
**Meter Mounting Configurations, Height, Working Space,
and Clearances, Exterior (Outdoor)**



1. Scope

This standard covers Seattle City Light (SCL) meter mounting configurations, height, working space, and clearance requirements for single, and multiple-meter (multi-pack) installations when exterior-mounted on private property.

Requirements for meters installed in meter rooms are outside the scope of this standard.

Physical protection devices (e.g., bollards) may be required. Requirements for such devices are outside the scope of this standard.

Photographic examples of installations that are non-compliant with requirements stated in this standard can be found in the Appendix.

2. Application

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

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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

Flush-mount: A mounting configuration where the face of the meter enclosure is flush with the exterior sheathing of the back wall. This configuration is not allowed for new construction. See Figure 4.1.

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

Recessed: A mounting configuration in which the face of the meter enclosure is flush with the exterior sheathing, and for which an enclosure has been created to surround the meter enclosure. This configuration is not allowed for new construction. See Figure 4.1.

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

Semi-flush-mount: A mounting configuration in which the meter enclosure is mounted partially inside the exterior wall to allow for conduit to be run internally. See Figure 4.1.

Surface-mount: A mounting configuration where the meter is mounted on the outside surface (siding) of a wall. See Figure 4.1.

Working space: The space (volume) defined in this standard in which meter installation and maintenance will take place

4. Requirements

4.1 Mounting Configurations

Surface-mount and semi-flush mount configurations are allowed. See Figure 4.1.

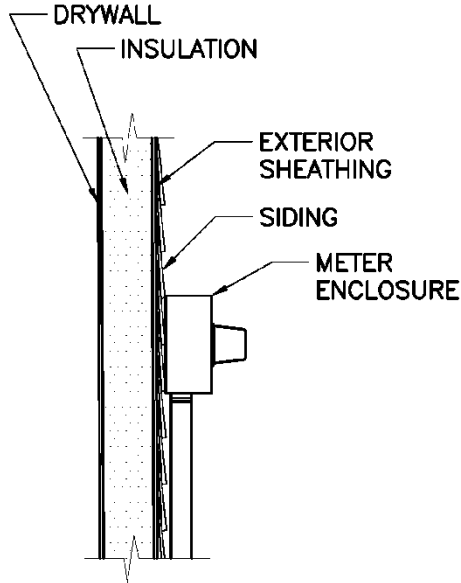
Flush- and recessed-mount configurations are not allowed for new construction, as the siding of the mounting wall would then protrude into the working space.

Installers should be aware that the semi-flush mount configuration significantly reduces the offset between the back wall and the face of the meter enclosure. Because the working space begins at the face of the meter enclosure, the space for attaching ancillary equipment to the back wall is greatly restricted.

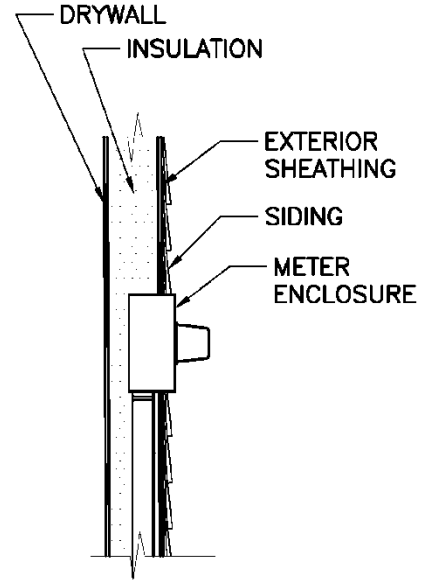
Figure 4.1. Meter Mounting Configurations (Allowed and Disallowed)

Allowed Meter Configurations

Surface-Mount Meter

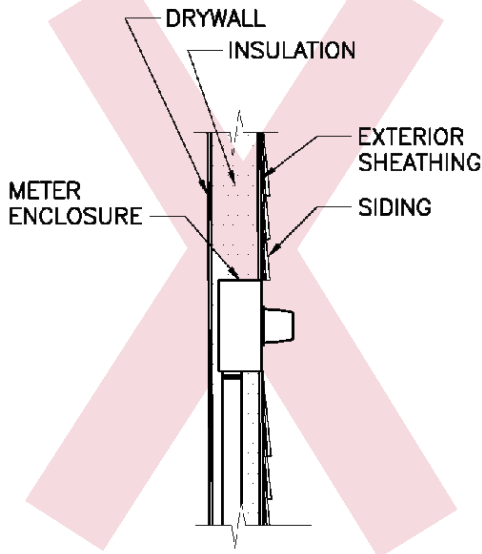


Semi-Flush-Mount Meter

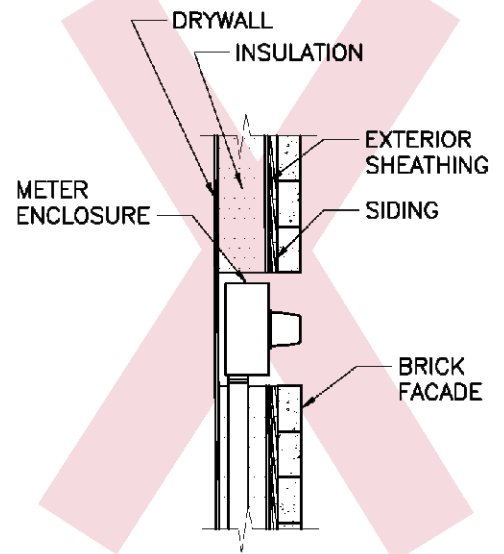


Disallowed Meter Configurations

Flush-Mount Meter



Recessed Meter



4.2 Meter Heights

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

See Figure 4.2a for meter height requirements for single-meter installations. See Figure 4.2b for meter and enclosure height requirements for multi-pack installations.

Figure 4.2a. Meter Height Requirements for Single-Meter Installations

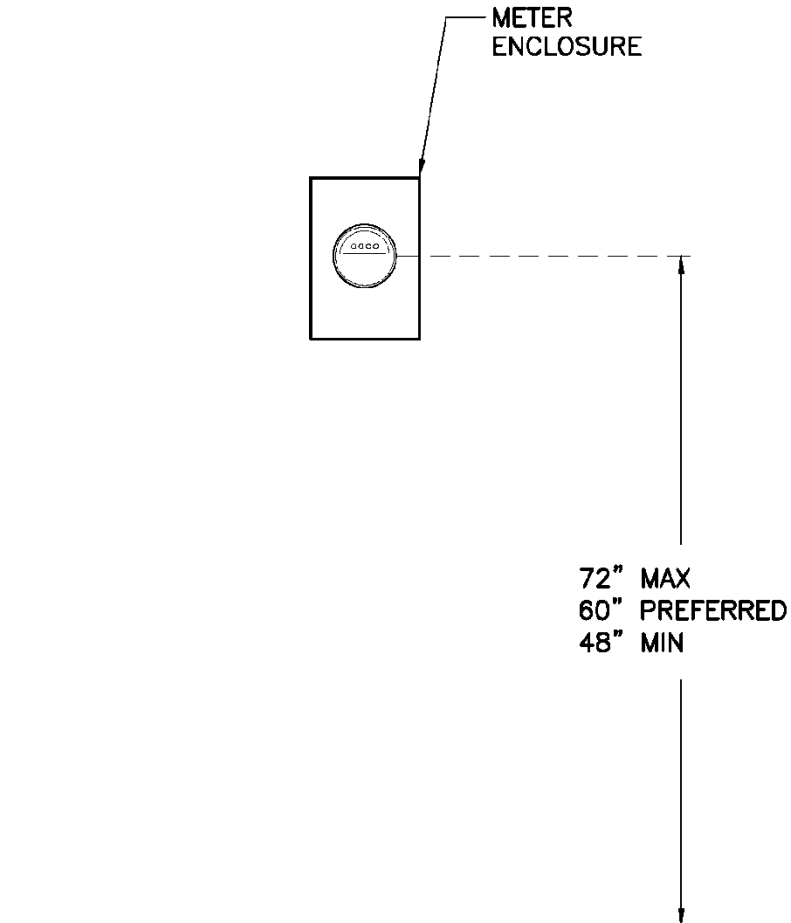
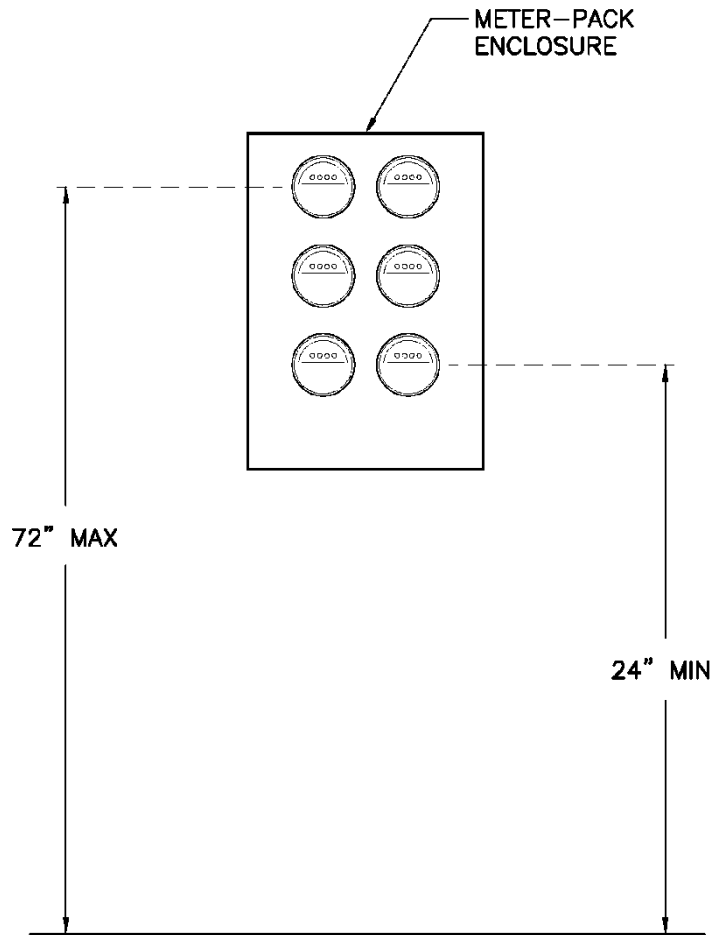


Figure 4.2b. Meter and Enclosure Height Requirements for Multi-Pack Installations



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. No object shall protrude into the working space, except for the SCL meter itself. This includes, but is not limited to, an adjacent meter installation (see figures 4.3f and 4.3g) as well as the house siding. Adjacent meter packs connected by a bus are considered to be one meter pack.

The working space shall be encompassed entirely within the customer's own property.

For single-meter installations, horizontal working space dimensions shall be measured from the centerline of the meter. See figures 4.3a–4.3c.

The working space is offset from the mounting wall. It begins at the face of the enclosure. See Figure 4.3c.

For multi-pack installations, 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. See figures 4.3d and 4.3e.

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

Vegetation shall not be allowed to encroach into the working space.

The working space shall not be used as a storage area.

Figure 4.3a. Working Space Requirements for Single Meter Installations, Projection

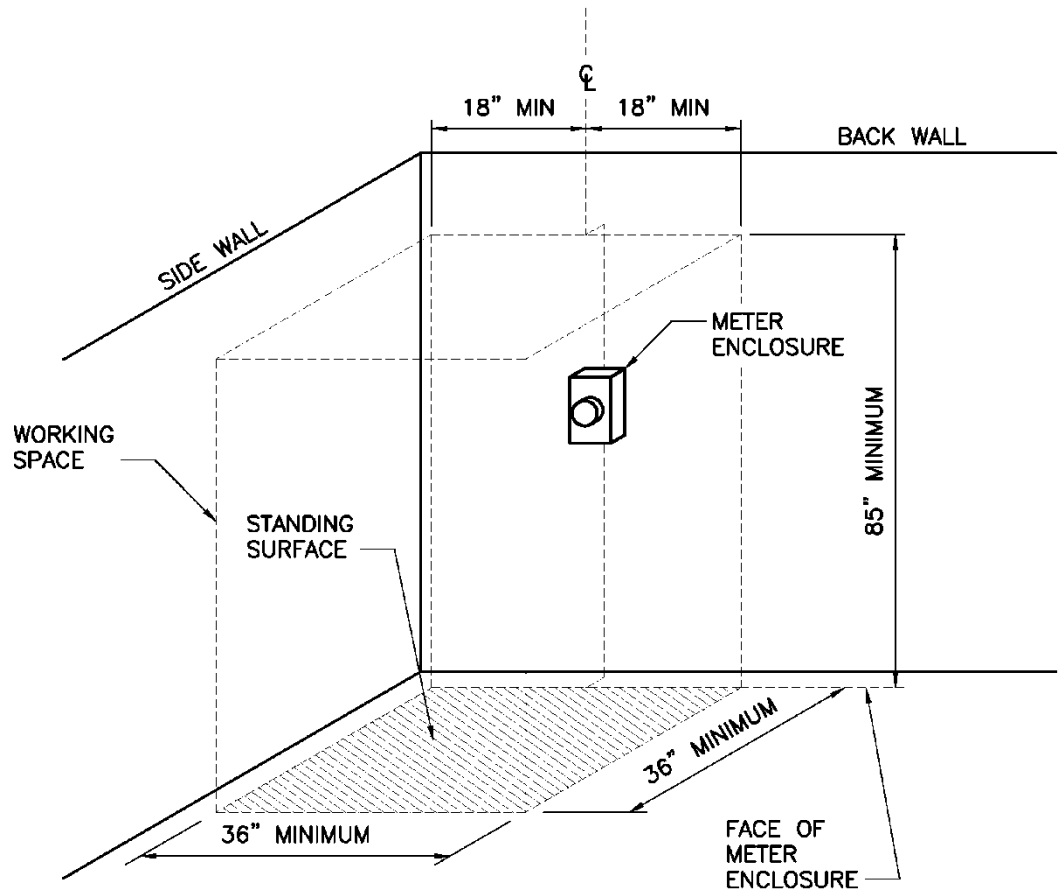


Figure 4.3b. Working Space Requirements for Single Meter Installations, Front View

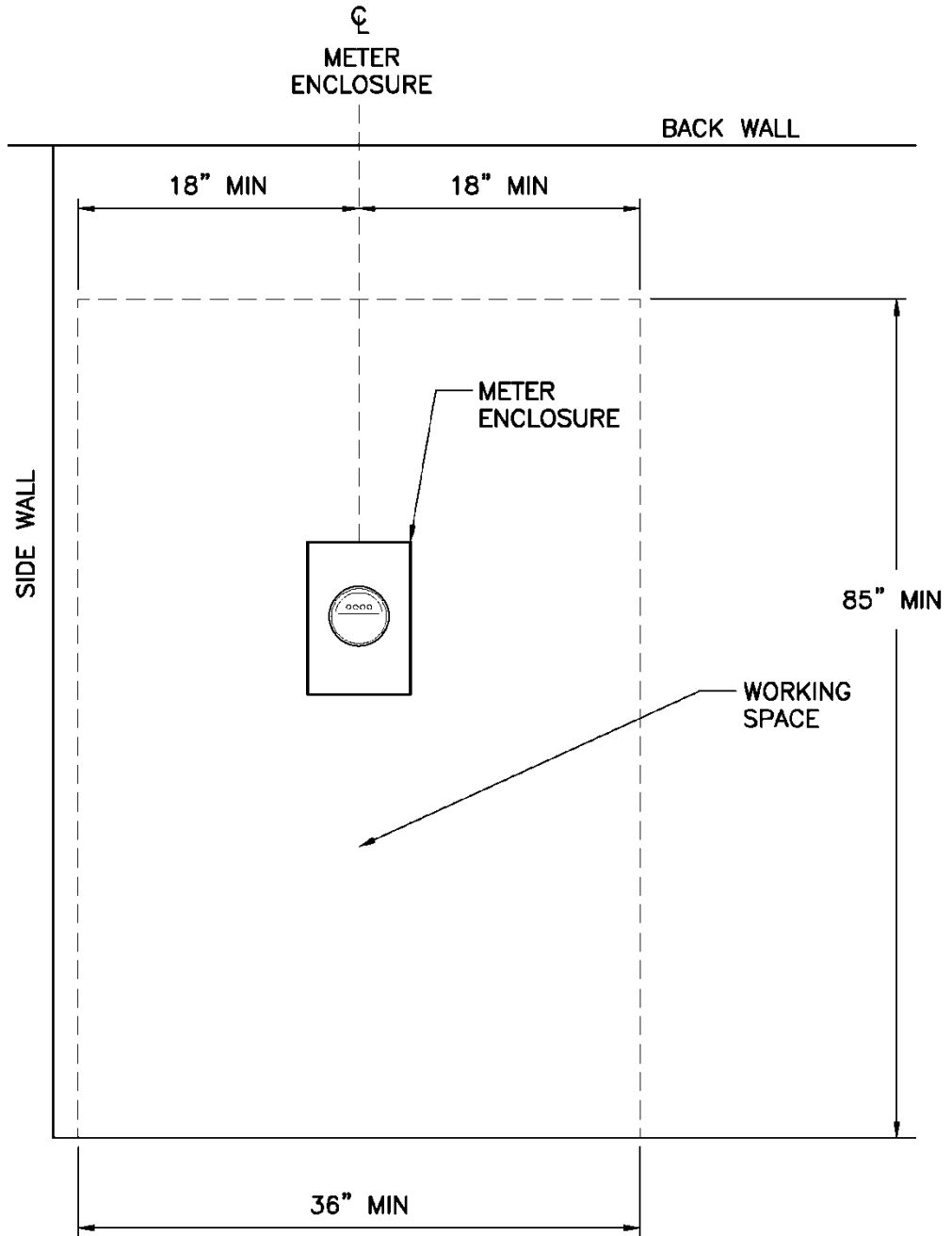


Figure 4.3c. Working Space Requirements for Single Meter Installations, Top View

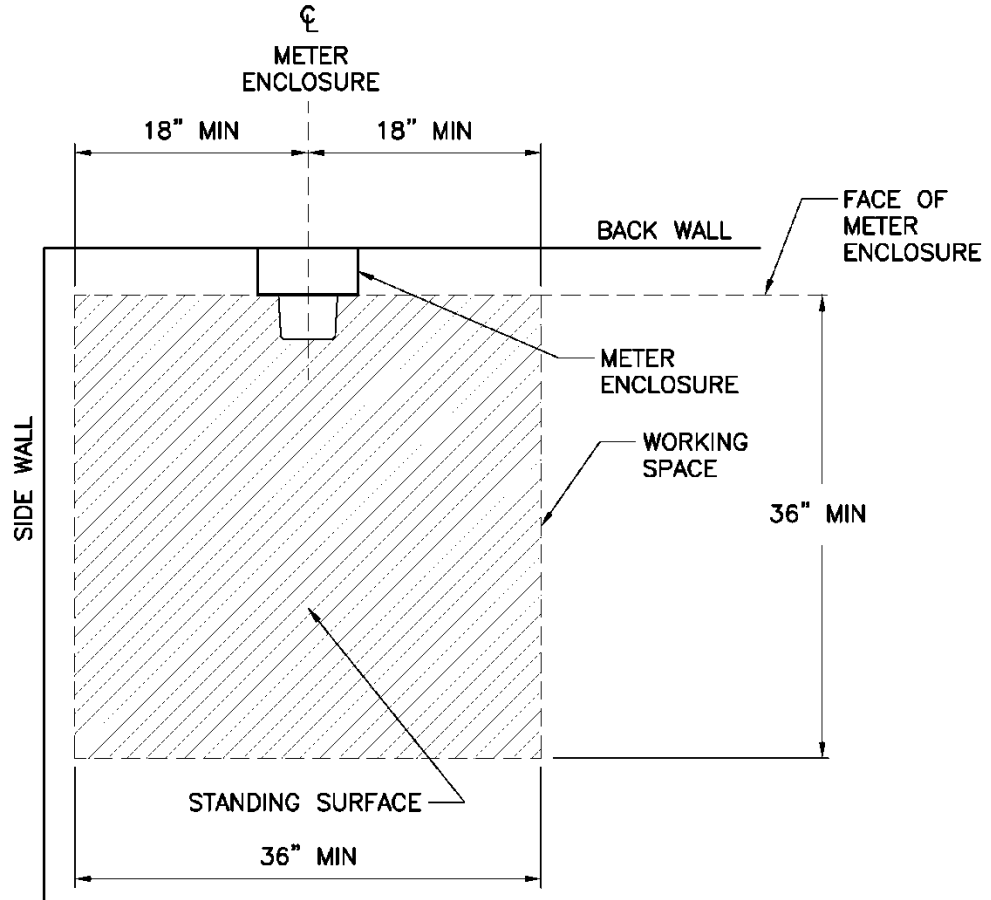


Figure 4.3d. Working Space Requirements for Multi-Pack Installations, Front View

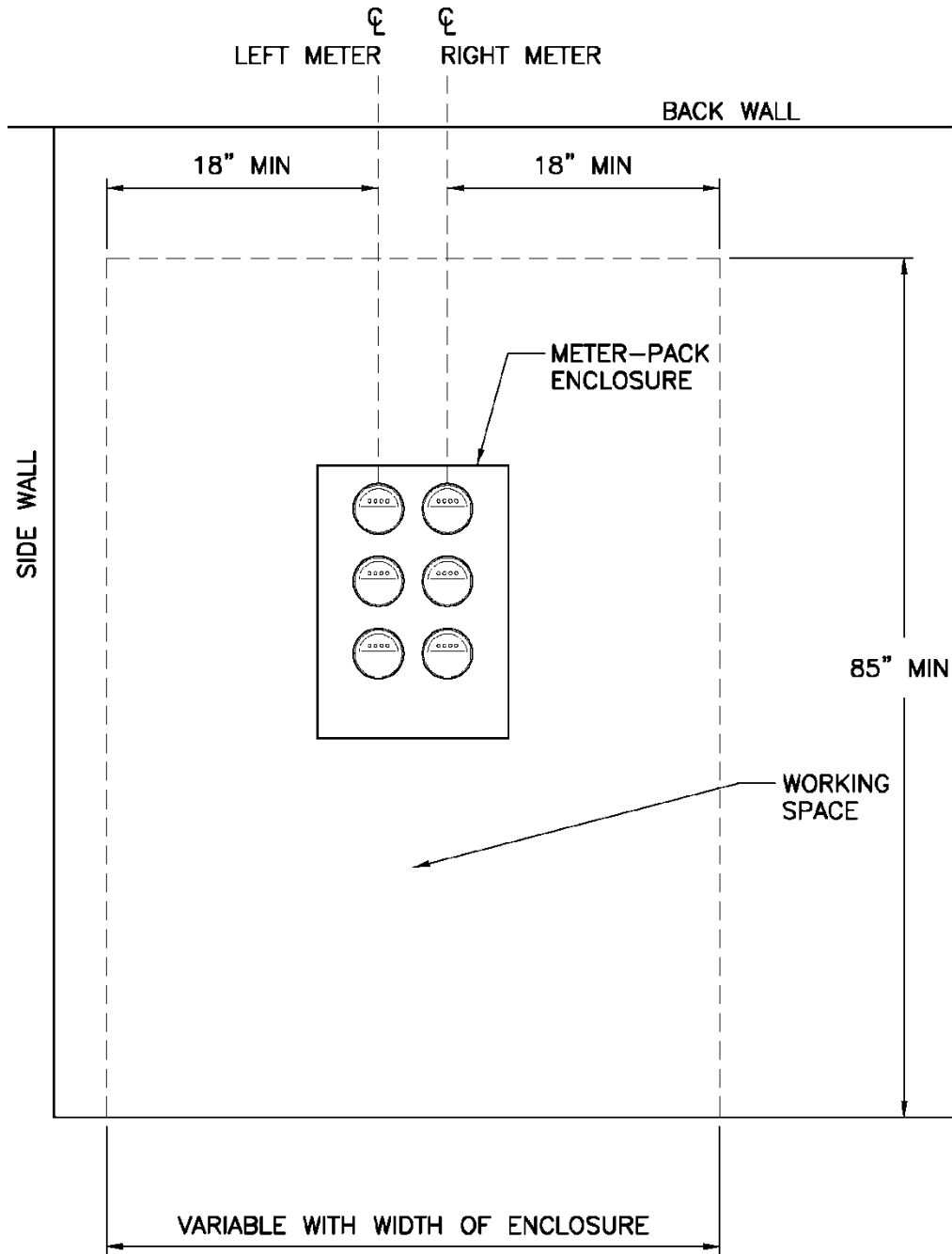


Figure 4.3e. Working Space Requirements for Multi-Pack Installations, Top View

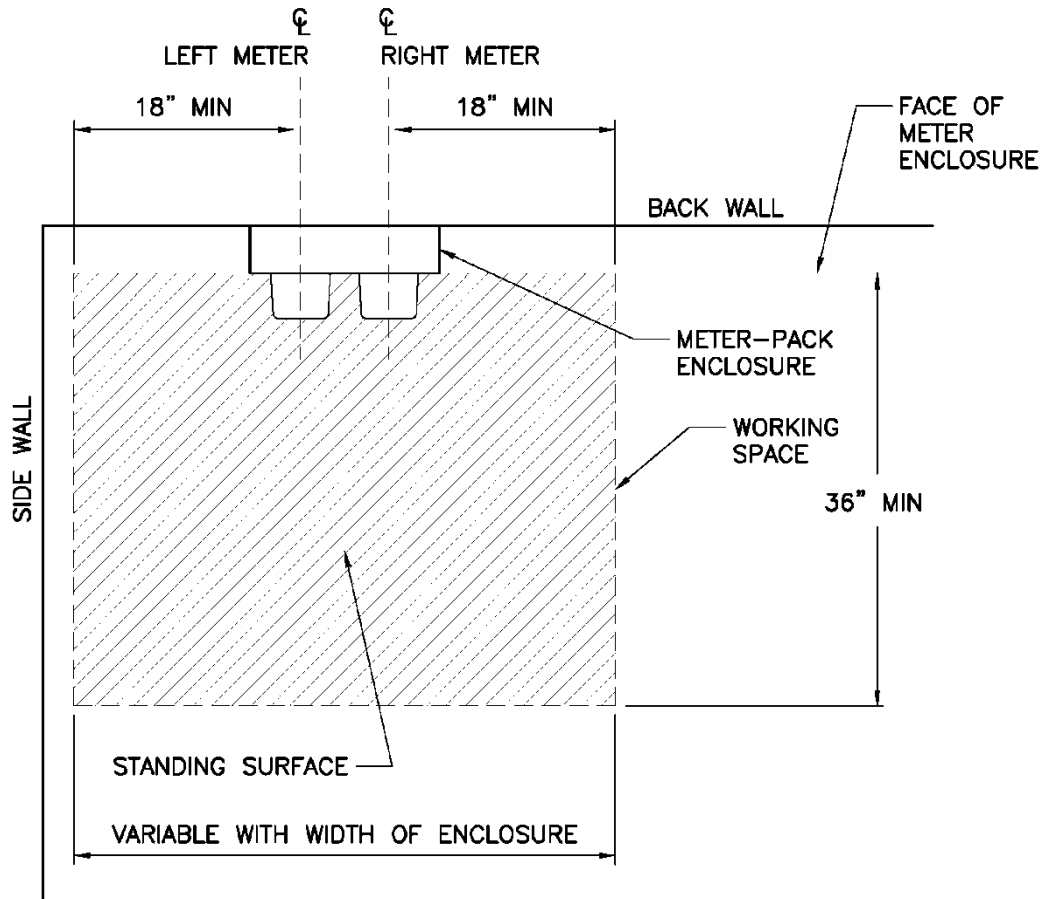


Figure 4.3f. Horizontal Working Space between an SCL Single Meter and an Adjacent Meter Installation

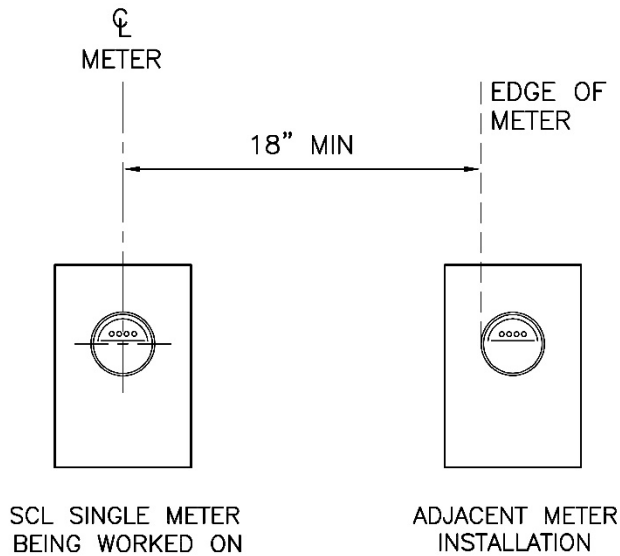
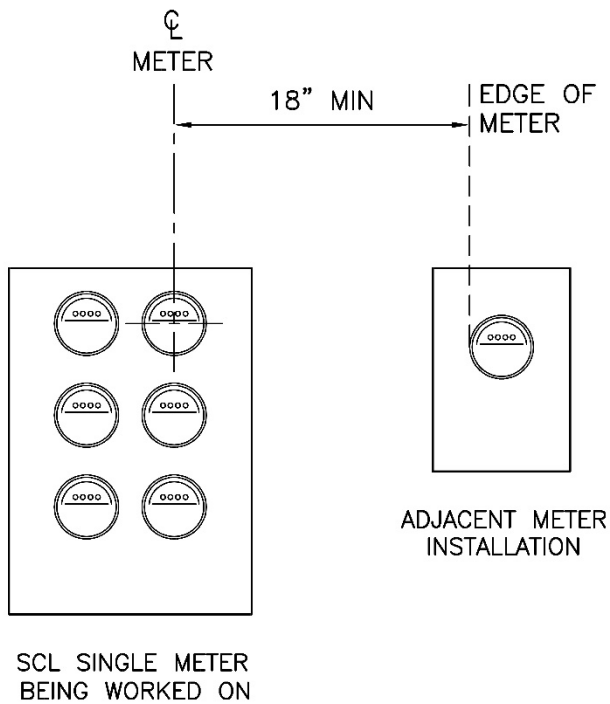


Figure 4.3g. Horizontal Working Space between an SCL Meter Pack and an Adjacent Meter Installation



4.4 Clearances

In addition to meter height and working space, radial clearance must be maintained between SCL electric meter enclosures and the nearest edge of the regulator of a gas meter. See figures 4.4a and 4.4b.

Figure 4.4a. Radial Clearance between an SCL Single-Meter Enclosure and a Gas Meter Regulator

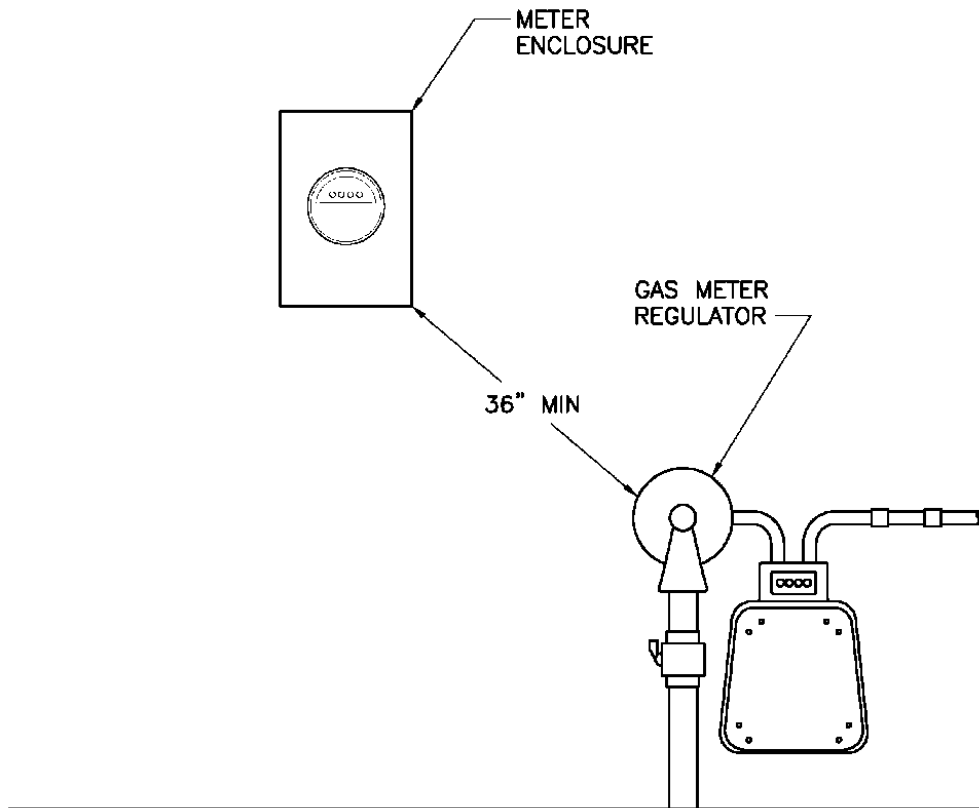
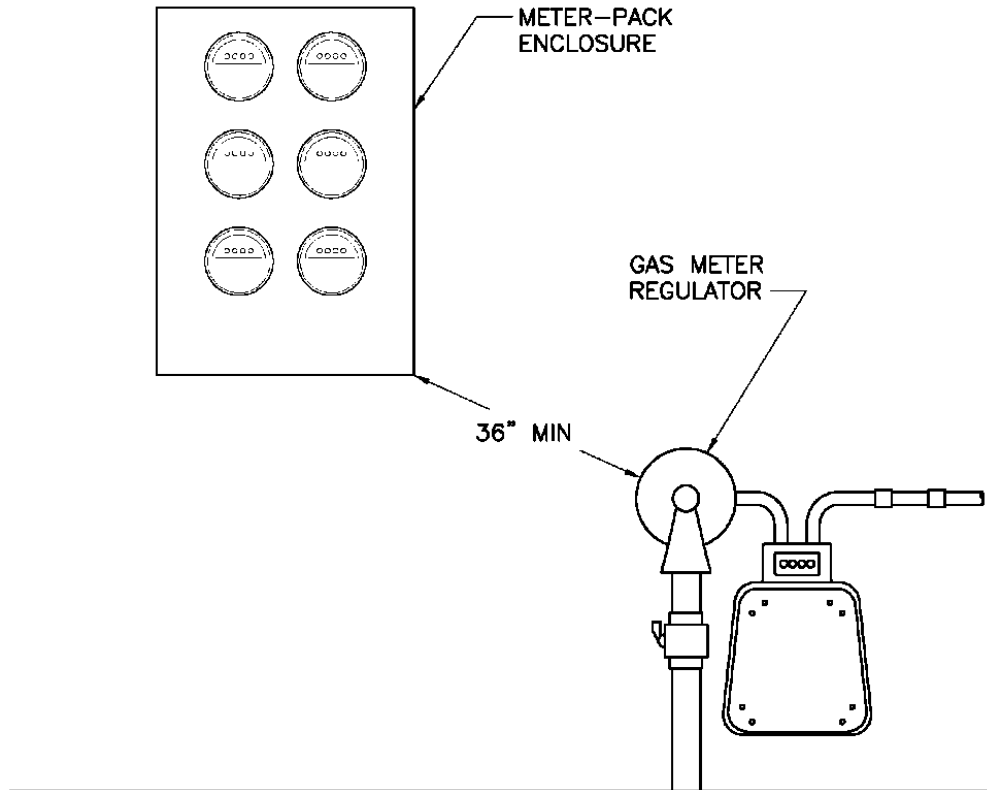


Figure 4.4b. Radial Clearance between an SCL Multi-Pack Enclosure and a Gas Meter Regulator



5. References

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

6. Sources

Abbott, Jeremy; SCL Electrical Work Review Crew Chief and subject matter expert for 1554.33

National Electrical Safety Code (NESC); C2-2017 Edition, Institute of Electrical and Electronics Engineers (IEEE)

Neuansourinh, Ponet; SCL Standards Engineer and co-ordinator of 1554.33

SCL Construction Standard 1553.03; "Meter Base and Socket Configurations"

SCL Construction Standard 1561.05; "Underground Residential Service Entrances"

Seattle City Light Technical Metering Operations (TMO)

Seattle Electrical Code (SEC); 2020 Edition; Seattle Department of Construction and Inspections (SDCI)

Shipek, John; SCL Standards Engineering Supervisor and co-ordinator of 1554.33

Vanderpool, Laura; SCL Standards Engineering Technical Writer and co-ordinator of 1554.33

WAC 296-45-325; "Working on or Near Exposed Energized Parts"; Washington
Administrative Code

Weller, Tief; SCL Electric Service Representative (ESR) Supervisor and subject matter
expert for 1554.33

Appendix. Examples of Non-Compliant Installations

Figure A-1.



Notes: Installation is non-compliant because the solar enclosure, its operating handle, and communications enclosure are protruding into the SCL meter working space.

Figure A-2.



Notes: Installation is non-compliant because the solar enclosure and its operating handle are protruding into the SCL meter working space. Also, the standing area is non-compliant due to plantings.

Figure A-3.



Notes: installation is non-compliant because the solar enclosure, its operating handle, and customer's production meter (at left) are protruding into the SCL meter working space. Also, the standing area is non-compliant and must be cleaned up.

Figure A-4.



Notes: Installation is non-compliant because the communications enclosure (at left) is protruding into the SCL meter pack working space. Also, the standing area is non-compliant due to plantings.

Figure A-5.



Notes: Installation is non-compliant because the traffic control cabinet is completely compromising the SCL meter working space. Also, the standing area is non-compliant.

Figure A-6.



Notes: Installation is non-compliant because the railing to the left of the SCL meter pack is protruding into the SCL meter pack working space. Also, the standing area is non-compliant due to the concrete curb.

Figure A-7.



Notes: Installation is non-compliant because the standing area is compromised by stairs.

Figure A-8.



Notes: Installation is non-compliant because the solar enclosure is protruding into the SCL meter working space. Also, the standing area is non-compliant due to plantings.