



A. **UNDERGROUND SERVICE POLICY** (Distribution Systems)

II. **GENERAL**

1. The following rules are prescribed for extension of electric facilities to all new developments as well as conversion of existing overhead distribution facilities to underground. A residential subdivision consists of five or more lots of 10 acres or less each. These underground provisions do not apply to transmission lines or main distribution feeder facilities required to serve areas larger than the specific development in question. Summer and Winter rates vary for installation of distribution facilities. Facilities will be undergrounded as funds become available through the Light and Power budgeting process in compliance with sound fiscal management. Distribution facilities will be undergrounded only where such undergrounding is in keeping with good engineering design and sound system operating practices.
2. Definitions:
  - a. Distribution System - electrical system operated from 600 volts up to 15,000KV or less, to ground.
  - b. Secondary System - electrical system operated to 600 volts or less, to ground. (Includes all service drops)
  - c. Service Drops - electrical conductors operated at 600 volts or less that connect the customers metering point to the utilities distribution system.
  - d. Winter rate for the construction of distribution facilities and service drops applicable whenever the excavation conditions are difficult due to ground freezing. Higher rates apply during these periods of time due to increased stress on trenching equipment and increased manpower due to slower trenching.
  - e. Summer rates for the construction of distribution facilities and underground service drops are applicable whenever there is no ground frost.
  - f. Customer facilities include service disconnect, metering base, service entrance, etc.
  - g. Public Places are areas used by all of the citizens of Traverse City, i.e. Parks, schools, shopping malls, beach areas, hiking trails etc., typically does not include alleys, streets or sidewalks.
  - h. Readily accessible area is an area that provides Light and Power with an opportunity to underground electrical facilities at a lower cost due to other adjacent areas of construction such as roads, buildings etc. (reduced trenching, reduced concrete removal, reduced boring costs).
  - i. Transmission systems - electrical systems operated above 15,000 volts or more to ground.

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II CUSTOMER REQUIREMENTS

1. The customer must enter into a written contract with TCL&P describing the underground facilities to be provided. This contract will also identify any required contribution to be paid by the customer and any underground service work to be performed by the customer or his contractor.
2. Upon TCL&P's request, the property owner must provide recordable easements satisfactory to the engineering and legal departments. TCL&P will keep service records for all installed underground facilities.
3. Prior to the installation of underground facilities, the customer or developer must provide rough grading (within six inches of finished grade). Permanent survey stakes indicating property lines must be installed and maintained.
4. Any subsequent relocation of the Department's facilities required, on account of a change in grade or improperly located survey stakes, shall be done at the customer's or developers expense.
5. Customer must provide a suitable route for service lines and space for necessary transformers or other facilities.
6. Customer shall, at his expense, remove sufficient trees, rocks, or other obstructions to allow the Department to install its underground facilities.
7. Where conduits are required under paved areas or other areas deemed necessary by TCL&P, the customer shall either install the conduits in accordance with TCL&P's engineering requirements or pay TCL&P to install these needed conduits. Where the customer installs conduit, the underground charge will be reduced by \$1.00 per foot.
8. If temporary overhead service is installed for the convenience of the customer for construction purposes prior to the installation of the underground system, the customer shall be required to pay the in-and-out costs of such overhead facilities in the underground area.
9. Any unexpected additional costs of construction above what is normally incurred will be paid for by the customer.

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**III. RESIDENTIAL DEVELOPMENTS**

1. The Electric Distribution System, including any street lighting in new residential subdivisions, shall be placed underground.
2. The owner or developer of such subdivision shall be required to make a nonrefundable contribution in aid of construction, which may be required in advance, to the Department in an amount equal to the sum of the lot front measurement multiplied by \$3.50 (Summer), \$5.25 (Winter), which shall be considered to be the difference in cost between overhead and direct burial underground facilities.
3. The front-foot measurement of each lot to be served by a residential underground distribution system shall be made along the contour of the front lot line. This front lot line is that line which usually borders on or is adjacent to a street. However, when streets border on more than one side of a lot, the shortest dimension shall be used. In case of a curved lot line which borders on a street, or streets, and represents at least two sides of the lot, the front-foot measurement shall be considered as  $\frac{1}{2}$  the total measurement of the curved lot line.
4. The construction provided for in the \$3.50 (Summer), \$5.25 (Winter), per lot front-foot contribution in aid of construction includes the extension of electric distribution facilities to the lot line of each lot in the subdivision.
5. The use of the lot front-foot measurement in these rules shall not be construed to require that the underground electric distribution facilities be placed at the front of the lot.
6. The Department shall install, own and maintain the service line from the property line to the customer's meter.
7. For a normal underground electric service installation, the developer or customer shall make a nonrefundable contribution in aid of construction, which may be required in advance, to the Department in an amount equal to the product of the straight line distance in feet from the termination of the Department's facilities at the front or rear property line to a point directly below the customer's meter multiplied by \$3.50 (Summer). Where special routing of the service line is required by the customer, the \$5.25 (Winter) per foot will apply to the route of the line as installed.

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8. Underground service connections from overhead distribution lines will be made if requested by the customer. The customer shall be required to make a nonrefundable contribution in aid of construction to the Department, which may be required in advance, to cover the additional cost of the underground service connection. For normal installations such contribution shall be computed on the basis of \$50.00 plus \$3.50 (Summer) per foot of straight line distance from the base of the Department's pole at the front or rear property line to a point directly below the customer's meter. Where special routing is required by the customer, the \$5.25 (Winter) per foot will apply to the route of the line as installed.

**IV COMMERCIAL OR INDUSTRIAL DEVELOPMENTS**

1. New distribution and service lines in the vicinity of these customers' property, and constructed solely to serve a customer or group of adjacent customer, shall be placed underground.
2. The developer or customer shall be required to make a nonrefundable contribution in aid of construction to the Department, which may be required in advance, for a direct burial installation in an amount computed by multiplying the length in feet of the required trench by \$5.50 (Summer). The customer shall furnish and install the \$8.25 (Winter) secondary service and shall furnish the concrete pad for City's transformer. The installed cost of the concrete pad will be deducted from the underground charge.
3. In addition to the \$5.50 (Summer), \$8.25 (Winter), per trench foot, a contribution of \$50.00 shall be required for each new underground service connection made from overhead facilities.
4. In high-rise buildings where the Department is requested to furnish primary cables plus dry-type transformers located within the building, the cables will be installed in customer-furnished conduits at \$5.50 per conduit foot. An additional charge of \$3.00 per KVA will be made for all transformer capacity installed within the building.
5. When it is in the best interest of the Light and Power Department, the Executive Director may waive these underground charges and make accommodations as deemed appropriate by special circumstances.

**V. MOBILE HOME PARKS**

1. The underground distribution system shall be installed in accordance with the aforementioned "Commercial" policy at \$5.50 (Summer), \$8.25 (Winter), per trench foot for direct burial facilities.

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2. The underground service lines in individual trailer sites will be installed in accordance with the Residential policy above at \$3.50 (Summer), \$5.25 (Winter), per trench foot for direct burial installations.

## **VI. TYPES OF CONSTRUCTION**

1. Direct burial of underground cables is the Department's standard construction for non-paved areas as covered by the foregoing rules. Minimum depth of burial below final grade is 30 inches for cables operating at 600 volts or less, and 42 inches for higher voltage cables.
2. When required, distribution transformers may be of the pad-mounted type or submersible type in the below grade vault at the option of the Department.
3. Conduit and manhole systems may be required where cables must be installed in congested areas or under paved areas.
4. Pad-mounted switches, primary pad-mounted junction boxes, and pad-mounted fused switches and junction boxes may be used instead of manhole systems where they can be adequately protected from physical damage.

## **VII. SPECIAL CHARGES**

1. Where practical difficulties exist, such as front or water conditions, rock near the surface, or where other than standard direct burial construction is necessary, the required contribution in aid of construction may be increased sufficiently to cover the extra costs involved.

## **VIII. EXISTING OVERHEAD FACILITIES**

### **1. FOR DESIGNATED PUBLIC PLACES**

1. In areas used by all of the citizens of Traverse City, the term "commons" will be used. (i.e. parks, school yards, shopping malls, etc.) In commons areas where overhead facilities affect detrimentally the community image of Traverse City, the Light and Power Board will place such distribution facilities underground at its expense. The customer would pay only for the cost of undergrounding of his own service drop and conversion of his meter base from overhead to underground. The Light and Power Board will create a prioritized list of commons areas to be undergrounded and develop an associated capital plan. For designated commons

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areas where aesthetics indicate that undergrounding is appropriate and is in keeping with good engineering design and sound system operations, the following costs will be allocated to all parties.

- a. Board pays for: - all distribution system costs
- b. Customer pays for: - undergrounding service drop and conversion of meter base to underground.

### 2. CUSTOMER REQUESTED AREAS

- 2. TCL&P would, upon request, participate in the undergrounding of existing overhead facilities in residential and commercial areas not designated as commons areas on the following terms and conditions.
  - a. Board pay for - cost of new overhead system (base system)
  - b. Customer pays for - Book value of existing overhead (30-year depreciation)
    - Difference in cost between installing new overhead and underground distribution systems.
    - undergrounding service line and conversion of meter base to underground.

### 3. FOR READILY ACCESSIBLE AREAS

- 2. In areas of existing overhead systems, where roadways/buildings or other facilities are being constructed that would make it easier for TCL&P to install conduit and underground facilities at reduced cost (i.e., no trenching, no concrete removal, no boring etc.), TCL&P, at its own discretion and cost, can elect to install URD because of the opportunity that presents itself in the form of reduced costs.
  - a. Board pays for: - all underground distribution facilities
    - removal of overhead (if required).
  - b. Customer pays for: - undergrounding service line and conversion of meter base to underground (if required).

### 4. NEEDED ELEMENTS FOR CONVERSION AREAS

- 4. In order for an area to be eligible for undergrounding considerations, the following criteria would to be met.

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- a. Contract signed between customers and TCL&P.
  - b. All other utilities in this area must agree to underground their facilities or remove them (i.e., telephone, cable tv., etc.) For later removal of TCL&P utility poles.
  - c. All right-of-way required across private property must be provided at no cost to TCL&P and obtained by customer.
5. In order for TCL&P to financially participate in undergrounding facilities in TCL&P service areas, the appropriate resources must be available through the Light and Power budget process

**IX. TEMPORARY SERVICES**

1. It will not be mandatory that any new commercial or industrial distribution systems or service connections be placed underground if, in the Department's judgement, such facilities would serve customers having loads of temporary duration.
2. At the option of the Department, temporary service provided during the construction of permanent facilities may be overhead.

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Richard L. Smith  
Executive Director and Secretary  
Traverse City Light and Power Board