



City of Palo Alto

City Council Staff Report

(ID # 10449)

Report Type: Action Items

Meeting Date: 6/17/2019

Summary Title: Resolution Correcting Wood Pole Wireless Standards

Title: Adoption of a Resolution Amending Objective Standards for Wireless Communications Facilities in the Public Rights of Way (Continued From June 3, 2019) to Delete Inadvertently Added Language, Clarify Existing Standards, and Adopt an Interim Setback from Schools

From: City Manager

Lead Department: City Attorney

Recommendation

Staff recommends that the City Council adopt the attached resolution (Attachment A), amending the recently adopted objective standards for Wireless Communications Facilities (WCFs) attached to wood utility poles in the public rights of way to delete a standard inadvertently included through an administrative error. In addition, the resolution clarifies that WCFs may not be attached to poles outside of the public rights of way (e.g. on a private rear or side lot line) and adopts an interim standard regarding setbacks from public schools for WCFs on both Streetlight and Wood Utility Poles. Staff will continue to work with consultants to develop appropriate updates to the City's objective standards for WCFs.

Discussion

On June 3, 2019, the City Council voted to delay consideration of staff's request to correct an administrative error in the objective standards for small cell Wireless Communications Facilities on Wood Utility Poles, first adopted on April 15, 2019 (June 3, 2019 Staff report available at: <https://www.cityofpaloalto.org/civicax/filebank/documents/71447>; April 15, 2019 Staff report available at: <https://www.cityofpaloalto.org/civicax/filebank/documents/70193>; and April 15, 2019 action minutes available at: <https://www.cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=50627.15&BlobID=71238>).

The adopted standards for the placement of small cell nodes on Wood Utility Poles inadvertently included draft text (Attachment A, Exhibit 2, page 2, item number 22) that staff did not intend as a final standard. This text represents an initial concept to regulate impacts related to second-story windows that staff was unable to fully develop prior to the Council's April 15 meeting. This error was only present in the standards for Wood Utility Poles; it was not included in the standards for Streetlight Poles.

The existing language is poorly drafted:

“22) WCF equipment and antennas shall be located on poles such that they do not fall within the horizontal plane defined by a 45 degree angle extending 50 feet from the center point of upper story windows, doors, balconies, and other openings.”

The most straightforward interpretation of the standard would result in little practical impact. The plain text of the restriction prohibits equipment only within a two-dimensional horizontal area, or “pizza slice”, defined by the center point of upper story windows, balconies or doors and two lines, separated by 45 degrees, extending from that center point to a distance of 50 feet (see Fig. 1 below). An applicant could easily comply with this standard by slightly shifting equipment placement, and it therefore represents a limited restriction on placement of WCFs. Additionally, the restriction applies only for upper story locations and offers no similar limitation for single-story structures.

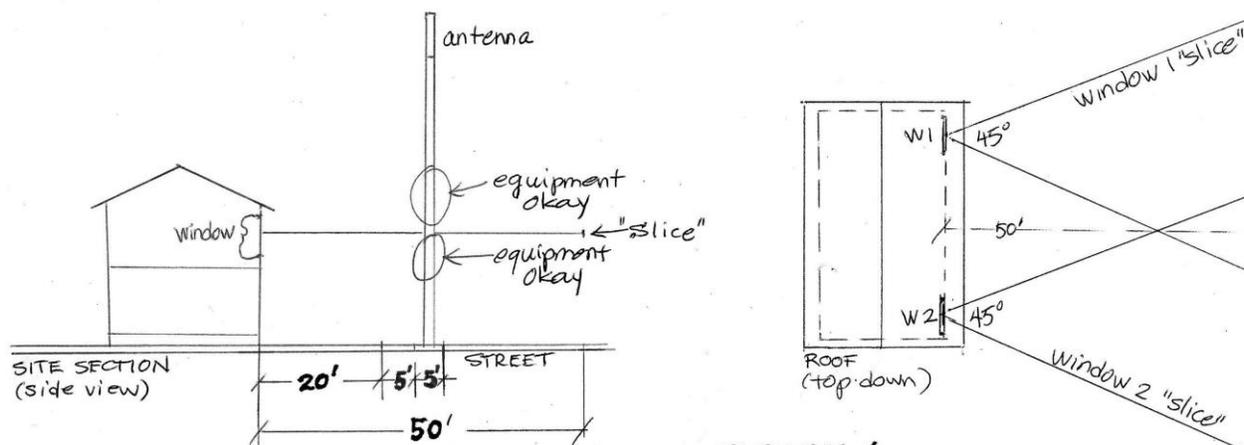


FIGURE 1

After careful review, staff determined that alternative interpretations restricting WCF placement within a three-dimensional space are unsupported by the language as currently drafted. Staff are not prepared at this time to propose alternative language that would create a more effective restriction, as additional analysis is required to understand the practical and policy impacts of such a standard. For example, it is unclear whether it is desirable to prioritize multi-story structures over single-story structures. In addition, City policies and regulations typically regulate from the perspective of streetscape and street design (e.g. Comprehensive Plan Goal L-9 and Policy L-9.10), rather than with respect to features of private property such as windows or door openings that may change over time. Staff are in the process of conducting the additional analysis necessary to develop additional standards and hope to return with more thoroughly-considered proposals in advance of the 1-year timeline directed by the Council on April 15, 2019.

Nonetheless, staff understand the urgency of these issues for the Council and community. In particular, numerous public comments have focused on a desire for a setback from schools. Should the Council feel the need to take immediate action, staff recommend:

1. Clarifying that an applicant may not utilize Streetlight or Wood Utility poles outside of the public right of way (e.g. along private rear or side lot lines); and
2. Adopting an interim standard establishing a 300-foot setback from public schools.

Staff believe the appearance of WCFs will no longer be reasonably distinguishable at a distance of 300 feet (equivalent to the length of a football playing field). If approved by Council, these new and revised standards would apply only to WCF applications filed after the date the standard is adopted. Under Federal regulations, they cannot be applied to pending applications nor would they impact existing equipment or previously approved projects.

The attached resolution shows in redline the proposed deletion of the erroneously added language with respect to Wood Utility Poles, the added clarifications that WCFs may not be attached to poles in locations other than the public right of way (e.g. along private rear or side lot lines), and the new interim standards governing WCF distances from public schools. Staff will continue to develop the City's objective aesthetic standards for WCFs consistent with the Council's direction on April 15, 2019.

Attachments:

- Attachment A: 2019-06-17 WCF Standards Clean Up Resolution

Resolution No. _____
Resolution of the Council of the City of Palo Alto Amending
Objective Aesthetic, Noise, and Related Standards for
Wireless Communication Facilities in the Public Rights of Way

The Council of the City of Palo Alto RESOLVES as follows:

SECTION 1. Findings and Declarations.

- a. On April 15, 2019, the City Council adopted a resolution establishing objective aesthetic, noise, and related standards for Wireless Communication Facilities (WCFs) on Streetlight and Wood Utility Poles in the Public Rights-of-Way.
- b. The adopted standards for WCFs on Wood Utility Poles contain a provision that was included as a result of an administrative error.
- c. The City Council wishes to adopt amended standards for WCFs on Wood Utility Poles to correct this error.
- d. The City Council wishes to revise the pole location standards to clarify that WCFs shall not be located on poles outside of the public rights of way (e.g. along private rear or side lot lines).
- e. The City Council wishes to adopt a new interim standard setback from public schools for all WCFs on Streetlight Poles and Wood Utility Poles.

SECTION 2. Objective Standards for WCFs on Streetlight Poles in the Public Rights-of-Way Amended.

The City Council hereby adopts the standards in Exhibit 1, attached to and incorporated into this resolution as if fully set forth herein, for Wireless Communication Facilities on Streetlight Poles in the Public Rights-of-Way.

SECTION 3. Objective Standards for WCFs on Wood Utility Poles in the Public Rights-of-Way Amended.

The City Council hereby adopts the standards in Exhibit 2, attached to and incorporated into this resolution as if fully set forth herein, for Wireless Communication Facilities on Wood Utility Poles in the Public Rights-of-Way.

SECTION 4. If any section, subsection, clause or phrase of this resolution or the attached standards is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion or sections of the resolution and exhibits. The Council hereby declares that it should have adopted the resolution and exhibits, and each section, subsection, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 5. Environmental Review. The Council finds that this resolution is exempt from

the provisions of the California Environmental Quality Act ("CEQA"), pursuant to Section 15061 of the CEQA Guidelines, because it does not authorize the construction of Wireless Communication Facilities in any locations where such facilities are not already permitted; therefore it can be seen with certainty that there is no possibility that the ordinance will have a significant effect on the environment. The resolution is further exempt under CEQA Guidelines sections 15301, 15302, 15303 and 15305 because it simply represents part of a comprehensive regulatory scheme governing minor alterations to existing facilities or small structures.

INTRODUCED AND PASSED:

AYES:

NOES: ABSENT:

ABSTENTIONS:

ATTEST:

City Clerk

Mayor

APPROVED AS TO FORM:

APPROVED:

Deputy City Attorney

City Manager

Director of Planning and Community
Environment

Streetlight Poles

Standard designs for WCFs located on Streetlights – An applicant proposing to attach to a Streetlight in the public right of way shall utilize one of the other designs specified herein.

- a) **Underground design:** Radio equipment shall be placed in an underground vault in the pedestrian right of way. The antennae shall be placed in a shroud at the top of a nearby pole.
 - i) Underground vaults shall be the minimum volume necessary to house WCF equipment. Application materials should explain why the proposed dimensions are required. In no event shall vault dimensions exceed 5 feet 8-inches x 8 feet 2-inches x 5 feet 7-inches or 260 cu. ft., excluding space required for ventilation or sump pump equipment.
- b) **Top-mounted design:** All equipment shall be enclosed within a shroud at the top of the pole containing both radio and antenna equipment.
 - i) Top-mounted equipment shrouds shall not exceed 5.5 feet from the top of the streetlight pole and shall taper to meet the pole above the mast arm. The diameter of the antenna and shroud shall not exceed 15” at their widest.
- c) **Minimal sunshield design:** Radio equipment shall be enclosed within one or two sunshields not exceeding 8 inches wide nor 0.75 cubic feet in volume each, mounted directly to the side of the pole. Sunshields shall be attached at least 12 feet above ground level. To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.
- d) **Existing signage:** Radio equipment shall be attached to a pole behind existing signage under the following conditions:
 - i) Radio equipment shall be placed within a shroud that does not exceed the dimensions of the sign in height and width, nor 4 inches in depth, including any required mounting bracket.
 - ii) In no event shall WCF equipment obscure or interfere with the visibility or functioning of the signage.
 - iii) To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.

General standards for all WCFs located on Streetlights in the public right of way

WCF equipment and shrouds

- 1) Antennae shall be the smallest antennae possible to achieve the coverage objective. Except in the case of top-mounted designs, antennae shall not exceed 3 feet from the top of the streetlight pole and the associated “antenna skirt” shall taper to meet the pole above the mast arm. The diameter of the antenna and shroud shall not exceed 15” at their widest.
- 2) All shrouds and equipment shall be painted to match Public Works Department (PWD) standards or the existing pole, as applicable.
- 3) All shrouds and equipment shall be designed without gaps between materials or sky visible between component surfaces.
- 4) Equipment that cannot propagate an adequate signal within the shrouding required by the standard designs shall be attached to a streetlight pole at a height of 2 feet below the light mast or higher. Each instance of such equipment shall not exceed 0.85 cu. ft. nor shall the total volume of such equipment and any shrouding exceed 2.6 cu. ft. per streetlight pole.

Height

EXHIBIT 1

- 5) Except for top-mounted designs, poles and all attachments will not exceed the height of similar surrounding poles by more than 3 feet. For top-mounted designs, poles and all attachments shall not exceed the height of similar surrounding poles by more than 6 feet.
- 6) Replacement poles will conform to PWD style guidelines where the City has adopted standards and will match the pole being replaced where no standards exist. For integrated pole designs, poles shall incorporate decorative elements (e.g. fluting, decorative mast arm and luminaire, etc.) from PWD standards or existing poles, as applicable.

Landscaping

- 7) At the direction of the Urban Forestry division, Applicant shall provide street trees and/or smaller amenity trees that interrupt direct views of WCF equipment where Urban Forestry determines appropriate space exists within 35 feet of the pole.
- 8) Any existing landscaping removed or damaged by installation shall be replaced in kind.

Noise

- 9) Noise shall comply with PAMC Chapter 9.10 and shall be consistent with noise-related Comprehensive Plan goals and policies.
 - a) In residential areas with an average 24-hour noise level (L_{dn}) at or below 60 decibels (dB), noise generated by WCF equipment shall not cause the L_{dn} exceed 60dB or to increase by 5.0 dB or more, even if the resulting L_{dn} would remain below 60 dB.
 - b) In residential areas with an L_{dn} above 60 dB, noise generated by WCF equipment shall not cause the average to increase by 3.0 decibels (dB) or more.

Curb clearances

- 10) If placed below 16' above ground level, attachments shall not be placed closer than 18" to the curb, nor shall they extend over the sidewalk (Caltrans Highway Design Manual Section 309).
- 11) WCF node equipment must be at least 3' from a curb cut.

Miscellaneous

- 12) WCF installations shall not require any changes in the City's existing banner marketing program.
- 13) All cabling shall be routed entirely within the pole or an attached shroud.
- 14) Safety signage shall be the smallest size possible to accomplish its purpose.
- 15) Power disconnects shall be placed in a vault near the base of the pole.
- 16) Except as provided in these standards, no equipment cabinets may be placed at grade.
- 17) Light mast orientation, height, color temperature and other photometric information shall comply with PWD standards.

Pole location

- 18) Nodes shall utilize existing streetlight pole locations. Any new pole locations are prohibited unless approved through PWD/CPAU pole placement application.
- 19) Streetlight nodes at a designated gateway location or along a scenic corridor shall not utilize a top-mounted design.

19)20) WCF nodes shall not be placed in locations within 300 feet of any parcel containing a public school.

Wood Utility Poles

Standard designs for WCFs located on Wood Utility Poles – An applicant proposing to attach to a wood utility pole in the public right of way shall utilize one of the other designs specified herein.

- a) **Underground design:** Radio equipment shall be placed in an underground vault in the pedestrian right of way. The antennae shall be placed in a shroud at the top of a nearby pole.
 - i) Underground vaults shall be the minimum volume necessary to house WCF equipment. Application materials should explain why the proposed dimensions are required. In no event shall vault dimensions exceed 5 feet 8-inches x 8 feet 2-inches x 5 feet 7-inches or 260 cu. ft., excluding space required for ventilation or sump pump equipment.
- b) **Top-mounted design:** All equipment shall be enclosed within a shroud at the top of the pole containing both radio and antenna equipment.
 - i) Top-mounted equipment shrouds shall not exceed 5.5 feet from the top of the pole or bayonet attachment, if one is used, and shall taper to meet the pole above the mast arm. The diameter of the antenna and shroud shall not exceed 15” at their widest.
- c) **Minimal sunshield design:** Radio equipment shall be enclosed within one or two sunshields not exceeding 8 inches wide nor 0.75 cubic feet in volume each, mounted directly to the side of the pole. To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.
- d) **Existing signage:** Radio equipment shall be attached to a pole behind existing signage under the following conditions:
 - i) Radio equipment shall be placed within a shroud that does not exceed the dimensions of the sign in height and width, nor 4 inches in depth, including any required mounting bracket.
 - ii) In no event shall WCF equipment obscure or interfere with the visibility or functioning of the signage.
 - iii) To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.

General standards for all WCFs located on Wood Utility Poles in the public right of way

WCF equipment and shrouds

- 1) Antennae shall be the smallest antennae possible to achieve the coverage objective. Antennae shall not exceed 5.5 feet from the top of the pole or bayonet attachment, if one is used. The diameter of the antenna and shroud shall not exceed 15” at their widest.
- 2) Bayonet attachments and equipment or antennae at the top of the shroud shall be covered by a single integrated shroud and “antenna skirt” that shall meet the pole without any gaps.
- 3) All conduit shall be mounted flush to the pole.
- 4) All shrouds and equipment shall be painted to match PWD standards or the existing pole, as applicable. Paint shall be maintained regularly and shrouds shall be repainted if necessary to match changes in pole color over time.
- 5) All shrouds and equipment shall be designed without gaps between materials or sky visible between component surfaces.
- 6) Equipment that cannot propagate an adequate signal within the shrouding required by the standard designs shall be attached to the top of the pole or on a cross arm or brace protruding from the pole to the minimum extent necessary to comply with safety

EXHIBIT 2

standards including GO95. Such cross arm shall be placed as high on the pole as technically feasible. Each instance of such equipment shall not exceed 0.85 cu. ft. nor shall the total volume of such equipment exceed 2.6 cu. ft. per wood utility pole.

Height

- 7) For wood utility poles carrying power lines, replacement poles and pole-top bayonet attachments shall be the minimum height necessary to provide GO-95 mandated clearance between WCF equipment and power lines.
- 8) For wood utility poles without power lines, any pole top equipment shall not increase the height of the pole by more than six feet.
- 9) In no event shall the total height of a pole or replacement pole, including all equipment exceed 55 feet.
- 10) Replacement poles will conform to all standards adopted by CPAU.

Landscaping

- 11) At the direction of the Urban Forestry division, Applicant shall provide street trees and/or smaller amenity trees that interrupt direct views of WCF equipment where Urban Forestry determines appropriate space exists within 35 feet of the pole.
- 12) Any existing landscaping removed or damaged by installation shall be replaced in kind.

Noise

- 13) Noise shall comply with PAMC Chapter 9.10 and shall be consistent with noise-related Comprehensive Plan goals and policies.
 - a) In residential areas with an average 24-hour noise level (L_{dn}) at or below 60 decibels (dB), noise generated by WCF equipment shall not cause the L_{dn} exceed 60dB or to increase by 5.0 dB or more, even if the resulting L_{dn} would remain below 60 dB.
 - b) In residential areas with an L_{dn} above 60 dB, noise generated by WCF equipment shall not cause the average to increase by 3.0 decibels (dB) or more.

Curb clearances

- 14) If placed below 16' above ground level, attachments shall not be placed closer than 18" to the curb, nor shall they extend over the sidewalk (Caltrans Highway Design Manual Section 309).
- 15) WCF node equipment must be at least 3' from a curb cut.

Miscellaneous

- 16) Safety signage shall be the smallest size possible to accomplish its purpose.
- 17) Power disconnects shall be placed on the wood pole or in a vault near the base of the pole.
- 18) Except as provided in these standards, no equipment cabinets may be placed at grade.
- 19) If applicable, light mast orientation, height, color temperature and other photometric information shall comply with PWD standards.

Pole location

- 20) Nodes shall utilize existing wood utility pole locations. Any new pole locations are prohibited unless approved through PWD/CPAU pole placement application.
- ~~21) Wood utility poles at a designated gateway location or along a scenic corridor shall not utilize a top-mounted design.~~
- ~~22) WCF equipment and antennas shall be located on poles such that they do not fall within the horizontal plane defined by a 45-degree angle extending 50 feet from the center point of upper-story windows, doors, balconies, and other openings. WCF nodes shall utilize only wood utility poles located in the public rights of way.~~
- ~~24)23) WCF nodes shall not be placed in locations within 300 feet of any parcel containing a public school.~~