Field Guide to Third-Party Attachments on Poles

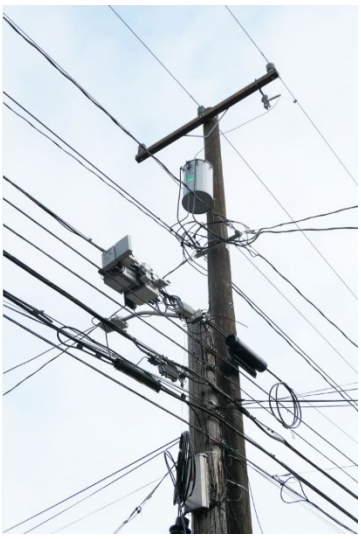

Table of Contents

1. Scope

This work practice identifies a variety of third-party material and equipment that are directly attached, or strand-mounted, to power, streetlight, and communications poles commonly found in Seattle.

Explanations of the material and equipment are outside the scope of this practice.

Details of the communication and supply spaces are outside the scope of this practice. See SCL 0093.04; “Attachments on Wood Poles.”

Electric power material and equipment, such as distribution-class transformers, is outside the scope of this practice. See SCL construction and material standards.

2. Application

This work practice is directed at any reader interested in identifying the material and equipment that is directly attached or strand-mounted to Seattle City Light power and streetlight poles.

Emphasis has been added to highlight devices that emit radio frequency (RF) radiation that may be hazardous to utility workers in close proximity of such devices.

This work practice can be used in conjunction with SCL 0095.04; “Working in the Vicinity of Wireless Communications Antennas,” to help identify radio frequency (RF) emitting devices.

This work practice can be used to facilitate better coordination with third-party renter/operator organizations, such as communication companies, cable TV companies, neighboring electric utilities, and city and state entities, to name just a few. See SCL 0093.12; “Pole Attachments, Identification and Tagging,” for the key to three-digit organization codes.

3. Introduction

This work practice was developed to increase awareness and the general understanding of the variety of material and equipment that is directly attached or strand-mounted to Seattle City Light power and streetlight poles.

For most devices attached to one of our poles, a reader should be able to match it to a figure in Section 4 and consequently learn what it is.

4. Images

The following subsections include representative photos of materials and equipment grouped according to type.

On the left-hand side of each page, save a few exceptions, will be a photo of the entire pole to provide context. On the right-hand side are close-up photos of the individual items with captions to identify each.

Antennas will be marked with a ★.

See SCL 0095.04 for how to safely work in the vicinity of wireless communications antennas.

4.1 Small Wireless Facilities (SWFs) (including power supply enclosures)

Figure 4.1a. Pole view

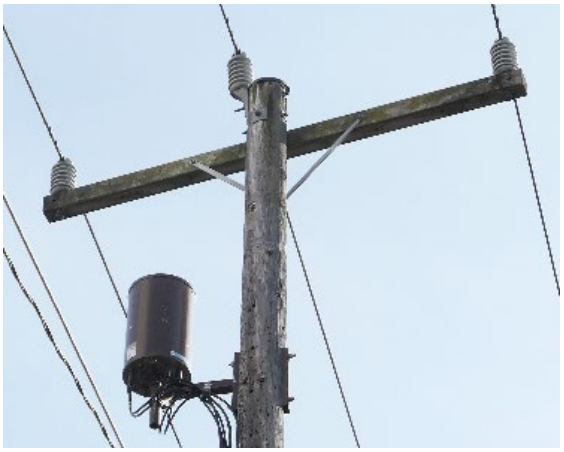

Figure 4.1b. ★ SWF antenna

Figure 4.1c. Power supply enclosure and service disconnect switch

Figure 4.1d. Pole view

Figure 4.1e. ★ SWF antenna

Figure 4.1f. Service disconnect switch enclosure for SWF, site still under construction

Figure 4.1g. Pole view

Figure 4.1h.★SWF antenna

Figure 4.1i. Power supply enclosure and service disconnect switch

Figure 4.1k. ★SWF antenna

Figure 4.1j. Pole view

Figure 4.1l. Power supply enclosure and service disconnect switch

Figure 4.1m. Pole view

Figure 4.1n.★ SWF antenna

Figure 4.1o. Power supply enclosure and service disconnect switch

Figure 4.1p. Power supply enclosure, no SWF on pole, location of service disconnect switch, Crown Castle

Figure 4.1q. Power supply enclosure, no SWF on pole, location of service disconnect switch

Figure 4.1r. Power supply enclosure and service disconnect switch

Figure 4.1s. Power supply enclosure and service disconnect switch

Figure 4.1t. Pole View

Figure 4.1u. ★SWF below streetlight bracket arm, co-located, antenna

Figure 4.1v. SWF below streetlight bracket arm, co-located, enclosure

Figure 4.1w. Pole view

Figure 4.1x.★SWF, 5G, antenna

Figure 4.1y. SWF, 5G, service disconnect

4.2 Strand Mount Antennas (all except Wi-Fi Hotspot

Figure 4.2a. Pole view

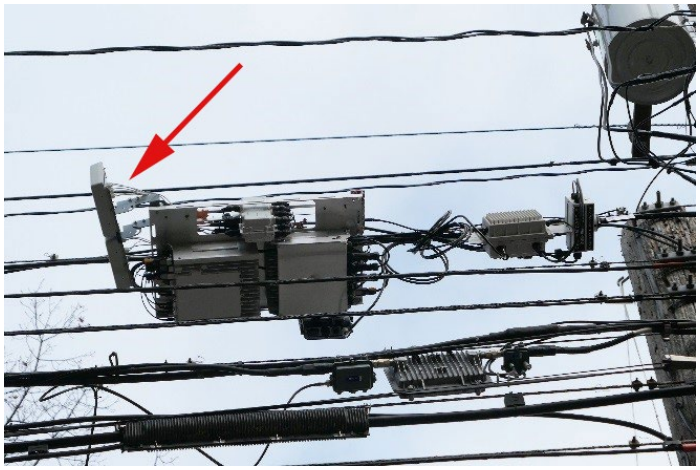

Figure 4.2b. ★Strand-mount antenna, Crown Castle

4.3 Strand-Mount Antennas, Wi-Fi Hotspot

Figure 4.3a. Strand-mount antenna, Wi-Fi hotspot (at right)

Figure 4.3b. ★ Strand-mount antenna, Wi-Fi hotspot, Comcast

Figure 4.3c. ★ Strand-mount antenna, Wi-Fi hotspot, Comcast, alternate view

4.4 Macrocells

Figure 4.4a. Pole view

Figure 4.4b.★Macrocell antenna on non-SCL monopole

Figure 4.4c. Pole view

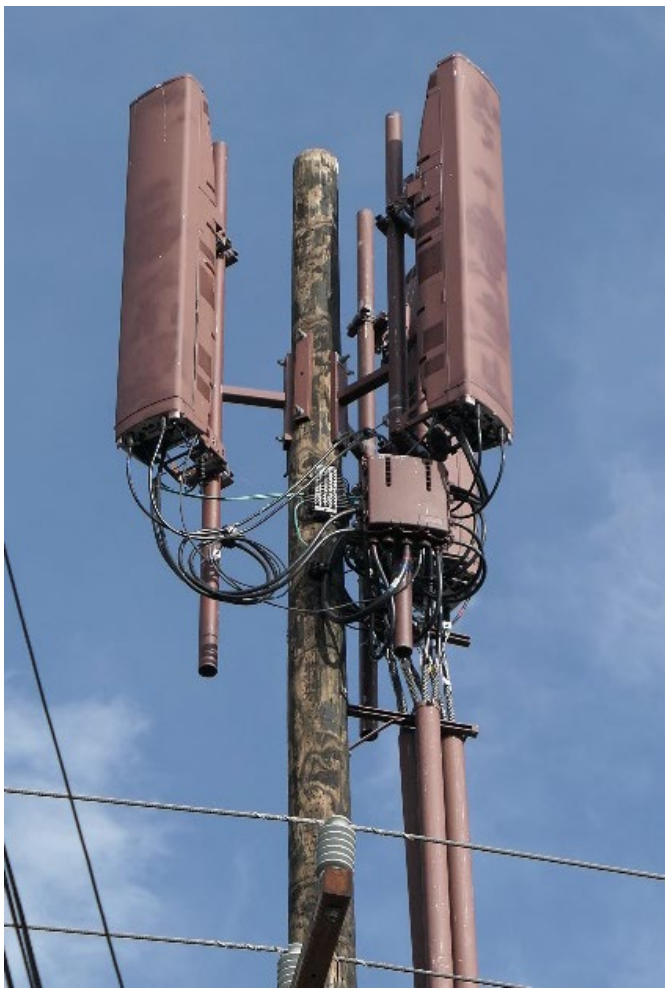

Figure 4.4d. ★ Macrocell antenna, T-Mobile

Figure 4.4e. Communications facility supporting macrocell

Figure 4.4f. Pole view

Figure 4.4g. ★Macrocell antenna

Figure 4.4h. Amplifiers

Figure 4.4i. Communications facility supporting macrocell

4.5 AMI Repeaters

Figure 4.5a. Pole view

Figure 4.5b. ★AMI repeater (router), SCL

Figure 4.5c. ★Metricom device (obsolete)

Figure 4.5d. Pole view

Figure 4.5e. ★AMI repeater (router), PSE

4.6 AMR

Figure 4.6a. Pole view

Figure 4.6b.★AMR repeater (router), PSE

Figure 4.6c. Pole view

Figure 4.6d. ★AMR microcell controller with Yagi antenna, PSE

Figure 4.6e. Pole view

Figure 4.6f. ★AMR microcell controller with Yagi antenna, PSE

4.7 AMI Collectors

Figure 4.7a. Pole view

Figure 4.7b. ★AMI collector antenna, SCL

Figure 4.7c. Communications enclosure for AMI collector

4.8 CenturyLink (copper and fiber telephone cable)

Figure 4.8a. Pole view

Figure 4.8b. Serving terminal (silver box) and splice case (center right) for telephone copper aerial cable

Figure 4.8c. Serving terminal (silver box) and splice case (center right) for telephone copper aerial cable

Figure 4.8d. Serving terminal for telephone copper aerial cable, alternate style

Figure 4.8e. Pole view

Figure 4.8f. Fiber optic cable storage bracket (a.k.a. slack halo or snowshoe)

Figure 4.8g. Pole view

Figure 4.8h. Fiber optic cable splice

Figure 4.8i. Serving terminal for telephone copper aerial cable

Figure 4.8j. Pole View

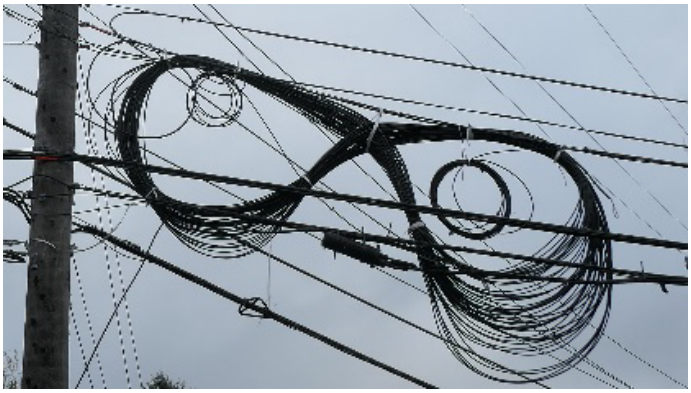

Figure 4.8k. Fiber optic cable slack loop (aka Figure 8 storage) waiting to be put in halo

Figure 4.8l. Fiber Optic Cable Splice

4.9 Cable Television (CATV)

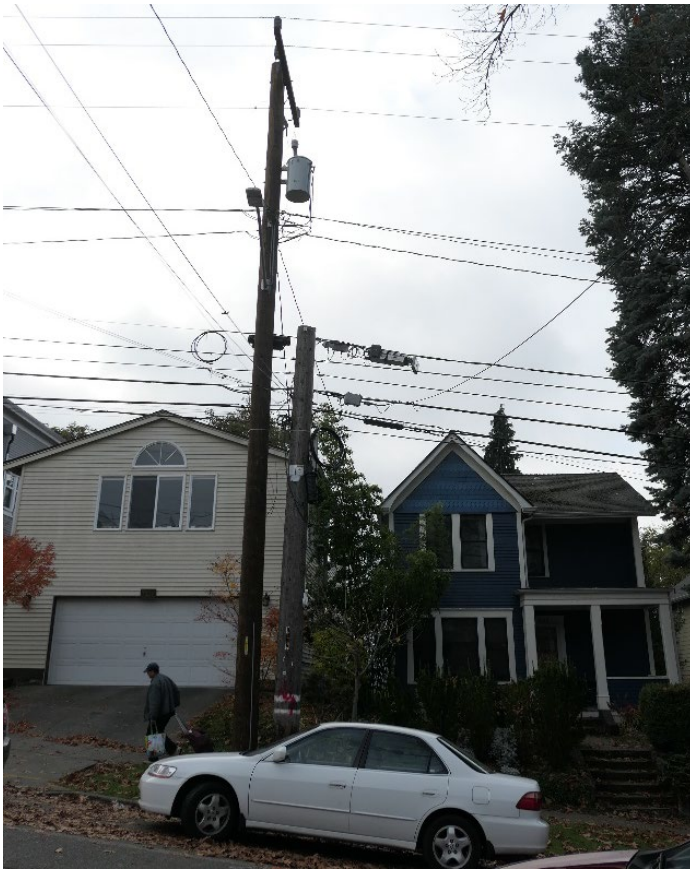

Figure 4.9a. Pole view

Figure 4.9b. CATV line amplifier, with coupler, WaveCom

Figure 4.9c. Pole view

Figure 4.9d. Node amplifier, Comcast

Figure 4.9e. Pole view

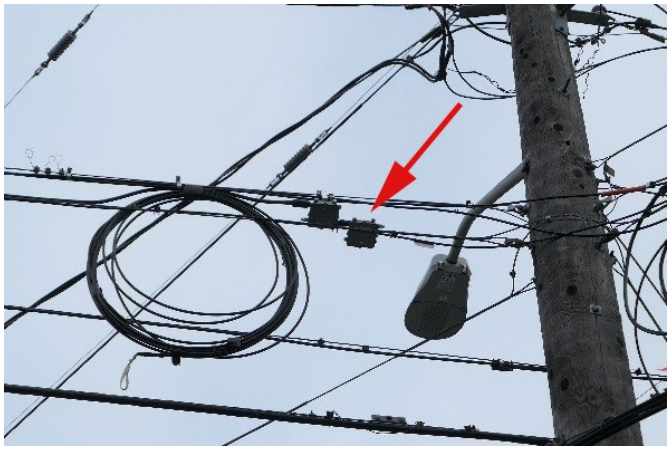

Figure 4.9f. CATV cable coupler (non-active), Comcast

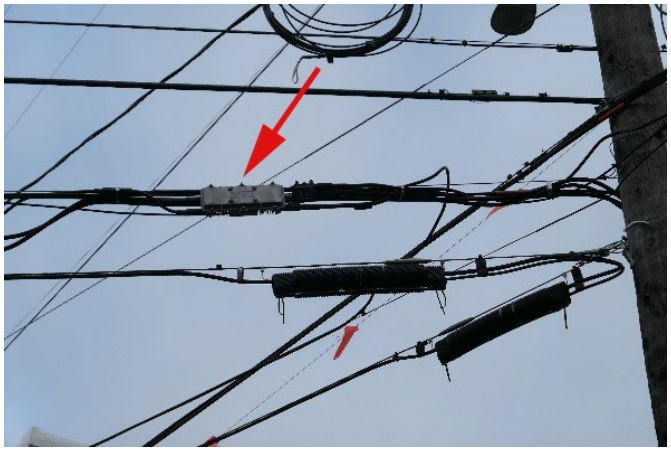

Figure 4.9g. CATV line amplifier with coupler, WaveCom

4.10 Lighting

Figure 4.10a. Pole view

Figure 4.10b. Cluster-mount, high-pressure sodium (HPS) floodlights

Figure 4.10c. Cluster-mount, LED floodlights; see SCL 1713.12

4.11 Video Cameras

Figure 4.11a. Pole view

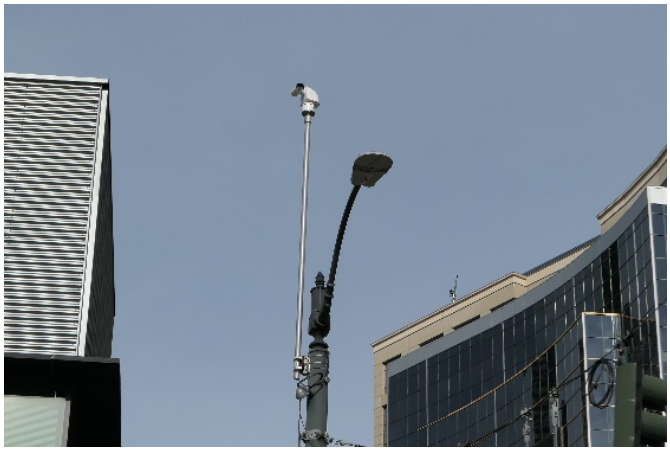

Figure 4.11b. Video camera

Figure 4.11c. Video camera

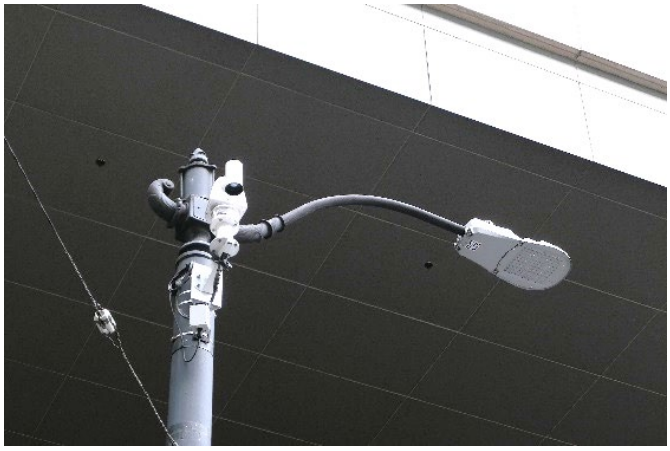

Figure 4.11d. Video camera

4.12 Other

Figure 4.12a. Pole view

Figure 4.12b. SDOT device (Intelligent Traffic System (ITS) relay)

Figure 4.12c.

Figure 4.12d. Unknown device located at 3rd Ave. and Madison St.

Figure 4.12e. Traffic signal pre-emption sensor

Figure 4.12f. Pole view

Figure 4.12g. Spare low-voltage fuse storage container (obsolete), SCL

Figure 4.12h. Pole view

Figure 4.12i. ★Yagi antenna for King County Metro Transit

Figure 4.12j. Communications enclosure for King County Metro Transit Yagi antenna

Figure 4.12k. Bird

Figure 4.12l. Bird

5. References

SCL Construction Standard 0095.04; "Working in the Vicinity of Wireless Communications Antennas"

SCL Construction Standard 0093.12; "Pole Attachments, Identification and Tagging"

SCL Construction Standard 1713.12; "Floodlight Installation, Single and Cluster-Mount on Wood Poles"

6. Sources

Neuansourinh, Ponet; SCL Standards Engineer and subject matter expert for 0093.07

Shipek, John; SCL Standards Supervisor, originator, and subject matter expert for 0093.07