

Meter Height, Dedicated Equipment Space, Working Space, and Clearances, Equipment Rooms



1. Scope

This standard covers Seattle City Light (SCL) meter mounting configurations, height, working space, and clearance requirements for meter installations in equipment rooms.

Requirements for totalizing meters are outside the scope of this standard.

Requirements for meters installed outdoors (exterior-mounted) are outside the scope of this standard. See SCL 1554.33.

2. Application

This standard is for SCL personnel, customers, and installers involved with planning, installing, inspecting, reading, testing, and maintaining electric meters in equipment rooms.

3. Definitions

Back wall: The wall onto which a meter enclosure is mounted

Clearance: A specified minimum distance between two objects to assure adequate space for safety, security, or access

Dedicated equipment space: The space required by the NEC to be dedicated to the electrical installation. See Section 4.2 for specific requirements.

Multi-pack: Two or more meters in a single enclosure

Side wall: A wall that is perpendicular to the back wall

Standing surface: The surface defined within the working space upon which a worker will stand to perform work

Working space: The space (volume) defined in this standard in which meter installation and maintenance will take place and applies to the protection of the worker.

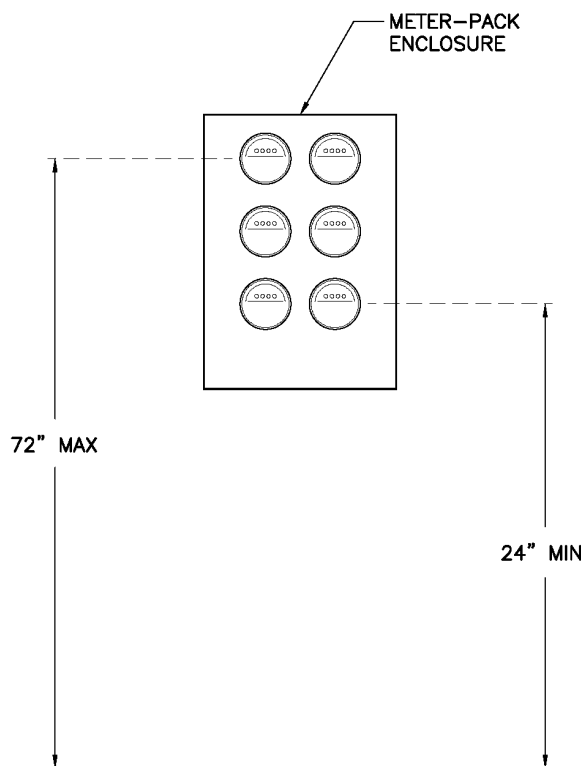
4. Requirements

All installations shall meet or exceed all applicable requirements of the latest revision of the National Electrical Code as well as this standard. In case of conflict, the most stringent requirement will prevail.

4.1 Meter Height

Meter height is the distance measured from the center of the meter face to the standing surface (floor).

Figure 4.1. Meter Height Requirements



4.2 Dedicated Equipment Space

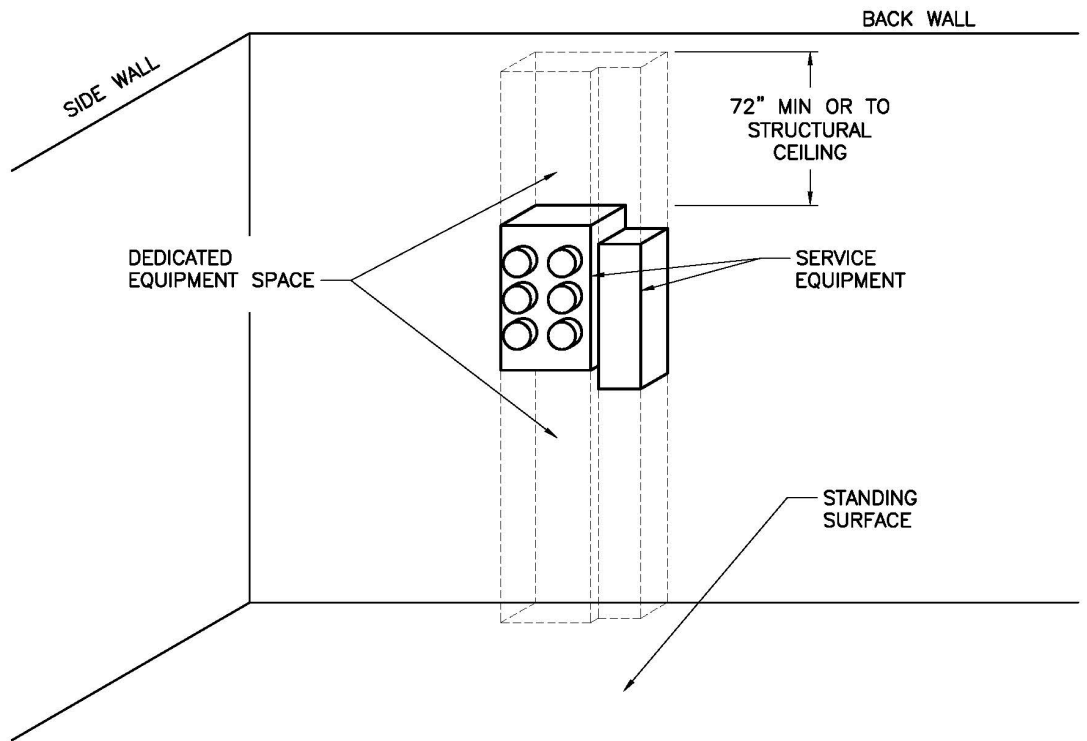
The dedicated equipment space is the space required by the NEC to be dedicated to the electrical installation.

Per the NEC, this space is equal to the width and depth of the equipment associated with the electrical installation and extending from the floor to a height of 72 in above the equipment, or to the structural ceiling, whichever is lower. See Figure 4.2.

Items allowed in this space include fittings, devices, appliances, luminaires, apparatus, machinery, and the like used as a part of or in connection with, an electrical installation.

Items not allowed in this space include any piping, ducts, leak protection apparatus, or other equipment foreign to the electrical installation.

Figure 4.2. Dedicated Equipment Space



4.3 Working Space

An adequate working space is required for safety of personnel who install, read, test, and maintain meters.

A clear and unobstructed working space shall be provided and maintained in front of and to either side of each meter installation. See figures 4.3a–4.3d.

Horizontal working space dimensions shall be measured from the centerline of the farthest right-hand side meter for the right side, and from the centerline of the farthest left-hand-side meter for the left side.

The working space is offset from the mounting wall. It begins at the face of the enclosure.

No object shall protrude into the working space, except for the equipment related to the electrical installation, as described in Section 4.2, Dedicated Equipment Space. See Figure 4.3a for a graphic showing a representation of these two spaces in relationship to each other.

Inside meter locations must have sufficient lighting to read meters and maintain equipment.

Meter rooms must be for the sole purpose of electrical switchgear and metering equipment. Under no circumstances will gasoline, diesel fuel, propane, paints, or any other noxious or hazardous materials be stored in a meter room.

The standing surface shall be level, firm, and free from standing water.

Figure 4.3a. Dedicated Equipment Space and Working Space, Projection

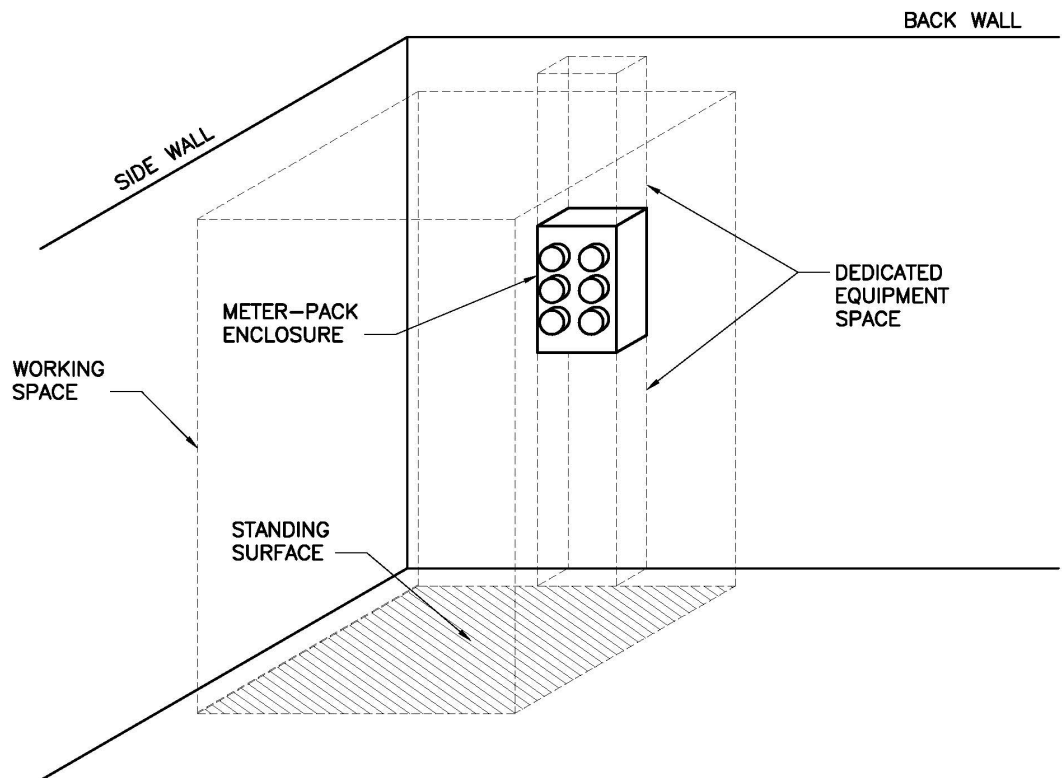


Figure 4.3b. Working Space Requirements, Projection

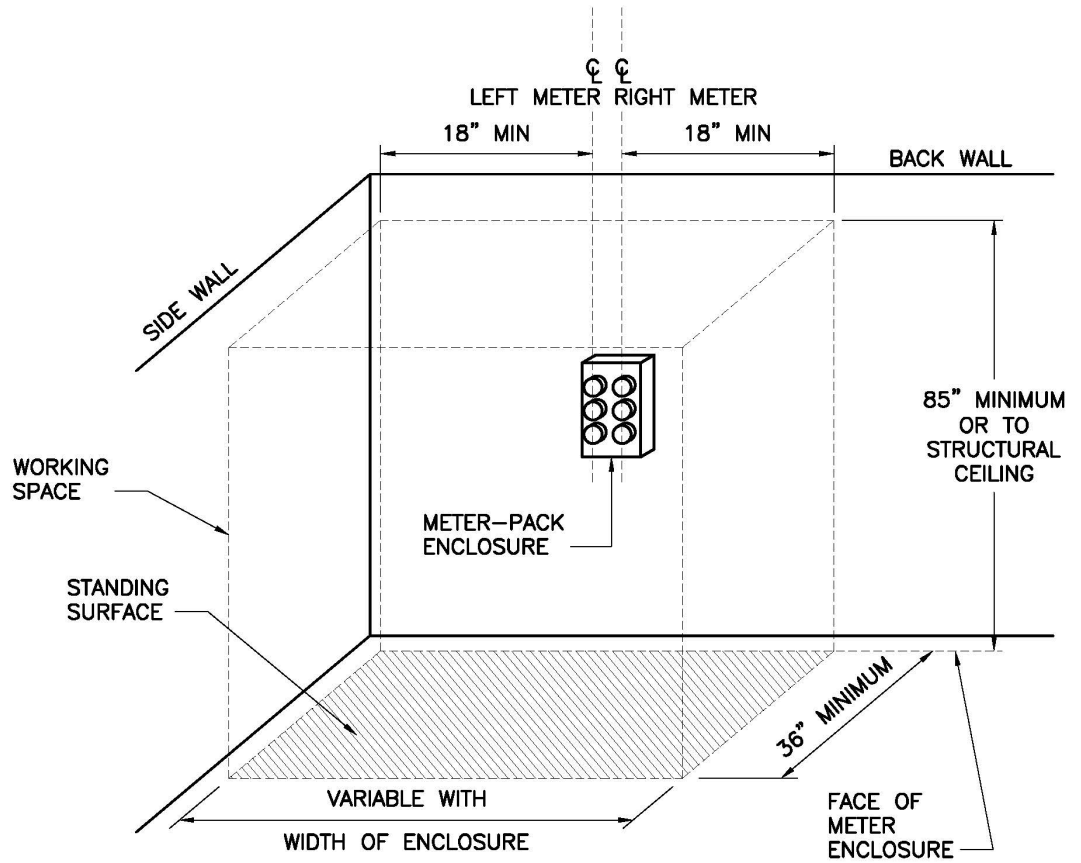


Figure 4.3c. Working Space Requirements, Front View

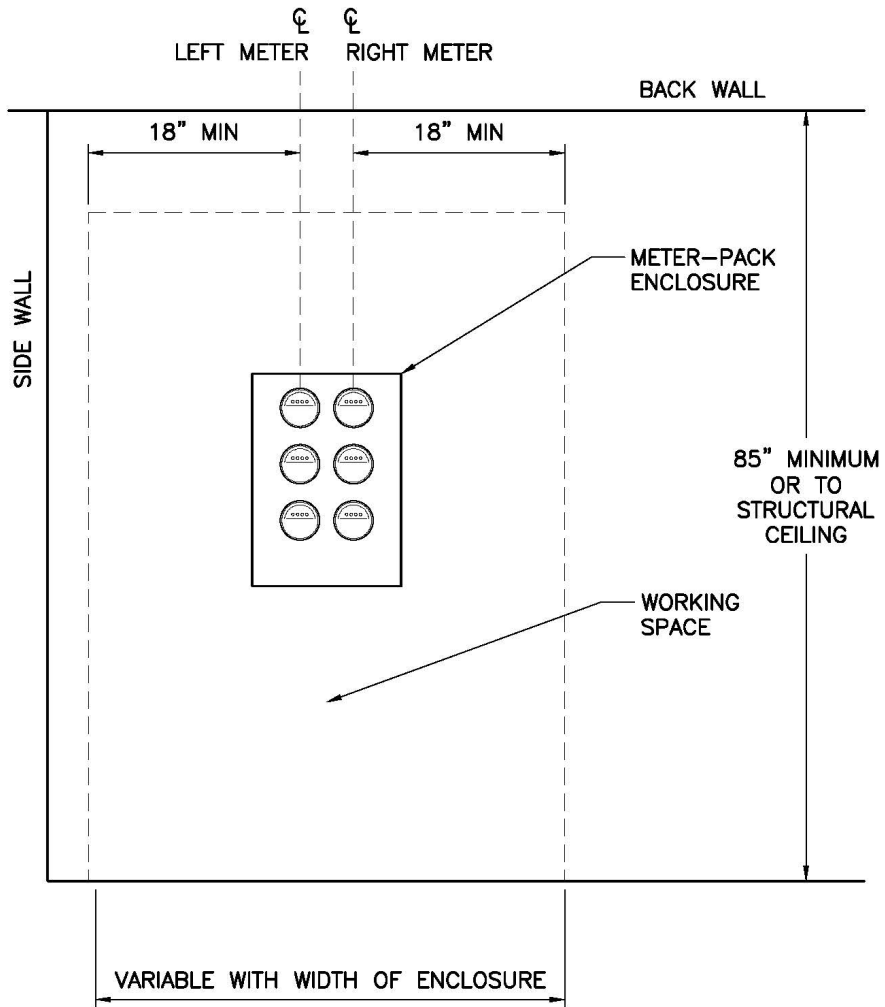
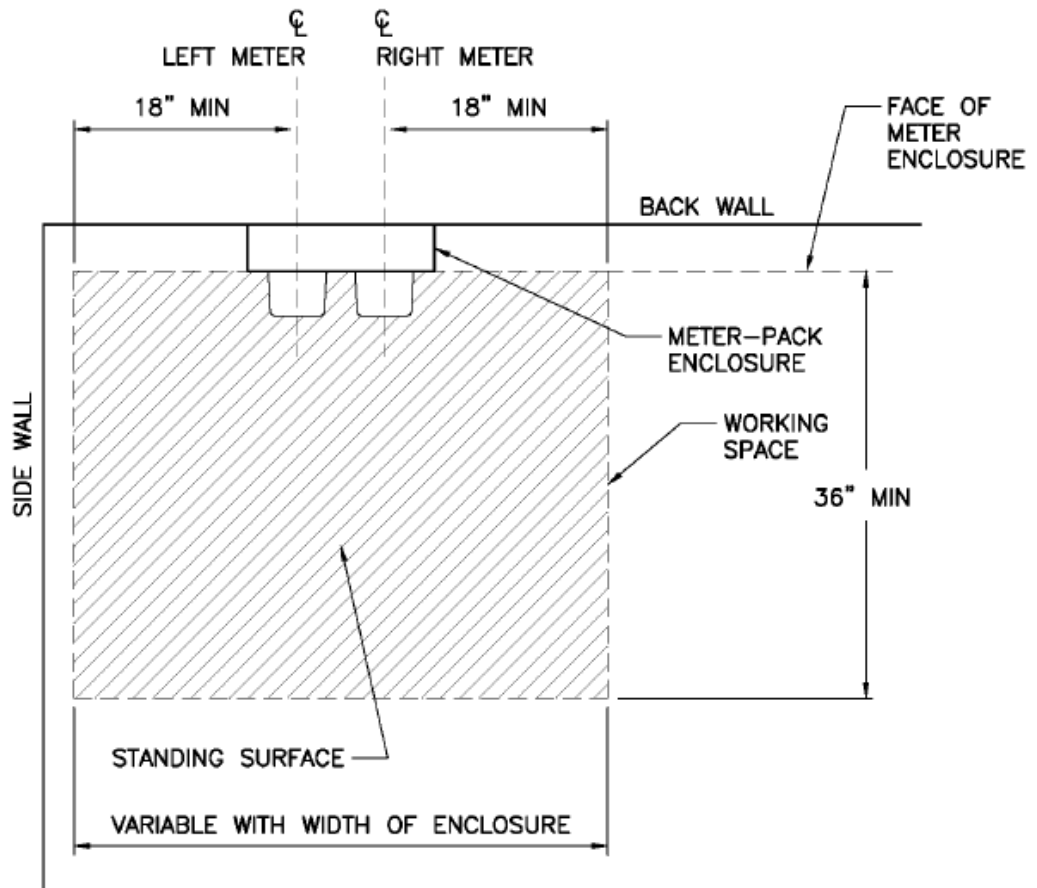


Figure 4.3d. Working Space Requirements, Top View



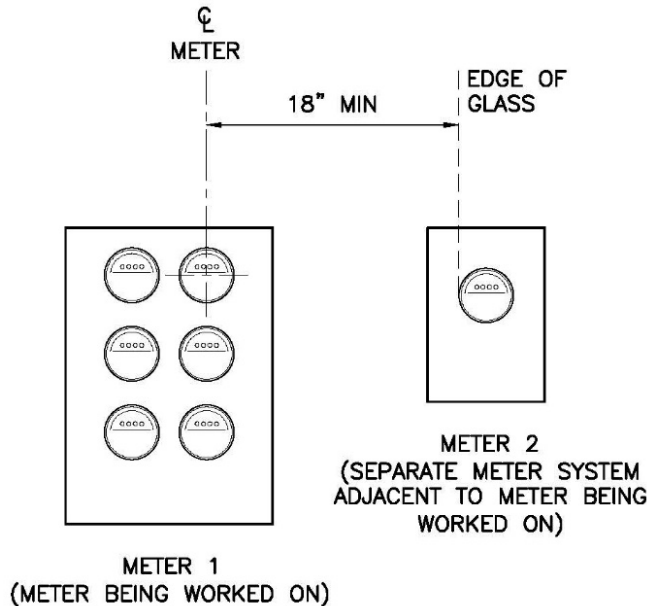
4.4 Clearances

Horizontal clearance must be maintained between the electric meter installation and other objects.

Customers are encouraged to consult with all equipment owners who share the space for additional clearance requirements.

Figure 4.4 shows a horizontal minimum spacing of 18 inches from the centerline of the farthest-right-hand-side meter to the edge of a meter glass of a separate meter enclosure. For purposes of illustration a single meter is shown as adjacent to the multi-pack. The edge of the glass can also represent walls, pillars, or other objects that protrude into the working space.

Figure 4.4. Horizontal Clearance Between a Multi-Pack and a Separate Meter or Object



5. References

National Electric Code (NEC), NFPA 70; 2020 Edition, National Fire Protection Association, Quincy, MA

SCL Construction Standard 1554.33; Meter Mounting Configurations, Heights, Working Space, and Clearances, Exterior (Outdoor)

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