



Portland Design Commission
Portland Historic Landmarks Commission

1900 SW Fourth Ave., Suite 5000
Portland, Oregon 97201
Telephone: (503) 823-7300
TDD: (503) 823-6868
FAX: (503) 823-5630
www.portlandonline.com/bds

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Anne Hill
Portland Bureau of Transportation
1120 SW 5th Ave, Suite 1331
Portland OR 97201

Re: Vertical Infrastructure in the Right of Way

Dear Anne,

Thank you to you and your team for the joint Design Commission and Historic Landmarks Commission briefing on January 25, 2021 that summarized the multi-year effort by the Portland Bureau of Transportation (PBOT), the Bureau of Development Services (BDS), the Design Commission, the Historic Landmarks Commission, and the Portland City Council to develop stealth small cell antennas and equipment on existing or new Vertical Infrastructure in the Right of Way.

At the briefing, we covered a variety of issues surrounding small cell infrastructure technology, federal and local policy mandates, industry trends, and PBOT's procurement process for new smart streetlight fixtures for Portland. Highlights were:

1. The mandate to accommodate this new small cell technology is from the Federal Communications Commission (FCC) and is imminent. Therefore, timing for development of design standards for stealth 4G and 5G equipment in the right of way is imperative if Portland is to participate in shaping the final appearance.
2. Early efforts to combine technologies resulted in unacceptable modifications to existing streetlights with externally mounted equipment.
3. PBOT has pursued a design and procurement process aimed at integrating the new small cell technology equipment within streetlight components.
4. This new technology requires a certain spacing to achieve a viable network. Due to the geographic distribution of Portland's current streetlight infrastructure—in which the number and spacing of fixtures varies per block—the rollout of a new combined small cell/streetlight fixture will fill empty locations and also replace existing ornamental fixtures.
5. This rollout will take place over a period of years, resulting in a streetscape that mixes new combination fixtures with existing ornamentals. Compatibility of the two will be addressed with new design standards.
6. Two design options were presented:
 - Option 1A: updated historic ornamental
 - Option 1B: contemporary ornamental

Following the presentation, the two Commissions reached general consensus on the issues outlined below and shown in the attached drawing:

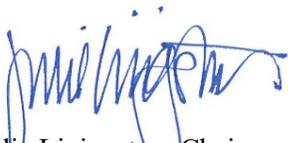
1. Critical design elements include:
 - A twin luminaire fixture mounted at a height that matches that of the existing twin ornamental

- Matching the proposed stealth pole height to the existing catenary version of the twin ornamental
2. Regarding the bulk of the base, pole shaft, and upper pole necessary to enclose equipment:
 - The round section base offers the greatest interior space and accommodates a flush access door best, but both commissions agreed to the simple transition of octagonal pole to round base in Option 1B mated with the panelized base in Option 1A. The door opening and ventilation louvers should be concealed.
 - The octagonal section pole shaft is preferred because it references the historic fluting and tapered shape of the existing twin ornamental and scales down the bulk of the non-tapered stealth pole by reflecting light and shade in varying degrees across the faceted surfaces.
 - The flared upper pole has an access door that prevents it from accommodating support arms for the luminaires. Commissioners agreed this means luminaires, arms and the (widened) attachment band need to remain at the proposed locations even though this isn't an aesthetically ideal design. The impact can be offset by painting the portion of the pole above the luminaire mounting band in silver, as done on the Portland Transit Mall. The luminaire housing, arms, banding, pole, and base can be painted per PBOT's adopted colors for different districts and corridors in the Central City.
 3. For the luminaires, commission members saw the need for further review:
 - If the historic arms and acorn luminaires of Option 1A become the final preferred approach, painted finishes should be monochromatic without contrasting gold trim.
 - If the contemporary arms and luminaires of Option 1B become the final preferred approach, alternative luminaires should be selected that are sympathetic in shape to the upward flaring acorn but larger and compositionally proportional to the bulk of the pole and base.
 - The compatibility of alternative configurations for the arms—angled vs. curving, tapered vs. not tapered, etc.—should be explored.

Both Commissions appreciate being kept involved as implementation moves forward. Design Commissioner Brian McCarter and Landmarks Commissioner Maya Foty will continue to participate in PBOT stakeholder meetings and share updates with their respective Commissions.

Thank you for giving us the opportunity to help design a future stealth small-cell pole for our city.

Sincerely,



Julie Livingston, Chair
on behalf of the Portland Design Commission



Kristen Minor, Chair
on behalf of the Portland Historic Landmarks Commission

CC: Christine Leone and Alex Bejarano, PBOT
Bureau of Development Services Design Review staff
Portland Design Commission
Portland Historic Landmarks Commission

Ornamental Comparison

Commission Comments

Estimated Usable Cabinet Volume:
 Available Cellular Equipment Volume: 7.5 Cubic Feet
 Available City or Future Equipment Volume: 4 Cubic Feet
 Maximum Equipment Width: 15"

Hybrid 1A

4G Cantenna

5G Antennas

Provide a silver color for the upper pole per the Portland Transit Mall Silver

Integrated Equipment Cabinet

Provide a single monolithic color without gold trim

Pedestrian Signal (optional)

Push Button (optional)

Base Cabinet

Use the simpler transition from octagonal pole to base (Option 1B)

Use the panelized base with fluting but extend around the entire base including the door; integrate ventilation grilles into recesses

Hybrid 1B

Further explore alternative arm form and an alternative contemporary fixture with similar form but scaled up to proportion of the bulky pole