

GENERAL

This guide's purpose is to assist you, our customer-owners, in acquiring underground electrical service as quickly, conveniently, and economically as possible. Included here is a summary of the requirements that the PUD has incorporated into their Rules and Regulations for Underground Line Extensions.

We normally supply and install the underground secondary cable, meter, and current transformers when necessary. **The cost of these items is shown on page 205.1.** Service items which are normally your responsibility are summarized below:

- Advise us of your service requirements before purchasing or installing service entrance equipment, electrical equipment, trenches, and conduit so we may determine the availability, location, and conditions for your service.

A representative from our Engineering Department will review with you the location of service, route, and other associated information.

- Provide all trenching, conduit, and backfilling, in accordance with instructions below. Additionally, you pay the cost of secondary conductors beyond 100 feet in length per dwelling unit and provide all service entrance wiring and equipment. If your requirements are non-standard, or you have unusual additional service costs, you may need to supply secondary vaults, oversized conduit, special sweeps, and/or reimbursement for additional cost. All work and materials must be in accordance with our standards and approval. Call our Engineering Department at 547-0556 for a trench inspection.
- Obtain any permits required from city, county, and state agencies prior to commencing excavation of any public lands or rights-of-way, and comply with the requirements of these agencies.
- Provide easements for line extensions or other new facilities required for your new service. If an easement is necessary our representative will review this requirement with you in more detail.
- Pay applicable excess footage charges, for service conductor over 100 feet per residence, before PUD construction crews will be scheduled.
- Call the State Electrical Inspector for inspection and approval of your new service entrance equipment.
- Apply for service at your new home. For customer-owners who have never had service with us before, refer to "Applying for Service" in the General Information section of this guide.

INSTALLATION AND MATERIAL SPECIFICATIONS

- General: Conduit runs that exceed 175 feet in length may require special conduit sweeps unless prior approval is obtained from our Engineering Department. Not more than a total of 180° of turns or sweeps will be allowed in a duct run without a pull box or handhole. For example, between our transformer and your meter base, not more than two 90° sweeps or four 45° sweeps, or any combination thereof, would be allowed in the conduit. If the number of sweeps needed exceeds 180°, you would need to furnish and install a PUD approved pull box.
- Grading: Final grade should be established before trenching and installation of ducts or vaults. Any changes in the grade that would put the conduits, vaults, or pull boxes at a depth less than required, or leave any installation in an undesirable condition, would require you to correct it at your expense.



RESIDENTIAL UG SERVICE LINE EXTENSION GUIDE

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DATE:

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CALL BEFORE YOU DIG -- 1-800-424-5555

- **Excavation:** Excavating should be done only as necessary for installing the duct and vault system, exercising care for adjacent sidewalks, curbs, streets, and underground utilities. Trenches for underground ducts need to be true to line and grade, as shown on the drawings and indicated in the specifications. Keep banks of trenches vertical. Maintain trenches free from standing water when ducts or vaults are being installed, and cleaned of excess and loose rock and earth before installation of duct encasement.
- **Conduit:** The underground duct (conduit) must be gray Polyvinyl Chloride (PVC) Schedule 40, conform to NEMA TC2 Specifications and be permanently marked at regular intervals with the manufacturer's name or symbol, size, "SCH 40" and "PVC". The conduit size will be determined by the PUD (normally 3", 4", and 6").
- **Couplings and Fittings:** Must be PVC Schedule 40, factory-made, and conform to the same specifications as the conduit. Special sweeps may be required, at the discretion of our Engineer. Sweeps must have a minimum 36" centerline radius. 24" radius can be used with prior approval of our Engineer.
- **Installation of the Conduit System:** Ducts shall run in a straight line. Standard bends, sweeps or offsets, as specified above, may be used as required. Install couplings, connectors, and fittings to provide a rigid mechanical assembly with conduit cut square, reamed, and without burrs. Cement conduit joints as recommended by the manufacturer.
- **Duct Bedding and Encasement:** A minimum of four (4) inches of bedding and four (4) inches of cover is used to encase the ducts. The minimum depth from finished grade to bottom of the trench for primary cable is forty-eight (48) inches and thirty-six (36) inches to bottom of trench for services and secondary. (See Page 221.1).

**Sand or clean soil should be used for the encasement of the duct.
Crushed stone or other similar aggregate with sharp points is NOT acceptable.**

- **Inspections:** After installation of the duct, pull boxes, and the 4" sand bedding beneath the duct, call the Engineering Department for an inspection before proceeding. After installing the 4" sand cover over the conduit, call the Engineering Department again for a final inspection before proceeding with the backfill.

**FAILURE TO OBTAIN AN APPROVAL BEFORE BACKFILLING WILL
REQUIRE YOU TO EXPOSE ALL OR PART OF THE DUCT RUN, FOR
OUR INSPECTION AND ACCEPTANCE, BEFORE WE PROCEED WITH
INSTALLATION OF CABLE.**

- **Backfilling:** Excavation material may be used for backfill provided it is free from frozen particles, rock, vegetation, or trash. Backfill should be placed uniformly in layers and each layer thoroughly compacted. Leave ends of conduit exposed for the PUD crews to gain access. **Conduit must be sealed with a factory manufactured conduit plug.**

***If there are any questions, please contact our Engineering Department:
1411 West Clark Street, P.O. Box 2407
Pasco, WA 99302-2407
(509) 547-0556 or 1-800-638-7701***