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Presented by: The Manager
Introduced:
Drafted by: J.W. Hartle

ORDINANCE OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 2014-__

**An Ordinance Amending the Land Use Code to Incorporate
Personal Wireless Service Facility Development Standards.**

WHEREAS, telecommunication technology and infrastructure shall be regulated within the City and Borough of Juneau, Alaska to protect property values, unique view sheds, neighborhood harmony, and create a more prescriptive guide to the industry.

NOW, THEREFORE, BE IT ENACTED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

Section 1. Classification. This ordinance is of a general and permanent nature and shall become a part of the City and Borough Code.

Section 2. Amendment of Section. CBJ 49.25.430 - Yard setbacks, is amended at 49.25.430(1)(C) to read:

49.25.430 - Yard setbacks. ...

(C) Antennas, masts, towers, any of which are 25 feet or greater in height or 25 square feet or greater in area at the base or foundation; and dishes greater than five feet in diameter; and

...

1 **Section 3. New Article.** Article IX. - Wireless Communication Facilities, is
2 created to read:

3

4 **ARTICLE IX. - WIRELESS COMMUNICATION FACILITIES**

5

6 49.65.900 – Purpose and Intent.

7 (a) It is the purpose of this article to establish regulations for the locating of wireless
8 communication facilities (WCF), antenna, ground equipment and related accessory
9 structures. The purpose and intent of this subsection are to:

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11 1. Minimize the impacts of wireless communications facilities on surrounding
12 land uses by establishing standards for location, structural integrity, and
13 compatibility.

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15 2. Encourage the location and collocation of communications equipment on
16 existing structures thereby minimizing new visual, aesthetic, and public
17 safety impacts, effects upon the natural environment and wildlife, and
18 reducing the need for additional towers.

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20 3. Avoid potential injury to persons and property from WCF failures and
21 windstorm hazards through structural standards and setback requirements.

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23 4. Accommodate the growing need and demand for wireless communications
24 services.

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- 5. Respond to the policies embodied in the Telecommunications Act of 1996 in such a manner as not to unreasonably discriminate between providers of functionally equivalent personal wireless services or to prohibit or have the effect of prohibiting personal wireless services.
- 6. Respond to the policies embodied in *Section 6409(a)* of the Middle Class Tax Relief and Job Creation Act of 2012.
- 7. Establish review procedures to ensure that applications for wireless communications facilities are reviewed for compliance with federal, state and local regulations and acted upon within a reasonable period of time as required by applicable state and federal regulations.
- 8. Encourage the use of existing locations identified in the CBJ *Wireless Master Plan* as preferred locations for WCF infrastructure.

(b) The intent of this article is to protect and preserve the public interest in the development of communication infrastructure through establishing a reasonable and practical permitting process that preserves neighborhood harmony and, scenic viewsheds and corridors as indicated in the City and Borough of Juneau Comprehensive Plan.

49.65.910 - Types of Wireless Communication Facilities.

1 a) Wireless Communication Facilities are 1) defined in CBJ 49.80.120, 2) categorized
2 in Table 1 in CBJ 49.65.930, and 3) illustrated as example figures in CBJ 49.65.910 (b).

3

4 b) Example Figures. The following figures shall only be used as examples for
5 categorizing proposed WCF. The director shall determine which category of WCF a given
6 application is for according to CBJ § 49.80.120.

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8 [INSERT FIGURE 1]

9 (Collocation: +1 antenna arrays on Concealed Tower)

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11 [INSERT FIGURE 2]

12 (Collocation: + 1 antenna array on Non-concealed Tower)

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14 [INSERT FIGURE 3]

15 (Concealed Roof-top & Attached WCFs))

16

17 [INSERT FIGURE 4]

18 (Concealed, Attached WCF)

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20 [INSERT FIGURE 5]

21 (Non-concealed, Attached WCF)

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23 [INSERT FIGURE 6]

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1 (Non-concealed, Roof Top WCF)
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3 [INSERT FIGURE 7]
4 (Non-Antenna Support Structure)
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7 [INSERT FIGURE 8]
8 (Concealed Tower)
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10 [INSERT FIGURE 9]
11 (Concealed Tower)
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13 [INSERT FIGURE 10]
14 (Concealed Tower)
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16 [INSERT FIGURE 11]
17 (Non-Concealed Tower)
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19 [INSERT FIGURE 12]
20 (Non-Concealed Tower)
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22 [INSERT FIGURE 13]
23 (DAS Node)
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[INSERT FIGURE 14]
(DAS Node with Wired Hub)

[INSERT FIGURE 15]
(DAS Wired Hub)

c) Exempt Facilities. The following are exempt from this Article:

- 1) Any amateur (ham) radio tower less than 75 feet in height on a lot smaller than one acre with a population density of more than 120 per square mile and 140 feet on a lot that is one acre or larger with a population density of more than 120 per square mile. Use of any amateur (ham) radio towers for a WCF shall not be exempt and will be regulated as a WCF under this article.
- 2) Satellite earth stations four feet or less in diameter in all residential districts and seven feet or less in all other zoning districts.
- 3) A temporary or mobile WCF installed by a government agency during a state of emergency. Facility shall be removed once the emergency ceases.
- 4) A temporary, commercial WCF installed during a state of emergency. The WCF shall be removed within three months after the conclusion of the state of emergency;

1 5) A temporary, commercial WCF installed for providing coverage of a special
2 event such as news coverage or sporting event, subject to approval by the
3 director. The WCF shall be removed within one week after the conclusion of the
4 special event.

5
6 49.65.920 - General Standards.

7 (a) Wireless Communication Facilities:

8 **1. Location Preference of New WCFs:** Locating a new WCF shall be in
9 accordance with the preferred locating alternatives order. Where a lower ranked
10 alternative is proposed, the applicant must file relevant information
11 demonstrating that despite diligent efforts to adhere to the established hierarchy
12 within the search area, higher ranked options are not technically feasible,
13 practical or justified given the location of the proposed wireless communications
14 facility:

15 (1) Concealed attached antenna, collocation or combined antenna on
16 an existing tower;

17 (a) In non-residential zoning districts;

18 (b) In residential zoning districts.

19 (2) Non-concealed attached antenna in non-residential zoning
20 districts:

21 (a) on an existing structure or building;

22 (b) on a new structure or building

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- (3) Non-concealed attached antenna in residential zoning districts;
 - (a) on an existing structure or building;
 - (b) on a new structure or building
- (4) New Concealed freestanding tower;
 - (a) in non-residential zoning districts
 - (b) in residential zoning districts
- (5) Substantial changes to an existing tower
- (6) Non-concealed freestanding tower
 - (a) in non-residential zoning districts
 - (b) in residential zoning districts

2. Collocation and other modifications to existing facilities pursuant to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 (47 U.S.C. §1445(a)).

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i. Modifications to facilities that involve the addition, removal, and/or replacement of transmission equipment that do not substantially change the physical dimensions of an existing tower, antenna support structure or base station shall be subject to the building permit requirements of Section XXXX. Streamlined process for collocation approvals are subject to the procedures set forth for a building permit, pursuant to Section XXXXX

ii. For the purpose of this subsection, “substantial change” means the following:

1. The mounting of the proposed antenna on the tower would increase the existing 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, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas;
or

2. The mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved (not to exceed four) or more than one new equipment shelter; or

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3. The mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or

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

iii. Increases to height allowed by Subsection 2 above to the existing tower shall be based on the maximum height allowed by the original Final Development Plan approval (if applicable), not affect any tower lighting, and shall comply with Section XXXX, Skyline Development Standards. Concealed attached antennas located on a roof top, not constructed exclusively for wireless service, shall not be considered a tower or a base station and shall be limited to the maximum height approved at Final Development Plan.

Comment [A1]: Correct to CBJ nomenclature (Building Permit?)

Comment [A2]: Assumes you have such standards

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iv. Additional equipment shall maintain the appearance intended by the original facility, including, but not limited to, color, screening, landscaping, camouflage, concealment techniques, mounting configuration, or architectural treatment. Notwithstanding this provision, the Director may approve a modification where maintaining the original design is not feasible, provided that the applicant provides evidence demonstrating that the modification's design or configuration is necessary and is the least obtrusive means of accomplishing the objective.

(3) Except for roof top towers 20 feet or less in height, non-concealed towers shall be prohibited in MU & MU2 zoning districts, designated Scenic Corridors/Viewsheds listed in the Comprehensive Plan, and the Downtown Historic District.

(4) Except for towers owned and operated by governmental agencies for the purposes of public safety, all towers over 100 feet tall shall be structurally designed to accommodate at least three carriers; those over 130 feet shall accommodate at least four carriers.

(5) Use of ground or guy-wires shall only be permitted in the Rural Reserve (RR) and Industrial (I) zoning districts, and only on roof-tops in the Light Commercial (LC), General Commercial (GC), Waterfront Commercial

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(WC), and Waterfront Industrial (WI) districts.

(6) The only signage that is permitted upon a WCF, equipment cabinets, or fence, shall be informational and for the purpose of identifying the WCF (i.e. Antenna Structure Registration number), as well as the address and telephone number, security or safety signs, and property manager signs (if applicable) of the party responsible for the operation and maintenance of the facility.

(7) If more than two hundred twenty (220) volts are necessary for the operation of the facility and is utilized within the equipment compound or in the tower, signs located every twenty (20) feet and attached to the fence or wall shall display in large, bold, high contrast letters (minimum height of each letter four inches) the following: “HIGH VOLTAGE - DANGER.”

Comment [A3]: Building Department would require putting signs on the structure, not on fence. This probably shouldn't be in this ordinance.

(8) All lighting and structure markings shall comply with FAA standards. Any lighting required by the FAA must be dual arrangement with strobe lights daytime and red lights at nighttime of the minimum intensity and number of flashes per minute (i.e. the longest duration between flashes) allowable by the FAA. The lights shall be oriented so as not to project directly onto surrounding property.

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(b) Accessory Structures and Generators:

- (1) Shall be placed inside a building or structure if located in or abutting Residential, Commercial or Mixed-Use districts, or be screened with a perimeter sight-obscuring foliage or fence as tall as the structure(s) in all other districts (an “Equipment Compound”). Those located in the Industrial district are exempt from this requirement;
- (2) No storage shall be allowed in an equipment compound, and the compound shall not be used as habitable space;
- (3) Shall not generate sound that exceeds 55 dB as measured from the nearest Residential district property line, and shall not exceed 70 db at the property boundary of the equipment compound, unless approved as an Intermediate or Major Utility Facility (17.1500, 17.200 CBJ 49.25.300) permit;
- (4) All outdoor lighting fixtures shall be “full cutoff” styles that direct light only onto the subject parcel; and,
- (5) Shall be located as close to the tower or antenna array, as safe and practical.

Comment [A4]: What if the structures is in an RR district about a D-1 district?

Comment [A5]: Do we want to add RR. Ex. Table Top Mtn accessory structures probably don't need to be screened or enclosed within a structure due to their location.

Comment [A6]: Maybe this should be a variance process.

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(c) Abandonment and Fall Zone.

1) As a condition of approving a WCF having a fall zone that overlays any existing buildings, structures, parking lots, playgrounds, rights-of-way, property lines, or other features determined to be of a similar nature by the director, the WCF owner shall submit a report to the Director by July 1 bi-annually from a licensed engineer stating that the WCF is structurally sound.

(a) If this report is not submitted by this date, the tower owner will be notified that they shall have up to 60 days to submit a letter to the Director explaining continued use. If a letter is not received within this time, the Director shall deem the WCF abandoned and notify the owner to remove it within 60 days or the City shall remove it at the owner's expense.

(b) Upon removal of the tower, antenna, and equipment compound, the development area shall be returned to its natural state and topography and vegetated consistent with the natural surroundings or consistent with the current uses of the surrounding or adjacent land at the time of removal, excluding the foundation, which shall be reduced to below finished grade.

49.65.930 – Permit Types.

1 (a) Wireless Communication Facilities shown in Table 1 or those defined as non-
2 substantial modifications to existing WCF require Building permit approval only;
3 those not shown require Conditional Use permit and Building permit approvals.
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TABLE 1: Building Permit Approval Only for those listed below.

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TABLE 1
WCF Type

	<u>Zoning Districts</u>	<u>Maximum Height</u>	<u>Min. Distance to D-1 - D-18 Districts</u>	<u>Example Figures</u>
Collocation	All	Not more than 10% or 20 feet added to existing structure	N/A	Figures 1 and 2
Concealed Roof-top & Attached	D-1 – D-18	≤ 10 Feet	N/A	Figure 3
Roof-top & Attached	D-1 – D-18	≤ 5 Feet above lowest attachment point ¹	N/A	Figures 4 - 6
Roof-top & Attached	Non-Residential and Mixed Use	≤ 30% of Building Height or 20 Feet (whichever is less)	N/A	Figures 4 - 6
Non-Antenna Support Structures	All	≤ 10 Feet	N/A	Figure 7
New Concealed Tower	WI, WC, GC, LC, and RR	≤ 10 Feet above Max. Height of Zoning District	N/A	Figures 8-10
New Concealed Tower	WI, WC, LC, and RR	≤ 60 Feet	> 500 Feet	Figures 8-10
New Concealed Tower	I	< 90 Feet	> 500 Feet	Figures 8-10

TABLE 1: Building Permit Approval Only for those listed below.

TABLE 1 (continued)

<u>WCF Type</u>	<u>Zoning Districts</u>	<u>Maximum Height</u>	<u>Minimum Distance to Residential District</u>	<u>Example Figures</u>
New Concealed Tower	D-1 – D-18	Compliant with Max Height of Zoning District	N/A	Figures 8-10
New Non-Concealed Tower	All except MU, MU-2, and I	Compliant with Max Height of Zoning District	N/A	Figures 11 and 12
New Non-Concealed Tower	RR & I	<60 Feet	>500 Feet	Figures 11 and 12
DAS Nodes/Systems	(need input here from CBJ)			
DAS Wired Hubs	(need input here from CBJ)			

Note:

1) Except for collocations and towers, the height of the WCF facility shall be measured from the lowest point of attachment to the building or structure to the highest point of the WCF or its accessory structure.

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(b) **Performance criteria for concealed towers.** To encourage facilities that blend well with City and Borough’s landscape, new concealed towers must meet the following performance criteria:

1. The concealed tower is designed either (i) to resemble the surrounding landscape and other natural features where located in proximity to natural surroundings or (ii) flagpoles, new light stanchions, or other similar man-made structures, when located in proximity to developed surroundings.
2. A minimum of seventy percent (70%) of the concealed tower is screened from view by existing vegetation, topography, or other existing structures from any State Highway or County Road designated a Scenic Corridor/Viewshed.
3. Viewsheds are not significantly impacted by the proposed concealed facility.
4. The concealed tower does not extend higher than the dominant background where it is located or otherwise penetrate the skyline as defined in Section XXXX Skyline Development Standards.

Comment [A7]: This presumes you have such a definition elsewhere in your code

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49.65.940 - Required Submittals.

(a) The applicant shall submit the following documents for any proposed WCF to the director:

- (1) The type of the proposed facility, according to CBJ 49.80.120 - Definitions;
- (2) Project narrative and description, including information concerning the proposed facility's placement on the hierarchy set forth in Section 49.65.920(a)(1);
- (3) Site plan showing the location of any existing buildings, structures, and improvements on the site, as well as adjacent rights-of-way, topography, unique physical characteristics of the site or other information that the applicant believes are pertinent to the design or location of the facility;
- (4) Scaled construction drawings of all proposed structures and buildings, including fall zones, profile view drawings, and including a stamped or sealed structural analysis of the proposed tower prepared by a registered Professional Engineer licensed in the State of Alaska indicating the existing, proposed and future loading capacity of the WCF;
- (5) A map showing the applicants search area used to ascertain the proposed location.

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(6) A map showing existing and future coverage, including adjacent facilities for the intended service area using search rings and propagation data.

(7) Any additional information determined by the director to be required to complete the application.

(8) Prior to final inspection for a building permit for any WCF, documentation shall be submitted from a Radio Frequency (RF) Engineer indicating the constructed facility's compliance with American National Standards Institute (ANSI) standards for electromagnetic radiation: In order to protect the public from excessive exposure to electromagnetic radiation, the facility applicant shall certify through a written statement that the facility meets or exceeds current ANSI standards as adopted by the Federal Communication Commission (FCC)..

(b) The director may deny a Building permit that shall be in writing if it is found that:

(1) The proposed WCF is not described in sufficient detail by the applicant to allow the director to categorize the facility according to CBJ 49.65.920 and CBJ 49.25.300; or

(2) The application is incomplete.

1 (3) The application is not consistent with federal and state codes and statutes

2 (c) In addition to the submittals required under CBJ 49.65.920(a), all Conditional
3 Use permit applications shall be reviewed for completeness according to the
4 provisions of CBJ 49.15.330 and shall be deemed complete only when all of the
5 following documents and tasks are accomplished and submitted:
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7 (1) For a new tower:

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9 (A) Documentation describing the effort that the applicant made to install
10 or collocate onto an existing tower or other acceptable structure
11 located within a 1 mile radius of the proposed site;

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13 (B) Documentation describing the effort the applicant made to upgrade any
14 alternative tower candidate for future collocation within 1 mile of the
15 proposed site for future collocation
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17 (C) Written technical evidence from an RF Engineer that the proposed
18 WCF cannot be reasonably collocated on other towers or other
19 acceptable structure located within a 1 mile radius of the proposed
20 tower site, if any.

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22 (D) An affidavit by an RF engineer demonstrating compliance with
23 "Location Preference" hierarchy of facilities set forth in Section
24

1 49.65.920 of this Ordinance. If a lower ranking alternative is proposed
2 the affidavit must address why higher ranked options are not
3 technically feasible, practical, and/or justified given the location of the
4 proposed communications facility.
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7 (2) Documentation describing the effort the applicant made to utilize the
8 nearest existing WCF identified in the CBJ Wireless Master Plan (WMP).
9

10 (3) Statement of how the proposal is designed to minimize harmful impacts to
11 the neighborhood through siting and design;
12

13 (4) A map vicinity map showing the distance to the nearest dwelling and
14 Residential district;
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16 (5) Documentation from the Federal Aviation Administration (FAA) stating
17 whether or not an obstruction light and/or specific paint color is required;
18

19 (6) Photographic simulations of the proposed structure(s) as it would appear
20 viewed from the closest residential property, adjacent roadways, parks, and
21 Scenic Corridors/Viewsheds designated in the Comprehensive Plan of the
22 City and Borough of Juneau;
23

1 (7) Documentation stating that the components of the concealed tower are
2 designed to withstand horizontal and vertical loading from wind, snow, or
3 ice accumulation in accordance with ANSI/EIA/TIA-222 G (as amended);
4 and

5
6 (8) If a tower is in excess of 100 feet in height and in or within 500 feet of a
7 Residential district or designated scenic corridors/viewsheds, the applicant
8 shall provide:

9
10 (A) Balloon testing analysis shall be performed by the applicant in
11 coordination with the director, whereby a balloon no smaller than ten
12 feet in length and three and a half feet in diameter and consisting of
13 the same color as the proposed structure is flown or raised upon a
14 temporary mast, at the maximum height of the proposed antenna
15 support structure and must be tethered within 50 horizontal feet of the
16 proposed location. The date, time and location of this balloon test shall
17 be indicated on a public notice sign located at the most visible location
18 along the nearest right-of-way. The balloon shall be flown for three
19 consecutive days from sunrise to sunset. One day of testing must occur
20 on a weekend day; and

21 (B) A report of the balloon test including a photograph of the notice sign,
22 the dates and times of the balloon test and the general weather
23 conditions during the balloon test periods.
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Comment [A8]: Discuss: 5 days within 2-week period?

1 (C) A list of adjacent property owners keyed to the map referenced in
2 subsection (4) above. The list must be from the most current ownership
3 information supplied by CBJ Tax Department, together with two (2)
4 sets of mailing labels for such property owners. Applicant will also
5 provide a notarized Certification Letter stating the ownership list
6 referenced herein is accurate to the best of the applicant's ability.

7
8 (C) An affidavit by an RF Engineer explaining the necessity of the
9 desired height for the proposed WCF, and why lower heights are
10 insufficient. If there are existing WCFs within 1.5 miles to the
11 applicant's search ring or areas recommended by the WMP for
12 future WCFs, the affidavit shall explain:

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14 i. Why those WCFs do not meet the applicant's engineering
15 requirements,
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17 ii. Why those WCFs heights cannot be increased to meet the
18 applicant's engineering requirements,
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20 iii. Why those WCFs cannot be upgraded to support the applicant's
21 proposed WCF,
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23 iv. Why do the areas identified in the WMP not meet the
24 applicant's engineering, or
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1 v. What other limiting factors render existing WCF sites and
2 WMP areas unsuitable.

3 (d) In addition to the findings at CBJ 49.15.330(d)(5), the director may recommend
4 denial of the application for Conditional Use Permit if it is found that the
5 proposed WCF is not consistent with the Wireless Master Plan.
6

Comment [A9]: I assume this is only for a PC level review.

7 (e) The Director may require supplemental review for any WCF that does not
8 meet the requirements of CBJ 49.65.940 Table 1.
9

- 10 1. Where due to the complexity of the analysis required to review an application for
11 any proposed WCF, the Director may require the applicant to obtain a technical
12 review by a third party expert, the costs of which shall be borne by the applicant
13
- 14 2. Based on the results of the expert review, the director may require changes or
15 additional documentation for the applicant's application.
16
- 17 3. The supplemental review may address the following:
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- 19 (i) The accuracy and completeness of the application;
 - 20 (ii) The applicant's analysis, methodology, and conclusions;
 - 21 (iii) Whether the proposed telecommunication facility complies with the
22 applicable approval criteria;
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1 (iv) Whether the proposed installation is consistent with the original
2 WCF's zoning approval; and,

3 4. Other items deemed by the Director to be relevant in determining whether a
4 proposed WCF complies with Title 49.

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6 49.65.950 – Effects to Existing WCFs.

7 a) All WCFs made nonconforming by the adoption of this article shall be
8 regulated according to CBJ 49.30 Nonconforming Development.

9
10 49.65.960 – Publicly-Owned Property Under the Wireless Master Plan.

11 a) The City and Borough has adopted a Wireless Master Plan that indicates
12 preferred locations of WCFs and, consequently, creates the opportunity for pre-
13 approving sites for future WCFs. Some of these preferred sites are owned by the
14 City who may contract with a third party to administer those publicly-owned
15 sites for purposes of developing the sites as part of the Wireless Master Plan.
16 Except as specifically provided herein, the requirements established by this Article,
17 shall be applicable to all WCFs to be developed or collocated on City owned sites.

18
19 49.65.970 – DAS Systems.

20
21 **a) DAS Nodes**

22 DAS Nodes shall be permitted in accordance with Table 1 of this ordinance and as
23 follows:

1 (v) DAS Node equipment cabinets shall be located or screened to minimize the
2 visual impact of the DAS Node equipment cabinets upon adjacent properties and shall
3 be of a material or color that matches the exterior of the building or structure upon
4 which it is situated. DAS Node equipment cabinets shall be located in a manner so as to
5 not create any pedestrian or vehicular impediments or hazards.

6 (vi) Commercial advertising shall not be allowed on a DAS Node.
7

8 (vii) Signals, lights, or illumination shall not be permitted on a DAS Node,
9 unless required by the FCC or the FAA.

10 2. DAS Node equipment may be located on utility poles pursuant to the
11 following regulations:

12 (i). The maximum height of the pole with the DAS Node equipment shall
13 not exceed forty-five (45) feet in height.
14

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16 (ii). The utility pole shall be located on public property, within public
17 easements, or public rights-of-way.
18

19 (iii). The DAS Node equipment shall be of a size and placement that
20 is structurally compatible with the engineering design of the pole
21 pursuant to the CBJ Building Code and attested to by a professional
22 engineer licensed in the State of Alaska and competent to evaluate
23 antenna choices.
24

1 (iv). The DAS Node equipment shall not extend more than twenty
2 percent (20%) or (10) feet, whichever is less, above the existing pole
3 height. If the pole is replaced to withstand the addition of
4 telecommunications equipment, the replacement pole shall not exceed the
5 height of the original pole.

6 (v). Placement of a DAS node on a utility pole shall only be on poles
7 owned or operated by a public utility authorized to operate in the CBJ, a
8 CBJ franchisee, or CBJ.

9 (vi). All relocation costs associated with any relocation of the DAS
10 Node necessitated by roadway or sidewalk improvements shall be borne
11 by the applicant.

12 (vii). DAS Nodes which meet the definition of DAS Systems because of
13 the combination of a wired DAS Hub at the same location shall also meet
14 the requirements of subsection b) below as it relates to the DAS Hub
15 portion of the DAS system in addition to the requirements herein.
16
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18
19 **b) DAS Wired Hub.**

20 DAS Wired Hub facilities and equipment shall be permitted as a principal or
21 accessory use in accordance with Table 1 of this ordinance and as follows:
22

1 1. Screening. DAS Wired Hub facilities and equipment shall be hidden
2 and/or screened from public view by one or more of the following techniques,
3 which shall also be consistent with the aesthetic / visibility standards identified in

4 **Section XXXX:**

5
6 (i) One or more of the following techniques can be used to hide and /or
7 screen equipment:
8

9
10 A. Locate equipment within a building. The building shall be designed to be
11 consistent with the prevailing architectural style of the neighborhood in which it is
12 located, including exterior materials and roof pitch. The enclosure shall not exceed
13 one story, unless location in a flood plain or other drainage concerns requires it to be
14 elevated.
15

16 B. Locate equipment behind a secured, landscaped perimeter. An
17 evergreen landscape buffer shall surround the perimeter of the Wired DAS Hub. If
18 this method is selected, the buffer requirements identified in subsection (4) apply.
19 Additionally, an opaque fence or wall shall be constructed to minimize opportunities
20 for unauthorized access, climbing, vandalism, graffiti and other conditions that would
21 result in hazardous conditions, visual blight and attractive nuisances. The fence or
22 wall shall be no less than the above grade height of any equipment within the
23
24

1 enclosure, which shall not be taller than one story, unless located in a flood zone.

2
3 C. Roof-top equipment. DAS Wired Hub equipment shall be screened
4 from public view in a manner that is consistent with the architectural style of the
5 building upon which the DAS Wired Hub is located.
6

7
8 2. Setbacks: Setbacks shall equal [redacted] percent ([redacted]%) of the length of the longest
9 distance of the DAS Wired Hub compound area (width or length) Setbacks are
10 measured as follows:

- 11
- 12 a. From the property line(s) to the equipment compound area fence.
 - 13 b. From the road right-of-way line to the equipment compound area
14 fence.
 - 15 c. When adjacent to railroad right-of-way, the underlying zoning
16 setback shall prevail.
17

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19
20 3. Signage: Commercial messages are prohibited on DAS Wired Hub. Required
21 noncommercial signage shall be subject to the following requirements:

- 22
- 23 a. The only signage that is permitted upon DAS Wired Hub shall be
24 informational, such as the party responsible for the operation and

1 maintenance of the facility, and any additional security and safety signs
2 as applicable.

3 b. If more than 220 voltage is necessary for the operation of the facility
4 and is present in a ground grid or in the tower, signs located every twenty
5 (20) feet and attached to the fence shall display in large, bold, high
6 contrast letters, minimum height of each letter four (4) inches, the
7 following: "HIGH VOLTAGE - DANGER."
8

9 c. Nameplate signage shall be provided, in an easily visible location,
10 including the address and telephone number of the contact to reach in the
11 event of an emergency or equipment malfunction, including property
12 manager signs as applicable.
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17 **Section 4. Amendment of Section.** CBJ 49.80.120 - Definitions, is amended by the
18 addition of the following definitions to be incorporated in alphabetical order:

19
20 **49.80.120 - Definitions.**

21 *Amateur Radio Tower (ham)*— Any tower used for amateur radio transmissions
22 consistent with the "Complete FCC U.S. Amateur Part 97 Rules and Regulations" for
23 amateur radio facilities.

24 *Attached Wireless Communication Facility* means the facility is attached to the side of a

1 building. This does not include Roof-top WCF. See Wireless Communication Facility.

2

3 *Collocation* means any wireless communication device located upon an existing or
4 proposed tower that is or will be used in common by two or more companies. Any
5 antenna modifications that do not increase the overall height of the facility are
6 considered collocations.

7

8 *Combined* An antenna or similar device used to transmit and/or receive the signal of
9 various frequencies and/or providers.

10

11 *Concealed Towers* sometimes referred to as camouflaged, means towers and related
12 structures/devices that are inconspicuously designed with the surrounding environment.

13 Examples include, but are not limited to: faux trees, enhanced flag poles, steeples, and
14 faux chimneys. See definition of Tower.

15

16 *DAS Network* - A network of smaller, spatially separated antenna nodes connected to
17 a communications network. A DAS network splits the transmitted signal among
18 several smaller antennas to provide coverage and reliability over the same area as a
19 single cell tower antenna.

20

21 *DAS node* – a set of equipment including wireless antenna mounted on a medium
22 elevation support structure such as a telephone pole or light pole which is connected
23 via fiber optic cable initially to an equipment cabinet on site and thereafter to a
24

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26

1 Wired DAS Hub at either the same location or a different location. DAS nodes may
2 or may not share common ownership with DAS Wired Hubs.

3 *DAS System* is the combination of a DAS node and a DAS Wired Hub. A DAS
4 System can be comprised of (A) a self contained single installation which has a DAS
5 antenna mounted to a medium elevation support structure such as a light pole or
6 telephone pole and includes the DAS Wired Hub either mounted on the same pole or
7 ground mounted in close proximity; or (B) a DAS node that is connected by fiber optic
8 cables to a remote located DAS Wired Hub.
9

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11
12 *DAS Wired Hub* – A DAS wired hub is ancillary equipment usually contained in a
13 shelter or other enclosure which does not have any wireless transmission or receive
14 equipment contained therein but is utilized in the deployment and operation of
15 wireless DAS Network receive/transmit infrastructure that is located elsewhere.
16

17
18 *Equipment Compound* means the outdoor area devoted to a WCF usually consisting of a
19 tower and associated equipment.
20

21 *Equipment Cabinet* means any shelter, pedestal, or other similar structure(s) used to
22 contain radio or other equipment necessary for the transmission and/or reception of
23 wireless communication signals_
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Equipment Shelter means a structure used to contain and protect equipment cabinets or other equipment used for a Wireless Communication Facility.

Fall Zone means a circular area with a radius from the tower equal to the height of the tower that may be susceptible to damage from falling debris (i.e. WCF parts, snow, or ice) or structure collapse. (Provide diagram for easier understanding)

Ham Radio Facility – see Amateur Radio Tower

Non-Antenna Support Structure means a structure with a primary purpose other than elevating a WCF but which can accommodate a WCF. Examples include, but not limited to: light standards, utility poles, flag poles, and stadium lights.

Radio Frequency Engineer (RF Engineer) means an individual trained in the science of radio frequency design and propagation with a minimum of one year professional experience with electrical engineering devices designed to operate in the radio frequency spectrum of 500MHz to 6GHz.

Radio Frequency Emissions mean any electromagnetic radiation or other communications signal emitted from an antenna or antenna-related equipment that is regulated by the FCC.

- Comment [A10]:** Is this adequate training? Seems sketchy.
- Comment [A11]:** I believe this is impossible to administer
- Comment [A12]:** This is no longer required by the FCC although CityScape has these licenses

1 *Roof-top Wireless Communication Facility* means a WCF located on a roof of a building,
2 except when attached to a tower.

3

4

5 *Satellite Earth Station* means a parabolic (or dish) antennae(s) that is mounted to
6 any support structure or tower that may include associated equipment cabinets
7 necessary for the transmission or reception of wireless communications signals with
8 satellites.

9

10 *Search Ring* means an area designated by a wireless provider or operator as the
11 optimum location for a new WCF.

12

13

14 *Tower* means a structure with a primary purpose to elevate a WCF. A tower is typically a
15 component of a WCF. Monopoles and lattice design structures are examples of
16 towers. A tower can be a component of a WCF.

17

18 *Wireless Communication Facility (WCF)* means a facility that transmits and/or receives
19 wireless communications signals such as telephone, internet, or radio that typically
20 consists of an antenna array, transmission cables, and related equipment. WCFs also
21 include all personal wireless services infrastructure such as commercial mobile services,
22 unlicensed wireless services, and common carrier wireless exchange access services, as
23 defined by the FCC.

24

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1 *Wireless Master Plan (WMP)* means a document prepared for the City and Borough of
2 Juneau with a purpose of (a) identifying existing WCF infrastructure, (b) identifying
3 probable future development of WCF infrastructure using planning techniques, and (c)
4 identifying preferred locations and types of WCF infrastructure for future development
5 to further advance the goals of the Comprehensive Plan of the City & Borough of Juneau
6 .

7
8 **Section 5. Effective Date.** This ordinance shall be effective 30 days after its
9 adoption.

10 Adopted this day of _____ 2014.

11
12 _____
Merrill Sanford, Mayor

13 Attest:
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15 _____
Laurie J. Sica, Clerk

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