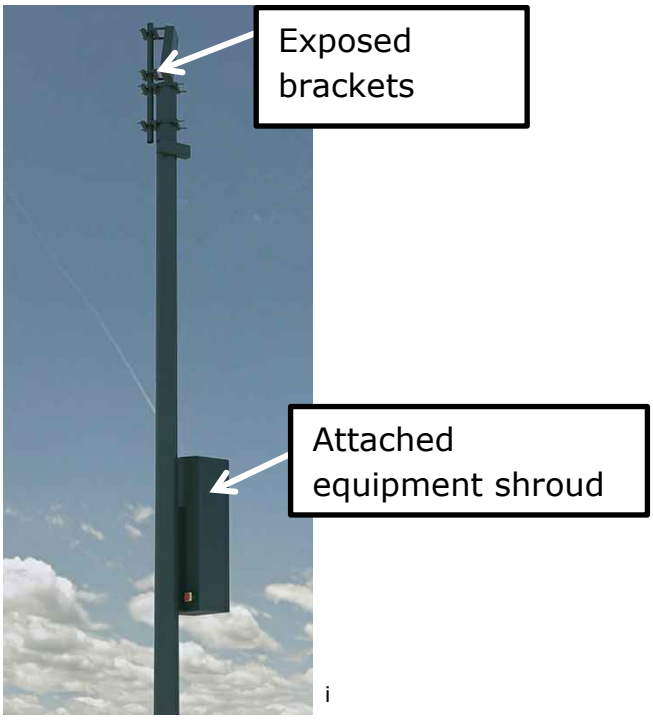
Small Cell Design Criteria Supplement

This criteria supplement is intended to assist applicants and reviewers of small cell facilities to better meet the requirements established in the Littleton City Code (LCC). Advancing technology and adaptable design for siting and fitting small cells into the right-of-way (ROW) poses both opportunities and challenges. This supplement cannot address all application scenarios, but is designed to address the most anticipated design types.

New Free Standing Small Cell

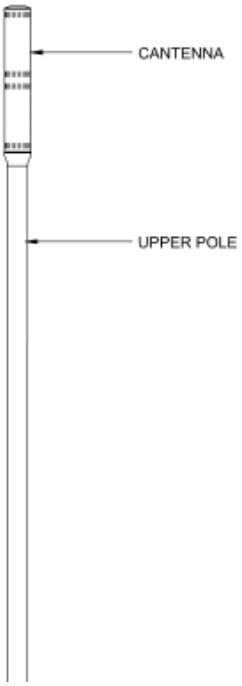
The LCC establishes several criteria by which new free standing small cell poles should be designed. New poles are permitted when attachment to existing infrastructure is not available or feasible. New poles, however, are also an opportunity to better conceal/ camouflage because they are not necessarily subject to the same design constraints for attaching to existing infrastructure. Therefore, equipment shall be internal to all new small cell poles.

Unacceptable Installation Types



i

Accepted Installation Types



ii

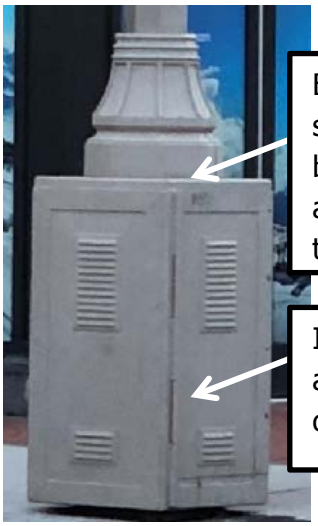
Published 4/15/2019
Last Revised 6/24/2019

New Free Standing Small Cell Pole and Base Size

Applicant must provide examples of existing utility pole and base diameters and attachment styles with the application and a narrative with how their design is consistent with those dimensions and attachment styles within 500’ of the proposed new pole.

Base installations should be consistent with surrounding utility base dimensions and design and should be smooth and straight with limited flat surface where the upper pole is mounted to the base cabinet. The upper pole shall be architecturally compatible with the equipment cabinet.

Examples of Existing Utility Bases



[iii] **Unacceptable**

[iv] **Existing/No Equipment**

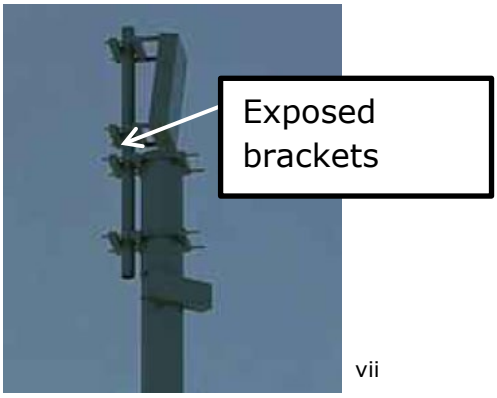
[v] **Existing/No Equipment**

[vi] **Potential design solution**

Published 4/15/2019
Last Revised 6/24/2019

For all pole types

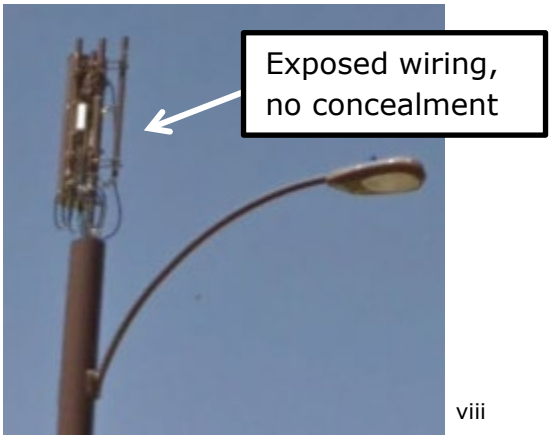
Cantenna must include a tapered or smooth transition between upper pole and cantenna attachment.



vii

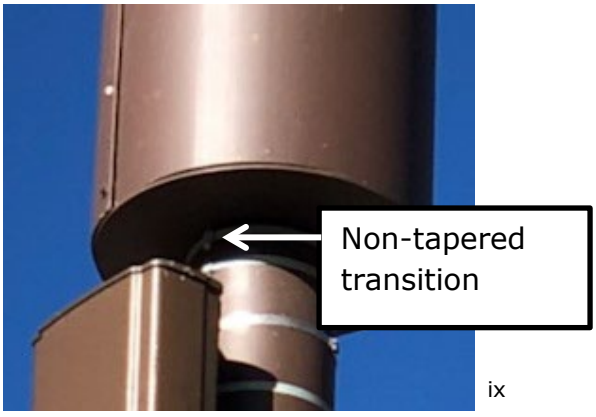
Unacceptable

Image courtesy of Littleton WCF19-0001 Application



viii

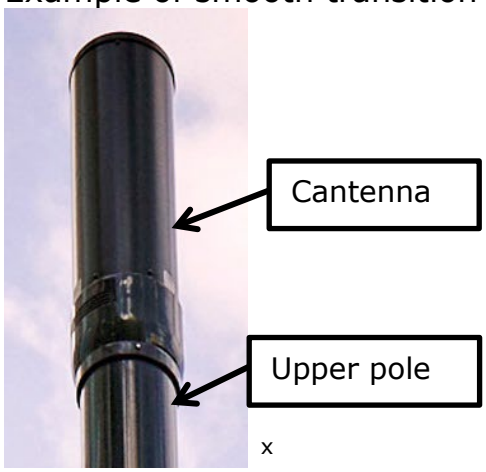
Unacceptable



ix

Unacceptable

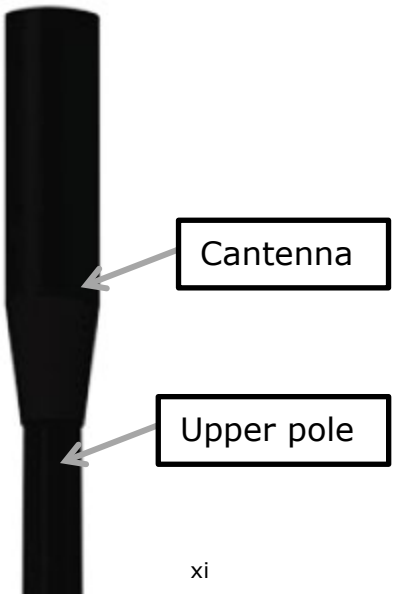
Example of smooth transition



x

Acceptable

Example of tapered transition



xi

Acceptable

Published 4/15/2019
Last Revised 6/24/2019

The cantenna should be sized to inconspicuously transition from the upper pole.

Unacceptable cantenna/upper equipment size

xii

Questionable cantenna size

xiii

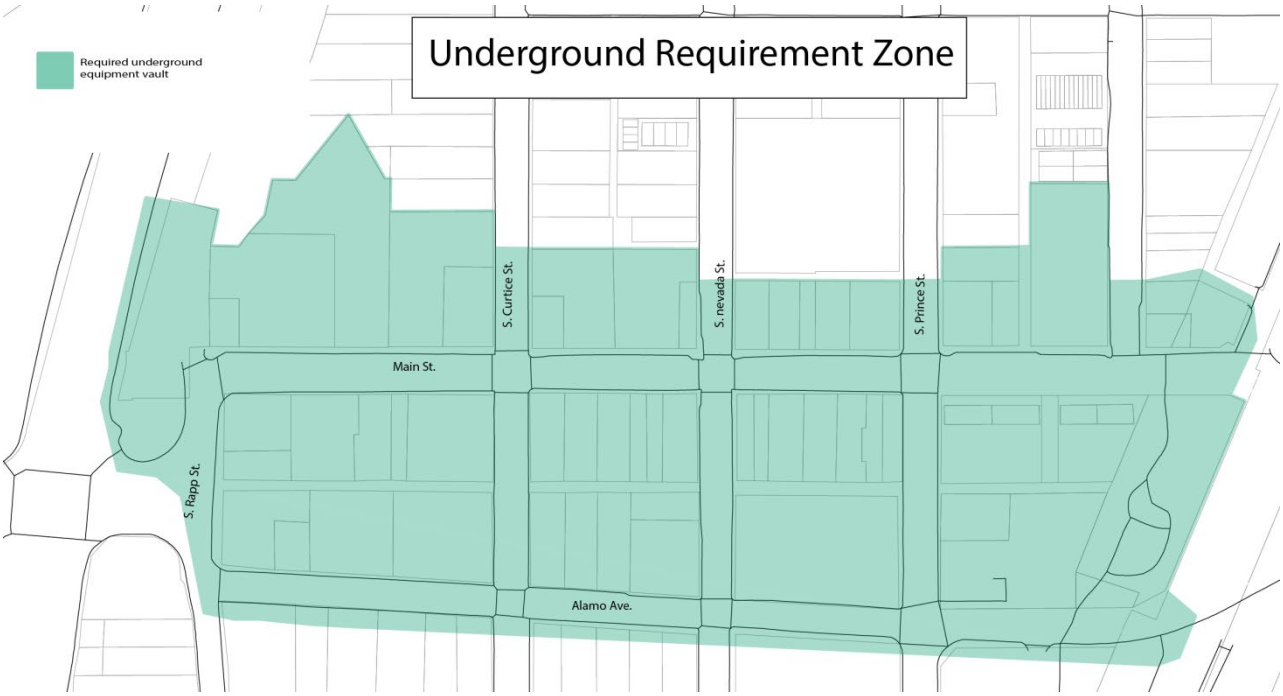
Acceptable cantenna size

xiv

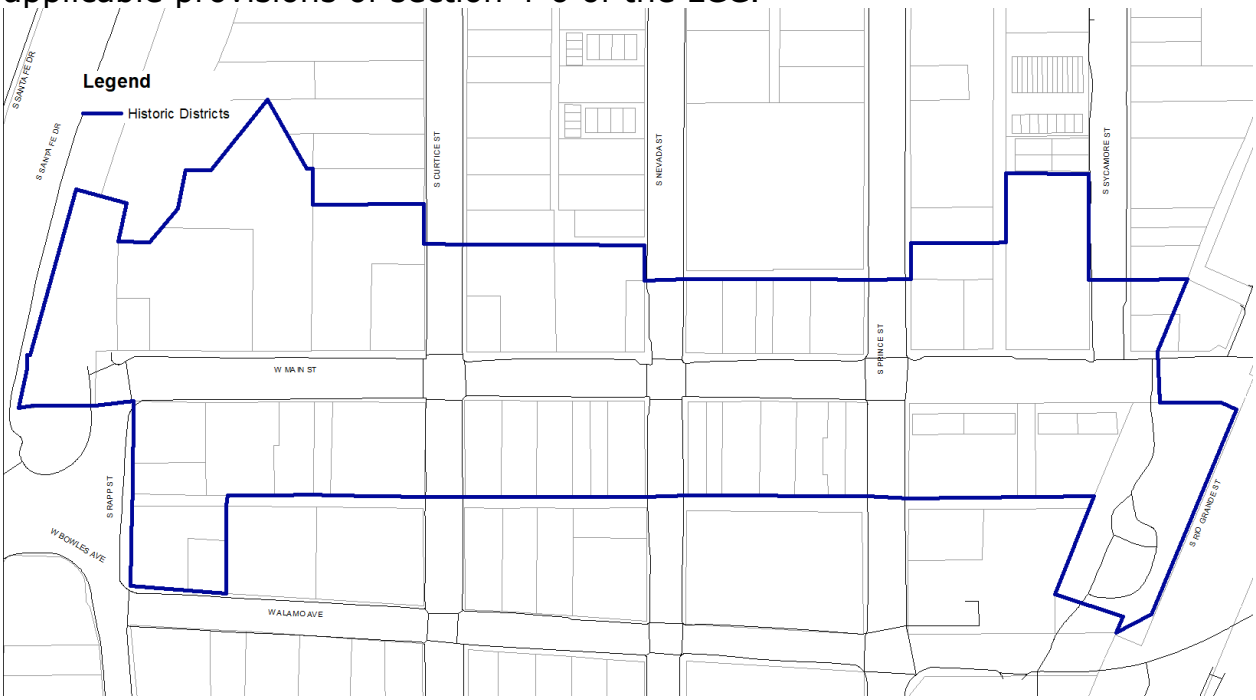
Published 4/15/2019
Last Revised 6/24/2019

Location in Downtown Littleton

Location in downtown Littleton shall be subject to the following provisions. Proposed small cells in the Underground Requirement Zone shall require a flush-to-grade underground equipment vault. All proposed small cells not in the Underground Requirement Zone shall remain subject to all provisions of the LCC including 10-16-4(A)7(b)(7).



Proposed small cells located in a Historic District shall be subject to all applicable provisions of section 4-6 of the LCC.



Published 4/15/2019
Last Revised 6/24/2019

[i] *Image courtesy of Littleton WCF19-0001 Application*
[ii] *Image courtesy of Denver Small Cell Infrastructure Design Guidelines (SCIDG)*
[iii] *Image courtesy of Denver (SCIDG)*
[iv] *Image courtesy of Google Streetview*
[v] *Image courtesy of Google Streetview*
[vi] *Image courtesy of Aero Wireless Group from Denver SCIDG.*
[vii] *Image courtesy of Littleton WCF19-0001 Application*
[viii] *Image courtesy of Google Streetview*
[ix] *Image courtesy of Aero Wireless Group from Denver SCIDG.*
[x] *Image courtesy of Aero Wireless Group from Denver SCIDG.*
[xi] I*mage courtesy of Valmont Structures*
[xii] I*mage courtesy of Valmont Structures*
[xiii] I*mage courtesy of Valmont Structures*
[xiv] I*mage courtesy of Valmont Structures*