**Builder/owner/developer requirements**

- Complete and return the Gas Service Application(s) and (if applicable) Natural Gas Service Contract.
- Provide Customer Construction Services (CCS) with an approved complete set of civil site plans (if new construction) and the legal description or tax parcel identification. Include plans for any frontage road improvements.
- Inform CCS whether you will provide trenching/conduit per PSE’s standards or if you would like PSE to handle all trenching.
- Inform PSE of your estimated natural gas load and pressure requirements. Evaluate your total natural gas load by adding up the Btu input for all equipment being installed (immediate and future use) and tell us the desired pressure delivery. Depending on the equipment installed, the delivery pressure options are 6-7 inches w.c., 2 psig, 5 psig, 10 psig, or 15 psig.
- The fuel line is the gas piping (owned and maintained by the customer) between the meter(s) and the customer’s equipment/appliances.
  
  NOTE: It is your responsibility to ensure that a mechanical permit or a gas piping permit is obtained from the appropriate jurisdiction and an inspection of the completed fuel line and equipment installation is performed and the job is approved. For more information go to [pse.com/permitsandinspections](http://www.pse.com/permitsandinspections).
- Local regulations may require that you install earthquake activated shutoff valves. These valves must be installed downstream from the PSE meter set outlet. Once installed, the earthquake activated shutoff valve must not obstruct the operation or serviceability of PSE’s piping, gas service shutoff valve, gas meter, or gas pressure regulating equipment.

**Gas meter location and clearances**

- For an acceptable meter location that allows for the required access and clearance, see the Gas meter clearances and service installation requirements (form 3885).
Commercial, industrial, and multifamily main/service and meter installation requirements

Typical commercial/industrial diaphragm-type gas meter set assemblies

Components of a typical A250 manifold meter set assembly for a commercial structure with multiple tenants or multifamily

Concrete Pad

- Concrete pad must be leveled
- Gas riser shall be 4" from slab and 15" from building wall
- Gas riser will be 24" minimum depth

<table>
<thead>
<tr>
<th>METER TYPE</th>
<th>CONCRETE PAD DIMENSION (LxWxH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1000</td>
<td>4' x 3' x 4&quot; Min.</td>
</tr>
<tr>
<td>Greater than D3000</td>
<td>8' x 3' x 4&quot; Min.</td>
</tr>
</tbody>
</table>
Commercial, industrial, and multifamily main/service and meter installation requirements

Permits
For equipment light-up and tie-in to the gas meter, the fuel line must be in place with an approved permit and plumbed to an approved gas meter location. A valid permit must be indicated by either:

- A permit visible from outside the structure; or,
- A green Gas Service Approval sticker affixed to the fuel line.

Guard post installation (PSE’s responsibility)

- To protect the meter set assembly from vehicle damage, PSE will install guard posts when required.
- To avoid the need for PSE to install guard posts, choose a meter location that is away from driveways or other areas where vehicles travel.
- Guard post requirements are based on the following factors:
  - Existing barriers (curbs, guard rails, steep increases in grade, ditches, rockeries, trees, shrubs, chimneys, recessed walls, etc.), which will provide adequate protection;
  - Proximity of the facility to the edge of the travel lanes;
  - The expected speeds in the travel lanes;
  - The width of the travel lane;
  - The volume of vehicle traffic; and,
  - Existing nearby building damage or other indicators of vehicle damage that may have already occurred.
- In cases where a meter set assembly will be installed behind a curb, observe the following:
  - If the curb will be a rolled curb, and if there is less than 10 feet of space between the curb and the meter, guard posts will be installed; and,
  - If the curb will have a vertical face, and if there will be less than 5-1/2 feet between the curb and the meter, guard posts will be installed.
- Guard posts will be painted “caution” yellow, especially those located in commercial or industrial locations, street rights-of-way, and alleyways.

Effective: 12/20/19
Canceling: 10/01/19
Service installation requirements

Separation requirements to other utilities for conduit and direct-buried installations

<table>
<thead>
<tr>
<th>INSTALLATION</th>
<th>GAS TO ELECTRIC</th>
<th>GAS TO TV/TEL</th>
<th>ELECTRIC TO TV/TEL</th>
<th>GAS TO ELECTRIC</th>
<th>GAS TO TV/TEL</th>
<th>ELECTRIC TO TV/TEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONDUIT</td>
<td>12&quot; MINIMUM</td>
<td>6&quot; MINIMUM</td>
<td>12&quot; MINIMUM*</td>
<td>6&quot; MINIMUM</td>
<td>6&quot; MINIMUM</td>
<td>12&quot; MINIMUM*</td>
</tr>
<tr>
<td>DIRECT-BURIED</td>
<td>12&quot; MINIMUM</td>
<td>12&quot; MINIMUM</td>
<td>12&quot; MINIMUM*</td>
<td>12&quot; MINIMUM</td>
<td>12&quot; MINIMUM</td>
<td>12&quot; MINIMUM*</td>
</tr>
</tbody>
</table>

*Contact your TV/TEL provider about their separation requirements from power.

Typical mainline joint trench dimensions and facility placement

**NOTES:**
1. If the final backfill contains rocks greater than 8 inches in diameter, install 12 inches of compacted sand shading across the full width of the trench.*
   If the final backfill contains rocks 8 inches in diameter or smaller, install 6 inches of compacted sand shading across the full width of the trench.∗
2. Rocks greater than 10 inches in diameter are not permitted in the final backfill.
3. Sand bedding is required under PSE gas pipe. Bedding is not required for the full width of the trench; it shall extend from the side of the trench nearest to where the gas main/service is installed to a minimum of 6 inches on the opposite side of the gas line.
4. Utilities shall not be stacked over the gas line in the trench.
5. If wet utilities will be included in the trench, please contact PSE or local power company directly for clearance requirements.
6. Reduced clearance of 4 inches between power and communication must have approval of participating communications companies.

*Alternatives to full-width trench shading require PSE approval.
Typical commercial/industrial/multifamily joint utility service trench with customer-installed gas service conduit

3/4 YARD SAND BACKFILL FOR EACH 4' X 4' WORK PIT
BUILDERS SAND (ASTM C33) SHALL BE PROVIDED ON-SITE BY THE CUSTOMER AND PLACED WITHIN HAND-SHOVELING DISTANCE TO THE WORK PIT FOR BEDDING AND SHADING OF DIRECT-BURIED FACILITIES. A LARGER WORK PIT MAY REQUIRE MORE SAND. SAND SHALL BE WASHED, CLEAN, AND FREE OF DEBRIS OR ROCKS LARGER THAN 1/4 INCH.

GAS SERVICE LINE IN CONDUIT
SCHEDULE 40 WHITE OR YELLOW PVC

ELECTRIC SERVICE CABLE IN CONDUIT 3” SCHEDULE 40 GREY PVC

COMMUNICATIONS

PLUG ENDS OF CONDUIT AND SET STAKES

WORK PIT

RELIEF VENT

MULTIPLE ELECTRIC METER INSTALLATION

MULTIPLE GAS METER INSTALLATION

Suggested meter layouts. Upon Project Manager approval, the locations of the gas and electric meters may be reversed to prevent underground crossovers of electric and gas lines.
Conduit requirements for gas service

- PSE recommends the use of conduit for all gas service installations.
- Conduit installation requirements
  - Gas conduit runs over 100 feet long must have a 3/8-inch minimum diameter pull rope installed.
  - Conduit bends shall be one long radius, single-piece sweeps (see table below).
  - Fittings and elbows shall not be used because the joints prohibit service insertion.
  - The sum total of the degrees of bends in the conduit run cannot exceed 180°.
  - Conduit should not cross in the trench.
  - Yellow or white Schedule 40 PVC conduit used for gas service lines shall not be marked “water,” or any other utility.
- Backfill requirements for conduit installations
  - Backfill for conduit: Soil that is free from construction debris, glass, sharp rocks, frozen clods, and rocks larger than 10" in diameter.
  - Shading: None required above conduit.
  - Bedding: None required below conduit.

Gas service line depth table for conduit and direct-buried installations

<table>
<thead>
<tr>
<th>GAS SERVICE TYPE</th>
<th>GAS SERVICE PIPE SIZE</th>
<th>MINIMUM DEPTH OF COVER OVER GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>ANY SIZE</td>
<td>18&quot;</td>
</tr>
<tr>
<td>Commercial/Industrial</td>
<td>1-1/4&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>Any Service in Snow Country (see form 3736)</td>
<td>ANY SIZE</td>
<td>24&quot;</td>
</tr>
</tbody>
</table>

Proper conduit sizing and bending requirements of plastic service pipe

<table>
<thead>
<tr>
<th>GAS SERVICE SIZE (in.)</th>
<th>MIN. BENDING RADIUS (in.)</th>
<th>MIN. CONDUIT DIAMETER (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/4</td>
<td>48</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>113</td>
<td>6</td>
</tr>
</tbody>
</table>

You may excavate the portion of the mainline trench and/or the service line trench on your own property. Customers are not authorized to excavate in the public right-of-way, so PSE will provide any trench that is not located on private property.

- If you provide your own trench, you are responsible for meeting the requirements outlined in PSE’s Gas and Electric Underground Service Installation Requirements (Form 3061) and Joint Utility Mainline Trench Excavation Requirements (Form 2809). The applicable form is provided by PSE and can also be found at: pse.com/customerconstruction.
- For unique site preparation requirements, contact your Project Manager.
- Sand must be provided by the builder or developer and placed within hand-shoveling distance to the work pit or trench for bedding and shading. (CFR 129.361, ASTM C33)
Alcove guideline notes

4. Alcove width to be negotiated with PSE Project Manager. This may change based on, but not limited to:
   4.1 Meter size
   4.2 Number of meters
   4.3 Meter configuration
   4.4 Meter orientation
   4.5 Termination of vent line

6. Vent termination cutout size and location to be coordinated with PSE Project Manager. A 2" vent line is shown in this example, but may be larger depending on customer load.

7. Guard posts are to be the primary method for protecting all aboveground facilities in the alcove. PSE PM to determine whether guard posts need to be removable. Installation of a stem wall may be negotiated with the PSE Project Manager.

11. Bury line on riser to be at or above alcove grade.

12. Concrete cap to be a minimum of 4" but to be negotiated with PM.

To arrange for the gas meter turn-on, please call PSE at 1-888-225-5773
Coordinate with PSE PM for meter set assembly turn on if meter is set at 2 psi or greater and an A1000 or larger.