Requirements for Pad Mounted Termination Enclosure Installations

1. Scope

This standard covers the requirements for the installation of a pad mounted termination enclosure. A pad mounted terminal enclosure is an option that may be used when any of the following conditions apply:

- The number of customer secondary cables exceeds the termination positions of the transformer.
- The number of customer secondary cables exceeds the terminating capacity of the 1000 A or 2000 A multiple connectors.
- The pad mounted terminal enclosure reduces the footprint of the secondary termination facility.
- The customer's electrical switchgear is located at a lower elevation than the transformer and may allow for water intrusion.

2. Application

This standard provides direction to Seattle City Light (SCL) engineers, crews, reviewers and customers for the minimum requirements for a pad mounted termination enclosure. These requirements ensure that the enclosure can be used as an approved termination facility.

3. Requirements

The installation of the enclosure, secondary conductors, and any civil work are performed by the customer. SCL will only pull and terminate the utility secondary cable(s) from the transformer.

3.1 Enclosure

The enclosure being installed:

- Shall be UL Listed.
- Shall be NEMA 3R rated.
- Shall have lockable door(s). Doors may also be located on the back of the enclosure.
- Shall be mounted on a 4" to 6" tall concrete pad or pedestal.
- No mullion is allowed between the doors. The doors shall meet up when shut, such that they are lockable with only one utility padlock.
- If the back of the enclosure is removable, the back shall be removable only after gaining access through the front door(s).
- Shall be between 5 feet and 7 feet in height.

3.2 Bus Bars

Bus bars shall be drilled per SCL 0474.08.

If the cable used is 350 kcmil or greater, the bus bars shall all be located at the top of the cabinet and shall run from front to back as shown in Figure 3.2a.

If the cable used is smaller than 350 kcmil, tiered bus bars may be used as shown in Figure 3.2b or they may be located at the top of the cabinet.

Figure 3.2a Bus Bars, Top of Cabinet, Front View

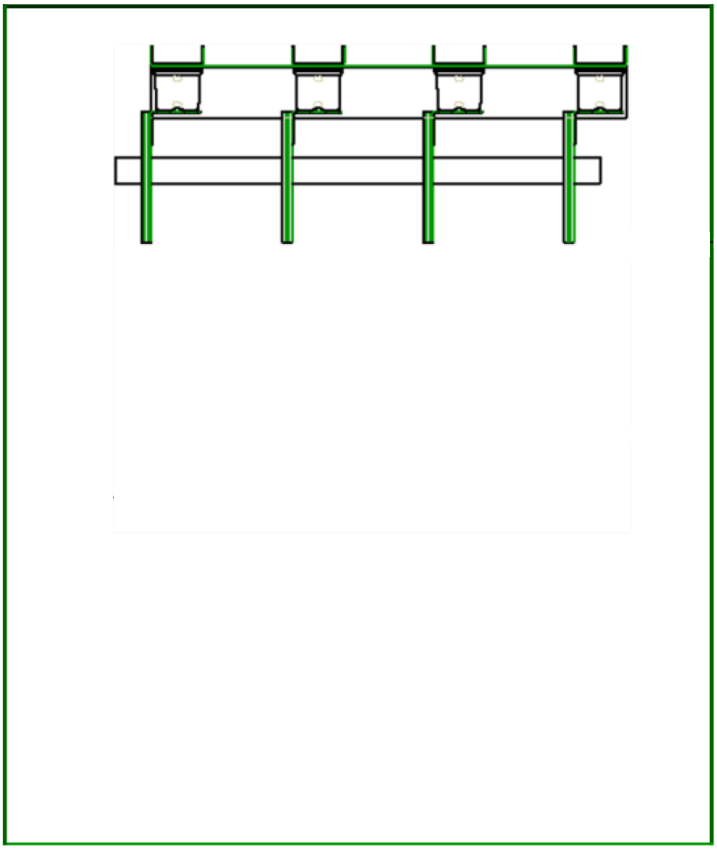
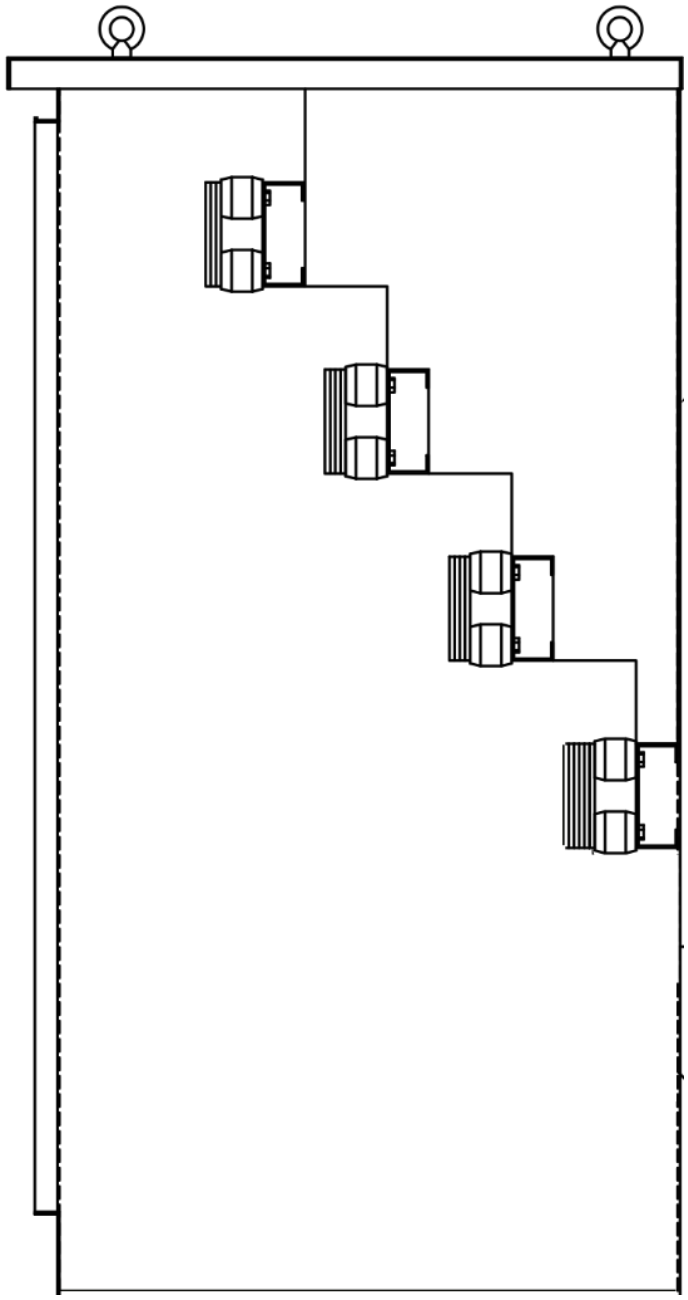


Figure 3.2b. Bus Bars, Tiered, Side View



3.3 Entrance

Conduits entering the enclosure shall be rigid galvanized steel conforming to SCL 7050.05. The conduits shall extend no more than 3" above the concrete pad.

Customer cables shall proceed directly from the entrance conduit to the bus bars with shortest distance such that no excessive slack is stored within the cabinet.

Conduits entering the enclosure shall be arranged as shown in Figure 3.3a and 3.3b.

Figure 3.3a. Top of Cabinet Bus Bar Conduit Arrangement

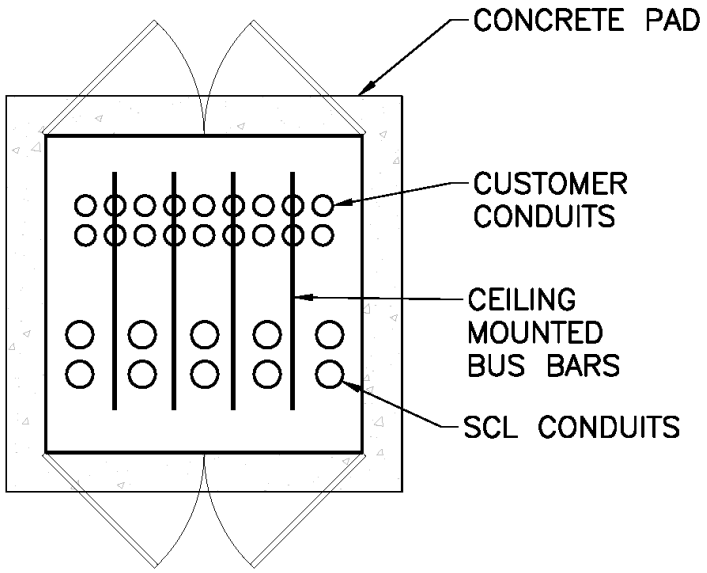
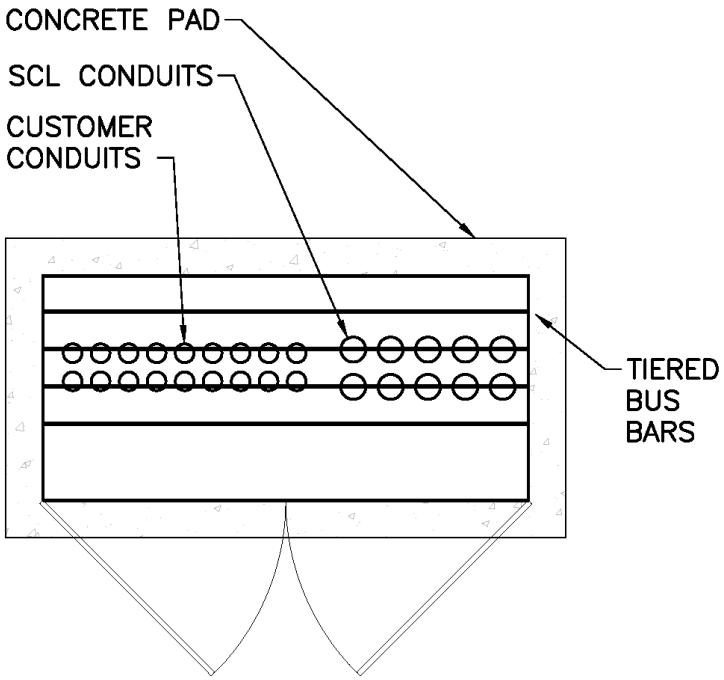


Figure 3.3b. Tiered Bus Bar Conduit Arrangement



3.4 Clearances

The required working clearance is 10 feet in front of doors or accessible panels, and 3 feet on the other sides. All working clearance areas shall be level and free from obstruction.

3.5 Access

The enclosure shall be installed in a location free from obstruction so that it is accessible by truck.

3.6 Protection

Protective devices such as bollards or curbs shall be installed when the enclosure is located near vehicular traffic such as a parking lot, loading dock or driveway. The protective devices shall be installed in a location that will protect the enclosure while still meeting the required clearances and allowing for truck access.

4. References

SCL Construction Standard 0474.08; "Looped Radial and Network Dry Vault Service Entrance Bus Duct for Underground Primary Service"

SCL Material Standard 7050.05; "Zinc-Coated Steel Conduit and Fittings"

5. Sources

Lu, Curtis; SCL Standards Engineer and originator of 0230.03 (curtis.lu@seattle.gov)

Lin, Chung-l; SCL Electrical Power Systems Engineer and subject matter expert for 0230.03 (chung-i.lin@seattle.gov)