STANDARD

ELECTRICAL

SERVICE

REQUIREMENTS

1140 East Parker Street

Lakeland, FL 33801-2066

Effective Date: July 1, 1998
Revised Date: September 2011

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INTRODUCTION

The City of Lakeland, Electric Utilities Department, as with any business is constantly working to establish and maintain credibility. Credibility is a necessary basis for good working relationships between customer, developers, electricians, as well as state, county, regional and local agencies.

The defining of responsibilities between the various parties is the first and most important action in establishing credibility. In an effort to do this, the Department has developed this "Standard Electric Service Requirements" document. Its purpose is to fully define the various parties responsibilities, thereby, establishing credible and realistic accountability. This will lead to interactions and working conditions where all parties involved realize and understand their responsibilities, thereby, providing a means of accountability for everyone.

The Department has used its experience, gained over many years in the electric utility industry, to identify those areas frequently in need of clearly defined boundaries. The Department has attempted to clearly and accurately state the responsibilities of all parties involved, thereby, establishing expectations which are known to, and can be depended on by all members when dealing with the Department.

This information will allow for the planning, coordination, construction, operation, maintenance, and renovation of both customer's and the Department's facilities. The important ingredient being provided is the commitment of the Department's policies and procedures, regarding standard electric service requirements, to writing in order to improve understanding and cooperation among all parties.

This document has been developed to cover the majority of activities and situations encountered. It cannot possibly cover every possible situation which may arise. There will be times when the circumstances encountered are not covered or when the policies and procedures clearly are not applicable and logic must prevail. In these cases, the Department and its employees pledge to work with all parties involved to reach a fair and equitable resolution in the best interest of everyone.

_____

Alan Shaffer
Energy Delivery Director

Prepared by:
Lakeland Electric
Standard Electrical Service Requirements Committee

Approved by the City _____

Effective: July 1, 1998

PROCEDURE FOR REVISIONS

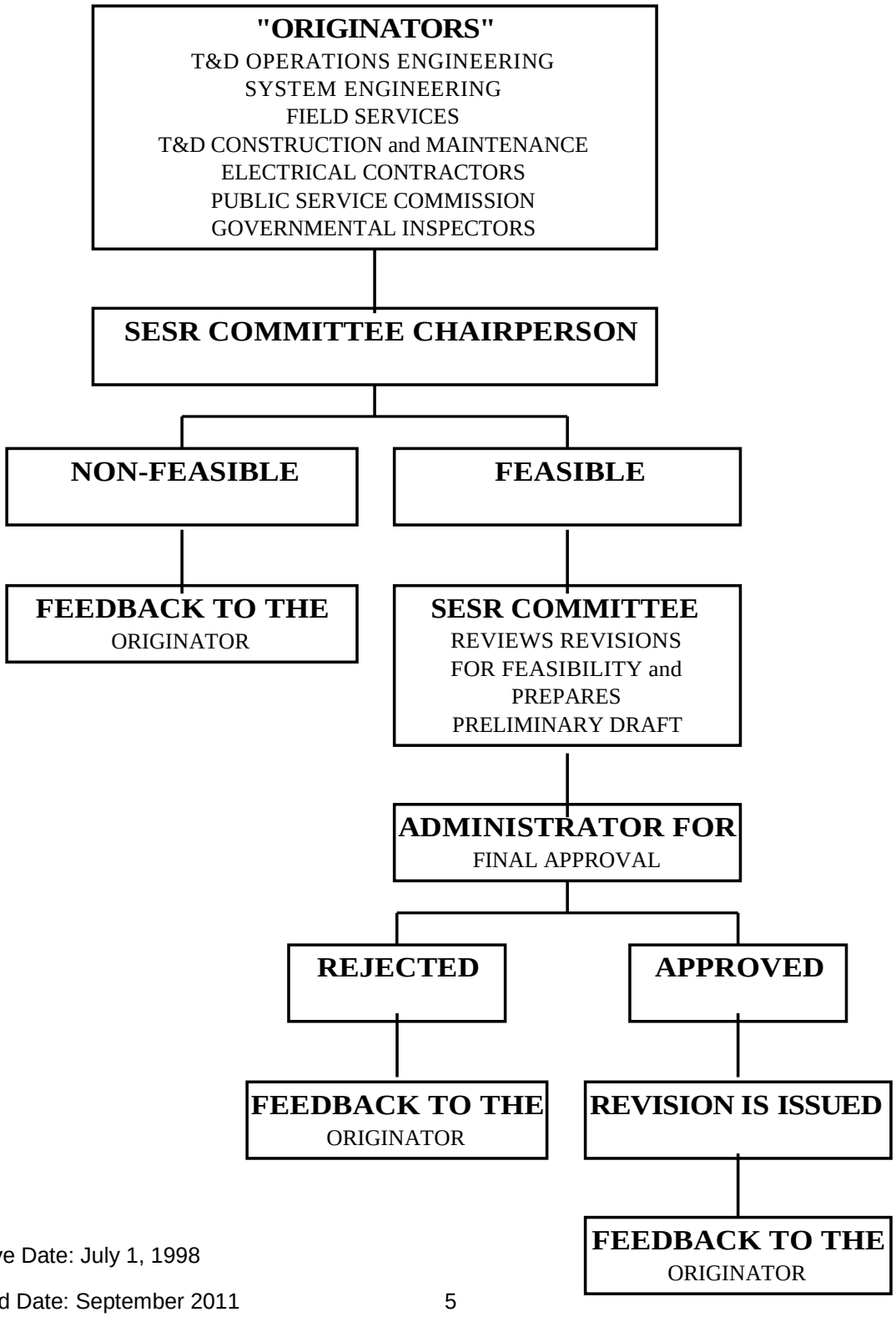
The rules set forth in this Standard Electrical Service Requirements (SESR) change from time to time due to improved methods of construction, product application, and changes in Safety standards. Lakeland Electric (LE) reserves the right to change or amend its rules, regulations, rates, or other charges, at any time and such changes or amendments, shall become effective upon the date determined by Lakeland Electric.

These changes follow a sequence of approval which enables the establishment and enforcement of the requirements. Additionally, routine review of the requirements by Manager of Engineering insures that the information does not become outdated.

Proposed revisions are received by the SESR Committee Chairperson, reviewed and studied for viability with input from the originator. If the change is viable it will be passed to the SESR Committee for preliminary approval. A draft will be written and passed to Administration for final approval. If approved, the final draft of the new or revised rule is then copied and distributed with the appropriate cover letter to all Policy Manual holders. The originator will be notified whether the proposal was rejected or passed.

LAKELAND ELECTRIC

SESR POLICY PROCEDURE FOR REVISION
FLOWCHART



CONTACT LIST

CITY OF LAKELAND

Address: 228 S. Massachusetts Avenue
Lakeland, FL 33801
Phone: (863) 834-6000
Permit Office
Phone: (863) 834-6070
Inspection Requests (Electrical)
Phone: (863) 834-8299
Property Information Office
Phone: (863) 834-6084

LAKELAND ELECTRIC

Customer Service Offices
Office: Main
Address: 801 East Lemon Street
Lakeland, FL 33801-5050
Phone: (863) 834-9535

Electric Systems Engineering, A-71
Address: 501 East Lemon Street, A-71
Lakeland, FL 33801-5050
Phone: (863) 834-6502
Fax: (863) 834-8475

Electric System Reliability A-51
Address: 501 East Lemon Street, A-51
Lakeland, FL 33801-5050
Phone: (863) 834-6482
Fax: (863) 834-6548

T&D Operations Engineering, T-21
Address: 1140 East Parker Street T-21
Lakeland, FL 33801-2066
Phone: (863) 834-8868
Fax: (863) 834-6744

Contracts and Rights-of -Way

Address: 501 East Lemon Street –A-24
Lakeland, FL 33801-5050
Phone: (863) 834-6536
Fax: (863) 834-8387

Commercial & Industrial Act Mgr. A-33
Address: 501 East Lemon Street, A-33
Lakeland, FL 33801-5050
Phone: (863) 834-6380
Fax: (863) 834-6344

Field Service Division, AS5
Airport Road
Lakeland, FL
Phone: (863) 834-6789
Fax: (863) 834-6815

CITY OF POLK CITY

Address: 132 Commonwealth Ave., NW
Post Office Box 113
Polk City, FL 33868-0113

Permit-Building-Inspection Office
Phone: (863) 834-1375

POLK COUNTY

Address: 305 W. Church Street
Post Office Box 726
Bartow, FL 33831

Inspection Requests
Phone: (941) 534-6057

Building Inspectors Office
Phone: (834) 534-6577
(834) 534-6578

Permit Office
Phone: (834) 534-6080

DEFINITIONS

Account: Any present or prospective user or user's authorized representative of electric and/or water service provided by Lakeland Electric at a specific location.

Alternating Current (AC): Current which alternates the direction of its flow periodically. The period in which it alternates or changes from original to reverse back to original is a cycle (frequency), measured in Hertz. Normally in US is 60 hertz (60 cycles / second).

Ampere (amp): Unit of measurement of current. Quantity of electrons flowing through a conductor past a given point in one second.

Applicant: Any person, partnership, association, corporation, or governmental agency controlling or responsible for the development of new subdivision, business, industry or dwelling unit and applying for electric service and / or the construction thereof to service such facility.

Billing Demand: Is expressed in kilowatts and is the peak 30 minute integrated demand for that account for the particular billing period.

Branch Circuit: That portion of the electrical circuit nearest the utilization point behind the main disconnect and the last circuit protective device.

Bus (Bus bar): An electrical conductor or electrically conducting bar which serves as a common connection for two or more electrical circuits.

Cable: An electrical conductor composed of two or more separately insulated wires banded or twisted together.

Capacitor: An electrical device that maintains or increases voltage in power lines and improves the efficiency of the electrical system by reducing inductive losses that produce wasted energy.

Capacity Requirements: Typically the maximum voltage and current needs of a Customer or his facility.

CIAC: See Contributions-in-Aid-of-Construction

Circuit: A conductor (wire) or system of conductors (wires) and other electrical equipment through which electric current flows or is intended to flow.

Circuit Breaker: An Overcurrent device used to protect wiring from excessive current flow.

Circuit Recloser: A protective electrical device that interrupts momentary line faults and restores power automatically when the fault is cleared. If it opens and closes several times consecutively, it locks open until manually closed by a service person.

Class of Service: The type of service available to a particular type of Customer (residential, commercial, etc.).

Code: The National Electrical Code's latest revision.

COL: The City of Lakeland.

Commercial Service: Service to Customers engaged in selling, warehousing, or distributing a commodity in some business activity or in a profession, or in some form of economic or social activity (offices, stores, clubs, hotels, schools, etc.).

Commission: Florida Public Service Commission

Conductor: A wire that carries electric energy.

Conduit: A pipe that carries one or more conductors.

Connection Charge: Fee paid by a Customer to connect their facilities to the electric service provided by the utility.

Conjunctive Billing: The adding of the readings of several meters on a customer's premises into one reading which is then applied to the appropriate rate.

Contributions-in-Aid-of-Construction (CIAC): The cost to be paid by the Customer which is in excess of the normal amount required to be spent by the utility for service to the Customer.

Current: The volume of electric energy flowing through a conductor.

Customer: Any individual, developer, owner, partnership, corporation, trustee or: any present or prospective user, or user's authorized representative of electric and / or water service provided by Lakeland Electric. A Customer may have one or more accounts.

Delta Connection: A three-phase electrical connection where the equipment (transformers, load, etc.) is connected in a triangular configuration.

Demand: The magnitude of electric load in operation at an installation. Demand may be expressed in kilowatts, kilovolt-amperes, or other suitable units.

Distribution: Delivery of electric energy to customers on the distribution system. It is reduced and then carried first on primary distribution lines. For customers needing lower voltage it is reduced again by a distribution transformer or line transformer changing it to secondary distribution voltage. Ranges from 120 to 12,470 volts.

Distribution System: Electric Service facilities consisting of primary and secondary conductors, service laterals, transformers and necessary accessories and appurtenances for the furnishing of electric power at utilization voltage (13 kV and below on Lakeland Electric's system).

Easement: A privately owned parcel of land which is dedicated by the Owner for the primary purpose of installing, maintaining and replacing Lakeland Electric's facilities.

Electrical Contractor: A person responsible for the construction or maintenance of the Customer's electrical facilities.

Energy: Electrical power consumed over time, generally expressed in kilowatt-hours. For example, a 100 watt light operating for 10 hours consumes 1,000 watt-hours (1 kilowatt-hour) of electrical energy.

FAC: Florida Administrative Code.

Facilities Charge: A monthly charge for facilities owned and maintained by the utility and installed beyond the point of metering or installed for a special purpose.

Feeder (distribution): The main trunk line from which taps carry electricity to customers.

Final Grade: The finished grade level of the earth around a building, or structure, and within the utility easement. Same as Final Grade.

Finish Grade: The final grade level of the earth around a building, or structure, and within the utility easement. Same as Final Grade.

Flicker: The momentary variation of voltage level caused by on/off switching of a load on a circuit.

Fuse: Protective device containing a small wire designed to melt when current reaches a value that could damage the conductor or the device it is protecting.

Ground: Earth potential.

Grounding: Connecting a source of electricity, or a conductor likely to be subjected to electrical current, to the ground for runoff and absorption of excess electrical current.

High Leg: The conductor in a three-phase delta secondary connection that has a higher voltage-to-ground potential than the other conductors.

Horsepower (HP): The nameplate rating of the output power of motors and other similar apparatus. Although, one horsepower is equal to 746 watts, due to motor inefficiency and power factor, one horsepower output is frequently equated to one kilovolt-ampere input.

Inspector or Inspection Authority: A person or agency authorized to inspect and approve electrical installations.

Kilowatt (KW) (1000 watts): A watt is the electrical unit of power or rate of doing work. It is equal to one ampere flowing under the pressure of one volt at unity power factor.

LE: The City of Lakeland Department of Electric Utilities.

Line Extension: That extension of the circuit to be added to the existing circuit.

Line Side: The Utility's side.

Load:

(1) The Customer's equipment requiring electrical power.

(2) The quantity of electric power required by the Customer's equipment, usually expressed in kilowatts or horsepower.

Load Balance: An equally spread load over a multi-phase system.

Load Side: The Customer's side.

Loop: An electrical circuit that provides two sources of power to a load or substation. With a loop, when a source is de-energized, the remaining source can continue to provide power.

Master Metering: The use of a single electrical meter to measure the total consumption of a multi-occupant building or complex. Generally disallowed for residential, multi-unit buildings.

Mobile Home (House Trailer): A non-self propelled vehicle or conveyance, equipped to travel upon the public highway, that is used either temporarily, or permanently as a residence or living quarters.

National Electrical Code (NEC): The minimum standard for customer wiring as enacted by the National Fire Protection Association and enforced by local government.

National Electrical Safety Code (NESC): The minimum national standards for all attachments and installations of current carrying facilities.

Ohm: Unit of measurement of electrical resistance.

Overhead Service: Wiring and associated facilities normally installed on poles by Lakeland Electric to serve the Customer.

Pad-Mounted (transformer): A distribution transformer located at ground level, normally on a concrete pad.

Phase: A technical term referring to relative position of electrical properties in a circuit (the angular difference between voltage waveforms between two transmission lines or substations, and the angular difference between voltage and current at any point in a transmission system). It is crucial that all equipment operating in one circuit be closely "in phase." Problems begin when a phase angle gets too large.

Point of Attachment (to the customer): That location at which Lakeland attaches its service to the Customer's wiring system.

Point of Delivery: The point where Lakeland Electric's facilities are connected to the service cable serving the Customer. i.e. Lakeland Electric pole, or underground distribution equipment.

Power Factor (PF): The ratio of kilowatts divided by kilovolt-amperes.

$$\textit{Power Factor} = \frac{\textit{Kilowatts}}{\textit{Kilovolt-Amperes}}$$

Premises: The property location of Customer or Lakeland Electric equipment.

Primary Service Voltage: The voltage level in a local geographic area which is available after Lakeland Electric has provided one transformation from the transmission system. For service taken at primary voltage all additional transformations shall be Customer-owned.

Raceway: A mechanical structure for supporting wiring, conduit, or bus.

Rate Schedule: The approved standard used for calculation of bills.

Relay: A protective device that monitors input to indicate or isolate an abnormal condition. The relays quickly detect problems and open the proper number of circuit breakers to isolate the problem. This minimizes or prevents damage to equipment and minimizes disruption of the normal operation of the rest of the power system.

Relay Service: Service supplied to a Customer from more than one distinct source that is normally automatically switched upon loss of the preferred source.

Residential Service: Service to customers in private residences and individually metered apartments and condominiums when all energy is used for domestic purposes.

Resistance: Property of substance to resist the flow of electric current. A certain amount of energy is required to overcome resistance of an electric conductor, resulting in some energy loss.

Responsible Party: Person or organization responsible for payment for services provided by Lakeland Electric.

Right-of-Way: Land in which a public roadway is installed.

Rules and Regulations: The approved standards and methods for service to Lakeland Electric's customers.

Secondary: 0 – 600 volts. The power from a distribution transformer or secondary pedestal.

Secondary Pedestal: Above grade junction box where secondaries terminate and services are started.

Service:

(1) The supply of L.E.'s product, "Electrical Energy", measured in kilowatt-hours and kilowatt demand.

(2) The conductors and equipment for delivering energy from the electricity supply system to the wiring system of the premises served.

Service Address: Street address and designation as approved by the City of Lakeland Property Information Office.

Service Drop: The overhead service conductor(s) from the last pole or other aerial support to and including the connections to the service entrance conductors at the building.

Service Entrance: That portion of the wiring system between the point of attachment to Lakeland Electric's distribution system and the load side terminals of the main switch or switches. This will include the grounding equipment.

Service Equipment: The necessary equipment, usually consisting of circuit-breaker or switch, fuses and their accessories, located near the point of entrance of supply conductors to a building and intended to constitute the main control and means of disconnection for the supply to that building.

Service Lateral: The underground service conductor(s) between the transformer, hand hole, connection cabinet or pole and the Customer's terminal box, meter or other enclosure.

Service Location: The point established by Lakeland Electric for the location of the service entrance (the location of the meter).

SESR: Standard Electric Service Requirements Policy. Policy for contractors, electricians and developers to install and obtain electrical service.

Single-Phase: One phase of a three-phase system (see three-phase).

Single Structure: Single-family unit or single commercial building.

Subdivision: A parcel of land which is subdivided into tracts or lots or more building lots or upon which more than one (1) separate dwelling units are to be located, or land on which new multiple-occupancy buildings are constructed.

Sub-Meter or Test Meter: A meter used to check electric usage on a particular electrical load for a non-billing purpose.

Tap: An electric circuit with limited capacity extending from the main feeder, usually supplying a small number of customers.

Tariff: The assembled volume containing the "rules", "regulations", "rate schedules", "standard forms", "contracts", and other materials as required by, and filed with, the Florida Public Service Commission.

Temporary Service: Service which is provided by Lakeland Electric for limited time use, such as construction poles.

Three-Phase: A term applied to circuits or machines utilizing three alternating current voltages, equal in magnitude, separated by 120 electrical degrees.

Transformer: The device which changes voltage levels.

Underground Service: The wiring system and associated equipment which is placed on or in the earth, as opposed to pole line construction.

Vault: An isolated ventilated enclosure for electrical equipment with fire-resistant walls, ceiling and floor which personnel may enter and in which transformers and switching equipment are installed, operated, and maintained.

Voltage: The electrical pressure of a circuit expressed in volts. Generally, the nominal rating based on the maximum normal effective difference of potential between the conductors of a circuit.

Voltage Dip: A momentary reduction of voltage level.

Weheatherhead: A device used at the service entrance to prevent water from entering the service mast or riser.

Wye Connection: A three-phase electrical connection where the equipment (transformer, load, etc.), is connected in a "Y" configuration. Also called a star connection.

SECTION 1: GENERAL CUSTOMER INFORMATION

1.1 Application for Electric Service – Deposits

Anyone desiring electric service from Lakeland Electric must make an "Application for Electric Service." Contact Lakeland Electric Customer Service Business Office at Lakeland Electric's Administration Building or at any convenient Branch Office. The application may be made by the Customer or by a duly authorized agent.

Application may be made in person or by mail, phone or facsimile however, an original application signed by the responsible party must be submitted to Lakeland Electric within fifteen (15) days. Information required includes personal and/or business information and identification as specified; service address as determined by the Property Information Office of the City of Lakeland; telephone number at the location; and billing address and telephone number if different from Service Location.

In addition, a monetary deposit may be required, the amount of which shall be set by Lakeland Electric and will vary according to the type of service provided. A connection charge is assessed and appears on the first bill. Lakeland Electric will not connect the electric service until the necessary application has been made and any deposit paid. This should be done as far in advance of the time electrical service is desired as is possible. The application will be finalized by Lakeland Electric when all the provisions of these Rules and Regulations and of applicable codes and inspections have been complied with. Upon acceptance thereof by Lakeland Electric the application constitutes a service contract based upon these and other Lakeland Electric rules, rates, and policies and becomes effective at the time the Customer is connected to Lakeland Electric's system.

For specific information on all new residential and commercial construction services, refer to Section 2.0, *General Service Information.*

FOR AN APPLICATION—CONTACT CUSTOMER SERVICE AT 863-9535

CITY OF LAKELAND – DEPARTMENT OF ELECTRIC UTILITIES
APPLICATIO FOR RESIDENTIAL SERVICE

PLEASE PRINT

Date of Application:_____ Date Service Requested: _____

Name of person who will be responsible for this service:

Last_____ First_____ Middle_____

Name of business responsible for this service: _____

Service Address: _____

Mailing Address (If different): _____

Home Phone:_____ Work Phone:_____ SSN: _____

Please be prepared to show the Customer Service Representative your Authorized Photo ID (State Photo ID, State Driver License, or Passport). You may be requested to validate your identification number if you transact business over the telephone.

I understand:

1. That Florida Law exempts residential accounts from paying state sales tax. You will be exempt if there is a commercial business of any kind conducted on these premises. If this account is for a model home, there is to be no sales center or office benefiting from this service.

2. It is my responsibility to notify Lakeland Electric of any changes in the status of this service address.

3. That I am responsible for all taxes, penalties, and interest that may be assessed against this account while in my name.

4. That this information is subject to audit by the Florida Department of Revenue.

By my signature I certify that the above information is correct, and that I agree to be responsible for all utility charges at this service address until I order those services terminated.

Signature of the responsible person: _____

(The responsible person must be 18 years old or older)

This application must be complete, signed, and returned by the responsible party within 15 days of the service start date to avoid possible interruption of service. A postage paid return envelope is furnished for your convenience, or you may return it to our Downtown Office at 501 East Lemon Street.

If a business is responsible, a letter of authorization must accompany this application. The letter must be on the letterhead of the responsible business.

FOR OFFICE USE ONLY

Account #:_____ **Deposit #:**_____ **EMP:** _____

W/O #:_____ **W/O #:** _____

FOR AN APPLICATION CONTACT THE

COMMERCIAL ACCOUNT MANAGERS (863) 834-6385

CITY OF LAKELAND –DEPARTMENT OF ELECTRIC UTILITIES
APPLICATION FOR GENERAL OR COMMERCIAL/INDUSTRIAL SERVICE

THIS APPLICATION MUST BE COMPLETED AND SIGNED BY AN AUTHORIZED PERSON AND RETURNED TO OUR OFFICE WITHIN 30 DAYS FROM THE UTILITY START DATE TO AVOID INTERRUPTION OF SERVICE.

Utility start date:_____ Deposit Amount: _____ ☐ Cash ☐ Bond ☐ ILOC

Account Name _____

Service Address: _____

Mailing Address: _____

Previous service with L. E.? No _____ Yes _____ Year _____

If yes, under what name? _____

If yes, at what address? _____

Nature of Business: _____

Parent Company Name: _____

Contact Person Name:_____ Phone #: _____

CHECK ONE AND COMPLETE

☐ Sole Owner: Name:_____ DOB: _____

Fed ID#:_____ SS$:_____ DR Lic #: _____

☐ Partnership: Fed ID #:_____ List Partner Below

☐ Corporation: Fed ID #:_____ List Offices/Registered Agent Below

NAME & TITLE	ADDRESS	PHONE #

I understand that utility charges are due when rendered and the customer will pay all costs, charges and expenses, including reasonable attorney's fee for the collection of all unpaid balances. Deposits are based on usage and are subject to periodic review and adjustment.

Effective Date: July 1, 1998
Revised Date: September 2011

Date:_____

Authorized Signature & Title (owner, officer, agent or partner)

1.2 Alterations and additions to Customer Installation

The T&D Operations Engineering Division must be notified by the Customer before adding any significant load. Relocation of service attachments must be approved and a layout of the new Service Location furnished by the T&D Operations Engineering Division before the Customer commences work. When alterations have been satisfactorily completed by the Customer and the necessary inspection approvals obtained, Lakeland Electric will make the connections to provide the new service.

The following customer requests for relocation of Lakeland Electric facilities will require the Customer to provide a Contribution-In-Aid-Of-Construction (CIAC) for all Lakeland Electric system non improvement costs:

(a) Relocations required to accommodate a change in the physical layout of the Customer's property or for special purposes of the Customer.

(b) Relocations of Lakeland Electric facilities on private property and public right-of-way.

(c) Relocations required to maintain industry safety standards and clearance requirements due to conflicts created by Customer action.

1.3 Metering of Electric Service

Lakeland Electric will furnish, free of charge, the necessary watt hour meter(s) for the electrical service provided. All electrical energy furnished by Lakeland Electric shall be determined by the meter(s) measurements. In any case where the meter(s) fails to record accurately, due to a defect not caused by the Customer, adjustments will be made in accordance with Subsection 6, 11, *Meter Tests and Adjustments for Failed Meter.*

Lakeland Electric requires individual metering for each separate occupancy unit of commercial establishments, residential buildings, condominiums, cooperatives, marinas, and trailer/mobile homes and recreational parks for which construction commenced after January 1, 1981. The only exceptions shall be for occupancy units which are specifically excluded from this requirement under subsection (5) (a) of Section 25-6.049 of the Florida Administrative Code (FAC).

1.4 Rate Determination

Lakeland Electric personnel shall determine the rate schedule which is to apply to any individual customer service account in accordance with the rates filed with the Florida Public Service Commission (FPSC). Rate schedules and information regarding their application may be obtained from any Lakeland Electric Business Office.

1.5 Billing

Meter readings will normally be taken monthly and bills rendered as soon thereafter as practical. Bills are due when rendered and shall be paid to the City of Lakeland Treasurer or

such other office as Lakeland Electric may provide. Bills which become past due shall be subject to service disconnection. Late fee on past due bills, discontinuance of service and reconnection charge shall be in accordance with the latest edition of the applicable Lakeland Electric Policy and Procedures.

(a) such buildings or locations are situated on a single unit of property; or

(b) such buildings or locations are situated on two or more units of property which are immediately adjoining, adjacent or contiguous; or contiguous except for intervening streets, alleys or highways

(c) the customer shall be responsible for having the necessary electrical distribution facilities installed beyond the single delivery point. The customer may request Lakeland Electric to design and install the necessary electrical distribution facilities beyond the meter and pay Lakeland Electric its customary charges and fees for such service. However, Lakeland Electric is not obligated to provide such service;

1.6 System Extensions and Additions

Lakeland Electric has established facilities to be provided for standard service requirements in Subsection 2.22, *Contributions-In-Aid-Of-Construction*. Any service requests which require system extensions or additions which are beyond those established for standard service shall require CIAC.

1.7 Inspections and Approvals

If an installation, addition, or alteration is made that requires City or County electrical wiring permits, no service will be connected or altered until approval of the installation by the City or County Inspection Department is received by Lakeland Electric. It is the Customer's responsibility to notify the City or County Inspection Department when his wiring installation, addition, or alteration is completed and ready for inspection.

Lakeland Electric will make a field check of the Customer's service entrance facilities only to check for compliance with the requirements stated in this Policy. If the facilities are not in compliance, Lakeland Electric may refuse to connect service. A reasonable effort will be made to advise the Customer of any changes required. A field check shall be done within two full business days from the date receipt of the clearance.

1.8 Load Management

Contact Field Services Division at (863) 834-6789 for information.

1.9 Right-or-Way and Access

Duly authorized agents of Lakeland Electric shall at all times have access to Lakeland Electric facilities on the Customer's premises for the purpose of installing, maintaining, inspecting, and removing Lakeland Electric property, and shall have access to the premises during normal working hours for the purpose of meter reading. Failure to provide such access may be grounds for discontinuance of service and relocation of metering equipment to an accessible location at the Customer's expense. Lakeland Electric shall not be liable for trespass during the performance of these activities. The Customer shall grant or cause to be

granted to Lakeland Electric without cost to Lakeland Electric, all rights, easements, permits, and privileges which in the opinion of Lakeland Electric, are necessary for the rendering of service to the Customer.

The Customer shall grant Lakeland Electric the right to trim or remove any trees and other vegetation upon land adjacent to but outside the easement area which endangers or interferes with the safe and efficient operation of the electric facility.

1.9.1 Easement Requirement

1.9.1 Necessary utility easements shall be determined by Lakeland Electric and shown clearly on a drawing provided to the Customer.

1.9.2 Customer shall submit a fully executed AGREEMENT TO PROVIDE EASEMENTS for Public Utilities prior to installation of any facilities b Lakeland Electric.

1.9.3 The Customer shall be responsible for providing all necessary Utility easements to Lakeland Electric in proper form, at no cost to Lakeland Electric. Dedicated utility easements must be received by Lakeland Electric Department prior to final acceptance or energization of facilities.

1.9.4 Proper form for utility easements shall be as follows:

1.9.4.1 Developments platted and recorded in the official records of Polk County, are required to have all necessary utility easements added to the final plat prior to recording. A "certified" copy of this recorded plat MUST BE provided to Lakeland Electric;

1.9.4.2 The Customer may provide Lakeland Electric with written, fully described easements on an approved City of Lakeland form or;

1.9.4.3 The Customer may provide Lakeland Electric with a written legal description of a raised seal surveyed centerline of electric distribution facilities. If this option is chosen, language in the utility easement description must allow for the specified easement width lying each side of the surveyed centerline.

1.9.5 Failure to provide Lakeland Electric with proper utility easements will cause a delay in energizing the electric distribution system.

1.9.6 Approved forms may be obtained from T & D Operations Engineering or Contracts and Rights-of-Way.

1.9.7 Use of combination of drainage and utility easement shall be accepted only with the approval of Lakeland Electric.

1.10 Protection of Lakeland Electric Property

Lakeland Electric's customer shall take all reasonably due and diligent actions to protect Lakeland Electric's facilities on the Customer's premises and shall permit only Lakeland Electric's employees or Lakeland Electric's Contractors to have access to such facilities. In the event any of Lakeland Electric's facilities are damaged or lost, the damage or loss resulting from or arising out of the carelessness, neglect, or misuse by the Customer,. The cost of repairing and/or replacing such damaged equipment shall be paid by the Customer. The Customer shall be diligent in his awareness of Lakeland Electric's facilities and shall not allow:

(a) Trees, vines, or shrubs to interfere with Lakeland Electric's vision in reading, access to, or maintenance of electric meters.

(b) Trees, vines, or shrubs to interfere with Lakeland Electric's overhead service drop or underground service lateral.

(c) Ornamental shrubs or other growth which may hinder ventilation of and/or maintenance to any pad-mounted facilities to be planted adjacent to such facilities.

(d) The installation of heat generating equipment adjacent to any metering or pad-mounted facilities.

(e) The storage or installation of items not necessary for providing electric service in vault type enclosures intended specifically for electric service facilities.

(f) Trees, shrubs, or other vegetation in the easement area. **

Such circumstances may create hazardous conditions to persons and facilities and may cause the Customer's service to be interrupted, or service to other customers to be interrupted or otherwise adversely affected.

Prior to planting trees, shrubs, or plants call "Sunshine State One-Call of Florida, Inc." at 1-800-432-4770. Sunshine State One-Call will notify the appropriate utility agencies to mark any underground facilities in your described area. This is for your protection and it is the law.**

UNDER NO CIRCUMSTANCES should a Customer attempt or allow others to attempt to remove or trim trees and/or brush or remove other materials which are in contact with or in close proximity to overhead power lines. Contact Customer Service at (863) 834-9535.

1.11 Private Use of Lakeland Electric Facilities

Except as may be permitted by contract with other entities, or by written permission for one-time temporary public functions, no person or entity shall use Lakeland Electric poles, wires towers, structures, or other facilities for the purpose of fastening or supporting any radio or television aerials or other equipment, or any wires, ropes, signs, banners or other facilities, nor locate same in proximity to Lakeland Electric property or facilities. Lakeland Electric shall have the right to order such items removed, or to remove same and charge the violator for such removal without any liability for the removal or the manner of making it.

1.12 Work on Customer Facilities

Except as may be specifically mentioned in these Rules and Regulations or in related Lakeland Electric Policies and procedures, Lakeland Electric is not responsible for the electric system beyond the Service Location. Lakeland Electric does not assume any responsibility for, or liability arising because of, the condition of wires or apparatus beyond the Service Location.

1.13 Resale of Electricity

Resale of electricity purchased from Lakeland Electric is prohibited. Electricity purchased from Lakeland Electric under its retail service tariffs is intended for the exclusive use of the Customer unless specifically permitted by special contract providing for the resale of electricity proved by Lakeland Electric.

1.14 Sub-Metering of Electric Service

When sub-metering is allowed under Subsection (5) (a) of Section 25-6.049 FAC and master metering is used the Customer may use reasonable apportionment measures, including sub-metering, for the purpose of allocating the costs of the electricity billed by Lakeland Electric.

The Customer may not allocate costs which exceed the Customer's actual costs of electricity. Any Customer which uses an allocation method which reimburses the Customer for more than the actual billed cost of electricity shall be considered in violation of Lakeland Electric's tariff restriction and the FAC Code on the resale of electricity as specified in *Subsection 1.13, Resale of Electricity.*

Lakeland Electric shall not be responsible for any costs associated with the owning, installing, maintaining, reading, and/or any other costs associated with sub-metering installed by the customer.

1.15 Refusal or Discontinuance of Service

Lakeland Electric reserves the right to refuse or discontinue service for any reason it deems necessary in the interest of the adequacy and reliability of service to other firm customers, customers agreeing to receive service under non-firm rate tariffs, public safety, public health, and quality of service to other customers. This right shall include, but not be limited to the following:

1.15.1 Refusal of Service

Lakeland Electric refuses application for new service for the following conditions:

(a) Unsafe or inadequate facilities available to provide service requested by the applicant.

(b) Service requirements for equipment requested by the applicant is of a character which is likely to unfavorably impact the service to other customers.

(c) The character of service requested by the applicant is not compatible with Lakeland Electric current distribution voltage 12 Kv. See Section 2.9 for secondary services available.

(d) The conditions of service requested by the applicant which would require Lakeland Electric to operate in parallel with generating equipment connected to the Customer's system not in compliance with Subsection 2.13, Emergency or Standby Generators.

(e) Failure or refusal to provide Lakeland Electric with the required deposit in compliance with City ordinance.

(f) Failure to provide easements for Lakeland facilities.

(g) Failure to pay or make acceptable arrangements for the payment of outstanding bills for the location of the service request or any other location where the applicant has received service at t any time.

1.15.2 Discontinuance of Service With Notice

Service may be discontinued after a diligent attempt by Lakeland Electric to obtain Customer compliance and shall include at least five working days written notice to the Customer, for the following reasons:

(a) Non-compliance with/or violating a state or municipal law, ordinance, and/or regulation governing electric service.

(b) Failure or refusal to provide adequate space for LE's meter, service equipment, and any other necessary facilities to provide electric service the Customer has requested.

(c) Failure or refusal to provide LE with the required deposit in compliance with City ordinance.

(d) For non-payment of bills or non-compliance with LE's rules and regulations.

(e) For neglect or refusal to provide safe and reasonable access to LE for the purpose of reading meters, inspection, maintenance, operation, and/or installation of equipment owned by LE and necessary to provide the service as requested.

(f) Customer load characteristics which cause load imbalance, voltage fluctuation, power factor, generate harmonics, or any other factor which adversely affect the operation of LE's system or the capability of service to other LE customers. If these problems are internal to the customer or are generated via the customer then CIAC shall apply.

1.15.2 Discontinuance of Service without Notice

Lakeland may refuse or discontinue service without prior written notice for the following reasons:

(a) For conditions known to LE to be hazardous.

(b) For events of tampering with meters or other LE facilities.

(c) For the unauthorized or fraudulent use of electric service.

1.16 Force Majeure

Lakeland Electric shall not be liable to the Customer, or to others for whose benefit the contract for electric service may be made, for any injury to persons, including the Customer, or for any damage to property, including that of the Customer, when such injury or damage is a result or consequence of a hurricane, storm, lighting, or other act of God, fire, explosion, flood, war, riot, labor strike, lockout, embargo, injunction or other legal process, or of accident to, or unanticipated breakage of, any facility, machinery, equipment or lines of LE or others, or of interruption of the supply of electricity not proximately caused by LE's negligence, or of delay in restoring interrupted electrical service not proximately resulting from lack of due diligence on LE's part under the particular circumstances then existing.

1.17 Standby and Excess Facilities

A request for standby power for existing or future customers shall be made to LE's Manager of Engineering. LE reserves the right to approve or disapprove any and all applications based upon the requirements requested, location within its service territory, availability of facilities, engineering feasibility, and impact and risks to other customers.

Anytime LE is requested to install standby facilities:

- Which are not in normal continuous use, and/or
- Which are above and beyond those that would normally be installed, CIAC shall apply. If these standby facilities are installed on the customer's side of a primary meter, a Facilities Charge may be applicable. See CIAC and Facilities Charge in Section 2.22.

SECTION 2.0

GENERAL SERVICE INFORMATION

2.1 Basic Requirements for Customer's Facility

All wiring and electrical equipment of the Customer shall be installed in accordance with this SESR Policy Manual and in compliance with the latest edition of the NEC, NESC, and LE Standards and Policies, as well as with guidelines of local inspection authorities. All wiring installations must be inspected and approved by an authorized electrical inspector as required by law. LE may refuse service to any new or altered installation or disconnect service to any existing installation, which in the opinion of LE, constitutes a hazard to the public, to other customers, or to its employees. The Customer is cautioned against the purchase and use of electrical equipment that is not approved by competent authority. As previously stated, compliance of Customer-owned facilities with the requirements of the NEC will provide the Customer with a safe installation, but not necessarily and efficient or convenient installation. For this reason, the requirements for service listed herein may be in excess of those required by the NEC. Frequently, a larger service entrance, a higher point of attachment, more branch circuits, or types of service equipment that exceed code minimums are desirable. **As a general convenience, every electrical contractor shall provide a stencil (decal) or tag with his name, address, and hone number on the service switch of the Customer's wiring system.**

Each facility served by LE shall have the facility's assigned street address numbers permanently attached to the structure. The numbers shall be sized in accordance with the requirements of the local building codes, and shall be a minimum of three inches high. The numbers shall be oriented so as to be visible from the street, alley, trail or other access to the structure. The Customer is required to post the address before electrical service will be connected. The Customer shall permanently maintain the numbers.

2.2 Description of Customer's Installation

The Customer shall furnish LE's T & D Operations Engineering Division with a description of the Customer's new installation. This information is necessary for LE top determine the types and methods of service the Customer's installation may qualify for. **The Customer should not proceed with any stages of design or construction until service voltage, service location, and other service requirements have been established by LE's T & D Operations Engineering Division.**

At a minimum, the following items shall be furnished for each commercial, industrial, and multi-family residential installation.

(a) **Magnetic Disk**: Showing proposed and pertinent existing structure layout(s), as well as other proposed and existing utilities in an acceptable transferable file.

(b) **Site Plan**: Site plan shall show building(s), paved areas, sidewalks, location of main disconnect(s), desired electrical service location(s), and desired LE electrical equipment location(s). Show drainage ditches, retention ponds, walls, sanitary sewer lift stations, driveways or entrance roads. It shall include angles, bearings, and distances.

(c) **Electrical Plan**: One complete set of electrical plans shall be furnished for each service.

(d) **Electrical Load Calculation**: One electrical load calculation shall be furnished for each service.

Failure to provide all of the above may result in a delay of service connection.

For 120/240 volt, single-phase residential services up to 200 amps, the information contained on the electrical permit will generally be sufficient to enable LE to determine service requirements. **The Customer shall contact LE's T & D Operations Engineering Division to determine the Service Location**.

2.3 Service Location

LE's T & D Operations Engineering Division shall designate the Service Location[22] for each electrical service provided and each existing electrical service where the service entrance is being modified. The Customer shall contact LE's T & D Operations Engineering Division for a written Service Location prior to installation of the Customer's wiring. **Lakeland Electric shall not be bound by Service Locations claimed to have been given orally.**

2.4 Alternate Service Location

In cases where the Customer desires a Service Location other than the one designated by Lakeland Electric, the desired alternate service location may be granted by Lakeland Electric provided the following conditions are met.

(a) The Customer provides a CIAC for any additional expenses required for Lakeland Electric to provide and maintain service from the alternate service location, and include but are not limited to the cost for additional service and equipment, beyond the provisions in Subsections 3.3, Overhead Maximum Residential Standard Service Provided, and 4.4, Underground Maximum Residential Standard Service Provided.

(b) The alternate service location does not conflict with existing or future construction of Lakeland Electric.

(c) The alternate service location meets all codes, local ordinances, and the provisions of any applicable Lakeland Electric rules, policies, or directives.

Lakeland Electric shall not be bound by service locations claimed to have been given orally.

2.5 Alterations or Additions to Customer Installation

The capacity of Lakeland Electric electrical service to the customer is based on information furnished by the Customer at the time of initial service design. Therefore, no significant additions or changes should be made to the Customer's installation without first providing the information described in Subsection 2.2, Description of Customer's Installation, to L E's T & D Operations Engineering Division to determine adequacy of the electrical service.

Failure to provide this information may adversely affect the quality of service to the Customer and to other customers serviced from the same LE facilities. Extreme cases may require disconnection of customer's service while corrective action is taken.

2.6 Number of Services Provided

Lakeland Electric, under normal circumstances, will provide electric service to only one point and only one meter on a structure when that structure serves only one entity, whether that entity be a person, a family, a business, and organization, or any other entity of any kind.

Two or more persons residing in the same household should not be considered as separate entities. A department, division, or wholly-owned subsidiary of any other subdivision of a business or organization shall not be considered as a separate entity.

When a structure contains more than one entity, Lakeland electric will provide electric service to one point on the structure with one meter for each entity. Any variance from this would need to be approved through T & D Operations Engineering.

If requested b the Customer, Lakeland Electric may elect to provide additional points of service when any of the following special conditions apply and where approved by the local inspection authority. **When Lakeland Electric provides multiple Service Locations to a single entity, all services shall be at the same voltage.**

(a) Fire pump service where facilities are located where a secondary run from the main service entry point is more than 350 feet (separate facilities provided exclusively for fire pump service shall require a CIAC or facilities charge).

(b) High ampacity secondary services where service through one service cable and one meter is not feasible.

(c) Structures of such size that internal service lines beyond the Customer's service location is more than 450 feet.

2.7 Repair and Modifications of Existing Services

A Customer having service through two or more meters shall be required to combine all services into a single service if;

(a) The customers' electric service is ever modified or upgraded.

(b) The structure is rebuilt and its Electrical facilities modified in such a manner as to disrupt the integrity of the isolation of the separate services.

2.8 Rear Lot Line Services

In some areas Lakeland Electric maintains a distribution system along rear lot lines as opposed to the normal location, within the road right-of-way. When a Customer with rear lot line service increases service size, Lakeland Electric may require the Customer to relocate the service location. Contact Lakeland Electric's T & D Operations Engineering Division.

2.9 Service Voltages Available

It is essential that the customer consult the LE T & D Operations Engineering Office before proceeding with the purchase of equipment or installation of wiring. The type of service provided will be determined by Lakeland Electric based on the character of the customer's load and the type of Lakeland Electric primary and secondary (0-600v) distribution system in the area. The following table will be used as a guide in determining the type of service(s) for which the customer **may** qualify. CIAC **may** apply, see Section 2.22, Appendices A and B.

SERVICE VOLTAGE DESCRIPTION	MINIMUM DEMAND	MAXIMUM SERVICE SIZE	NOTES	PULLS WIRE
120/240 1ph 3 wire				
Overhead	N/A	400 Amps	1.	LE
Underground from pole	N/A	400 Amps		CUST*
1ph padmount transformer	N/A	600 Amps		CUST*
120/240V 3ph 4 wire delta				
Overhead	1-7.5 Hp	400 Amps	1. 2. 3.	LE
Underground from pole	1-7.5 Hp	800 Amps	2. 3.	CUST*
2-1 ph padmount transformer	1-7.5 Hp	400 Amps	2. 3.	CUST*
120/208V 1ph 3 wire				
3 ph padmount transformer	N/A	200 Amps	2. 3. 4.	CUST
120/208V 3 ph 4 wire Wye				
Overhead	1-7.5 Hp	400 Amps	1. 2. 3.	LE
Underground from pole	1-7.5 Hp	800 Amps	2. 3.	CUST
3 ph padmount transformer	1-7.5 Hp and 60kw	3000 Amps	2. 3. 5.	CUST
277/480V 3ph 4 wire Wye				
Overhead	1-7.5 Hp and 35kw	400 Amps	1. 2. 3.	LE

Underground from pole	1-7.5 Hp and 35kw	400 Amps	2. 3.	CUST
3ph padmount transformer	1-7.5 Hp and 60kw	3000 Amps	2. 3. 5.	CUST

***NOTE: For Residential Services and lift stations in new subdivisions 200 Amps or less, LE shall pull conductor-exception multi-gang service centers with a combined load greater than 200 Amps.**

Notes:

1. See Paragraph 4.6.2, Services Over 200 Amps.
2. Three-phase minimum demand.
3. Customer may be required to provide a Contribution-in-Aid-of-Construction, see Paragraph 2.22, *Apportionment of costs for LE System extensions/additions*.
4. Available only in multi-occupancy buildings served by a three-phase pad mounted transformer.
5. Service requested larger than 3000 amps contact T & D Operations Engineering.

2.10 Voltage Control Standards

Upon request LE will test the voltage supplied to the Customer at the Service Location and take corrective action if it is found to be consistently outside the Florida Public Service Commission's rules. (Standard voltage is ±7.5% for commercial services, ±5.0 for residential services.) **The responsibility for providing unusually close voltage regulation, where required by the nature of the customer's load, shall rest with the Customer.**

2.11 Limits of Lakeland Electric Liability

Lakeland Electric will use reasonable diligence at all times to provide dependable service at the nominal voltage, but does not guarantee, nor will it be liable to the Customer, for complete or partial failure or interruption of service, for fluctuations in voltage, or for phase failure or reversal. For recommended practices, refer to Section 6.0, *Customer Utilization Equipment*.

After the electric energy passes the Service Location, it becomes the property of the Customer and LE shall not be liable for loss or damage to any person or property whatsoever resulting directly or indirectly from the use or misu8se or presence of said electric energy on the Customer's premises.

2.12 Temporary Service

A Customer needing temporary service shall contact L E's T & D Operations Engineering Division to establish the need for temporary service. This contact will be to agree on the location, size, and type of temporary service. A temporary service shall comply with all

requirements applicable to permanent services, i.e., application for service, code compliance, inspection by local authorities, etc. In addition, the Customer shall be required to provide a CIAC for the installation and removal of any facilities necessary to provide the temporary service. This will not include L E's normal service connection for the particular type of service rendered or the cost of any portion of the temporary service to be used in providing permanent service.

2.13 Emergency or Standby Generators

Emergency or standby generators installed on the Customer's internal distribution system shall be equipped with a transfer switch approved by System Engineering. The transfer switch shall consist of circuit breakers or switches that are mechanically or electrically interlocked to preclude the possibility that the Customer's generation system might become interconnected with L E's system.

The Customer shall submit to System Engineering, a complete manufacturer's description of the transfer switch and a power distribution diagram showing the connection of the switch into Customer's internal wiring system. Customer failure to provide and maintain a LE-approved transfer switch on the Customer's emergency or standby generator system constitutes a possible Safety hazard and shall be grounds for disconnection of electrical service.

Emergency or auxiliary generation equipment will not be installed in switchboard rooms or transformer vaults, and must be at least 15 feet clear of any openings to those spaces.

2.14 Parallel Generating Facilities (Photovoltaic, Fuel Cells, etc.)

Parallel generating facilities shall be installed only with approval from the Manager of Engineering. Each request shall be approved on a case by case basis.

2.15 Non-Utility Generating (NUG) Facilities

Customer requests to be interconnected into L E's system as a PURPA-defined NUG shall be made through L E's Manager of Engineering. The Customer's facility shall comply with the latest edition of Lakeland Electric Safety and Technical Standards for Parallel Operation of Qualifying Facilities.

2.16 Standby Service

Lakeland Electric shall provide standby service to Customers with internal generation only under provisions of its Standard Rate Tariffs for such services.

2.17 Alternate or Dedicated Service

It shall remain the Customer's responsibility to provide and maintain any secondary distribution system beyond each of L E's metering points.

Interconnection of multiple LE services on the Customer's distribution system beyond L E's metering point shall not be permitted.

Lakeland Electric does not provide alternate or dedicated distribution feeder service as a standard policy. However, Lakeland Electric may provide such services when the provision

of such service is appropriate and justified. To request such service, contact L E's Manager of Engineering.

2.18 Customer Service Entrance Ground

Lakeland Electric provides a grounded neutral with all services rendered. The Customer shall provide and maintain a grounding electrode system as described in the latest edition of the NEC. In addition, Lakeland Electric requires a minimum of two copper clad ground rods (5/8" x 8'0 with acorn clamps.

A low resistance ground is important in providing protection of the Customer's facility. Lakeland Electric strongly recommends that the Customer install a grounding electrode system with a maximum resistance to ground of 15 ohms. Lower resistance to ground may be necessary to operate and protect some computers and solid state equipment. Lakeland Electric also strongly recommends that the Customer install a high energy, low voltage MOV type lightning arrester on their main breaker panel.

Lakeland Electric shall not be held responsible for damage to the Customer's facility or equipment due to an insufficient ground.

2.19 Conductor Size and Identification

In situations where the customer is responsible for providing and installing the service conductors, the following minimums shall apply:

(a) All service conductors shall be sized in accordance with NEC specifications and shall be marked with the appropriate color coded tape.

(b) All three-phase service conductor runs shall have an individual full sized neutral leg. Single-phase services may reduce the neutral size per NEC code. All neutrals shall be marked with white tape.

(c) No ground or bonding wire will be allowed between L E's equipment and the customer's equipment.

(d) If a service has parallel runs of conductors, each run shall be installed in its own conduit system and color coding shall correspond to other parallel runs.

(e) If the service conductors are to be installed underground, each run shall be installed in its own conduit system per NEC specifications and must comply with L E 's minimum depth for service conductor.

2.20 Security of Service Entrance

The Customer's service entrance shall be secured against unauthorized electrical connection between L E's Point of Delivery and L E's Service Location.

Installation of metered load side conductors in line side raceway is prohibited.

Service provided through more than one meter shall be provided with each set of load side conductors in its individual conduit or raceway.

Service raceways, wire ways, and pull boxes housing individual or multiple service taps shall be fitted with an approved means of sealing or locking by LE.

2.21 Security of Service Entrance Equipment Ahead of Lakeland Electric Service Location

In some cases, a building with multiple electrical services requires the installation of a building service equipment main. The building service equipment main is located ahead of L E's Service Location for the services and, therefore, contains an unmetered service entrance.

In order to provide for the security of the service entrance, the building service equipment main shall be provided with a means for L E's Field Services Division to install seals and/or locks on all removable covers. The installation of seals and/or locks behind covers attached by bolts or screws shall not be permitted. The installation of seals and/or locks shall be permitted on covers that are behind easily accessible hinged doors.

For commercial service, the building service equipment main shall be a circuit breaker.

For multi-family residential services, the Customer may provide a meter center with a fusible building service equipment main in lieu of a circuit breaker. Meter centers shall be furnished in accordance with the requirements of Subsection 5.12, *LE Approval of Customer-Furnished Meter Center.*

2.22 Customer's Operating Characteristics

The characteristics of the Customer's electrical load shall be such that the load balance, voltage fluctuation, power factor, generation of harmonics, or any other factor does not adversely affect the operation of L E's system or the quality of service to other LE customers. Extreme cases may require disconnection of customer service while corrective action is taken, under Section 1.15.3, *Discontinuance of Service Without Notice.*

2.23 Contributions-in-Aid-of-Construction (CIAC)

Lakeland Electric, ad in any other business, strives to make prudent investments. Service and/or facilities provided by Lakeland Electric are an investment of either labor, materials, and/or equipment upon which Lakeland Electric should earn a reasonable return. For this reason, Lakeland Electric had established maximum service facilities to be provided based on the specific characteristics of each requested service. These maximum facilities are specified in Subsections 3.3 and 4.4, *Overhead Maximum Residential Standard Service Provided and Underground Maximum Residential Standard Service Provided, respectively.*

When Lakeland Electric is required and/or requested to provide facilities beyond these minimums, Lakeland Electric will require CIAC, or additional payments in the form of facilities charges for the installation, operation, maintenance, and replacement of such facilities.

2.23.1 Relocations

The following Customer requests for relocation of Lakeland Electric facilities will require the Customer to provide CIAC for all Lakeland Electric system non-improvement costs:

(a) Relocations required to accommodate a change in the physical layout of the Customer's property or for special purposes of the Customer.

(b) Relocations of Lakeland Electric facilities on private property and public right-of-way.

(c) Relocations required to maintain industry Safety standards and clearance requirements due to conflicts created by Customer actions.

2.23.2 Electric Line Extensions

Lakeland Electric is obligated to provide cost effective facilities within our service territory. Therefore, when Lakeland Electric extends primary distribution, the design and installation must be an economically sound investment for ratepayers. This includes situations where no lines exist, where single-phase or two-phase lines exist, or where existing lines need to be upgraded. Lakeland Electric shall install up to the first 300' span of a single-phase overhead primary line extension without charge to the customer. The customer shall pay in advance any and all cost incurred by Lakeland Electric beyond that point as well as supply property corners, easements, and any o0ther miscellaneous documentation necessary to expedite said electric line installation. See the CIAC Policy.

2.23.3 Facility Utilization

When kW demand factors do not meet the demand load specifications submitted by the original customer, intermittent usage patterns, or inefficient utilization of L E's facilities, Lakeland Electric may require CIAC or other means of providing a fair return on investment.

2.23.4 Relocation or Removal of Existing Facilities

Should Lakeland Electric be requested or required to relocate or remove existing distribution facilities for the convenience or necessity of a Customer, all costs associated with such relocation or removal shall be borne exclusively by the Customer requesting such relocation or removal. These costs shall include, but are not limited to, the costs of relocation or removal, new material and equipment costs, and any additional costs resulting from existing landscaping, pavement, or unusual conditions.

2.23.5 Automatic Load Transfer Devices

Customers may request and Lakeland Electric may agree to provide automatic transfer capability which allows automatic transfer of a Customer's load from one distribution circuit to a second distribution circuit during times of load interruption on the first circuit.

Lakeland Electric reserves the right to approve or disapprove each request for automatic transfer service based upon the Customer's need, location, feasibility, and availability of such service. Normally relay service will not be furnished to customers

who have historical demands less than 500 kW or to customers receiving service under the terms of the General Service Interruptible Rate Schedule.

Should Lakeland Electric approve requests for automatic transfer service the Customer shall compensate Lakeland Electric as a CIAC or by way of a facilities charge for duplication of, or additional facilities required to provide such service in excess of the facilities normally furnished by Lakeland Electric for a single source, single transformation electric service installation required to service requesting Customer.

Lakeland Electric reserves the right to make exceptions when public safety and/or health is involved. If Lakeland Electric agrees to provide such service, there shall be a CIAC required.

Beginning October 1999, Lakeland Electric will begin charging a fee for standby capacity that Lakeland Electric must have installed and standing by on an alternate circuit should a transfer occur. There shall also be a monthly operations and maintenance (O & M) charge to be established and changed from time to time to recover L E's O & M costs associated with the standby facilities.

2.24 Provisions for Energy Pulse Data

Lakeland Electric will provide energy pulses transmitted from L E's metering equipment to provide data to energy management systems.

All access to Lakeland Electric metering equipment shall be by Lakeland Electric personnel only. The pulses normally will be provided from a separate junction box which will be for Lakeland Electric and Customer access.

Where the installation requires output from Lakeland Electric of more than one pulse source, it shall be the responsibility of the Customer to provide any required totalization of pulse data for his use.

Any replacement of material or equipment solely used to supply pulses to the Customer shall be made by Lakeland Electric at the Customer's expense.

All billing of demand and/or energy will be based upon L E's meter readings and not upon pulse data supplied to the Customer. Lakeland Electric will not guarantee a certain pulse rate and the Customer will be responsible for installing equipment necessary to change the pulse rate to work with the customer's equipment.

Date pulses will be provided through "dry" contacts only and will be limited to a maximum of one amp, 500 Volt, 100 Volt amp fused energy source.

The Customer will contribute the full cost for additional equipment required to provide the data pulse, for which there will be a fee. The Customer shall also provide for equipment maintenance as required. All service charges will be calculated at cost by Lakeland Electric. An agreement or contract must be executed and Customer must make satisfactory arrangements for payment before installation can begin.

SECTION 3.0

SECONDARY (O-400V) SERVICES – OVERHEAD

3.1 GENERAL

In areas where the existing distribution system is overhead, overhead service shall be provided within the limits given in subsection 2.9, Service Voltages Available, except as specifically exempted by the following subsections:

(a) 3.8 Services Over 400 Amperes

(b) 4.6 Underground Residential Service from Overhead Pole-Mounted Transformers

(c) 4.10 Special Requests for Pad-Mounted Transformers

(d) As required by local ordinance or Deed Restrictions.

3.2 Service Location

The Service Location for all overhead services shall be at the Customer's weather head where L E's service drop and Customer service entrance conductors are connected. Typical overhead service drop connections for residential, commercial, and temporary services are shown in Section 8.

The location of the Service Location shall be designated by Lakeland Electric, see subsection 2.3, *Service Location.*

3.3 Maximum Residential Standard Service Provided

The Standard provision for electric "service" shall consist of and shall be applied as follows:

(a) The Motor Pool, materials, and labor required to construct a power line between the nearest Point of Delivery on Lakeland Electric's existing distribution system and that location on the structure requiring electric power nearest this existing Point of Delivery.

(b) The cost to construct the power line described in item (a.) Shall not exceed the maximum standard allocation provided within L E's service rate structure. See Appendix A.

In the event that the distance exceeds the maximum standard allocation defined in Appendix A the customer shall be responsible for any additional cost. All cost beyond the standard allocation provided within the service rate structure associated with extensions of power lines on private property will be governed by the CIAC Policy. CIAC may also be applicable to service upgrades, overhead/underground conversions, change-outs and relocation's of existing power lines. For additional information, see CIAC Policy.

3.4 Overhead Service Drops

Lakeland Electric requires a minimum 36 inches clearance above roof. Installations where it is not feasible to provide a point of attachment 36 inches above the roof will require the Customer to provide and install a secure point of attachment that will meet the clearance requirement stated in Subsection 3.6, *Service Drop Clearances*.

3.5 New Overhead Development

When Developer requests or is required to utilize an overhead electric distribution system within a new development, Lakeland Electric shall provide the distribution system in accordance with the latest edition of "Policies, Standards, and Specifications for Subdivisions and Commercial Developments." The Developer shall contact l E's T & D Operations Engineering Division to obtain a copy of the latest edition of this procedure. The Developer is urged to contact Lakeland Electric as soon as practical to assure the timely installation of the overhead electrical distribution system.

T & D Operations Engineering Division (863) 834-8868.

3.6 Service Drip Clearances

It is the Customer's responsibility to provide a suitable point of attachment for L E's service drop. The point of attachment and the Customer weather head shall be located such that the lowest point of sag of a new or replacement service drop shall be in accordance with the applicable minimum vertical clearance specified in the following table. Minimum vertical clearances shall be maintained to the bottom of the drip loop which shall be considered a part of the service drop. The mini9mum point of attachment shall be 12 feet above finished grade.

Table 3.1

Vertical Clearance per L E Based on DOT and NESC

Where Wires Cross Over	Minimum Vertical Clearance
In Residential Areas Sidewalks or Final Grade Accessible to Pedestrians Only	10 feet
Residential Driveway Not Subject to Truck Traffic	12 feet (subject to change)
Commercial Areas Not Subject to Truck Traffic	15 feet (subject to change)
Public Streets, Alleys, Roads, and Commercial Driveways	18 feet
Roofs or Projecting Platforms Accessible to Pedestrians[1]	8 feet
Roofs or Projecting Platforms Not Accessible to Pedestrians	3 feet

[1] A roof or projecting platform is considered accessible if the means of access is through a doorway, ramp, stairway, or permanently mounted ladder.

Installations where it is not feasible to provide a point of attachment three feet above the roof will require the Customer to provide and install a secure point of attachment that will meet the clearance requirements.

The Customer shall provide 36 inches (3 feet) of excess service entrance conductors past the weather head, or L E's metering current transformers (CT) for CT metered services, to allow for proper termination of the service drip and formation of a drip loop.

3.7 Mobile Home (Pre-manufactured Home or House Trailer) Service

In order to receive permanent electrical service to a mobile home the Customer shall provide a mobile home service poke as shown in **Drawing SESR-OH-040.**

(a) L E requires the service pole to be 6" x 6" x 20' pressure treated.

(b) Height to be increased if required by NESC, NEC, or LE.

(c) L E requires the Customer to install an anchored down guy support for services exceeding 75 feet, guy wire should be a minimum of ¼ inch galvanized stranded. This is to insure that the minimum vertical clearance is maintained as specified in Section 3.6, Service Drop Clearance.

(d) Customer will provide a point of attachment at a maximum of 6 inches from top of pole. Drill ¾ inch hole perpendicular to mast.

3.8 Services Over 400 Amperes

For all services above 400 amps, Lakeland Electric shall require the Customer to install the service entrance underground to L E's service pole. The Customer shall install the service entrance underground to a Lakeland Electric service pole in accordance with the requirements of Subsection 4.6, *Underground Service from Overhead Pole-Mounted Transformers.*

For services above 800 amps (400 amps/480v), Lakeland Electric shall require service from a pad mounted transformer. See Sub-section 4.8, Commercial Services From Pad-Mounted Transformers.

3.9 Underground Service From Overhead Lines

When an underground service from an overhead line is desired or required, see Section 4.0, Secondary (0-400V) Services Underground. **See Drawing SESR-UG-030**.

3.10 New Temporary Service for Construction

Typical overhead temporary service arrangements are shown in **Drawing SESR-OH-020.** Temporary poles shall be installed to maintain proper clearance as shown in Subsection 3.6, Service Drop Clearances, and shall comply with the provisions of Subsection 2.12, Temporary Service.

The temporary service drop or temporary construction wires or cables shall not be tied to the Customer's permanent panel or meter socket except for test purposes. At no time should a temporary test connection be left unattended. If found unattended the service will be disconnected and a reconnection fee will be charged for reconnection.

3.11 120 Volt Overhead Service (2-wire)

The Customer shall provide a minimum 36 inches of secondary conductor beyond the weather head, with the neutral conductor clearly marked. **See Drawing SESR-OH-005** for meter wiring diagram.

SECTION 4.0

SECONDARY (0-600V) SERVICES UNDERGROUND

4.1 General

In areas where the existing distribution system is underground, where required by local governing bodies, or where replacement of the existing overhead system with an underground system is designated by Lakeland Electric, underground service must be used and overhead service will not be made available to the Customer.

4.2 Service Location

For underground services of 200 amps or less, the Service Location shall be at the meter as shown in **Drawing SESR-UG-030**. See Subsection 2.3, Service Location. Exception: In Underground Residential Developments (URD) where the service lateral is installed by the Customer, the Service Location shall be the secondary terminals between the Customer's service lateral and L E's Point of Delivery.

For underground services larger than 400 amps, the Service Location shall be at L E's metering CT enclosure. If the Customer service equipment is located immediately adjacent to the CT enclosure, the Service Location shall be line side terminals of the customer service equipment.

The Service Location for all other underground secondary services shall be the secondary terminals of L E's Point of Delivery. The location of the Point of Delivery shall be designated by Lakeland Electric.

4.3 New Underground Development

When a Developer requests or is required to utilize an underground electric distribution system within a new development, Lakeland Electric shall provide the distribution system in accordance with the latest edition of "Policies, Standards, and specifications for Subdivisions

and Commercial Developments." The Developer shall contact L E's T & D Operations Engineering Division to obtain a copy of the latest edition of this procedure. The Developer is urged to contact Lakeland Electric as soon as practical to assure the timely installation of the underground electrical distribution system.

T & D Operations Engineering Division (863) 834-8868

4.4 Maximum Residential Standard Service Provided

Standard provision for electric "service" shall consist of an be applied as follows:

(a) The materials and labor required to construct a power line between the nearest *Point of Delivery* on L E's existing distribution system and that location on the structure requiring electric power nearest this existing *Point of Delivery.*

(B) The cost to construct the power line described in item (a) shall not exceed the maximum standard allocation provided within L E's service rate structure. See Appendix A.

In the event that the distance exceeds the maximum standard allocation defined in Appendix A the Customer shall be responsible for any additional cost. All cost beyond the standard allocation provided within the service rate structure associated with extensions of power lines on private property will be governed by the CIAC Policy. CIAC may also be applicable to service upgrades, overhead/u8nderground conversions, change-outs and relocation's of existing power lines. For additional information, see CIAC Policy.

4.5 Service Laterals in Underground Residential Developments

Lakeland Electric shall provide a 120/240 volt, single-phase, three wire service lateral to the Customer.

For services up to 200 amps maximum, the Customer shall provide for service installation as shown in **Drawing SESR-UG-030.**

For services above 200 amps the Customer will install and maintain conduit and conductor to L E's Point of Delivery as shown in **Drawing SESR-UG-030.**

For services above 400 amps, the Customer shall contact L E's T & D Operations Engineering Division to determine the particular requirements for service installation.

4.6 Underground Residential Service from Overhead Pole-Mounted Transformers.

4.6.1 Services Up to 200 Amps

Upon Customer request, Lakeland Electric may elect to provide connection to an underground service from overhead transformers when the service would normally be served overhead. The Customer shall be required to install all necessary conduit and risers on the pole for the underground cable, according to **Drawing SESR-UG-30.** If Lakeland Electric deems the installation of a pole on Customer property necessary, the Customer shall provide Lakeland Electric with appropriate easements and unrestricted access for maintenance.

The Customer shall contact L E's T & D Operations Engineering Division to determine the specific requirements for each service. At a minimum, the Customer shall be required to provide the following:

(a) Description of Customer's installation as required in Subsection 2.2, *Description of Customer's Installation.*

(b) An agreement for service, see Section 1.1, Application for Electric Service-Deposits, and any required easements, Section 1.9, *Right of Way and Access, and, 1.9.1, Easements Requirements.*

(c) Aluminum conduit installed on L E's service pole to a height of 10 feet with an additional 10 foot section of conduit furnished by the Customer and installed by Lakeland Electric. **See Dra2wing SESR-UG030.**

(d) Conduits mounted on the house side of pole or adjacent to any existing electric service conduits, with elbows pointing and conduit installed in the direction of the Customer Service Location.

4.6.2 Services over 200 Amps

Lakeland Electric shall provide connection to an underground service from overhead pole-mounted transformers as defined in Subsection 2.9, *Service Voltages Available*, and in Subsection 3.8, Services over 400 Amps. The Point of Delivery shall be at the secondary service connections on a Lakeland electric distribution pole as designated by Lakeland Electric. If Lakeland Electric deems the installation of a pole on Customer property necessary, the Customer shall provide Lakeland Electric with appropriate easements and unrestricted access for maintenance.

Lakeland Electric shall provide underground service from overhead pole-mounted transformers only when the complete underground secondary installation is furnished, installed, and maintained by the Customer. The Customer shall contact L E's T & D Operation Engineering Division to determine the specific requirements for each service. At a minimum, the Customer shall be required to provide the following:

(a) Description of Customer's installation as required in Subsection 2.2, *Description of Customer's Installation.*

(b) An agreement for service, see Section 1.1, Application for Electric Service Deposits, and any required easements, Section 1.9, Right of Way and Access, and, 1.9.1, Easements Requirements.

(c) Conduits mounted on the house side of pole or adjacent to any existing electric service conduits, with elbows pointing and conduit installed in the direction of the Customer Service Location.

(d) Weather head at the top of the conduit on pole.

(e) Six (6) feet of excess service entrance conductors past the weather head to allow for proper termination of the service drop and formation of a drip loop.

4.6.3 120 Volt Underground Service (2-wire)

The Customer shall provide conduit and conductor installed per code requirements to L E's Point of Delivery. Customer should contact the T & D Operations Engineering Division to determine the Point of Delivery. **See Drawing SESR-UG-005** for meter wiring.

4.7 Commercial Services From Pole-Mounted Transformers

Lakeland Electric shall provide connection to an underground service from overhead pole-mounted transformers as defined in Subsection 2.9, *Service Voltages Available*, and in Subsection 3.8, Services Over 400 Amps. The Point of Delivery shall be at the secondary service connections on a Lakeland Electric distribution pole as designated by Lakeland Electric. If Lakeland Electric deems the installation of a pole on Customer property necessary, the Customer shall provide Lakeland Electric with appropriate easements and unrestricted access for maintenance.

Lakeland Electric shall provide underground service from overhead pole-mounted transformers only when the complete underground secondary installation is furnished, installed, and maintained by the Customer. The Customer shall contact L E's T& D Operations Engineering Division to determine the specific requirements for each service. At a minimum, the Customer shall be required to provide the following:

(a) Description of Customer's installation as required in Subsection 2.2, *Description of Customer's Installation*.

(b) An agreement for service, see Section 1.1, *Application for Electric Service-Deposits*, and any required easements, Section 1.9, Right of Way and Access, and, 1.9., *Easements Requirements*.

(c) Conduits mounted on the house side of pole or adjacent to any existing electric service conduits, with elbows pointing and conduit installed in the direction of the Customer Service Location.

(d) Weatherhead at the top of the conduit on pole.

(e) Six (6) feet of excess service entrance conductors past the weatherhead to allow for proper termination of the service drop and formation of a drip loop.

4.8 Commercial Services From Pad-Mounted Transformers

The Customer shall provide conduit and conductor installed per the local inspecting agency code requirements to L E's Point of Delivery. Customer should contact the T & D Operations Engineering Division to determine the Point of Delivery.

All Customers within and Underground Distribution Development shall be served by pad-mounted transformers.

The Customer shall contact L E's T & D Operations Engineering Division to determine the particular requirements for service installation. At a minimum, the Customer shall be required to provide the following per Subsection 2.2 and the "Policies, Standards, and Specifications for Subdivisions and Commercial Developments":

(a) An agreement for service, Section 1.1, Application for Electric Service-Deposits, and any required easements, Section 1.9, Right of Way and Access, and, 1.9.1, Easements Requirements.

(b) Conduit routing as required by Lakeland Electric. The Customer may be required to install conduits to property line(s) to provide for future extensions.

(c) Pull boxes sized and located as required by Lakeland Electric.

(d) Rigid PVC conduit, 20' sticks, schedule 40, grey, are required for each Lakeland Electric **primary** circuit installed.

(1) Four 2-inch diameter conduits shall be installed unless specified otherwise in **writing** by the assigned project Manager. Conduits shall be installed minimum 36 inches below finished grade and shall be provided with 24 inch radius galvanized elbows and pull string.

(2) Two larger diameter conduits shall be installed for downtown areas and where space is limited. Conduits shall be installed minimum 36 inches below finished grade and shall be provided with 36 inch radius galvanized elbows and pull string. The conduit diameter shall be specified in writing by the assigned Project Manager.

(e) Transformer pad(s) in accordance with Lakeland Electric specifications.

(f) The secondary service lateral with eight feet of excess cable above the top of the pad. Secondary conductor should not be installed prior to the installation of the padmount transformer.

4.9 Lakeland Electric Provisions for Commercial Services

Lakeland Electric shall provide the following provided CIAC does not apply:

(a) Marked copy of the Customer's plan showing size and number of conduits, conduit routing, pull box location, transformer locations.

(b) Transformer(s)

(c) Primary cables

(d) Primary and secondary cable terminations in the transformer

(e) Copy of the "Policies, Standards, and Specifications for Subdivisions and Commercial Developments."

4.10 Special Requests for Pad-Mounted Transformers

In areas served by an overhead distribution system, distribution system, customers not meeting the minimum requirements for service from a pad-mounted transformer may request Lakeland Electric to provide service from a pad-mounted transformer. In addition to the requirements of Subsection 4.7, Commercial Services From Pad-Mounted Transformers, the Customer shall be required to provide a CIAC for all Lakeland Electric costs in excess of the cost to provide overhead service.

4.11 Customer's Responsibility to Protect Pad-Mounted Equipment

In addition to the requirements of Subsection 1.10, Protection of Lakeland Electric Property, the Customer shall provide protection for Lakeland Electric pad-mounted equipment that is installed adjacent to parking lots or driveways. At a minimum, the method of protection shall be as shown in **Drawing SESR-UG—80.**

4.12 Responsibility of Service Conduit

After conduit acceptance for up to 200 amp service, Lakeland Electric shall make repairs to damaged conduit and/or cable. The costs shall be borne by the party/person who damaged said conduit as per CIAC, Service Conduit Repair.

The Customer that has installed their own service cable shall continue to be responsible for the service conduit if damaged. If Lakeland Electric opts to repair the conduit and/or cable, the costs shall be borne by the customer.

4.13 Temporary Service for Construction

A typical underground temporary service pole arrangement for a maximum 200 amp URD service is shown in **Drawing SESR-UG-020**. In this arrangement, the Customer will install the temporary service pole adjacent to L E's Point of Delivery equipment (i.e., pad-mounted transformer or secondary pedestal), and provide eight (8) feet of service conductor coiled above ground with the neutral identified with white tape.

Temporary service for underground services greater than 200 amps shall be treated on an individual basis. Contact L E's T & D Operations Engineering Division to determine the particular requirements for installation.

When permanent service will be provided from a three-phase pad-mounted transformer, the Customer may request Lakeland Electric to install the permanent service transformer prior to building completion to supply temporary service.

The temporary service drop or temporary construction wires or cables shall not be tied to the Customer's permanent panel except for test purposes. At no time should a temporary test connection be left unattended. If found unattended the service will be disconnected and a fee will be charged for reconnection.

SECTION 5.0
METERS AND METERING EQUIPMENT

5.1 General

Lakeland Electric shall provide for the metering of each Customer's electrical service. The metering equipment shall measure the electrical power flowing through the service of each account in the units of measure as required by the appropriate Lakeland Electric Rate Schedule.

Lakeland Electric shall furnish to the Customer, for installation and maintenance by the Customer, three-phase meter sockets and/or enclosures, instrument transformers, and safety test blocks. Lakeland Electric shall furnish, install, and maintain the required meters, metering devices, and secondary wiring between the instrument transformers, meters, and metering devices. Lakeland Electric approved single-phase meter sockets shall be installed and maintained by the Customer.

Metering equipment furnished by Lakeland Electric for Customer installation shall be obtained from Lakeland Electric T & D Operations Engineering Division by presenting the designated copy of an Electrical Permit issued by the local inspection authority. No equipment shall be issued after the expiration date of the permit or after permanent power has been installed.

Metering equipment shall be installed as described in this subsection and as shown in Section 6.0. Additional requirements are given in Section 2.0, General Service *Information,* Section 3.0, Secondary (0-600V) Services – *Overhead*, Section 4.0, Secondary, (0-600V) Services – Underground.

5.2 Metering Tampering

Only duly authorized agents of Lakeland Electric or persons authorized by law shall install or remove, turn on or turn off, or make any changes to any part of L E's metering installation which may affect the accuracy of measurements. Unauthorized connection to or tampering with Lakeland Electric metering equipment or Lakeland Electric seals placed on the equipment, or connection to unmetered service entrance conductors ahead of the metering equipment subjects the customer to immediate discontinuance of service, prosecution under the laws of the State of Florida, adjustment or prior bills for service rendered, and reimbursement to Lakeland Electric for all extra expenses incurred including any tampering charges in effect at the time of the event.

5.3 Types of Metering Systems

In order to meter the electrical power consumed by the Customer, Lakeland Electric must measure both the current flowing to the Customer and voltage level at which the current is flowing.

Normally;, Lakeland Electric shall meter single-and three-phase, secondary services of 200 amps and below using self-contained meters. When self-contained meters are used, the Customer's service entrance is connected directly into the meter socket. The line voltage is applied to the meter and full load currents flow through the meter.

Secondary services above 400 amps and all primary services require instrument transformers to transform line currents and voltages (for primary service) to measurable magnitudes. The input to output ratio for current transformers (CTs), used on both primary and secondary services is determined by the magnitude of the current flow at Customer peak load. The ratio of the potential transformers (PTs), used on the primary services is determined by the primary service voltage.

5.4 Metering Equipment Enclosure Sealing/Locking Requirements

The portion of the Customer's service entrance that is ahead of L E's Service Location shall be placed under the security of seals and/or locks installed by Lakeland Electric as stated in Subsections 2.19, Security of Service Entrance, and 2.20, *Security of Service Entrance Equipment Ahead of Lakeland Electric Service Location.*

In addition, the Customer shall provide for the secure installation of Lakeland Electric metering equipment. Instrument transformers installed in cabinets or switchgear metering cubicles shall be secured against unauthorized access. Removable cover and/or doors allowing access into the instrument transformers shall be equipped with a means to allow the installation of seals and/or locks by Lakeland Electric.

5.5 Secondary Service Current Transformer Installation in Enclosures

CTs installed in the Customer's service entrance shall be installed in an enclosure. The enclosure shall be acceptable to Lakeland Electric. The enclosure shall be provided with a means of installing seals and/or locks as required in Subsection 2.20 *Security of Service Entrance.*

The enclosure shall be either a metering cubicle in the switchboard or a CT cabinet. Large enclosures shall be equipped with hinged doors. No Customer wiring or equipment shall be permitted in the CT enclosure except the Customer's service entrance. The installation of CTs in the wire way of the Customer's service equipment shall not be permitted.

CTs shall be securely mounted within the enclosure. The secondary terminal compartment of each CT shall be readily accessible and the nameplate data of each CT shall be visible without disturbing the Customer's service entrance. The base of each CT shall be solidly grounded.

Provisions for Lakeland Electric connection of potential leads to the meters shall be provided. When CTs are installed on a bus bar type service entrance, the Customer shall drill and tap a ¼ x 20 hole in one bus bar per phase. The hole shall be located on the line side of the CT. The Customer shall provide a ¼ x 20 machine screw of the proper length for each hole. The screw shall be of an appropriate metal to avoid reaction with the bus material.

The Customer shall mark service entrance conduits entering the CT cabinet either "LINE" for conduits from L E's source side or "LOAD" for conduits to the Customer's service equipment.

5.6 Raceways for Instrument Transformer Secondaries

The Customer shall provide a raceway with pull wire from the instrument transformers to the meter enclosure. The raceway shall be used solely for the installation of instrument transformer secondaries. The raceway shall not exceed 25 feet in length from the instrument transformers to the meter enclosure.

The raceway shall be one inch galvanized metal conduit. The raceway shall provide for the effective grounding of the meter enclosure. The installation of EMT metal or grey rigid schedule 40 PVC or other types of non-metallic conduit for raceways for instrument transformer secondaries shall not be permitted.

Raceways having the equivalent of four or more 90 degree bends shall be provided with exposed junction boxes and/or conduit bodies. Junction boxes shall be provided with a means of installing seals and/or locks as required in Subsection 2.20, *Security of Service Entrance Equipment Ahead of Lakeland Electric Service Location.* Conduit bodies shall be sealed by Lakeland Electric.

5.7 Location of Meters

Meter locations shall be approved by Lakeland Electric. See Section 6.0.

Meters shall be installed outdoors and shall be readily accessible to Lakeland Electric at all times. If the meter becomes inaccessible to Lakeland Electric due to locked fences, building conditions, animals, or any other reason, the Customer shall be required to relocate the meter or perform other changes necessary to make the meter accessible to Lakeland Electric.

In those cases where Lakeland Electric makes the decision to install secondary CTs on underground pad-mounted transformer bushings, the Customer shall install the meter can on a 6" X 6" X 8' concrete post set not less than 2 feet into the final grade. The meter post shall be within 25 feet of the pad-mounted transformer. Lakeland Electric must approve the location of the meter post. The Customer shall supply and install an aluminum one inch metal conduit raceway between the transformer and the meter can. The raceway shall be buried not less than 12 inches between the transformer and the meter post.

When a meter socket or enclosure is mounted recessed in a wall, it shall be recessed so that the lid can be easily removed and the seals and/or locks can be easily installed.

Meters installed on the driveway or parking lot side of a structure shall have a minimum four foot lateral clearance from the meter to the parking or driving surface unless the meter is protected by permanent part of the structure or by guard structures. Guard structures shall be constructed from six inch diameter by eight feet long galvanized steel pipe mounted in concrete and filled with concrete. The pipe shall be mounted four feet below grade with four feet extending above grade. The above grade portion of the pipe shall be painted DOT yellow. Guard structures, minimum two required, shall be installed four feet in front of the meters and four feet on centers to protect all exposed meters.

Upon Customer request, Lakeland Electric may permit the use of meter rooms in multi-occupancy buildings of three stories or more in height. Prior to beginning construction, the Customer shall provide Lakeland Electric with two copies of plans for approval. Meters shall not be installed without L E's Electric Service Location Form approved by an authorized representative of Lakeland Electric. Meter rooms shall not be permitted in any location other than multi-occupancy buildings of three stories or more in height.

5.8 Identification of Meters

Each facility serviced by Lakeland Electric shall have the street address posted as required in Subsection 2.1, *Basic Requirements for Customer's Facility*. In addition, where meters are installed in groups, such as for multi-occupancy buildings, mobile home services, etc., each meter socket or enclosure shall be permanently identified with the assigned street address and/or apartment number so that Lakeland Electric can associate the meter with the customer served.

The meter socket or enclosure shall have the address or apartment number permanently marked. Surfaces to be marked shall be properly cleaned before marking. The blank covers of the meter socket or enclosure are not acceptable locations for permanent identification.

5.9 Required Metering Installation Upgrades

When an existing single family residential customer increases the service size, the service shall be brought into compliance with these Standard Electric Service Requirements.

When an existing service, other than a service to a single family residence, is repaired or modified and that repair or modification includes the replacement of the service entrance on the line side of L E's Service Location, the Customer's metering installation shall be brought into compliance with the requirements of these Standard Electric Service Requirements.

At a minimum, the Customer shall be required to:

(a) Relocate meters located inside a building or inaccessible area to an accessible area outdoors.

(b) Replace self-contained A-base meters with socket type meters.

5.10 Meter Impulse Signals to Customer

Lakeland Electric shall, upon customer request, install impulse generation equipment at L E's meter location. The data provided to the Customer by Lakeland Electric is for the explicit purpose of load monitoring and load control.

The Customer shall provide all wiring and all translation, monitoring, and control equipment beyond L E's service location. Te Customer shall be required to provide a CIAC for any

Lakeland Electric metering equipment installed beyond that which is normally provided for the Customer's class of service. The Customer shall contact L E's Account Manager for complete information concerning this subject, as referenced in Subsection 2.23, *Provisions for Energy Pulse Data.*

5.11 Meter Tests and Adjustments for Failed Meter

Lakeland Electric makes every effort practical to maintain the standard accuracy of Lakeland Electric metering installations. If, upon test, any metering equipment is found to be in error by not more than two percent (2%), previous recordings of the metering equipment shall be considered accurate. These shall be used by Lakeland Electric in computing the Customer's billing for service under the applicable rate schedule.

If, upon test, any metering equipment is found to be in error by more than two percent (2%), all previous recordings by such equipment shall be corrected for the error for a period not to exceed 12 months or as defined by Lakeland Electric policy.

Customer requests for meter tests and information concerning billing adjustments shall be made through Lakeland Electric Customer Service Business Office. If a customer requests a meter to be tested and the test shows the metering equipment to be within acceptable accuracy limits, a charge may be assessed against the Customer if the previous customer requested test was within 12 months of this test. Chares and billing adjustments shall be made in accordance with the latest Lakeland Electric Policy.

5.12 Lakeland Electric Approval of Customer-Furnished Meter Center

Meter centers provided by the Customer shall be approved by Lakeland Electric prior to installation by the Customer. The Customer shall be responsible for all maintenance, including parts and labor, of pre-wired meter centers.

SECTION 8.0
STANDARD ELECTRICAL SERVICE REQUIREMENTS (SESR)
DRAWINGS and SPECIFICATIONS

Overhead and Underground Single-Phase Two-Wire Meter	E10CD1MC02
Overhead and Underground Single-Phase Three-Wire Meter	E10CD1MC01
Overhead Service To A Temporary Pole	E10CDTSP01
Overhead Service To A Residential Structure	E10CDRS001
Overhead Service To A Mobile Home Pole	E10CDMSP01
Underground Service To A Temporary Pole	E20CDTSP01
Underground Service To A Residential Structure	E20CDRS001
Underground Service To A Mobile Home Pole	E20CDTSP01
Padmounted Equipment Protective Barrier	E20CDEPB01
Overhead Service 3-Phase 4-Wire Self-Contained Meter	E10CD3MC01
Underground Service To CT-Rated Meter CT's In Cabinet	E20CDCTM02
Underground Service To CT-Rated Meter CT's In Transformer	E20CDCTM01

SECTION 6.0

CUSTOMER UTILIZATION EQUIPMENT

6.1 GENERAL

Lakeland Electric builds and maintains an electrical system to provide high quality and reliable electric service to all customers. However, since electrical equipment operated by one Customer may adversely affect the quality and continuity of service to another Customer and since the misuse of some equipment may constitute a fire hazard or endanger life, this section establishes guidelines and requirements governing the installation and operation of some of the more common types of customer utilization equipment. The Customer should contact L E's T & D Operations Engineering Division for additional information or for information on equipment not covered within this section.

6.2 Voltage Fluctuation Limits

Maximum allowable Customer caused voltage fluctuation limits for welder operation and motor starts are shown in Table 6.1 (next page). The generation of voltage fluctuations in excess of these limits may require Lakeland Electric to disconnect customer service until corrective action is taken by the customer if Lakeland Electric was not made aware of the use of the equipment when the service was designed. Lakeland Electric is responsible for service designs that operate within these limits when made aware of the planned use of this equipment, are shown by Table 6.1. Voltage fluctuation limits for welder operation and motor starts are shown in the following table. The generation of voltage fluctuations in excess of these limits may require Lakeland Electric to disconnect customer service until corrective action is taken by the Customer.

Voltage fluctuations are evaluated at either of two points. In the case of Customer complaints, voltage fluctuations are evaluated at the point of Lakeland Electric service to the Customer with the complaint. In the case of a customer requesting permission to operate equipment, the voltage fluctuation is evaluated at the point on L E's system where the quality of service to other customers may be affected.

Table 6.1

VOLTAGE FLUCTUATION LIMITS		
Maximum Fluctuation	**Equipment**	**Operating Restriction**
1/2 %	Welders	None
1%	Motors	Unlimited starts per day
2%	Motors	Maximum 2 starts per day
5%	Motors	Once per day between 1 a.m. and 6 a.m.
Above 5%	All	Not allowed

6.3 Motor Starting

Based on general standards of design, across the line starting of any motor in excess of the following horsepower, voltage, and phase ratings shall not be allowed. Any motors exceeding these ratings shall require a soft start.

Transformer Serving Multiple customers

Single-phase, line to neutral operation – 2 horsepower

Single-phase, line to line operation – 4 horsepower

Three-phase operation – 5 horsepower

Primary Service and Single Customer Transformer Services

Three-phase operation – 25 horsepower

Lakeland Electric recommends that customers with three-phase service not utilize single-phase motors operating on line to neutral voltages larger than one (1) horsepower or line to line voltages larger than two (2) horsepower.

6.4 Protection of Motors and Other Equipment

The Customer shall be responsible for protecting motors and other equipment against undervoltage, overvoltage surges (lightning), Overcurrent, phase failure (single-phasing), phase reversal, power interruptions, and short circuits.

Motors which cannot be safely subjected to full voltage starting and processes which may create a Safety hazard upon uncontrolled re-start, should automatically assume a stop or off condition upon the interruption of the supply voltage.

6.5 Equipment Voltage Rating

Lakeland Electric cautions the Customer against using equipment with a nameplate voltage rating that is inappropriate for the standard system voltage provided by Lakeland Electric. Deviations of plus of minus 5 percent of nominal rated service voltage are not uncommon in a utility distribution system and an additional voltage drop of 10 percent may occur on the Customer's internal wiring system. While equipment is generally designed by the manufacturer to operate at nameplate voltage plus or minus 10 percent, the operation of equipment with an inappropriate nameplate voltage for the service voltage supplied may result in damage to the equipment.

For example, if a 230 volt, three-phase motor were used on a 120/208 volt system, the motor could experience voltages as low as 178 volts or 14 percent below the motor's minimum operating voltage.

Minimum Motor Operating Voltage	=	230V	-10% = 207V
Minimum Utility Voltage	=	208V	- 5% =197.6V
Minimum Customer Voltage	=	197.6V	- 10% = 177.8V

6.6 ARC Welders

Arc welders of the transformer type usually have such severe load characteristics that voltage dip and lighting flicker may result during their operation. Welders of this type can be detrimental to the service being rendered to other customers, especially when served directly from L E's secondary lines. Before application of such welders, L E's T&D Operations Engineering Division should be consulted.

6.7 DC Equipment (Other Than Welders)

Customers installing SCR, diode, or other AC to DC converters are advised to install drive isolation transformers designed to prevent noise and harmonics from being generated back onto the Customer and Lakeland Electric distribution systems. Where the desired DC voltage level is critical, consideration should be given in the selection of the equipment for voltage fluctuation normally existent in the AC supply.

6.8 Flashing Lights

All flashing signs or lights served by Lakeland Electric shall be provided with such necessary switching and control equipment as may be needed to eliminate undesirable flicker, and radio and television interference to other customers.

6.9 X-Ray Machines, Broadcasting Equipment, and ARC Furnaces

Due to the very severe operating characteristics of such equipment as furnaces, X-Ray, radio, and television broadcasting stations, the Customer shall consult with L E's Distribution Engineering Division before installation is made.

6.10 Computers and Sensitive Electronic Equipment

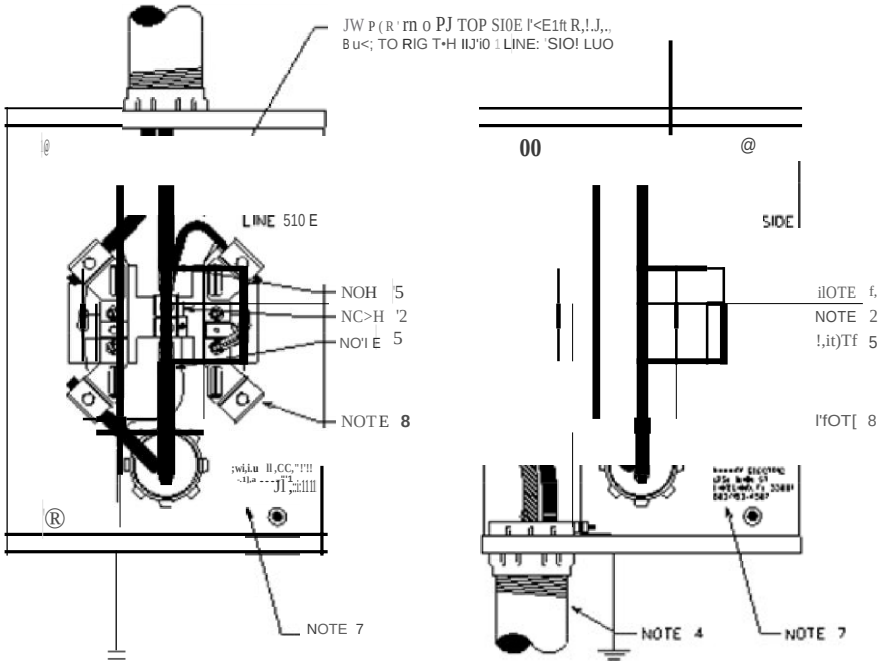
Lakeland Electric makes every effort to provide reliable and high quality electric service to the Customer. The power system is, however, exposed to many elements beyond L E's complete control such as lightning, trees, vehicle accidents, equipment failure, and animals. These elements occasionally cause abnormal system conditions such as short circuits resulting in voltage fluctuations and interruptions in power as the system's automatic protective devices detect and isolate the problem.

Even the briefest of these disturbances lasting a fraction of a second may adversely affect the operation of computers and other sensitive electronic equipment and controls. Additionally, the operation of electrical noise generating equipment by the Customer such as power supplies and variable speed drives may also affect these sensitive devices.

Before installing any sensitive electronic equipment the Customer is advised to have the equipment manufacturer monitor the voltage of the supply system to the equipment in order to determine the power adequacy and recommend any power purification equipment that may be necessary. The Customer should notify L E's Electric System Reliability Division if there are any questions concerning quality of power.

Standard Electrical Service Requirements (SESR)
Drawings and Specifications

• Overhead and Underground Single-Phase Two-Wire Meter	E10CD1MC02
• Overhead and Underground Single-Phase Three-Wire Meter	E10CD1MC01
• Overhead Service To A Temporary Pole	E10CDTSP01
• Overhead Service To A Residential Structure	E10CDRS001
• Overhead Service To A Mobile Home Pole	E10CDMSP01
• Underground Service To A Temporary Pole	E20CDTSP01
• Underground Service To A Residential Structure	E20CDRS001
• Underground Service To A Mobile Home Pole	E20CDTSP01
• Padmounted Equipment Protective Barrier	20CDEPB01
• Overhead Service 3-Phase 4-Wire Self-Contained Meter	E10CD3MC01
• Underground Service To CT-Rated Meter CT's In Cabinet	E20CDCTM02
• Underground Service To CT-Rated Meter CT's In Transformer	E20CDCTM01



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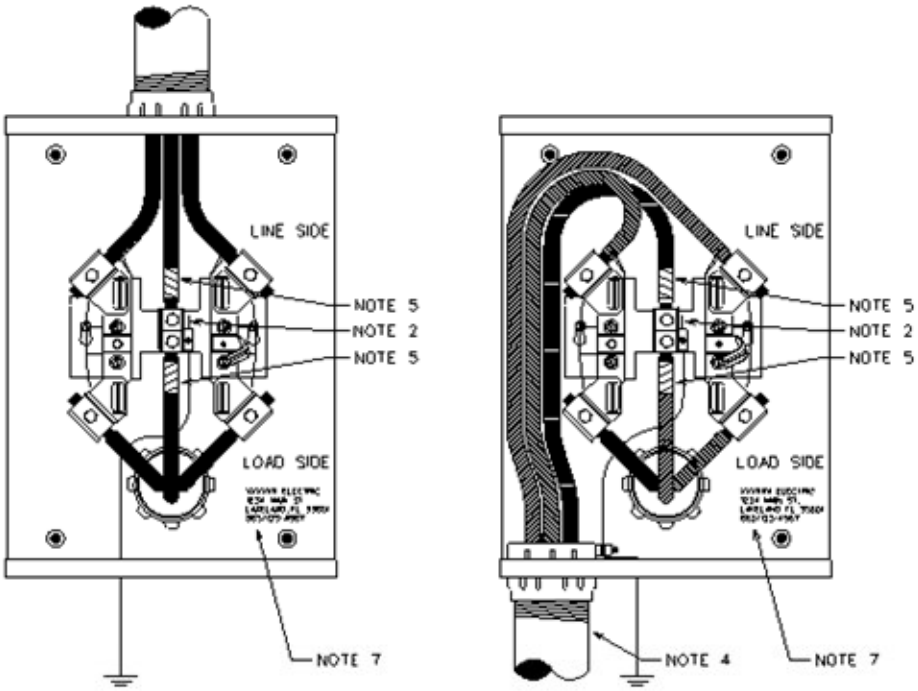
E L@CO JMC02. DGN

REFERENCE	OH & UG SERVICE, SINGLE PHASE, 3-WIRE METER CONNECTIONS	E10CD1MC01



OVERHEAD INSTALLATION

UNDERGROUND INSTALLATION

NOTES:

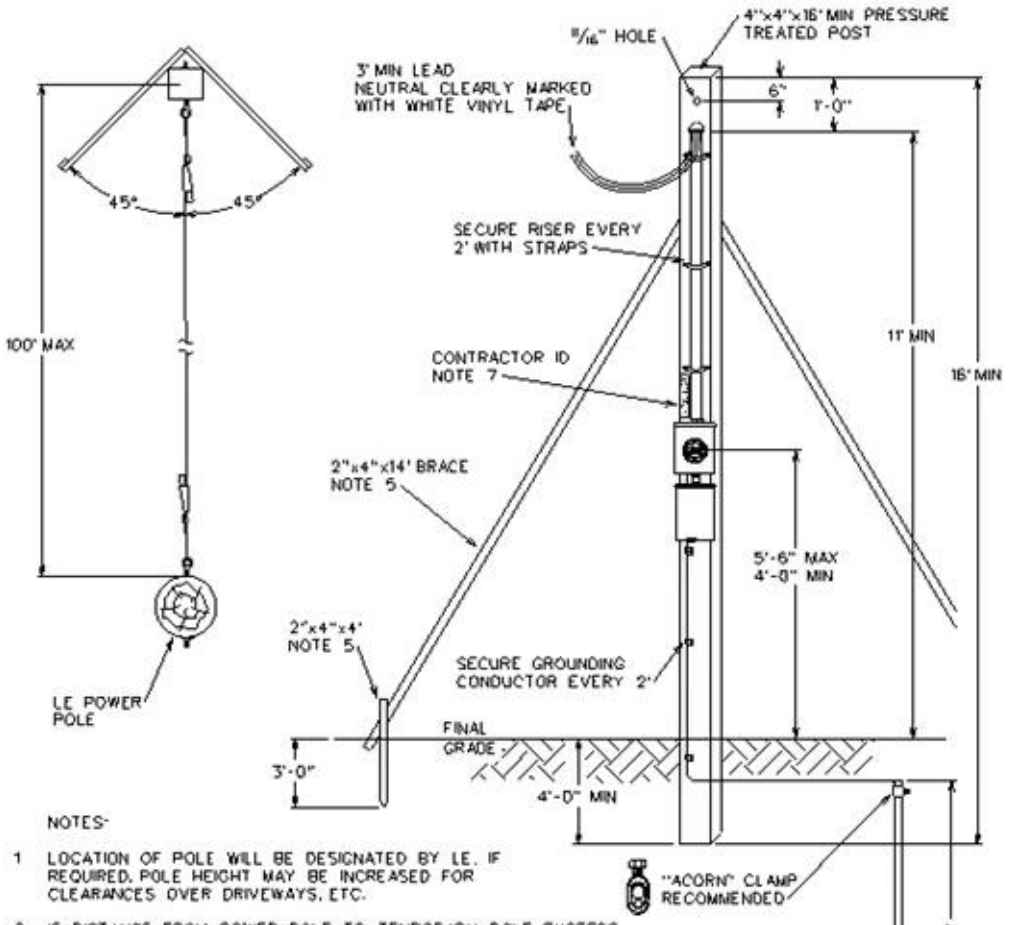
1. INSTALL ONLY LAKELAND ELECTRIC APPROVED METER CAN AT 5'-6" FROM CENTERLINE OF METER TO FINAL GRADE. THE USE OF NON-APPROVED METER SOCKETS IS PROHIBITED. IF SERVICE IS GREATER THAN 225 AMPS, LAKELAND ELECTRIC WILL PROVIDE METER CAN.
2. ATTACH A #4 SOLID SOFT-DRAWN COPPER WIRE TO THE GROUND TERMINAL IN THE METER CAN. SECURE THE GROUND WIRE TO THE WALL/POLE USING "J" TYPE WIRE CLAMPS EVERY 24". FOR INSTALLATIONS ABOVE 200 AMPS, REFER TO NEC FOR WIRE SIZE.
3. INSTALL TWO $\frac{5}{8}$" x 8' COPPER-CLAD GROUND RODS WITH MINIMN 6' OF SEPARATION BETWEEN EACH ROD AND ATTACH GROUND WIRE USING BRASS "ACORN" TYPE GROUND CLAMP ONLY. ADDITIONAL GROUNDING ATTACHMENT POINTS MAY BE REQUIREDED BY LOCAL REGULATION.
4. FOR UNDERGROUND INSTALLATIONS, THE RISER CONDUIT SHALL BE 2.5" ALUMINUM, AND SHALL BE INSTALLED THROUGH THE BOTTON KNOCKOUT ON THE LEFT OR RIGHT SIDE OF THE METER CAN ONLY. DO NOT USE CENTER KNOCKOUT ON BOTTOM OF METER CAN.
5. CUSTOMER SHALL MARK THE NEUTRAL CONDUCTORS INSIDE THE METER CAN WITH WHITE VINYL TAPE. FOR OVERHEAD INSTALLATIONS, CUSTOMER SHALL ALSO MARK THE NEUTRAL CONDUCTOR AT WEATHERHEAD WITH WHITE VINYL TAPE
6. FOR OVERHEAD INSTALLATIONS, CUSTOMER SHALL PROVIDE A MINIMUM OF 36" OF EXCESS CONDUCTOR PROJECTION FROM THE WEATHERHEAD.
7. ELECTRIC CONTRACTOR SHALL PROVIDE THEIR BUSINESS NAME, ADDRESS, AND PHONE NUMBER INSIDE THE CUSTOMER'S MAIN PANEL OR IN THE METER CAN.
8. CONTACT LAKELAND ELECTRIC AT (863) 834-8868 FOR FURTHER INFORMATION.

E1ØCD1MC01.DGN

LAKELAND ELECTRIC	OVERHEAD DISTRIBUTION 114 - SECONDARY & SERVICES	Page1

Date Printed: 09/07/2011

REFERENCE	OVERHEAD SERVICE TO A TEMPORARY POLE	E10CDTSP01



NOTES-

1 LOCATION OF POLE WILL BE DESIGNATED BY LE. IF REQUIRED, POLE HEIGHT MAY BE INCREASED FOR CLEARANCES OVER DRIVEWAYS, ETC.

2 IF DISTANCE FROM POWER POLE TO TEMPORARY POLE EXCEEDS 100', PLEASE CONTACT LAKELAND ELECTRIC FOR FURTHER INSTRUCTIONS.

3. TEMPORARY POLE SHALL BE A MINIMUM 4" x 4" x 16' PRESSURE TREATED POST. ALL 4" x 4" x 16' POLES MUST BE BRACED REGARDLESS OF DISTANCE FROM L.E. POINT OF DELIVERY TEMPORARY POLE SHALL BE SET AT A MINIMUM DEPTH OF 4-FEET BELOW GRADE.

4. AN OPTIONAL 16' x 6" DIAMETER PRESSURE TREATED ROUND POLE MAY BE USED IF DESIRED. THIS POLE DOES NOT REQUIRE BRACING.

5. POLE BRACES SHALL CONSIST OF TWO - 2" x 4" x 14' LENGTHS OF LUMBER FIRMLY ATTACHED TO A 2" x 4" x 4' STAKE DRIVEN TO A DEPTH OF 3' INTO THE GROUND. PRESSURE-TREATED LUMBER IS OPTIONAL FOR BRACES

6. ALL TEMPORARY POLES SHALL DISPLAY A PERMANENT MARKING TAG WITH CONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER.

7. GROUNDING - ATTACH A #4 SOLID SOFT-DRAWN COPPER WIRE TO THE GROUND TERMINAL IN THE METER CAN AND RUN TO A SINGLE 5/8" 8' COPPER-CLAD GROUND ROD. AN ACORN-TYPE GROUND CLAMP IS RECOMMENDED FOR CONNECTION TO GROUND ROD. ABOVE 200 AMPS REFER TO NEC FOR WIRE SIZE.

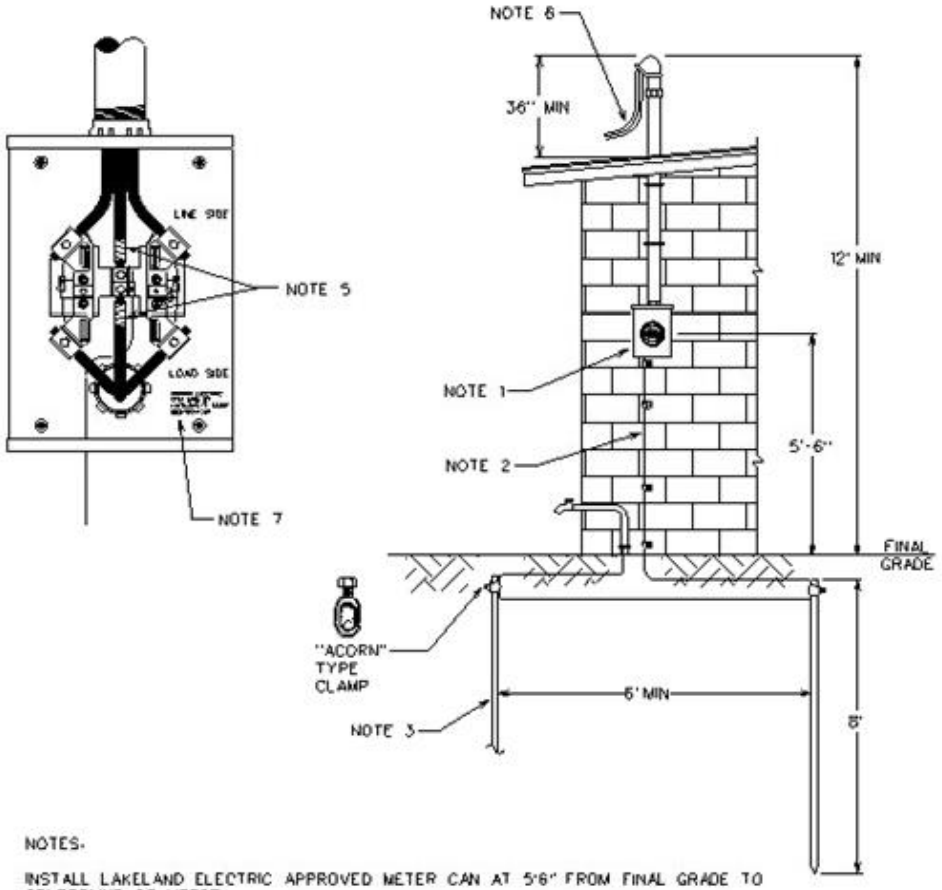
8. CONTACT LAKELAND ELECTRIC AT (863) 834-8868 FOR FURTHER INFORMATION.

E10CDTSP01.DGN

LAKELAND ELECTRIC	OVERHEAD DISTRIBUTION 114 - SECONDARY & SERVICES	Page1

Date Printed: 09/07/2011

REFERENCE	OH SERVICE TO A RESIDENTIAL STRUCTURE	E10CDRS001



NOTES:

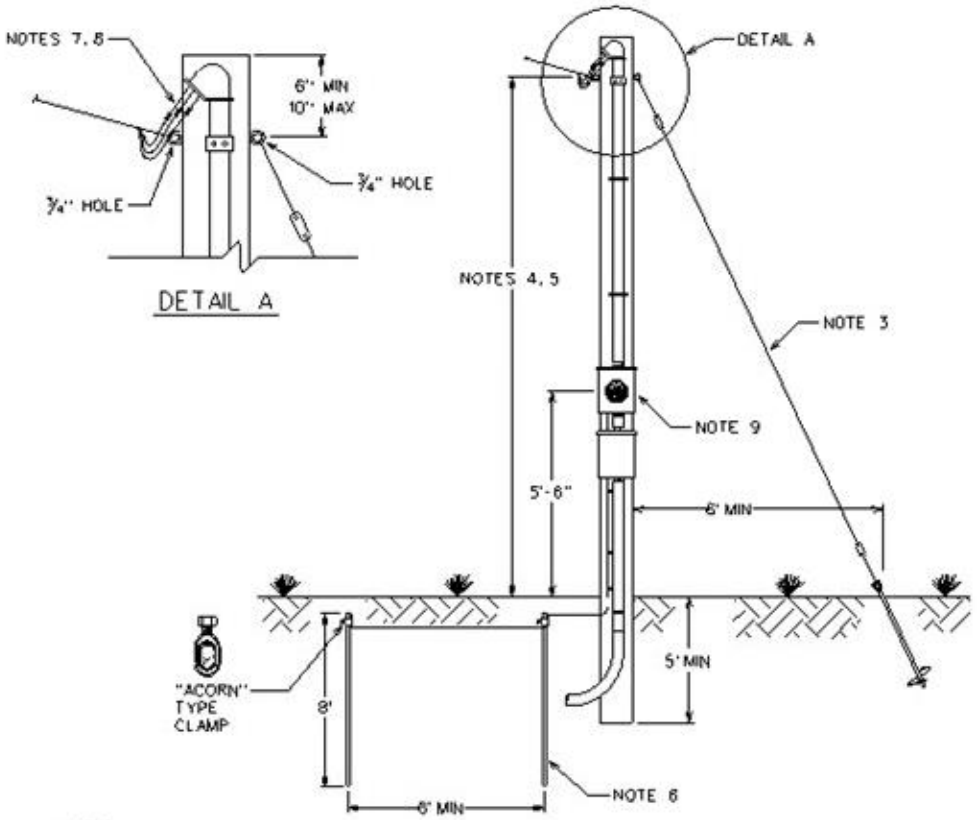
1. INSTALL LAKELAND ELECTRIC APPROVED METER CAN AT 5'6" FROM FINAL GRADE TO CENTERLINE OF METER.
2. ATTACH #4 SOLID, SOFT-DRAWN COPPER WIRE TO GROUNDING TERMINAL IN METER CAN. SECURE GROUND WIRE TO WALL USING "J" TYPE WIRE CLAMPS EVERY 24" ABOVE 200 AMPS REFER TO NEC FOR WIRE SIZE.
3. INSTALL TWO ⅝" x 8' COPPER-CLAD GROUND RODS WITH MINIMUM 6' SEPARATION BETWEEN EACH ROD AND ATTACH GROUND WIRE USING BRASS "ACORN" TYPE GROUND CLAMP ONLY. ADDITIONAL GROUNDING ATTACHMENT POINTS MAY BE REQUIRED BY LOCAL REGULATION.
4. SERVICE RISER PIPE SHALL EXTEND A MINIMUM OF 36" ABOVE ROOF ELEVATION ALL OVERHEAD SERVICE RISER PIPES SHALL MEET A MINIMUM OVERALL HEIGHT OF 12' ABOVE FINAL GRADE. SERVICE RISER PIPE MUST BE SECURED IN A MANNER AS REQUIRED BY LOCAL REGULATION.
5. SIZE NEUTRAL PER N.E.C. CODE. THE NEUTRAL CONDUCTORS INSIDE THE METER CAN AND AT THE WEATHER HEAD SHALL BE MARKED WITH WHITE VINYL TAPE.
6. CUSTOMER SHALL PROVIDE A MINIMUM OF 36" OF EXCESS CONDUCTOR PROJECTING FROM WEATHER HEAD.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE BUSINESS NAME, ADDRESS AND PHONE NUMBER INSIDE PANEL OR METER HOUSING.
8. CONTACT LAKELAND ELECTRIC AT (863) 834-8868 FOR FURTHER INFORMATION.

E10CDRS00.DGN

LAKELAND ELECTRIC	OVERHEAD DISTRIBUTION 114 - SECONDARY & SERVICES	Page1

Date Printed: 09/07/2011

REFERENCE	OH SERVICE TO A MOBILE HOME POLE	E10CDMSP01



NOTES:

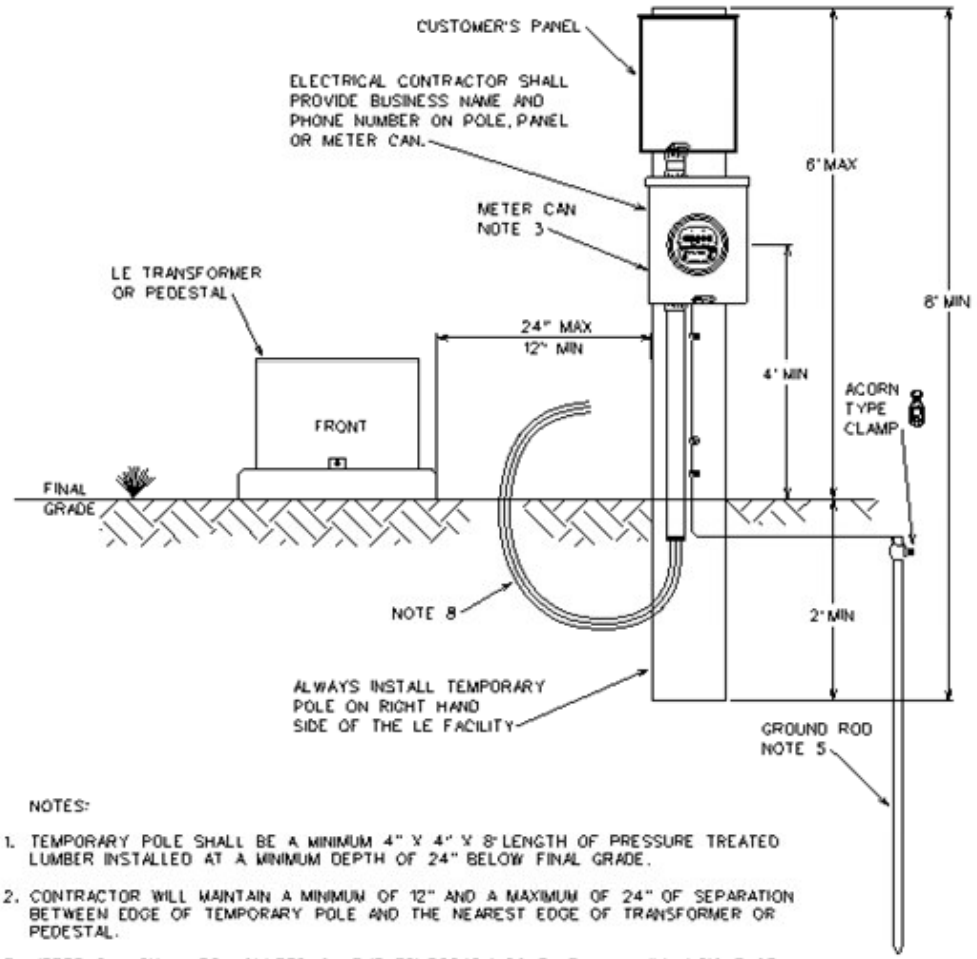
1. THE MOBILE HOME SERVICE POLE SHALL BE 6" X 6" X 20' (MINIMUM) PRESSURE TREATED LUMBER
2. THE SERVICE POLE SHALL BE BURIED AT A MINIMUM DEPTH OF 5' (SEE NOTE 3 FOR GUYING EXCEPTION).
3. IF LAKELAND ELECTRIC POLE IS ON THE SAME SIDE OF THE STREET AND WITHIN 75' OF THE MOBILE HOME SERVICE POLE, GUYING OF THE MOBILE HOME SERVICE WILL NOT BE REQUIRED.
4. POINT OF ATTACHMENT FOR SERVICE CABLE SHALL BE SUCH THAT A VERTICAL CLEARANCE OF CONDUCTORS IS 14' 6" ABOVE FINISHED GRADE.
5. IF REQUIRED, POLE HEIGHT MAY BE INCREASED FOR CLEARANCES OVER DRIVEWAYS, ETC.
6. INSTALL TWO ⅝" x 8' COPPER-CLAD GROUND RODS WITH MINIMUM 6' SEPARATION BETWEEN EACH ROD AND ATTACH GROUND WIRE USING BRASS "ACORN" TYPE GROUND CLAMP ONLY. ADDITIONAL GROUNDING ATTACHMENT POINTS MAY BE REQUIRED BY LOCAL REGULATION.
7. CUSTOMER SHALL PROVIDE A MINIMUM OF 36" OF CONDUCTOR PROTRUDING FROM THE WEATHERHEAD.
8. THE NEUTRAL SHALL BE CLEARLY MARKED IN THE METER BOX AND AT THE WEATHERHEAD WITH WHITE VINYL TAPE.
9. INSTALL A METER BOX FROM THE LAKELAND ELECTRIC LIST OF APPROVED METER BOXES. ATTACH SAID METER BOX TO THE POLE AT A DISTANCE OF 5' 6", CENTERLINE OF METER TO FINISHED GRADE.
10. CONTACT LAKELAND ELECTRIC AT (863) 834-8868 FOR FURTHER INFORMATION.

E10CDMSP01.DGN

LAKELAND ELECTRIC	OVERHEAD DISTRIBUTION 114 - SECONDARY & SERVICES	Page1

Date Printed: 09/07/2011

REFERENCE	UNDERGROUND SERVICE TO A TEMPORARY POLE	E20CDTSP01



NOTES:

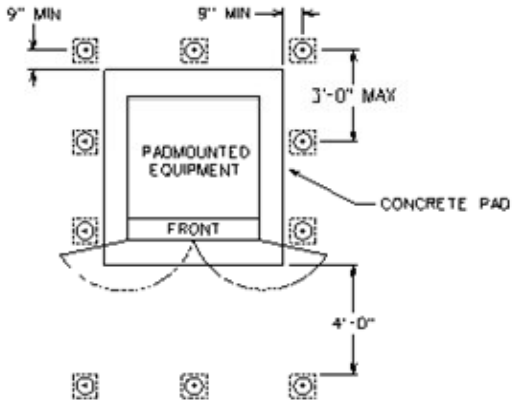
1. TEMPORARY POLE SHALL BE A MINIMUM 4" X 4" X 8' LENGTH OF PRESSURE TREATED LUMBER INSTALLED AT A MINIMUM DEPTH OF 24" BELOW FINAL GRADE.
2. CONTRACTOR WILL MAINTAIN A MINIMUM OF 12" AND A MAXIMUM OF 24" OF SEPARATION BETWEEN EDGE OF TEMPORARY POLE AND THE NEAREST EDGE OF TRANSFORMER OR PEDESTAL.
3. METER CAN SHALL BE MOUNTED ON THE TEMPORARY POLE AT A MINIMUM HEIGHT OF 48" ABOVE FINAL GRADE MEASURED TO THE CENTERLINE OF THE METER.
4. THE RISER CONDUIT FROM THE BASE OF THE METER CAN TO SUB-GRADE SHALL BE ALUMINUM, RIGID STEEL OR SCHEDULE 80 PVC
5. GROUNDING - ATTACH A #4 SOLID SOFT-DRAWN COPPER WIRE TO THE GROUND TERMINAL IN THE METER CAN AND RUN TO A SINGLE ⅝" 8' COPPER-CLAD GROUND ROD. AN ACORN-TYPE GROUND CLAMP IS RECOMMENDED FOR CONNECTION TO GROUND ROD. ABOVE 200 AMPS REFER TO NEC FOR WIRE SIZE.
6. MINIMUM CONDUCTOR SIZE SHALL BE #2 STRANDED ALUMINUM OR #4 STRANDED COPPER WIRE.
7. MARK THE NEUTRAL WITH WHITE VINYL TAPE INSIDE THE METER CAN AND AT THE EXPOSED END OF THE CONDUCTOR.
8. A MINIMUM OF 48" OF CONDUCTOR SHALL BE LEFT COILED ABOVE GRADE TO COMPLETE THE CONNECTIONS INTO THE TRANSFORMER OR PEDESTAL.
9. FOR QUESTIONS REGARDING TEMPORARY COMMERCIAL OR STANDARD CONFIGURATIONS, CONTACT LAKELAND ELECTRIC AT 863/834-8868.

E20CDTSP01.DGN

LAKELAND ELECTRIC	*UNDERGROUND DISTRIBUTION* 208 - TERMINATIONS - SECONDARY	Page1

Date Printed: 09/07/2011

REFERENCE	PADMOUNTED EQUIPMENT PROTECTIVE BARRIER	E20CDEPB01

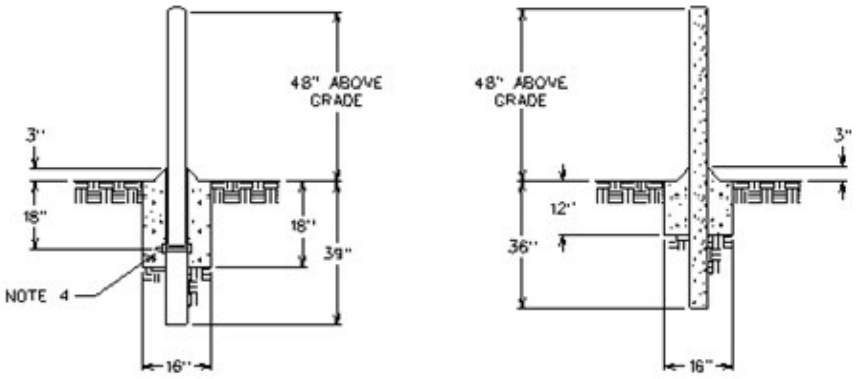


NOTES:

1 REAR AND SIDE BARRIERS SHALL BE FIXED.

2. FRONT BARRIERS MAY BE FIXED OR REMOVABLE.

3 BARRIER SPACING SHALL BE A MAXIMUM OF 3' CENTER TO CENTER.



REMOVABLE BARRIER

FIXED BARRIER

NOTES:

1. FILL 4" GALVANIZED IRON PIPE WITH CONCRETE. LEAVE CROWN OF CONCRETE AT TOP.

2. PAINT PIPE TRAFFIC YELLOW.

3. BUILD SLOPED CONCRETE COLLAR AT GRADE TO SHED WATER.

4. FOR REMOVABLE BARRIER, INSTALL 5" GALVANIZED IRON PIPE FOR SLEEVE INSTALL ¾" X 8" GALVANIZED MACHINE BOLT THROUGH SLEEVE 18" BELOW GRADE.

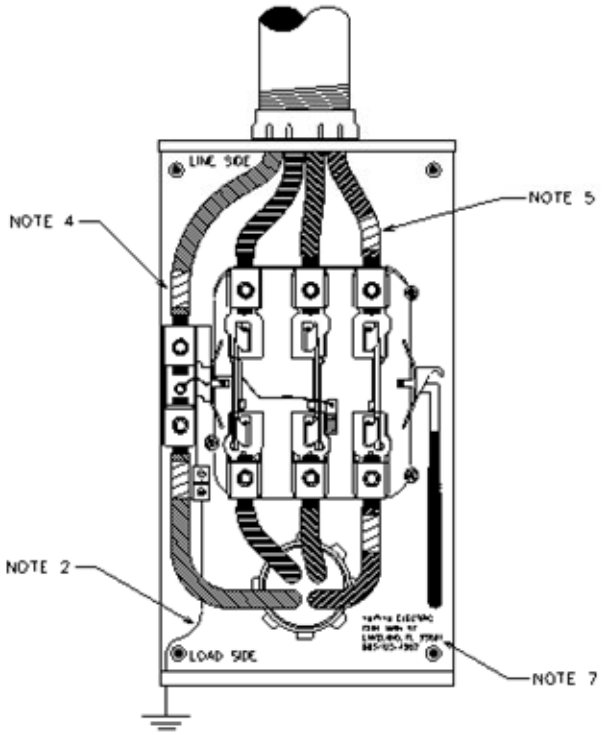
5. TAMP GROUND UNDER BARRIER UNTIL WELL COMPACTED.

E20CDEPB01.DGN

LAKELAND ELECTRIC	UNDERGROUND DISTRIBUTION 203 - CONCRETE FOUNDATIONS & BASES	Page1

Date Printed: 09/07/2011

REFERENCE	OH SERVICE, 3-PHASE, 4-WIRE SELF-CONTAINED METER CONNECTIONS	E10CD3MC01



OVERHEAD INSTALLATION

NOTES:

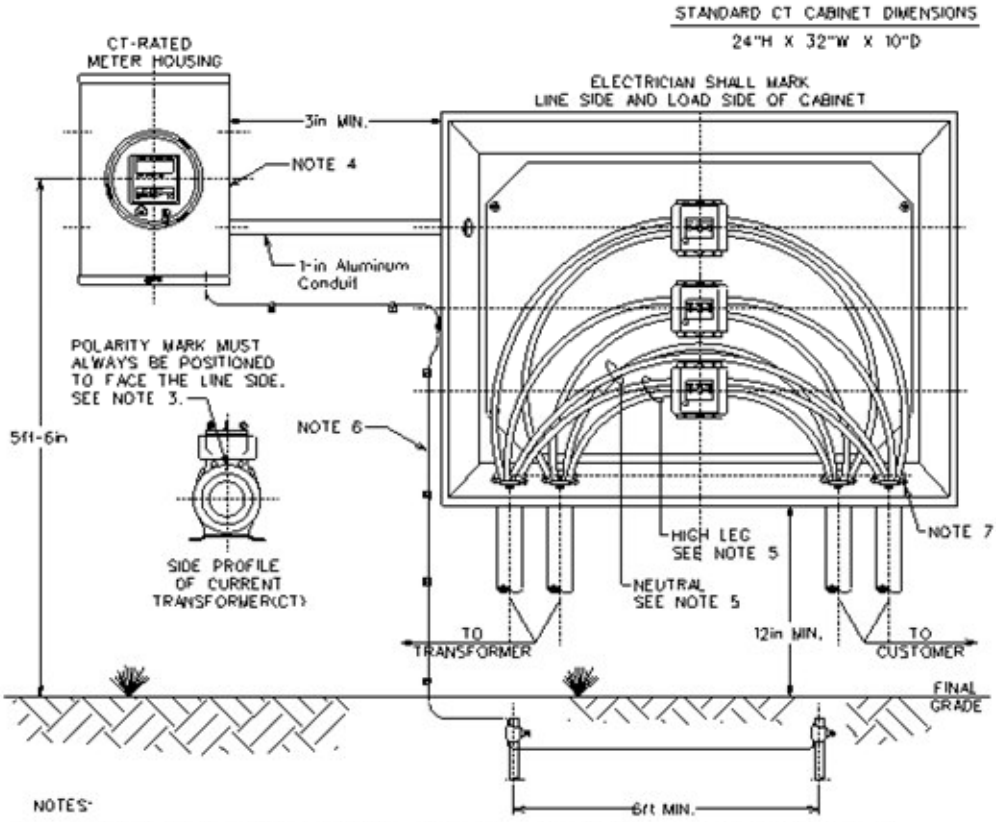
1. INSTALL ONLY LAKELAND ELECTRIC ISSUED METER CAN AT 5'-6" FROM CENTERLINE OF METER TO FINAL GRADE. THE USE OF NON-APPROVED METER SOCKETS IS PROHIBITED.
2. ATTACH A MINIMUM #4 SOLID SOFT-DRAWN COPPER WIRE TO THE GROUND TERMINAL IN THE METER CAN. SECURE THE GROUND WIRE TO THE WALL USING "J" TYPE WIRE CLAMPS EVERY 24". REFER TO NEC FOR REQUIRED GROUND WIRE SIZE.
3. INSTALL TWO⅝" x 8' COPPER-CLAD GROUND RODS WITH MINIMUN 6' OF SEPARATION BETWEEN EACH ROD AND ATTACH GROUND WIRE USING BRASS "ACORN" TYPE GROUND CLAMP ONLY. ADDITIONAL GROUNDING ATTACHMENT POINTS MAY BE REQUIREDED BY LOCAL REGULATION
4. THE NEUTRAL CONDUCTORS SHALL BE MARKED WITH WHITE VINYL TAPE INSDE METER CAN AND ALSO AT THE WEATHERHEAD (OVERHEAD SERVICE) OR IN THE PEDESTAL/TRANSFORMER (UNDERGROUND SERVICE).
5. ALL HIGH-LEG CONNECTIONS SHALL BE MARKED WITH ORANGE VINYL TAPE INSIDE METER CAN AND ALSO AT THE WEATHERHEAD (OVERHEAD SERVICE) OR IN THE PEDESTAL/TRANSFORMER (UNDERGROUND SERVICE). THE HIGH-LEG SHALL BE TERMINATED IN RIGHT-HAND METER LUG ONLY WITHOUT EXCEPTION!
6. FOR OVERHEAD INSTALLATIONS, CUSTOMER SHALL PROVIDE A MINIMUM OF 36" OF EXCESS CONDUCTOR PROJECTION FROM THE WEATHERHEAD.
7. ELECTRIC CONTRACTOR SHALL PROVIDE THEIR BUSINESS NAME, ADDRESS, AND PHONE NUMBER INSIDE THE CUSTOMER'S MAIN PANEL OR IN THE METER CAN.
8. CONTACT LAKELAND ELECTRIC AT (863) 834-8868 FOR FURTHER INFORMATION.

E10CD3MC01.DGN

LAKELAND ELECTRIC	OVERHEAD DISTRIBUTION 114 - SECONDARY & SERVICES	Page1

Date Printed: 09/07/2011

REFERENCE	UG SERVICE TO A CT-RATED METER WITH CT'S IN A CABINET	E20CDCTM02



NOTES:

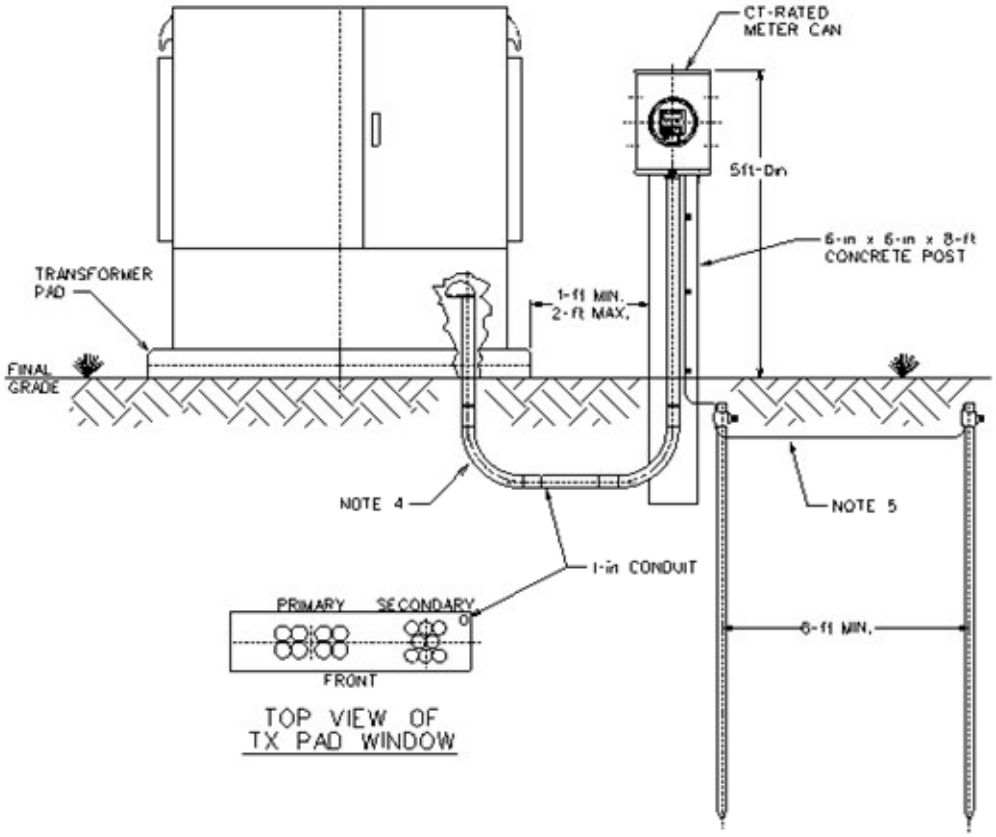
1. ALL SERVICES ABOVE 400-AMPS REQUIRE CT METERING. THE CUSTOMER IS RESPONSIBLE FOR THE INSTALLATION OF THE CABINET, CT'S, AND METER SOCKET. THESE ITEMS ARE ISSUED BY LAKELAND ELECTRIC. CONTACT YOUR ASSIGNED PROJECT TECHNICIAN FOR MORE INFORMATION.
2. INSTALL CT CABINET NO LESS THAN 12-IN FROM BOTTOM OF CABINET TO FINAL GRADE AND NO MORE THAN 48-IN FROM BOTTOM OF CABINET TO FINAL GRADE.
3. CURRENT TRANSFORMERS SHALL BE INSTALLED SO THAT THE WHITE POLARITY MARK ALWAYS FACES IN THE DIRECTION OF THE LINE SIDE. IF SECONDARY VOLTAGE INCLUDES A "HIGH LEG", THE CT FOR THE HIGH LEG SHALL BE MOUNTED ON THE FAR RIGHT-HAND SIDE. IF THE CT'S ARE MOUNTED IN A VERTICAL CONFIGURATION (AS SHOWN), INSTALL THE HIGH LEG CT ON THE BOTTOM.
4. MOUNT LAKELAND ELECTRIC SUPPLIED METER SOCKET AT 5-6" FROM FINAL GRADE TO CENTERLINE OF METER SOCKET. NIPPLE OUT OF METER SOCKET WITH 1-IN ALUMINUM CONDUIT INTO CT CABINET. MAINTAIN A MINIMUM OF 3-IN CLEARANCE BETWEEN CT CABINET AND METER SOCKET.
5. MARK HIGH LEG(S) (IF APPLICABLE) WITH ORANGE TAPE ONLY AND NEUTRAL(S) WITH WHITE TAPE ONLY. MARK OTHER LEGS WITH APPROPRIATE TAPE COLOR. ALL NEUTRALS MUST BE FULL SIZED.
6. INSTALL #4 SOLID COPPER GROUND WIRE TO GROUNDING LUG IN METER SOCKET. RUN GROUND WIRE THROUGH BASE OF METER HOUSING TO CABINET. CONNECT TO CABINET. SECURE GROUND WIRE WITH PROPER HARDWARE AND CONNECT TO SYSTEM GROUND. LAKELAND ELECTRIC REQUIRES TWO 5/8-IN x 8-FT COPPER-CLAD GROUND RODS AT A MINIMUM 6-FT SEPARATION. ATTACH GROUND WIRE TO EACH GROUND ROD USING "ACORN" TYPE CLAMP OR EXOTHERMIC WELD.
7. INSTALL CUSTOMER BONDING TO CT CABINET PER NEC AND LOCAL INSPECTING AUTHORITY REQUIREMENTS

E20CDCTM02.DGN

LAKELAND ELECTRIC	METERING 608 - SECONDARY METERING	Page1

Date Printed: 09/07/2011

REFERENCE	UG SERVICE TO A CT-RATED METER WITH CT'S IN A TRANSFORMER	E20CDCTM01



TOP VIEW OF TX PAD WINDOW

NOTES:

1. FOR SERVICES OF 400 AMPS OR MORE THAT ARE NOT CT'D INSIDE THE TRANSFORMER, CUSTOMER IS REQUIRED TO INSTALL A CT CABINET, CT'S AND METER SOCKET ISSUED BY LAKELAND ELECTRIC.
2. CT METER MAY BE INSTALLED ON A EXTERIOR WALL ONLY IF THE DISTANCE FROM THE TRANSFORMER TO THE PROPOSED POINT OF ATTACHMENT ON WALL DOES NOT EXCEED 25-FT. IF DISTANCE EXCEEDS 25-FT TO CLOSEST POINT OF ATTACHMENT, CT METER MUST BE POST MOUNTED
3. CONCRETE POST FOR POST MOUNTED INSTALLATIONS MUST BE 8-FT LONG BY 6-IN x 6-IN STEEL REINFORCED BURIED AT 3-FT DEPTH. MOUNT METER SOCKET HOUSING ON POST SO THAT TOP EDGE IS FLUSH WITH THE TOP EDGE OF POST.
4. INSTALL 1-IN CONDUIT FROM BASE OF METER SOCKET INTO SECONDARY WINDOW OF PAD AS SHOWN. ALL CONDUIT ABOVE GRADE SHALL BE ALUMINUM. INSIDE PAD WINDOW, STUB CONDUIT UP 12-IN ABOVE FINAL GRADE AND INSTALL WEATHERHEAD OVER OPENING FOR METER WIRE LEADS
5. INSTALL #4 SOFT-DRAWN SOLID COPPER GROUND WIRE TO GROUNDING LUG IN METER SOCKET. RUN THE GROUND WIRE THROUGH THE BASE OF THE METER SOCKET AND SECURE IT TO THE POST WITH WIRE J-CLIPS. INSTALL TWO 8-FT x 5/8-IN COPPER-CLAD GROUND RODS AT A MINIMUM OF 6-FT APART. SECURE GROUND WIRE TO EACH ROD USING "ACORN" TYPE CLAMP ONLY.
6. NO SERVICE CONDUCTOR MAY BE PULLED INTO CONDUIT UNTIL THE TRANSFORMER IS INSTALLED ON PAD.
7. CONTACT LAKELAND ELECTRIC AT 863/834-8868 FOR FURTHER INFORMATION.

E20CDCTN01.DGN

LAKELAND ELECTRIC	METERING 608 - SECONDARY METERING	Page1

Date Printed: 09/07/2011