



SERVICE POLICY

Effective October 2010

This policy provides information on the Idaho Falls Power (IFP) procedures for new and existing services and what will be required of a customer desiring electric service. This service policy is based in part on current City of Idaho Falls Ordinance. It is to be used only as a guide and shall not be considered to be complete with respect to all possible service configurations or special extenuating circumstances. The terms Contractor, Developer, Owner, and Customer are interchangeable in this policy. Any deviations from this policy must receive prior IFP approval.

Normally, the customer's first step in obtaining electrical service is to secure a building permit from the City Building Department. However, for all three phase projects, it is required that the developer coordinate service plans directly with IFP prior to seeking a building permit. The Customer shall provide information necessary for IFP to provide electrical service, including but not necessarily limited to: overhead or underground service, single phase or three phase service, the total connected load, the electric heat and air conditioning load, the required voltage, and the number and size of motors with ratings greater than twenty-five (25) horsepower.

All commercial and industrial customers shall provide directly to IFP the following, as applicable: A plot plan indicating the service entrance location, *proposed* transformer location (final determination by IFP), all electrical requirements including as a minimum; number of phases, voltage, connected 3 phase and single phase loads. Included on this plot plan will be IFP's required easements for the electric lines. In general, easements for electric service shall be twelve feet (12') in width. It is the customer's responsibility to have the designated easements surveyed and dedicated to the City. IFP will also indicate the preferred transformer location. No service work, cable pulls, or connects will be made unless the site address is posted in a conspicuous place.

SPECIFIC REQUIREMENTS BASED ON TYPE OF SERVICE

I. NEW COMMERCIAL UNDERGROUND SERVICE:

Customer shall do the following to prepare for service:

1. Determine location of loads, approximate size of loads and possible future needs. All 3 phase underground installations will be served with Y connected secondary only (i.e. 120/208 or 277/480).
2. Provide easements to the City for underground power cable as indicated on the marked-up plot plan described above. If the indicated easement locations present problems, then the developer is responsible to obtain permission for a different routing from IFP.
3. IFP requires all City owned cable to be in conduit. Customer shall provide and install all conduits as required from the IFP's designated service tap point(s) (source) through new or existing easements to the customer's transformer pad outlined in step #4 below. It may be further required that the customer open an additional trench and place conduit from the transformer pad to an exit point from the customer's property and provide easements for same. This latter requirement is necessary where the City wishes to loop feed through the customer's property for service reliability and to supply future customers. All PVC electric conduits shall be schedule 40 and **all elbows shall be PVC schedule 40 large radius sweep (3')** or as otherwise specified by IFP. No conduit run shall have more than 360 degree of bends. Maximum lengths of conduit runs shall be determined by IFP.
4. **Three Phase Transformers:** Customer shall construct a concrete transformer pad in the location indicated on the marked-up plot plan described above. A minimum 10' clear area is required in front of the transformer pad and a minimum of 2' clearance is required on the other three sides of the pad. The final transformer location will be determined by IFP. IFP must be contacted for inspection of transformer form prior to the pad being poured. For pad design *see attachment #1*. The pad location shall be compacted to a minimum of 95% of maximum density prior to concrete placement. Transformer will not be installed on pad until it has cured a minimum of seven (7) days.

Single Phase Transformers: Transformer pads shall be provided by IFP but shall be installed by the contractor/developer per *attachment #2*. The pad location shall be compacted to a minimum of 95% of maximum density prior to placement. The top of the transformer pad shall be installed a minimum of 6" above final grade. A minimum 10' clear area is required in front of the transformer pad and a minimum of 2' clearance is required on the other three sides of the pad. The transformer location will be determined by IFP. *See Attachment #2*.

High Voltage Switch Cabinets Bases and Secondary Pedestals: High voltage switch cabinet bases and secondary pedestals shall be provided by IFP but shall be installed by the contractor/developer per *attachment #3*. The top of the base transformer pad shall be installed a minimum of 6" above final grade. A minimum 10' clear area is required in front of the high voltage switch cabinet bases and a minimum of 2' clearance is required on the other three sides of the base. The location of the bases and pedestals will be determined by IFP. *See Attachment #3*.

5. **Trench and Conduit:**

Contact IFP field inspectors through the main office (612-8438) prior to starting any trench and conduit work. (This can save all parties a tremendous amount of time, energy, and money).

- a. Trench for primary conductor shall have a minimum depth of 48" and maximum depth of 60" below final grade. Minimum trench width shall be 24" unless otherwise noted. Before final backfill, IFP shall be notified when the conduit is in place. **IFP will inspect all conduit installations before backfilling for proper depth and installation.** IFP will specify the conduit size. Contact IFP inspector upon completion of pulling a mandrel through the conduit to prove the conduit. Any additional or future costs due to broken, damaged, obstructed or poorly assembled conduits will be paid by the customer.
- b. Minimum primary conduit depth can be reduced to eighteen inches (18") of cover below final grade through lava upon prior approval of IFP, but rigid galvanized steel (RGS) conduit must be provided and installed by the customer where trench depth is less than 48". IFP will specify the conduit size.
- c. The preferred method of crossing existing streets with primary conductor is overhead to a pole located near the new service. IFP will provide the pole and all primary conductor. The customer will provide the first length (10') of rigid galvanized steel (RGS) conduit up the pole above the RGS elbow. All elbows at the base of the pole shall be large radius (3') RGS (steel). All conduits installed on IFP poles will be on 8" (approx.) standoffs. If an underground road crossing is made, the customer will provide all conduit and either push the conduit beneath the roadway, or provide a trench in which to install conduit. The use of HDPE (high density polyethylene) continuous conduit may be used at select road crossing locations with prior approval from Idaho Falls Power. Conduit must be Perma-Guard/UL and fittings must be Arnco Shur-Lock II or an approved equal. **IFP will inspect all conduit installations before backfilling for proper depth and installation.** IFP inspector may require a select backfill depending on conditions. If required, a minimum of 6" of sand is to be placed above and below conduit(s). Prior to cable installation, trenches must be

backfilled and pads must be in place. Trenches across existing roadways must also be approved by the Public Works Division.

- d. In all cases the customer shall be responsible for backfill and compaction of cable trenches and repair of street crossings. Per city standards all electrical trenches shall be compacted to a minimum of 95% of maximum density to prevent settlement.
 - e. A minimum of one foot (1') clearance must be maintained between primary high voltage cable, and all other utilities and service voltage cables. Except at crossings where a separation should exist such as to allow future repairs of either utility approximately two inches (2" minimum).
 - f. All conduit, including bell ends, shall be supplied and installed by the developer/contractor. Bell ends shall be installed at transformers, secondary pedestals, switch cabinets, and light pole locations. See attachment #10 to reference installation guidelines. Conduits must be capped and labeled to identify routing.
6. Customer provides, installs and retains ownership of all commercial secondary service conductors and conduits from building (or load) to transformer (or source). When customer needs are such that they can be met from an existing power pole, the customer shall install all secondary cable to the pole and provide sufficient secondary cable to reach from the pole top connection point to customer's meter base or other point of connection. The customer shall provide and install the required first length (10') of rigid galvanized steel (RGS) conduit up the pole above the RGS elbow. All conduits on IFP poles will be on 8" (approx.) standoffs. Since the secondary trench and cable are the customer's responsibility, no easements will be required by the City. all future maintenance, locating, and repair of secondary will be the customer's responsibility.
7. Customer shall provide and install necessary meter bases, CT boxes, and install IFP provided CT's in CT boxes.

IFP will then install meter, meter wiring, etc., place a transformer on the concrete pad, pull primary cable through customer installed conduit, and connect primary cables to the primary terminals of the pad-mounted transformer. IFP makes up secondary connections in the transformer and provides connectors for standard cable up to and including 500 kcm. If greater than 500 kcm cable is to be used, the customer provides connectors and/or other special facilities. Finally, IFP connects the primary cable to its power system at the designated tap point after all requirements are met.

II. NEW COMMERCIAL OVERHEAD SERVICE:

Customer shall do the following to prepare for service:

1. Determine location of service entrance, approximate size of loads and possible future needs.
2. Provide a meter base, standard power riser, weather head, and/or suitably anchored attachment point to allow connection to IFP's designated service tap point. Install IFP provided CT's.
3. Provide necessary easements to connect the customer to IFP's designated tap point. Easements are required for primary only, except in rare cases where an easement for overhead secondary may be necessary if it crosses the property of others.

IFP will then provide metering equipment and aerial overhead conductor. Customer will install IFP provided CT's. Note that no customer owned equipment will be permitted on IFP's poles.

III. NEW RESIDENTIAL SERVICE:

A. Underground

1. **New underground residential electric systems will be installed in front lot locations and shall be determined by IFP.**
2. **Secondary:** In residential underground areas the customer (whether through the developer, builder or individually) is required to open and close a 30" deep trench, and install 2½" schedule 40 PVC conduit to the meter base, 3 pvc radius elbows will be used from IFP's designated pad-mounted transformer or service pedestal to the service point. At the building foundations an appropriate smaller radius elbow may be required to maintain conduit cover. Minimum conduit depth can be reduced to eighteen inches (18") of cover below final grade through lava upon approval of IFP, but rigid galvanized steel (RGS) conduit must be provided and installed by the customer where trench depth is less than 30". IFP will specify the conduit size. Conduit will have a maximum of 360 degree of bends per run. Conduit can only be bent with approved methods (i.e. blanket warmer or rigid conduit bender, **NO TORCHES.**) Riser conduit shall be 2½" rigid galvanized steel. Schedule 40 PVC acceptable only if mounted within the framed wall. If surface mounted on the house, the riser to the meter base and adjacent elbow must be rigid galvanized steel. **IFP will inspect all conduit installations before backfilling for proper depth and installation.** Meter base must be framed and braced before the power cable will be pulled into the base. After IFP inspects conduit, an authorization for backfill sticker will be placed on conduit or meter base. All trenches will be compacted to a minimum of 95% of

maximum density to prevent settlement. It shall be the home owner's responsibility to maintain integrity of secondary conduit at their expense.

3. **Service Entrance and Meter Base:** The meter is to be located within five (5) feet of the nearest front corner of the house to the existing transformer or pedestal. Conduit is to have a maximum of 360 degree of bends. *See Attachment #4.* This is to be used only as a guide and shall not be considered complete with respect to all possible service configurations or special extenuating circumstances. Any deviation of meter placement must have prior approval from IFP. The centerline of the meter should be 5'6" above the finished grade or walkway. If structural details prevent this, the centerline height shall be not less than five (5) feet or more than six (6) feet.
4. **Primary:** Primary conduit and trench requirements are the same as for commercial service. At times, a primary extension may be required, in which case the customer will open and close a 48" deep trench below final grade and install conduit. Minimum trench width shall be 24" unless otherwise noted. In general, easements for electric service shall be twelve feet (12') in width. It is the customer's responsibility to have the designated easements surveyed and dedicated to the City. IFP will also indicate the preferred transformer and service pedestal locations. A horizontal and/or vertical separation is required between electrical facilities and/or other utilities.
Exception: on residential extensions, IFP will provide transformer pads and service pedestals. At this time, before transformer pad or service pedestal is installed, the customer/contractor shall install one 10' (ten foot) length of 2 ½" schedule 40 PVC secondary conduit with 3' sweep and schedule 40 PVC riser if required from each transformer and/or pedestal on approximately a 45 degree angle into each lot to be served with electrical service.
5. **Power Cables:** IFP will provide and install the necessary primary and secondary cable in the customer provided conduit to connect the customer's service point to the City's pad-mounted transformer or pedestal. The customer is required to establish a final grade compacted to a minimum of 95% of maximum density at each transformer and service pedestal on location large enough for placement of IFP's transformer pad and/or pedestal. *See Attachments #2 & 3.* Coordinate with IFP. The customer's service entrance equipment must be in place and approved by the electrical inspector before final hookup. Installed conduit shall be inspected by IFP to ensure proper conduit depth and installation. Cable will not be installed until trench has been backfilled.
6. **High Voltage Transformers and Switch Cabinets:** The high voltage equipment shall not be enclosed in any manner which will restrict the dissipation of heat. A ten (10) foot minimum clearance and access must be maintained in front of the cabinet door. A two (2) foot clearance should be maintained on all other sides of the equipment.

Fences or landscaping installed within this clearance will be removed at the owners expense should servicing be required. *See Attachments 2 & 3.*

B. Overhead

1. Overhead service wire length have a maximum length of 125 feet.
2. The same procedures are used as in the NEW COMMERCIAL OVERHEAD SERVICE Section above.

IV. **MULTI FAMILY UNITS, CONDOS AND APARTMENTS:**

A. Underground

1. Conduits to service the building will be determined by IFP. The same procedures are used as in new residential service. Secondary conductor(s) will be terminated at one point on the customer's premises, i.e. main breaker, disconnect or similar tap point. IFP's conductor(s) shall not be used as a bus in gutters, etc.
2. All new three phase residential loads will use the same procedures as a new commercial service

B. Overhead

1. The same procedures are used as in NEW COMMERCIAL OVERHEAD SERVICE.

V. **CONSTRUCTION SERVICE AND TEMPORARY SERVICE:** There will be no hook-up labor and material charges for a construction service for a permanent facility. IFP will charge it's up and down labor and unrecoverable materials for a temporary facility. Examples of temporary facilities would be a construction trailer or Christmas tree lot which would require a line extension and/or transformer.

The customer must provide his own service pole and meter base, and have it approved by the City's electrical inspector. The service pole cannot be more than one hundred twenty-five feet (125') from the designated IFP tap point. It also must be tall enough to allow for appropriate traffic clearance and be strong enough to support the service conductors.

VI. **CUSTOMER REQUESTED ADDITIONAL SERVICE, CHANGE IN SERVICE, COSMETIC CHANGES OR ACCIDENTAL DAMAGES TO IDAHO FALLS POWER'S SYSTEM:**

Once IFP has provided service to a facility, any change to that service including upgrades, expansion, extension or relocation shall incur a charge for the cost of the change, based upon a fee schedule maintained by IFP. An estimate will be provided upon request.

The customer shall be responsible for costs incurred by IFP for the repair of any of its facilities damaged by the customer or a third party working on behalf of the customer. IFP will provide information and services in advance of maintenance or construction activities (such as dropping and reconnecting overhead service lines for tree trimming) at no charge, if scheduled during normal business hours.

VII. **Illumination: Public Rights-of-Way**

Illumination: It shall be the customer's/developer's responsibility to provide illumination (street lights), along or within the public rights-of-way contained within their new development. All new light pole foundations and lighting conduits shall be constructed in accordance with current City of Idaho Falls standard drawings and specifications. IFP shall install poles, cables and luminaires. IFP will furnish to contractor for installation: anchor bolts, nuts, washers, grounding butt plate, and ground wire.

IFP will not provide or maintain illumination for private roads, parking lots, public walkways, or jogging paths.

VIII. **Required Clearances**

See clearance drawings (*attachment #11 and #12*) for required clearances of overhead power lines to driveways, parking lots, alleys, areas of farm and construction equipment, pedestrian traffic, vehicular traffic, railroads, and water ways. Contact Idaho Falls Power for clearances not addressed in this service policy.

GENERAL METERING REQUIREMENTS

1. **SCOPE:** These requirements cover only the common meter installations. Infrequent or special applications which usually require the approval of IFP are not included. Wiring diagrams and other meter information may be obtained from the Metering Department.

2. **LOCATION OF METERS:** The following requirements apply to the location of meters.

A meter shall not be located where it will be subjected to shock, vibration, or other damage.

Protection from ice, snow, rain or other damage shall be provided by the contractor/customer for metering equipment, when location so demands.

Meters shall be installed only in sockets which are plumb in all directions and securely fastened to the structure.

Commercial meters and metering equipment shall be installed at an outside location which will be kept readily accessible at all times for reading, inspecting, and testing. The meter cannot be contained inside a cabinet or utility closet.

All residential meters shall be installed at an outside location which will be readily accessible at all times for reading, inspecting and testing. Meters shall be front yard accessible.

Meters shall not be located where they might be damaged or become inaccessible by the movement or storage of materials or supplies.

The centerline of the meter should be 5'6" above the finished grade or walkway. If structural details prevent this, the center line height shall be not less than five 5' or more than 6'. *See Attachment #5.*

In multiple meter installations such as apartment buildings or shopping centers, meters may be mounted in horizontal rows with the allowable maximum and minimum height from ground or walkway to the center line of the meter being 6'6" and 4' respectively.

In apartment or multiple-use buildings, meters shall not be installed above the first-story level or in the basement.

Meters shall NOT be mounted on IFP owned poles or padmount transformers.

3. **3 PHASE / SINGLE PHASE METER AND BASE:** All single phase and three phase meters shall be socket type. All new 200 amp residential or upgraded underground meter bases will be: Cooper's B-line UG204F or UG204 or Millbank's UF4015-KO or U015-O. IFP can accept equal with prior approval.
4. **DETERMINE SELF CONTAINED OR CT METERING:**

Use Table 1 to determine if the service should be metered with a self-contained or current transformer meter. The selection should be based on the actual connected kW.

**TABLE 1.
SELF-CONTAINED VERSUS CT METERING**

SINGLE PHASE – 120/240 VOLT	
MAIN SWITCH AMPACITY	METER TYPE
0 TO 400 AMPS 401 AMPS & ABOVE	SELF-CONTAINED CT SECONDARY

Use Table 2 to determine if the service should be metered with a self-contained or current transformer meter. The selection should be based on the actual connected kW.

**TABLE 2.
SELF-CONTAINED VERSUS CT METERING**

POLYPHASE		
METER VOLTAGE	SELF-CONTAINED METER MAXIMUM LOAD	CT METER MINIMUM LOAD
120/208 V - NETWORK	200 AMPERES	201 AMPERES & ABOVE
120/240 V	200 AMPERES	201 AMPERES & ABOVE
120/208 V	200 AMPERES	201 AMPERES & ABOVE
240/480 V	200 AMPERES	201 AMPERES & ABOVE
277/480 V	200 AMPERES	201 AMPERES & ABOVE

5. **GROUNDING:** Meter bases or enclosures, conduit and meter frames attached to building shall be grounded to a service ground by the contractor. Where self-contained meter bases are used, the neutral conductor shall be connected to the ground terminal in the base.
6. **REMOVAL OF METERS:** Only authorized personnel shall be allowed to remove meters from meter bases or the customer's premises. When socket-type meters are removed, the socket must have a cover plate securely fastened and sealed in place.
7. **METER IDENTIFICATION AT MULTIPLE METER INSTALLATIONS:** Prior to actual meter installation, the customer or contractor must provide the Meter Department with a plan or diagram indicating which meter socket serves which unit. The customer or contractor shall mark the meter sockets with the applicable unit address by some permanent means at a location on or near meter base.
8. **GENERAL:** The customer or contractor must furnish meter bases and enclosures for all installations. All meter bases and enclosures will be installed by the contractor and incorporated into the customer's wiring.
Meter bases must be listed and meet City of Idaho Falls specifications and all applicable codes. Combination socket and disconnecting devices are approved for use, provided the base meets all other specifications and is wired on the line-side of the customer's disconnecting device. Corrosion inhibitor shall be used on all connections to aluminum conductors. Protection from ice and other damage shall be provided by the contractor/customer for metering equipment, when location so demands.

Bypass meter bases must be in compliance with the Meter base section of this policy. IFP will not provide new three-phase, three-wire self-contained service without a grounded neutral system.

9. **MASTER METERING:** Idaho Falls Power's retail rates are intended for application to individual customers or units of service and, except as specifically excepted hereinafter, master metering is prohibited. However, master metered mobile home parks, multi-occupant residential buildings, commercial buildings and shopping centers connected prior to 7/1/2010, may continue to receive master metered service.
Mobile Home Parks built before 7/1/2010, whose space for tenants have been sub-metered by the park owners, need not be individually metered by Idaho Falls Power. Mobile home park tenants must be charged the same rate for electric service as if they were directly metered and billed by Idaho Falls Power.
Multi-occupant residential buildings, commercial buildings and shopping centers may be master metered if the electric heating, ventilation, air conditioning or water heating systems are centrally located and cannot be controlled by the individual tenants.
A master-metered customer may install sub-metering for individual spaces at its own expense. This metering system must be maintained by the building owner and installed by licensed electricians. Master metered customers may also utilize a reasonable

allocation procedure to determine a tenant's usage for the purpose of reimbursing the master metered customer. Such a procedure shall constitute an allocation and not a resale. The customer shall indemnify Idaho Falls Power for any and all liabilities, actions or claims for injury, loss or damage to persons or property arising from the allocation of service by the customer.

Idaho Falls Power will not sell or otherwise provide meters or associated equipment required for sub-metering, nor test and maintain customer owned meters.

RESIDENTIAL METERING REQUIREMENTS

1. **SINGLE PHASE METERS:** All single phase customers with a main switch ampacity up to and including 400 amperes will be metered with a self-contained meter. On all loads from 200 to 400 amperes a 320 amp meter base will be used. On all loads up to and including 200 amperes a meter base of suitable ampacity will be used.

All new 200 amp residential or upgraded underground meter bases will be: Cooper's B-line UG204F or UG204 or Millbank's UF4015-KO or UF4015-O. IFP can accept equipment of equal type and quality with prior approval.

COMMERCIAL METERING REQUIREMENTS

1. **THREE PHASE METERS:** All three phase customers with a main switch ampacity up to and including 200 amperes will be metered with a self-contained meter. All loads in excess of 200 amperes will be CT metered.

2. **SEQUENCE:** All meters or instrument transformers must be ahead of the customer's disconnecting switch. Where multiple meter installations are required and a main switch is used, meters may be installed behind the main switch and ahead of the customer's disconnect; no unmetered circuits will be connected to the main switch. Entrance wiring must be so arranged that metered circuits do not enter conduits, raceways or enclosures containing unmetered circuits except on IFP owned pole meter loops. Use Table 1 to determine if the service should be metered with a self-contained or current transformer meter. The selection should be based on the actual connected kW.

3. **CURRENT TRANSFORMER INSTALLATIONS:** CT installations shall not be more than 50' from the meter base, connected by a minimum 1 inch conduit for metering conductors only. Underground metering conduit buried 24" deep; schedule 40 PVC with rigid galvanized steel above ground into meter base. CT's must be contained within a CT can.

See attachment #7A (Free Standing CT Meter) if no building wall is available for mounting.

When using enclosures for current transformers, they shall be furnished and installed by the customer. All enclosures shall be at least 11 inches deep and of such size as to permit ready installation of current transformers on the size of wire used. Table 2 will be used as a guide for the minimum nominal size of metal cabinet to be used for this purpose. All enclosures and meter bases shall have provisions for installing security seals and shall be installed at an accessible location on outside of building. IFP will not allow any customer equipment to be installed on, or holes drilled, in transformer. Enclosures for current transformers will be used on both underground and overhead in instrument metered installations. Top of CT enclosure not to exceed 6' above finished grade. Bottom of CT enclosure not to be less than 2' above finished grade. All CT's shall be solidly mounted. Buss type (bolted to buss bar) CT's are allowed. Any variances to the above will be determined by IFP.

CT meter bases located within 6.0' of the padmount transformer shall be grounded and bonded to transformer to prevent touch potential.

**TABLE 2.
ENCLOSURE FOR CURRENT TRANSFORMERS**

SERVICE ENTRANCE CONDUCTOR AMPACITY	MINIMUM TRANSFORMER CABINET SIZE (W X H X D)
401 & ABOVE - 1Ø	24" x 24" x 11"
400 & BELOW - 3Ø	24" x 48" x 11"
401 - 800	36" x 48" x 11" <small>HINGED DOOR TYPE</small>
801 - 1000	36" x 48" x 14" <small>HINGED DOOR TYPE</small>
OVER 1000	NOTIFY IDAHO FALLS POWER

4. **INSTALLATION OF METERS:** All meters, voltage, and current leads, used with instrument transformers shall be installed by Meter Department personnel. Self-contained meters may be installed by other authorized IFP employees.

METER BASES

1. **SCOPE:** These specifications cover all self-contained meter bases and transformer-rated meter bases. Protection from ice, snow, rain or other damage shall be provided by the contractor/customer for metering equipment, when location so demands.
2. **SINGLE PHASE METER BASES:** Residential and commercial service installations over 200 amp, up to 400 amp, (320 amp meter base) single phase, shall have factory installed lever type bypass facilities. All single phase self contained commercial service installations must have factory installed lever bypass. Single phase meter bases over 400 ampere shall be CT

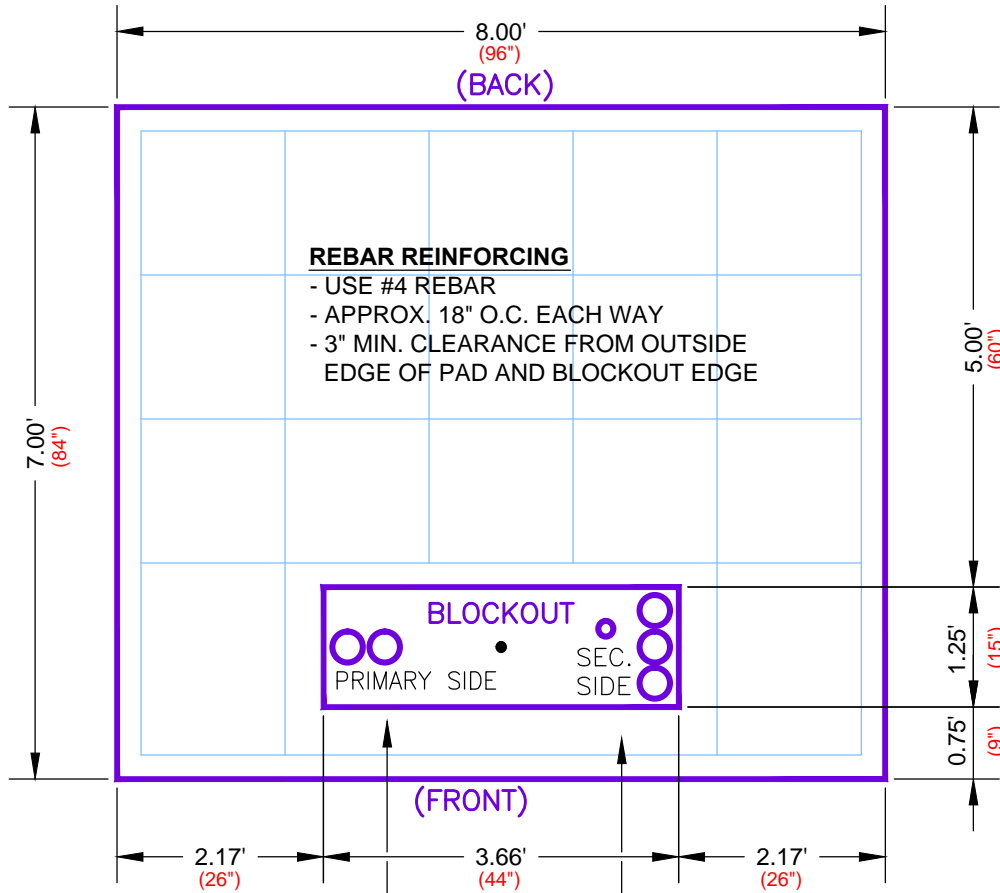
instrument metered using six (6) point socket type meter base with drilled and tapped mounting plate for test switch provisions (Circle AW catalog #12-146 or equivalent).

3. **THREE PHASE METER BASES 200 AMPERE AND BELOW:** Self-contained meter base installations on three phase service shall be a seven (7) point terminal socket type meter base and shall have factory installed lever type bypass facilities.
4. **THREE PHASE METER BASES OVER 200 AMPERE:** Three phase meter bases over 200 ampere shall be a CT instrument metered installation using thirteen (13) terminal socket type meter base with drilled and tapped mounting plate for test switch provisions. (Milbank UC3433-XL, or equivalent).
5. All commercial meter bases shall be of the lever bypass type on all permanent structures.
6. **NETWORK METERING 200 AMPERES AND BELOW:** Self-contained meter base installations shall be a five (5) terminal socket type meter base with fifth terminal installed left center in meter base (9 o'clock position).
7. **CURRENT AND POTENTIAL LEADS:** The contractor will furnish and install all meter bases and the rigid galvanized steel (RGS) conduit (1 inch minimum) to the meter base for current and potential leads. IFP will furnish instrument transformers as needed. The contractor will provide the necessary enclosure and install the CT's (CT's will be made available by IFP Meter Department). All CT's will be solidly mounted in CT enclosures.
8. **WORKING SPACE AROUND ELECTRICAL METERING EQUIPMENT:** Sufficient access and working space shall be provided around all metering equipment to permit ready and safe operation, maintenance and testing of such equipment, with a minimum of 3' (3 feet) front working space, minimum of 6'6" (6 feet 6 inches) head room and a minimum of 3' (3 feet) wide plus permitting 180 degree opening of equipment doors or hinged panels.

CUSTOMER GENERATING EQUIPMENT REQUIREMENTS

All new electric generation equipment that a customer desires to connect to the IFP distribution system must be approved by IFP prior to connection to the power system. The system must demonstrate that it cannot back feed power into the IFP system. An automatic transfer switch or another IFP approved alternate isolation system will be required. Contact the IFP Engineer to attain approval prior to the purchase of the isolation equipment. A signed net metering agreement will be required, before interconnection to the IFP system will be made.

3 PHASE TRANSFORMER PAD



REBAR REINFORCING

- USE #4 REBAR
- APPROX. 18" O.C. EACH WAY
- 3" MIN. CLEARANCE FROM OUTSIDE EDGE OF PAD AND BLOCKOUT EDGE

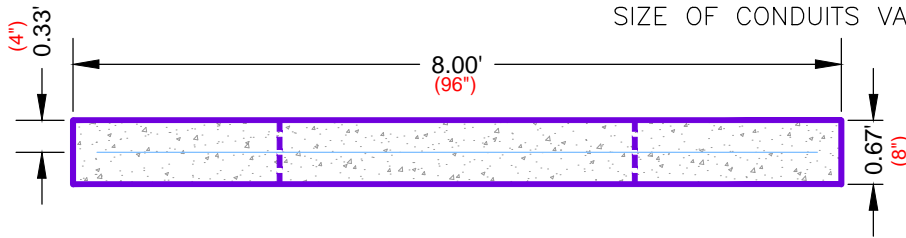
CT METERING SHALL NOT BE ALLOWED IN THE TRANSFORMER.

- GROUND ROD TO BE INSTALLED IN THE CENTER OF BLOCKOUT

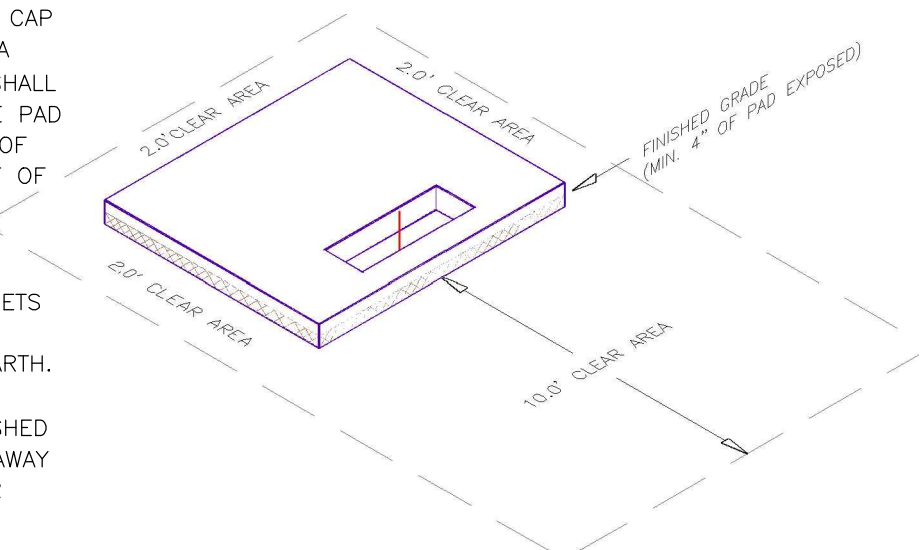
SECONDARY COMPARTMENT SIZE VARIES WITH TRANSFORMER SIZE AND MANUFACTURER — CONTACT LINE SUPERINTENDENT FOR SPECIFICS.

INSTALL ALL PRIMARY CONDUITS AS FAR LEFT IN THE BLOCKOUT AS POSSIBLE

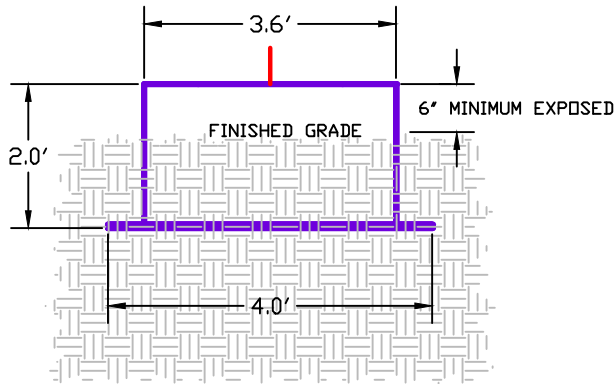
INSTALL ALL SECONDARY CONDUITS AS FAR RIGHT IN THE BLOCKOUT AS POSSIBLE. NUMBER AND SIZE OF CONDUITS VARY.



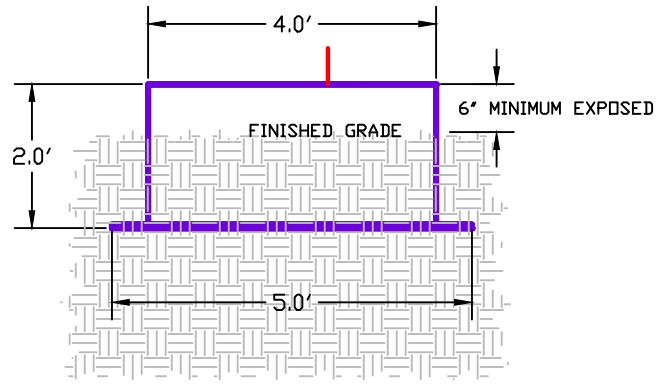
ADDITIONAL COMMENTS: INSTALL CONDUITS TO WITHIN $\pm 6"$ OF TOP OF PAD. INSTALL BELL ENDS AND CAP ALL CONDUITS. TRANSFORMER PAD SHALL HAVE A MINIMUM THICKNESS OF 8" OF CONCRETE AND SHALL BE DESIGNED WITH REINFORCING AS SHOWN. THE PAD LOCATION SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY PRIOR TO PLACEMENT OF CONCRETE. THE TRANSFORMER WILL NOT BE INSTALLED UNTIL THE CONCRETE HAS CURED A MINIMUM OF (7) DAYS. IF THE TEMPERATURE IS EXPECTED TO DROP BELOW 40°, THERMAL BLANKETS MUST BE USED FOR A MINIMUM PERIOD OF 72 HOURS. DO NOT PLACE PAD ON THE FROZEN EARTH. TOP OF THE TRANSFORMER PAD SHALL BE CONSTRUCTED TO A MINIMUM OF 4" ABOVE FINISHED GRADE. POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM THE TRANSFORMER PAD. CONTACT IFP FOR INSPECTION PRIOR TO PLACEMENT OF CONCRETE.



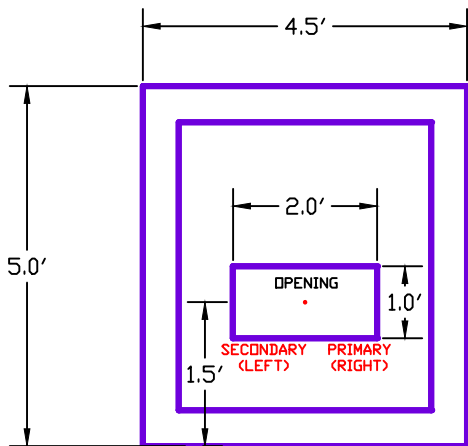
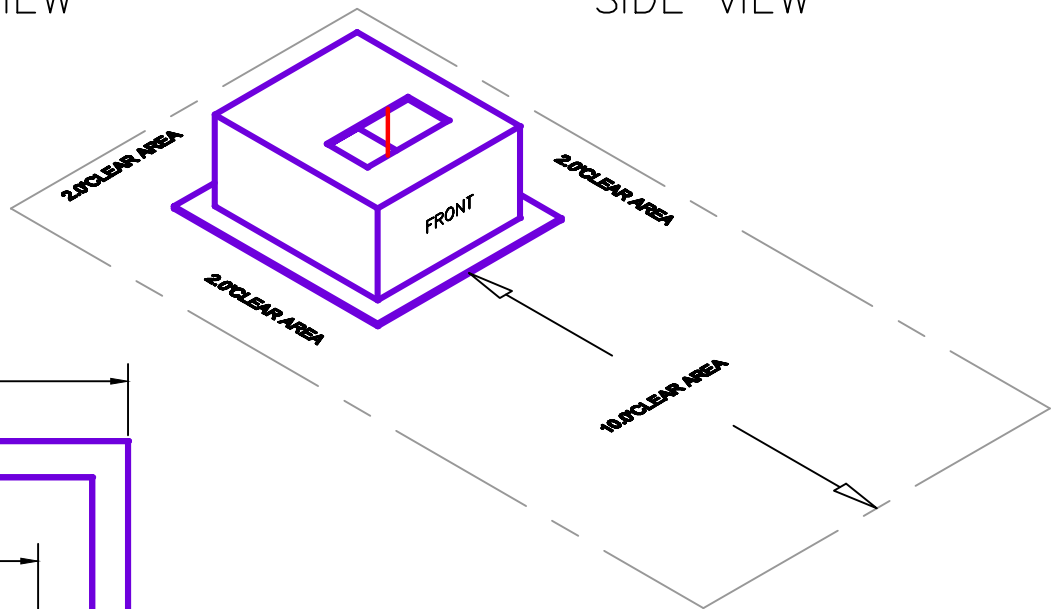
SINGLE PHASE TRANSFORMER BASE (GROUND SLEEVE)



FRONT VIEW



SIDE VIEW



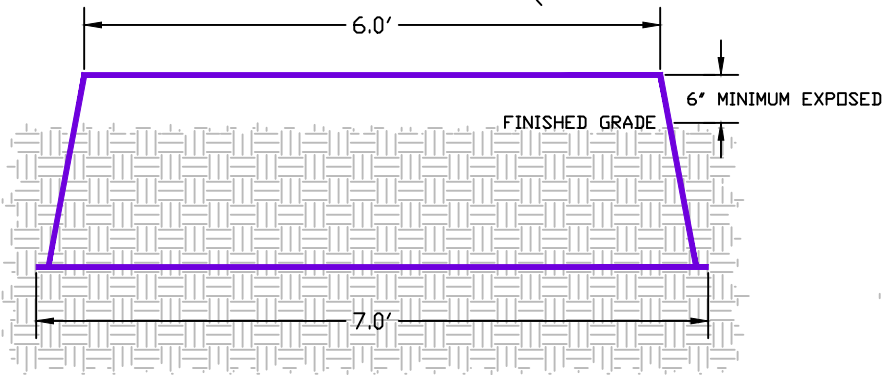
PLAN VIEW

GROUND ROD TO
BE INSTALLED IN
THE CENTER OF
THE OPENING

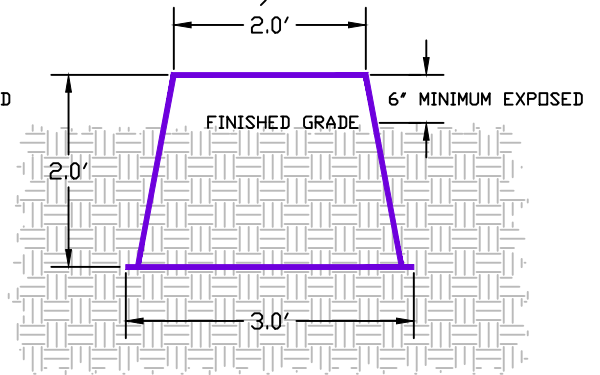
SINGLE PHASE SWITCH CABINET BASE (GROUND SLEEVE) SHALL BE PROVIDED BY IDAHO FALLS POWER BUT SHALL BE INSTALLED TO REQUIRED GRADE BY THE CONTRACTOR/DEVELOPER. THE PAD LOCATION SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY PRIOR TO PLACEMENT. THE TOP OF THE BASE SHALL BE INSTALLED A MINIMUM OF 6" ABOVE FINISHED GRADE. POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM THE CABINET BASE. ANY DEVIATION IN THE FINAL GRADE OR LOCATION OF THE CABINET BASE MUST BE APPROVED BY IDAHO FALLS POWER. CT METERING WILL NOT BE ALLOWED IN THE TRANSFORMER.

3 PHASE SWITCH CABINET

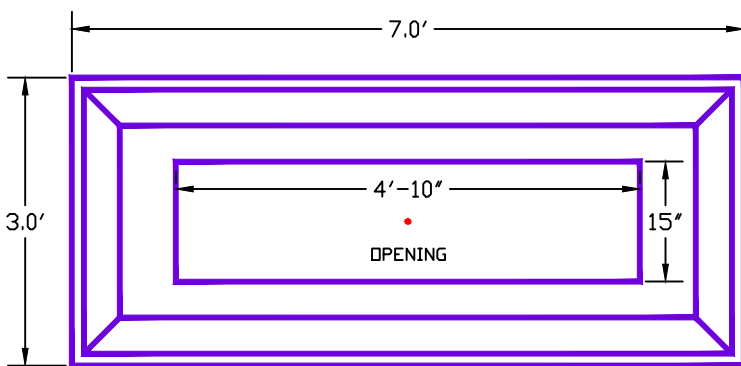
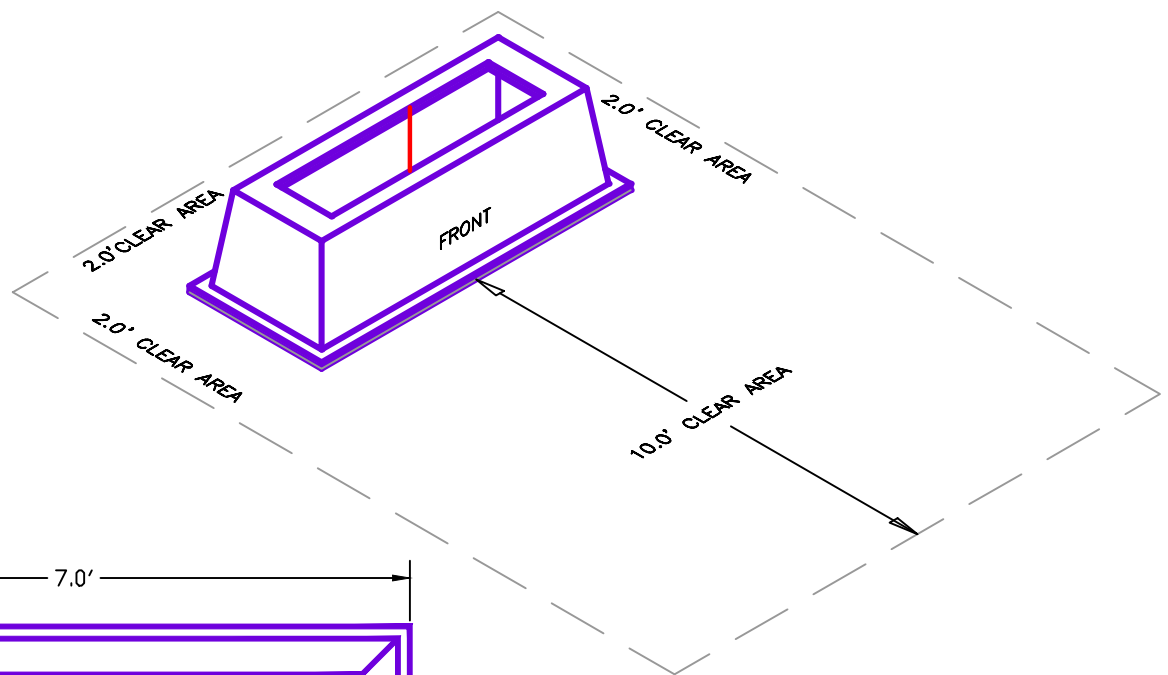
BASE (GROUND SLEEVE)



FRONT VIEW



END VIEW

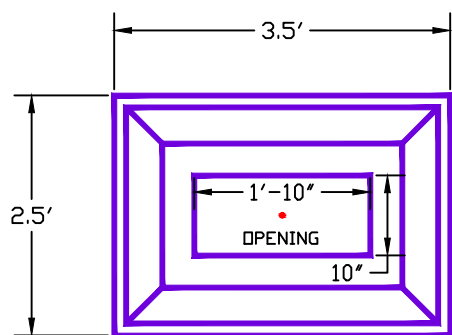


PLAN VIEW

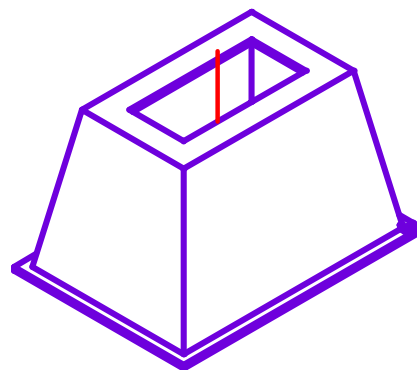
GROUND ROD TO BE
INSTALLED IN CENTER
OF OPENING

3 PHASE SWITCH CABINET BASE (GROUND SLEEVE) SHALL BE PROVIDED BY IDAHO FALLS POWER BUT SHALL BE INSTALLED TO REQUIRED GRADE BY THE CONTRACTOR/DEVELOPER. THE PAD LOCATION SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY PRIOR TO PLACEMENT. THE TOP OF THE BASE SHALL BE INSTALLED A MINIMUM OF 6" ABOVE FINISHED GRADE. POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM THE CABINET BASE.

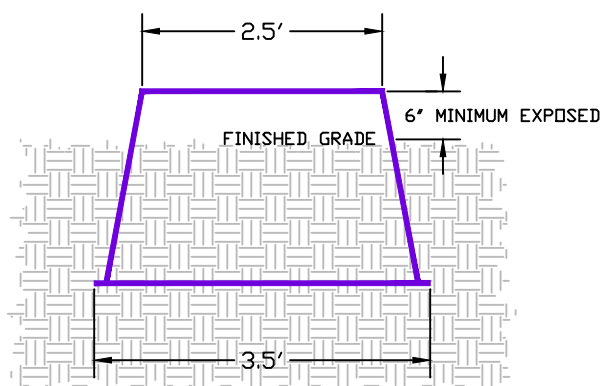
SINGLE PHASE SWITCH CABINET BASE (GROUND SLEEVE)



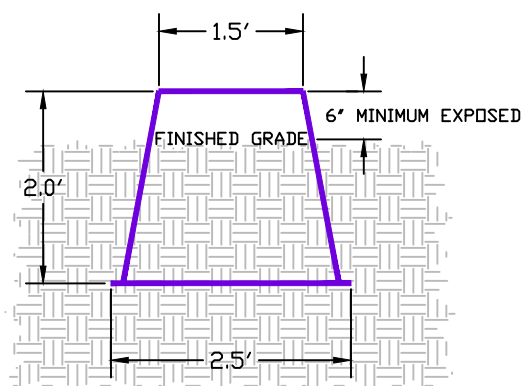
PLAN VIEW



- GROUND ROD TO BE INSTALLED IN CENTER OF OPENING



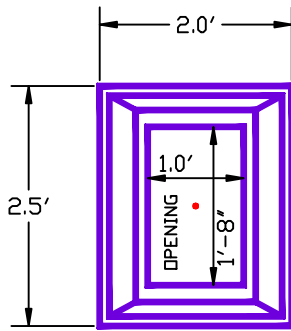
FRONT VIEW



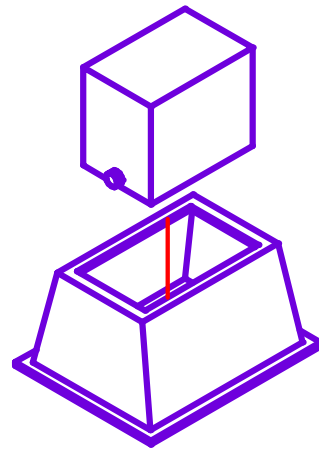
END VIEW

SINGLE PHASE SWITCH CABINET BASE (GROUND SLEEVE) SHALL BE PROVIDED BY IDAHO FALLS POWER BUT SHALL BE INSTALLED TO REQUIRED GRADE BY THE CONTRACTOR/DEVELOPER. THE PAD LOCATION SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY PRIOR TO PLACEMENT. THE TOP OF THE BASE SHALL BE INSTALLED A MINIMUM OF 6" ABOVE FINISHED GRADE. POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM THE CABINET BASE. ANY DEVIATION IN THE FINAL GRADE OR LOCATION OF THE CABINET BASE MUST BE APPROVED BY IDAHO FALLS POWER.

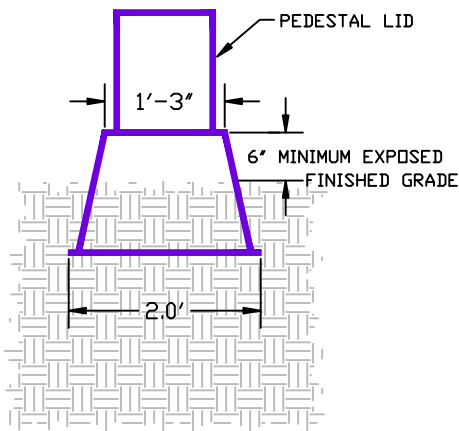
SECONDARY SERVICE PEDESTAL BASE (GROUND SLEEVE)



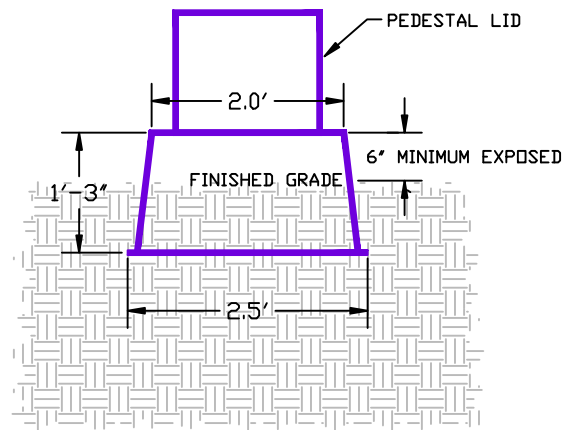
PLAN VIEW



- GROUND ROD TO BE INSTALLED IN CENTER OF OPENING

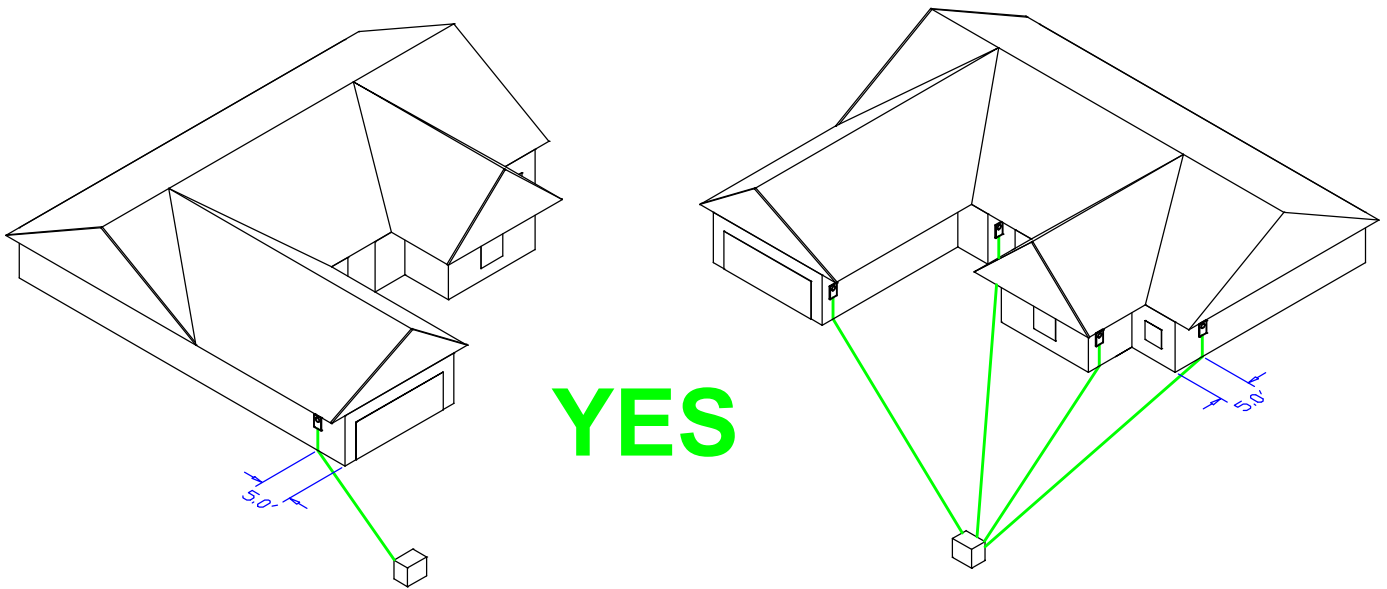


FRONT VIEW

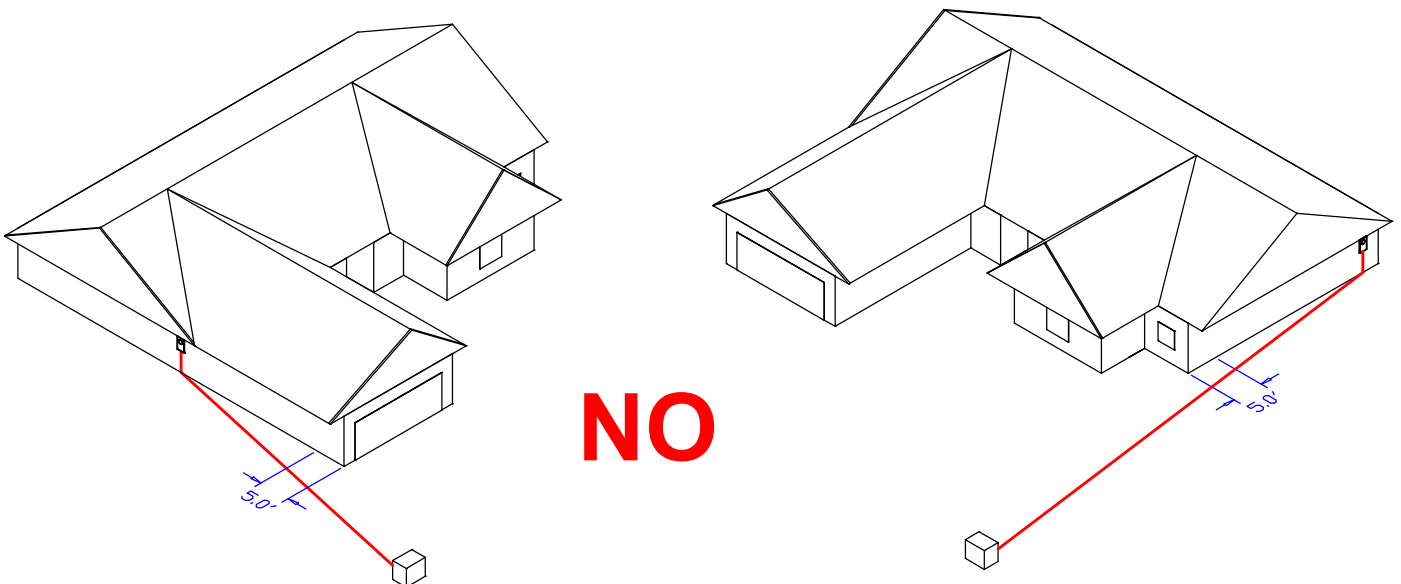


SIDE VIEW

SECONDARY SERVICE PEDESTAL BASE (GROUND SLEEVE) SHALL BE PROVIDED BY IDAHO FALLS POWER BUT SHALL BE INSTALLED TO REQUIRED GRADE BY THE CONTRACTOR/DEVELOPER. THE TOP OF THE BASE SHALL BE INSTALLED A MINIMUM OF 6" ABOVE FINISHED GRADE. POSITIVE DRAINAGE MUST BE PROVIDED AWAY FROM THE PEDESTAL BASE.

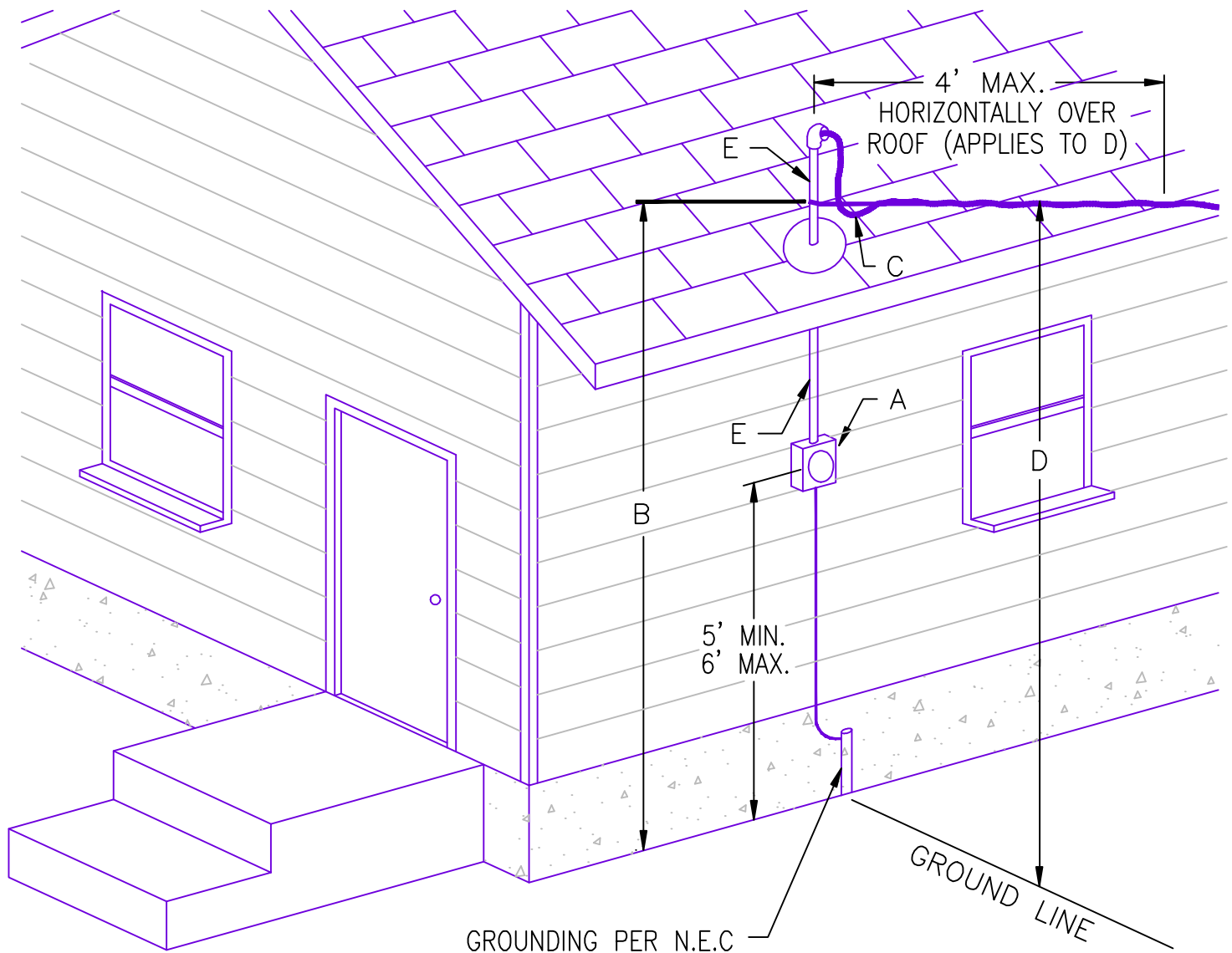
TYPICAL RESIDENTIAL UNDERGROUND SERVICE

Conduit will have a maximum of 360° of bends per run. Idaho Falls Power will inspect all conduit prior to backfilling. Meter must be front yard accessible.



NOT PERMITTED

TYPICAL RESIDENTIAL OVERHEAD SERVICE

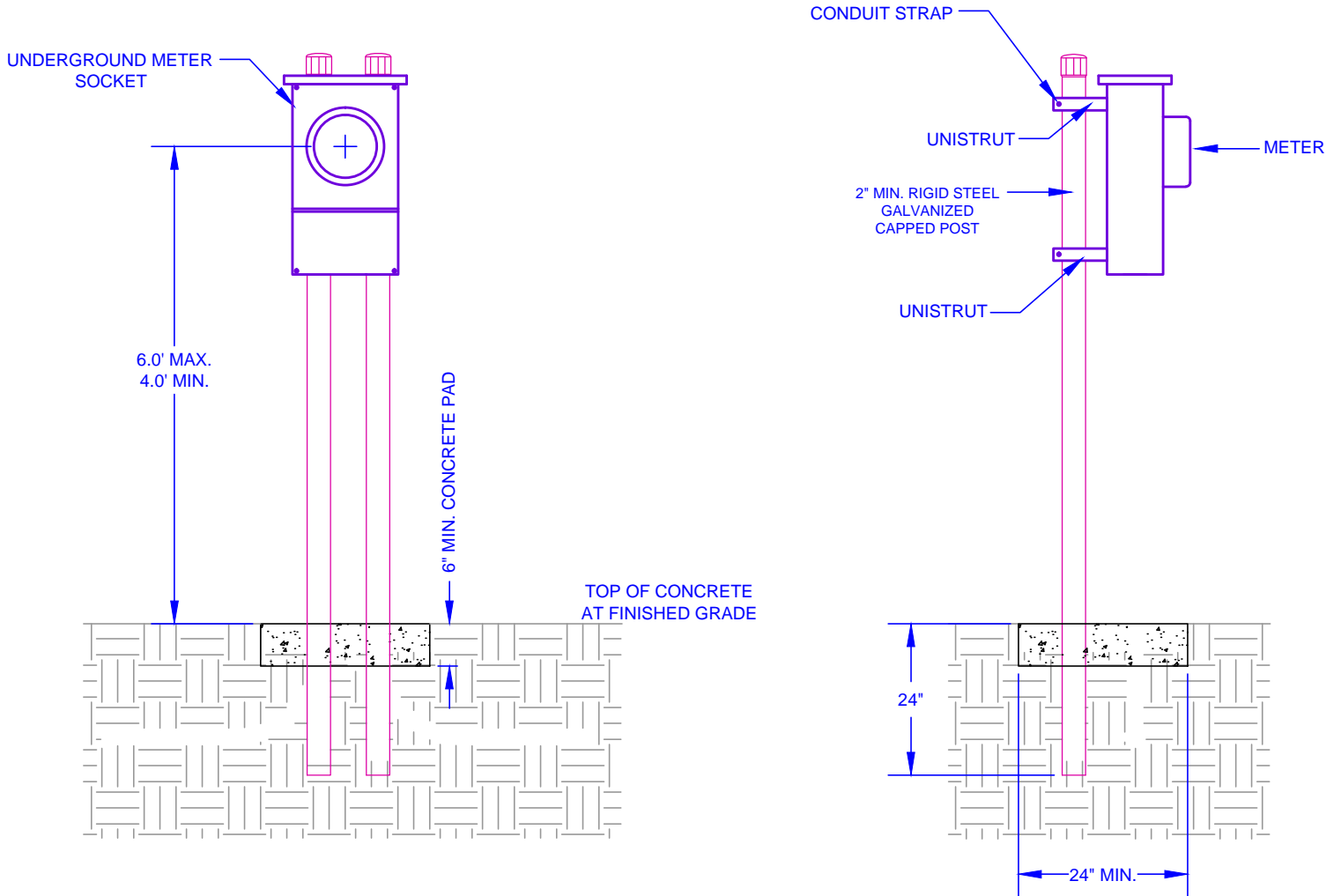


- A. Meter location must be approved by Utility prior to installation.
- B. Point of attachment 12' minimum above finished grade, or from any platform or projection from which conductors may be reached.
- C. The cable and drip loop must be at least 18" above roof.
- D. 12' above finished grade – 14' over residential driveways – 16' over streets. More if practical.

E. Service mast needs to be sized so as to support service conductors with a minimum size of 2" rigid galvanized steel (RGS) or IMC conduit.

NOTE: Clearances B, C, and D are based on the current National Electrical Safety Code and are applicable where the voltage is limited to 150 volts to ground.

FREE STANDING CT METER (POST MOUNTED – 1 ϕ OR 3 ϕ)



CUSTOMER WILL FURNISH AND INSTALL:

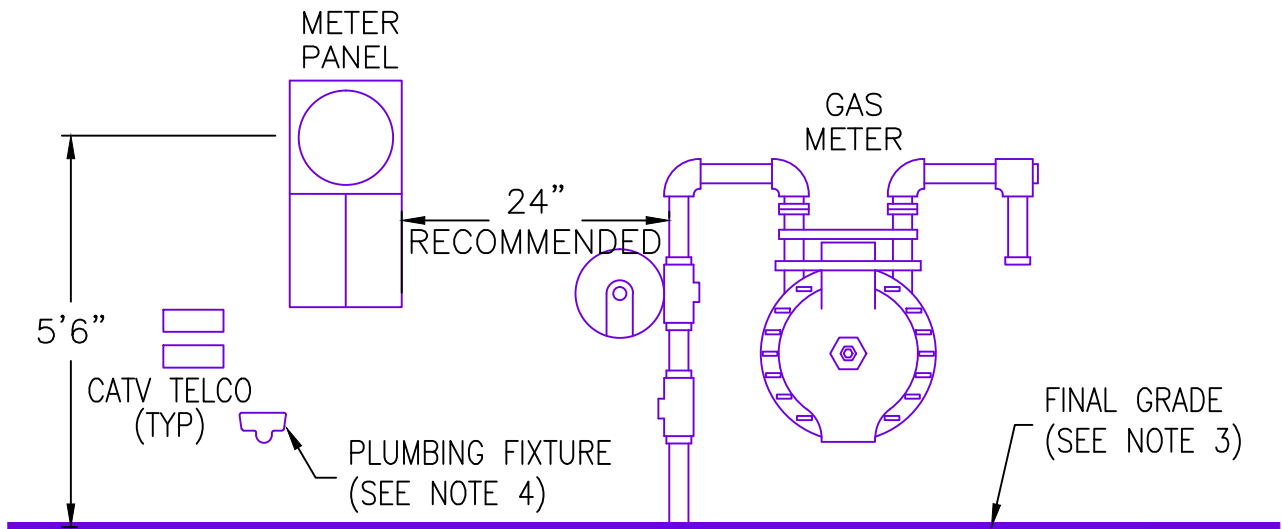
METER SOCKET ENCLOSURE (UNDERGROUND TYPE)
 PEDESTAL HARDWARE
 CONDUIT
 RIGHT OF WAY
 TRENCH EXCAVATION AND BACKFILL
 GROUNDING PER NEC
 CONCRETE PAD, 24" X 24" X 6" DEEP

ADDITIONAL REQUIREMENTS:

1. WRITTEN APPROVAL FROM THE POWER COMPANY MUST BE OBTAINED BEFORE INSTALLING A FREE STANDING PEDESTAL.
2. THE METER PEDESTAL IS TYPICALLY LOCATED ADJACENT TO, OR IN, THE EASEMENT CLOSE TO THE DRIVEWAY. THE EXACT LOCATION OF THE METER MUST BE SPECIFIED AND/OR APPROVED BY THE POWER COMPANY.
3. REFER TO SERVICE POLICY FOR UNDERGROUND AND CONDUIT REQUIREMENTS.
4. SERVICE CONDUIT MUST BE PLUMB IN ALL DIRECTIONS.

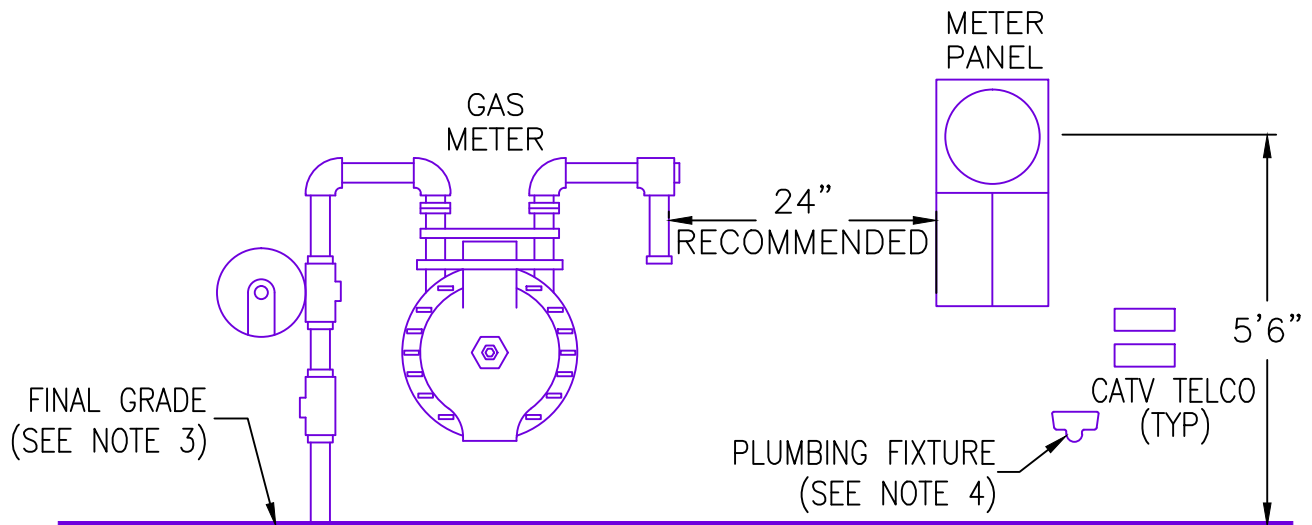
ELECTRICAL SERVICE REQUIREMENTS

SEPARATION OF METER ASSEMBLIES FOR ELECTRIC AND GAS SERVICES



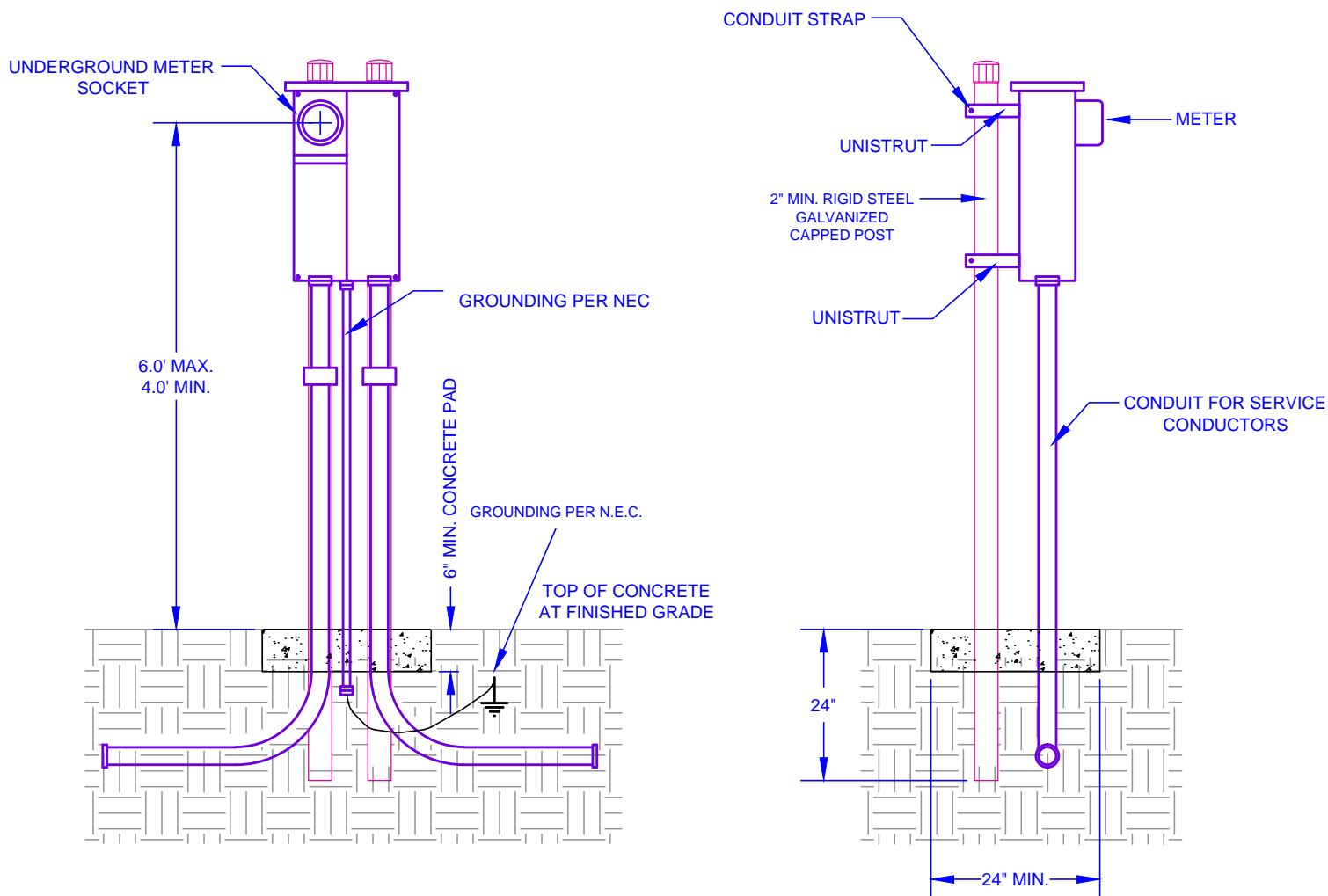
NOTES:

1. Size and dimensions of panels will vary. Drawings are not to scale.
2. This drawing pertains to both overhead and underground electric service applications.
3. Maintain 3' of clear, level and unobstructed work space in front of both meters.
4. Plumbing fixtures which extend more than 6" out from wall surface must be located a safe distance from the outside edge of the meter panel.



FREE STANDING METER PANEL

(POST MOUNTED – 1 ϕ)
(RESIDENTIAL UP TO 200 AMPS ONLY)



CUSTOMER WILL FURNISH AND INSTALL:

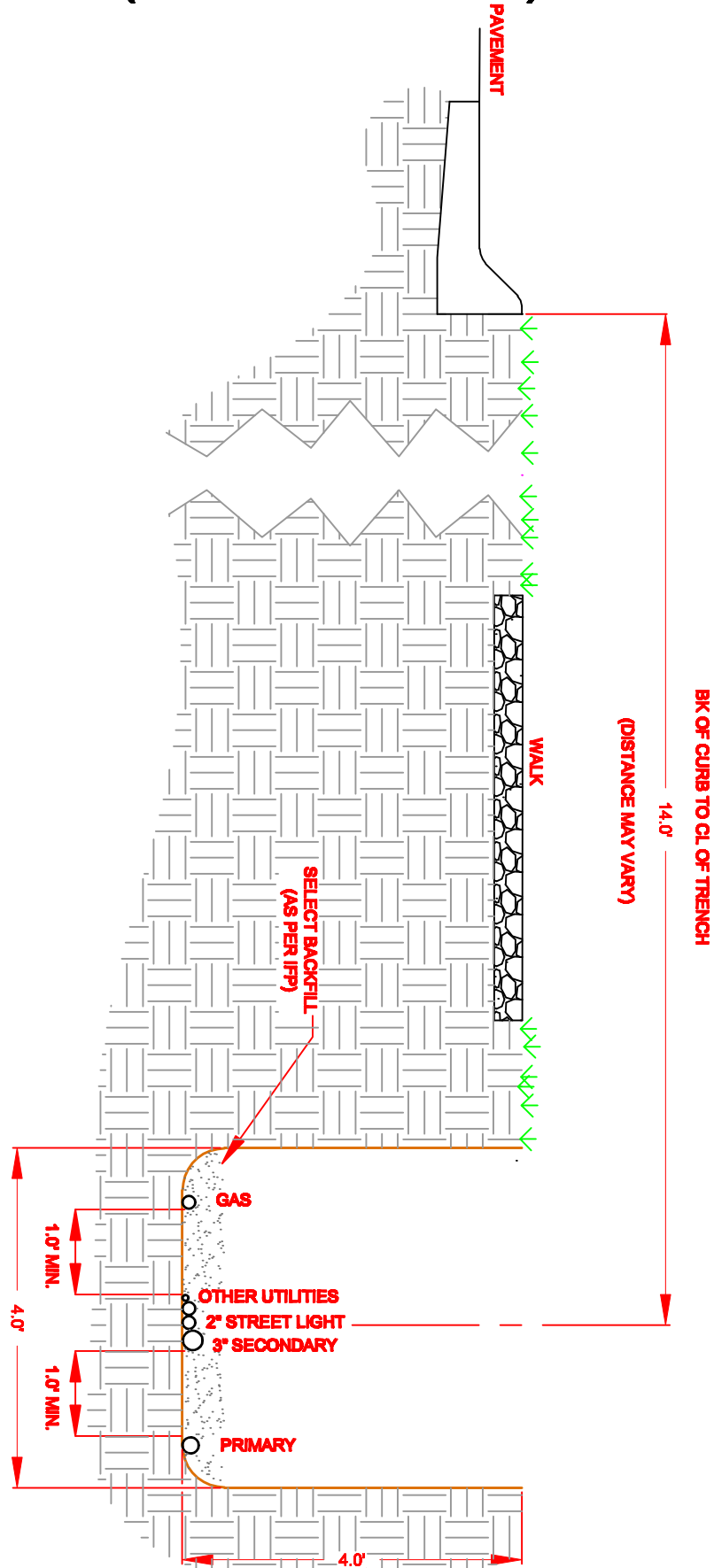
METER SOCKET ENCLOSURE (UNDERGROUND TYPE)
 PEDESTAL HARDWARE
 CONDUIT
 RIGHT OF WAY
 TRENCH EXCAVATION AND BACKFILL
 GROUNDING PER NEC
 CONCRETE PAD, 24" X 24" X 6" DEEP

ADDITIONAL REQUIREMENTS:

1. WRITTEN APPROVAL FROM THE POWER COMPANY MUST BE OBTAINED BEFORE INSTALLING A FREE STANDING PEDESTAL.
2. THE METER PEDESTAL IS TYPICALLY LOCATED ADJACENT TO, OR IN, THE EASEMENT CLOSE TO THE DRIVEWAY. THE EXACT LOCATION OF THE METER MUST BE SPECIFIED AND/OR APPROVED BY THE POWER COMPANY.
3. REFER TO SERVICE POLICY FOR UNDERGROUND AND CONDUIT REQUIREMENTS.
4. SERVICE CONDUIT MUST BE PLUMB IN ALL DIRECTIONS.

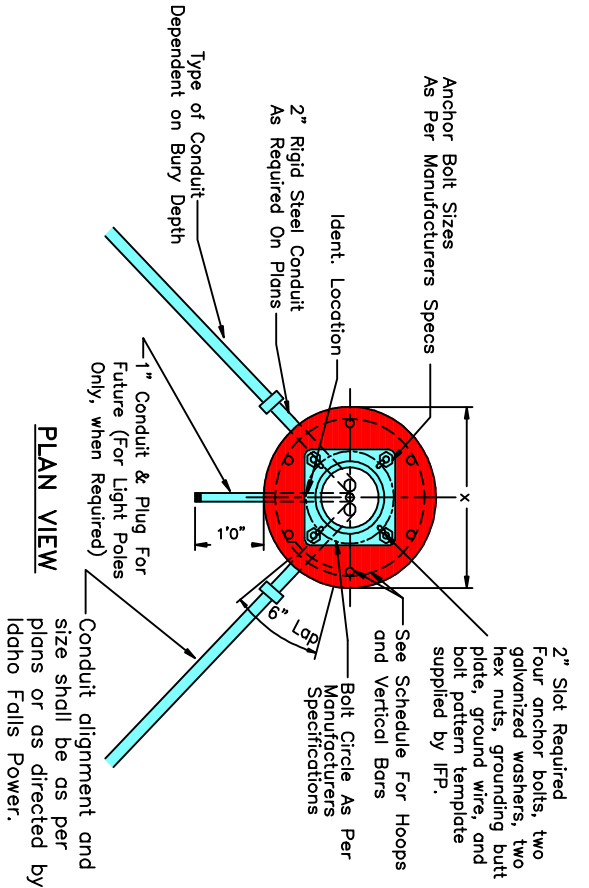
JOINT UTILITY TRENCH DETAIL (NOT TYPICAL)

CONTACT I.F.P. FOR TRENCH SPECIFICS



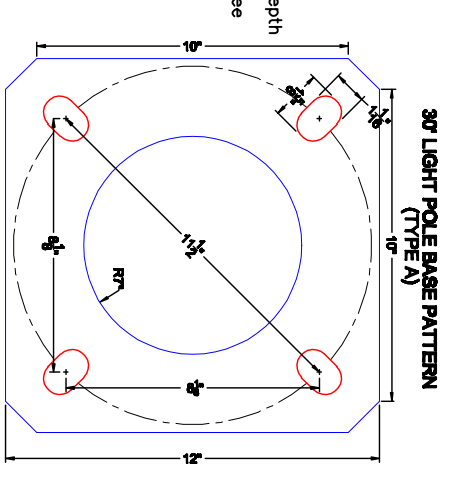
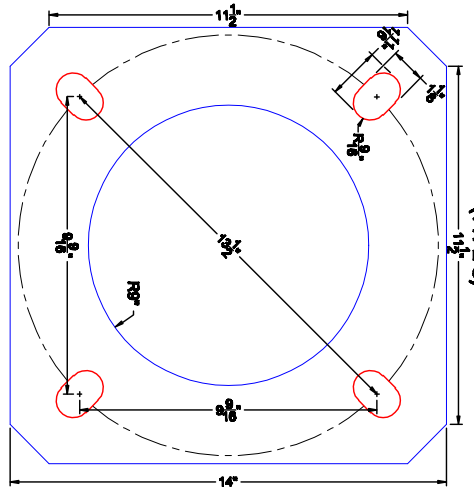
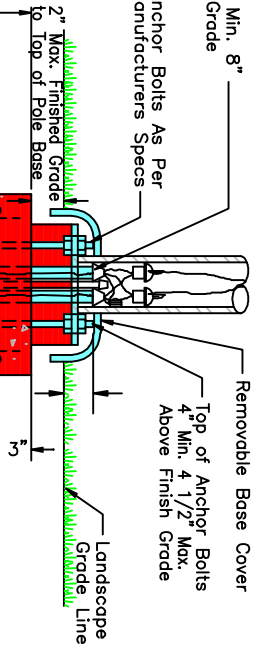
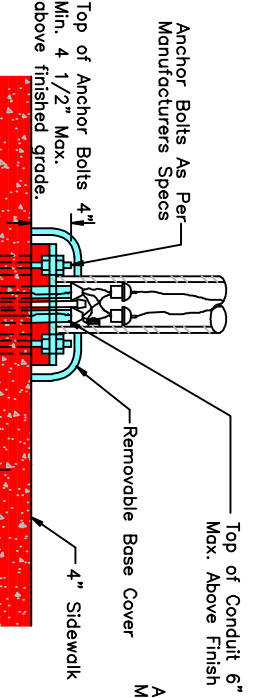
SCALE: 1" = 2'
1/31/08

LIGHT POLE FOUNDATION DETAIL



ALL BASES SHALL BE INSPECTED AND APPROVED BY IFP PRIOR TO CONCRETE PLACEMENT

POLE FOUNDATION SCHEDULE						
STRUCTURE TYPE	FOUNDATION TYPE	X	Y	HOOPS NO. SIZE LIN. FT.	VERTICAL RODS NO. SIZE LIN. FT.	CU. YDS. CONCRETE
30' Light Pole	A	2'-0"	5'-0"	4 #4 23'-0"	6 #4 28'-0"	0.6
Pedestrian Signal Pole	C	3'-0"	8'-0"	5 #4 44'-2"	8 #6 61'-4"	2.1

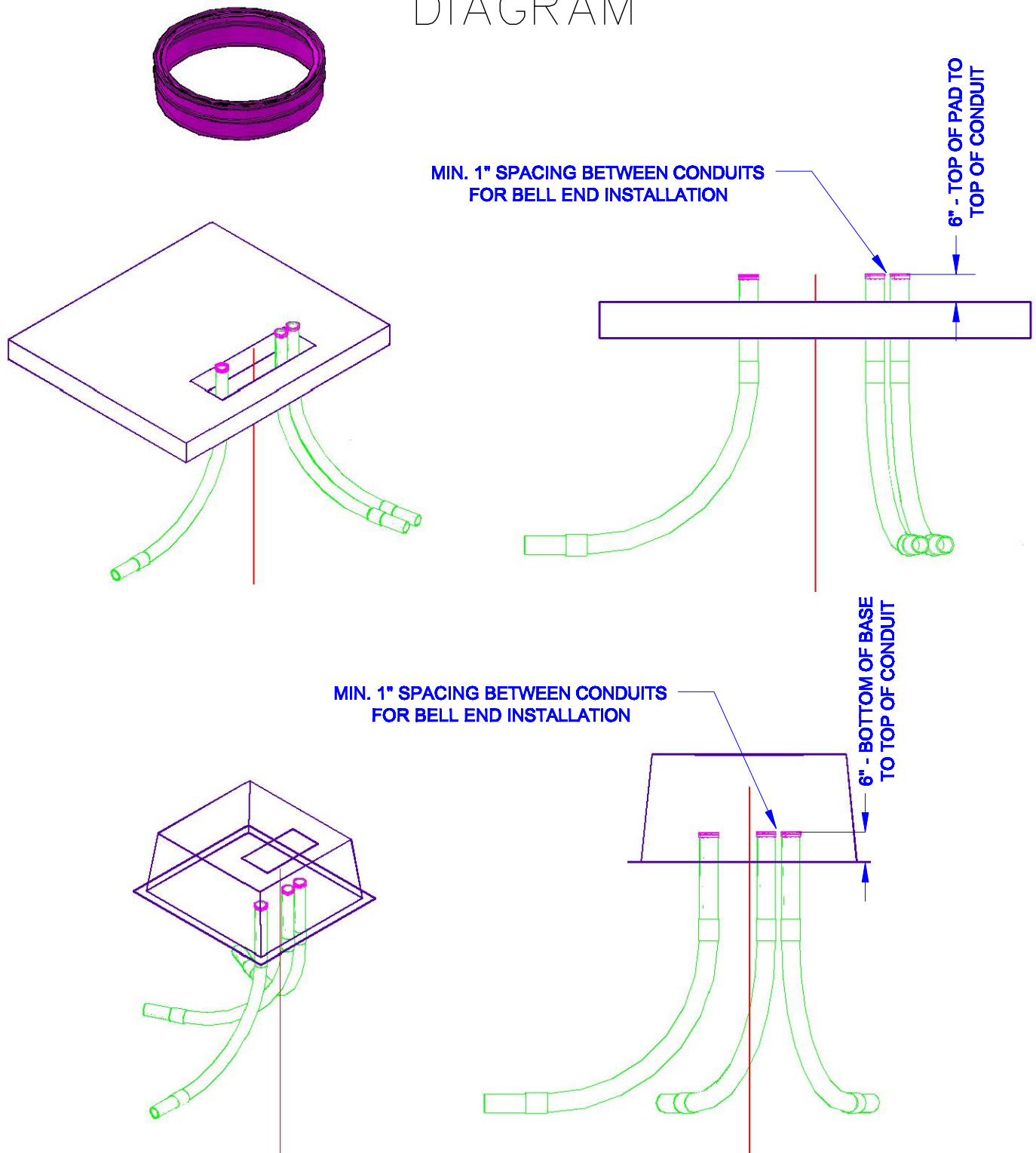


SIDE VIEW
POLE FOUNDATION BASE DETAIL
(SIDEWALK AREAS)

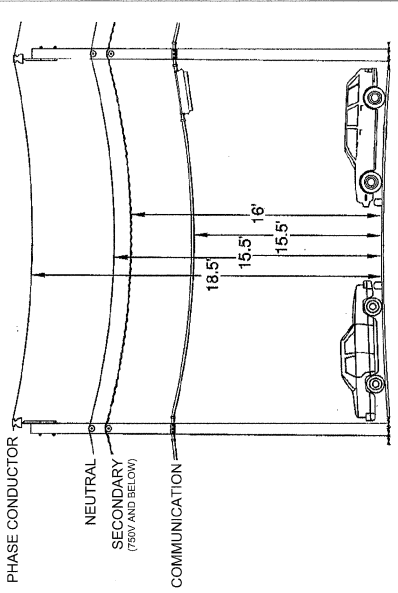
SIDE VIEW
POLE FOUNDATION BASE DETAIL
(LANDSCAPED AREAS)

NOT TO SCALE
BASED ON CITY STANDARD
DRAWING 400-11

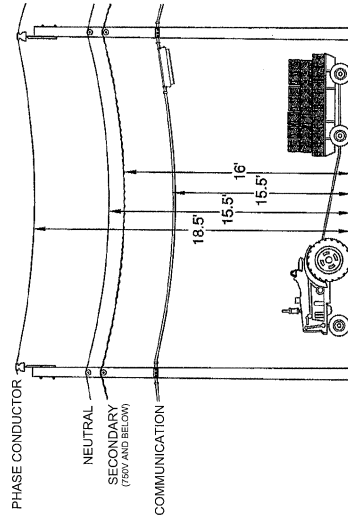
TYPICAL BELL END INSTALLATION DIAGRAM



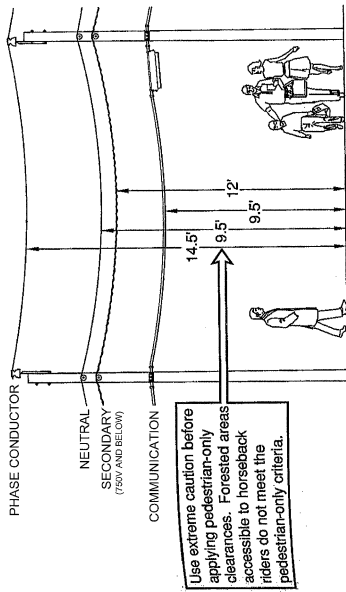
ALL CONDUIT (PRIMARY AND SECONDARY) MUST BE CUT TO 6" FROM BOTTOM OF BASE OR TOP OF CONCRETE PAD. BELL ENDS MUST BE SUPPLIED AND INSTALLED BY DEVELOPER/CONTRACTOR. ALL CONDUITS MUST BE CAPPED AND LABELED TO IDENTIFY ROUTING. BELL END INSTALLATION DETAIL TO BE USED FOR ALL ELECTRICAL FACILITIES INCLUDING SECONDARY PEDESTALS, SWITCH CABINETS, TRANSFORMERS, AND LIGHT POLE BASES.



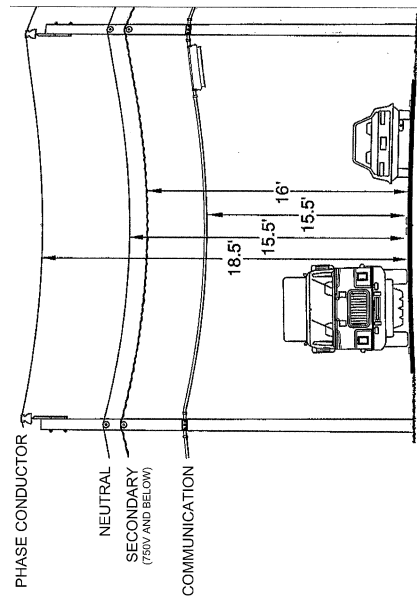
DRIVEWAYS, PARKING LOTS, AND ALLEYS



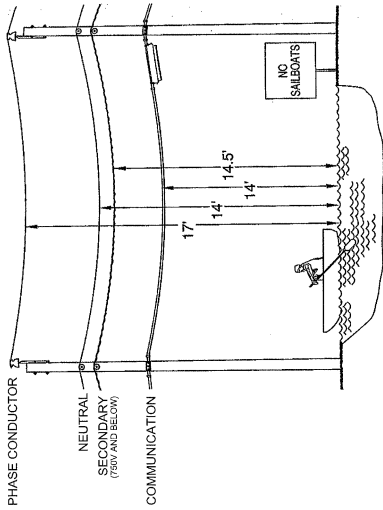
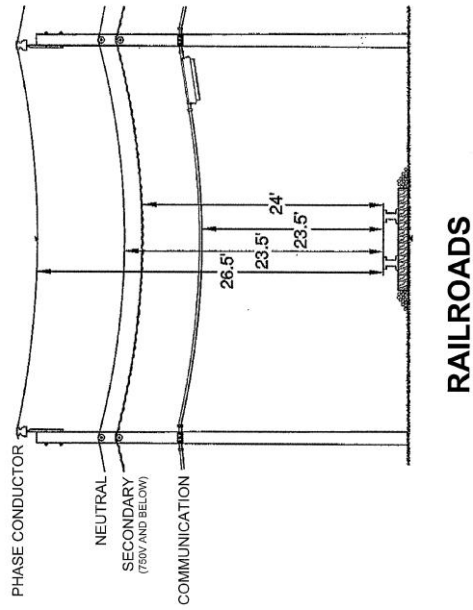
LAND TRAVERSED BY VEHICLES, SUCH AS CULTIVATED, GRAZING, FOREST, ORCHARD, ETC.



SPACES AND WAYS SUBJECT TO PEDESTRIANS OR RESTRICTED TRAFFIC ONLY



ROADS, STREETS, AND OTHER AREAS SUBJECT TO TRAFFIC



**WATER AREAS NOT SUITABLE FOR SAIL BOATING
OR WHERE SAILBOATING IS PROHIBITED**

**RULES OF THE NESC AND
THE NATIONAL ELECTRIC
CODE (NEC) OVERLAP AT
THE SERVICE POINT**

