines that the uses will not violate standards referred to in Sections 2.215 through 2.230, additional Development Code provisions, the Comprehensive Plan, and other City laws:

1. Arts and crafts studio.
2. Family day care center.
3. Home occupation, which satisfies the requirements of Section 3.095.
4. Single-family dwelling.
5. Two-family dwelling.
6. Carriage house dwelling, meeting the requirements of Section 3.050.
7. Cottage cluster development meeting the requirements of Section 3.050.
8. Residential home.
9. *Accessory Dwelling Unit*

(Section 2.205 added by Ord 14-09, 10-6-14)

2.210. CONDITIONAL USES PERMITTED.

The following uses and their accessory uses are permitted in the CR Zone if the Planning Commission, after a public hearing, determines that the location and development plans comply with applicable standards referred to in Sections 2.215 through 2.230, additional Development Code provisions, the Comprehensive Plan, and other City laws:

1. Day care center, only in the community building of a cottage cluster development meeting the requirements of Section 3.050.

2. Public or semi-public use.

3. Temporary use meeting the requirements of Section 3.240.

(Section 2.210 added by Ord 14-09, 10-6-14)

2.215. SETBACKS.

Uses in the CR Zone will comply with the following minimum setback requirements or the setback requirements of applicable overlay zones, whichever requirements are greater.

1. The minimum front setback shall be 10 feet. Front steps are permitted to encroach into front setbacks.

2. The minimum side setback shall be five (5) feet, except on corner lots where the side setback on the street side shall be a minimum of 10 feet.

3. The minimum rear setback shall be 15 feet, except on corner lots where the rear setback shall be a minimum of five (5) feet.

4. Uses in the CR Zone that are part of a cottage cluster development will comply with the setback requirements in Section 3.050.

(Section 2.215 added by Ord 14-09, 10-6-14)

2.220. LOT SIZE AND DENSITY.

Uses in the CR Zone shall meet the following lot size requirements that are applicable to the particular use:

1. The minimum lot size for a single-family dwelling is 2,500 square feet. The maximum lot size for a single-family dwelling is 4,000 square feet.

2. The minimum lot size for a two-family dwelling is 4,000 square feet. The maximum lot size for a two-family dwelling is 6,000 square feet. *An Accessory Dwelling Unit shall not be considered a two-family dwelling for the purposes of minimum lot size.*

3. Uses in the CR Zone that are part of a cottage cluster development shall have a maximum density of 24 units/acre.

3. All uses will comply with access, parking, and loading standards in Article 7, with the following exceptions:

   a. Parking requirement for single-family~~,~~ *and* two-family~~, and carriage house dwelling units~~ shall have at least:

      1) one parking space for each unit with a gross floor area of 700 feet or less (rounded up to the nearest whole number);

      2) 1.5 parking spaces for each unit with a gross floor area of 701 square feet or more (rounded up to the nearest whole number).

   b. Parking in the CR Zone is permitted on a separate lot provided it is within 100 feet of the development. An easement or other acceptable document shall be recorded to assure that the separate lot for parking remains with the units it services.

4. Where feasible, joint access points and parking facilities for more than one use should be established.

5. Access drives and parking areas should be located on side streets or non-arterial streets.

6. Conditional uses will meet the requirements in Article 11.

7. Signs will comply with requirements in Article 8 and specifically, residential uses will comply with the specific regulations in Section 8.160.

8. All structures will have storm drainage facilities that are channeled into the public storm drainage system or a natural drainage system approved by the City Engineer. Developments affecting natural drainage shall be approved by the City Engineer.

9. Where new development is within 100 feet of a known landslide hazard, a site investigation report will be prepared by a registered geologist. Recommendations contained in the site report will be incorporated into the building plans.

10. All uses will comply with the requirements of applicable overlay zones.

11. All uses shall comply with applicable lighting standards in Section 3.128. *(Section 2.235.11 added by Ord 19-05, 6-17-2019)*

(Section 2.235 added by Ord 14-09, 10-6-14)

11. Transportation facilities.
(Section 2.985.11 formerly 14.305.11 added by Ordinance 14-03, 4-21-14)

12. *Accessory Dwelling Unit.*

(Section 2.985 renumbered by Ord 14-09, 10-16-14)

2.986. CONDITIONAL USES PERMITTED.

The following uses and their accessory uses are permitted in a AH-MP Zone if the Planning Commission, after a public hearing, determines that the location and development plans comply with applicable standards referred to in Sections 2.987 through 2.992, additional Development Code provisions, the Comprehensive Plan, and other City laws:

1. Bed and breakfast or inn.

2. Day care center.

3. Eating and drinking establishment without drive-through facility.

4. Public or semi-public use.

5. Restaurant as an accessory use to an Inn which has been approved as a Conditional Use. See Section 3.230.

6. Retail sales establishment not exceeding 6,000 square feet gross floor area.

7. Temporary use meeting the requirements of Section 3.240.

(Section 2.986 renumbered by Ord 14-09, 10-16-14)

2.987. YARDS.

There shall be no minimum yard requirements in the AH-MP Zone.

(Section 987 formerly 2.14.315 amended by Ordinance 99-19, 9-21-99; Section 2.987 renumbered by Ord 14-09, 10-16-14)

2.988. DENSITY.

Residential development shall have a minimum density of 18 units per net acre.

(Section 2.988 formerly 14.320 amended by Ordinance 99-19, 9-21-99; Section 2.988 renumbered by Ord 14-09, 10-16-14)

Aquatic Conservation area in which they occur, and if they are consistent with the Aquatic Conservation Zone's purpose. The procedures in Section 5.020, Resource Capability Determination, will be used to make this determination.

1. Aquaculture and water-dependent portions of aquaculture facility.

2. Active restoration for purposes other than protection of habitat, nutrient, fish, wildlife and aesthetic resources.

3. Temporary alteration.

4. Beach nourishment at sites designated in the Comprehensive Plan.

5. Filling in conjunction with conditional uses 1 through 4, above, pursuant to the applicable standards in Section 4.070.

6. High-intensity water-dependent recreation including boat ramp, marina, and individual dock.

7. Minor navigational improvement.

8. Mining and mineral extraction.

9. Dredging in conjunction with any of the conditional uses 1 through 8, above, pursuant to the applicable standards in Section 4.050.

10. Low-intensity water-dependent commercial or industrial use requiring occupation of water-surface area by means other than fill.

11. In-water log storage.

12. Piling in conjunction with any of the conditional uses 1 through 11, above.

13. Temporary use meeting the requirements of Section 3.240.

14. In pile supported buildings existing prior to October 1, 2002, non water-dependent or non water-related uses as follows:

    a. Arts and crafts studios.
    b. Bed and breakfast, home stay lodging (which satisfies requirements in City Code Sections 8.750 to 8.800), or inn.
    (Section 2.585.14.b amended by Ord 19-07, 7-1-2019)
    c. Home occupation.
    d. Professional and business office, personal service establishment limited to beauty and barber services and garment alterations.
    e. Residential home.
    f. Single-family dwelling *and Accessory Dwelling Unit.*

(Adopted 10-8-92)

IN: INSTITUTIONAL ZONE

2.835. PURPOSE.

This zone is intended to facilitate uses such as parks, public works, schools, museums, open space, and similar activities on property which is presently committed to such uses.

2.840. USES PERMITTED OUTRIGHT.

The following uses and their accessory uses are permitted in an IN Zone if the Community Development Director determines that the uses will not violate standards referred to in Sections 2.835 through 2.860, additional Development Code provisions, the Comprehensive Plan, and other City laws:

1. Caretaker dwelling.
2. Community building.
3. Low-intensity recreation.

   (Section 2.840(3) amended by Ordinance 96-01, 1-16-96)
4. Public parking lot or structure.
5. Public restroom.
6. Public utility shop and yard.
7. Recycling or solid waste transfer facility.
8. Reservoir.
9. School or college.
10. Single-family dwelling on lot where such use existed as of January 1, 1990 *and an Accessory Dwelling Unit.*
11. Utilities.
12. Transportation facilities.
    (Section 2.840.12 added by Ordinance 14-03, 4-21-14)

3.020. ACCESSORY DWELLING UNITS.

A. Purpose.

The purpose of this Section is to promote more efficient use of large, older homes; provide more affordable housing; allow individuals and smaller households to retain large, older houses as residences; and maintain the single-family character of the house and neighborhood.

(Section 3.020.A amended by Ordinance 17-07, 4-17-17)

B. Standards.

1. Size.

a. Primary ~~Structure~~*Single-Family Dwelling.*

~~A house with an Accessory Dwelling Unit must have at least 1,400 square feet of floor area prior to creation of the Accessory Dwelling Unit. The floor area of the garage or other non-living space, such as an unfinished basement, may not be used in the calculation of the total square footage.~~ *Any single family dwelling may site an Accessory Dwelling Unit, secondarily to the primary structure.*

(Section 3.020.B.1.a amended by Ordinance 17-07, 4-17-17)

b. Accessory Dwelling Unit.

An Accessory Dwelling Unit shall not exceed 40% of the primary structure or 800 square feet in size, whichever is smaller. Only one unit per single-family lot and per main dwelling is permitted.

(Section 3.020.B.1.b amended by Ordinance 17-07, 4-17-17)

2. Creation of the Unit.

a. The Accessory Dwelling Unit may be created ~~only~~ through an internal conversion of an existing living area, basement, attic, other existing attached accessory buildings, such as a garage, or areas over attached or detached garages. Construction of new units are also permitted and can be built over new detached or attached garages or as separate detached units.

(Section 3.020.B.2.a amended by Ordinance 17-07, 4-17-17)

b. To differentiate an Accessory Dwelling Unit from a two-family dwelling, all utilities such as water, electric, or gas, shall remain as single service utilities. The Accessory Dwelling Unit shall not have its own utility services, except if the separate services existed prior to January 1, 2004. This does not apply to utilities providing service to communication devices such as telephone, television, and other communication devices.

c. An Accessory Dwelling Unit shall be subordinate to the existing single-family dwelling and may not be subdivided or otherwise segregated in ownership from the primary residence structure.

3. Location of Entrances.

In addition to the main entrance, one entrance to the house may be located on the side or rear of the house. An additional entrance on the main dwelling shall not alter the appearance in such a way that the structure appears to be a two-family dwelling, unless the house contained additional front doors prior to the conversion. The location of the entrance to a detached unit can be anywhere if it is placed behind the main dwelling. In cases where the new ADU is placed in front of the main dwelling, the entrance shall not face the street. In cases where new units are placed on a comer lot, they shall be located on a side yard or rear of the lot.

(Section 3.020.B.3 amended by Ordinance 17-07, 4-17-17)

4. Zones in Which Permitted.

Accessory Dwelling Units are permitted outright ~~or conditional~~ as an accessory use to any existing single-family dwelling in all zones.

(Section 3.020.B.4 amended by Ordinance 17-07, 4-17-17)

5. ~~Owner Occupancy.~~

~~a. The property owner shall occupy either the principal unit or the Accessory Dwelling Unit as their permanent primary residence, and at no time receive rent for the owner-occupied unit.~~

~~b. The property owner shall provide a covenant or deed restriction in a form acceptable to the City and suitable for recording with the County, providing notice to future owners of the subject lot that the existence of the Accessory Dwelling Unit is predicated upon the occupancy of either~~

~~the Accessory Dwelling Unit or the principal dwelling unit by the property owner.~~

~~6. Lot Size.~~

~~A home with an Accessory Dwelling Unit in the R-1 Zone (Low Density Residential) shall be located on a minimum lot size of 5,000 square feet. There is no minimum lot size for other zones.~~

~~7. Off Street Parking Requirements.~~

~~In addition to the two spaces required for the primary unit, the Accessory Dwelling Unit shall have one additional off-street parking space. If on street parking is available on a city street built to a city standard identified in the Transportation System Plan and has parking on both sides of the street, one space may be credited to the requirement of three total spaces.~~

~~*(Section 3.020.B.7 amended by Ordinance 17-07, 4-17-17)*~~

~~8.~~*5.* Height.

The height of new detached units shall not exceed 20 feet or 80% of the height of the main dwelling, whichever is less.

(Section 3.020.B.8 deleted and added by Ordinance 17-07, 4-17-17)

~~9.~~*6.* Homestay Lodging.

Home Stay Lodging in conjunction with an Accessory Dwelling Unit may be allowed as follows:

a. Home Stay Lodging (which satisfies requirements in City Code Sections 8.750 to 8.800) may be allowed on properties in conjunction with an Accessory Dwelling Unit as listed in the allowable uses within specific zones in compliance with Section 3.100 (Home Stay Lodging).

(Section 3.020.B.9 amended by Ord 19-07, 7-1-2019; Section 3.020.B.9 added by Ordinance 17-07, 4-17-17)

C. Permits.

1. Permit Required.

A Type I ~~or Type III~~ permit is required for the establishment of an Accessory Dwelling Unit. The property owner shall submit an application to the Community Development Department on a form provided by the City.

(Section 3.020.C.1 amended by Ordinance 17-07, 4-17-17)

2. Expiration of Permit.

An Accessory Dwelling Unit permit shall automatically expire if any of the following occurs:

~~a.~~ The Accessory Dwelling Unit is substantially altered and is no longer in conformance with the plans as approved by the Astoria Planning Commission, Community Development Director, and/or the Building Official; or

~~b. The subject lot ceases to provide the approved number of parking spaces; or~~

~~c. The property owner ceases to reside in either the principal or the Accessory Dwelling Unit.~~

D. Non-conforming Accessory Dwelling Units.

1. The portion of a single-family dwelling or detached accessory structure which meets the definition of Accessory Dwelling Unit which was in existence prior to January 1, 2004, may continue in existence provided the following requirements are met:

a. An application for an Accessory Dwelling Unit is submitted to the Community Development Department for review.

b. The Accessory Dwelling Unit complies with the minimum requirements of the Building Codes as adopted by the City of Astoria.

c. The Accessory Dwelling Unit complies with the requirements of this Section 3.020 concerning "Accessory Dwelling Units".

(Section 3.020.D.1 amended by Ordinance 17-07, 4-17-17)

2. The Community Development Director may approve a permit submitted for a non-conforming unit that does not meet all of the above requirements, except those relative to building code requirements, as follows:

a. The permit review shall be in accordance with Article 9 concerning Type II administrative decisions. The Community Development Department shall notify property owners of record in accordance with 9.010 to 9.020 at least twenty (20) days prior to the issuance of a permit for a Non-conforming Accessory Dwelling Unit. The notice shall set forth the standards required and the nature of the non-conformity.

(Section 3.020.D.2 amended by Ordinance 17-07, 4-17-17)

b. Permits for a Non-conforming Accessory Dwelling Unit may be issued after the notice period by the Community Development Director where the Director has made written findings as follows:

1) That full compliance would be impractical; and

2) That neither present nor anticipated future use of the unit reasonably require strict or literal interpretation and enforcement of the requirements of this code; and

3) That the granting of the permit will not create a safety hazard.

3. A decision of the Community Development Director may be appealed to the Planning Commission in accordance with 9.040.

(Section 3.020 Added by Ordinance 04-10, 11/1/04)

7.100. MINIMUM PARKING SPACE REQUIREMENTS.

Table 7.100 – Off-Street Parking Space Requirements by Use.

The following are minimum off-street parking requirements by use category. The Community Development Director or Planning Commission, as applicable, may increase the required off-street parking based on anticipated need for a specific conditional use. Off-street vehicle parking requirements are calculated to include consideration of employee and customer/client uses.

For off-street parking requirement calculations, gross floor area as defined in Section 1.400 shall not include outdoor storage areas. Gross floor area for off-street parking calculations shall include exterior space utilized for the use which results in expanded use on the site such as outdoor seating area for an eating/drinking establishment.

(Section 7.100 amended by Ord 19-06, 7-1-2019; Section 7.100 amended by Ord 19-05, 6-17-2019)

Use Categories	Minimum Parking per Land Use (Fractions are rounded up to the next whole number.)
RESIDENTIAL CATEGORIES	
Single-family Dwelling, including manufactured homes on individual lots, and attached dwellings such as townhomes and condominiums	2 spaces per dwelling unit
Two-family Dwelling (Duplex)	2 spaces per dwelling unit
Accessory Dwelling (second dwelling unit on a single-family lot)	~~1 additional space for the accessory dwelling unit~~*No additional parking is required.*
Manufactured Dwelling in a Park	1.5 per dwelling unit
Multi-family Dwelling including Group Housing	1.5 spaces per dwelling unit with more than one bedroom; 1.25 spaces per dwelling unit limited to one bedroom, or one bedroom group housing units; Calculation is based on specific number of each type of units within the complex.
Group living, such as nursing or convalescent homes, rest	1 space per 8 bedrooms plus one per employee

(Adopted 10-8-92)

3. For aquatic areas, whether the use or activity meets the resource capability and purpose of the zone in which it is proposed when such a determination is required in accordance with Article 5.

4. For aquatic uses, the findings of an Impact Assessment where required by Article 5.

5. Development standards of the applicable zone.

6. Basic conditional use standards of Section 11.030.

7. Appropriate conditional use standards of Section 11.130 to 11.170.

(Section 11.020.B amended by Ord 19-07, 7-1-2019)

11.022. CLASSIFICATION OF CONDITIONAL USE REVIEW.
(Section 11.022 added by Ord 19-07, 7-1-2019)

Permits shall be processed and reviewed as a Type II or Type III permit in accordance with the procedures specified in Sections 9.020 to 9.030 as follows:

A. Type II Procedure (Administrative/Staff Review with Notice).

Type II includes minor conditional uses which are minimal uses and which will have little or no impact on adjacent property or users. Administrative approval by the Community Development Director of Type II conditional uses may be granted.

Type II conditional uses include:

1. Home Stay Lodging in conjunction with an Accessory Dwelling Unit.

~~2. Accessory Dwelling Unit in R-1 Zone.~~

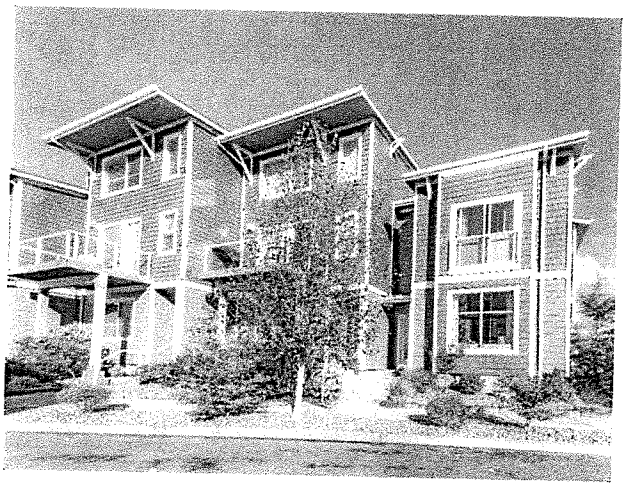
B. Type III Procedure (Quasi-judicial with Public Hearing).

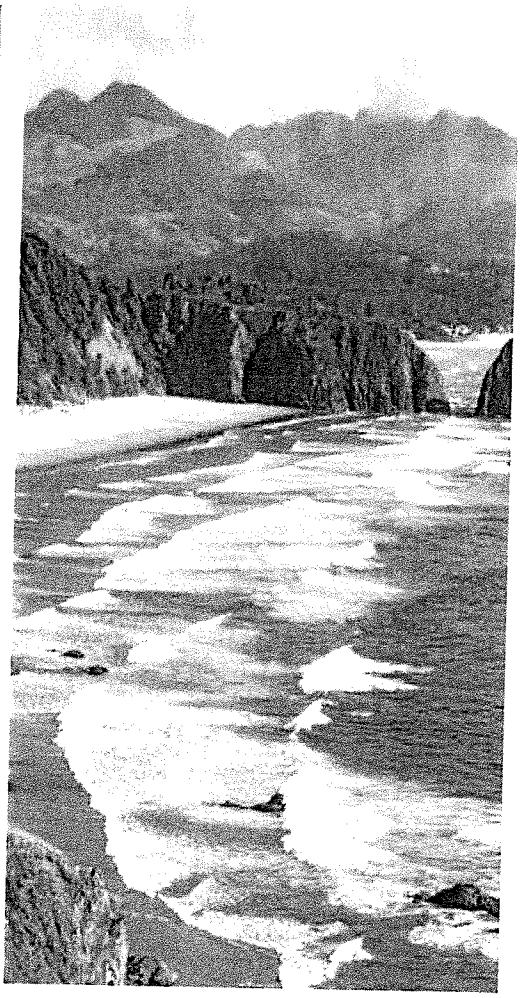
Type III includes conditional uses which are significant and are likely to create impacts on adjacent property or users. A Type III conditional use may be granted by the Planning Commission.

(Section 11.022 added by Ord 19-07, 7-1-2019)

11.030. BASIC CONDITIONAL USE STANDARDS.

A. Before a conditional use is approved, findings will be made that the use (except for housing developments) will comply with the following standards:





CLATSOP COUNTY HOUSING STRATEGIES REPORT

JANUARY, 2019

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1. Introduction and Overview

Clatsop County and its five local incorporated cities undertook an in-depth study of the current and projected housing conditions across the county, as well as recommended strategies to better align the housing supply with local needs, now and into the future. To this end, a consultant team, guided by local advisory committees and stakeholders, has helped to prepare a set of findings on the housing conditions in the county, and a resulting set of strategies and tools to help address the identified opportunities and challenges. This work is summarized in this report and the technical appendices that accompany it. The Housing Strategies Report provides an overview of key findings, but its main purpose is to provide a set of specific strategies and tools to consider in addressing housing in Clatsop County moving forward.

The strategies presented in this report reflect the following overarching findings that have come to light during this process. These findings apply *on a county-wide basis*, and apply to the individual cities to different degrees:

1) **Sufficient Supply, but Not the Right Types of Housing**

   - Technically, there seems to be a sufficient supply of land and number of housing units to meet both current and future needs. However, much of this supply serves the second-home and short-term rental market, leaving insufficient supply for year-round residents to both purchase or rent. In addition, some of the supply of future residential land suffers from a variety of constraints related to natural features and hazards, infrastructure challenges, or other issues.

2) **Add the Right Types of Supply**

   - Strategies should focus on adding the right type of supply, meaning home-buying opportunities at affordable price points, and more multi-family rental housing.
   - Adding "missing middle" housing types such as townhomes, cottage clusters, and medium-density housing can help to meeting the needs of first-time homebuyers. This housing, if not located in the most sought after beach locations, should be less attractive to second-home buyers.
   - Increased multi-family rental housing development should be encouraged to serve the local service, tourism, and other working-class sectors.

3) **Control Commercial Use of Residential Land**

   - Non-residential uses of housing units should be discouraged and/or controlled to the extent possible. This includes housing used purely for short-term rental and investment income. It can be helpful to shift the mindset to thinking of these as commercial uses (like a hotel) taking place in residential zones where they may not be appropriate.
   - This does not necessarily include second homes, which may be vacant for much of the year, but are not being used as a commercial venture.

4) **Use Available Residential Land Efficiently**

- Remaining available residential land should be used efficiently. This means encouraging middle- and high-density residential zones to be used for housing at these densities, and not be built out with low-density housing that don't meet the intention of the zones.
- An added benefit of efficient use is that it encourages housing types that may more naturally serve the local residents, including "missing middle" types and multi-family rental housing.

5) **Focus on Workforce Housing**

- Strategies should focus on the needs of the county's current and future workforce (at all income levels.) While subsidized housing is very important and should be continually expanded, there are also existing programs and institutions for providing units at these lowest price points.
- If more non-subsidized housing is provided for the general market, this has the beneficial effect of allowing some older housing to become available to lower income residents as well.

2. Housing Trends: Summary of Key Findings

A major impetus to this project is the perception that there is a significant imbalance between the housing needs of local residents and the housing that is currently available within the county. This manifests itself in a shortage of housing to rent or buy, the wrong types of units for many permanent residents, and a lack of affordability for many based on local income levels.

The overall findings of our technical analysis of current housing conditions (Appendix A) include:

- There is technically an "oversupply" of housing in Clatsop County based on a simple comparison of number of households to number of housing units. There are 1.4 housing units in the county for each permanent resident household, with an estimated vacancy rate of over 27%.
- However, much of this housing is not available to local residents, resulting in a much lower effective vacancy rate for homes at affordable prices. The disconnect stems from the fact that much of the housing supply in Clatsop County is used for vacation housing, not permanent residences. This situation is more acute in the beach side communities in the south of the county.
- The PSU Population Forecast Program, which generates official forecasts of population growth across the state, projects modest growth across the county and most of the local cities. The exception is Warrenton, which is projected to grow quickly, and Seaside which is projected to grow near the statewide average. Cannon Beach and Gearhart are projected to

experience low population growth due to increasing land constraints that will prevent growth, despite demand.

- There is a forecasted need for over 1,500 new housing units across the county to accommodate current and future residents, while allowing for a continued supply of vacation properties.
- Seventy-three percent (73%) of needed units are projected to be ownership units, and 27% rental units. The large share of ownership units reflects that second homes/vacation homes are included in the "owner" category. In addition, it is estimated that many local renter households might otherwise own a home, if there were units available in the proper price range.
- The growth of short-term rental activity, made easier by new website and app platforms, is likely exacerbating the perceived housing shortage and lack of affordability. While the Oregon Coast has always had vacation rental activity, these technologies have facilitated the management of vacation housing for income generation.
- Investors seeking short-term rental properties likely bid up housing prices for local residents, and also make it attractive to convert traditional rentals for year-round residents into short-term rentals for vacationers.
- There is a full range of housing needed in the future, from single family homes, to townhomes, to apartments, to subsidized affordable housing and emergency shelters. The county should consider the need to add all types of supply for households at a range of incomes.
- Newly-built housing supply will tend to be more expensive housing, as it is up-to-date and in better condition than older housing. However, adding new supply for higher-income households is necessary to allow the older housing supply to "filter" to those with more modest income.
- Denser forms of housing, such as townhomes and condos rather than single family homes, may help create some smaller and lower-priced housing stock that can serve first-time and lower-income buyers. In addition, housing in areas less attractive to tourists (for instance, further from the beach or the town center) may be less likely to be consumed by second home seekers or investors.
- It is estimated that based on preferences, there will still be a strong demand for single-family homes across the county, making up roughly 70% of the 20-year need. However, land constraints may increasingly necessitate encouraging denser forms of housing to provide sufficient units affordable to people with a range of incomes.

The following sections provide a set of Strategies and Tools to consider to address the housing conditions identified through this project. The final section of this report provides an implementation roadmap to guide next steps.

3. Land Supply

The overall findings of our assessment of land supply and capacity in Clatsop County and its cities (Appendix B) include:

- On a county-wide basis and in most of the individual cities within the County, there is an adequate supply of buildable residential land to meet future projected housing needs.
- The supply of residential buildable land is concentrated in north County (Warrenton and Astoria); the relative supply – both in terms of total acres and in terms of the potential surplus of buildable land – is much lower in the cities of Gearhart, Seaside and Cannon Beach.
- The City of Seaside shows a forecasted deficit of buildable residential land.
- Constraints on and cost of land in Cannon Beach may make it impractical for the City to actually meet future housing needs, particularly in terms of the ability to construct housing at prices affordable to low and moderate income households.
- Each city has a supply of land zoned for medium and high density development. However, lower density development is allowed in many of these zones. If a significant amount of lower density development occurs in higher density zones, the supply of needed higher density land could be compromised.
- There is a substantial supply of buildable residential land in the unincorporated portions of Clatsop County, including within several unincorporated communities where urban-level zoning and community water and sewer systems are in place. However, many of these areas lack a full set of commercial and other supportive services and the ability of local sewer and water systems to serve the amount of development allowed under existing zoning is not completely known. Furthermore, Oregon's statewide land use planning system is focused on directing growth into urban areas.
- Much of the remaining supply of buildable residential land in the cities of Cannon Beach, Seaside, and Gearhart is in the form of infill lots in single-family zones. Reducing obstacles to the development of these areas will be essential to meeting future housing needs in these communities.

Stated simply, there is enough land within the County in total to meet the needs of future population and housing needs on a County-wide basis. However, the relative ability of individual jurisdictions to meet these needs varies and to large degree. In addition, the location of vacant land, natural resource constraints, ownership patterns, and land prices create challenges to the future development of land in a way that meets local housing needs, particularly for lower and moderate income households and workers. Following is a summary of strategies recommended to address land supply issues.

Strategy 1: Ensure Land Zoned for Higher Density Uses is not Developed at Lower Densities

Applicable jurisdictions: All cities and county

Most of the cities in Clatsop County allow for development of new single family detached homes in their medium and high density zones. While having a mix of housing types in these zones is not in and of itself a bad thing, it is important to preserve an adequate supply of land designated for medium and high density for higher density housing forms – townhouses, triplexes, four-plexes and multi-family dwellings. This is important from both a land efficiency perspective and to make sure that each city continues to have an adequate supply of land available for these types of housing. Specific actions to implement this strategy include:

- Establish minimum density standards as described in *Policy and Development Code Strategy #2 (next section)*.
- Update development codes to not allow (or prohibit) new single-family detached housing in high density zones.
- Allow single-family detached homes in medium density zones only if they meet minimum density or maximum lot size requirements.
- Allow continued use and repair of single-family homes in these zones and allow conversion of larger single-family homes into multi-unit dwellings (e.g., duplexes or triplexes).

This strategy should be coordinated with *Policy and Development Code Strategy #2 (next section)*.

Strategy 2: Further Study the Potential Need for a UGB Amendment in Seaside to Help Meet South County Housing Needs

Applicable jurisdictions: Seaside and Cannon Beach

The results of this project and the recent Housing Needs Analysis indicate a potential deficit of residential land in Seaside. This issue should be evaluated in more detail and should take into account the following additional factors and potential opportunities:

- **Efficiency Measures**. Ultimately, under the Goal 10 process, cities in Oregon must demonstrate that they have considered and/or undertaken measures to use land efficiently prior to expanding their urban growth boundaries. A number of the other strategies outlined in this report, particularly those described in Section 4 would be considered efficiency measures. While the City is not obligated to undertake or implement every possible efficiency measure, it should demonstrate that it has considered whether or not a given efficiency measure can be implemented effectively and to what degree it will impact residential land needs.
- **Regional Land Needs.** Oregon's land use planning framework requires individual cities to provide adequate land to meet 20-year housing and employment needs. Regional approaches to meeting land needs are allowed in the Portland metropolitan area and in the Salem Keizer area where regional UGBs are in place. Eugene and Springfield also took a

regional approach to amending their joint UGB until 2015. Outside of those areas, each city is required to meet its own land needs. While the cities of Cannon Beach and Seaside are not contiguous, it makes some sense to the two cities to coordinate with each other, Clatsop County and the state to consider strategies to meeting their combined housing land needs. This is particularly important given significant constraints on available land in Cannon Beach that can cost-effectively be developed at prices affordable to low and moderate income households. Discussions between all parties about considering future UGB amendments in Seaside that can help meet land needs for both cities are recommended.

- **Affordable Housing UGB Amendment.** In 2016, the Oregon Legislature passed House Bill 4079 (HB 4079) which formed a pilot program to help cities build affordable housing. The program allows two cities to add new housing units on lands currently outside their UGBs without going through the normal UGB expansion process. Applications for pilot communities were due in 2018. While the deadline for use of this program for Seaside or other communities in Clatsop County has passed, this program may offer future opportunities if it is expanded or extended. Seaside and potentially other Clatsop County communities should investigate potential use of this opportunity through communication and coordinate with Oregon Department of Land Conservation and Development (DLCD) staff.

Strategy 3: Refine BLI Data and Results

Applicable jurisdictions: Warrenton and Astoria

During this study, the cities of Warrenton and Astoria in particular identified the need for potential refinements to the BLI data and findings associated with their communities. These issues should be further evaluated and the BLI findings subsequently refined as needed.

The City of Warrenton noted significant potential constraints with wetlands on the feasibility and cost of future development. Given the amount of land in Warrenton subject to these potential constraints, it will be important to further assess them. The City of Warrenton received a housing grant from DLCD to conduct a more detailed BLI and housing needs assessment. That project is underway and these issues are expected to be evaluated as part of that effort.

The City of Astoria noted major constraints associated with federally owned land within the UGB. This land is shown as potentially buildable in the current BLI results but may not in fact be available for development during the planning period, based on constraints associated with federal ownership and management of this area. The City should work with other government agencies to clarify the status of this land and remove it from the BLI as appropriate. This ultimately could be done through one of several alternative actions, including but not limited to the following:

- Draft findings based on further consultation and analysis demonstrating that this land should not be considered as buildable within the 20-year planning period.
- Rezone the property to a resource designation that precludes future development.

- Remove the land from the UGB through a UGB swap which would allow inclusion of other land that could help meet future housing needs. UGB land exchanges of 50 acres or less are subject to less restrictive requirements than UGB expansions of over 50 acres.

Strategy 4: Further Assess and Address Infrastructure Issues

Applicable jurisdictions: Unincorporated Clatsop County and Gearhart

This study indicated a substantial potential supply of buildable land in unincorporated portions of the County, including land in several unincorporated communities that is zoned for urban levels of development and potentially served by local sewer and water districts. However, there are several potential constraints on this land that affect its ability to meet long-term housing needs. In some cases, these areas have limited commercial and institutional services available to meet the needs of future residents. In other cases, land in these areas is only zoned to allow for single-family detached housing and cannot accommodate denser forms of development. Efforts to rezone properties or otherwise allow for denser forms of development have proven challenging in these areas in the past. Finally, the capacity of local sewer and water districts to serve future development is not clearly known. Additional analysis and clear communication about realistic infrastructure capacity in these areas is needed to help inform assessments of residential development capacity in these areas.

The City of Gearhart does not have a municipal sewer system. As a result, residential development can only occur on properties large enough to support on-site septic systems. Given the supply of residentially zoned land in Gearhart and future population growth projections there, the amount potential future development likely will make it cost-effective to develop a municipal wastewater system. However, other strategies such as package wastewater treatment systems or collection and off-site treatment of wastewater could potentially allow for cost-effective higher intensity development in Gearhart and could be explored as a strategy for meeting a broader array of housing needs in the city.

4. Policy and Development Code

Broad land supply policies and decisions are not the only lever by which Clatsop County jurisdictions can affect the housing market and housing needs. Comprehensive plan policies and development code regulations can directly influence housing development by reducing regulatory complexity, removing unnecessary obstacles, and encouraging specific housing types. For this reason, this study included a review of the comprehensive plans and development codes of each jurisdiction. Conceptual ideas for policy and code changes were identified based on this review. Most of these strategies are generally applicable to most jurisdictions in the County; however, some strategies may be more or less appropriate for different jurisdictions based on land supply conditions, local housing

market factors, or infrastructure availability or capacity. The applicability of each strategy is noted in the description of the strategy.

Policy and Code Assessment

The following policy and development code strategies were identified based on a review of each jurisdiction's existing comprehensive plan and development code. This review assessed the extent to which the plan policies or code regulations addressed 11 policy issues and nine (9) code issues related to housing development. The assessment focused on the Housing Element of local Comprehensive Plans and primarily on the regulations pertaining to the residential zoning districts in each jurisdiction's development code. The strategies identified below are grounded in this assessment and informed by the conditions and needs identified in the housing needs analysis and buildable land inventory. The strategies are conceptual ideas for potential changes that are broadly applicable; however, they should be tailored to address specific needs and concerns within each community.

Strategy 1: Adopt Supportive and Inclusive Comprehensive Plan Policies

Applicable jurisdictions: All cities and county

The Housing Element of local Comprehensive Plans establish the policies that guide residential development in each community. These policies are important because they institute aspirational goals and principles for meeting the housing needs of the community. The policies are also important because they establish formal criteria and guidelines for land use decisions that pertain to housing. Per state land use law, individual development applications, single-parcel zone changes, and broader zoning amendments must all demonstrate consistency with the housing policies of the comprehensive plan.

The policy and code review evaluated the degree to which each comprehensive plan addressed 11 key policy issues. Clatsop County jurisdictions generally addressed the following four housing policy issues sufficiently in the comprehensive plan:

1. Supports Statewide Planning Goal 10
2. Emphasizes affordable housing needs
3. Supports partnerships
4. Encourage a variety of housing types

The degree to which each comprehensive plan addressed the remaining 7 policy issues varied, however, indicating an opportunity to amend the policies to better address important housing needs and goals that have been identified through this study. These policy issues are wide-ranging and inclusive: they may establish support for broad principles, such as Fair Housing or flexible zoning, or identify the need to provide for specific housing types, such as accessory dwelling units or manufactured homes.

These policy issues are identified in Table 1, and an example policy statement is provided to demonstrate one way to articulate the policy idea. Jurisdictions are encouraged to modify and tailor policy language, with input from community members and decision-makers, to best reflect local needs and conditions. Perhaps most importantly, updating the comprehensive plan to address these housing goals presents an opportunity for the community to consider and find how these issues fit within the broader comprehensive plan policy goals, such as transportation, livability, and economic vitality. For more detail on each policy issue and the existing policies of each comprehensive plan, see Appendix C – Policy and Code Review Memorandum.

Table 1. Recommended Comprehensive Plan Policy Updates

Policy Issue	Example Language
1. Affirms Fair Housing goals	*Foster inclusive communities, overcome disparities in access to community assets, and enhance housing choice for people in protected classes throughout the city by coordinating plans and investments to affirmatively further fair housing (City of Portland).* *Continue to work with the Washington County HOME Consortium to identify impediments to fair housing and develop strategies to address them (City of Beaverton).*
2. Supports mixed use development	*Increase opportunities for higher density mixed use development in the Downtown Urban Renewal District, Washington Square Regional Center, Tigard Triangle, and designated Corridors to enable residential uses to be located in close proximity to retail, employment, and public facilities, such as transit and parks (City of Tigard)*
3. References accessory dwelling units	*The City shall allow accessory dwelling units in appropriate residential districts, but shall require that they are compatible and blend into the overall residential environment. (City of Tigard)*
4. Supports flexible zoning	*Provide flexible development standards for projects that exceed the minimum requirements for natural resource protection, open space and public gathering places, and energy efficiency (City of Beaverton).*
5. Addresses land supply goals	*Goal 1. Housing Supply and Variety.* *Provide a sufficient quantity and variety of housing to meet community needs.* *Policy 1. Annex where feasible and zone an adequate supply of residential land outside the tsunami inundation zone to accommodate the city's housing needs.* *Policy 2. Promote a variety of residential densities and housing types in all price ranges to meet a range of housing needs.*

Policy Issue	Example Language
	Policy 3. Revise plan designations, zoning districts and regulations as needed to implement the mix of housing indicated in the adopted Housing Needs Analysis. (City of Lincoln City)
6. **Supports manufactured homes**	*Encourage preservation of mobile home parks as a low/moderate income housing option. Evaluate plans and investments for potential redevelopment pressures on existing mobile home parks and impacts on park residents and protect this low/moderate income housing option. Facilitate replacement and alteration of manufactured homes within an existing mobile home park. (City of Portland)*

Strategy 2: Establish Minimum Density Standards

Applicable jurisdictions: All cities

As described in the Land Supply section, most Clatsop County jurisdictions, and the county as a whole, have a sufficient supply of residentially zoned land to meet the projected 20-year housing needs in the County. Land supply conditions vary among the cities in Clatsop County, however; the beach communities of Seaside and Cannon Beach have a more limited supply of buildable residential land, and more of the existing housing stock is consumed by the short-term rental market. In these communities, it is imperative that the remaining buildable land be used efficiently by developing at or near the maximum density of the zoning district. In cities where residential land supply is less constrained, it remains critically important the remaining buildable residential lands are developed at or near maximum planned densities, for several reasons:

- The buildable land inventory for this study assumed that development would occur at the maximum density of the zone. If actual built densities were significantly lower, it increases the risk that the community will not be able to meet the projected 20-year housing need.
- The short-term rental market will continue to absorb a portion of the existing housing stock, so it is essential that remaining buildable lands produce enough units to help mitigate or offset the consumption of a portion of the housing stock for this use.
- Every community in Clatsop County faces significant physical and natural constraints on future UGB expansions. Thus, even if there is sufficient land to meet the 20-year housing need, it remains uncertain how communities in the region will meet even longer-term housing needs should current growth trends hold constant.

The most direct method to ensure land is used efficiently is to adopt minimum density standards for each residential zone. A minimum density standard would prohibit residential developments that do not meet the intent of the zone. For example, large lot, detached homes would be prohibited in a higher density residential zone, but the minimum density standard may allow for small lot detached houses or townhomes. The minimum density standard can be tailored to local conditions and needs

but is most effective if it is set at between 50 and 80 percent of the maximum density standard in the zone.

As summarized in the Policy and Code Review (Appendix C), all Clatsop County jurisdictions have residential zones that regulate maximum density, either through a minimum lot size and/or a maximum density standard. Only one zone in the County—the Attached Housing – Mill Pond zone in Astoria—establishes a minimum density standard (18 units per acre). Given land scarcity in some communities, and the critical long-term need for the region to accommodate more housing, all cities in the County should consider establishing minimum density standards in some or all zones.

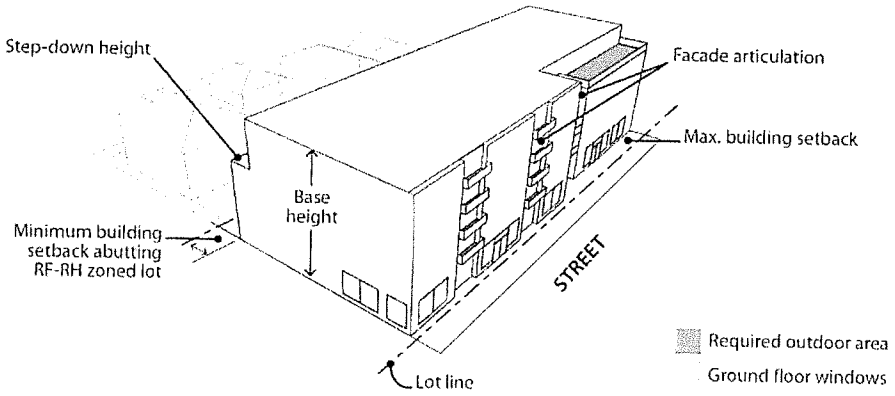
Strategy 3: Revise Maximum Density, Height or Bulk Standards in Higher Density Residential Zones

Applicable jurisdictions: All cities, more important in higher cost, land-constrained cities, such as Seaside and Cannon Beach

The Policy and Code Review conducted for this study found that there may be an opportunity to revise development standards that control maximum density—including both maximum density standards and other controls such as maximum building height or lot coverage—in higher density zones. These districts include the R-3 zones in Astoria, Cannon Beach, and Seaside, and the R-H zone in Warrenton. These zones all permit higher density, multi-family housing outright; however, the set of standards that, taken together, limit residential densities, may unnecessarily constrain density in some situations. Given rising housing prices and an overall shortage of housing stock identified by this study, it may be an opportune time for some jurisdictions to revisit the level of density restrictions that is appropriate in the zone or specific subareas. In some places, due to higher rental rates, it may be feasible to develop higher density housing than what was considered feasible when the density standards of these zones were adopted.

The best approach to reducing these density restrictions, and the broader question of the appropriateness of these changes, depends on several factors. Where these zones include areas of existing detached, lower-density housing, allowances for higher density must be balanced with a consideration for visual compatibility and other potential impacts on these neighborhoods. It is essential for these issues to be addressed through preparation of clear and objective standards, as required by state law and to avoid creating barriers to development associated with discretionary review processes or neighborhood opposition. Where these zones include large areas of vacant land, density limitations should largely be intended to ensure sufficient infrastructure capacity. Where higher density zones interface with lower density zones, or higher density housing is developed adjacent to existing, lower-density housing in the same zone, step-down and setback requirements can be implemented to provide for smooth transitions (see Figure 1). As always, changes to density limitations should be informed by place-specific study and include a public process that engages any affected communities.

Figure 1. Example of height step-down adjacent to lower density housing



Strategy 4: Support High Density Housing in Commercial Zones

Applicable jurisdictions: all cities

As demonstrated by the Buildable Lands Inventory (Appendix B), there is a substantial supply of vacant and potentially buildable lands in commercial zones across the County. For some communities and in some locations, commercial zones can be suitable and desirable locations for higher density housing development. Bringing more residents in close proximity to commercial services benefits the businesses, by potentially expanding the local customer base, and the residents, by providing convenient and potentially walkable access to daily needs and amenities. As residential development in commercial zones will absorb some commercial land supply, it is important that the residential development be of a higher density. Low density residential development would consume commercial land while offering less value in terms of increasing local customer base and accessibility for residents.

Many Clatsop County jurisdictions recognize the benefits of higher density housing in commercial zones, as multi-family housing is allowed as a conditional or permitted use in many commercial zones across the county. However, some regulatory barriers to high density housing in commercial zones may be unnecessary. The following amendments may be appropriate.

- **Allow multi-family housing outright**. In some zones, multi-family housing is allowed with a conditional use permit. A conditional use permit can be an additional procedural obstacle to residential development and could discourage it in commercial zones. In lieu of a conditional use permit, which often applies relatively discretionary approval criteria, adopt clear and objective criteria and standards for where and how multi-family housing is permitted. For example, housing may not be permitted on the ground floor of specific streets that are intended for storefront shopping.

- **Consider allowing single-family attached housing.** Townhomes can be developed at densities that would be beneficial to a commercial district and can function well as a transition between a commercial district and detached housing.
- **Allow vertical mixed-use development outright.** Vertical mixed-use development, with residential units above a commercial use, is a traditional and highly valuable form of development as it preserves ground floor commercial space while creating additional housing units. Vertical mixed use is costly and complicated to develop, so its prevalence will be limited, but cities should encourage this form of development in commercial zones.
- **Adopt a minimum density standard.** To ensure that residential development in commercial zones provides the benefits noted above, adopt a minimum density standard that would prohibit detached, lower density housing.
- **Tailor development and density standards.** Many cities in Clatsop County apply the same density and development standards to multi-family housing in commercial zones as apply in higher density residential zones. This may be appropriate; however, commercial zones may include more attached buildings, higher lot coverages, and multi-story development than many residential zones that include detached houses. Therefore, it may be appropriate to allow higher densities, greater lot coverage, and higher building heights in the commercial zone than are allowed in the high-density residential zone.

Prior to expanding allowances for residential development in commercial zones, cities should ensure that there is sufficient buildable commercial land to meet projected needs, based on an Economic Opportunities Analysis (EOA) and Statewide Planning Goal 9 Guidelines.

Strategy 5: Streamline and Right-Size Minimum Off-Street Parking Requirements

Applicable jurisdictions: All cities

All jurisdictions in Clatsop County require residential developments to provide a minimum number of off-street parking spaces. Given that vehicle travel rates are high and the local transit system cannot provide service levels that would effectively allow for lower rates of car ownership, it is reasonable to require residential developments to include off-street parking.

Many developers would include off-street parking as a marketable amenity regardless of the code requirement. However, in some cases, the level of off-street parking required may exceed what the market would otherwise provide and may be unnecessary to effectively accommodating parking needs. This can become an obstacle to housing development because off-street parking lots consume land, reducing developable area on a site and net density, and potentially rendering a project economically infeasible. This condition is more likely on smaller infill lots. Structured or underground parking is only feasible if rental rates are high enough to offset high construction costs. If a development is at the margins of economic feasibility, parking requirements may preclude the development or cause fewer housing units to be built.

Most Clatsop County jurisdictions require two off-street parking spaces for a single-family house and between one and two off-street spaces per unit in a duplex or multi-family development. A requirement of two spaces per unit, regardless of the number of units in building, is likely to present a substantial obstacle to many projects that may otherwise be feasible. The Oregon *Model Development Code for Small Cities* recommends a baseline standard of one space per unit. A general reduction to this standard—or lower, where appropriate—is a positive step towards removing a potential obstacle to housing development.

In combination with or in lieu of a general reduction, cities should consider several other methods to reduce the chance that off-street parking requirements are a barrier to housing development, including:

- **Scale requirements by number of bedrooms**. The number of bedrooms in a dwelling unit is more closely correlated with the number of vehicles owned by the household than simply the number of dwelling units. Jurisdictions may allow the option of calculating minimum parking requirements based on the number of bedrooms in each unit. This can benefit multi-family developments with many one bedroom and studio units, which are more likely to have single-person households.
- **Provide a credit for on-street parking.** This provision allows development to reduce the minimum parking requirements based on the number of spaces that can be accommodated along the street frontage of the development. Lower density developments benefit most from this credit because there is more likely street frontage per unit. This credit recognizes that on-street parking will be used and allows for more efficient utilization of site area.
- **Allow shared parking.** Different uses require parking at different times a day. Where a housing development abuts or is in close proximity to a use that requires most of its parking during the day (such as an office), parking spaces can be shared as peak utilization periods do not overlap. Applicants who request shared parking arrangements are typically required to demonstrate that the hours of peak use do not overlap and that an agreement has been recorded between the two users to allow for joint use of the parking area.
- **Targeted reductions or waivers.** Minimum parking requirements can be reduced for certain geographic areas (such as near transit), for certain uses (such as affordable housing), in exchange for certain amenities (such as bike parking), or when an applicant can demonstrate that parking demand will be lower than the minimum requirement.

Any reduction or streamlining of minimum parking requirements should consider impacts on utilization of on-street parking. Where street widths do not allow for on-street parking or where vacation rental operations in the neighborhood are causing on-street parking to be heavily utilized, the level of reductions should be sensitive to these conditions.

Strategy 6: Facilitate "Missing Middle" Housing Types in All Residential Zones

Applicable jurisdictions: All cities and county

Given the demographic trends identified in this study, and the ongoing challenge of providing enough housing options for people with low or moderate incomes, smaller sized, modest housing units will continue to be an important need in Clatsop County. Some of these units can be provided in larger, multi-family apartment buildings; however, there are two significant limitations to this form of development. First, due to concerns for visual compatibility and character, this type of development is largely only permitted in high density zones, which usually account for a smaller portion of the overall residential land area than low or moderate density zones. Second, this type of development can be more expensive to construct on a per unit basis than lower density development, unless constructed at high densities that exceed what is allowable or financially feasible in many areas in Clatsop County.

For these reasons, it makes sense to try to accommodate these smaller sized housing units in smaller structures that are typically compatible with detached, single-family houses and, therefore, could be permitted outright in these zones. These housing types include duplexes, triplexes, garden or courtyard apartments, and townhomes. They have been termed the "missing middle" – occupying the space between high density apartment buildings and low density, detached housing (Figure 2).

Figure 2. Missing middle housing types conceptual graphic

Source: Opticos Design

"Missing middle" is a useful concept, but it includes a diverse array of housing types, some of which may or may not be compatible with all residential zones. One housing type, cottage cluster housing, is addressed separately in Strategy 7. There are three key code concepts involved with facilitating more missing middle housing types:

- **Tailor the allowance to the location and housing type**. As noted above, missing middle housing types vary in form. Similarly, residential zones and neighborhoods vary widely in existing character. To ensure compatibility, study the existing characteristics of residential areas and select housing types that are most likely to be compatible. For example, a

neighborhood that is almost exclusively made up of detached houses may not be a good fit for townhomes, which are usually built in structures that contain 3-8 side-by-side units in a relatively large overall structure. However, duplexes and cottage cluster housing, which have smaller building footprints, may be more compatible.

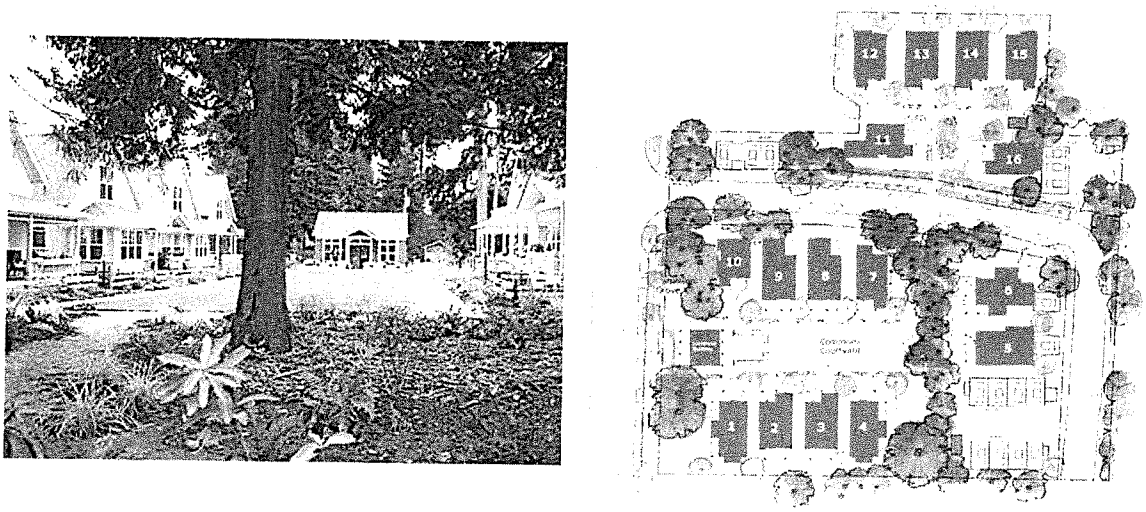
- **Allow outright.** Some missing middle housing types, such as duplexes and triplexes, are permitted as conditional uses in residential zones in Clatsop County jurisdictions. This can present a procedural barrier and uncertainty for these housing types. A more supportive approach is to allow the housing type outright under clear and objective standards.
- **Limit building size to be compatible with detached houses, but allow multiple dwelling units.** The primary compatibility issue for missing middle housing types is the size of the structure, both height and bulk, compared to detached houses. Many Clatsop County jurisdictions require duplexes or triplexes to have larger lot sizes than single-family, detached houses. This encourages larger structures and units; if other standards are held constant—such as maximum lot coverage and height—then this will result in a structure that is larger than most detached houses in the area, because the builder is likely to maximize the floor area of the structure. Alternatively, if development standards are designed to allow for a structure to be a similar size or just slightly larger than existing detached houses, but multiple units are allowed within that structure, then the code will help to ensure compatibility with detached houses while encouraging smaller sized individual dwelling units.

Strategy 7: Encourage Cottage Cluster Housing

Applicable jurisdictions: All cities

As described in relation to Strategy 7 ("missing middle" housing), there is a current and projected need for modestly sized housing units to accommodate young families, elderly people, and other smaller households. One way to provide these types of units is by encouraging cottage cluster housing: groups of small, detached homes, usually oriented around a common green or courtyard, located on individual lots, a single lot, or structured as condominiums. Cottage clusters are growing more popular. They provide many of the same features of conventional detached houses, but in a smaller footprint, with shared maintenance responsibilities, and arranged in a way that can facilitate a communal environment (see Figure 3).

Figure 3. Example of a cottage cluster development



The development potential for cottage cluster housing is significant. Cottage clusters can be developed on relatively small lots, as access and parking is shared and the units are relatively small, usually between 500 and 1,000 square feet. The visual character of cottage clusters, detached dwellings with substantial shared yard space, is highly compatible with neighborhoods of detached homes. This housing form challenges some cultural norms related to private yards and lot ownership—which may limit its market appeal—but developers are adopting design and ownership strategies to overcome this limitation.

The City of Astoria has adopted a special set of standards to apply to cottage cluster housing. Most other Clatsop County jurisdictions allow clustering of housing, including in planned unit developments or master planned areas; however, most do not allow for "cottage cluster" developments, with smaller dwellings and higher densities than base standards. Additionally, the cost, complexity, uncertainty of a master planned development or planned unit development procedure may deter development. A more supportive approach is to allow cottage cluster housing outright, subject to clear and objective standards. Additionally, the following recommendations will help ensure the code is supportive of this housing type:

- **Density bonus.** Allow for increased densities over the base zone in exchange for a cap on the size of individual dwelling units. This combination allows for more dwelling units while ensuring an efficient use of land.
- **Low minimum unit size.** Given maximum house sizes of 1,000-1,200 square feet, allow a wide range of sizes—even as small as 400 square feet—and consider allowing both attached and detached housing.
- **Flexible ownership arrangements**. Do not require a single ownership structure; allow the site to be divided into individual lots, built as rental units on one lot, or developed as a condominium plat.

- **Supportive lot standards.** Ensure that minimum site size, setbacks and building coverage requirements do not prohibit cottage cluster development on smaller lots.
- **Balanced design standards.** Draft basic design requirements that ensure neighborhood compatibility, and efficient use of land, but are not so specific as to restrict the ability to adapt to varying neighborhood contexts.

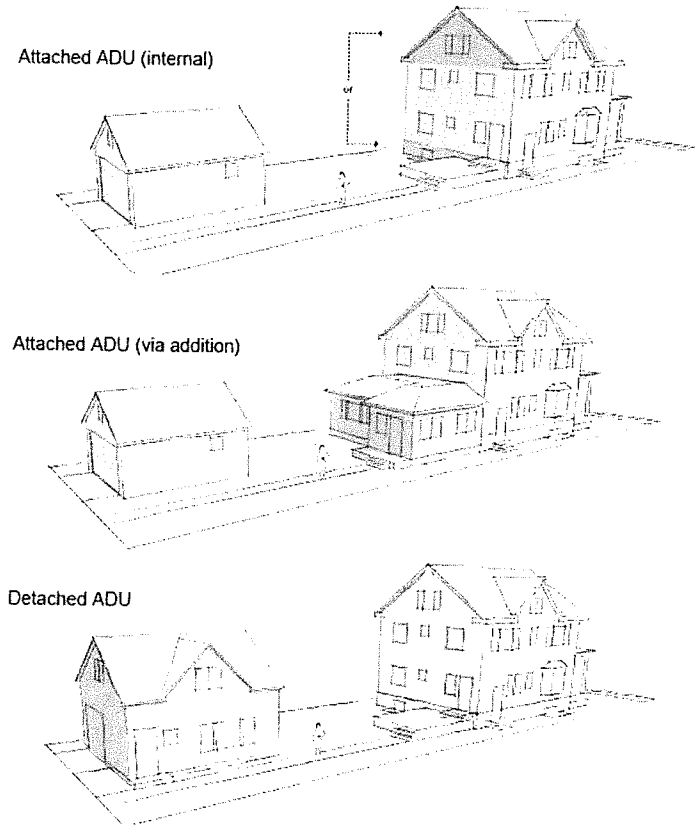
Strategy 8: Promote Accessory Dwelling Units

Applicable jurisdictions: All cities

An Accessory Dwelling Unit (ADU) is a secondary dwelling unit on the same lot as a single-family house that is smaller than the primary dwelling. ADUs can come in three forms: a detached structure, an attached addition, or a conversion of internal living space in the primary dwelling (Figure 4). As ADUs are often invisible from the street, or may be perceived as a part of the primary dwelling, they offer a method of increasing density in low density areas with minimal visual impact on the character of the neighborhood.

Figure 4. Types of ADUs

ADUs in blue; main residence in white



Source: City of St. Paul, MN

The state legislature recently adopted a statute that requires cities with a population of over 2,500 and counties with a population over 10,000 to allow ADUs outright on any lot where single-family housing is allowed.[1] This requirement applies to Seaside, Astoria, Warrenton, and Clatsop County. Clatsop County and the cities of Astoria, Cannon Beach, and Warrenton allow ADUs. However, as detailed in the Policy and Code Review (Appendix C), a conditional use permit is required for ADUs in some locations. To ensure compliance with state law, these cities should permit ADUs outright in all residential zones where single-family housing is permitted. The cities of Seaside and Gearhart prohibit ADUs currently but must allow ADUs outright in the future.

In addition to these use regulations, the statute requires that cities limit the regulations that apply to ADUs to "reasonable siting and design standards". DLCD has not adopted rules to clarify either what standards are considered reasonable or how they fit the category of "siting and design".[2] However, DLCD has issued an update to the *Model Development for Small Cities* to revise the standards that apply to ADUs to be consistent with the general intent of the legislation, i.e., to support ADU development. This model code recommends the following provisions:

- **Maximum Size.** Allow the ADU to be up to 900 square feet or 75% of the primary dwelling, whichever is less.
- **Off-Street Parking.** Do not require an off-street parking space for the ADU in addition to the spaces required for the primary dwelling.
- **Owner Occupancy.** Do not require that the owner of the primary dwelling reside either in the primary dwelling or the ADU, as this limits the marketability of a property with an ADU. This standard may also not be construed as relating to "siting and design".
- **Design Standards.** Minimize special design standards that apply to the ADU. In particular, requirements for the ADU to be "compatible" with the primary dwelling may be difficult to implement and not always result in a desirable outcome.
- **Number of ADUs.** Consider allowing two ADUs on the same lot if one of the ADUs is internal or an attached addition.

Given there is local policy support for promoting ADU development, the following amendments are recommended for each jurisdiction. These amendments are conceptual in nature and specific standards should be tailored to local needs and conditions.

[1] See ORS 197.312(5)

[2] The Oregon Land Use Board of Appeals (LUBA) recently issued an opinion in November of 2018, *Home Builders Association v. City of Eugene*, LUBA Nos. 2018-063 and 2018-064, that did not take up the issue of determining if certain standards are reasonable or related to siting and design; therefore, some local discretion is granted in defining the reasonableness of local standards.

Table 2. Recommended Code Amendments to Support ADUs

Jurisdiction	Recommended Amendments
Clatsop County	• Reduce or remove minimum off-street parking requirement • Replace provision that requires compatibility with primary dwelling with a clear and objective standard
Astoria	• Increase maximum size as a percentage of primary dwelling from 40% to 60-80% • Remove owner occupancy requirement • Reduce or remove minimum off-street parking requirement • Clarify requirements associated with whether the unit must be attached, detached, or internal • Consider allowing two ADUs per lot if one is attached or internal • Consider allowing ADU to be up to the same height as primary dwelling
Cannon Beach	• Increase maximum size to 800-900 square feet • Reduce or remove minimum off-street parking requirement • Consider allowing two ADUs per lot if one is attached or internal and/or allow an ADU with a duplex or triplex in zones where multi-family is allowed
Warrenton	• Increase maximum size to 800-900 square feet • Increase maximum height to allow for 1.5 or 2 story ADUs • Consider allowing two ADUs per lot if one is attached or internal • Remove owner occupancy requirement • Remove prohibition on long-term rental of the unit. A prohibition on short-term rental (less than 30 days) may still be appropriate – see Cannon Beach Zoning Code, Section 17.54.080(J).
Gearhart and Seaside	• Allow ADUs outright in residential zones • Adopt clear and objective standards consistent with DLCD Model Code.

Strategy 9: Incentivize Affordable and Workforce Housing

Applies to all jurisdictions

Some of the development regulations identified above can present obstacles or add costs to housing developments that are intended for regulated or subsidized affordable housing units. These developments are usually built by housing authorities or non-profit developers. However, some for-profit developers may include units affordable to people with lower or moderate incomes if incentives can help offset the cost of providing some or all of the units at a lower rental rate. In addition to or in lieu of financial incentives, which are discussed in the next section, local governments can offer concessions on regulatory standards that provide meaningful economic value to a development project. The concessions should be offered in exchange for the development dedicating a minimum proportion of the units in the development to be regulated as affordable to

people with lower or moderate income. Local governments should consider the following elements in designing a regulatory incentive program:

- **Specify an income level and minimum share of affordable units**. Based on policy goals and local needs, determine the income level at which the units should be affordable. Income levels are usually based on Area Median Income (AMI), which is established by the Department of Housing and Urban Development (HUD). HUD considers earning less than 80% of AMI to be low-income, less than 50% of AMI to very low income, and less than 30% of AMI to be extremely low income. An effective strategy is to provide tiers of income level and share of affordable units. If the development includes units affordable at 80% of MFI, then a higher share of the units would be required to be affordable at this level, such as 20%, to qualify for the incentive. If the development includes units affordable at 60% of MFI or lower, then a lower share of the units would be required to be affordable, such as 10%.
- **Allow flexibility in the type of regulatory concession that is granted**. The relative value of a regulatory concession will depend on the location, size of lot, existing zoning, and many other factors. It is common to provide either a density or height bonus or a reduction in minimum parking requirements as an incentive, as these are usually valuable concessions. However, allowing the applicant to propose a different regulatory concession, such as reduction in minimum setbacks or lot coverage, can help widen the appeal of the program.
- **Ensure units remain affordable over time.** The regulations should ensure that developments using these provisions maintain affordability over time by requiring a restrictive covenant be recorded on the property or management of the property by a non-profit or housing authority.
- **Allow flexibility in how affordable units are provided**. In some cases, it may be advantageous to construct the affordable units are on a different site than the primary development that is receiving the concession. It may also make sense for the development to purchase existing market-rate units and convert them to affordable units. Allowing flexibility in how the units are provided can also widen the appeal of the program.
- **Provide expedited permitting.** As a result of recently adopted state statute, many developments that include affordable housing units are required to be processed in under 100 days.[3] To ensure compliance with this requirement, and to provide an additional incentive for development of affordable housing, jurisdictions may consider adopting provisions that provide an expedited permitting process for qualifying developments. Expedited permitting can help to reduce soft costs of development, such as holding land and hiring professional services, and reduce uncertainty for prospective developers.

[3] ORS 197.311

Strategy 10: Limit Short-Term Rental Uses in Residential Zones

Applicable jurisdictions: All cities

As identified in the Section 2, Key Findings, the prevalence of short-term or vacation rental uses in Clatsop County is consuming a substantial share of the existing housing stock. This may be affecting the costs of both long-term rental and for-sale housing by contributing to an overall housing shortage. Additionally, a separate concern with short-term rental uses is that they may modify the residential character of neighborhoods, particularly if the rental is used for large gatherings. For these reasons, many Clatsop County jurisdictions have elected to regulate short-term rental uses, which may involve requiring specific permits and/or placing limits or conditions on the number of rentals that can be permitted.

It was not within the scope of this study to assess the effectiveness of each jurisdiction's short-term rental regulations and make recommendations about permitting programs or enforcement. Short-term rentals should be classified as a commercial use when considered as part of a broad analysis of land needs and supply, as required by Oregon's statewide planning goals and land use system. Given that some areas in the County are experiencing shortages of residential land supply, and all communities are facing shortages for some types of housing, the consumption of residential land and housing units by short-term rental uses is an issue that must be addressed as part of a complete housing strategy.

Rules that address short-term rentals can include:

- Limit this activity to certain zones or geographies
- Limit the number permitted
- Establish use and occupancy standards that set expectations for how this activity should be conducted
- Adopt an official definition of short-term rentals as distinct from longer rentals, and/or as a commercial activity
- Require business licensing, and track unregistered short-term rentals
- Collect taxes and assess penalty fees

5. Incentives for Development

The following are market-based strategies which can provide incentives to encourage developers to build desired housing types in the cities and county. In general, these incentives help to reduce some of the costs of development that the public sector can impact. While the bulk of development costs

are set by private market labor and materials costs, these steps can provide incentives on the margin to facilitate development.

Given the housing needs across the county, these steps can be used to encourage attached dwelling types, ranging from townhomes for homebuyers to multi-family rental apartments, to affordable housing. Also, these incentives can be applied to accessory dwelling units to encourage infill development.

All of these incentives come at some cost to the public through waived revenue from fees and taxes and/or staff costs. Therefore, these programs should be carefully calibrated to balance revenue loss vs. public benefit. Policies should reflect what housing types are most important to incentivize in each location.

Incentive 1: Streamline Permitting and Review Process

Applicable jurisdictions: All cities (Warrenton has implemented)

Jurisdictions can search for ways to reduce time and costs of the review and permitting process to developers building desired housing types. This incentive can be accomplished by reducing review times, consolidating steps in the process, and reducing or simplifying submittal requirements. In few industries is the old adage that "time is money" more true than in the development industry. The developer is often tying up capital and/or paying interest on loans during the pre-development process. Any reduction in process time translates into reduced costs and greater certainty to the developer and their partners.

Streamlining the process can also involve an internal audit of the process to ensure it is efficient for both staff and applicants. This might involve making all permits available in one location with one main contact, providing clear and accessible information on requirements, and also allowing enough flexibility to consider innovative or new forms of development.

Streamlining the review and permitting process is usually administratively feasible, though the greatest obstacle is often staff resources to expedite some projects when staff is already busy and/or limited in size. Cities could consider some of the funding mechanisms described below to help support staff in expediting application review. The City of Warrenton has recently reduced its review period by three weeks.

Recent statewide legislation also requires that cities with a population over 5,000, and counties with a population over 25,000 allow for 100-day review and decision on qualified affordable housing applications. This applies to Clatsop County, Astoria, Seaside and Warrenton.

Incentive 2: System Development Charge (SDC) or Fee Waivers, Exemptions or Deferrals

Applicable jurisdictions: All cities (Astoria has implemented)

Waiver, exemption or deferment of SDC's or development fees directly reduces the soft costs of development to applicants for desired housing types.

Development fees are not regulated by state law and cities have significant leeway to waive, reduce, or defer these fees. These fees may typically be applied by planning, building or engineering departments. Cities and the county should adopt policies for what types of housing are desirable enough for public goals to warrant forgoing these fees. Some cities specify that waivers can be claimed only by non-profit organizations proposing affordable housing the meets certain criteria for number of units and affordability level. Also, fee waivers can be limited to a certain ceiling. In most cases, fees amount to a smaller cost to the developer than SDCs and therefore are a more modest incentive.

SDC's face more statutory limitations and other hurdles to implementation. Most notably, the city typically only assesses a portion of SDC's, which are also assessed by a range of overlapping jurisdictions such as the county, school districts, fire district, and other special districts. Cities can reduce their portion of SDC's or negotiate with partner agencies for greater reductions.

Generally, the reductions should be applied to housing types that demonstrate a similar reduction in demand for services or impacts (e.g. smaller units, multi-family vs. single family, ADU's, housing types that generate less traffic, etc.) However, state law does not directly address reductions that are not justified on these bases. Recently, state law has alluded to SDC reductions for affordable housing that do not directly address an accompanying reduction in services, and many cities exempt certain development from SDC;s including ADU's and affordable housing. Waiving SDCs may require a City to backfill lost revenues or to update its SDC methodology to recapture reduced or waived SDCs from remaining development.

SDC's and fees can add significant cost to a development project and reducing them can reduce development costs by 3% or more. In some cities where SDC's have been waived for ADU's the reduction may be 10% of costs or more. These reductions can be a significant factor in the cost of development and financing.

Incentive 3: Tax Exemptions and Abatements

Applicable jurisdictions: All cities; potential for specific abatement programs vary by community

Tax exemptions or abatements offer another financial incentive to developers that can improve the long-term economic performance of a property and improve its viability. This can be a substantial incentive, but the city or county will forego taxes on the property, generally for ten years. Other taxing jurisdictions are not included, unless they agree to participate.

Tax exemption programs are authorized by the state for specific purposes:

- **Vertical Housing Tax Exemption:** This program is meant to encourage vertical mixed-use buildings in areas where they might be viable, typically downtowns or town centers. The

program allows for a partial tax exemption for the built space, above the ground floor. Affordable housing is not required, but inclusion of affordable units can increase the tax benefits. The city must adopt a defined Vertical Housing Development Zone in which the exemption will apply.

- **Multiple-Unit Housing Exemption:** This program is aimed at preserving, rehabilitating or constructing multi-unit housing within a transit-oriented to town core area. As with the Vertical Housing program, an area must be designated for the program to apply. This program may apply to market-rate housing, with additional benefits for workforce or low-income units.

- **Non-Profit Low-Income Housing:** This program is aimed at encouraging subsidized affordable housing development and can be more broadly applied geographically. Units must be affordable at 60% of Area Median Income to be eligible. This program applies to non-profit agencies that are often one the few sources of subsidized housing in many communities.

Implementation of tax exemption programs requires adoption by local officials and establishment of program goals and policies. They can be a good incentive to focus housing development in key areas and encourage more density and mixed uses in town centers.

6. Funding Tools & Uses

This section discusses potential funding tools available to local jurisdictions to participate in efforts to preserve existing housing and encourage desired housing types. While prior sections of this report have discussed policy or regulatory approaches, creating funds dedicated to housing programs would allow the region to exert greater control and leverage over development activity.

Funding Source 1: Tax Increment Financing (Urban Renewal)

Applicable jurisdictions: All cities (Astoria and Seaside have adopted Urban Renewal Areas)

Tax increment financing (TIF) is the mechanism through which urban renewal areas (URA) grow revenue. At the time of adoption, the tax revenues flowing to each taxing jurisdiction from the URA is frozen at its current level. Any growth in tax revenues in future years, due to annual tax increase plus new development, is the "tax increment" that goes to the URA itself to fund projects in the area.

For the most part, these funds must to go to physical improvements in the area itself. These projects can include participating in public/private partnerships with developers to build housing, or can be used to complete off-site public improvements that benefit and encourage new development in the area, or to acquire key sites. The funds can also be used for staff to administer these programs, and to refund waived SDCs.

Urban renewal projects must be specified in the adopted Urban Renewal Plan, or can be added by amendment at a later date. This process encourages planning ahead for how revenues will be equitably used for a variety of means, including housing. The tax increment can grow at very different rates among URA's depending on how much new development occurs there to grow the tax base. However, this program can be a very effective way to build revenue to focus on key areas of the community.

Funding Source 2: Construction Excise Tax

Applicable jurisdictions: All cities (Cannon Beach has implemented)

The construction excise tax (CET) is a tax on construction activity of new structures or additional square footage to an existing structure to pay for housing affordable at 80% of AMI or less. Cities or counties may levy a CET on residential construction of up to 1% of the permit value, or on commercial and industrial construction with no limit on the rate.

The allowable uses for CET revenue are set forth in state statute as follows:

- 4% for administrative costs, and of the remainder:
- 50% must be used for developer incentives (i.e. fee and SDC waivers, tax abatements, etc.) for affordable housing
- 35% for affordable housing programs, flexibly-defined
- 15% to Oregon Housing and Community Services (OHCS) for homeownership programs
- Commercial CET: At least 50% of revenue must go towards housing-related programs; remainder is unrestricted

The CET is a fairly straightforward to administer, with 4% of funds to cover the added administration costs. This administrative set-aside can also help pay the administration costs for related policies adopted for use with this program, such as fee and SDC waivers or tax abatements.

The required use of funds ensures that the funding is used to incentivize development and housing and can't be diverted or diluted with competing uses. While this funding is most typically used to benefit households with incomes at 80% AMI or less, the funds from a commercial CET allow for more flexibility to apply to middle-income housing.

The CET does raise costs for housing developers, but it can be offset by providing other development-based incentives described in the prior section. This source also requires time to build substantial funds in low-development environments.

Funding Source 3: Affordable Housing Bond (Regional or Local)

Applicable jurisdictions: All cities and county

Localities can propose bonds meant to provide affordable housing and related programs through a public vote. Most recently, the City of Portland and the (Portland) Metro Region have each passed large bonds for affordable housing and 2018 changes to state law allow for these funds to be used more flexibly to work with non-profits and other non-governmental agencies which provide much of the affordable housing in many communities (i.e. with tax credits.) This change means that cities and counties do not need to become directly involved in developing affordable housing and build the many new competencies that involves.

Housing bonds can be sought regionally (as with Metro, and under consideration in the Eugene/Springfield metro area) or can be done as a local option level. In Clatsop County, a housing bond proposed on the county level would in effect be a regional approach. This would allow a strategic approach to address some of the geographic disparities identified through this project.

A bond dedicated to affordable housing would provide a stable, on-going funding source. However, it does require voter approval and periodic renewal, if desired. The funding can be used for capital, programs and operating expenses. The implementation and affordability levels are flexible. While this project has identified the need for many types of market-rate (i.e. non-subsidized) housing, affordable housing programs can help fill an important niche for lower- and working-class income families, particularly for multi-family rental housing. Affordable programs set at 80% AMI can serve many in the service industry and other working-class renter households. Serving these households can take pressure off of other segments of the housing market and dedicated affordable housing properties will house permanent county residents, rather than be used for vacation rentals.

* * *

The following is a list of potential applications for funding towards housing goals:

Funding Uses 1: Public Private Partnerships

Applicable jurisdictions: All cities and county

Most of the strategies discussed below fall under the umbrella of public/private partnerships which include a broad range of projects where the public contributes to private or non-profit development. The public involvement usually entails providing some financial incentive or benefit to the development partner in return for the partner's agreement that the development will provide some public benefit for a specified length of time. These partnerships can be used to encourage a wide range of public goals, including certain development forms, affordability levels, public space (plazas, parks), environmental features, mixed uses, etc.

The benefit of public/private partnerships is that the city or county does not have to build internal expertise in development, property management, or complicated affordable housing programs. Partner agencies with experience in these types of projects benefit from public contributions, making the projects more feasible.

The role of public agencies, be it the county or cities or a regional housing coordinator, is to identify potential community partners for different types of projects and be broadly familiar with available housing programs, to know how best to contribute. If the public would like to pursue some of these strategies, it must also identify funding sources and build a fund that is ready to deploy.

The following are some examples of specific public/private partnership models.

Funding Uses 2: Housing Preservation Fund

Applicable jurisdictions: All cities and county

Housing preservation efforts are often focused on "low cost market rate" housing (LCMR), meaning non-subsidized housing that nonetheless has lower than average rents for the area due to the age or condition of the property or the neighborhood. Often in the form of older apartment properties or mobile home parks, these properties are sometimes viewed negatively, or seen as potential targets for "revitalization". But in truth, in many communities, this housing stock actually provides a vital source of more affordable units for working class households. LCMR units commonly outnumber subsidized affordable housing projects in a community by a large measure. Depending on the location and local market, these properties can face pressure to raise their rents from rising property values, new ownership, or redevelopment.

Another key focus of housing preservation efforts are subsidized properties that will soon lose their regulated status at the end of their original tenure.

Housing preservation funds can creatively incentivize LCMR properties to maintain their lower rent levels by offering low-cost financing for renovation or acquisition. These funds can help owners of older properties in need of reinvestment to maintain their properties and avoid selling, while the renovations improve the property for the renter households living there. This tool can also be used to directly acquire LCMR properties or work with partner agencies to do so.

For most cities or counties, it is likely best to partner with agencies who offer these competencies. The Network for Oregon Affordable Housing (NOAH) is a Portland-based agency that operates a housing preservation fund with experience in using these tools to preserve housing statewide. NOAH works with for-profit and non-profit property owners and regulated and unregulated properties, generally through offering financing for renovation or purchase in return for long-term rental restrictions.

One use for regional housing funds might be to help identify LCMR properties in need of preservation and provide capital to a partner such as NOAH to engage with those specific properties.

Funding Uses 3: Land Acquisition/Use Public Lands

Applicable jurisdictions: All cities and county

Land acquisition by a city or city partner is the most direct method to ensure that a key parcel or location will be preserved to meet public goals, and not (re)developed for other uses. Examples of priority sites may be a key corner or large development opportunity in a town center or urban renewal area, that is seen as a lynchpin for other future revitalization in the area. Another target may be large parcels zoned to allow multi-family development but which under current market forces are more likely to be developed as low-density housing, or expensive housing, etc. Public contribution to land acquisition can also be a powerful tool to help partner agencies achieve public goals (for instance, temporary public control of a historical building to facilitate a partner developer to renovate it for a beneficial use.)

As land acquisition is expensive, this tool is generally used for key opportunities that arise. Because public agencies can be more patient then private developers, this tool does allow for purchase of properties in down cycles. There are also partner agencies, such as NOAH mentioned above, and the state Land Acquisition Program (LAP), that can assist localities with contributions and expertise for acquiring land for affordable housing. Cities and counties can also identify any surplus public land they already own that could be used for these purposes.

Control of a key site gives a public agency ultimate say in what happens in that location. Typically, a development partner is eventually identified to develop the site, and the value of the property provides a significant incentive that the city can contribute to the project. Through reduced property transfer, the city can ensure that the development meets public goals such as affordable housing, multi-family housing, mixed uses, etc. The discounted land may also allow development forms that would typically be economically infeasible to become viable.

Land acquisition may be used for "land banking" where the public agency maintains the property for an extended period, or it may be used in the short term to take advantage of a specific opportunity or aid a specific partner development. Land banking can be used to secure land in areas where gentrification or rising property values are expected. Early public land acquisition ensures that some properties in the rapidly appreciating neighborhood are preserved for affordable housing or other public benefit.

Funding Uses 4: Community Land Trust

Applicable jurisdictions: All cities and county

A community land trust (CLT) is a model wherein a community organization owns the land underlying a housing development and provides long-term ground leases to households to purchase homes on that property. The structure allows the land value to largely be removed from the price of the housing, making it more affordable. The non-profit agency can also set prices at below-market levels, and can set terms with buyers on the eventual resale of the units, sharing price appreciation,

and other terms that allow the property to remain affordable for future owners as well. This is an approach for providing affordable homeownership opportunities whereas most regulated affordable housing is for rental units. That said, CLTs can also be used in partnership with affordable rental developers to reduce the cost basis of the land and help make the project more feasible. In markets where housing prices outpace local incomes, CLTs can control the rate of price increases and ensure that some properties are available for lower-income buyers.

This model can be used in conjunction with most of the other funding strategies discussed here (i.e. housing preservation or land acquisition). Given the distinctive legal structure of CLT's it is likely best for Clatsop County and its cities to consider partnering with a non-profit community organization to administer this program. The cities can help identify key opportunities for this model and help to capitalize the efforts of its partner.

Funding Uses 5: Regional Housing Coordination

Applicable jurisdictions: All cities and county

The following section discusses regional housing coordination in more detail. One potential use of funding would be for administration of a more formal central agency or Regional Housing Coordinator position, to serve as central point-of-contact for community partners and the public. As the county and cities consider a more holistic regional approach to housing challenges, this organizational structure would allow for more strategic planning among the cities in north and south Clatsop County on where and how to use resources, and direct potential development partners. (See more discussion below.)

7. Regional Collaboration and Capacity Building

The findings of this study underscore the regional nature of the housing market in Clatsop County. While the County is made up of a series of separate cities, unincorporated communities, and rural areas, employment opportunities and housing needs do not stop at these jurisdictional boundaries. Whether due to economic necessity, personal preferences, or household commuting challenges, many people will live in one area of the County and work in another.

Achieving a balance of housing and jobs within each community can help to increase the odds that more people can live where they work; however, existing development patterns, geo-physical constraints, and regional economic forces will almost certainly continue to perpetuate significant cross-commuting and economic interdependence between the communities in the County.

Given the regional nature of the housing market and the economic interdependence of the communities in the County, it makes sense to institutionalize regional collaboration and coordination on housing-related policies and programs. There are several benefits to this regional approach:

- **Regulatory consistency**. The housing market is strongly influenced by the regulatory environment, including the development code and related regulation of short-term rental uses. When that regulatory environment differs across cities, it can result in divergent housing outcomes and conditions, which can affect commuting patterns and access to employment opportunities. Further, differences in regulations or incentives can disadvantage some jurisdictions relative to others in attracting housing development. Regulatory consistency can help ensure a wide range of housing types is available in all communities, at all income levels, to improve jobs-housing balance. Some variation in regulations will continue to be necessary to reflect local needs and conditions; however, the region should consider if consistency and coordination is worthwhile goal when adopting new policies and revising existing policies.
- **Funding strategies.** The funding sources and tools identified in Section 6 may be more effective if implemented at the regional level, as the pool of funds will be larger to draw, potentially allowing for projects that have a greater impact. Additionally, the pool of candidate projects to invest in will be wider. This lessens the chance that an individual City has an excellent project, which would benefit regional housing needs, but cannot generate enough funding alone to invest in the project.
- **Planning and coordination**. As demonstrated by this study, regional planning efforts can better identify both shared challenges and shared opportunities to address housing needs. Additionally, regional planning and analysis can benefit from efficiencies of scale. For some types of planning work, it is more efficient to study the County as a whole than to engage in multiple, separate projects.

This study is one step in the direction of regional collaboration and capacity-building. Future steps may include establishing a regional housing coordinator position at the County, formalizing ongoing meetings of staff and/or stakeholders from each jurisdiction, and setting up tools or systems for sharing data and best practices on an ongoing basis.

8. Implementation Roadmap

Strategy	*Applicable Jurisdictions*	*Level of Effort*	*Timing**	*Notes*
Land Supply Strategies				
Strategy #1. Ensure land zoned for higher density is not developed at lower densities	All Cities & County	Low-Medium	Short-term	Requires relatively modest set of code updates to either revise list of allowed uses in specific zones and/or establish minimum densities; likely to require some public outreach.
Strategy #2. Further study the potential need for a UGB amendment in South County to meet needs	Seaside, Cannon Beach	Medium	Short-term	Requires potential refinement and further analysis of BLI data and evaluation of alternative UGB expansion areas.
Strategy #3. Refine BLI data and results	Astoria, Warrenton	Low-Medium	Short-term	Warrenton undertaking as part of DLCD grant project; completion there by June, 2019. Astoria should conduct targeted assessment of selected large parcels.
Strategy #4. Further asses infrastructure issues	County & Gearhart	Medium-High	Medium-term	Requires additional research and coordination with local service providers in unincorporated Clatsop County and assessment of alternative wastewater treatments strategies in Gearhart.
Policy and Code Strategies				
Strategy #1. Adopt supportive and inclusive comprehensive plan policies	All Cities & County	Medium	Short-term	Can be completed as part of a future Comprehensive Plan updated process or separately as an implementation action associated with any motion to approve or adopt this Countywide strategy.

Strategy	*Applicable Jurisdictions*	*Level of Effort*	*Timing**	*Notes*
Strategy #2. Emphasize minimum density standards	All Cities	Medium	Short-term	May be completed in conjunction with other development code updates related to residential development or as a standalone project. Additional public involvement process (beyond an adoption hearing) may be necessary.
Strategy #3. Revise maximum density, height or bulk standards in higher density residential zones	All Cities	Medium	Short-term	May be appropriate to combine with Strategy #2 (minimum density standards). Additional public involvement process (beyond an adoption hearing) may be necessary.
Strategy #4. Support high density housing in commercial zones	All Cities	Medium	Short-term	Level of effort depends on the degree of change. Any changes to commercial zones should ensure sufficient land remains to meet commercial land need.
Strategy #5. Streamline and right-size off-street parking requirements	All Cities	High	Short- or medium-term	Additional public involvement necessary. Changes should consider availability of on-street parking and varying conditions in different neighborhoods.
Strategy #6. Facilitate "missing middle" housing types in all residential zones	All Cities & County	High	Short- or medium-term	Additional public involvement necessary. The range of housing types permitted will need to consider existing development patterns. New design or development standards likely necessary to ensure higher density housing types can fit into lower density neighborhoods.
Strategy #7. Encourage cottage cluster housing	All Cities	Medium	Short-term	Additional public involvement necessary. Model code provisions are available. This project may also consider engaging with potential developers of this specific housing types.

Strategy	*Applicable Jurisdictions*	*Level of Effort*	*Timing**	*Notes*
Strategy #8. Promote accessory dwelling units	All Cities	Low-Medium	Short-term	Additional public involvement necessary. May be appropriate to combine with Strategy #6 (missing middle). Need to consider relationship to short-term rental/vacation rental regulations.
Strategy #9. Incentivize affordable and workforce housing	All Cities & County	Low-Medium	Short-term	Engage with affordable housing providers to ensure incentives are useful and valuable. Consider pairing incentives with other code changes, such as allowing higher density/height in exchange for affordability standards.
Strategy #10. Limit short-term rental uses in residential zones	All Cities & County	Varies	Varies	Level of effort and timing depends on existing regulations and goals in each community.
Incentives for Developers				
Incentive #1. Stream-lining permitting and review process	Cities	Medium	Short-term	For most cities, will likely require a review of procedures, timelines and fees to understand how and if they can be streamlined.
Incentive #2. System development charge (SDC) or fee waiver	Cities	Medium-High	Short- or medium-term	SDC reductions are likely to provide greater financial incentive to the developer than fee reductions. Engage with other overlapping jurisdictions to maximize the share of total charges that might be included. Explore methods to backfill lost revenue from SDCs through funds such as a CET.

Strategy	*Applicable Jurisdictions*	*Level of Effort*	*Timing**	*Notes*
Incentive #3. Tax exemptions and abatements	All Cities	Medium-High	Short- or medium-term	Can provide a sizable developer incentive over time. Most programs must be established in local policy, and in some cases a specific district must be designated. The local housing priorities should drive which exemption program is adopted (i.e. Multi-Unit, Vertical Housing and/or Affordable Housing). Cities should be cautious over creating competing programs, if one outcome is truly prioritized over the others.
Funding Sources and Uses				
Funding Source #1. Tax increment financing (Urban Renewal)	Cities	High	Medium- or long-term	Requires a planning process to assess the feasibility of the proposed urban renewal area and formal adoption of an urban renewal plan. The plan describes the URA boundaries, planned projects and projected funding levels. In key districts of a community, can be a good tool to build revenue and ensure that it is invested in that area. Can be a source to help pay for developer incentives. (Astoria and Seaside have implemented.)
Funding Source #2. Construction excise tax	Cities	Low-Medium	Short-term	A good source of funding for developer incentives and affordable housing programs. This source will fluctuate with development market cycles, but can build revenue quickly if applied to both residential and commercial construction. Raises development costs somewhat, but can be off-set with incentives.

Strategy	*Applicable Jurisdictions*	*Level of Effort*	*Timing**	*Notes*
Funding Source #3. Affordable housing bond (regional or local)	All Cities & County	Medium-High	Medium-term	Requires public approval of a bond measure, including a public engagement campaign explaining the reasons for the bond. Timing may hinge on public sentiment about how acute housing pressures have grown in the county. A countywide bond would allow for the county and cities to pool resources and address some of the geographical disparities identified in this study.
Funding Uses #1. Public/private partnerships	All Cities & County	Low-Medium	Short- or medium-term	Public/private partnerships can become more systematized once specific incentive and funding programs are established. The county should inventory and engage with potential partner agencies in affordable housing, financing, community land trusts, etc.
Funding Uses #2. Housing preservation fund	All Cities & County	Medium	Medium-term	Entails the design and adoption of a program, identifying spending priorities. It is likely best to partner with agencies with experience in administering and managing these programs. The fund can be used to finance these efforts and direct them to specific areas or sites.
Funding Uses #3. Land acquisition/ use public lands	All Cities & County	Medium	Medium-term	Cities and perhaps a regional coordinator should inventory existing "surplus" public lands that might be repurposed for housing projects in partnership with development partners. Similarly, key parcels and sites for acquisition should be confidentially identified but will likely be contingent on building of funding from TIF, CET or other sources.
Funding Uses #4. Community land trust (CLT)	All Cities & County	Medium	Short-term	A CLT program can be accomplished by providing incentives, financing or grants to partner agencies that specialize in this model. This is one of the few models for providing lower-cost homes for sale rather than rent.

Strategy	*Applicable Jurisdictions*	*Level of Effort*	*Timing**	*Notes*
Regional Collaboration				
Regional collaboration and capacity building	All Cities & County	Medium	Short-term	Requires inter-agency engagement among county and cities to decide the purview of this office or position in housing issues across the county. Can serve as first point-of-contact for partners and community and direct a more coordinated response to housing issues among the communities of the county which face different housing needs, opportunities and constraints.

* Short-term = 1-3 years; Medium-term = 4-5 years; Long-term = 6-10 or more years

Appendix A: Housing Needs Analysis Memo
Appendix B: Buildable Land Inventory Memo
Appendix C: Policy and Code Review Memo

CITY OF ASTORIA
Founded 1811 • Incorporated 1856

COMMUNITY DEVELOPMENT

MEMORANDUM

DATE: November 19, 2019

TO: Astoria Planning Commission

FROM: Barbara Fryer, City Planner

SUBJECT: Work Session Item #2 Proposed Amendment (A19-06) for Astoria Warming Centers

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This is a Planning Commission initiated amendment.

Current Astoria Code:

Allows Public/Semi-Public uses as a conditional use in the R-3 zoning district. Warming Centers currently interpreted to be semi-public uses of a temporary nature and, as such, are a conditional use.

Proposed Amendments:

Attached you will find the most current draft regulations.

Staff will conduct a work session to review the proposed changes.

Definitions

Temporary Warming Shelter:

A temporary shelter that accommodates more than 10 persons per operating day and meeting specific conditional use standards as defined in the development code.

Specific Conditional Use Standard

11.180 Temporary Warming Shelters

I. Temporary Warming Shelters

A. Purpose

The purpose of a Temporary Warming Shelter is to provide short-term shelter for persons when persons are at greater risk of injury and death from inclement weather conditions.

B. Description

A Temporary Warming Shelter provides an opportunity for persons to escape from weather conditions that can be hazardous to their health. Operating during the coldest hours of the day, and during the coldest months of the year, the shelter provides warmth, a place to dry, a place to sleep, and optional warming food and beverage.

C. Operation

In addition to the specific operating local jurisdiction guidelines outlined below, a Temporary Warming Shelter shall operate under the guidelines of **Oregon State Fire Marshal's Technical Advisory No. 11-14 ("TA 11-14")**.

In the event that guidelines from the local jurisdiction conflict with guidelines from TA 11-14 or from future revisions to TA 11-14, the more stringent guidelines shall supersede.

Local jurisdiction guidelines:

1. Maximum Number of Persons Allowed:

Zone	Maximum Persons
R3	One (1) individual for every thirty-five (35) square feet of room area or 25 individuals, whichever is less

R2	One (1) individual for every thirty-five (35) square feet of room area or 15 individuals, whichever is less
All Other Zones	One (1) individual for every thirty-five (35) square feet of room area

2. Buffer
    a) A warming shelter may not operate within 1000' of another warming shelter
3. Neighborhood Responsibilities
    a) Garbage Watch
    During non-operating hours at least one responsible individual shall canvass the neighborhood within 100' of the Shelter and collect all trash not in receptacles.
    b) Crime Watch
    For one hour prior to and for thirty minutes after the Shelter's operating hours, at least one responsible individual shall maintain a crime watch in and around the Shelter and shall report all suspicious activity to the Astoria Police Department.
4. Life-Safety Requirements
    a) Weapons
    The Temporary Warming Shelter shall formulate a weapons safety plan to ensure the safety of its clients. At a minimum, the plan shall contain describe the process for:
        (1) Defining what the shelter considers a weapon
        (2) Describing the method(s) to determine if clients are carrying a weapon(s)
        (3) Describing the process for ensuring that weapons are safely stored during operating hours

D. Annual Reporting
    1. A warming shelter shall report to the city on an annual basis the following information:
        a) The dates and times of each operating day
        b) The number of persons accommodated on each operating day
        c) Dates and times of all emergency services contacts and visits
        d) Copies of all public feedback

Zone Changes

Add "Temporary Warming Shelter" as Conditional Use in Zones

1. AH-HC

2. C3
3. C4
4. HR
5. LS
6. S2
7. R3
8. R2

CITY OF ASTORIA
Founded 1811 • Incorporated 1856

COMMUNITY DEVELOPMENT

MEMORANDUM

DATE: November 21, 2019

TO: Astoria Planning Commission

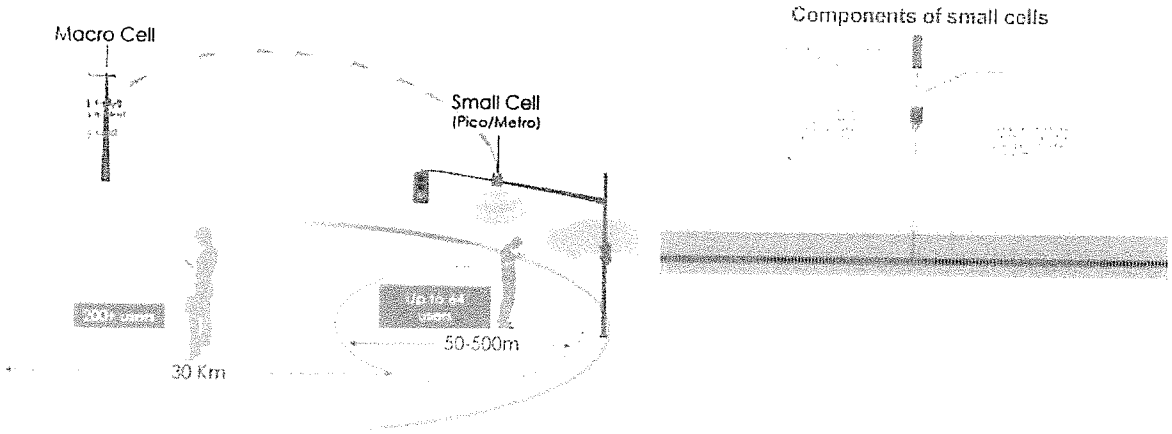
FROM: Barbara Fryer, City Planner

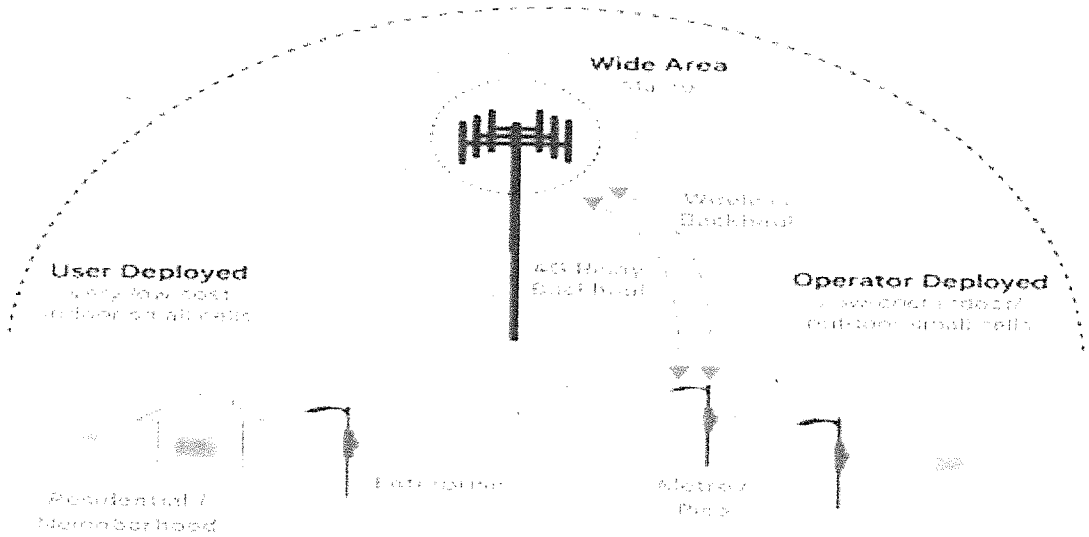
SUBJECT: Work Session Item #3 Proposed Amendment (A19-08) Small Cell Wireless

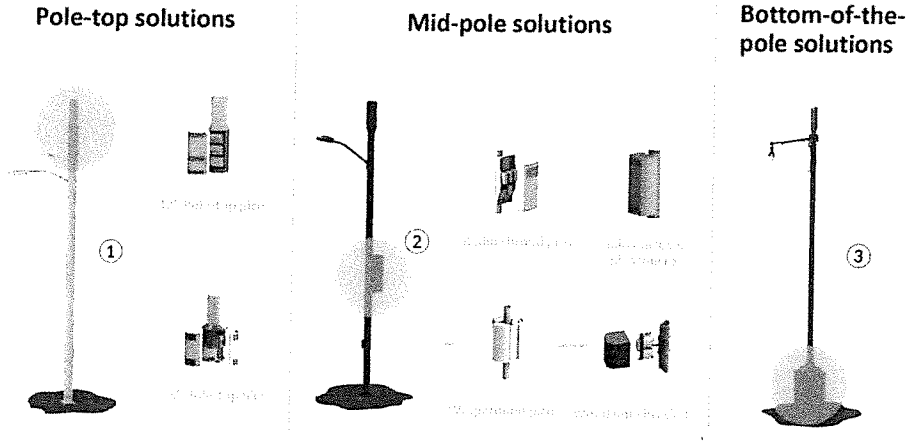
Background: On September 10, 2019, Verizon Wireless approached the City Council about securing a franchise agreement to install small-cell wireless facilities on utility poles in areas of high cell phone data use. The transmitters would be located about every 500 feet in high data-traffic areas such as downtown. These small cell transmitters are about 2 feet tall.

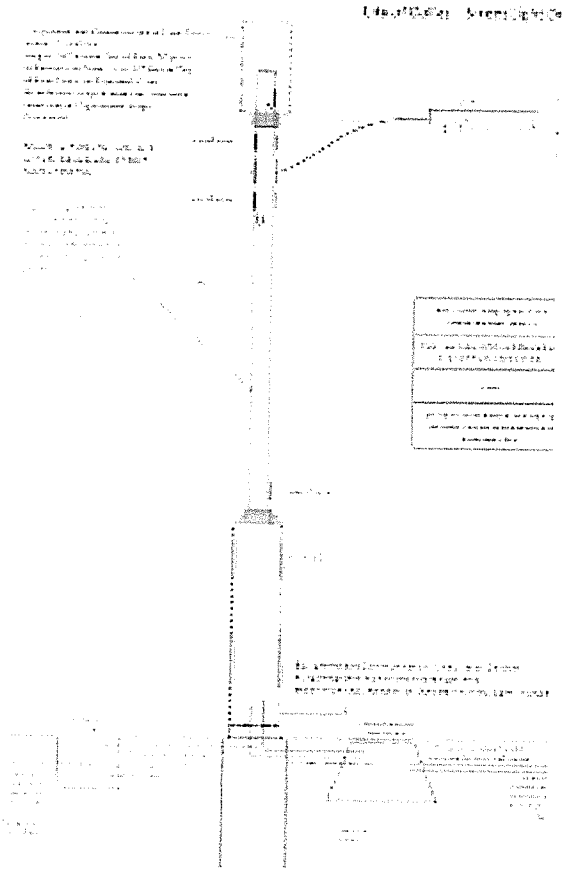
In 2017, the Senate approved the Streamline Small Cell Deployment Act (S.3157) that limits cities and counties from prohibiting the service and furthermore states that if the city does not act on an application within 60-90 days, the request will be deemed granted 31 days after the applicant provides written notice of the City's failure to act. The FCC made a declaratory Ruling and Order in 2017 that also limits applications for all small wireless facilities to $500 for up to 5 sites and $100 per site thereafter. It also limits recurring fees to $270 per site per year. This ruling also requires collocation to be acted on within 60 days and that all other request be acted on in 90 days. The FCC modified the requirement that if the local government does not act on an application in time, it will be viewed as a prohibition of service allowing potential litigation.

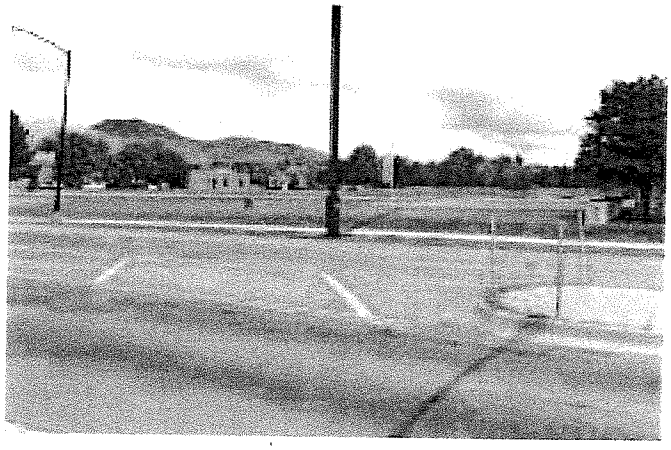
This technology is different from current cell technology in that it is mounted lower to the ground and is a 2 foot panel. This technology, as noted earlier is located every 500 feet. I have included some infographics and photos of this technology on the following pages:

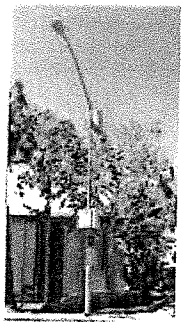

Macro Cell
Small Cell
(Pico/Metro)
30 Km
50-500m
Components of small cells

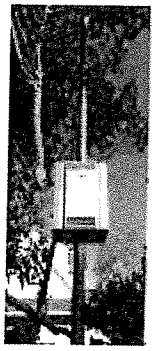

Wide Area
User Deployed
Operator Deployed

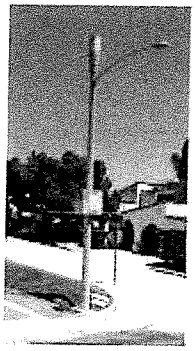

Pole-top solutions
Mid-pole solutions
Bottom-of-the-pole solutions
1
2
3

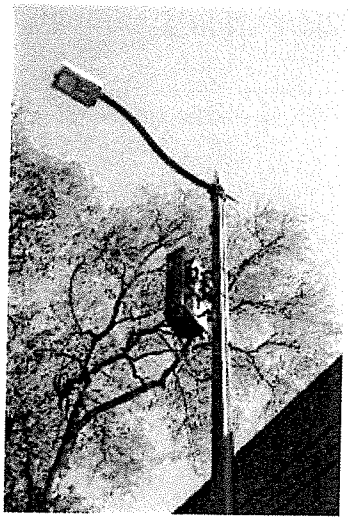


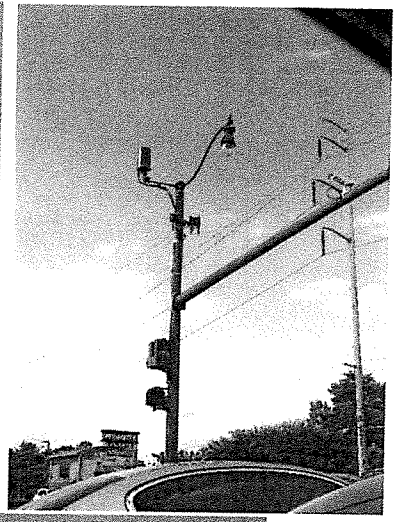


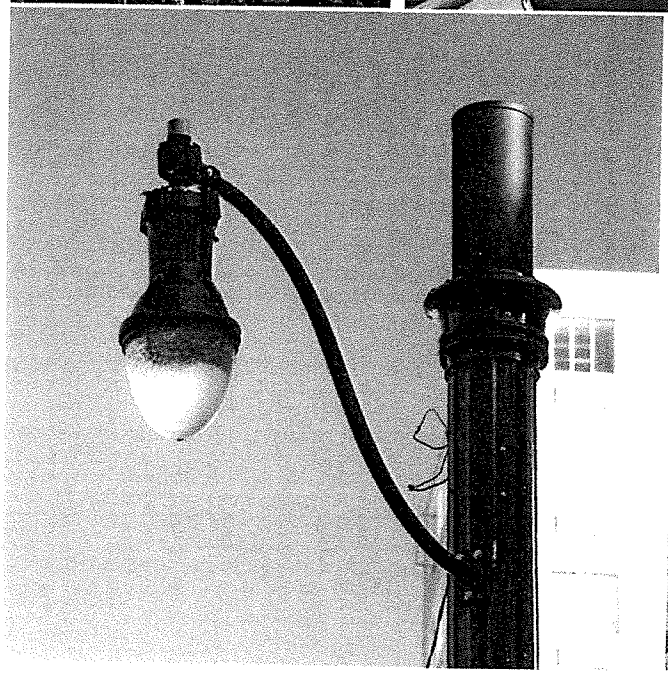


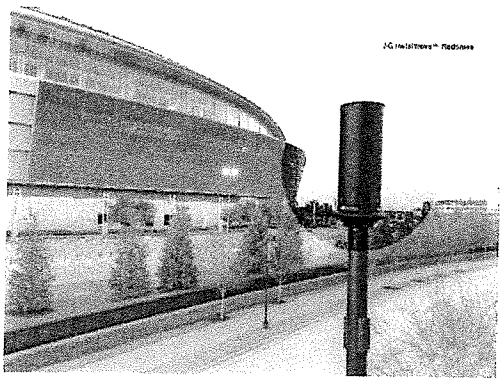






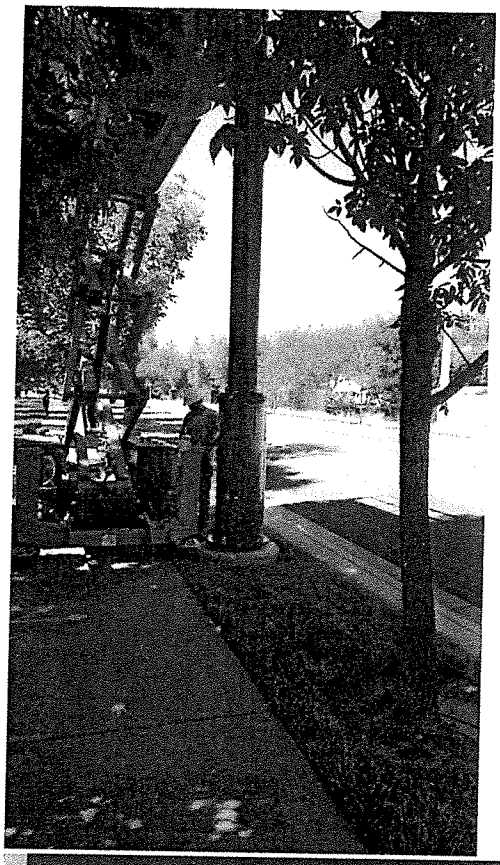


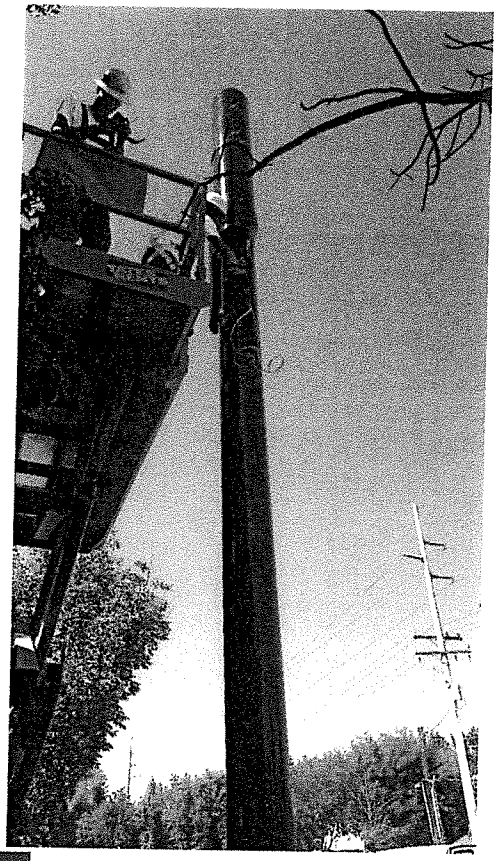


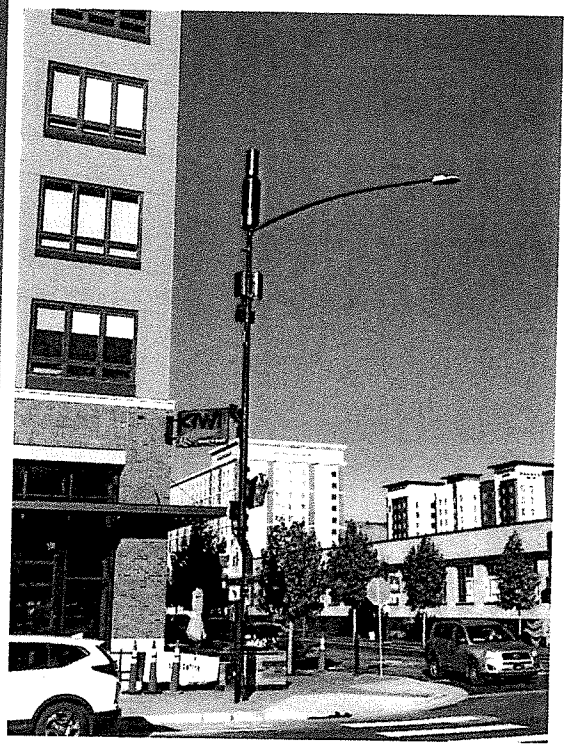


Discussion Items:

Issue	Discussion Points
Antenna Design	• Stealth, • do not extend beyond permitted height in zone, • smallest possible, • antenna and mounting hardware and accessories painted color to match pole....
Environment	Noise, Vibration, Odors
Location	• Existing poles • not Acorn light standards or decorative light standards
Pole Design for new poles or replacement poles	Maximum diameter of pole,
Equipment cabinets	• Underground • Cabling and wiring underground
Definitions	
Visual Impact and Alternative Site Analysis	
Zones	
Historical Buildings and Structures	
Accessory Building Size	
Signs	
No net loss of required parking	
Type I Process for small wireless	







Two Small Cell Facilities in Boise Idaho. Top two photos are of one in a neighborhood. The bottom two photos are in their downtown core.

Exhibits:

1: NLC Small Cell Wireless Technology in Cities

2: NLC Model Code

3: Industry proposed Ordinance

4: Industry primer on Small Cell Technology

5: Bend Small Cell Wireless

6: Beaverton Wireless Code

7: Hillsboro Proposal

8: Bainbridge Island, WA Small Cell Wireless

9: Madison Wisconsin Guidelines

10:Oregon LOC DRAFT Model Ordinance

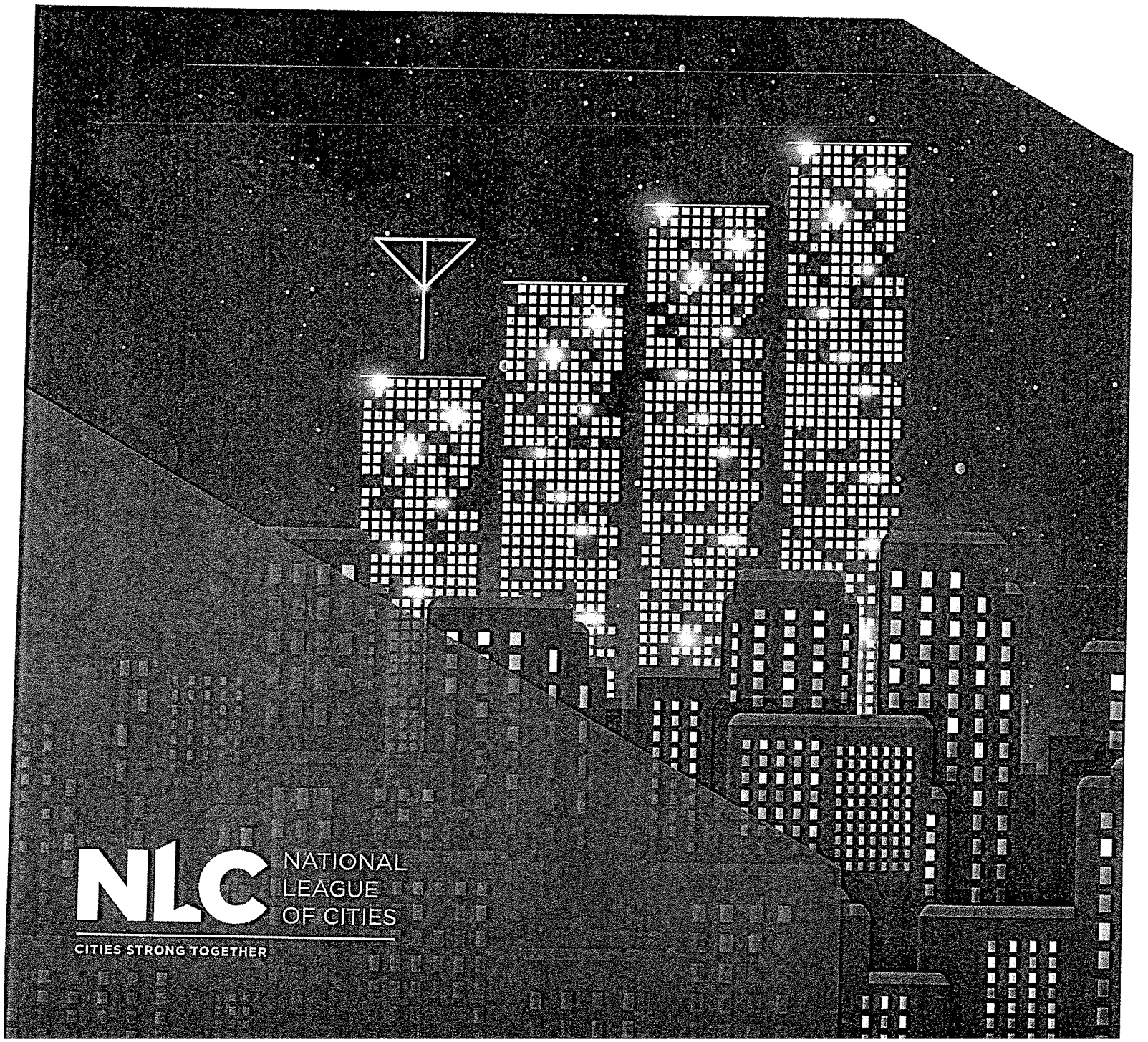
11:Oregon LOC Draft Design Guidelines

EXHIBIT 1:

NLC SMALL CELL WIRELESS TECHNOLOGY IN CITIES

MUNICIPAL ACTION GUIDE

Small Cell Wireless Technology in Cities



NLC NATIONAL LEAGUE OF CITIES

CITIES STRONG TOGETHER

Introduction

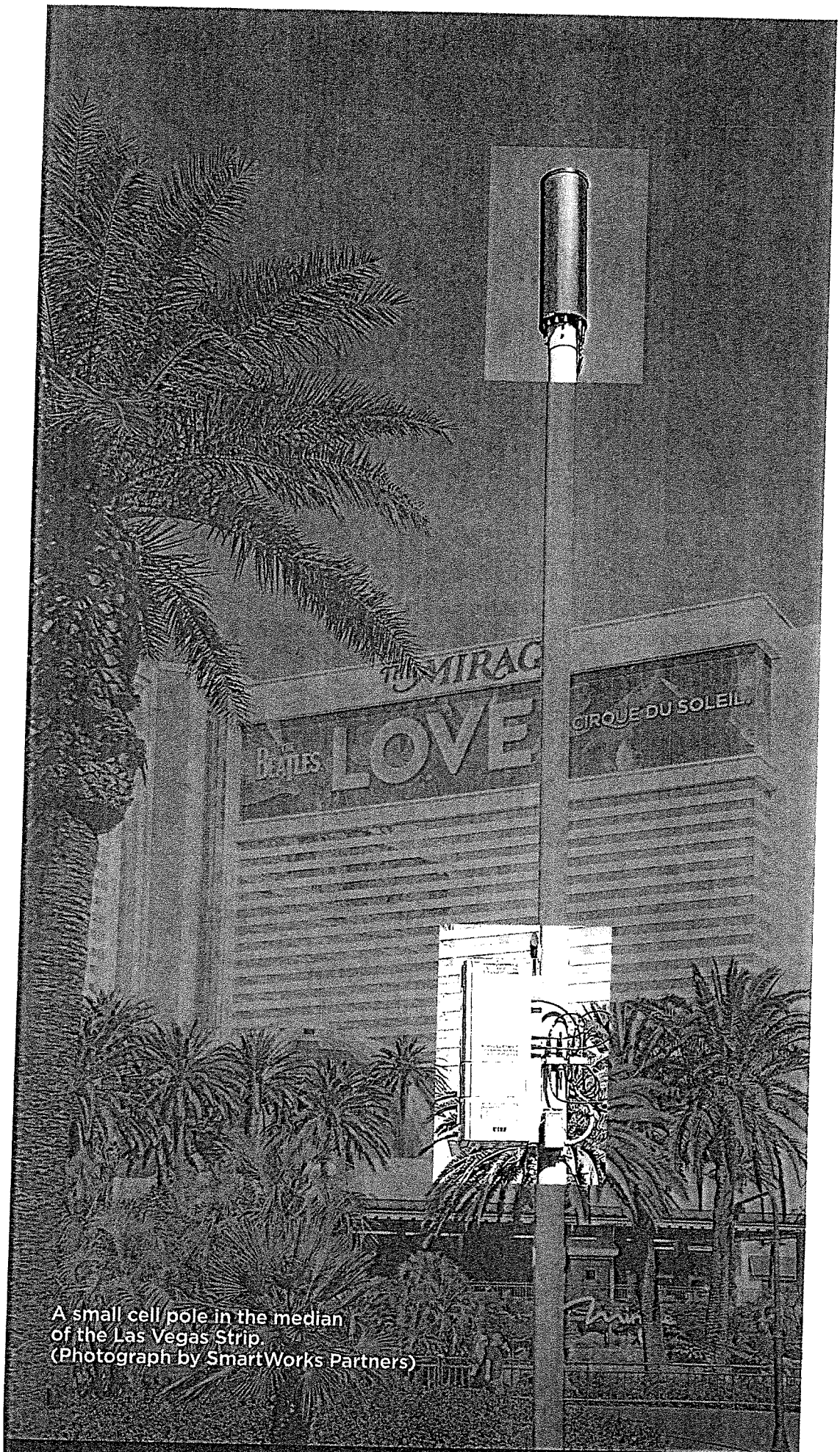
From our connected homes, where everything is controlled by the internet, to our workplaces, where reliable broadband access is paramount for almost every type of job, technology is impacting every facet of our daily lives. Cities are inextricably linked to the internet, and the integration of new technologies promises better and more innovative ways to serve our residents.

With this seismic shift toward smart cities and the internet of things (IoT), reliance on wireless and wireline broadband infrastructure is becoming greater and greater. Mobile phones, IoT devices and other small wireless gadgets are becoming ubiquitous. Wireless data consumption has reached approximately 1.8 exabytes per month in North America alone, and that number is projected to grow six-fold by 2022.[2] As various wireless providers maintain that the roll out of 5G internet service is approaching, and the IoT proliferates with the connection of millions of new smart devices to the internet, cities must face the reality that to meet the increasing demands of residents, more wireless facilities and infrastructure must be deployed. With that reality, city officials must also face a number of policy, public safety, land-use and right-of-way considerations.

As cities navigate this rapidly-changing policy issue with both wireless and infrastructure providers and community residents, a number of considerations for the different stakeholders begin to emerge. This action guide from the National League of Cities (NLC) provides an overview of small cell technology, as well as guidance on how local governments can plan for, develop policy and processes around, and manage the deployment of, small cell wireless infrastructure. It will also provide city leaders with strategies for proactively engaging with wireless providers and residents to plan for small cell networks in their communities.

The Internet of Things in Connected Cities

Every consumer product and piece of infrastructure increasingly has the ability to sense surrounding stimuli, to communicate with other devices and people, and to draw on the computing and storage power of the cloud. This phenomenon has been dubbed the internet of things (IoT). The more smart devices and sharing platforms there are, the more data is generated about consumer preferences and habits. But what does this mean for cities? Smart cities are employing the same technology to connect their disparate utility, infrastructure and public service grids, generating real-time aggregate data. This, in turn, can help cities manage their programs and services more effectively and gauge their impact for residents, businesses and visitors immediately. The city of the future is an interconnected one, where devices communicate with one another in a constant stream of data that provides real-time information to the public and to the municipality.[3]



A small cell pole in the median of the Las Vegas Strip. (Photograph by SmartWorks Partners)

What is a 'Smart City'?

The term 'smart city' sometimes seems to mean everything and nothing all at once, and a common question about the phenomena is some variation on, "what is a smart city?". A smart city is a city that has developed technological infrastructure that enables it to collect, aggregate and analyze real-time data and has made a concerted effort to use that data to improve the lives of its residents and the economic viability of the community. Smart city initiatives often involve four components: the underlying communications infrastructure, information and communication technologies (ICTs) that generate and aggregate data; analytical tools which convert that data into usable information; and organizational structures that encourage collaboration, innovation and the application of that information to solve public problems.[1] Examples include water or utility monitoring devices that promote efficient or sustainable usage, smart streetlights that double as gunshot spotters and communicate with city administrators when they need maintenance, and traffic control and management systems that streamline traffic bottlenecks and report congestion and traffic data to city transportation planners.

Small Cell Technology

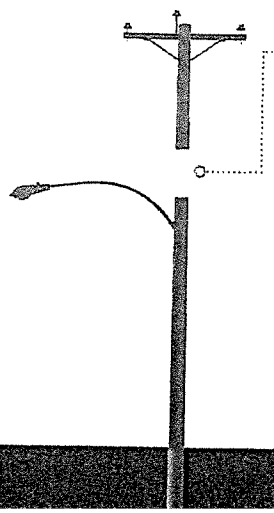
What is small cell technology?

As wireless data usage continues to escalate, providers must find new and innovative ways to keep up with consumer demand for more speed and data capacity. One way to address the capacity crunch is by deploying "small cells," a type of wireless technology for broadband infrastructure. Various federal, state and local laws define small cell differently. Generally, "small cell" refers to both the smaller coverage area of the wireless signal, and the smaller size of the infrastructure. Small cell installations generally cover much smaller geographic areas — measured in hundreds of feet — than the traditional macrocell towers that can cover miles in each direction. The antennas are much smaller than those deployed at macrocell sites, and are often attached to buildings, rooftops and structures in public rights-of-way (ROW), including utility and light poles and other street furniture.[4] Pole- or ground-mounted equipment accompanying the antenna may also be needed and can be as big as a large refrigerator. This equipment may be in the ROW, or on other public or private property.

These facilities help to complement or stretch macrocell coverage and add capacity in high demand areas.[5] Small cell infrastructure is typically deployed to alleviate capacity constraints where crowds gather or to cover targeted areas, including public squares and spaces, downtown pedestrian areas, parks, office buildings, campuses, or stadiums and arenas.

Macrocell vs. Small Cell:

Although they serve different purposes, macrocell and small cell technologies complement each other.



Traditional macrocell towers have a coverage area that spans several miles. They're hard to miss, although their signal degrades towards the edge of their coverage areas.

Small cell technology is much more discreet, mounted on existing structures like rooftops and utility poles. Sometimes, they are accompanied by refrigerator-sized equipment. Because small cells only supply a few hundred feet of coverage, they are best suited for dense areas like downtowns.

What are some of the benefits in cities?

With the increasing usage of wireless devices and data, cities are facing increased demand for reliable wireless service. Small cell facilities can be used to increase the mobile broadband network capacity in cities. This improved service and capacity has many advantages, including economic competitiveness, a "tech friendly" reputation, and more opportunities to deploy smart city and IoT applications. Given that up to 80% of today's 911 calls are placed via wireless phones, robust wireless networks are also critical to public safety.[6]

What are some challenges in cities?

Often, wireless providers will want small cells deployed in dense urban areas to provide adequate capacity in high demand spots, and each provider will want its own facility installed to cover the same dense area. Thus, there may be several requests to locate such facilities in the same general areas, such that four polls in a row will have small cells from four different wireless companies. This can result in clusters of small cells that are visually unappealing and detract from the aesthetic of the community. Deployment and installation of small cell facilities can potentially interfere with existing technology, such as wireless traffic signals and other municipal technology in close proximity. There is also the risk of ground mounted equipment associated with some small cell facilities obstructing a crowded city's rights-of-way. In addition, recent state and federal efforts to speed the deployment of small cell facilities have focused on preempting local authority to review and control small cell deployments, or to collect fair rents for the use of public property.

What federal and state policies apply to municipal siting processes?

The siting of wireless infrastructure is governed by local, state and federal law. Most wireless infrastructure siting is governed by the applicable government entity with control over the facility's property or location, and there may also be state and/or federal laws that apply to local determination. Local governments assess applications for permits to build new or alter existing wireless facilities for a variety of purposes, including public safety, overall management of public property or rights-of-way, accessibility requirements, environmental issues, land use and community aesthetics. Local governments may charge wireless service providers or wireless facility providers for application processing, access to the rights-of-way, and/or ongoing fees for access to public property — such as municipal street lights or traffic lights — either pursuant to local codes, as part of a large master lease or license agreements with a provider, or on an application-by-application basis.

Federal oversight of wireless siting is primarily based on three federal laws: The Communications Act of 1934, the Telecommunications Act of 1996 (Telecommunications Act) and a provision of the Middle-Class Tax Relief and Job Creation Act of 2012 (Spectrum Act).

These laws contain provisions intended to spur the development of wireless infrastructure and impose some limits on local authority over that infrastructure. The Telecommunications Act, for instance, makes it unlawful for local government to prohibit, or have the effect of prohibiting, the "provision of personal wireless service," prevents local government from "unreasonably discriminating among providers of functionally equivalent services," and requires that local government "act on any authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time." It also stipulates that local governments denying siting applications do so "in writing and supported by substantial evidence contained in a written record."[7] The Federal Communications Commission (FCC) has interpreted that a "reasonable period of time" for local governments to grant or deny siting requests is 150 days for new facilities, and 90 days for collocations.[8] This presumed time limitation is commonly known as a "shot clock."

Meanwhile, the Spectrum Act also contains provisions that limit local control over collocated wireless facilities to ensure the swift deployment of wireless technologies. Section 6409(a) of the Act provided that "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station."[9] The FCC created regulations in support of this law, specifying that these collocation requests must be approved within 60 days of application, and that this definition includes distributed antenna system (DAS) and small cell facilities.[10] If a city finds that it received an incomplete application, it has a limited period of time in which to pause, or "toll," the shot clock by notifying applicants in writing of the missing information and relevant local requirements.

The 1934 Communications Act has been cited in recent federal petitions and rulemaking activity[11] relating to the deployment of small cell facilities. Section 253 of the 1934 Act requires that local governments receive "fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis," when determining costs to access the public rights-of-way. The FCC has solicited public comment on how and whether to clarify the meaning of this phrase in relation to small cell wireless facilities but has not yet issued a decision or guidance. Likewise, the FCC has recently issued orders prohibiting moratoria on wireless deployment applications and permitting in essentially all circumstances.[12]

State governments have also passed laws intended to speed the deployment of wireless infrastructure, particularly small cell infrastructure, in recent years. For example, Arizona's HB 2365, which was signed into law on March 31, 2017, imposes a series of new requirements on cities' regulation of wireless infrastructure. Arizona's law creates timelines for both cities and applicants to complete reviews of applications and buildout of the requested site. Additionally, it states that rates

The Telecommunications Act of 1996:

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or fees are limited to not more than the actual and direct costs incurred by cities to review those applications or manage the ROW, and places a fixed dollar cap on those application fees, as well as a fixed cap on annual rights-of-way access and pole collocation fees.[13] [14] [15]

Other states have enacted similar limits on local review times, factors which may be considered in a site review and fees local governments may assess. State laws may limit whether local governments can enter into agreements with providers for larger-scale deployments of infrastructure within a community.

What are some of the policy challenges cities face?

Cities adapting their ordinances or processes to enable efficient small cell deployment face a number of policy challenges. First, cities must consider any recent changes to state law that impact local ordinances. Nearly half of all states had already passed small cell legislation or were considering it by their 2018 legislative sessions. Many states that passed laws exempted municipal rights of way from the legislation. These laws may impact what fees or rates cities can assess, what factors they may consider when deciding whether to approve or deny a wireless facility application, and whether the city is subject to a stricter application review timeline than federal regulations establish.

Cities must also consider their own internal capacity when determining how much time should elapse before a new ordinance focused on small cell deployment goes into effect. For example, if the new process demands the establishment of new online application systems or forms, the city should allow ample time to create those new systems before applicants will expect access to them, to avoid unnecessary delays in the application process. Particularly in the case of small cell deployments, providers may wish to file many applications at once as part of a network build-out, and cities should be prepared to determine whether they can limit the number of applications any provider can file within a given time period under state law, or whether they are capable of accepting batches of similar applications simultaneously.

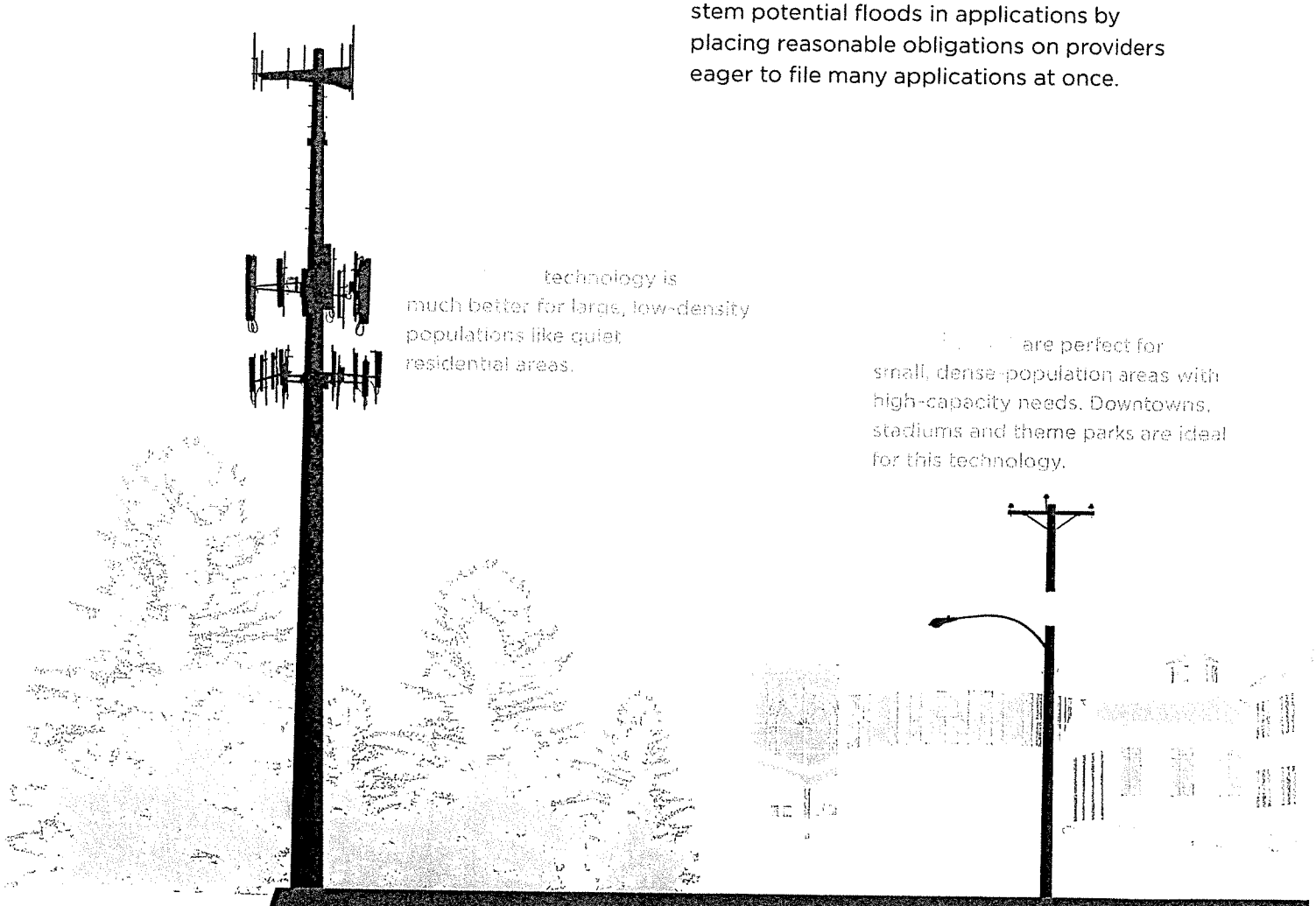
Cities should be cautious in passing moratoria on new wireless facility applications. While moratoria may provide the necessary time for policy makers to determine how best to approach this new technological and administrative challenge, they are not legal in some states, and have been prohibited by the FCC. Moratoria may invite legal challenges from wireless providers eager to start construction.

City Examples

Boston: Preserving History and Planning for a Technology-Driven Future

The city of Boston faced a unique challenge when it set out to upgrade the city's wireless networks: its history. The city contains narrow, twisting streets with little sidewalk space, carefully-maintained historic districts, and a wide variety of decorative poles and streetlights — including some gas lamps. This adds up to crowded rights-of-way with sensitive aesthetic needs. However, a city known for its universities and tech industries needed to be a competitive leader on broadband infrastructure to retain and attract residents and businesses.

To address the growing demand for small cell wireless infrastructure, the city used widely-available online tools to create an online application and review process that has reduced the average turnaround time for small cell site application reviews to roughly two weeks. The city has also managed to stem potential floods in applications by placing reasonable obligations on providers eager to file many applications at once.



For instance, after a permit for a new wireless facility is approved, the provider must build its site within sixty days.

Because of its narrow, historic streets, Boston has had to work very closely with neighbors and wireless providers to create innovative pole designs that take up less sidewalk space, or to negotiate a different pole location on a nearby arterial street with fewer residences and more room to site equipment.

Lincoln: Creating Business Solutions to Technology Challenges

In the city of Lincoln, Nebraska, broadband infrastructure is an important development priority. As demand for service, and for permission to build infrastructure, rose in the community, the city decided to tackle business process challenges. The city began physically relocating staff and grouping them by process and function, rather than department, and created a new rights-of-way construction group of staff from multiple departments to manage broadband infrastructure, small cell wireless applications and other issues. This created a one-stop-shop for private utility construction in the public right-of-way.

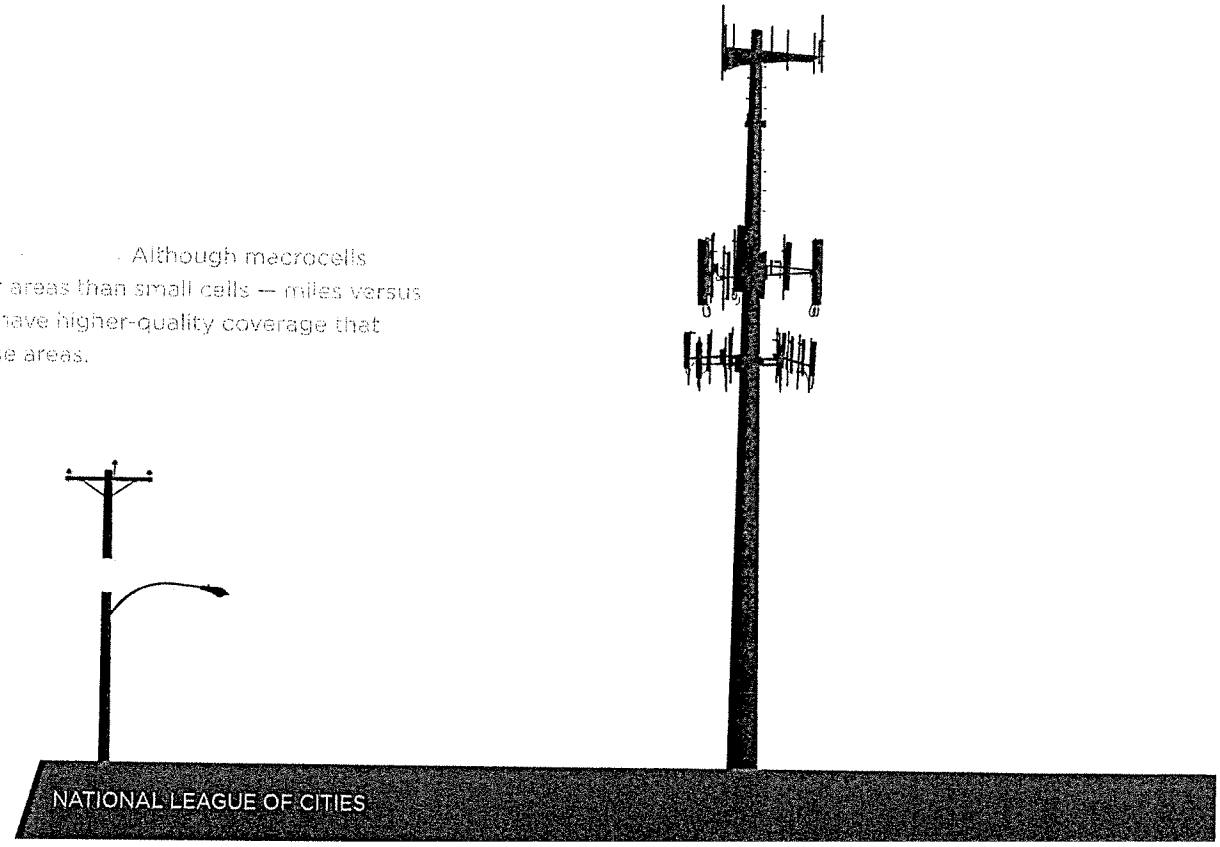
The city worked with carriers to create a standard pole design that met the needs of 95 percent of the city's pole locations and could accommodate most carriers' equipment. For the other five percent of locations, the city has worked with individual carriers to co-design poles to meet those locations' needs and added those new designs to a list of pre-approved poles. The city has also developed a database of existing right-of-way infrastructure assets, such as water, power and broadband lines in the city. This helps smooth the application process and cuts down on the time needed to communicate between city departments and with providers. Additionally, the city has created a master license agreement process based on existing public-private partnership agreements and adapted the master license agreements used for broadband to business and home to mobile infrastructure. Making the agreements consistent, and posting them publicly online, has helped reassure providers that they are getting the same deal as their competitors and smoothed the negotiating process.

Lincoln has faced some challenges in recent years with its efforts to deploy wireless infrastructure. Some providers have successfully received permits to build new poles, but have not deployed in those locations, resulting in wasted city resources and no improved service for residents. The city has also fought back against attempts by the state legislature to preempt local authority over small cells. In 2017, the city battled wireless providers who claimed that city-induced costs were inhibiting infrastructure deployment. When Lincoln offered a discount to local carriers who were willing to build out connectivity in rural parts of Nebraska, the providers backed down, and ultimately preemptive legislation did not pass that year.

Raleigh: Focused Commitment Geared Toward Technology through Partnerships

The city of Raleigh is focused on being the best — with hopes of being designated a 'best place' to live, work and play, as well as a forward-thinking leader in the technology space. The city recognized that in order to achieve those goals, it would need to be open to the prospect of small cell wireless infrastructure deployment. From the moment the city was approached about installing small cell infrastructure, the priority was to establish a good working relationship with wireless providers while protecting and upholding the values and interests of residents within our communities.

The city streamlined its application process by eliminating some unnecessary engineering time and costs. Rather than calling for engineering drawings for all installations, the city shifted its process to require basic geographic coordinates for proposed wireless sites, so that the city could quickly work with providers to find optimal locations. Wireless providers appreciated hearing back from city staff about site feasibility within a couple of days of submittal. The city has also taken several steps to hear the wishes of residents, most directly through its 20 Citizen Advisory Councils. City employees who manage small cell deployment have been meeting regularly with these advisory boards to gather feedback and answer questions about the process of small cell installation.



Although macrocells cover much larger areas than small cells — miles versus feet — small cells have higher-quality coverage that works well in dense areas.

What is Broadband?

As defined by the Federal Communications Commission, broadband is connection speeds of at least 25 Mbps for downloads and three Mbps for uploads. About 20 percent of American households don't have access to broadband under this current definition.

One administrative challenge came about in the form of a piece of legislation passed by the state that preempts the city's ability to manage small cell applications. A 2017 law restricts local governments in the state of North Carolina from sending applications for collocated infrastructure — or infrastructure that wireless providers want to place on existing poles — to city council for review. Wireless providers that wish to collocate small cell infrastructure are allowed to seek administrative approval and place their equipment and infrastructure on those existing poles. This is intended to streamline the review process for small cell installations that do not require a new structure or pole to be constructed. While it shortens the administrative approval process, it removes the city's ability to govern on this issue.

San Jose Leverages Small Cell Deployment to Close the Digital Divide

Equity drives San Jose's approach to bringing new technologies to the city, and the deployment of municipal broadband and municipal fiber lines is no exception. Located in Silicon Valley, San Jose city officials are acutely aware of the technology boom happening on their doorstep and are eager to welcome these advances, provided they can do so in a way that speaks to the needs of all residents. With only three percent of the city connected to high quality fiber lines, the city needed to both improve overall access to high speed internet and address the digital divide for 95,000 residents without access. After commissioning a study of the city's broadband approach as well as conducting surveys of low-income populations, San Jose officials set about working with the private sector on an arrangement that facilitates deployment, speaks to the city's equity goals and meets provider expectations.

They settled on a tiered pricing structure where providers pay $750-$2500 depending on whether they will cover the entire city or smaller areas. Larger deployments essentially receive a bulk-discounted rate. This revenue then feeds into two important city goals: internal capacity building and digital equity. For the former, the revenue bolsters the public works department, enabling staff to streamline the permitting and governance processes. Providers are therefore amenable to the deal because it facilitates faster small cell deployment. Additionally, the remaining funds, $24 million so far, go into a "Digital Inclusion Fund" to close the digital divide for low income and vulnerable populations.

When San Jose officials stepped back to look at the whole picture, they noticed that different providers had an interest in deploying in different market segments and, therefore, different neighborhoods. By building relationships with these carriers, San Jose has been able to spread coverage across the city. Where gaps arise, the digital inclusion fund fills in. Some of the projects on deck include free device checkout at libraries and coding camps. The city will also pursue grants on top of these core funds to further build out program support in the long term.

The city of Tempe knows that small cell infrastructure will be integral to meeting the technological demands of the future. For city staff, determining the process for small cell infrastructure deployment and being transparent about it with wireless providers was very important. Once the city established a master license agreement with the first carrier in the market, that original agreement was used as a template to develop subsequent agreements with small cell infrastructure providers, who also wanted to deploy small cells and distributed antenna systems (DAS).

In 2017, however, preemptive legislation was passed by the Arizona state legislature that hindered the city's ability to completely control small cell infrastructure deployment. The new law imposed fee caps as well as shot clocks on the application process. It also forced cities to reduce their fees to a rate that was significantly lower than existing market rate agreements.[16] The rationalization for such legislation was that it was needed to speed up deployment in Arizona by limiting a city's capacity to interfere via local legislation and incentivize 5G by reducing the industry's costs of deployment. During the negotiation period preceding the passage of the bill, the city fought hard to maintain its ability to manage the right-of-way, mostly in order to retain control over the aesthetic elements of deployment and to minimize any visual blight caused by the size of the small cell allowed (the equivalent of 27 pizza boxes).[17]

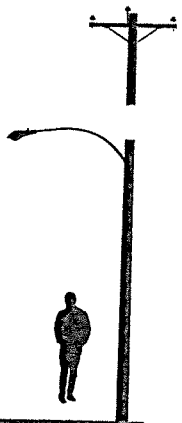
The new law required Arizona cities to establish and make standard terms of agreements publicly available. Tempe viewed the legislation's six-month implementation period as an opportunity to foster collaboration between the public and private sectors. Before finalizing the standard terms and conditions, site license provisions, application processes for small cells and design criteria, the city sent draft copies of all proposed documents to the major carriers and infrastructure providers for feedback. Collaboration with the industry was important in avoiding conflict when documents advanced to the city council for deliberation and approval.

The city also carefully considered the desires and values of the public. For residents, aesthetics and the way the new

small cell infrastructure blended into the community were very important. Tempe was able to coordinate with other local cities and wireless providers to create design guidelines, ensuring that new infrastructure would mesh with the local aesthetic. The city worked to ensure that the guidelines were not too much of a hindrance to deployment. Tempe found that balancing the concerns of industry with the city's ability to manage its poles and right-of-way is critical. Local government can function as the connection between the community and industry, ensuring that both parties' interests are represented and accounted for.

Macrocell infrastructure is hard to miss. Towers can reach up to 199 feet in height, and they're rarely shorter than 50 feet.

Small cell antennas are typically only a few feet tall, roughly the size of a pizza box. They are also often accompanied by an equipment cabinet the size of a utility box or refrigerator.



Strategies for City Leadership

1 Gain a full understanding of the technology and important safety considerations.

Local elected officials and decision-makers should ensure that they understand technical, political and legal implications of the technology, its deployment, and any existing policies related to small cell facility siting. This will ensure that the best interests of the community are upheld when new decisions around small cell siting are being made.

2 Articulate your priorities for accommodating this technology.

City officials should determine how they want to integrate this technology into their communities and be intentional about expressing those desires during the policy-making discussions and deployment process. Some questions and considerations might include:

a. **Whether the city wants to subsidize the build-out of the facilities to speed up wireless connections;**

b. **Whether the city needs extra time to conduct a thorough engineering review for public safety concerns; or**

c. **Whether the city will work to harmonize the facilities with the look and feel of different parts of town.**

3 Create clear policies for permit review that let both city staff and industry applicants know the expectations.

This includes establishing processes for how applications will be addressed or processed, timeframes, objective requirements for the decisions and possibly application checklists. Cities should communicate these policies broadly and transparently to potential applicants. They may also wish to collaborate with likely applicants to develop design standards compatible with technological needs.

4 Develop a template right-of-way access policy/agreement, as well as a city pole attachment agreement.

Cities should make sure these policies and agreements address multiple kinds of infrastructure, from macrocell towers to small-cell facilities. This might include the establishment of requirements for both types of structures — such as size, location, design, public safety, stealth, etc.

5 Think through in advance any beneficial items the city could negotiate with industry in exchange for use of the right-of-way — if allowed by state law.

Issues up for negotiation might include collocation; length of time for siting; terms of installation; terms for upgrade; free or discounted services for schools, libraries, or other public entities; or other provisions that benefit the community and its residents.

6 Give careful consideration to fee structures.

There are a variety of fees and charges that cities may want to address. Application fees to cover the cost of staff to review applications, permitting fees to cover costs of building permit reviews and inspections, regulatory access fees for use of public ROW (ongoing), rent based on market rates if using public property (ongoing), and ongoing maintenance fees. Cities should take care to ensure that costs for removal of abandoned equipment are not borne by taxpayers.

Collocation:

When multiple wireless providers attach antennas and other equipment to a single shared support structure. This practice may lower barriers to entry for new providers and reduce pole proliferation. The federal government defines collocation as: the mounting or installation of transmission equipment on an eligible support structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes.[18]

Small cell facilities:

Small cell facilities are a type of wireless broadband infrastructure. They typically take the form of small antennas that are placed on existing infrastructure (both indoors and outdoors) and ground mounted equipment. These facilities help to compliment or stretch tower macrocell coverage and add capacity in high demand areas. In many states this term is defined by state law.

Ground mounted equipment:

This type of equipment sits at ground level, such as along sidewalks. It is distinct from equipment mounted on existing infrastructure such as telephone poles or buildings. This equipment is similar to traffic control or telephone equipment cabinets.

Macrocell:

A macrocell is a wireless facility used in cellular networks with the function of providing radio coverage to a large area of mobile network access. A macrocell differs from a microcell by offering the backbone of coverage area and high-efficiency output. It is placed on stations where the output power is higher, usually in a range of tens of watts.[19]

Smart city:

A "smart city" is one that has developed technological infrastructure that enables it to collect, aggregate and analyze real-time data to improve the lives of its residents.[20]

Internet of things (IoT):

The internet of things (IoT) is a computing concept that describes the idea of everyday physical objects being connected to the internet and able to identify themselves to other devices. The term is closely identified with RFID as the method of communication, although it also may include other sensor technologies, wireless technologies or QR codes.[21]

5G:

The term for emerging 5th generation wireless telecommunications standards usually associated with network speeds of 1 Gpbs or more.[22]

Exabytes:

An exabyte is a unit of measurement that describes 10^{18} bytes or 1 billion gigabytes. This unit refers to such a large amount of data that it is typically used to express quantities of information transmitted over the internet in absolute terms.

Internet Service Providers:

An internet service provider (ISP) is a company that provides customers with Internet access. Data may be transmitted using several technologies, including dial-up, DSL, cable modem, wireless or dedicated high-speed interconnects. Typically, ISPs also provide their customers with the ability to communicate with one another by providing Internet email accounts, usually with numerous email addresses at the customer's discretion. Other services, such as telephone and television services, may be provided as well. The services and service combinations may be unique to each ISP.[23] Throughout the paper we use this term synonymously with the term carrier.

Infrastructure Developer:

Company or entity that invests in or builds out the basic physical and virtual systems of a community, including roads, utilities, internet and wireless networks, water, sewage, etc. These systems are considered essential for enabling productivity in the economy and require significant fiscal investments. Developers and investors can be from the public or the private sector.[24]

National Association of Telecommunications Officers and Advisors: Wireless Facility Siting: Model Chapter Implementing Section 6409(a) and Wireless Facility Siting: Section 6409(a) Checklist — https://www.natoa.org/documents/6409ModelOrdinance.pdf

United States Department of Commerce Internet Policy Task Force and & Digital Economy Leadership Team: Fostering the Advancement of the Internet of Things

https://www.ntia.doc.gov/files/ntia/publications/iot_green_paper_01122017.pdf

BroadbandUSA: Broadband Glossary — https://www.fcc.gov/files/broadband_glossary_102914.pdf

BroadbandUSA: Smart Communities Glossary — https://www2.ctcnet.org/files/broadband_glossary_102014.pdf

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[3] **Trends in Smart City Development.** (2016). National League of Cities. Access at: https://www.nlc.org/sites/default/files/2016-12/Trends%20in%20Smart%20City%20Development_0.pdf

[4] **Federal Communications Commission.** (2016). Public Notice: Comment Sought on Streamlining Deployment of Small Cell Infrastructure by Improving Wireless Citing Policies. Access at: https://apps.fcc.gov/edocs_public/attachmatch/DA-16-1427A1.pdf

[5] **WIA** (2017). Enabling Wireless Networks Everywhere, Presentation.

[6] See https://www.law.cornell.edu/uscode/text/47/332

[7] **47 U.S.C. § 332(c)(7)(B)**

[8] **Petition to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting,** WT-Docket No. 08-165 (11/18/09).

[9] 47 U.S.C. §1455(a)

[10] **Acceleration of Broadband Deployment by Improving Wireless Siting Policies,** WT Docket No. 13-238, 11-59, 13-32, (10/17/14)

[11] **Ibid.**

[12] **Federal Communications Commission. (2018):** Public Notice: FCC Speeds Access to Utility Poles to Promote Broadband, 5G Deployment. Access at https://www.fcc.gov/document/fcc-speeds-access-utility-poles-promote-broadband-5g-deployment-0

[13] $750.00 (A.R.S. § 9-593(I)) and $1000.00 (A.R.S. § 9-594(E)(3)).

[14] $50 per small cell (A.R.S. § 9-592(D)(4)

[15] $50 per pole (A.R.S. § 9-595).

[16] The average small cell fee charged by Arizona cities in 2017 was $3,530.00 per site, which included both the use of the pole and the use of the right-of-way for a small cell and associated ground equipment. (This amount was about 1/8 of the annual fees charged for macro sites). The legislation capped this fee at $100.00 per site ($50.00 for the use of the pole and $50.00 for the use of the right-of-way.)

[17] All antennas to be located inside an enclosure of up to 6 cubic feet in volume and the associated equipment to be up to 28 cubic feet in volume. A.R.S § 9-591(19).

[18] **47 C.F.R. § 1.40001(b)(2)**

[19] https://www.law.cornell.edu/cfr/text/47/1.40001

[20] **Trends in Smart City Development.** (2016). National League of Cities. Access at: https://www.nlc.org/sites/default/files/2016-12/Trends%20in%20Smart%20City%20Development_0.pdf

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About NLC

The National League of Cities (NLC) is the nation's oldest and largest organization devoted to strengthening and promoting cities as centers of opportunity, leadership, and governance. NLC is a resource and advocate for more than 1,600 member cities and the 49 state municipal leagues, representing 19,000 cities and towns and more than 218 million Americans.

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NLC NATIONAL LEAGUE OF CITIES

EXHIBIT 2:

MODEL CODE FOR MUNICIPALITIES BY NLC

August 2018

MODEL CODE FOR MUNICIPALITIES

National League of Cities

and

National Association of Telecommunications Officers and Advisors

NOTE: WHEN CONSIDERING ADOPTION OF THIS MODEL CODE, LOCAL GOVERNMENTS SHOULD CONSIDER THAT THERE MAY BE FEDERAL, STATE OR LOCAL LAWS THAT COULD LIMIT OR OTHERWISE AFFECT VARIOUS TERMS AND PROVISIONS SET FORTH HEREIN. CIRCUMSTANCES OF EACH LOCAL GOVERNMENT MAY REQUIRE MODIFICATIONS OF THIS MODEL CODE. THE MODEL CODE IS NOT INTENDED TO PROVIDE LEGAL ADVICE AND WE STRONGLY ENCOURAGE LOCALITIES TO CONSULT WITH AN ATTORNEY BEFORE ADOPTION ANY PORTION OF THIS MODEL CODE.

PREAMBLE

Background

On January 31, 2017, Federal Communications Commission Chairman Ajit Pai established a Broadband Deployment Advisory Committee (BDAC), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. Among other tasks, Chairman Pai asked the BDAC to draft a model code for municipalities that could assist local governments in enacting ordinances authorizing wireless and wireline broadband deployment in the public rights of way.

In the summer of 2018, the BDAC voted to recommend its model code for municipalities to the FCC. The BDAC model states that it recognizes the "enormous diversity [among local governments] based on geography, size, resources, aesthetics, existing infrastructure, regulatory and legal framework, history, culture, and community priorities" and states its intent to create a "non-binding, flexible guideline." While we agree with these statements and appreciate the hard work of the BDAC members, we believe local governments could benefit from an alternative model code that reflects the range of legal and policy options open to municipalities.

NLC and NATOA's Alternative Model Code

There is no single model code that will work for every jurisdiction. As such, NLC and NATOA's model code is intended as a roadmap to assist local governments in adopting their own ordinances governing use of the rights of way by communications providers. While example language is included in some sections, we do not intend to suggest these examples could work for every jurisdiction.

We also recognize there are many ways to structure an ordinance authorizing use of the rights of way by wireless and wireline communications providers. The appropriate structure will vary by jurisdiction. For purposes of this model code, we opted to use a similar approach as the BDACs model code to provide an opportunity to compare and contrast the two models. Thus, the general concept of this model, like the BDAC model, is to:

(1) Outline the mechanism for authorizing use of the rights of way by wireless and wireline communications providers (*e.g.*, franchise agreements, right of way use agreements, licenses, *etc.*);
(2) Provide a mechanism for administrative approval of deployments that meet specific criteria, which will allow for faster deployment of certain facilities where discretionary review and/or public hearings are unnecessary; and
(3) Establish the requirements for working in the rights of way to install communications facilities.

The model is intended to provide a general framework and thus is drafted as an outline of provisions jurisdictions may want to include in their final ordinance. In many cases example language is provided to help illustrate the issues to be addressed and, in some cases, to provide an alternative to similar language found in the BDAC model. However, the intent is to allow each jurisdiction to draft the substantive provisions that best reflect local needs and interests.

Note that the NLC/NATOA model code does not authorize attachments to poles or structures in the rights of way, which involves considerations, such as make-ready work and attachment fees, that have not been addressed in this model. We recommend that jurisdictions that own poles or other structures in the rights of way establish a clear process for authorizing attachments to those structures, which may be incorporated into this code or established as a stand-alone process.

Finally, please note that this model is not intended to, and does not, address or reflect state and local laws or any limitations on local authority. The circumstances of each municipality may, and likely will, require modifications to the framework and/or example language of this model code. The model code is not intended to provide legal advice and we strongly encourage municipalities to consult with an attorney before adopting any portion of this model code.

Additional Considerations

As described above, NLC and NATOA followed the general framework of the BDAC model code, which applies only to wireless and wireline communications providers, including cable operators, telecommunications providers and information services providers. Municipalities should review their existing ordinances and policies to determine if this framework is appropriate. Municipalities may want to consider whether it would be preferable to adopt a utility-neutral ordinance covering all utilities and communications providers, which would provide one set of "rules" for use of the public rights of way. Differences in state laws, local authority and policy choices, existing ordinances and rights of way agreements, among other things, may impact the decision in how to proceed.

Understanding the Organization of the Model Code

As stated above, the model code is best described as an outline or roadmap to assist municipalities in drafting the appropriate ordinance for their community. Most sections of the model code begin with an overview of the purpose of the Section. This explanation is bracketed and in ALL CAPS, and is intended as guidance for municipal drafters, not for adoption in a final ordinance.

Most subsections include a general explanation of the type of provision a municipality may wish to include in its ordinance, which is intended as guidance rather than proposed language for adoption in a final ordinance. These instructions generally are at the beginning of a subsection and are in plain text.

In some sections, the model code includes example language to illustrate the intent of the section. The example language, or a variation thereof, may be appropriate for adoption in a final ordinance in some jurisdictions. Example language is in *italics*.

Finally, there may be additional notes or issues for consideration within the subsections of the model code, which are bracketed and in ALL CAPS. Again, these notes are is intended as guidance for municipal drafters, not for adoption in a final ordinance.

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Article I. Title and Definitions

Section 1.1 Title

[INSERT APPROPRIATE TITLE FOR THIS CHAPTER]

Section 1.2 Definitions. [THE FOLLOWING DEFINITIONS ARE EXAMPLES ONLY; JURISDICTIONS SHOULD ADOPT DEFINITIONS THAT REFLECT STATE LAW AND LOCAL AUTHORITY AND POLICIES.]

a. ***"Administrative Review"*** *means ministerial review of an Application by the Authority relating to the review and issuance of a Permit, including review by the [insert appropriate staff and designee, if desired] to determine whether the issuance of a Permit is in conformity with the applicable provisions of this Chapter.*

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

c. ***"Applicable Codes"*** *means uniform building, fire, safety, electrical, plumbing, or mechanical codes adopted by a recognized national code organization to the extent such codes have been adopted by the Authority, including any amendments adopted by the Authority, or otherwise are applicable in the jurisdiction.*

d. ***"Applicant"*** *means any Person who submits an Application under this Chapter.*

e. ***"Application"*** *means a written request, on a form provided by the Authority, for a Permit.* [IF THE JURISDICTION DOES NOT HAVE A PERMIT FORM, DELETE "ON A FORM PROVIDED BY THE AUTHORITY" IN THE DEFINITION.]

f. ***"Authority"*** *means the [city/town/etc of _____] or any agency, subdivision or any instrumentality thereof.* [THIS MODEL USES THE TERM "AUTHORITY" FROM THE BDAC MODEL. JURISDICTIONS SHOULD CONSIDER USING THE TERM FOR THE CITY/TOWN/*ETC.* THAT IS CONSISTENT WITH OTHER PROVISIONS OF THEIR CODE.]

g. ***"Collocate"*** *means to install or mount a Small Wireless Facility in the Public ROW on an existing Support Structure, an existing Tower, or on an existing Pole to which a Small Wireless Facility is attached at the time of the Application. "Collocation" has a corresponding meaning.*

h. ***"Communications Facility"*** *means, collectively, the equipment at a fixed location or locations within the Public ROW that enables Communications Services, including: (i) radio transceivers, Antennas, coaxial, fiber-optic or other cabling, power supply (including backup battery), and comparable equipment, regardless of technological configuration; and (ii) all other equipment associated with any of the foregoing. A Communications Facility does not include the Pole, Tower or Support Structure to which the equipment is attached.*

i. ***"Communications Service"*** *means cable service, as defined in 47 U.S.C. § 522(6); information service, as defined in 47 U.S.C. § 153(24); or telecommunications service, as defined in 47 U.S.C. § 153(53).* [CONSIDER REVISING THIS DEFINITION TO REFER TO "BROADBAND" RATHER THAN "INFORMATION SERVICES," OR OTHERWISE ESTABLISH THAT AN INTERNET PROVIDER MUST PROVIDE CERTAIN MINIMUM SPEEDS TO BE ELIGIBLE TO FILE AN APPLICATION UNDER THIS CHAPTER.]

j. ***"Communications Service Provider"*** *means a provider of Communications Services and includes a cable operator, as defined in 47 U.S.C. § 522(5).*

k. ***"Decorative Pole"*** *means a Pole that is specially designed and placed for aesthetic purposes.*

l. ***"Discretionary Review"*** *means review of an Application by the Authority relating to the review and issuance of a Permit that is other than an Administrative Review.*

m. ***"Eligible Facilities Request"*** *means an eligible facilities request as set forth in 47 C.F.R. Section 1.40001(b)(3), as that section may be amended from time to time.*

n. ***"FCC"*** *means the Federal Communications Commission of the United States.*

o. ***"Laws"*** *means, collectively, any and all Federal, State, or local law, statute, common law, code, rule, regulation, order, or ordinance.*

p. ***"Ordinary Maintenance and Repair"*** *means inspections, testing and/or repair that maintain functional capacity, aesthetic and structural integrity of a Communications Facility and/or the associated Support Structure, Pole or Tower, that does not require blocking, damaging or disturbing any portion of the Public ROW.* [NOTE THAT THIS TERM IS USED IN SECTION 2.2.d, WHICH EXEMPTS ORDINARY MAINTENANCE AND REPAIR FROM THE PERMIT REQUIREMENT. THIS DEFINITION SHOULD BE REFINED TO REFLECT THE TYPE OF WORK IN THE ROW THE MUNICIPALITY WILL ALLOW WITHOUT A PERMIT. ALTERNATIVELY, THIS DEFINITION AND SECTION 2.2.d MAY BE DELETED IF THE JURISDICTION'S POLICY IS TO REQUIRE A PERMIT FOR ALL WORK IN THE ROW.]

q. ***"Permit"*** *means a written authorization (in electronic or hard copy format) to install, at a specified location(s) in the Public ROW, a Communications Facility, Tower or a Pole to support a Communications Facility.*

r. ***"Permittee"*** *means an Applicant that has received a Permit under this Chapter.*

s. ***"Person"*** *means an individual, corporation, limited liability company, partnership, association, trust, or other entity or organization, including a governmental entity.*

t. ***"Pole"*** *means a legally constructed pole, such as a utility, lighting, traffic, or similar pole made of wood, concrete, metal or other material, located or to be located within the Public Right of Way. A Pole does not include a Tower or Support*

Structure and does not include a pole or structure that supports electric transmission lines.

u. ***"Provider"*** *means a Communications Service Provider or a Wireless Services Provider, and includes any Person that owns and/or operates within the Public ROW any Communications Facilities, Wireless Facilities, Poles built for the sole or primary purpose of supporting Communications Facilities, or Towers.*

v. ***"Public Right of Way" or "Public ROW"*** *means the area on, below, or above property that has been designated for use as or is used for a public roadway, highway, street, sidewalk, alley or similar purpose, and for purposes of this Chapter shall include Public Utility Easements, but only to the extent the Authority has the authority to permit use of the area or Public Utility Easement for Communications Facilities or Poles, Towers and Support Structures that support Communications Facilities. The term does not include a federal interstate highway or other areas that are not within the legal jurisdiction, ownership or control of the Authority.*

w. ***"Public Utility Easement"*** *means, unless otherwise specified or restricted by the terms of the easement, the area on, below, or above a property in which the property owner has dedicated an easement for use by utilities. Public Utility Easement does not include an easement dedicated solely for Authority use, or where the proposed use by the Provider is inconsistent with the terms of any easement granted to the Authority.*

x. ***"Replace" or "Replacement"*** *means, in connection with an existing Pole, Support Structure or Tower, to replace (or the replacement of) same with a new structure, substantially similar in design, size and scale to the existing structure and in conformance with this Chapter and any other applicable Authority [charter/code regulations], in order to address limitations of the existing structure to structurally support Collocation of a Communications Facility.*

y. ***"Small Wireless Facility"*** *means a Wireless Facility that meets both of the following qualifications: (i) each Antenna could fit within an enclosure of no more than __ (_) cubic feet in volume; and (ii) all other wireless equipment associated with the Antenna, including the Provider's preexisting equipment, is cumulatively no more than _____ (__) cubic feet in volume.* [THIS DEFINITION IS A MODIFICATION OF THE BDAC MODEL DEFINITION. JURISDICTIONS SHOULD CONSIDER WHETHER ANOTHER DEFINITION WOULD BE MORE APPROPRIATE, SUCH AS AN OVERALL VOLUME LIMIT (NOT ONE LIMIT FOR ANTENNAS AND ONE FOR OTHER EQUIPMENT) OR OTHER MEASURES OF SIZE LIMITS. NOTE THAT THE VOLUME LIMITS LEAVE ROOM FOR DIFFERENT SHAPES (*E.G.*, VERY TALL AND THIN) THAT MAY NOT BE DESIRABLE. IF THIS IS A CONCERN, THIS DEFINITION SHOULD BE REVISED OR IT SHOULD BE ADDRESSED THROUGH THE DESIGN STANDARDS IN THIS CHAPTER. NOTE ALSO THAT THE BDAC MODEL AND SOME STATE LAWS EXCLUDE CERTAIN EQUIPMENT FROM THE VOLUME CALCULATION, WHICH SOME JURISDICTIONS MAY WANT TO INCORPORATE IN THIS DEFINITION IF APPROPRIATE.]

z. ***"State"*** *means the [State/Commonwealth] of _____.*

aa. ***"Support Structure"*** *means a structure in the Public ROW other than a Pole or a Tower to which a Wireless Facility is attached at the time of the Application.*

bb. ***"Tower"*** *means any structure in the Public ROW built for the sole or primary purpose of supporting a Wireless Facility. A Tower does not include a Pole or a Support Structure.*

cc. ***"Wireless Facility"*** *means the equipment at a fixed location or locations in the Public ROW that enables Wireless Services. The term does not include: (i) the Support Structure, Tower or Pole on, under, or within which the equipment is located or Collocated; or (ii) coaxial, fiber-optic or other cabling that is between Communications Facilities or Poles or that is otherwise not immediately adjacent to or directly associated with a particular Antenna. A Small Wireless Facility is one type of a Wireless Facility.*

dd. ***"Wireless Services"*** *means any wireless services using licensed or unlicensed spectrum, whether at a fixed location or mobile, provided to the public.*

ee. ***"Wireless Services Provider"*** *means a Person who provides Wireless Services.*

Article II. Governance of Deployment in the Public ROW

Section 2.1 Access to Public ROW [THIS SECTION REQUIRES A FRANCHISE, ROW AGREEMENT, LICENSE OR OTHER AUTHORIZATION FOR USE OF THE PUBLIC ROW. THIS SECTION SHOULD BE ADJUSTED WHERE A MUNICIPALITY DOES NOT HAVE AUTHORITY TO REQUIRE A FRANCHISE/ AGREEMENT/LICENSE. THIS SECTION MAY INCLUDE THE TERMS AND CONDITIONS FOR USE OF THE ROW OR IT MAY SIMPLY STATE THAT A NEGOTIATED FRANCHISE/ROW USE AGREEMENT IS REQUIRED. NOTE THAT THIS CODE DOES NOT ADDRESS AUTHORITY TO ATTACH TO AUTHORITY-OWNED POLES OR STRUCTURES IN THE ROW. THIS CODE SHOULD STATE THAT A SEPARATE ATTACHMENT AGREEMENT IS REQUIRED (OR, ALTERNATIVELY, THAT ATTACHMENT TO AUTHORITY-OWNED POLES WILL BE INCLUDED IN THE ROW USE FRANCHISE/AGREEMENT, IF THAT IS THE PREFERENCE).]

a. Agreement. State that an agreement is required to authorize installation of Communications Facilities in the Public ROW. [For example: *"Prior to installing in the Public ROW any Communications Facility, or any Pole built for the sole or primary purpose of supporting a Communications Facility, or any Tower, a Person shall enter into a [Right of Way Agreement; Franchise Agreement; License Agreement] with the Authority expressly authorizing use of the Public Right of Way for the Communications Facility, Pole or Tower proposed to be installed."*]

(i) General Terms [THE FOLLOWING IS A SUGGESTED LIST OF GENERAL PROVISIONS THAT COULD BE INCORPORATED INTO FRANCHISES OR OTHER ROW USE AGREEMENTS, AGREED TO AS PART OF ROW LICENSE OR OTHERWISE REQUIRED OF ALL PROVIDERS.]

(A) Include the maximum term of the agreement, including any renewals, and the bases for termination. [CONSIDER

FOLLOWING SIMILAR PROVISIONS OF EXISTING ROW ORDINANCES OR AGREEMENTS.]

(B) State the scope of authority granted in the franchise/agreement/ license. [For example: *"The [franchise/agreement/license] authorizes the Provider's non-exclusive use of the Public ROW for the sole purpose of installing, maintaining and operating Communications Facilities, including any Pole built for the sole or primary purpose of supporting the Communications Facilities and any Tower, to provide the services expressly authorized in the [franchise/agreement/license], subject to applicable Laws, this Chapter and the terms and conditions of the [franchise/agreement/license]. The [franchise/agreement/license] authorizes use only of the Public ROW in which the Authority has an actual interest. It is not a warranty of title or interest in any Public ROW and it does not confer on the Provider any interest in any particular location within the Public ROW. No other right or authority is granted except as expressly set forth in the [franchise/agreement/license]. Nothing herein shall authorize the use of the Authority's Poles, Towers, Support Structures, or other structures in the Public ROW. All use of Authority Poles, Towers, Support Structures, and other structures in the Public ROW shall require a separate agreement, and the payment of separate fees for such use."*

(C) Include general maintenance obligations. [For example: *"The Provider shall, at its sole cost and expense, keep and maintain its Communications Facilities, Poles, Support Structures and Towers in the Public ROW in a safe condition, and in good order and repair."*]

(D) Include specific indemnification and insurance requirements. [CONSIDER FOLLOWING SIMILAR PROVISIONS OF EXISTING ROW ORDINANCES OR AGREEMENTS.]

(E) Emergency contacts and required response to emergencies related to facilities. [CONSIDER FOLLOWING SIMILAR PROVISIONS OF EXISTING ROW ORDINANCES OR AGREEMENTS.]

(F) Assignment and sublicensing. [For example: *"Lessees or licensees using space in ducts, conduits and on Poles must comply with the terms of this [agreement/Chapter], unless expressly exempted by the Authority."*]

(G) Include the Authority's right to access books and records, including audit rights. [CONSIDER FOLLOWING SIMILAR PROVISIONS OF EXISTING ROW ORDINANCES OR AGREEMENTS.]

(ii) Public ROW Construction and Installation Requirements. [CONSIDER INSERTING REFERENCE TO EXISTING ROW CONSTRUCTION REQUIREMENTS; IF NO REQUIREMENTS EXIST, CONSIDER ADDING

STANDARDS APPLICABLE TO ALL ROW USERS (*I.E.*, ALL UTILITIES, CABLE, TELECOMS, *ETC.*) TO THE APPROPRIATE CHAPTER OF THE CODE OR DEVELOPING STANDARDS TO INSERT IN THIS SECTION. THE FOLLOWING IS A SUGGESTED LIST OF PROVISIONS TO ADDRESS:]

(A) ROW Permit.

1. State that permits are required. [For example: *"Unless expressly authorized in this Chapter or in writing by the Authority, no Person may construct, maintain or perform any other work in the Public ROW related to Communications Facilities, Poles built for the sole or primary purpose of supporting Communications Facilities, or Towers without first receiving a Permit to the extent required under this Chapter, and any other permit or authorization required by applicable Laws."*] [CONSIDER ADDING A CROSS-REFERENCE TO ANY OTHER PERMITS THAT MAY BE REQUIRED, SUCH AS A STREET OPENING PERMIT, ELECTRICAL PERMIT, *ETC.*]

2. State that permits will not be issued unless the Provider has a franchise/agreement/license, if required, and has paid all applicable fees. [For example: *"The Authority shall not issue a Permit unless the Applicant, or a Provider on whose behalf the Applicant is constructing Communications Facilities, Poles or Towers, has applied for and received the [franchise/agreement/license] required by this Chapter, or otherwise has a current and valid franchise with the Authority expressly authorizing use of the Public ROW for the Communications Facilities, Poles or Towers proposed in the Application, and all applicable fees have been paid."*]

(B) Location of New Facilities.

1. Include general non-interference language. [For example: *"The Provider shall not locate or maintain its Communications Facilities, Poles and Towers so as to unreasonably interfere with the use of the Public ROW by the Authority, by the general public or by other persons authorized to use or be present in or upon the Public ROW."*]

2. Describe the required location and requirements for above-ground placement of new poles and equipment cabinets (*e.g.*, distance from curb/sidewalk/lot lines; line of sight for traffic; labeling requirements; noise limits; *etc.*). Consider cross-referencing the design standards described below where the standards impact location of facilities.

3. State when new facilities must be placed underground; consider the circumstances in which wireless facilities may

remain above-ground in the ROW even where other facilities are underground. [For example: *"Unless otherwise agreed to in writing by the Authority or otherwise required by applicable Laws, whenever any existing electric utilities or Communications Facilities are located underground within a Public ROW, the Provider with permission to occupy the same portion of the Public ROW shall locate its Communications Facilities underground at its own expense. The Authority may, in its sole discretion, approve above-ground placement of equipment cabinets, pedestals and similar equipment. For facilities or equipment such as Wireless Facilities that cannot, by their nature, operate unless located above-ground, the Provider and Authority shall work to find a suitable location for such facilities or equipment, which may be outside the Public ROW."*]

(C) Construction Standards.

1. Require the Provider and its contractors to comply with applicable safety requirements, permits, traffic control requirements, *etc.* Refer to or incorporate existing ROW construction standards. [For example: *"In performing any work in or affecting the Public ROW, the Provider, and any agent or contractor of the Provider, shall comply with the provisions of Section 2.5 of this Chapter and all other applicable Laws, including [INSERT CROSS REFERENCE TO OTHER APPLICABLE AUTHORITY CODES, IF ANY]."*]

(D) Restoration Requirements.

1. Require the Provider and its contractors to comply with applicable restoration requirements. Refer to or incorporate existing ROW construction standards. [For example: *"The Provider, or its agent or contractor, shall restore, repair and/or replace any portion of the Public ROW that is damaged or disturbed by the Provider's Communications Facilities, Poles, Towers or work in or adjacent to the Public ROW as required in Section 2.5 of this Chapter and all other applicable Laws, including [INSERT CROSS REFERENCE TO OTHER APPLICABLE AUTHORITY CODES, IF ANY]."*].

2. Include authority of the municipality to complete the restoration, at provider's cost, if the provider fails to do so. [For example: *"If the Provider fails to timely restore, repair or replace the Public ROW as required in this subsection, the Authority or its contractor may do so and the Provider shall pay the Authority's costs and expenses in completing the restoration, repair or replacement."*]

(E) Removal, Relocation and Abandonment.

1. Describe the requirement to relocate or remove facilities consistent with state law and local policies. Include the timeline to complete relocation/removal. [For example: *"Within ____ (___) days following written notice from the Authority, the Provider shall, at its own expense, protect, support, temporarily or permanently disconnect, remove, relocate, change or alter the position of any of its Communications Facilities, Poles, Support Structures or Towers within the Public ROW, including relocation of above-ground Communications Facilities underground (consistent with the provisions of this Chapter), whenever the Authority has determined, in its sole discretion, that such removal, relocation, change or alteration is necessary for the construction, repair, maintenance, or installation of any Authority [OR public OR governmental body] improvement, the operations of the Authority [OR public OR governmental body] in, under or upon the Public ROW, or otherwise is in the public interest. The Provider shall be responsible to the Authority for any damages or penalties it may incur as a result of the Provider's failure to remove or relocate Communications Facilities, Poles, Support Structures or Towers as required in this subsection."*]

2. Include relocation/removal authority of the municipality in the event of an emergency. [For example: *"The Authority retains the right and privilege to cut or move any Communications Facility, Pole, Support Structure or Tower located within the Public ROW of the Authority, as the Authority may determine, in its sole discretion, to be necessary, appropriate or useful in response to any public emergency. If circumstances permit, the Authority shall notify the Provider and give the Provider an opportunity to move its own facilities prior to cutting or removing the Communications Facility, Pole, Support Structure or Tower. In all cases the Authority shall notify the Provider after cutting or removing the Communications Facility, Pole, Support Structure or Tower as promptly as reasonably possible."*]

3. Address the providers' obligations relative to abandoned facilities. Include a timeline for removal and restoration; consider whether to allow facilities to be abandoned in place and whether the provider will remain responsible for abandoned facilities or if the municipality may choose to take ownership. [For example: *"A Provider shall notify the Authority of abandonment of any Communications Facility, Pole, Support Structure or Tower at the time the decision to abandon is made, however, in no case shall such notification be made later than 30 days prior to*

abandonment. Following receipt of such notice, the Provider shall remove its Communications Facility, Pole, Support Structure or Tower at the Provider's own expense, unless the Authority determines, in its sole discretion, that the Communications Facility, Pole, Support Structure or Tower may be abandoned in place. The Provider shall remain solely responsible and liable for all of its Communications Facilities, Poles, Support Structures and Towers until they are removed from the Public ROW unless the Authority agrees in writing to take ownership of the abandoned Communications Facilities, Poles, Support Structures or Towers."]

4. Include authority of the municipality to complete the relocation/removal, at provider's cost, if the provider fails to do so. [For example: *"If the Provider fails to timely protect, support, temporarily or permanently disconnect, remove, relocate, change or alter any of its Communications Facilities, Poles, Support Structures or Towers or remove any of its abandoned Communications Facilities, Poles, Support Structures or Towers as required in this subsection, the Authority or its contractor may do so and the Provider shall pay all costs and expenses related to such work, including any delay damages or other damages the Authority incurs arising from the delay."*]

(F) As-builts and Maps.

1. Require maps showing location of equipment in ROW and as-builts after construction; specify, if desired, the required format for maps. [CONSIDER INCLUDING OR REFERENCING SIMILAR PROVISIONS OF EXISTING ROW ORDINANCES OR AGREEMENTS.]

(G) [CONSIDER ADDING OTHER DESIRED ROW CONSTRUCTION-RELATED REQUIREMENTS, SUCH AS "DIG ONCE" REQUIREMENTS/INSTALLATION OF EXCESS CONDUIT FOR THE AUTHORITY AT INCREMENTAL COST.]

b. Fees and Charges. [INSERT EXISTING APPLICABLE FEES AND CHARGES OR ESTABLISH NEW FEES AND CHARGES. BELOW ARE EXAMPLES OF POSSIBLE FEES AND CHARGES:]

(i) **Permit Application Fee.** Insert the appropriate fee for each Permit Application submitted under this Chapter. [For example: *"Every Applicant shall pay a Permit application fee of [$___] for each Application. The fee shall be paid upon submission of the Application."*] [CONSIDER ALLOWING BATCH PERMITS WITH LOWER FEES FOR SUBSEQUENT PERMITS. FOR EXAMPLE: *"Every Applicant shall pay a Permit application fee of [$___] for a single Application, and [$___] for multiple Applications of up to [insert number] Applications submitted simultaneously by a*

Provider pursuant to Section 2.2.i." "The fee shall be paid upon submission of the Application(s)."]

(ii) **Agreement/License Application Fee.** Insert the appropriate fee for reviewing and issuing the ROW franchise/agreement/license required under this Chapter. [For example: *"Every Person requesting a [Right of Way Agreement; Franchise Agreement; License Agreement] from the Authority shall pay an application fee of [$___], which shall be paid upon submission of the [Right of Way Agreement; Franchise Agreement; License Agreement] application."*]

(iii) **ROW Use Fee.** Insert the appropriate fee to be paid for use of the Public ROW. [For example: *"In exchange for the privilege of non-exclusive occupancy of the Public ROW, the Provider shall pay the Authority [[$____] per installation or other calculation] (the "ROW Use Fee"). The ROW Use Fee shall be due and payable within thirty (30) days of [issuance of the [Right of Way Agreement; Franchise Agreement; License]] [issuance of the applicable Permit(s) required under this Chapter] and [annually/ quarterly/monthly] thereafter. Late payments shall be subject to interest at a rate of [____] [and a penalty of __]."*] [IF THERE IS NO AGREEMENT OR LICENSE FOR USE OF THE ROW, CONSIDER INCLUDING AUDIT RIGHTS IN THIS SECTION. NOTE THAT THIS CODE DOES NOT ADDRESS ATTACHMENT FEES FOR ATTACHING TO AUTHORITY POLES OR STRUCTURES IN THE ROW. TO THE EXTENT PERMITTED UNDER APPLICABLE LAW, ANY ATTACHMENT FEES SHOULD BE ADDRESSED ELSEWHERE OR, IF REQUIRED OR PREFERRED, INCORPORATED IN THIS CODE ALONG WITH OTHER PROVISIONS UNIQUE TO ATTACHMENTS (*E.G.*, MAKE READY AND RELOCATION OF EXISTING ATTACHMENTS).]

(iv) **Other Fees.** State that other fees may apply. [For example: *"The Applicant or Provider shall be subject to any other generally applicable fees of the Authority or other government body, such as those required for electrical permits, building permits, or street opening permits, which the Applicant or Provider shall pay as required in the applicable Laws, as well as attachment fees for the use of Authority owned Poles, Towers, Support Structures, ducts, conduits or other structures in the Public ROW, as set forth in attachment agreements authorizing such use."*] [CONSIDER INCLUDING A CROSS REFERENCE TO GENERALLY APPLICABLE AUTHORITY FEES THAT WOULD APPLY.]

(v) **No Refund.** State the policy on refunding any fees. [For example: "*Except as otherwise provided in a [Right of Way Agreement; Franchise Agreement; License], the Provider may remove its Communications Facilities, Poles or Towers from the Public ROW at any time, upon not less than thirty (30) days prior written notice to the Authority, and may cease paying to the Authority any applicable recurring fees for such use, as of the date of actual removal of the facilities and complete restoration of the Public ROW. In no event shall a Provider be entitled to a refund of fees paid prior to removal of its Communications Facilities, Poles or Towers."*] [NOTE

THAT PRO RATA REFUNDS ARE AN OPTION JURISDICTIONS MAY WANT TO CONSIDER.]

Section 2.2 Permit Applications [THIS SECTION SHOULD STATE THE PERMIT APPLICATION REQUIREMENTS AND OTHER RELATED REQUIREMENTS.]

a. Permit Required. State that a permit is required under this Chapter. [For example: *"Unless expressly authorized in this Chapter or in writing by the Authority, no Person may construct, install or maintain in the Public ROW any Communications Facilities, Poles built for the sole or primary purpose of supporting Communications Facilities, or Towers, including the installation or Collocation of Communications Facilities on existing Poles, Towers, Support Structures or other structures within the Public ROW, without first receiving a Permit. Notwithstanding the foregoing, in the event of an Emergency, a Provider or its duly authorized representative may work in the Public ROW prior to obtaining a Permit, provided that the Provider shall attempt to contact the Authority prior to commencing the work and shall apply for a Permit as soon as reasonably possible, but not later than __ [days/hours], after commencing the Emergency work. For purposes of this subsection, an "Emergency" means a circumstance in which immediate repair to damaged or malfunctioning facilities is necessary to restore lost service or prevent immediate harm to persons or property."*]

b. Permit Application Requirements. [For example: *"The Application shall be made by the Provider or its duly authorized representative and shall contain the following:*

(i) *The Applicant's name, address, telephone number, and e-mail address, including emergency contact information for the Applicant.*

(ii) *The names, addresses, telephone numbers, and e-mail addresses of all consultants, if any, acting on behalf of the Applicant with respect to the filing of the Application.*

(iii) *A description of the proposed work and the purposes and intent of the proposed facility sufficient to demonstrate compliance with the provisions of this Chapter. The Applicant shall state whether the Applicant believes the proposed work is subject to Administrative Review or Discretionary Review and if the Permit is an Eligible Facilities Request.* [CONSIDER ADDING BOXES TO CHECK ON THE PERMIT APPLICATION.]

(iv) *If applicable, a copy of the authorization for use of the property from the Pole, Tower or Support Structure owner on or in which the Communications Facility will be placed or attached.*

(v) *Detailed construction drawings regarding the proposed facility.* [ADD ANY CROSS-REFERENCES TO OTHER EXISTING CODE PROVISIONS THAT PROVIDE SPECIFIC REQUIREMENTS FOR DRAWINGS]

(vi) *To the extent the proposed facility involves Collocation on a Pole, Tower or Support Structure, a structural report performed by a duly licensed engineer evidencing that the Pole, Tower or Support Structure will structurally support the Collocation (or that the Pole, Tower or Support*

Structure will be modified to meet structural requirements) in accordance with Applicable Codes.

(vii) *For any new aboveground facilities, accurate visual depictions or representations, if not included in the construction drawings."*]

(viii) [ADD ANY OTHER SUBMISSION REQUIREMENTS, SUCH AS TRAFFIC CONTROL PLANS.]

c. Proprietary or Confidential Information in Application. State how the Authority will handle proprietary/confidential information and the Applicant's requirement to mark information as such. [For example: *"Applications are public records that may be made publicly available pursuant to [INSERT STATE LAW AND/OR LOCAL CODE/POLICY]. Notwithstanding the foregoing, Applicant may designate portions of its Application materials that it reasonably believes contain proprietary or confidential information as "proprietary" or "confidential" by clearly marking each portion of such materials accordingly, and the Authority shall treat the information as proprietary and confidential, subject to [INSERT STATE LAW AND/OR LOCAL CODE/POLICY] and the Authority's determination that the Applicant's request for confidential or proprietary treatment of Application materials is reasonable. The Authority shall not be required to incur any costs to protect the Application materials from disclosure, other than the Authority's routine procedures for complying with [INSERT STATE LAW AND/OR LOCAL CODE/POLICY]."*] [THIS LANGUAGE SHOULD BE ADJUSTED TO COMPLY WITH APPLICABLE PUBLIC RECORDS/FREEDOM OF INFORMATION LAWS.]

d. Ordinary Maintenance and Repair. Describe the requirements for performing Ordinary Maintenance and Repair. [For example: *"A Permit shall not be required for Ordinary Maintenance and Repair. The Provider or other Person performing the Ordinary Maintenance and Repair shall obtain any other permits required by applicable Laws and shall notify the Authority in writing at least ___ [days/hours before/after] performing the Ordinary Maintenance and Repair."*] [AS NOTED ABOVE, A JURISDICTION MAY CHOOSE NOT TO ALLOW ORDINARY MAINTENANCE AND REPAIR WITHOUT A PERMIT (SUBJECT TO APPLICABLE LAWS), IN WHICH CASE THIS PROVISION SHOULD BE DELETED ALONG WITH THE DEFINITION OF THAT TERM.]

e. Material Changes. State whether, and under what circumstances, a material change to an Application will impact the review process and/or require payment of additional permit fees. [For example: *"The Authority may require payment of an additional Permit application fee in the event the Authority determines, in its sole discretion, that material changes to an Application after submission amount to a new Application and will materially increase the time and/or costs of the Permit review process."* IF A JURISDICTION WILL INCLUDE SHOT CLOCKS IN SECTION 2.3.b.(ii), CONSIDER ADDING: *"Unless otherwise agreed to in writing by the Authority, any material changes to an Application, as determined by the Authority in its sole discretion, shall be considered a new application for purposes of the time limits set forth in Section 2.3.b.(ii), unless otherwise provided by applicable Laws."*]

f. Application Fees and Bonds. State when Application fees must be paid and other financial obligations such as bonds. [For example: *"Unless otherwise provided by applicable Laws, all Applications pursuant to this Chapter shall be accompanied by the Fees required under Section 2.1.b."* [INSERT CROSS REFERENCE TO EXISTING BOND REQUIREMENT OR ADD REQUIREMENT HERE, FOR EXAMPLE: "*Unless otherwise provided in a franchise agreement or agreed to in writing by the Authority, a performance bond or other form of surety acceptable to the Authority equal to at least one hundred percent (100%) of the estimated cost of the work within the Public ROW shall be provided before the Applicant commences work."*]

g. Effect of Permit. [For example: *"A Permit from the Authority authorizes an Applicant to undertake only the activities in the Public ROW specified in the Application and Permit, and in accordance with this Chapter and any general conditions included in the Permit. A Permit does not authorize attachment to or use of existing Poles, Towers, Support Structures or other structures in the Public ROW; a Permittee or Provider must obtain all necessary approvals from the owner of any Pole, Tower, Support Structure or other structure prior to any attachment or use. A Permit does not create a property right or grant authority to the Applicant to interfere with other existing uses of the Public ROW."*]

h. Duration. [For example: *"Any Permit for construction issued under this Article II shall be valid for a period of ___ days/weeks/months after issuance."]* [CONSIDER PROVIDING FOR EXTENSION OF TIME, FOR EXAMPLE: *"Any Permit for construction issued under this Article II shall be valid for a period of ___ [days/weeks/months] after issuance, provided that the ___ [day/week/month] period [may/shall] be extended for up to an additional ___ [days/weeks/months] upon written request of the Applicant (made prior to the end of the initial ___ [day/week/month] period) if the failure to complete construction is as a result of circumstances beyond the reasonable control of the Applicant."*]

i. [CONSIDER ALSO INCLUDING A BATCH PERMIT PROVISION TO ALLOW MULTIPLE APPLICATIONS TO BE SUBMITTED AT ONE TIME. For example: *"An Applicant may simultaneously submit not more than _____ (__) Applications for Communications Facilities, or may file a single, consolidated Application covering such Communications Facilities, provided that the proposed Communications Facilities are to be deployed on the same type of structure using similar equipment and within an adjacent, related geographic area of the Authority. If the Applicant files a consolidated application, the Applicant shall pay the application fee calculated as though each Communication Facility were a separate Application. [ADJUST THIS IF A DISCOUNT IS GIVEN FOR BATCH APPLICATIONS.]"* [CONSIDER INCLUDING A MONTHLY OR OTHER TIME-BASED LIMIT ON FILING CONSOLIDATED OR BATCH APPLICATIONS, ESPECIALLY IF THERE IS AN APPLICABLE SHOT CLOCK. ALSO CONSIDER OTHER APPLICABLE LIMITS, SUCH AS DISTANCE, WITH RESPECT TO BATCH WIRELINE APPLICATIONS SO THAT APPLICATIONS ARE REVIEWABLE IN A TIMELY MANNER.]

Section 2.3 Administrative Review [INSERT BELOW THOSE TYPES OF DEPLOYMENTS THAT MAY BE APPROVED BY ADMINISTRATIVE REVIEW WITHOUT A PUBLIC HEARING. THESE MUST MEET THE OTHER CRITERIA

ESTABLISHED IN THIS CHAPTER, BUT SO LONG AS THEY DO THERE WOULD NOT BE DISCRETION TO DENY THE PERMIT. THIS SECTION OR THE DESIGN CRITERIA SHOULD REFERENCE LAND USE ZONES IF THE JURISDICTION WANTS CERTAIN ZONES (*E.G.*, HISTORIC, RESIDENTIAL) TO HAVE DIFFERENT STANDARDS OF REVIEW. THE PROVISIONS BELOW PROVIDE SAMPLE LANGUAGE BASED ON THE BDAC RECOMMENDATION (WITH MODIFICATIONS). JURISDICTIONS MUST REVIEW APPLICABLE LAWS TO ENSURE THAT THIS SECTION IS CONSISTENT WITH STATE OR FEDERAL REQUIREMENTS, AND SHOULD ADJUST THE LANGUAGE TO MEET COMMUNITY NEEDS AND INTERESTS SUBJECT TO APPLICABLE LAWS.]

a. Permitted Use. Describe uses that will be approved on Administrative Review. [For example: *"The following uses within the Public ROW shall be permitted uses, subject to Administrative Review and issuance of a Permit as set forth in this Section 2.3. All such uses shall be in accordance with all other applicable provisions of this Chapter, including without limitation, those set forth in Section 2.5 below [IF APPLICABLE ADD: and the terms of any Right of Way Agreement/ Franchise Agreement/License].*

(i) *Collocation of a Small Wireless Facility that does not exceed the maximum height set forth in Subsection 2.3.c or a Collocation that qualifies as an Eligible Facilities Request.* [COLLOCATION IS LIMITED TO PLACEMENT OF SMALL WIRELESS FACILITIES ON A TOWER, OR ON A SUPPORT STRUCTURE OR POLE THAT HOLDS AT LEAST ONE SMALL WIRELESS FACILITY AT THE TIME OF THE APPLICATION. CONSIDER WHETHER THERE ARE INSTANCES IN WHICH THE INITIAL PLACEMENT OF A SMALL WIRELESS FACILITY ON A SUPPORT STRUCTURE OR POLE SHOULD BE PERMITTED ON ADMINISTRATIVE REVIEW AND, IF SO, ADD APPROPRIATE LANGUAGE TO THIS SECTION. NOTE THAT THE BDAC DEFINITION OF "COLLOCATION" INCLUDES REPLACEMENT OF EXISTING COMMUNICATIONS FACILITIES SUCH AS SWAPPING OUT ANTENNAS. THE PROPOSED DEFINITION IN THIS MODEL DOES NOT INCLUDE REPLACEMENT, SO JURISDICTIONS MAY WANT TO CONSIDER INCLUDING AS A PERMITTED USE THE REPLACING OF FACILITIES THAT ARE THE SAME TYPE/SIZE/AESTHETICS/*ETC.*]

(ii) *Modification of a Pole, Tower or Support Structure or Replacement of a Pole for Collocation of a Communications Facility where the modification or Replacement qualifies as an Eligible Facilities Request.*

(iii) *Construction of a new Pole or a monopole Tower (but no other type of Tower) to be used for a Small Wireless Facility that does not exceed the maximum height set forth in Subsection 2.3.c, provided that there are existing poles of similar height within ___ feet of either side of the proposed new Pole or monopole Tower.* [THIS IS A MODIFICATION OF THE BDAC MODEL AND HAS BEEN LEFT FOR CONSIDERATION; HOWEVER, NEW POLES/TOWERS MAY NOT BE APPROPRIATE IN SOME ZONES OR UNDERGROUNDING DISTRICTS WITH ADMINISTRATIVE REVIEW

ONLY. JURISDICTIONS SHOULD CONSIDER CHANGES TO THIS SECTION TO REFLECT LOCAL NEEDS AND INTERESTS.]

(iv) *Construction of a Communications Facility, other than those set forth in subsections (i), (ii) or (iii) in this Section 2.3.a, involving the installation of coaxial, fiber-optic or other cabling, that is installed underground or aboveground between two or more existing Poles or an existing Pole and an existing Tower and/or existing Support Structure, and related equipment and appurtenances."* [CONSIDER ADDRESSING THE SIZE AND LOCATION OF "RELATED EQUIPMENT AND APPURTENANCES" IF NOT ADDRESSED IN THE DESIGN STANDARDS.]]

b. Application Review. [INSERT APPLICATION REVIEW REQUIREMENTS, INCLUDING THE STANDARD FOR ADMINISTRATIVE APPROVAL OF APPLICATIONS THE COMPLY WITH THIS SECTION.] For example:

(i) *"The Authority shall review the Application and, if the Application conforms with applicable provisions of Section 2.2 and this Section, the Authority shall issue the Permit, subject to the standard permit requirements published by the Authority."*

(ii) [THE FOLLOWING OPTION IS FROM THE BDAC MODEL. NOTE THAT THESE TIMELINES MAY NOT BE REQUIRED BY APPLICABLE LAW. IF A JURISDICTION OPTS TO INCLUDE TIMELINES FOR APPROVING PERMITS, THE TIMELINES SHOULD BE MADE CONSISTENT WITH APPLICABLE STATE AND FEDERAL TIMELINES.] *"Except as otherwise provided by applicable Laws, the Authority shall:*

(A) *Within __ days of receiving an Application, notify the Applicant if the Application is incomplete, and identify the missing information. The Applicant may resubmit the completed Application within ___ days without additional charge, in which case the Authority shall have ___ days from receipt of the resubmitted Application to verify the Application is complete, notify the Applicant that the Application remains incomplete or, in the Authority's sole discretion, deny the Application; and*

(B) *Make its final decision to approve or deny the Application within ___ days for a collocation, and ___ days for any new structure, after the Application is complete (or deemed complete in the event the Authority does not notify the Applicant that the Application or resubmitted Application is incomplete).*

(iii) *The Authority shall advise the Applicant in writing of its final decision."*

(iv) [CONSIDER INCLUDING AUTHORITY FOR APPROPRIATE STAFF TO WAIVE MINOR VARIANCES FROM THE REQUIREMENTS OF THIS CHAPTER AND APPROVE APPLICATIONS BY ADMINISTRATIVE REVIEW RATHER THAN DISCRETIONARY REVIEW.]

c. Maximum Height of Permitted Use. Establish height limits on permitted uses described in subsection 2.3.a. [For example: *"Small Wireless Facilities, and new, modified or Replacement Poles, Towers and Support Structures in the Public Right of Way may be approved through Administrative Review as provided in Section 2.3.a only if the following requirements are met:*

(i) *Each new, modified or Replacement Pole, Tower or Support Structure installed in the Public ROW shall not exceed ____."* [INSERT HEIGHT LIMITS OR REFERENCE EXISTING LIMITS ON POLE HEIGHTS IN THE ROW. CONSIDER WHETHER THE LIMIT SHOULD BE THE SAME IN ALL ZONES; WHETHER THE LIMIT SHOULD BE RELATIVE TO EXISTING POLES OR BASED ON HEIGHT FROM THE GROUND (OR THE LESSER/GREATER OF BOTH). NOTE THAT THIS LIMIT WILL APPLY TO POLES THAT HOLD WIRELINE AND WIRELESS FACILITIES.]

(ii) *"New Small Wireless Facilities in the Public ROW shall not exceed _____."*] [INSERT HEIGHT LIMITS FOR POLES/TOWERS/SUPPORT STRUCTURES, INCLUDING ATTACHED WIRELESS FACILITIES, IF NOT ADDRESSED IN SUBSECTION (i) ABOVE. CONSIDER WHETHER THE LIMIT SHOULD BE THE SAME IN ALL ZONES; WHETHER THE LIMIT SHOULD BE RELATIVE TO EXISTING POLES OR BASED ON HEIGHT FROM THE GROUND (OR THE LESSER/GREATER OF BOTH). ANOTHER OPTION, RECOGNIZING THAT STANDARD STREET LIGHTS CAN BE FITTED WITH A CANISTER THAT WILL INCREASE THE HEIGHT OF THE LIGHT POLE, IS WHETHER TO PERMIT A HEIGHT COMPARABLE TO LIGHT POLES WITHIN A CERTAIN DISTANCE, PLUS AN ADDITIONAL NUMBER OF FEET (*E.G.* 5 OR 8 FEET).]

d. Design Standards. Establish the design standards a deployment must meet to be considered a permitted use as described in subsection 2.3.a. [For example: *"All aboveground Communications Facilities, Poles built for the sole or primary purpose of supporting Communications Facilities, or Towers in the Public ROW may be approved through Administrative Review to the extent provided in Section 2.3.a only if the following design guidelines are met:"* [ESTABLISH OBJECTIVE DESIGN STANDARDS WITH WHICH AN APPLICANT CAN (AND MUST) DEMONSTRATE COMPLIANCE IN THE APPLICATION TO QUALIFY FOR ADMINISTRATIVE REVIEW AND APPROVAL. THE FOLLOWING IS A LIST OF ISSUES TO CONSIDER ADDRESSING IN THE STANDARDS.]

(i) Height, size, shape, color and related requirements and/or limits for poles, towers, support structures, antennas and ground-mounted equipment.

(ii) Structure design/style (consider new/replacement use cases).

(iii) Limits on number, location or styles of poles, support structures and towers that may be installed or used.

(iv) Aesthetic approach for different types of facilities.

(v) Construction approach per facility, including powering and metering.

(vi) Structural integrity/remediation approach per facility.

(vii) Electrical integrity/remediation approach per facility.

(viii) Set-backs for poles, towers, support structures, antennas and ground-mounted equipment.

(ix) Limits on use of ground-mounted equipment for wireless facilities (*e.g.*, may be used only to house equipment and other supplies in support of the operation of the wireless facility or required to be placed in an underground vault).

(x) Lighting, marking and noise requirements and/or limits.

(xi) Fencing/landscaping/screening/signage requirements and/or limits.

(xii) Collocation analysis.

(xiii) Alternative site analysis.

(xiv) Use of decorative poles.

(xv) [CONSIDER WHETHER ANY OF THESE REQUIREMENTS SHOULD BE DIFFERENT IN DIFFERENT ZONES, HISTORIC AREAS, ENVIRONMENTALLY SENSITIVE AREAS, *ETC.*]

Section 2.4 Discretionary Review and Approval.

This Section should describe when discretionary review applies. [For example: *"All other uses within the Public ROW not expressly set forth or referenced in Section 2.3.a shall require compliance with, and issuance of, a permit under [CITE TO EXISTING REQUIREMENTS OF THE CITY CODE/CHARTER THAT REQUIRE DISCRETIONARY REVIEW].*"] [DEPENDING ON LOCAL CODES AND PREFERENCES, THIS MAY REQUIRE A PERMIT UNDER THIS SECTION (TO AUTHORIZE CONSTRUCTION IN THE ROW) AS WELL AS A LAND USE/ZONING APPROVAL, IN WHICH CASE A DISTINCTION SHOULD BE MADE IN THIS SECTION BETWEEN THE TWO PERMITS AND BOTH SHOULD CLEARLY BE REQUIRED.]

Section 2.5 General Public ROW Installation Requirements.

a. General Work Requirements. [INSERT GENERAL WORK REQUIREMENTS THE PERMITTEE MUST FOLLOW OR REFERENCE EXISTING CODE REQUIREMENTS THAT A PERMITTEE MUST FOLLOW. NOTE THAT THIS IS DIFFERENT FROM THE ROW REQUIREMENTS IN SECTION 2.1, WHICH APPLY TO THE OWNER OF THE FACILITIES AND APPLY THROUGHOUT THE TERM OF THE FRANCHISE/AGREEMENT/LICENSE OR OCCUPANCY OF THE ROW, WHEREAS THIS SECTION APPLIES TO THE WORK IN THE ROW, WHICH MAY BE PERFORMED BY A CONTRACTOR ON BEHALF OF A PROVIDER. BELOW IS A LIST OF ISSUES TO CONSIDER INCLUDING IN THIS SECTION.]

(i) General safety and compliance with laws. [For example: *"The Permittee shall employ due care during the installation, maintenance or any other work in the ROW, and shall comply with all safety and Public ROW-protection requirements of applicable Laws, Applicable Codes, and any generally applicable Authority guidelines, standards and practices, and any additional commonly accepted safety and Public ROW-protection standards, methods and devices (to the extent not inconsistent with applicable Laws)."*]

(ii) Traffic control. [For example: *"Unless otherwise specified in the Permit, the Permittee shall erect a barrier around the perimeter of any excavation and provide appropriate traffic control devices, signs and lights to protect, warn and guide the public (vehicular and pedestrian) through the work zone. The manner and use of these devices shall be described within a traffic control plan in accordance with the Uniform Manual of Traffic Control Devices. The Permittee shall maintain all barriers and other traffic control and safety devices related to an open excavation until the excavation is restored to a safe condition or as otherwise directed by the Authority."*]

(iii) Interference. [For example: *"The Permittee shall not interfere with any existing facilities or structures in the Public ROW, and shall locate its lines and equipment in such a manner as not to interfere with the usual traffic patterns (vehicular or pedestrian) or with the rights or reasonable convenience of owners of property that abuts any Public ROW."*]

(iv) Utility Locates. [For example: *"Before beginning any excavation in the Public ROW, the Permittee shall comply with [INSERT REFERENCE TO STATE OR LOCAL LAW ON UTILITY LOCATES OR "CALL BEFORE YOU DIG"]."*]

b. Compliance with Permit.

(ii) State that the Permittee must follow permit requirements. [For example: *"All construction practices and activities shall be in accordance with the Permit and approved final plans and specifications. The Authority and its representatives shall be provided access to the work site and such further information as they may require to ensure compliance with such requirements. All work that does not comply with the Permit, the approved plans and specifications for the work, or the requirements of this Chapter, shall be removed at the sole expense of the Permittee. The Authority may stop work in order to assure compliance with the provision of this Chapter."*]

(i) Address any needed additional permits. [For example: *"In addition to obtaining a Permit for installation of a Communications Facility, Poles built for the sole or primary purpose of supporting Communications Facilities, or Towers in the Public ROW, an Applicant must obtain all other required permits, including but not limited to, [insert other specific local permits]."*]

c. Mapping Data. Insert required maps and as-builts. [For example: *"The Permittee shall provide to the Authority as-builts, in a format designated by the Authority or otherwise compatible with such format, showing the location of Communications*

Facilities, Poles, Support Structures and Towers upon completion of the permitted work."]

d. [CONSIDER ANY OTHER CONSTRUCTION-RELATED ISSUES TO INCLUDE.]

Section 2.6 Attachment to and Replacement of Decorative Poles. [CONSIDER ADDRESSING ATTACHMENTS TO DECORATIVE POLES. THE EXAMPLE LANGUAGE BELOW IS A MODIFIED VERSION OF THE BDAC RECOMMENDATION. NOTE THAT, IF CONSISTENT WITH APPLICABLE LAWS, A JURISDICTION MAY OPT TO HAVE ALL CHANGES/ATTACHMENTS TO DECORATIVE POLES GO THROUGH A DISCRETIONARY REVIEW PROCESS RATHER THAN ADMINISTRATIVE REVIEW. THE BDAC MODEL LANGUAGE, INCLUDED BELOW, REGARDING WHETHER CHANGES ARE "IN KEEPING WITH THE AESTHETICS OF THE DECORATIVE POLE," APPEARS TO BE A DISCRETIONARY DECISION AND THUS MAY BE MORE APPROPRIATELY CONSIDERED THROUGH DISCRETIONARY REVIEW.]

[For example: *"Notwithstanding anything to the contrary in this Chapter, an Applicant may not install a Small Wireless Facility on a Decorative Pole, or replace a Decorative Pole with a new Decorative Pole unless the Authority has determined, in its sole discretion, that each of the following conditions has been met:*

a. *The Application qualifies for issuance of a Permit under Section 2.3.a;*

b. *The attachment and/or the replacement Pole is in keeping with the aesthetics of the Decorative Pole."* [CONSIDER REVISING TO MEET LOCAL POLICY GOALS]; and

c. [INSERT ANY OTHER CRITERIA FOR PERMITTING ATTACHMENTS TO OR REPLACEMENT OF DECORATIVE POLES].

[CONSIDER EXPANDING THE SCOPE OF THIS SECTION TO COVER HISTORIC DISTRICTS AND OTHER SENSITIVE AREAS, THOUGH SEE THE NOTE ABOVE REGARDING THE DISCRETIONARY NATURE OF THIS REVIEW. FOR EXAMPLE: *"Notwithstanding anything to the contrary in this Chapter, an Applicant may not install a Small Wireless Facility on a Decorative Pole, replace a Decorative Pole with a new Decorative Pole, or install new above-ground Communications Facilities in [INSERT NAME OF ZONES/DISTRICTS] unless the Authority has determined, in its sole discretion, that each of the following conditions has been met:*

a. *The Application qualifies for issuance of a Permit under Section 2.3.a;*

b. *The attachment and/or the replacement Pole is in keeping with the aesthetics and character of the Decorative Pole and/or the [INSERT NAME OF ZONES/DISTRICTS]."*]

Section 2.7 Violation of this Chapter.

Include appropriate language regarding violations of this Chapter. [For example: *"Violation of any of the provisions of this Chapter shall be a [INSERT APPLICABLE TERM, E.G., simple citation] punishable with a civil penalty of $_____ for each violation. Each day that a violation*

occurs or is permitted to exist by the Applicant or Provider constitutes a separate offense."] [CONSIDER INSTEAD REFERENCING AN EXISTING GENERALLY APPLICABLE VIOLATION/PENALTY PROVISION OF THE CODE AND NOTICE/OPPORTUNITY TO CURE OR OTHER PROCESS TO CONTEST THE VIOLATION.]

Section 2.8 Effective Date.

Insert appropriate language regarding the effective date of the ordinance. [For example: *"This Chapter shall take effect __ (__) days after its passage, approval and publication."*]

EXHIBIT 3:

INDUSTRY PROPOSED ORDINANCE

DRAFT ZONING ORDINANCE CHANGES

TO ALLOW SMALL CELL ANTENNAS AND MINOR/CO-LOCATED TELECOMMUNICATIONS FACILITIES

Introduction

This draft is in four parts:

First, definitions at §24-1 of the City Code which add new references to both uses;
Second, additions to the different zones to now allow small cell facilities;
Third, additions to the zoning code's telecommunications section to address small cell facilities;
Four, additions to the telecommunications section to address minor/co-located facilities.

NOTE: Additions are in **bold**; deletions are ~~crossed out~~.

PART I: DEFINITIONS

Sec. 24-1. Definitions.

Co-location: **Siting additional telecommunications facilities on an exterior structure or pole with an existing telecommunications facility, using the same Support Structure, such as poles, buildings, street lights, water tanks, towers, utility poles and the like, without the need to construct a new Support Structure, and thus constituting a minor telecommunications facility modification. Co-location may include siting multiple facilities from the same provider or facilities from more than one provider in the same location.**

Major Telecommunications Facility Modification: **An alteration of an existing exterior telecommunications facility for any purpose where (i) the height of the existing facility is increased by more than ten percent (10%) from the current height, or twenty (2)) feet, whichever is greater; (ii) the existing facility is increased by more than four (4) new equipment cabinets; (ii) the new facility will have an additional protrusion of more than twenty (20) feet or width of the existing tower, whichever is greater; (iv) installation of the new facility will require excavation outside existing leased or owned property and current easements. The calculation for such modifications shall be cumulative over time following the initial approval of the telecommunications facility. No such modification shall be permitted if the Support Structure will exceed the zoning district height as provided in this chapter.**

Minor Telecommunications Facility Modification: **An alteration of an existing exterior telecommunications facility or co-location of additional facilities with an existing exterior telecommunications facility in any zone that does not meet or exceed the thresholds for a major modification, the calculation for which shall be cumulative over time, following the initial approval of the telecommunications facility. No such modification shall be permitted if the modification to the structure will cause the structure to exceed the height limit for the zoning district as provided in this chapter.**

New telecommunications facility. **The establishment of a telecommunications facility on a tower, building or other support structure where no such facility presently exists.**

Small cell telecommunications facility. **A facility, excluding a satellite television dish antenna, established for the purpose of providing wireless voice, data and/or image transmission within a designated service area. A small cell telecommunications facility must not be staffed, and consists of one or more antennas attached to a Support Structure. An antenna or wireless antenna base station which provides wireless voice, data and image transmission within a designated service area as part of a small cell telecommunications facility may consist of a low-powered access node with no more than five watts of transmitter output power per antenna channel, and may not be larger than a maximum height of three (3) feet and a maximum width of two (2) feet. A small cell telecommunications antenna may be installed on existing rooftops, structures or support structures where permitted. A small cell telecommunications facility also consists of related equipment which may be located within a building, an equipment cabinet outside a building, an equipment cabinet on a rooftop that is at least fifteen (15) feet high when in a commercial zone or attached to a commercial structure, or twenty (20) feet high when in a residential zone or attached to a residential structure, or an equipment room within a building. Such related equipment shall have a maximum square footage of ten (10) square feet and a maximum height of two (2) feet.**

Stealth Telecommunications Facility: Any Telecommunications Facility that is integrated as an architectural feature of a structure or the landscape so that the facility and its purpose to provide wireless services is not visually apparent or prominent.

Support Structure(s): Monopoles, towers, utility poles, light poles, buildings or any other freestanding self-supporting structure which can safely support the installation of any new or additional proposed telecommunications facility.

Telecommunications facility. Any exterior facility, **including an antenna, antenna array or other communications equipment,** excluding a satellite television dish antenna **or small cell telecommunications facility**, established for the purpose of providing wireless voice, data and image transmission within a designated service area **and which includes equipment consisting of personal wireless services, as defined in the Federal Telecommunications Act of 1996, which includes Federal Communications Commission licensed commercial wireless telecommunications services, including cellular, personal communications services (PCS), specialized mobile radio (SMR) enhanced specialized mobile radio (ESMR), and paging, as well as unlicensed wireless services and common carrier wireless exchange access services and similar services that current exist or that may in the future be developed.**. A telecommunication facility must not be staffed. A telecommunication facility consists of one or more antennas attached to a support structure and related equipment. Antennas are limited to the following types and dimensions: omni-directional (whip) antennas not exceeding fifteen (15) feet in height and three (3) inches in diameter; directional or panel antennas not exceeding six and one-half (6½) feet in height and two (2) feet in width. An antenna may be mounted to a building, a building rooftop or a freestanding monopole in accordance with sections 24-167A(D) 1 and/or 2. Equipment may be located within a building, an equipment cabinet, or an equipment room within a building. **Where reference is made to a telecommunications facility, unless**

otherwise specified or indicated by context, such reference will be deemed to include the Support Structure on which the antenna or other communications equipment is mounted, transmission cables, and any associated equipment shelter.

[second paragraph for "Telecommunications Facility" definition] New Telecommunications Facilities and Major Telecommunications Facility Modifications, as defined herein, shall be subject to the applicable zoning and permit requirements of this Chapter, including § 24-167A(d). Minor Telecommunications Facility Modifications shall require approval and payment of any applicable fees as provided by § 24-167A(d)(3).

PART II: CHANGES TO ALLOW SPECIFIC ZONES TO ALLOW SMALL CELL FACILITIES

Small cell telecommunications facilities would be permitted as follows:

Section 24-22(b) and (c)

Show "small cell telecommunications facility" in charts, noting it as "P"

***** ***** ***** ***** ***** ***** *****

Section 24-24 (RA Zone)

(8) Small cell telecommunications facility, subject to the requirements in section 24-167A(e). (note, also permitted in R90 per § 24-28(1))

***** ***** ***** ***** ***** ***** *****

Section 24-43 (RPT Zone)

(8) Small cell telecommunications facility, subject to the requirements in section 24-167A(e). (note, also permitted in R-20 per § 24-56(1))

***** ***** ***** ***** ***** ***** *****

Section 24-66 (R-18 Zone)

(9) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-75 (RH Zone)

(11) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-86 (RO Zone)

(9) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

(Note, use would be permitted in CB zone due to inclusion in RA Zone, §24-22, per §24-93, so no additional change is needed)

***** ***** ***** ***** ***** ***** *****

Section 24-102(a) (CP Zone)

(11) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-111 (C-1 Zone)

(15) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-117 (C-2 Zone)

(31) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-123 (C-3 Zone)

(6) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-136(f) (I-1 Zone)

(8) Small cell telecommunications facility, subject to the requirements in section 24-167A(e).

***** ***** ***** ***** ***** ***** *****

Section 24-151 (E-1 Zone)

(20) Small cell telecommunications facility, subject to the requirements in section 24-167A(e). (note, also permitted in I-3 per § 24-143(1), I-4 per §24-150A and E-2 per §24-160A(1))

***** ***** ***** ***** ***** ***** *****

(**Note**, use would be permitted in MXD zone as being permitted in other zones, per §24-160D.3, so no change is needed here)

***** ***** ***** ***** ***** ***** *****

Section 24-160E.2 (H-M Zone)

(13) Small cell telecommunications facility, subject to the requirements in section 24-167A(e). (note, also permitted in R90 per § 24-28(1))

***** ***** ***** ***** ***** ***** *****

(**Note**, use would be permitted in CBD zone as being permitted in other zones, per §24-160F.2(a), and in the CD zone for the same reason, per §24-160G.1(a), so no change is needed here)

***** ***** ***** ***** ***** ***** *****

PART III: ADDITIONS TO THE TELECOMMUNICATIONS SECTION OF THE ZONING CODE TO PROVIDE FOR SMALL CELL FACILITIES

Section 24-167A. Satellite television antennas and towers, poles, antennas and/or other structures intended for use in connection with transmission or receipt of radio or television signals, ~~and/or~~ telecommunications facilities **or small cell telecommunications facilities.**

(B) Towers, poles, antennas or other structures intended for use in connection with transmission or receipt of radio or television signals or both, other than satellite television antennas; provided, that they are not used in connection with the operation of a commercial radio or television broadcasting station, are permitted subject to the requirements set forth in this subsection (B). Such Support Structures may be freestanding or fastened to a building. No portion of any such structure shall be erected within any minimum required yard or closer to any property line in a residential zone, or to any electric power line serving a lot other than the lot on which such structure is located, than the height of such structure. The height of any such structure shall be measured from the lowest point at which such structure touches the ground; provided, that if such structure is attached to a building and does not touch the ground, its height shall be measured from the lowest point at which such structure is attached to the building. This paragraph shall not be construed to prevent the construction of such a structure on the roof of any building; provided, that the height of such structure does not exceed twenty (20) feet. Any tower, pole, antenna or other structure referred to in the first sentence of this paragraph which was lawfully erected prior to November 7, 1974, shall, notwithstanding anything to the contrary herein, continue to be deemed lawful. The following subsections applicable to satellite television antennas shall also apply to towers, poles, antennas or similar Support Structures generally: Section 24-167A(A)(2)(d) and (f), and section 24-167A(A)(3), (4), (5), (6), (7), and (8).

(C) The city council, acting as a board of appeals, is authorized to hear and decide conditional uses for towers, poles, antennas, buildings or other structures intended for use in connection with the operation of a commercial radio or television broadcasting station in the C-2 Zone, alter conformance with the filing, notification and hearing requirements normally applicable to special exceptions, as set forth in section 24-188, and may approve this use upon the following affirmative findings:

(1) The proposed structure will not endanger the health and safety of residents, employees or travelers, including, but not limited to, the likelihood of the failure of such structures.

(2) The proposed structure will not substantially impair the use of, or prove detrimental to, neighboring properties, considering, among other relevant factors, the following:

(a) The topography and elevation of the property on which such structure is proposed to be located and the appearance and visibility of such structure from neighboring and surrounding properties and from public rights-of-way;

(b) The location of surrounding residences, buildings, structures and public rights-of-way and their use;

(c) The character of the surrounding neighborhood and the master plan recommendations for the ultimate use of surrounding properties;

(d) The likelihood or interference with existing radio, television, telephone or microwave reception or service.

(3) The proposed structure will cause no objectionable noise, fumes, odors, glare, physical activity or effect that would impair the peaceful enjoyment of neighboring properties;

(4) The proposed buildings, structures and use will be in harmony with the general character of the neighborhood;

(5) The proposed structure will be served by adequate public services and facilities, including police and fire protection, water and sanitary sewer, storm drainage, public roads and other public improvements.

(D) Telecommunications facilities.

1. Standards when allowed as permitted use. The following standards apply in those zones in which **new or major modifications of** telecommunications facilities are allowed as a permitted use.

(a) An antenna and a related unmanned equipment building or cabinet may be installed on a rooftop of buildings constituting Support Structures on privately owned land which are at least thirty (30) feet in height. An antenna may be mounted on the wall of a building facing the rear lot line at a height of at least thirty (30) feet. An antenna may not be mounted on the rear wall of a building on a through lot. A telecommunications facility antenna must not be mounted on the facade of any building designed or used as a one family residential dwelling. An unmanned equipment building or cabinet may be located on the roof of a building provided it and all other roof structures do not occupy more than twenty-five (25) percent of the roof area. Unmanned equipment buildings or cabinets that increase the roof coverage of all roof structures to occupy more than twenty-five (25) percent of the roof area may be approved by the board of appeals as a special exception in accordance with subsection 2 of this section.

(b) Telecommunications antennas may be attached to a free standing monopole on privately owned land. A free-standing monopole including antenna structure for a telecommunications facility is permitted up to one hundred ninety-nine (199) feet in height with a setback of one foot for every foot of height from all adjoining residentially zoned properties, and a setback of one-half (½) foot for every foot of height from adjoining non-residential properties.

(c) An unmanned equipment building or cabinet included as part of a telecommunications facility on privately owned land must not exceed five hundred

sixty (560) square feet and twelve (12) feet in height. Any such equipment building or cabinet must be so located as to conform to the applicable set back standards of the zone in which the property is classified.

(d) Public property.

(i) A private telecommunications facility may be located on public property or attached to an existing structure owned or operated by the City of Gaithersburg and shall be a permitted use in all zones. The use of any property owned or operated by the city shall be at the discretion of the city council and shall not be subject to the same conditions and requirements as are applicable to such facilities on privately owned property. The city council may but is not required to hold a public hearing prior to its decision to allow the use of property owned or under the control of the city.

(ii) A private telecommunications facility may be located on public property of or attached to an existing structure owned or operated by a county, state, federal or other non-city governmental agency or on the property of an independent fire department or rescue squad subject to the same conditions and requirements as are applicable to such facilities on privately owned property.

(e) All such antennas shall be located and designed so as to minimize visual impact on surrounding properties and from public streets.

(f) No signs are permitted in connection with any telecommunications facility.

(g) No lights are permitted on any monopole or antenna unless required by the federal communications commission, the federal aviation administration, or the city.

(h) All monopoles erected as part of a telecommunications facility must maintain at least three (3) telecommunications carriers provided, however, that a monopole or other support structure designed or engineered to accommodate less than three (3) telecommunications carriers may be permitted by special exception when approved by the board of appeals.

(i) No more than one monopole is permitted on a lot or parcel of land and, no two (2) monopoles may be located within one thousand (1,000) feet of each other in any zone in which such facilities are permitted uses. In any such zone, more than one monopole may be permitted on a lot or parcel and two (2) or more monopoles may be located within one thousand (1,000) feet of each other by special exception approved by the board of appeals. A special exception to permit either the location of more than one monopole on a lot or parcel or two (2) or more monopoles within one thousand (1,000) feet of each other may only be approved by the board of appeals if the applicant establishes that existing telecommunications facilities serving the same service area have no additional capacity to include the applicant's antenna or that co-location on an existing monopole is technically impractical and that engineering criteria establish the need for the requested facility. In addition, any such application

must comply with all of the other standards and requirements applicable to special exceptions for telecommunications facilities.

(j) Every free standing monopole or support structure and any unmanned equipment building or cabinet associated with a telecommunications facility must be removed at the cost of owner of the facility when the telecommunications facility is no longer in use by any telecommunication carrier.

2. Standards and requirements applicable to special exceptions for **new or major modifications to** telecommunications facilities.

(a) An application for a special exception for a **new or major modification to a** telecommunication facility may be approved by the board of appeals if the board finds that:

(1) Complies with all of the standards contained in section 24-167A(C)1.

(2) The location selected is necessary for the public convenience and service.

(3) The location selected is not in an area in which there is an over concentration of freestanding monopoles, towers or similar structures.

(4) The location selected for a monopole is more than three hundred (300) feet from either the nearest boundary of a historic district or more than three hundred (300) feet from the nearest boundary of the environmental setting of a historic resource that is not within a historic district.

(5) The location selected for a monopole is suitable for the co-location of at least three (3) telecommunication antennas and related unmanned cabinets or equipment buildings and the facility is designed to accommodate at least three (3) antennas. The holder of a special exception may not refuse to permit the co-location of two (2) additional antennas and related equipment buildings or cabinets unless co-location is technically impractical because of engineering and because it will interfere with existing service. The refusal to allow such co-location without just cause may result in revocation of the special exception.

(6) In the event a telecommunications facility is proposed to be located on a rooftop or other Support Structure, the board of appeals must find that the building is at least thirty (30) feet in height in any multifamily residential zone or non-residential zone; and fifty (50) feet in height in any one family residential zone. Rooftop telecommunications facilities may not be located on a one family residence.

(7) In the event a telecommunications antenna is proposed to be located on the facade of a building, the board of appeals must find that it is to be located at a height at least thirty (30) feet on a building located in a multifamily residential zone or non-residential zone and at a height greater than fifty (50) feet in any one family

residential zone. A telecommunications antenna must not be mounted on the facade of a one family residence.

(8) In any residential zone the board of appeals must find that the equipment building or cabinet does not exceed five hundred sixty (560) square feet and twelve (12) feet in height, and is faced with brick or other suitable material on all sides and that the facades are compatible with the other building or buildings located on the lot or parcel. Equipment buildings and cabinets must be landscaped to provide a screen of at least three (3) feet. The board may require that monopoles: 1) be camouflaged; 2) be placed within a part of an existing structure; or 3) be constructed in such a way that the monopole appears to be part of an existing structure.

(9) The board must further find that any equipment building or cabinet is located in conformity to the applicable set back standards of the zone.

(10) The board must find that the addition of an equipment building or cabinet proposed to be located on the roof of a building, in combination with all other roof structures does not create the appearance of an additional story and does not increase the roof coverage by more than an additional ten (10) percent. The board must also find that the structure is not visually intrusive.

(11) The board must also find that a free-standing monopole or other support structure is proposed to hold no less than three (3) telecommunications carriers. The board may approve a monopole or other support structure with fewer than three (3) telecommunications carriers if the applicant establishes that: (a) existing telecommunications facilities serving the same service area have no additional capacity to include the applicant's antenna; or (b) the applicant establishes that co-location on an existing monopole is technically impractical and that engineering criteria establish the need for the requested facility; and the approval of the application will not result in an over concentration of similar facilities in the surrounding area.

(b) Area requirements.

(1) The minimum parcel or lot area is sufficient to accommodate the location requirements for the monopole or other support structure as hereinafter set forth in subsection (c).

(2) In no event may the minimum parcel or lot area be less than the lot area required for the zone in which the monopole or support structure is located.

(3) For the purpose of this section, the location requirement is measured from the base of the monopole or other support structure to the perimeter property line.

(4) The board of appeals may, upon request of the applicant, reduce the location requirement to not less than the building setback for the applicable zone, provided the

board makes the additional finding that the reduced location requirement results in a less visually obtrusive location for the monopole or other support structure. In making that additional finding, the board shall consider the height of the structure, topography, existing vegetation, planned landscaping, the impact on adjoining and nearby residential properties, if any, and the visibility of the monopole or other support structure from adjacent streets.

(c) Location requirements for structures. A monopole or other support structure must be located as follows:

(1) In residential zones, a distance of one foot from the property line for every foot of height of the monopole or other support structure.

(2) In non-residential zones, monopoles and other support structures must be located at a distance of one-half (½) foot from the property line of adjacent non-residentially zoned property for every foot of height of the monopole or other support structure. Such structures must be located a distance of one foot from the property line of adjacent residentially zoned property for every foot of height of such structure.

(d) Signage. No signs are permitted in connection with the establishment of a telecommunications facility.

(e) Lights. No lights or other illumination devices are permitted on a monopole or other support structure unless required by the federal communications commission, the federal aviation administration or the board.

(f) Removal of telecommunications facilities. Every free-standing monopole or support structure and any unmanned equipment building or cabinet associated with a telecommunications facility must be removed at the cost of owner of the facility when the telecommunications facility is no longer in use by any telecommunication carrier.

Due to the extensive and prolonged review by regulatory agencies of applications for licenses to operate commercial radio or television broadcasting stations, the establishment of such use may be initiated for up to five (5) years from the date of the decision of the city council, or from the date of a final decision of any appeal filed therefrom. Appeals may be filed to any decision of the city council under this subsection (C) of section 24-167A in the same manner as provided generally from appeals to decisions of the board of appeals under section 24-193 of this Code.

3. [[PLEASE NOTE: A new section 3 on minor modifications, proposed in Part IV below, would be placed here.]]

(E) Small cell telecommunications facilities. The following standards apply in those zones where small cell telecommunications facilities are allowed as a permitted use.

1. An antenna may be installed on streetlight or mast arms mounted on pre-existing poles, including utility and street light poles or other pre-existing exterior Support Structures, but the installation of taller poles or new overhead wiring to accommodate the antennae will not be permitted without a special exception approved by the Board of Appeals. Overall, an antenna may be installed at least twenty (20) feet from the ground in a residential zone or on an existing residential Support Structure or Support Structure on privately owned land, or fifteen (15) feet from the ground in a commercial zone or on an existing commercial structure or support structure on privately owned land. An antenna may be mounted on the wall of a building facing the rear lot line at a height of at least twenty (20) feet in a residential zone or when mounted on a residential building, or fifteen (15) feet in a commercial zone or when mounted to a commercial building .

2. An antenna must not be installed on or within sixty (60) feet of a single-family or two-family dwelling unit and must not be installed on the façade of any residence.

3. Cable connecting the antennae to the equipment box shall be contained inside the pole or Support Structure or shall be flush mounted and covered with a metal, plastic or similar material cap matching the color of the pole or structure on which it is installed, properly secured and maintained by the applicant.

4. Related unstaffed equipment cabinets may be located within a building, an equipment cabinet outside a building, an equipment cabinet on a rooftop, or an equipment room within a building.

   (i) Such related equipment shall have a maximum square footage of ten (10) square feet with a maximum height of two (2) feet, and must be so located and installed in accordance with the applicable setback and other requirements of the zone in which the property is classified.

   (ii) A related unstaffed equipment cabinet may be installed on a rooftop of a building on privately owned land which is at least fifteen (15) feet in height, provided it and all other roof structures do not occupy more than twenty-five (25) percent of the roof area.

5. The applicant shall provide proof that it is a licensed provider and will comply with all applicable federal, state and City laws and regulations, including those regarding wireless communications services.

6. An antenna and equipment box must be installed as a Stealth Telecommunications Facilities on a property within a Historic District or that has been designated by the City as a Historic Resource, and the Historic District Commission must review such an application.
7. Public property.

(i) A private small cell telecommunications antenna may be located on the exterior of public property or attached to an existing Support Structure owned or operated by the City of Gaithersburg and shall be a permitted use in all zones. The use of any property owned or operated by the city shall be at the discretion of the city council and shall not be subject to the same conditions and requirements as are applicable to such facilities on privately owned property. The city council may but is not required to hold a public hearing prior to its decision to allow the use of property owned or under the control of the city.

(ii) A private small cell telecommunications antenna may be located on the exterior of public property of or attached to an existing Support Structure owned or operated by a county, state, federal or other non-city governmental agency or on the property of an independent fire department or rescue squad subject to the same conditions and requirements as are applicable to such facilities on privately owned property.

8. All such small cell telecommunications antennas shall be located and designed so as to minimize visual impact on surrounding properties and from public streets.

9. No signs are permitted in connection with any small cell telecommunications antenna.

10. No lights are permitted on any monopole or antenna unless required by the federal communications commission, the federal aviation administration, or the City.

11. No more than one building, pole or other Support Structure containing a small cell telecommunications facility or co-located facility is permitted on a lot or parcel of land, or for parcels larger than a half-acre, per half-acre of land. A special exception to permit the location of more than one building, pole or other structure containing small cell telecommunications facilities on a lot or parcel or half-acre may only be approved by the Board of Appeals if the applicant establishes that existing small cell telecommunications facilities serving the same service area have no additional capacity to include the applicant's facility. Any such application must comply with all of the other standards and requirements for small cell telecommunications facilities.

12. Every small cell telecommunications facility must be removed at the cost of owner when it is no longer in use or when it has not been operated for a continuous period of six (6) months. Such a facility must be removed within 90 days after receiving a removal notice from the City.

13.

PART IV: ADDITIONS TO PROVIDE FOR MINOR MODIFICATIONS AND CO-LOCATIONS

Within Section 24-167A(D)

3. Minor modifications of existing telecommunications facilities in any zone shall require approval of a permit by Planning and Code Administration staff and payment of the required fee in place of special exception approval.

(a) Such modification permits shall be submitted for approval on a form designated by the City Manager.

(b) Prior to approval of the minor modification permit for telecommunications facilities, the applicant shall specify whether the application is subject to any Federal Communications Commission application requirements, and if so identify whether it must be reviewed under regulations implementing § 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, § 332(c)(7) of the Telecommunications Act of 1996, or other applicable federal laws or regulations.

(c) Prior to approval of the minor modification permit for telecommunications facilities, the application must also (i) demonstrate required zoning approval and/or approval by the Historic District Commission, where applicable; (ii) provide a safety report demonstrating that the structure can safely accept installation of the additional telecommunications facilities; (iii) provide proof that it is a licensed provider and will comply with all federal, state, and City laws and regulations, including those relative to wireless services; (iv) provide any other relevant information required by the City, and (v) if the installation is within or crosses a right of way, demonstrate compliance with all applicable right of way permit requirements, including any prior right of way agreements.

(d) The size, location and appearance of the minor modification will be subject to Planning and Code Administration staff review and approval. Where Planning and Code Administration staff conclude a proposed installation does not constitute a minor modification or does not meet other applicable requirements, City staff may deny the permit or refer it to the Planning Commission for further review and a final decision.

(e) If the permit is denied because it does not meet the definition of a minor modification, the application shall be subject to the applicable zoning and permit requirements of this Chapter unless the applicant withdraws the permit.

(f) An applicant may appeal denial of a permit to the city planning commission if filed with the planning department, in writing, within fifteen (15) days after the denial decision is mailed, under the processes for appeals of minor amendments to site development plans under §24-172A(b)(6).

EXHIBIT 4:

INDUSTRY PRIMER ON SMALL CELL TECHNOLOGY

Small Cells on Pole Facilities

A Primer on How Utility Poles, Street Lights and Traffic Signals Will Help Drive Next-Generation Mobile Broadband Networks

Content

Abstract

Introduction

Small Wireless Communications Equipment Deployment Options

Retrofit Considerations for Existing Poles

Streamlining the Permitting Process for Wireless Facilities Deployments

A View of New Smart Pole Design Features and their Applications

Conclusion

Appendix

About the Authors

Footnotes

This white paper is meant to be an educational tool and does not reflect Wireless Infrastructure Association policy.

Abstract

Reliable wireless coverage promotes economic development, and is critical to attract and maintain a vibrant business environment and a competitive workforce. The attachment of small wireless antennas and associated equipment on pole structures – which can include Distributed Antenna System (DAS) remote units, remote radio units and self-contained small cells –significantly improves the coverage and capacity of 3G, 4G and soon-to-be-deployed 5G wireless networks. Installing wireless infrastructure at the precise location where it is needed improves the network and immediately benefits the community. To deploy these network solutions, a combination of existing infrastructure, and, in some situations, new pole infrastructure with the appropriate power and connectivity, are needed. Attaching this equipment to poles involves close collaboration with local municipalities and utility companies. Local jurisdictions should make their infrastructure available for collocation so that multiple deployments can co-exist on one pole.

This white paper provides information to municipal planners, site acquisition firms, architectural and engineering (A&E) firms and others interested in supporting small wireless equipment deployments on existing and new pole structures. For the purpose of this paper, the definition of small wireless communications equipment includes DAS remote units, remote radio units, self-contained small cells and associated equipment that can be mounted on a utility pole or similar structure. Street furniture is defined as utility poles and other structures located in the public right-of-way (ROW).

Specifically, this document addresses:

- Small Wireless Communications Equipment Deployment Options
- Retrofit Considerations for Existing Poles
- Streamlining the Permitting Process for Wireless Facilities Deployments
- A View of New Smart Pole Design Features and their Applications

Introduction

Commercial cellular networks are handling more traffic than ever as society embraces broadband mobility. In its 2015 Global Mobile Consumer Survey, The Rise of the Always-Connected Consumer US Edition, Deloitte describes society's smartphone use as an obsession.[1] The survey found that 93 percent of smartphone users check their phones within three hours of waking. Beyond consumers' individual habits, mobile broadband penetration impacts the local economy. The Brookings Institute estimated that "for every 1 percentage point increase in broadband penetration as a state, employment is projected to increase by 0.2 to 0.3 percent per year."[2] Mobile broadband penetration is also important from a public-safety standpoint because people are dropping wired home phones, or they never had them in the first place. An estimated 48.3% of Americans have only cellular phones in their homes, according to the Center for Disease Control, which tracks the trend.[3] This is notable because 70 percent of calls to 911 are made from mobile phones.[4]

Not surprisingly, U.S. carriers have had to fortify their networks to keep up with ever-growing customer demand. Along with macrocellular towers to build out coverage across the United States, carriers and infrastructure providers are deploying smaller equipment to bring antennas closer to the end user. In some cases, these deployments can take place using pole facilities, including utility poles, street lights and traffic signals.

Small wireless communications equipment supplements the macrocellular tower layer. The selection of the type of wireless equipment is decided on a market-by-market basis by the carrier or infrastructure provider, depending upon which solution best meets customers' needs.

Small Wireless Communications Equipment Deployment Options

Each type of small wireless communications equipment has its own nuances. Small cells typically support a single carrier, operate on only one or two frequency bands and transmit less power than a remote radio unit or DAS. As a result, a tradeoff must be made between deploying a larger number of small cells using lower power, or deploying a DAS solution, which would require fewer sites using higher power, support multiple technologies and frequency bands and be able to support multiple wireless carriers. Small cells can have embedded or external antennas, but similar to remote radio units and DAS deployments, external antennas offer greater flexibility in reaching the target area. The flexibility to use different types of antennas and evolve to new antenna technologies is critical to accommodate network evolution as carriers and infrastructure providers find new ways to handle increased

cellular traffic. Watching video on a smartphone uses much more bandwidth than sending a text message, for example.

Basic Installation Considerations for Power on Utility Poles

- National Electrical Safety Code (NESC) and pole-owner guidelines require that wood poles be possible to climb. New equipment cabinets must be installed on the same side of the pole as existing equipment cabinets.
- Minimum clearances between communications attachments and power attachments must be maintained. Typically, 40 inches of clearance is required between the lowest power attachment and the uppermost communications attachment. When installing an antenna at the top of the pole, 5 feet of clearance above the uppermost power conductor typically is required.
- Utility poles usually offer readily available electric power and often the wireless infrastructure installation will include a meter shell, a disconnect switch, a conduit and weather-head from the meter shell up the pole into the power zone. Some utilities require that all small wireless communications equipment use metered service drops; others will make services available at a flat monthly rate.
- Initial network design considerations will include a backhaul solution, which transports voice and data from the carrier's Base Transceiver Station (BTS) back to its core network. Choices might include dark fiber (unused fiber already in the ground), lit circuits (fiber being used), cable TV or a wireless solution. Since utility poles are used extensively in building fiber-optic communications networks, dark fiber is a common solution.
- The list of candidate sites, which initially is evaluated based upon network planning software, is further refined based upon a field survey so the pole's structural condition can be evaluated. When planning the use of wood utility poles to host small equipment deployments, the condition of the poles and the ability of each to support additional weight and wind loads must be evaluated.
- The pole owner's attachment guidelines will specify how new cabinets, service meters and disconnects, cable pathways, grounding systems, antennas and other items must be attached and positioned onto the existing pole.

Above Ground Level (AGL) Heights for All Components

Radios or radio cabinets typically will be positioned at least 6 feet to 8 feet above grade to the bottom of the cabinet on existing poles that are retrofitted to house the equipment. Power service meter, disconnect and any outboard communications devices (such as a backhaul router) must be positioned on the pole, interconnected and grounded, according to the pole-owner's guidelines and NESC.

Antennas will be positioned according to the regulations provided by the utility. An important consideration in antenna attachment heights relates to the positioning of conduit and u-guard cable protection that will be used as cabling pathways.

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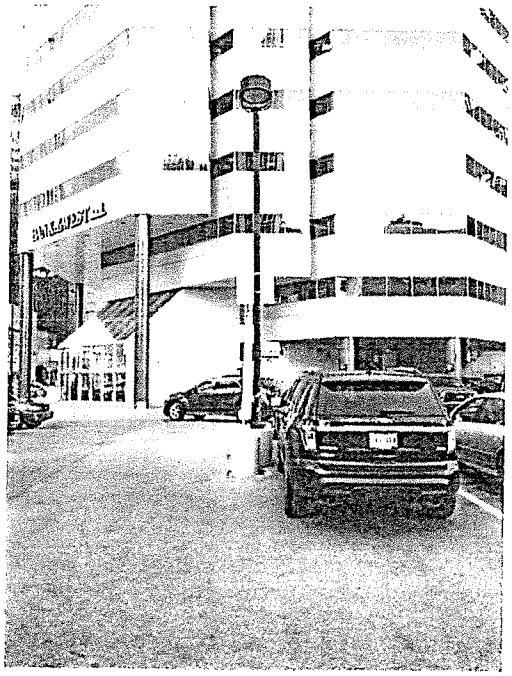
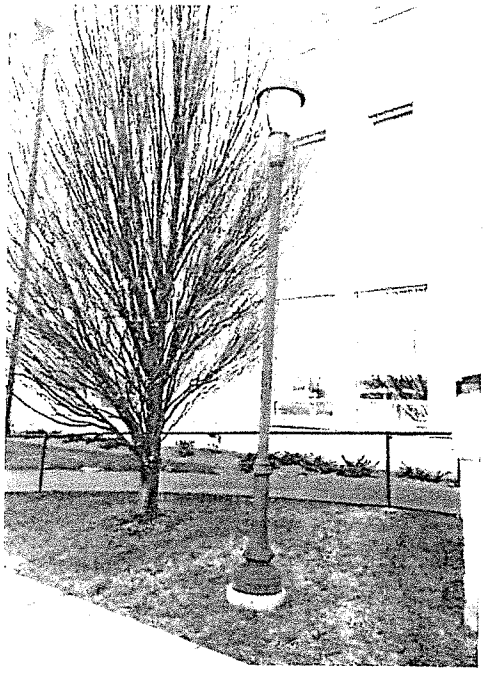
Loading Considerations

The process of developing a cost-effective wireless network must take into consideration the capacity of the existing structures intended to support the load on the pole-mounted equipment. A structural analysis should take place when mounting secondary equipment directly to the pole to confirm that the structural integrity is maintained with the additional load.

If adding weight on the pole would make it unsafe, there are several options to consider. If the pole overstresses are in a reasonable range, modifications to increase the pole's structural capacity may be considered. In situations when the pole overstress is extreme, full pole replacement may be required. In either case, the design, fabrication and installation will both delay the deployment timeline and increase its cost when the deployment strategy initially did not consider new poles. Relocating secondary equipment to the ground level can eliminate any additional cost or timeline delays associated with pole modifications or pole replacement.





Photos courtesy of Aero Solutions

These structures would only be suitable for small omnidirectional antennas mounted at the top of the structure.

Streamlining the Permitting Process for Wireless Facilities Deployments

The Telecommunications Act of 1996 ('96 Act) designated the Federal Communications Commission (FCC) as the primary entity responsible for rules governing telecommunications services, and designated states and local governments as the primary entities responsible for rules governing access to the public's ROW.[5] Since a number of entities can access the ROW, each entity must be a good steward and follow the proper procedures to ensure work is done safely and does not negatively impact other entities collocated on the street furniture. Local jurisdictions can help to ensure that proper processes are followed so potential concerns are mitigated. Some examples of laws and rulings shaping today's current regulatory landscape include items adopted as part of the 1996 Act, as well as subsequent rulings that clarify timelines for deployments and modifications to existing sites (See Appendix).

Jurisdictional Permitting Processes

Geographic size, population and/or demographics can play a large role in determining how a particular jurisdiction will react to the current regulatory climate. Wireless-friendly jurisdictions understand the importance of wireless connectivity in today's economy and structure their permitting processes to facilitate wireless deployments. In fact, a few jurisdictions have regulations that allow wireless infrastructure by right in the ROW, so long as the proposed infrastructure is on an existing utility pole. These jurisdictions hold that wireless infrastructure applications should be processed the same as other utility infrastructure installation located in the ROW, such as electric, gas, water, sewer and cable improvements.

Streamlined Permitting Process

In larger jurisdictions, new wireless infrastructure permits are usually processed through a public works department. In these circumstances, an encroachment permit or other administrative process is required. A traffic control permit may be required as well as a building permit for the electrical work. If public notices are required, a public hearing may be necessary only if a duly notified constituent timely objects and requests a public hearing. Public Works employees usually administer such hearings.

Common Goal

Wireless carriers, infrastructure providers, jurisdictions and constituents should all share the same common goal: seamless and ubiquitous wireless coverage and capacity for the community's constituents. Detailed steps and parameters need to be articulated and agreed upon by the stakeholders to advance the stated common goal. A concerted effort should be made to minimize the number of new vertical elements introduced into the ROW.

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Existing infrastructure, whether owned by the jurisdiction, joint-pole authorities or others should be considered first for collocation before proposing new poles. Small wireless communications equipment proposed in the ROW within commercial and industrial areas should be processed administratively.

Bifurcated Permitting Structure/Small Cell Exemption

A bifurcated permitting process works best at addressing jurisdictional concerns while giving wireless providers assurances of the process in place. Equipment of a certain size, dimension or volume should qualify as a "small cell," which is either exempt from the wireless ordinance requirements completely or otherwise approved. In general, a small wireless facility would be one that includes the following properties: each antenna is located inside an enclosure of no more than six cubic feet in volume; and all other wireless equipment associated with the facility is cumulatively no more than 28 cubic feet in volume. The following types of associated ancillary equipment are not included in the calculation: electric meter, concealment elements, telecommunications demarcation box, ground-based enclosures, grounding equipment, power transfer switch, cut-off switch, and vertical cable runs.

Communications providers must be free to make decisions about the nature of the equipment needed to improve service or it could negatively impact the wireless broadband service provided to the community. Nonetheless, wireless carriers and infrastructure providers have an incentive to conform to the small-cell parameters to secure the streamlined administrative review process and the certainty of a favorable outcome. Aligning the interests of wireless providers with that of the community is a victory for jurisdictions. All stakeholders benefit from the rapid deployment and improvement of wireless networks.

Collocation

Local jurisdictions should make their infrastructure, including street furniture, available for collocation (the shared use of wireless infrastructure by multiple carriers) to reduce visual clutter and avoid unnecessary duplication of infrastructure. Collocation is today's industry norm, and it works well both for the industry and for communities. The practice of sharing infrastructure offers an ordered and transparent process for all industry players. This streamlined approach helps level the playing field while also lowering barriers for new entrants, encouraging competition in support of increased innovation. Shared wireless infrastructure minimizes the need for infrastructure, which is a practice that is supported by the environmental, historic and cultural preservation communities.

Other Considerations to Streamline the Process

Pre-approved antenna configurations and site layouts are other practices that can assist in streamlining the permitting process. Acceptable antenna attachment configurations should be shown for each pole type that could be encountered including utility poles, street lights or traffic signals. Master plans showing existing wireless

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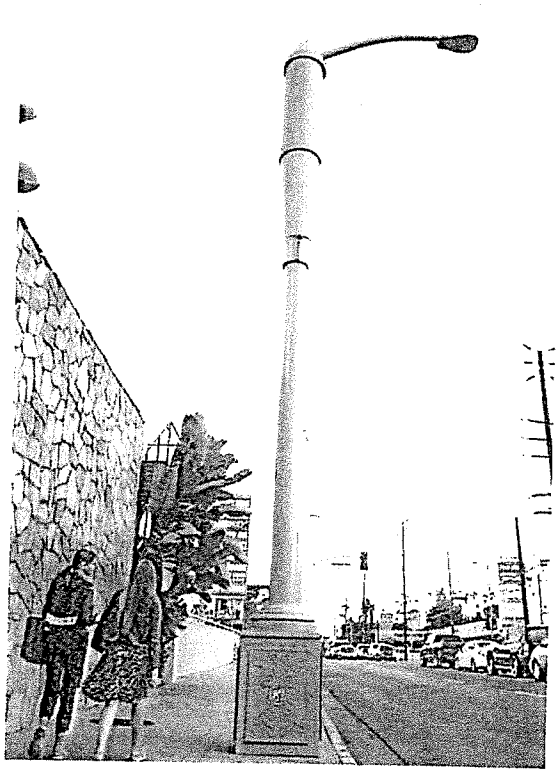
infrastructure and a two-year buildout forecast are typical. Attachment to jurisdictional infrastructure in the ROW should be encouraged. Lease terms and antenna configurations can be codified in a Site License Agreement or another such instrument. Jurisdictions should charge rental rates that are reasonable and reflect the regulated rates typically charged between pole owners and utilities within the ROW.

Public Engagement

One way to win over local jurisdictional support for wireless deployments is to be responsive to local concerns and sensitivities. The size and scale of a proposed wireless deployment should have a commensurate public outreach program. Early meetings with elected officials and staff can go a long way toward identifying local values that need to be observed. Local permitting experts are valuable in identifying these potential pitfalls.

A View of Smart Pole Design Features and their Applications

In some cases, new poles can be effective in providing wireless coverage for small-cell networks. When integrated into the network deployment strategy from the start, these "smart" poles can be designed as structures that blend into the environment, may carry the required telecommunication equipment internally inside the pole and provide opportunities for new technologies offered in the future. For example, the City of San Jose, California, partnered with Ericsson and Philips to test smart poles that are designed to offer more energy conservation, reduced expenditures on energy and maintenance, use LED lighting on dark streets and better broadband connectivity to residents.[6]

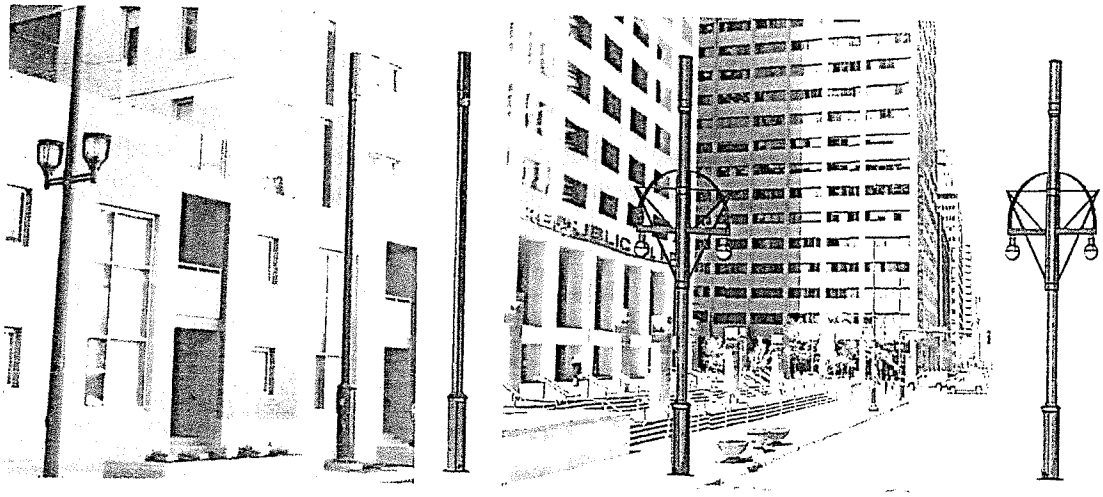


Small Cell integrated into light pole

Photo courtesy of Verizon

In these circumstances, existing available infrastructure may not be accessible or in the right location or height to properly position the telecommunication equipment. In other cases, the existing pole infrastructure may be impractical to reinforce, requiring new pole structures. Smart poles can be deployed to supplement or replace existing poles and conform to the existing infrastructure.Smart pole designs must take into consideration the telecommunication equipment to be deployed today and any known future technology requirements. Smart poles

can be the right solution for strategically placed sites in outdoor parking areas or other urban locations when suitable.



Left photo: CityPole™ installed as standard smart pole in downtown Denver
Right Photo: CityPole™ lighting fixture design

Photo courtesy of Comptek/Aero Solutions

Conclusion

The rapidly accelerating rise of mobile adoption has shifted the way Americans live, work and play. This societal shift shows no signs of stopping or even leveling off. We are a connected society, which is changing the way students are educated, healthcare is administered and business is done. All of that connectivity depends on a strong wireless infrastructure foundation. Small wireless equipment mounted to poles, smart poles and other forms of wireless street infrastructure are going to play an increasingly important role as new technologies are deployed and carriers try to keep up with their customers' insatiable wireless appetites. As such, network infrastructure providers, wireless carriers, utility companies and local jurisdictions must find ways to cooperate to ensure timely deployment of more wireless infrastructure.

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Appendix

Telecommunications Act of 1996

The following are some of the pertinent sections from Section 332(c)(7) of the Telecommunications Act of 1996.[7] The 1996 Act states that "the regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof shall not unreasonably discriminate among providers of functionally equivalent services and shall not prohibit or have the effect of prohibiting the provision of personal wireless services." 47 U.S.C. § 332(c)(7)(B)(i).

"A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request." 47 U.S.C. § 332(c)(7)(B)(ii).

"Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record." 47 U.S.C. § 332(c)(7)(B)(iii).

The law also states that "No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [Federal Communications] Commission's regulations concerning such emissions." 47 U.S.C. § 332(c)(7)(B)(iv).

FCC Shot Clock Order

The FCC's "Shot Clock" order, issued on November 18, 2009, was an important step to encourage the expansion of wireless networks.[8] The ruling interprets Section 332 (c)(7)(B)(ii)'s requirement that a local jurisdiction review siting applications "within a reasonable period of time" to create a rebuttable presumption that the jurisdiction acts within a "reasonable period of time" when it approves or denies an application for the collocation of

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additional antennas to existing infrastructure within 90 days and an application for the construction of new infrastructure within 150 days.

Middle Class Tax Relief and Job Creation Act of 2012

Section 6409(a)[9] of this law states:
"Notwithstanding section 704 of the Telecommunications Act of 1996 (Public Law 104-104) or any other provision of law, a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimension of such tower or base station.

"Eligible facilities request. For purposes of this subsection, the term "eligible facilities request" means any request for modification of an existing wireless tower or base station that involves (a) collocation of new transmission equipment; (b) removal or transmission equipment; or (c) replacement of transmission equipment.

"Applicability of environmental laws. Nothing in paragraph (1) shall be construed to relieve the Commission from the requirements of the National Historic Preservation Act or the National Environmental Policy Act of 1969."

FCC Report and Order: Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies

In its Report and Order dated October 17, 2014 (2014 Infrastructure Order)[10], the FCC promulgated new rules on wireless siting and clarified some existing rules. Specific provisions of the Order include:

• Defining the terms of Section 6409(a) of the Spectrum Act and developing rules for its implementation at the state and local level, including a new 60-day shot clock during which an application must be addressed or it is deemed granted. This ensures the efficient use of previously approved structures to support new antennas and technology upgrades;

• Excluding certain distributed antenna systems (DAS), small cells and other discrete wireless facilities from environmental and historic preservation review, particularly for those deployments leveraging utility poles in rights-of-way and building rooftops;

• Clarifying the shot clock and defining wireless facility siting application processes, including applying the shot clock to DAS and small cells, limiting when additional application information can be requested, and clarifying when the shot clock begins and when it can be tolled;

• Removing barriers to the deployment of temporary towers to boost coverage for large gatherings like festivals and rallies.

Amendment to the Nationwide Programmatic Agreement for the Collocation of Wireless Antennas

On August 8, 2016, the FCC's Wireless Telecommunications Bureau, along with the Advisory Council on Historic Preservation (ACHP) and the National Conference of State Historic Preservation Officers (NCSHPO), signed the *First Amendment to Nationwide Programmatic Agreement for the Collocation of Wireless Antennas* (Amended Collocation Agreement)[11] to eliminate historic preservation review for small facility deployments that do not adversely impact historic sites and locations. A continuation of an effort begun in the 2014 Infrastructure Order, the Amended Collocation Agreement establishes new exclusions from the Section 106 review process for small wireless facility deployments like DAS and small cells with a focus on attachments on deployments in historic districts or on historic properties. It also provides greater clarity on attachments to non-utility infrastructure.

Author Information

Jim Lockwood, Aero Solutions, Working Group Chair

Jim Lockwood is CEO and founder of Aero Solutions, a leading provider of structural engineering, A/E services and tower reinforcement products since 2002 to the wireless infrastructure industry. Aero optimizes macro-cell co-locations on tower structures and buildings and small cell applications on buildings, light poles, utility structures and other street furniture. Headquartered in Boulder, CO, the company has completed over 4.000 co-locations across the United States, Caribbean, Asia and Europe, providing professional engineering, construction management and reinforcing materials. Jim has 15 years of experience in the wireless infrastructure industry and 30 years as an entrepreneur in the engineering, products, and construction industry. He established Comptek in New York in 1998, a provider of structural components and engineered products; and Wind Tower Technologies in 2013. Prior to 1998, Jim was a Principal of J. Muller International, responsible for the firms Chicago and New York offices and CEO of Egis, Inc. in New York. Jim is a professional engineer, P.E., and holds a BSCE degree from the Univ. of Cincinnati and an MSCE degree from the Univ. of Washington, Seattle.

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Andre de Grasse, Mobile Form Solutions

Andre de Grasse has over 25 years of successful professional domestic and international experience in technology, operations, professional services and project management in different industries with end-to-end people management. Andre graduated with a Bachelor of Applied Sciences in Electrical Engineering from the University of New Brunswick and graduated from the Goizueta School of Business with an MBA at the University of Emory. He is president of Mobile Form Solutions, partner of RD3 Inc., Andre has held positions from global manager of engineering at Bechtel Corporation; USA national site development lead of wireless at Cox Communications to project leads internationally such as Unicom China, Nortel, Nextel, BellSouth, Unefon Mexico, Vespa Brazil and others.

Ray Hild, JMA Wireless

Ray Preston Hild is an accomplished senior management and strategic partnership professional with over 26 years of experience in the wireless industry. He has consulted on several major government and enterprise initiatives and co-authored several industry white papers. Ray has been a member of the WIA Innovation and Technology Council for several years. In addition, he has served on a variety of wireless committees and boards for major industry associations on such topics as: Unified communications, DAS in mid-tier markets, oDAS, mobile broadband, wireless as the 4th utility, enterprise wireless systems and network densification. In addition, Ray has created the Public Safety Code Guidebook which is meant to track the changing landscape of first responder wireless requirements across the US. Ray has held management and leadership positions with several prominent corporations over the years. Those include Sprint-Nextel, Corning, Galtronics, Kavveri Telecom and most recently JMA Wireless, a global supplier of world-class telecommunications equipment, where he serves as area vice president. He has won dozens of awards over several decades for service and performance. Ray is involved in the Johns Hopkins Mentorship Academy working with teenagers needing guidance in their career choices. He is also invested in supporting those who served through 185 for Heroes, an organization that hosts events for Operation 2nd Chance to help our warriors when they return from duty.

Keith Kaczmarek, Public Safety Ventures

Keith is a general partner at Public Safety Ventures, a private equity firm focused on the public safety and critical industry markets. Keith has more than 30 years of wireless telecommunications experience. He has held prominent business, technology and operations leadership roles at inPhase Wireless, Intrado, Powerwave, Cyren Call, FiberTower, inOvate Communications Group, Teligent, Nextel, AirTouch, PrimeCo and GTE. Keith was a co-founder of Cyren Call Communication, focused on supporting public safety in the creation of a

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nationwide public safety broadband network. He was also a general partner at inOvate Communications Group a venture fund focused on early-stage wireless companies. Keith is a Radio Club of America Fellow, holds an MBA degree, a M.S. in Electrical Engineering and a B.S. in Electrical Engineering from the University of Illinois.

Mike Kelly, HMI Technical Solutions

Mike Kelly is the Director of the Program Support Services Group - HMI Technical Solutions, LLC, a subsidiary of Henkels & McCoy Group, Inc. Mr. Kelly's group provides a wide range of support services – administrative, technical, and operational - to customers whose requirements include the implementation of multiple projects, or highly complex projects. Mr. Kelly joined Henkels & McCoy in 1986. He has served the company in many capacities, including Supervisor of Field Operations, Major Account Manager, and manager – Federal Government Group. Mr. Kelly served in the US Army. He received a degree in Electronic Theory from RETS Technical Institute. He is a member of AFCEA and BICSI.

Patrick Lau, CommScope

Patrick Lau is director of business development, Distributed Coverage & Capacity Solutions in the North American region for CommScope. In this position, Patrick is responsible for coordinating sales opportunities between engineering, project management and sales teams and qualifying new in-building opportunities with wireless operators and enterprise customers. Patrick has 18 years of experience in the RF telecommunications field. Prior to joining CommScope, Patrick worked in various engineering and business development roles for Allen Telecom, Allgon and Andrew Corporation. Patrick earned Bachelor of Science and Master of Science degrees in Electrical Engineering from the University of Akron (Ohio).

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Joe Mullin, InSite Wireless Group

Joe Mullin oversees all DAS projects for InSite. He has more than 25 years of experience designing and deploying wireless networks, including expertise developing specialized in-building coverage solutions for medical, industrial, and entertainment venues throughout the U.S. Previously, Mr. Mullin was Vice President of Engineering for Arch Wireless, where he was responsible for network design, facility management, and regulatory compliance. Mr. Mullin also has developed and marketed wireless network products with Glenayre Electronics and Harris RF Communications. He managed construction projects for the U.S. Army Corps of Engineers in the U.S. and Europe. Mr. Mullin holds a B.S. in Civil Engineering from Worcester Polytechnic Institute and an MBA from Boston University. He is a Registered Professional Engineer and is a member of the IEEE and the Radio Club of America.

Meghan Riley, Verizon Wireless

Meghan Riley served as North Territory Planning Manager for Special Venues, In-building, and Small Cells for Verizon Wireless at the time of contribution, a role in which she led planning, acquisitions and system design, development, and management of HetNet solutions for the Midwest and Northeastern states (Meghan has since transitioned into the role of Senior Manager, System Performance for Verizon's Illinois/Wisconsin Submarket). Meghan began her wireless career working as a consultant representing clients in difficult zoning matters and specializing in major venue acquisition and project management of large-scale DAS and small cell deployments throughout the Midwest. Meghan holds a B.A. from University of Iowa and a J.D. from The John Marshall Law School in Chicago.

Ken Sandfeld, SOLiD Americas

Ken Sandfeld is President of SOLiD Americas and is responsible for SOLiD's wireless coverage and capacity enhancing product portfolio including Distributed Antenna Systems (DAS) and Optical Transport solutions. Ken's wireless experience spans over 20 years with industry notables including Spectrian, Remec and MobileAccess. With a proven track record launching innovative wireless technology, Ken is focused on solving the industry's densification challenges by bringing SOLiD's Next Generation DAS solutions for indoor and outdoor applications as well as advanced tunable DWDM & high capacity passive CWDM optical solutions that provide ultra-densification of wireless coverage across all verticals and venues.

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Contributing Authors

Steve Kemp, CommScope

Daniel Galloway, Fortis

Daryl Gasho, Fortis

Clarence McAllister, Fortis

Joe McCarty, Verizon Wireless

Bill Moten, TESSCO Technologies

Greg Smith, Verizon Wireless

Kirk Wampler, Crown Castle

EXHIBIT 5:

BEND DEVELOPMENT CODE AMENDMENTS FOR SMALL CELL WIRELESS FACILITIES

EXHIBIT A
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Development Code Update
City Council
March 20, 2019

Prepared by:
City of Bend Planning Division

Note:
Text in underlined typeface is proposed to be added
Text in ~~strikethrough~~ typeface is proposed to be deleted.
***Indicates where text from the existing code has been omitted because it will remain unchanged.
Staff comments are ***bold and italicized***

Chapter 3.7

WIRELESS AND BROADCAST COMMUNICATION FACILITIES – STANDARDS AND PROCESS

Sections:

3.7.100 Purpose and Applicability.
3.7.200 Definitions.
3.7.300 Application Requirements.
3.7.400 General Regulations.
3.7.500 Review Process and Approval Standards.
3.7.550 Eligible Facilities Request for a Modification of an Existing Tower or Base Station.
3.7.600 Exemptions.
3.7.700 Maintenance.
3.7.800 Inspections.
3.7.900 Preexisting Towers.
3.7.1000 Abandonment or Discontinuation of Use.

3.7.100 Purpose and Applicability.

A. Purpose. This chapter is intended to accommodate the provision of wireless and broadcast communication services and provide a uniform and comprehensive set of standards for the development, siting, and installation

of wireless and broadcast communication facilities. In accordance with the guidelines and intent of Federal law and the Telecommunications Act of 1996, these regulations are intended to: (1) protect and promote the public health, safety, and welfare of the residents of Bend; (2) preserve neighborhood character and protect aesthetic quality; (3) encourage siting in preferred locations and (4) minimize adverse visual impacts through careful design, configuration, screening, and innovative camouflaging techniques.

B. Applicability.

1. This chapter applies to the development, siting, and installation of wireless and broadcast communication facilities, including but not limited to cellular telephone facilities, broadband Internet facilities, and radio and TV broadcasting facilities. This chapter in no way prohibits, restricts, or impairs the installation, maintenance, or use of video antennas (including direct-to-home satellite dishes, TV antennas, and wireless cable antennas) used by viewers to receive video programming signals from direct broadcast facilities, broadband radio service providers, and TV broadcast stations.

2. This chapter also applies to an eligible facilities request for a modification of an existing tower or base station that does not substantially change the physical dimension of such tower or base station. See BDC 3.7.550, Eligible Facilities Request for a Modification of an Existing Tower or Base Station.

3.7.200 Definitions.

***

Appurtenances means attachments to the tower including, but not limited to, antennas, radios, mounts, rods, and other equipment related to the operation of the wireless communication facility.

***

Base station means a structure or equipment at a fixed location that enables Federal Communications Commission (FCC) licensed or authorized wireless communications between user equipment and a communications network. The term does not encompass a tower as defined in this section or any equipment associated with a tower.

1. The term includes, but is not limited to, equipment associated with wireless communications services such as private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul.

2. The term includes, but is not limited to, radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supplies, and comparable equipment, regardless of technological configuration (including Distributed Antenna Systems and small-cell networks).

3. The term includes any structure other than a tower that, at the time the relevant application is filed with the State or local government under BDC 3.7.550, supports or houses equipment described in (1) through (2) of this definition that has been reviewed and approved under the applicable zoning or siting process, or under another State or local regulatory review process, even if the structure was not built for the sole or primary purpose of providing such support.

4. The term does not include any structure that, at the time the relevant application is filed with the State or local government under BDC 3.7.550, does not support or house equipment described in (1) through (2) of this definition.

***

Facility or personal wireless service facility for small wireless facilities means an antenna facility or a structure that is used for the provision of personal wireless service, whether such service is provided on a stand-alone basis or commingled with other wireless communications services.

***

Small wireless facility means a low-power wireless communication facility used to increase capacity to wireless communication demand areas or provide infill coverage in areas of weak reception, including a separate transmitting and receiving station serving the facility, or that is considered a small wireless facility under federal law.

***

Structure means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services).

***

3.7.300 Application Requirements.

Applications for small wireless facilities must submit an application demonstrating compliance with BDC 3.7.500(2). Applications for eligible facilities requests must submit an application in compliance with BDC 3.7.5500. All other

applications for a wireless or broadcast communication facility ~~shall~~ must provide the following reports, documents or documentation:

A. Geographic Service Area. The applicant ~~shall~~ must ~~identify the geographic service area for the proposed facility, including~~ submit a map showing all the applicant's existing sites in the ~~local service network~~ city. ~~associated with the gap the facility is meant to close. The applicant shall describe how this service area fits into and is necessary for the service provider's service network.~~ Prior to the issuance of any building permits, applicants for AM, FM, HDFM, TV, and DTV projects ~~shall~~ must provide a copy of the corresponding FCC Construction Permit or license for the facility being built or relocated.

B. Visual Impact~~, Technological Design Options,~~ and Alternative Site Analysis. The applicant ~~shall~~ must provide a visual impact analysis showing the maximum silhouette, viewshed analysis, color and finish palette, and proposed screening for all components of the facility. The analysis ~~shall~~ must include photo simulations and other information as necessary to determine visual impact of the facility as seen from multiple directions. The applicant ~~shall~~ must include a map showing where the photos were taken. Except for Type I applications, the applicant ~~shall~~ must include an analysis of alternative sites ~~and technological design options~~ for the facility within and outside of the City that are capable of meeting the same service objectives as the preferred site with an equivalent or lesser visual impact. If a new tower is proposed, the applicant must demonstrate the need for a new tower, and why alternative locations ~~and design alternatives, such as the use of microcell technology,~~ cannot be used to meet the identified service objectives.

C. Narrative. The application ~~shall~~ must include a written narrative that describes in detail all of the equipment and components to be included in the facility, e.g., antenna(s) and arrays, equipment cabinet(s), back-up generator(s), air conditioning unit(s), lighting, fencing, etc. The following information ~~shall~~ must also be provided:

1. Height. Provide an engineer's diagram showing the height of the facility and all of its visible components. Carriers must provide evidence that establishes that the proposed facilities are designed to the minimum height required from a technological standpoint for the proposed site to meet the carrier's coverage objectives. If the tower height will exceed the base height restrictions of the applicable zone, this narrative ~~shall~~ must include a discussion of the physical constraints (topographical features, etc.) making the additional height necessary. The narrative ~~shall~~ must include consideration of the possibility for design alternatives, including the use of multiple sites or microcell technology that would avoid the need for the new facility or the requested height.

2. Construction. Describe the anticipated construction techniques and time frame for construction or installation of the facilities. This narrative ~~shall~~ must include all temporary staging and the type of vehicles and equipment to be used.

3. Maintenance. Describe the anticipated maintenance and monitoring program for the antennas, back-up equipment, and landscaping.

4. Noise/Acoustical Information. Provide manufacturer's specifications for all noise-generating equipment such as air conditioning units and back-up generators, and a depiction of the equipment location in relation to adjoining properties.

5. Landscape Plan. Provide a plan showing all proposed landscaping, screening and proposed irrigation with a discussion of how the chosen materials at maturity will screen the site.

6. Parking. Provide a site plan showing the designated parking area for maintenance vehicles and equipment.

7. Co-location. In the case of new multi-user towers or similar support structures, the applicant ~~shall~~ must submit engineering feasibility data and a letter stating the applicant's willingness to allow other carriers to co-locate on the proposed facilities wherever technically and economically feasible and aesthetically desirable.

8. Lease. The site plan ~~shall~~ must show the lease area of the proposed facility.

9. FCC License. Provide a copy of the applicant's FCC license and/or construction permit, if an FCC license and/or construction permit is required for the proposed facility, including documentation showing that the applicant is in compliance with all FCC RF emissions safety standards.

10. Lighting and Marking. Any proposed lighting and marking of the facility, including any required by the FAA.

3.7.400 General Regulations.

All applications for wireless and broadcast communication facilities are subject to the following requirements and regulations:

A. Maximum Number of High Visibility Facilities per Lot or Parcel. No more than one high visibility facility is allowed on any one lot or parcel. The Planning Commission may approve exceeding the maximum number of high visibility facilities per lot or parcel if one of the following findings is made through a Type III review process: (1)

co-location of additional high visibility facilities is consistent with neighborhood character, (2) the provider has shown that denial of an application for additional high visibility facilities would have the effect of prohibiting service because the facility would fill a significant gap in coverage and no alternative locations are available and technologically feasible, or (3) the provider has shown that denial of an application for additional high visibility facilities would unreasonably discriminate among providers of functionally equivalent services. In such cases, the Planning Commission ~~shall be~~ is the Review Authority for all related applications (e.g., Wireless or Broadcast Communication Facility Site Plan, Conditional Use Permit).

B. Towers Adjacent to Residentially Designated Property. In order to ensure public safety, all wireless and broadcast communication towers located adjacent to any property designated as Residential on the Bend Comprehensive Plan Map ~~shall~~ must be set back from all residential property lines by a distance at least equal to the height of the facility, including any antennas or other appurtenances. The setback ~~shall be~~ is measured from that part of the tower that is closest to the neighboring residentially designated property.

C. High visibility facilities require a Conditional Use Permit on any property designated as Residential on the Bend Comprehensive Plan Map, or designated Public Facilities (PF) on the Bend Comprehensive Plan Map but developed as a residential subdivision.

D. Historical Buildings and Structures. No facility ~~shall be~~ is allowed on any building or structure, or in any district, that is listed on any Federal, State or local historical register unless it is determined by the Review Authority that the facility will have no adverse effect on the appearance of the building, structure, or district. No change in architecture and no high visibility facilities are permitted on any such building, any such site, or in any such district.

E. Equipment Location. No tower or equipment ~~shall~~ can be located in a front, rear, or side yard setback in any zone, and no portion of any antenna array ~~shall~~ can extend beyond the property lines. For guyed towers, all guy anchors ~~shall~~ must be located at least 50 feet from all abutting properties.

F. Tower Heights. Towers may exceed the height limits otherwise provided for in the Development Code. However, all towers greater than the height limit of the underlying zone ~~shall~~ require a Conditional Use Permit application (Type II process). ~~to be reviewed by the Development Services Director through a Type II process under BDC Chapter 4.1, Development Review and Procedures, subject to the approval standards in BDC Chapter 4.4, Conditional Use Permits.~~

1. Exemption to Conditional Use Permit.

a. Type I small wireless facilities in the public right-of-way or in a public utility easement on an existing or replacement utility or light pole.

G. Accessory Building Size. All accessory buildings and structures built to contain equipment accessory to a wireless or broadcast communication facility may not exceed 12 feet in height unless a greater height is necessary and required by a condition of approval to maximize architectural integration. Each accessory building or structure located on any property designated as Public Facilities or Residential on the Bend Comprehensive Plan Map is limited to 200 square feet, unless approved through a Conditional Use Permit.

H. Visual Impact. All facilities ~~shall~~ must be designed to minimize the visual impact to the greatest extent practicable by means of placement, screening, landscaping, and camouflage. All facilities ~~shall~~ must also be designed to be compatible with existing architectural elements, building materials, and other site characteristics. The applicant ~~shall~~ must use the least visible antennas reasonably available to accomplish the coverage objectives. All high visibility facilities ~~shall~~ must be sited in such a manner as to cause the least detriment to the viewshed of adjoining properties, neighboring properties, and distant properties.

1. Exemption.

a. Small wireless facilities on an existing or replacement utility pole, light pole or structure.

I. Colors and materials for facilities ~~shall~~ must be nonreflective and chosen to minimize visibility. Facilities, including support equipment and buildings, ~~shall~~ must be painted, colored or textured using colors to match or blend with the primary background, unless required by any other applicable law.

J. All camouflaged facilities ~~shall~~ must be designed to visually and operationally blend into the surrounding area in a manner consistent with existing development on adjacent properties. The facility ~~shall~~ must also be appropriate for the specific site. In other words, it should not "stand out" from its surrounding environment.

K. Facade-mounted antennas ~~shall~~ must be architecturally integrated into the building design and otherwise made as unobtrusive as possible. If possible, antennas should be located entirely within an existing or newly created architectural feature so as to be completely screened from view. Facade-mounted antennas ~~shall~~ must not extend more than two feet out from the building face.

L. Roof-mounted antennas ~~shall~~ must be constructed at the minimum height possible to serve the operator's service area and ~~shall~~ be set back as far from the building edge as possible or otherwise screened to minimize visibility from the public right-of-way and adjacent properties.

M. Compliance with Photo Simulations. As a condition of approval and prior to final inspection of the facility, the applicant ~~shall~~ must submit evidence, such as photos, to the satisfaction of the City sufficient to prove that the facility is in substantial conformance with photo simulations provided with the application. Nonconformance ~~shall~~ requires modification to compliance within 90 days or the structure must be removed.

N. Noise from any equipment supporting the facility ~~shall~~ must meet the requirements of BC Chapter 5.50, Noise.

O. No signs, striping, graphics, or other attention-getting devices are permitted on any wireless or broadcast communication facility except for warning and safety signage with a surface area of no more than three square feet. Signs ~~shall~~ must be affixed to a fence or ancillary facility and limited to no more than two signs unless more is required by law.

P. Traffic Obstruction. Maintenance vehicles servicing facilities located in the public or private right-of-way shall cannot park on the traveled way or in a manner that obstructs traffic.

Q. No net loss in required parking spaces ~~shall~~ can occur as a result of the installation of any wireless or broadcast communication facility.

R. Sidewalks and Pathways. Cabinets and other equipment ~~shall~~ must not impair pedestrian use of sidewalks or other pedestrian paths or bikeways on public or private land and ~~shall~~ must be screened from view.

S. Lighting. Wireless or broadcast communication facilities ~~shall~~ cannot include any beacon lights or strobe lights, unless required by the Federal Aviation Administration (FAA) or other applicable authority. If beacon lights or strobe lights are required, the Review Authority shall review the available alternatives and approve the design with the least visual impact. All other site lighting for security and maintenance purposes ~~shall~~ must be shielded and directed downward, and ~~shall~~ must comply with the outdoor lighting standards in BDC 3.5.200, unless otherwise required under Federal law.

T. Speculation. No application ~~shall~~ can be accepted or approved for a speculation tower, i.e., from an applicant that simply constructs towers and leases tower space to service providers, but is not a service provider, unless the applicant submits a binding written commitment or executed lease from a service provider to utilize or lease space on the tower.

3.7.500 Review Process and Approval Standards.

A. Type I Process. The following facilities are allowed with the approval of a Wireless or Broadcast Communication Facility Site Plan ~~to be reviewed by the Development Services Director~~ pursuant to a Type I process under BDC Chapter 4.1, Development Review and Procedures:

1. Stealth and low visibility facilities.

2. Small Wireless Facilities.

a. Small wireless ~~F~~facilities proposed ~~within~~ the public right-of-way or in a public utility easement on an existing or replacement utility or light pole, so long as they meet all of the following:

~~a. The antennas do not project more than 24 inches above the existing utility pole support structure;~~

~~b. No more than a total of two antennas or antenna arrays are located on a single pole;~~

~~c. The equipment cabinet is no larger than six cubic feet and is concealed from public view by burying or screening by means other than walls or fences.~~

i. The Facilities:

(A) Are mounted on existing or replacement structures 50 feet or less in height including their antennas, or

(B) Are mounted on existing or replacement structures no more than 10 percent taller than other adjacent structures, or

(C) 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.

ii. Each antenna associated with the deployment, excluding associated antenna equipment, is no more than three cubic feet in volume.

iii. All other wireless equipment associated with the facility, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the facility, is no more than 28 cubic feet in volume.

iv. The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable FCC safety standards.

v. Comply with Part II, Section 8 of the City of Bend Standards and Specifications when located in the public right-of-way or public utility easement.

b. Small wireless facilities proposed on private property on an existing or replacement utility pole, light pole or structure, so long as they meet all of the following:

i. The facilities do not exceed the height limits of the underlying zone or as otherwise authorized by federal law.

ii. Each antenna associated with the deployment, excluding associated antenna equipment, is no more than three cubic feet in volume.

iii. All other wireless equipment associated with the facility, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the facility, is no more than 28 cubic feet in volume.

iv. The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable FCC safety standards.

v. Comply with Part II, Section 8 of the City of Bend Standards and Specifications.

3. Facade-mounted antennas or low powered networked telecommunications facilities, such as those employing microcell antennas, integrated into the architecture of an existing building in such a manner that no change to the architecture is apparent and no part of the facility is visible to public view.

4. Antennas or arrays that are hidden from public view through the use of architectural treatments, e.g., within a cupola, steeple, or parapet which is consistent with the applicable building height limitation.

5. New antennas or arrays that are attached to an existing broadcast communication facility located in any zone; provided, that they do not exceed the following "safe harbor" parameters:

   a. Side-mounted antennas.

   b. Small top-mounted antennas. No more than three small top-mounted antennas ~~shall~~ can be placed on the top of any one broadcast communication facility without a Type II review.

6. To minimize adverse visual impacts associated with the proliferation and clustering of towers, co-location of antennas or arrays on existing towers ~~shall~~ takes precedence over the construction of new towers, provided such co-location is accomplished in a manner consistent with the following:

   a. An existing tower may be modified or rebuilt to a taller height to accommodate the co-location of additional antennas or arrays, as long as the modified or rebuilt tower will not exceed the height limit of the applicable zoning district. The height change may only occur one time per tower.

b. An existing tower that is modified or reconstructed to accommodate the co-location of additional antennas or arrays ~~shall~~ must be of the same tower type and reconstructed in the exact same location as the existing tower.

B. Type II Process. The following facilities are allowed with the approval of a Wireless or Broadcast Communication Facility Site Plan ~~to be reviewed by the Development Services Director~~ pursuant to a Type II process under BDC Chapter 4.1, Development Review and Procedures:

1. High visibility facilities located on any property designated as Commercial, Industrial, Public Facilities, ~~Surface Mining~~ or Mixed-Use on the Bend Comprehensive Plan Map and at least 500 feet from any property designated as Residential on the Bend Comprehensive Plan Map.

2. Moderate visibility facilities that do not exceed the height limit of the applicable zone.

3. New antennas or arrays that are attached to an existing broadcast communication facility located in any zone which exceed the "safe harbor" parameters of subsection (A)(6~~5~~)(a) or (b) of this section.

4. Small wireless facilities that exceed the thresholds in BDC 3.7.500(A)(2).

C. Conditional Use Permit Requirements. Applications for wireless or broadcast communication facilities in all other locations and situations including moderate or high visibility facilities that exceed the height limit of the applicable zone ~~shall~~ also require a Conditional Use Permit (Type II process). ~~to be reviewed by the Development Services Director through a Type II process under BDC Chapter 4.1, Development Review and Procedures, subject to the approval standards in BDC Chapter 4.4, Conditional Use Permits.~~ In addition to the approval standards in BDC Chapter 4.4, Conditional Use Permits, the applicant ~~shall~~ must demonstrate that the Wireless or Broadcast Communication Facility Site Plan approval standards in subsections (D)(2) through (5) of this section are met.

D. Approval Criteria. The ~~Development Services Director shall~~ City may approve the use and Wireless or Broadcast Communication Facility Site Plan for any of the facilities listed in subsections (B) and (C) of this section upon a determination that the following criteria are met:

1. The height of the proposed tower or facility does not exceed the height limit of the underlying zoning district, or does not increase the height of an existing facility.

2. The location is the least visible of other possible locations and technological design options that achieve approximately the same signal coverage objectives.

3. The location, size, design, and operating characteristics of the proposed facility will be compatible with adjacent uses, residences, buildings, and structures, with consideration given to:

a. Scale, bulk, coverage and density;

b. The harmful effect, if any, upon neighboring properties;

c. The suitability of the site for the type and intensity of the proposed facility; and

d. Any other relevant impact of the proposed use in the setting where it is proposed.

4. All required public facilities have adequate capacity, as determined by the City, to serve the proposed wireless or broadcast communication facility; and

5. The proposed wireless or broadcast communication facility complies with all of the general regulations contained in BDC 3.7.400.

6. Small wireless facilities must comply with Part II, Section 8 of the City of Bend Standards and Specifications.

E. Conditions of Approval. The City may impose any other reasonable condition(s) deemed necessary to achieve compliance with the approval standards, including designation of an alternate location, or if compliance with all of the applicable approval criteria cannot be achieved through the imposition of reasonable conditions, the application ~~shall~~ must be denied.

F. Timeframe for Review. Within the time limits imposed by state or federal law less any time period that may be excluded by state or federal law, the Review Authority must approve the application unless the Review Authority determines that the application is not covered by this chapter or does not comply with applicable standards.

3.7.550 Eligible Facilities Request for a Modification of an Existing Tower or Base Station.

A. Applicability. An applicant may submit an eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimension of such tower or base station that involves:

1. Collocation of new transmission equipment;
2. Removal of transmission equipment; or
3. Replacement of transmission equipment.

For purposes of this subsection, collocation means (1) mounting or installing an antenna facility on a pre-existing structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. Provided that, for purposes of Eligible Facilities Requests, "collocation" means the mounting or

installation of transmission equipment on an eligible support structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes.

B. Type I Process. An eligible facilities request for a modification of an existing tower or base station that does not substantially change the physical dimension of such tower or base station is reviewed pursuant to a Type I process under BDC Chapter 4.1, Development Review and Procedures.

C. The applicant must provide documentation or information to verify whether the request is not a substantial change. A modification substantially changes the physical dimensions of an eligible support structure if it meets any of the following:

1. For towers other than towers in the public rights-of-way, it increases the height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater; for other eligible support structures, it increases the height of the structure by more than 10% or more than ten feet, whichever is greater;

   a. Changes in height should be measured from the original support structure in cases where deployments are or will be separated horizontally, such as on buildings' rooftops; in other circumstances, changes in height should be measured from the dimensions of the tower or base station, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.

2. For towers other than towers in the public rights-of-way, it involves 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; for other eligible support structures, it involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet;

3. For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or, for towers in the public rights-of-way and base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure;

4. It entails any excavation or deployment outside the current site;

5. It would defeat the concealment elements of the eligible support structure; or

6. It does not comply with the conditions of approval associated with the siting approval of the construction or modification of the eligible support structure or base station equipment, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would not exceed the thresholds identified In 1 through 4 above.

D. Approval Criteria. The City may approve an eligible facilities request for a modification of an existing wireless tower or base station upon a determination that the following criterion is met:

1. The eligible facilities request for a modification of an existing tower or base station does not substantially change the physical dimension of such tower or base station.

E. Conditions of Approval. The City may impose any other reasonable condition(s) deemed necessary to achieve compliance with the approval standards, or if compliance with the applicable approval criterion cannot be achieved through the imposition of reasonable conditions, the application must be denied.

F. Timeframe for Review. Within the time limits imposed by state or federal law less any time period that may be excluded by state or federal law, the Review Authority must approve the application unless the Review Authority determines that the application is not covered by this chapter or does not comply with applicable standards.

3.7.600 Exemptions. The following ~~shall be considered~~ are exempt structures or activities under this chapter:

A. Whip or other similar antennas no taller than six feet with a maximum diameter of two inches.

B. Antennas (including direct-to-home satellite dishes, TV antennas, and wireless cable antennas) used by viewers to receive video programming signals from direct broadcast facilities, broadband radio service providers, and TV broadcast stations regardless of zone category.

C. Low-powered networked telecommunications facilities such as microcell radio transceivers located on existing utility poles and light standards within public right-of-way. Low-powered networked telecommunications facilities ~~shall~~ must comply with this chapter.

D. All military, Federal, State, and local government communication facilities except for towers.

E. Cell on Wheels (COW), which are permitted as temporary uses in ~~N~~nonresidential ~~Z~~zones for a period not to exceed ~~14~~ 180 days, in residential zones for a period not to exceed 14 days, or during a period of emergency as declared by the City, County, or State.

F. Replacement antennas or equipment, provided the replacement antennas and/or equipment (i) have a function similar to the replaced antenna and/or equipment and do not exceed the overall size of the original antenna and/or equipment or (ii) the replacement equipment will be located in an existing cabinet or base station.

3.7.700 Maintenance.

The following maintenance requirements apply to all facilities:

A. All landscaping ~~shall~~ must be maintained at all times and shall be promptly replaced if not successful.
B. If a flag pole is used for camouflaging a facility, flags must be flown and must be properly maintained at all times.
C. All wireless and broadcast communication sites ~~shall~~ must be kept clean and free of litter.
D. All wireless and broadcast communication sites ~~shall~~ must maintain compliance with current RF emission standards of the FCC, the National Electric Safety Code, and all State and local regulations.
E. All equipment cabinets ~~shall~~ must display a legible operator's contact number for reporting maintenance problems.

3.7.800 Inspections.

A. The City or its agents ~~shall~~ have authority to enter onto the property upon which a wireless or broadcast communication facility is located, to inspect the facility for the purpose of determining whether it complies with the Building Code and all other construction standards provided by the City and Federal and State law.
B. The City reserves the right to conduct such inspections at any time, upon reasonable notice to the wireless or broadcast communication facility owner. In the event such inspection results in a determination that violation of applicable construction and maintenance standards set forth by the City has occurred, remedy of the violation may include cost recovery for all costs incurred in confirming and processing the violation.

3.7.900 Preexisting Towers.

Towers that lawfully existed prior to the adoption of this chapter ~~shall be~~ are allowed to continue their use as they presently exist. This code does not make lawful any towers that are not lawfully approved on the date the ordinance codified in this code is adopted. Routine maintenance ~~shall be~~ is permitted on such lawful preexisting towers.

Lawfully existing towers may be replaced as long as the replacement is ~~in the exact location of the tower being replaced and is of a construction type identical in height, width, weight,~~ located on the same property, no closer to the nearest property line than the existing tower, no taller than the existing tower, has a width no more than 10% larger than the existing tower & has identical lighting & painting. The tower being replaced must be removed within 30 days of completion of the replacement tower. Any other changes or modifications to a replacement tower ~~shall not be considered routine maintenance, shall~~ must be treated as new construction, and ~~shall~~ must comply with the requirements of this chapter.

3.7.1000 Abandonment or Discontinuation of Use.

The following requirements apply to the abandonment and/or discontinuation of use for all facilities:

A. All facilities located on a utility pole ~~shall~~ must be promptly removed at the operator's expense at any time a utility is scheduled to be placed underground or otherwise moved.
B. All operators who intend to abandon or discontinue the use of any wireless or broadcast communication facility ~~shall~~ must notify the City of such intentions no less than 60 days prior to the final day of use.
C. Wireless or broadcast communication facilities ~~shall be~~ are considered abandoned 90 days following the final day of use or operation.
D. All abandoned facilities ~~shall~~ must be physically removed by the facility owner no more than 90 days following the final day of use or of determination that the facility has been abandoned, whichever occurs first.
E. The City reserves the right to remove any facilities that are abandoned for more than 90 days at the expense of the facility owner.
F. Any abandoned site ~~shall~~ must be restored to its natural or former condition. Grading and landscaping in good condition may remain.

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Chapter 4.1
DEVELOPMENT REVIEW AND PROCEDURES

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4.1.815 Hearings Body.

A. The following must serve as the Hearings Body as determined by the Development Services Director:
   1. Hearings Officer.

2. Planning Commission, for matters of interpretation of this code, appeals of Type II decisions~~,~~ where the Hearings Officer cannot hear the matter due to a conflict of interest, or as otherwise specified by provisions of City code.
3. City Council subject to BDC 4.1.1100, Appeals.
4. City Council for annexation applications subject to BDC Chapter 4.9, Annexations.

***

EXHIBIT 6:

BEAVERTON WIRELESS DEVELOPMENT CODE SECTION

60.70.35.

12. **Building-Wall-Mounted Antennas.** Any WCF antennas mounted to the roof edge or sidewall elevation of a building shall be completely covered with the same exterior finish and painted the same color as the exterior of the building or structure.

13. **Structure-Mounted Antennas.** Any WCF antennas mounted to a structure that is not a building shall comply with the following standards:

    A. Antennas shall not extend beyond the maximum height for structures of the underlying zoning district.

    B. Antennas on existing tower structures or pole structures, other than those used for cellular phone service shall extend a maximum of ten (10) feet above the existing structure height as measured from its tallest point.

    C. Antennas on water reservoir tanks shall extend a maximum of five (5) feet above the existing structure height as measured from its tallest point.

    D. Antennas on structures shall be painted the same color as the structure. [ORD 4596; February 2013]

14. **Setbacks.** All new WCF towers, antenna arrays, and ground and/or roof-mounted equipment shelters shall comply with the setbacks established in the underlying zoning district. These standards shall also apply to WCF collocation proposals:

    A. In all underlying zoning districts, building wall-mounted antennas and at-grade equipment shelters shall comply with all setbacks contained in the underlying zoning district. For the purposes of this Code, the setback shall be measured from the portion of the at-grade equipment shelter or building wall-mounted antennas that extend outward towards the property line to the greatest extent.

B. New WCF towers shall be set back from all property lines by a distance equal to the height of the tower plus five (5) additional lineal feet, except that the decision-making authority may authorize an Adjustment or Variance to this standard, if the applicant can demonstrate that such an Adjustment or Variance would reduce the visual impacts of the tower on adjacent property because of vegetation, topography, intervening buildings, or other site-specific factors. Adjustments and Variances shall be authorized through the Adjustment and Variance provisions specified in Chapter 40 (Applications).

C. New WCF towers located on commercially or industrially zoned property shall meet the setback of the underlying zone where the new WCF tower is more than the height of the tower plus five (5) feet from a Residential or Multiple Use zoning district. The decision-making authority may authorize an Adjustment or Variance to this standard, if the applicant can demonstrate that such an Adjustment or Variance would reduce the visual impacts of the tower on adjacent property because of vegetation, topography, intervening buildings, or other site-specific factors. Adjustments and Variances shall be authorized through the Adjustment and Variance provisions specified in Chapter 40 (Applications). [ORD 4659; June 2015]

15. **Parking.** A minimum of one (1) readily accessible parking space shall be provided to serve new WCF towers or collocated WCF for the purpose of regular maintenance or emergency repairs. The decision-making authority may waive the minimum-parking requirement. Waivers may be authorized if the applicant can demonstrate that there is existing on-site parking, on-street parking, leased parking, or parking on separate adjacent property authorized for use by a written agreement.

16. **Clustering of Towers.** Clustering of towers shall be prohibited in all Residential and Multiple Use zoning districts. Proposals for the clustering of towers in Commercial and Industrial zoning districts shall comply with all development standards of this Section, and other applicable sections of the Development Code.

17. **Collocation Capacity.** New WCF towers and associated site area shall be designed to accommodate a minimum of one (1) additional future service. Collocation capacity shall be reserved through all of the following methods:

    A. Construction of a tower of sufficient height to accommodate a minimum of two (2) antenna arrays; and,

    B. Installation of a foundation of adequate size and structural bearing capacity to accommodate a tower with a minimum of two (2) antenna arrays; and,

    C. Provision of a fenced enclosure of sufficient size to accommodate the equipment shelters for a minimum of two (2) antenna arrays.

18. **Specific Development Standards in Multiple Use Zoning Districts.** The following standards are specific to WCF on lots in Multiple Use zoning districts and are in addition to the other development standards specified in this section of the Code:

    A. Equipment for new WCF towers or new attached WCF or incorporated WCF shall either be placed underground, entirely within an existing building, on a screened rooftop, or entirely within a new above ground structure constructed solely for the purpose of housing this equipment. This enclosed building shall be architecturally treated to blend in with the surrounding built environment. Acceptable types of architectural treatments include but are not limited to painted metal roofs, faux windows, awnings, canopies, brick, or colored or textured masonry.

    B. Cables and other connection devices between equipment shelters and new WCF towers or new attached WCF or incorporated WCF shall be placed entirely underground, or shall be placed above-ground in a completely enclosed structure. If placed above-ground, the completely enclosed structure shall be compatible in scale, design, and materials to the above-ground equipment shelter, and the surrounding built environment.

C. For new WCF towers located on a lot that because of physical site constraints, tower related site design, or lease or ownership restrictions cannot be developed for any other Permitted Use while the tower is in operation, property perimeter structural bearing walls having a minimum height of ten (10) feet and composed of brick or colored and textured masonry or a combination of brick and colored and textured masonry shall be installed along all property lines for the portion of the lot being developed for WCF, abutting public streets. Required perimeter walls shall have architectural treatments including but not limited to faux windows, or awnings, covering a minimum of fifty (50) percent of each wall elevation; provided, the Director may determine a different type of perimeter treatment along property lines not abutting public streets for compatibility with the current uses of abutting properties.

D. For new WCF towers located on property that could be developed for another use concurrent with the tower operation, the tower and, if applicable, above-ground equipment building shall be placed on the lot so as to not preclude future development of the remaining portion of the site and to allow for conformance to site design, parking and other applicable standards. Any lot area not proposed for WCF development that is disturbed by site development activity shall be landscaped. The decision-making authority shall determine the type of landscaping based on the existing landscaped nature of the lot and abutting lots.

D. For WCF towers located on property occupied by an existing use, the tower and, if applicable, above grade equipment building, shall be located on the site so as to not preclude future redevelopment of the remaining portion of the site or future compliance with code requirements for a different use of the site. [ORD 4462; January 2008]

19. **Specific Development Standards for WCF in Public Road Right-of-Way.** The following standards are specific to the installation of New or Collocation of WCF within the right-of-way and are in addition to the other applicable development standards specified in the Beaverton Development Code: [ORD 4702; January 2017]

A. Installation of WCF on structures within the public road right-of-way shall not jeopardize the physical integrity or shorten the lifespan of these structures.

B. Antennas shall be Stealth Design, interior mounted, flush-mounted or otherwise designed not exceed the existing diameter of the structure at the mounting point for the antennas. No mounted arm antennas are permitted.

C. Antennas mounted on a structure shall not extend beyond the permitted height of the underlying zoning district.

D. Collocates to poles that existed on or before the date of adoption of this text amendment or replacement of poles, inclusive of antennas and any mounting devices, may extend above the maximum permitted height listed under Sections 20.05.15, 20.10.15, 20.15.15 and 20.20.15, up to and including ten (10) feet above the height of the existing pole unless separately authorized through an adjustment or variance application.

E. Antennas shall be painted to match the color of the structure.

F. Noise Levels. Noise levels shall meet the numerical standards established by the State of Oregon Department of Environmental Quality, measured to property lines abutting or within 500 feet of Residential or Multiple Use zoning districts, as stated in Section 60.50.25.11 and 60.70.35.9.

G. Vibration. No vibration discernible without instruments at the nearest property line, other than that caused by highway vehicles, trains and/or aircraft, shall be permitted.

H. Odors. Emission of odorous gasses or matter that is readily detectable at the nearest property line is prohibited. Measures and controls shall be taken that are intended to prevent offensive fumes and odor. Air quality shall also meet the standards established by the State of Oregon Department of Environmental Quality as stated in Section 60.50.25.12.

I. Replacement of the existing structure, tower or pole may be authorized, provided that the replacement structure fully contains antennas and associated equipment and no higher than permitted under Sections 20.05.15, 20.10.15, 20.15.15 and 20.20.15.

J. The maximum diameter of any new or replacement tower or pole shall be 24-inches.

K. Attachments to historic or ornamental streetlight poles shall not be permitted.

L. Attachments to traffic signal poles shall not be permitted.

M. Equipment cabinets shall be placed completely within underground vaults. No at-grade or pole-mounted equipment cabinets, equipment in the public right-of-way, or on any equipment on private property (above or below grade) abutting the structure is permitted. The mounting of equipment to the structures shall conform to the following:

1. The smallest antennas, equipment, and equipment cabinets to satisfy engineering requirements and service objectives shall be utilized.

2. All cabling and wiring shall be placed completely underground or on the in interior of the structure, tower or pole. Collocates to poles that existed on or before the date of adoption of this text amendment, that cannot accommodate cabling run on the interior, may have cables attached to the exterior, provided that they are painted to match the color of the structure.

3. Mounting hardware and accessory equipment shall be painted to match the color of the structure, tower or pole.

[ORD 4702; January 2017]

60.70.40. Development Standards for Satellite Antennas. The following development standards shall apply to all satellite antennas in all zoning districts, except for satellite antennas and direct-to-home satellite services exempted by Section 60.70.20.1.F.-.G.:

1. New satellite antennas shall be mounted on the ground or on building roofs only.

2. New satellite antennas shall not be mounted on lattice towers or guyed tower support structures.

3. New ground-mounted satellite antennas shall be screened from view from abutting properties, or public right-of-way, or both in a manner that does not detract from the function of the antennas. Screening shall be done through one of more methods listed in Sections 60.70.35.5-7 on all directions, except for the direction that the antenna is oriented for sending, receiving, or both. The decision-making authority shall determine the appropriate type and height of screening based on the area proposed for development, the nature of the surrounding development, and the proximity of the development area to this surrounding development. [ORD 4596; February 2013]

4. New building roof-mounted satellite antennas shall be screened from view from abutting properties, or public right-of-way, or both in a manner that does not detract from the function of the antennas. Screening shall be done through the placement of the antennas behind parapet walls or other permanent architectural features.

    4. Satellite antennas mounted on building roofs shall not extend beyond the maximum height for buildings of the underlying zoning district or, in the case of existing buildings which are non-conforming in height, shall not extend beyond the existing height of the building. The satellite antenna height shall be measured from the height of the building roofline. [ORD 4596; February 2013]

60.70.45. Requirements for Non-Exempt Amateur Radio Facilities.

1. Non-exempt amateur radio facilities may not be erected until a valid building permit has been obtained from the City of Beaverton.

2. Notwithstanding Chapter 30 of the Development Code, the following rules apply to non-exempt amateur radio facilities in existence on or before May 8, 2003:

   A. Facilities constructed before May 8, 2003 under building permits validly issued on the date of construction are not subject to these regulations.

   B. Exempt facilities that are proposed to be modified to become a non-exempt facility, shall acquire a new building permit from the City.

   C. Facilities without permits from the City of Beaverton, Washington County, or Multnomah County shall acquire a building permit from the City.

60.70.50. Required Studies and Information. The following requirements for studies and information shall be provided in addition to the submittal requirements specified in the application checklist to be provided by the Director: [ORD 4702; January 2017]

1. For new WCF towers or poles, the following information is required to be submitted at time of application:

   A. A visual impact report prepared by an Oregon licensed engineer or Oregon licensed architect shall be submitted. For purposes of this section of the Code, the extent of the adjacent area to be analyzed in this report shall be determined by the Director at the time of pre-application based on the type of tower proposed and the nature of the surrounding development. The visual impact report shall be comprised of:

      1. A written summary of the findings of the visual impact analysis.

      2. A to-scale (engineer scale measurement) vicinity map identifying in plan-view the location of the proposed WCF tower.

60.70.50.1.

3. A to-scale (engineer scale measurement) aerial plan showing in plan view the location of the proposed WCF tower and the location and type of adjacent development.

4. A to-scale (engineer scale measurement) elevation drawing indicating the height, dimensions, type, design, materials and color of the tower and any on-ground associated equipment.

5. A visual graphic (photo) simulation of the proposed WCF tower from northern, southern, western and eastern orientations inclusive of adjacent buildings, structures, natural features and public or private streets.

6. Recommended methods to mitigate the visual impacts of the proposed WCF tower on adjacent properties.

B. For a new WCF tower, a coverage analysis report prepared by an Oregon licensed professional engineer with demonstrated experience in the preparation of coverage analysis reports specifying the search ring within which service is proposed inclusive of the location, height and frequency of existing and approved WCF, and addressing the quality of existing wireless service and new wireless service within the search ring.

C. All WCF applications abutting or within Residential, or Multiple Use zoning districts proposing exterior at-grade equipment shelters shall be accompanied by the equipment manufacturer's written noise specifications if these specifications are proposed to be followed. [ORD 4397; August 2006]

D. Copy of the license application or received license from the Federal Communications Commission (FCC) or documentation that a license is not required. A copy of an approved license, or evidence of exemption shall be provided to the Planning Division prior to the issuance of a building permit.

E. Copy of the permit application or received permit from the Federal Aeronautics Administration (FAA), if applicable. A copy of an approved permit shall be provided to the Planning Division prior to the issuance of a building permit.

60.70.50.1.F

F. Copy of written authorization from the Oregon Department of Aviation, if applicable. A copy of the written authorization, if applicable, shall be provided to the Community Development Department prior to the issuance of a building permit.

G. Copies of all environmental reports and assessments required to be submitted to the FCC or FAA for proposed WCF shall be provided to the City at their time of filing with these agencies. It is the applicant's responsibility to conform to all requirements of these agencies resulting from the submittal of the environmental assessments.

H. Copy of an approved and signed City of Beaverton franchise/utility license.

I. Noise Study: If applicable, provide a noise study prepared by a licensed Oregon acoustical engineer in accordance with Section 60.50.25.11

J. For all WCF located within the right-of-way, proposed to replace a street light pole, provide plans for LED street lights. (Illumination levels to be evaluated per Section 450.4 of the City Engineering Design Manual, Option C requirements unless otherwise approved by the City Public Works Director).

K. For all City owned poles within the right-of-way any studies requested by the Public Works Director required to ensure the safety and integrity of city owned and maintained property, including but not limited to structural calculations.

L. New poles located within 10-feet of a roadway without a curb and gutter shall include a vehicle impact study and protective devices such as bollards.

M. For all WCF located within the right-of-way, signed approval from the Public Works Director.

[ORD 4702; January 2017]

60.70.55. Temporary Uses.

1. The Director may authorize a temporary WCF inclusive of needed equipment shelters and on-site improvements to facilitate continuity in service during the initial construction, repair, maintenance and/or replacement of permanent equipment. Temporary WCF shall be authorized through temporary use permit provisions specified in Chapter 40 (Applications). The authorization of temporary WCF shall be subject to the following criteria:

   A. A temporary WCF facility shall be permitted to operate a maximum of ninety (90) days from the date of temporary permit authorization.

   B. At the discretion of the Director a time extension not to exceed a maximum of ninety (90) days may be granted to facilitate continuity in service provided that a written request letter is submitted a minimum of thirty (30) calendar days prior to the expiration of the initial temporary use authorization.

   C. The written request letter shall be submitted by an authorized representative of the service provider, shall specify the amount of the additional time request and shall explain the reason(s) for the additional time request.

   D. Failure to submit the additional temporary use authorization request within the specified timeframe stated herein may result in a denial of the additional temporary use timeframe request.

   E. All temporary WCF facilities shall be removed a maximum of fourteen (14) calendar days from the expiration of the initial or extended temporary use authorization.

60.70.60. Collocation Protocol.

1. Purpose. The purpose of this requirement is to create a process that will allow providers to equitably share publicly available, non-proprietary information among themselves, with interested persons and agencies, and with the City. This collocation protocol is designed to increase the likelihood that all reasonable opportunities for collocation of wireless communication antennas on existing towers have been investigated and the appropriate information has been shared among providers. The City recognizes that collocation is preferable, where technologically feasible and visually desirable, as a matter of public policy, but that collocation

60.70.60.1

is not always feasible for technical or business reasons. However, if all licensed providers are made aware of any pending tower or antenna permit requests, such disclosure will allow providers to have the maximum amount of time to consider possible collocation opportunities, and will also assure the City that all reasonable accommodations for collocation have been investigated. The Code creates strong incentives for collocation because proposals for collocation qualify for a less rigorous approval process in almost all zones within the City.

2. Applicability. Requirements for the collocation protocol apply only to new WCF towers constructed after May 8, 2003.

3. The applicant shall show proof satisfactory to the City that it has made reasonable inquiries at potential sites for collocation that would otherwise meet the applicant's need for signal coverage.

60.70.65. Abandoned Facilities.

1. Criteria for Removal of Abandoned WCF Facilities. Abandoned wireless communication facilities inclusive of antennas and at-grade equipment shelters that are not operated for a continuous period of six (6) months shall be removed by the owner of the property on which the WCF is located or by the owner or lessee of the WCF within a maximum of ninety (90) day from the date of a written notice letter from the City. Failure to remove abandoned WCF within this timeframe is hereby declared a nuisance, and shall be subject to abatement under the provisions of local or state law.

2. Multiple WCF Providers. If there are two or more WCF providers collocated on an abandoned tower, Section 60.70.65.A. shall not become effective until all providers cease using the WCF for a continuous period of six (6) months.

3. Time Extension. Prior to the expiration of the ninety (90) day period stated in Section 60.70.65.A., the property owner and/or the WCF owner may request a temporary use permit for an additional ninety (90) day extension to provide time to find another user.

EXHIBIT 7:

HILLSBORO SMALL WIRELESS FACILITY APPLICATION, FEE PROPOSAL AND DESIGN AND CONSTRUCTION STANDARDS

Hillsboro
OREGON

MEMORANDUM

To: Robby Hammond, Assistant City Manager

From: Tina Bailey, Transportation Division Manager
Andrew Bartlett, Management Analyst

Date: January 15, 2019

Subject: Small Wireless Facility Application and Annual Attachment Fee Proposal and Design and Construction Standards

Requested City Council Action:
Consider holding a public hearing and adopting:

a. Resolution No. 2619 establishing a rate of $3,000 for the initial application fee and $1,700 a year for the annual attachment of small wireless facilities within the public right-of-way. (Finance Committee Recommendatoin)

Consider adopting:

b. Resolution No. 2620 adopting Design and Construction Standards for Small Wireless Facilities.

Background:
Small wireless facilities or small cell facilities are the next step in cellular infrastructure and seen as a necessary component for 5G cellular deployment. The devices work in conjunction with the more traditional macrocell towers individuals are familiar with. As the name implies, the installations are much smaller than traditional macrocell towers and are typically deployed in denser population areas to handle increased data demands by mobile customers. A comparison of a small cell versus macrocell is shown in the figure on page 2.

Since small cell installations are planned for much lower heights and at a greater frequency than macrocell towers, carriers are looking towards existing utility pole and street light infrastructure to meet their needs. Additionally, carriers have indicated that installations may need to be placed as close as 300 feet from each other. With four major carriers at present, the number of installations within the right-of-way and on City infrastructure could be substantial.

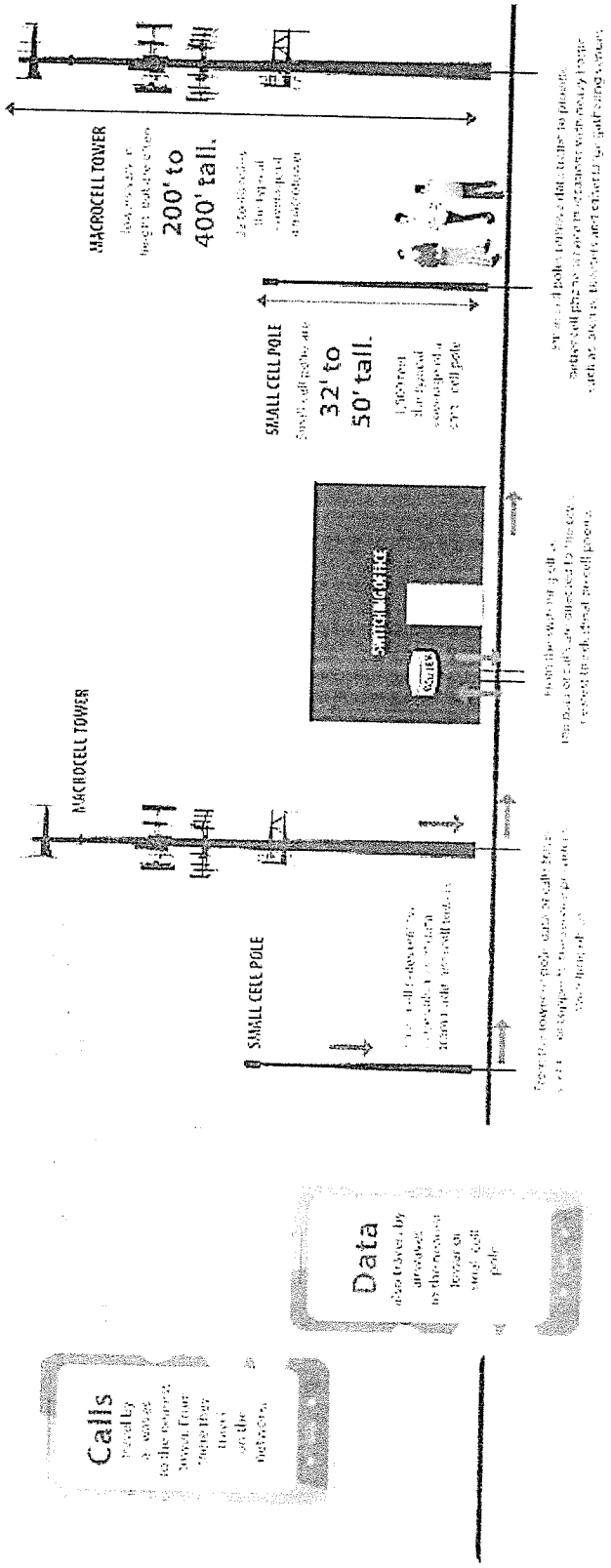

Figure 1: Small Cell versus Macrocell Comparison (Not to Scale) (Source: SDNcommunications.com)

Over the last year, staff has been working towards the establishment of standards that would protect the community's assets and develop a rate structure that would recover the public's costs to approve and inspect each new installation as well as the ongoing maintenance and coordination efforts that are necessary to manage the right-of-way. As it is a rapidly developing field, understanding the implications to the public and developing a rate structure and standards has been a challenge. Recent Federal action however has accelerated the need to establish rates and standards.

On September 26, 2018 the Federal Communications Commission (FCC) adopted FCC 18-133 which significantly limited the City's management of small wireless infrastructure deployment and associated fees for the use of the right-of-way and public property within the right-of-way. These regulations are scheduled to become effective on January 14, 2019, however it is important to note, there have been legal challenges filed against the FCC order. The following summarizes the key regulations established in this Ruling and Order:

- Caps all fees related to small wireless facilities (SWF) at "a reasonable approximation of the state or local governments' actual and reasonable costs."
    - Caps apply to application/review or similar fees for SWF inside and outside the rights of way; right of way use fees; and fees for use of municipal property in the rights of way.
    - The following fees are presumed to meet the standard:
        - Non-Recurring Fees: $500, including a single up-front application that includes up to five SWF, with an additional $100 for each SWF beyond five, or $1,000 for non-recurring fees for a new pole to support SWF.
        - Recurring Fees: $270 per SWF per year for all recurring fees, including any ROW access fee or fee for attachment to municipally-owned structures in the ROW.
    - Local governments can charge higher fees than those set forth above if they can show the fees are:
        - A reasonable approximation of costs;
        - Those costs themselves are reasonable; and
        - They are non-discriminatory.

- Preempts aesthetics requirements for SWF unless they are (1) reasonable; (2) no more burdensome than those applied to other types of infrastructure deployments; (3) objective; and (4) published in advance.
    - Under this standard, requirements that all wireless facilities be deployed underground are preempted, as is any undergrounding requirement that "materially inhibits wireless service."
    - Implies that minimum spacing requirements likely could not meet this standard.

- Imposes shot clocks of 60 days for SWF added to existing structures (regardless of whether the structure already supports a SWF) and 90 days for SWF using a new structure.

- Existing shot clocks for non-SWF deployments remain in place: 90 days for collocation on an existing structure; 150 days for deployment on a new structure.
- Both the new and existing shot clocks apply to "any approval that a siting authority must issue under applicable law prior to deployment." This includes zoning approvals and building permits, and may also include license or franchise agreements to access the rights of way, leases for use of municipal poles or property in the rights of way, electric permits and road closure permits, among others.
- For SWF, shot clocks are reset, not just tolled, if the siting authority notifies the applicant within 10 days after submission that the application is incomplete. For subsequent determinations of incompleteness, the shot clock would toll—not reset—if the siting authority provides written notice within 10 days that the supplemental submission did not provide the requested information.
- For non-SWF, shot clocks begin to run when an application is first submitted, and can be paused—not reset—if the siting authority 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 SWF.
- Failure to act within the new small wireless facility shot clock constitutes a presumptive violation of the Communications Act and applicants may seek expedited injunctive relief in court within 30 days of a local government missing a shot clock deadline. There is no "deemed granted" remedy.

These new regulations will have considerable impacts on the City and on other jurisdictions across the Country. If the order does go into effect on the January 14th deadline, Public Works is currently not staffed to handle the review and inspection of multiple applications under the timelines prescribed in the Ruling and Order. Installation on City owned street light systems will also require structural review to ensure the poles and foundations are capable of supporting the additional loads. The City does not currently have the structural expertise to review these submittals. Considerable outsourcing of the review of the applications and overtime for the inspection is likely. Small cell facilities will also require a unique permitting process to be developed.

In addition, unlike most other jurisdictions, the City owns the lighting and wiring for the street light system. As a result, the City will have additional costs for such things as reviewing wiring and connection plans, disconnecting power to allow installation, inspecting the connections to our poles and electrical systems, and ongoing coordination when our lights need maintenance. Most installation will also require the carrier to upgrade poles and their foundations, at the carriers cost, in order to meet structural requirements. This will also lead to additional plan review and inspection costs. For most agencies, these additional costs would be borne by PGE and PGE would be assessing charges accordingly. Staff anticipates this will make our costs higher than most agencies.

With these new regulations it is critical that the City have a baseline set of rates and standards in place as close to the effective date of the order in the event that the order is not stayed.

Staff has developed estimated costs for the review and inspection of initial applications as well ongoing maintenance. It is anticipated that the City will adjust these rates in the future as actual data becomes available.

Application Fee:
For each small cellular wireless attachment, staff recommends an application fee that will cover the costs for the reviewing, inspecting, approving and administering each application and installation. This is based on the estimated staff hours (salary and benefits) and associated equipment and overhead costs to process each application and installation.

Tasks included in this fee include review of applications for compliance with standards, coordination with pole owners in the event it is not a city pole, coordination with PGE as needed, construction overview and inspection, and associated administrative tasks with receiving, issuing, tracking permits.

Task	Work Hours
Application Review:	9
Construction Inspection:	10
Administrative:	6
Total Hours per Application:	25

The proposed application fee for each attachment is $3,000 at the time of application. This is a one-time fee for each application regardless of whether attachment is made to a city owned pole, a pole owned by a third party, or a new pole is installed by the carrier.

Annual Attachment Fee
For each small cellular wireless attachment, staff recommends an annual attachment fee. This is based on the estimated staff hours (salary and benefits), and associated equipment and overhead costs to maintain the right-of-way and to coordinate with carriers.

Tasks include in the calculation the maintenance of poles which are used for the attachments, coordinating and contracting tree trimming and landscape maintenance around poles, coordination with carriers during maintenance by either the city or the carrier on the collocated infrastructure, cost of coordination of traffic impact by carrier during service or maintenance of their facilities, and associated administrative and support cost associated with the above activities.

Tasks	Work Hours
Annual Right of Way Maintenance:	6
Coordination:	6
Administrative:	4
Total Hours per attachment	16

The proposed annual attachment fee is $1,700 per year. This fee is per attachment regardless of whether attachment is made to a city owned pole, a pole owned by a third party, or a new pole is installed by the carrier.

Staff has also developed a preliminary set of Small Wireless Facility Design and Construction Standards. These standards were based on a draft of standards circulated to carriers for comment by the City of Tigard. The City changes to the City of Tigard's draft were primarily to reflect the City's ownership and maintenance of the light poles and associated electrical wiring. We are aware that several carriers have commented on the standards. Due to the timing of the FCC effective date, these comments have not been incorporated within the proposed standards.

The City does intend to revisit the standards in the coming months. The comments received as part of this process will be examined as part of this revision. This revision will follow our traditional process for the modification of standards providing for a 30 day minimum comment period before consideration by Council occurs.

In the interim, the City is proposing the attached standards as preliminary basis for reviewing applications. Carriers do always have the ability to request deviations or permanent revisions to the Design and Construction Standards if errors are found or if they can demonstrate why the standards cannot be met.

Recommendation:
As a result of the estimates, Finance Committee has recommended City Council approve Resolution No. 2619 establishing a rate of $3,000 for the initial application fee and $1,700 a year for the annual attachment of small wireless facilities within the public right-of-way.

Staff also recommends City Council approve Resolution No. 2620 adopting Design and Construction Standards for Small Wireless Facilities

Cost:
The proposed fees are based on estimated actual costs incurred by the City. The financial impact to the city are projected to be neutral.

RESOLUTION NO. 2619

A RESOLUTION TO ESTABLISH FEES APPLICABLE TO SMALL CELL WIRELESS FACILITIES SITED WITHIN THE CITY OF HILLSBORO CITY RIGHTS OF WAY

WHEREAS, on September 26, 2018, the Federal Communications Commission ("FCC") adopted FCC Declaratory Ruling and Third Report and Order 18-133 (the "FCC Order") which significantly limits the City's authority to manage and regulate its rights-of-way ("ROW") in the context of Small Cell Wireless Facility ("SWF") infrastructure deployment by the private sector, including limiting the City ability to impose fees for use of the City ROW and public property within the City ROW; and

WHEREAS, under the FCC Order, application and review fees for SWF infrastructure proposed to be sited in the City ROW, as well as ongoing annual fees, are required to be a reasonable approximation of costs incurred by the City in processing applications and hosting SWF infrastructure; and

WHEREAS, the FCC Order requires that if the sum total of all non-recurring fees, such as up-front application fees, exceeds $500 for up to five SWF and $100 for each additional SWF to be sited on existing infrastructure in the City ROW, or $1,000.00 for a new pole to be installed in the City ROW to support a SWF, that the applicable fee(s): 1) be limited to a reasonable approximation of the City's costs, 2) that those costs themselves are reasonable, and 3) that the costs are non-discriminatory; and

WHEREAS, the FCC Order requires that if the sum total of all recurring annual fees, such as ROW access fees and attachment fees, exceeds $270 per year per SWF, that the applicable annual fee: 1) be a reasonable approximation of the City's costs, 2) that those costs themselves are reasonable, and 3) that the costs are non-discriminatory; and

WHEREAS, Hillsboro Municipal Code ("HMC") Section 9.48.030 authorizes the City to establish fees for permits for the construction and installation of equipment and facilities in the City ROW; and

WHEREAS, HMC Section 9.48.070 authorizes the City to establish fees that may not be deducted offset, or otherwise reduced or avoided based on the payment of the right-of-way use fees or any other fees required by the HMC; and

WHEREAS, the City Council finds that presumptive fees established in the FCC Order do not represent a reasonable approximation of the City's actual costs for processing applications for SWF infrastructure, nor do they represent a reasonable approximation of the City's costs for hosting SWF infrastructure in its ROW; and

WHEREAS, City staff has undertaken an analysis to establish a reasonable approximation of the City's costs for processing applications for SWF infrastructure in the City ROW, as well as for hosting SWF infrastructure in its ROW; and

WHEREAS, City staff estimates the City's cost for processing new SWF installation applications to be $3,060.74; and

WHEREAS, City staff estimates annual recurring costs for SWF hosting in the ROW to be $1,777.13; and

WHEREAS, based on the estimates of City staff, the City Council finds that it is in the public interest to establish the fees set forth below.

NOW, THEREFORE, THE CITY OF HILLSBORO RESOLVES AS FOLLOWS:

Section 1. The SWF application fee shall be $3,000.00 per proposed SWF site in the City ROW. The one-time application fee applies both to SWF infrastructure proposed to be attached to existing infrastructure as well as to SWF infrastructure to be supported by a new pole.

Section 2. Recurring annual fees shall be $1,700.00 per SWF sited in the City ROW.

Section 4. The City shall compare its actual costs incurred to the fees established by this Resolution when a sufficient number of applications have been processed to assess the accuracy of the cost estimates provided by City staff, adjust the fees as necessary to more accurately reflect the City's costs, and to consider the impact of any legal challenges to the validity of the FCC Order.

Section 5. This resolution is effective immediately upon adoption.

Approved and adopted by the Hillsboro City Council at a regular meeting held on the 15th day of January, 2019.

_____
Steve Callaway, Mayor

ATTEST:

_____
Amber Ames, City Recorder

RESOLUTION NO. 2620

A RESOLUTION ADOPTING DESIGN AND CONSTRUCTION STANDARDS FOR SMALL CELL WIRELESS FACILITIES IN THE CITY OF HILLSBORO RIGHTS OF WAY

WHEREAS, the City of Hillsboro (the "City") has Constitutional and Charter authority to manage its rights-of-way ("ROW"); and

WHEREAS, Chapter 9.48 of the Hillsboro Municipal Code ("HMC") regulates utility facilities in the City ROW; and

WHEREAS, on September 26, 2018, the Federal Communications Commission ("FCC") adopted FCC Declaratory Ruling and Third Report and Order 18-133 (the "FCC Order") which significantly limits the City's authority to manage and regulate its rights-of-way ("ROW") in the context of Small Cell Wireless Facility ("SWF") infrastructure deployment by the private sector; and

WHEREAS, the City Council finds that the installation of Small Cell Wireless facilities in the City ROW, which is a limited asset, should be regulated by a single set of standards; and

WHEREAS, the FCC Order imposes certain requirements and limitations on the City's regulation of SWF design and construction standards, which become effective on April 15, 2019; and

WHEREAS, the City Council finds it necessary to adopt SWF design and construction standards prior to the April 15, 2019 effective date for that portion of the FCC Order applicable to SWF standards, so as to provide City staff guidance in reviewing SWF applications received prior to that date; and

NOW, THEREFORE, THE CITY OF HILLSBORO RESOLVES AS FOLLOWS:

Section 1. The City of Hillsboro Small Cell Wireless Facilities Design and Construction Standards, attached hereto as "Exhibit A" is hereby adopted.

Section 2. This resolution is effective immediately upon adoption.

Approved and adopted by the Hillsboro City Council at a regular meeting held on the 15th day of January, 2019.

_____
Steve Callaway, Mayor

ATTEST: _____
Amber Ames, City Recorder

Exhibit "A"

Design and Construction Standards

390. Small Wireless Facilities Design & Construction Standards

390.1. Permitting Process

A. A Network Provider shall comply with the following permitting process when seeking to install Wireless Facilities in the public right-of-way (ROW):

1. Obtain a City of Hillsboro franchise and/or ROW license;
2. File a Type II land use application, where applicable; and
3. Obtain a Public Improvement Permit (PIP)

390.2. General Provisions

A. Wireless Facilities, for the purposes of these standards, includes any pole, conduit/cabling, cabinets, equipment or other materials used in the installation of a wireless network.

B. A Network Provider shall construct and maintain Wireless Facilities in a manner that does not:

1. Obstruct, impede or hinder the usual travel or public safety on the Public Right-of-Way:
2. Obstruct the legal use of the Public Right-of-Way by other providers;
3. Violate or conflict with any Laws, including but not limited to the City of Hillsboro ordinances or standards;
4. Obstruct, impede, or hinder any operations of the City's infrastructure or systems (existing or future), including but not limited to Smart City equipment, street light equipment, traffic signal equipment, etc.
5. Any items installed after the initial application will require an additional approval process with the City. All new and existing equipment will be required to comply with any currently adopted standards at the time of installation.

C. In locations where a new pole is installed, the City requires the pole be designed to internally conceal and hold all Wireless Facilities equipment. In instances where an existing pole is located in the desired location, and the existing pole is deemed structurally sound to support the proposed network equipment, the Wireless Facilities may attach to the existing pole so long as every effort is made to conceal the equipment inside the pole. In the event the proposed equipment cannot reasonably fit within the existing pole itself, and with the approval of the City , the Wireless Facilities shall be concealed or enclosed in one (1) equipment box, cabinet or other unit that may include ventilation openings.

1. Poles and associated wireless facilities equipment shall be prepared and powder coated consistent with 00593 of the *Oregon Standard Specifications for Construction.*

D. Any newly installed street light poles shall be PGE Option C.

E. There shall be no surface mounted conduit or exposed wiring on any exterior surface of the supporting pole.

F. There shall be no more than one (1) Network Node on any one (1) Pole.

G. A Network Node installed on a street light pole must connect to the same power source supplying power for the street light.

H. Aerial cable spans and/or aerial span power connections are not permitted.

I. Network Provider installations are limited within the public right-of-way to installation on:

1. Street light poles (City of Hillsboro Owned)
2. Existing public utility poles
3. Network Provider installed poles, which will require a separate land use approval process. See City of Hillsboro Municipal Code for additional information.

J. Complete Construction plans for the proposed infrastructure must be submitted through a PFI permit application and bundled into a single PDF file, formatted to 11"x 17" sheets, sealed by a Professional Engineer licensed in the State of Oregon, and including:

1. Each pole represented by a set of plans within the overall file, designed so that if any single pole is removed from the application, the remaining plan set remains valid. Overall sheets including details & notes are encouraged.
2. Structural analysis for each identified pole sealed by a Professional Engineer in the State of Oregon indicating the pole and foundation can handle the proposed equipment load, and where and existing pole is utilized, any existing loading. Foundations must also be approved by pole owner.
3. Electrical load analysis showing that the existing transformer, circuit and any associated wiring can handle the additional power load from the proposed equipment, or any proposed upgrades as needed. Wiring shall be sized to limit voltage drops to a maximum of 2 percent between the utility service connection and the control panel, and a maximum of 3 percent from the control panel to the most distant fixture served. Submit an electronic file of the voltage drop/line loss calculations for City approval.
4. Each plan set shall include the following:

a) A cover sheet containing a scaled City map including all pole locations included in the subject application, a list of each pole location including GPS coordinate, PGE or City pole ID (where applicable), and a legend of all sheets.

b) A page for each specific pole location referenced with pole title, name, location information, PGE pole ID (where applicable), and photograph of the proposed location of the pole.

c) "Required Notes for Each set of Pole Plans" only if unique to the location and as such cannot be part of Overall sheet notes.

d) Labeled and dimensioned site plan and elevation plan, including the following as applicable:

i. Key symbols, ROW lines, property lines, etc.
ii. Street information including names, curb-lines, sidewalk, street amenities, vegetation, existing and proposed utilities
iii. Identification of immediately adjacent property owner(s) and/ or easements
iv. Structural Plans for pole and associated foundations that reference structural calculations and include depth, diameter, grounding, reinforcing, and foundation information as necessary
v. Labeled construction materials, color, finish, etc.
vi. Pole dimensions and total max height from adjacent grade
vii. Size and dimension of any projection(s) from pole
viii. Proposed voltage, maximum transmission wattage and radio frequency for all equipment associated with each Network Node, as allowed under FCC regulations
ix. Detail of proposed communication conduit and electrical connection location
x. Typical conduit / duct bank installation section detail
xi. All existing utilities, including but not limited to:
    A. Storm & Sanitary Sewer pipes and appurtenances
    B. Any utilities 24" and greater depicted as double-lines
    C. Gas line (indicate size, High Pressure, services, etc).
    D. Electric lines (indicate power pole number, anchor pole, overhead line, and duct bank in actual dimensions)
    E. Water infrastructure including valves, fire hydrants, etc.
    F. Adjacent private service line locations where known

e) Certification for each proposed site showing the wireless facility operates within radio frequency exposure guidelines as established by the FCC.

K. Once installation is completed, the applicant is required to provide the City with a complete set of as-built drawings meeting the same information and requirements as the application set outlined in item K of this section, but updated for any approved changes that occurred in the field.

390.3. Location

A. All Wireless Facilities shall be located to avoid any physical or visual obstruction to pedestrian or vehicle traffic, or in any manner create safety hazards to pedestrians, bicyclists or motorists.

B. All Wireless Facilities shall be positioned to not encroach or effectively narrow the clear path of any pedestrian, bicycle, or roadway facility.

C. Wireless facilities proposed to be sited in the ROW shall be sited according to the following priorities, in descending order of preference. If the priority is not followed, the owner must demonstrate why a higher priority is not available for use. For purposes of this subsection, streets shall have the classification set forth in the Hillsboro Transportation System Plan.

1. First priority: freeways;
2. Second priority: arterials;
3. Third priority: collectors;
4. Fourth priority: neighborhood routes;
5. Fifth priority: local streets.

390.4. Separation

A. The separation between Network Provider (i.e. those not owned by the City of Hillsboro or it's agency partners) installed Wireless Facilities shall be a minimum of two-hundred fifty (250) feet.

B. The separation between Wireless Facilities and City of Hillsboro or its agency partners owned/operated Smart City technology shall be a minimum of two-hundred fifty (250) feet.

C. In residential areas, the Wireless Facilities shall be located where the shared property line between two residential parcels intersects the Public Right-of-Way.

D. In no instance shall a Wireless Facility be located in front of a building entrance or exit.

390.5. Wireless Facilities

A. Cabinets and Equipment

1. Where Wireless Facilities are installed in the location of an existing street light, and the additional structural load cannot be accommodated by the existing street light pole and foundation, a new street light pole and foundation shall be installed and all equipment shall be concealed and located inside the pole, except for the antenna.
2. Where Wireless Facilities are installed and the additional structural load can be accommodated by the existing street light pole and foundation, every effort must be made to conceal the equipment inside the pole. In instances where the proposed equipment cannot reasonably be accommodated within the existing pole, the Wireless

Facilities shall be concealed or enclosed in an equipment box, cabinet or other unit that may include ventilation openings as follows:

a. The Network Provider is limited to one (1) equipment box or cabinet per pole per installation. All other equipment must be located either within the pole itself, or in a below ground vault.

b. The Network Provider shall not install ground mounted cabinets or other equipment without written City approval.

c. The base of all cabinets and equipment attached to poles shall be installed at least eight (8) feet above the ground, and if a Network Node attachment is projecting toward the street and/or bicycle facilities, for the safety and protection of the public and vehicular traffic, the base of the attachment shall be installed no less than seventeen (17) feet above the bicycle facility and/or street.

d. Protrusions from the outer circumference of the pole shall be no more than eighteen (18) inches and twenty four (24) inches in height.

e. The color of all cabinets and equipment shall match pole color.

f. The total volume of all installed equipment external to the pole (including, but not limited to cabinets, vaults, boxes, antennas) shall not exceed twenty-one (21) cubic feet. This maximum applies to all equipment installed at the time of original application, and including any equipment to be installed at a future date. If a Network Provider wishes to install equipment that exceeds this maximum, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

g. Equipment shall be orientated away from nearby residential windows, doorways and entrances.

h. Where permitted, equipment located on poles must be attached with stainless steel banding, powder coated to match pole, and sized to support the required equipment load.

B. Antennas

1. Network Antennas shall be built into any newly installed poles.

2. Where the Network Provider has demonstrated an existing pole can be used, the antenna must be painted to match the existing pole.

3. Antennas shall not exceed:

a. Maximum five (5) feet in height or 10% of the pole height, whichever is less; and

b. Maximum diameter/width of nine (9) inches or pole diameter at mounting location, whichever is less

c. If a network provider wishes to install an antenna that exceeds these limitations, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

4. Network Antenna placement shall not impair light, air or views from adjacent windows.

5. For Equipment that include a GPS antenna, integrate the GPS antenna into the same cylindrical shape on top of the main antenna in order to form the appearance of a single unit.

6. Antennas shall use electronic tilt mechanisms.

7. Use single element side-arm or top-mount cylindrical antennas.

8. Panel antennas are not permitted.

9. Side-mounted antennas shall use flange or channel mountingarm to conceal all cabling and passive radio frequency equipment.

10. For top-mounted antennas, use a shroud around the base of the antenna, especially for antennas models with four or more cabling ports. If a shroud cannot be used, utilize cable ties (or similar) to neatly arrange cabling and note such on the site completion checklist on the cover sheet of the plans.

11. Pole top antenna mounts shall not be offset from pole.

12. Only one (1) antenna shall be allowed per pole. If a Network Provider wishes to upgrade or replace their antenna at any point during their permitted use of the right-of-way, they must remove any existing antenna so the maximum number of antennas at any time does not exceed one (1).

390.6. Network Provider Installed Poles

A. A Network Provider installed pole is defined as any pole installed by the Network Provider. This can be either to replace an existing pole in its current location that cannot structurally support the Wireless Facilities, or a pole installed in a new location where it can be shown that no existing location can be utilized.

1. Structural calculations shall take into account anticipated sign loading of 10.3 square feet, with centroid of sign located at 9.8 feet from base of pole.

B. New Network Provider installed poles must be designed to be consistent in size, color, and character with the existing street lighting within the project area and/or block face. This includes tapering the poles so they have the appearance of street lighting poles.

C. Network Provider poles that are installed to replace or supplement existing street lighting must be submitted with an accompanying photometric analysis that meets Subsection 350 of the latest version of the *City of Hillsboro Design and Construction Standards*. The photometric analysis must be sealed by a Professional Engineer in the State of Oregon.

D. The maximum diameter of any Network Provider installed pole shall not exceed three feet (3').

E. Network Provider installed pole set back from curbs, offset from driveways and offset from street trees shall be directed by City.

F. Network Provider installed poles and accessory equipment shall not be located within 10 feet of any energized line. Installation shall conform to OAR 437-002-0047 and 437-002-2316.

G. New Network Provider installed poles shall be designed so they do not interfere or conflict with existing building overhangs and awnings.

H. Network Provider installed poles shall use breakaway technology.

390.7. Electrical Service

A. The Network Provider shall be responsible for coordinating with the City of Hillsboro for electrical service connection to the Wireless Facility.

B. Provide separate disconnect for Wireless Facility in junction box adjacent to pole.

C. All electrical service conduit and wiring shall be located underground, and inside pole.

D. A Network Provider shall not allow or install generators or backup generators.

390.8. Logo, Decals, Flashing Lights, and RF Warning Sticker

A. The Network Provider shall post its name, identifying information, permit number and 24 - hour emergency telephone number in an area of the Wireless Facility that is visible to the public. Signage required under this section shall not exceed two (2) inches by four (4) inches, unless otherwise required by law (e.g. RF ground notification signs).

1. Place the identifying information on the side of the enclosure facing on-coming vehicle traffic for the side of the road where the equipment is installed. Consider combining with disconnect information.

2. Use sticker colors that are muted (e.g. tan), complementary or the same color as the equipment but with white colored lettering.

3. Utilize the smallest and lowest visibility (e.g. yellow instead of blue) radio-frequency (RF) warning sticker required by government or electric utility regulations. Place the RF sticker as close to the antenna as possible, facing directly out toward the street, or directly away from the street if there is no window or doorway within twenty-five (25) feet of the pole (preferred).

B. All equipment manufacturer decals shall be removed. Except as required by Law or by the Utility Pole owner, Network Provider shall not post any signage or advertising on the Wireless Facilities.

C. Equipment shall not have static or flashing light that are visible when the enclosures are closed.

D. Equipment related features (e.g. cooling system fans) shall not exceed a 50 decibels during the day and 40 decibels at night.

390.9 Conduit and Cabling

A. Electrical systems for Wireless Facilities located within the City and/or PGE owned street light poles shall be contained in a dedicated conduit labeled to identify its dedicated use for Wireless Facilities.

B. All underground conduit runs must be marked with an underground marking tape per 00960.42(e) of the *Oregon Standard Specifications for Construction* and contain locate wires.

C. All conduits shall be Schedule 40 PVC or HDPE depending on installation method.All elbows shall be fiberglass.

D. Install bushings on all conduit ends and seal the ends with an approved conduit plug.

E. All underground conduit must be located in the public utility easement (PUE) where available.

WPG WIRELESS POLICY GROUP LLC

January 15, 2019

The Honorable Steve Callaway, Mayor
Hillsboro City Council
150 E Main Street
Hillsboro, OR 97123

SENT VIA EMAIL: amber.ames@hillsboro-oregon.gov

Re: Small Wireless Facility Fees & Design Standards
Agenda Items #5.A & 8.A – Resolution Nos. 2619 & 2620

Dear Mayor Callaway and Councilors:

Thank you for the opportunity to comment on the proposed fees and design standards for small wireless facilities. These comments are submitted to the City of Hillsboro ("City") on behalf of AT&T.

As you know, the Federal Communications Commission ("FCC") recently adopted an Order[1] addressing a local jurisdiction's regulation of small wireless facility deployment. Much of the FCC Order will be effective on January 14, 2019.

Proposed Small Wireless Fees - Resolution No. 2619

The FCC Order requires that: (1) fees are a reasonable approximation of the local government's costs related to and caused by the small wireless deployment, (2) only objectively reasonable costs are factored into these fees, and (3) the fees are no higher than the fees charged to similarly-situated competitors in similar situations.[2]

Further, the FCC Order sets a presumptively reasonable recurring fee for small wireless facilities located in the right-of-way of $270 per year, per facility.[3] For non-recurring fees (including application fees), the FCC Order sets a presumptively reasonable fee of $500 for the first five small wireless facility attachments in the same application, with an additional $100 for each small wireless facility attachment beyond five in the same application.[4]

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[1] *Accelerating Wireless and Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, WT Docket No. 17-79, WC Docket No. 17-84, FCC 18-133 (rel. Sept. 27, 2018); 83 Fed. Reg. 51867 (Oct. 15, 2018)("FCC Order").

[2] FCC Order, para. 50.

[3] FCC Order, para. 79.

[4] Id.

PO Box 34628 - #75604
Seattle, WA 98124

(fax) 206.219.6717
www.wirelesspolicy.com

Staff has proposed for your consideration two fees for small wireless facilities – an annual right-of-way fee ($1,700), to be charged for each attachment/pole, and an initial application fee ($3,000), to be charged for each attachment/pole. These proposed fees are substantially higher than the FCC's presumptively reasonable fees. For example, the application fee is 30 times the FCC's presumptively reasonable non-recurring fee for attachments. Further, the staff report does not show that staff's time is "*related to and caused by*" the small wireless facility and reflecting the facility's "*degree of actual use* of the public rights-of-way."[5] Among other things:

- Many of the work items staff has listed to support the proposed fees relate to City-owned light poles and not to Portland General Electric ("PGE") poles. For instance, the following costs are not applicable to PGE poles: "the City will have additional costs for such things as reviewing wiring and connection plans, disconnecting power to allow installation, inspecting the connections to our poles and electrical systems, and ongoing coordination when our lights need maintenance."[6]
- The rationale that it will take two full days of staff time annually ($1,700) to maintain each small wireless facility (that has already been constructed and inspected) on either a City-owned pole or a PGE pole is not reasonable. AT&T questions whether the City historically devotes a similar number of hours of work to each PGE utility pole located in the right-of-way.
- The $3,000 application fee appears to be a significant departure from the fees the City assesses to review applications for other right-of-way or development activities,[7] even though the FCC requires that the fees charged to process small wireless applications be comparable to those charged for other kinds of infrastructure deployment in the right-of-way.
    - In comparison with other permits issued by the City for utility work, we find that the City does not charge a fee at all for Franchise Utility Permits, which authorize work such as new utility installation or removal as well as installation, replacement, or removal of street light poles. These permits include application review and inspections. The proposed $3,000 application fee for small wireless installations is extraordinary when compared to the City's charges for the same work proposed by other service providers (none).
    - Cost of public right-of-way permits of a similar valuation (such as for street improvements) are one-quarter of the cost of a small wireless facility permit ($750/permit).
    - Development review fees for permits for a similar value of construction are less than $600, one-fifth the cost proposed for small wireless facilities.

The City's proposed fees are substantially higher than the FCC's presumptively reasonable fees, not charged for permitting other construction projects in the right-of-way, and not supported as a reasonable approximation of the City's costs related to and caused by a small wireless deployment.

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[5] Id. at footnote 131.
[6] Staff Report, p. 4.
[7] City Resolution No. 2586 (Citywide Fees and Charges Schedule).

AT&T supports the City's adoption of small wireless facility right-of-way and application fees that are in line with the FCC's presumptively reasonable fees and suggests that the City reevaluate the proposed fees.

Proposed Small Wireless Design Standards – Resolution No. 2620

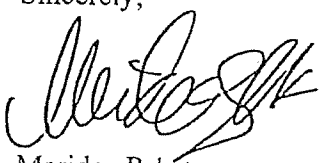
Under the FCC Order, aesthetic regulations for small wireless facilities apply to the extent they are reasonable, technically feasible, objective, no more burdensome than those applied to other types of infrastructure deployments, and published in advance.[8] Each small wireless facility standard must be technically feasible for all carriers.

The design standards provided in Exhibit A to Resolution No. 2620 raise numerous, significant concerns. For example, the standards do not appear to address PGE's needs and typical configurations for small wireless facilities attached to standard utility poles. As another example, the strict limitations on antennas (only one antenna per pole, prohibition of panel antennas, limitation of antenna diameter to 9 inches, and others) do not allow sufficient flexibility for all wireless carriers to bring small wireless technology to the Hillsboro community and would foreclose the addition of the latest technology over time. An upgrade to 5G will require the addition of an antenna to an existing small wireless facility. For these and other reasons, the proposed design standards are not consistent with the FCC Order.

The staff report acknowledges that the proposed design standards have not yet been revised in response to industry input and that staff will be revisiting them in the coming months. We intend to provide detailed comments on behalf of AT&T during that process.

Thank you for your consideration of these comments. Ken Lyons of the Wireless Policy Group will attend your meeting tonight on AT&T's behalf and will be able to address any questions at that time.

Sincerely,



Meridee Pabst
meridee.pabst@wirelesspolicy.com

cc: Tina Bailey, Transportation Division Manager
Andrew Bartlett, Management Analyst
Robby Hammond, Assistant City Manager
Rich Roche, AT&T

[8] FCC Order, paras. 86-87.

Davis Wright Tremaine LLP

1300 SW Fifth Avenue
Suite 2400
Portland, OR 97201-5630

Alan J. Galloway
(503) 778-5219 tel
(503) 778-5299 fax

alangalloway@dwt.com

January 15, 2019

Via Email (Andrew.Bartlett@hillsboro-oregon.gov, Tina.Bailey@hillsboro-oregon.gov, Robby.Hammond@hillsboro-oregon.gov)

Andrew Bartlett, Management Analyst
Robby Hammond, Assistant City Manager
Tina Bailey, Transportation Division Manager
City of Hillsboro
150 E. Main Street
Hillsboro, Oregon 97123

Re: T-Mobile's Comments on Wireless Facilities Design & Construction Standards

Dear Messrs. Bartlett and Hammond and Ms. Bailey:

I am writing on behalf of T-Mobile West, LLC ("T-Mobile") concerning the City's proposed "Wireless Facilities Design & Construction Standards" (the "Proposed Standards"), governing the deployment of wireless facilities in public rights of way. T-Mobile appreciates this opportunity for input as the City modernizes its regulations and urges the City to use this opportunity to create regulations that encourage the deployment of the small wireless facilities – including next-generation 5G technology – that will be critical in meeting the growing communications needs of the City.

T-Mobile has significant concerns regarding the Proposed Standards' compliance with federal law, particularly as the federal law was recently clarified by the Federal Communications Commission ("FCC"). On September 27, 2018, the FCC issued a Declaratory Ruling and Third Report and Order ("*Declaratory Ruling*").

In the *Declaratory Ruling*, the FCC clarified that under Section 332(c)(7)(B)(i)(II), "an effective prohibition [of service] occurs where a state or local legal requirement materially inhibits a provider's ability to engage in any of a variety of activities related to its provision of a covered service." *Id.* ¶ 37. The FCC made clear that a city effectively prohibits the provision of wireless services if it inhibits or limits T-Mobile "not only when filling a coverage gap ***but also when densifying a wireless network, introducing new services or otherwise improving service capabilities***." *Id.* ¶ 37 (emphasis added). The FCC also made clear that an effective prohibition includes inhibiting a provider from deploying the "performance characteristics" of its choosing. *Id.* n.86.

Relevant to the Proposed Standards, the FCC clarified that cities may have authority to regulate the deployment of small wireless facilities based on aesthetics, but to do so, the

regulations must be (a) reasonable, (b) no more burdensome than those imposed on other types of infrastructure deployments, and (c) objective and published in advance. (*Decl. Ruling* ¶ 86.) To be "reasonable," the aesthetic regulations must be "technically feasible." (*Id.* ¶ 87.) The *Declaratory Ruling* makes clear that what is "technically feasible" is dictated by the performance characteristics that T-Mobile chooses and seeks to achieve. (*Id.* ¶ 37, n.87.)

T-Mobile has provided electronic section-by-section comments on the Proposed Standards on the accompanying copy of the Proposed Standards. The following broadly summarizes the issues identified in the section-by-section analysis.

The Proposed Standards Are Discriminatory

As noted above, it is well-established that local government regulation of telecommunications facilities deployment in the public rights of way must be nondiscriminatory. In the Proposed Standards, however, the City seeks to impose on small wireless facilities many requirements that are not imposed on other telecommunications or utility providers in the public rights of way. Essentially, the Proposed Standards frequently appear to be transferring to the right of way requirements that were used for tall towers on private property. Yet, those requirements have never been applied to utility poles or other utility and communications deployments in the public rights of way. By now singling-out entities that use wireless technology to provide telecommunications services, the City is discriminating in favor of the incumbent wireline telecommunications providers. Examples of the provisions in the Proposed Standards that suffer from this unlawfully discriminatory issue include: §§ 390.1(A)(2); 390.2(C), 390.2(E), 390.2(H), 390.2(I)(3), 390.2(J), 390.2(K); 390.3(C); 390.4; 390.5(A)(2)(f), 390.5(B)(2)–(4), (6); 390.6(A); and 390.8(D).

The Proposed Standards Cannot Limit Small Wireless Facilities to Certain Zones

Based on the Proposed Standards, it appears that the City proposes to dictate the technology used by T-Mobile and others, and to limit the deployment of small wireless facilities to only certain areas. The Proposed Standards attempt to limit small wireless facilities to "freeways" and "principle arterial" streets, and if any other "lower priority" location is proposed, the applicant must demonstrate that a higher priority location "is not available for use." *See* § 390.3(C). In addition to the fact that no clear criteria is identified for how the City will determine whether this demonstration is adequate, it fundamentally exceeds the City's authority. As the FCC made clear, T-Mobile must be permitted to deploy facilities to achieve its service goals, including densifying its network or even to improve existing service. The mere fact that a higher priority location may be "available to use" does not mean that the locations the City seeks to prioritize will allow providers to achieve their service goals. Moreover, whether a location on a higher priority location is available is unrelated to providing service. The FCC has made clear that prior regulatory approaches that sought to limit wireless facility deployment to areas that the local government considered "good enough" conflicts with federal law. The Proposed Standards cannot limit T-Mobile to certain locations.

The Proposed Standards Improperly Dictate Technology and Network Design

Numerous provisions in the Proposed Standards effectively dictate the equipment, technology, and network design of T-Mobile and other providers. For example, the limits on equipment dimensions and prohibition on panel antennas both explicitly and effectively dictate T-Mobile's choice of equipment and technology. Likewise, as discussed above, the City's attempt to limit small wireless facilities to certain streets or areas is dictating network design.

The FCC and courts have made clear that local governments are preempted from dictating equipment and technology choices. (*See, e.g., N.Y. SMSA Ltd. P'ship v. Town of Clarkstown,* 612 F.3d 97, 105 (2d Cir. 2010); *Decl. Ruling* ¶ 40, n.95 (local governments "ill-qualified" to inquire into and regulate services offered).) Indeed, in the *Declaratory Ruling*, the FCC made clear that local governments cannot "dictate the design of a provider's network." *Decl. Ruling* ¶ 37, n.84; *see also Clarkstown,* 612 F.3d at 105.

The Proposed Standards Lack Critical Definitions

The Proposed Standards lack definitions for key terms, and the scope of the definitions could impact whether the Proposed Standards are lawful. Notably, the Proposed Standards refer to "Network Provider," "Wireless Facilities," "Network Node," and "Network Antennas." These terms are capitalized and trigger various requirements. Yet, there is no definition of any of these terms. The scope of "Wireless Facilities," for example, could have a significant impact on whether certain requirements are lawful or reasonable.

The Proposed Standards Are Not Objective

As noted above, the FCC has clarified that for a local government aesthetics-based regulation to be lawful, it must be "objective." The FCC explained that such regulations "must incorporate clearly-defined and ascertainable standards, applied in a principled manner. . . ." (*Decl. Ruling* ¶ 88.) The FCC emphasized that regulations that "require applicants to guess at what types of deployments will pass aesthetic muster" are not objective. (*Id.*)

The Proposed Standards violate this critical requirement. In multiple provisions the Proposed Standards impose wholly subjective, undefined, and discretionary "standards." T-Mobile and other providers cannot know in advance if their proposed installation will be granted because the "standard" is fundamentally subjective and dependent on the judgment of members of the City.

The Proposed Standards Violate 47 U.S.C. § 1455(a)

Finally, the Proposed Standards have several provisions that improperly limit future modifications. Section 6409(a) of the Middle Class Tax and Jobs Creation Act, 47 U.S.C. 1455(a), provides that local governments cannot deny and must grant eligible facilities requests that do not significantly increase the physical dimensions of the existing tower or base station.

The FCC has adopted objective definitions of what constitutes a significant increase. 47 C.F.R. § 1.40001. Sections 390.5(A)(2)(f) and (B)(12) violate Section 6409(a).

T-Mobile Looks Forward to Further Development of the Proposed Standards

T-Mobile believes that the City shares T-Mobile's desire for modernized regulations that, consistent with federal law, are conducive to the deployment of the small wireless facilities – including next-generation 5G technology – in the City. T-Mobile appreciates the opportunity for input that the City and its staff have provided, and hopes that the City will carefully consider the concerns raised in this letter – and in the accompanying section-by-section comments on the Proposed Standards – in order to achieve that goal. T-Mobile looks forward to further dialogue on the Proposed Standards. If the City wishes to discuss the Proposed Standards or T-Mobile's concerns, please do not hesitate to contact the undersigned.

Very truly yours,

Davis Wright Tremaine LLP

Alan J. Galloway

Alan J. Galloway

Enclosure

Design and Construction Standards

390. Small Wireless Facilities Design & Construction Standards

390.1. Permitting Process

A. A Network Provider shall comply with the following permitting process when seeking to install Wireless Facilities in the public right-of-way (ROW):

1. Obtain a City of Hillsboro franchise and/or ROW license;
2. File a Type II land use application, where applicable; and
3. Obtain a Public Improvement Permit (PIP)

390.2. General Provisions

A. Wireless Facilities, for the purposes of these standards, includes any pole, conduit/cabling, cabinets, equipment or other materials used in the installation of a wireless network.

B. A Network Provider shall construct and maintain Wireless Facilities in a manner that does not:

1. Obstruct, impede or hinder the usual travel or public safety on the Public Right-of-Way:
2. Obstruct the legal use of the Public Right-of-Way by other providers;
3. Violate or conflict with any Laws, including but not limited to the City of Hillsboro ordinances or standards;
4. Obstruct, impede, or hinder any operations of the City's infrastructure or systems (existing or future), including but not limited to Smart City equipment, street light equipment, traffic signal equipment, etc.
5. Any items installed after the initial application will require an additional approval process with the City. All new and existing equipment will be required to comply with any currently adopted standards at the time of installation.

C. In locations where a new pole is installed, the City requires the pole be designed to internally conceal and hold all Wireless Facilities equipment. In instances where an existing pole is located in the desired location, and the existing pole is deemed structurally sound to support the proposed network equipment, the Wireless Facilities may attach to the existing pole so long as every effort is made to conceal the equipment inside the pole. In the event the proposed equipment cannot reasonably fit within the existing pole itself, and with the approval of the City , the Wireless Facilities shall be concealed or enclosed in one (1) equipment box, cabinet or other unit that may include ventilation openings.

1. Poles and associated wireless facilities equipment shall be prepared and powder coated consistent with 00593 of the *Oregon Standard Specifications for Construction.*

D. Any newly installed street light poles shall be PGE Option C.

Commented [DWT1]: If this is not required of all other telecom providers in ROW it is discriminatory in violation c Section 253 of the Communications Act

Commented [DWT2]: What is the definition of "wireless network"? Does this transform pre-existing wires in ROW that are used to provide backhaul, for example, into "wireles facilities"?

Commented [DWT3]: Facilities lawfully installed should be lawful non-conforming uses The City cannot impose requirements after the fact that create non-compliance

Commented [DWT4]: This assumes that structural soundness is the only issue; and who will "deem" the answer? Pole owners may have other safety standards that may prohibit use of poles that have certain other types of attachments already

Commented [DWT5]: This simply makes no sense for existing utility poles It is also discriminatory

Commented [DWT6]: Everything cannot fit in one box. For example there may be required electric meters and/or cut-off switches

Exhibit "A"

Design and Construction Standards

E. There shall be no surface mounted conduit or exposed wiring on any exterior surface of the supporting pole.

F. There shall be no more than one (1) Network Node on any one (1) Pole.

G. A Network Node installed on a street light pole must connect to the same power source supplying power for the street light.

H. Aerial cable spans and/or aerial span power connections are not permitted.

I. Network Provider installations are limited within the public right-of-way to installation on:

1. Street light poles (City of Hillsboro Owned)
2. Existing public utility poles
3. Network Provider installed poles, which will require a separate land use approval process. See City of Hillsboro Municipal Code for additional information.

J. Complete Construction plans for the proposed infrastructure must be submitted through a PFI permit application and bundled into a single PDF file, formatted to 11"x 17" sheets, sealed by a Professional Engineer licensed in the State of Oregon, and including:

1. Each pole represented by a set of plans within the overall file, designed so that if any single pole is removed from the application, the remaining plan set remains valid. Overall sheets including details & notes are encouraged.
2. Structural analysis for each identified pole sealed by a Professional Engineer in the State of Oregon indicating the pole and foundation can handle the proposed equipment load, and where and existing pole is utilized, any existing loading. Foundations must also be approved by pole owner.
3. Electrical load analysis showing that the existing transformer, circuit and any associated wiring can handle the additional power load from the proposed equipment, or any proposed upgrades as needed. Wiring shall be sized to limit voltage drops to a maximum of 2 percent between the utility service connection and the control panel, and a maximum of 3 percent from the control panel to the most distant fixture served. Submit an electronic file of the voltage drop/line loss calculations for City approval.
4. Each plan set shall include the following:

a) A cover sheet containing a scaled City map including all pole locations included in the subject application, a list of each pole location including GPS coordinate, PGE or City pole ID (where applicable), and a legend of all sheets.

Commented [DWT7]: This is how wires are attached to utility poles It is standard procedure To prohibit for "wireless" is discriminatory

Commented [DWT8]: There is no definition of Network Node

Commented [DWT9]: This is between PGE and the provider not the City to dictate

Commented [DWT10]: This is discriminatory If there are existing aerial lines then new aerial lines must be allowed

Commented [DWT11]: If not imposed on other companies that install utility poles in the ROW this is discriminatory in violation of federal law

Commented [DWT12]: In our experience, this is not required of any other ROW pole attacher It is thus unlawfully discriminatory

Commented [DWT13]: Also not required of any other attaching party This is not within the City's authority to regulate

b) A page for each specific pole location referenced with pole title, name, location information, PGE pole ID (where applicable), and photograph of the proposed location of the pole.

Commented [DWT14]: Why? Photographs are for subjective, not objective regulations

c) "Required Notes for Each set of Pole Plans" only if unique to the location and as such cannot be part of Overall sheet notes.

d) Labeled and dimensioned site plan and elevation plan, including the following as applicable:

i. Key symbols, ROW lines, property lines, etc.
ii. Street information including names, curb-lines, sidewalk, street amenities, vegetation, existing and proposed utilities
iii. Identification of immediately adjacent property owner(s) and/ or easements
iv. Structural Plans for pole and associated foundations that reference structural calculations and include depth, diameter, grounding, reinforcing, and foundation information as necessary
v. Labeled construction materials, color, finish, etc.
vi. Pole dimensions and total max height from adjacent grade
vii. Size and dimension of any projection(s) from pole
viii. Proposed voltage, maximum transmission wattage and radio frequency for all equipment associated with each Network Node, as allowed under FCC regulations
ix. Detail of proposed communication conduit and electrical connection location
x. Typical conduit / duct bank installation section detail
xi. All existing utilities, including but not limited to:
    A. Storm & Sanitary Sewer pipes and appurtenances
    B. Any utilities 24" and greater depicted as double-lines
    C. Gas line (indicate size, High Pressure, services, etc).
    D. Electric lines (indicate power pole number, anchor pole, overhead line, and duct bank in actual dimensions)
    E. Water infrastructure including valves, fire hydrants, etc.
    F. Adjacent private service line locations where known

e) Certification for each proposed site showing the wireless facility operates within radio frequency exposure guidelines as established by the FCC.

Commented [DWT15]: In our experience, this level of requirement is not required of other ROW occupants and is therefore unlawfully discriminatory

K. Once installation is completed, the applicant is required to provide the City with a complete set of as-built drawings meeting the same information and requirements as the application set outlined in item K of this section, but updated for any approved changes that occurred in the field.

390.3. Location

Exhibit "A"

Design and Construction Standards

A. All Wireless Facilities shall be located to avoid any physical or visual obstruction to pedestrian or vehicle traffic, or in any manner create safety hazards to pedestrians, bicyclists or motorists.

B. All Wireless Facilities shall be positioned to not encroach or effectively narrow the clear path of any pedestrian, bicycle, or roadway facility.

C. Wireless facilities proposed to be sited in the ROW shall be sited according to the following priorities, in descending order of preference. If the priority is not followed, the owner must demonstrate why a higher priority is not available for use. For purposes of this subsection, streets shall have the classification set forth in the Hillsboro Transportation System Plan.

1. First priority: freeways;
2. Second priority: arterials;
3. Third priority: collectors;
4. Fourth priority: neighborhood routes;
5. Fifth priority: local streets.

390.4. Separation

A. The separation between Network Provider (i.e. those not owned by the City of Hillsboro or it's agency partners) installed Wireless Facilities shall be a minimum of two-hundred fifty (250) feet.

B. The separation between Wireless Facilities and City of Hillsboro or its agency partners owned/operated Smart City technology shall be a minimum of two-hundred fifty (250) feet.

C. In residential areas, the Wireless Facilities shall be located where the shared property line between two residential parcels intersects the Public Right-of-Way.

D. In no instance shall a Wireless Facility be located in front of a building entrance or exit.

390.5. Wireless Facilities

A. Cabinets and Equipment

1. Where Wireless Facilities are installed in the location of an existing street light, and the additional structural load cannot be accommodated by the existing street light pole and foundation, a new street light pole and foundation shall be installed and all equipment shall be concealed and located inside the pole, except for the antenna.
2. Where Wireless Facilities are installed and the additional structural load can be accommodated by the existing street light pole and foundation, every effort must be made to conceal the equipment inside the pole. In instances where the proposed equipment cannot reasonably be accommodated within the existing pole, the Wireless

Commented [DWT16]: How are these different? Wireless installations in ROW should be subject to standard, generally applicable standards governing sight lines, traffic, and safety

Commented [DWT17]: The City cannot attempt to restrict wireless installations to certain streets, nor can the City insert itself as adjudicator of what is "available for use." The City's approach assumes that the City can restrict wireless to the least feasible technological solution

First, the requirement is discriminatory because these limits are not imposed on any other telecom provider in the ROW

Second, the FCC has made clear that T-Mobile and others must be allowed to densify its network, for example. That means that the City cannot dictate that wireless facilities are excluded unless T-Mobile has no other available option in the City's opinion

Commented [DWT18]: There is no basis for the 250 foot separation. It is discriminatory and will effective prohibit the provision of service

It is also ambiguous how this will be applied

Commented [DWT19]: Same problem with separation distances; also this is based on apparently attempt to regulate RF interference which is solely in FCC authority

Commented [DWT20]: Does this only apply to new poles? If there is an existing pole in the location then it is discriminatory and unreasonable to prohibit use of that pole. Likewise, if the City has allowed other providers to install poles in such locations (in front of building) then it is unlawfully discriminatory to prohibit "wireless" providers from doing the same

Facilities shall be concealed or enclosed in an equipment box, cabinet or other unit that may include ventilation openings as follows:

a. The Network Provider is limited to one (1) equipment box or cabinet per pole per installation. All other equipment must be located either within the pole itself, or in a below ground vault.

b. The Network Provider shall not install ground mounted cabinets or other equipment without written City approval.

c. The base of all cabinets and equipment attached to poles shall be installed at least eight (8) feet above the ground, and if a Network Node attachment is projecting toward the street and/or bicycle facilities, for the safety and protection of the public and vehicular traffic, the base of the attachment shall be installed no less than seventeen (17) feet above the bicycle facility and/or street.

d. Protrusions from the outer circumference of the pole shall be no more than eighteen (18) inches and twenty four (24) inches in height.

e. The color of all cabinets and equipment shall match pole color.

f. The total volume of all installed equipment external to the pole (including, but not limited to cabinets, vaults, boxes, antennas) shall not exceed twenty-one (21) cubic feet. This maximum applies to all equipment installed at the time of original application, and including any equipment to be installed at a future date. If a Network Provider wishes to install equipment that exceeds this maximum, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

g. Equipment shall be orientated away from nearby residential windows, doorways and entrances.

h. Where permitted, equipment located on poles must be attached with stainless steel banding, powder coated to match pole, and sized to support the required equipment load.

B. Antennas

1. Network Antennas shall be built into any newly installed poles.

2. Where the Network Provider has demonstrated an existing pole can be used, the antenna must be painted to match the existing pole.

3. Antennas shall not exceed:

   a. Maximum five (5) feet in height or 10% of the pole height, whichever is less; and

   b. Maximum diameter/width of nine (9) inches or pole diameter at mounting location, whichever is less

Commented [DWT21]: As noted above, this "single box" requirement is unrealistic and will prevent the provision of service.

Commented [DWT22]: What will criteria for City review?

Commented [DWT23]: The City cannot dictate technology in this manner by limiting the dimensions

Commented [DWT24]: This conflicts with federal definition of a small wireless facility and is unreasonably limiting.

Commented [DWT25]: This violates Section 6409 (47 U.S.C. § 1455(a)). The City cannot deny future modifications unless they exceed the objective parameters defined by the FCC (47 C.F.R. § 1.40001).

Commented [DWT26]: This makes no sense. The "macro" standards were designed for and assume an installation on a tower on private property, not on poles in the ROW

Commented [DWT27]: What is a "network antenna"? No definition is provided

Commented [DWT28]: Providers cannot install antennas inside a wooden utility pole

Commented [DWT29]: Is this a reference to height above the pole? Or size of the antenna?
Also this may conflict with clearance standards imposed by NESC or the pole owner, which frequently exceeds 4 feet

Commented [DWT30]: The City cannot effectively dictate technology by limiting the dimensions in this manner

c. If a network provider wishes to install an antenna that exceeds these limitations, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

4. Network Antenna placement shall not impair light, air or views from adjacent windows.

5. For Equipment that include a GPS antenna, integrate the GPS antenna into the same cylindrical shape on top of the main antenna in order to form the appearance of a single unit.

6. Antennas shall use electronic tilt mechanisms.

7. Use single element side-arm or top-mount cylindrical antennas.

8. Panel antennas are not permitted.

9. Side-mounted antennas shall use flange or channel mountingarm to conceal all cabling and passive radio frequency equipment.

10. For top-mounted antennas, use a shroud around the base of the antenna, especially for antennas models with four or more cabling ports. If a shroud cannot be used, utilize cable ties (or similar) to neatly arrange cabling and note such on the site completion checklist on the cover sheet of the plans.

11. Pole top antenna mounts shall not be offset from pole.

12. Only one (1) antenna shall be allowed per pole. If a Network Provider wishes to upgrade or replace their antenna at any point during their permitted use of the right-of-way, they must remove any existing antenna so the maximum number of antennas at any time does not exceed one (1).

390.6. Network Provider Installed Poles

A. A Network Provider installed pole is defined as any pole installed by the Network Provider. This can be either to replace an existing pole in its current location that cannot structurally support the Wireless Facilities, or a pole installed in a new location where it can be shown that no existing location can be utilized.

1. Structural calculations shall take into account anticipated sign loading of 10.3 square feet, with centroid of sign located at 9.8 feet from base of pole.

B. New Network Provider installed poles must be designed to be consistent in size, color, and character with the existing street lighting within the project area and/or block face. This includes tapering the poles so they have the appearance of street lighting poles.

C. Network Provider poles that are installed to replace or supplement existing street lighting must be submitted with an accompanying photometric analysis that meets Subsection 350 of the latest version of the *City of Hillsboro Design and Construction Standards*. The photometric analysis must be sealed by a Professional Engineer in the State of Oregon.

Commented [DWT31]: These standards are not objective are discriminatory, and not reasonable They therefore violate Section 253.

Commented [DWT32]: 1 This is discriminatory This is not imposed on the existing pole.
2 How is "impair" defined?

Commented [DWT33]: Can't dictate technology and equipment choices

Commented [DWT34]: Can't have a blanket prohibition on technology.

Commented [DWT35]: Effectively dictating technology, which the City is preempted from doing

Commented [DWT36]: 1. This violates Section 6409
2 There is no basis for such a limit

Commented [DWT37]: This is unlawfully discriminatory other utilities regularly replace utility poles to accommodate new equipment The City does not treat them in this manner

Commented [DWT38]: Since this would include replacement utility poles, it is requiring a complete change i the nature of the pole, but T-Mobile doesn't own or control those existing poles

D. The maximum diameter of any Network Provider installed pole shall not exceed three feet (3').

E. Network Provider installed pole set back from curbs, offset from driveways and offset from street trees shall be directed by City.

F. Network Provider installed poles and accessory equipment shall not be located within 10 feet of any energized line. Installation shall conform to OAR 437-0020047 and 437-002-2316.

G. New Network Provider installed poles shall be designed so they do not interfere or conflict with existing building overhangs and awnings.

H. Network Provider installed poles shall use breakaway technolog

390.7. Electrical Service

A. The Network Provider shall be responsible for coordinating with the City of Hillsboro for electrical service connection to the Wireless Facility.

B. Provide separate disconnect for Wireless Facility in junction box adjacent to pole.

C. All electrical service conduit and wiring shall be located underground, and inside pole.

D. A Network Provider shall not allow or install generators or backup generators.

390.8. Logo, Decals, Flashing Lights, and RF Warning Sticker

A. The Network Provider shall post its name, identifying information, permit number and 24 - hour emergency telephone number in an area of the Wireless Facility that is visible to the public. Signage required under this section shall not exceed two (2) inches by four (4) inches, unless otherwise required by law (e.g. RF ground notification signs).

1. Place the identifying information on the side of the enclosure facing on-coming vehicle traffic for the side of the road where the equipment is installed. Consider combining with disconnect information.

2. Use sticker colors that are muted (e.g. tan), complementary or the same color as the equipment but with white colored lettering.

3. Utilize the smallest and lowest visibility (e.g. yellow instead of blue) radio-frequency (RF) warning sticker required by government or electric utility regulations. Place the RF sticker as close to the antenna as possible, facing directly out toward the street, or directly away from the street if there is no window or doorway within twenty-five (25) feet of the pole (preferred).

B. All equipment manufacturer decals shall be removed. Except as required by Law or by the Utility Pole owner, Network Provider shall not post any signage or advertising on the Wireless Facilities.

Commented [DWT39]: Not objective; wholly subjective and "secret"

Commented [DWT40]: No basis for this separation requirement; NESC clearance is much smaller.

Commented [DWT41]: These are not monopoles. What i "breakaway" technology for a street light sized pole?

Commented [DWT42]: Doesn't work for utility poles

Commented [DWT43]: These are all governed by federal laws

C. Equipment shall not have static or flashing light that are visible when the enclosures are closed.

D. Equipment related features (e.g. cooling system fans) shall not exceed a 50 decibels during the day and 40 decibels at night.

Commented [DWT44]: Only existing generally-applicable noise ordinance levels should apply 50 decibels is unrealistically quiet. Ambient sound will be at least that loud

390.9 Conduit and Cabling

A. Electrical systems for Wireless Facilities located within the City and/or PGE owned street light poles shall be contained in a dedicated conduit labeled to identify its dedicated use for Wireless Facilities.

B. All underground conduit runs must be marked with an underground marking tape per 00960.42(e) of the *Oregon Standard Specifications for Construction* and contain locate wires.

C. All conduits shall be Schedule 40 PVC or HDPE depending on installation method.All elbows shall be fiberglass.

D. Install bushings on all conduit ends and seal the ends with an approved conduit plug.

E. All underground conduit must be located in the public utility easement (PUE) where available.

WPG WIRELESS POLICY GROUP LLC

January 15, 2019

Via Email: Andrew Bartlett, Management Analyst, City Manager's office
andrewb@ci.hillsboro.or.us

The Honorable Steve Callaway, Mayor
Hillsboro City Council
150 E. Main Street
Hillsboro, Oregon 97123

Re: Hillsboro Small Wireless Facilities Ordinances and Resolutions

Dear Mayor Callaway and Councilors:

I am reaching out on behalf of Verizon Wireless regarding the proposed Small Wireless Facility Design Standards and Fee Resolutions scheduled for hearing on January 15, 2019.

Resolution No. 2619 – Fees for Small Wireless Facilities in the Public Right of Way

While Verizon agrees with the attempt at cost-based methodology, we would ask that the City consider this important matter more thoroughly before implementation. There has simply not been enough time for a thorough explanation and consideration of the costs included in the fees. The suggested fees of $3,000 permit fee and $1,700 annual attachment fee are higher than other cost-based jurisdictions, and far higher than the presumptively reasonable rates of a $100 permit fee and $270 Annual ROW/attachment fee in the FCC's Order (FCC 18-133). High permitting and attachment costs will hinder Verizon's ability to deploy 5G and small cell technology in Hillsboro.

Resolution No. 2620 – Design and Construction Standards for Small Wireless Facilities

The design standards in Exhibit "A" to the Resolution were apparently developed with little input from industry representatives. Verizon would request that the Council continue this matter to provide an opportunity for industry representatives to meet with the City. Verizon would appreciate the chance to discuss the technical and feasibility challenges the design standards present and to assist in developing durable regulations that provide an efficient path forward to bring this new technology to Hillsboro, in a thoughtful manner that addresses the community's aesthetic values and complies with the recent Federal Communications Commission Order ("Order"). [1] A redline of Verizon's proposed edits are attached for your consideration.

[1] Accelerating Wireless and Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, Declaratory Ruling and Third Report and Order, WT Docket No. 17-79, WC Docket No. 17-84, FCC 18-133 (rel Sept. 27, 2018); 83 Fed. Reg. 51867 (Oct. 15, 2018).

PO Box 34628 - #75604
Seattle, WA 98124
kim.allen@wirelesspolicy.com
www.wirelesspolicy.com
t 425.628.2666
f 206.219.6717

Upon initial review, the design standards are technically problematic in a number of aspects and place unworkable prohibitions on the choice of facilities and equipment a carrier deploys in direct contravention of the Order's mandate a locality's specification of the "means or facilities" through which a provider must offer service, as an unlawful prohibition.[2]

One example is the requirement that panel antennas are not permitted. Antennas for millimeter wave spectrum cannot be placed in a shroud because the shroud itself would block the 5G signal, so small panel antennas are required. Also unworkable, at least on a wood utility pole, is the requirement that protrusions from the outer circumference of the pole cannot be more than 18". NESC code requires at least a 6" set-off from the wood pole to maintain climbability. As a result, this requirement of 18" effectively forecloses the current Verizon cabinet design, which is 22 inches deep.

Summary

In view of the identified challenges with the standards and fees, Verizon would appreciate the time and opportunity to work through these issues with staff before the resolutions are brought back at a later time to the Council for action. A Verizon representative will be at the meeting on January 15 to answer any questions you might have.

Sincerely,

Kim Allen, Senior Vice President
Wireless Policy Group, LLC
Representative for Verizon Wireless

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[2] FCC Order, para. 37 and footnote 87.

Exhibit "A"

Design and Construction Standards

390.Small Wireless Facilities Design & Construction Standards

390.1. Permitting Process

A. A Network Provider shall comply with the following permitting process when seeking to install Wireless Facilities in the public right-of-way (ROW):

1. Obtain a City of Hillsboro franchise and/or ROW license;
2. File a Type II land use application, where applicable; and
3. Obtain a Public Improvement Permit (PIP)

390.2. General Provisions

A. Wireless Facilities, for the purposes of these standards, includes any pole, conduit/cabling, cabinets, equipment or other materials used in the installation of a wireless network.

B. A Network Provider shall construct and maintain Wireless Facilities in a manner that does not:

1. Obstruct, impede or hinder the usual travel or public safety on the Public Right-of-Way:
2. Obstruct the legal use of the Public Right-of-Way by other providers;
3. Violate or conflict with any Laws, including but not limited to the City of Hillsboro ordinances or standards;
4. Obstruct, impede, or hinder any operations of the City's infrastructure or systems (existing or future), including but not limited to Smart City equipment, street light equipment, traffic signal equipment, etc.
5. Any items installed after the initial application will require an additional approval process with the City. All new and existing equipment will be required to comply with any currently adopted standards at the time of installation.

C. In locations where a new pole is installed, the City requires the pole be designed to internally conceal and hold all Wireless Facilities equipment. In instances where an existing pole is located in the desired location, and the existing pole is deemed structurally sound to support the proposed network equipment, the Wireless Facilities may attach to the existing pole so long as every effort is made to conceal the equipment inside the pole. In the event the proposed equipment cannot reasonably fit within the existing pole itself, and with the approval of the City , the Wireless Facilities shall be concealed or enclosed in one (1) equipment box, cabinet or other unit that may include ventilation openings.

1. Poles and associated wireless facilities equipment shall be prepared and powder coated consistent with 00593 of the *Oregon Standard Specifications for Construction.*

D. Any newly installed street light poles shall be PGE Option C.

Commented [KA1]: This type of decision allows an appeal to the planning commission with a de novo hearing with extensive public notice. All approvals, including appeals, must conclude within the time allowed under the shot clock. This would be unworkable with this type of land use review.

Commented [KA2]: With Verizon's small wireless facility design, antennas and equipment cannot fit within a single box.

E. There shall be no surface mounted conduit or exposed wiring on any exterior surface of the supporting pole.

F. There shall be no more than one (1) Network Node on any one (1) Pole.

G. A Network Node installed on a street light pole must connect to the same power source supplying power for the street light.

H. Aerial cable spans and/or aerial span power connections are not permitted.

I. Network Provider installations are limited within the public right-of-way to installation on:

1. Street light poles (City of Hillsboro Owned)
2. Existing public utility poles
3. Network Provider installed poles, which will require a separate land use approval process. See City of Hillsboro Municipal Code for additional information.

J. Complete Construction plans for the proposed infrastructure must be submitted through a PFI permit application and bundled into a single PDF file, formatted to 11"x 17" sheets, sealed by a Professional Engineer licensed in the State of Oregon, and including:

1. Each pole represented by a set of plans within the overall file, designed so that if any single pole is removed from the application, the remaining plan set remains valid. Overall sheets including details & notes are encouraged.
2. Structural analysis for each identified pole sealed by a Professional Engineer in the State of Oregon indicating the pole and foundation can handle the proposed equipment load, and where and existing pole is utilized, any existing loading. Foundations must also be approved by pole owner.
3. Electrical load analysis showing that the existing transformer, circuit and any associated wiring can handle the additional power load from the proposed equipment, or any proposed upgrades as needed. Wiring shall be sized to limit voltage drops to a maximum of 2 percent between the utility service connection and the control panel, and a maximum of 3 percent from the control panel to the most distant fixture served. Submit an electronic file of the voltage drop/line loss calculations for City approval.
4. Each plan set shall include the following:
   a) A cover sheet containing a scaled City map including all pole locations included in the subject application, a list of each pole location including GPS coordinate, PGE or City pole ID (where applicable), and a legend of all sheets.

Commented [KA3]: This is the only way to place conduit on a wood utility pole.

Commented [KA4]: How is this defined?

Commented [KA5]: In areas where there is existing aerial fiber, SWF's should be able to deploy fiber in the same way as other infrastructure in the right of way,

Commented [KA6]: This process must be completed, including appeals, within 90 days of the initial submittal. What process does the city propose for these applications?

b) A page for each specific pole location referenced with pole title, name, location information, PGE pole ID (where applicable), and photograph of the proposed location of the pole.

c) "Required Notes for Each set of Pole Plans" only if unique to the location and as such cannot be part of Overall sheet notes.

d) Labeled and dimensioned site plan and elevation plan, including the following as applicable:

i. Key symbols, ROW lines, property lines, etc.
ii. Street information including names, curb-lines, sidewalk, street amenities, vegetation, existing and proposed utilities
iii. Identification of immediately adjacent property owner(s) and/ or easements
iv. Structural Plans for pole and associated foundations that reference structural calculations and include depth, diameter, grounding, reinforcing, and foundation information as necessary
v. Labeled construction materials, color, finish, etc.
vi. Pole dimensions and total max height from adjacent grade
vii. Size and dimension of any projection(s) from pole
viii. Proposed voltage, maximum transmission wattage and radio frequency for all equipment associated with each Network Node, as allowed under FCC regulations
ix. Detail of proposed communication conduit and electrical connection location
x. Typical conduit / duct bank installation section detail
xi. All existing utilities, including but not limited to:
    A. Storm & Sanitary Sewer pipes and appurtenances
    B. Any utilities 24" and greater depicted as double-lines
    C. Gas line (indicate size, High Pressure, services, etc).
    D. Electric lines (indicate power pole number, anchor pole, overhead line, and duct bank in actual dimensions)
    E. Water infrastructure including valves, fire hydrants, etc.
    F. Adjacent private service line locations where known

e) Certification for each proposed site showing the wireless facility operates within radio frequency exposure guidelines as established by the FCC.

K. Once installation is completed, the applicant is required to provide the City with a complete set of as-built drawings meeting the same information and requirements as the application set outlined in item K of this section, but updated for any approved changes that occurred in the field.

390.3. Location

Design and Construction Standards

A. All Wireless Facilities shall be located to avoid any physical or visual obstruction to pedestrian or vehicle traffic, or in any manner create safety hazards to pedestrians, bicyclists or motorists.

B. All Wireless Facilities shall be positioned to not encroach or effectively narrow the clear path of any pedestrian, bicycle, or roadway facility.

C. Wireless facilities proposed to be sited in the ROW shall be sited according to the following priorities, in descending order of preference. If the priority is not followed, the [redacted] must demonstrate why a higher priority is not available for use. For purposes of this subsection, streets shall have the classification set forth in the Hillsboro Transportation System Plan.

Deleted: owner

1. First priority: freeways;
2. Second priority: arterials;
3. Third priority: collectors;
4. Fourth priority: neighborhood routes;
5. Fifth priority: local streets.

390.4. Separation

A. The separation between Network Provider (i.e. those not owned by the City of Hillsboro or it's agency partners) installed Wireless Facilities shall be a minimum of two-hundred fifty (250) feet.

B. The separation between Wireless Facilities and City of Hillsboro or its agency partners owned/operated Smart City technology shall be a minimum of two-hundred fifty (250) feet.

C. In residential areas, the Wireless Facilities shall be located where the shared property line between two residential parcels intersects the Public Right-of-Way, whenever feasible.

D. In no instance shall a Wireless Facility be located in front of a building entrance or exit.

Commented [KA7]: If there is an existing pole at that location, why would a SWF be treated differently than that existing infrastructure, in violation of the FCC Order's requirement that SWF regulations be no more burdensome than other infrastructure in the ROW.

390.5. Wireless Facilities

A. Cabinets and Equipment

1. Where Wireless Facilities are installed in the location of an existing street light, and the additional structural load cannot be accommodated by the existing street light pole and foundation, a new street light pole and foundation shall be installed and all equipment shall be concealed and located inside the pole, except for the antenna.

2. Where Wireless Facilities are installed and the additional structural load can be accommodated by the existing street light pole and foundation, every effort must be made to conceal the equipment inside the pole. In instances where the proposed equipment cannot reasonably be accommodated within the existing pole, the Wireless

Facilities shall be concealed or enclosed in an equipment box, cabinet or other unit that may include ventilation openings as follows:

a. The Network Provider is limited to one (1) equipment box or cabinet per pole per installation. All other equipment must be located either within the pole itself, or in a below ground vault.

b. The Network Provider shall not install ground mounted cabinets or other equipment without written City approval.

c. The base of all cabinets and equipment attached to poles shall be installed at least eight (8) feet above the ground, and if a Network Node attachment is projecting toward the street and/or bicycle facilities, for the safety and protection of the public and vehicular traffic, the base of the attachment shall be installed no less than seventeen (17) feet above the bicycle facility and/or street.

d. Protrusions from the outer circumference of the pole shall be no more than eighteen (18) inches and twenty four (24) inches in height.

e. The color of all cabinets and equipment shall match pole color as closely as technically feasible.

f. The total volume of all installed equipment external to the pole (including, but not limited to cabinets, vaults, boxes, antennas) shall not exceed twenty-one (21) cubic feet. This maximum applies to all equipment installed at the time of original application, and including any equipment to be installed at a future date. If a Network Provider wishes to install equipment that exceeds this maximum, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

g. Equipment shall be orientated away from nearby residential windows, doorways and entrances.

h. Where permitted, equipment located on poles must be attached with stainless steel banding, powder coated to match pole, and sized to support the required equipment load.

B. Antennas

1. Network Antennas shall be built into any newly installed poles.

2. Where the Network Provider has demonstrated an existing pole can be used, the antenna must be painted to match the existing pole.

3. Antennas shall not exceed:

   a. Maximum five (5) feet in height or 10% of the pole height, whichever is less; and

   b. Maximum diameter/width of nine (9) inches or pole diameter at mounting location, whichever is less

Commented [KA8]: Radios cannot be vaulted in the PNW due to the high moisture levels and vault flooding, which corrodes the equipment.

Commented [KA9]: The Verizon 4G cabinet is 22 inches deep. The set off to keep the pole climbable is typically 6 inches. This standard is not workable.

Commented [KA10]: This volumetric limitation is inconsistent with the FCC Order's allowance of an unlimited number of 3 CF antennas and 28 CF of other equipment.

Commented [KA11]: These restrictions are entirely inconsistent with the FCC Order, that allows an unlimited number of 3 CF antennas on a pole

Commented [KA12]: What does this mean?

Commented [KA13]: 5G antennas cannot be painted or shrouded. This would be an effective prohibition of 5G in Hillsboro.

c. If a network provider wishes to install an antenna that exceeds these limitations, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

4. Network Antenna placement shall not impair light, air or views from adjacent windows.

5. For Equipment that include a GPS antenna, integrate the GPS antenna into the same cylindrical shape on top of the main antenna in order to form the appearance of a single unit.

6. Antennas shall use electronic tilt mechanisms.

Commented [KA14]: What is the aesthetic rationale for this?

7. Use single element side-arm or top-mount cylindrical antennas.

8. Panel antennas are not permitted.

Commented [KA15]: Verizon's design relies on panel antennas for all 5G and some 4G deployments. This regulation will result in an effective prohibition of service and will unreasonably discriminate against one carriers design, in violation of the Telecommunications Act of 1996

9. Side-mounted antennas shall use flange or channel mountingarm to conceal all cabling and passive radio frequency equipment.

10. For top-mounted antennas, use a shroud around the base of the antenna, especially for antennas models with four or more cabling ports. If a shroud cannot be used, utilize cable ties (or similar) to neatly arrange cabling and note such on the site completion checklist on the cover sheet of the plans.

11. Pole top antenna mounts shall not be offset from pole.

12. Only one (1) antenna shall be allowed per pole. If a Network Provider wishes to upgrade or replace their antenna at any point during their permitted use of the right-of-way, they must remove any existing antenna so the maximum number of antennas at any time does not exceed one (1).

Commented [KA16]: This is wholly inconsistent with existing federal law and the new FCC Order

390.6. Network Provider Installed Poles

A. A Network Provider installed pole is defined as any pole installed by the Network Provider. This can be either to replace an existing pole in its current location that cannot structurally support the Wireless Facilities, or a pole installed in a new location where it can be shown that no existing location can be utilized.

1. Structural calculations shall take into account anticipated sign loading of 10.3 square feet, with centroid of sign located at 9.8 feet from base of pole.

B. New Network Provider installed poles must be designed to be consistent in size, color, and character with the existing street lighting within the project area and/or block face. This includes tapering the poles so they have the appearance of street lighting poles.

C. Network Provider poles that are installed to replace or supplement existing street lighting must be submitted with an accompanying photometric analysis that meets Subsection 350 of the latest version of the *City of Hillsboro Design and Construction Standards*. The photometric analysis must be sealed by a Professional Engineer in the State of Oregon.

D. The maximum diameter of any Network Provider installed pole shall not exceed three feet (3').

E. Network Provider installed pole set back from curbs, offset from driveways and offset from street trees shall be directed by City.

F. Network Provider installed poles and accessory equipment shall not be located within 10 feet of any energized line. Installation shall conform to OAR 437-002-0047 and 437-002-2316.

G. New Network Provider installed poles shall be designed so they do not interfere or conflict with existing building overhangs and awnings.

H. Network Provider installed poles shall use breakaway technology.

390.7. Electrical Service

A. The Network Provider shall be responsible for coordinating with the City of Hillsboro for electrical service connection to the Wireless Facility.

B. Provide separate disconnect for Wireless Facility in junction box adjacent to pole.

C. All electrical service conduit and wiring shall be located underground, and inside pole.

D. A Network Provider shall not allow or install generators or backup generators.

390.8. Logo, Decals, Flashing Lights, and RF Warning Sticker

A. The Network Provider shall post its name, identifying information, permit number and 24 - hour emergency telephone number in an area of the Wireless Facility that is visible to the public. Signage required under this section shall not exceed two (2) inches by four (4) inches, unless otherwise required by law (e.g. RF ground notification signs).

1. Place the identifying information on the side of the enclosure facing on-coming vehicle traffic for the side of the road where the equipment is installed. Consider combining with disconnect information.

2. Use sticker colors that are muted (e.g. tan), complementary or the same color as the equipment but with white colored lettering.

3. Utilize the smallest and lowest visibility (e.g. yellow instead of blue) radio-frequency (RF) warning sticker required by government or electric utility regulations. Place the RF sticker as close to the antenna as possible, facing directly out toward the street, or directly away from the street if there is no window or doorway within twenty-five (25) feet of the pole (preferred).

B. All equipment manufacturer decals shall be removed. Except as required by Law or by the Utility Pole owner, Network Provider shall not post any signage or advertising on the Wireless Facilities.

C. Equipment shall not have static or flashing light that are visible when the enclosures are closed.

D. Equipment related features (e.g. cooling system fans) shall not exceed a 50 decibels during the day and 40 decibels at night.

390.9 Conduit and Cabling

A. Electrical systems for Wireless Facilities located within the City and/or PGE owned street light poles shall be contained in a dedicated conduit labeled to identify its dedicated use for Wireless Facilities.

B. All underground conduit runs must be marked with an underground marking tape per 00960.42(e) of the *Oregon Standard Specifications for Construction* and contain locate wires.

C. All conduits shall be Schedule 40 PVC or HDPE depending on installation method.All elbows shall be fiberglass.

D. Install bushings on all conduit ends and seal the ends with an approved conduit plug.

E. All underground conduit must be located in the public utility easement (PUE) where available.

Davis Wright Tremaine LLP

Suite 2400
1300 SW Fifth Avenue
Portland, OR 97201-5630

Alan J. Galloway
503.778.5219 tel
503.778.5299 fax

alangalloway@dwt.com

January 7, 2019

Via Email (Andrew.Bartlett@hillsboro-oregon.gov, Tina.Bailey@hillsboro-oregon.gov, Robby.Hammond@hillsboro-oregon.gov)

Robby Hammond, Assistant City Manager
Tina Bailey, Transportation Division Manager
Andrew Bartlett, Management Analyst
City of Hillsboro
150 Main Street
Civic Center, Fifth Floor
Hillsboro, OR 97123-4028

Re: T-Mobile's Comments on the City of Hillsboro's Proposed Small Wireless Fees

Dear Ms. Bailey and Messrs. Bartlett and Hammond:

T-Mobile West LLC ("T-Mobile") respectfully submits these comments on the fees proposed in the Staff Memo regarding "Small Wireless Facility Application and Annual Attachment Fee Proposal" that is scheduled for consideration at the January 8th Finance Committee meeting.

T-Mobile appreciates the City's recognition that under federal law as clarified by the Federal Communications Commission ("FCC") in its September 27, 2018 Declaratory Ruling, the City may charge only fees that recover the City's reasonable costs that are specifically related to and caused by the small wireless installation in the public rights of way. (Decl. Ruling ¶ 50, n.131.) Such fees must include only "objectively reasonable" costs, and the costs may be no higher than fees charges to other right of way installations regardless of technology. (Decl. Ruling ¶ 77; *id.* n. 231 (explaining that the nondiscrimination requires "neutral treatment and access of all technologies and communication providers based upon extent/nature of ROW use").)

Nonetheless, T-Mobile is concerned that the estimates used by Staff to develop the proposed fees are not reasonable. As discussed below, the estimates appear to include tasks that are not specifically related to and caused by the small wireless installation; the estimates significantly overstate the level of City staff involvement and activity; and the effective hourly rates used appear to be significantly overstated.

First, the tasks listed in the Staff Memo appear to significantly overstate the City's involvement. For example, for many decades the City has managed the installation of telecommunications and utility equipment in the public rights of way. Small wireless facilities

are not fundamentally different than those other installations. Indeed, in many instances, the equipment that T-Mobile and others will install will be identical in size or even smaller than the equipment installed on poles in the public rights of way by other companies. Accordingly, it is not correct that "[s]mall cell facilities will also require a unique permitting process to be developed," as the Staff Memo asserts. (Memo at 4.) Indeed, the nondiscrimination requirements of federal law prohibit the City from imposing on small wireless installations permitting requirements that are not imposed on other entities that install facilities in the public rights of way.

Similarly, the Staff Memo asserts that the City will have "additional costs" related to its ownership of lighting and wiring for the street light system. Staff's assertion that the "additional costs" that would normally be borne by PGE will make the City's costs "higher than most agencies." (Memo at 4.) Yet, there is no basis for that assertion that the City's costs will be higher than most agencies. In addition, to the extent that the Staff points to PGE as an example, to justify an annual fee of $1,700 per attachment, the Staff overlooks the fact that the annual attachment fee paid to PGE based on PGE's costs is in the neighborhood of $15/foot, not $1,700.

Looking specifically at the justification for the "Application Fee" – which is for each small cellular attachment – Staff has included "coordination with pole owners in the event it is not a city pole, coordination with PGE as needed" among other tasks. Yet, the relationship between the pole owner and T-Mobile is not a matter that the City needs to "coordinate." Thus, such costs are unreasonable. Moreover, the proposed application fee is the same regardless of whether the attachment is to a City-owned pole, third party-owned pole, or new pole installation, which may have very different tasks for City Staff.

Moreover, although the Memo does not provide much detail, it appears there is significant overcharge. For example, even accepting Staff's estimate of 25 hours for each small wireless installation for the sake of argument, for a $3,000 fee, that means Staff used an hourly rate of $120 per hour. It is unclear how that hourly fee was derived, because if it is applied across an entire year, it would mean the City personnel involved were making $240,000 per year. Based on the information in the "City of Hillsboro Pay Plan" available on the City's website,[1] such an annual amount is more than double the salary and benefits of most employees of the Building Department or Planning Department. For example, a "Step 8" Building Permit Technician makes $67,099 per year, or approximately $35/hr.[2]

There appears to be significant overstatement of costs embedded in the proposed Application Fee.

Likewise, the proposed "Annual Attachment Fee" includes tasks that are not reasonably related to the management of the already-installed facilities and overstates costs. First, the Staff

[1] https://www.hillsboro-oregon.gov/home/showdocument?id=20060

[2] Assuming 40 hours per week, 50 weeks per year, with 2 weeks of vacation. Even assuming only 37.5 hours per week, the hourly amount increases only to approximately $37/hr.

Memo includes in the estimate "annual right of way maintenance" of 6 hours. The installation of small wireless facilities on poles in the public rights of way cause the City to incur no additional right of way "maintenance" (and even if they did, there is no logical connection to 6 hours of "maintenance"). The other tasks identified are also unreasonable. Private companies handle tree trimming as necessary with no "coordination" by the City. Likewise, there is no basis to assume that the City will be involved in "coordination" during maintenance or temporary traffic blockage, and certainly not every year for every installation. The vast majority of small wireless facilities will not cause the City to incur any costs on a year-to-year basis.

In addition to overstating the City's tasks, the effective hourly fee is also high. A $1,700 fee based on an assumption of 16 hours leads to a blended hourly rate of $106.25. Again, this radically exceeds the costs for City employees' wages, benefits, and overhead. As noted above, the annual attachment fee for use of a utility pole based on the pole owner's costs is approximately $15/foot. The FCC has determined that a presumptively reasonable annual fee would be $270. The fee Staff proposes is more than 6 times higher than the FCC presumption. Based on the information provided, the proposed fee is excessive and unjustified, and it would effectively prohibit the provision of telecommunications service.

Conclusion

Even based on the limited information provided in the Staff Memo, it is clear that the proposed fees are not appropriately limited to the City's reasonable and legitimate costs caused by small wireless installations. At a minimum, T-Mobile recommends that the City adopt the FCC's default presumptively reasonable fees at least until the City develops a more accurate estimate of its costs.

Sincerely,

DAVIS WRIGHT TREMAINE LLP

Alan J. Galloway

Alan J. Galloway

WPG WIRELESS POLICY GROUP

January 7, 2019

Councilor Olivia Alcaire
Councilor Kyle Allen
Councilor Fred Nachtigal
Hillsboro Finance Committee
150 E Main Street
Hillsboro, OR 97123

SENT VIA EMAIL: amber.ames@hillsboro-oregon.gov

Re: Small Wireless Facility Fees
Agenda Item #1.A – January 8, 2019, Finance Committee Meeting

Dear Councilors:

Thank you for the opportunity to comment on the proposed right-of-way and application fees for small wireless facilities. These comments are submitted to the City of Hillsboro ("City") on behalf of AT&T.

As you know, the Federal Communications Commission ("FCC") recently adopted an Order[1] addressing a local jurisdiction's regulation of small wireless facility deployment. Much of the FCC Order will be effective on January 14, 2019.

The FCC Order requires that: (1) fees are a reasonable approximation of the local government's costs related to and caused by the small wireless deployment, (2) only objectively reasonable costs are factored into these fees, and (3) the fees are no higher than the fees charged to similarly-situated competitors in similar situations.[2]

Further, the FCC Order sets a presumptively reasonable recurring fee for small wireless facilities located in the right-of-way of $270 per year, per facility.[3] For non-recurring fees (including application fees), the FCC Order sets a presumptively reasonable fee of $500 for the first five small wireless facility attachments in the same application, with an additional $100 for each small wireless facility attachment beyond five in the same application.[4]

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[1] *Accelerating Wireless and Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, WT Docket No. 17-79, WC Docket No. 17-84, FCC 18-133 (rel. Sept. 27, 2018); 83 Fed. Reg. 51867 (Oct. 15, 2018)("FCC Order").
[2] FCC Order, para. 50.
[3] FCC Order, para. 79.
[4] Id.

PO Box 34628 - #75604
Seattle, WA 98124

(fax) 206.219.6717
www.wirelesspolicy.com

Staff has proposed for your consideration two fees for small wireless facilities – an annual right-of-way fee ($1,700), to be charged for each attachment/pole, and an initial application fee ($3,000), to be charged for each attachment/pole. These proposed fees are substantially higher than the FCC's presumptively reasonable fees. For example, the application fee is 30 times the FCC's presumptively reasonable non-recurring fee for attachments. Further, the staff report does not show that staff's time is "*related to and caused by*" the small wireless facility and reflecting the facility's "*degree of actual use* of the public rights-of-way."[5] Among other things:

- The rationale that it will take two full days of staff time annually ($1,700) to maintain each small wireless facility (that has already been constructed and inspected) on either a City-owned pole or a Portland General Electric ("PGE") pole is not reasonable. AT&T questions whether the City historically devotes a similar number of hours of work to each PGE utility pole located in the right-of-way.
- A $1,700/year rate, regardless of how it is calculated, is also not "objectively reasonable," considering the rates that AT&T is seeing nearby jurisdictions adopt.
- The $3,000 application fee appears to be a significant departure from the fees the City assesses to review applications for other right-of-way or development activities,[6] even though the FCC requires that the fees charged to process small wireless applications be comparable to those charged for other kinds of infrastructure deployment in the right-of-way.
    - In comparison with other permits issued by the City for utility work, we find that the City does not charge a fee at all for Franchise Utility Permits, which authorize work such as new utility installation or removal as well as installation, replacement, or removal of street light poles. These permits include application review and inspections. The proposed $3,000 application fee for small wireless installations is extraordinary when compared to the City's charges for the same work proposed by other service providers (none).
    - Cost of public right-of-way permits of a similar valuation (such as for street improvements) are one-quarter of the cost of a small wireless facility permit ($750/permit).
    - Development review fees for permits for a similar value of construction are less than $600, one-fifth the cost proposed for small wireless facilities.

The City's proposed fees are substantially higher than the FCC's presumptively reasonable fees, not charged for permitting other construction projects in the right-of-way, and not supported as a reasonable approximation of the City's costs related to and caused by a small wireless deployment.

AT&T supports the City's adoption of small wireless facility right-of-way and application fees that are in line with the FCC's presumptively reasonable fees and suggests that the City reevaluate the proposed fees.

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[5] Id. at footnote 131.

[6] City Resolution No. 2586 (Citywide Fees and Charges Schedule).

Thank you for your consideration of these comments. Ken Lyons of the Wireless Policy Group will attend your January 8th meeting on AT&T's behalf and will be able to address any questions at that time.

Sincerely,

Meridee Pabst
meridee.pabst@wirelesspolicy.com

cc: Tina Bailey, Transportation Division Manager
Andrew Bartlett, Management Analyst
Robby Hammond, Assistant City Manager
Rich Roche, AT&T

From: Coon, Steven Russell
To: Andrew Bartlett; Steven Russell Coon; Kim Allen
Subject: Comments on Fees for Small Wireless Facilities
Date: Monday, January 7, 2019 4:48:10 PM

Andrew,

It was good talking to you on the phone last week. As discussed, Verizon would like to comment on the proposed fees for small wireless facility applications and annual attachments.

We appreciate being given the opportunity to comment, and want to thank you for looking at rates that are cost-based. From your memo to the City Manager, it seems that the direction is to have fees in place prior to the FCC Order being in effect on January 14th.

While we agree with the cost-based methodology, we would ask that the City consider this important matter more thoroughly before implementation. There has simply not been enough time for a thorough explanation and consideration of the costs included in the fees. The suggested fees of $3,000 permit fee and $1,700 annual attachment fee are higher than other cost-based jurisdictions, and far higher than the presumptively reasonable rates of a $100 permit fee and $270 Annual ROW/attachment fee in the FCC's Order (FCC 18-133).

More importantly, high costs will hinder Verizon's ability to deploy 5G and small cell technology in Hillsboro. Verizon is prioritizing deployment of 5G in cities with reasonable rates, and predictable design standards and processes. Since I work and spend a lot of time in Hillsboro, I want 5G to be deployed here as soon as possible so our community can enjoy the benefits of this awesome technology. 5G is the start of the next technology revolution, and Hillsboro, being a high tech city, should be at the forefront of that revolution.

We look forward to working with you and Staff to understand the City's costs in more detail.

Regards,

Steve

Steve Coon, PMP
Small Cell Strategy Specialist - Verizon Network Engineering

steven.coon@verizonwireless.com
971-294-2083

WPG WIRELESS POLICY GROUP

January 15, 2019

The Honorable Steve Callaway, Mayor
Hillsboro City Council
150 E Main Street
Hillsboro, OR 97123

SENT VIA EMAIL: amber.ames@hillsboro-oregon.gov

Re: Small Wireless Facility Fees & Design Standards
Agenda Items #5.A & 8.A – Resolution Nos. 2619 & 2620

Dear Mayor Callaway and Councilors:

Thank you for the opportunity to comment on the proposed fees and design standards for small wireless facilities. These comments are submitted to the City of Hillsboro ("City") on behalf of AT&T.

As you know, the Federal Communications Commission ("FCC") recently adopted an Order[1] addressing a local jurisdiction's regulation of small wireless facility deployment. Much of the FCC Order will be effective on January 14, 2019.

Proposed Small Wireless Fees - Resolution No. 2619

The FCC Order requires that: (1) fees are a reasonable approximation of the local government's costs related to and caused by the small wireless deployment, (2) only objectively reasonable costs are factored into these fees, and (3) the fees are no higher than the fees charged to similarly-situated competitors in similar situations.[2]

Further, the FCC Order sets a presumptively reasonable recurring fee for small wireless facilities located in the right-of-way of $270 per year, per facility.[3] For non-recurring fees (including application fees), the FCC Order sets a presumptively reasonable fee of $500 for the first five small wireless facility attachments in the same application, with an additional $100 for each small wireless facility attachment beyond five in the same application.[4]

---

[1] *Accelerating Wireless and Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, WT Docket No. 17-79, WC Docket No. 17-84, FCC 18-133 (rel. Sept. 27, 2018); 83 Fed. Reg. 51867 (Oct. 15, 2018)("FCC Order").
[2] FCC Order, para. 50.
[3] FCC Order, para. 79.
[4] Id.

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Staff has proposed for your consideration two fees for small wireless facilities – an annual right-of-way fee ($1,700), to be charged for each attachment/pole, and an initial application fee ($3,000), to be charged for each attachment/pole. These proposed fees are substantially higher than the FCC's presumptively reasonable fees. For example, the application fee is 30 times the FCC's presumptively reasonable non-recurring fee for attachments. Further, the staff report does not show that staff's time is "*related to and caused by*" the small wireless facility and reflecting the facility's "*degree of actual use* of the public rights-of-way."[5] Among other things:

- Many of the work items staff has listed to support the proposed fees relate to City-owned light poles and not to Portland General Electric ("PGE") poles. For instance, the following costs are not applicable to PGE poles: "the City will have additional costs for such things as reviewing wiring and connection plans, disconnecting power to allow installation, inspecting the connections to our poles and electrical systems, and ongoing coordination when our lights need maintenance."[6]
- The rationale that it will take two full days of staff time annually ($1,700) to maintain each small wireless facility (that has already been constructed and inspected) on either a City-owned pole or a PGE pole is not reasonable. AT&T questions whether the City historically devotes a similar number of hours of work to each PGE utility pole located in the right-of-way.
- The $3,000 application fee appears to be a significant departure from the fees the City assesses to review applications for other right-of-way or development activities,[7] even though the FCC requires that the fees charged to process small wireless applications be comparable to those charged for other kinds of infrastructure deployment in the right-of-way.
    - In comparison with other permits issued by the City for utility work, we find that the City does not charge a fee at all for Franchise Utility Permits, which authorize work such as new utility installation or removal as well as installation, replacement, or removal of street light poles. These permits include application review and inspections. The proposed $3,000 application fee for small wireless installations is extraordinary when compared to the City's charges for the same work proposed by other service providers (none).
    - Cost of public right-of-way permits of a similar valuation (such as for street improvements) are one-quarter of the cost of a small wireless facility permit ($750/permit).
    - Development review fees for permits for a similar value of construction are less than $600, one-fifth the cost proposed for small wireless facilities.

The City's proposed fees are substantially higher than the FCC's presumptively reasonable fees, not charged for permitting other construction projects in the right-of-way, and not supported as a reasonable approximation of the City's costs related to and caused by a small wireless deployment.

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[5] Id. at footnote 131.
[6] Staff Report, p. 4.
[7] City Resolution No. 2586 (Citywide Fees and Charges Schedule).

AT&T supports the City's adoption of small wireless facility right-of-way and application fees that are in line with the FCC's presumptively reasonable fees and suggests that the City reevaluate the proposed fees.

Proposed Small Wireless Design Standards – Resolution No. 2620

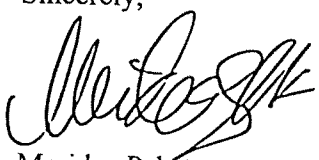
Under the FCC Order, aesthetic regulations for small wireless facilities apply to the extent they are reasonable, technically feasible, objective, no more burdensome than those applied to other types of infrastructure deployments, and published in advance.[8] Each small wireless facility standard must be technically feasible for all carriers.

The design standards provided in Exhibit A to Resolution No. 2620 raise numerous, significant concerns. For example, the standards do not appear to address PGE's needs and typical configurations for small wireless facilities attached to standard utility poles. As another example, the strict limitations on antennas (only one antenna per pole, prohibition of panel antennas, limitation of antenna diameter to 9 inches, and others) do not allow sufficient flexibility for all wireless carriers to bring small wireless technology to the Hillsboro community and would foreclose the addition of the latest technology over time. An upgrade to 5G will require the addition of an antenna to an existing small wireless facility. For these and other reasons, the proposed design standards are not consistent with the FCC Order.

The staff report acknowledges that the proposed design standards have not yet been revised in response to industry input and that staff will be revisiting them in the coming months. We intend to provide detailed comments on behalf of AT&T during that process.

Thank you for your consideration of these comments. Ken Lyons of the Wireless Policy Group will attend your meeting tonight on AT&T's behalf and will be able to address any questions at that time.

Sincerely,



Meridee Pabst
meridee.pabst@wirelesspolicy.com

cc: Tina Bailey, Transportation Division Manager
Andrew Bartlett, Management Analyst
Robby Hammond, Assistant City Manager
Rich Roche, AT&T

[8] FCC Order, paras. 86-87.

EXHIBIT 8:

BAINBRIDGE ISLAND, WASHINGTON SMALL WIRELESS FACILITIES USE REGULATIONS

Bainbridge Island, W

Chapter 18.10A
USE REGULATIONS – SMALL WIRELESS FACILITIES[1]

Sections:

18.10A.010 Purpose.
18.10A.020 Applicability.
18.10A.030 Definitions.
18.10A.040 Design zones.
18.10A.050 Design and concealment standards for small wireless facilities.
18.10A.060 New poles for small wireless facilities and installations in a design zone.

18.10A.010 Purpose.

The purposes of this chapter are to set forth regulations for the placement and development of small wireless facilities. Among the purposes included are to:

A. Manage reasonable access to the right-of-way of the city for communication purposes on a nondiscriminatory basis.

B. Conserve the limited physical capacity of the public rights-of-way held in public trust by the city.

C. Ensure that all service providers maintaining facilities or providing services within the city comply with the ordinances, rules, and regulations of the city.

D. Reduce unnecessary local regulation of providers and services.

E. Ensure that the city can continue to fairly and responsibly protect the public health, safety, and welfare.

F. Encourage the provision of advanced and competitive telecommunications, on the widest possible basis, to the businesses, institutions and residents of the city.

G. Minimize potential adverse visual, aesthetic, and safety impacts of small wireless facilities.

H. Encourage the design of such small wireless facilities to be aesthetically and architecturally compatible with the surrounding built and natural environments where possible.

I. Encourage the co-location or attachment of small wireless facilities on existing support structures to help minimize the total number and impact of such structures throughout the community.

J. Reserve to the city and provide for the fullest exercise possible of the authority and discretion of the city to require that:

1. Facilities are installed and maintained within the public rights-of-way in such manner and at such points so as not to inconvenience the public use of the public rights-of-way or to adversely affect the public, safety and welfare; and

2. All non-city users of the rights-of-way shall be required to reimburse and hold harmless the city for the actual costs incurred by the city by reason of the construction or presence in the public rights-of-way of the facilities of such other users. (Ord. 2019-15 § 6, 2019)

18.10A.020 Applicability.

Any application for a small wireless facility both inside and outside of the right-of-way shall comply with the following application requirements for a small wireless facility permit described in this chapter. Applications must also comply with the requirements of Chapter 19.10 BIMC. For small wireless facilities inside the right-of-way, the applicant must also comply with the requirements of Chapters 19.02 and 19.04 BIMC. (Ord. 2019-15 § 6, 2019)

18.10A.030 Definitions.

For the purpose of this chapter, the following terms, phrases, words, and abbreviations shall have the meanings given herein. Words not otherwise defined shall have their common and ordinary meaning:

A. "Antenna" means an apparatus designed for the purpose of emitting radiofrequency ("RF") radiation, to be operated or operating from a fixed location pursuant to FCC authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term "antenna" does not include an unintentional radiator, mobile station, or device authorized under 47 C.F.R. Part 15.

B. "Applicant" means any person or corporation submitting an application for a small wireless facility permit.

C. "City property" means any real property owned by the city, whether in fee or other ownership estate of interest.

D. "Co-location" means (1) mounting or installing an antenna facility on a pre-existing structure, and/or (2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. Provided that, for purposes of eligible facilities requests, "co-location" means the mounting or installation of transmission equipment on an eligible support structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes.

E. "Director" means the director of planning and community development or his/her designee.

F. "FCC" or "Federal Communications Commission" means the federal administrative agency, or lawful successor, authorized to regulate and oversee telecommunications carriers, services and providers on a national level.

G. "Grantee" means a person holding a master permit.

H. "Light pole" means a pole used primarily for lighting streets, parking areas, parks or pedestrian paths.

I. "Master permit" means the authorization granted by the city to an operator of a telecommunications system, under this title, giving the operator the nonexclusive right to occupy the space, or use facilities upon, across, beneath, or over any public right-of-way in the city, to provide a specified service within a master permit area. Such master permit shall not include or be a substitute for:

1. Any other permit or authorization required for the privilege of transacting and carrying on a business within the city required by the ordinances and laws of the city;

2. Any permit, agreement or authorization required in connection with operations on or in public streets or property, including, by way of example and not limitation, street cut permits;

3. Any permits or agreements for occupying any other property of the city or private entities to which access is not specifically granted by the master permit including, without limitation, permits and

agreements for placing devices on or in poles, conduits, other structures, or railroad easements, whether owned by the city, or a private entity; or

4. The right to place devices in the right-of-way, such as pay telephones, for end user use in terminating or originating transmissions.

By way of example, and without limiting the foregoing, this title shall not be read to diminish or in any way affect the authority of the city to control the use of the city's real estate, fixtures or personal property. Therefore, any person who desires to use such property must obtain additional approvals, or agreements for that purpose, as may be required by the city.

J. "Public right-of-way" or "right-of-way" means land acquired or dedicated for public roads and streets but does not include:

1. State highways;

2. Land dedicated for road, streets, and highways not opened and not improved for motor vehicle use by the public;

3. Structures, including poles and conduits, located within the right-of-way;

4. Federally granted trust lands or forest board trust lands;

5. Lands owned or managed by the State Parks and Recreation Commission; or

6. Federally granted railroad rights-of-way acquired under 43 U.S.C. Section 912 and related provisions of federal law that are not open for motor vehicle use.

K. "Service provider" is defined consistently with RCW 35.99.010(6). Service provider shall include those infrastructure companies that provide telecommunications services or equipment to enable the deployment of telecommunication services.

L. "Small wireless" and "small wireless facility" shall have the same meaning as a "small wireless facility" as set forth in 47 C.F.R. 1.6002.

M. "Structure" means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of telecommunications service (whether on its own or commingled with other types of services).

N. "Telecommunications facilities" means the plant, equipment and property including, but not limited to, cables, wires, conduits, ducts, pedestals, electronics, and other appurtenances used or to be used to transmit, receive, distribute, provide or offer wireline or wireless telecommunications service.

O. "Telecommunications service" means the transmission of information by wire, radio, optical cable, electromagnetic, or other similar means for hire, sale, or resale to the general public. For the purpose of this subsection, "information" means knowledge or intelligence represented by any form of writing, signs, signals, pictures, sounds, or any other symbols. For the purpose of this chapter, telecommunications service excludes the over-the-air transmission of broadcast television or broadcast radio signals.

P. "Traffic signal poles" means a pole that supports equipment used for controlling traffic, including but not limited to traffic lights, rapid flashing beacons, speed radar, and school zone flashers.

Q. "Transmission equipment" means equipment that facilitates transmission for any FCC-licensed or authorized wireless communication service, including, but not limited to, radio transceivers, antennas

coaxial or fiber-optic cable, and regular and backup power supply. The term includes equipment associated with wireless communications services including, but not limited to, private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul.

R. "Unified enclosure" means a small wireless facility providing concealment of antennas and equipment within a single enclosure.

S. "Utility pole" means a structure designed and used primarily for the support of electrical wires, telephone wires, television cable, traffic signals, or lighting for streets, parking areas, or pedestrian paths.

T. "Wireline" means services provided using a physically tangible means of transmission, including without limitation wire or cable, and the apparatus used for such transmission. (Ord. 2019-15 § 6, 2019)

18.10A.040 Design zones.

A. The following areas, as defined in Chapter 18.06 BIMC, are designated as design zones for the purpose of siting small wireless facilities:

1. Mixed Use Town Center;

2. Neighborhood Service Centers;

3. HS Road zoning districts; and

4. In the right-of-way of State Highway 305 from Harborview Drive SE to High School Road.

B. Any applicant who desires to place a small wireless facility in a design zone must first establish that the applicant cannot locate the small wireless facility outside of the design zone. Applications for small wireless facilities in a design zone may be approved if the applicant demonstrates that due to technical infeasibility the applicant cannot locate the proposed small wireless facility on an existing or replacement pole within 500 feet of the proposed site and outside of the design zone.

C. Applications for small wireless facilities within design zones are approved or denied by the director and must comply with a concealment element design described in BIMC 18.10A.060. (Ord. 2019-15 § 6, 2019)

18.10A.050 Design and concealment standards for small wireless facilities.

Small wireless facility deployments permitted inside or outside the right-of way shall conform to the following design standards:

A. Small wireless facilities attached to existing or replacement nonwooden light poles or utility poles in the right-of-way or nonwooden light poles or utility poles outside of the right-of-way shall conform to the following design criteria:

1. Upon adoption of a city standard small wireless facility pole design(s) within the design and construction standards, an applicant is encouraged to first consider using or modifying the standard pole design to accommodate its small wireless facility without substantially changing the outward visual and aesthetic character of the design. The applicant, upon a showing that use or modification of the standard pole design is either technically or physically infeasible, or that the modified pole design will not comply with the city's ADA, sidewalk clearance requirements and/or would violate electrical or other safety standards, may deviate from the adopted standard pole design and use the design standards as adopted in this subsection A.

2. The applicant shall minimize to the extent possible the antenna and equipment space and shall use the smallest amount of enclosure possible to fit the necessary equipment. The antennas and equipment shall be located using one of the following methods:

a. Concealed completely within the pole or pole base. Antennas and the associated equipment enclosures (including disconnect switches and other appurtenant devices) shall be fully concealed within the pole, unless such concealment is otherwise technically infeasible, or is incompatible with the pole design. If within the pole base, the base shall meet the ADA requirements and not impact the pedestrian access route.

b. Located on a pole. If located on a pole, antennas and the associated equipment enclosures (including disconnect switches and other appurtenant devices) must be camouflaged to appear as an integral part of the pole or flush mounted to the pole, meaning for antennas no more than 12 inches off of the pole and for associated equipment no more than six inches off the pole, and must be the minimum size necessary for the intended purpose, but in no event shall any antenna exceed three cubic feet in volume. The equipment enclosure and all other wireless equipment associated with the pole (including but not limited to conduit), including wireless equipment associated with the antenna and any pre-existing associated equipment on the pole, may not exceed 28 cubic feet. If the equipment enclosure is permitted on the exterior of the pole, the applicant is required to place the equipment enclosure behind any banners or road signs that may be on the pole, provided that such location does not interfere with the operation of the banners or signs or the equipment itself. The applicant may propose a side mounted canister antenna, so long as the inside edge of the antenna is no more than six inches from the surface of the pole. All cables shall be concealed either within the canister antenna or within a sleeve between the antenna and the pole.

c. Underground in a utility vault. If located underground, the access lid to the equipment enclosure shall be located outside the footprint of any pedestrian curb ramp and shall have a nonskid surface meeting ADA requirements if located within an existing pedestrian access route.

d. On private property. If located on private property, the applicant shall submit a copy of a letter of authority from the private property owner prior to the small wireless facility permit issuance.

3. The furthest point of any equipment enclosure may not extend more than 28 inches from the face of the pole. Any equipment or antenna enclosures must meet WSDOT height clearance requirements.

4. All conduit, cables, wires and fiber must be routed internally in the nonwooden pole. Full concealment of all conduit, cables, wires and fiber is required within mounting brackets, shrouds, canisters or sleeves if attaching to exterior antennas or equipment.

5. An antenna on top of an existing pole may not extend more than six feet above the height of the existing pole and the diameter may not exceed 16 inches, measured at the top of the pole, unless the applicant can demonstrate that more space is technically needed. The antennas shall be integrated into the pole design so that it appears as a continuation of the original pole, including colored or painted to match the pole, and shall be shrouded or screened to blend with the pole except for canister antennas which shall not require screening. All cabling and mounting hardware/brackets from the bottom of the antenna to the top of the pole shall be fully concealed and integrated with the pole.

6. Any replacement pole shall substantially conform to the design of the pole it is replacing or the neighboring pole design standards utilized within the contiguous right-of-way. Any replacement pole shall be placed as close to the original pole as possible, but no more than five feet from the existing pole location.

7. The height of any replacement pole may not extend more than six feet above the height of the existing pole or the minimum additional height technically necessary; provided, that the height of the replacement pole cannot be extended further by additional antenna height.

8. The diameter of a replacement pole shall comply with the city's setback and sidewalk clearance requirements and shall, to the extent technically feasible, not be more than 20 inches measured at the base of the pole, unless additional diameter is needed in order to conceal equipment within the base of the pole, and shall comply with the requirements in subsection E.4 of this section.

9. The use of the pole for the siting of a small wireless facility shall be considered secondary to the primary function of the pole. If the primary function of a pole serving as the host site for a small wireless facility becomes unnecessary, the pole shall not be retained for the sole purpose of accommodating the small wireless facility and the small wireless facility and all associated equipment shall be removed.

B. Wooden Pole Design Standards. Small wireless facilities located on wooden poles shall conform to the following design criteria:

1. The wooden pole at the proposed location may be replaced with a taller pole for the purpose of accommodating a small wireless facility; provided, that the replacement pole shall not exceed a height that is a maximum of 10 feet taller than the existing pole, unless a further height increase is required and confirmed in writing by the pole owner and that such height extension is the minimum extension possible to provide sufficient separation and/or clearance from electrical and wireline facilities.

2. A pole extender may be used instead of replacing an existing pole but may not increase the height of the existing pole by more than 10 feet, unless a further height increase is required and confirmed in writing by the pole owner and that such height increase is the minimum extension possible to provide sufficient separation and/or clearance from electrical and wireline facilities. A "pole extender" as used herein is an object affixed between the pole and the antenna for the purpose of increasing the height of the antenna above the pole. The pole extender shall be painted to approximately match the color of the pole and shall substantially match the diameter of the pole measured at the top of the pole.

3. Replacement wooden poles must either match the approximate color and materials of the replaced pole or shall be the standard new wooden pole used by the pole owner in the city.

4. Antennas, equipment enclosures, and all ancillary equipment, boxes and conduit shall be colored or painted to match the approximate color of the surface of the wooden pole on which they are attached.

5. Antennas shall not be mounted more than 12 inches from the surface of the wooden pole.

6. Antennas should be placed in an effort to minimize visual clutter and obtrusiveness. Multiple antennas are permitted on a wooden pole; provided, that each antenna enclosure shall not be more than three cubic feet in volume.

7. A canister antenna may be mounted on top of an existing wooden pole, which may not exceed the height requirements described in subsection B.1 of this section. A canister antenna mounted on the top of a wooden pole shall not exceed 16 inches, measured at the top of the pole, and shall be colored or painted to match the pole. The canister antenna must be placed to look as if it is an extension of the pole. In the alternative, the applicant may propose a side mounted canister antenna, so long as the inside edge of the antenna is no more than 12 inches from the surface of the wooden pole. All cables shall be concealed either within the canister antenna or within a sleeve between the antenna and the wooden pole.

8. The furthest point of any antenna or equipment enclosure may not extend more than 28 inches from the face of the pole. Any equipment or antenna enclosures must meet WSDOT height clearance requirements.

9. An omni-directional antenna may be mounted on the top of an existing wooden pole, provided such antenna is no more than four feet in height and is mounted directly on the top of a pole or attached to a sleeve made to look like the exterior of the pole as close to the top of the pole as technically feasible. All cables shall be concealed within the sleeve between the bottom of the antenna and the mounting bracket.

10. All related equipment, including but not limited to ancillary equipment, radios, cables, associated shrouding, microwaves, and conduit which are mounted on wooden poles shall not be mounted more than six inches from the surface of the pole, unless a further distance is technically required, and is confirmed in writing by the pole owner.

11. Equipment for small wireless facilities shall be attached to the wooden pole or placed in accordance with subsection E.1 of this section. For equipment placed on the pole, the equipment must be placed in the smallest enclosure possible for the intended purpose. The equipment enclosure and all other wireless equipment associated with the utility pole, including wireless equipment associated with the antenna and any pre-existing associated equipment on the pole, may not exceed 28 cubic feet. Multiple equipment enclosures may be acceptable if designed to more closely integrate with the pole design and does not cumulatively exceed 28 cubic feet. The applicant is encouraged to place the equipment enclosure behind any banners or road signs that may be on the pole; provided, that such location does not interfere with the operation of the banners or signs or the equipment itself.

12. An applicant who desires to enclose both its antennas and equipment within one unified enclosure may do so; provided, that such enclosure is the minimum size necessary for its intended purpose and the enclosure and all other wireless equipment associated with the pole, including wireless equipment associated with the antenna and any pre-existing associated equipment on the pole does not exceed 28 cubic feet. The unified enclosure may not be placed more than 12 inches from the surface of the pole. To the extent possible, the unified enclosure shall be placed so as to appear as an integrated part of the pole or behind banners or signs; provided, that such location does not interfere with the operation of the banners or signs.

13. The visual effect of the small wireless facility on all other aspects of the appearance of the wooden pole shall be minimized to the greatest extent possible.

14. The use of the wooden pole for the siting of a small wireless facility shall be considered secondary to the primary function of the pole. If the primary function of a pole serving as the host site for a small wireless facility becomes unnecessary, the pole shall not be retained for the sole purpose

of accommodating the small wireless facility and the small wireless facility and all associated equipment shall be removed.

15. The diameter of a replacement pole shall comply with the city's setback and sidewalk clearance requirements and shall not be more than a 25 percent increase of the existing utility pole measured at the base of the pole, unless additional diameter is needed for structural integrity of the pole, and shall comply with the requirements in subsection E.4 of this section.

16. All cables and wires shall be routed through conduit along the outside of the pole. The outside conduit shall be colored or painted to match the pole. The number of conduit shall be minimized to the number technically necessary to accommodate the small wireless facility.

C. Small wireless facilities attached to existing buildings shall conform to the following design criteria:

1. Small wireless facilities may be mounted to the sides of a building if the antennas do not interrupt the building's architectural theme.

2. The interruption of architectural lines or horizontal or vertical reveals is discouraged.

3. New architectural features such as columns, pilasters, corbels, or other ornamentation that conceal antennas may be used if it complements the architecture of the existing building.

4. Small wireless facilities shall utilize the smallest mounting brackets necessary in order to provide the smallest offset from the building.

5. Skirts or shrouds shall be utilized on the sides and bottoms of antennas in order to conceal mounting hardware, create a cleaner appearance, and minimize the visual impact of the antennas. Exposed cabling/wiring is prohibited.

6. Small wireless facilities shall be colored, painted and textured to match the adjacent building surfaces, unless otherwise technically infeasible.

7. Small wireless facilities must meet the height requirement of the underlying zoning district.

8. Feed lines and coaxial cables shall be located below the parapet of the rooftop.

9. If a cabinet enclosure cannot be located within the building where the wireless communication facilities will be located, then the city's first preference is for the wireless telecommunication carrier to locate the equipment on the roof of the building. If the equipment can be screened by placing the equipment below the parapet walls, no additional screening is required. If screening is required, the proposed screening must be consistent with the existing building in terms of color, design, architectural style, and material. If the cabinet equipment cannot be located on the roof or within the building then it shall be located underground consistent with subsection E.1 of this section.

D. Small wireless facilities mounted on cables strung between existing utility poles shall conform to the following standards:

1. Each strand mounted facility shall not exceed three cubic feet in volume.

2. Only one strand mounted facility is permitted between any two existing poles.

3. The pole must be able to support the necessary load requirements of the strand mounted facility.

4. The strand mounted devices shall be placed as close as possible to the nearest utility pole, in no event more than five feet from the pole unless a greater distance is technically necessary or is required by the pole owner for safety clearance.

5. No strand mounted device shall be located in or above the portion of the roadway open to vehicular traffic.

6. Ground mounted equipment to accommodate a shared mounted facility is not permitted except when placed in pre-existing equipment cabinets.

7. Pole mounted equipment shall comply with the requirements of subsection A or B of this section, as applicable.

8. Such strand mounted devices must be installed to cause the least visual impact and without excess exterior cabling or wires (other than the original strand).

9. Strand mounted facilities are only permitted on poles that have existing overhead wirelines.

E. General Requirements.

1. Ground mounted equipment in the rights-of-way is prohibited, unless such facilities are placed under ground or the applicant can demonstrate that pole mounted or undergrounded equipment is technically infeasible. If ground mounted equipment is necessary, then the applicant shall submit a concealment element plan. Generators located in the rights-of-way are prohibited.

2. No equipment shall be operated so as to produce noise in violation of Chapter 16.16 BIMC.

3. Small wireless facilities are not permitted on traffic signal poles unless denial of the siting could be a prohibition or effective prohibition of the applicant's ability to provide telecommunications service in violation of 47 U.S.C. Sections 253 and 332.

4. Replacement poles and new poles shall comply with the Americans with Disabilities Act (ADA), city construction and sidewalk clearance standards, city ordinances, and state and federal laws and regulations in order to provide a clear and safe passage within the rights-of-way. Further, the location of any replacement or new pole must: be physically possible, comply with applicable traffic warrants, not interfere with utility or safety fixtures (e.g., fire hydrants, traffic control devices), and not adversely affect the public welfare, health or safety.

5. No signage, message or identification other than the manufacturer's identification or identification required by governing law is allowed to be portrayed on any antenna or equipment enclosure. Any permitted signage shall be located on the equipment enclosures and be of the minimum amount possible to achieve the intended purpose (no larger than four by six inches); provided, that signs are permitted as concealment element techniques where appropriate.

6. Antennas and related equipment shall not be illuminated except for security reasons, required by a federal or state authority, or unless approved as part of a concealment element plan.

7. Side arm mounts for antennas or equipment must be the minimum extension necessary and may not create a gap of more than 12 inches for wooden poles and no more than six inches for nonwooden poles between the pole and the antennas or equipment.

8. The preferred location of a small wireless facility on a pole is the location with the least visible impact.

9. Antennas, equipment enclosures, and ancillary equipment, conduit and cable, shall not dominate the structure or pole upon which they are attached.

10. Except for locations in the right-of-way, small wireless facilities are prohibited on any property containing a residential use in the residential zones.

11. The city may consider the cumulative visual effects of small wireless facilities mounted on poles within the rights-of-way when assessing proposed siting locations so as to not adversely affect the visual character of the city. This provision shall not be applied to limit the number of permits issued when no alternative sites are reasonably available nor to impose a technological requirement on the applicant.

12. These design standards are intended to be used solely for the purpose of concealment and siting. Nothing herein shall be interpreted or applied in a manner which dictates the use of a particular technology. When strict application of these requirements would effectively prohibit the applicant from providing a wireless service, alternative forms of concealment or deployment may be permitted which provide similar or greater protections from negative visual impacts to the streetscape. (Ord. 2019-15 § 6, 2019)

18.10A.060 New poles for small wireless facilities and installations in a design zone.

A. New poles for small wireless facilities or for installations of small wireless facilities in a design zone are only permitted if the applicant can establish that:

1. The proposed small wireless facility cannot be located on an existing utility pole or light pole, electrical transmission tower, or on a site outside of the public rights-of-way such as public nonpark property, a building, a transmission tower, or in or on a nonresidential use in a residential zone whether by roof or panel-mount or separate structure;

2. The proposed small wireless facility complies with the applicable requirements of BIMC 18.10A.050;

3. The proposed small wireless facility receives approval for a concealment element design, as described in subsection C of this section;

4. The proposed small wireless facility also complies with Shoreline Management Act, SEPA, and any other relevant law or regulation if applicable; and

5. No new poles shall be located in a critical area or associated buffer or setback required by Chapter 16.20 BIMC except when determined to be exempt pursuant to Chapter 16.20 BIMC.

B. An application for a new pole or installation in a design zone is subject to review and approval or denial by the director.

C. The concealment element design shall include the design of the screening, fencing, or other concealment technology for a tower, pole, or equipment structure, and all related transmission equipment or facilities associated with the proposed small wireless facility, including but not limited to fiber and power connections.

1. The concealment element design should seek to minimize the visual obtrusiveness of the small wireless facility. The proposed pole or structure should have similar designs to existing neighboring poles in the rights-of-way, including similar height to the extent technically feasible. If the proposed small wireless facility is placed on a replacement pole in a design zone, then the replacement pole

shall be of the same general design as the pole it is replacing, unless the department of planning and community development otherwise approves a variation due to aesthetic or safety concerns. Any concealment element design for a small wireless facility should attempt to mimic the design of such pole and integrate the small wireless facility into the design of the pole. Other concealment methods include, but are not limited to, integrating the installation with architectural features or building design components, utilization of coverings or concealment devices of similar material, color, and texture – or the appearance thereof – as the surface against which the installation will be seen or on which it will be installed, landscape design, or other camouflage strategies appropriate for the type of installation. Applicants are required to utilize designs in which all conduit and wirelines are installed internally in the structure.

2. If the director has already approved a concealment element design either for the applicant or another small wireless facility along the same public right-of-way or for the same pole type, then the applicant shall utilize a substantially similar concealment element design, unless it can show that such concealment element design is not physically or technologically feasible, or that such deployment would undermine the generally applicable design standards.

D. Even if an alternative location is established pursuant to subsection A.1 of this section, the director may determine that a new pole in the right-of-way is in fact a superior alternative based on the impact to the city, the concealment element design, the city's comprehensive plan and the added benefits to the community.

E. Prior to the issuance of a permit to construct a new pole or ground mounted equipment in the right-of-way, the applicant must obtain a site-specific agreement from the city to locate such new pole or ground mounted equipment. The requirement also applies to the placement of replacement poles when the replacement is necessary for the installation or attachment of the small wireless facility, the replacement structure is higher than the replaced structure, and the overall height of the replacement structure and the wireless facility is more than 60 feet.

F. These design standards are intended to be used solely for the purpose of concealment and siting. Nothing herein shall be interpreted or applied in a manner which dictates the use of a particular technology. When strict application of these requirements would unreasonably impair the function of the technology chosen by the applicant, alternative forms of concealment or deployment may be permitted which provide similar or greater protections of the streetscape. (Ord. 2019-15 § 6, 2019)

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[1] Code reviser's note: Ord. 2019-15 (passed May 14, 2019) Section 11 provides in part: "This interim official control shall take effect immediately and shall remain effective for six (6) months, unless terminated earlier by the City Council. Provided, that the Council may, at its sole discretion, renew the interim official control for one or more six month periods in accordance with state law."

EXHIBIT 9:

MADISON WISCONSIN INTERIM SMALL CELL DESIGN GUIDELINES

Interim Small Cell Design Guidelines

CITY OF MADISON

June 25, 2019

These guidelines have been drafted with input from the following agencies:

- Attorney's Office
- Engineering Division
- Information Technology
- Traffic Engineering Division

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1 Background

The City of Madison oversees and manages hundreds of miles of highway right-of-way within the City's municipal limits. There are numerous competing demands upon the use of this space, including by pedestrians, bicycles, vehicles, adjoining property owners, municipal utilities and regulated utilities. The City is responsible for managing these competing present and future demands while at the same time promoting and protecting the public health, safety and welfare.

The City has a rich history of establishing a unique streetscape that sets it apart from other cities. A crucial component of that streetscape is its extensive network of public space within each neighborhood. The public space enhances the quality of life for our residents and visitors, and ensures that the city has the foundation to become more pedestrian friendly and sustainable. It also serves as the City's civic, cultural, and physical framework that provides the opportunity for public assembly. Any new use made of that public space must be adapted to the special characteristics of Madison, while also taking into account the City's obligations noted above.

To address growing customer demand for faster wireless technology, cellular providers have proposed to increase the capacity of their networks by deploying small cell infrastructure, a new low-powered antenna technology, to reduce data traffic load on larger cell towers. Small cell infrastructure consists of antennas and related power equipment that are installed in closer proximity to users on the ground to improve cellular and data coverage in small geographic areas. Installed small cell facilities will improve the provider's ability to meet current 4G (LTE) voice and data demands, but may be modified with future 5G high speed equipment as technology improves. To provide the necessary coverage to support these more robust communication networks, each telecommunications provider is expected to install infrastructure to serve their individual needs; additionally, some companies serve as an infrastructure providers, installing equipment that will house infrastructure for specific or multiple cellular providers. Like other utilities, State law allows telecommunication providers to place Small Cell infrastructure equipment in the public right-of-way.

In anticipation of 5G implementation, and in response to recent orders of the Federal Communication Commission (FCC) and forthcoming State legislation, the City adopted ORD-19-00037 on May 21, 2019 (Legistar File No. 55033), which ordinance will create Section 10.053 Madison General Ordinances on August 1, 2019. This ordinance creates a new small cell facility permit, thereby providing the City with a process for managing, and uniform standards for acting upon, requests for the placement of wireless telecommunications facilities (Small Cell facilities) within the right-of-way consistent with the City's obligation to promote the public health, safety, and welfare; to manage the right-of-way; and to ensure that the public's use is not obstructed or incommoded by the use of the right-of-way for the placement of wireless telecommunications facilities.

Pursuant to Section 10.053(5)(b)1 of the small cell ordinance, and consistent with the FCC Orders and anticipated State laws, the City has developed guidelines that will allow cellular companies to locate Small Cell installations in a way that maximizes technological benefits, while attempting to preserve street-side aesthetics. Small Cell infrastructure will affect the function and aesthetics of public spaces. Moreover, there are numerous providers already operating in Madison. The end result is a significant demand upon a limited recourse. Cities across the nation are beginning to address the issue of balancing the need to accommodate increased cellular demand with their community's public space character and function. These guidelines build off of those efforts in a way that is appropriate to the needs of the City of Madison.

1.1 Federal and State Law on Small Cell Infrastructure

Local regulation of wireless infrastructure is subject to the parameters of Federal and State law. In 2018, the Federal Communications Commission (FCC) issued a series of orders that imposed requirements on municipalities regarding wireless infrastructure regulations. Under the FCC orders, no local regulation may prohibit or have the effect of prohibiting the ability of any entity to provide telecommunications service. Any local regulations must be competitively neutral and nondiscriminatory. Under State law, municipalities retain the authority to regulate wireless infrastructure in the right-of-way under Wis. Stat. Secs. 182.017(1r) and 196.58(1r), provided that any such local regulation must be reasonable and defensible on public health, safety, and welfare grounds. As required by federal and state law, these guidelines are non-discriminatory and apply to other utility facilities in the right-of-way where applicable.

1.2 Local Laws on Small Cell Infrastructure

The City of Madison has multiple local ordinances that apply, or may apply, to the installation of Small Cell facilities in the right-of-way. It is up to the providers to secure all necessary permits before proceeding with installation. As a general rule, every telecommunications utility with facilities within the right-of-way must be registered with the City under Madison General Ordinances (MGO) Section 10.05(2). In addition, any work in the right-of-way which may require excavations requires an excavation permit (ENGROW Permit) under MGO Section 10.05(6). Included in the ENGROW permit process, and not covered by these guidelines, are approval requirements for new poles or towers within the right-of-way. Also, any work which necessitates the occupation of the right-of-way on a temporary basis may require a street occupancy permit under MGO Section 10.055. Finally, as discussed above, beginning on August 1, 2019, small cell facilities will require a small cell permit under MGO Section 10.053.

2 Adoption

These guidelines are intended to cover the general standards and aesthetics for the design and installation of Small Cell technology in the public right-of-way across Madison. They are comprehensive in nature while recognizing the unique characteristics and history of Madison. The guidelines cover the different areas of Madison while keeping generally applicable standards based on the type of infrastructure installed.

As a result of this comprehensive approach, the guidelines have been drafted with input from a variety of stakeholders. Input was also received from staff of the Traffic Engineering Division, Information Technology, the Department of Planning, Community, & Economic Development (DPCED), Planning Commission, Department of Public Works, the Historic Preservation – Landmarks Commission, and Urban Design Commission.

The guidelines are also the result of the review of information shared by telecommunication providers, technical limitations, and requirements of Small Cell infrastructure standards and practices across the country, including Denver, Boston, Dublin-OH, Washington DC, and Lincoln-NE.

As 5G technology is only just now being deployed across the nation, and laws and regulations are actively being created or modified to address the challenges posed to providers and all levels of government, it may be necessary to periodically update these guidelines. Hence, these guidelines incorporate the currently applicable local and federal policies and regulations and are subject to future change. The applications shall comply with the most current version of guidelines and regulations made available by the City.

Pursuant to the directive of the Common Council in ORD-19-00037 and under MGO Section 10.053(5)(b)1, the City Engineer hereby adopts these Small Cell Design Guidelines. Prior to their application, these guidelines shall be readily made available online.

CITY OF MADISON

3 Purpose

3.1 Goals of the Guidelines

The Small Cell Design Guidelines set forth requirements and specifications for the placement and design of utility infrastructure within the City's public right-of-way (ROW) to address engineering, safety, and aesthetic concerns within the parameters outlined above and consistent with the City's regulatory role over the right-of-way. The guidelines intend to accommodate the functional needs of the cellular infrastructure industry while recognizing the character and function of the City's public space. The City's specific goals of these guidelines include, but are not limited to:

- Avoiding impact on the most important view sheds and vistas within the Capitol Corridor & Downtown Districts;
- Minimizing the impact on the character of designated districts, including Urban Design Districts, historic districts, landmarks, and protected open spaces;
- Protecting access and circulation to buildings and public open spaces; and,
- Minimizing visual and physical clutter within the streetscape.

3.2 Areas of Special Interest

The character of Madison's streetscape reinforces the importance of the public realm, where the streets, squares, and public spaces are the primary features in the city defined against the background of urban development. The City has designed these areas of special interest within its zoning code, in City plans, and by resolution. Such areas include Urban Design Districts, Urban-Mixed Use Districts (UMX), Downtown Core District (DC), the State Street Mall Concourse, Historic Districts, the Capitol Corridor, Undergrounding District, and the like. These guidelines will detail any special design guidelines that may apply in such areas of the City.

4 Review Process – Public Right-of-Way (ROW) Permit

All Small Cell installations will require a Wireless Telecommunications Facility Permit (Small Cell Permit) from the City under MGO Sec. 10.053. All applications will require review to ensure adherence to these guidelines and all other applicable standards, regulations, and laws. Applications that comply with these guidelines and all other applicable standards, regulations, and laws will be processed by City of Madison's Engineering Division.

Applicants will be notified if their application is not consistent with these guidelines, with reasons why their application is not consistent, and, at such time, the applicant will have an opportunity to revise their application and resubmit.

5 General Guidelines

5.1 General Location Guidelines

5.1.1 Preferred Locations. It is preferred to have small cell infrastructure installed in industrial and commercial areas, whenever possible. A facility may be permitted in a location other than a preferred location if the applicant provides evidence showing that.

5.1.1.1 Adequate coverage can be maintained, existing services can be improved, or new services can be added only if facilities are placed in a non-preferred location; or

5.1.1.2 The proposed facility will meet all applicable requirements for the non-preferred location and will complement the character of the surrounding area.

5.1.2 Non-Preferred Locations. The applicant should avoid locating new support structures, towers, or utility poles within residential neighborhoods, designated open space, conservation areas, or Special Interest Area Districts.

5.1.3 Avoid Significant Buildings and View Sheds. Wireless communication facilities shall not interfere with prominent vistas or significant public view corridors. Small cell facilities shall not obstruct contributing vistas and views as designated by any Neighborhood Plans or the City of Madison Planning Division.

5.1.4 Small Cell infrastructure shall not be located along the front or side boundary lines of a Madison Landmark, a National Historic Landmark, or a property individually listed in the National Register of Historic Places.

5.2 Collocation

5.2.1 Collocation Generally. Subject to the provisions of this section, collocation of facilities is generally preferred over new support structures if it can be accomplished in a way that better compliments the character of the surrounding area.

5.2.2 Collocation with non-municipal facilities. Collocation on facilities or support structures owned by parties other than the City of Madison is subject to the following:

5.2.2.1 Where an existing facility or support structure can potentially accommodate collocation of a new wireless facility, collocation will be required unless:

- The applicant submits substantial evidence supporting the unsuitability of the collocation;
- The owner of the existing facility or support structure is unwilling to accommodate the applicant's equipment and cannot be required to cooperate; or

5.2.2.2 Authorization for collocation on a facility or support structure owned by a party other than the City of Madison will be voided if the facility or support structure is destroyed, removed, relocated, or replaced, unless:

- The owner of the collocated facility obtains a new right-of-way use permit; or
- The facility or support structure accommodating the collocation is replaced with a facility or support structure comparable in size, mass, appearance, and placement, as determined by the City Engineer.

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5.3 Location Specifications

5.3.1 **Vision Requirements** – Facilities and support structures must be located so as not to create a vision hazard at intersections or driveways. Equipment near these areas must be placed below 2.5 ft.

5.3.2 **Obstruction of Traffic** – All equipment and support structures are to be installed such that they do not obstruct, impede or hinder vehicular, pedestrian or bicycle travel, including any facilities necessary to meet Americans with Disabilities Act of 1990 along with any updates to the ADA guidelines. A clear pedestrian path shall be maintained at all locations, and the minimum width of the path may vary and will be determined by City Engineering with each application.

5.3.3 **Obstruction of Maintenance Activities** – To the extent possible, a facility, support structure, tower, or utility pole should be located and designed so as to avoid interference with right-of-way maintenance activities, such as:

5.3.3.1 Grass mowing, brush collection, tree trimming, and landscaping maintenance;

5.3.3.2 Trash collection;

5.3.3.3 Maintenance of streets, pavement, sidewalks, and bicycle lanes; and

5.3.3.4 Maintenance of other facilities in the rights-of-way.

5.3.4 **Alignment** – Facilities and support structures, towers, and utility poles are to be located in alignment with existing trees, facilities, support structures, towers, utility poles, and streetlights, and are to be spaced evenly between any of these other objects.

5.3.5 **Frontage** – New facilities and support structures, towers, and utility poles are to be located at or near the extension of property lines whenever possible and are not to be located directly in front of a building entrance area or window of existing structures.

5.3.6 **Spacing** – See Table 5-1. below regarding spacing of support structures to specific right-of-way features and applicable notes.

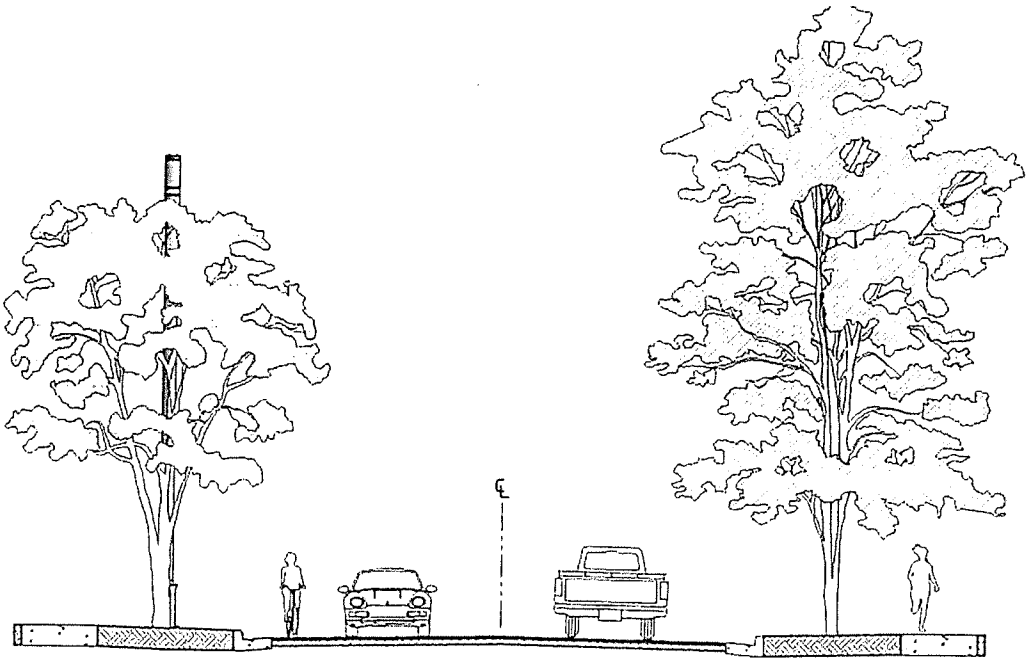
Table 5-1: Pole Spacing Standards

Object	Required Minimum Spacing
Curb	2.5 ft. to face of curb
Mainline Sidewalk	1.5 ft.
Bike Paths	2 ft.
Pavement Edge (unimproved streets)	4 ft.
Residential Driveway	6 ft.
Commercial Driveway	10 ft.
Street Light	10 ft.
Traffic Signal	10 ft.
Utility Pole	25 ft.
Street Tree	15 ft.
Building Face	8 ft.
Fire Hydrant	6 ft.
Bike Rack	8 ft.
Bus Stop	8 ft.

Notes:

1. *Minimum spacing is to nearest face of pole.*
2. *If an existing pole that violates any of these standards is being replaced, it may remain in the same location, but it may not be placed any closer to any object than existing condition.*
3. *In certain circumstances, City Engineering may request further spacing than what is noted Examples - driveways with heavy truck use, more sensitive street trees, streets with right-of-way reservations or planned sidewalk installation, etc.*
4. *Exceptions may be allowed in extreme circumstances, such as very narrow terraces.*
5. *New or replacement poles should be placed near property line extensions, whenever possible, and not placed directly in front of building entrances.*

Figure 5-3.1: Freestanding Small Cell in Amenity Zone



Freestanding small cells shall be located such that they in no way impede, obstruct, or hinder reasonable pedestrian or vehicular travel, affect public safety, obstruct the legal access to or use of the public right of way, violate applicable law, violate or conflict with public right of way design standards, specifications, or design district requirements, violate the Federal Americans with Disabilities Act of 1990, or in any way create a risk to public health, safety, or welfare.

Figure 5-3.2: Freestanding Small Cell Location Between Property and Trees

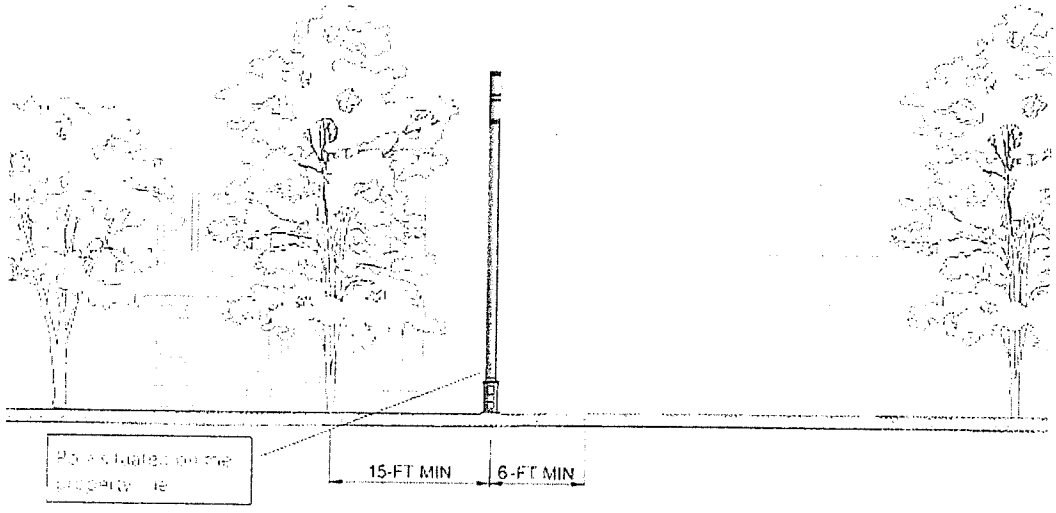


Figure 5-3.3: Freestanding small cell between property lines

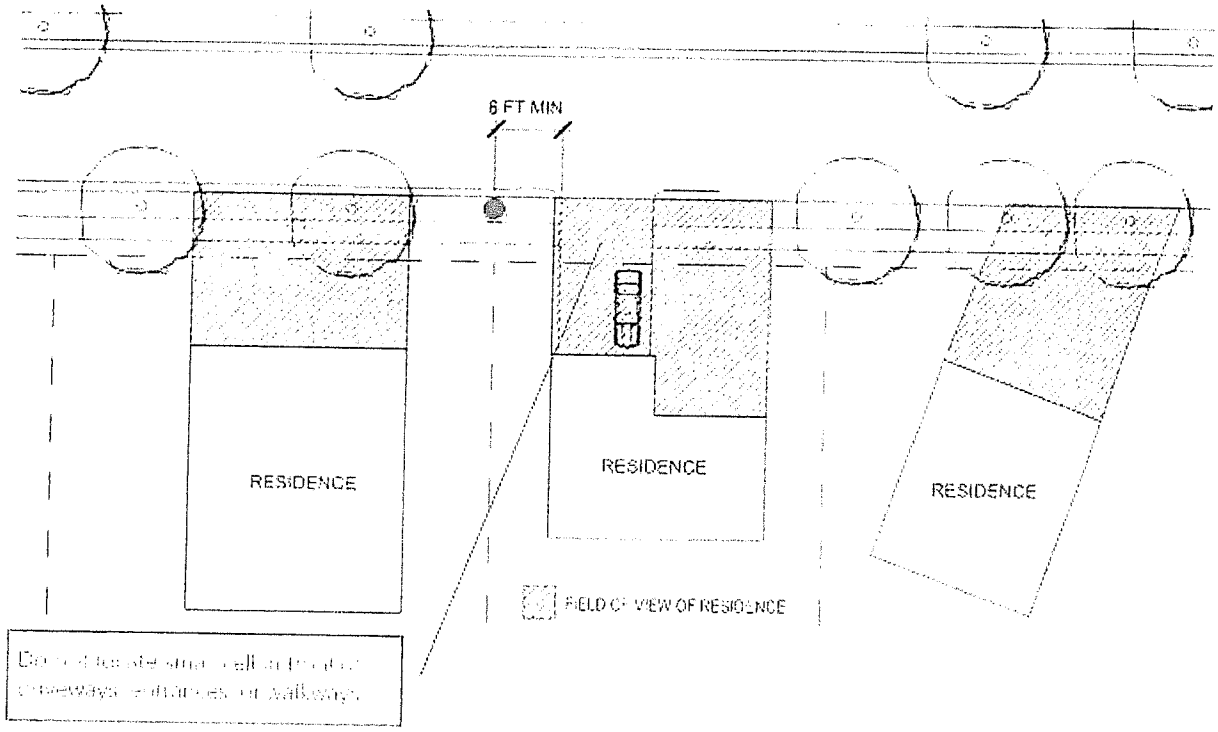
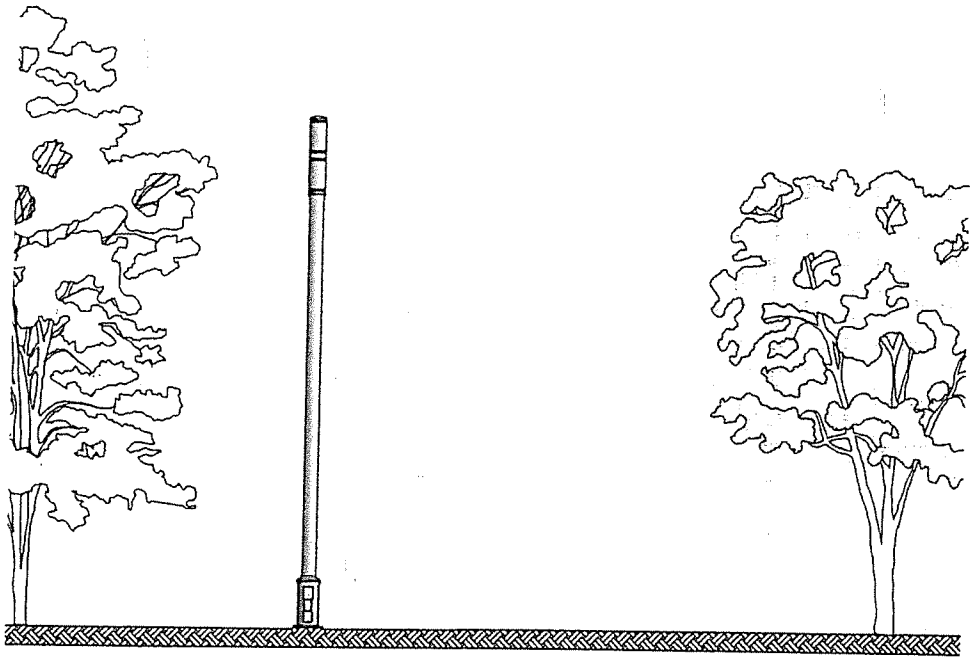


Figure 5-3.4: Small Cell in Commercial Area



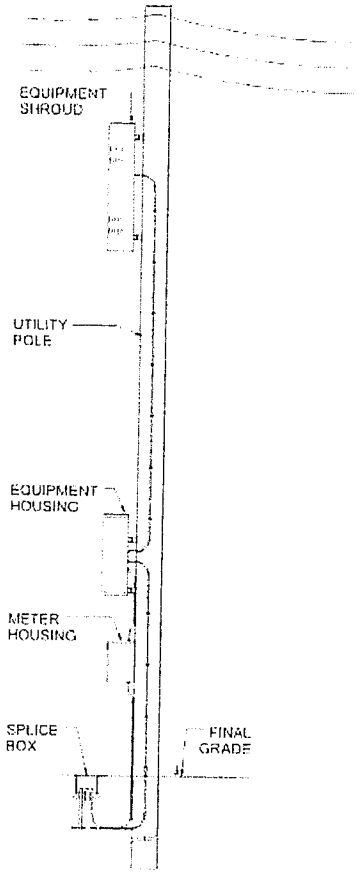
5.4 Height Restrictions and Requirements

5.4.1 Support Structures, Towers, and Utility Poles. The height of a support structure, tower, or utility pole in the right-of-way shall be no more than 10% higher of any pole on the same block as the proposed structure up to a maximum height of 50 feet.

5.4.2 Small Wireless Facility. The height of a small wireless facility in the right-of-way may not exceed 50 feet above ground and is to remain within 10 ft. of the tallest existing support structure, tower, or utility pole that is in place on the same block, excluding a proposed support structure for the new small cell facility.

5.4.3 Minimum Height of Wireless Communications Equipment. Equipment mounted to support structures must not interfere with or create a hazard to pedestrian or vehicular traffic and must be a minimum of 12 feet above any pedestrian or bicycle thoroughfare and a minimum of 16 feet above any traffic lane.

Figure 5-4.1: Attachment to Utility Pole



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6 General Aesthetic Standards

6.1.1 Each new or modified facility must be compatible in size, mass, and color to similar facilities in the immediate area, with a goal of minimizing the physical and visual impact on the area.

6.1.2 The diameter of new support structures is to be minimized such that it is sufficient only for the structural support of the existing and currently proposed attachments.

6.1.3 Antennas located at the top of support structures shall be incorporated into the structure, or placed within shrouds of a size such that the antenna appears to be part of the support structure.

6.1.4 All small cell equipment is to be shrouded. Wiring and cabling shall be neat and concealed within or flush to the support structure, ensuring concealment of these components to the greatest extent possible.

6.1.5 No wireless telecommunications facility is permitted in any local historic district or Urban design district if it will be contrary to or destructive of the character of the district, without the approval of the Landmarks Commission for historic districts and the Urban Design Commission for urban design districts.

6.1.6 Noise. Facilities must be constructed and operated in a manner that minimizes noise that is audible as provided in Madison General Ordinances.

6.1.7 Lighting. Facilities must not be illuminated, except in accordance with state or federal regulations or if incorporated as part of a street light pole.

6.1.8 Signage Prohibited. Signage is not permitted except to comply with FCC or Wisconsin regulations to provide safety warning or emergency contact information.

6.1.9 Trees. Tree "topping" or improper pruning of trees within the right-of-way is prohibited. Any proposed pruning of trees, shrubs, or other landscaping already existing in the right-of-way must be noted in the application and approved separately by permit issued by the City Forester. Any such work shall be performed by a certified arborist and subject to other review, input, and requirements of the City Forestry Division.

6.1.10 Pole Type. New or replacement poles shall match existing pole types on the same block. There are a variety of pole types within the City of Madison, and typical situations and allowed pole types are noted in Table 6-1 below.

6.1.11 Frequency of Installations. Small Cell facilities are to be spaced appropriately to maintain aesthetics of the streetscape. Spacing in Special Interest Areas will be greater than in typical areas of the City.

Table 6-1: Pole Type Areas

Name	Ex Pole Types	Allowed Pole Types	Note Regarding Area
Area 1	Painted Steel Poles	Galvanized steel pole painted, color and pole style (taper, cross section, detailing) to match existing poles. Contractor to insure paint is compatible and will stick to a galvanized surface.	Downtown areas, including Cap Square, E & W Wash
Area 2	Painted Steel Poles Wood Utility Poles	Wood pole or galvanized steel pole painted, color and pole style (taper, cross section, detailing) to match existing poles. Contractor to insure paint is compatible and will stick to a galvanized surface.	Limited areas, Willy St., for example
Area 3	Galvanized Steel Poles	Galvanized steel pole	Various locations throughout City

Table 6-1: Pole Type Areas

Name	Ex Pole Types	Allowed Pole Types	Note Regarding Area
Area 4	Galvanized Steel Poles Wood Utility Poles	Galvanized steel or wood poles	Various locations throughout City
Area 5	Concrete Poles	Concrete or galvanized steel poles	Newer residential subdivisions
Area 6	Wood Poles	Wood or galvanized steel poles	Near east & west side neighborhoods

Notes:

1. *Pole areas are only considering the style of taller street light, traffic signal and any other utility poles. It does not consider locations with pedestrian scale and ornamental lighting as it is assumed that those poles will be too short for use with small cells.*
2. *The City will not take ownership of or perform maintenance on any new poles installed for the sole purpose of installing small cell equipment.*
3. *Poles with rust, peeling paint, faded paint or unsightly in appearance shall be repainted or replaced in accordance with these specifications.*
4. *The minimum paint system shall be an epoxy prime paint and polyester polyurethane topcoat paint, applied by electrostatic means, or the manufacturer's best paint system. The paint system chosen shall result in a durable weather-resistant paint well adhered to the pole and suitable for streets with heavy salting and the resulting salt spray from passing vehicles. Any green finish paint color shall match a Tiger-Drylac RAL color (6009 for green), with glossy finish. Any black finish paint color shall match a Tiger Drylac RAL 9004 with 80% gloss. The manufacturer shall fully warrant the paint system for five years.*

Table 6-2: Permissible Spacing and Frequency of Installations

	Outside Areas of Special Interest		Inside Areas of Special Interest		
Blockface Length Intervals[1]	Number of Small Cell Facilities Permitted per Blockface[2]	Minimum Distance between Facilities on same Blockface[3]	Number of Small Cell Facilities Permitted per Blockface	Minimum Distance between Facilities on same Blockface	Limit per Carrier per Block[4]
0'-150'	1	N/A	1	N/A	1
151'-300'	1	N/A	1	N/A	1
301'-450'	2	60'	1	N/A	1
451'-600'	2	60'	2	90'	1
601'-750'	3	60'	2	105'	2
Over 750'	3	60'	2	120'	2

[1]Block lengths should be measured along the edge of curb between the edge line extended of adjacent intersecting streets.

[2]This is inclusive of all types of installations and regardless of carrier.

[3]In other words, the minimum distance between two facilities sharing the same side of the block. Distance should be measured in a linear fashion along the edge of curb between the two facilities' center points.

[4]A block is defined as two opposing blockfaces.

7 Guidelines Regarding Areas of Special Interest

7.1 Definition of Areas of Special Interest

With respect to these guidelines, areas of special interest shall be defined and include the following:

7.1.1 Historic Districts
7.1.2 Historic Landmarked Properties
7.1.3 Areas included within Urban Design Districts, UMX, DC, and Downtown Capital Corridor
7.1.4 Undergrounding Districts
7.1.5 Other Areas of Interest as defined in Maps Below

7.2 General Guidelines for Areas of Special Interest

7.2.1 Small Cell infrastructure located in unnamed alleys within a historic district shall setback a minimum of twenty feet (20') from the inside edge of adjoining sidewalk.

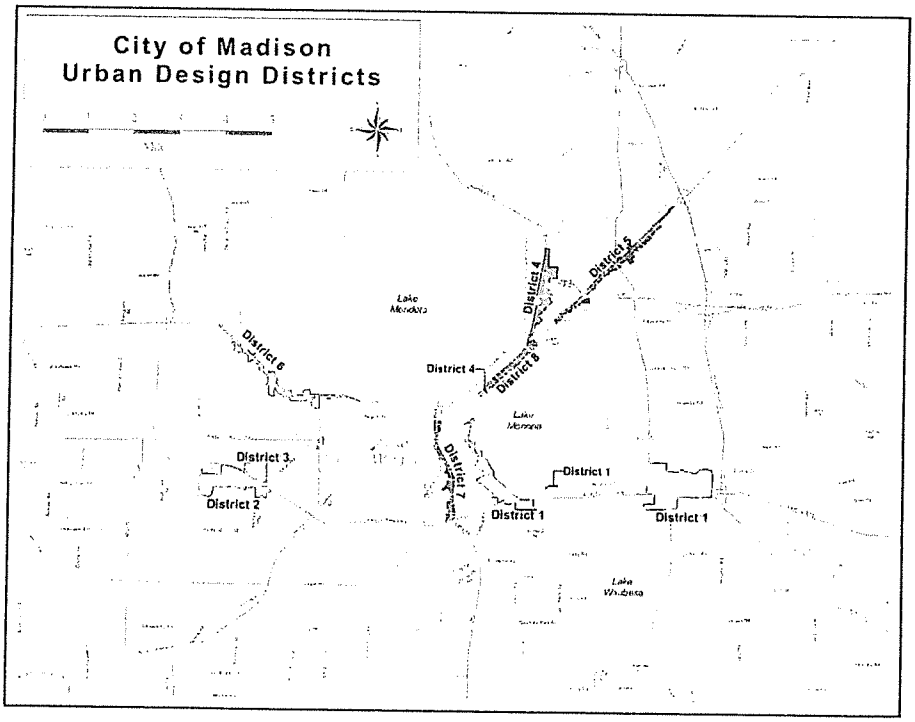
7.2.2 In any Special Interest Area, where allowed, small cell equipment, other than the antenna, may be mounted on the pole, but in such situations all equipment other than the meter shall be a minimum of 17 ft. above ground or must be completely concealed or placed underground.

7.3 Downtown Capital Corridor

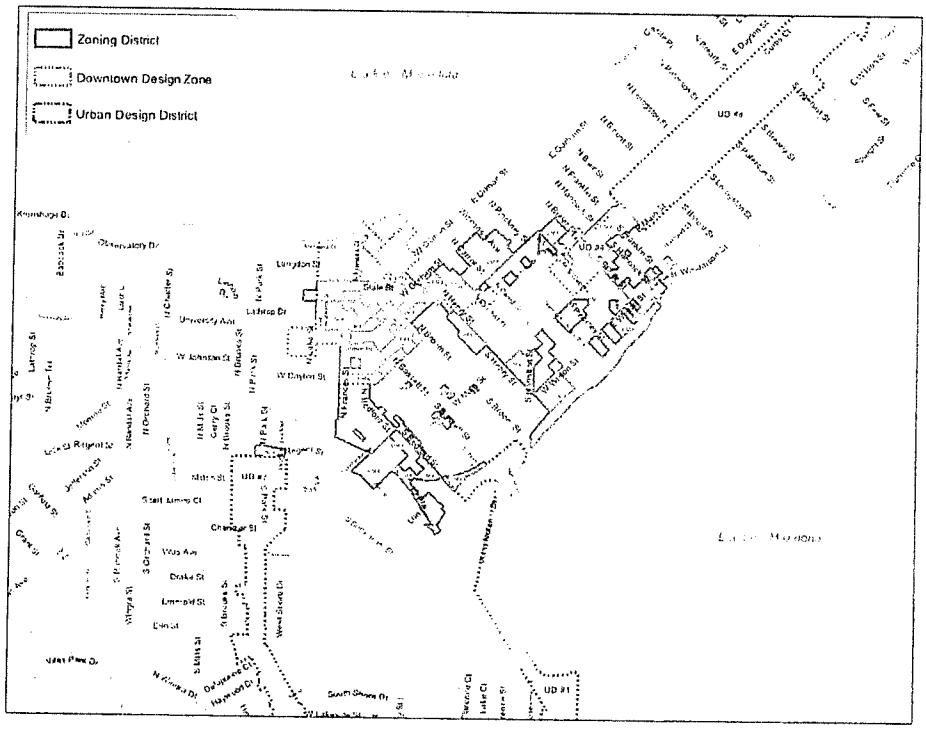
7.3.1 New small cell infrastructure on the Capitol Square, Outer Loop, State Street, or any of the spoke streets between the Square and Outer Loop must have all equipment, other than the antenna, either completely concealed in a decorative street amenity (to be owned and maintained by the small cell company) or be installed in an underground vault. This is consistent with the existing streetscape in this area.

7.4 Special Interest Area Maps

Map 1: Urban Design Districts

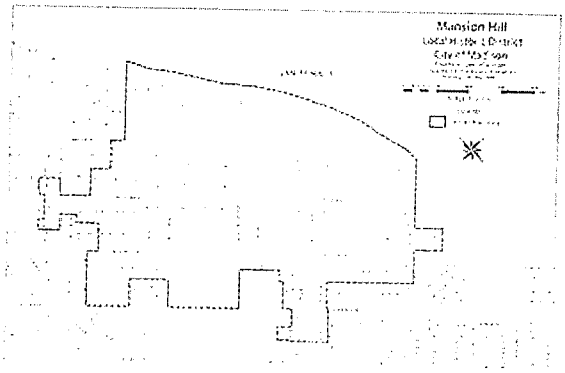


Map 2: Isthmus Special Districts

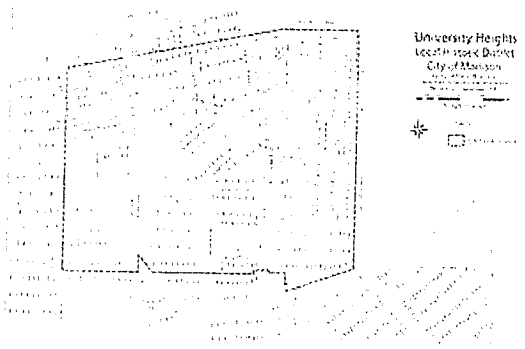


Map 3: Local Historic Districts

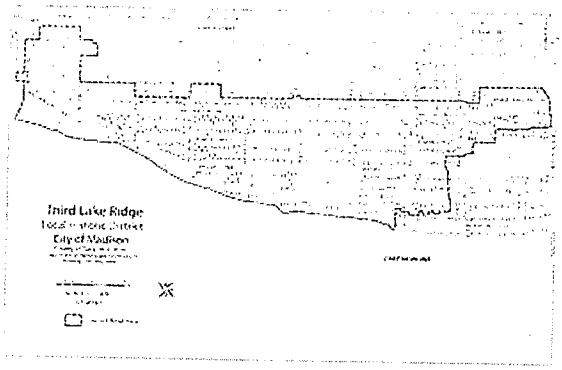
Mansion Hill Historic District



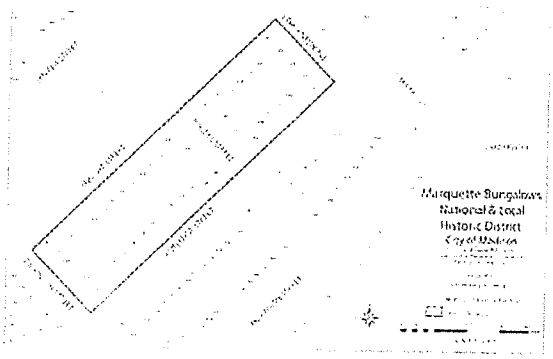
University Heights Historic District



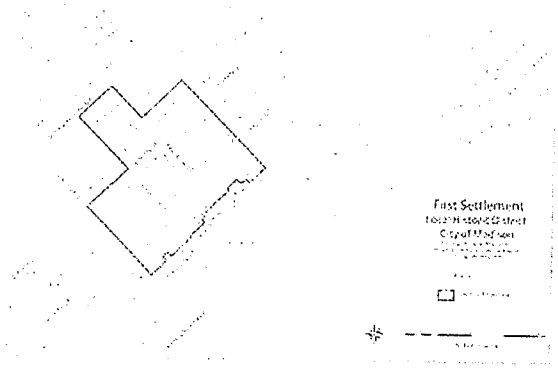
Third Lake Ridge Historic District



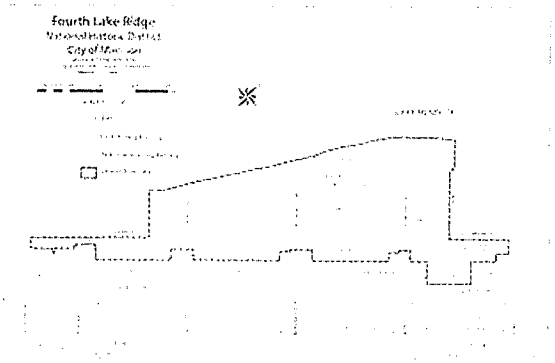
Marquette Bungalows Historic District



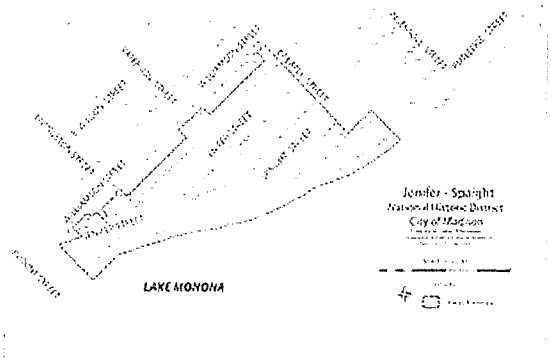
First Settlement Historic District



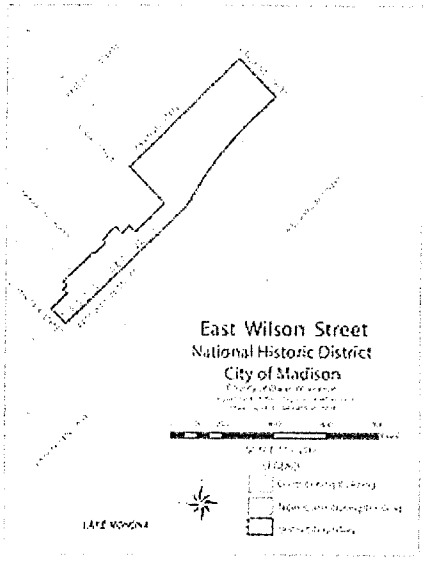
Fourth Lake Ridge



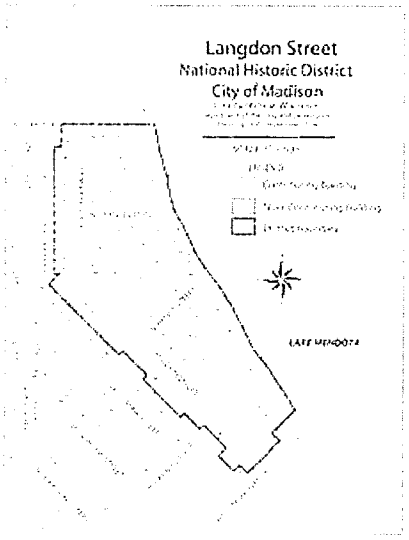
Jenifer-Spaight



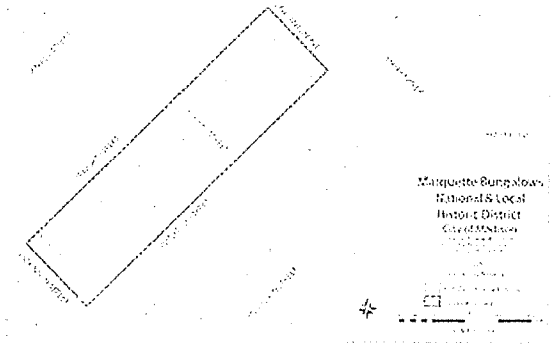
East Wilson Street



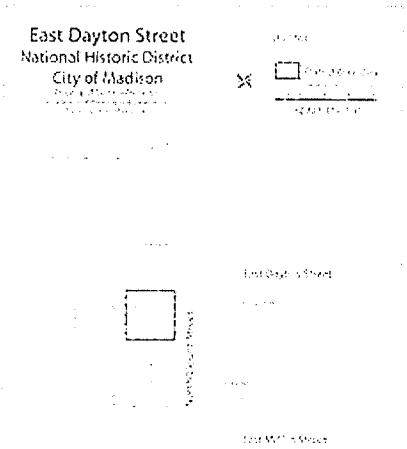
Langdon Street



Marquette Bungalows



East Dayton Street



8 General Requirements for Small Cell Equipment

8.1 General Design Requirements

All small attachments shall meet the following requirements:

8.1.1 Be reviewed and approved by a licensed professional structural engineer in the State of Wisconsin, which shall include review of any structures and foundations. All pertinent calculations shall be stamped by a Professional Structural Engineer and submitted to the City as part of the permit review process.

8.1.2 All installations shall meet or exceed all applicable structural standards, clearance standards, and provisions of the latest National Electrical Safety Code (NESC).

8.1.3 All structures with small cell equipment shall have an identification tag attached to the structure with the company information and emergency contact information.

8.1.4 The Small Cell Company is responsible for providing, installing, permitting, and metering all necessary electrical, fiber optic, and telecommunication connections to the small cell equipment. All connections shall comply with all local, state and federal codes.

8.1.5 When installed within the right-of-way, the small cell equipment and any support structures shall be relocated at owner's expense, when the City deems necessary for public improvements.

Table 8-1: General Requirements for Small Cell Equipment

Electrical Service	Per electric utility provider.
Grounding	Per electric utility provider and the NESC requirements.
Separation of Service	All new electrical conduit and fiber shall be separated by Owner.
Utility Equipment	Per electric utility provider.
Radio Frequency Equipment Disconnect	Radio frequency equipment shall have a disconnect that meets or exceeds electric utility provider's and the City's requirements.
Warning Label	Radio frequency warning labels shall be mounted on the exterior of the Network Provider's equipment, clearly marked, and visible from the ground/roadside.
Owner Identification	A 4-inch by 6-inch (maximum) aluminum plate with the Network Provider's name, location identifying information, and emergency telephone number shall be permanently fixed to the equipment, 5 feet above finished grade.

8.2 Attachments to Utility Poles and Lines

8.2.1 If a small cell attachment is proposed for an existing utility pole with an existing street light attachment, the small cell equipment shall be installed such that the street light will remain in the same location and height and such that the small cell equipment will not obstruct proper lighting of the area. See Tables 8-2 and 8-3 for more specifics and Figures 8-1 and 8-2 for images/examples.

Table 8-2: Small Cell Equipment Attachments to Utility Poles

Equipment Color	Visible attachments and hardware shall be colored to match pole, or colored gray (RAL 7038) if located on a wooden pole.

Table 8-2: Small Cell Equipment Attachments to Utility Poles

Equipment Shroud	Maximum size of all equipment on the pole, related to the small cell or otherwise, shall not exceed 28 cubic feet in volume. Only one equipment shroud, containing all required small cell equipment, shall be installed per pole. Except, one additional equipment shroud shall be allowed per pole if the antenna is located within the second equipment shroud. Equipment shall be located such that it meets the Americans with Disabilities Act of 1990 and does not obstruct, impede, or hinder the typical pedestrian or vehicular travel way.
Cantenna	The cantenna shall include all the antenna, radio head, mounting bracket, and all other hardware necessary for a complete installation. Antennas shall not exceed 3 cubic feet in volume, and the following equipment sizes shall be allowed per type of antenna installed: 4G-LTE: Maximum 14" outer diameter, maximum height shall be 5'-0" from top of cantenna to pole attachment point. 5G only: Maximum 16" outer diameter with 19" (maximum) protrusions for 5G antennas. Maximum height shall be 5'-0" from top of cantenna to pole attachment point. Dual technology (Typically 4G & 5G): 16" outer diameter with 19" (maximum) protrusions for 5G antennas. Maximum height shall be 6'-8" from top of cantenna to pole attachment point.

Table 8-3: Small Cell Attachment to Utility Strand Specification Overview

Equipment Color	Visible attachments and hardware shall be colored gray (RAL 7038).
Strand Mount Equipment Shroud	1 cubic foot maximum strand mount equipment shroud. Only one equipment shroud shall be installed per permit location.
Strand Mounted Warning Label	Radio frequency warning labels shall be mounted on the equipment, and clearly marked on both sides of the shrouds and be visible from the ground, roadside, and field side.

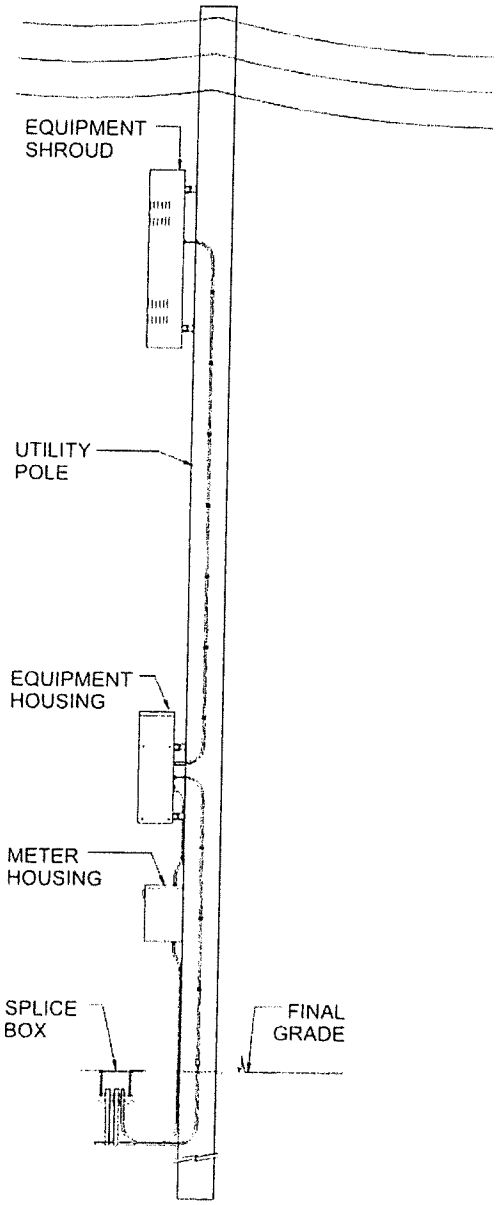


Figure 8-1: Attachment to Utility Pole

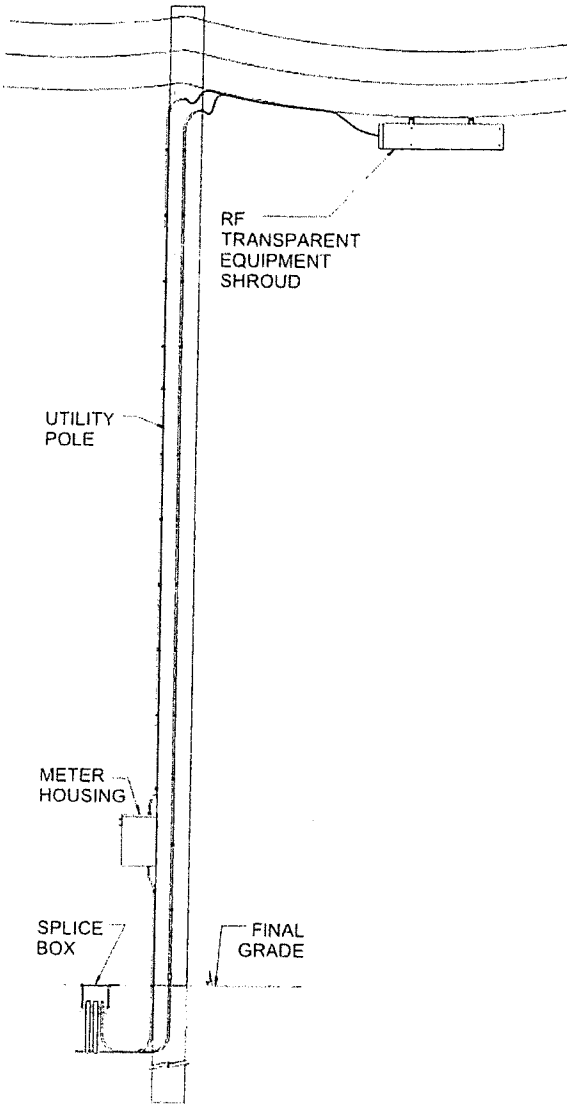


Figure 8-2: Attachment to Utility Strand

8.3 Equipment for Freestanding Poles

8.3.1 The freestanding pole components include the foundation, equipment cabinet, upper pole, cantenna, and all hardware and internally integrated electrical equipment necessary for a complete assembly. The small cell components shall also be sized to be visually pleasing. For a combination pole to be considered visually pleasing, the transition between the equipment cabinet and upper pole should be considered. A decorative transition shall be installed over the equipment cabinet upper bolts. All hardware connections shall be hidden from view. No horizontal flat spaces greater than 1.5 inches shall exist on the equipment cabinet to prevent cups, trash, and other objects from being placed on the equipment cabinet. Each pole component shall be architecturally compatible to create a cohesive aesthetic. Examples of an unacceptable and an acceptable small cell installation can be found in Figure 8-3 and Figure 8-4, below, and a freestanding pole example can be found in Figure 8-5. Tables 8-4 and 8-5 provide additional equipment requirements for freestanding poles.

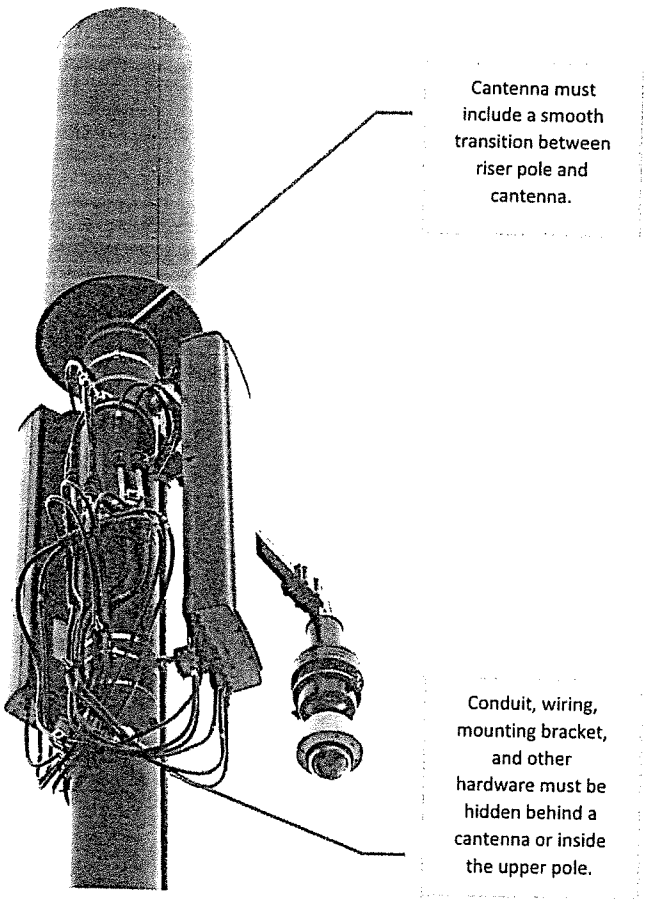


Figure 8-3: Unacceptable Installation

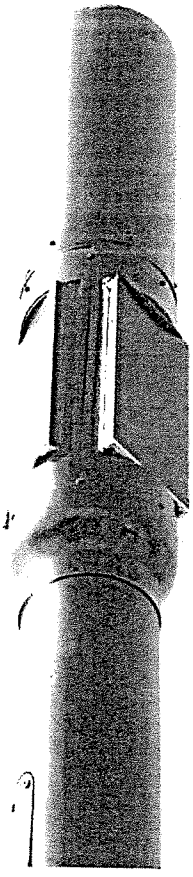


Figure 8-4: Acceptable Installation

CITY OF LAKELAND

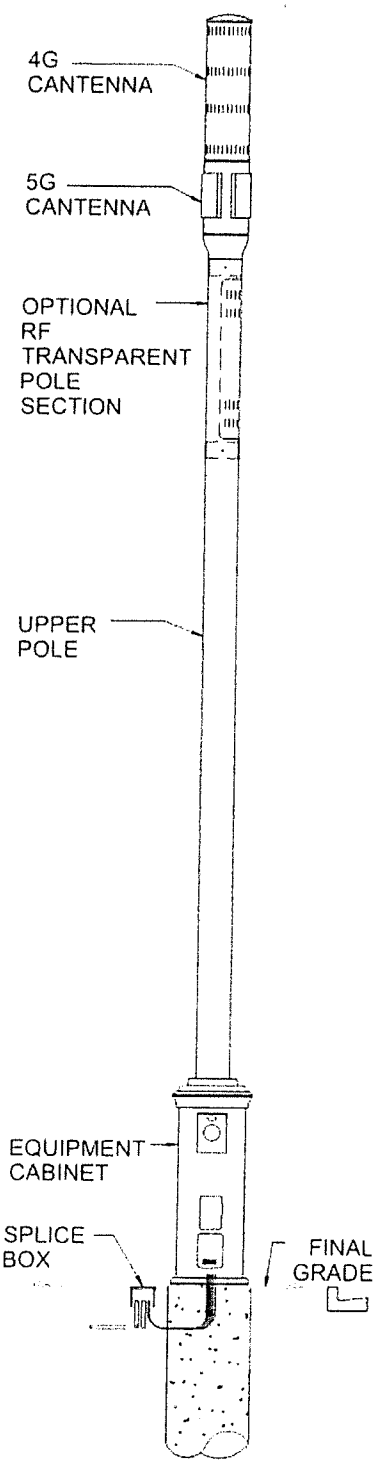


Figure 8-5: Freestanding Pole Example

Table 8-4: Equipment Requirements for Freestanding Poles

Equipment Cabinet Transition	All hardware attachments shall be hidden. Equipment cabinet and/or equipment cabinet cover shall not have a flat, horizontal surface larger than 1.5 inches.	
Equipment Cabinet Access Doors	Utility Access	Network Provider Access
	Per electric utility provider's meter access requirements. The meter shall be recessed as much as possible into the pole base.	Lockable access door sized to install, maintain, and remove all small cell equipment as needed.
Required Equipment	Utility Equipment*	Network Provider Equipment*
	Per electric utility provider's requirements.	Per small cell Network Provider's requirements.
	*All equipment shall be located internal to the equipment cabinet or recessed in the equipment cabinet to meet Utility requirements. All equipment shall be mounted per the Owner's requirements.	
Equipment separation	All equipment shall be separated by owner. All access doors shall be secured by owner requirements.	
Ventilation	Passive louvers and/or other passive ventilation systems shall be provided as the primary means of temperature control.	
Motorized Ventilation	If required, fan(s) shall not emit noise greater than 30dBa at one meter (3.28 feet).	
Hand Holes	Provide hand holes as necessary to provide access to underground utilities. All hand holes are to be installed flush with the top surface.	
Grommets	Weatherproof grommets shall be integrated into the pole design to allow cable to exit the pole, future IOT attachments, without water seeping into the pole.	
Cantenna Shroud Transition	The antenna and upper pole attachment shall be shrouded to meet City aesthetics. A tapered transition between the upper pole and cantenna shall be included.	
Cantenna Finish	Antenna shroud shall be colored to match pole.	
Design Wind Velocity	115 mph minimum per TIA-222 rev G, IBC 2012 with ASCE 710, and amendments for local conditions.	
Foundation	Plan details of concrete pole foundations, including anchor bolt pattern & placement, shall be stamped by a licensed professional engineer in the State of Wisconsin and approved by the Engineering Division.	
Potential Shroud	All fixed connections shall be hidden from view.	
Electrical Separation	An internal divider shall separate electrical wiring and fiber, per Owner. Separation of service shall meet electric utility provider's requirements.	

Table 8-5: 4G and 5G Equipment Requirements for Freestanding Poles

4G – LTE only	Equipment cabinet dimension	Round, galvanized equipment cabinet. Maximum 5'-8" height, from top of foundation to top of transition shroud, with 16" outer diameter equipment cabinet. A 20" outer diameter will be allowed if Applicant can show that a smaller equipment cabinet is incapable of housing the necessary equipment.
	Cantenna dimension	14" maximum outer diameter.
5G only	Equipment cabinet dimension	Round, galvanized equipment cabinet, painted if required to meet aesthetic standards. Maximum 5'-8" height, from top of foundation to top of transition shroud, with 16" outer diameter equipment cabinet. A 20" outer diameter will be allowed if Applicant can show that a smaller equipment cabinet is incapable of housing the necessary equipment.
	Cantenna dimension	16" maximum outer diameter with 19" (maximum) protrusions for 5G antennas.
Dual technology (4G & 5G)	Equipment cabinet dimension	Round, galvanized equipment cabinet. Maximum 5'-8" height, from top of foundation to top of transition shroud, with 20" maximum outer diameter.
	Cantenna dimension	16" maximum outer diameter with 19" (maximum) protrusions for 5G antennas.

8.4 Attachments to City Streetlight Poles

It may be possible for small cell infrastructure to be attached to streetlight poles owned by the City of Madison. However, these attachments will be covered under separate agreements between the City of Madison and the Small Cell provider. These design guidelines will still apply, but there will be additional requirements for the final design of the pole, foundation, cabinets, etc., which will described further under the separate agreement.

CITY OF MADISON

9 Glossary

The following serve to define terms used in the guidelines as they relate to the public spaces in Madison.

Areas of Special Interest – Areas within Madison that have stricter aesthetic standards. These include the Capitol Corridor, Downtown Urban Design Guidelines, State Street & the Capitol Square Area, Underground Areas, Underground Districts, Urban Design Districts, etc.

Antenna – An apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location, for the transmission of writing, signs, signals, data, images, pictures, and sounds of all kinds.

Building Entrance Area – The building entry setting is an integral component of the functional and decorative features of architectural design. These entrances are delineated by one or more of the following features, such as: doors, pilaster, entablatures, columns, balustrades, columns, fanlights, sidelights, stairs or ramps, podiums plinths, flagpoles, sculptural or decorative elements, and designed landscape plantings flanking the entry.

Building face – Any building wall, or its projection, that fronts a right-of-way.

Clear pedestrian path – The straight path that is free of all obstructions within the sidewalk between the amenity zone and the public parking area or property line/building restriction line. The clear pedestrian path is measured from the farthest extended portion of any element projecting out from the building facade, such as a sidewalk café, to the curb line or the nearest obstruction, such as the outer edge of a tree box.

Cobra head fixture – A City of Madison standard lighting fixture typically mounted on an arm that is attached either to a wood pole or a steel pole (galvanized or painted).

Undergrounding District – Areas of the City that historically had overhead utility lines but have now been undergrounded by either coordination with developments, by use of City funds, by resolution to enforce private property undergrounding of overhead services, or a combination of these means.

Underground Area – Newer areas of the City of Madison, in which all utility services are provided underground and the only poles in the area are either for street lights or traffic signals.

Small Cell infrastructure – Low-powered antennas and related equipment that provide cellular and data coverage to smaller geographic areas, supplementing the larger cellular network and improving service for wireless customers. This term is used interchangeably with Small Cell Equipment.

Standalone poles – Independent poles solely used for the attachment of small cell antennas and used only for the purpose of transmitting wireless signals. Also referred to as Freestanding poles.

Streetscape elements – Components that make up the city street, such as trees, light poles, bicycle racks, traffic cabinets, parking meters, signs, sculptures, and street furniture.

Terrace – The area of public space between the curb and the sidewalk reserved for the installation of street lights, parking meters, bicycle racks, signs regulating curbside management. It also includes the tree space, the area of public space reserved for the planting of street trees.

Utility pole – An existing pole in public space owned by a party other than Madison or the cellular provider installed to provide public utilities and that can accommodate Small Cell infrastructure equipment.

Traffic signal – A pole of any type to which a traffic or pedestrian signal or other traffic right-of-way regulating equipment is attached.

Views and Vistas – Primary, Radiating, Orthogonal, Major Cross-Axes, Tangential, Frontal, and Axial Street vistas that contribute to the Capitol Corridor & Downtown Urban Design Guidelines Plan National Register of Historic Places nomination.

EXHIBIT 10:

Oregon LOC DRAFT Model Ordinance

Oregon LOC Draft Model ORD

INTRODUCTION

Background

On January 31, 2017, Federal Communications Commission Chairman Ajit Pai established a Broadband Deployment Advisory Committee (BDAC), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. On September 27, 2018, the FCC released a Declaratory Ruling and Third Report and Order (FCC 18-133, referred throughout the document as "Small Cell Order" or "FCC Order") that significantly limits local authority over small wireless infrastructure deployment and fees for use of the rights of way. The order took effect January 14, 2019. The FCC order defines the size limitations for small wireless facilities (allowing antennas of up to 3 cu. ft. each, with additional equipment not to exceed 28 cu. ft.), and specifies that such facilities may not result in human exposure to radiofrequency radiation in excess of applicable standards in the FCC's rules (which preempt local regulation of RF emissions). Throughout the model code, it is noted when language is mirrored in the FCC~~small cell~~ order.

LOC Model Small Wireless Facilities Code

In coordination with many cities, representatives from Verizon, AT&T, and T-Mobile, the League of Oregon Cities met from January 2019 to April 2019 to discuss and craft a model code, model design standards relating to small wireless facilities while there is pending litigation on the FCC order. The model code and model design standards are intended to be paired together.

There is no model that will work for every jurisdiction. As such, LOC's model is intended as a roadmap to assist local governments in adopting their own set of code. While example language is included in the sections, we do not intend to suggest these examples could work for every jurisdiction.

We also recognize there are many ways to structure a code. The appropriate structure will vary by jurisdiction. The intent is to allow each jurisdiction to draft the substantive provisions that best reflect local needs and interests. We recommend that jurisdictions that own poles or other structures in the rights of way establish a clear code for small wireless facilities. The circumstances of each municipality may, and likely will, require modifications to the framework and/or example language of this model code.

Additional Considerations

The LOC model code only applies to wireless communications. Municipalities should review their existing ordinances, standards and policies to determine if this framework is appropriate. Municipalities may want to consider whether it would be preferable to adopt a utility-neutral code covering all utilities and communications providers. Differences in policy choices and existing standards, among other things, may impact the decision in how to proceed. It is recommended that cities ~~work with~~consult their attorney, ROW specialists, engineers, master plans, comprehensive plans, goals and/or wireless providers before final adoption of this code.

Understanding the Organization of the Model Design Standards

As stated above, the model is best described as an outline or roadmap to assist municipalities in drafting the appropriate code for their community. The model includes example language to illustrate the intent of the section. The example language, or a variation thereof, may be appropriate for final adoption in some jurisdictions.

Finally, there may be additional notes or issues for consideration within the subsections of the model, which are [bracketed] and in ALL CAPS. These notes are is intended as guidance for municipal drafters, not for adoption in a final ordinance.

OREGON

SMALL WIRELESS FACILITY MODEL ORDINANCE

AN ORDINANCE ESTABLISHING STANDARDS FOR SMALL WIRELESS FACILITIES IN THE RIGHTS-OF-WAY IN THE CITY OF _____

Preamble

WHEREAS, the City of _____ ("City") desires to encourage wireless infrastructure investment by providing a fair and predictable process for the deployment of small wireless facilities, while enabling the City to promote the management of the rights-of-way in the overall interests of the public health, safety and welfare; and

WHEREAS, the City recognizes that small wireless facilities are needed to deliver wireless access and capacity to advanced technology, broadband and first responder services to homes, and businesses, as well as health care, public safety and educational services providers within the City; and

WHEREAS, the City recognizes that the wireless industry needs small wireless facilities, including facilities commonly referred to as small cells, deployed in the public rights-of-way; and,

WHEREAS, the City intends to adopt a new code consistent with local, state and federal laws, standards and requirements.

NOW, THEREFORE, BE IT ORDAINED by the _____ that Title _____ of the Municipal Code of the City of _____ shall be amended by adding the following Chapter _____ that will read as follows:

Section 1 – Purpose and Scope

[NOTE: THIS SECTION SHOULD BE CONSISTENT WITH EXISTING ROW ORDINANCES]

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(A) Purpose. [Example: The purpose of this Chapter is to establish nondiscriminatory policies and procedures for use of the rights-of-way and more specifically the placement of small wireless facilities in right-of-way within the City's jurisdiction, which will provide public benefit consistent with the preservation of the integrity, safe usage, and reasonable aesthetic qualities of the City rights-of-way and the City as a whole.]

(B) Intent. In enacting this Chapter, the City is establishing uniform standards consistent with federal law to address the placement of small wireless facilities and associated poles in the rights-of-way, including without limitation, to manage the public right of way [in order to:

(1) prevent interference with the use of streets, sidewalks, alleys, parkways and other public ways and places;

(2) prevent the creation of obstructions and other conditions that are hazardous to vehicular and pedestrian traffic;
(3) prevent interference with the facilities and operations of facilities lawfully located in rights-of-way or public property;
(4) protect against environmental damage, including damage to trees;
(5) preserve the character of Historic Districts or areas with Decorative Poles; and
(6) facilitate rapid deployment of small cell facilities to provide the benefits of wireless services.]~~]~~

[IT IS SUGGESTED THAT CITIES RREVIEW OTHER CHAPTERS OF CITY CODE TO MAKE SURE THERE IS NO CONFLICT AND~~, if that is not possible~~ CONSIDER WHETHER IT IS APPROPRIATE TO ADD~~ing~~ A SUBSECTION (C) TO SECTION 1.]

(C) Conflicts with Other Chapters. This Chapter supersedes all Chapters or parts of Chapters adopted prior hereto that are in conflict herewith, to the extent of such conflict]~~.~~

Section 2 - Definitions

~~"Antenna"~~

(A) "Antenna" means an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location pursuant to Commission authorization, for the provision of personal wireless service and any commingled information services. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under 47 C.F.R. Part 15.

~~(A) means an apparatus designed for the purpose of emitting radio frequency (RF) signals to be operated or operating from a fixed location pursuant to the Federal Communications Commission authorization for the provision of wireless service. For purposes of this definition, the term antenna does not include an unintentional radiator, mobile station, or device authorized under 47 C.F.R. Part 15.~~

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(B) "Antenna Equipment" means equipment, switches, wiring, cabling, power sources, shelters or cabinets associated with an antenna, located at the same fixed location as the antenna, and, when collocated on a structure, is mounted or installed at the same time as such antenna.

(C) "Antenna Facility" means an antenna and associated antenna equipment.

(D) "Applicable Codes" means uniform building, fire, safety electrical, plumbing, or mechanical codes adopted by a recognized national code organization or local amendments to those codes that are of general application, to the extent the local amendments are not inconsistent with the terms of this Chapter.

(E) "Applicant" means any person who submits an application as or on behalf of a wireless provider.

(F) "Application" means requests submitted by an applicant (i) for permissions for all authority necessary to collocate small wireless facilities; or (ii) to approve the installation, modification or replacement of a structure on which to collocate a small wireless facility in the rights-of-way, where required.

(G) "City Structure means a structure in the rights of ways owned, managed or operated by the City or any subdivision or instrumentality thereof, including municipal electric utilities. [Including, but not limited to streetlights, traffic signals, utility poles, building] [Consider excluding certain structures in a new section or in section 8]

(H) "Collocate" means 1) mounting or installing an antenna facility on a preexisting structure, and/or 2) modifying a structure for the purpose of mounting or installing an antenna facility on that structure. "Collocation" has a corresponding meaning.

(I) "Day" means calendar day~~, except for state holidays~~. [NOTE: DAY IS IN REFERENCE ~~WITH~~TO FCC SHOT CLOCKS]

~~(J)~~ "Decorative Pole" means a city structure that is specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than a small wireless facility, lighting, specially designed informational or directional signage or temporary holiday, or temporary holiday or special events attachments, have been placed or are permitted to be placed according to nondiscriminatory standards.

~~(K)~~(J) ~~"~~

(~~L~~)(K) "Historic District" means a group of buildings, properties, or sites that are either: 1) listed in the National Register of Historic Places or formally determined eligible for listing by the Keeper of the National Register in accordance with Section VI.D.1a.i-v of the Nationwide Programmatic Agreement codified at 47 C.F.R. Part 1, Appendix C; or, 2) a locally designated historic district as of the effective date of this Chapter.

(~~M~~)(L) "Permissions" means [list various permits, agreements and licenses needed for SWF deployment]

(~~N~~)(M) "Person" means an individual, corporation, limited liability company, partnership, association, trust, or other entity or organization, including the City.

(~~O~~)(N) "Pole" means a type of structure in the rights-of-way that is or may be used in whole or in part by or for wireline communications, electric distribution, lighting, traffic control, signage, or similar function, or for collocation of small wireless facilities; provided, such term does not include a tower, building or electric transmission structures.

(~~P~~)(O) "Rights-of-Way" or "ROW" means [insert a consistent definition across other codes. Example: "Right-of-way," "rights-of-way," "public right-of-way," or "ROW" means and

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includes, but is not limited to, the space in, upon, above, along, across, over or under the public streets, roads, highways, lanes, courts, ways, alleys, boulevards, bridges, trails, paths, sidewalks, bicycle lanes, public utility easements and all other public ways or areas, including the subsurface under and air space over these areas, but does not include parks, parkland, or other City property not generally open to the public for travel.]

~~(Q)~~(P) "Routine Maintenance" means inspections, testing, repair, and modifications that maintain functional capacity, aesthetic and structural integrity of a small wireless facility and/or the associated pole or structure.

~~(R)~~(Q) "Small Wireless Facility" means a facility that meets each of the following conditions:

(1) The facilities (i) are mounted on structures 50 feet or less in height including the antennas, 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; and,

(2) Each antenna associated with the deployment, excluding associated antenna equipment, is no more than three cubic feet in volume; and,

(3) All other wireless equipment associated with the structure, including wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume; and,

(4) The facilities do not result in human exposure to radio frequency in excess of the applicable safety standards specified in 47 C.F.R. 1.1307(b).

~~(S)~~(R) "Structure" means a pole, tower, or base station, ~~or other building,~~ whether or not it has an existing antenna facility, that is used or to be used ~~for the~~ for the provision of personal wireless service (whether on its own or comingled with other types of service) ~~provision of wireless service~~.

~~(T)~~(S) "Technically Feasible" means that by virtue of engineering or spectrum usage the proposed placement for a small wireless facility, or its design, concealment measures, or site location can be implemented without a reduction in the functionality of the small wireless facility.

~~(U)~~(T) "Wireless Infrastructure Provider" means any person, including a person authorized to provide communications service in the state, that builds or installs wireless communication transmission equipment, wireless facilities, but that is not a wireless services provider.

~~(V)~~(U) "Wireless Provider" means a wireless infrastructure provider or a wireless services provider.

~~(W) "Wireless Services" means any services, using licensed or unlicensed spectrum, including the use of WiFi, whether at a fixed location or mobile, provided to the public [excludes cable services].~~

~~(X)~~(V) "Wireless Services Provider" means a person who provides personal wireless services (whether or not it is comingled with other services).

Section 3 – Permitted Use; Application and Fees

(A) Permitted Use. The following uses within the rights-of-way shall be a permitted use, subject to compliance with the city's applicable design standards [insert cross-reference here], ~~administrative review only~~ and issuance of a permit as set forth in this Chapter:

(1) Collocation of a small wireless facility; and,

(2) Placement of a ~~[~~new,~~]~~ modified, or replacement pole to be used for collocation of a small wireless facility~~, that does not exceed the maximum height set forth in Section 5(A)(1). [Note: not every city will allow new poles]~~

(B) Permissions Required. Except as otherwise provided in this Chapter, no person shall place any facility described in Section 3(A) in the right-of-way, without first filing an application for the facility~~same~~ and obtaining [a permit, license, or agreement] ~~therefor~~.

(C) ~~[THIS SECTION CAN BE LEFT IN OR HANDLED ADMINISTRATIVELY]~~ Application Requirements. [THIS SECTION CAN BE LEFT IN OR HANDLED ADMINISTRATIVELY] An application filed pursuant to this Chapter shall be made by the wireless provider or its duly authorized representative and shall contain the following:

(1) The applicant's name, address, telephone number, and e-mail address;

(2) The names, addresses, telephone numbers, and e-mail addresses of all duly authorized representatives and consultants, if any, acting on behalf of the applicant with respect to the filing of the application.

(3) A general description of the proposed small wireless facility and associated pole, if applicable. The scope and detail of such description shall be appropriate to the nature and character of the work to be performed, with special emphasis on those matters likely to be affected or impacted by the physical work proposed;

(4) Site plans and engineering drawings to scale that identify the proposed small wireless facility.

(5) A statement that the small wireless facility shall comply with all applicable codes, regulations and standards.

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(6) The applicant shall not be required to provide more information to obtain a small wireless facility permit than is required of other entities who install facilities in the rights-of-way.

(D) Routine Maintenance and Replacement. An application shall not be required for: (1) routine maintenance; or (2) the replacement of a small wireless facility with another small wireless facility that is the same, substantially similar or smaller in size and weight and height. The City may require a permit for work within the ROW~~.~~ ~~such activities that require excavation or closure of sidewalks or vehicular lanes.~~Such a permit must be issued to the applicant on a non-discriminatory basis upon terms and conditions applied to any other person performing similar activities, regardless of technology, in the ROW. [NOTE: CONSIDER INCLUDING A LIST OF ACTIVITIES THAT REQUIRE A PERMIT EITHER IN CODE, ON THE APPLICATION, IN AGREEMENTS, ETC. For example, *The City requires a permit for work within the ROW for activities that require excavation or closure of sidewalks or vehicular lanes.*]

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(E) Information Updates. Any amendment to non-material information contained in an application shall be submitted in writing to the City within thirty (30) days of the change.

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(F) Application Fees. Application fees shall be set by [resolution].

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[NOTE THE FCC PRESCRIBED THE FOLLOWING FEES BELOW IN THE SMALL CELL ORDER. CITIES MAY CHOOSE TO INCORPORATE THIS LANGUAGE INTO THEIR CODE OR REFERENCE A FEE SCHEDULE SET BY RESOLUTION.

(1) $500 for up to the first five small wireless facilities in the same application, with an additional $100 for each small wireless facility beyond five in the same application, or fees that are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are nondiscriminatory.

(2) $1000 for the installation, modification or replacement of a pole together with the collocation of an associated small wireless facility in the rights-of-way that is a permitted use in accordance with this Chapter, or fees that are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are nondiscriminatory.]

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Section 4 – Action on Administrative Permit Applications Subject to this Chapter

[NOTE: THIS SECTION CODIFIES THE FCC ~~SMALL CELL ORDER~~ORDER SHOT CLOCKS.]

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(A) The [City designee] shall review an application subject to this Chapter considering its conformity with applicable provisions of this Chapter, and shall issue a permit on nondiscriminatory terms and conditions subject to the following requirements:

(1) For an initial application, the [City designee] shall notify the applicant in writing on or before the tenth (10th) day of submission if the application is materially incomplete. In the written notice that the application is incomplete, the [City designee] must clearly and specifically identify all the missing documents or

information and must clearly and specifically identify the related code provision, ordinance, application instruction or otherwise publicly-stated procedures requiring the submission of the missing information; and,

(2) If the [City designee] notifies the applicant in writing that the initial application is incomplete in accordance with subsection (1), the processing deadline in subsection (4) shall restart at zero on the date the applicant submits all the documents and information identified by the [City designee] to render the application complete (the "resubmitted application"); and,

(3) For a resubmitted application following a notice of deficiency, if the [City designee] notifies the applicant in writing on or before the tenth (10th) day of resubmission that the resubmitted application remains materially incomplete and clearly and specifically identifies the missing documents or information that need to be submitted based on the City's original notice of deficiency provided under subsection (1), the processing deadline in subsection (4) will be tolled from the deficiency notice for the resubmitted application until the applicant submits all documents and information identified by the City to make the application complete; and,

(4) The [City designee] shall make its final decision to approve or deny a complete application within (i) sixty (60) days of receiving an initial, or if applicable, resubmitted, application for the collocation of a small wireless facility using an existing structure, and (ii) 90 days for an initial, or if applicable, resubmitted, application to collocate a small wireless facility on a new structure; and,

(5) Except for the restart and tolling described in subsections (1)-(4) above, these timelines may be tolled only by mutual agreement between the applicant and the City; and

(6) The City must advise the applicant in writing of its final decision, and if the final decision is to deny the application, the final decision document shall state the basis for a denial, including specific code provisions, ordinance, application instruction or otherwise publicly-stated procedures on which the denial was based, and send the decision document to the applicant on the day the City denies the application.

~~(A) The [city designee] shall review an application subject to this Chapter considering its conformity with applicable provisions of this Chapter, and shall issue a permit on nondiscriminatory terms and conditions subject to the following requirements:~~

~~(1) For an initial application, the [city designee] shall notify the applicant in writing on or before the tenth (10) day of submission if the application is materially incomplete. In the written notice that the application is incomplete, the [city designee] must clearly and specifically identify all the missing documents or information and must specify the related code provision, ordinance, application instruction or otherwise publicly stated procedures requiring the submission of~~

~~the related to missing information; and, [Note: "initial application" comes from the terms used in the FCC small cell order]~~

~~(2) If the [city designee] notifies the applicant in writing that the application is incomplete in accordance with subsection (1), the processing deadline in subsection (3) shall restart at zero on the date the applicant resubmits all the documents and information identified by the [city designee] to render the application complete (resubmittal application); and,~~

~~(3) The [city designee] shall make its final decision to approve or deny a complete application within (i) sixty (60) days of receiving an application for the collocation of a small wireless facility using an existing structure, and (ii) 90 days for an application to collocate a small wireless facility on a new structure. These timelines may be tolled only by mutual agreement between the applicant and the City; and~~

~~(4) The City must advise the applicant in writing of its final decision, and if the final decision is to deny the application, the final decision document shall state the basis for a denial, including specific code provisions on which the denial was based, and send the decision document to the applicant on the day the City denies the application.~~

(B) The City must process all applications on a nondiscriminatory basis and may only deny an application subject to this Chapter if the proposed small wireless facility or new, modified, or replaced pole:

(1) Materially and demonstrably interferes with the safe operation of traffic control equipment;

(2) Materially and demonstrably interferes with sight lines or clear zones for transportation or pedestrians;

(3) Materially fails to comply with the Americans with Disabilities Act or similar federal, ~~or~~ state, or local laws, ~~and~~ standards and regulations regarding pedestrian access or movement;

(4) Fails to comply with applicable codes, standards and regulations; or

(5) Fails to comply with the provisions in this Chapter.

~~(5)~~

(C) Batch Applications. [NOTE: FCC SMALL CELL ORDER ALLOWS APPLICANTS TO SUBMIT SWF APPLICATIONS IN BATCHES, WITHOUT NUMERICAL LIMITS. CITIES MAY CONSIDER TO BATCH APPLICATIONS. SOME MAY CHOOSE TO BATCH BY COMMON DESIGN ELEMENTS AND/OR VICINITY, AS WELL AS OTHER MEASURES TO PROMOTE EFFICIENCY.

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A BATCH APPLICATION THAT INCLUDES DEPLOYMENT(S) THAT FALL WITHIN COLLOCATIONS ON EXISTING STRUCTURES *AND* DEPLOYMENT(S) ON NEW STRUCTURES SHALL BE SUBJECT TO A 90-DAY TIMEFRAME FOR APPROVAL AS OPPOSED TO A 60-DAY TIMEFRAME.]

~~(C) An applicant may at the applicant's discretion, file a consolidated application for small wireless facilities and related poles; provided, that the denial of one or more small cell facilities in a consolidated application shall not delay the processing of any other small wireless facility or related poles submitted in the same consolidated application. Batch applications shall be collectively processed in accordance with the procedures in subsection (A). A batch application that includes deployments that fall within Section 4(A)(3)(i) and Section 4(A)(3)(ii) shall be subject to a 90-day timeframe for approval.~~

Section 5 – Small Wireless Facilities in the ROW; Maximum Height; Other Requirements

~~(A)~~ Maximum Size of Permitted Use. ~~A new, modified or replaced pole for the collocation of small wireless facilities may be placed in the rights-of-way as a permitted use provided that each new, modified, or replaced pole does not exceed the lesser of:~~

~~(1) Ten (10) percent taller than adjacent structures; or,~~

~~(2)~~(A) ~~Fifty (50) feet above ground level.~~

~~(B)~~ Any wireless provider that seeks to install, modify, or replace facilities on a pole in the rights-of-way that exceeds the height limits contained in this section 2(R)(1), shall be subject to applicable requirements [or insert cross references to macro facilities code].

[CITIES MAY CONSIDER ADDING A SUBSECTIONS (BC) – (DE) HERE OR A SECTION IN THE DESIGN ~~STANDARDS THAT~~STANDARDS THAT HANDLES THE METHODS FOR DECORATIVE POLES, UNDERGROUND AND HISTORIC DISTRICTS.]

~~(C)~~(B) Decorative Poles. A wireless provider shall be permitted to collocate on or replace a decorative pole when necessary to collocate a small wireless facility; provided that any such replacement pole shall, to the extent feasible, replicate the design of the pole being replaced.~~]~~

(C) Underground District. [ACCORDING TO THE FCC ORDER, UNDERGROUNDING REQUIREMENTS ARE SUBJECT TO THE SAME CRITERIA AS OTHER AESTHETIC STANDARDS. CITIES ARE PREEMPTED FROM A REQUIREMENT THAT (1) MATERIALLY INHIBITS WIRELESS SERVICE OR (2) CAUSES AN EFFECTIVE PROHIBITION OF SERVICE.

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THE TECHNOLOGY FOR SMALL WIRELESS FACILITTIES WILL NOT WORK UNDERGROUND. THEREFORE, CITIES UNDERGROUNDING REQUIREMENTS OR UNDERGROUND DISTRICTS MAY CREATE AN EFFECTIVE PROHIBITION. CITIES ARE ENCOURAGED TO REVIEW CURRENT UNDERGROUNDING REQUIREMENTS AND WORK WITH THEIR ATTORNEYS/ROW SPECIALISTS TO MAKE SURE THOSE REQUIREMENTS ARE NOT IN CONFLICT WITH THE FCC ORDER.]

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~~(D)~~

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~~(1) In areas where a city has designated an underground district, a wireless provider shall comply with written, objective, reasonable and nondiscriminatory requirements that prohibit the installation of poles or structures in the rights-of-way where (i) all such lines are required to be placed underground three months prior to the submission of the application; (ii) structures that remain may be made available to wireless providers for the collocation of small wireless facilities, and may be replaced by a wireless provider to accommodate the collocation of small wireless facilities, in compliance with this Chapter; and (iii) wireless providers may install a new pole in the designed area that otherwise complies with this Section when it is not able to provide wireless service by collocating on a remaining pole or structure.~~

~~(2) For small wireless facilities installed before the City has adopted such undergrounding requirements that communications and electric lines be placed underground, the City shall (i) permit a wireless provider to maintain the small wireless facilities in place, subject to any applicable pole attachment agreement with the pole owner; or (ii) permit the wireless provider to replace the associated pole within 50 feet of the prior location.~~

(D) ~~(E)~~Historic District. Small wireless facilities or poles to support collocation of small wireless facilities located in Historic Districts shall be designed to have a similar appearance, including coloring and design elements, if technically feasible, of other poles in the rights-of-way within 500 feet of the proposed installation. Any such design or concealment measures may not be considered part of the small wireless facility for purpose of the size restrictions in the definition of small wireless facility.

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[NOTE:(~~B~~C) – (~~D~~E) OF THIS SECTION CODIFY THE FCC SMALL CELL ORDER'S THAT REQUIREMENTS MUST BE: (1) REASONABLE, MEANING THEY ARE TECHNICALLY FEASIBLE AND REASONABLE DIRECTED TO AVOIDING OR REMEDYING THE INTANGIBLE PUBLIC HARM OF UNSIGHTLY OR OUT-OF-CHARACTER DEPLOYMENTS; (2) NO MORE BURDENSOME THAN THOSE APPLIED TO OTHER TYPES OF INFRASTRUCTURE DEPLOYMENT; (3) OBJECTIVE; AND, (4) PUBLISHED IN ADVANCE. THE REQUIREMENTS MAY NOT PROHIBIT OR HAVE THE EFFECT OF PROHIBITING WIRELESS SERVICE.]

Section 6 – Effect of Construction/Work Permit

[Cities should cross-reference back to permitting code so language within this section is consistent]

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(A) Authority Granted. No Property Right or Other Interest Created. A permit from the City authorizes an applicant to undertake only certain activities in accordance with this Chapter and does not create a property right or grant authority to the applicant to impinge upon the rights of others who may already have an interest in the rights-of-way. [NOTE: IF YOUR CITY HAS A ROW LICENSE, CLARIFY THAT THIS DOES NOT GRANT A ROW LICENSE OR RIGHT TO PROVIDE SERVICES]

(B) Permit Duration.

(1) A permit for construction granted pursuant to this Section shall be valid for a period of _____ after issuance unless the City agrees to extend this period due, or delay is caused by the lack of commercial power, communications facilities, or other events outside of the reasonable control of the wireless provider.

(2) ~~After construction, the~~The installed facility ~~permit does not expire, but~~ is subject to applicable relocation requirements, termination for material non-compliance after notice and a reasonable opportunity to cure, and an applicant's right to terminate a permit at any time.

Section 7 – Removal, Relocation or Modification of Small Wireless Facility in the ROW

[NOTE: IF YOUR CITY HAS REMOVAL, RELOCATION, OR MODIFICATION SECTIONS IN OTHER ROW CODES, CONSIDER CROSS-REFERENCING TO THOSE SECTIONS HERE]

(A) Notice. The City shall provide the greatest practical notice possible, but no less than _____ days following written notice from the City, the wireless provider shall, at its own expense, protect, support, temporarily or permanently disconnect, remove, relocate, change or alter the position of any small wireless facilities within the rights-of-way whenever the City has determined that such removal, relocation, change or alteration, is reasonably necessary for the construction, repair, maintenance, or installation of any City improvement in or upon, or the operations of the City in or upon, the rights-of-way.

(B) Emergency Removal or Relocation of Facilities. The City retains the right and privilege to cut or move any small wireless facility located within the rights-of-way of the City in the event of an emergency, as the City may determine to be necessary, appropriate or useful in response to any imminent danger to public health, safety, or property. If circumstances permit, the City shall notify the wireless provider and provide the wireless provider an opportunity to move its own facilities prior to cutting or removing a facility and shall notify the wireless provider promptly after cutting or removing a small wireless facility.

(C) Abandonment of Facilities.

(D) Damage and Repair. The City may require a wireless provider to repair all damage to the rights-of-way directly caused by the activities of the wireless provider and return the rights-of-way to its functional equivalence before the damage pursuant to the competitively neutral, reasonable requirements and specifications. If the wireless provider fails to make the repairs within ____ days after written notice, the City may affect those repairs and charge the applicable party the actual, documented cost of such repairs.

Section 8 – Collocation on City Structures in the ROW

[NOTE: NOT ALL CITIES MAY CHOOSE TO ALLOW SMALL WIRELESS FACILITIES TO BE COLLOCATED]

(A) Collocation on City Structures. Small wireless facilities may be collocated on city structures in the rights-of-way pursuant to this Chapter. No person will be permitted an exclusive arrangement or an arrangement which excludes otherwise qualified applicants to attach to city structures in the rights-of-way. A person who purchases or otherwise acquires a City structure is subject to the requirements of this section.

(B) Make-Ready. The rates, fees, terms and conditions for the make-ready work to collocate a small wireless facility on a pole owned or controlled by the City must be nondiscriminatory, competitively neutral, commercially reasonable, comply with this Chapter and be subject to the following:

(1) The City or any person owning, managing, or controlling the poles owned by the City will provide a good faith estimate for any make-ready work reasonably necessary to make a specific city pole suitable for attachment of the requested small wireless facility, including pole replacement if necessary, within 60 days after receipt of a completed request. Make-ready work including any pole replacement shall be completed within 60 days of written acceptance of the good faith estimate by the applicant.

(2) The City or any person owning, managing, or controlling the poles owned by the city shall not require more make-ready work than required to meet applicable codes or industry standards. Fees for make-ready work shall not include costs related to pre-existing or prior damage and non-compliance. Fees for make-ready work including any pole replacement shall not exceed actual and direct costs, or the amount charged to others for similar work and shall not include any revenue or contingency based consultant fees or expenses of any kind.

Section 9 – Rates for ROW and Collocation on City Structures in the ROW

[NOTE: THE FCC PRESCRIBED THE FOLLOWING FEES BELOW IN (A). CITIES MAY CHOOSE TO INCORPORATE THIS LANGUAGE INTO THEIR CODE OR MAKE REFERENCE HERE TO A FEE SCHEDULE SET BY RESOLUTION]

(A) The recurring rate for use of the ROW and attachment of small wireless facilities to a city structure in the ROW shall be subject to the following requirements:

(1) Annual Rate. A wireless provider authorized to place small wireless facilities and any related pole in the rights-of-way will pay to the City compensation for use of the rights-of-way and collocation on city structures in the ROW an aggregate annual rate not to exceed $270 per small wireless facility or a rate that is based on (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are non-discriminatory. This rate, together with the one-time application fees, shall be the total compensation that the wireless provider is required to pay the city for the deployment of each small wireless facility in the ROW and any associated pole.

(2) Cease Payment. A wireless provider may remove its facilities at any time from the rights-of-way and city structures in the ROW with the required permits and cease paying the City compensation as of the date of removal of the facilities.

Section 10 – Effective Date

This Ordinance shall take effect _____ days after its passage, approval and publication.

EXHIBIT 11:

Oregon LOC DRAFT Design Guidelines

Oregon LOC Draft Design Guidelines

PREAMBLE

Background

On January 31, 2017, Federal Communications Commission Chairman Ajit Pai established a Broadband Deployment Advisory Committee (BDAC), which he tasked with making recommendations to the FCC on ways to accelerate the deployment of broadband by reducing or removing regulatory barriers to infrastructure investment. On September 27, 2018, the FCC released a Declaratory Ruling and Third Report and Order (FCC 18-133, referred throughout the document as "small cell order" or "FCC order") that significantly limits local authority over small wireless infrastructure deployment and fees for use of the rights of way. The order took effect January 14, 2019. However, there were some aesthetic preemptions in the order ~~will~~ did not take effect until April 15, 2019. Under the FCC oorder aesthetic or design standards must be (1) reasonable; (2) no more burdensome than those applied to other types of infrastructure deployments; (3) objective; and (4) published in advance. The FCC order also defines the size limitations for small wireless facilities (allowing antennas of up to 3 cu. ft. each, with additional equipment not to exceed 28 cu. ft.), and specifies that such facilities may not result in human exposure to radiofrequency radiation in excess of applicable standards in the FCC's rules (which preempt local regulation of RF emissions).

LOC Model Small Wireless Facilities Design Standard

In coordination with many cities, representatives from Verizon, AT&T, and T-Mobile, the League of Oregon Cities met from January 2019 to April 2019 to discuss and craft a model code, model design standards relating to small wireless facilities while there is pending litigation on the FCC order. The model code and model design standards are intended to be paired together.
~~In coordination with many cities, representatives from Verizon, AT&T, and T-Mobile, the League of Oregon Cities met from January 2019 to April 2019 to discuss and craft a model design standard while there is pending litigation on the FCC order.~~

There is no single design standard that will work for every jurisdiction. As such, LOC's model design standard is intended as a roadmap to assist local governments in adopting their own set of design standards. While example language is included in some sections, we do not intend to suggest these examples could work for every jurisdiction.

We also recognize there are many ways to structure a design standard. The appropriate structure will vary by jurisdiction. For purposes of this model ~~eode~~, we opted to approach designs by type of pole and deployment. The model is intended to provide a general framework and thus is drafted as an outline of provisions jurisdictions may want to include in their final design standard. In many cases example language is provided to help illustrate the issues to be addressed. However, the intent is to allow each jurisdiction to draft the substantive provisions that best reflect local needs and interests. We recommend that jurisdictions that own poles or other structures in the rights of way establish a clear design standard. The circumstances of each municipality may, and likely will, require modifications to the framework and/or example language of this model design standard.

Additional Considerations

The LOC model design standards only applies to wireless communications. Municipalities should review their existing ordinances, standards and policies to determine if this framework is appropriate. Municipalities may want to consider whether it would be preferable to adopt a utility-neutral standard covering all utilities and communications providers, which would provide one set of "rules" for the design

of the public rights of way. Differences in policy choices and existing standards, among other things, may impact the decision in how to proceed. It is recommended that cities consult their attorney, ROW specialists, engineers, master plans, comprehensive plans, goals and/or wireless providers before final adoption of standards. Cities may choose to adopt design standards administratively or in code.

Understanding the Organization of the Model Design Standards

As stated above, the model is best described as an outline or roadmap to assist municipalities in drafting the appropriate standards for their community. The model includes example language to illustrate the intent of the section. The example language, or a variation thereof, may be appropriate for final adoption in some jurisdictions.

Finally, there may be additional notes or issues for consideration within the subsections of the model, which are [bracketed] and in ALL CAPS. Again, these notes are is intended as guidance for municipal drafters, not for adoption in a final ordinance.

Small Wireless Facility Design Standards

A. Definitions

These design standards apply to Small Wireless Facilities ("SWF") installed in the public right-of-way unless the applicant obtains approval of a deviation pursuant to ~~Section F~~Section I.

1. Facilities that may be considered a small wireless facility site shall meet the following definition:

2. The proposed facilities meet one of the following height parameters:
   a. are mounted on structures 50 feet or less in height including their antennas as defined in 47 C.F.R. Section 1.1320(d), or
   b. are mounted on structures no more than 10 percent taller than other adjacent structures, or
   c. 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.

3. Each antenna or antenna enclosure shall not exceed three cubic feet in volume, and the total volume of multiple antennas on one structure shall not exceed fifteen (15) cubic feet, unless additional antenna volume is requested pursuant to ~~Section F~~Section I.

[NOTE: THE FCC ORDER DOES NOT LIMIT THE NUMBER OF ANTENNAS. ADDITIONALLY, SINCE THIS TECHNOLOGY IS ADDITIVE, A VOLUMETRIC STANDARD FOR TOTAL ANTENNAS OR ANTENNA ENCLOSURES UNDER 15 CUBIC FEET WOULD BE PROHIBITIVE FOR FUTURE INSTALLATIONS OF ANTENNAS TO MAKE THE JUMP FROM 4G TO 5G.]

4. The total volume of ~~all~~ installed equipment external to the pole (including, but not limited to cabinets, vaults, boxes~~, antennas~~) shall not exceed ~~not exceed~~ twenty-eight (28) cubic feet. This maximum applies to all equipment installed at the time of original application and includes any equipment to be installed at a future date. Antennas and antenna enclosures are ~~excluded~~excluded. If equipment exceeds this maximum, the installation will be redefined as a Macro site installation and all the associated standards and rates for Macro installations will be applied.

[A CITY MAY WISH TO IMPLEMENT A SMALLER VOLUMETRIC STANDARD, BUT SHOULD CONSIDER EXCLUDING SOME OR ALL OF THE FOLLOWING PIECES OF EQUIPMENT:

a. SHROUD
b. CABINETS
c. CUT-OFF SWITCH
d. METER/METER BASE

e. CONDUIT
f. WIRING
g. TELECOMMUNICATION DEMARCATION BOX
h. GROUND-BASED ENCLOSURES
i. BATTERY BACK-UP POWER SYSTEMS
j. GROUNDING EQUIPMENT
k. POWER TRANSFER SWITCH

EXAMPLE LANGUAGE FOR EXCLUSIONS: *The following associated equipment may be located outside the primary equipment enclosure and if so located, are not included in the calculation of equipment volume: Electric meter, telecommunication demarcation box, ground-based enclosures, battery back-up power systems, grounding equipment, power transfer switch, and cut-off switch.*

ADDITIONALLY, A RELIEF VALVE LIKE ~~SECTION F~~SECTION I SHOULD BE USED TO PROVIDE A PATH FORWARD]

5. The facilities do not result in human exposure to radio frequency radiation in excess of the applicable safety standards specified in the FCC's Rules and Regulations [47 CFR section 1.1307(b)].

[IF THE CITY HAS SPECIFIC CODES OR ORDINANCES WITH DEFINITIONS RELATING TO SWF, CONSIDER INCLUDING DEFINITIONS OR A CROSS REFERENCE HERE]

B. General Requirements.

1. [NOTE: SECTION (B)(1) IS OPTIONAL. CITIES SHOULD CONSIDER A PREFERENCE THAT IS IN LINE WITH GOALS AND CURRENT STANDARDS ON WHETHER THE CITY PREFERS GROUND-MOUNTED EQUIPMENT OR NOT.] .Ground-mounted equipment in the right-of-way is ~~prohibited~~discouraged, unless the applicant can demonstrate that pole-mounted equipment is not technically feasible, or the pole owner requires placement of equipment on the ground (such as an electric meter). If ground-mounted equipment is necessary, then the applicant shall conceal the equipment in a cabinet, in street furniture or with landscaping.

2. Replacement poles and new poles shall comply with the Americans with Disabilities Act (ADA), city construction and sidewalk clearance standards, and city, state and federal laws and regulations in order to provide a clear and safe passage within the right-of-way. Further, the location of any replacement or new pole must comply with applicable traffic requirements, not interfere with utility or safety fixtures (e.g., fire hydrants, traffic control devices), and not adversely affect public health, safety or welfare. [NOTE: ADA REQUIREMENT, WALKING SPACE, BOLT PATTERNS ALL NEED TO BE CONSIDERED. THESE CAN BE LIMITING DESIGN FACTORS]

3. Replacement poles shall be located as near as feasible to the existing pole. The abandoned pole must be removed within ____ days. [NOTE: KEEP CONSISTENT

WITH OTHER CODES OR REQUIREMENTS ABOUT TIMEFRAMES TO REMOVE EQUIPMENT (LANGUAGE MAY APPEAR ON PERMIT APPLICATION OR AGREEMENT) OR DEFER TO POLE OWNER REQUIREMENTS].

4. Any replacement pole shall substantially conform to the ~~color,~~ material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested pursuant to ~~Section F~~Section I.

5. No advertising, branding or other signage is allowed unless approved by the [City designee] as a concealment technique or as follows:

    a. Safety signage as required by applicable laws and regulations ~~placed in accordance with legal requirements~~; and,

    b. Identifying information and 24-hour emergency telephone number on wireless ~~provider~~ equipment in an area that is visible.

[NOTE: SIGNAGE IS USUALLY REQUIRED TO BE PLACED ON THE POLE AND READABLE FROM THE GROUND AS A MINIMUM. A CITY MAY ADD ADDITIONAL REQUIREMENTS FOR PLACEMENT.]

6. Antennas and antenna equipment shall not be illuminated except as required by municipal,a federal or state authority, ~~or unless approved as part of a light standard.~~provided this shall not preclude deployment on a street light.

C. Small Wireless Facilities Attached to Wooden Poles and Non-Wooden Poles with Overhead Lines. Small wireless facilities located on wooden utility poles and non-wooden utility poles with overhead lines shall conform to the following design criteria unless a deviation is requested pursuant to ~~Section F~~Section I**:**
[IN OREGON, PGE AND PACIFIC CORP ARE THE MOST COMMON UTILITY POLE OWNERS. BOTH HAVE THEIR OWN DESIGN STANDARDS. CITIES SHOULD WORK WITH POLE OWNERS TO FIND WHAT WORKS BEST FOR THEIR COMMUNITIES AND COMPARE DESIGN STANDARDS.]

1. Proposed antenna and related equipment shall meet:

    a. The FCC definition of small wireless facilities and antenna;
    b. The pole owner requirements; and
    c. National Electric Safety Code (NESC) and National Electric Code (NEC) standards.

2. The pole at the proposed location may be replaced with a taller pole or extended for the purpose of accommodating a small wireless facility; provided that the replacement or extended pole does not exceed 50 feet in height or 10 percent taller than adjacent poles, whichever is greater. The replacement or extended pole height may be increased if required by the pole owner, and such height increase is the minimum necessary to provide sufficient separation and/or clearance from electrical

and wireline facilities. Such replacement poles may either match the approximate color and materials of the replaced pole or shall be the standard new pole used by the pole owner in the city.

3. To the extent technically feasible, antennas, equipment enclosures, and all ancillary equipment, boxes, and conduit shall ~~be colored or painted to~~ match the approximate material and design ~~color~~ of the surface of the pole or existing equipment on which they are attached or adjacent poles located within the contiguous right-of-way.

4. Antennas ~~and antenna equipment, including but not limited to ancillary equipment, radios, cables, associated shrouding, disconnect boxes, meters, microwaves, and conduit,~~ which are~~is~~ mounted on poles shall be mounted as close to the pole as technically feasible from the surface of the utility pole.~~;~~ ~~unless~~ For clarity, an additional distance is allowed if needed for pole owner requirements or ~~material interference~~effective operation ~~from the pole on~~of the small wireless facility.

5. No antenna shall~~-~~ extend horizontally ~~be~~ more than 20 inches~~, measured from the end of the standoff to the far edge of the antenna~~ past the outermost mounting point, unless additional antenna space is requested pursuant to ~~Section F~~Section I. [NOTE: THE 20 INCH STANDARD HERE IS NOT INTENDED TO DICTATE THE SIZE OF THE ANTENNA. RATHER, TO DICTATE HOW FAR AWAY FROM THE POLE EQUIPMENT IS.]

6. Antenna equipment, including but not limited to ancillary equipment, radios, cables, associated shrouding, disconnect boxes, meters, microwaves, and conduit, which is mounted on poles shall be mounted as close to the pole as technically feasibly and allowed by the pole owner.

~~6.~~7. Antenna equipment for small wireless facilities must be attached to the pole, unless otherwise required by the pole owner or permitted to be ground-mounted [pursuant to subsection (B)(1) above]. The equipment must be placed in an enclosure reasonably related in size to the intended purpose of the facility and reasonable expansion for future frequencies and/or technologies. [**IF APPLICABLE,** THE APPLICANT IS ENCOURAGED TO PLACE THE EQUIPMENT ENCLOSURE(S) BEHIND ANY DECORATIONS, BANNERS OR ~~ROAD~~ SIGNS THAT MAY BE ON THE POLE.]

~~7.~~8. All cables and wiring shall be covered by conduits and cabinets to the extent that it is technically feasible, if allowed by pole owner. The number of conduits shall be minimized to the number technically necessary to accommodate the small wireless facilities.

~~7. The diameter of a replacement pole shall comply with the city's sidewalk clearance requirements.~~

~~E.~~D. **Small Wireless Facilities Attached to Non-Wooden Light Poles and Non-Wooden Utility Poles without Overhead Utility Lines.** Small wireless facilities attached to existing or replacement non-wooden light poles and non-wooden utility poles without overhead lines

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shall conform to the following design criteria unless a deviation is requested pursuant to ~~Section F~~Section I:

[NOTE: JURISDICTION MAY PREFER A OR B OR BOTH. ALSO, NOTE THAT THE MOST COMMON TYPES OF THESE POLES ARE DUAL USE POLES. DUAL USE POLES USUALLY REQUIRE SEPARATION INSIDE THE POLE TO KEEP THE UTILITY EQUIPMENT SEPARATE FROM NEW OR ADDED EQUIPMENT FROM SMALL WIRELESS FACILITIES. HOWEVER, THERE MAY BE STANDALONE SMALL WIRELESS FACILITIES POLES THAT WILL MAY USE OPTION A OR B OR BOTH]

a. **External Equipment**. The antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible and must be reasonably related in size to the intended purpose of the facility and reasonable expansion for future frequencies and/or technologies, not to exceed the volumetric requirements described in ~~Section F~~Section I. If the equipment enclosure(s) is mounted on the exterior of the pole, the applicant is encouraged to place the equipment enclosure(s) behind any decorations, banners or ~~road~~ signs that may be on the pole. Conduit and fiber must be fully concealed within the pole.

b. **Concealed Equipment**. All equipment (excluding disconnect switches), conduit and fiber must be fully concealed within the pole. The antennas must be camouflaged to appear as an integral part of the pole or be mounted as close to the pole as feasible. [NOTE: 5G ANTENNAS CANNOT BE COVERED OR SHROUDED, THEREFORE THEY MUST BE MOUNTED TO THE OUTSIDE OF THE POLE. ~~NOTE: POLES MAY HAVE TO BE SIGNIFICANTLY~~ BIGGER IN DIAMETER IF EQUIPMENT IS CONCEALED IN OPTION B (ACCORDING TO POLE MANUFACTURES APPROX. 16-20 INCHES). OPTION A MAY REQUIRE REPLACEMENT POLE THE DIAMETER OF THE POLE SHOULD BE SIMILAR TO THE ORIGINAL]

2. Any replacement pole shall substantially conform to the ~~color,~~ material and design of the existing pole or adjacent poles located within the contiguous right-of-way unless a different design is requested pursuant to ~~Section F~~Section I.

3. The height of any replacement pole may not extend more than 10 feet above the height of the existing pole, unless such further height increase is required in writing by the pole owner.

~~3. The diameter of a replacement pole shall comply with the city's sidewalk clearance requirements. [ADA REQUIREMENT, WALKING SPACE, BOLT PATTERNS ALL NEED TO BE CONSIDERED. THESE CAN BE LIMITING DESIGN FACTORS. NOTE: POLES MAY HAVE TO BE SIGNIFICANTLY BIGGER IN DIAMETER IF EQUIPMENT IS CONCEALED IN OPTION B (ACCORDING TO POLE MANUFACTURES APPROX. 16-20 INCHES). OPTION A MAY REQUIRE~~

~~REPLACEMENT POLE THE DIAMETER OF THE POLE SHOULD BE SIMILAR TO THE ORIGINAL.]~~

E. **New Poles.** Small wireless facilities may be attached to new poles that are not replacement poles under sections C or D, installed by the wireless provider, subject to the following criteria:

~~G.~~ [NOTE: CITIES SHOULD CHECK WITH OTHER CODES TO MAKE SURE THIS SECTION DOES NOT CONFLICT WITH PRACTICES OF NO NEW POLES OR POLE NEUTRAL PRACTICES]

1. Antennas, antenna equipment and associated equipment enclosures (excluding disconnect switches), conduit and fiber shall be fully concealed within the structure.~~,~~ If~~un~~less such concealment is not technically feasible, or is incompatible with the pole design, then the antennas and associated equipment enclosures must be camouflaged to appear as an integral part of the structure or mounted as close to the pole as feasible, and must be reasonably related in size to the intended purpose of the facility and reasonable expansion for future frequencies and/or technologies, not to exceed the volumetric requirements in Section (A)(3).

2. To the extent technically feasible, all new poles and pole-mounted antennas and equipment shall~~-~~ substantially conform to the material and design of adjacent poles located within the contiguous right-of-way unless a different design is requested pursuant to ~~Section F~~Section I.~~be painted or colored with flat, non-reflective colors or shades that are compatible with other infrastrueture in the right-of-way and/or blend with the visual environment.~~

3. New poles shall be no more than forty (40) feet in height unless additional height is requested pursuant to ~~Section F~~Section I. [NOTE: THE FCC DEFINITION CONSIDERS A FACILITY A SMALL WIRELESS FACILITIES IF IT IS 50 FT. OR UNDER. SMALL CELLTECHNOLOGY WORKS BEST WHEN DEPLOYED BETWEEN 35-45 FT. AND OTHER THAN DEPLOYMENTS ON UTILITY POLES, MOST WIRELESS PROVIDERS DO NOT NEED 50 FT TO DEPLOY. THEREFORE, IT MAY BE POSSIBLE TO HAVE NEW POLES THAT ARE NOT 50 FT.]

4. The city prefers that wireless providers install small wireless facilities on existing or replacement poles instead of installing new poles, unless the wireless provider can ~~demonstrate~~ document that installation on an existing or replacement pole is not technically feasible or otherwise not possible (due to a lack of owner authorization, safety considerations, or other reasons acceptable to the [City designee]).

~~4.~~ [NOTE: CITIES MAY CONSIDER THE SPACING BETWEEN POLES/DEPLOYMENTS. IT IS RECOMMENDED THAT CITIES CONSIDER DISTANCES BETWEEN NEW POLES BY AN INDIVIDUAL PROVIDER RATHER THAN ALL SWF DEPOLOYMENTS. SPACING MAY VARY BECAUSE OF BUILDINGS, TOPOGRAPHY, SIZE OF INSTALLATION, ETC. THEREFORE, IT IS

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RECOMMENDED THAT CITIES WORK WITH PROVIDERS TO SEE WHAT IS FEASIBLE]

~~[Option for strand-mounted SWF:~~

F. Undergrounding Requirements: [ACCORDING TO THE FCC ORDER, UNDERGROUNDING REQUIREMENTS ARE SUBJECT TO THE SAME CRITERIA AS OTHER AESTHETIC STANDARDS. CITIES ARE PREEMPTED FROM A REQUIREMENT THAT (1) MATERIALLY INHIBITS WIRELESS SERVICE OR (2) CAUSES AN EFFECTIVE PROHIBITION OF SERVICE.

THE TECHNOLOGY FOR SMALL WIRELESS FACILITTIES WILL NOT WORK UNDERGROUND. THEREFORE, CITIES UNDERGROUNDING REQUIREMENTS OR UNDERGROUND DISTRICTS MAY CREATE AN EFFECTIVE PROHIBITION. CITIES ARE ENCOURAGED TO REVIEW CURRENT UNDERGROUNDING REQUIREMENTS AND WORK WITH THEIR ATTORNEYS/ROW SPECIALISTS TO MAKE SURE THOSE REQUIREMENTS ARE NOT IN CONFLICT WITH THE FCC ORDER.]

G. Historic District Requirements.

Small wireless facilities or poles to support collocation of small wireless facilities located in Historic Districts shall be designed to have a similar appearance, including material and design elements, if technically feasible, of other poles in the rights-of-way within 500 feet of the proposed installation. Any such design or concealment measures may not be considered part of the small wireless facility for purpose of the size restrictions in the definition of small wireless facility.

H. Strand Mounted Equipment. Strand mounted small wireless facilities are permitted, subject to the following criteria:

1. Each strand mounted antenna shall not exceed 3 cubic feet in volume, unless a deviation is requested pursuant to ~~Section F~~Section I.
2. Only 2 strand mounted antennas are permitted between any two existing poles.
3. Strand mounted devices shall be placed as close as possible to the nearest pole and in no event more than five feet from the pole unless a greater distance is required by the pole owner.
4. No strand mounted device will be located in or above the portion of the roadway open to vehicular traffic.
5. Strand mounted devices must be installed with the minimum excess exterior cabling or wires (other than original strand) to meet the technological needs of the facility.~~]~~

I. Deviation from Design Standards.

1. An applicant may obtain a deviation from these design standards if compliance with the standard: (a) is not technically feasible; (b) impedes the effective operation of the small

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wireless facility; (c) impairs a desired network performance objective ~~or performance outcome~~; or (d) otherwise materially inhibits or limits the provision of wireless service. The city may also provide a deviation from these standards when it finds the applicant's proposed design provides equivalent or superior aesthetic value when compared to strict compliance with these standards. [NOTE: SINCE DEVIATIONS FROM THE DESIGN STANDARDS MAY LEAD TO QUESTIONS FOR WHY ONE PROVIDER WAS ALLOWED AN EXCEPTION AND ANOTHER WAS NOT, IT IS ADVISED THAT CITIES DOCUMENT REASONS FOR DEVIATIONS]

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2. Requests for deviation must be narrowly tailored to minimize deviation from the requirements of these design standards.

3. The small wireless facility design approved under this ~~Section G~~Section I~~A~~ must meet the conditions of ~~[*citation to 47 CFR Sec. 1.6002(l), or locally adopted definition reflecting the FCC conditions in the definition of SWF*]~~.

4. [City designee] will review and may ~~will~~ approve a ~~H~~requests for deviation to the minimum extent required to address the applicant's needs or facilitate a superior design. [NOTE: CITIES MAY RECOMMEND A PRE-MEETING WITH PROVIDERS IF A DEVIATION FROM STANDARDS IS BEING CONSIDERED. HOWEVER, PRE-MEETINGS MUST BE OPTIONAL, IF THEY ARE REQUIRED IT WILL TRIGGER THE FCC SHOT CLOCKS TO START.]

J. ~~**Conflicting Design Requirements.** In circumstances where the design requirements of the pole owner and the city are different, the more stringent of the two shall prevail. City design requirements that are in direct conflict with the pole owner's requirement may be waived.~~\

CITY OF ASTORIA
Founded 1811 • Incorporated 1856

COMMUNITY DEVELOPMENT

MEMORANDUM

DATE: November 20, 2019

TO: Astoria Planning Commission

FROM: Barbara Fryer, City Planner

SUBJECT: Work Session Item #4 Proposed Amendment (A19-10) for Columbarium

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This is a City Council initiated amendment.

Background

The last wishes of the long time clergyman at Grace Episcopal Church was to be interred at the Church. Currently, the Astoria City Code prohibits placement of remains outside of the established cemeteries. City Council directed staff to develop an amendment to allow columbarium within places of worship.

Columbarium are areas, internally to a building or church or externally in a monument, where niches are provided as a place for cremated remains to be memorialized. Each niche contains one person. A columbarium may have one or many niches. I've attached some photos for your information.

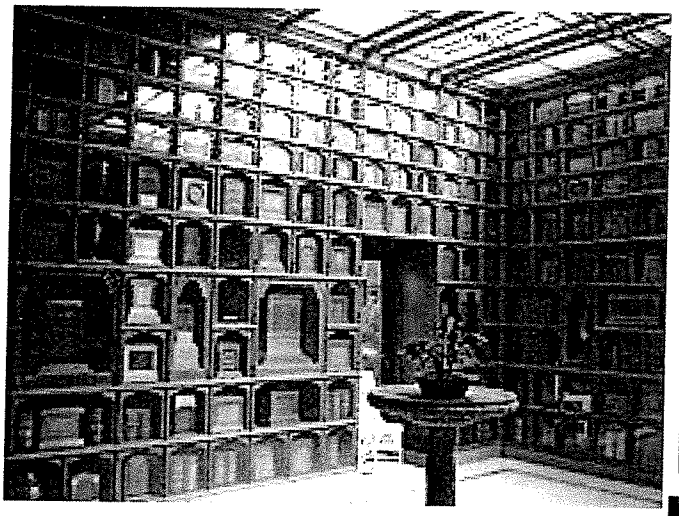
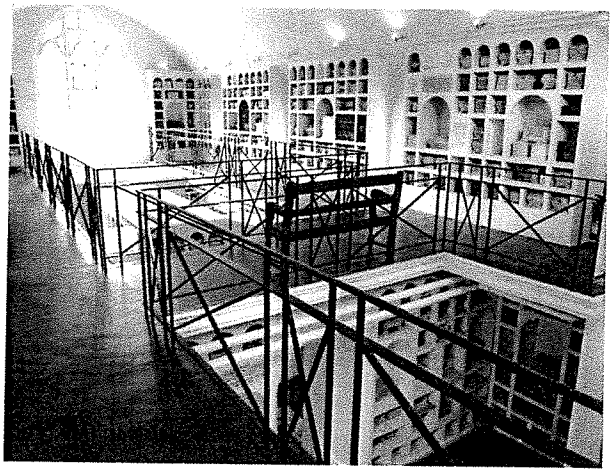
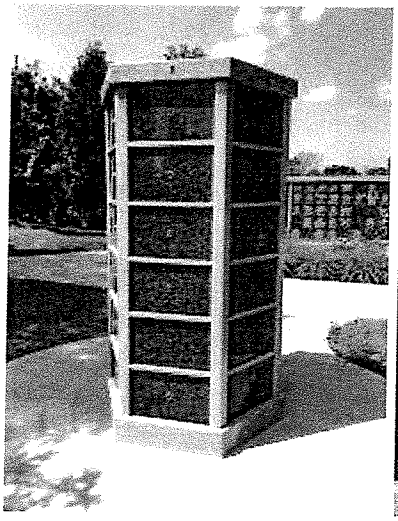
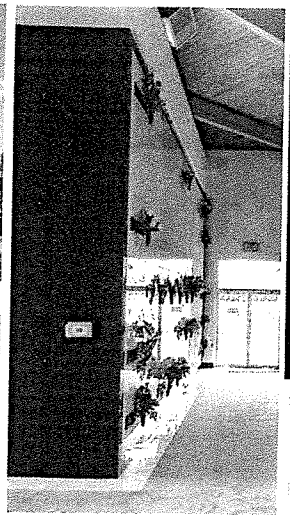
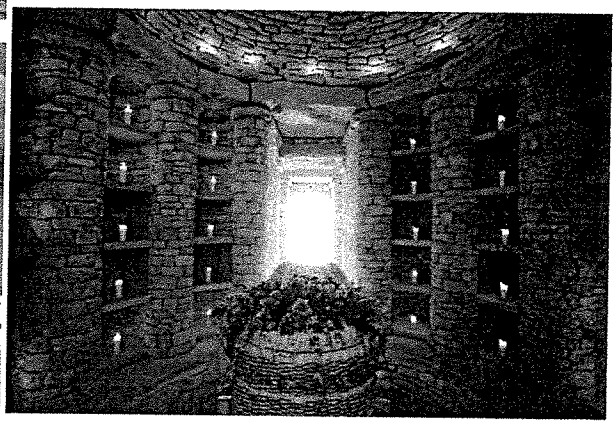
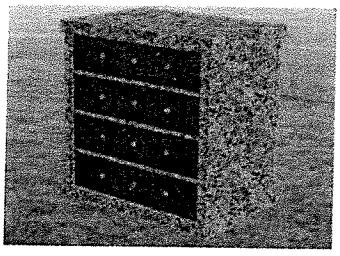
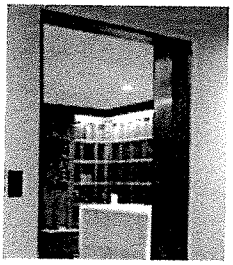
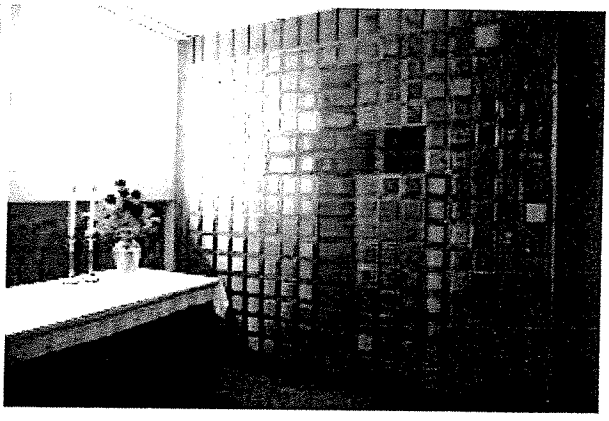
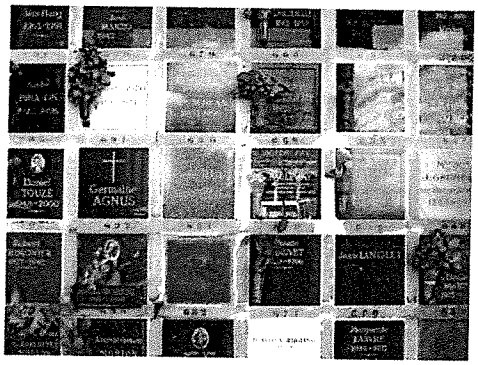
Current Astoria City Code:

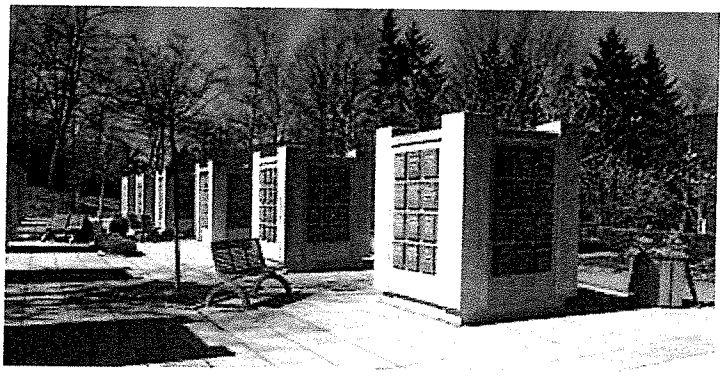
1.280 **Public Burying Ground**. All cemeteries now owned or hereafter acquired by the city are declared to be public burying grounds. No person may establish any other cemetery within the city; nor may any body be buried in any place other than in a designated cemetery.

Proposed Amendments:

City Attorney, Blair Henningsgaard, will make appropriate changes to the City Code. At the same time, permitting columbarium as a conditional use within places of worship is proposed.

This work session is to identify concerns and questions to address as an amendment moves forward.



City Hall•1095 Duane Street•Astoria, OR 97103•Phone 503-338-5183• Fax 503-338-6538
ttaylor@astoria.or.us • www.astoria.or.us