Electric System

Service Rules

City of Mascoutah, Illinois

CITY OF MASCOUTAH, ILLINOIS

ELECTRIC SYSTEM

SERVICE RULES

FOREWORD

This publication has been prepared by the City of Mascoutah (City), as a reference and guide to its regulations, practices, and general requirements for the connection of electric service facilities and utilization equipment. It is provided for the use of customers, contractors, consultants and other persons engaged in the planning or construction of buildings and the installation or replacement of equipment connected to and served by the City electrical system.

This publication is not intended to be a comprehensive manual for all wiring details and other lawful requirements. It is, rather, prepared as a guide and supplement to the National Electric Code, the National Electrical Safety Code, and City.

The publication of these Electric System Service Rules shall not be construed as relieving the customer, or his or her contractor, from the responsibility of properly installing wiring in accordance with the rules and regulations of any authority having jurisdiction. The City shall not be deemed under any circumstances to have accepted any responsibility for the condition of the customer's wiring and equipment.

Continuing developments in the utility industry periodically bring about changes and improvements. In general, the result of these changes and improvements has been to provide better and more dependable electric service. Accordingly, the City reserves the right to make changes and modifications to these Electric System Service Rules when, in its judgement, such changes are necessary and in the best interest of its customers and the City.

The comfort and convenience of electric services is best obtained by providing a safe and adequate wiring installation. To insure sufficient electrical capacity to enjoy future appliances and equipment, electric wiring systems installed today should be adequately planned to meet the needs of tomorrow.

Questions relating to the design, layout, power quality, and availability of service should be directed to the City.

DECLARATION OF LIMITATIONS

Where the City determines it is in the best interest of public safety, the customer, or the efficient operation of the electric system, the City hereby reserves the right to make certain determinations that may be contrary to these Electric System Service Rules.

Nothing in these Service Rules shall be construed to undermine reasonable engineering and operational principles and practices.

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SECTION 1. DEFINITIONS

1.1. Words and phrases

1.1.1. Auxiliary Generation Equipment: Customer-owned Generation Equipment that is not connected to the City grid.

1.1.2. Character of Service: The voltage, frequency, capacity and number of phases supplied or available.

1.1.3. City Electric Department: Responsible for the transmission and distribution of Energy to the Customer.

1.1.4. City Electric Department Supervisor: The person responsible for the design, layout, engineering operation and maintenance of the electric distribution system.

1.1.5. City Utility Billing Department: The department responsible for utility billing.

1.1.6. Customer: Any person using electrical energy supplied by the City by means of connection to its electric distribution system. Term used to describe the responsible party for a residential or commercial customer, including the resident, owner, sub divider, builder, and/or developer.

1.1.7. Customer-owned Generation Equipment: Any equipment that generates Energy that is owned, operated, and maintained by the Customer.

1.1.8. Electrical Contractor: Any person, firm or corporation engaged in the business of installing, maintaining, or altering, by contract or otherwise, electrical equipment for the use of electric energy supplied for light, heat, or power in any building or structure which is, or will be, connected with the City's electric distribution system.

1.1.9. Electric Distribution System: The wires, cables, poles, meters, and apparatus forming a part of the system of or by which electric energy is transmitted, distributed, and metered by the City.

1.1.10. Electrical Installation: The installation of electric wiring or equipment in any premises for the use of electric energy distributed by the City.

1.1.11. Energy: Electricity used for lighting, heating, or power purposes.

1.1.12. Facilities: The wires, cables, poles, meters and apparatus forming a part of the system of or by which electric energy is transmitted and distributed by the City.

1.1.13. Meter Socket and Trough: The mounting device consisting of jaws, connectors, and enclosure for socket-type meters. The mounting device may be either a single socket or a trough. The trough and assembled

enclosure may be extendible to accommodate more than one mounting unit. This equipment is approved for installation by the City and is owned and maintained by the Customer.

1.1.14. National Electric Code (NEC): The latest revision of the National Electric Code of the National Fire Protection Association (NFPA 70) as approved by the American National Standards Institute and adopted by the City.

1.1.15. National Electrical Safety Code: The latest revision of the National Electrical Safety Code by the Institute of Electrical and Electronics, Inc. and approved by the American National Standards Institute.

1.1.16. Nominal Voltage: A specific voltage value assigned to a circuit or system for the purpose of convenient designation.

1.1.17. Parallel Generation Equipment: Customer-owned Generation Equipment that is connected to the City grid.

1.1.18. Permanent Service: The installation of either overhead or underground service to an established electric Customer at the Service Point.

1.1.19. Person: Any person, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or its legal representative, agent or assigns.

1.1.20. Power Factor: The relationship (ratio) between the active power and the volt amperes in any particular alternating current circuit.

1.1.21. Premises: A building, structure, or enclosure to which energy is transmitted from the electric distribution system by the City.

1.1.22. Primary Voltage: The voltage on the supply side of a transformer.

1.1.23. Secondary Voltage: The voltage on the load side of a transformer.

1.1.24. Service: The conductors for delivery electric energy from the electric distribution system to the Service Entrance Equipment of the Premises served.

1.1.25. Service Entrance Equipment: The equipment used for metering and disconnection at the Service Location.

1.1.26. Service Location: The physical location of the Service Entrance Equipment.

1.1.27. Service Point: Point of connection of the City Service to the Customer's equipment, and the limit of the City's responsibility.

1.1.28. Structure: An object which is constructed or erected requiring permanent location on land.

1.1.29. Temporary Service: The installation of a service of a temporary nature, usually for construction purposes, for a period of time not to exceed one (1) year from the date on which the temporary service is installed unless construction schedule warrants extended period of time.

1.1.30. Building Inspection/Permits: The organization in the City which incorporates all aspects of commercial, residential, and capital development projects. The Public Works Director is responsible for the review and issuance of permits, inspections, and code compliance.

1.1.31. Utilization Equipment: Any Customer-owned equipment, apparatus, appliance or device located on a Customer's Premises or used by a Customer which requires Energy.

1.2. Words and phrases not specifically defined above shall be defined according to a standard dictionary, the National Electrical Code, the National Electrical Safety Code or the City Building Code, as applicable.

SECTION 2. ACCEPTANCE OF SERVICE RULES

2.1. Any person making application for, connecting to, accepting, or using City electrical service by connecting an end user to the City's electrical distribution or transmission facilities shall thereby agree to conform to and abide by all the City's ordinances, rules, and regulations for the operation of electrical system, including electric wiring, appliances, equipment standards, permits, and inspections.

SECTION 3. ACCESS TO ELECTRICAL UTILITY FACILITIES

3.1. Any properly authorized agent of the City shall have free access to the Customer's premises at all reasonable hours for the purpose of reading, examining, inspecting, repairing, replacing or removing City meters or other equipment or property.

3.2. No Customer shall build a deck, porch, patio, addition, or plant trees/shrubs, etc. over, around, or otherwise block access to existing City facilities; the Customer shall maintain an 18" side clearance from the underground Service conductors from the City facilities to the meter. See Section 22 for meter clearance and access requirements.

3.2.1. The City may relocate its facilities to accommodate a Customer's need where:

3.2.1.1. The Customer makes a written request for the relocation of City facilities and agrees to pay all costs associated with such relocation; *and*

3.2.1.2. The City determines that it is technically feasible to relocate its facilities to accommodate the Customer's request.

3.2.2. Any Customer blocking access to any City facilities shall be given written notice of such violation and shall be allowed fifteen (15) days within which to provide for appropriate corrective action approved by the City.

3.2.3. Any violation of this Section not corrected within the specified time may be corrected by the City, and the customer shall be billed for all costs associated with such corrective action. Violations that the City is not able to correct shall be turned over the City Manager's Office.

3.3. To safely operate the electrical system, the City hereby reserves the right to remove any trees, bushes, fences, or other obstructions located on a Customer's property which may block access to existing City facilities. City is not responsible for replacement or reconstruction of any obstructions removed by the City.

3.4. Fences and other obstructions shall not be placed to restrict reading and maintenance of the City's meters. Where meters are located beyond locked doors or padlocked gates, the customer's locking device shall have a keyway for dual key capacity that accommodates a City lock. Variations must have written authorization from the City.

SECTION 4. APPLICATION FOR SERVICE

4.1. Application for a new or modified electric service connection or the connection, or reconnection, of an existing service shall be made to the City, using the "Application for Service" form.

4.2. All such applications shall contain a description of the Premises to be served, including the electrical load(s) and locations of any existing electrical facilities on the property. For residential applications for new electric service, the Application for NEW Residential Electric Service shall be completed.

4.3. Where new electrical installations, additions or alterations are contemplated, inquiry should be made in advance of design or purchase of equipment relative to available voltage, point of delivery and extension of the City's Distribution System.

4.4. It is the Customer's responsibility to install their service entrance equipment and meter socket at the place indicated by the City's representative. Failure to do so may result in unnecessary costs to the Customer for service relocations and possible delays in providing service.

SECTION 5. DISCONTINUANCE OF SERVICE

5.1. The City may refuse to provide or may discontinue service for violation of any of its service policies; for failure to pay charges for electric service when delinquent (to the extent of state law); for theft or illegal diversion of energy; for situations that constitute a safety hazard or for code violations.

5.2. The discontinuance of service for any cause does not release the Customer from the obligation to pay for energy received or for charges otherwise specified.

5.3. A service that has been discontinued due to failure to pay, theft, illegal diversion, unsafe conditions, or damage to City metering equipment shall be upgraded to current codes by the Customer before service is reconnected.

5.4. The City reserves the right and authority to vary from policy when failure to pay charges for electric service when delinquent; for violation of rate schedule or contract provisions; for theft or illegal diversion of energy; for situations that constitute a safety hazard or for code violations. The City may open and tag customer disconnects in these situations. Violating such disconnecting or tagging may result in permanently disconnecting the service and will compound customer costs and legal actions respective to the situation.

5.5. The City may terminate any Customer's service if the City determines the Customer's equipment is causing or may cause damage to the City's equipment or facilities, or that the Customer's continued connection to the City's system may cause power quality problems for any other City customer.

SECTION 6. BALANCING LOADS

6.1. All electric loads within a service shall be balanced.

6.2. Where three-phase services are provided, single-phase loads shall be evenly divided between each of the three phases.

6.3. Where single-phase services are provided, the load shall be evenly divided between the energized conductors.

SECTION 7. CHARACTER OF SERVICE

7.1. Normal Service

7.1.1. All service supplied by the City shall be alternating current at a nominal voltage and a frequency of approximately 60 Hz. The City system design for normal operation includes Total Harmonic Distortion (THD) limited at 5% for the fundamental frequency and voltage of the application at the Service Point as defined by the City. Individual voltage distortion at a Service Point shall not be greater than 3%.

7.1.2. The City hereby disclaims any liability for and does not guarantee to maintain the accuracy of the nominal values under all conditions.

7.1.3. Nominal values will, however, for practical purposes, normally be found to be within reasonable limits.

7.2. Standard Classes of Service

7.2.1. All Customers shall contact the City before designing electrical service. Not all voltage characteristics are available in all service areas.

7.2.2. The City will provide the following secondary service where the specified voltages are available either from existing facilities or from facilities planned for the requested location:

7.2.2.1. Nominal Class of Service

Phases	Wires	Voltage	Use
1	3	120/240	Lighting & Appliances
3	4	120/208	Light & Power
3	4	277/480	Light & Power
3	3	120/240	Light & Power

7.2.2.2. There are areas within the City's service area where nonstandard secondary networks exist. New services will not be supplied from nonstandard secondary networks.

7.2.2.3. Primary voltages are also available for services to large Customers with loads in excess of 500 kWD. Customers shall consult with the City for the availability and conditions of such services. Primary services shall not be delivered at a voltage level above 13.80 kV.

7.3. Service Limitations

7.3.1. The City shall not provide more than one standard class of service to any single structure.

7.3.2. Three phase service shall not be provided for loads less than 60 kWD.

7.3.3. Customers are hereby advised that since the class of service supplied depends on the location and character of the load, all Customers shall obtain the specific characteristics of available service(s) before proceeding with the design, purchase and installation of any equipment and wiring facilities.

7.3.4. Information concerning the specific characteristics of available service(s) may be obtained from the City Electric Department Superintendent.

7.3.5. Any exceptions to these limitations shall be pre-approved by the City Electric Department Superintendent.

SECTION 8. CUSTOMER-OWNED GENERATION

8.1. Auxiliary Generation

8.1.1. The Customer shall not use any other electric power or lighting service, including standby generators, in conjunction with the City's service without the written consent of the City. Such written consent may be granted at the sole discretion of the City if the Customer has critical operations where standby service is desirable.

8.1.2. All Customer-owned generation equipment, including traditional combustion, photovoltaic (PV), wind, or any alternate means of electrical energy generation must meet the appropriate national electrical standards

(NEC, NESC, etc.), local codes (building, fire, etc.), and all applicable permits must be obtained by the Customer.

8.1.3. Where the Customer provides for an auxiliary power supply, an adequately-sized, “double-throw disconnecting device” must be provided to open all ungrounded conductors from the normal supply before connection is made to the emergency supply in accordance with the requirements of the latest edition of the NEC. This disconnect, external to the building structure, shall be installed per the latest City standards, and shall be appropriately labeled as to its function.

8.2. Parallel Generation

8.2.1. All auxiliary generation equipment that will be interconnected with the City grid will require a separate written agreement between the Customer and the City. The equipment must meet all standards for auxiliary equipment, as well as any applicable City standards. Requirements for the operation of parallel generation are included in the City Interconnection Policy.

8.2.2. When the City determines that the Customer has parallel generation equipment that requires a separate and dedicated distribution feeder, the engineering, installation, coordination, and protection of the said feeder will be performed at the Customer’s expense.

SECTION 9. COMMERCIAL AND INDUSTRIAL SERVICE

9.1. The Customer shall consult with the City before selecting any service location.

9.2. In accordance with all Municipal Codes, the City shall install facilities adequate to supply and meter a normal load equal to the maximum fifteen (15) minute demand of the Customer. Such facilities shall be installed only at a single point of delivery.

9.3. To avoid expensive alterations later, the service entrance should be sized for future growth as well as for present requirements. It is the Customer’s responsibility to install service equipment in accordance with NEC provisions as a minimum. An important provision of the current edition of the NEC recommends that “Service equipment shall be suitable for the short-circuit current available at its supply terminals.” In order for architects, engineers and wiring contractors to select proper service equipment to meet NEC guidelines, the following information will apply to new installations.

9.3.1. Available fault currents will vary with each installation. Inquiry for a particular location should be directed to the City Electric Department Superintendent.

9.4. A standard underground commercial or industrial installation shall consist of a padmount transformer or a utility point of service connection, which shall be located between five feet (5’) and fifty feet (50’) from the service entrance and be accessible by truck. Variation must have written authorization from the City.

9.5. If the metering cabinet, meter and main service disconnect are freestanding, they must be located no more than fifteen feet (15') from the transformer. Variations must have written authorization from the City.

9.6. The Customer or property owner shall be solely responsible for the ownership, installation, and maintenance of a concrete transformer pad and/or vault, which shall be constructed and maintained in accordance with the City's specifications. No structures, fences, or trees/shrubs shall be placed within ten feet (10') of the front and five feet (5') from the sides with a vertical clearance of thirty feet (30') from the top of final grade at the transformer location. Transformers cannot be enclosed.

9.7. The Customer or property owner shall install concrete filled, eight inch (8") steel protection posts to protect the service transformer and the metering installation where the City determines that it is required for safety. Upon the Customer's written request, the City may approve other forms of protection.

9.8. For overhead service, the Customer or property owner shall install, maintain, and replace as necessary the overhead meter socket, entrance conduit, entrance wire, weatherhead, point of attachment, and applicable equipment in accordance with the City and NEC standards.

9.9. The City will install, maintain, and replace as necessary, all permanent commercial overhead services from the City's power pole to the Customer's point of attachment at the drip loop of the service.

9.9.1. The City shall make the final connection between the utility point of service after City inspection and approval. Customer to provide adequate length of service conductors as determined by the City.

9.10. The City shall approve the size and number of service conductors proposed to be connected to any City facility for the purpose of the availability of secondary connections.

9.11. The Customer or property owner shall be solely responsible for the ownership, installation, maintenance, and replacement of Service Entrance Equipment in accordance with the City.

9.11.1. All electric meters shall be mounted on the pad mounted transformer or the outside wall of the structure.

9.11.2. Every electric meter shall be installed so that the center of the meter is between forty-eight inches (48") and sixty inches (60") above the final grade, except as otherwise designated.

9.11.3. Every electric meter shall be located so that there will be no obstructions for meter reading, meter testing, or other maintenance. Under no circumstances shall metering equipment be placed within a locked area.

SECTION 10. COMMERCIAL AND INDUSTRIAL INSTALLATIONS - GENERAL DESIGN GUIDELINES

10.1. The City shall provide only one point of electrical service for each structural unit. For multi-unit commercial/industrial sites, each address is considered a structural unit.

10.2. The City shall not provide more than one standard class of service to any single structure.

10.3. The City shall approve all service entrance equipment before installation. Such approval should be granted before the Customer places an order for the purchase and/or manufacture of any equipment.

10.4. All new electrical metering and equipment installations shall be located on the outside wall of the structure served in one location.

10.5. Where individual, commercial, metered services are provided, the Customer shall install a main mechanical load-breaking device (disconnect or circuit breaker), which may be operated by the City as needed or required. Variations must have written authorization from the City.

Where up to and equal to 1200 amps are provided:

- Such main mechanical load breaking devices shall be physically located outside of the structure served and adjacent to the instrument cabinet and meter socket. Electrically, it shall be located on the load side of the meter socket, except where there are multiple banked meters that share a single main disconnect. Variations must have written authorization from the City.

Where more than 1200 amps are provided:

- Such a main mechanical load-breaking device and associated instrument cabinet may be installed inside of the structure served.

- Meter sockets must be installed on the outside wall of the structure served, within fifty feet (50') of the instrumentation cabinet. Variations must have written authorization from the City.

SECTION 11. CONSTRUCTION PROCEDURES

11.1. Nothing contained in the standards shall require the City to install area feeder circuits underground or require any part of its existing Distribution System to be placed underground.

11.2. The Customer shall provide the City with a construction schedule so the electric system can be installed in an orderly and timely manner. This shall be provided at the associated pre-construction meeting.

11.3. Lots and easements shall be brought to within four inches (4”) of final grade and all other underground utilities located beneath the electric facilities shall be installed prior to the installation of the underground electric system.

11.4. The Customer shall provide the City with a clear, unobstructed access across the property as required for the installation of the electric distribution facilities.

Prior to the actual installation of electrical facilities, the developer or customer shall provide:

Final grade (± 4”) (where utility facilities will be installed);

- The signed Agreement for the Construction and Installation of the Electric System;
- Staking for all lots located in the subdivision or development;
- Lot number on stakes;
- Easements;
- Payment of the Facility Installation Charge;
- Payment of the Contribution in Aid of Construction charge (when applicable);
- Catalog cuts for approval of metering equipment (when available). ***Attention: Failure to complete any of the above items may result in construction delays.***

11.5. The Customer shall be solely responsible for the cost of moving or rebuilding any facilities as a result of error or changes.

11.6. The Customer shall install all crossing conduits needed for City utilities before the roadbase/curbing is constructed.

11.6.1. The Customer shall provide the City with thirty (30) days written notice to make the necessary street crossing installation(s).

11.6.2. Where the Customer fails to coordinate such installations with the City, they shall be ultimately responsible for any extra expenses incurred by the City as a result of boring, tunneling, street repairs, etc.

11.7. When rock or ledge is encountered less than thirty-six inches (36”) below grade, the Customer shall be solely responsible for any added costs to install the underground electric facilities.

11.8. When, in the sole judgment of the City, difficult installation conditions exist, such as rock, ledge, frost, etc., the City shall not be bound by any construction schedule which may have been stated, written or otherwise implied.

11.9. The Customer shall be solely responsible for the removal of any and all trench or construction spoils caused by the City or its contractor resulting from the installation of on-site electric facilities.

11.10. Prior to the start of construction, the Customer shall arrange with the City for a site inspection to determine the suitability of the site. Such determination shall be made at the sole discretion of the City.

11.11. The Customer shall be solely responsible for any extra costs incurred by the City to remobilize the City's construction crews if such work is stopped because the City determines that a portion of the site is not suitable for construction of City facilities.

11.12. The City shall schedule its work after all fees are received, necessary easements granted, service equipment is approved, and the project site is ready as determined by the City.

SECTION 12. CONTRACT OUTDOOR LIGHTING

12.1. Contract outdoor security lighting shall be available to any Customer using City electric service for unmetered outdoor lighting, provided that the Customer has signed a written agreement with the City. This service is only available in areas currently served by overhead electric distribution, and is not for the purpose of lighting the public right-of-way or parking lots.

12.2. A complete description of the contract terms and rates is included in Section 11-1-1 of the City Municipal Code. The Customer is to contact the City Utility Billing Department in order to initiate a request for contract outdoor lighting.

SECTION 13. CUSTOMER EQUIPMENT

13.1. As determined by the City, the Customer shall select and install only motors, apparatus, and devices which are suitable for operation with the character of the service available and supplied by the City.

13.2. The City hereby reserves the right with Customer consent to gain access to, inspect and test any Customer-owned equipment which is connected to the City's system.

13.3. The City shall be the sole authority to determine whether any Customer-owned equipment connected to the City's system causes or may have a deleterious effect on the quality of service provided by the City to its customers.

13.4. The City hereby reserves the right and authority to require the Customer to install, at the Customer's sole expense, any such wiring and equipment which the City determines is required to prevent any deleterious effects on the quality of service provided by the City to its customers.

13.5. In the event that the City determines Customer-owned equipment needs repair, it shall be the responsibility of the Customer to repair the deficiency or disconnect the equipment from the City within 60 days of notification. Should the necessary

repairs not be completed within the specified amount of time, the City Manager's Office will be contacted and fines may apply. If the equipment poses a safety hazard, the City reserves the right to disconnect service. Variations must have written authorization from the City.

13.6. The City will require a Customer to provide, at Customer's expense, special or additional equipment when a Customer's use of electric facilities results in an interference with the quality of the Customer's own service or that of neighboring customers, as determined by the City.

SECTION 14. CUSTOMER RESPONSIBILITY FOR CITY PROPERTY AND CLEARANCES

14.1. Breaking of seals, tampering with meters, wires or any other property belonging to the City by unauthorized representatives of the City is prohibited and may be punishable by law.

14.2. The Customer, at all times, shall protect the property of the City on the premises of the Customer and shall not permit anyone other than representatives of the City and other persons authorized by law to inspect, work on, open or otherwise handle the wires, meters or other City Facilities. In case of loss or damage to City property due to carelessness, neglect or misuse by the Customer, their family, agents, servants or employees, the Customer shall pay to the City the cost of any necessary repairs or replacements of such Facilities or the value of such Facilities.

14.3. Swimming pools (above or below grade) shall be constructed to provide a minimum distance of 10 feet as measured horizontally, from the vertical plane containing the nearest part of the pool or wading area, diving platform, deck or similar structure to vertical plane containing the nearest electrical conductor or equipment. Conductors are prohibited from passing over or under all pools and their associated decks.

14.4. Attachments of any kind or nature shall not be permitted on City poles without previous execution of the City's Pole Attachment Agreement. The only exception to this will be temporary service.

14.5. Care shall be taken by the Customer in the installation of antennas near City power lines such that under all conditions, the installation will not be under or fall across City lines nor contact them in any way that may be considered hazardous to life or property.

14.6. The City will provide clearances as specified in the National Electric Safety Code when installing or reconstructing its Facilities.

14.7. The Customer is responsible for providing clearances as specified in the National Electric Safety Code when constructing structures on their property. The Customer shall not construct or locate a building, structure or mobile equipment within 5 feet of the City's Distribution System, as measured horizontally, from the vertical plane containing the nearest electrical conductor or equipment displaced by a 6 psf wind.

14.8. The location of buildings, structures (requiring building permit) or mobile equipment is prohibited above or beneath the City's Distribution System and within utility easements or rights-of-way.

14.9. The Customer shall be liable to the City for costs of any repairs or replacement of City Facilities located on the Customer's premises or projects that are lost or damaged due to change in characteristics of the Customer's load that have not been reported to the City.

SECTION 15. DAMAGE TO DEPARTMENT-OWNED FACILITIES

15.1. Any person working in an area containing the City's equipment or electric facilities shall be solely responsible to take whatever precautions are necessary to avoid damaging such facilities.

15.2. Any person causing damage to the City's equipment or facilities shall be solely responsible for any costs incurred to repair such damage.

SECTION 16. EASEMENTS

16.1. Property owners shall dedicate by plat or grant by written agreement, public utility easements to the City for the City's use for the construction, maintenance, and replacement of its facilities as required.

16.2. The Customer shall provide and/or describe at no cost to the City, all rights-of-way and easements required for the City's primary and secondary conductors, pad-mounted transformers, secondary pedestals and any other facilities that may be required to serve the Customer. The grading must be within 4 inches of final grade, with lots pinned or staked and the easement cleared of all trees, stumps and obstructions before the City begins construction. Excessive spoils (rock, tree, temps, etc.) resulting from the installation of the City's Distribution System will be the responsibility of the Customer to remove. Access for City vehicles shall be provided to all City facilities prior to sodding, landscaping and fencing.

16.3. All required easements shall be dedicated or granted without cost to the City. This shall include any additional or relocated easements which may be required by the City due to circumstances or conditions unforeseen prior to the beginning of construction.

16.4. Standard easements shall customarily follow property lines.

16.4.1. If such customary easement location is not possible due to field conditions, such as hills, slopes, obstructions, etc., required easements shall be located in the nearest flat, clear area which will insure the safety of the individuals and equipment while installing, operating or maintaining City facilities.

Easements at least fifteen feet (15') wide along all front lot lines, and ten feet (10') wide along all rear lot lines shall be required for each lot in a proposed residential subdivision, or as required by the City.

Easements at least fifteen feet (15') wide along all sides, front, and rear property lines and along routes of electric facilities shall be required for all non-residential developments, or as required by the City. Blanket easements are preferred.

16.5. Special circumstances dictate the need for additional easements in certain cases.

16.6. Easements shall be shown and recorded on the subdivision plat.

SECTION 17. ELECTRICAL UTILITY FACILITY INSTALLATION

17.1. All new facilities shall be installed so that they are capable of being looped.

17.2. The City hereby reserves the right to install temporary or emergency facilities in the most economical manner using reasonable engineering principles and practices.

SECTION 18. EQUIPMENT FURNISHED AND MAINTAINED BY THE CITY

18.1. The City or its approved contractor shall construct and install all new on-site electric distribution systems requested by the Customer or required by the provisions of the Municipal Code to serve the Premises in new or existing subdivisions or developments.

18.2. All such distribution systems shall be constructed in conformity with the requirements of the National Electric Safety Code.

18.3. The owner, subdivider, builder, developer, and Customer shall be jointly and severally responsible for the payment of the Facility Installation Charge, which includes the estimated cost and expense for the construction and installation for all such on-site electric distribution systems.

18.4. All estimated costs and expenses for the construction and installation of all such on-site electric distribution systems shall be due and payable before any construction work is scheduled by the City.

18.5. Where City-owned facilities need to be relocated or upgraded due to any development, redevelopment, rehabilitation, addition, site modification, increase in load, or Customer request, all required work shall be performed by the City, the costs therefore shall be fully reimbursed at the sole expense of the requesting party.

18.6. Where a request for the construction and installation of new on-site electric distribution systems involves exceptionally high costs for equipment, special equipment, or facilities which may require a long period of time to manufacture or construct, the City, at its sole discretion, may require the Customer to pay for the required equipment before the City orders such items.

SECTION 19. INFRASTRUCTURE AVAILABILITY CHARGE

19.1. Costs associated with the extension of, or addition to, the City's Distribution System must be recovered by the City or justified by some combination of the following, as determined by the City.

19.1.1. City's Distribution System will be enhanced or be made more reliable.

19.1.2. The extension is not solely for the benefit of the requesting Customer and will serve future Customers.

19.1.3. The anticipated revenue to be received after implementation of the extension or addition will offset the City's investment within 3 years.

19.1.4. The Customer submits a Contribution to Aid Construction, prior to start of work, for costs of the extension or addition as determined by the City.

19.2. The City will determine the feasibility of a proposed system expansion or addition prior to undertaking the work.

19.3. It shall be the responsibility of the Customer to provide any information and/or property surveying as required for any work.

SECTION 20. INTERRUPTION OF SERVICE

20.1. Insofar as practical, planned interruptions of service in the normal course of business will be prearranged with the Customer.

20.2. The City hereby reserves the right to curtail or temporarily interrupt a Customer's service where the City determines that repairs, replacement, or modification of the City's facilities are required either on or off the Customer's premises.

20.3. The City hereby reserves the right to interrupt a Customer's service in the case of emergencies or whenever such interruption is required to comply with an order from any jurisdictional authority.

20.4. The City shall not be liable for any loss or damage to property resulting directly or indirectly from any interruption or termination of electric service for any reason.

SECTION 21. JULIE

21.1. In accordance with State statute, the City of Mascoutah is connected to the JULIE Illinois One Call System.

21.2. All requests for locating underground facilities should be directed to JULIE at 1-800-892-0123 (or dial 811 from any phone within the State of Illinois) prior to the beginning of any excavation.

SECTION 22. METERING

22.1. General

22.1.1. All electricity furnished by City systems shall be metered unless the Customer has Customer's use of energy.

22.1.2. The City shall furnish, own, and maintain all metering equipment or other equivalent control means through which electric service is supplied.

22.1.3. The Electric Meters shall be within 1% accuracy for any installation.

22.2. Meter Locations

22.2.1. The City shall determine and designate all meter locations for new, modified, or rehabilitated installations.

22.2.2. All meters shall be located outdoors with appropriate environmental ratings. Variations must have written authorization from the City.

22.2.3. Meters shall be located to facilitate the setting, changing, testing, and reading of the meters. They shall not be covered, enclosed, or located within other equipment.

22.2.4. All metering equipment shall be located in an area openly accessible to the City, and shall be banked in one (1) location.

22.2.5. For multi-family units, all meter sockets are to be labeled with the unit number served with one inch (1") permanent outdoor-rated labeling. No marker labeling will be accepted.

22.2.6. The Customer shall be solely responsible at all times to maintain a suitable approach to the meter location, with no obstructions within four feet (4') of the front and two feet (2') of the sides of the meter.

22.2.7. The Customer shall install concrete-filled, eight inch (8") steel protection posts (bollards) to protect the metering installation where meters are located outdoors in paved areas or when the City determines that said meters may be susceptible to damage and/or obstruction outside of paved areas.

22.3. Grounding

22.3.1. The requirements of the latest adopted edition of the NEC shall determine all practices with respect to the grounding of electric meters.

22.3.2. The Customer's service entrance installation shall have an identified full-sized grounded conductor in accordance with the NEC.

22.4. Meter and Equipment Seals

22.4.1. The City shall seal all meters and points of access to unmetered wiring on the Customer's premises.

22.4.2. The Customer shall call the City if it becomes necessary to gain access to any sealed equipment.

22.4.3. No person shall break any seal, close any bypass switch, connect, disconnect, or tamper with any of the City's metering equipment other than authorized City personnel.

22.4.4. Any person(s) determined to have violated this rule shall be prosecuted to the full extent of the law, and shall also be liable for the cost of all energy supplied which has not been billed due to unauthorized use, alteration, or tampering with metering equipment. The person(s) will also be charged for all of the City employee labor hours required for the investigation and resolution to the said violation.

22.4.5. The Customer shall be liable for the costs of any such unauthorized use of energy.

22.5. Meter Installations

22.5.1. General

22.5.1.1. Single-phase electric meters up to 240 volts, 200 amperes (up to 400 amperes residential) shall be installed with trough-type meter sockets.

22.5.1.2. All devices designed to interrupt service or protect against tampering or vandalism shall be installed on the load side of the electric meters. See Section 11.6.1.

22.5.1.3. Where electric meter damage, vandalism, or tampering occurs or is anticipated, outdoor electric meters shall be protected by a suitable cover with hasp and staple for the installation of a City padlock. The City will determine if such a situation exists, and the Customer is responsible for the installation of such equipment.

22.5.1.4. Where the City determines that a protective box is required to protect against possible vandalism or meter tampering, such a protective box shall be installed and maintained by the Customer and the padlock shall be provided by the City.

22.5.2. Meter Sockets

22.5.2.1. The City shall specify the appropriate ring-less meter sockets (meter trough assembly) for each installation, which shall be furnished and installed by the Customer.

22.5.2.2. It is the sole responsibility of the Customer to maintain the meter socket and meter trough assembly in such a way as to sustain a safe environment as per the NEC guidelines and City standards. In the event that the City determines that immediate maintenance is warranted, the Customer will be contacted by the City and must, through their electrician, perform any necessary corrective action within sixty (60) days of notice.

22.5.2.3. The City does not endorse or denounce specific manufacturers of meter socket and meter trough assemblies. However, the City reserves the right to preapprove specific equipment for applications that it feels occur in large non-unique quantities and also reserves the right to approve or decline requests for the same from equipment manufacturers.

22.5.3. Manual Bypass Meter Sockets

22.5.3.1. The Customer shall install, at its sole cost, a City-approved manual bypass meter socket with the ability to break load at full rating for each of the following installations:

22.5.3.1.1. All commercial installations (lever bypass); and

22.5.3.1.2. All residential installations rated 200 amperes and above (lever bypass); and

22.5.3.1.3. All multi-unit residential installations (horn bypass).

22.5.3.2. Protective load disconnect (breakers), which are embedded in certain meter sockets, may also be used. See the appropriate City standards for more information.

22.5.4. Cover Plates

22.5.4.1. After meter sockets are installed, the interior of the socket must be protected if exposed to the weather or if the terminals are energized.

22.5.4.1.1. The contractor shall supply and install suitable temporary covers, approved by the City, before the socket is energized.

22.5.4.1.2. The City will furnish and install covers for unused meter loops at the time meters are installed at banked (grouped) locations.

22.5.5. Multiple Meter Installations

22.5.5.1. The City shall review and approve any multiple meter service before the owner or developer orders or installs any equipment.

22.5.5.2. Multiple meter bank assemblies shall be designed so that the center of the top meter is no more than seventy-two inches (72”) above the floor, or the ground and the center of the bottom meter(s) is not less than thirty inches (30”) above final grade. Variations must have written authorization from the City.

22.6. Instrument Transformer Meter Installations

22.6.1. The installation of all transformer-rated meters over 200 amperes and/or greater than 480 volts, shall include facilities for mounting current transformers and potential transformers, as required.

22.6.1.1. The installation of all transformer-rated meters over 480 volts shall include facilities for mounting potential transformers.

22.6.1.2. The installation of all commercial transformer-rated meters over 200 amperes and residential transformer-rated meters over 320 amperes shall include facilities for mounting current transformers.

22.6.2. The City shall furnish, own, and maintain all instrument transformers required to provide electric service.

22.6.2.1. The Customer shall provide and install a one inch (1”) continuous rigid conduit from each meter socket to its respective instrument transformer cabinet.

22.6.2.2. This continuous rigid conduit shall be installed in addition to the meter socket, instrument cabinet, test switches, and all other equipment required for the installation of the transformer-rated meter, except the instrument transformers and metering conductors, which shall be supplied and installed by the City.

22.6.2.3. The one inch (1”) continuous rigid conduit shall be wired by the City.

22.6.2.4. Such meter sockets will be located on an outside building wall, between fifty-four and sixty-six inches (54”) and (66”) above final grade, and in such a position that there will be no obstructions to meter reading, testing, or other maintenance.

22.6.3. The City shall review and approve details of the Customer’s service entrance and equipment for installations requiring instrument transformers before the Customer orders or installs any such equipment.

22.6.4. See the appropriate City standard(s) with regards to detailed information on the installation of this equipment.

SECTION 23. ELECTRIC MOTOR INSTALLATIONS

23.1. Before the Customer installs any single-phase motor greater than seven (7) horsepower or any three (3) phase motor greater than fifteen (15) horsepower, the Customer shall have such an installation approved by the City.

23.2. The Customer shall install any required equipment to protect a motor installation from high-voltage, low-voltage, “single” phasing, or reverse phasing conditions.

SECTION 24. PLANS AND DRAWINGS

24.1. Submission of Plans

24.1.1. The City does not design, plan, install or maintain the Customer’s wiring or electric equipment.

24.1.2. Customers may contact the City to obtain information relative to new electric service connections or changes in existing service. In order to obtain service at the time desired, an application should be submitted well in advance and the Customer should keep the City informed as to the progress of the relative work and when service is anticipated.

24.1.3. Prospective Customers desiring the installation of new electric service or changes in service shall furnish a building plan, a one-line electric diagram and a completed “Application for Service” form before service will be considered. The City will not design, plan, install or maintain any wiring or electrical equipment that is the property of the Customer. The City reserves the right to determine availability of voltage, phase of service, route of service, metering procedures and maximum fault current in any given area.

24.1.4. Where three-phase service is required, it shall be the Customer’s responsibility to balance distribution of the load between the three phases of service as evenly as possible to preclude an over-current condition on City equipment. Loss of City equipment due to an imbalance may result in Customer being billed for replacement costs for such equipment.

24.1.5. The Customer is responsible for notifying the City of proposed all-electric services during the plan submission stages of development or service upgrade.

24.1.6. The Customer shall provide to City complete and accurate drawings and layouts for subdivisions, planned unit developments, and any other projects requiring the installation or replacement of City electrical facilities. These plans and drawings are part of the required submittal to obtain City building permits, and are required to be delivered in duplicate to the City for formal review and comment.

24.1.7. The Customer shall provide the City with complete architectural drawings for any commercial project for which the City is reviewing a Building Permit Application. Such drawings shall include:

24.1.7.1. The requested service voltage; and

24.1.7.2. The building connected load (in kW) broken down by load type; and

24.1.7.3. The electrical switchgear and metering lineup; and

24.1.7.4. The one-line diagram, depicting the service to the electric panels; and

24.1.7.5. The specifications for the HVAC equipment, etc.; and

24.1.7.6. The proposed location for City pad-mounted transformer on the Customer's property (if applicable).

24.1.7.7. At the request of the Customer, the City will perform a preliminary review of electrical facilities for commercial installations.

SECTION 25. POWER FACTOR/POWER QUALITY

25.1. The City electrical service standards for supplying its Customers require the Customer to maintain a power factor of ninety-five percent (95%) or greater.

25.2. Any Customer having power factor characteristics not meeting Section 25.1 may be required to install, furnish, and maintain the appropriate corrective equipment which will result in an overall power factor within the City's standard range as measured at the meter.

25.3. Any Customer introducing disturbances related to the quality of power (i.e., harmonics or adverse spikes/dips), which affect the utility's equipment and/or the utility's quality of power to other Customers may be required to install, furnish, and maintain the appropriate corrective equipment.

25.4. In the event that the City determines the Customer is required to install, furnish, and maintain the appropriate corrective equipment by not meeting the requirements of Section 25.1 or Section 25.3, the Customer shall, at Customer's sole expense, install, furnish and maintain the appropriate corrective equipment within 90 days of notification.

25.5. Should the necessary repairs not be completed within the specified amount of time, the shall install facilities adequate for the Customer to meet the requirements of Section 25.1 and/or Section 25.3, the Customer shall reimburse the City for all costs associated with installing, furnishing and maintaining the appropriate corrective equipment.

25.6. Variations must have written authorization from the City.

SECTION 26. PROTECTION OF CUSTOMER-OWNED EQUIPMENT

26.1. The City shall not guarantee the supply of electric service against any irregularities or interruptions in service, and the City hereby disclaims any liability for any damages or lost business incurred by any such irregularity or interruption.

26.2. The Customer may install circuit protection and power quality improvement devices (i.e., line conditioners and uninterruptable power supplies) on the load side of the meter to protect against possible equipment damage at the Customer's sole cost, expense, and liability for the purchase, installation, use, or misuse of any such devices.

SECTION 27. RATES

27.1. Electrical rates have been established for various Customer classes.

27.2. A full description of each of the electrical service rates is included in Section 11-1-1 of the City Municipal Code, as amended from time to time.

SECTION 28. RESIDENTIAL SERVICE

28.1. Defined

28.1.1. For the purpose of installing and maintaining electrical utility facilities, residential services shall be defined to include those facilities which provide a connection from the City's utility power supply to any single-family detached dwelling units, duplex units, and single-family attached dwelling units which are situated on subdivided lots, the side lot lines of which terminate at the public right-of-way.

28.1.2. Other multiple occupancy buildings shall be defined as commercial services for the sole purpose of the Customer installing and maintaining the service conductors.

28.2. Standard Service Size

28.2.1. The City shall provide only one electric service connection to each residential dwelling unit.

28.2.2. The City will provide each residential dwelling unit with electric service rated at 120/240 volts, single phase, 200 amperes, in accordance with all service rules and standards for new construction. Installations with greater than 200 amperes are also allowed, but additional requirements will have to be met.

28.2.3. The Customer is responsible for all costs incurred if their non-standard (greater than 200 amperes) service requires that the infrastructure serving the surrounding facilities be upgraded in order to meet their proposed upgrade.

28.3. Overhead Electrical Service

28.3.1. Overhead service shall be available only in those existing areas of the City where electrical utilities are currently located on utility poles.

28.3.2. The Customer shall provide, install, maintain, and replace as necessary, the riser conduit, weatherhead, meter socket and all other materials and installations required for a complete installation of an overhead residential service.

28.3.2.1. Riser conductor tails shall extend a minimum of three feet (3') out of the weatherhead.

28.3.3. The center of any meter for overhead service shall be located between forty-eight inches (48") and sixty-six inches (66") above final grade.

28.3.4. The electric meter shall be located at the side of the structure on the outermost wall closest to the side lot line, which is nearest to the point of connection with the City's system and no more than five feet (5') from the rear corner of the structure. Variations must have written authorization from the City.

28.3.5. The Customer shall provide a straight, clear, unobstructed path for installation of the electric service from the point of service connection to the meter location.

28.3.6. The meter shall be placed so that there will be no obstruction to, and complete open access for meter reading, meter testing, meter wireless communications, or other maintenance. See Section 22.2.

28.4. Underground Electrical Service

28.4.1. In a service area where electrical facilities are padmounted, any new electrical service connections shall be installed underground in accordance with these Electric System Service Rules.

28.4.2. The Customer may request underground installation in a service area which is predominantly served by overhead electrical service.

- The Customer shall reimburse the City for any costs incurred in providing such a request for underground service.

28.4.3. The Customer shall provide, install, maintain, and replace as necessary, a complete trough metering installation, approved by the City.

28.4.4. The electric meter shall be located to maintain complete open access at all times for meter reading, meter testing, or other maintenance. See Section 22.2.

28.4.5. The center of any such electric meter shall be located between forty-eight inches (48") and sixty-six inches (66") above final grade.

28.4.6. The electric meter trough shall be located at the side of the structure on the outermost wall closest to the side lot line, which is nearest to the point of connection with the City's system and no more than five feet (5') from the rear corner of the structure.

28.4.6.1. The Customer shall provide a clear, unobstructed path from the point of service connection to the meter location for the installation of the electric service.

28.4.7. All lots and easements shall be brought to within four inches (4") of final grade prior to the installation of underground electric services.

28.4.8. All other underground utilities located beneath the City's electric facilities shall be installed prior to the installation of the underground service.

28.5. Alterations or Additions to Existing Dwelling Units

28.5.1. Where the City determines it is necessary to relocate an existing electric meter due to meter failure, remodeling, alteration, or addition to an existing dwelling unit, the new meter shall be located in conformity to these Electric System Service Rules.

SECTION 29. SPECIAL EQUIPMENT

29.1. Where the Customer's electrical load includes equipment or devices which create a high demand on the operation of the City's facilities for a relatively short period of time, the City may determine that the installation of special equipment may be required to provide satisfactory service.

SECTION 30. STREET LIGHTING

30.1. The City designs, maintains, and upgrades the street lighting systems on all City streets.

SECTION 31. TEMPORARY SERVICE

31.1. The City will provide temporary service to any Customer where such service may be provided from the City's existing lines or facilities.

31.1.1. Where a Customer applies for routine temporary service, the Customer shall supply and maintain suitable equipment for a service entrance and all required service conductors sized in accordance with all applicable codes and these Electric System Service Rules.

31.2. The Customer shall pay the monthly charges for energy used at the applicable service rate.

31.3. At the sole discretion of the City, temporary service required for conditions other than those specified in Section 31.1 above may be provided. The Customer shall reimburse the City for all costs associated with installing and removing such "non-

routine" facilities. Such instances include temporary service for emergency purposes when the Customer is responsible for the repair to the meter socket.

31.4. Temporary service is intended for limited use only and should not exceed a period of six months unless otherwise agreed upon.

31.5. Permanent service entrance equipment shall be installed as soon as practicable.

SECTION 32. TREE TRIMMING

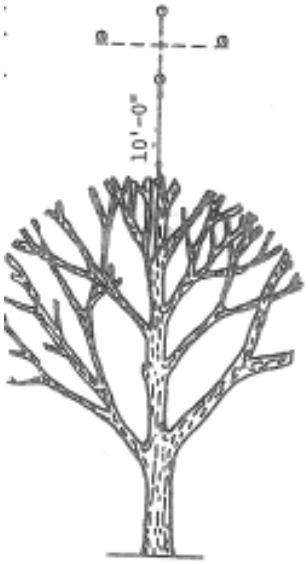
32.1. The City reserves the right to trim or remove any tree which creates a line-clearance hazard as defined by the NESC, or if it is deemed to in any way provide an unsafe working condition for the City or any other utility, or if it is deemed to in any way provide a potential safety hazard to the general public.

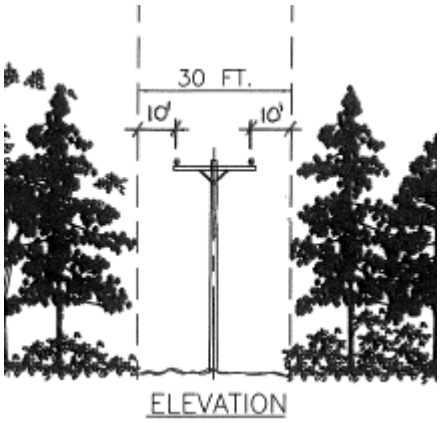
32.2. Properly authorized agents of the City shall, at all reasonable hours have, free access to Customer's property for the purpose of trimming or removing trees.

32.3. The Customer shall permit the City to trim or remove any trees on the Customer's property that may interfere with the safe operation of the City's facilities. Routine trimming is vital to maintaining reliable service and is performed at no cost to the Customer. To avoid future problems and inconvenience, it is strongly recommended that Customers avoid planting tall-growing trees under or near overhead power lines.

32.3.1. Trimming and tree removal related to maintaining safe clearance for customer service drops to a Customer's facilities, are the responsibility of the customer/property owner.

32.3.2. Damage to a service drop or the utility facilities due to customer/property owner neglect of trimming for service drop clearances may result in service or cost for repair.

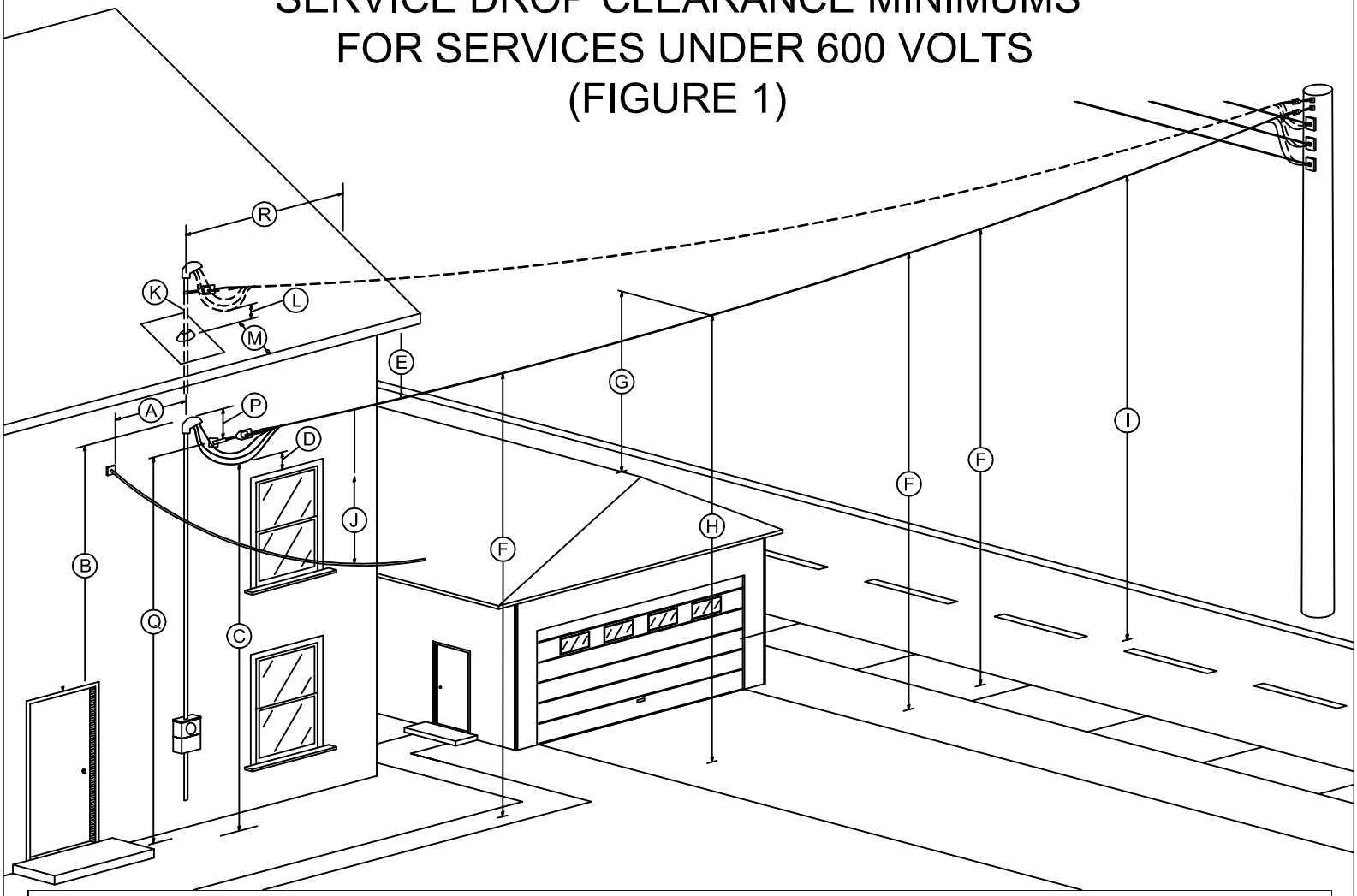




ELEVATION

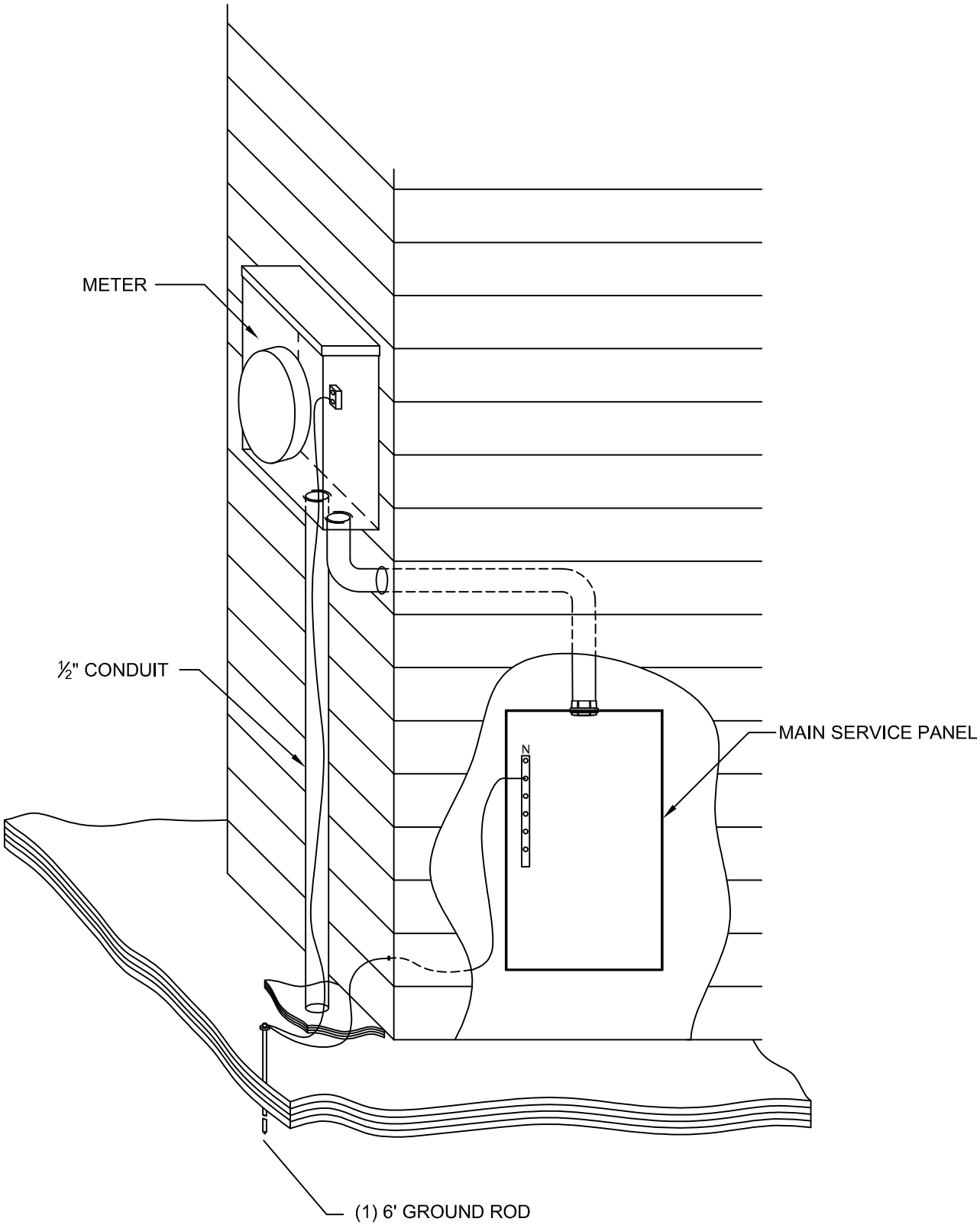
SECTION 33. SERVICE ENTRANCE STANDARDS

SERVICE DROP CLEARANCE MINIMUMS FOR SERVICES UNDER 600 VOLTS (FIGURE 1)

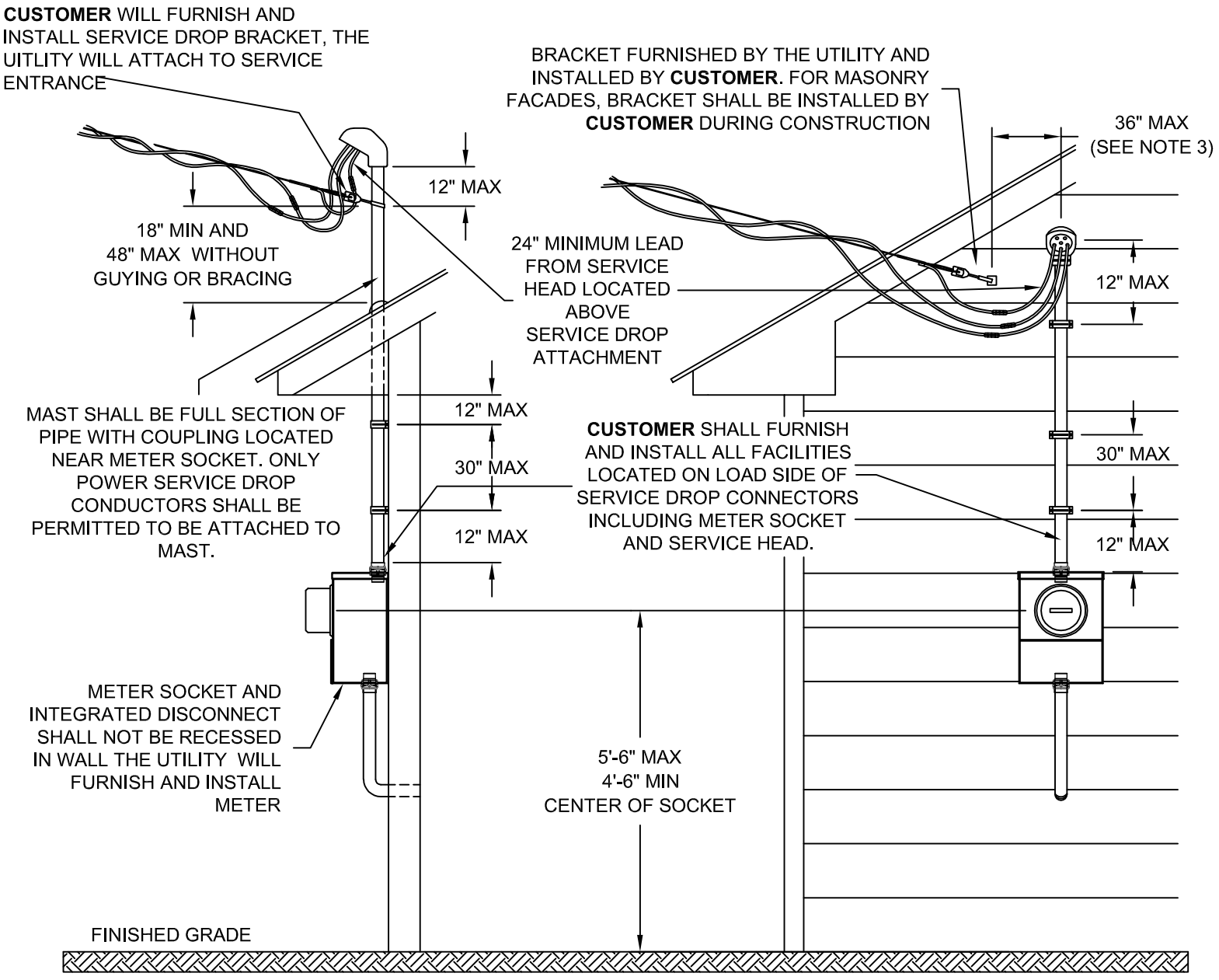


MINIMUM CLEARANCES		
CLEARANCE ID	**DESCRIPTION**	**CLEARANCE (ft.)**
A	Telephone service at point of attachmment	**12"**
B	Doors, Porches, fire escapes and similar locations	**3'**
C	Lowest point of drip loop for multiplex cable	**10'**
D	Windows: Beside and below	**3'**
	Above window	**4"**
E	Gutters and downspouts	**3"**
F	Sidewalks and finished grade for multiplex cable	**12'**
G	Conductors not attached to but crossing over buildings	**3.5'**
H	Residential driveways	**16'**
I	Public street, alley, public parking lot and areas subject to truck traffic	**16'**
J	Telephone service drop at crossing	**2'**
K	Optional method by use of mast. Conduit coupling must be located near meter socket. Only power service drop conductors shall be attached to the mast.	**-**
L	Overhanging roof: If service overhang (R) 6 feet or less and "M" is 4 feet or less.	**18"**
	If service overhang (R) Greater than 6 feet, vertical clearance above the roof remainder of horizontal distance.	**3'**
M	Distance from service mast to edge of roof (see dimension "L")	**-**
P	Point of attachment shall not be higher than the weatherhead	**-**
Q	Service drop attachment	**12'**
R	Service overhang of roof (see dimensions "L")	**-**

TYPICAL GROUNDING DETAILS
(FIGURE 2)



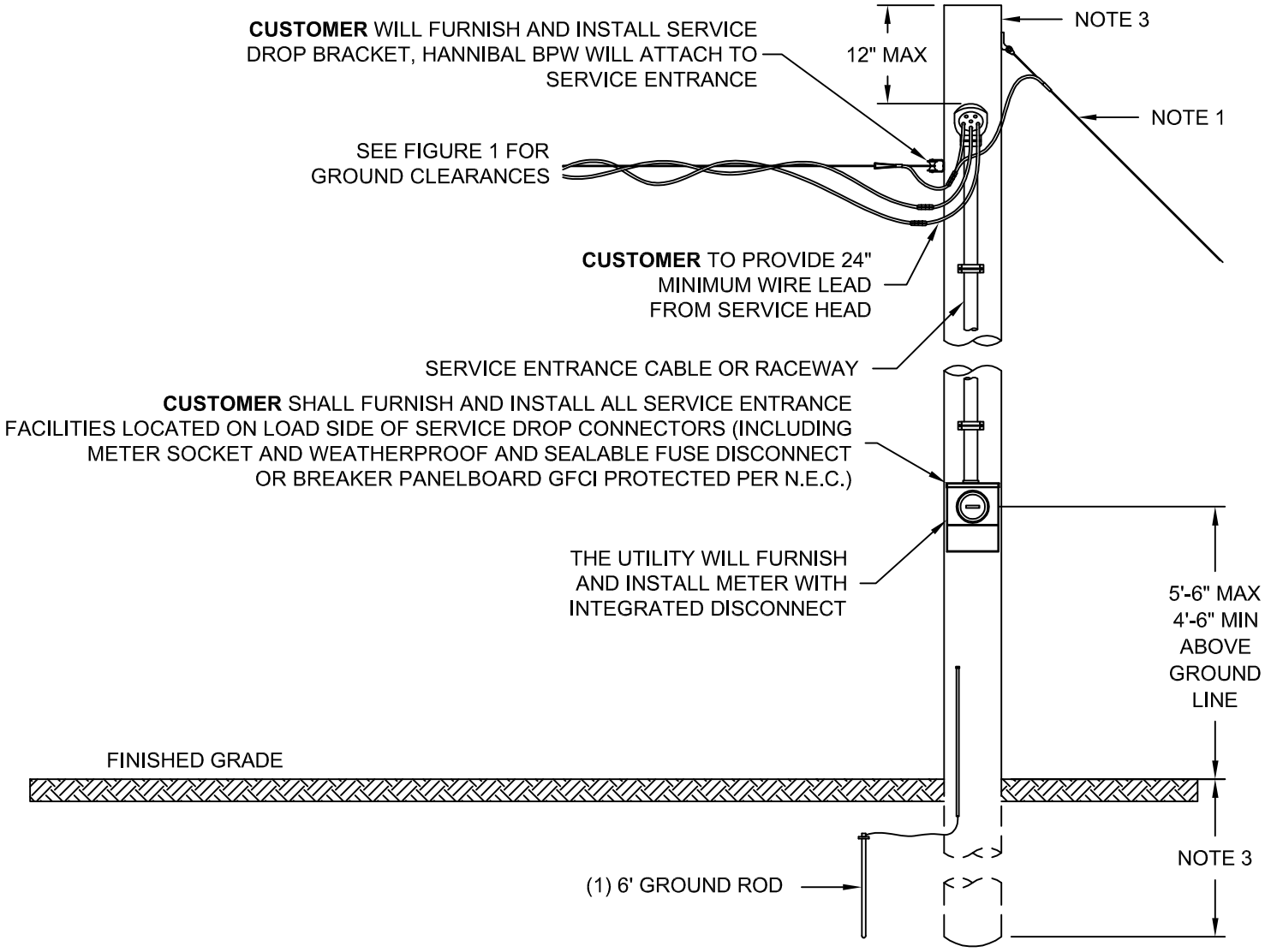
TYPICAL 400 AMP OR LESS OVERHEAD SERVICE INSTALLATION (FIGURE 3)



NOTES:

1. SEE FIGURE 1 FOR MINIMUM GROUND CLEARANCE
2. SEE FIGURE 2 FOR GROUNDING REQUIREMENTS.
3. **CUSTOMER** SHALL CONSULT THE UTILITY FOR POINT OF ATTACHMENT OF SERVICE DROP AND METER LOCATION. IF THE UTILITY AGREES TO ALLOW **CUSTOMER** TO INSTALL BRACKET ABOVE SERVICE HEAD, BRACKET SHALL BE LOCATED NO MORE THAN 24" FROM SERVICE HEAD.
4. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
5. ALL **CUSTOMER** WORK SHALL BE COMPLETE AND INSPECTIONS OBTAINED BY THE UTILITY BUILDING BEFORE THE UTILITY WILL PROVIDE SERVICE.

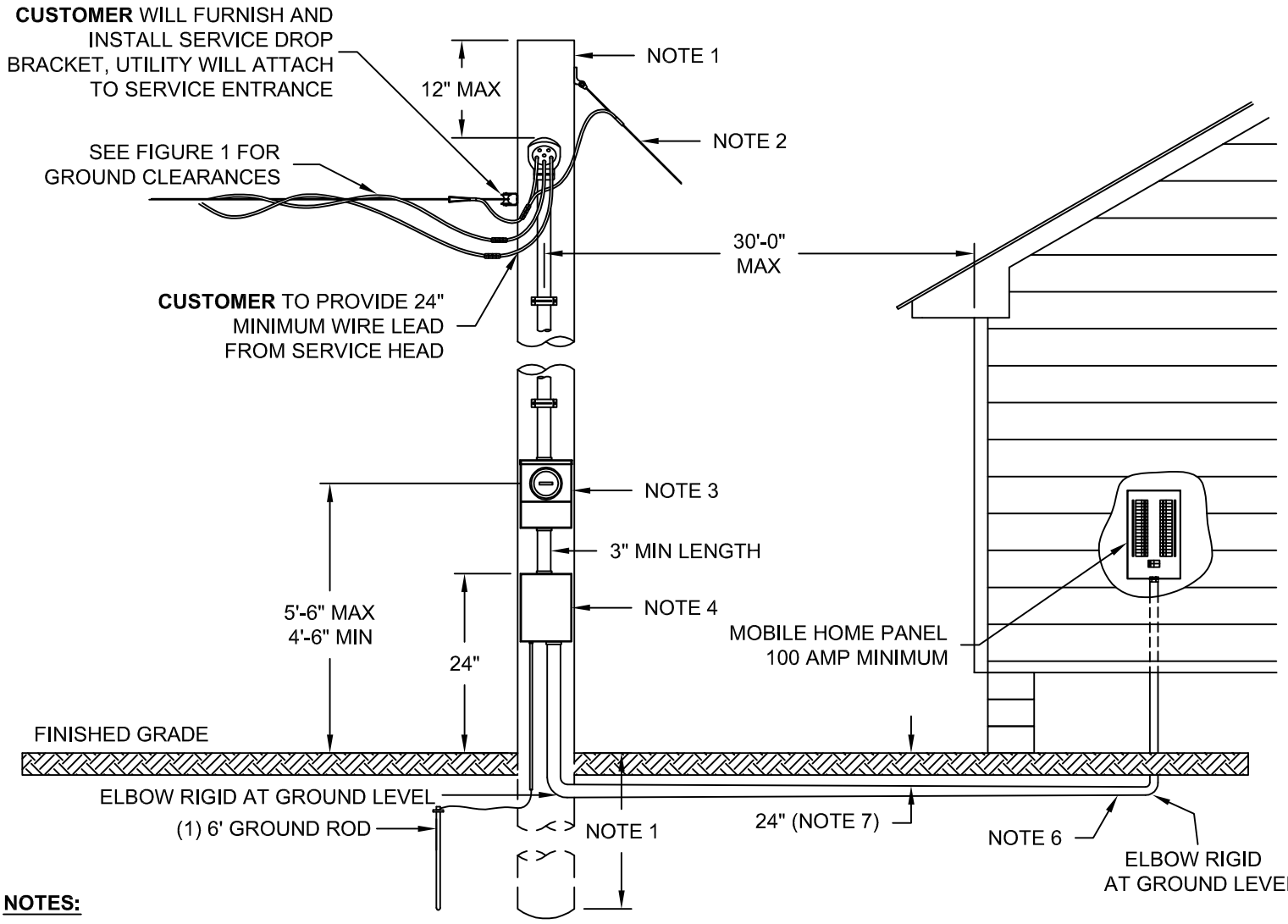
TEMPORARY OVERHEAD SERVICE SUPPORT
(FIGURE 4)



NOTES:

1. **CUSTOMER** SHALL CONSULT WITH THE UTILITY FOR LOCATION OF TEMPORARY SERVICE POLE. SUCH POLE SHALL BE LOCATED NOT LESS THAN 10' OR MORE THAN 75' FROM THE UTILITY'S TRANSFORMER SECONDARY, UNLESS OTHERWISE APPROVED BY THE UTILITY. **CUSTOMER** MAY BE REQUIRED TO FURNISH AND INSTALL PROPER GUYING. THE UTILITY WILL BOND GUY TO SERVICE NEUTRAL. **CUSTOMER** SHALL PAY APPLICABLE CHARGES.
2. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BY THE BUILDING INSPECTOR BEFORE THE UTILITY WILL PROVIDE SERVICE.
3. SERVICE POLE OR SUPPORT, FURNISHED AND INSTALLED BY **CUSTOMER**. REQUIREMENTS: 18' MINIMUM LENGTH CHEMICAL PRESERVATIVE TREATED POLE OR 18' MINIMUM CONTINUOUS LENGTH 6" X 6" CHEMICAL PRESERVATIVE TREATED TIMBER FREE OF UNACCEPTABLE DEFECTS, INSTALLED MINIMUM 4' IN GROUND AND WELL TAMPED.
4. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
5. ALL **CUSTOMER** WORK SHALL BE COMPLETE AND INSPECTIONS OBTAINED BY THE UTILITY BEFORE THE UTILITY WILL PROVIDE SERVICE.

TYPICAL OVERHEAD SERVICE FOR PARKS OR INDIVIDUALLY LOCATED MOBILE HOMES (FIGURE 5)

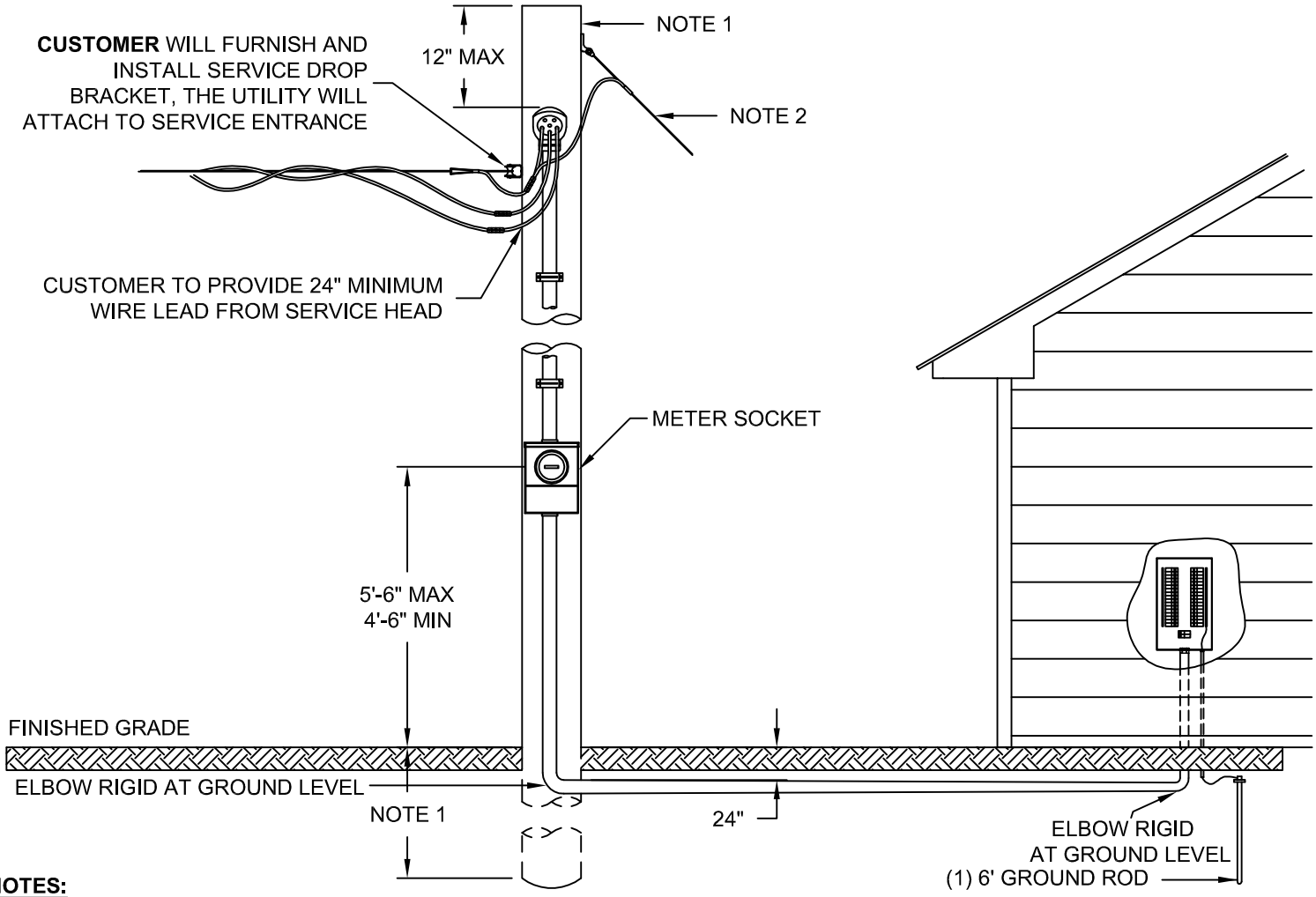


NOTES:

1. **CUSTOMER** SHALL FURNISH AND INSTALL UTILITY APPROVED POLE. POLE REQUIREMENTS: 30' CLASS 4 (RECOMMENDED), CHEMICAL PRESERVATIVE TREATED POLE, INSTALLED MINIMUM 5' IN GROUND AND WELL TAMPED. IF RECOMMENDED POLE HEIGHT NEEDS TO BE EXCEEDED, UTILITY TO BE CONSULTED FOR APPROVAL PRIOR TO POLE BEING SET.
2. IF SERVICE DROP EXCEEDS 100' OR PROPER POLE SETTING DEPTH CAN NOT BE OBTAINED, UTILITY SHALL INSTALL PROPER GUYING. UTILITY WILL BOND GUY TO SERVICE NEUTRAL**. CUSTOMER** SHALL PAY APPLICABLE CHARGES.
3. **CUSTOMER** SHALL FURNISH AND INSTALL ALL SERVICE ENTRANCE FACILITIES LOCATED ON THE LOAD SIDE OF SERVICE DROP CONNECTORS (INCLUDES METER SOCKET AND WEATHERPROOF AND SEALABLE FUSE DISCONNECT OR BREAKER PANELBOARD). THE UTILITY WILL FURNISH AND INSTALL METER.
4. THE SERVICE ENTRANCE SHALL BE A MINIMUM 100 AMP WITH MAIN DISCONNECT AND MEANS FOR CONNECTING AN ACCESSORY BUILDING OR ADDITIONAL ELECTRICAL EQUIPMENT LOCATED OUTSIDE MOBILE HOME, SERVICE DISCONNECT SHALL BE LOCATED WITHIN SIGHT OF AND WITHIN 30 FEET OF THE MOBILE HOME.
5. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BY THE UTILITY BEFORE UTILITY WILL PROVIDE SERVICE.
6. FEEDER: MUST BE IN CONDUIT.
7. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
8. ANTENNAS OR AERIALS SHALL NOT BE ATTACHED TO ANY POLE USED FOR SUPPLYING OF ELECTRIC SERVICE TO CUSTOMERS.
9. RACEWAY ON LINE SIDE OF METER TO WEATHER HEAD SHALL BE GALVANIZED RIGID STEEL. LOAD SIDE OF METER AND ALL UNDERGROUND RACEWAY SHALL BE SCHEDULE 40 PVC, UNLESS NOTED OTHERWISE.

GENERAL OVERHEAD POLE MOUNTED SELF-CONTAINED SERVICE (FIGURE 6A)

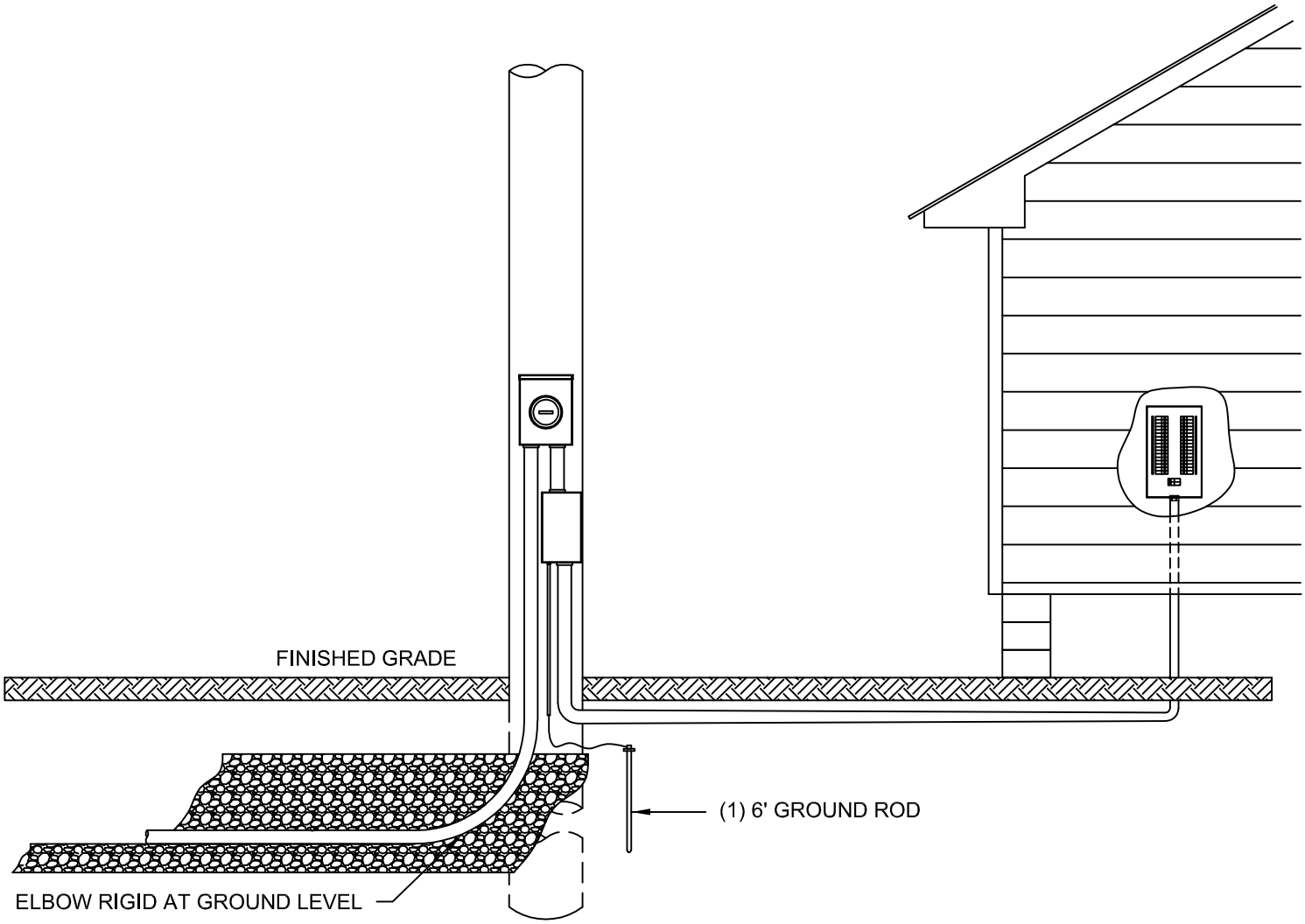
SINGLE OR THREE PHASE BUILDING / STRUCTURE MOUNTED SERVICE EQUIPMENT / MAIN DISCONNECT. (EXCLUDES MOBILE HOME AND CENTRAL DISTRIBUTION SERVICE)



NOTES:

1. **CUSTOMER** SHALL FURNISH AND INSTALL THE UTILITY APPROVED POLE. POLE REQUIREMENTS: 30' CLASS 4 (RECOMMENDED), CHEMICAL PRESERVATIVE TREATED POLE, INSTALLED MINIMUM OF 5' IN GROUND AND WELL TAMPED. IF RECOMMENDED POLE HEIGHT NEEDS TO BE EXCEEDED, THE UTILITY TO BE CONSULTED FOR APPROVAL PRIOR TO POLE BEING SET.
2. IF SERVICE DROP EXCEEDS 100' OR PROPER POLE SETTING DEPTH CANNOT BE OBTAINED, THE UTILITY SHALL INSTALL PROPER GUYING. THE UTILITY WILL BOND GUY TO SERVICE NEUTRAL.
3. **CUSTOMER** SHALL FURNISH AND INSTALL ALL SERVICE ENTRANCE FACILITIES LOCATED ON THE LOAD SIDE OF SERVICE DROP CONNECTORS (INCLUDING METER SOCKET). THE UTILITY WILL FURNISH AND INSTALL METER. SERVICE ENTRANCE RACEWAY TO BE BURIED AT A MINIMUM OF 24" BELOW GRADE
4. IF CUSTOMER'S SERVICE EQUIPMENT AND MAIN DISCONNECT ARE NOT LOCATED ON THE POLE BELOW THE METER SOCKET, NO ADDITIONAL DISCONNECT MEANS IS REQUIRED AT THE POLE ON THE LOAD SIDE OF THE METER SOCKET.
5. THE SERVICE ENTRANCE SHALL BE A MINIMUM 100 AMP. WITH MAIN DISCONNECT MEANS AND LABELED "SUITABLE FOR USE AS SERVICE EQUIPMENT".
6. FOR 480 / 277 VOLT WYE SERVICES (3-PHASE, 4-WIRE), SEE FIGURE 42. METER DISCONNECT REQUIRED AHEAD OF METER SOCKET.
7. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
8. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
9. ANTENNAS OR AERIALS SHALL NOT BE ATTACHED TO ANY POLE USED FOR SUPPLYING ELECTRIC SERVICE TO CUSTOMERS.

TYPICAL UNDERGROUND MOBILE HOME SERVICE FOR PARKS OR INDIVIDUALLY LOCATED HOMES (FIGURE 6B)

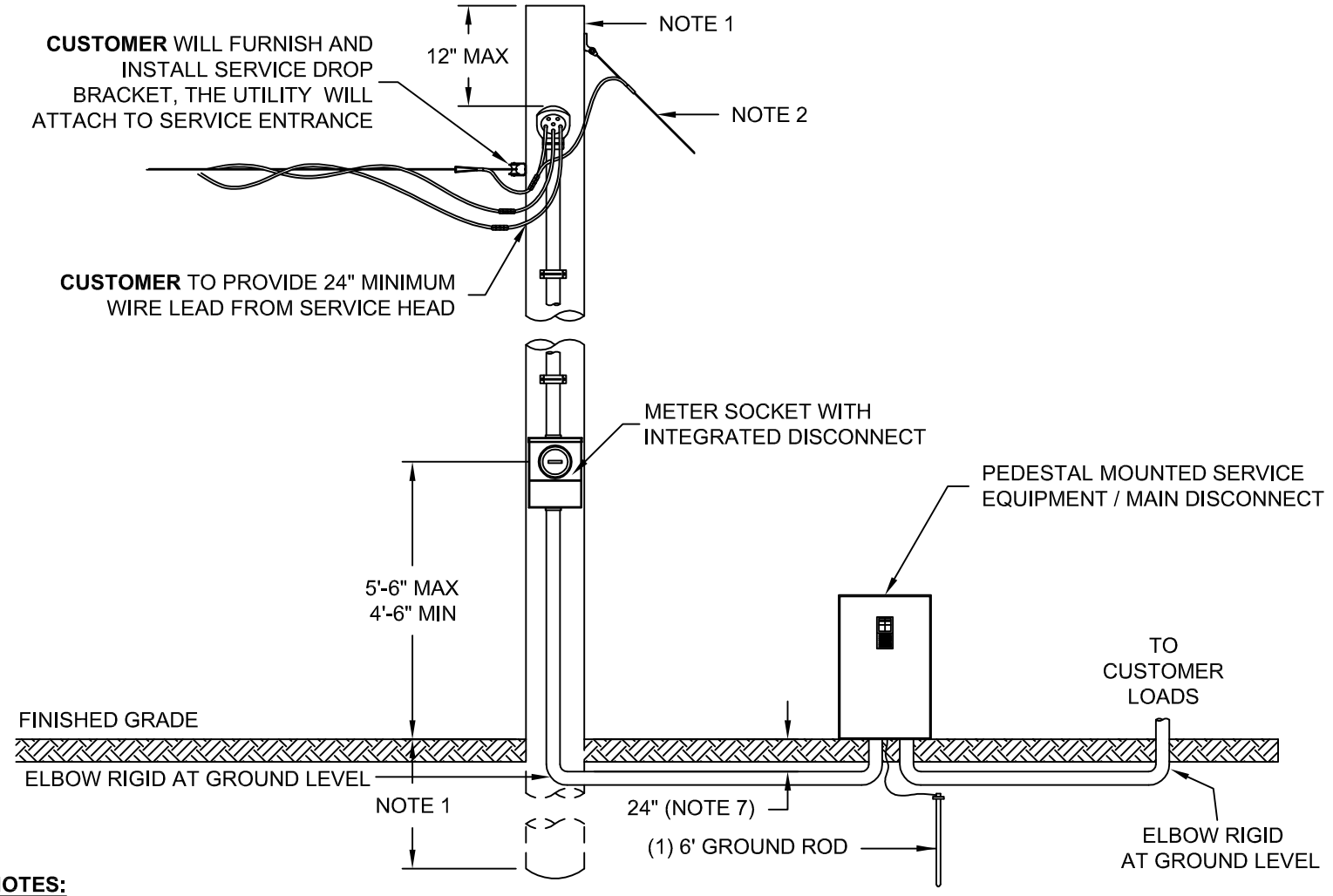


NOTES:

1. CUSTOMER SHALL FURNISH AND INSTALL 200 AMP MINIMUM METER SOCKET; 100 AMP MINIMUM MAIN DISCONNECT AND MEANS FOR CONNECTING AN ACCESSORY BUILDING OR ADDITIONAL ELECTRICAL EQUIPMENT LOCATED OUTSIDE MOBILE HOME; AND APPROPRIATE CONDUIT TYPE WHEN USED ON MINIMUM SIZE 4" X 4" X 8' PRESSURE TREATED POST. METERING PEDESTAL OR METER SOCKET / MAIN DISCONNECT COMBINATION ALSO ACCEPTABLE. SERVICE DISCONNECT SHALL BE LOCATED WITHIN SIGHT OF AND WITHIN 30 FEET OF THE MOBILE HOME.
2. CUSTOMER SHALL FURNIGH AND CONNECT ALL LOAD SIDE CONDUCTORS. HANNIBAL BPW WILL CONNECT LINE SIDE CONDUCTORS AND INSTALL METER. CUSTOMER SHALL FURNISH AND INSTALL 4-WIRE., PERMANENT WIRING IF OVER 50 AMPS.
3. CUSTOMER SHALL FURNISH AND INSTALL CONDUIT RISER AND SWEEP ELBOW. CONDUIT RISER AND SWEEP ELBOW SHALL BE 3" SCHEDULE 80 PVC OR EQUIVALENT. SERVICE LATERAL CONDUIT SHALL BE 3" DIAMETER TYPE 11 PVC RIGID CONDUIT - DB60, DB120, OR SCHEDULE 40. ALL CONDUIT MUST BE ELECTRICAL GRADE.
4. CUSTOMER TO TRENCH AND BACKFILL; FURNISH AND INSTALL CONDUIT WITH ¼" NYLON OR POLYPROPYLENE PULL ROPE FOR HANNIBAL BPW SERVICE LATERAL CONDUCTORS. TRENCH TO BE EXCAVATED IN LOCATION INDICATED BY HANNIBAL BPW. IDENTIFICATION TAPE PROVIDED BY HANNIBAL BPW AND INSTALLED BY CUSTOMER. SEE FIGURES 32 AND 33 FOR TYPICAL TRENCHING DETAILS.
5. BURIAL DEPTH MAY BE REDUCED TO 18" IF FEEDER IS IN CONDUIT
6. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
7. ALL CUSTOMER WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BY HANNIBAL BPW BUILDING INSPECTOR BEFORE HANNIBAL BPW WILL PROVIDE SERVICE.
8. CUSTOMER SHALL PROVIDE 3" TYPE II PVC OR SCHEDULE 40 SWEEP ELBOW (30" MINIMUM RADIUS) AT TERMINAL POLE OR PAD MOUNTED TRANSFORMER.

GENERAL OVERHEAD POLE MOUNTED SELF-CONTAINED SERVICE (FIGURE 7A)

SINGLE OR THREE PHASE PEDESTAL MOUNTED SERVICE EQUIPMENT W/O MAIN DISCONNECT. (EXCLUDES MOBILE HOME)

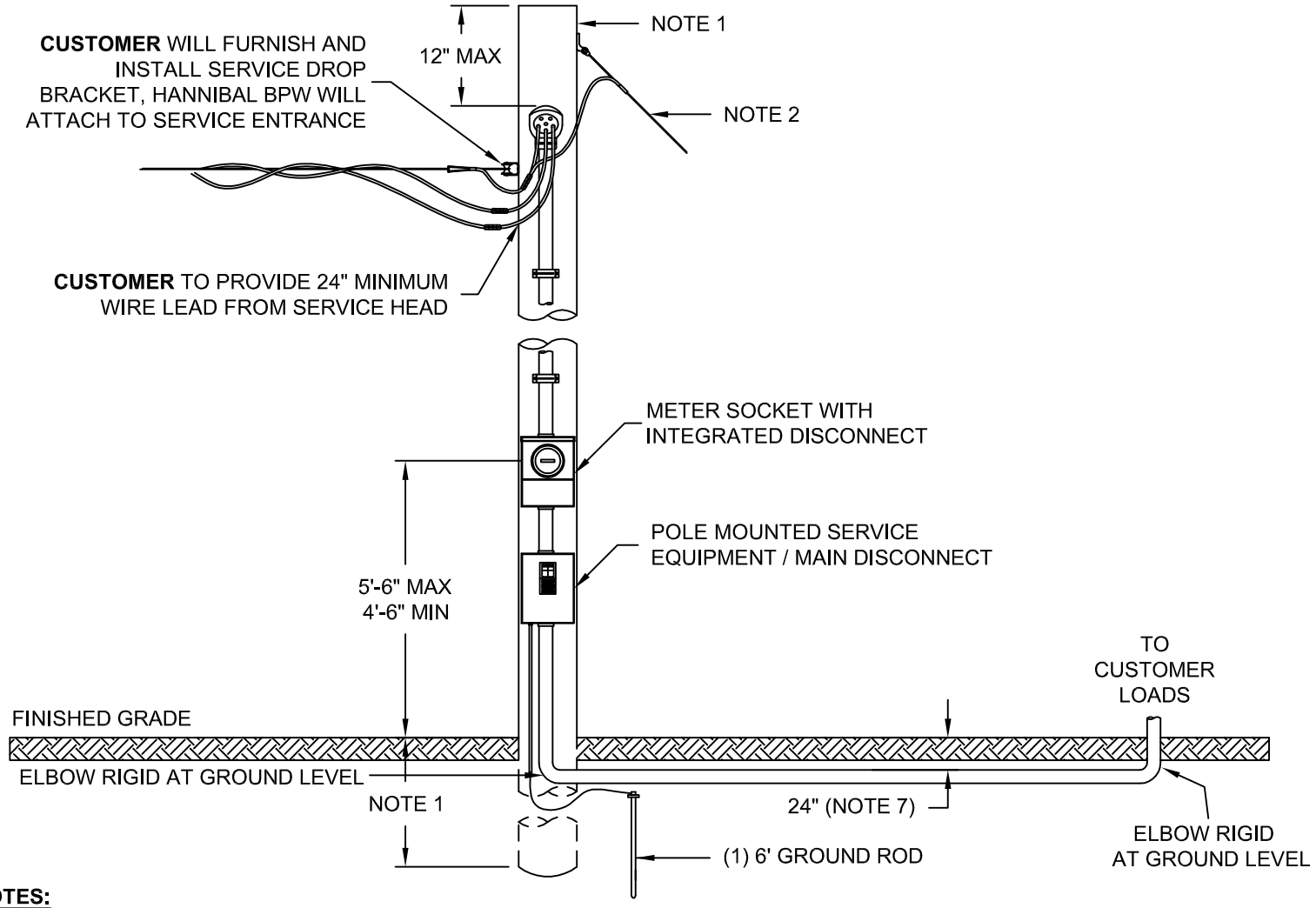


NOTES:

1. **CUSTOMER** SHALL FURNISH AND INSTALL THE UTILITY APPROVED POLE. POLE REQUIREMENTS: 30' CLASS 4 (RECOMMENDED), CHEMICAL PRESERVATIVE TREATED POLE, INSTALLED MINIMUM OF 5' IN GROUND AND WELL TAMPED. IF RECOMMENDED POLE HEIGHT NEEDS TO BE EXCEEDED, THE UTILITY TO BE CONSULTED FOR APPROVAL PRIOR TO POLE BEING SET.
2. IF SERVICE DROP EXCEEDS 100' OR PROPER POLE SETTING DEPTH CAN NOT BE OBTAINED, THE UTILITY SHALL INSTALL PROPER GUYING.THE UTILITY WILL BOND GUY TO SERVICE NEUTRAL**. CUSTOMER** SHALL PAY APPLICABLE CHARGES.
3. **CUSTOMER** SHALL FURNISH AND INSTALL ALL SERVICE ENTRANCE FACILITIES LOCATED ON THE LOAD SIDE OF SERVICE DROP CONNECTORS (INCLUDING METER SOCKET). THE UTILITY WILL FURNISH AND INSTALL METER. SERVICE ENTRANCE RACEWAY TO BE BURIED AT A MINIMUM OF 24" BELOW GRADE
4. THE SERVICE ENTRANCE SHALL BE A MINIMUM 100 AMP. WITH MAIN DISCONNECT MEANS AND LABELED "SUITABLE FOR USE AS SERVICE EQUIPMENT".
5. FOR 480 / 277 VOLT WYE SERVICES (3-PHASE, 4-WIRE), SEE FIGURE 30. METER DISCONNECT REQUIRED AHEAD OF METER SOCKET.
6. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
7. MINIMUM BURIAL DEPTH OF 24"
8. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
9. ANTENNAS OR AERIALS SHALL NOT BE ATTACHED TO ANY POLE USED FOR SUPPLYING ELECTRIC SERVICE TO CUSTOMERS
10. RACEWAY ON LINE SIDE OF METER TO WEATHER HEAD SHALL BE GALVANIZED RIGID STEEL. LOAD SIDE OF METER AND ALL UNDERGROUND RACEWAY SHALL BE SCHEDULE 40 PVC, UNLESS NOTED OTHERWISE.

GENERAL OVERHEAD POLE MOUNTED SELF-CONTAINED SERVICE (FIGURE 7B)

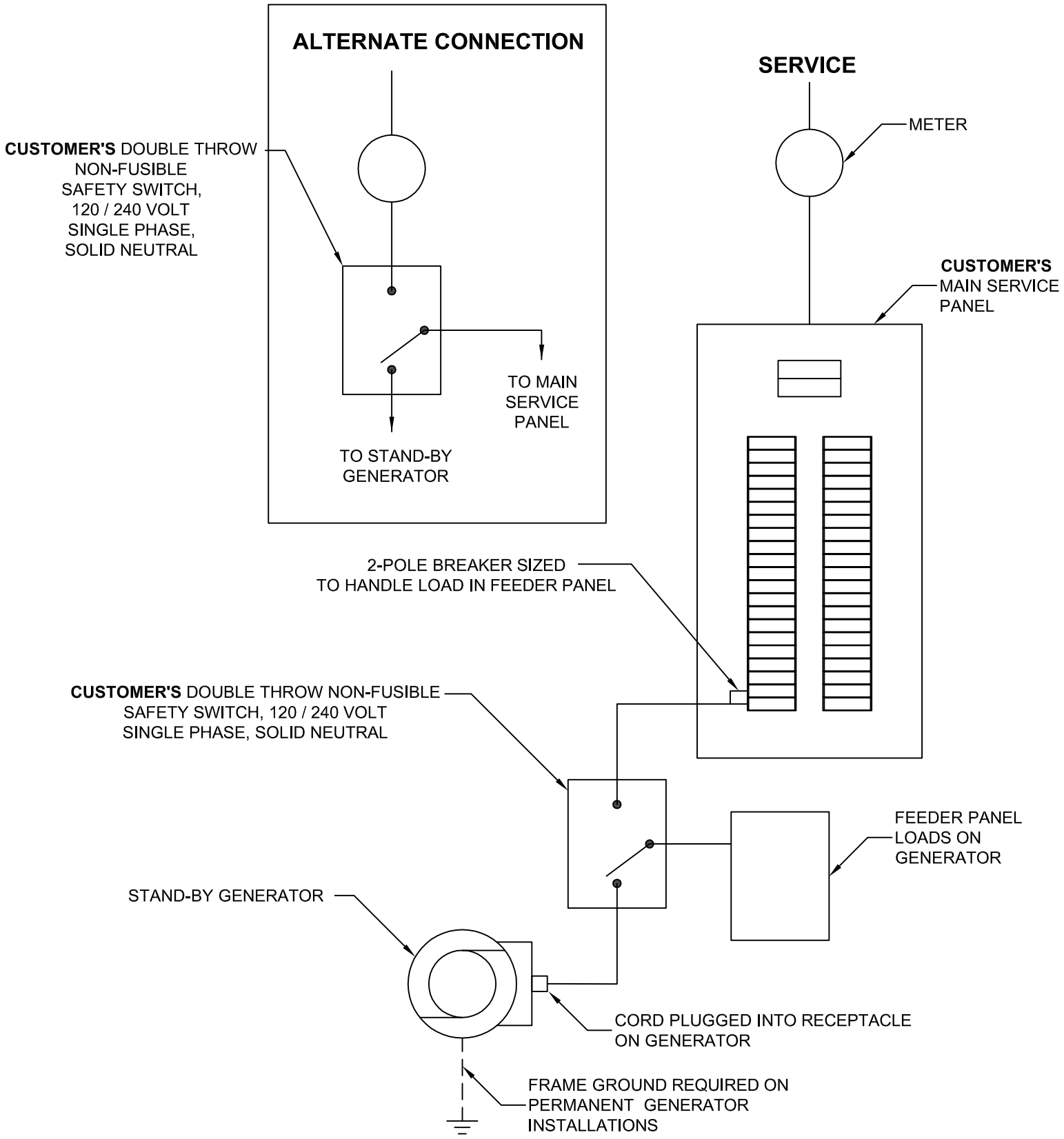
SINGLE OR THREE PHASE POLE MOUNTED SERVICE EQUIPMENT W/ MAIN DISCONNECT.
(EXCLUDES MOBILE HOME)



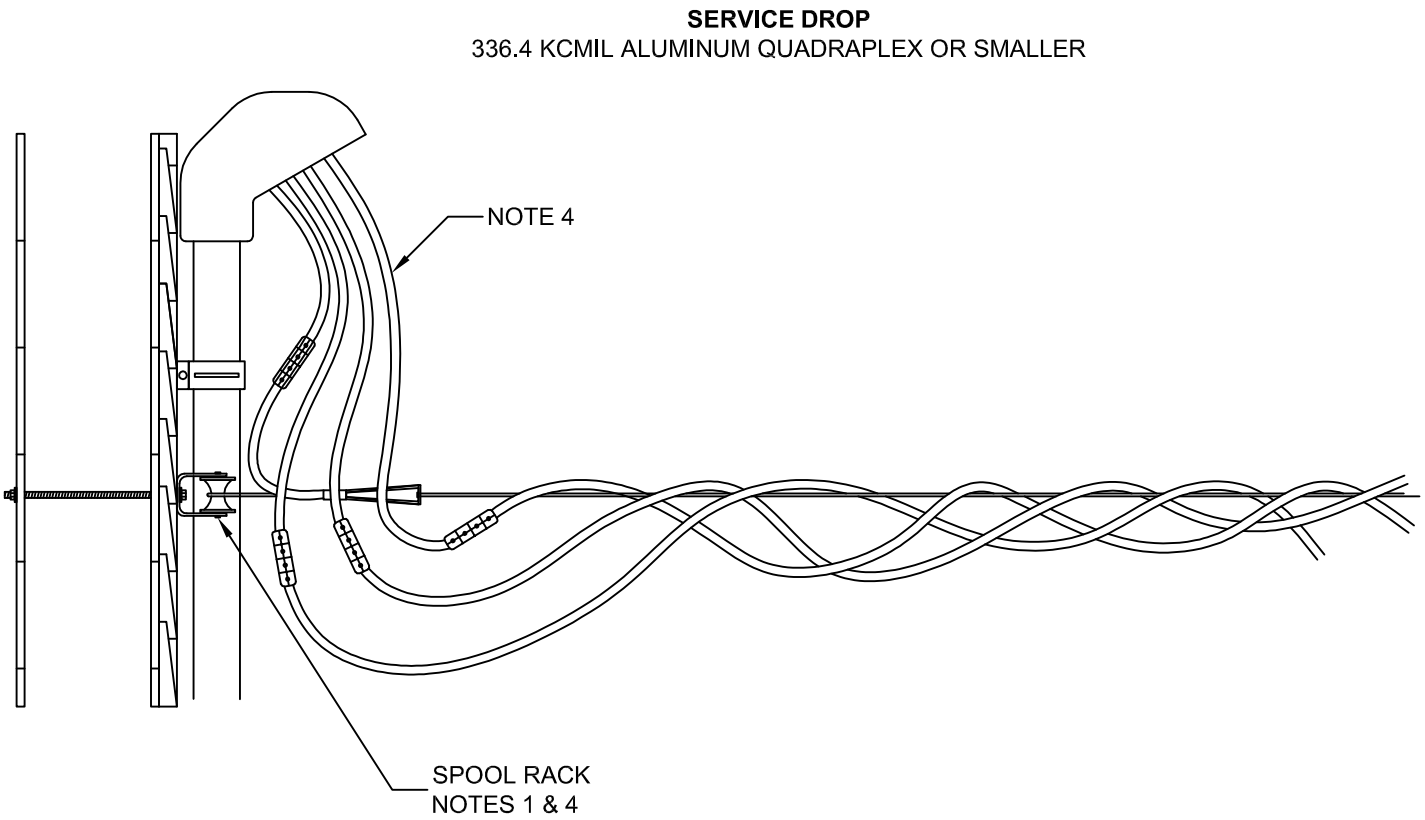
NOTES:

1. **CUSTOMER** SHALL FURNISH AND INSTALL THE UTILITY APPROVED POLE. POLE REQUIREMENTS: 30' CLASS 4 (RECOMMENDED), CHEMICAL PRESERVATIVE TREATED POLE, INSTALLED MINIMUM OF 5' IN GROUND AND WELL TAMPED. IF RECOMMENDED POLE HEIGHT NEEDS TO BE EXCEEDED, THE UTILITY TO BE CONSULTED FOR APPROVAL PRIOR TO POLE BEING SET.
2. IF SERVICE DROP EXCEEDS 100' OR PROPER POLE SETTING DEPTH CAN NOT BE OBTAINED, THE UTILITY SHALL INSTALL PROPER GUYING.THE UTILITY WILL BOND GUY TO SERVICE NEUTRAL**. CUSTOMER** SHALL PAY APPLICABLE CHARGES.
3. **CUSTOMER** SHALL FURNISH AND INSTALL ALL SERVICE ENTRANCE FACILITIES LOCATED ON THE LOAD SIDE OF SERVICE DROP CONNECTORS (INCLUDING METER SOCKET). THE UTILITY WILL FURNISH AND INSTALL METER. SERVICE ENTRANCE RACEWAY TO BE BURIED AT A MINIMUM OF 24" BELOW GRADE
4. THE SERVICE ENTRANCE SHALL BE A MINIMUM 100 AMP. WITH MAIN DISCONNECT MEANS AND LABELED "SUITABLE FOR USE AS SERVICE EQUIPMENT".
5. FOR 480 / 277 VOLT WYE SERVICES (3-PHASE, 4-WIRE), SEE FIGURE 30. METER DISCONNECT REQUIRED AHEAD OF METER SOCKET.
6. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
7. MINIMUM BURIAL DEPTH OF 24"
8. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
9. ANTENNAS OR AERIALS SHALL NOT BE ATTACHED TO ANY POLE USED FOR SUPPLYING ELECTRIC SERVICE TO CUSTOMERS
10. RACEWAY ON LINE SIDE OF METER TO WEATHER HEAD SHALL BE GALVANIZED RIGID STEEL. LOAD SIDE OF METER AND ALL UNDERGROUND RACEWAY SHALL BE SCHEDULE 40 PVC, UNLESS NOTED OTHERWISE.

STAND-BY GENERATOR FOR 120 / 240 VOLT SINGLE-PHASE SERVICE (CUSTOMER OWNED) (FIGURE 8)



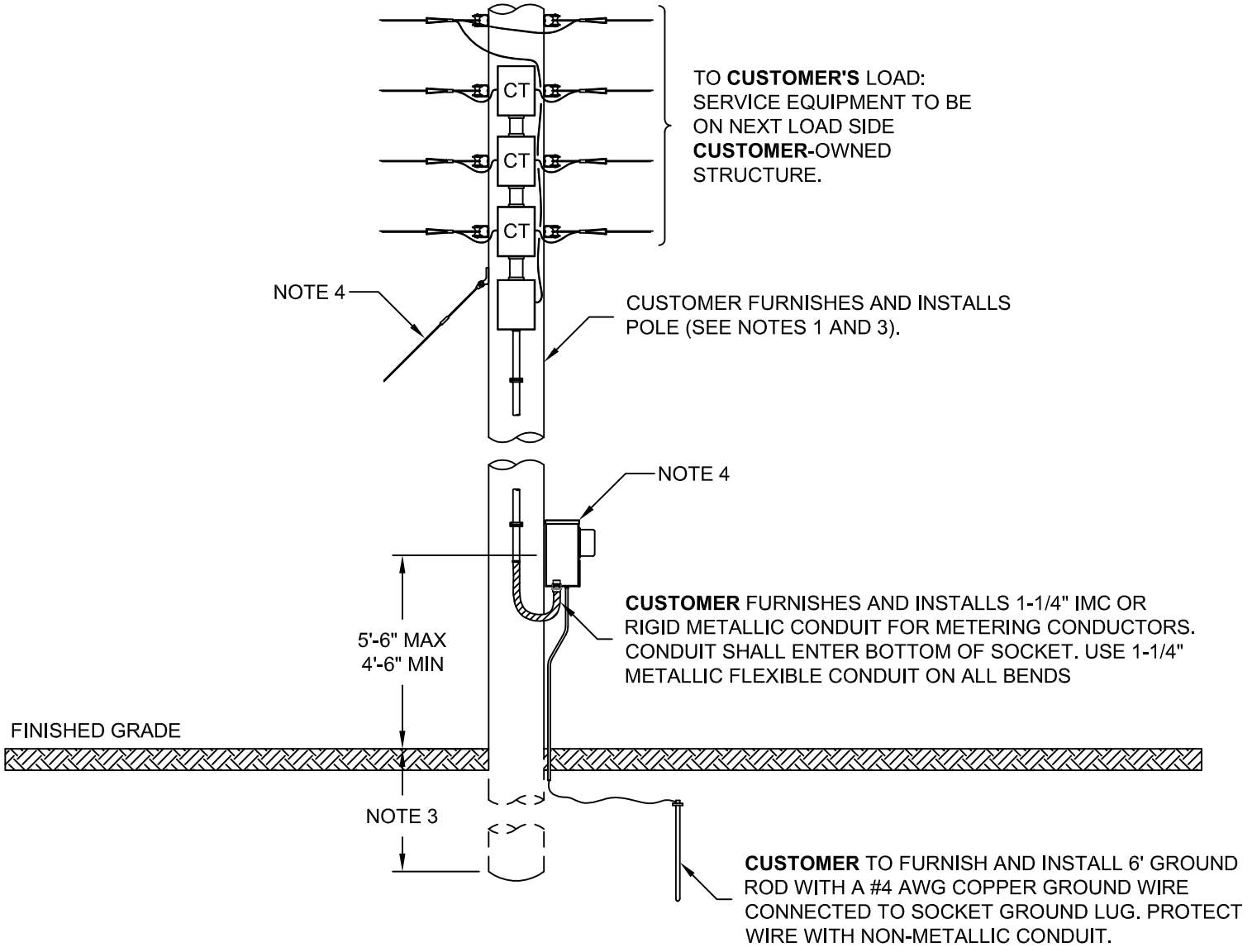
TYPICAL OVERHEAD SERVICE INSTALLATION BUILDING ATTACHMENT 3-PHASE, 4-WIRE SERVICE (FIGURE 9)



NOTES:

1. **CUSTOMER** SHALL FURNISH AND INSTALL 1 SPOOL ATTACHED ON FRAME BUILDING WITH ½" MACHINE BOLT THROUGH STUDDING.
2. CONSULT THE UTILITY IF RACK IS TO BE MOUNTED ON BRICK, CONCRETE, OR TILE WALL.
3. THE UTILITY TERMINATES SERVICE DROP ON SPOOL RACK AT A SINGLE POINT TO BE DETERMINED BY THE UTILITY.
4. **CUSTOMER** SHALL FURNISH AND INSTALL SERVICE ENTRANCE CONDUCTORS -24" MINIMUM LEAD FROM SERVICE HEAD. IF THE UTILITY AGREES TO ALLOW CUSTOMER TO INSTALL BRACKET ABOVE SERVICE HEAD, BRACKET SHALL BE LOCATED NO MORE THAN 24 INCHES FROM SERVICE HEAD.

POLE MOUNTED TRANSFORMER-RATED METERING (CUSTOMER-OWNED POLE) (FIGURE 10)



NOTES:

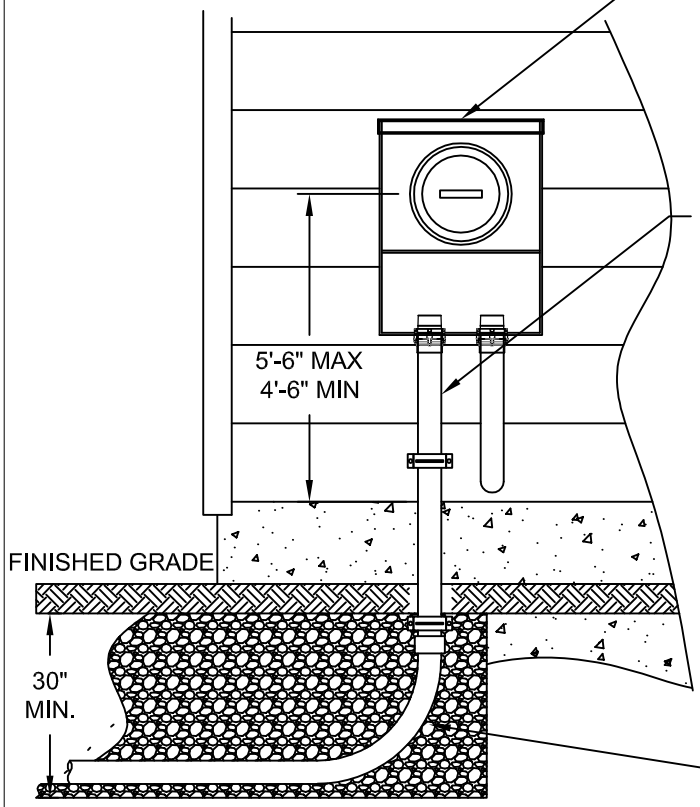
1. **CUSTOMER** SHALL CONSULT THE UTILITY FOR LOCATION OF POLE.
2. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTION OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
3. **CUSTOMER** SHALL FURNISH AND INSTALL THE UTILITY APPROVED POLE TREATED WITH CHEMICAL PRESERVATIVE. POLE REQUIREMENT: 30' LENGTH, CLASS 4 (RECOMMENDED); INSTALLED MINIMUM 5' IN GROUND AND WELL TAMPED. IF SERVICE DROP EXCEEDS 50' OR PROPER SETTING DEPTH CANNOT BE OBTAINED. **CUSTOMER** SHALL INSTALL PROPER GUYING. THE UTILITY WILL BOND GUY TO SERVICE NEUTRAL.
4. METERING TRANSFORMER PACKAGE AND METER SOCKET SUPPLIED AND INSTALLED BY THE UTILITY. NUMBER OF CURRENT AND VOLTAGE TRANSFORMERS WILL VARY WITH SERVICE TYPE.

TYPICAL 400 AMP UNDERGROUND SERVICE INSTALLATION (FIGURE 11)

CUSTOMER SHALL FURNISH AND INSTALL 400 AMP METER SOCKET WITH INTEGRAL DISCONNECT AND CONNECT LOAD SIDE CONDUCTORS. COMPANY WILL CONNECT LINE SIDE CONDUCTORS AND INSTALL METER. SOCKET SHALL NOT BE RECESSED INTO WALL. USE ONLY TWO OUTSIDE KNOCKOUTS (NOT CENTER OF BOTTOM) FOR UNDERGROUND SERVICE.

CUSTOMER SHALL FURNISH 3" CONDUIT RISER, CLAMPS AND 3" EXPANSION COUPLING. METER SOCKET SHALL BE LEFT OR RIGHT BUSSED. SERVICE RISER CONDUIT SHALL BE INSTALLED IN THE KNOCKOUT DIRECTLY UNDER THE LINE SIDE TERMINALS. LOAD CONDUCTORS SHALL NOT OBSTRUCT SERVICE RISER CONDUIT OPENING.

THE UTILITY SHALL INSTALL ALL CONDUIT



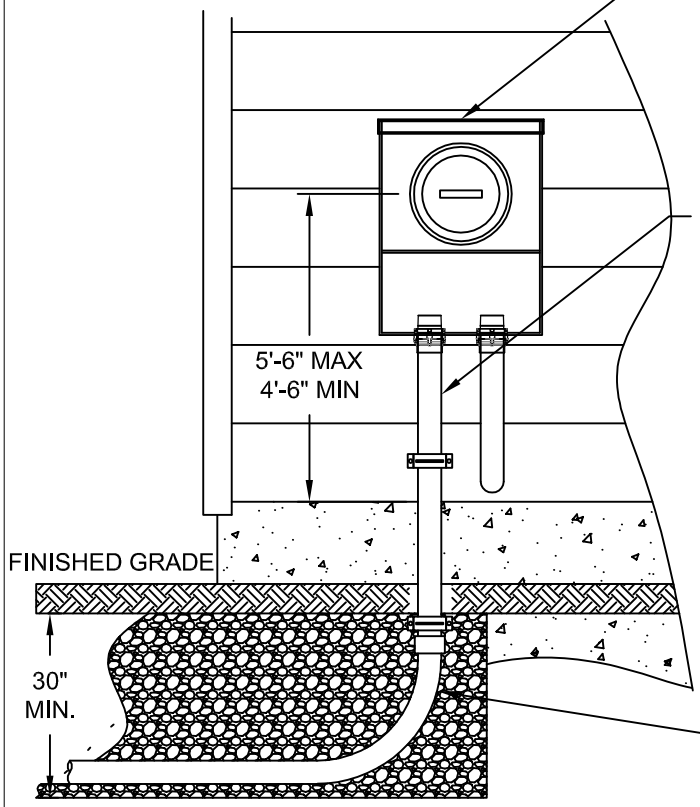
SEE FIGURE 34 FOR TYPICAL BONDING CONNECTOR.

NOTES:

1. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
2. SEE FIGURE 2 FOR GROUNDING REQUIREMENTS.
3. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
4. CONDUIT RISER AND SWEEP ELBOW SHALL BE 3" SCHEDULE 40 PVC. SERVICE LATERAL CONDUIT SHALL BE 3" DIAMETER SCHEDULE 40 PVC. ALL CONDUIT SHALL BE ELECTRICAL GRADE. CLAMPS SHALL BE SECURELY ANCHORED TO FRAMING TIMBER OR MASONRY.
5. CONDUIT RISER SHALL HAVE WEEP HOLES AT GROUND LINE WHEN REQUIRED.

TYPICAL 200 AMP OR LESS UNDERGROUND SERVICE INSTALLATION (FIGURE 12)

CUSTOMER SHALL FURNISH AND INSTALL 200 AMP MINIMUM METER SOCKET WITH INTEGRAL DISCONNECT AND CONNECT LOAD SIDE CONDUCTORS. COMPANY WILL CONNECT LINE SIDE CONDUCTORS AND INSTALL METER. SOCKET SHALL NOT BE RECESSED INTO WALL. USE ONLY TWO OUTSIDE KNOCKOUTS (NOT CENTER OF BOTTOM) FOR UNDERGROUND SERVICE.



CUSTOMER SHALL FURNISH 2 $\frac{1}{2}$" CONDUIT RISER, CLAMPS AND2 $\frac{1}{2}$" EXPANSION FITTING. METER SOCKET SHALL BE LEFT OR RIGHT BUSSED. SERVICE RISER CONDUIT SHALL BE INSTALLED IN THE KNOCKOUT DIRECTLY UNDER THE LINE SIDE TERMINALS. LOAD CONDUCTORS SHALL NOT OBSTRUCT SERVICE RISER CONDUIT OPENING.

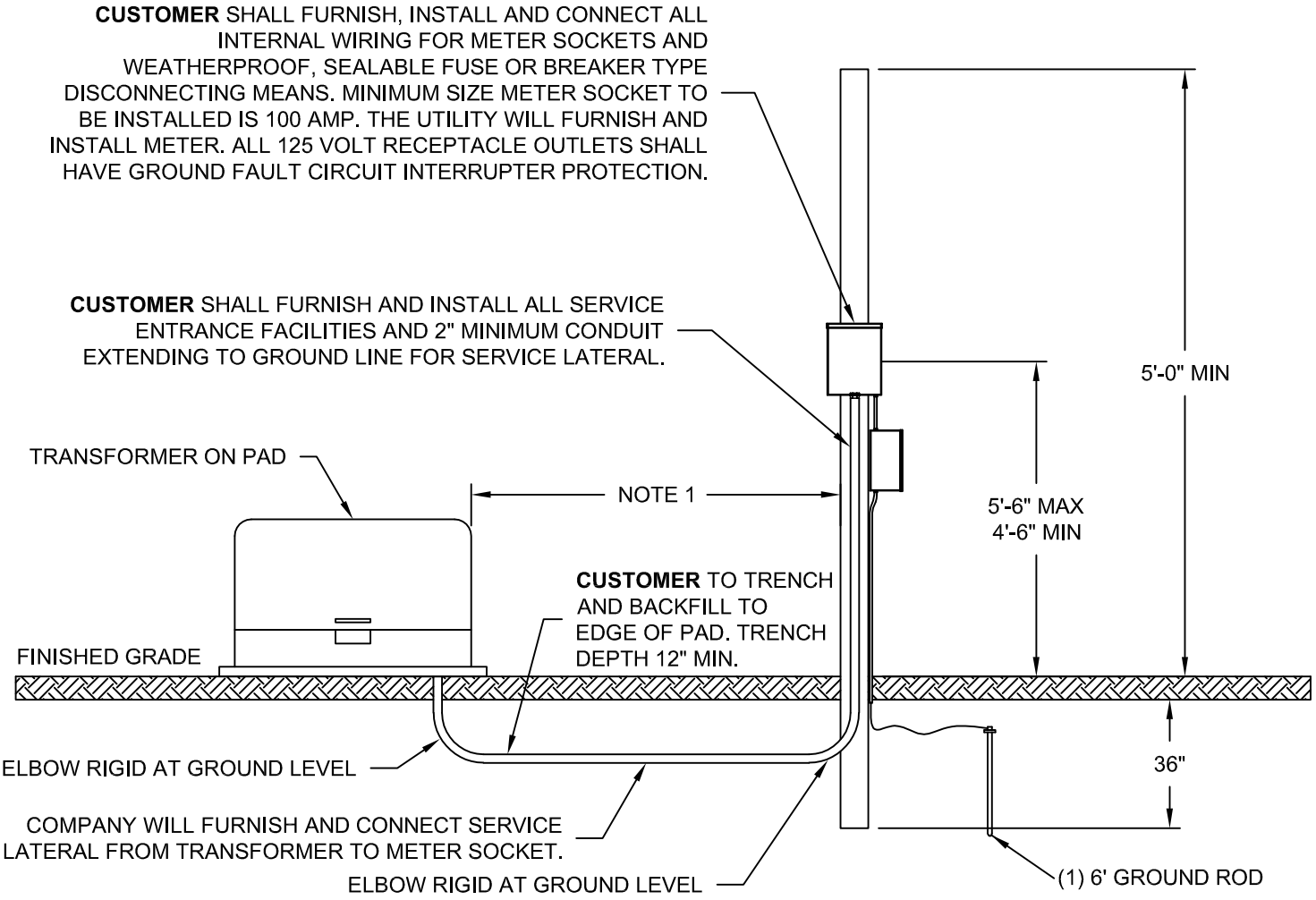
THE UTILITY SHALL INSTALL ALL CONDUIT

SEE FIGURE 34 FOR TYPICAL BONDING CONNECTOR.

NOTES:

1. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
2. SEE FIGURE 2 FOR GROUNDING REQUIREMENTS.
3. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
4. CONDUIT RISER AND SWEEP ELBOW SHALL BE 2 $\frac{1}{2}$ " SCHEDULE 40 PVC. SERVICE LATERAL CONDUIT SHALL BE 2 $\frac{1}{2}$"DIAMETER SCHEDULE 40 PVC. ALL CONDUIT SHALL BE ELECTRICAL GRADE. CLAMPS SHALL BE SECURELY ANCHORED TO FRAMING TIMBER OR MASONRY.
5. CONDUIT RISER SHALL HAVE WEEP HOLES AT GROUND LINE WHEN REQUIRED.

TEMPORARY UNDERGROUND SERVICE SUPPORT AT TRANSFORMER (FIGURE 13)

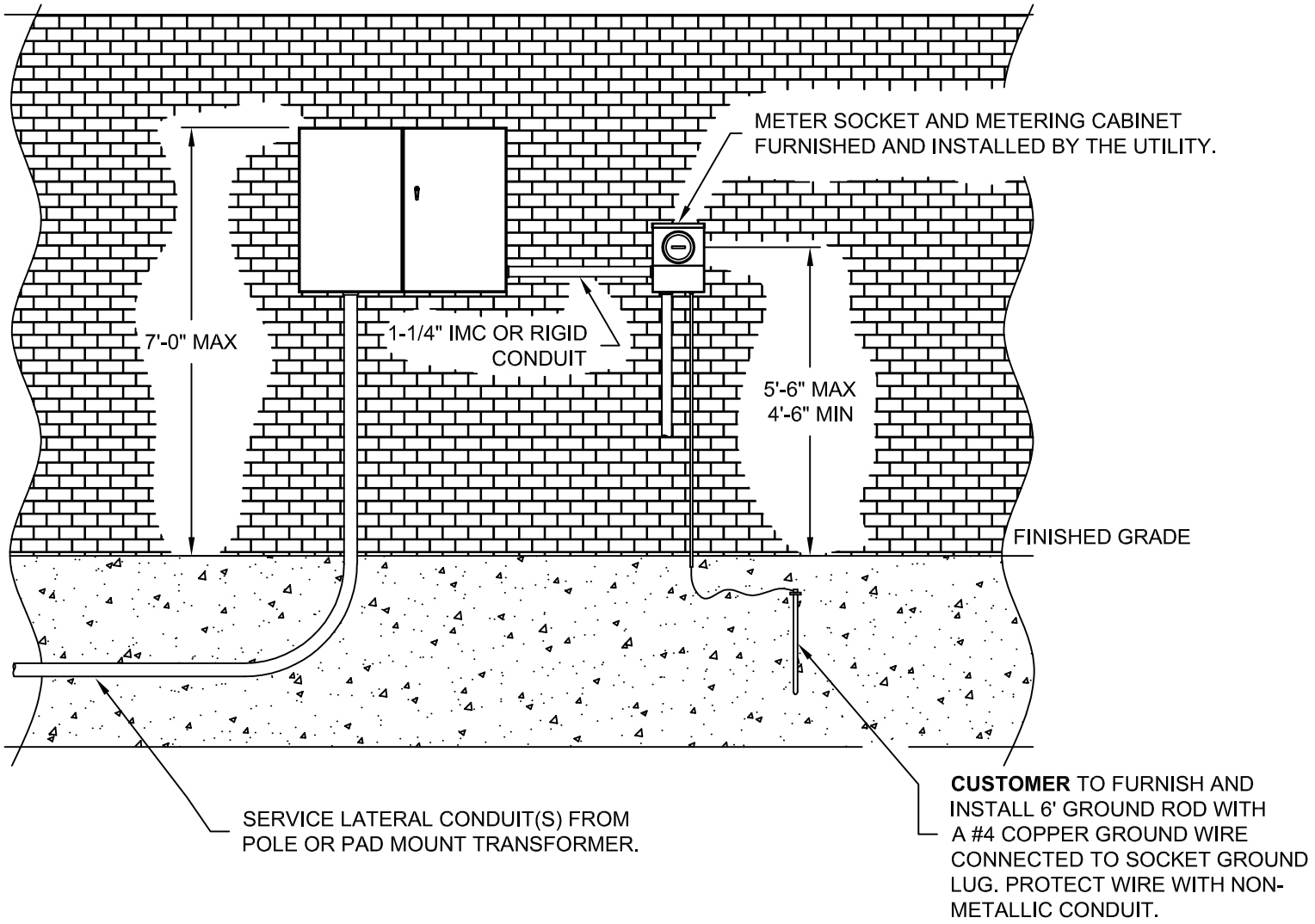


NOTES:

1. **CUSTOMER** SHALL CONSULT WITH THE UTILITY FOR LOCATION OF TEMPORARY SERVICE POST OR SUPPORT. SUCH SUPPORT SHALL BE LOCATED WITHIN 5' OF THE UTILITY'S TRANSFORMER OR SECONDARY, UNLESS OTHERWISE APPROVED BY THE UTILITY.
2. **CUSTOMER** SHALL FURNISH AND INSTALL A NOMINAL 4" x 4" x 8', PRESSURE TREATED POST OR OTHER UTILITY APPROVED SUPPORT.
3. **CUSTOMER** SHALL TRENCH AND BACKFILL FOR THE UTILITY SERVICE LATERAL CONDUCTORS. TRENCH TO BE EXCAVATED IN LOCATION INDICATED BY THE UTILITY.
4. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
5. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.

UNDERGROUND TRANSFORMER-RATED METERING INSTALLATION (3-PHASE, 4-WIRE SERVICE) (FIGURE 14)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION

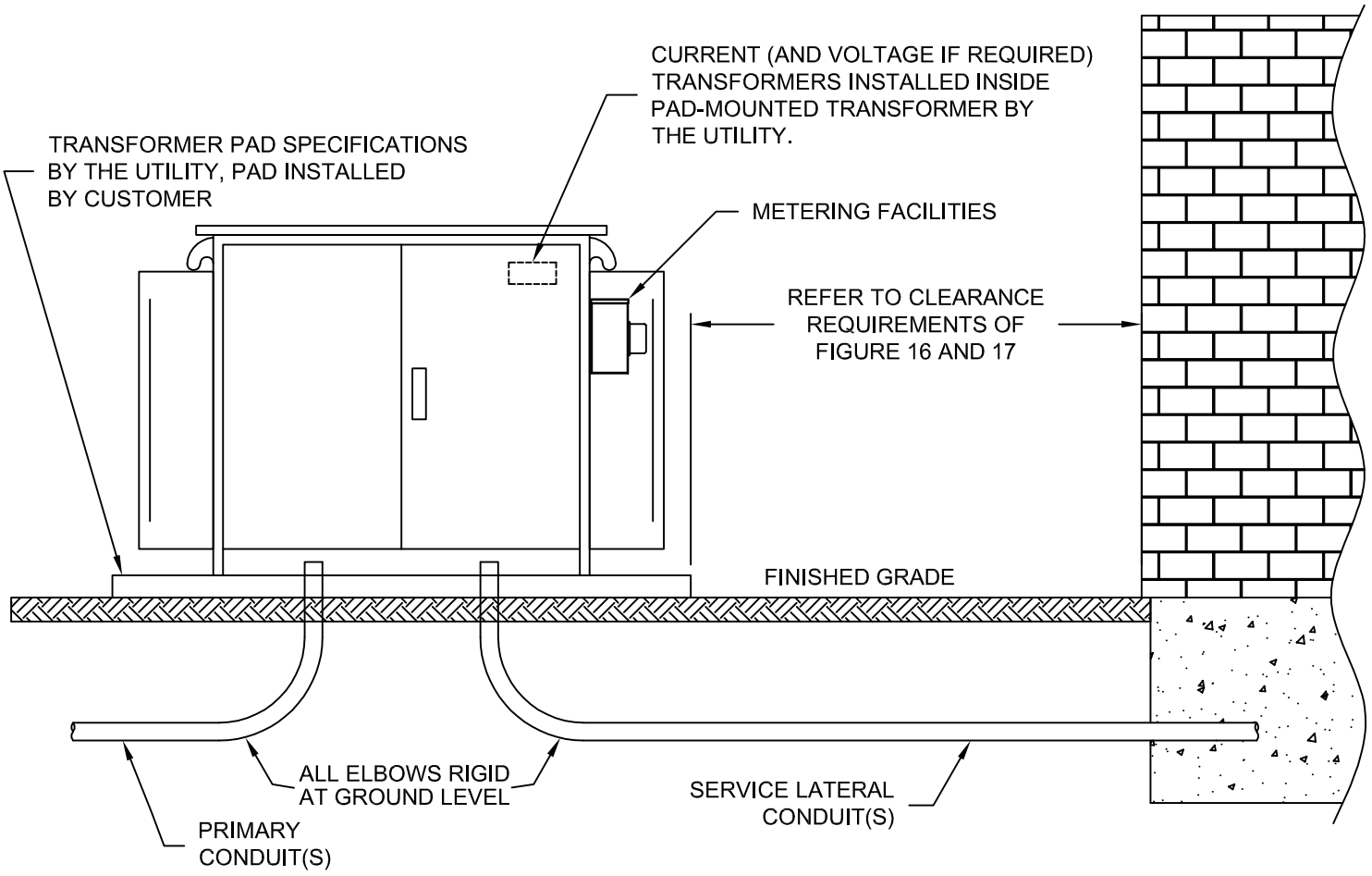


NOTES:

1. FOR METERING LOCATED ON BUILDING, SERVICE LATERAL CONDUIT(S) SHALL BE FURNISHED AND INSTALLED BY **CUSTOMER**, OWNED AND MAINTAINED BY THE UTILITY. TRENCHING AND BACKFILLING IS RESPONSIBILITY OF **CUSTOMER**. CONDUIT SHALL HAVE WEEP HOLES AT GROUND LINE WHEN REQUIRED.
2. SERVICE LATERAL INSTALLED IN CONDUIT SHALL BE INSTALLED AS A-B-C-N IN EACH CONDUIT.
3. THE UTILITY WILL PROVIDE ALL CONNECTORS AND MAKE ALL CONNECTIONS AT METERING CABINET.
4. **CUSTOMER** SHALL GIVE THE UTILITY ADEQUATE ADVANCE NOTICE AS TO NUMBER AND SIZE OF CONDUCTORS **CUSTOMER** WILL INSTALL.

TYPICAL TRANSFORMER-RATED METERING INSTALLATION AT PAD-MOUNTED TRANSFORMER (3-PHASE, 4-WIRE SERVICE) (FIGURE 15)

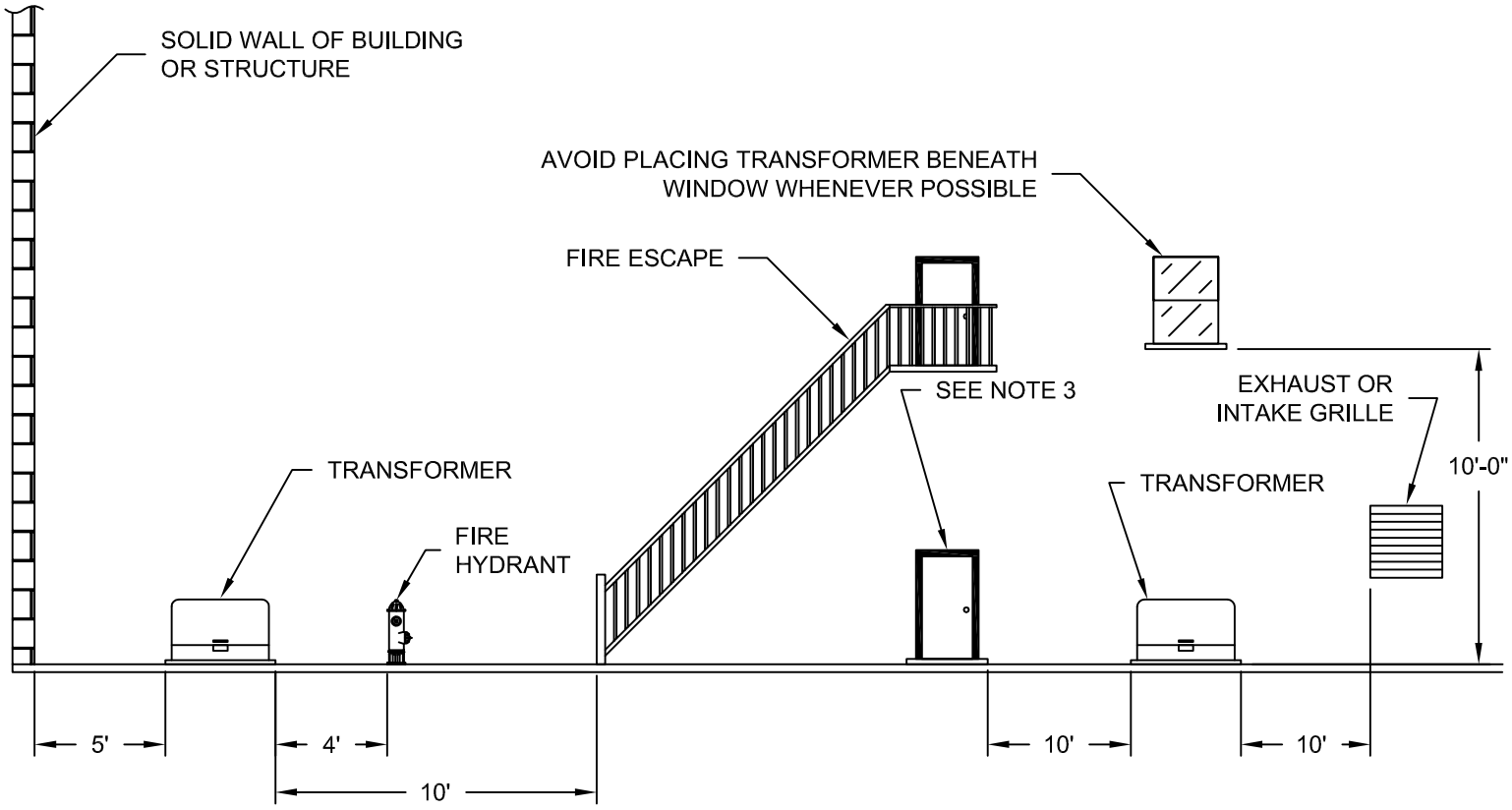
CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION



NOTES:

1. FOR METERING LOCATED AT PAD-MOUNTED TRANSFORMER, SERVICE LATERAL SHALL BE FURNISHED, INSTALLED, OWNED AND MAINTAINED BY **CUSTOMER**.
2. TRENCHING AND BACKFILLING SHALL BE DONE BY THE **CUSTOMER**.
3. SERVICE LATERAL INSTALLED IN CONDUIT SHALL BE INSTALLED AS A-B-C-N IN EACH CONDUIT.
4. **CUSTOMER** WILL PROVIDE ALL CONNECTORS AND MAKE ALL SECONDARY CONNECTIONS AT TRANSFORMER.
5. **CUSTOMER** SHALL GIVE THE UTILITY ADEQUATE ADVANCE NOTICE AS TO NUMBER AND SIZE OF CONDUCTORS **CUSTOMER** WILL INSTALL.
6. BARRIERS MAY BE REQUIRED BY THE UTILITY FOR PROTECTION OF TRANSFORMER FROM VEHICULAR DAMAGE.

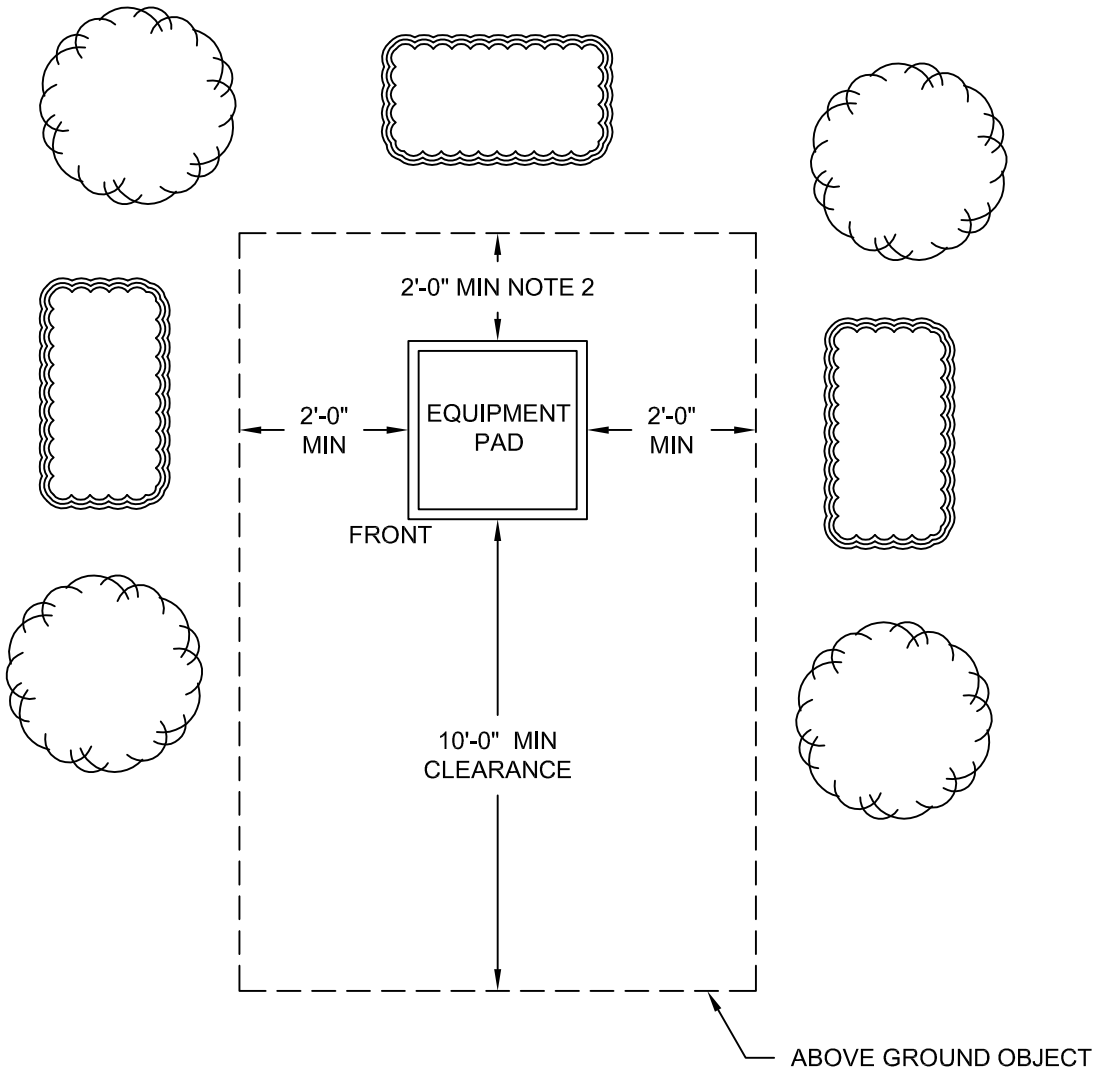
CLEARANCE REQUIREMENTS FROM BUILDINGS FOR PAD MOUNTED TRANSFORMER (FIGURE 16)



NOTES:

1. CERTAIN CONDITIONS MAY REQUIRE CURBING TO CONFINE OIL IN CASE OF TANK RUPTURE.
2. NO PORTION OF BUILDING OR BUILDING STRUCTURE SHALL OVERHANG ANY PART OF PAD-MOUNTED TRANSFORMER.
3. FIREPROOF DOOR, FOR EXITS FROM PUBLIC ASSEMBLY, SUCH AS AUDITORIUM, 10' CLEARANCE TO TRANSFORMER SHOULD BE INCREASED TO 25', UNLESS THERE IS BARRIER.

CLEARANCES OF PAD-MOUNTED EQUIPMENT FROM SHRUBS, PLANTS, FENCING AND OTHER OBSTRUCTIONS (FIGURE 17)

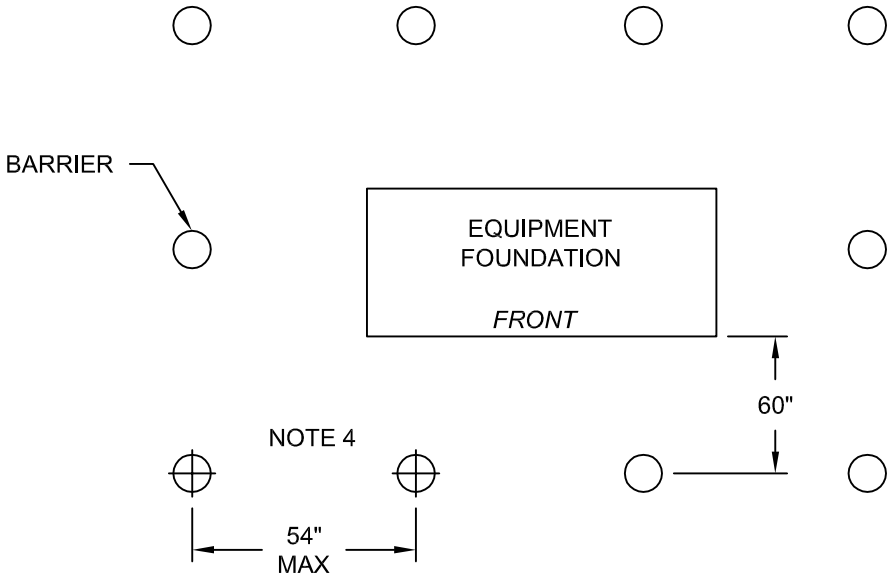


NOTES:

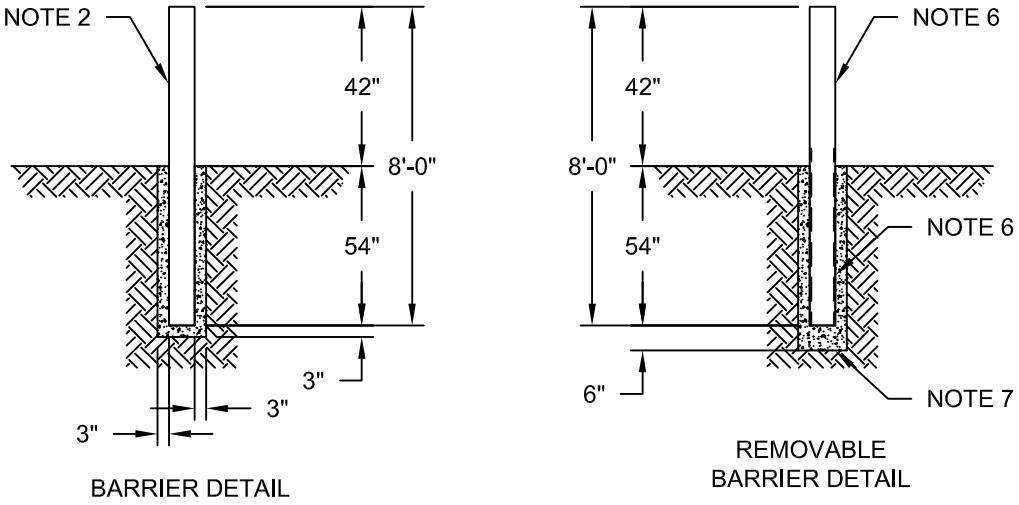
1. 2' MINIMUM DIMENSION IS CLEARANCE THAT SHALL BE MAINTAINED WHEN PLANTS REACH MATURITY. ALLOW ADEQUATE SPACE FOR FUTURE GROWTH, AND AVOID PLANTING SHRUBS OR SETTING POSTS DIRECTLY OVER CABLES.
2. IF PAD-MOUNTED EQUIPMENT IS SWITCH OR OTHER SIMILAR DEVICE WITH FRONT AND REAR DOORS, THIS DISTANCE SHALL BE INCREASED TO 10'.
3. WARNING - PAD-MOUNTED TRANSFORMER AND PAD-MOUNTED EQUIPMENT HAVE UNDERGROUND ELECTRIC CABLES ENTERING AND EXITING THEM BELOW GRADE. IF IT IS DECIDED TO INSTALL PLANTS AROUND PAD, CALL THE UTILITY PRIOR TO INSTALLATION.

VEHICULAR BARRIER FOR PAD-MOUNTED EQUIPMENT (FIGURE 18)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION



PLAN VIEW



BARRIER DETAIL

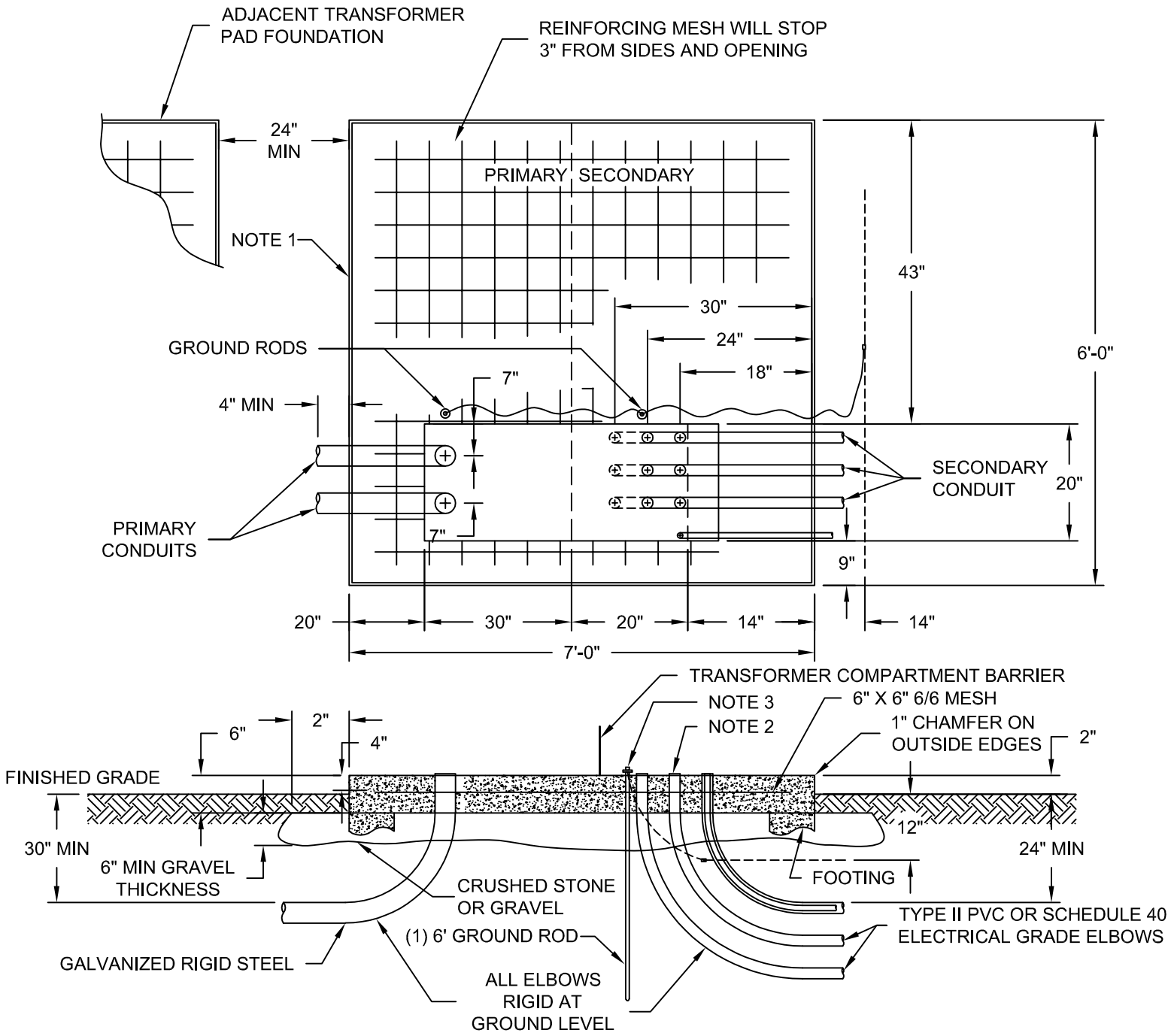
REMOVABLE BARRIER DETAIL

NOTES:

1. USE BARRIER TO PROTECT EQUIPMENT FROM POSSIBLE DAMAGE FROM VEHICLES.
2. USE 6" RIGID GALVANIZED STEEL CONDUIT, CUT TO 8' AND FILL WITH CONCRETE. ENCASE IN 3" OF CONCRETE, AS SHOWN.
3. THIS DISTANCE MAY BE REDUCED TO 24" BY WITH PRIOR APPROVAL, FROM THE UTILITY PROVIDED CLEARANCES ARE MAINTAINED FOR ITEMS SUCH AS TRANSFORMER RADIATORS AND EQUIPMENT DOOR OPENINGS.
4. PROVIDE CLEARANCE FOR REMOVAL OR REPLACEMENT OF EQUIPMENT WHEN OVERHEAD OBSTACLES PREVENT LARGE VEHICLES FROM STRIKING PAD-MOUNTED EQUIPMENT.
5. WHEN NECESSARY, HEIGHT OF BARRIER ABOVE GROUND MAY BE INCREASED TO PREVENT LARGE VEHICLES FROM STRIKING PAD-MOUNTED EQUIPMENT.
6. FOR REMOVABLE VEHICLE BARRIERS, USE 6" PVC SCHEDULE 40 CONDUIT, CUT TO 54" AND ENCASED IN CONCRETE. INSERT 8' OF 5" GALVANIZED STEEL CONDUIT, WITH CAP, INTO PVC CONDUIT.
7. USE 6" OF COMPACTED STONE OR GRAVEL FOR SUMP.

CONCRETE PAD FOUNDATION 75 TO 500 KVA, THREE-PHASE, 12.47 KV HIGH SIDE (FIGURE 19)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION

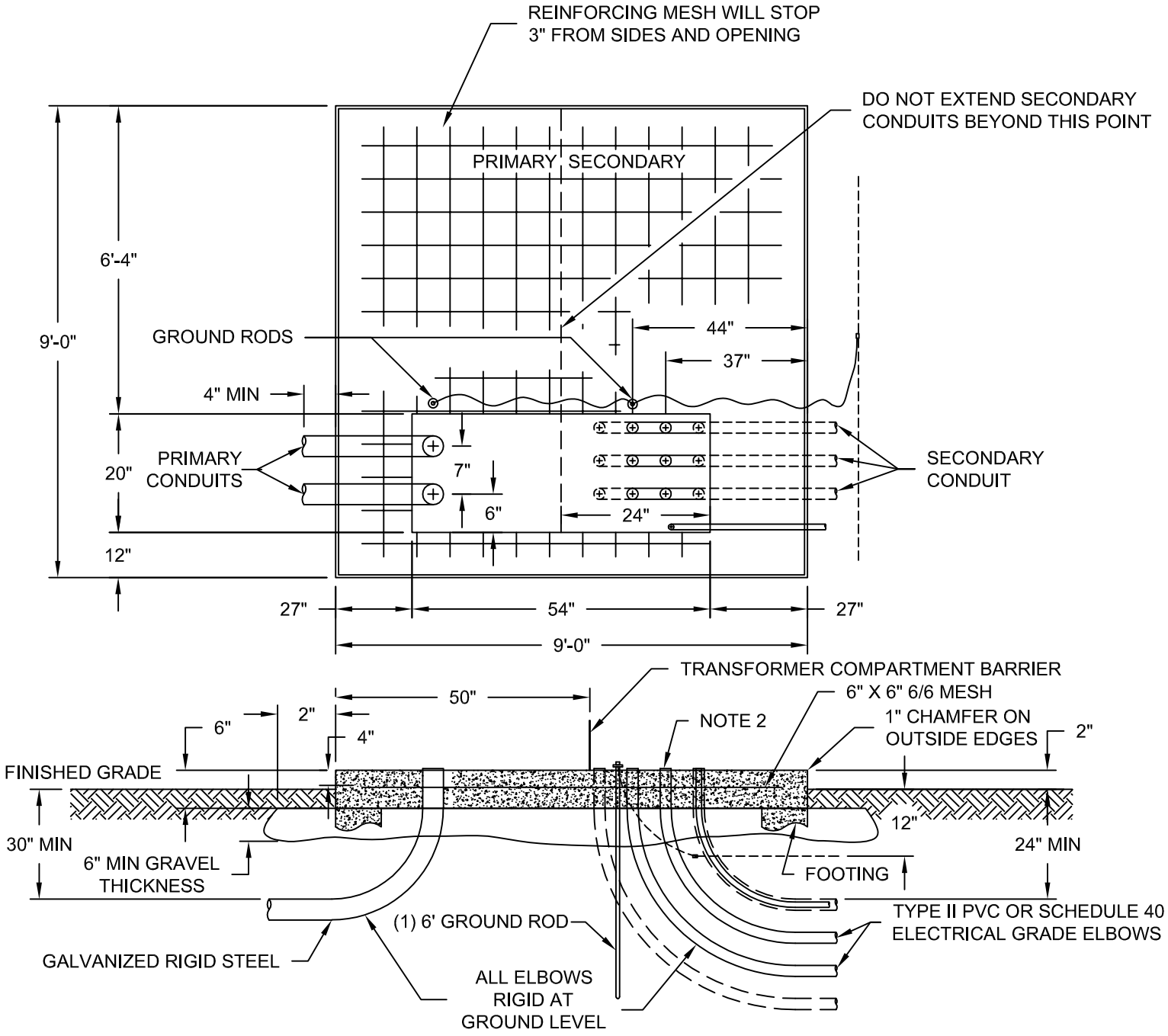


NOTES:

1. REFERENCE FIGURE 21 FOR CONCRETE PAD FOUNDATION, PAD-MOUNTED TRANSFORMER GENERAL NOTES.
2. SECONDARY CONDUITS SHOULD NOT EXTEND MORE THAN 2" ABOVE TOP OF FOUNDATION. PRIMARY CONDUITS SHOULD BE CUT OFF 2" BELOW TOP OF FOUNDATION TO ALLOW FOR TERMINATING THE CABLES.
3. **CUSTOMER** SHALL FURNISH AND INSTALL GROUND RODS AND GROUNDING CONNECTIONS. EXTEND GROUND RODS 2" ABOVE TOP OF FOUNDATION TO ACCOMMODATE GROUND JUMPER.
4. SEE FIGURE 16 FOR CLEARANCE FROM BUILDING WALL OR OTHER PARTS OF BUILDING.

CONCRETE PAD FOUNDATION PAD-MOUNTED TRANSFORMER 750 TO 2500 KVA, THREE-PHASE, 12.47 KV HIGH SIDE (FIGURE 20)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION



NOTES:

1. REFERENCE FIGURE 21 FOR CONCRETE PAD FOUNDATION, PAD-MOUNTED TRANSFORMER GENERAL NOTES.
2. SECONDARY CONDUITS SHOULD NOT EXTEND MORE THAN 2" ABOVE TOP OF FOUNDATION. PRIMARY CONDUITS SHOULD BE CUT OFF 2" BELOW TOP OF FOUNDATION TO ALLOW FOR TERMINATING THE CABLES.
3. **CUSTOMER** SHALL FURNISH AND INSTALL GROUND RODS AND GROUNDING CONNECTIONS. EXTEND GROUND RODS 2" ABOVE TOP OF FOUNDATION TO ACCOMMODATE GROUND JUMPER.
4. SEE FIGURE 16 FOR CLEARANCE FROM BUILDING WALL OR OTHER PARTS OF BUILDING.

CONCRETE PAD FOUNDATION PAD-MOUNTED TRANSFORMER GENERAL NOTES (FIGURE 21)

NOTES:

1. INSTALL ALL CONDUITS BEFORE PLACING PAD. CONDUITS SHOULD NOT BE PLACED UNDER SECTIONS OF PAD SUPPORTING TRANSFORMER SO THAT ORIGINAL GROUND WILL NOT BE DISTURBED.

2. CONDUIT SHALL BE GALVANIZED RIGID STEEL FOR THE PRIMARY AND SCHEDULE 40 PVC FOR THE SECONDARY.

3. BACKFILL SHALL BE CLEAN GRANULAR SOIL, FREE OF LARGE STONES AND PERISHABLE MATERIAL. ALL BACKFILL SHALL BE SPREAD AND COMPACTED IN MAXIMUM LAYERS OF 8 INCHES.

4. THOROUGHLY COMPACT CRUSHED STONE OR GRAVEL.

5. CONCRETE PAD MAY BE POURED IN PLACE OR MAY BE PRECAST.

6. TO PREVENT WATER MIGRATION FROM CONCRETE WHEN POURING, PLACE WATERPROOF MEMBRANE ON CRUSHED STONE OR GRAVEL BEFORE POURING CONCRETE.

7. REINFORCING WIRE MESH SHALL CONFORM TO ASTM DESIGNATION A185.

8. CEMENT TO BE 1 OR 1-A AND MEETING ASTM DESIGNATIONS C-150 AND C-175, RESPECTIVELY.

9. CONCRETE TO DEVELOP 3000 PSI AT 28 DAYS AGE, CONTAIN MINIMUM OF 5.5 BAGS OF CEMENT PER CU. YD. AND MAXIMUM OF 6 GALLONS OF WATER PER 94 POUND BAG OF CEMENT, AND CONFORM TO ASTM DESIGNATION C-94. 14 DAYS MINIMUM DRYING TIME BEFORE TRANSFORMER IS SET. FOR FIGURE 19, VOLUME OF CONCRETE IS APPROXIMATELY 0.7 CU. YDS. FOR FIGURE 20, VOLUME OF CONCRETE IS APPROXIMATE 1.7 CU. YDS.

10. SEAL ALL OPENINGS AROUND CONDUITS WITH GROUT. CAP ALL SPARE CONDUITS TO PREVENT ENTRY OF RODENTS AND ANIMALS INTO TRANSFORMER COMPARTMENT.

11. IF CONDUIT EXTENDS INTO BUILDING, IT SHALL BE SEALED (PER NEC) AT BUILDING END TO PREVENT GAS FROM ENTERING BUILDING THROUGH THE CONDUIT.

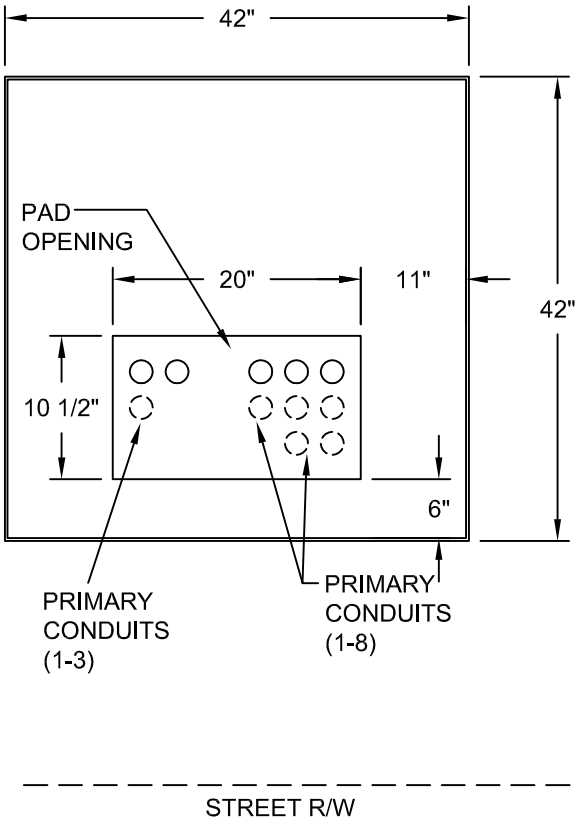
12. WHERE DAMAGE TO TRANSFORMER BY VEHICLES IS POSSIBLE, TRANSFORMER SHALL BE PROTECTED BY APPROPRIATE BARRIER SHOWN ON FIGURE 18.

13. TRANSFORMER PAD DESIGN PROVIDED BY THE UTILITY.

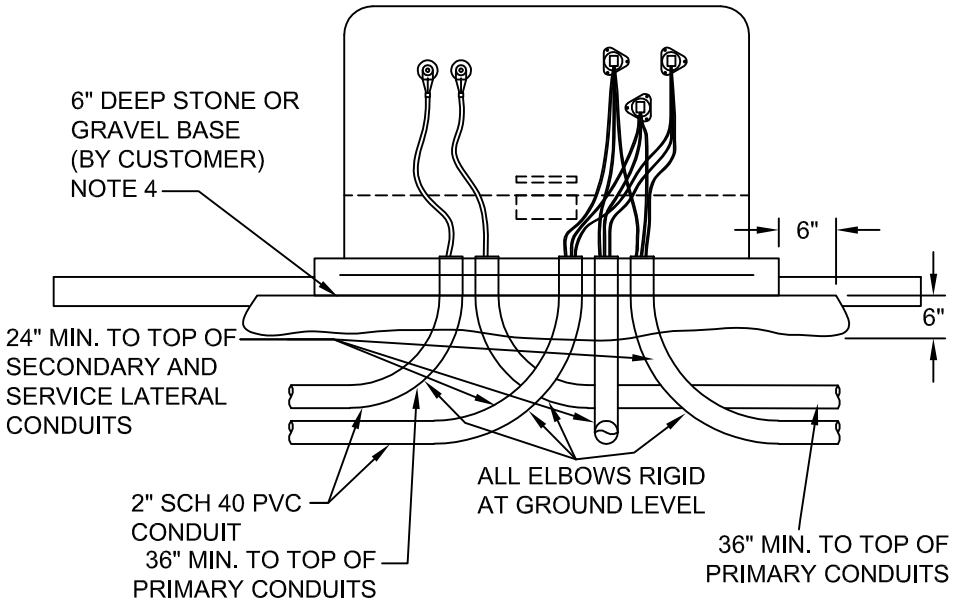
PAD FOUNDATION PAD MOUNTED TRANSFORMER SINGLE PHASE (FIGURE 22)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION

PLAN VIEW DETAIL



ELEVATION DETAIL

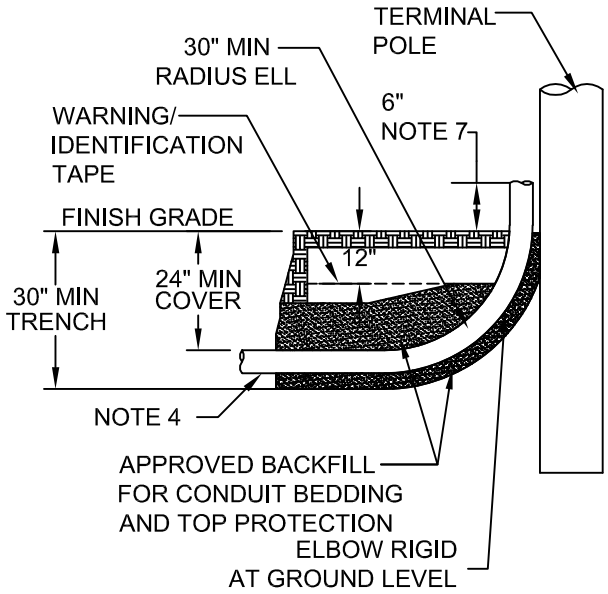


NOTES:

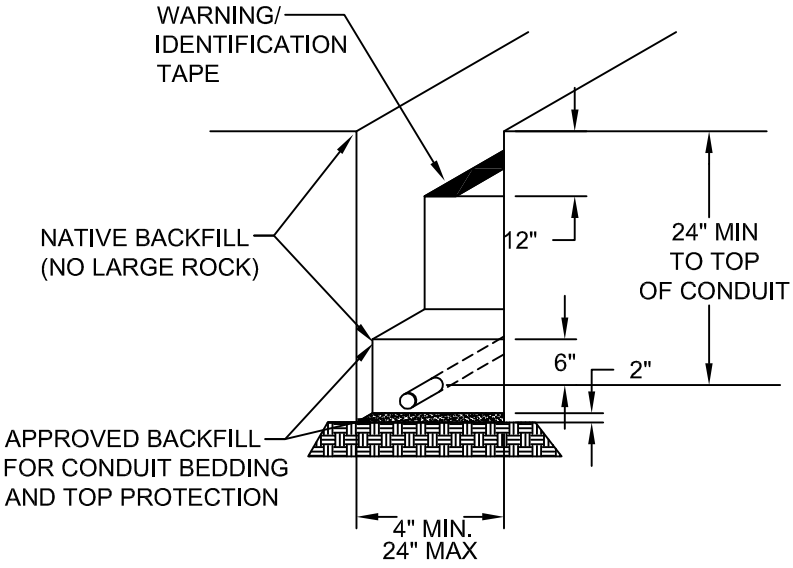
1. PRIMARY CONDUITS ARE LOCATED ON THE LEFT SIDE OF THE PAD OPENING.
2. SERVICE LATERAL CONDUITS ARE LOCATED ON THE RIGHT SIDE OF THE PAD OPENING.
3. ELEVATION DETAIL IS LOOKING FROM THE STREET SIDE OF THE TRANSFORMER.
4. THE **CUSTOMER** IS RESPONSIBLE FOR SITE PREPARATIONS (GRAVEL, CONDUIT, ETC.). **CUSTOMER** SHALL FURNISH TRANSFORMER PADS, FURNISH AND INSTALL GROUND RODS AND GROUNDING CONNECTIONS. THE **CUSTOMER** SHALL PROVIDE A 6' WIDE BY 6' LONG, CLEAR LEVEL AREA AT THE TRANSFORMER PAD SITE WITH PAD TO BE CENTERED IN THE AREA. THE PAD SITE SHALL BE ELEVATED SLIGHTLY SUCH THAT SURFACE WATER WILL NOT ENTER PAD SLOT OR CONDUITS. A 6" DEEP CRUSHED STONE OR GRAVEL BASE SHALL BE INSTALLED ON FIRM OR TAMPED SOIL UNDER THE ENTIRE PAD AND SHALL EXTEND 6" BEYOND ALL SIDES OF THE PAD. PROVIDE A CLEAR, LEVEL AREA OF APPROXIMATELY PAD WIDTH TO A DISTANCE OF 10' TO THE FRONT OF THE PAD FOR OPERATION PURPOSES

TYPICAL TRENCHING DETAILS FOR INSTALLATION OF SECONDARY / SERVICE LATERAL AND PRIMARY CONDUIT (FIGURE 23)

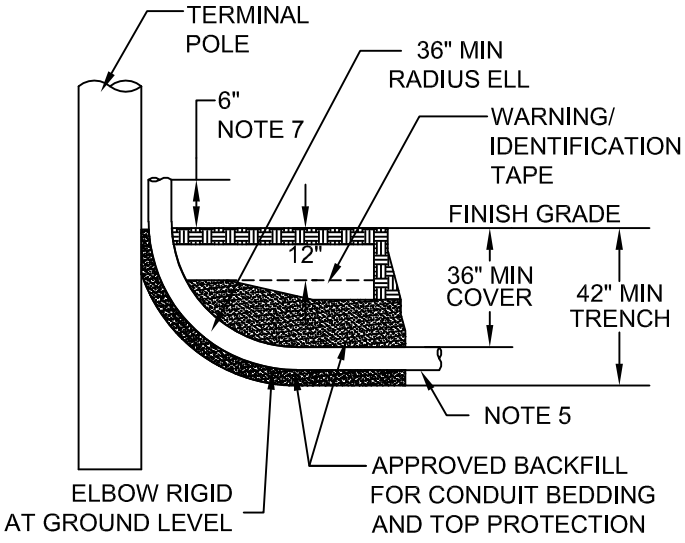
SECONDARY/SERVICE CONDUIT AT POLE



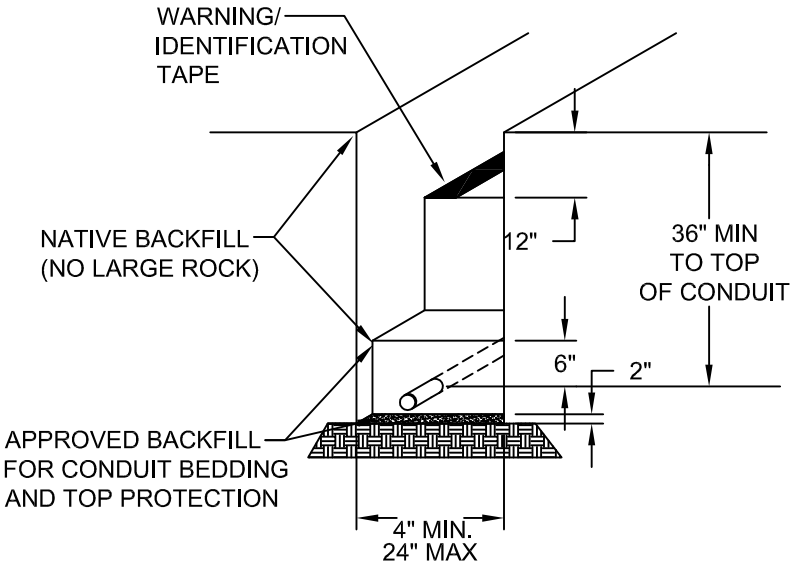
SECONDARY/SERVICE LATERAL TRENCH



PRIMARY CONDUIT AT POLE



PRIMARY TRENCH



TYPICAL TRENCHING DETAILS FOR INSTALLATION OF SECONDARY / SERVICE LATERAL AND PRIMARY CONDUIT GENERAL NOTES (FIGURE 24)

NOTES:

1. **CUSTOMER** SHALL CONTACT THE UTILITY FOR LOCATION OF THE UTILITY FACILITY AND ROUTE OF UNDERGROUND CONDUIT. **CUSTOMER** SHALL TRENCH AND BACKFILL AND FURNISH AND INSTALL CONDUIT WITH 1/4 INCH NYLON OR POLYPROPYLENE PULL ROPE FOR THE UTILITY TO INSTALL CONDUCTORS. ANY FAILURE OF THIS PULL ROPE SHALL BE CORRECTED BY THE **CUSTOMER**. TRENCH SHALL BE EXCAVATED IN LOCATION INDICATED BY THE UTILITY AND GRADED TO WITHIN 6 INCHES OF FINISHED GRADE.

2. THE BOTTOM OF TRENCH MUST BE FREE OF ROCK, CINDERS, OR SHARP OBJECTS. A 2" BED OF APPROVED BACKFILL SHALL BE INSTALLED BELOW THE CONDUIT. AN ENCASEMENT OF 6" OF APPROVED BACKFILL COVER SHALL BE INSTALLED ABOVE THE TOP OF THE CONDUIT TO PREVENT CONDUIT DAMAGE. CUSTOMER SHALL BACKFILL ABOVE CONDUIT BEDDING USING NATIVE BACKFILL TO A DEPTH 12" BELOW FINISHED GRADE AND INSTALL IDENTIFICATION TAPE PROVIDED BY THE UTILITY. THE REMAINDER OF THE TRENCH SHALL BE BACKFILLED TO GRADE USING NATIVE BACKFILL MATERIAL. ALL BACKFILL LAYERS SHALL BE TAMPED AND COMPACTED TO AVOID SETTLING.

3. APPROVED BACKFILL FOR CONDUIT BEDDING AND COVER SHALL BE STONE DUST, GRADED SAND, LIMESTONE SAND, ROCK-FREE EARTH OR TOPSOIL WITH NO STONES LARGER THAN 1 1/2 INCH IN DIAMETER. APPROVED BACKFILL MATERIAL SHALL ALSO INCLUDE CONCRETE ENCASEMENT. CONSULT THE UTILITY FOR LOCATIONS REQUIRING CONCRETE ENCASEMENT. NATIVE BACKFILL FROM 6" ABOVE THE TOP OF ANY CONDUIT TO FINISHED GRADE SHALL BE NATIVE SOIL AND NOT CONTAIN LARGE ROCKS.

4. SECONDARY AND SERVICE LATERAL CONDUITS SHALL BE SCHEDULE 40 PVC INCLUDING SWEEP ELL (30" MINIMUM RADIUS) AT TERMINAL POLE. ALL CONDUITS SHALL BE ELECTRICAL GRADE. CUSTOMER SHALL CONTACT THE UTILITY FOR PROPER SECONDARY/SERVICE CONDUIT DIAMETER.

5. PRIMARY CONDUITS ARE SIZED FOR INSTALLATION OF CONDUCTORS. **CUSTOMER** SHALL CONTACT THE UTILITY FOR PROPER PRIMARY CONDUIT DIAMETER. CONDUIT TYPE SHALL BE TYPE II DB60 PVC OR GRS SWEEP ELL (36" MINIMUM RADIUS) AT TERMINAL POLE. ALL CONDUITS SHALL BE ELECTRICAL GRADE.

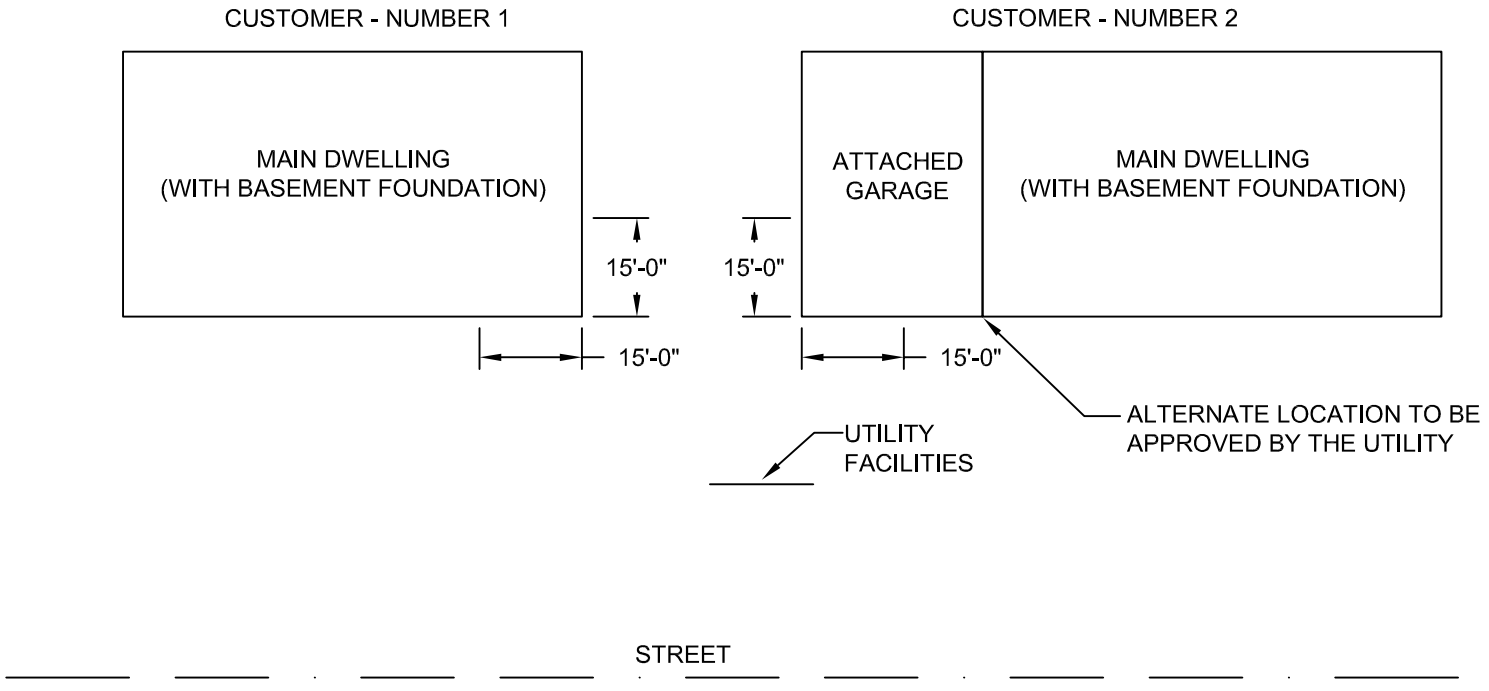
6. PRIMARY, SECONDARY AND SERVICE LATERAL CONDUITS MAY BE INSTALLED IN THE SAME TRENCH, PROVIDED THE PRIMARY TRENCH COVER DIMENSIONS ARE USED.

7. **CUSTOMER** TO MAINTAIN PROPER COVER DEPTH, SWEEP ELL MUST EXTEND 6" ABOVE GRADE AT POLE AND PROVIDE THE UTILITY WITH ONE 10' SECTION OF GALVANIZED RIGID STEEL CONDUIT.

8. THE **CUSTOMER** SHALL COORDINATE THE JOINT USE/OCCUPANCY OF THE TRENCH WITH OTHER UTILITIES.

9. SEPARATION BETWEEN ELECTRIC CONDUITS AND GAS, WATER OR SEWER LINES SHALL BE 12" MINIMUM. GREATER SEPARATION SHALL BE MAINTAINED WHERE PRACTICAL. GAS, WATER AND SEWER DEPARTMENTS MAY REQUIRE GREATER SEPARATION. **CUSTOMER** SHALL DETERMINE SEPARATION REQUIREMENTS IN ADVANCE.

RESIDENTIAL SERVICE-METER LOCATION
(FIGURE 25)

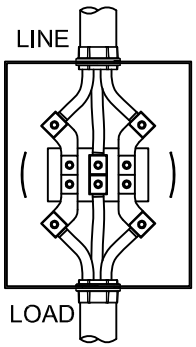


NOTES:

1. **CUSTOMER** SHALL CONTACT THE UTILITY FOR METER LOCATION.
2. METER SHALL BE WITHIN 15' OF OUTSIDE CORNER CLOSEST TO THE UTILITY'S SERVICE FACILITIES.

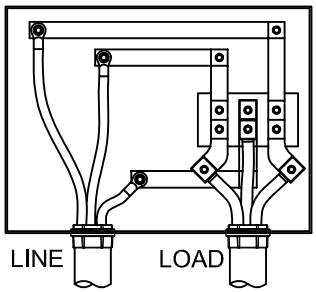
SELF-CONTAINED METER SOCKET CONNECTIONS (FIGURE 26)

OVERHEAD ONLY



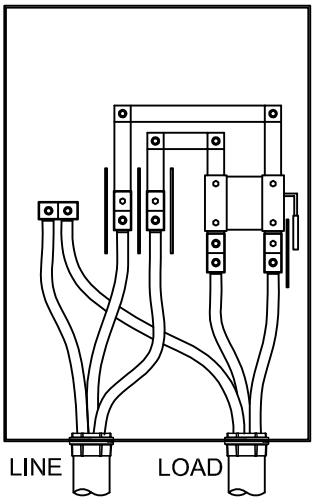
120/240 VOLT
3 WIRE
SINGLE-PHASE
100 AND 200 AMP

UNDERGROUND ONLY



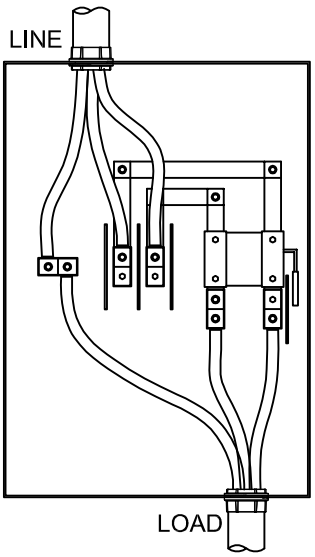
120/240 VOLT
3 WIRE
SINGLE-PHASE
200 AMP

UNDERGROUND



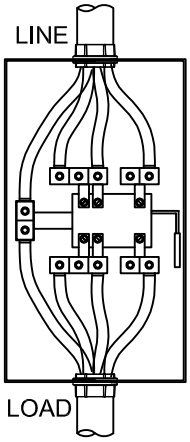
120/240 VOLT
3 WIRE
SINGLE-PHASE
400 AMP

OVERHEAD



120/240 VOLT
3 WIRE
SINGLE-PHASE
400 AMP

OVERHEAD ONLY

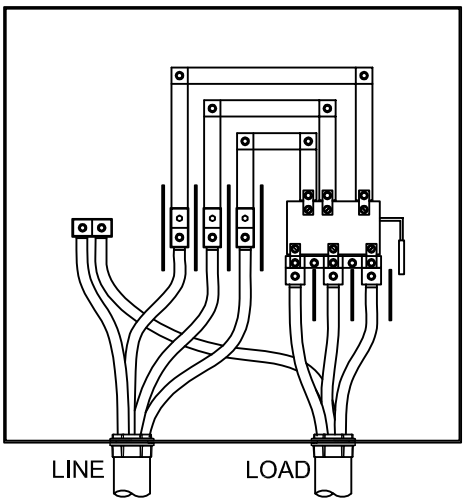


208Y/120 VOLT
240/120 VOLT*
480Y/277 VOLT+
4 WIRE
THREE-PHASE
200 AMP

* PUT HIGH PHASE OF 240/120 VOLT DELTA ON RIGHT JAW OF METER SOCKET.

* SEE FIGURE 42 FOR 480Y/277 VOLT INSTALLATIONS.

UNDERGROUND OR OVERHEAD



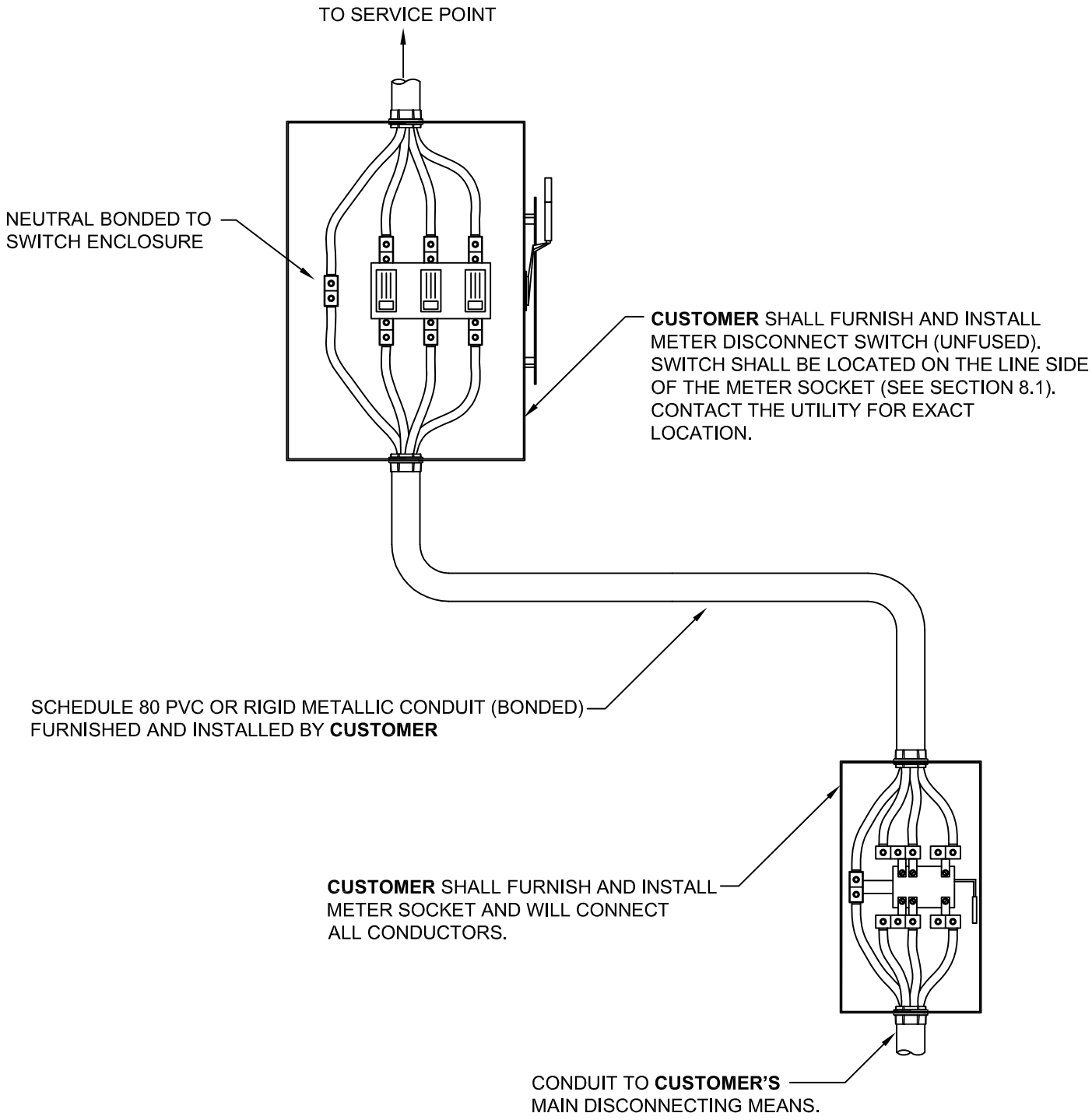
208Y/120 VOLT
240/120 VOLT*
480Y/277 VOLT+
4 WIRE
THREE-PHASE
400 AMP

NOTES:

1. ALL METER SOCKETS SHALL BE RINGLESS-TYPE AND SUITABLE FOR PLUG-IN METERS.
2. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.

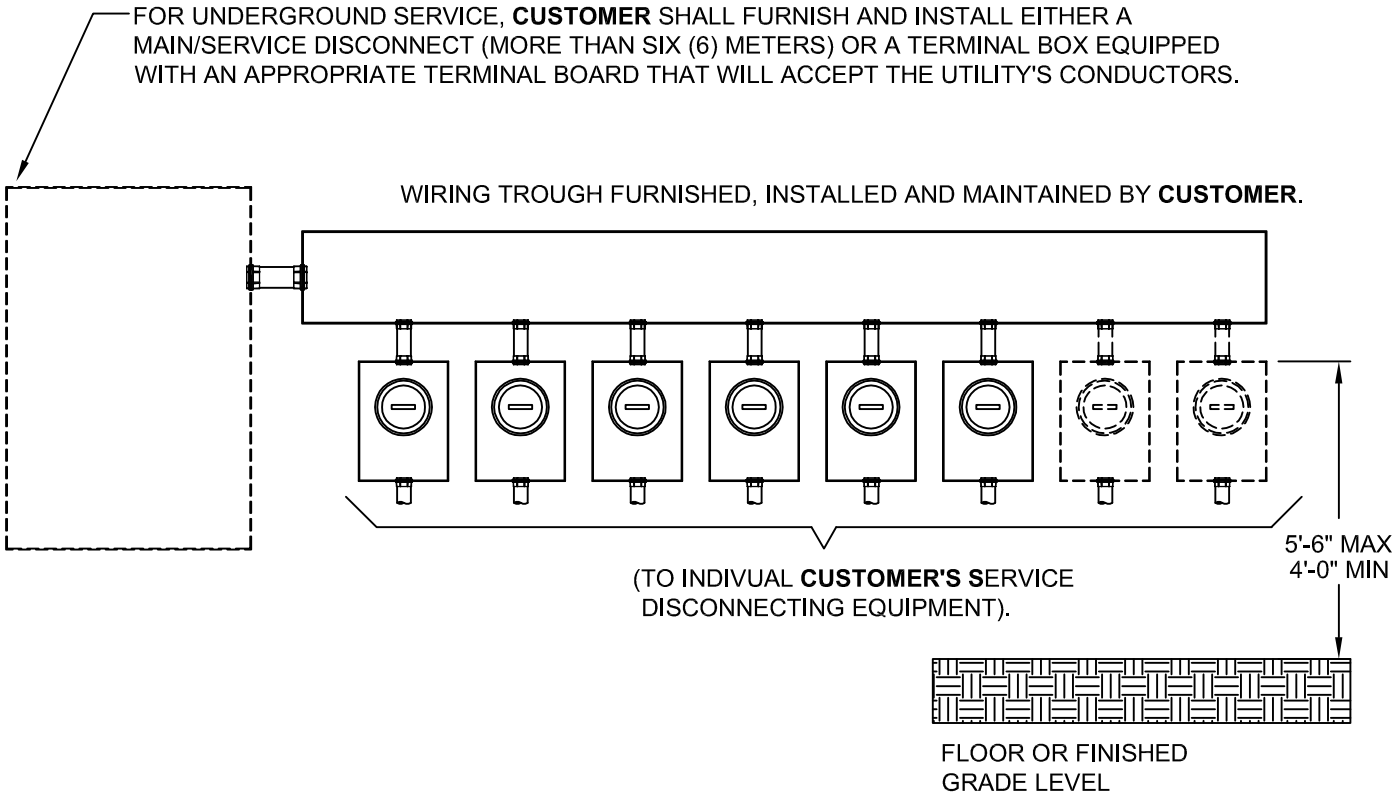
SELF-CONTAINED METER INSTALLATION 480 / 277 VOLT WYE, 3-PHASE, 4-WIRE (FIGURE 27)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION



MULTIPLE METER INSTALLATIONS 240V OR LESS (FIGURE 28)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION

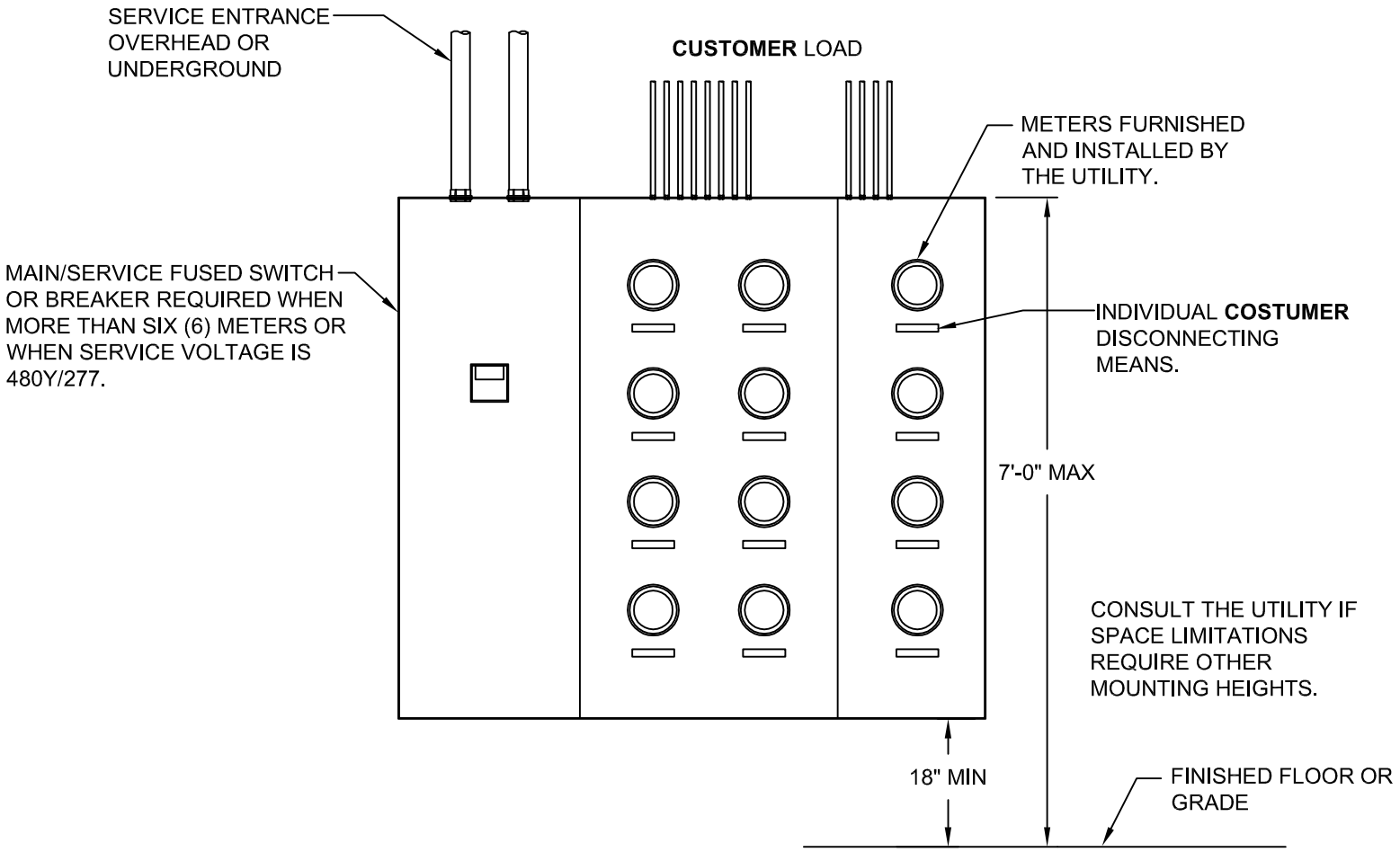


NOTES:

1. **CUSTOMER** SHALL CONSULT WITH THE UTILITY FOR POINT OF ATTACHMENT OF SERVICE LATERAL OR DROP, METERING LOCATION, AND PROPOSED SERVICE ENTRANCE FACILITIES PRIOR TO PROCEEDING WITH THIS INSTALLATION.
2. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
3. **CUSTOMER** SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING AND CONNECTING ALL SERVICE ENTRANCE WIRING FROM TERMINAL BOX OR MAIN DISCONNECT TO METER SOCKETS AND ALSO BE RESPONSIBLE FOR INSURING THAT TERMINAL BOX OR MAIN DISCONNECT HAS PROPER NUMBER, SIZE AND TYPE OF TERMINALS TO ACCEPT THE UTILITY'S SERVICE LATERAL.
4. **CUSTOMER** SHALL FURNISH AND INSTALL ALL METER SOCKETS AND CONNECT ALL CONDUCTORS IN METER SOCKET. **CUSTOMER** SHALL PERMANENTLY AND CLEARLY LABEL EACH METER SOCKET TO SHOW AREA SERVICE. (PERMANENT MARKER IS NOT ACCEPTABLE)
5. THE UTILITY WILL FURNISH AND INSTALL METERS.
6. METERED CONDUCTORS SHALL NOT BE INSTALLED IN WIRING TROUGH(S).
7. **CUSTOMER** MAY INSTALL METER STACK OR METER TROUGH TYPE EQUIPMENT SUBJECT TO THE UTILITY'S APPROVAL.
8. WHEN SERVICE ENTRANCE CONSISTS OF MORE THAN ONE SET OF CONDUCTORS, INDIVIDUAL LOADS SHALL BE CONNECTED SO AS TO BE BALANCED AMONG ALL SETS OF CONDUCTORS.
9. WIRING TROUGH(S), MAIN SERVICE DISCONNECT OR TERMINAL BOX SHALL BE SEALABLE AND SHALL ALSO BE WEATHERPROOF WHEN INSTALLED OUTDOORS.
10. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.

PRE-ASSEMBLED MULTIPLE METER INSTALLATION (FIGURE 29)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION

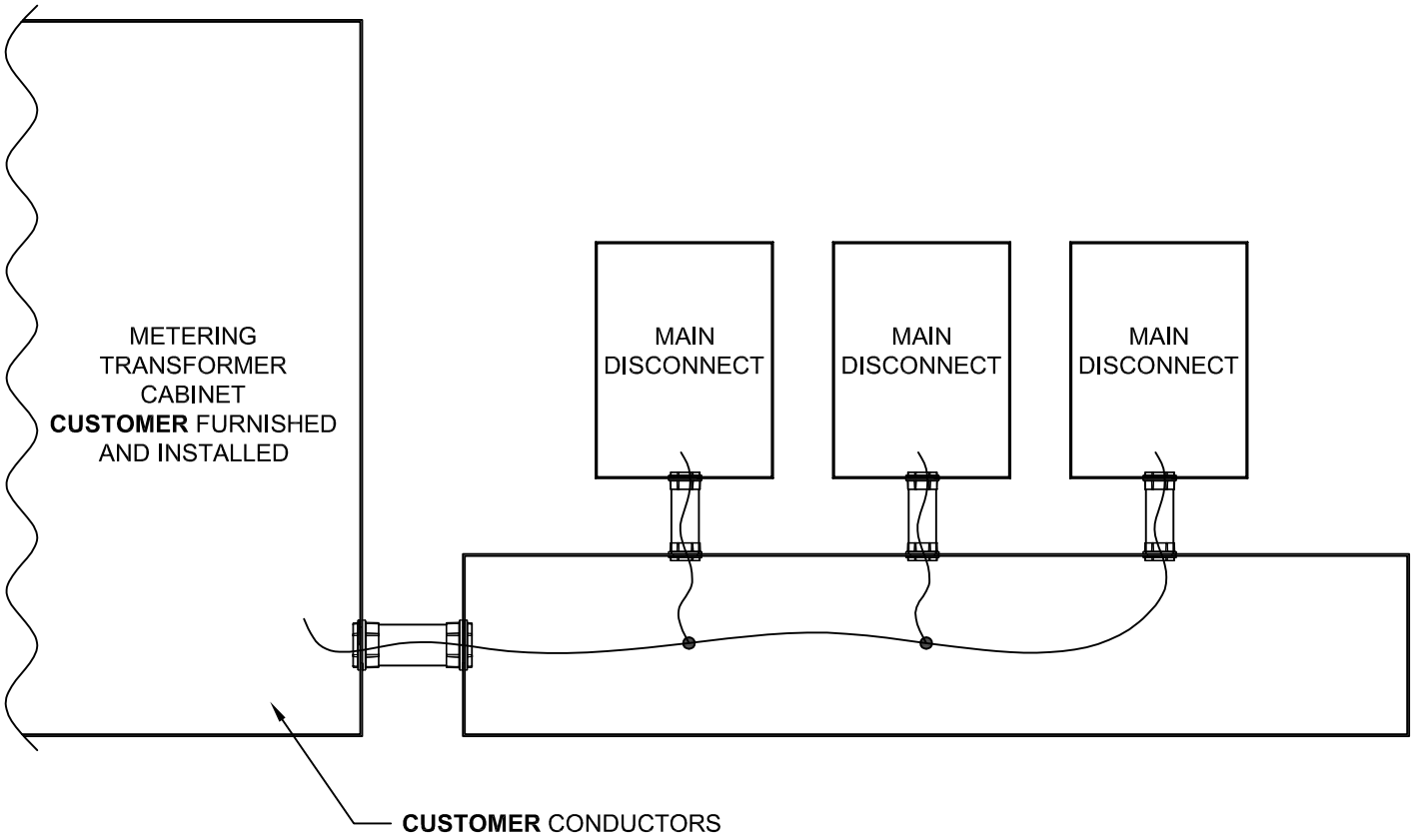


NOTES:

1. **CUSTOMER** SHALL CONSULT WITH THE UTILITY FOR POINT OF ATTACHMENT OF SERVICE LATERAL OR DROP, METERING LOCATION, AND PROPOSED SERVICE ENTRANCE FACILITIES PRIOR TO PROCEEDING WITH INSTALLATION.
2. ALL **CUSTOMER** WORK SHALL BE COMPLETED AND INSPECTIONS (SEE SECTION 4.06) OBTAINED BEFORE THE UTILITY WILL PROVIDE SERVICE.
3. **CUSTOMER** SHALL FURNISH, INSTALL AND CONNECT SEALABLE MULTIPLE METERING EQUIPMENT FOR OVERHEAD SERVICE. **CUSTOMER** SHALL FURNISH AND CONNECT SERVICE ENTRANCE CONDUCTORS. FOR UNDERGROUND SERVICE, THE UTILITY WILL EXTEND ITS UNDERGROUND CONDUCTORS TO MAIN LUGS IN CUSTOMER METER STACK AND MAKE CONNECTIONS.
4. **CUSTOMER** SHALL PERMANENTLY AND CLEAR LABEL EACH METER SOCKET TO SHOW AREAS SERVED. (PERMANENT MARKER IS NOT ACCEPTABLE)
5. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.

WIRING TROUGH INSTALLATION WITH METERING TRANSFORMER CABINET (FIGURE 30)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION

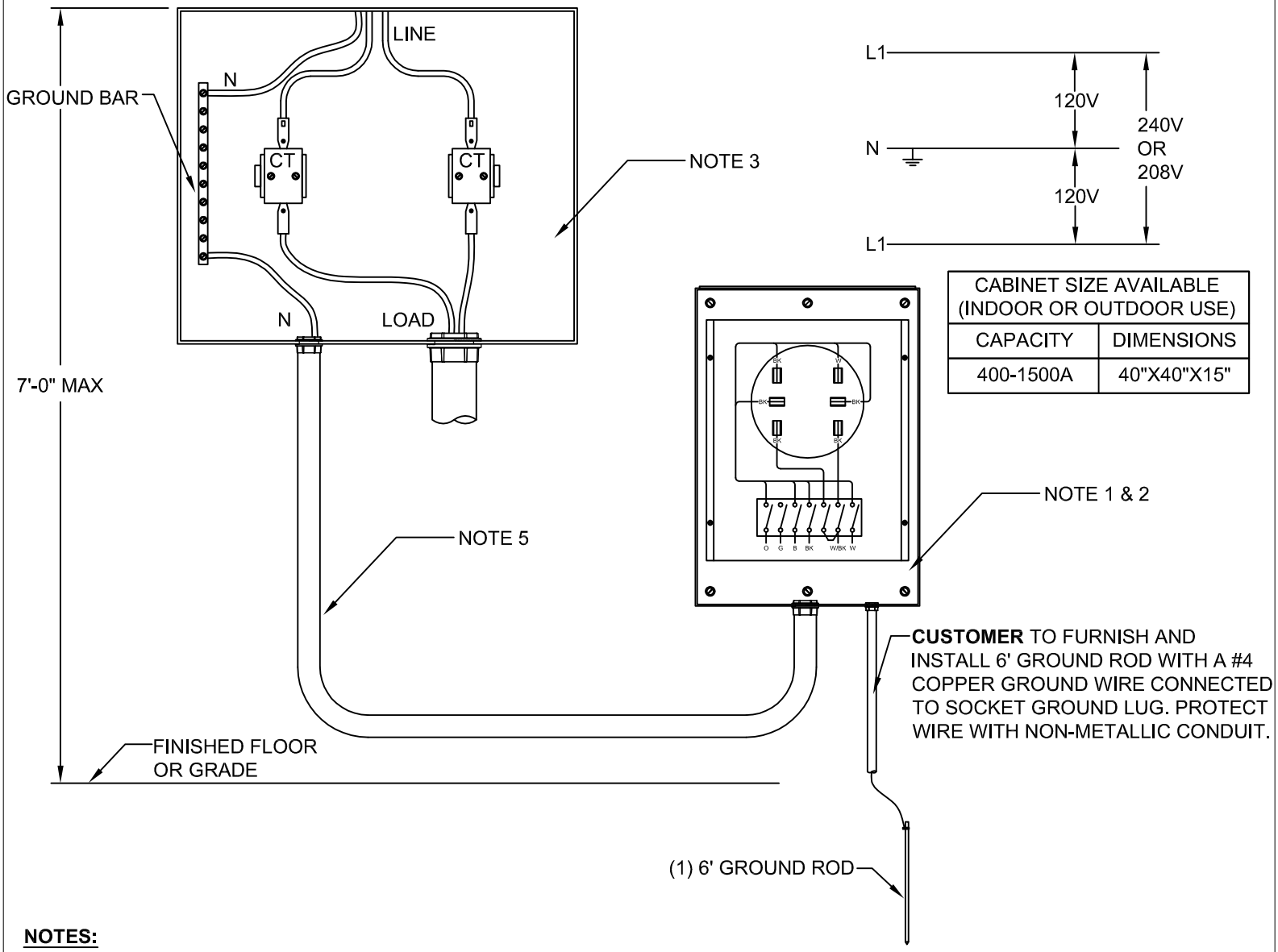


NOTES:

1. **CUSTOMER'S** LOAD CONDUCTORS SHALL EXTEND INTO METERING TRANSFORMER CABINET AT LEAST 48 INCHES.
2. **CUSTOMER** WILL FURNISH SUITABLE CONNECTORS FOR THE UTILITY TO CONNECT TO ITS UNDERGROUND CONDUCTORS AND CONDUCTORS TO METERING TRANSFORMERS WITHIN CABINET.
3. WHEN OVERHEAD SERVICE IS PROVIDED, C**USTOMER** SHALL FURNISH ALL SERVICE ENTRANCE CONDUCTORS.

TYPICAL TRANSFORMER-RATED METERING INSTALLATION CABINET-MOUNT SINGLE-PHASE, 3-WIRE, 120 / 240V OR 120 / 208V (FIGURE 31)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION



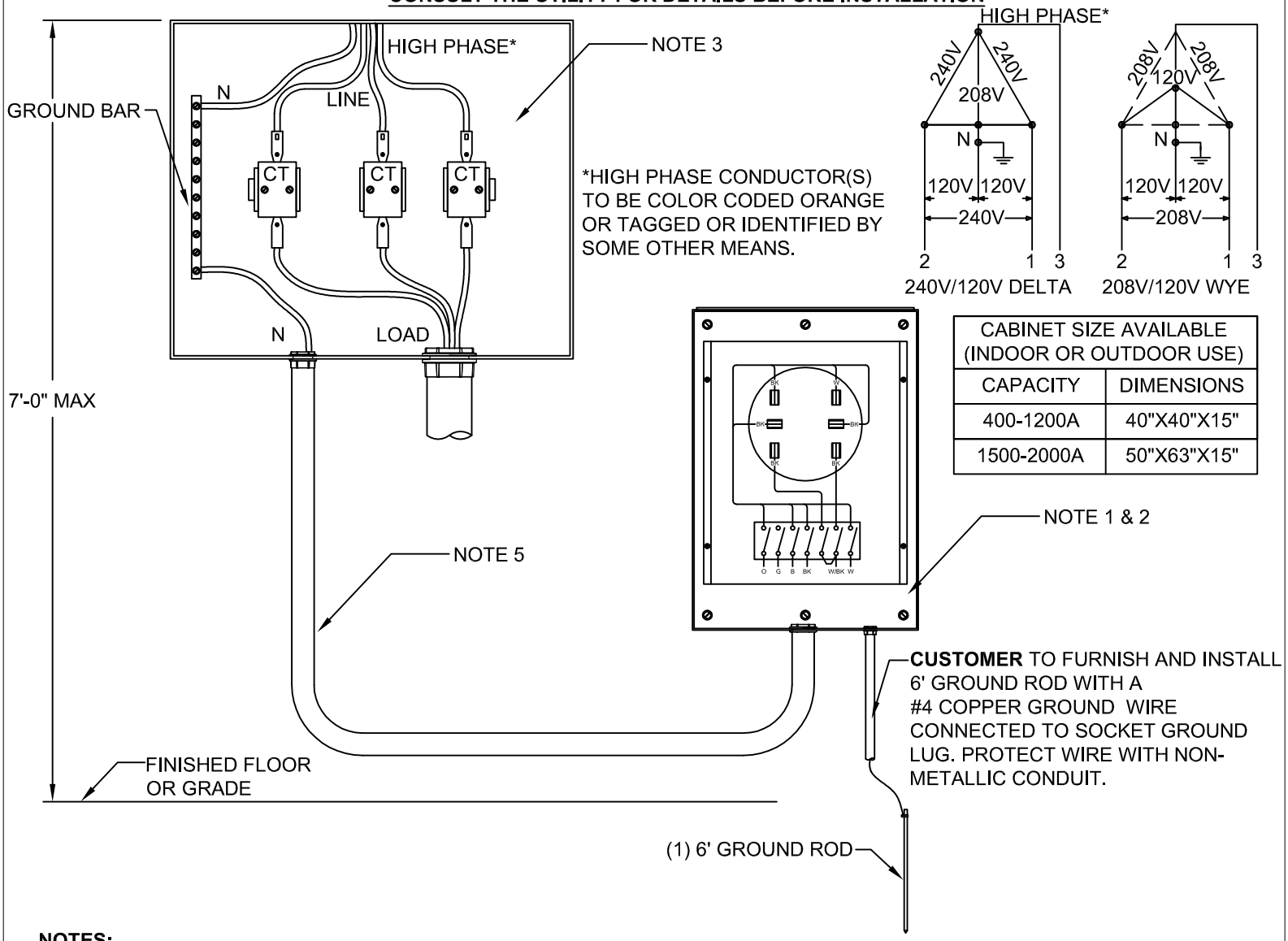
CABINET SIZE AVAILABLE (INDOOR OR OUTDOOR USE)	
CAPACITY	DIMENSIONS
400-1500A	40"X40"X15"

NOTES:

1. METER SOCKET LOCATION SHALL BE DESIGNATED BY THE UTILITY ON EXTERIOR OF BUILDING. MOUNTING HEIGHT 4'-6" TO 5'-6" TO THE TOP OF THE METER SOCKET.
2. CLEAR SPACE OF AT LEAST 36" X 36", FREE FROM OBSTRUCTIONS AND IN LOCATION SUITABLE FOR METER MOUNTING SHALL BE PROVIDED.
3. MAINTAIN 3 FOOT CLEAR WORKING SPACE IN FRONT OF CABINET.
4. CABINET-MOUNT METERING PACKAGE AND METER SOCKET SUPPLIED AND INSTALLED BY **CUSTOMER**, WIRED BY THE UTILITY.
5. 1-1/4" IMC OR RIGID METALLIC CONDUIT FOR RUNNING METER CABLE TO METER SOCKET (30' MAX. CABLE LENGTH) FURNISHED AND INSTALLED BY CUSTOMER. METER CABLE FURNISHED AND INSTALLED BY THE UTILITY.
6. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
7. CONDUIT FOR METER CABLE SHALL ENTER METER CABINET AT THE BOTTOM OR WITHIN 16 INCHES FROM THE BOTTOM ON THE SIDE OF THE CABINET.

TYPICAL TRANSFORMER RATED METERING INSTALLATION CABINET-MOUNT 240/120V DELTA OR 208/120V WYE (FIGURE 32)

CONSULT THE UTILITY FOR DETAILS BEFORE INSTALLATION



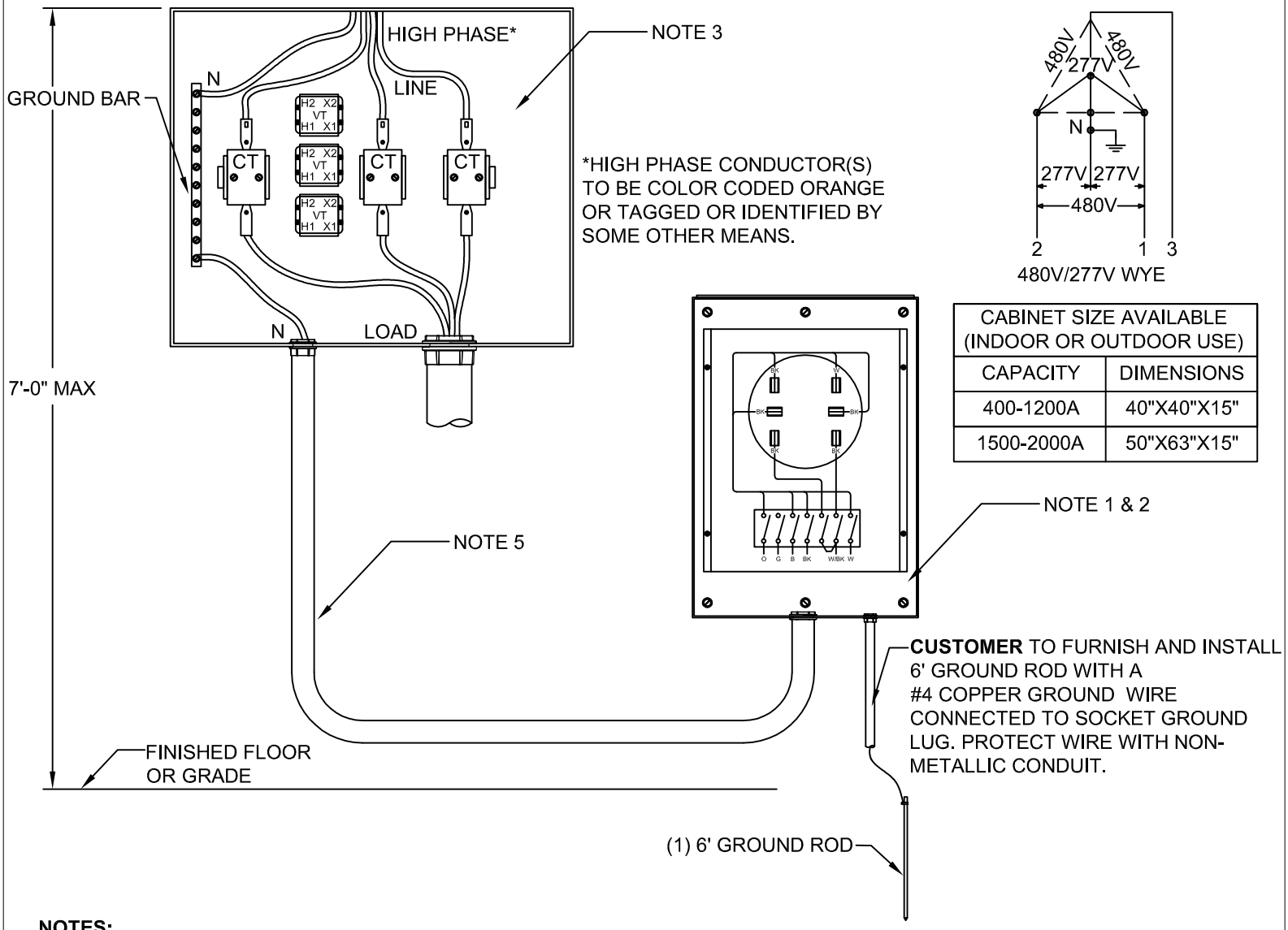
CABINET SIZE AVAILABLE (INDOOR OR OUTDOOR USE)	
CAPACITY	DIMENSIONS
400-1200A	40"X40"X15"
1500-2000A	50"X63"X15"

NOTES:

1. METER SOCKET LOCATION SHALL BE DESIGNATED BY THE UTILITY ON EXTERIOR OF BUILDING. MOUNTING HEIGHT 4'-6" TO 5'-6" TO THE TOP OF THE METER SOCKET.
2. CLEAR SPACE OF AT LEAST 36" X 36", FREE FROM OBSTRUCTIONS AND IN LOCATION SUITABLE FOR METER MOUNTING SHALL BE PROVIDED.
3. MAINTAIN 3 FOOT CLEAR WORKING SPACE IN FRONT OF CABINET.
4. METERING PACKAGE WITH INSTRUMENT TRANSFORMERS AND METER SOCKET SUPPLIED AND INSTALLED BY **CUSTOMER**, WIRED BY THE UTILITY.
5. 1-1/4" IMC OR RIGID METALLIC CONDUIT FOR RUNNING METER CABLE TO METER SOCKET (30' MAX. CABLE LENGTH) FURNISHED AND INSTALLED BY **CUSTOMER**. METER CABLE FURNISHED AND INSTALLED BY THE UTILITY.
6. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
7. CONDUIT FOR METER CABLE SHALL ENTER METER CABINET AT THE BOTTOM OR WITHIN 16 INCHES FROM THE BOTTOM ON THE SIDE OF THE CABINET.

TYPICAL TRANSFORMER RATED METERING INSTALLATION
CABINET-MOUNT 480/277V WYE
(FIGURE 33)

CONSULT UTILITY FOR DETAILS BEFORE INSTALLATION



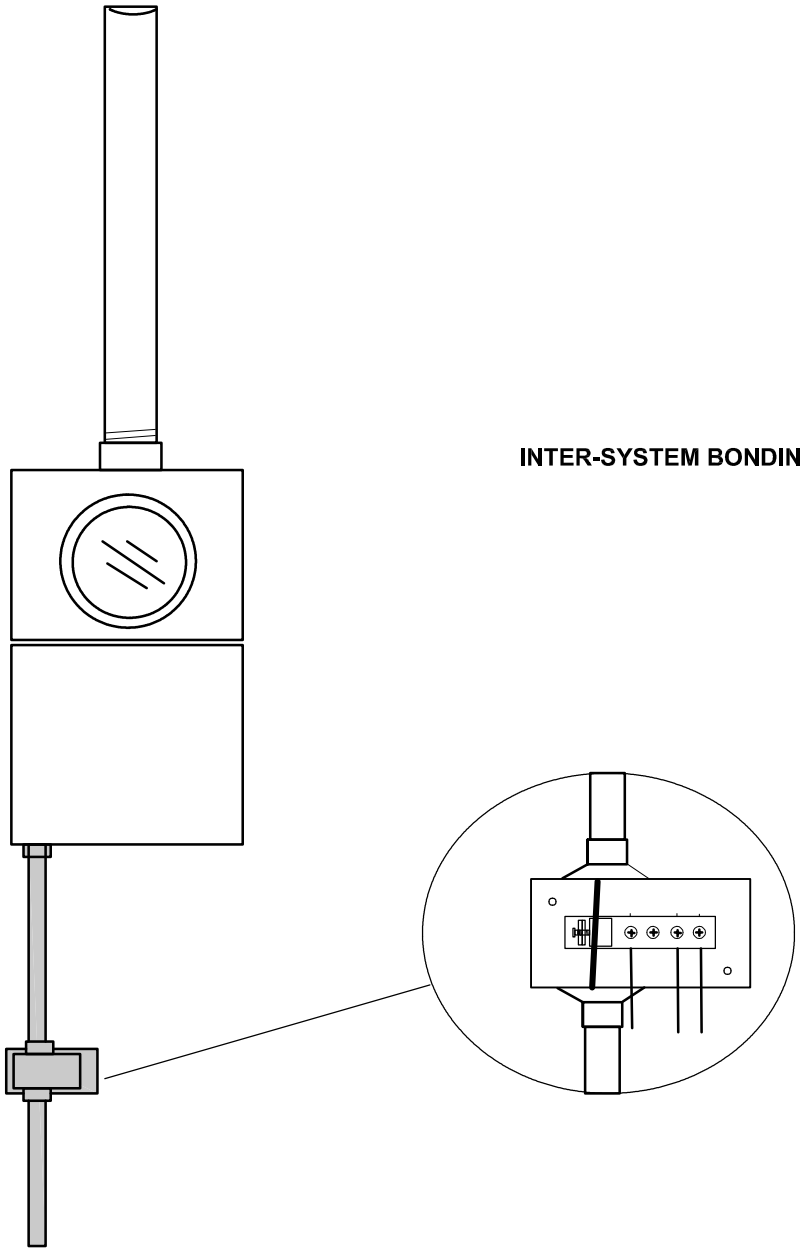
CABINET SIZE AVAILABLE (INDOOR OR OUTDOOR USE)	
CAPACITY	DIMENSIONS
400-1200A	40"X40"X15"
1500-2000A	50"X63"X15"

NOTES:

1. METER SOCKET LOCATION SHALL BE DESIGNATED BY HANNIBAL BPW ON EXTERIOR OF BUILDING. MOUNTING HEIGHT 4'-6" TO 5'-6" TO THE TOP OF THE METER SOCKET.
2. CLEAR SPACE OF AT LEAST 36" X 36", FREE FROM OBSTRUCTIONS AND IN LOCATION SUITABLE FOR METER MOUNTING SHALL BE PROVIDED.
3. MAINTAIN 3 FOOT CLEAR WORKING SPACE IN FRONT OF CABINET.
4. METERING PACKAGE WITH INSTRUMENT TRANSFORMERS AND METER SOCKET SUPPLIED AND INSTALLED BY **CUSTOMER**, WIRED BY THE HANNIBAL BPW.
5. 1-1/4" IMC OR RIGID METALLIC CONDUIT FOR RUNNING METER CABLE TO METER SOCKET (30' MAX. CABLE LENGTH) FURNISHED AND INSTALLED BY **CUSTOMER**. METER CABLE FURNISHED AND INSTALLED BY HANNIBAL BPW.
6. INHIBITOR COMPOUND SHALL BE USED ON ALL ALUMINUM WIRE TERMINATIONS.
7. CONDUIT FOR METER CABLE SHALL ENTER METER CABINET AT THE BOTTOM OR WITHIN 16 INCHES FROM THE BOTTOM ON THE SIDE OF THE CABINET.

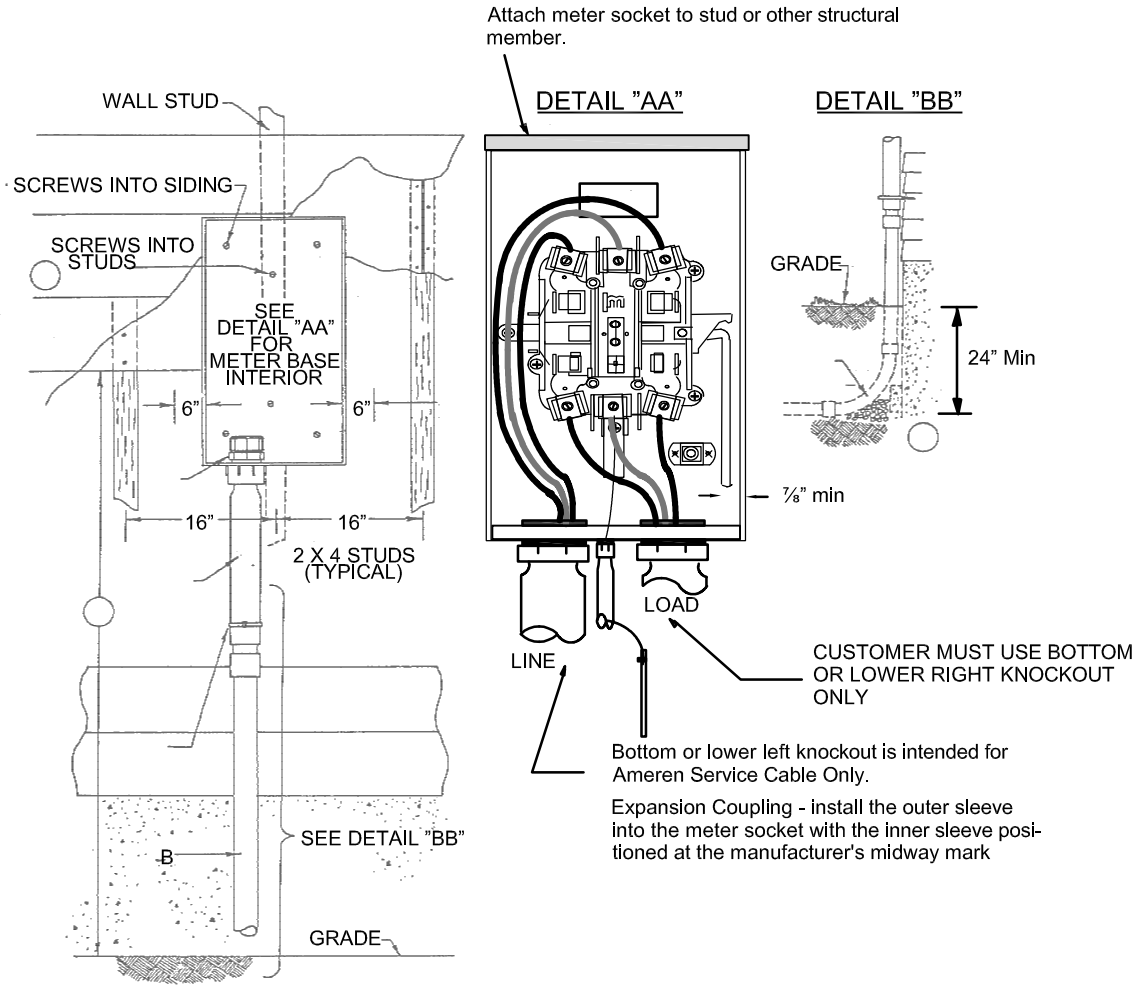
TYPICAL INTER-SYSTEM BONDING
(FIGURE 34)

CONSULT UTILITY FOR DETAILS BEFORE INSTALLATION



RESIDENTIAL SERVICE CABLE AND METER CONNECTIONS SINGLE FAMILY DWELLING (200 AMP SERVICE) (FIGURE 35)

CONSULT UTILITY FOR DETAILS BEFORE INSTALLATION



NOTE:
The Utility installed service cable will only enter through the bottom left hand knockout. No customer wiring is permitted on the left hand side of the device where the conduit that would contain the Utility's service cable enters the device. This area must be kept clear to permit installation and potential replacement of Utility-owned service cable and to eliminate the possibility of premature failures due to cables coming in contact with each other. If improper wiring is performed, service cable will NOT be installed by the Utility.