

## In-Building Vault Lighting and Receptacle Requirements, Looped Radial System



### 1. Scope

This standard outlines the lighting and receptacle requirements for a dry, in-building, vault in the Seattle City Light (SCL) looped radial system. It also includes application notes specific to SCL.

### 2. Application

This standard is directed at personnel who install the light fixtures and receptacles in dry in-building vaults in the SCL Looped Radial system. SCL shall make final connections to power once the light fixtures and receptacles have been installed and wired.

### 3. Requirements

#### 3.1 General

Layout shall be verified with an electrical inspector prior to rough-in.

#### 3.2 Lighting

Surface-mount a plastic lamp holder (Cooper Wiring S1174W) centered on each wall at 8 ft above finished floor. If a wall exceeds 15 ft in length, install lamp holders 10 ft on center. Install a light switch (lighted handle, Leviton 1201-LHW or equal) inside each door at 42 inches above finished floor. Provide 3-way or 4-way switches as necessary. Furnish and install lamps for the fixtures (Satco S39391 LED 5000K or equal, Stock No. 014551). If vault walls are 8 ft tall or less, mount lamp holders on the ceiling, 12 inches away from the wall.

Standard Coordinator  
Brett Hanson

Handwritten signature of Brett Hanson in black ink.

Standards Engineering Supervisor  
Brett Hanson

Handwritten signature of Brett Hanson in black ink.

Division Director  
Bob Risch

Handwritten signature of Bob Risch in black ink.

### 3.3 Receptacle

Surface-mount one duplex NEMA 5-20R receptacle below each lamp holder at 42 inches above finished floor.

The home run receptacle shall be GFCI and wired to protect downstream receptacles.

### 3.4 Wiring

Circuits shall be routed within EMT 1/2-inch conduit (minimum) that is mounted to the surface of the vault walls. Homerun junction boxes shall be installed at 42 inches above the finished floor. All junction boxes shall be 4-inch square steel and furnished with cover plates. Light fixtures shall be connected to one circuit including dedicated hot, neutral, and ground conductors. Receptacles shall be connected to a separate circuit including dedicated hot and neutral conductors.

Lighting and receptacle circuits shall be installed using different colored jackets to distinguish the hot and neutral conductors of each circuit. All conductors shall be #12 THWN, and 3 ft of extra conductor shall be left at the homerun junction boxes for final connection by Seattle City Light.

Seattle City Light crews shall connect to the homeruns via fuses and use #4 THWN conductors if the 120 V source is outside the vault.

Permanent power for the vault lighting and receptacles shall be supplied directly from SCL equipment.

---

## 4. Sources

**SCL Construction Standard U10-6**, "Lighting and Sump Pump Installation for Single Transformer Vaults" (canceled)

**Edwards, Tommy**; SCL Electrical Reviewer and subject matter expert for 0674.06

**Hanson, Brett**; SCL Standards Supervisor and originator of 0674.06