

*CITY OF LAKELAND*



**POLICIES AND SPECIFICATIONS**

**FOR**

**SUBDIVISION AND COMMERCIAL DEVELOPMENTS**

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**1.0 DEFINITIONS:**

- 1.1 Contribution-In-Aid of Construction (CIAC) -- shall apply when the Customer requests resources, materials, and equipment above and beyond the LE standard distribution or lighting design layout. Lakeland Electric's intent is to designate a point of delivery of electric service that is most cost effective for all rate payers and provide lighting designed to certain minimum standards. Should the proposed LE design layout be unsatisfactory to the customer, then CIAC shall apply for all additional cost incurred.
- 1.2 COL – City of Lakeland
- 1.3 Conduit System – Below grade raceways for underground electric distribution lines shall include concrete foundations/bases, conduit and fittings, concrete encasements, pullboxes, manholes and any other materials needed for a complete underground distribution installation.
- 1.4 Contractor – the Corporation, company, partnership, firm or individual who has entered into a contract with the Developer/Owner to fulfill a specific job.
- 1.5 Developer – Any person or group developing any parcel of land to which the end result will produce more than one (1) electric customer, OR, any person or group developing any parcel of land for purpose of resale to an eventual electric customer. The Developer is usually the property owner or a designated representative.
- 1.6 Facility (Facilities) – Pole, transformer, pullbox, switchgear, pedestal, junction box, conductor, hardware, meters, etc., which is the property of COL.
- 1.7 Final Grade – The elevation at which the developer has determined the road surface, shoulders, drainage, adjacent property, and subdivision lots are to be constructed as shown on the APPROVED set of construction plans.
- 1.8 Preliminary Plat – Copy of plat to be recorded with Polk County.
- 1.9 LE – The City of Lakeland Department of Electric. (Lakeland Electric)
- 1.10 Overhead Construction (OH) – The standard placement of electric distribution lines on utility poles.
- 1.11 Property Information Office (PIO) – Located at Lakeland City Hall to submit plans for addresses and road name verification.
- 1.12 Plat – A map or drawing depicting the division of land into lots, blocks, parcels, tracts, sites or other divisions as set forth in Chapter 177, Florida Statutes.
- 1.13 Point of Attachment (to the customer) – That location which LE attaches it's service to the customer's wiring system.
- 1.14 Point of Delivery – The point where LE facilities are connected to the service cable serving the customer. i.e. LE pole, or underground distribution equipment.
- 1.15 Point of Service – The point on a parcel of property that is determined the closest and most reasonable for LE to provide electric service.

- 1.16 Recorded Plat – A plat that has been officially recorded with Polk County and issued a plat book number and page number.
- 1.17 Right-of-Way – A strip of land occupied or intended to be occupied and dedicated for a described usage by a road, crosswalk, railroad, electric power line, oil or gas pipeline, water main, sanitary, or storm sewer main, or—\_for similar use.
- 1.18 Roadway – The portion of the right-of-way which contains the road, pavement and curbing.
- 1.19 Site Plan – Lot layout plan including dimensions such as arcs, angles, bearings, road configuration, and road names.
- 1.20 Street Lighting Conduit – Conduit providing a raceway between Lakeland Electric utility poles, transformers, pedestals, street lights, etc., for the purpose of installing secondary voltage cables for street light services.
- 1.21 Street Light – Lighting fixtures installed for the primary purpose of lighting a roadway.
- 1.22 Subdivision – Any parcel of land being divided into lots or tracts for purposes of resale, lease or rental.
- 1.23 System Engineering – Lakeland Electric, Transmission and Distribution Engineering Division.
- 1.24 Underground Construction (UG) – The placement of electric distribution lines below final grade.
- 1.25 Underground Primary Conduit -- Providing a raceway between LE utility poles, transformers, pull boxes, manholes, switches, etc., for the purpose of installing primary voltage cables.
- 1.26 Underground Secondary Conduit –Providing a raceway between LE utility poles, transformers, pull boxes, manholes, switches, etc., for the purpose of installing secondary voltage cables rated 600 Volts and less.
- 1.27 Underground Service Line Conduit –Providing a raceway between LE facilities and meter pedestals, meter centers or meters.
- 1.28 Utility Easement – To provide the City of Lakeland with certain legal privileges to construct, install and maintain facilities on private property without violating trespass laws. **(Public Utility Easement or Lakeland Electric Easement)**

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## 2.0 GENERAL INFORMATION:

2.1 Lakeland Electric offers both Overhead and Underground electric distribution facilities for residential subdivision and commercial development. Extensions of distribution from existing underground facilities will be underground. Proposed extensions from existing overhead facilities can be either overhead or underground depending upon any governmental restrictions. Contribution-in-Aid-of-Construction may apply. See 2.11 and 2.12.

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2.2 This policy contains the minimum requirements for the installation of the electric distribution system and does not restrict requirements for more stringent specifications when conditions warrant them.

2.3 Extension of an electric distribution system shall be in accordance with this policy including all notes on specification sheets included within and any Lakeland Electric Engineering Standard specification provided in support of this policy, as well as the Lakeland Electric "Standard Electrical Service Requirements" policy (SESR).

2.4 The installed electric distribution system will not be energized until all provisions and conditions of this policy have been met.

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2.5 Lakeland Electric shall retain sole right for the design and specifications of the electric distribution system. Lakeland Electric shall base designs to provide a standard single-phase electric distribution system.

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~~2.42.6~~ Customer requests for the provision of 3-phase electric distribution must be evaluated and approved by Lakeland Electric. Contribution-in-Aid-of-Construction (CIAC) may be applied. See 2.11 and 2.12.

~~2.52.7~~ The Developer shall provide all necessary utility easements and/or dedicated electric easements at no cost to Lakeland Electric. All easements must be properly executed prior to energizing facilities.

~~2.62.8~~ Lakeland Electric reserves the right to install additional distribution facilities for system improvement and may require additional conduit systems be provided and installed by the developer for future development considerations.

~~2.72.9~~ All Right-of-Way permitting for the installation and construction of Lakeland Electric facilities will be obtained by Lakeland Electric as necessary. The developer/contractor must submit proof of insurance meeting the requirements of City of Lakeland Risk Management Dept. for any work done on portions of the project where the City of Lakeland is signer or co-signer to the utility use permit.

2.10 Lakeland Electric shall use the following criteria to evaluate all requests for three-phase commercial service applications:

2.10.1 The customer shall provide electrical plans with load data, panel schedules and service riser diagrams for proper LE evaluation.

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2.10.2 The three-phase service voltage requested is of similar characteristics of the service voltages provided by LE.

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2.10.3 The availability of three-phase distribution in relation to the proposed construction site. Extensions, additions or modifications to existing distribution facilities may subject the Customer to pay Contribution-In-Aid of Construction (CIAC).

2.11 Contribution-In-Aid of Construction (CIAC) shall apply when the Customer requests resources, materials, and equipment above and beyond the LE standard distribution design layout. Lakeland Electric's intent is to designate a point of delivery of electric service that is most cost effective for all rate payers. Should the proposed LE design layout be unsatisfactory to the customer,

then CIAC shall apply for all additional cost incurred to provide the point of delivery at the customer's requested designated location.

- 2.12 Contribution-In-Aid of Construction (CIAC) shall apply when the Customer requests removal or relocation of existing LE facilities to accommodate site construction needs.
- 2.13 It will be the responsibility of the customer to contact Lakeland Electric Customer Service Division **(863)834-9535** to set up all necessary accounts prior to energizing any temporary or permanent service.
- 2.14 Lakeland Electric will provide **single** metering enclosures and associated metering equipment for all three-phase services and single-phase services above 200 amps main disconnect rating.
- 2.15 Single-phase installations 200 amps or less main disconnect rating, the meter cans must be on the list of LE approved meter sockets. Contact LE Maintenance & Services Engineering for the current list of approved meter cans **(863)834-8868**.
- 2.16- Installations requiring multiple meter gang-centers servicing multi-occupancy facilities will be the customer's responsibility to provide the equipment. Equipment must be approved by LE prior to purchase and installation of metering enclosures to meet utility metering requirements.
- 2.17 It will be the electrician's responsibility to install all meter enclosures, C. T. cabinets and C. T.'s located inside C. T. cabinets as specified and provided by LE.
- 2.18 All metering equipment shall be grounded per National Electrical Code, Local Inspecting Authority and LE specifications.
- 2.19 The Developer must notify in writing at the time of plans submittal to LE all requests for Street Lighting or Parking lot lighting within the new subdivision or commercial development. LE will then provide to the developer the LE Street & Private Area Lighting guide, from which the Developer can request a particular style and type of light. LE shall retain sole right to the number and placement of all Street Light fixtures based on it's individual characteristics in all Street Light applications.

### **3.0 APPLICATION AND PLANS SUBMITTAL:**

**SCOPE:** The purpose of this policy is to create consistency between the Developer and Lakeland Electric. This Policy will establish the guidelines to allow Lakeland Electric the proper notice to obtain the information needed to design and provide a quality electric distribution system. Lakeland Electric **retains sole right** to the design and specifications to insure the best service for the end use customer and LE.

- 3.1 Application: All new residential and commercial developments must submit an "Application for Electric Distribution Design" and a complete set of the most current site construction plans. The submitted plans must contain but not be limited to, proposed water, sanitary, storm-water, drainage, typical road cross sections, lot lines, any existing and/or proposed easements.
- 3.2 Lakeland Electric designs the electrical distribution and the process does not start until all requested documents and drawings have been submitted. The design process is set for a maximum of twelve (12) weeks and material acquisition can take sixteen (16) weeks or more. It is imperative that LE receive the requested items in a timely manner to avoid delays in providing power.
- 3.3 Applications for new residential/multi-family or subdivided commercial development must be submitted to Lakeland Electric New Development Engineering to allow for a **12 weeks design process** prior to start of construction.

- 3.4 Lakeland Electric will provide to the developer an electrical layout within the allotted times designated in 3.2 and 3.3. Information included in this layout will include proposed above grade equipment locations, poles, conduit routing and any other pertinent construction information. LE will use due diligence to provide the electrical layout in a timely manner and communicate any delays to the applicant. **L E shall not be bound by service locations claimed to have been given orally.**
- 3.5 Plans submittal: Site and construction plans must be submitted in both hard copy form and electronic format. Electronic format must be suitable for Lakeland Electric use, i.e. Micro-Station or ACAD.
- 3.6 Any changes to the construction (preliminary or final) plans that directly affects the LE electrical design shall start the electrical design period over from the latest plans received date.
- 3.7 The Developer must submit one site plan approved for construction to the City of Lakeland, Property Information Office (PIO) at Lakeland City Hall for addressing of the lots, apartment units, commercial units, etc., at the time of Application submittal.
- 3.8 The Developer must submit **2** copies of the **Recorded Plat** for complete addressing confirmation to the Property Information Office prior to any addresses being verified to Lakeland Electric for establishing new service accounts.
- 3.9 **Replats and Revisions** shall be defined as a *new submittal*. Replats will require a new application and plans submittal thus beginning the design process again. Site plan revisions or changes in lot layouts shall **void** any previously provided electric distribution layout. Replats and Revisions may result in additional engineering fees to provide an electric distribution design.
- 3.10 The Developer shall submit a completed **Combined Document**, this form includes: LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE UNDERGROUND, CERTIFICATE OF DEDICATION AND WARRANTY, LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE OVERHEAD, AGREEMENT TO PROVIDE EASEMENT FOR PUBLIC UTILITIES, LETTER OF PROXY NOTICE. All sections initialed and signature page properly executed and returned to Lakeland Electric to the attention of the assigned engineer **prior** to design of any facilities by Lakeland Electric. **See 3.12.**
- 3.11 To expedite the project, it is required that a pre-construction meeting be held as soon as construction plans are available and prior to any construction or firm decisions concerning the electrical service.

**3.12 PROJECT INITIATION DOCUMENTS**



**SUBJECT: LETTER OF INTENT –REQUEST FOR ELECTRIC DISTRIBUTION SERVICE UNDERGROUND**

Manager of Engineering:

It is hereby requested that the following development \_\_\_\_\_ located in Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_, be connected to the City of Lakeland Electric's distribution system. It is understood that the following conditions and requirements exist:

1. A complete electric conduit system will be installed at no cost to the City in accordance with the approved plans, specifications and all other aspects of the City of Lakeland, Department of Electric, Electric Operations, Policies, Standards and Specifications for Subdivisions and Commercial Developments.
2. No liability whatsoever for injuries or damages resulting from system installation will be transferred to the City of Lakeland.
3. All necessary easements will be dedicated at no cost to the City of Lakeland, prior to the installation of City facilities.
4. Upon final acceptance by Lakeland Electric, absolute title of all conduits, pull boxes, manholes and other appurtenances will be vested in, and be the sole property of, the City of Lakeland (Certificate of Dedication and Warranty).
5. Lakeland Electric is given all rights necessary to enter the property at any time for the purpose of inspection of the construction, materials, or other reasons necessary to insure a first-class installation. A **one (1) week** notification in writing will be given prior to the start of construction.
6. "As Built" plans will be submitted within ten (10) days after completion of the conduit system.
7. A full 1-year warranty is given against defects in materials and workmanship. Warranty is to begin upon acceptance by Lakeland Electric and to cover any and all portions of the electric conduit system as installed.
8. The developer acknowledges that he and other parties will be performing construction work on the property and that there is a possibility that damage may occur to the underground electric facilities, the secondary pedestals, and transformers which are above the surface of the ground. The developer hereby assumes the responsibility for protection of the facilities installed by Lakeland Electric from damage by his employees, contractors, and subcontractors working within the Development. This responsibility shall commence when Lakeland Electric begins its installation of the facilities, and terminates one (1) year from the time the underground facilities are energized or until the respective lot is sold, whichever comes first. The liability of the Developer shall be to reimburse Lakeland electric for actual costs for labor, equipment, and material utilized in repairing such damage to the City's facilities.
9. The developer/contractor shall submit proof of insurance meeting the requirements of City of Lakeland Risk Management Department for any work done on portions of the project where the City is signer or co-signer to the utility use permit, i.e. Polk County, DOT, CSX Railroad, etc. The City must be listed as additional insured on the contractor's policy.
10. A certified cost breakdown by conduit size will be supplied to Lakeland Electric prior to final acceptance.
11. At least ten (10) days prior to the need for any electric service, the developer shall contact Lakeland Electric for a final development closeout review.
12. Should any of the above conditions not be fulfilled, electric service may be withheld by Lakeland Electric.



13. I have read the attached Subdivision/Commercial Project Policy and Procedure Manual (revision date February 2, 2007) and understand my responsibilities in order to obtain underground electric with the Lakeland Electric.

PLEASE INITIAL



**CERTIFICATE OF DEDICATION AND WARRANTY**

KNOW ALL MEN BY THESE PRESENTS, that \_\_\_\_\_  
(Name of Individual or Corporation)

BEING THE OWNER OF certain properties in Section \_\_\_\_\_, T \_\_\_\_\_ S, R \_\_\_\_\_ E,

Polk County, Florida, known at \_\_\_\_\_  
(Name of Subdivision, Mobile Home Park, Description or Parcel, etc.)

\_\_\_\_\_

\_\_\_\_\_

does hereby dedicate in fee simple forever the herein described electric conduit system facilities on said properties to the City of Lakeland, a municipal corporation organized under the laws of the State of Florida. This warranty does warrant that all electric facilities installed have been verified by the owner or his designated representative to be installed within the electric easements required by the City of Lakeland. This dedication includes all of the conduits, pull boxes, manholes and appurtenances installed for and connected to the City of Lakeland electric distribution system. Said facilities are dedicated to the perpetual use of the public and may be maintained, modified, moved or replaced by the City of Lakeland. All portions of the electric conduit system are hereby guaranteed against material defects and/or improper workmanship for a period of one (1) year from the date of acceptance by the City of Lakeland, Department of Electric.

PLEASE INITIAL

**SUBJECT: LETTER OF INTENT – REQUEST FOR ELECTRIC DISTRIBUTION SERVICE OVERHEAD**

Manager of Engineering:

It is hereby requested that the following development \_\_\_\_\_  
\_\_\_\_\_ located in Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_, be connected to the City of Lakeland Electric's distribution system. It is understood that the following conditions and requirements exist:

1. All property corners along road rights of way will be installed and appropriately marked at no cost to the City in accordance with approved plans and all other aspects of the City of Lakeland Department of Electric, T&D Operations Engineering, Policies Standards and Specifications for subdivisions and Commercial Developments.
2. No liability whatsoever for injuries or damages resulting from system installation will be transferred to the City of Lakeland.
3. All necessary easements will be dedicated at no cost to the City and provided to Lakeland Electric prior to final acceptance.
4. The City is given all rights necessary to enter the property at any time for the purpose of inspection of construction, materials, or other reasons necessary to insure a first-class installation.
5. At least ten (10) days prior to the need for any electric services, the developer shall contact Lakeland Electric for a final development closeout review.

REVISION 3: 07 / 14 / 2010

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EFFECTIVE: 07 / 14 / 2010

6. Should any of the above conditions not be fulfilled, electric service may be withheld by the Lakeland Electric.
7. I have read the attached Subdivision/Commercial Project Polity and Procedure Manual (revision date February 2, 2007) and understand my responsibilities in order to obtain overhead electric with the City of Lakeland.

PLEASE INITIAL



**AGREEMENT TO PROVIDE EASEMENT FOR PUBLIC UTILITIES**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned, do(es) hereby agree to provide necessary public utility easements over, under, or through property commonly known as:

\_\_\_\_\_ and described as:

in favor of the City of Lakeland, for the purpose of providing said property with necessary public utilities.

The undersigned has designated easements for the placement of public utilities as more particularly shown on Exhibit "A": attached hereto and made a part thereof, and has agreed that until such time as properly described easements are conveyed, the City is hereby authorized to install or have installed any facilities necessary to provide electric service or other public utilities, and the undersigned does recognize the necessity of said easements for the efficient operation of the utility and for the benefit of the property to be served. Further, it is agreed that the aforementioned public utility easements will be provided without cost to the City of Lakeland, within one hundred and twenty (120) days from the date of this Agreement, and in accordance with applicable sections of the City of Lakeland, Department of Electric, Policies, Standards and Specifications for Subdivisions and Commercial Developments.

This instrument shall be rendered null and void and of no further effect at such time as easement agreements, duly executed by and between the undersigned and the City of Lakeland, are recorded upon the public records in the County where the subject property is located. Failure on the part of the undersigned, or anyone acting by or through the undersigned, to convey public utility easements contemplated by this instrument, shall be grounds for the future denial of electric service, or other public utility.

The agreements understandings and expressions contained herein shall be binding upon the undersigned, its successors, assigns, administrators, trustees and grantees.

PLEASE INITIAL

**SUBJECT: LETTER OF "PROXY" NOTICE**

Supervisor of New Development Engineering:

With reference to the City of Lakeland, Department of Electric, Subdivision and Commercial Development Manual, I am hereby requesting that

\_\_\_\_\_ at

ADDRESS: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

FAX NUMBER: \_\_\_\_\_

Is designated as "Proxy" for \_\_\_\_\_ Development.

**PLEASE INITIAL**



“SIGNATURE PAGE”

Development/ Project Name: \_\_\_\_\_

IN WITNESS WHEREOF, this Agreement has been executed this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(SIGNATURE OF OWNER)  
**PLEASE INITIAL**

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Please type or print name of Owner

Title: \_\_\_\_\_

Phone #: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

STATE OF FLORIDA

COUNTY OF: (        )

Before me, the undersigned authority, personally appeared \_\_\_\_\_  
To me known, or who produced, as identification, and known to me to be the person (s) who executed the foregoing instrument, and they each and severally acknowledged to and before me that they executed the same freely and voluntarily for the purposes therein expressed.

Witness my hand and official seal at

\_\_\_\_\_ on this, the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

\_\_\_\_\_ Notary Public

My Commission Expires: \_\_\_\_\_

**\*NOTE: PLEASE SUFFICIENTLY PROVIDE INITIALS IN EACH INITIAL BLOCK PROVIDED. TWO WITNESSES AND NOTARY, OTHERWISE, THIS LETTER WILL BE RETURNED TO SENDER FOR PROPER SUBMITTAL.**

\*For LE use only:

ACCEPTED BY: \_\_\_\_\_

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

#### 4.0 ADDRESSES/ROAD NAME VERIFICATION—PROPERTY INFORMATION:

- 4.1 Scope: The City of Lakeland Development Department Property Information Office (PIO) has the responsibility for assigning all street addresses in the Lakeland Electric and Water utility service area. A master street addressing grid has been prepared so as to be consistent with existing addresses without sacrificing the need to have sequential geographic locations of properties along each street and road.
- 4.2 Significant awareness by the Developer regarding the status of street naming and addressing in their project should be maintained throughout planning, construction and final platting. The PIO in cooperation with the Polk County 911 System serves to coordinate this effort through initial name screening and "reservation" of that name at the beginning of an active project through to finalize addressing on a **RECORDED PLAT**.
- 4.3 The Developer shall submit one (1) approved set of the initial County Development Review Committee site plan, or City of Lakeland, or City of Polk City "approved for construction" site plan: to the Property Information Office. **See 7.4 and 8.3.**
- 4.4 Property Information Office must be kept informed by the Developer and/or engineering firm of the project status concerning any pertinent changes such as road configuration, road names, lot layout, lot numbering that will affect street address number matches.
- 4.5 Project addresses **must be** issued **prior** to any work orders being released.
- 4.6 The Developer shall submit two (2) copies of the **RECORDED PLAT** as recorded for complete addressing. **See 7.12, 7.13, 8.20 and 8.21.**
- 4.7 City of Lakeland Property Information Office hours are Monday through Friday (excluding holidays) from 8:00 a.m. to 5:00 p.m. or you may call **(863) 834-6084**.

#### 5.0 EASEMENT REQUIREMENTS:

- 5.1 The Developer shall be responsible for providing all necessary **Utility Easements** containing proposed Lakeland Electric facilities in proper form, at no cost to the City of Lakeland. Samples of proper forms are included in this policy. **See 5.10** .
- 5.2 The Developer shall submit a completed **Combined Document**, this form includes: LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE UNDERGROUND, CERTIFICATE OF DEDICATION AND WARRANTY, LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE OVERHEAD, AGREEMENT TO PROVIDE EASEMENT FOR PUBLIC UTILITIES, LETTER OF PROXY NOTICE All sections initialed and signature page properly executed and returned to Lakeland Electric to the attention of the assigned engineer **prior** to design of any facilities by Lakeland Electric. **See 3.12.**
- 5.3 Lakeland Electric reserves the right to obtain additional easements that support economic design and system reliability.
- 5.4 All platted subdivision/planned developments require platted easements to be included on the construction plans and preliminary plat prior to Lakeland Electric acceptance.
- 5.5 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 sealed copy of this Recorded plat **MUST BE** provided to Lakeland Electric prior to energizing any facilities.

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- 5.6 The Developer may provide Lakeland Electric with a written legal description and a raised-seal surveyed sketch of the proposed electric distribution facilities. If this option is required to properly describe and convey the **UTILITY EASEMENT**, the description must include the specified easement width requested by Lakeland Electric. Along with the survey, the person(s) name, or entity, mailing address, phone and fax number shall also be submitted **along with a copy of deed and property identification number.**
- 5.7 Failure to provide Lakeland Electric with proper **UTILITY EASEMENTS** will cause a delay in energizing the electric distribution system.
- 5.8 Use of combination of drainage and utility easement shall be accepted only with the approval of Lakeland Electric.
- 5.9 Typical cross-sections for each right-of-way within a subdivision, including easements, must be included in the submitted construction plans including utility placements with dimensions.

5.10

S A M P L E F O R M

Parcel No: \_\_\_\_\_
Section: \_\_\_\_\_
Township: \_\_\_\_\_ South
Range: \_\_\_\_\_ East

E A S E M E N T

THIS EASEMENT, is made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, between \_\_\_\_\_, Grantor, and the CITY OF LAKELAND, FLORIDA, Grantee.

W I T N E S S E T H

That the Grantor, for and in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, hereby grants unto the Grantee, its successors, and assigns, a perpetual easement and right-of-way for the purpose of clearing, excavating, constructing, operating and maintaining public utilities in, upon, and through the following described land in the County of Polk, State of Florida, to-wit:

L E G A L D E S C R I P T I O N H E R E

IT IS EXPRESSLY COVENANTED AND AGREED that this easement agreement does in no wise convey the fee simple title to this property, but is only an easement for the use thereof and for the purpose herein stated. Grantor covenants with Grantee that is is lawfully seized of said lands and that it has good and lawful authority to grant this easement. IN WITNESS WHEREOF, the Grantor has hereto set his hand(s) and seal(s) on the date first written above.

Signed, Sealed, and Delivered in the presence of:

Witness as to all Signatories Print Name \_\_\_\_\_ Address \_\_\_\_\_ (Seal)
Witness as to all Signatories Print Name \_\_\_\_\_ Address \_\_\_\_\_ (Seal)
Print Name \_\_\_\_\_ Address \_\_\_\_\_ (Seal)

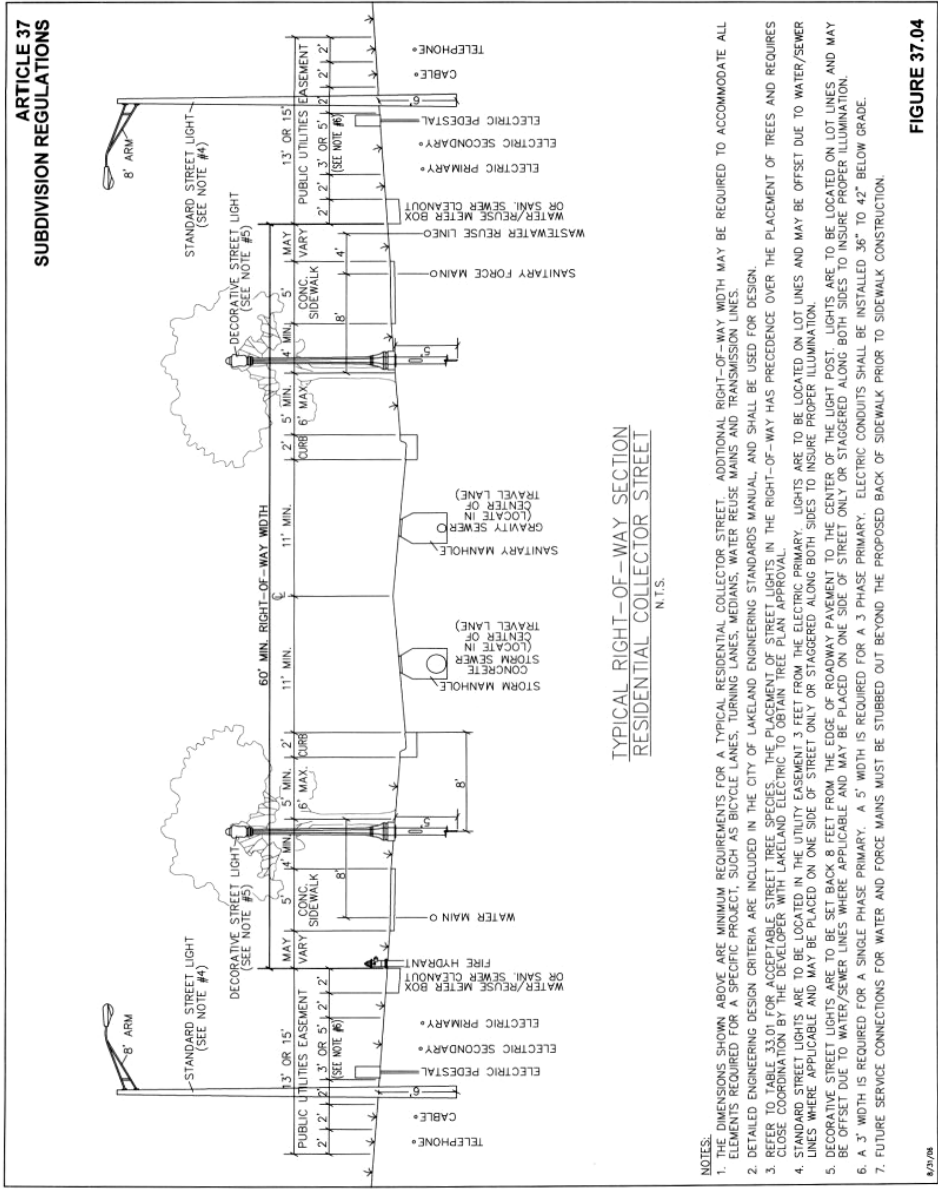
STATE OF FLORIDA
COUNTY OF POLK

SWORN TO AND SUBSCRIBED BEFORE ME, THE UNDERSIGNED AUTHORITY, THIS DAY APPEARED \_\_\_\_\_, who is personally known to me or who has produced \_\_\_\_\_ foregoing instrument for the purpose expressed therein.

WITNESS my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, My Commission Expires: \_\_\_\_\_
Notary Public
Print Name: \_\_\_\_\_ Commission Number: \_\_\_\_\_
Address: \_\_\_\_\_
(AFFIX NOTARY SEAL)

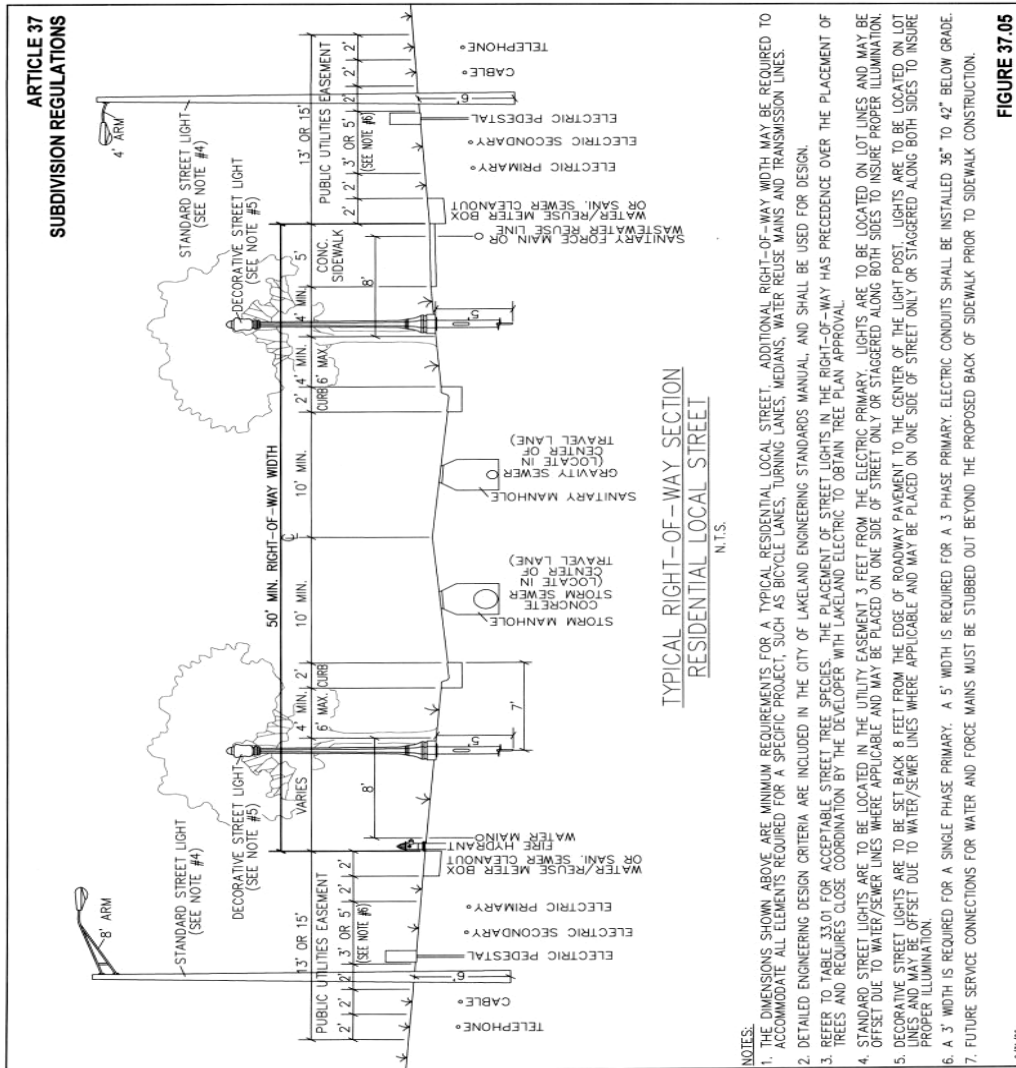
This instrument prepared and legal description approved:
Date: \_\_\_\_\_ By: \_\_\_\_\_ City Hall, Lakeland, FL 33801

**5.11 TYPICAL UTILITY EASEMENT ALIGNMENT (60.0' RIGHT-OF-WAY)**





**5.12 TYPICAL UTILITY EASEMENT ALIGNMENT (50.0' RIGHT-OF-WAY).**

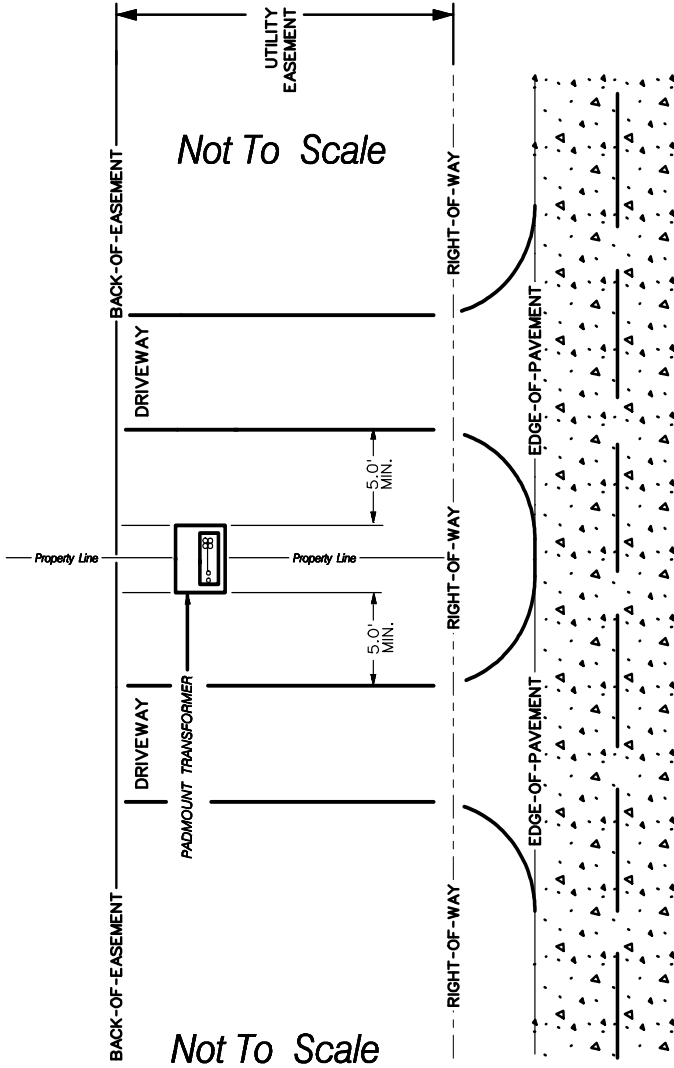


**FIGURE 37.05**

**5.13 MINIMUM CLEARANCE REQUIREMENTS FROM DRIVEWAYS**

**TYPICAL UTILITY EASEMENT**

**MINIMUM CLEARANCE REQUIREMENTS FOR DRIVEWAYS**



*Not To Scale*

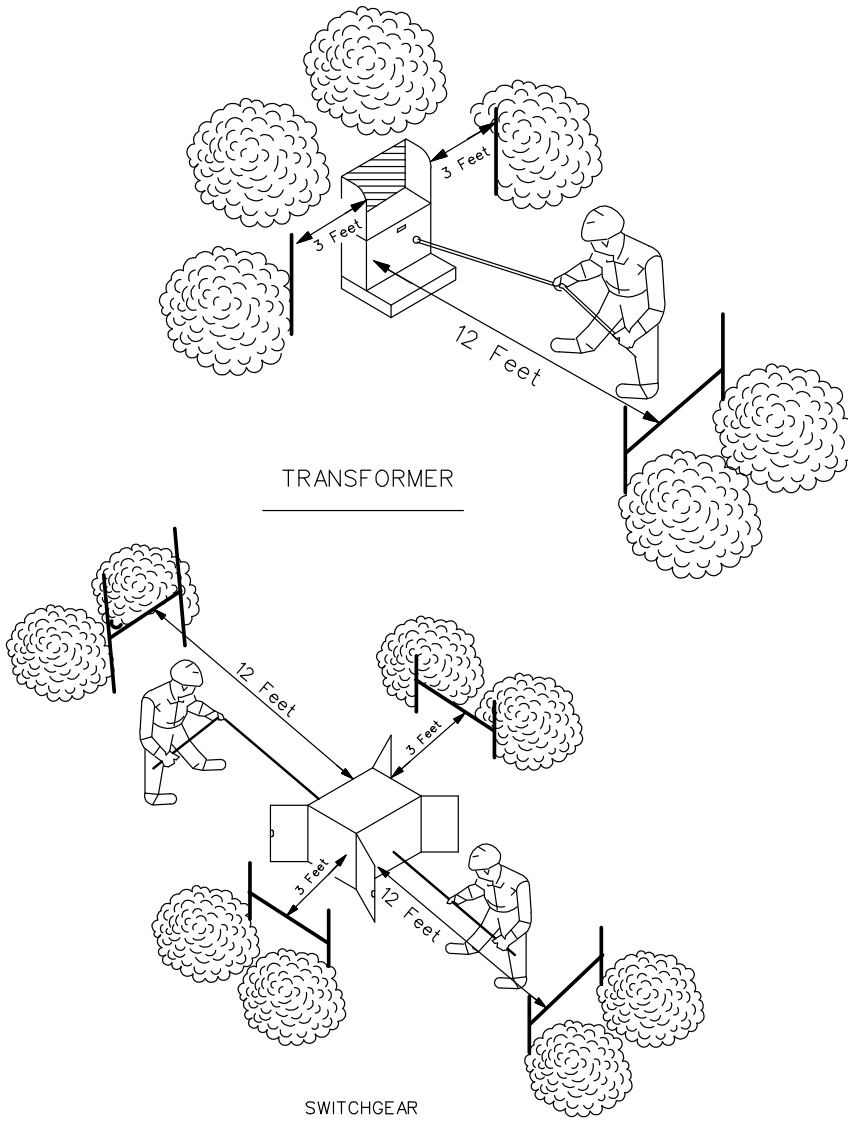
1. WHEN INSTALLING A DRIVEWAY, A MINIMUM OF FIVE (5) FEET OF CLEARANCE SHALL BE MAINTAINED BETWEEN THE ABOVE GRADE FACILITIES AND THE OUTSIDE EDGE OF THE DRIVEWAY NEAREST THE FACILITY.
2. MAINTAIN A MINIMUM 1.0' VERTICAL CLEARANCE WHEN INSTALLING ELECTRIC CONDUIT PERPENDICULAR TO ANY OTHER UNDERGROUND UTILITY.
3. ALL LAKELAND ELECTRIC EQUIPMENT SHALL BE PLACED WITHIN THE DESCRIBED EASEMENT AREA.
4. IF COMPLIANCE WITH ANY OF THESE CONDITIONS CANNOT BE ACHIEVED, LAKELAND ELECTRIC MUST BE NOTIFIED IMMEDIATELY PRIOR TO THE INSTALLATION OF THE ELECTRICAL CONDUIT.

## **6.0 TREE TRIMMING / LANDSCAPING / SIGN CLEARANCE:**

- 6.1 Scope: For safety reasons, certain minimum clearances must be maintained between various circuits of the transmission and distribution electric system. No less important are clearances from foreign circuits, rails, roads, buildings, signs, etc. Lakeland Electric Utility Clearance Standards are based on the National Electric Safety Code ANSI C2 latest adopted editions.
- 6.2 Rights-of Way and Utility Easement clearing and tree trimming shall be performed by the developer as follows:
  - 6.2.1 Rights-of-Way in platted and recorded subdivisions or developments shall be cleared in accordance with Polk County Subdivision Regulations and City of Lakeland Regulations.
  - 6.2.2 Rights-of-Way along unplatted roads or private roads shall be cleared to a width of twenty (20) feet beyond edge of payment on the roadside where overhead lines will be installed as determined by Lakeland Electric, Energy Delivery Engineering Division.
  - 6.2.3 In addition to rights-of-way clearing, the necessary utility easement shall be cleared or trimmed of any and all tree limbs overhanging said strip adjacent to rights-of-way described in 6.2.1 and 6.2.2.

**6.4 PLANTING CLEARANCES FOR PADMOUNT TRANSFORMERS AND SWITCHES:**

CLEARANCES  
FOR PADMOUNT TRANSFORMERS AND SWITCHES



## **7.0 OVERHEAD CONSTRUCTION:**

- 7.1 Overhead construction shall be available to all new developments within the Lakeland Electric Utility service territory – **UNLESS** the development is within the corporate boundaries of the City of Lakeland, or under an annexation agreement, in which case, such development must utilize underground distribution. **See 8.0** .
- 7.2 If the subdivision or planned development is within the corporate boundaries of the City of Lakeland, or under an annexation agreement, contact City Hall Community Development Department at **(863) 834-6011** for additional instructions and/or information.
- 7.3 New electric distribution construction shall be located within road rights-of-way at the **DISCRETION** of the Manager of Lakeland Electric Energy Delivery Engineering Division . or his designee.
- 7.4 The Developer shall submit one (1) complete set of preliminary plans to Lakeland Electric. This set of plans shall include but not be limited to proposed water, surface drainage, storm, sanitary facilities, typical road cross sections, and any proposed three-phase power locations. **See 3.0**.
- 7.5 The Developer shall submit one (1) preliminary lot layout plan "approved for construction" by Development Review Committee to Property Information Office. **See 4.0**.
- 7.6 The Developer shall submit a completed **Combined Document**, this form includes: LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE UNDERGROUND, CERTIFICATE OF DEDICATION AND WARRANTY, LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE OVERHEAD, AGREEMENT TO PROVIDE EASEMENT FOR PUBLIC UTILITIES, LETTER OF PROXY NOTICE All sections initialed and signature page properly executed and returned to Lakeland Electric to the attention of the assigned engineer **prior** to design of any facilities by Lakeland Electric. **See 3.12**.
- 7.7 Lakeland Electric will submit any and all City, State, and County permits required to install an overhead electric system. The Developer shall pay the permitting fee(s) prior to the permit submittals.
- 7.8 **ANY** site plan revisions shall **VOID** all previous layout work by Lakeland Electric. **ALL** revisions shall be considered new work and shall follow the above procedure accordingly.
- 7.9 Within one (1) week after project construction has commenced, the Developer shall notify Lakeland Electric **IN WRITING** of the proposed construction schedule, with particular emphasis upon the time that roads will be ready for Lakeland Electric Crews to enter for purposes of overhead line construction.
- 7.10 At such time that roads are ready for use by Lakeland Electric the Developer shall have all lot corners along road rights-of-way set and clearly marked, at no cost to Lakeland Electric.
- 7.11 Any miss-marked lot corners resulting in improper pole locations shall not be the responsibility of Lakeland Electric and any and all costs incurred by Lakeland Electric for pole relocation shall be paid by the Developer in advance.
- 7.12 The Developer must submit two (2) sealed copies of the **Recorded Plats** to the City of Lakeland Property Information Office (PIO). **See 4.0**.
- 7.13 The Developer must submit a sealed copy of the **Recorded Plat** to Lakeland Electric prior to energizing of the facilities. Failure to provide all required submittals may result in LE withholding electric service.

## 8.0 UNDERGROUND CONSTRUCTION:

- 8.1 Underground electric distribution shall be available for all new developments within Lakeland Electric service territory.
- 8.2 If the subdivision or planned development is within the corporate boundaries of the City of Lakeland, or under an annexation agreement, contact City Hall Community Development Department at **(863) 834-6011** for additional instructions and/or information.
- 8.3 The Developer shall submit one (1) complete set of preliminary plans to Lakeland Electric. This plan shall also include but not limited to proposed water, surface drainage, storm, sanitary facilities, typical road and drainage cross sections, and any requested/proposed three-phase power locations. **See 3.0.**
- 8.4 The Developer shall submit a completed **Combined Document**, this form includes: LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE UNDERGROUND, CERTIFICATE OF DEDICATION AND WARRANTY, LETTER OF INTENT-REQUEST FOR ELECTRIC DISTRIBUTION SERVICE OVERHEAD, AGREEMENT TO PROVIDE EASEMENT FOR PUBLIC UTILITIES, LETTER OF PROXY NOTICE. All sections initialed and signature page properly executed and returned to Lakeland Electric to the attention of the assigned engineer **prior** to design of any facilities by Lakeland Electric. **See 3.12.**
- 8.5 The Developer shall submit one (1) preliminary lot layout plan "approved for construction" by County Development Review Committee to Property Information Office. **See 4.0.**
- 8.6 New electric distribution construction shall be located within rights-of-way or utility easements adjacent to road rights-of-way at the **DISCRETION** of the Manager of Lakeland Electric Energy Delivery Engineering Division or his designee.
- 8.7 Lakeland Electric will submit any and all necessary permits. The Developer shall pay the permitting fee(s) prior to the permit(s) submittals.
- 8.8 Developers shall be responsible for the installation of all conduits within the proposed development. In addition Developers may also be required to install conduits on property or Right-of-Way adjacent to the proposed development. The conduit system shall be installed in accordance with Lakeland Electric Specifications for conduit installation, **See 9.0.**
- 8.9 Conduit installation for LE facilities shall not commence until an approved electrical layout has been provided to the customer by the assigned Engineering Technician.
- 8.10 All required above grade or at grade electric equipment (i.e. Padmount Transformers, Secondary Pedestals, Pull-boxes, etc.) will be **CENTERED** on property lines. Exceptions requested by the Developer shall be at the discretion and with the approval from the Project Technician. **FINAL GRADE** must be met at each above grade equipment location, prior to release of work order.
- 8.11 All work involved in conduit system installation shall at all times conform to good construction practice, whether specific or implied. Industry standards and/or manufacturers' recommendations must be complied with. Maximum care must be used in the protection of underground and above ground property, structures or facilities whether shown on the plans or not. Conduit system ownership is not vested to the City of Lakeland until 1 year from the final acceptance of the system.
- 8.12 Installation of the conduit system includes: conduit, conduit fittings, all approved sweeps, pull-boxes, manholes, risers, stub-outs, three-phase transformer pads, switch gear pads, fused enclosure pads and/or any other device or material deemed necessary for the electrical distribution conduit system plan provided by LE.

- 8.13 At least one (1) week prior to conduit system installation, the Developer shall submit **IN WRITING** the company name, contact person's name, address, and telephone number of the firm selected to install the conduit system and the date said work is scheduled to begin, to Lakeland Electric.
- 8.14 Lakeland Electric assigned technician shall inspect all materials **PRIOR** to installation, all materials to be installed must be approved by LE. **See 11.11.**
- 8.15 Lakeland Electric reserves the right to require the conduit ditches to be left open for inspection. If said ditches are filled prior to inspection, then LE may withhold electric service until requirement has been satisfied.
- 8.16 The **final conduit system inspection** shall be performed only by the assigned technician after the following items have been completed:
- ALL conduit work is complete.
  - ALL lot easements and Rights-of Ways are at **FINAL GRADE.**
  - ALL lot corners have been located and flagged with appropriate lot numbers.
- 8.17 Lakeland Electric reserves the right to deny acceptance of any conduit system that is damaged and/or does not meet the minimum requirements of this specification. A conduit system will not be accepted until all the provisions of this Policy have been met. When a conduit system is rejected for any reason, the Developer will be notified via mail, e-mail and/or telephone and the following shall be in effect. All repairs to the conduit system shall be performed by the Developer or the Developer's designated Contractor.
- 8.18 Changes made to final grade and/or lot layout resulting in the relocation or re-setting of previously installed LE equipment, all costs associated with work will be assumed by the developer.
- 8.19 The Developer must submit two (2) sealed copies of the Recorded Plats to the City of Lakeland Property Information Office (PIO). **See 4.0.**
- 8.20 The Developer must submit a sealed copy of the Recorded Plat to Lakeland Electric. Failure to provide may result in LE withholding electric service.
- 8.21 **This Policy contains the MINIMUM requirements for the installation of an underground electric distribution system and in no way restricts LE from requiring more stringent specifications when conditions warrant.**

**9.0 SPECIFICATIONS FOR CONDUIT INSTALLATION:**

9.1 Scope – The Developer shall furnish all labor, equipment, and materials and perform all necessary operations in connection with the installation of a complete electric distribution conduit system, ready for use. Work shall be in accordance with these specifications, the applicable plans, and all other terms and conditions of this Policy, either specific or implied. The work is to include any and all land restoration necessary to obtain final grade condition. **See 8.10 and 8.18.**

9.2 Conduit sizes shall be as follows, **unless otherwise noted on plans by Lakeland Electric:**

PRIMARY (Three-Phase)	(4) 2.0 inch
PRIMARY (Single-Phase)	2.0 inch
SECONDARY	2.5 inch
STREET LIGHTING	1.0 inch
SERVICE STUB – OUTS	2.5 inch
SERVICE LINES	2.5 inch*

\*(When service conductor is provided and installed by LE)

9.3 Elbow sweeps shall have the following radius and riser heights.

2.5"	Service	24"	Radius	2' 11"	Heights
2.0"	Primary	24"	Radius	2' 11"	Heights
2.5"	Secondary	24"	Radius	2' 11"	Heights
4.0"	Primary	36"	Radius	3' 11"	Heights

9.4 All conduit shall be installed at the following depths, measured from finished grade to top of conduit **See 11.21.**

PRIMARY	36 – 40 Inches
SECONDARY	36 – 40 inches
STREET LIGHTING	24 – 26 inches* (not installed in road Right-of-Way)
STREET LIGHTING	36 – 40 inches* (installed within road Right-of-Way)
SERVICE LINES	24 – 26 inches

9.5 In City, County or State Right-of-Way or Ingress-Egress Public Access Utility Easements all conduits shall be 36" below final grade, measured from top of sub base / final grade to top of conduit.

9.6 Minimum horizontal separations shall be maintained between electric conduits and all other utilities as specified in the typical utility easement profiles provided. **See 5.11 and 5.12.**

9.7 A minimum of one (1) foot vertical separation shall be maintained between electric conduits and all other utilities where these systems intersect.

9.8 A minimum of five (5) foot separation shall be maintained between the above grade facilities and driveways (paved or non-paved). **See 5.13.**

9.9 PVC conduit shall be installed straight and without use of factory sweeps unless specified or approved by LE. Pulling string provided and installed in all primary & secondary conduit runs. **See 11.11.**



- 9.10 All conduits installed parallel in the same ditch shall have a 3" minimum separation measured from conduit outside diameter to conduit outside diameter **See 11.21.**
- 9.11 Printed underground warning tape shall be installed **DIRECTLY OVER THE PIPE** during the backfilling operation, continuously throughout all trenches containing electric line conduits, at the following depths, measured from **TOP OF PIPE** to **TAPE**: **See 11.21.**
- |                 |    |        |
|-----------------|----|--------|
| PRIMARY         | 18 | inches |
| SECONDARY       | 18 | inches |
| STREET LIGHTING | 12 | inches |
| SERVICE LINES   | 12 | inches |
- 9.12 Twenty (20) foot of aluminum conduit in ten (10) foot lengths of the size specified by Lakeland Electric shall be provided at termination poles for risers for each individual conduit run. One ten (10) foot length shall be installed from the conduit run sweep, up the pole. The second ten (10) foot length shall be provided to LE. **See 11.8.**
- 9.13 The open ends of all conduits shall be covered with duct tape when stubbed-up inside LE distribution equipment locations.
- 9.14 The customer service side stub-ups and future primary stub-ups shall be covered with a glued Schedule 20 PVC cap to prevent the entrance of all foreign matter. **See 11.7.**
- 9.15 **WARNING: Due to a safety hazard, Lakeland Electric requires** the service conductors to be installed *after* the new padmount transformer installation. If the services are pulled in first, the customer will be required to remove or pull them back, which will cause a delay in service. If additional LE trip is necessary to install the new padmount transformer CIAC shall apply. The CIAC invoice is due when rendered and payment is required prior to energizing the transformer.

**10.0 ENCASED DUCT / DUCT BANK:**

- 10.1 When due to certain conditions it is determined by LE that the conduit system must be encased in concrete to meet clearance requirements for proper depth, minimum horizontal or vertical separations, or clearances from other utilities LE will provide specific requirements, the minimum requirements are:
- 10.1.2 Plastic conduit spacers for the appropriate size conduit are to be installed every five feet.
- 10.1.3 Concrete used for encased duct banks will be 2500 pound strength minimum unless otherwise indicated by LE.

## 11.0 MATERIALS FOR UNDERGROUND DISTRIBUTION:

- 11.1 Conduit shall be polyvinyl chloride (PVC), galvanized steel or aluminum as specified in this policy. Only conduit manufactured by approved suppliers and approved by LE materials standards may be used. The approved material list current to this printing can be seen on page 26. **\*It is incumbent upon the conduit contractor to verify the most current approved material list before acquisition or installation of the conduit system.**
- 11.2 PVC conduits shall be gray Schedule Forty (40), heavy wall rigid, in twenty (20) foot lengths with factory belled couplings, EXCEPT 1" Schedule Forty (40) for COL Lighting may be in ten (10) foot lengths.
- 11.3 Adapters (from PVC to metal) shall be PVC.
- 11.4 Ninety (90) degree sweeps for primary shall be galvanized, shall have a 24" radius and 2' 11" riser, and must be factory made. **See 9.3**
- 11.5 Ninety (90) degree sweeps for secondary shall be PVC, shall have a 24" radius and, and must be factory made. **See 9.3**
- 11.6 Ninety (90) degree sweeps for service stub-outs may be PVC, shall have a 24" radius, and must be factory made. **See 9.3**
- 11.7 All service stub-ups shall be glued with a Schedule Twenty (20) PVC cap on customer end, see 9.14. The COL equipment end taped with duct tape. **See 9.13.**
- 11.8 Risers shall be aluminum in ten (10) foot lengths with aluminum coupling attached. Two sticks shall be furnished by the Developer / Contractor for every run of pipe installed up the pole. **See 9.12.**
- 11.9 Pulling string shall be provided and installed in all primary & secondary conduits by the conduit contractor using only the approved material. Pulling string shall be "Flat woven polyester with sequential foot markings/pre-lubricated with 1250-lb minimum tensile strength." **See 9.9 and 11.11.**
- 11.10 Printed underground warning tape shall have the wording "**CAUTION BURIED ELECTRIC LINE**" continuously in black lettering on a red background. Tape shall be 3-4 inches in width and 4 mil polyethylene. **See 9.11 and 11.11.**

**11.11**

**APPROVED MATERIAL LIST:**



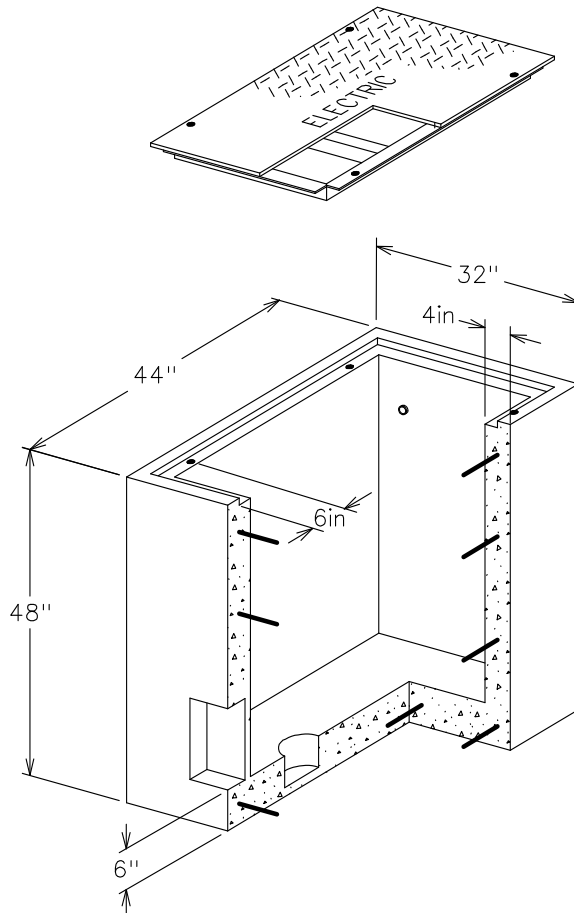
**APPROVED MATERIAL LIST**

LE USE	MATERIAL	APPROVED MANUFACTURER
A6-A7	Female PVC Adapter ¾", 1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6"	Carlson/Cantex/Allied-Ga Pipe
A8	Male PVC Adapter ¾", 1", 1.25"	Carlson/Cantex / Allied-Ga Pipe
C146-C148	PVC Coupling ¾", 1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6"	Carlson / Cantex/Sedco / Allied-Ga Pipe
N/A	PVC Caps--Schedule 20 2", 2.5", 3", 3.5", 4", 6"	Carlson / Cantex / LCP Allied-Ga Pipe/ Queen City Plastics
E28	End Flared Bell W/Socket 2", 3", 3.5", 4", 6"	Cantex/Allied-Ga Pipe Queen City Plastics
C100	PVC Conduit ¾", 1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6"	Allied-Ga Pipe / Carlson/Cantex / Centaur Lap/SedcoPipe/Heritage Plastics Queen City Plastics
E11-E12	PVC Elbows 2", 2.5", 3", 3.5", 4", 6"	Carlson/Cantex / Centaur LCP/Sedco/Allied-Ga Pipe/ Heritage Plastics / Queen City Plastics
E15	Galvanized Elbows 1", 2", 2.5", 3", 4", 6"	Open Market
C95-C96	Aluminum Conduit	Open Market
U1	U.S. Warning Tape 3" - 4" Width, Black Lettering On Red Tape	Allen System / Electromark Reef Industry Shield Tec/ Terra Tape / Panduit / Magnatec
N/A	Tape U/G Cable Pulling/Conduit Measuring 1250 lb Min Tensile Strength on 3000 foot reels/flat woven polyester with sequential ft markings/prelubricated	Arnco-WP 12 3000 / Neptco-WP 1250P
N/A	Tracer Wire #14AWG Solid Copper 600 volt rated	Open Market
N/A	Conduit Spacers	Carlson
P6	200 Amp Walsdorf Enclosure Pit	Old Castle Pre-Cast / Southern Pre-Cast Inc.
P-59	2' X 3' X 3'6" Pullbox 4' X 4' X 4' Pullbox 4' X 6'6" X 4' 6" Pullbox	Old Castle Pre-Cast / Southern Pre-Cast Inc.
P-6.05	75-500 KVA Concrete Pad	Quickset / Dekalb Concrete /
P-6.06	750-1000 KVA Concrete Pad	Old Castle Pre-Cast /
P-6.07	1500-2000 KVA Concrete Pad	Accord Industries

*Revised 07 / 14 / 2010 Psebe*

11.12 PULL BOX (2 X 3) TRAFFIC BEARING

2' X 3' X 3'-6"



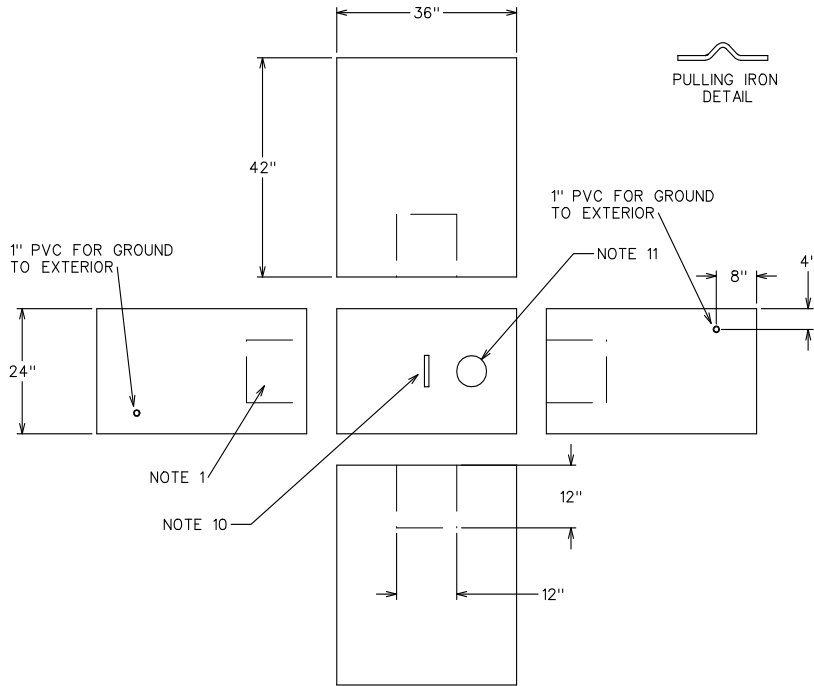
WEIGHT:
BOX = 2412 LBS.
LID = 115 BLS.
TOTAL = 2527 LBS.

NOTES:

1. TOP OF PULL BOX SHALL EXTEND 4 INCHES ABOVE FINAL GRADE WHEN INSTALLED IN GRASS AREAS.
2. THE PULL BOX SHALL BE INSTALLED WITH A 1 INCH KNOLL WHEN INSTALLED IN A PARKING LOT AND FLUSH WITH A DRIVEWAY.

### 11.13 PULL BOX (2 X 3) – TRAFFIC BEARING CONSTRUCTION DETAILS

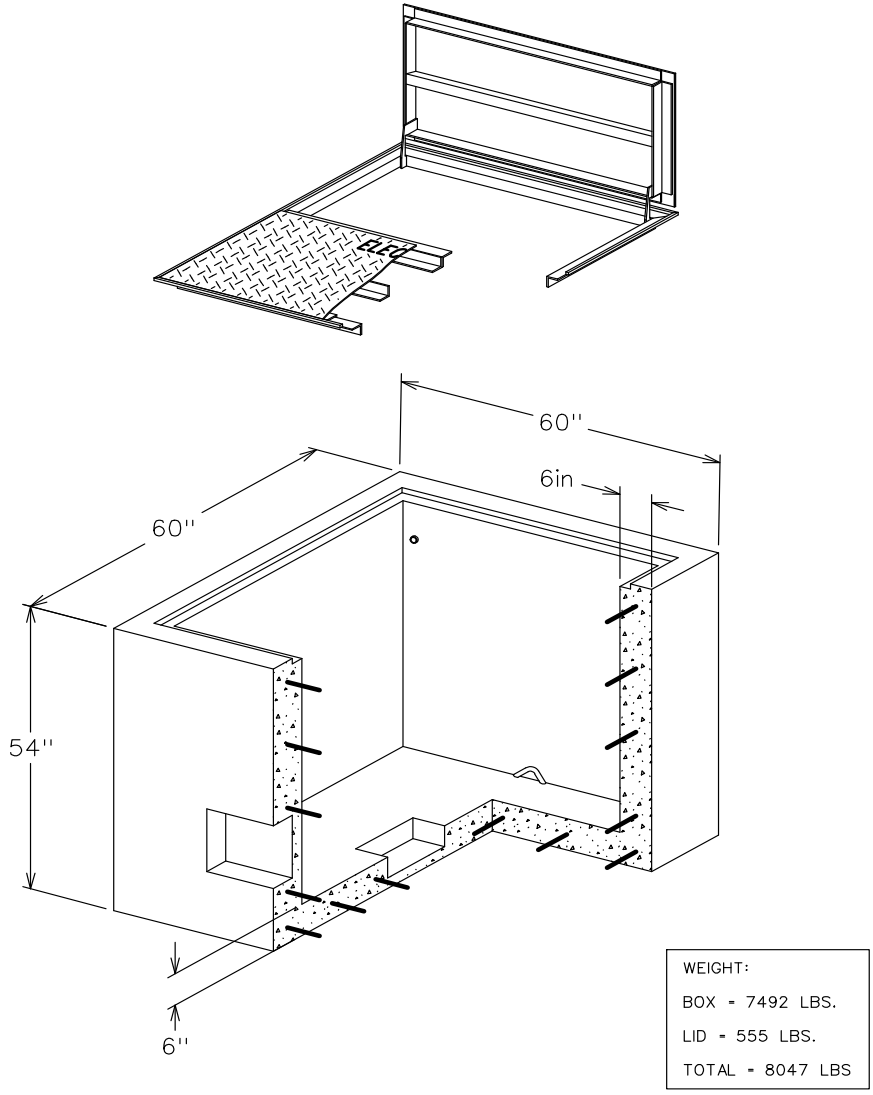
**2' x 3' x 3' 6"**



**NOTES:**

1. THIN WALL KNOCKOUTS CENTERED HORIZONTALLY ON ALL 4 WALLS SHALL BE PROVIDED AS SHOWN.
2. NUMBER 5 REBAR SPACED AS REQUIRED FOR TRAFFIC BEARING CAPABILITY.
3. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000-PSI AT 28 DAYS.
4. DESIGN LOADING SHALL INCLUDE DEAD LOAD, LIVE LOAD, IMPACT LOAD, HYDROSTATIC PRESSURE LOAD, AND OTHER LOADS WHICH MAY BE PLACED UPON THE STRUCTURE. LIVE LOADING DESIGN SHALL CONFORM TO AASHTO HS-20-44 SPECIFICATIONS, AND SHALL BE THE LOADING WHICH PRODUCES THE MAXIMUM SHEAR AND BENDING MOMENTS IN THE STRUCTURE.
5. "ELECTRIC" SHALL BE BEAD-WELDED ON THE COVER WITH 2" LETTERS PRIOR TO GALVANIZING.
6. THE LID SHALL BE SECURED TO BOX BY 1/2" STAINLESS STEEL PENTA HEAD BOLTS IN 4 LOCATIONS.
7. THREADED INSERTS FOR LID TIE DOWN BOLTS SHALL BE NON-CORROSIVE METAL.
8. BOLT HEAD RECESSES IN COVER MUST ACCOMMODATE 1/2" PENTA HEAD BOLT AND STANDARD SOCKET.
9. GALVANIZED COVER SHALL BE FLUSH MOUNTED IN A GALVANIZED FRAME CAST IN THE BOX.
10. PULLING IRONS SHALL BE 1/2" DIAMETER, STRESS-RELIEVED CARBON STEEL CABLE (7 STRAND, WITH AN ULTIMATE TENSILE STRENGTH RATING OF 270,000 PSI) FITTED WITH A RUSTPROOF SLEEVE AT THE HOOK POINT, WITH ALL EXPOSED SURFACES AND PART OF THE EMBEDDED SURFACES ENCAPSULATED IN A POLYESTER JACKET (AS MANUFACTURED BY PENNSYLVANIA INSERTS OR APPROVED EQUAL)
11. SUMP SHALL BE 6" DIAMETER BY 4-5/8" DEEP, AND OFFSET TOWARD ONE END TO AVOID PULLING IRON.

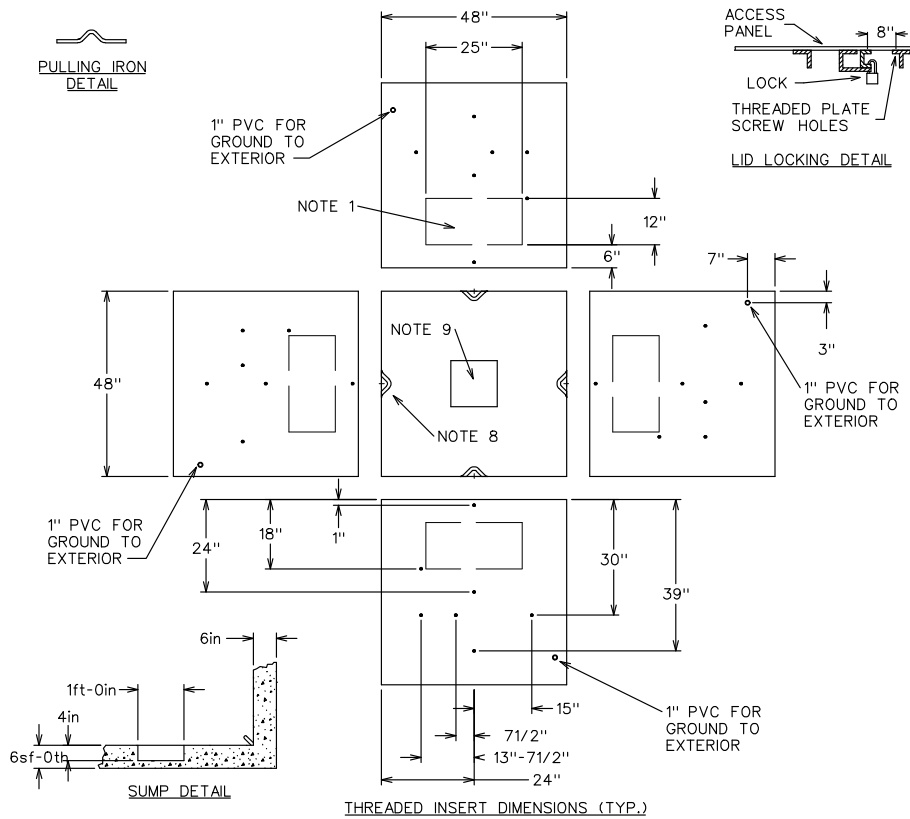
**11.14 PULL BOX (4 X 4) – TRAFFIC BEARING**



NOTE:

1. TOP OF PULL BOX SHALL EXTEND 4 INCHES ABOVE FINAL GRADE WHEN INSTALLED IN GRASS AREAS.
2. IN ASPHALT PARKING LOTS, PULL BOXES SHALL BE INSTALLED WITH A 1 INCH KNOLL. PULL BOXES SHALL BE INSTALLED FLUSH WITH GRADE IN STREETS, SIDEWALKS, DRIVEWAYS, AND CONCRETE PARKING LOTS.

**11.15 PULL BOX (4 X 4) – TRAFFIC BEARING CONSTRUCTION DETAILS**

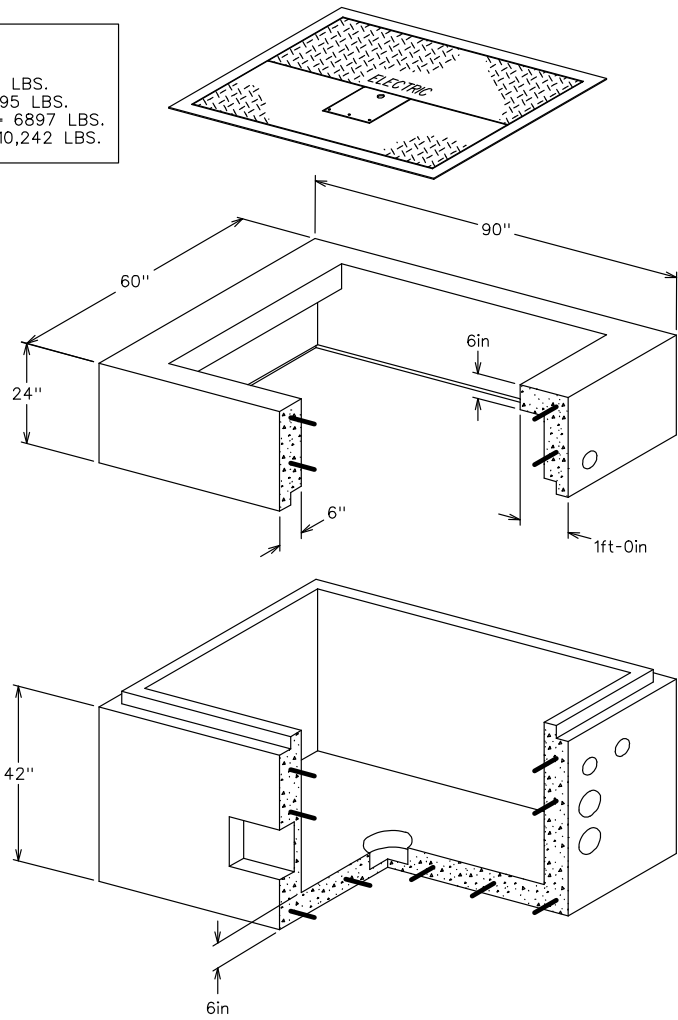


**NOTES:**

1. THIN WALL KNOCKOUTS CENTERED HORIZONTALLY ON ALL 4 WALLS SHALL BE PROVIDED AS SHOWN.
2. NUMBER 5 REBAR SPACED AS REQUIRED FOR TRAFFIC BEARING CAPABILITY.
3. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000-PSI AT 28 DAYS.
4. DESIGN LOADING SHALL INCLUDE DEAD LOAD, LIVE LOAD, IMPACT LOAD, HYDROSTATIC PRESSURE LOAD, AND OTHER LOADS WHICH MAY BE PLACED UPON THE STRUCTURE. LIVE LOADING DESIGN SHALL CONFORM TO AASHTO HS-20-44 SPECIFICATIONS, AND SHALL BE THE LOADING WHICH PRODUCES THE MAXIMUM SHEAR AND BENDING MOMENTS IN THE STRUCTURE. SEE SPECIFICATION ENG97-06.
5. "ELECTRIC" SHALL BE BEAD-WELDED ON THE COVER WITH 2" LETTERS PRIOR TO GALVANIZING.
6. THREADED INSERTS SHALL BE NON-CORROSIVE METAL.
7. GALVANIZED COVER SHALL BE FLUSH MOUNTED IN A GALVANIZED FRAME CAST IN THE BOX.
8. PULLING IRONS SHALL BE 1/2" DIAMETER, STRESS-RELIEVED CARBON STEEL CABLE (7 STRAND, WITH AN ULTIMATE TENSILE STRENGTH RATING OF 270,000 PSI) FITTED WITH A RUSTPROOF SLEEVE AT THE HOOK POINT, WITH ALL EXPOSED SURFACES AND PART OF THE EMBEDDED SURFACES ENCAPSULATED IN A POLYESTER JACKET (AS MANUFACTURED BY PENNSYLVANIA INSERTS OR APPROVED EQUAL)
9. SUMP SHALL BE 12" SQUARE BY 4" DEEP, CENTERED IN FLOOR.

**11.16 PULL BOX (4 X 6) – TRAFFIC BEARING**

WEIGHT:  
 LID = 650 LBS.  
 TOP = 2695 LBS.  
 BOTTOM = 6897 LBS.  
 TOTAL = 10,242 LBS.

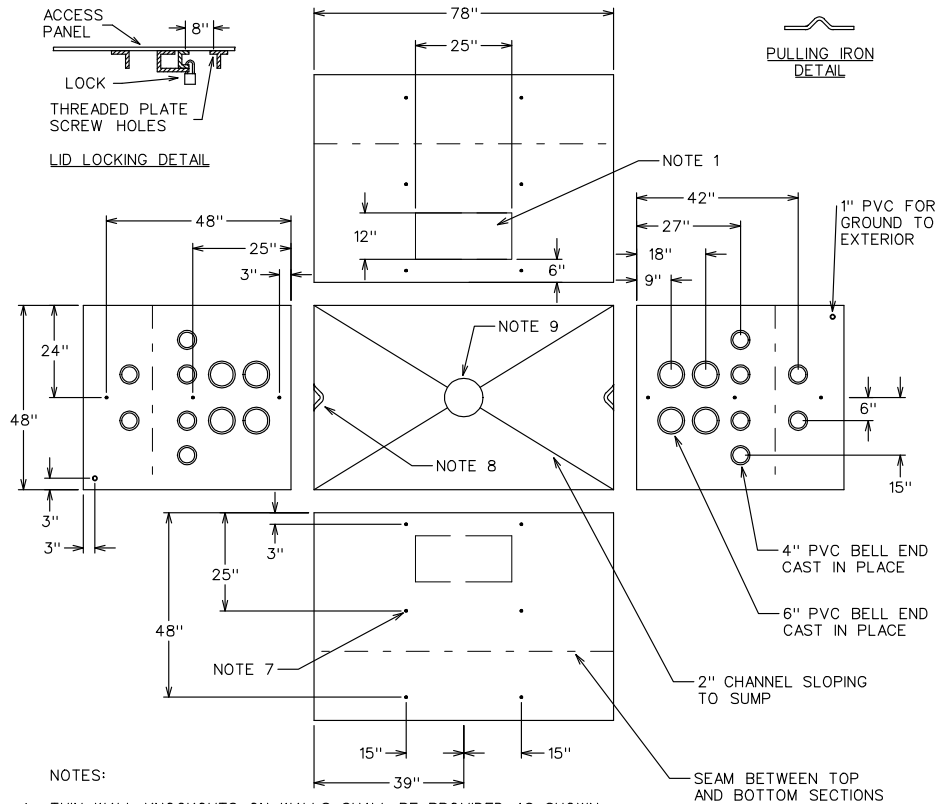


NOTES:

1. MATING SURFACE OF PULL BOX TOP AND BOTTOM HALVES SHALL BE SEALED WITH A BITUMINOUS TYPE SEALANT, AND ALL INTERIOR SEAMS GROUTED.
2. TOP OF PULL BOX SHALL EXTEND 4 INCHES ABOVE FINAL GRADE WHEN INSTALLED IN GRASS AREAS.  
 IN ASPHALT PARKING LOTS, PULL BOXES SHALL BE INSTALLED WITH A 1 INCH KNOLL. PULL BOXES
3. SHALL BE INSTALLED FLUSH WITH FINAL GRADE IN STREETS, SIDEWALKS, DRIVEWAYS, AND CONCRETE PARKING LOTS.



### 11.17 PULL BOX (4 X 6) – TRAFFIC BEARING CONSTRUCTION DETAILS

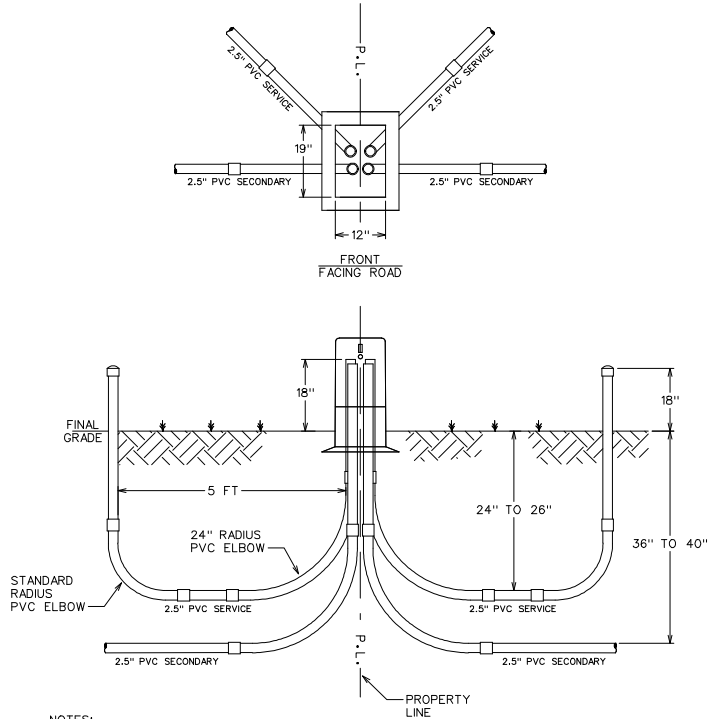


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EFFECTIVE: 07 / 14 / 2010

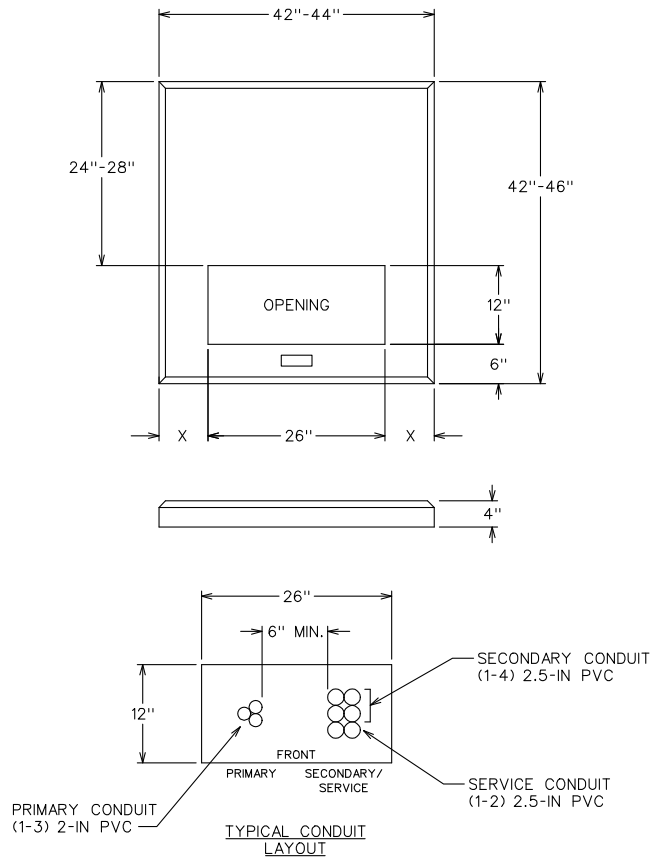
## 11.18 SECONDARY PEDESTAL SPECIFICATIONS



### NOTES:

1. ALL SERVICE STUB OUTS SHALL BE MINIMUM 2-1/2" SCHD. 40 GRAY PVC CONDUIT INSTALLED AT A DEPTH OF 24-IN TO 26-IN. SEE EXCEPTION IN NOTE 6 BELOW.
2. SECONDARY AND SERVICE ELBOWS AT PEDESTAL SHALL BE SCHD. 40 GRAY PVC WITH A MINIMUM RADIUS OF 24-IN. ELBOWS AT FIELD END OF STUBOUTS MAY BE STANDARD RADIUS ELBOWS.
3. STUB OUTS SHALL EXTEND A MINIMUM OF 5-FT IN DIRECTION OF FUTURE SERVICE.
4. STUB UPS SHALL EXTEND 18-IN ABOVE FINAL GRADE WITH A SCHEDULE 20 PVC CAP GLUED TO THE OPENING.
5. ALL SECONDARY CONDUIT SHALL BE 2-1/2" SCHD. 40 GRAY PVC INSTALLED AT A DEPTH OF 36-IN TO 40-IN, UNLESS OTHERWISE SPECIFIED BY LE.
6. EXCEPTION: ALL CONDUIT INSTALLED IN CITY, COUNTY, OR STATE RIGHT-OF-WAY OR INGRESS-EGRESS PUBLIC ACCESS UTILITY EASEMENT SHALL BE A MINIMUM OF 36-IN BELOW FINAL GRADE MEASURED FROM TOP OF GRADE TO TOP OF CONDUIT.

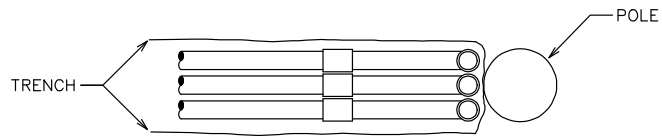
**11.19 SINGLE PHASE PADMOUNT INSTALLATION**  
**PAD & CONDUIT ORIENTATION SPECIFICATIONS**



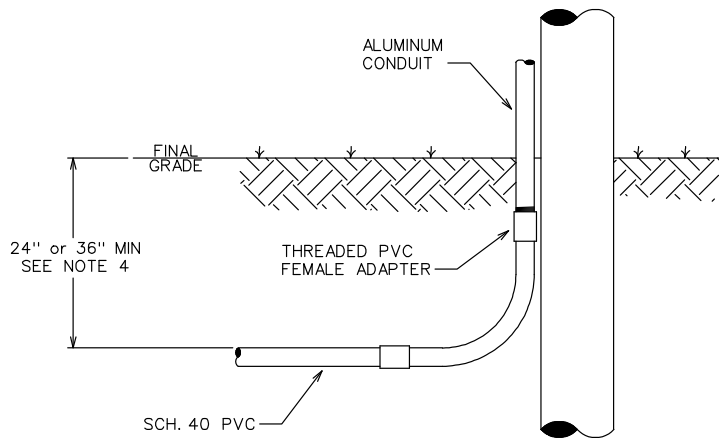
NOTES:

1. TOP OF PAD SHALL BE INSTALLED 2 INCHES ABOVE FINISHED GRADE.
2. SOIL UNDER THE PAD SHALL BE COMPACTED TO A FIRM AND LEVEL CONDITION.
3. PRIMARY AND SECONDARY CONDUITS SHALL BE STUBBED UP 18 INCHES ABOVE GRADE.
4. OPENING IS CENTERED IN PAD SO THAT DIMENSION X IS EQUAL ON BOTH SIDES.
5. SERVICE CONDUITS SHALL BE LOCATED IN FRONT OF THE SECONDARY CONDUITS.

## 11.20 TYPICAL INSTALLATION OF CONDUIT AT RISER LOCATIONS



PLAN VIEW

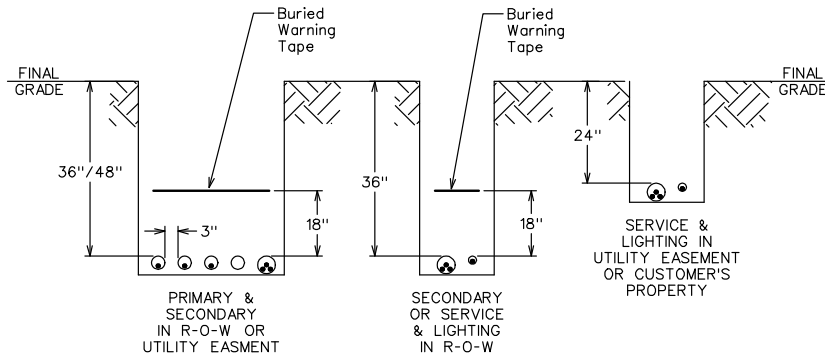


### NOTES:

1. PVC CONDUIT SHALL NOT BE EXPOSED ABOVE FINAL GRADE AT PRIMARY OR SERVICE UNDERGROUND CONDUIT RISER POLES.
2. THE POINT AT WHICH THE RISER CONDUIT ATTACHES TO THE POLE SHALL BE DETERMINED BY LAKELAND ELECTRIC.
3. THE CONDUIT CONTRACTOR SHALL PROVIDE TWO 10-FOOT STICKS OF ALUMINUM CONDUIT FOR EACH PRIMARY OR SERVICE UNDERGROUND CONDUIT RISER. ONE STICK SHALL BE INSTALLED IN PLACE.
4. THE MINIMUM INSTALLED DEPTH FOR ALL PRIMARY CONDUIT IS 36-INCHES. THE MINIMUM INSTALLED DEPTH FOR ALL SERVICE CONDUIT IS 24-INCHES. ALL CONDUIT DEPTHS ARE MEASURED FROM FINAL GRADE TO THE TOP OF THE CONDUIT.
5. PRIMARY, SECONDARY, & SERVICE ELBOWS SHALL BE MINIMUM 24-INCH RADIUS. ALL PRIMARY ELBOWS SHALL BE GALVANIZED UNLESS OTHERWISE SPECIFIED BY LE. SECONDARY AND SERVICE ELBOWS SHALL BE SCH.40 PVC.
6. IF THE RISER POLE IS NOT READILY ACCESSIBLE BY A BUCKET TRUCK, RISER CONDUIT SHALL BE INSTALLED 6-INCHES OFF THE FACE OF THE POLE.

**21 CLEARANCES FOR UNDERGROUND CONDUITS IN A TRENCH**

CLEARANCES, UNDERGROUND CONDUIT



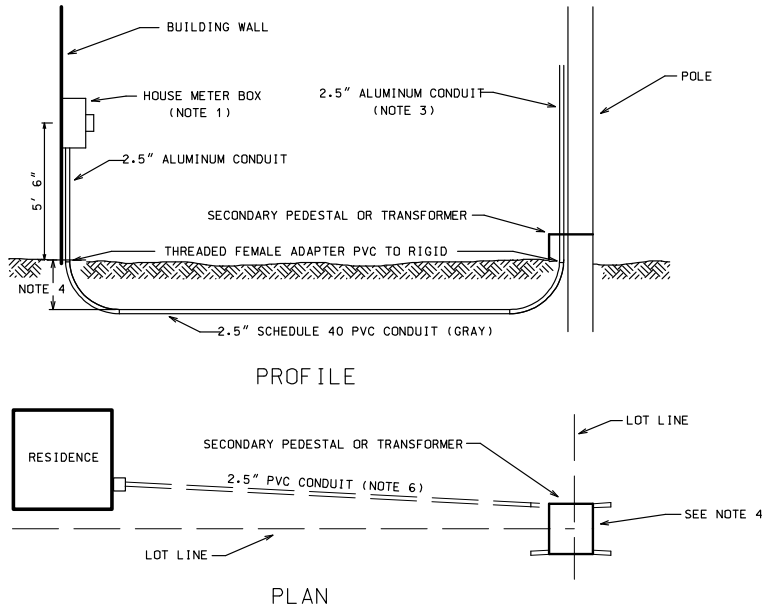
MINIMUM CONDUIT DEPTHS

CONDUIT LOCATION	PRIMARY	SECONDARY	SERVICE	LIGHTING
RIGHT-OF-WAY/ INGRESS-EGRESS (OUTSIDE DEVELOPMENT)	48"	36"	36"	36"
RIGHT-OF-WAY/ INGRESS-EGRESS (INSIDE DEVELOPMENT)	36"	36"	36"	36"
UTILITY EASEMENT	36"	36"	24"	24"
CUSTOMER'S PROPERTY	N/A	N/A	24"	24"

NOTES:

1. THE DIMENSIONS SPECIFIED SHALL BE MAINTAINED DURING INSTALLATION.
2. VERTICAL DIMENSIONS SHALL BE MEASURED FROM FINAL GRADE OR GRADE PROVIDED BY CONTRACTOR OR DEVELOPER TO THE TOP OF CONDUIT.
3. HORIZONTAL DIMENSIONS SHALL BE MEASURED FROM OUTSIDE TO OUTSIDE OF CONDUIT.
4. VARIATION FROM INDICATED DIMENSIONS SHALL BE MADE ONLY AFTER APPROVAL OF LAKELAND ELECTRIC.
5. ALL CONDUITS INSTALLED IN CITY, COUNTY, OR STATE RIGHT-OF-WAY, INGRESS-EGRESS RIGHT-OF-WAY, OR PUBLIC ACCESS UTILITY EASEMENTS SHALL BE A MINIMUM OF 36-IN BELOW FINAL GRADE.
6. HORIZONTAL CLEARANCE BETWEEN ELECTRICAL CONDUITS SHALL BE A MINIMUM OF 3-IN.
7. HORIZONTAL CLEARANCE BETWEEN SECONDARY CONDUIT AND LE COMMUNICATION CABLE SHALL BE A MINIMUM OF 12-IN.
8. HORIZONTAL CLEARANCE BETWEEN PRIMARY CONDUIT AND LE COMMUNICATION CABLES SHALL BE A MINIMUM OF 18-IN.
9. A MINIMUM CLEARANCE OF 12-IN VERTICAL AT CROSSINGS AND 60-IN HORIZONTAL ON PARALLEL RUNS SHALL BE MAINTAINED BETWEEN LAKELAND ELECTRIC CONDUIT AND ALL OTHER UTILITIES UNLESS OTHERWISE SPECIFIED BY LE.

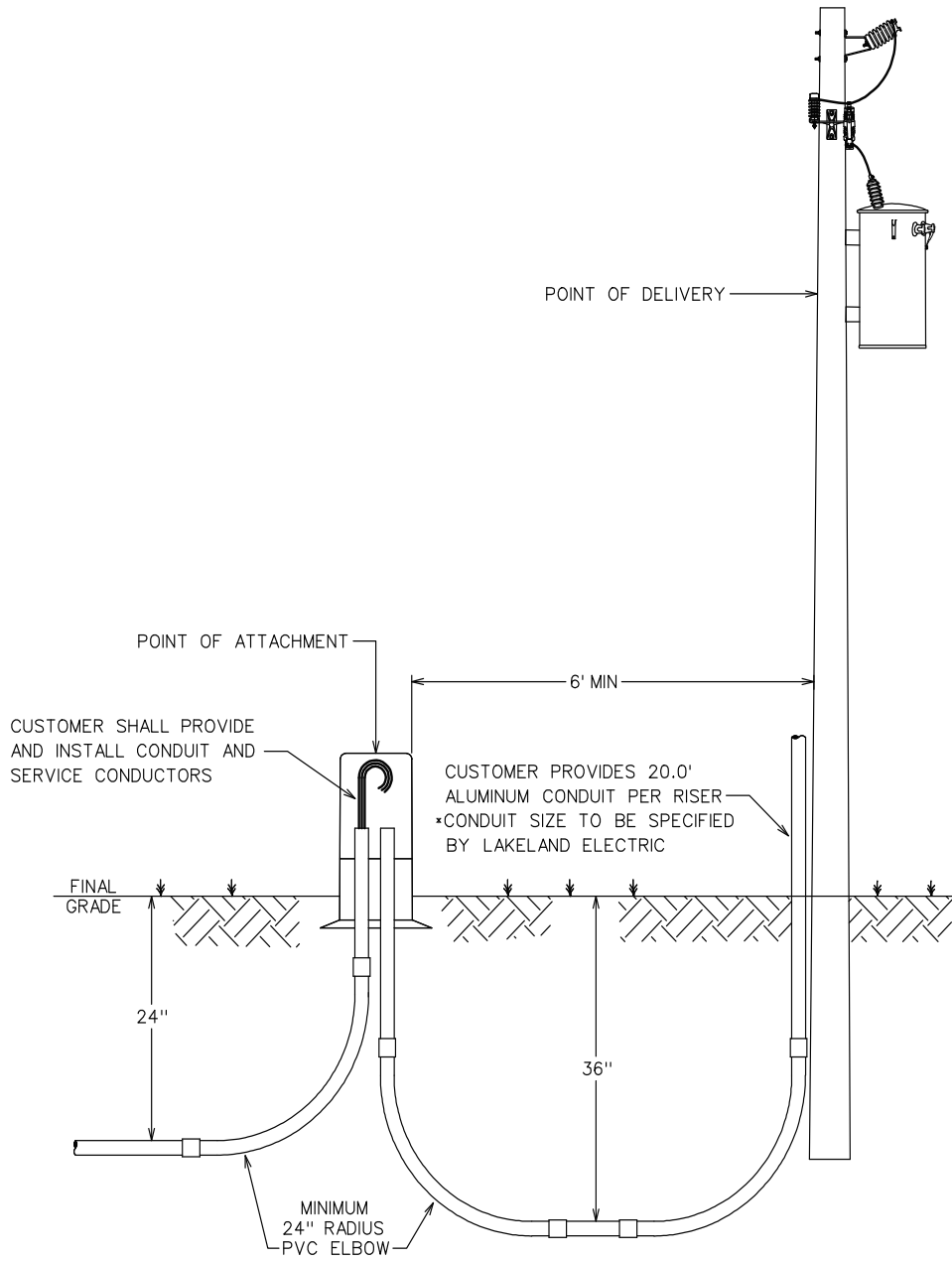
## 11.22 UNDERGROUND SERVICE DETAIL FOR RESIDENTIAL INSTALLATIONS



**NOTE:**

1. METER BOX INSTALLED BY OWNER.
2. SECONDARY SERVICE CABLE FURNISHED BY AND INSTALLED BY THE CITY ON RESIDENTIAL SERVICES OF 200 AMP OR LESS. ALL MATERIAL FOR SERVICES GREATER THAN 200 AMP WILL BE FURNISHED AND INSTALLED BY THE OWNER.
3. OWNER TO PROVIDE 20 FEET OF 2.5" ALUMINUM CONDUIT IF SERVICE TERMINATES AT POLE.
4. SECONDARY CONDUIT SHALL BE INSTALLED AT 36" BELOW FINAL GRADE WITHIN CITY, COUNTY OR STATE RIGHT-OF-WAYS AND INGRESS-EGRESS EASEMENTS AND INSTALLED AT A MINIMUM DEPTH OF 24" ON PRIVATE PROPERTY.
5. SECONDARY SERVICE SHALL NOT BE INSTALLED UNDER ANY PERMANENT STRUCTURES EXCEPT DRIVEWAYS.
6. IN CASES WHERE THE POLE IS NOT ACCESSIBLE BY A BUCKET TRUCK, STAND THE CONDUIT OFF OF THE POLE 6 INCHES.
7. CONDUITS ARE TO BE INSTALLED ADJACENT TO ANY EXISTING ELECTRIC CONDUITS ALREADY ATTACHED TO THE POLE.
8. IF TOTAL LENGTH OF SERVICE EXCEEDS 200 FT., CONTACT LAKELAND ELECTRIC FOR EVALUATION PRIOR TO CONSTRUCTION.

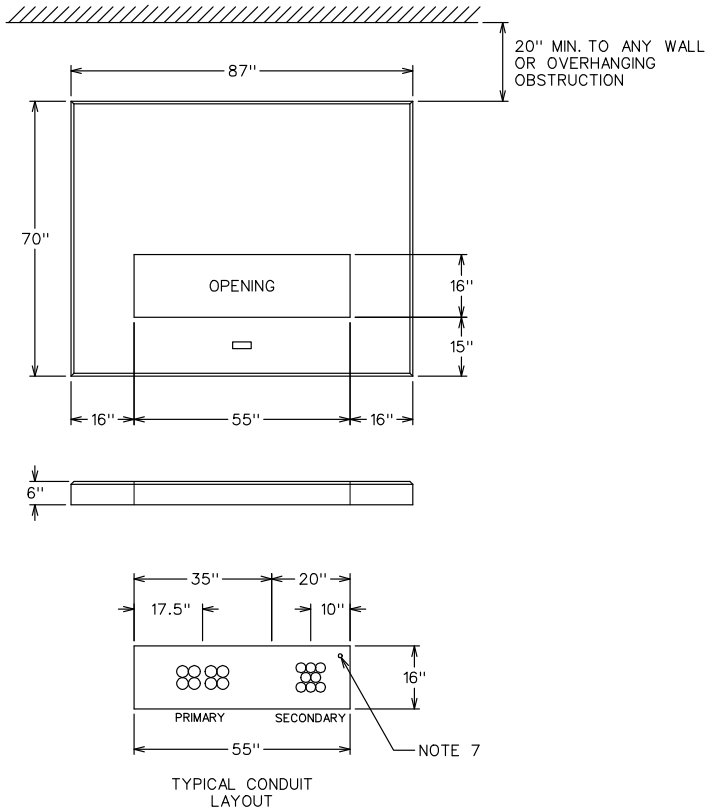
**11.23 UNDERGROUND SECONDARY RISER WITH PEDESTAL**



REVISION 3: 07 / 14 / 2010

EFFECTIVE: 07 / 14 / 2010

**11.24 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (75-500 KVA)**

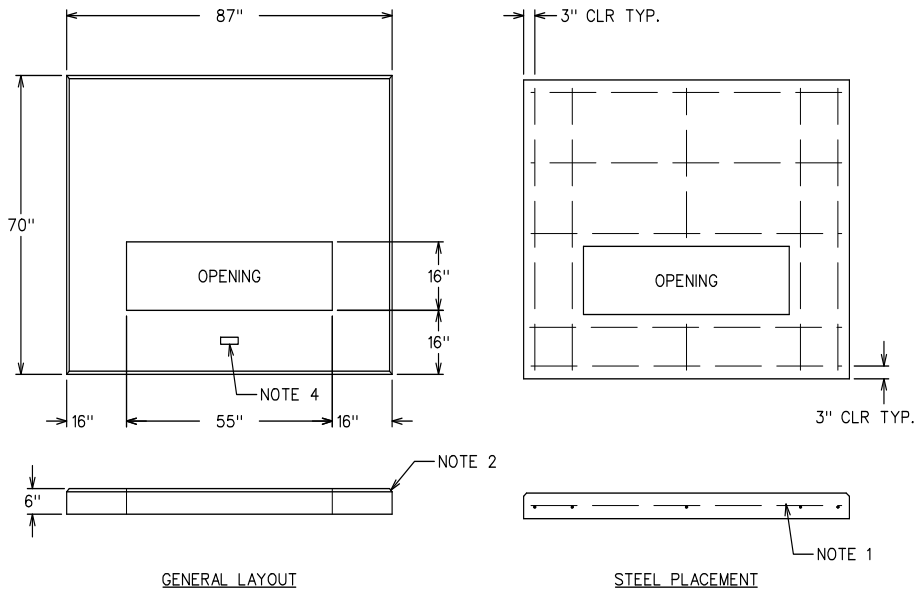


**NOTES:**

1. TOP OF PAD SHALL BE INSTALLED 3 INCHES ABOVE FINISHED GRADE.
2. SOIL UNER THE PAD SHALL BE COMPACTED BY MECHANICAL MEANS TO A FIRM AND LEVEL CONDITION.
3. PRIMARY AND SECONDARY COINUTS SHALL BE CUT FLUSH WITH THE TOP OF THE PAD.
4. PRIMARY AND SECONDARY CONDUITS SHALL BE GROUPED AND CENTERED IN EACH RESPECTIVE SIDE OF WINDOW.
5. THE CONTRACTOR SHALL PROVIDE 6 FEET OF SECONDARY CONDUCTOR ABOVE THE PAD FOR MAKEUP.
6. SECONDARY CONDUCTORS SHALL NOT BE INSTALLED UNTIL AFTER THE TRANSFORMER HAS BEEN INSTALLED. LAKELAND ELECTRIC WILL NOT BE RESPONSIBLE FOR DAMAGED SECONDARY CONDUCTOR WHEN THIS PROCEDURE IS NOT FOLLOWED.
7. THE CONTRACTOR SHALL PROVIDE AN ALUMINUM OR GALVANIZED CONDUIT STUBBED UP 8 INCHES ABOVE TOP OF PAD WITH WEATERHEAD FOR METERING. THE CONDUIT DIAMETER SHALL BE 1 INCH PREFERRED OR 1 1/4 INCH ACCEPTABLE. THIS CONDUIT SHALL BE LOCATED IN A 3 INCH X 3 INCH WINDOW IN THE RIGHT REAR CORNER OF THE PAD OPENING.



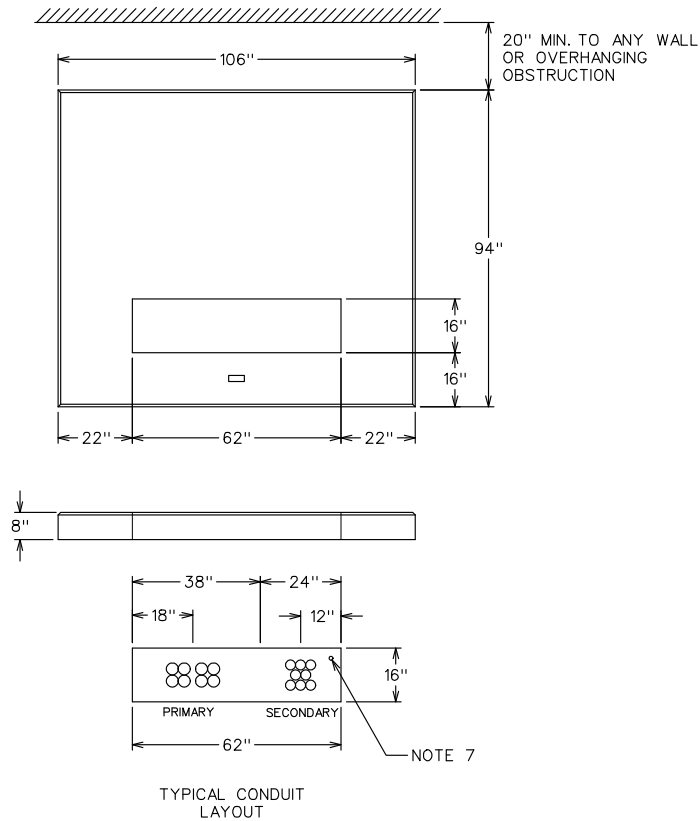
**11.25 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (75-500 KVA)  
CONSTRUCTION DETAILS**



NOTES:

1. ALL REINFORCING STEEL SHALL BE #5 REBAR AND PLACED IN CENTER OF PAD.
2. PAD SHALL HAVE A  $\frac{3}{4}$ " x  $\frac{3}{4}$ " x 45° CHAMFER AROUND THE TOP EDGE OF PAD.
3. CONCRETE SHALL DEVELOP A MINIMUM OF 3000 POUNDS PER SQUARE INCH AT 28 DAYS.
4. MANUFACTURER'S IDENTIFICATION (BRAND) SHALL BE CAST IN TOP SURFACE OF PAD AS NOTED.

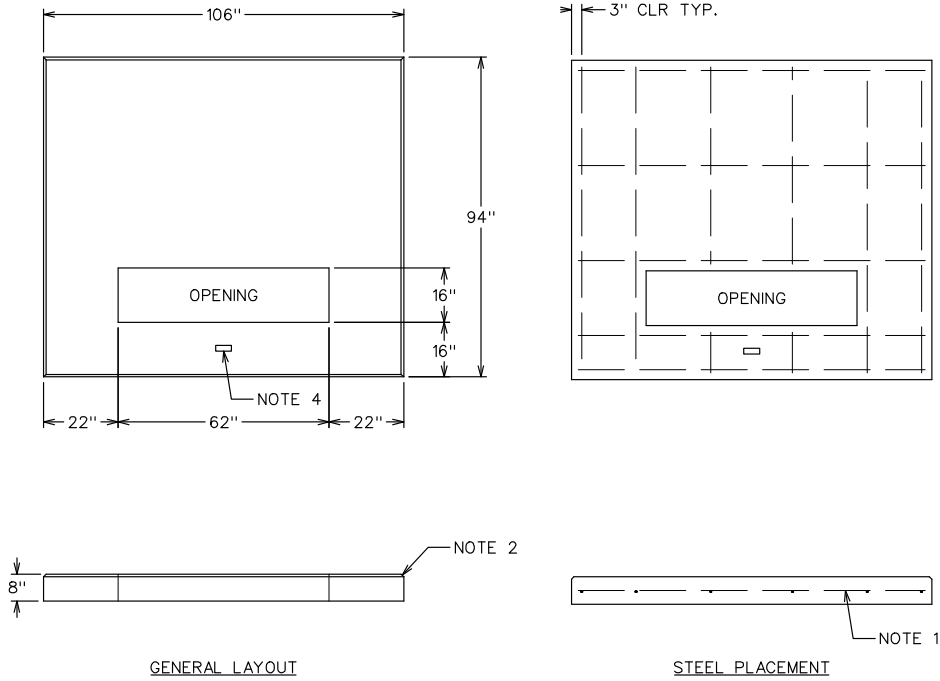
**11.26 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (750-1000 KVA)**



NOTES:

1. TOP OF PAD SHALL BE INSTALLED 4 INCHES ABOVE FINISHED GRADE.
2. SOIL UNER THE PAD SHALL BE COMPACTED TO A FIRM AND LEVEL CONDITION.
3. PRIMARY AND SECONDARY JCOINUTS SHALL BE CUT FLUSH WITH THE TOP OF THE PAD.
4. PRIMARY AND SECONDARY CONDUITS SHALL BE GROUPED AND CENTERED IN EACH RESPECTIVE SIDE OF WINDOW.
5. THE CONTRACTOR SHALL PROVIDE 6 FEET OF SECONDARY CONDUCTOR ABOVE THE PAD FOR MAKEUP.
6. SECONDARY CONDUCTORS SHALL NOT BE INSTALLED UNTIL AFTER THE TRANSFORMER HAS BEEN INSTALLED. LAKELAND ELECTRIC WILL NOT BE RESPONSIBLE FOR DAMAGED SECONDARY CONDUCTOR WHEN THIS PROCEDURE IS NOT FOLLOWED.
7. THE CONTRACTOR SHALL PROVIDE AN ALUMINUM OR GALVANIZED CONDUIT STUBBED UP 8 INCHES ABOVE TOP OF PAD WITH WEATERHEAD FOR METERING. THE CONDUIT DIAMETER SHALL BE 1 INCH PREFERRED OR 1 1/14 INCH ACCEPTABLE. THIS CONDUIT SHALL BE LOCATED IN A 3 INCH X 3 INCH WINDOW IN THE RIGHT REAR CORNER OF THE PAD OPENING.

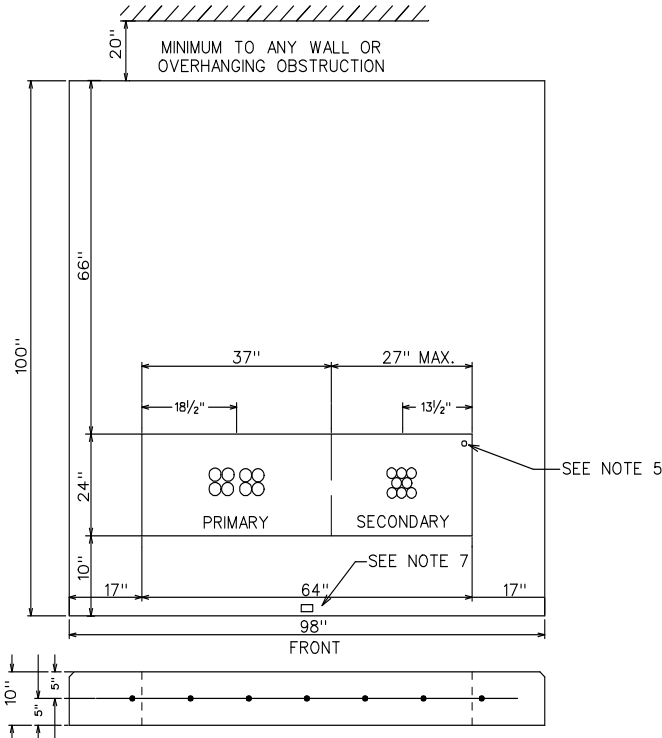
**11.27 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (750-1000 KVA)  
CONSTRUCTION DETAILS**



NOTES:

1. ALL REINFORCING STEEL SHALL BE #5 REBAR AND PLACED IN CENTER OF PAD.
2. PAD SHALL HAVE A  $\frac{3}{4}$ " x  $\frac{3}{4}$ " x 45° CHAMFER AROUND THE TOP EDGE OF PAD.
3. CONCRETE SHALL DEVELOP A MINIMUM OF 3000 POUNDS PER SQUARE INCH AT 28 DAYS.
4. MANUFACTURER'S IDENTIFICATION (BRAND) SHALL BE CAST IN TOP SURFACE OF PAD AS NOTED.

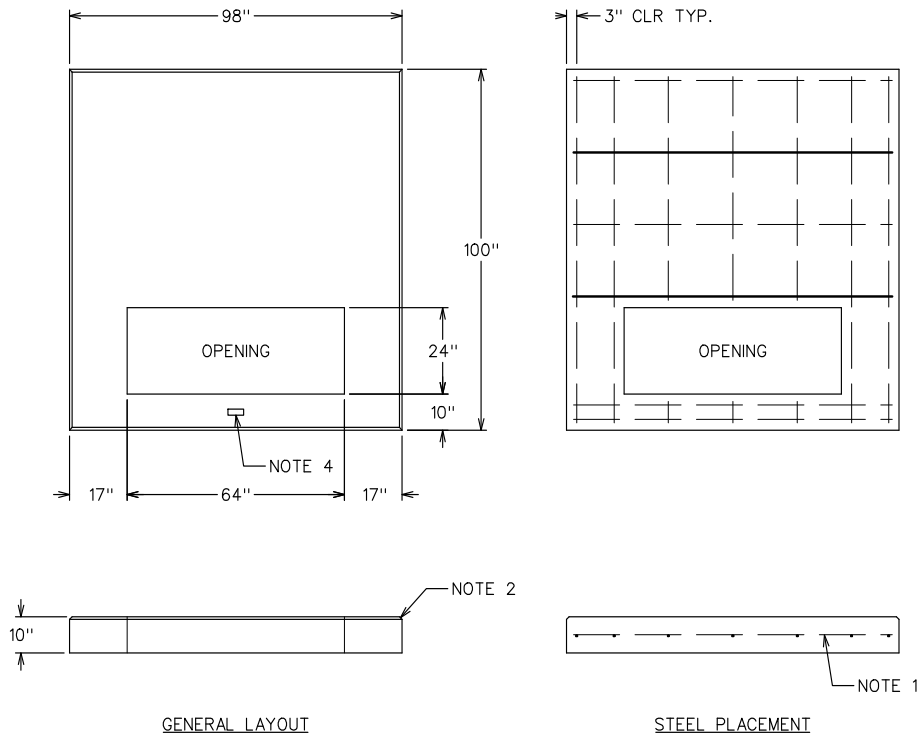
**11.28 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (1500-2500 KVA)**



NOTES:

1. MANUFACTURED PAD SHALL BE 10" THICK REINFORCED WITH NO. 5 REBAR ON 12" CENTERS, WELDED AND MESHED THROUGHOUT PAD. THE REBAR IN A Poured IN PLACE PAD MAY BE TIED. THE TOP EDGES SHALL HAVE A 2" x 2" x 45° BEVEL.
2. CONCRETE SHALL DEVELOP 4000 POUNDS PER SQUARE INCH AT 28 DAYS.
3. IMPORTANT - PRIMARY AND SECONDARY CONDUITS MUST BE GROUPED AND CENTERED IN EACH RESPECTIVE SIDE OF WINDOW.
4. PRIMARY AND SECONDARY CONDUITS TO BE CUT OFF FLUSH WITH TOP OF PAD.
5. 1" ALUMINUM OR GALVANIZED CONDUIT PREFERRED, 1 1/4" ACCEPTABLE, STUBBED UP 8" ABOVE PAD WITH WEATHERHEAD, TO BE SUPPLIED BY CONTRACTOR, FOR METERING. CONDUIT SHALL BE LOCATED IN A 3" x 3" WINDOW IN THE RIGHT REAR CORNER OF THE SECONDARY WINDOW OF THE PAD.
6. LEVEL TRANSFORMER LOCATION AND COMPACT SOIL UNDER PAD TO A FIRM AND LEVEL CONDITION.
7. MANUFACTURER'S IDENTIFICATION (BRAND) MUST BE CAST IN TOP SURFACE OF PAD AS NOTED.
8. CONTRACTOR TO PROVIDE 9' OF SECONDARY CONDUCTOR ABOVE PAD FOR MAKEUP.  
SECONDARY CONDUCTORS SHALL NOT BE INSTALLED UNTIL AFTER THE TRANSFORMER HAS BEEN INSTALLED. LAKELAND ELECTRIC WILL NOT BE RESPONSIBLE FOR SECONDARY CONDUCTORS THAT MAY BE DAMAGED WHEN THIS PROCEDURE IS NOT FOLLOWED.
9. INSTALL THE TOP OF PAD 5" ABOVE FINISHED GRADE.

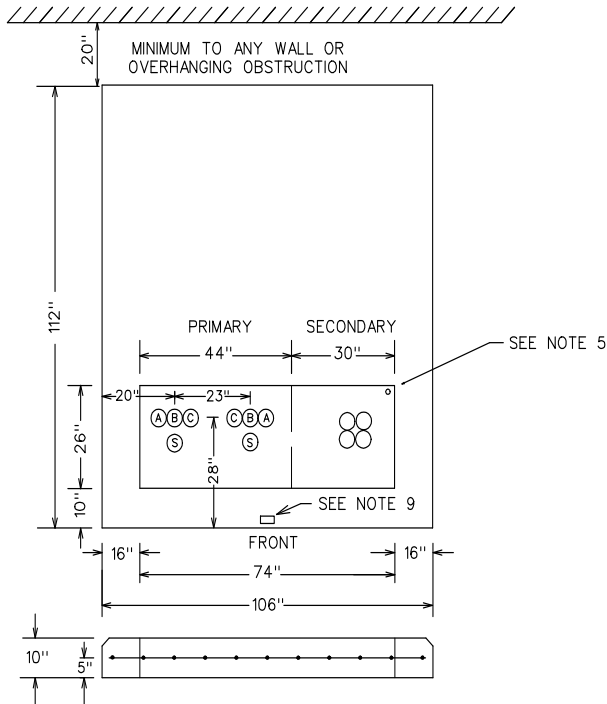
**11.29 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (1500-2500 KVA)  
CONSTRUCTION DETAILS**



NOTES:

1. ALL REINFORCING STEEL SHALL BE #5 REBAR AND PLACED IN CENTER OF PAD.
2. PAD SHALL HAVE A  $\frac{3}{4}$ " x  $\frac{3}{4}$ " x 45° CHAMFER AROUND THE TOP EDGE OF PAD.
3. CONCRETE SHALL DEVELOP A MINIMUM OF 3000 POUNDS PER SQUARE INCH AT 28 DAYS.
4. MANUFACTURER'S IDENTIFICATION (BRAND) SHALL BE CAST IN TOP SURFACE OF PAD AS NOTED.

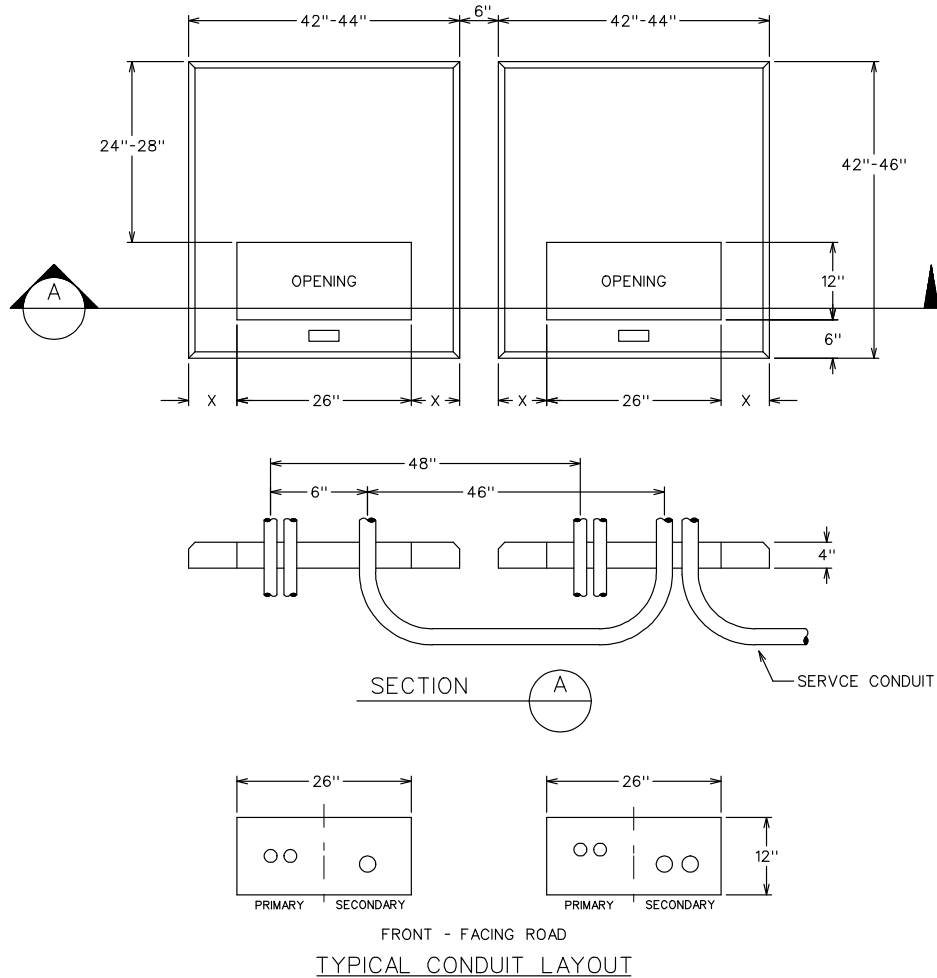
**11.30 SPECIFICATIONS FOR 3-PHASE TRANSFORMER PAD (3000 KVA)**



NOTES:

1. MANUFACTURED PAD SHALL BE 10" THICK REINFORCED WITH NO. 5 REBAR ON 9" CENTERS, WELDED AND MESHED THROUGHOUT PAD. THE REBAR IN A POURED IN PLACE PAD MAY BE TIED. THE TOP EDGES SHALL HAVE A 2" x 2" x 45° BEVEL.
2. CONCRETE SHALL DEVELOP 4000 POUNDS PER SQUARE INCH AT 28 DAYS.
3. IMPORTANT - PRIMARY CONDUITS MUST BE GROUPED AS SHOWN AND SECONDARY CONDUITS MUST BE GROUPED AND CENTERED IN THE SECONDARY WINDOW.
4. PRIMARY AND SECONDARY CONDUITS TO BE CUT OFF FLUSH WITH TOP OF PAD.
5. 1" ALUMINUM OR GALVANIZED CONDUIT PREFERRED, 1/4" ACCEPTABLE, STUBBED UP 8" ABOVE PAD WITH WEATHERHEAD, TO BE SUPPLIED BY CONTRACTOR, FOR METERING. CONDUIT SHALL BE LOCATED IN A 3" x 3" WINDOW IN THE RIGHT REAR CORNER OF THE SECONDARY WINDOW OF THE PAD.
6. THE CONTRACTOR SHALL PROVIDE 9 FT. OF SECONDARY CONDUCTOR ABOVE PAD FOR MAKEUP. SECONDARY CONDUCTORS SHALL NOT BE INSTALLED UNTIL AFTER THE TRANSFORMER HAS BEEN INSTALLED. LAKELAND ELECTRIC WILL NOT BE RESPONSIBLE FOR SECONDARY CONDUCTORS THAT MAY BE DAMAGED WHEN THIS PROCEDURE IS NOT FOLLOWED.
7. TOP OF PAD TO BE 5" ABOVE FINISHED GRADE.
8. LEVEL TRANSFORMER LOCATION AND COMPACT THE SOIL UNDER PAD TO A FIRM AND LEVEL CONDITION.
9. MANUFACTURER'S IDENTIFICATION (BRAND) MUST BE CAST IN TOP SURFACE OF PAD AS NOTED.

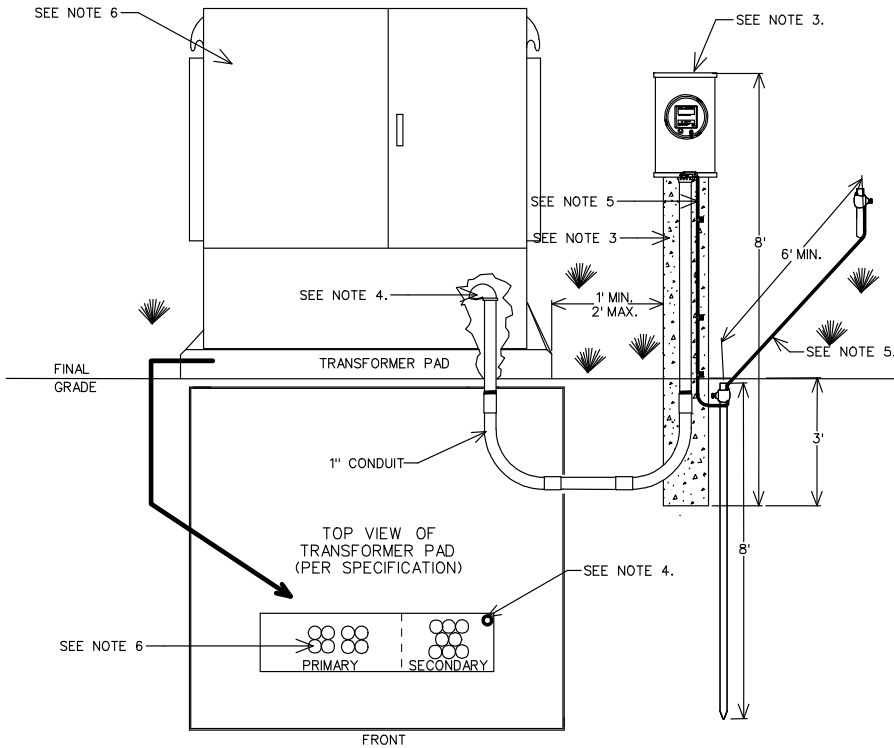
**11.31 SPECIFICATIONS FOR "OPEN-DELTA" TRANSFORMER PAD INSTALLATION**



NOTES:

1. TOP OF PAD SHALL BE INSTALLED 2 INCHES ABOVE FINISHED GRADE.
2. SOIL UNDER THE PAD SHALL BE COMPACTED TO A FIRM AND LEVEL CONDITION.
3. PRIMARY AND SECONDARY CONDUITS SHALL BE STUBBED UP 18 INCHES ABOVE GRADE.
4. PRIMARY CONDUITS SHALL BE STUBBED UP ON LEFT SIDE AND SECONDARY CONDUITS SHALL BE STUBBED UP ON THE RIGHT SIDE AS YOU FACE THE FRONT OF THE TRANSFORMERS.
6. OPENING IS CENTERED IN PAD SO THAT DIMENSION X IS EQUAL ON BOTH SIDES.

**11.32 SPECIFICATIONS FOR 3-PHASE CT-METERING (INSIDE TRANSFORMER)**



NOTES:

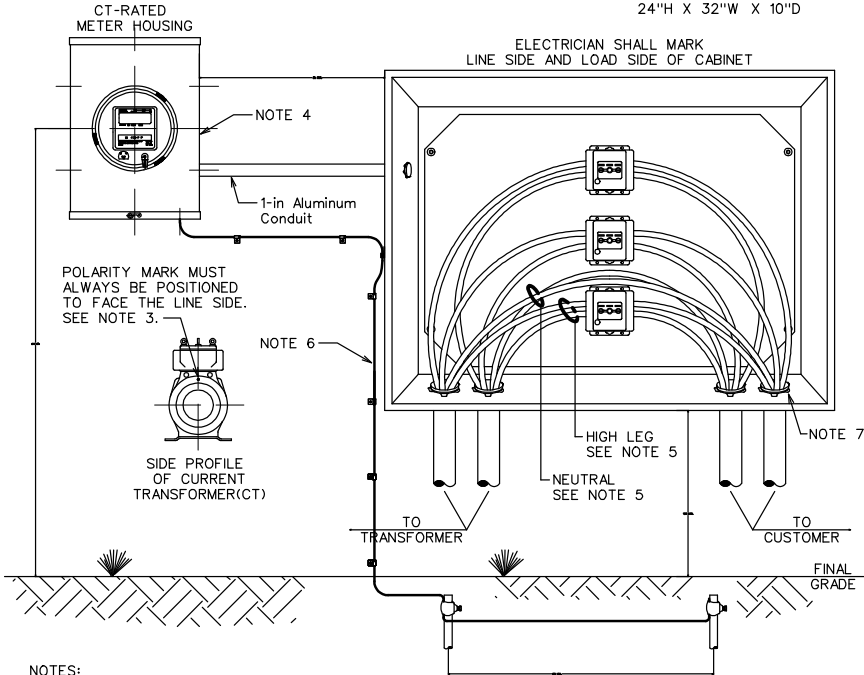
- 1.) FOR SERVICES OF 400 AMPS OR MORE THAT ARE NOT CT'D INSIDE THE TRANSFORMER, CUSTOMER IS REQUIRED TO INSTALL A CT CABINET, CT'S AND METER SOCKET ISSUED BY LAKELAND ELECTRIC.
- 2.) CT METER MAY BE INSTALLED ON A EXTERIOR WALL ONLY IF THE DISTANCE FROM THE TRANSFORMER TO THE PROPOSED POINT OF ATTACHMENT ON WALL DOES NOT EXCEED 25'. IF DISTANCE EXCEEDS 25' TO CLOSEST POINT OF ATTACHMENT, CT METER MUST BE POST MOUNTED
- 3.) CONCRETE POST FOR POST MOUNTED INSTALLATIONS MUST BE 8' LONG BY 6" X 6" STEEL REINFORCED BURIED AT 3' DEPTH. MOUNT METER SOCKET HOUSING ON POST SO THAT TOP EDGE IS FLUSH WITH THE TOP EDGE OF POST.
- 4.) INSTALL 1" 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" 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 5/8" 8' COPPER-CLAD GROUND RODS AT A MINIMUM OF 6' 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!



**11.33 SPECIFICATIONS FOR 3-PHASE CT-METERING INSTALLATION (IN OUTSIDE CABINET)**

E20CDCTM02	UG SERVICE TO A CT-RATED METER WITH CT'S IN A CABINET	ASSEMBLY
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STANDARD CT CABINET DIMENSIONS  
24"H X 32"W X 10"D



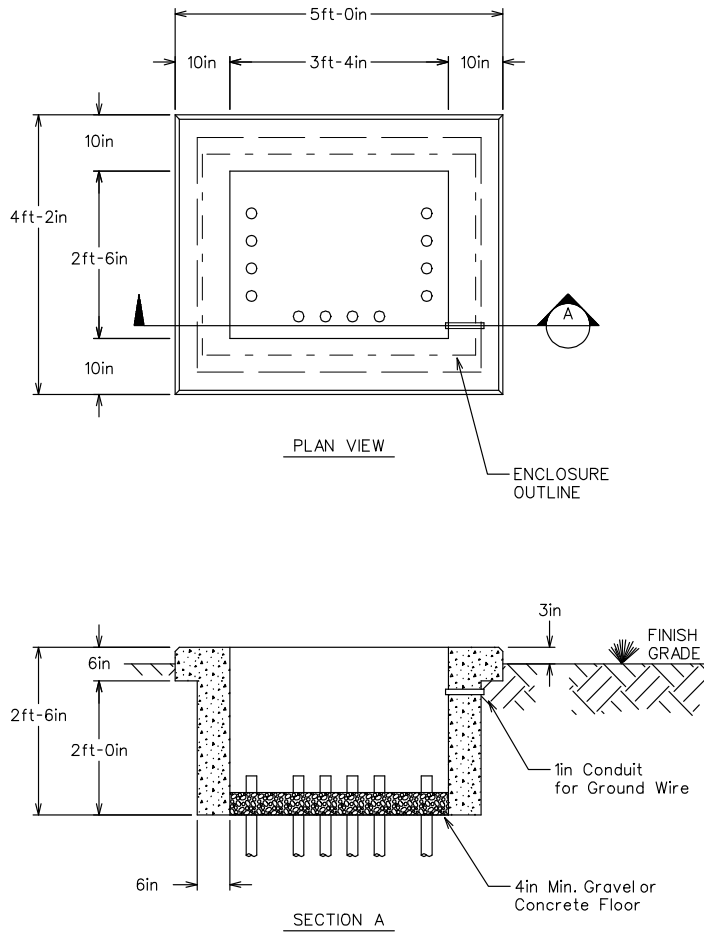
NOTES:

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

Drafted By: BRS	12/14/07	UNDERGROUND DISTRIBUTION	
Revision By: BRS No: 1	07/09/08		
Approved By: MDO	12/14/07		
Manager of Engineering		208	

**11.34 SPECIFICATIONS FOR WALSDORF ENCLOSURE PAD**

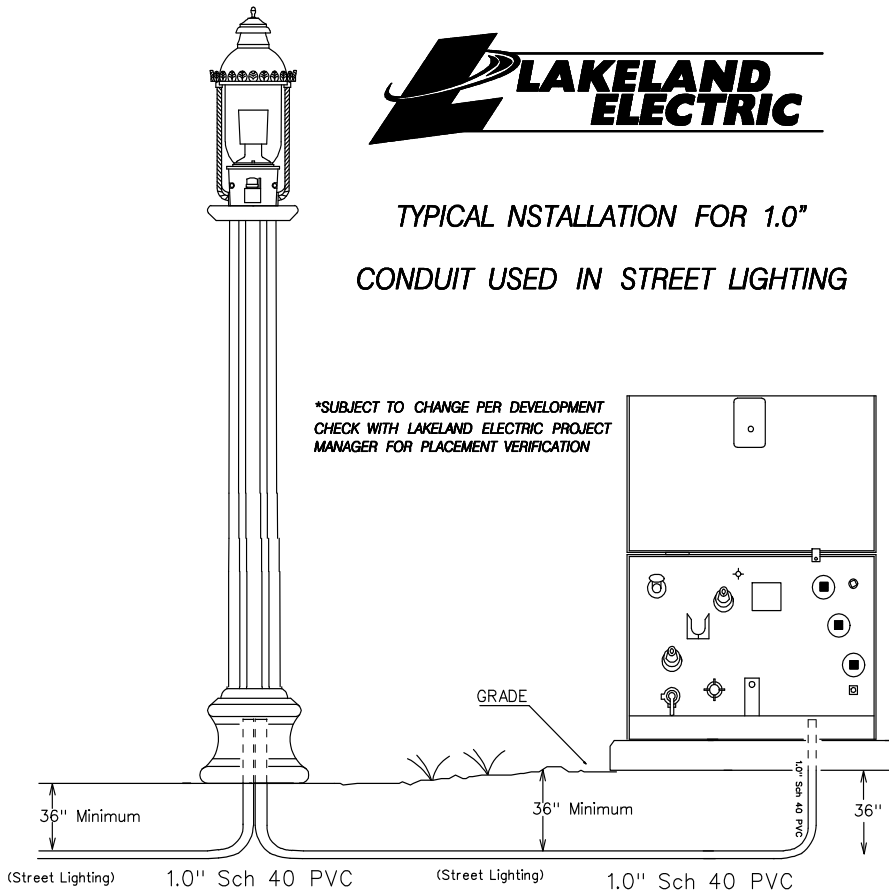


1. NOTES:
2. TOP OF PAD SHALL BE INSTALLED 3 INCHES ABOVE FINISHED GRADE.
3. SOIL UNDER THE PAD SHALL BE COMPACTED TO A FIRM AND LEVEL CONDITION.
4. PIT FLOOR SHALL CONSIST OF A MINIMUM 4 INCH THICKNESS OF CONCRETE OR GRAVEL. THE FLOOR MATERIAL SHALL BE FREE OF ANY LARGE ROCKS OR DEBRIS.
5. CONDUITS SHALL BE CUT 3 INCHES ABOVE TOP OF GRAVEL OR CONCRETE FLOOR.
6. CONDUITS SIZES AND ARRANGEMENT ARE JOB SPECIFIC AND WILL BE PROVIDED BY PROJECT MANAGER.

**11.35 SPECIFICATIONS FOR ROADWAY AND PRIVATE AREA LIGHTING CONDUIT**



**TYPICAL INSTALLATION FOR 1.0" CONDUIT USED IN STREET LIGHTING**

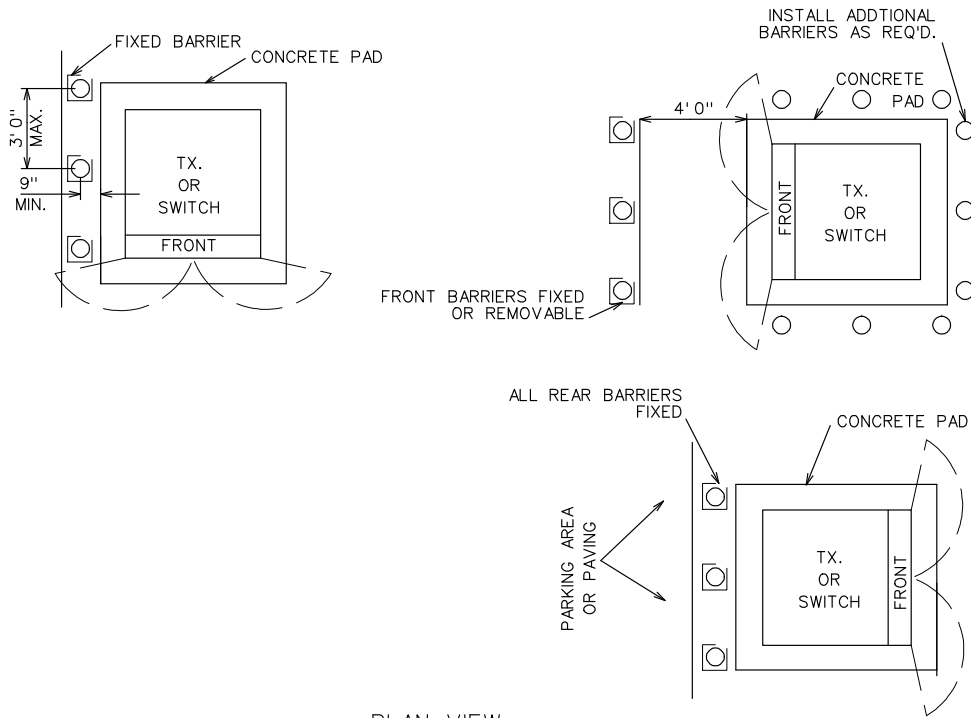


**NOTES:**

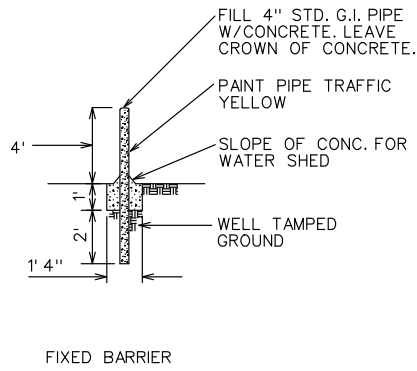
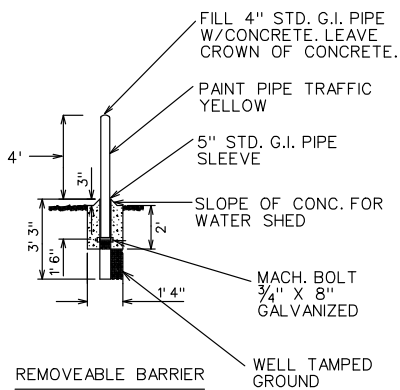
1. CONDUIT FOR STREET LIGHTING SHALL BE APPROVED 1.0" SCHEDULE 40 GRAY PVC STUBBED OUT AT 18.0" ABOVE FINAL GRADE AND INSTALLED BELOW GRADE A MINIMUM OF 36.0"
2. ALL INSTALLED 1.0" PVC CONDUIT AT TRANSFORMER LOCATIONS SHALL BE INSTALLED IN FRONT OF SERVICE CONDUITS
3. INSTALLED 1.0" CONDUIT IN RACEWAY SHALL BE IN THE PUBLIC UTILITY EASEMENT ABOVE THE PRIMARY AND SECONDARY CONDUIT
4. CONDUIT CONTRACTOR SHALL DISCUSS CONDUIT PLACEMENT WITH LAKELAND ELECTRIC PROJECT MANAGER AS EACH DEVELOPMENT MAY REQUIRE DIFFERENT LIGHTING PLACEMENT AND PARTICULAR NEEDS RELEVANT TO THAT PARTICULAR DEVELOPMENT
5. APPROVED PULL STRING SHALL BE BLOWN THROUGH ALL INSTALLED 1.0" SCH 40 GRAY PVC CONDUIT
6. APPROVED TRACER WIRE SHALL BE INSTALLED FOR FUTURE IDENTIFICATION WHERE SPECIFIED.

**11.36 SPECIFICATIONS FOR PROTECTIVE BARRIER INSTALLATION**

PROTECTIVE BARRIER INSTALLATION SPECIFICATIONS  
FOR PADMOUNT EQUIPMENT



PLAN VIEW



## APPLICATION FOR COMMERCIAL ELECTRICAL SERVICE DESIGN

Please fill in all the information on the application. Submit a set of site and electrical plans with the application to Lakeland Electric's New Development Engineering. Please submit site plans via e-mail, or CD in CAD format. **This information must be submitted before any electrical design is approved.** You will be contacted by New Development Engineering after this information is reviewed.

***Cost In Aid Of Construction(CIAC) may apply.***

<b>Business/Project:</b>	<b>Project Start Date:</b>
<b>Nature of Business:</b>	<b>Sq. Ft. of Building:</b>
<b>Location:</b>	
<b>Customer/Developer:</b>	
<b>Contact Person(s):</b>	
<b>Phone Number(s):</b>	
<b>Fax Number:</b>	<b>E-mail:</b>
<b>Mailing Address:</b>	
<b>Prefer Single or Three Phase (check one):</b> Single Phase <input type="checkbox"/> Three Phase <input type="checkbox"/> <i>(Will be determined by customers load characteristics.)</i>	
<b>Type of voltage requested (check one):</b> 120/240 <input type="checkbox"/> 120/208 <input type="checkbox"/> 277/480 <input type="checkbox"/> <i>(Some voltages may not be available.)</i>	
<b>Size of Main Service Panel:</b>	
<b>Prefer overhead or underground service to building (check one):</b> Overhead <input type="checkbox"/> Underground <input type="checkbox"/> <i>(Will be determined by customers load characteristics.)</i>	
<b>Largest motor size in horsepower &amp; Voltage:</b>	
<b>Site Plans (Via e-mail or CD in CAD format)</b> <input type="checkbox"/> <b>Electrical Plans (Including Load Data)</b> <input checked="" type="checkbox"/> <b>Plans may be e-mailed to <a href="mailto:jim.howard@lakelandelectric.com">jim.howard@lakelandelectric.com</a></b>	
<b>Additional Comments:</b>	

**INSTRUCTIONS FOR THE SUBDIVISION APPLICATION:**

**DATE:** DATE OF YOUR SUBMITTAL TO LAKELAND ELECTRIC

**PLATTED PROJECT NAME:** NAME WHICH IS TO BE RECORDED WITH POLK COUNTY

**ADDRESS OR LOCATION:** PREFER ADDRESS, OTHERWISE CLOSEST CROSS-STREETS

**S-T-R:** SECTION NUMBER-TOWNSHIP NUMBER-RANGE NUMBER

**NUMBER OF LOTS:** NUMBER OF LOTS IN SUBDIVISION and PER DEVELOPMENT PHASE

**NUMBER OF SERVICES:** HOW MANY ADDITIONAL SERVICES WITH NUMBER OF LOTS WILL REQUIRE SERVICES? I.E. GATES, FOUNTAINS, ENTRANCE LIGHTS, SIGNS, TRACT A, ETC.

**TYPICAL LOT SIZE:** WIDTH' X LENGTH' – Avg totalS.F

**PROJECT TOTAL ACREAGE:** Total development acreage.

**ACREAGE PER/CONSTRUCTION PHASE ONLY:** HOW MANY ACRES IS THE CONSTRUCTION PHASE OF THE PROJECT YOU ARE SUBMITTING? OR THE FIRST/NEXT PHASE TO BE BUILT? PHASE 1 = XXX ACRES

*PLEASE NOTE: EACH PHASE OF CONSTRUCTION **SHALL** HAVE ITS OWN SUBDIVISION APPLICATION. IT WILL HAVE ITS OWN ACCOUNT NUMBER AND FILED SEPARATELY.*

**DRAINAGE TYPE:** CURB AND GUTTER or SWALES W/RETENTION PONDS, ETC.

THE **ENGINEERING FIRM** and **DEVELOPER'S** NAME, ADDRESS, PHONE NUMBERS, FAX NUMBER, INTERNET ADDRESS, ETC. SHALL ALLOW NEW DEVELOPMENT ENGINEERING TO KEEP RECORDS UP-TO-DATE.