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## Clearances Between SCL Overhead Distribution Assets and Non-SCL Structures, Except Bridges

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### 1. Scope

This standard covers the clearance requirements between Seattle City Light (SCL) overhead distribution assets to non-SCL structures, except bridges.

SCL overhead distribution assets include (but are not limited to):

- Conductors (wires, cables)
- Equipment carried on pole

Non-SCL structures include (but are not limited to):

- Buildings
- Signs and billboards
- Lighting and signal supports
- Flagpoles and banners
- Tanks
- Pedestrian walkways and other installations not classified as bridges

For clearance between SCL overhead distribution assets to:

- Grounds, highways, and water surfaces, refer to SCL 0100.02
- Bridges, refer to SCL 0100.05
- Trees and vegetation, refer to SCL 0114.07

For clearances of secondary service drops, refer to SCL 0130.30.

For clearances between SCL underground assets and non-SCL structures and objects, see SCL 0214.00.

For working clearances refer to the Washington Administrative Code (WAC):

- WAC 296-155-428 and WAC 296-24-960, for qualified and unqualified workers.
- WAC 296-155-53408, for cranes working near power lines.

Transmission line clearance is outside the scope of this standard. Consult with an SCL transmission engineer for clearances to transmission lines. These clearances are site specific.

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### 2. Application

This standard is for SCL personnel, consultants, and contractors when designing and/or constructing overhead distribution facilities adjacent to buildings, signs, and other installations as identified in this standard.

Other utilities and contractors should also follow these requirements when installing their facilities near any SCL facility.

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### 3. Definitions

**Clearance:** The clear distance between two objects measured from surface to surface.

**Guarded:** Covered, fenced, enclosed, or otherwise protected by means of suitable covers or casings, barrier rails or screens, mats, or platforms, designed to limit the likelihood, under normal conditions, of dangerous approach or accidental contact by persons or objects. Note: Wires that are insulated but not otherwise protected are not normally considered to be guarded.

**Secondary Multiplex:** Secondary conductors of voltages of 0 – 750V meeting National Electrical Safety Code (NESC) Rule 230C3. Typically, these are triplex and quadruplex conductors spanning between poles. This does not include the service drops.

**Readily Accessible:** Any structure or platform that can be casually accessed by a person on foot who neither exerts extraordinary physical effort nor employs special tools or device to gain entry.

**Trucks:** Any vehicle exceeding 8-ft in height.

**Working Clearance:** The required amount of unobstructed space between a worker and an object. This clearance may be different for qualified electrical personnel and non-qualified personnel. Consult with State Code.

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### 4. Requirements

The clearances contained within this standard are intended to be not less than those required by the NESC and WAC. Where a conflict exists, the most stringent has been adopted.

Any situation that is not specifically addressed in this standard will require further investigation of the NESC, WAC or other applicable codes.

Horizontal and vertical clearances between conductors, wires, and cables adjacent but not attached to buildings, signs, billboards, lighting and signal supports, and other installations shall meet the requirements of Table 4.

**Table 4. Clearances of Conductors, Wires, and Cables to Buildings, Signs, Billboards, and Other Installations Except Bridges (Reference: NESC, Table 234-1)**

|   | Neutral<br>Conductor,<br>(NESC 230E1)<br>Insulated<br>Communication<br>Cables and<br>Messenger<br>(ft) | Unguarded<br>rigid live<br>parts 0 to<br>750 V<br>(ft) | Secondary<br>Multiplex<br>cables<br>(ft) | Unguarded<br>rigid live<br>parts 750<br>V to 22 kV<br>(ft) <sup>2</sup> | SCL 26 kV<br>Phase<br>Conductors<br>(ft) <sup>3</sup> |
|---|--|--|--|---|---|
| <b>Clearance with Conductor at Rest</b>   |  |  |  |   |   |
| <b>Clearance of Buildings</b>   |  |  |  |   |   |
| <b>Horizontal</b>   |  |  |  |   |   |
| To walls, projection, and guarded windows   | 4.5  | 5.0  | 5.0                                      | 7.0   | 14.0  |
| To unguarded windows  | 4.5  | 5.0  | 5.0                                      | 7.0   | 14.0  |
| To balconies and area readily accessible to persons   | 4.5  | 5.0  | 5.0                                      | 7.0   | 14.0  |
| <b>Vertical</b>   |  |  |  |   |   |
| Over or under roofs or projections not readily accessible to persons  | 3.0  | 10.0   | 3.5                                      | 12.0  | 14.0  |
| Over or under roofs or projections readily accessible to persons  | 9.5  | 10.0   | 10.0                                     | 14.0  | 14.5  |
| Over roofs, ramps, docks accessible to vehicles but not subject to truck traffic  | 9.5  | 10.0   | 10.0                                     | 14.0  | 14.5  |
| Over roofs, ramps, decks, and loading docks accessible to truck traffic   | 15.5   | 16.0   | 16.0                                     | 18.0  | 18.5  |
| <b>Clearance of signs, chimneys, billboards, radio and television antennas, flagpoles and flags, banners, tanks, and other installations not classified as buildings or bridges</b> |  |  |  |   |   |
| <b>Horizontal</b>   |  |  |  |   |   |
| To portions that are readily accessible to persons  | 4.5  | 5.0  | 5.0                                      | 7.0   | 14.0  |
| To portions that are not readily accessible to persons  | 3.0  | 5.0  | 3.5                                      | 7.0   | 14.0  |
| <b>Vertical</b>   |  |  |  |   |   |
| Over or under catwalks and other surfaces upon which personnel walk   | 9.5  | 10.0   | 10.0                                     | 14.0  | 14.5  |
| Over or under other portions of such installations  | 3.0  | 5.5  | 3.5                                      | 7.5   | 14.0  |
| <b>Streetlights, traffic signal support, supporting structure of a different line</b>   |  |  |  |   |   |
| <b>Horizontal</b>   |  |  |  |   |   |
| Clearance from lighting support, traffic signal support, supporting structure of a different line   | 3.0  | -  | 3.0                                      | -   | 10.0  |
| <b>Vertical</b>   |  |  |  |   |   |
| From lighting support, traffic signal support, supporting structure of a different line and intermediate poles in skip span construction  | 2.0  | -  | 2.0                                      | -   | 4.5 <sup>1</sup>                                      |

Notes:

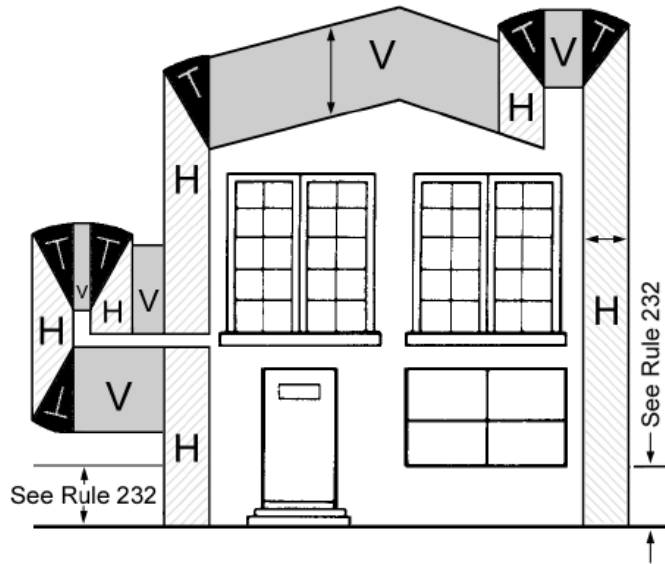
<sup>1</sup> Vertical Clearance may be reduced by 2 ft if the structure is owned and operated by SCL.

<sup>2</sup> WAC 296-46B-450 requires 8 ft minimum distance clearance between buildings and structures of combustible construction and oil filled transformers.

<sup>3</sup> Seattle City Light policy is that the clearance shall be 10 ft (WAC 296-155-428) plus 4 ft for maintenance and construction of building surfaces. See SCL 0100.04.

Clearances at the transition between horizontal and vertical, such as the corners of buildings and signs, are calculated by an arc drawn tangent to the vertical clearance line and intersecting the horizontal clearance line. Any conductor located outside this arc meets clearance requirements. For depiction of transitions between horizontal and vertical see Figure 4a and Figure 4b.

**Figure 4a. Transitional Clearances for Buildings (Reference: NESC 234 Fig. 234-1)**



**Legend**

regions where  
conductors are  
prohibited

controlling  
clearance

control criteria

H 

Horizontal

With wire, conductor, or cable displaced from the rest by a six-pound-per-square-foot wind force at final sag at 60° F.

V 

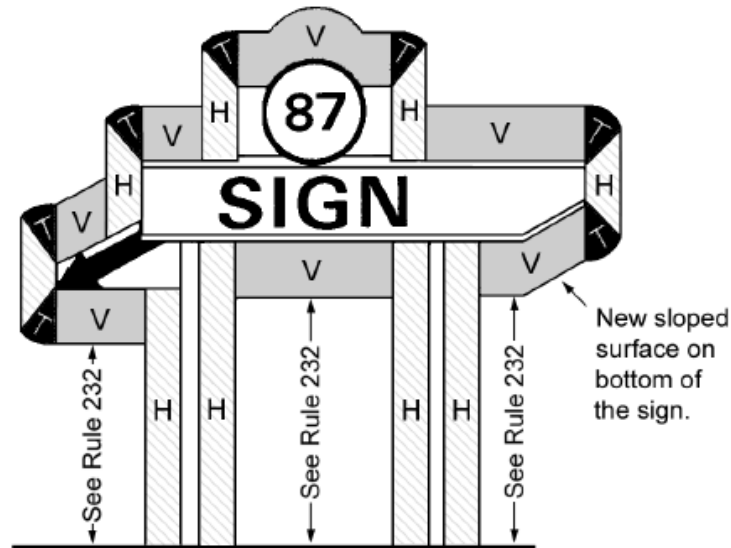
Vertical

With final unloaded sag in the wire, conductor, or cable.

T 

Transitional =  
Vertical (Arc)

Figure 4b. Transitional Clearances for Other Structures (Reference: NESC 234 Fig. 234-1)



## 5. References

**SCL Construction Standard 0100.02**; Clearances Between SCL Overhead Distribution Assets and Ground Surfaces

**SCL Construction Standard 0100.04**; Clearance Between 26 kV Overhead Distribution Conductors and Buildings

**SCL Construction Standard 0100.05**; Clearances Between SCL Overhead Distribution Assets and Bridges

**SCL Construction Standard 0114.07**; Distribution System Vegetation Management, Overhead, Clearances and Methods

**SCL Construction Standard 0130.30**; Secondary Service Drops

**SCL Construction Standard 0214.00**; Clearances Between SCL Underground Assets and Non-SCL Structures and Objects

**Washington Administrative Code (WAC) 296-155-428**; "General requirements"

**Washington Administrative Code (WAC) 296-24-960**; "Working on or near exposed energized parts"

**Washington Administrative Code (WAC) 296-155-53408**; "Power line safety"

## 6. Sources

**Lu, Curtis**; SCL Standards Engineer and Subject Matter Expert for 0100.03

**National Electrical Safety Code (NESC); C2-2023 Edition**; Institute of Electrical and Electronics Engineers (IEEE) Inc., New York, NY, 2011

**Neuansourinh, Ponet**; SCL Standards Engineer and Originator of 0100.03

**Occupational Safety and Health Administration (OSHA) 3433**; "Cranes and Derricks in Construction"

**Washington Administrative Code (WAC) 296-45-045;** "NESC Applicable"

**Washington Administrative Code (WAC) 296-45-325;** "Working on or near exposed energized parts"

**Washington Administrative Code (WAC) 468-34-110;** "Definition of Terms"

**Washington Administrative Code (WAC) 468-34-290;** "Vertical Clearance"