

LINE EXTENSIONS



Service Provider will make a distribution line extension over the shortest feasible route. **Service Provider** may agree to an extension over an alternate route provided the customer pays all additional costs. Extensions must begin from a **Company** circuit of the appropriate size, phase, and voltage class required to serve the subject customer project. For example, a customer requesting three-phase 600A primary service will require an extension from a **Company** three-phase 600A primary line. A 600A primary extension cannot be made from a three-phase 200A primary line or from a single-phase 200A primary line. Likewise, a customer requesting three-phase secondary service will require, at minimum, a three-phase 200A primary line extension; a single-phase primary extension will not suffice for three-phase service.

QUALIFICATIONS FOR THREE-PHASE

General Service or Light and Power Customers qualify for a three-phase line extension under the standard line extension policy if either of the following applies:

1. Customer has a minimum service entrance rating of 400A (which may be the sum of two 200A services grouped together and served from the same transformer).
2. Customer has a single three-phase motor rated 10hp or greater.

For three-phase line extensions where these requirements are not met, the customer will be required to pay the additional line extension cost from the point of origin as per the **Company** Rules and Regulations governing Special or Excess Facilities. Residential Customers do not qualify for three-phase service.

OVERHEAD LINE

Free Allowance




Upon an applicant's satisfactory completion of required site improvements, **Service Provider** will make extensions from its existing overhead facilities of proper voltage and adequate capacity free of charge a distance of up to 500 feet for **TEP** and 550 feet for **UES Santa Cruz**. The distance will be measured by the shortest feasible route along public streets, roads, highways, or suitable easements from the existing facilities to the applicant's point of delivery. Line extensions to temporary services, unusually small loads not consisting of a residence or a permanent occupied building will not be granted the free allowance.

Deposit

For overhead line extensions in excess of the free allowance, a non-interest bearing cash deposit must be made for the cost of the excess footage. The **Company** will refund the deposit under the terms of the contract for each permanent customer connected to the overhead extension for which the deposit was made. Any new connection made to a refundable line extension that requires its own separate contract, will not be applied as a refund connection. The total refund will not exceed the amount of the initial deposit.

UNDERGROUND LINE

In addition to any required deposit for the length of the distribution line (see Overhead Line Extensions) the customer will be required to pay the difference in cost between an underground line extension and an equivalent overhead line extension as a non-refundable cash payment. The customer may, with the consent of the **Company** and in accordance with **Company** Standards, provide trenching, backfilling (with necessary imported fill), conduit system, pole risers, pull boxes, switch bases and pads as part of the overhead- underground differential payment. The customer is also responsible for the installation any other civil material provided by **Service Provider** as noted in a **Company** Construction Drawing.

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SINGLE PHASE UNDERGROUND LINE

The overhead/underground differential payment for single-phase underground line extensions to individuals as well as within subdivisions is usually satisfied if the customer provides all trenching, backfilling (including any imported backfill required), compaction, repaving, and all earthwork required for equipment pad sites. Service Provider reserves the right to design any single phase underground distribution system in a duct. For such installations, the following basic rules are applied.

1. All trenches shall comply with Company's trenching and backfill requirements (joint and non-joint trenches).
2. Property corner pins must be identified and left in place and/or re-established in place for Company inspectors' use in placing stakes for transformers, pull boxes, J1's, pedestals and backfill inspections.
3. The customer is responsible for the trench and/or excavation being properly located within specified easements and/or rights-of-way. All relocation costs resulting from improperly located trenches shall be borne by the customer.

THREE-PHASE UNDERGROUND LINE

The overhead/Underground differential payment for the three-phase underground line extensions is usually satisfied by the customer providing all earthwork and installing all necessary ducts, concrete pads, pole risers and other appurtenances as specified on the applicable Company Standards for these items. Each installation will require advanced layout and approval by Service Provider as to satisfying the differential cost in this manner. The customer is responsible for the trench and/or excavation being properly within specified easements and/or right-of-way. All relocation costs resulting from improperly located trenches shall be borne by the customer.

1. Layout of the electrical system completed.
2. Obtain easements and agreements as possible.
3. Customer installs duct system and calls for inspection before backfilling the trench. Any concrete encased duct must be inspected prior to and after the pouring of concrete, but prior to backfilling the trench. After duct has been inspected and passed, customer to shade duct and install other utilities. A minimum of one foot separation is required between Company's and other utilities.
4. Customer completes backfill and compaction as required.
5. Customer installs Company approved precast pad or frames the concrete pad and calls for inspection.
6. Customer pours concrete pad, removes frame work and calls for a final inspection.
7. Customer installs pull rope and calls for mandrel inspection. Note: All contingencies must be satisfied prior to mandrel inspection including any billable costs, deposits and/or easements.
8. Service Provider installs the primary cable and pad-mounted transformer(s). Service point of delivery is typically at the secondary terminals in the transformer. Customer to furnish and install service conductors from the Company transformer to the customers switchgear. The service conductor size will be no greater than **600kcmil**.



SUBDIVISION LINE

Contracts for extensions made up to the perimeter of a duly recorded subdivision will be determined by the total footage of cable or wire and the class of line that is required to be extended in order to serve the new project/future load.

Contracts for extensions made inside of a duly recorded subdivision is determined by the total cable footage required to serve the subdivision and the number of lots being installed and energized under one contract.

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HIGH DENSITY DEVELOPMENT DESIGNS

Due to the tight nature of these developments some of the Service Requirements standards may be difficult to obtain. However, all Service Requirements are necessary for the safe operation and maintenance of the utility facilities and must be followed. Planning for these requirements early in the design phase ensures the best outcome for all parties. The following list of Service Requirements highlights common areas of concern pertaining to this type of design. This list is not all inclusive and the entire Service Requirements Book should be used to ensure compliance with all standards.

1. SR 208 - Site Preparation for Equipment Pads on Sloping Grades
2. SR 209 - Trenching, Underground Residential Distribution (U.R.D.)
3. SR 215 - Trenching 2.5", 4" and 6" Conduit Installation
4. SR 230 - Equipment Barrier, Protective
5. SR 312 - Trenching, Service (Single-Phase)
6. SR 405 - Metering Installations (General Requirements)
7. SR 418 - Residential or Commercial Service, Multi-Metering Installations
8. SR 452 - Approved Metering and Service Equipment

You may contact **Design Services** for TEP at (520) 918-8300 and for UES at (520) 761-7951 to help work through concerns and ensure compliance with these and all standards.

NEW SUBDIVISIONS - PROVISIONS FOR SERVICE




Arrangements for the extension of electric facilities to a new subdivision are made through the Land Management Department and the Contracts Coordinator.

The developer must provide:

1. A sepia copy of the recorded plat or development plan.
2. Construction contract deposit.
3. Differential payments as required for underground extensions.
4. Easements as required for the distribution extension, and any rights-of-ways necessary for approach lines must be dedicated on the plat. Additional easements may also be required and will be provided by a separate instrument in a form acceptable to **Service Provider**.
5. The area of installation shall pass all inspections before the electric distribution lines can be installed. Transformer pads and pedestals must be level at final grade prior to installing cable, transformers and terminating pedestals.
6. Individual lot boundaries shall be identified and remain identified until the distribution system has been installed.

DUCTS FOR ROAD CROSSING

Should a developer wish to pave or backfill areas prior to the installation of the remaining conduit system, the developer shall install the conduit(s) of the size and type which the project has been designed for by **Service Provider**. See per SR-210 for the specifications. If the conduit(s) is being installed for future use, the developer shall be responsible for providing **Design Services** with a dimensioned "As Built" drawing showing the exact location of the conduit(s) and install per SR-218. The cost of pavement cuts or boring necessitated by lack of conduit(s) or the inability to locate such conduit(s) shall be borne by the developer.


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ADDITIONAL CHARGES

In addition to the normal cost associated with the installation of distribution facilities, the customer may be charged for the following:

1. The costs associated with problems caused by changes in apartment numbers.
2. The cost of alternate designs requested by the customer.
3. The cost of facilities in excess of Service Provider's standard installation, which are requested by the Customer and would not otherwise be required to provide adequate service.
4. Other costs of nonrecurring nature, specifically associated with the proposed installation.
5. The cost associated with any installation change to an approved construction drawing, or deviation from Electrical Service Requirement book standards without prior approval from Design Services, is subject to Billable charges. These changes may include the cost of additional material, labor and engineering time.
6. When electric facilities are damaged in the course of excavation or in any other manner, the total cost of repair will be borne by the party responsible for the damage.
7.  Company inspectors do not verify grade stakes. Any adjustments required to grade and/or pad sites due to inaccurate grading, grade changes and/or improper grade establishment at trench or pad sites will be the responsibility of the Developer/Contractor. Any associate costs to correct grade or pad sites and any costs incurred by Service Provider due to a change in surface elevation will be borne by the customer.
8. Service Provider may agree to relocate existing facilities if the customer provides all required right-of-way and pays in advance all costs of the relocation.

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