

Indianapolis Power & Light Company

Electric Service and Meter Manual

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Metering Compartment For Switchgear
120/240 or 120/208V or 277/480V GB3-120

Overhead Service Installations

Service Connection Below Roof
400A Maximum Service GB4-010

Service Riser Extending Through Roof
400A Maximum Service GB4-020

Service Riser Extending Above Roof
400A Maximum Service GB4-030

Temporary Overhead Construction Service
120/240 Volt, 1 Phase, 3 Wire
225A Maximum Service GB4-040

Temporary Pole Meter Installation
For Construction
120/240 Volt, 1 Phase, 3 Wire
225A Maximum Service GB4-050

Permanent Pole Meter Installation For One Service
120/240 Volt, 1 Phase, 3 Wire
400A Maximum Service GB4-060

Permanent Pole Meter Installation
120/240 Volt, 1 Phase, 3 Wire
240/480 Volt, 1 Phase, 3 Wire
200A Type II INDOT Service GB4-065

Typical Roof Structures For Service
Drop and Metering Transformers
For 600 Volts and Below GB4-070

Typical Roof Structures For Service
Drop and Metering Transformers
Up to 300 Volts Services GB4-075

Roof Structure for Maximum 13.2 KV Primary Service
Single Conductor Cable GB4-080

Underground Service Installations

Residential Meter Locations for Underground Service	GB5-010
Underground Residential Service 400A Maximum Service	GB5-020
Secondary Risers For Single and Three Phase Services	GB5-030
New Residential Service Cable Installation to Foundation	GB5-040
New Residential Service Cable Installation to Foundation - Optional Method	GB5-050
Temporary Underground Construction Service 120/240 Volt, 1 Phase, 3 Wire 225A Maximum Service	GB5-060
Temporary Underground Construction 120/240 Volt, 1 Phase, 3 Wire 120/208 Volt, 1 Phase, 3 Wire 225A Maximum Service 120/208 Volt, 3 Phase, 4 Wire 125A Maximum Service	GB5-070
Single Meter Pedestal Installation For Mobile Home 120/240 Volt, 1 Phase, 3 Wire 225A Maximum Service	GB5-080
Single Meter Pedestal Installation 120/240 Volt, 1 Phase, 3 Wire 225A Maximum Service	GB5-085
200A Meter Fitting Free Standing - Underground Installation 120/240 Volt, 1 Phase, 3 Wire 225A Maximum Service	GB5-090
200A Meter Fitting Free Standing - Underground Installation 120/240 Volt, 3 Phase, 4 Wire 120/208 Volt, 3 Phase, 4 Wire 225A Maximum Service	GB5-095
Free Standing - Underground Installation 120/240 Volt, 1 Phase, 3 Wire 240/480 Volt, 1 Phase, 3 Wire 200A, Type II INDOT Service	GB5-097
Free Standing Structure For CT Metering Cabinet-Underground Installation 120/208, 120/240, 277/480 Volt 3 Phase, 4 Wire 250A to 1200A Service	GB5-100

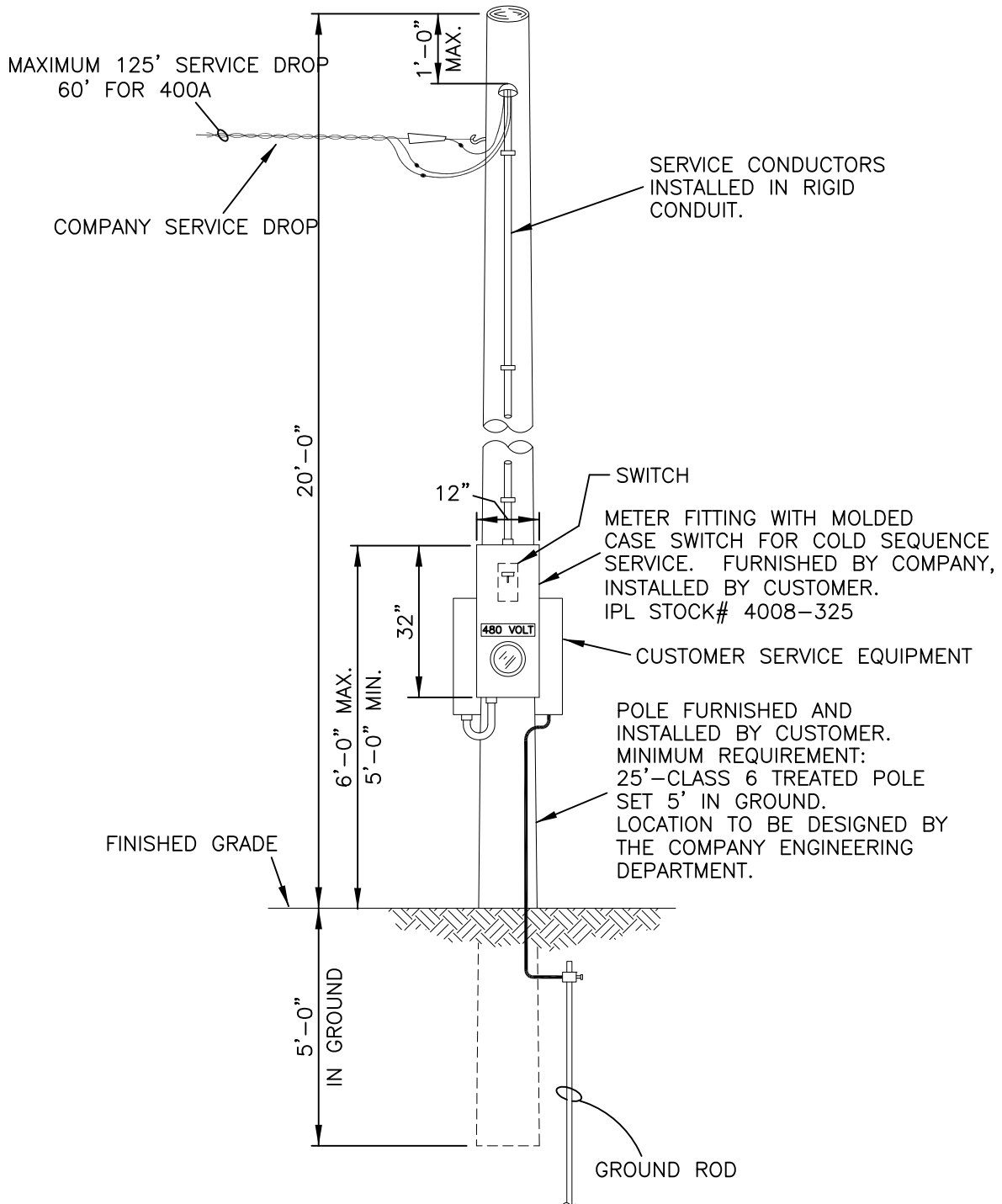
B. METERING INSTRUMENT TRANSFORMER STANDARDS FOR HIGH VOLTAGE (Over 600 volts) METALCLAD SWITCHGEAR

Where the instrument transformers are to be mounted in high voltage (over 600 volts) switchgear, the following standards and conditions shall be observed. Before fabrication is started, the manufacturer shall provide the Company with complete shop drawings and one-line electrical diagrams of the switchgear system and components for approval by the Installations and Metering Department and Engineering Department.

- (1) A separate compartment must be provided for the Company metering equipment with access to this compartment through a padlock able, hinged door or doors. Removable panels will not be accepted for access to switchgear space in which current and potential transformers are installed. A name plate and/or stencil shall be provided on the front and rear doors to identify the metering compartment.
- (2) The compartment shall provide adequate space for the mounting of three (3) bar type current transformers and three (3) potential transformers. These transformers are to be installed in the compartment such that they may readily be replaced or removed.
- (3) All mounting of potential transformers in switchgear requires prior approval of the Company metering department in writing. Potential transformers shall be mounted on a draw out carriage or a tilt shelf unless 550B(4) is utilized. This carriage or tilt shelf shall be lockable. Grounding devices with a visible grounding connection shall be provided to assure that all parts are properly grounded when the potential transformers are exposed. This will permit the removal and installation of the potential transformers and/or fuses to be done safely with out loss of power or endangering Company personnel. Connections to the primary side of the potential transformers shall be made on the line side of the current transformers. The carriage or tilt shelf shall be able to support the weight of three 100 pound potential transformers.

Section 550, cont.

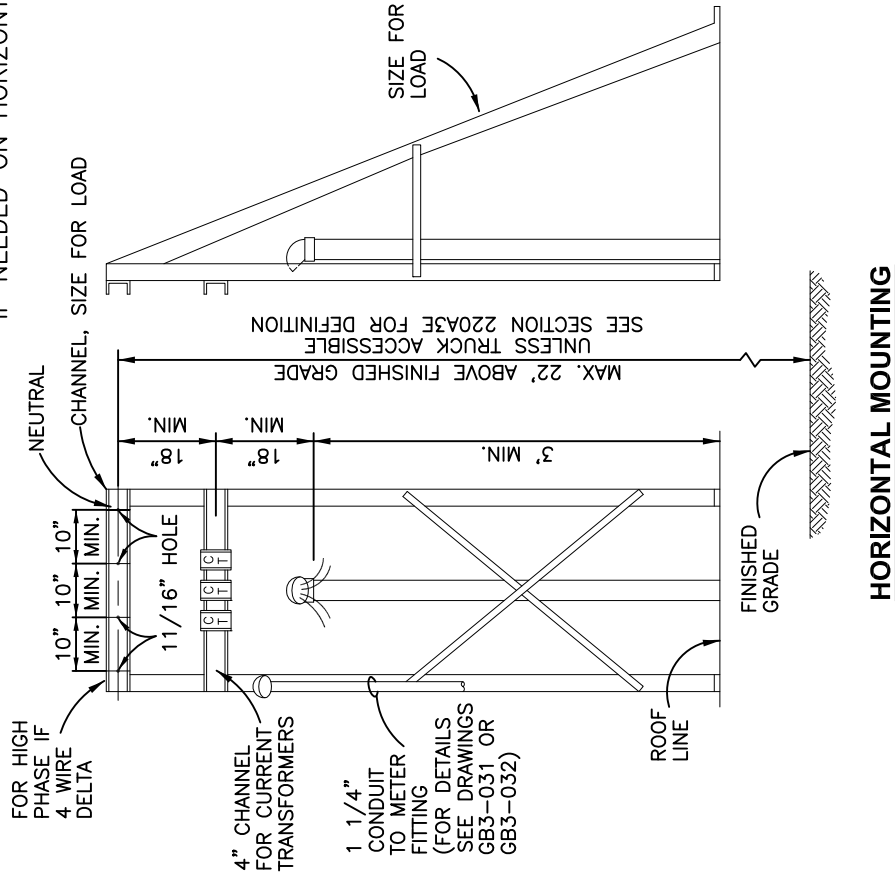
- (4) All mounting of potential transformers in switchgear requires prior approval of the Company metering department in writing. Potential transformers mounted on a stationary platform shall be installed in a lockable walk-in metering compartment that is separate from the current transformer cubical. Connections to the primary side of the potential transformer shall be made on the line side of the current transformers. A two door system shall be used for this method. As the first door is opened, a mechanical device shall open switches which will isolate the working area from voltage plus ground the potential transformers and their platform area. At this point, bare bus, wires, or any other live equipment shall not be reachable unless it has been grounded in this step. Once this operation has taken place, the second interlocked door can be opened to gain access to the potential transformers for maintenance and/or fuse replacement. Both doors will allow for visible inspection to verify that the equipment is isolated and grounded before access will be permitted. Company personnel may then make needed repairs safely with no loss of power to the customer. The potential transformers shall be located in the compartment section such that a minimum clearance of six inches is provided between them and the pad or floor upon which the switchgear is installed.



PERMANENT POLE METER INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
240/480 VOLT, 1 PHASE, 3 WIRE
200 A, TYPE II INDOT SERVICE

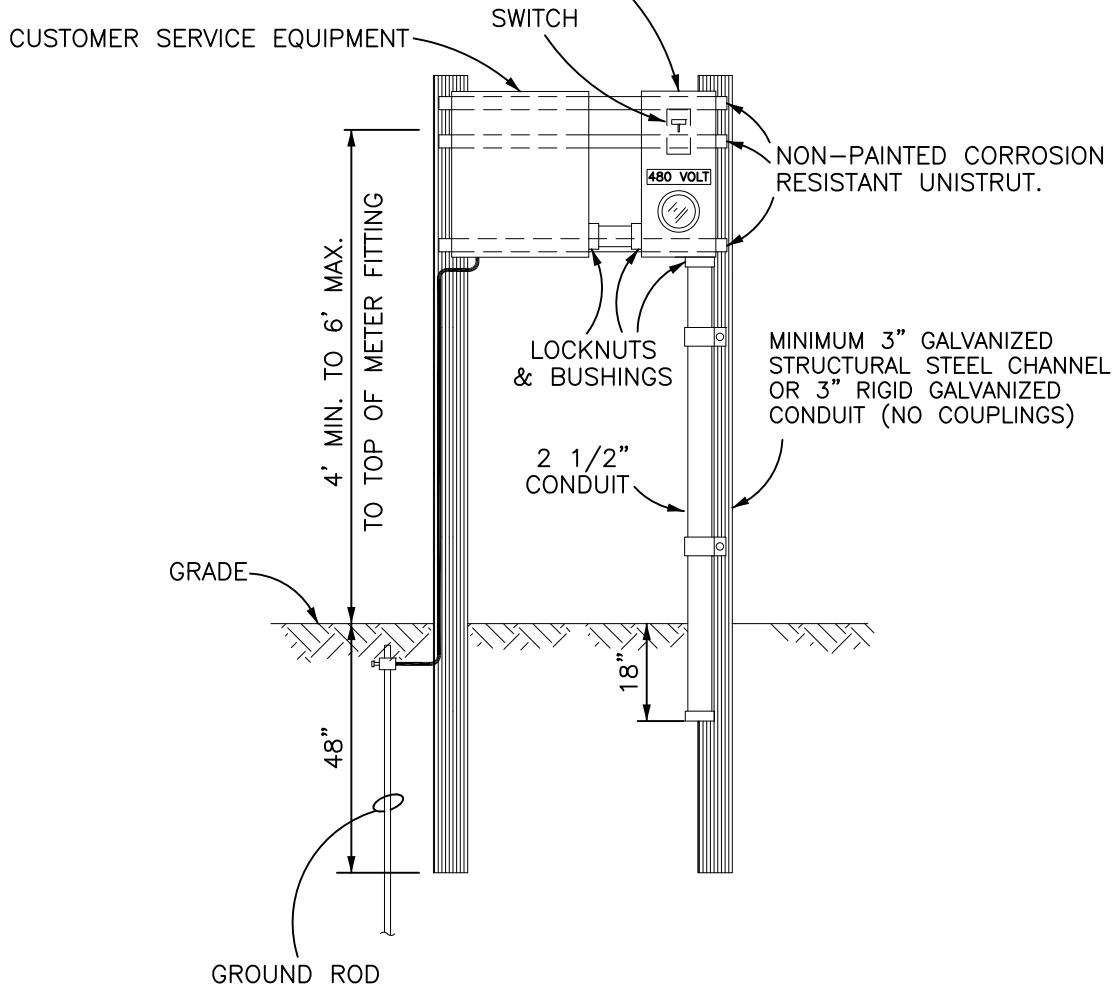
NOTES:

1. THE COMPLETE INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE COMPANY'S ENGINEERING DEPARTMENT.
2. THE NEUTRAL AND HIGH PHASE MAY BE REVERSED IF NEEDED ON HORIZONTAL INSTALLATIONS ONLY.



TYPICAL ROOF STRUCTURES FOR SERVICE DROP AND METERING TRANSFORMERS UP TO 300 VOLT SERVICES

METER FITTING WITH MOLDED CASE
 SWITCH FOR COLD SEQUENCE SERVICE
 FURNISHED BY COMPANY, INSTALLED
 BY CONTRACTOR.
 IPL STOCK# 4008-325



NOTES:

1. THE CONTRACTOR SHALL GROUND THE SERVICE FACILITIES. THE CONTRACTOR SHALL DRIVE THE GROUND ROD(S) TO AVOID COMPANY CABLES.
2. CONDUIT SHALL BE TERMINATED WITH A BUSHING OR BOX ADAPTER.

FREE STANDING - UNDERGROUND INSTALLATION
120/240 VOLT, 1 PHASE, 3 WIRE
240/480 VOLT, 1 PHASE, 3 WIRE
200 A, TYPE II INDOT SERVICE