

## Joint Trench Requirements and Standards for Contractors

The following guidelines from the PSE&G Gas Distribution Standards Manual, Section 4.7-5 should be followed whenever applicable to joint trench work being done by a contractor on behalf of PSE&G:

4.1: Gas construction shall be of plastic piping material for mains and services. Steel casing or a section of steel carrier pipe may be utilized to cross gas transmission pipelines as required.

4.8: The trench bottom is to be hand worked to provide proper width, smooth bottom contour, and removal of sharp objects such as stones, roots, etc.

4.9: The gas main is to be positioned to avoid the problems of crossovers. The side of the trench occupied by the gas main is that which will minimize the electric primary crossings of the gas main. For “back yard” distribution, the gas main is located nearest the buildings. For a street or front yard supply, the gas main should be on the street side of the trench for single-family house construction.

4.10: The electric and telephone facilities are positioned on the opposite side of the trench. Sketch 1 shows a separation – see note 1 to Figure 1.

4.11: Gas facilities are to be separated one foot or more in the horizontal plane from any other facility.

4.12: Separation of the gas facility from the other facilities must be maintained by positive means such as earth berms, flat stakes (to be later removed) or approved separators or other means.

4.13: The gas services are to be installed after the other facilities are positioned in the main trench. The crossing clearance is to be 12 inches or more in the vertical plane. A protector shield shall be placed around the gas service to protect against shear from the outlet of the Tee to a minimum of 6” into the Service Trench.

6.1: The number and size of the facilities that will occupy the trench govern the maximum width (see note for Figure 1). PSE&G will specify the trench width for each individual project.

6.2: For standard construction gas facilities should be installed last on the curb side/road-side of the trench. For “back yard” distribution, the gas main is located nearest the building.

6.3: Electric facilities will be installed several inches off the trench wall to insure maximum separation from the gas line, and also to prevent damage by protruding rock.

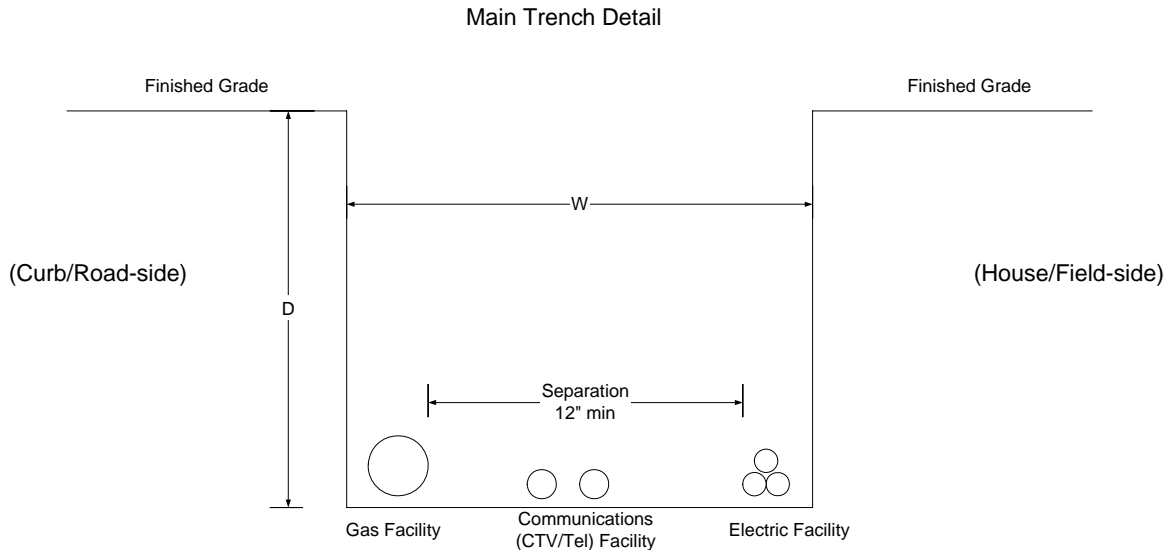
6.3.1: The random lay of communications cables with electric cables is not acceptable; separation between all cables is required. This allows all cables to remain at the same level, except for locations where these cables must cross over each other.

6.4: All installed facilities must have 12” of select backfill cover by the end of the workday.

6.5: The vertical crossover clearance between gas and electric / communication facilities shall be twelve inches. This applies to ALL crossings in main and service trenches.

- 6.6: The gas provider is to install a PVC rock shield or its equivalent around the gas service line from outlet of Tee to a minimum of 6" into the service trench.
- 6.7: At street crossings, electric cables must be installed in 4" diameter schedule 40 PVC conduits. Conduits for electric and communications facilities must be placed side by side at the same level. These conduits must extend four inches past the gas allotted portion of the main trench and have twelve (12) inches of vertical separation to the gas main. Conduits for gas street crossing shall be installed to align with the gas main.

Figure 1



W (Trench Width)  
24" - 2 Party  
30" - 3 or 4 Party  
36" - 6" or larger Gas Main, or 5 or more party.

D (Trench Depth)  
Trench depth to be determined based upon 36" cover (top of facility to finished grade) and a 6" select fill cushion below facility.

#### Notes:

- 1: If telephone service wires are run in the main trench, a 12" minimum separation is required.
- 2: When existing soil conditions are deemed unsuitable, an additional 6" of cushioning (12" total) will be required, as well as an additional 12" of select fill cover. All cushioning shall be of select fill material. Final compacted dimensions may vary.
- 3: Yellow (Gas) and Red (Electric) warning tapes will be installed on top of the one foot of select backfill, centered on their allotted portion of the trench. The warning tape is required by code and serves as confirmation of facilities below.

Figure 2

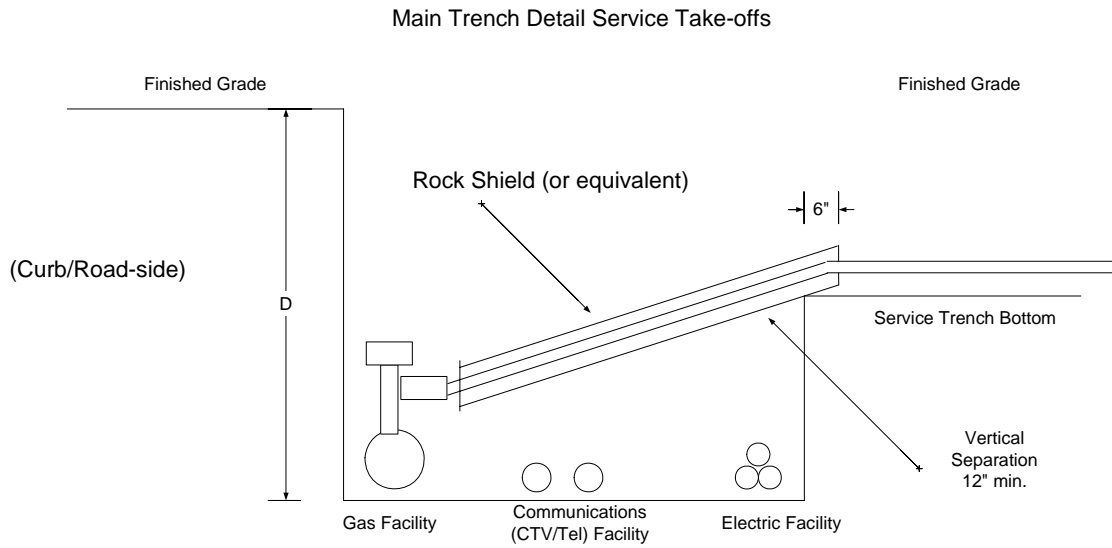
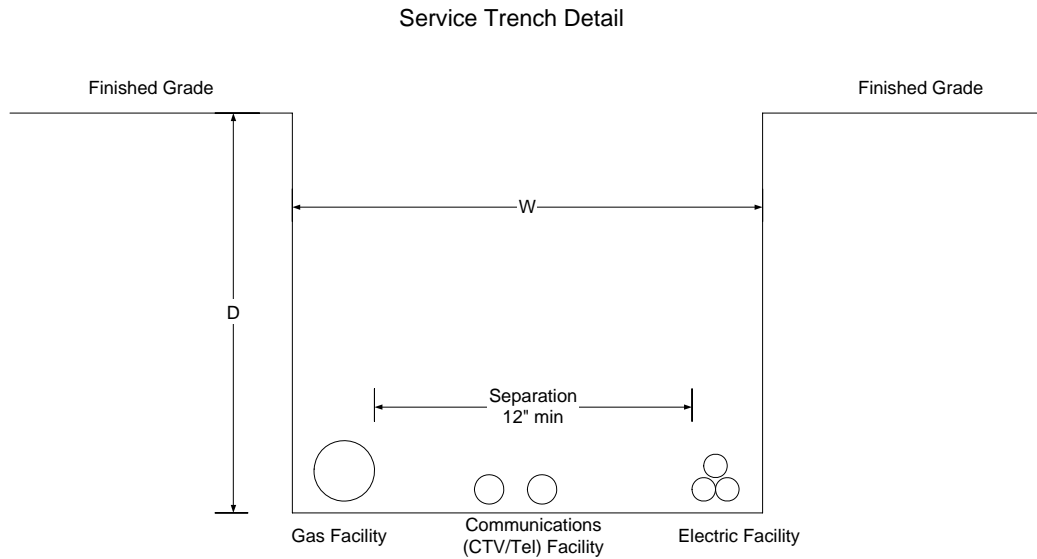


Figure 2A



#### Trench Dimensions

W (Trench Width)

24" - Standard Trench Width. Larger trench sizes will be determined based upon the number and size of facilities to be installed.

D (Trench Depth)

Trench depth to be determined based upon 24" cover (top of facility to finished grade) and a 6" select fill cushion below facility.

7.2: Service trench width to be 24 inches minimum. The number and size of the facilities that will occupy the trench govern the maximum width. PSE&G will specify the trench width for each individual project.

7.3: The twelve inches space between the electric/communications allotted space and the gas allotted space shall be the minimum horizontal separation between gas and electric facilities.

7.4: Minimize sole trenching and crossing facilities; if sole trenching is required locating wire shall be installed. If crossing does occur 12" vertical clearance is required.

7.5: The placement of gas and electric service and meters on the structure/dwelling should be done to avoid the crossing of gas and electric lines in the service trench.

7.6: Yellow (Gas) and Red (Electric) warning tapes will be installed on top of the one foot of select backfill, centered on their allotted portion of the trench. The warning tape is required by code and serves as confirmation of facilities below.

7.7: A four-foot long trench, the same depth as the main trench shall be provided off the main trench for all electric service stubs for future homes. The service shall be stubbed up on the dwelling side of this trench. Suitable soil shall be installed around the stub to the same level of the main trench.

8.1: The minimum horizontal separation between gas and electric facilities cannot be compromised during any portion of the backfilling process. The use of approved separation devices, the application of sandbags, the hand application of select bedding or other suitable methods must be provided to insure minimum separations are maintained.

8.3: Facilities installed by a contractor – Joint trench work contractor shall be responsible to install necessary select fill cushion a minimum of six inches below the gas facilities and a minimum of twelve inches above the gas facilities. Warning tape shall be installed a minimum of twelve inches above the gas facilities as indicated above. No gas facilities shall be left exposed overnight.

8.4: Any variances to the guidelines above require reporting to a supervisor immediately for corrective action.

9.0: Locating Facilities. A locating wire is only to be utilized where the gas facilities are in a separate trench. Installation sketch (Main and Service) shall indicate placement of utility and separation.

## 12: Excavation in Existing Joint Trenches

12.1: Proper personal protective equipment is to be used and worn by personnel whenever excavation is performed in joint trench.

12.2: A shutdown of the electric facilities is to be requested if found necessary and depending on the extent of work to be done.