BALTIMORE GAS AND ELECTRIC

Gas & Electric Metering Manual



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TO: Holders of the BGE Gas & Electric Metering Manual

FROM: Smart Metering & Technology Unit

SUBJECT: Manual Revisions – 9.2

DATE: September 2026

Revisions have been made to the BGE Gas & Electric Metering Manual and are noted in the Revision History. Due to formatting changes, it is recommended that you re-print these sections. Please update your manual with the revised pages detailed below.

**Please note: to allow for easier web navigation, bookmarks have been added to the pdf file. **

If you have any questions concerning these revisions, please refer to the Foreword Section for contact information.

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The following table details revisions made to this manual.

Revision	Date	Description
1.0	April 2003	Initial Release of Gas and Electric Metering Manual
1.01	May 14, 2003	Revised drawing in Section 502 (3-phase, 4-wire Wye, 120/208V Service) to show 120V from B phase to neutral.
		Removed 803 chapter title from page 800-11, section 802-6
		Removed "Appliance Repair" from tables 106-1 and 701-5
1.1	Sept 2003	Revised Table of Contents
		Revised COMAR definition to include "electric"
		Revised text in 206
		Revised text and drawing in 208
		Revised text in 209
		Revised dimensions in drawing for 211
		Revised text in drawing 213
		Revised text in 220, 221, 222, 224, 225, 226, 227, and 311
		Revised text and drawing in 312
		Revised drawing for 314
		Revised text in 321, 402, 406, 407, and 413
		Added drawing in 502 (120/240/240V 4-Wire Delta)
		Revised “Fixed Factor Billing” column in table 702-2
		Revised text in 705-8 and 706-4
		Updated "Meters-General Rules" in section 706-4
		Revised service pressure in drawings 802-1, 803-1, 803-5, 804-10, 804-11, 805-5, and 805-6
2.0	Oct 2004	Revised Foreword, Table of Contents and Definitions
		Sections 100, 200, 300 and 400 – All references to 66” minimum clearance from meter to driveway were changed to 36” minimum.
		Added text in 105-2
		Revised text change in drawing in 201-5D
		Revised contents of 203: added 203-1, 203-2 and 203-3
		Revised drawing in 220
		Revised drawing in 223
		Revised drawing in 227
		Revised text in 322
		Revised text in 327
		Added 328 – Existing Town House Installations
		Revised text and table in 402
		Revised text in 403-407
		Revised text in Drawing 14061-C
		Revised text in Drawing 14060-C
		Revised text in 409
		Revised text in 411-1 and 411-2
		Revised text in 413
		Revised text and drawings in 408-2
		Revised text and drawing in 412
		Revised text in 412
		Added Section 603-4 Separated (Meter) Installation
		Added Section 610 Metering Configuration for Town Houses (Only)

** Continued on the following page **

REVISION HISTORY

Revision	Date	Description
2.0	Oct 2004	Added Section 620 Typical Town House Indoor Meter Drawings
		Renumber Section 607-1 to 690-1 Improper Installation
		Section 700 Renamed from Industrial & Commercial to Commercial & Industrial
		Removed Table 702-1, same information in Table 702-2
		Revised Table 702-2 to show new MP specifications
		Revised text from 27.7" to 22.7" and changed wording from "guarantee" to "minimum" in section 702-2
		Added Table 702-3
		Section 703-6 corrected Tariff section from 4.1 to 6.1
		Updated Sections 704-1 & 704-2
		Added Town House Meter Location exception in Section 705-1
		Added “Notes” to Section 705-1
		Rewrote Service and Vent wall opens in Section 705-3
		Added 3 Foot Meter Protection requirement in Section 705-4
		Added removable bollards in Section 705-4
		Rewrote AMR Policy in Section 705-5
		Combined Service Renewals into Section 705-7
		Rewrote Meter Locations and Sources of Ignitions in Section 705-8
		Added text for gas vents in flood plane areas on section 705-8
		Added Section 706-2 Underground Piping After the Meter - Residential
		Renumber Sections 706-3, 4 and 5
		Added Section 706-6 BGE Procedure for Re-Connection of Existing Gas Service Installation (Relocations & Meter Increases)
		Removed Section 780 Residential High Rise Distribution Application
2.1	August 2005	Added website information to the Foreword
		Updated Table of Contents
		Updated gas design standards in the Scope
		Corrected the meter mounting height reference to “final grade to centerline of meter” and updated the reference sections on page 100-7.
		Added text to define a high-rise building and the text “every other floor” in Section 105-3.
		Updated the map to show George Spitzler’s contact information and coverage area in Section 106-2.
		Defined how to install thru-wall conduit connected from the LB fitting and the conduit from the splice box to LB fitting in Section 203-1.
		Defined customer responsibility for line conductors over 12” in Sections 215, 216, 217, 218, 226, 318, 319 and 320.
		Underlined Item (6) in Section 219.
		Added text box “For Outdoor Use Only” on the drawing in Section 227.
		Revised service loop height clearances in Section 303.
		Added an illustration of an equivalent pipe support in Section 307.
		Updated the list of manufacturers in Sections 401, 403, 404 and 405.
		Created Section 414 for “Approved Indoor Service Termination Cabinet 3Ø, 4W 1600-3000 Amps”.
		Created Section 415 for “Approved Indoor Service Termination Cabinet 3Ø, 4W Above 3000 Amps”.
		Corrected text in Section 408-2.

** Continued on the following page **

REVISION HISTORY

Revision	Date	Description
2.1	August 2005	Added suggested footer in Section 606-1
		Defined how to install thru-wall conduit connected from the LB fitting and the conduit from the splice box to LB fitting in Section 620-6.
		Remove 1 PSIG delivery option from MP system, Updated the ½ PSIG delivery from 1,000 to 23,000 cfh in Section 702-2
		Updated minimum line pressure delivery to 1.46 psig in Section 702-2
		Updated BGE's "Standard Designs" installation to 23,000 cfh for standard delivery and 25,875 cfh for 2 PSIG delivery in Section 702-2
		Updated system allowable pressure drop in Section 702-3
		Updated customer "Scratch-and-Sniff" card in Section 703-5
		Added suggested footer in Section 705-4
		Updated to match internal BGE policies in Section 705-8
		Added new Section 706-2 of "Added or Converted Equipment" from other fuel sources and renumbered the following Sections
		Added C&I customer responsibility for underground piping after the meter in Section 706-3
		Updated meter assembly insulation requirement in all of Section 800
		Updated increase meter assembly dimensions and drawings due to ERT module in all of Section 800
		Removed "Ten Pound" information from Section 800
		Consolidated drawings and delivery information in Sections 800-3 & -4
		Updated meter assembly insulation requirement in all of Section 900
		Removed "Ten Pound" information from Section 900
		Added 23M232 Meter Assembly Details
		Created "How to Read Your Meter" to Section 1000-1
		Created "Pressure Factor Chart" to Section 1000-3
		Created "Clocking a Meter" to Section 1000-4
2.2	October 2006	Revised text and rearrange the terms alphabetically in DEFINITIONS.
		Added an excerpt from BGE Electric Service Tariff that defines "Supply Points" to Section 102-1 and renumbered the whole section
		Revised "Building/Hazards Clearances" drawing to show 36" distance to driveway and added "Deck Installation Clearances" to Section 105-2
		Revised drawing in Section 202 and 302 to define meter clearance requirements if close to driveway
		Added text reference about Section 600 and splice box mech number (for BGE reference) in Section 203
		Modified drawing to define use of service trough for line conductors in Sections 215, 216 and 218
		Specified customer's responsibility for line conductors inside trough in Sections 215, 216, 217, 218, 226, 318, 319 and 320
		Created Section 228 "Cellular Site Installation Current Transformer (CT) Rated Meter"
		Created Section 229 "Cellular Site Installation Self-Contained Meters and/or CT-Rated Meter"
		Created Section 230 "Cellular Site Installation Meter Stack and/or CT-Rated Meter"
		Added Note "(N3)" concerning eaves dimension and removed table "Service Drop Size According to Service Ampacity" in Section 307
		Added Meter Socket Box dimensions in Sections 309, 310, 311 and 312

** Continued on the following page **

REVISION HISTORY

Revision	Date	Description
2.2	October 2006	Updated model number for pedestal box in Section 401
		Updated stud kit catalog number in Section 402
		Revised the dimensions format of the cabinet and updated the list of manufacturers in Sections 403, 404, 405
		Changed the Title of Section 406 to "Approved Service Entrance Compartment" and added the list of manufacturers and drawing numbers
		Edited text and updated table in Section 410
		Correct the height to be 6'-3" or 75" instead of 73" in Section 610-3 & 610-4
		Updated C&I contacts in Section 701-4
		Removed 10# gas system indication in Section 704-2
		Updated reference to the National Fuel Gas Code in all of Section 700
		Updated "Curtailment of Supply" information in Section 702-4
		Updated "New Gas Service" tag in Section 706-5
		Added BGE Reference Numbers to specific drawings in Section 800
		Updated 3M and 5M C&I Meter Set drawings in Section 900
2.3	March 2007	Updated Foreword
		Updated Table of Contents
		Added information re: Metering in a Flex Space Building in Section 503
		Added information re: Portable Generators and Transfer Switches in Section 504
		Updated MM701-4 to match new service territory representatives
		Updated MM704-1 building requirements to meet International Building Code and Local Code requirements
		Added outlet piping size chart to MM900-1
		Added outlet piping dimensions to C&I Meter Set drawings in Sec 901 through 904
		Added MM905-3 C&I Meter Set drawing to show requirements for metering in a Flex Space Building
2.4	March 2009	Edited Forward contact information electric metering and first paragraph
		Edited format and revised text in Section 102-1-B
		Edited 103-3 to reflect current tariff language
		Added maximum secondary fault current to Section 103-6
		Updated reference in Section 104-9
		Updated 106-2 contact information
		Revised 201-4 and 201-5 to show current requirements
		Edited Section 204 drawing
		Added Section 205 Single Outdoor Meter with Utility Disconnect
		Changed maximum voltage and added note to Section 211
		Edited Section 215-218, 220-222, and 224-226
		Revised 228 and 229 to reflect new rules regarding cellular tower metering. Deleted 230.
		Edited Section 301-2 to include decks
		Revised Section 303 moved H under B and deleted letter H
		Revised 303 to reflect current standards in OH Construction Standards
		Revised Section 307 table for > 48in, included note, added Note (N4)
		Added Section 310-2 Single Outdoor Meter With Utility Disconnect

** Continued on the following page **

Revision	Date	Description
2.4	March 2009	Added dual and single meter table to Section 401
		Edited format in Section 402-1, added line item and Note (2)
		Added Section 402-2 Approved Modular Metering Equipment Various Services (400 Amp/ 320 Amp Continuous)
		Added S.A.R phone number to Sections 403 – 405 and 415 – 416
		Added Section 416 Service Entrance Trough Requirements
		Updated reference to the National Electric Safety Code in all of Section 600
		Edited 620-2 drawing with current style regulator
		Edited 620-3 drawing with current style regulator
		Edited 620-7 drawing with current style regulator
		Updated BGE Gas Service Tariff throughout Section 700
		Updated reference to the National Fuel Gas Code in all of Section 700
		Update 701-1 Customer Care Center name
		Updated 701-4 Contact information
		Updated 701-5 contact information
		Revised COMAR reference in 703-4
		Updated 703-5 with latest Scratch and Sniff mailer
		Updated Gas Turn on Procedure in Section 703-10 from National Fuel Gas Code 2009 Edition
		Updated 704-1 to keep definition of “building” the same as the IBC
		Updated 704-2 reference to National Electric Safety Code
		Updated 705-3 unit name
		Revised 705-6 with expanded explanation of Bonding policy
		Revised 705-8 Reg/Relief vents and clearance
		Edit 706-2 to make bold
		Added re-light general practice to 706-7
		Revised 800 & 900 to reflect typical service height above grade
		Edit 800-1 grammar
		Changed 750 Meter to 800 Meter in all of Section 800
		Edited drawing to reflect change from ½” CTS service to ¾” IPS in Section 800
		Added pad thickness to all of Section 900
		Added “(MP)” to keep descriptions standard in Section 900
		Edited 902-3 to utilize the 40D49 pre-fab with Fisher 133 regulation
		Added 902-7 3M line pressure assembly
		Added 902-7 5M line pressure assembly
		Added 902-7 7M line pressure assembly
		Added 902-7 11M line pressure assembly
		Added 902-7 16M/23M232 line pressure assembly
		Numbering revision to 903-8
		Numbering revision to 903-9
2.4.1	December 2009	Revised contact information in the Foreword
		Revised Approved Modular Metering Equipment in Section 402
		Revised contact information in Section 701-4
		Updated Meter Protection Policy in Sections 412, 603-1, 606-1, 610, 703, and 705-4
2.4.2	November 2010	Added section 104-10 Pulse Metering

2.4.2	November 2010	Revised contact information on Meter Inspection Districts map
		Revised drawing and text for compliance in Section 303
		Revised drawing and text for compliance in Section 307
		Revised Approved Modular Metering Equipment in Sections 402
		Revised Electric Meter Protection drawing in Section 412
		Revised Indoor Service Termination Cabinet and Service Entrance Trough Requirements in Sections 406, 414 - 416
		Updated contact information in Section 701-4
		Added Section 703-9
		Combined Sections 802-4 and 802-5
2.5	December 2011	Revised contact information in the Foreword
		Updated Where to Call Service Information
		Revised contact information on Meter Inspection Districts map
		Revised wording of Service Conductors in Section 205
		Deleted 3Ø,3W from Service in Sections 218 and 219
		Revised Max Amps and deleted "DRAFT" from drawing in Section 228
		Updated drawing and text; Added drawing and definitions in Section 303 Service Drop Clearances for Residential and Commercial Properties
		Updated drawing and text; Added drawing and text for multi-tiered decks in Section 307 Typical Service Mast Installations
		Revised Service Conductors in Section 310-2
		Adjusted Max. Amps in Section 312
		Adjusted wording to clarify table location in Section 316
		Deleted blank page for former Section 317; adjusted numbering in all subsequent sections to follow sequential order
		Deleted 3Ø,3W for Service in Section 320
		Adjusted chart and text in Section 402-2
		Adjusted text in Note in Section 415
2.5.1	April 2013	Updated Contact Information
		Updated the Table of Contents
		Added Dual Electric Service specifications
		Added Dual Gas Service specifications
		Added Customer Owned Gas Booster/Compressor requirements
2.5.2	June 2013	Adjusted text in Section 601-1
		Adjusted text in Section 602-1; Clarified note specifying use of bollards
		Adjusted text in Section 602-2; Clarified definition of "front of building"
		Corrected language error in Section 603-1
		Corrected language error in Section 603-4
		Corrected mismatching figures in Section 605-1, #2
		Adjusted text in Section 606-1
		Adjusted text in Section 610-3; Corrected reference to section 602-2.
		Adjusted text in Section 610-4; Corrected reference to section 602-2.
2.5.3	July 2013	Adjusted text in Sections 101-2, 103-3, 105-1, 105-2
		Added depth dimension for N1 in diagrams in Section 105-2.4.C
		Removed outdated emergency phone number in Section 106-1
		Updated all contact info for Meter Inspection districts, Section 106-2
		Added 811 for Miss Utility, Section 106-4. Also added complete color codes.
2.5.4	September 2013	Updated contact info in Foreword.
		Adjusted text in Purpose & Scope
		Adjusted text in Section 303

2.5.4	September 2013	Corrected swimming pool clearance values in Section 304
		Added reference in Section 304
		Adjusted text in Section 304
		Cleaned formatting in Section 307 (Service Masts)
		Adjusted text in Section 307 (Decks)
		Corrected kcmil in Section 312
		Removed outdated BGE phone number in Section 701-1
		Updated MISS Utility phone number in Section 701-2
		Updated color codes in Section 701-2
		Updated contact info in Section 701-4
		Updated contact info in Section 701-5
		Added common settings in Section 702-2
		Adjusted text in Section 703-7
		Updated NFPA Code references throughout Sections 703
		Adjusted text in Section 703-9, 11, & 12
		Adjusted text in Section 704-2, Paragraph C.4
		Updated NFPA Code reference in Section 704-3
		Adjusted text in Section 705-2
		Updated NFPA Code reference in Sections 705-3, 6, & 8
		Updated NFPA Code reference in Sections 706-2, 4
2.5.5	October 2013	Removed 750 and added 800 to Section 900-1, Table G.
		Corrected CFH in Section 903-7.
		Added 23M232 to Sections 903-9, 10.
		Removed redundant Sections 903-11, 12.
		Added 23M232 to Sections 904-4, 6.
		Removed redundant Sections 904-7, 8.
2.5.6	November 2013	Adjusted contact info in cover letter / forward
		Removed non-standard 3Ø,3W service from Section 219
		Added note (8) to Section 226 and updated figure
		Corrected some language throughout MM200
		Adjusted text in 801-2, 3
		Removed redundant Section 802-5
3.1	March 2014	Corrected language in Definitions Page 3
		Updated drawings for new meter box dimensions page 100-13&14 Updated contact info page 100-17, Renumbered sections MM100
		Updated drawings for meter box dimensions sections MM200, 300 & 600
		Added approved pedestal page 400-1, Added model # to table 401, Added note #5 to table 402-1, Moved sections 411, 412 to MM100 section 106
		Renumbered sections MM600
3.2	July 2014	Minor Revisions made to section MM500
		Section 706-7 updated to reflect P.O.S. program
		Section 701-4 contact info updated, other minor revisions
3.3	August 2014	BGE New Business address updated in section MM100
3.4	December 2014	Updated page 700-21 to include deck exception for build-overs of existing gas services
		MM 900: Added new drawing to 902-12 for 3M meter, 14” water column delivery, off of medium pressure main.
		MM 900: Revised drawings 903-8/9 and 904-4/5

** Continued on the following page **

REVISION HISTORY

Revision	Date	Description
3.5	July 2015	Cover Letter and Foreword: Updated Contacts
		Added pedestals for Commercial and MDOT use (400-1)
		Revised wording for clarification, including changing from "portable generator" to "backup generator"
4.0	October 2015	Changed format of the Table of Contents (uses Word's self-update feature) Added fire pump and elevator under Dual Services; Removed requirement for totalizers (102-2)
		Added requirements for installation of electric meters in a flood zone (105-2); specified PVC duct requirement for service cables that are installed underneath an overbuild, e.g. patio/deck/paving (105-3); removed arrow to Front of Building figure (105-3)
		Updated contacts (701-4)
		Clarified requirements for installations of gas meters in a flood zone (705-8)
4.1	March 2016	Added Millbank U5136-O-**** and U5137-O-**** model numbers in Section 400-1
		Consolidated Meter Protection for Electric, Combined Gas and Electric, and Gas Metering into one **Meter Protection** Section and inserted after **Definitions**. Removed meter protection standards paragraphs from Sections 100, 400, 600 and 700
		Added to **Meter Protection** section Figures 11-14 for Options A and B specifying relocation requirements for elevating indoor gas meter within garages
		Added **BGE Outdoor Metering Location Standard** as Sections 105-2, 601-2, 705-1. Removed outdoor metering location standards paragraphs from Sections 100, 600 and 700
		Revised 'not normal conditions' to **Exceptions to the BGE Outdoor Metering Location Standard** in Sections 105-3, 601-2 and 705-1
		Removed Indoor Metering Configurations B and C from Section 603 Removed "Typical Townhouse Indoor Meter Drawings" from Section 603 and relocated content to new Section 605 and retitled heading to **Specifications for Meter Installation Meeting One or More Exceptions to the BGE Outdoor Metering Location Standard**
		Revised Section 705-5 Meters - General Rules paragraph 'H.' to "Gas metering assemblies located indoors will not be installed in garages."
5.0	December 2018	Revised Section 107-2 Map of Electric Meter Inspector Responsibilities: Change in contact information
		Revised Section 406 Approved Service Entrance Compartment: From "A pit is required where eight (8) or more ducts are provided for the installation of Company Underground wiring" to "A pit is required to be installed below the metering compartment" as part of a Safety Council initiative
		Added Section 506 Meter Requirements Review: Small Generator Interconnection as part of Exelon Reporting Commitment
		Revised Sections 602 Outdoor Metering Installation Options and MM800 Typical Residential & Small Commercial Gas Meter Set Drawings: minimum clear space in front of meter(s) from wall to be 56'' instead of 54'' as a correction per field measurement. The minimum work space required is 69'' H

** Continued on the following page **

REVISION HISTORY

Revision	Date	Description
5.0	December 2018	Revised MM700 Gas General: Updated edition of National Fuel Code to 2015 and National Electric Safety Code to 2017
6.0	May 2019	Revised Section 414, Service Entrance Trough Requirements, to indicate a minimum 6" clearance is required above floor line for trough installs. Pages 400-19 and 400-20 updated. Meter Protection Section is updated to reflect these changes as well
6.1	December 2019	Revised Section 107-2 Map of Electric Meter Inspector Responsibilities: Change in contact information
7.0	April 2020	Added **Meter Cabinet with Current Transformers** and **Approved Commercial Pedestals and Cabinets for Public EV Charging Stations** to Sections 231 and 416
		Updated date of last confirmation in Section 506
7.1	December 2020	Updated contacts in Foreword
		Added: 104-11 Maximum Number of Disconnects; 408-3 5G Antenna on a Customer-Owned Metal Pole; 408-4 Communication Service on a BGE or Joint-Owned Distribution Wooden Pole
		Revised 401 and 408-2 to include 5G antenna installations
		Revised **Approved Commercial Pedestals and Cabinets for Public EV Charging Stations** to include 100 amps and 200 amps commercial pedestals
		Revised 601-2 BGE Outdoor Metering Location Standard with outdoor regulator requirement
		Revised CFH in Section 902-1 to 1201 – 3000; Section 902-7 to 1200 – 3270; Section 903-1 to 1201 – 3000; Section 903-2 to 1351 – 3375; Section 904-1 to 1201 – 3000 or 1351 – 3375
7.2	April 2021	Added: Checklist Guide for Switchboard Submittals at end of Section 407
		Revised catalog number in Section 416 due to design changes
7.3	May 2021	Revised gate valves to ball valves in Sections 800 and 900
8.0	January 2022	Revised Sections 601-2 and 705-1 BGE Outdoor Meter Assembly Location Policy to address MD legislation
		Revised contact information on M&I – Natural Gas Responsibilities
		Deleted Additional Services under Section 102-2 Dual Service; Added clarification to separate service and meter for fire pumps to Section 410 Fire Pump Installations
		Revised contact information on Meter Inspection Districts Map
		Added Section 417 Approved Commercial Pedestals and Cabinets
8.1	November 2022	Revised Section 105-2 on referrals for exceptions for outdoor meters
		Added Section 105-4 Indoor Locations – Non-Standard for indoor guidelines
		Revised contact information on Meter Inspection Districts Map
8.2	April 2023	Revised Purpose and Scope with additional clarification on the use this book
		Revised meter enclosure maximum wire size in MM200 Electric Underground sections
		Revised Section 417 to include catalog designations for 800A commercial pedestals
		Moved Section 415 to Electric Underground Section 232
8.3	November 2023	Revised contact information on Electric Meter Inspection Districts Map

8.4	February 2024	Updated the specifications in sections 200-26 and 200-27 from Max. 9 sets to Max. 10 sets 500kcmil
		Updated vendor information in sections 400-2 and 400-3
		Revised sections 700-30, 700-31, and 700-32 to reflect current policies
8.5	December 2024	Revised and updated all sections to reflect 2024 verbiage.
8.6	January 2025	Revised section 700 to incorporate Gas Boosters and updated verbiage.
8.7	June 2025	Revised section 200 and 300 to accurately reflect current policies.
8.8	July 2025	Revised section 300 and 400 to accurately reflect current policies; as well as including Meter Collar Adapters in section 500.
8.9	December 2025	Adding BGE Approved Meter Collars
9.0	February 2026	Adding BGE Approved Meter Collars to section 500.
9.1	April 2026	Revised section 400 and 500 to reflect updated contact information and approved meter collars.
9.2	September	Revised section 500 to reflect approved meter collars.
		Revised section 600 to reflect current gas policies.

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Dear Metering Manual Holder,

This Baltimore Gas and Electric (BGE) *Gas & Electric Metering Manual* supersedes all previous editions. Please take time to familiarize yourself with the manual by reviewing all of the sections.

The current version of the Metering Manual is available for download at the following address:

www.bge.com/meteringmanual

If you would like to be included on our mailing list to receive revision notifications, please make sure that BGE has your current email address. If you have contacted BGE for revision notifications in the past, you will continue to automatically receive notifications of future releases. You may update your contact information by the following:

1. Submit a new email address at www.bge.com/meteringmanual
2. Send an email directly to BGEMeterManual@bge.com

For technical questions concerning this manual, please call one of the following:

Sean Gorman	667-313-2956 (Manager, Smart Metering & Technology)
Zach Wentz	667-313-3422 (Gas Metering)

Sincerely,

BGE Smart Metering & Technology Unit

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PURPOSE AND SCOPE ..... P&S-1

DEFINITIONS Definitions-1

Meter Protection

Page

Electric Meter Protection
Traffic Protection 1
Concrete Curb Barriers / Pipe Guard (Typical Installation) 1
Electric Meter Protection- Service Entrance Trough Standards 1

Combined Gas and Electric Meter Protection
Townhome (Combined Gas and Electric) Residential Meter Protection Requirements 8
Single Family Home Residential Gas Meter Protection Requirements 8

Gas Meter Protection Standards
Meter & Riser Protection 12
Commercial & Industrial Gas Meter Protection 13
Commercial and Industrial Meter Protection Requirements 13

100 – ELECTRIC GENERAL

101 Characteristics of Supply
101-1 General 100-1
101-2 Standard Service at Secondary Distribution System Voltages 100-1

102 Conditions of Supply
102-1 Supply Points 100-2
102-2 Dual Services 100-3

103 Conditions of Use
103-1 Avoidance of Injury to Equipment 100-4
103-2 Loss or Damage from Use of Electricity 100-4
103-3 Installations Requiring Special Consideration 100-4
103-4 Load Balancing 100-5
103-5 Superposition of Electric Energy on the Company's Electric System 100-5
103-6 Available Fault Currents 100-5

104 Customer's Installation
104-1 Governing Rules 100-6
104-2 Certificate of Approval 100-6
104-3 Space Provisions for Company Equipment 100-6
104-4 Protection Against Loss of Service and Damage to Company Metering Equipment 100-6
104-5 Point of Service Connection 100-6
104-6 Change in Class of Service 100-7
104-7 Grounding 100-7
104-8 Provisions for Sealing 100-7
104-9 Customer-Owned Metering Equipment — See 106-5 100-8
104-10 Pulse Metering 100-8

105 Location of Metering Equipment
105-1 General Provisions 100-9
105-2 BGE Outdoor Metering Location Standard 100-10
105-3 Outdoor Meter Locations Requirements 100-11
105-4 Indoor Locations – NON-STANDARD 100-17
105-5 Residential Meters in a Flood Zone 100-18

106 Electric Enclosures Protection
106-1 Protection Enclosures 100-18
106-2 Conditions for Applying the Guidelines 100-19

106-3 Types of Enclosures 100-19

107 Service Information
107-1 Where to Call 100-21
107-2 Map – Map of Electric Meter Inspector Responsibilities 100-22
107-3 Map - A.C. Network Area (Baltimore City) 100-23
107-4 Miss Utility, Location of Underground Facilities 100-24

200 – ELECTRIC UNDERGROUND

201 Underground Service
201-1 Terminus of Service 200-1
201-2 Trenching and Service Lateral Installation 200-1
201-3 Grading 200-1
201-4 Service Raceways in Municipal Duct Areas 200-1
201-5 Service Raceways other than in Municipal Duct Areas 200-1

202 Clearances from Sidewalk, Driveway, Grade, and Trench 200-4

203 Typical Indoor Raceway Installations (Town Houses Only) 200-5
203-1 Basement Installation with LB Fitting 200-5
203-2 Basement Installation without LB Fitting 200-6
203-3 Garage Installation 200-7

204 Single Meter Outdoor — 1Ø,3W; 3Ø,3W; or 3Ø,4W; Max. Volts - 208Y/120; Max. Amps - 200; One Set of Load Conductors 200-8

205 Single Outdoor Meter With Utility Disconnect — 3Ø, 4W; Max Volts – 480Y/277 (Wye services ONLY); Max Amps – 200 200-9

206 Freestanding Single Meter Outdoor — 1Ø,3W; 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 200; One Set of Load Conductors 200-10

207 Single Pedestal Outdoor Meter — 1Ø,3W; Max. Volts - 240; Max. Amps - 200; One or Two Sets of Load Conductors 200-11

208 Residential Only Single Outdoor Meter — 1Ø,3W; Max. Volts - 240; Max. Amps - 400 (320 A Continuous); One or Two Sets of Load Conductors 200-12

209 Residential Only Single Outdoor Meter Pedestal — 1Ø,3W; Max. Volts - 240; Max. Amps - 400 (320 A Continuous); Two Sets of Load Conductors 200-13

210 Two Meters Outdoor — 1Ø,3W or 3Ø,3W; Max. Volts - 240; Max. Amps - 150 Each Meter Position 200-14

211 Two Meters Outdoor — 1Ø,3W; 3Ø,3W; or 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 200 Each Meter Position 200-15

212 Three Meters Outdoor — 1Ø,3W, 3Ø,3W, 3Ø, 4W; Max. Volts - 240; Max. Amps - 150 Each Meter Position 200-16

213 Freestanding Multiple Outdoor Meters — 1Ø,3W; Max. Volts - 240; Max. Amps - 150 Each Meter Position 200-17

214 Doubtful Permanency Service from Pad-Mounted Transformer Single Outdoor Meter — 1Ø,3W; 3Ø,3W; or 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 200 200-18

215 Multiple Meters Customer's Trough (Outdoor/Indoor) — 1Ø,3W or 3Ø,3W; Max. Volts - 240; Max. Amps - 100 or 200 Each Meter Position 200-19

216 Multiple Meters Customer's Trough (Outdoor/Indoor) — 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 200 Each Meter Position 200-20

217 Six or fewer Indoor Meters Company's Horizontal 2- or 3-Position Meter Sockets — 1Ø,3W or 3Ø,3W; Max. Volts - 240; Max. Amps - 150 Each Meter Position 200-21

218 Multiple Indoor Meters Company's Vertical 2- or 3-Position Meter Sockets — 1Ø,3W or 3Ø,3W; Max. Volts - 240; Max. Amps - 150 Each Meter Position 200-22

219 Modular Meters Outdoor / Indoor Customer's Equipment — 1Ø,3W; 3Ø,3W; or 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 200 Each Meter Position 200-23

220 Outdoor/Indoor Instrument Current Transformer (C.T. Meter) — 1Ø,3W; Max. Volts - 240; Max. Amps - 201 to 800 200-24

221 Outdoor/Indoor Instrument Current Transformer (C.T. Meter) — 1Ø ,3W ,3Ø, 3W or 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 201 to 1600 200-25

222 Outdoor/Indoor Instrument Current Transformer (C.T. Meter) — 3Ø,3W or 3Ø,4W; Max. Volts - 480Y/277; Max. Amps - 201 to 3000 200-26

223 Outdoor Instrument Current Transformer (C.T. Meter) — 1Ø,3W; 3Ø,3W; or 3Ø,4W; Max. Volts - 480Y/277; Max. Amps, 1Ø - 1000 (Demand); Max. Amps, 3Ø - 3000 200-27

224 Outdoor/Indoor 1Ø,3W; 3Ø,3W
Delta Service Max. Volts – 120/208/240
Self-Contained Max. Amps, 200 200-28

225 Outdoor/Indoor 1Ø,3W; 3Ø,3W
Delta Service Max. Volts – 120/208/240
Current Transf. Max. Amps, 201-1600 200-29

226 Combination 1Ø,3W; 3Ø,3W
Self-contained Max. Volts – 480Y/277
and CT Meters Max. Amps, 201-1200 200-30

227 Outdoor
C.T. / Service 1Ø,3W; 3Ø,3W
Termination Max. Volts – 480Y/277
Cabinet Max. Amps, 201-1200 200-31

228 Cellular Site
Installation 1Ø,3W
For Transmission Max. Volts – 120/240
Towers Max. Amps, 200 200-32

229 Cellular Site
Installation 1Ø,3W or 3Ø,4W
For Communication Max. Volts – 480Y/277
Towers Max. Amps, 100-3000 200-33

230 Commercial
Pedestals 1Ø,3W or 3Ø,4W
For Public EV Max. Volts – 120/240 or 480Y/277
Charging Stations Max. Amps – 400 200-35

231 Meter Cabinets with 3Ø,4W
CTs for Public EV Max. Volts – 480Y/277
Charging Stations Max. Amps – 400 200-36

232 Meter Pedestals 1Ø,3W
For Traffic Control Max. Volts - 240
Signals with Lever Max. Amps - 200 400-31
Bypass

300 – ELECTRIC OVERHEAD

301 Overhead Service
301-1 Terminus 300-1
301-2 Service Drop 300-1

302 Clearances from Sidewalk, Driveway, and Grade 300-2

303 Service Drop Clearances for Residential and Commercial Properties 300-3

304 Swimming Pool Clearances 300-6

305 Length of Service Conductor at Service Head 300-8

306 Clearances of Service Drops Over Roofs 300-9

307 Typical Service Mast Installation 300-10

308 Typical Layout of Service Entrance Wiring on a Customer's Pole 300-14

309 Single Outdoor Meter
1Ø,3W; or 3Ø,3W
Max. Volts - 240
Max. Amps - 100
One Set of Load Conductors 300-15

310-1 Single Outdoor Meter
1Ø,3W; 3Ø,3W; or 3Ø,4W
Max. Volts - 480Y/277
Max. Amps - 200
One Set of Load Conductors 300-16

310-2 Single Outdoor Meter with Utility Disconnect
3Ø, 4W
Max. Votls – 480Y/277 (Wye services ONLY)
Max Amps – 200 300-17

311 Single Outdoor Meter
1Ø,3W
Max. Volts - 240
Max. Amps - 200
One or Two Sets of Load Conductors 300-18

312 Residential Only Single Meter Outdoor
1Ø,3W
Max. Volts - 240
Max. Amps - 320 (400 A Continuous)
One or Two Sets of Load Conductors 300-19

313 Two Meters Outdoor
1Ø,3W or 3Ø,3W
Max. Volts - 240
Max. Amps - 150 Each Meter Position 300-20

314 Two Meters Outdoor
1Ø,3W; 3Ø,3W; or 3Ø,4W
Max. Volts - 480Y/277
Max. Amps - 200 Each Meter Position 300-21

315 Three Meters Outdoor
1Ø,3W or 3Ø,3W
Max. Volts - 240
Max. Amps - 150 Each Meter Position 300-22

316 Doubtful Permanency Service Single Meter (Max. 2 Years)
1Ø,3W
Max. Volts - 240
Max. Amps - 200..... 300-23

317 Multiple Indoor Meters Customer's Trough
1Ø,3W; 3Ø,3W; or 3Ø,4W
Max. Volts - 480Y/277
Max. Amps - 200 Each Meter Position 300-24

318 Six or fewer Indoor Meters Company's Horizontal 2- or 3-Position Meter Sockets
1Ø,3W or 3Ø,3W
Max. Volts - 240
Max. Amps - 150 Each Meter Position 300-25

319 Multiple Indoor Meters Company's Vertical 2- or 3-Position Meter Sockets
1Ø,3W or 3Ø,3W
Max. Volts - 240
Max. Amps - 150 Each Meter Position 300-26

320 Modular Meters Outdoor / Indoor Customer Equipment
1Ø,3W; 3Ø,3W; or 3Ø,4W ...
Max. Volts - 480Y/277
Max. Amps - 200 Each Meter Position 300-27

321 **Outdoor/Indoor Instrument Current Transformer (C.T. Meter)** 1Ø,3W Max. Volts - 240 Max. Amps - 201 to 400 300-28

322 **Outdoor/Indoor Instrument Current Transformer (C.T. Meter)** 1Ø,3W; 3Ø,3W; or 3Ø,4W Max. Volts - 480Y/277 Max. Amps - 201 to 1600 300-29

323 **Instrument Current Transformer (C.T. Meter)** 3Ø,3W or 3Ø,4W Max. Volts - 480Y/277 Max. Amps - 201 to 3000 300-30

324 **Outdoor Instrument Current Transformer (C.T. Meter) Wall Mounted** 1Ø,3W Max. Volts - 240 Max. Amps – N/A 300-31

325 **Outdoor Instrument Current Transformer (C.T. Meter) Wall Mounted** 3Ø,3W **NON-STANDARD** Max. Volts - 480 Max. Amps – N/A 300-32

326 **Outdoor Instrument Current Transformer (C.T. Meter) Wall Mounted** 3Ø,4W Max. Volts - 480Y/277 Max. Amps - N/A 300-33

327 **Existing Town House Installations** 300-34

400 – ELECTRIC METERING

401 **Approved Pedestal Metering Equipment (Freestanding)** 400-1

402-1 **Approved Modular Metering Equipment (200 Amp)** 400-2

402-2 **Approved Modular Metering Equipment Various Services (400 Amp/320 Amp Continous)** 400-3

403 **Approved Current Transformer Cabinet**
1Ø, 3W 201-400 A 400-4

404 **Approved Current Transformer Cabinet**
1Ø, 3W, 3Ø, 4W 201-1600A 400-5

405 **Approved Current Transformer Cabinet**
3Ø, 4W 201-3000 A 400-6

406 **Approved Switchgear Termination/Current Transformer Compartment**
3Ø, 4W 6000A (service supplied by underground cable) 400-7

407 **Approved Switchgear Currrent Transformer Compartment**
3Ø, 4W 6000A 400-9

408-1 **Communication Service On Company or Joint-Owned Pole** 1Ø,3W Max. Volts - 240 Max. Amps - 30 400-12

408-2 **5G or CATV Service From Underground Service** 1Ø,3W Max. Volts - 240 Max. Amps - 200 400-13

408-3 **5G Antenna on a Customer-Owned Metal Pole** 1Ø,3W Max. Volts - 240 Max. Amps - 125 400-17

408-4 **Communication Antenna on a BGE Or Joint-Owned Dist. Wooden Pole** 1Ø,3W Max. Volts - 240 Max. Amps - 125 400-20

409 **Typical Wiring of Single Meter Socket** 400-24

410 **Fire Pump Installations** 400-25

411 **Approved Outdoor C.T./Termination Cabinet**
3Ø, 4W 4000 A 400-26

412 **Approved Indoor Service Termination Cabinet**
3Ø, 4W 1600-3000 A 400-27

413 **Approved Indoor Service Termination Cabinet**
3Ø, 4W Above 3000 A 400-28

414 **Service Entrance Trough Requirements** 400-29

415 **Approved Commercial Pedestals and Cabinets for EV Charging Stations**
1Ø3W, 3Ø4W 200 – 400 A 400-32

416 **Approved Commercial Pedestals and Cabinets**
1Ø3W, 3Ø4W 100 – 600 A 400-31

500 - MISC. ELECTRIC

501 Metering Calculations
501-1 Table I - Formulas for Determining Amps, HP, KW, kVA 500-1
501-2 Table II - Full-Load Currents 1Ø 500-1
501-3 Table III - Full-Load Currents 3Ø 500-2

502 Electric Service Diagrams 500-3

503 Flex Space Metering
503-1 Typical Metering Installation in a Dedicated Metering Room of a Flexible Space Building 500-5
503-2 Typical Outdoor Metering Installation for a Flexible Space Building 500-8
503-3 Minimum Space Requirements for Electric Metering Equipment 500-9

504 Backup Generators and Transfer Switches 500-10

505 Small Generator Interconnection 500-11

506 Meter Requirements Review – Small Generator Interconnection 500-12

507 Meter Collar Adapters 500-13

600 - RESIDENTIAL GAS & ELECTRIC COMBINED METERING

601 Combined Gas and Electric Metering
601-1 Combined Metering - General 600-1
601-2 BGE Outdoor Meter Assembly Location Policy 600-2
601-3 Town House Combined Meter Locations Requirements 600-4

602 Outdoor Metering Installation Options
602-1 Stacked Gas & Electric Installation 600-6
602-2 Side - by - Side Installation 600-7
602-3 Separated Installation 600-9
602-4 Minimun Building Clearance Requirements for Combined Metering 600-12
602-5 Proposed Penetration Zones 600-13

603 Metering Configurations for Town Houses (Only)
603-1 General 600-16
603-2 Standard Construction: Both Gas and Electric Meters Intalled Outdoors 600-16

604 Improper Installations
604-1 Improper Installations 600-17

700 - GAS SERVICE & METERING

701 Gas General
701-1 Gas General 700-1
701-2 Location of Underground Facilities 700-2
701-3 Properties of Natural Gas 700-2
701-4 Metering Services Units - Natural Gas Responsibilities 700-3
701-5 Other BGE Contacts 700-4

702 Gas Supply Conditions
702-1 Characteristic of Supply 700-5
702-2 Delivery Pressure 700-6
702-3 Capacity Design 700-7
702-4 Conditions of Supply 700-8
702-5 Dual Services 700-10

703 Gas Ownership/Responsibilities
703-1 Ownership Responsibilities 700-11
703-2 Company's Installation 700-11
703-3 Customer's Installation 700-12
703-4 Company's Responsibilities 700-14
703-5 Customer's Responsibilities 700-14
703-6 Meter & Riser Protection 700-15
703-7 Qualified Agency 700-15
703-8 Interruptions of Service beyond the Meter 700-15
703-9 Inspection and Testing 700-16
703-10 Before Turning Gas On 700-16
703-11 Test for Leakage 700-17
703-12 Placing Equipment in Operation 700-17
703-13 Premises Test for Gas Leakage 700-17

704 Gas Construction
704-1 Building Requirements 700-18
704-2 Gas Service Piping Location Requirements 700-19
704-3 Gas Metering Assembly Support 700-27

705 Meter Locations
705-1 BGE Outdoor Meter Assembly Location Policy 700-30
705-2 Outside Meter Locations Requirements 700-32
705-3 Remote Reading Devices 700-34
705-4 Corrosion Protection 700-34
705-5 Service Renewals & Relocations 700-37
705-6 Meters - General Rules 700-38

706 Gas Inspection, Testing and Service Activation
706-1 Customer Piping Activation 700-38
706-2 Added or Converted Equipment 700-38
706-3 Underground Piping After the the Meter – Residential 700-39
706-4 Pressure Testing 700-39

706-5 Purging 700-39
706-6 BGE Procedure for Activation of New Gas Service Installations 700-40
706-7 BGE Procedures for Re-Connection of Existing Gas Service Installation (Relocations & Meter Increases) ... 700-42

800 - TYPICAL RESIDENTIAL & SMALL COMMERCIAL GAS METER SET DRAWINGS

800 General Comments
800-1 General Comments 800-1

801 Residential & Small Commercial Low Pressure (LP)
801-1 0 - 275 CFH 800-2
801-2 276 - 450 CFH 800-3
801-3 451 - 630 CFH 800-4
801-4 631 - 750 CFH 800-5

802 Residential & Small Commercial Medium Pressure (MP)
802-1 0 - 295 CFH (compact outside installation) 800-6
802-2 0 - 295 CFH (outside installation) 800-7
802-3 0 - 295 CFH (stacked installation) 800-8
802-4 296 - 600 / 601 - 800 CFH 800-9
802-5 801 - 1200 CFH 800-10

803 Residential & Small Commercial High Pressure (HP)
803-1 0 - 295/330 CFH (compact outside installation - std or 2 psig delivery) 800-11
803-2 0 - 295/330 CFH (outside installation – std or 2 psig delivery) 800-12
803-3 0 - 295/330 CFH (stacked installation - std or 2 psig delivery) 800-13
803-4 296 - 600/800 CFH (std delivery) 800-14
803-5 331 - 675/999 CFH (2 psig delivery) 800-15
803-6 801 - 1200 CFH (std delivery) 800-16
803-7 1000 - 1350 CFH (2 psig delivery) 800-17

804 Residential & Small Commercial Over High Pressure (OHP)
804-1 0 - 295/330 CFH (std or 2 psig delivery) 800-18
804-2 296/331 – 600/675 CFH (std or 2 psig delivery) 800-19
804-3 601/676 – 800/999 CFH (std or 2 psigdelivery) 800-20
804-4 801 - 1200 CFH (std delivery) 800-21
804-5 976 - 1350 CFH (2 psig delivery) 800-22

900 - TYPICAL INDUSTRIAL & COMMERCIAL GAS METER SET DRAWINGS

900 General Comments
900-1 General Comments 900-1

901 Industrial & Commercial Low Pressure (LP)
901-1 631 - 800 CFH 900-2
901-2 801 - 2580 CFH 900-3
901-3 2581 - 3975 CFH 900-4
901-4 3976 - 5400 CFH 900-5
901-5 5401 - 7300 CFH 900-6
901-6 7301 – 9950 / 10950 CFH 900-7

902 Industrial & Commercial Medium Pressure (MP)
902-1 1201 - 3000 CFH 900-8
902-2 3001 - 5000 CFH 900-9
902-3 5001 - 7000 CFH 900-10
902-4 7001 - 11000 CFH 900-11
902-5 11001 - 16000 CFH 900-12
902-6 16001 - 23000 CFH 900-13
902-7 1200 - 2279 CFH 900-14
902-8 3271 - 5450 CFH 900-15
902-9 5451 – 7630 CFH 900-16
902-10 7631 - 11990 CFH 900-17

902-11 11991 - 25070 900-18
902-12 1200 - 3070 900-19

903 Industrial & Commercial High Pressure (HP)
903-1 1201 - 3000 CFH (std delivery) 900-20
903-2 1351 - 3375 CFH (2 psig delivery) 900-21
903-3 3001 - 5000 CFH (std delivery) 900-22
903-4 3375 - 5625 CFH (2 psig delivery) 900-23
903-5 5001 - 7000 CFH (std delivery) 900-24
903-6 5656 - 7875 CFH (2 psig delivery) 900-25
903-7 7001 - 10000 CFH (std delivery) 900-26
903-8 9001 - 16000 CFH (std delivery) 900-27
903-9 7876 - 12375 CFH (2 psig delivery) 900-27
903-10 12376 - 18000 CFH (std delivery) 900-28

904 Industrial & Commercial Over High Pressure (OHP)
904-1 1201 - 3000 or 1351 - 3375 CFH (std or 2 psig delivery) 900-29
904-2 3001 - 5000 or 3376 - 6525 CFH (std or 2 psig delivery) 900-30
904-3 5001 - 7000 or 5625 - 7875 CFH (std or 2 psig delivery) 900-31
904-4 7001 - 16000 CFH (std delivery) 900-32
904-5 7876 - 12375 CFH (2 psig delivery) 900-32
904-6 12376 - 18000 CFH (std delivery) 900-33

905 Multi-Meter Manifold (HP)
905-1 0 - 4950 CFH (outside installation - std or 2 psig delivery) 900-34
905-2 0 - 4950 CFH (inside installation - std or 2 psig delivery) 900-35
905-3 Flex Office Space – 0 - 7000 CFH (inside/outside installation - std or 2 psig delivery) 900-36

1000 – GAS MISCELLANEOUS

1001 How to Read Your Meter
1001-1 Reading a Gas Meter Dial Index 1000-1

1002 Cubic Rate Charts
1002-1 Cubic Rate Chart - Std Delivery read from a 1/2 & 1 and 2 & 5 cubic feet dials 1000-2
1002-2 Cubic Rate Chart - 2 psig Delivery read from a 1/2 & 1 and 2 & 5 cubic feet dials 1000-4

1003 Pressure Factor Chart
1003-1 Pressure Factor Chart 1000-6

1004 Clocking a Meter
1004-1 Clocking a Meter 1000-7

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Purpose

The purpose of this manual is provide a clear and concise reference to architects, engineers, builders, developers, plumbers, HVAC contractors, electricians, and BGE personnel, as well as anyone else concerned with the planning and construction of gas and electric meter installations. It is intended to clarify BGE installation requirements and facilitate coordination between the building community and BGE. The standards contained in this manual should be taken into account during the planning and design stages of all residential, commercial, and industrial facilities. This manual was not written to cover all conditions; however, BGE has representatives who will discuss unusual or special needs with its customers. To obtain contact information, please refer to Section 100 or Section 700.

It is the policy of BGE to assist its customers in securing a more beneficial use of gas and electricity. Experience has shown that certain rules and regulations governing customer's meter installations are necessary to enable BGE to serve all its customers in a consistent manner. These rules and regulations will serve to expedite service connections by establishing uniform standards for gas and electric service.

In the event of new gas and electrical installations, additions, or alterations are contemplated, an inquiry should be made in advance of construction or equipment purchase to assure that service will be available at the time required. This will also allow BGE to review characteristics and conditions of supply, conditions of use, and location of equipment.

Per BGE's gas and electric tariffs, BGE may refuse or discontinue service and remove its property for customer's failure to comply with any of the applicable rules and practices currently in effect. For further information, BGE's rules and regulations are contained in tariffs as filed with the Public Service Commission of the State of Maryland.

This manual does not cover all possible scenarios. Exceptions and deviations may be permitted under certain circumstances. It is the responsibility of the customer's electrician to contact the appropriate meter inspector before purchasing or installing any service entrance equipment.

Scope

This manual details BGE's standards for nearly all types of gas and electric metering installations deployed in its service territory. The manual is broken down into three primary areas: electric metering, gas and electric combined metering, and gas metering.

The electric meter portion will encompass all aspects of customer usage, from single phase, 120/240 VAC residential installations through three phase, 277/480 Volts Alternating Current (VAC) industrial and commercial (I&C) installations are covered. Primary voltage (greater than 4,000 volts) metering installations are engineered on a case by case basis and are not included in this manual.

Additionally, this manual outlines BGE requirements to safely provide adequate and reliable electric service to our Customers. The standards, practices and procedures described in this manual apply to BGE electric metering installations and the work associated with providing service. An electric metering installation is defined as the wiring and equipment which transports electricity and measures its usage from the service termination to the connection with the Customer's equipment (e.g. service panel, disconnect switch, transformer, etc.).

The electric section of this manual does not cover the design or installation of electrical wiring or equipment on the Customer's premises (house wiring). Construction and permitting requirements beyond the point of connection to the Customer's equipment are dependent upon the local permitting agency and/or building codes.

Found within the combined residential gas and electric metering section of this manual, are the installation requirements for side-by-side gas and electric meter installations on residential dwellings. This section specifically targets town houses and single-family homes.

The gas section of this manual covers nearly all residential and most I&C gas meter and regulator installations with standard delivery. Typical delivery is 7" water column (w.c.) or 2 pounds per square inch gauge (psig), depending on which BGE pressure system you are being serviced from. New gas metering installations are covered, as well as, replacements for existing gas metering installations. All standard delivery installations up to 23,000 Cubic Feet per Hour (CFH) at standard delivery or 25,875 CFH at 2 psig delivery capacity are subject to "Standard Designs". Capacities in excess of 23,000 / 25,875 CFH or greater than 7" w.c. or 2 psig delivery pressures require individual designs by BGE. Pressure systems able to supply other than 7" w.c. or 2 psig are not available in all areas; please check with your BGE Representative.

The gas metering installation section outlines BGE requirements to safely provide adequate and reliable gas service to customers. The standards, practices and procedures described in this manual apply to BGE gas metering installations and the work associated with providing service. A gas metering assembly is defined as the piping and equipment which transports and measures gas from the service termination to the connection with the customer's piping (Point of Service). This construction is often called a meter/regulator set. Construction and permitting requirements beyond the "Point of Service" are dependent upon the local permitting agency and/or building codes and are not covered in this manual.

Definitions

This section sets forth the definitions for various terms used in this manual and their source or sources where appropriate. Where no reference is provided, the definition provided is that applicable to the Company's practices.

AGA: American Gas Association

ANSI: American National Standards Institute

ASTM: American Society for Testing Materials

Accessible, Readily: (Readily Accessible) Capable of being reached quickly for operation, maintenance, or inspections, without requiring those to whom ready access is requisite to climb over or remove obstacles (such as panels or doors) or to resort to portable ladders, chairs, etc.

Appliance (Equipment): Any device that utilizes gas as a fuel or raw material to produce light, heat, power or air conditioning.

Approved: refers to materials and methods meeting the requirements of the current editions of the BGE's Gas & Electric Metering Manual, the Code of Maryland Regulations, the D.O.T. Office of Pipeline Safety CFR 49 Regulations Part 192, the National Electrical Code, the National Electrical Safety Code, the National Fuel Gas Code, or the inspection authority having jurisdiction, or of a recognized laboratory test.

Authority Having Jurisdiction: The organization, office or individual responsible for "approving" equipment, an installation or a procedure.

> Note: The phrase "authority having jurisdiction" is used in this standard in a broad manner since jurisdictions and "approval" agencies vary as do their responsibilities. Where public safety is primary, the "authority having jurisdiction" may be a federal, state, local or other regional department or individual such as a fire chief, fire marshal, chief of a fire prevention bureau, labor department, health department, building official, electrical inspector, or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau or other insurance company representative may be the "authority having jurisdiction." In many circumstances the property owner or his or her delegated agent is the "authority having jurisdiction"; at government installations, the commanding officer or departmental official may be the "authority having jurisdiction."

BGE: Baltimore Gas and Electric Company

BTU: British Thermal Unit

Barrel Lock: A cylindrical, barrel shaped lock used by utilities to prevent unauthorized use of utility services.

Barrel Lock Key: A special key used by utilities to unlock the barrel lock.

Building: Is a "permanent structure that is enclosed within exterior walls or fire walls" as described in an architectural drawing based on the latest International Building Code and Local Code and stamped by the architect on record with the State of Maryland.

C & I: Commercial and Industrial

CFH: Cubic Feet Per Hour

CFR: Code of Federal Regulation is a publication which contains the performance standards for pipeline safety as established through the Office of Pipeline Safety by the Research and Special Programs Administration of the Federal Department of Transportation (DOT).

COMAR: Code of Maryland Regulations is a compilation of the State's Administrative Regulations including Public Service Commission Regulations regarding service supplied by gas and electric companies.

CT (or C.T.): Current transformer

Cabinet: An enclosure designed either for surface or flush mounting and provided with a frame, mat, or trim in which a swinging door or doors are or may be hung.

Company: Baltimore Gas and Electric Company

Concealed Gas Piping: Gas piping installed in a finished building would require removal of permanent construction to gain access to the piping.

Customer: Any person, partnership, association, corporation or governmental agency being supplied with gas and/or electric service by a utility. (Ref. COMAR 20.55.01.04)

Customer Main Gas Valve: Valve installed at the outlet of the meter set, this valve serves as the connection point between utility piping and customer piping - that is "Point of Service".

DOT or D.O.T.: Federal Department of Transportation

Delivery Pressure: The gas pressure which BGE provides to the customer and upon which the customer's piping and equipment must be sized.

Delivery Pressure (2 PSIG): For design purposes it has been established as 2 pounds per square inch gauge with a plus / minus of 1% at the outlet of the meter (at the customer's main gas valve).

Delivery Pressure (Standard): For design purposes it has been established as 3" w.c. to 10" w.c. at the outlet of the meter (at the customer's main gas valve).

Distribution Line: A pipeline other than a gathering or transmission line. (Ref.49 CFR 192.3)

Distribution System: The mains, services, regulating and metering equipment and appurtenances used to distribute gas from the source of supply (Gate Station) to customers.

Doubtful Permanency Service: refers to a service intended for two (2) years or less, such as for construction, exhibit, or carnival purposes. The temporary facility will be removed at the completion of its use.

Emergency Standby Generator: refers to generators that normally operate when BGE service is unavailable and which are connected in such a manner that no interconnection can exist.

Front of the Building: is defined by the structure of the building facing the street that BGE is planning to install the utilities, the direction of the service lateral.

Front Distribution: is defined by BGE distributing its utilities from the street side to the location on the building closest to that side.

High Pressure (HP): Refers to that part of the Company's distribution system where the maximum allowable operating pressure is established as 99 psig and the minimum actual operating pressure is 25 psig on the main

I&C: Industrial and Commercial

Leak Check or Leak Test: An operation performed on a complete gas piping system and connected equipment prior to placing it into operation following initial installation and pressure testing or interruption of gas supply to verify that the system does not leak.

Low Pressure (LP): Refers to that part of the Company's distribution system where the maximum actual operating pressure is established as 10 inches Water Column and the minimum actual operating pressure is 3 inches Water Column on the main

MSS: Manufacturers Standardization Society of the Valve and Fitting Industry

Main: A distribution line that serves as a common source of supply for more than one service line. (Ref. 49 CFR 192.3) and (Ref. COMAR 20.55.01.04)

Master Meter: The meter through which the public utility supplies gas to a customer who in turn distributes the gas by pipeline to the ultimate users of the gas who may or may not be individually metered. (Ref. Preamble Amdt. 192.3, Docket OPS-9, April 5, 1973 Federal Register).

Medium Pressure (MP): Refers to that part of the Company's distribution system where the maximum allowable operating pressure is 10 psig and the minimum actual operating pressure is 2 psig on the main.

Metal-Clad Switchgear: refers to a metal structure containing a main switching and interrupting device and other associated equipment. A separate grounded metal compartment is required for the metering transformers, busses and connections.

Meter, Electric: Unless otherwise qualified, a device of the utility used in measuring watts, vars, var-hours, volt-amperes, or volt-ampere-hours. (Ref. COMAR 20.50.01.03)

Meter, Gas: Without other qualification, shall mean any device, which is used by a utility in measuring a quantity of gas. (Ref. COMAR 20.55.01.04)

Meter Assembly, Gas: That part of the Company's distribution system from the end of the service line to the Point of Service and comprises all pipe, valves, fittings, meters, regulators and appurtenances required.

NEC: National Electrical Code

NESC: National Electric Safety Code

NFGC: National Fuel Gas Code

NFPA: National Fire Protection Association

Over High Pressure (OHP): Refers to the part of the Company's distribution system where the maximum allowable operating pressure is typically established as 300 psig, but may be lower dependent upon specific line's qualification report, and the minimum actual operating pressure is 125 psig on the main

P.S.C.: Public Service Commission of Maryland

PSIA: Pounds per square inch, absolute. Includes the gauge reading and atmospheric pressures together.

PSIG: Pounds per square inch, gauge

Pipeline: All parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenances attached to pipe, compressor stations, metering stations, regulation stations, deliver stations, holders and fabricated assemblies. (Ref. 49 CFR 192.3) (Ref. COMAR 20.55.01.04)

Places of Public Assembly: Any building or portions of a building used for gathering together 100 or more persons, such capacity being designated by the Fire Department for common purposes of deliberation, worship or services, such as, but not limited to, churches, schools, hospitals, halls, theaters and municipal facilities. (Ref. COMAR 20.55.01.04)

Point of Connection: is that point external to the building where facilities installed by BGE are connected to the customer's facilities.

a. The point of connection for overhead secondary services is at the service head on the customer's building or structure and adjacent to the first point of attachment of the service drop to the building or structure.

b. The point of connection for underground secondary services including URD from underground mains is (1) for outdoor meter locations - at the meter mounting equipment, or (2) for indoor meter locations - just within the building wall at the point where the service run enters the building or at the splice box just outside the building.

Point of Service (P.O.S.): Location at the outlet side of the Company's meter assembly where the connection between the customer's piping and the Company's meter assembly is made.

Premises: A tract of land or real estate, including buildings and other appurtenances on it.

Pressure Test: An operation performed to verify the gas tight integrity of gas piping following its installation or modification.

Purge: To free a gas pipeline of air or gas, or a mixture of gas and air.

Readily Accessible: See Accessible, Readily

Regulator, Service: A pressure regulator installed by the serving gas supplier to reduce and limit the service line gas pressure to delivery pressure.

Regulator Vent: The opening in the atmospheric side of the regulator housing permitting the in and out movement of air to compensate for the movement of the regulator diaphragm.

Seals: A device to allow visual evidence of tampering.

Seals, Provisions for: The Customer shall, before service is supplied, equip all cabinets, switches or circuit breakers, fittings and other enclosures giving access to unmetered wiring, for the application of seals which will be provided by the Company and which, together with the meter seal, shall be readily accessible to the Company. By the application of a Company seal, BGE assumes no ownership of, liability, or responsibility for maintenance of said equipment.

Secondary Service: refers to service metered at nominal voltages of 600 volts or less.

Service, Electric: refers to the supply of electricity to the customer.

Service, Gas: Means a distribution line that transports gas from a common source of supply (main) to the meter assembly.

Service Drop: refers to the portion of an overhead service run from the last pole to the point of connection to the customer's facilities.

Source of Ignition: Devices or equipment that, because of their intended mode of use or operation, are capable of providing sufficient thermal energy to ignite flammable gas-air mixtures.

Splice Box: A subsurface enclosure that is used for the purpose of installing, operating or maintaining underground conductors, splices and terminations.

Tariff: The Electric Service Tariff Comprises the rules and rates, as filed with the PSC, under which electric service is supplied by BGE to its customers. The Gas Service Tariff Comprises the rules and rates, as filed with the PSC, under which gas service is supplied by BGE to its customers.

U.L.: Underwriters Laboratory

Underground Residential Distribution (URD): refers to the system in which the distribution lines and service conductors, with minor exceptions, are buried directly in earth. Requirements are governed by The Maryland Public Service Commission.

w.c.: Water Column

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Meter Protection

The purpose of this section is to address the meter protection standards for residential and commercial gas and electric meters. However, this section is to be used in conjunction with the other sections in this manual. Please be familiar with the other sections as well.

Electric Meter Protection

Traffic Protection

The following are general rules for pipe bollards used to provide protection for electric meters subject to vehicle traffic.

Electric Meters - Residential Locations

1. Steel pipe bollards, 2" nominal diameter and 36" from final grade filled with concrete.

2. Each bollard to be set in a footer consisting of a 3 ½ gallon bucket (11.75”D x 11”H), filled with concrete or Company approved equivalent.

3. The bollards should be located two (2) feet from the wall. This is an exception to the requirement that the customer shall maintain at least three (3) feet of unobstructed space in front of the meter.

4. The bollards should not be placed directly over the gas or electric service.

Note: If bollards are to be installed call Miss Utility before any digging.

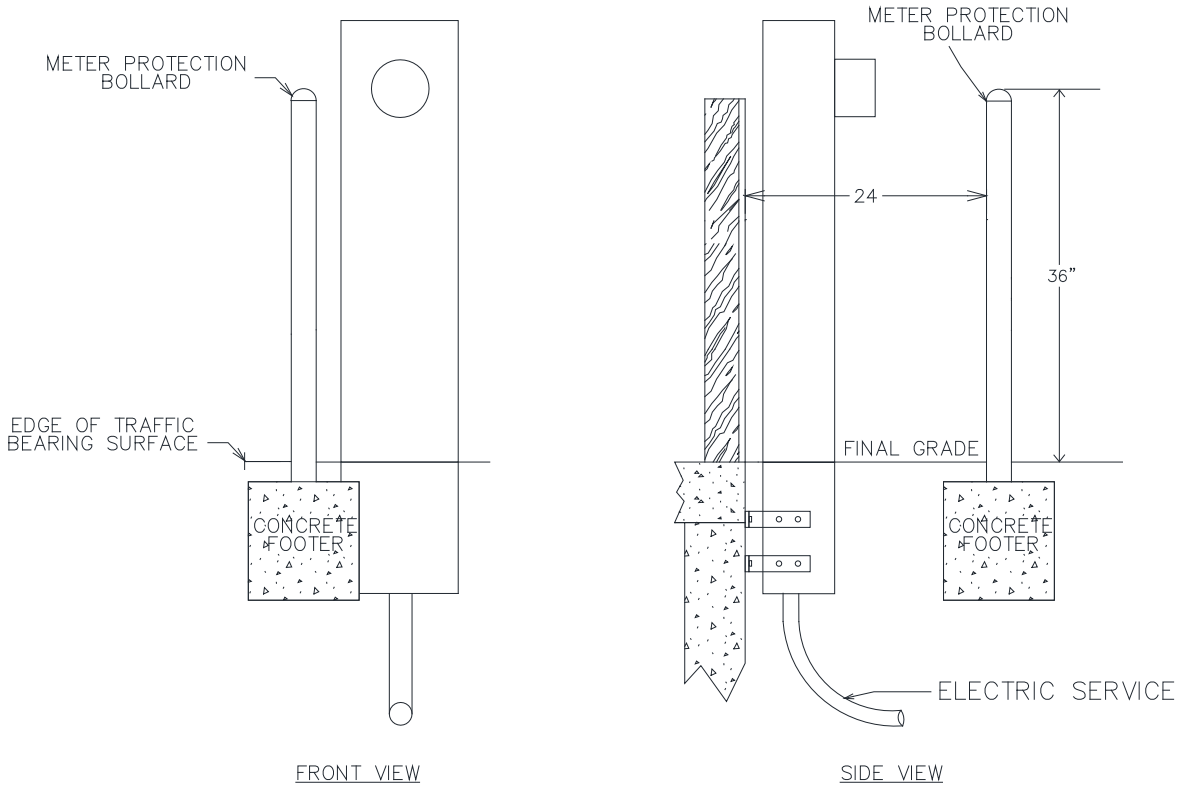


Figure 1

Concrete Curb Barriers / Pipe Guard (Typical Installation)

Meter Protection - For one residential meter

Concrete curb barrier or pipe guard for meter installed over a residential sidewalk.

Note: If multiple meters are installed, add space for each additional meter at the centerline, so that the configuration remains as shown with the additional width provided. For more than three meters, a center pipe support should be installed.

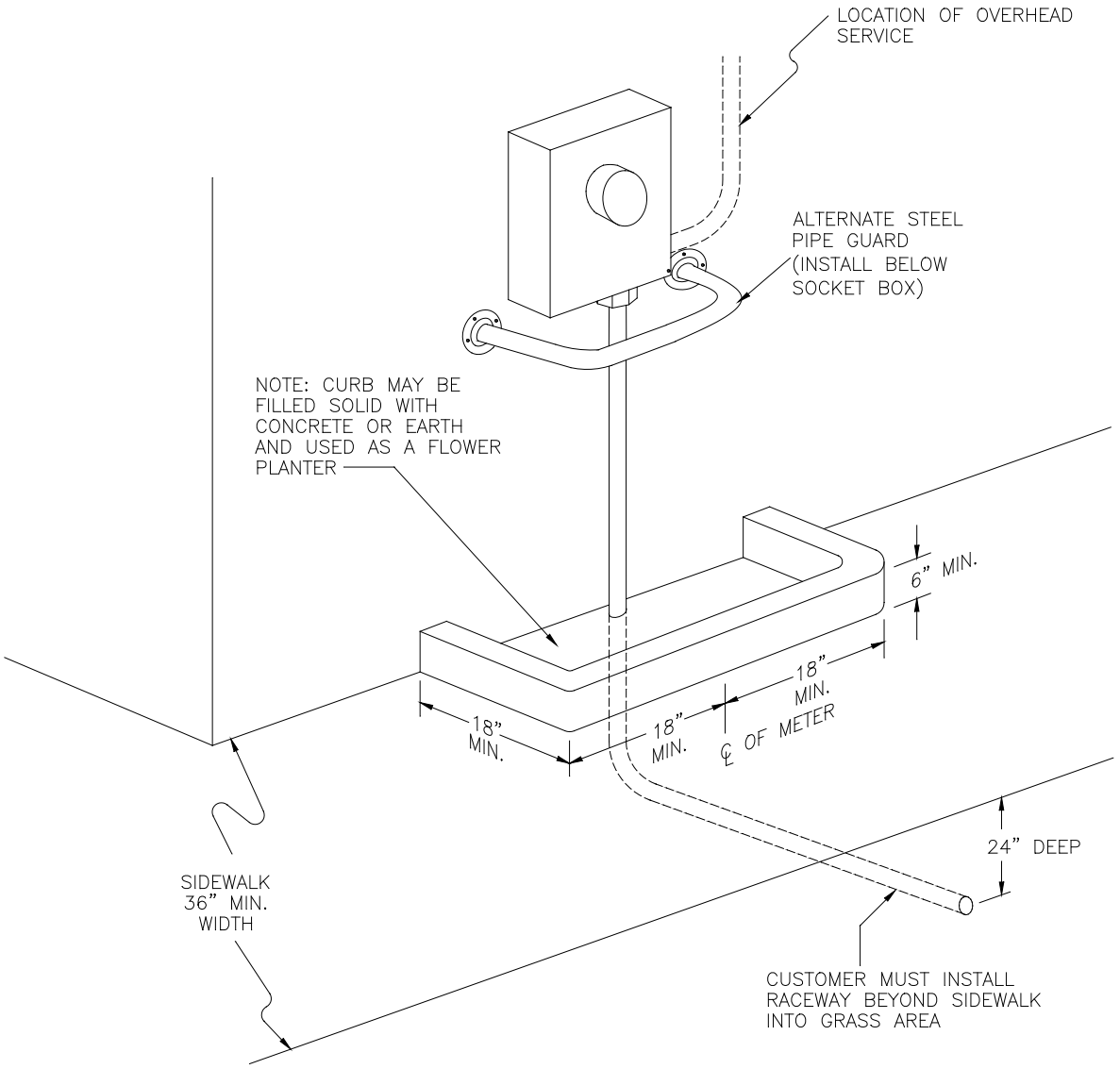

LOCATION OF OVERHEAD SERVICE
ALTERNATE STEEL PIPE GUARD (INSTALL BELOW SOCKET BOX)
NOTE: CURB MAY BE FILLED SOLID WITH CONCRETE OR EARTH AND USED AS A FLOWER PLANTER
6" MIN.
18" MIN.
18" MIN.
18" MIN.
℄ OF METER
24" DEEP
SIDEWALK 36" MIN. WIDTH
CUSTOMER MUST INSTALL RACEWAY BEYOND SIDEWALK INTO GRASS AREA

Figure 2

Pipe Guard Specifications

Pipe guards shall be fabricated from threaded or welded steel pipe. They should be mounted below meter sockets to allow meter inspection and removal.

Note: Pipe guards should not be used to provide protection from vehicles. In cases where a meter(s) is susceptible to damage from cars and trucks, such as parking lots and driveways, bollards must be installed.

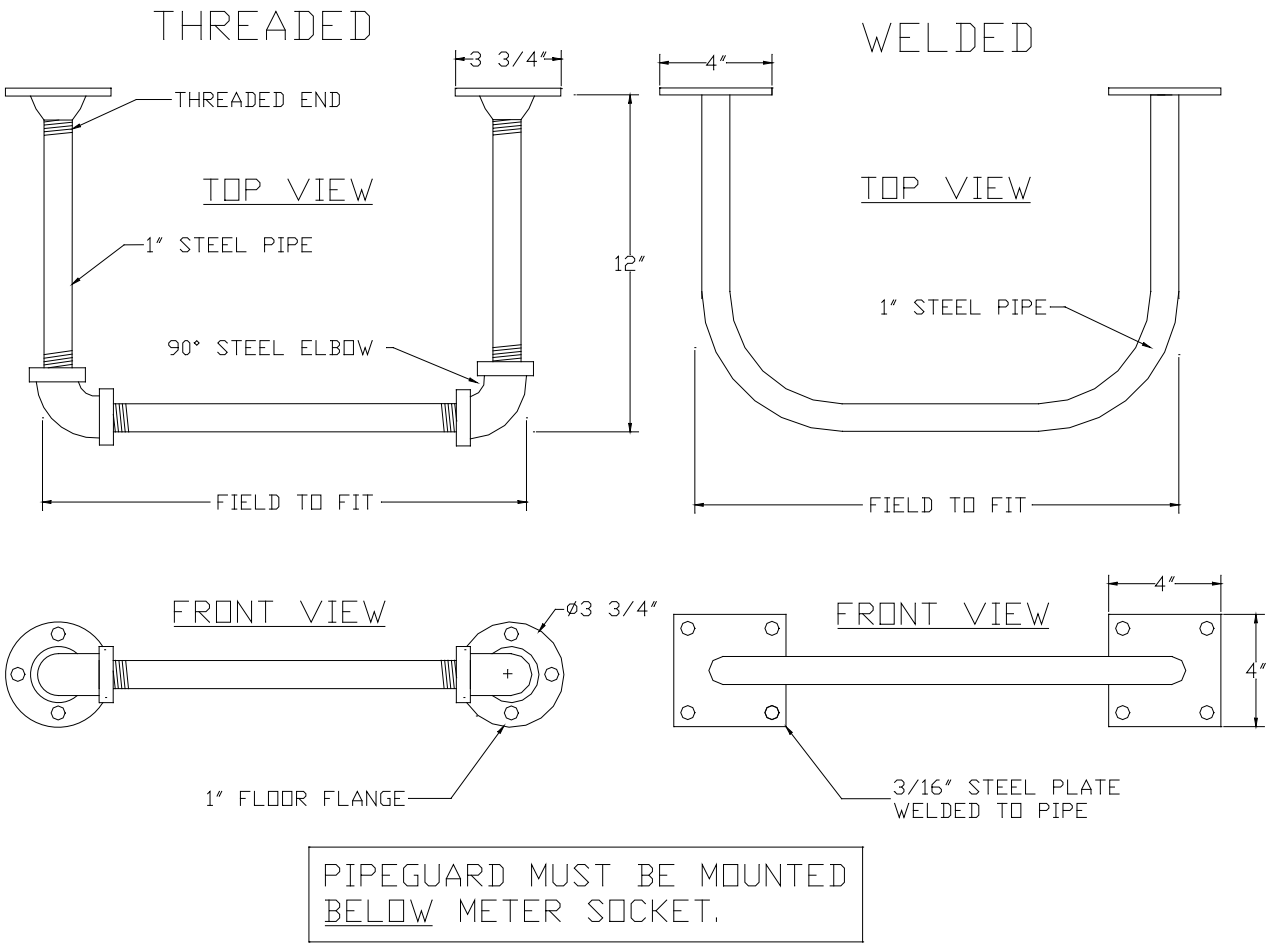


Figure 3

Electric Meter Protection- Service Entrance Trough Standards

BGE has implemented new service entrance trough requirements to protect utility and contract personnel from electrical injury. These requirements focus on protecting, supporting and training service entrance cables. They also include new requirements for trough support and trough covers. New trough access procedures are also detailed below.

The company has pre-approved specifications for service entrance troughs with the vendors listed below.

	**14”(W) x 14” (H) Service Entrance Trough (various lengths)**
Manufacturer	**Phone number**
J.M. Gillin Corp.	410-728-8700
S.A.R Metal Products	410-780-5434
Atlantic Sheet Metals	410-391-8066

See drawing (following page) for details of service entrance trough requirements.

Customer Furnishes and Installs

(1) 14” (W) x 14” (H) service entrance trough (various lengths) to be constructed of 14-gauge steel or
10-gauge aluminum.
(2) Trough cover(s) – maximum 48” in length. Two handles per cover (see drawing).
(3) Trough support brackets – affixed to wall every 48”. A minimum 6” clearance is required below trough support brackets.
(4) See Notes (N1), (N2), (N3), and (N4).

Company Furnishes and Installs:

(A) Terminal Blocks (Not Shown)

Notes:

(N1) Enclosed channel to prevent screw penetration into trough as shown in drawing. Use blunt point sheet metal screws or machine screws no longer than 3/4”. Design may vary by manufacturer. Any variations from drawing must be approved by BGE.
(N2) Wire tie channel with 1/4” inch slot inside trough every 24” for cable training and support.
(N3) Guide pins or tabs to align and support trough cover. Two guide pins or tabs minimum per trough cover. They should also provide provisions for sealing trough.
(N4) Guide pin holes.

See Sections 215-218, 220-222, 224-226, and 228-230 for underground installation. See sections 318-320, 322-324 for overhead installation.

Trough Access Procedure (effective April 2009)

1. Master or Licensed Electrician calls BGE (G&E New Business Line: 410-637-8713/800-233-1854) to inform BGE of planned worked involving an electrical trough.
2. Call is routed to appropriate M&I Meter Inspector based on geographic responsibility.
3. Meter Inspector discusses job with electrician to obtain necessary information (e.g. Work Order# (if available), address, customer, reason for access, electrician's name, expected date of completion, etc.)
4. Meter Inspector notes request in Asset Suite (if job exists at this location) or meter inspection reports (if job does not exist in Asset Suite) maintained by M&I.
5. If necessary, Meter Inspector travels to job site for pre-work inspection and contacts the electrician.
6. Master or Licensed Electrician performs work on the trough and calls Meter Inspector to indicate work is complete.
7. If BGE follow up work remains, field crew will reseal trough. If follow up BGE work is not required, Meter Inspector reseals trough. If Meter Inspector has not heard from electrician within 10 days after expected completion date, he contacts electrician to follow-up on job status.

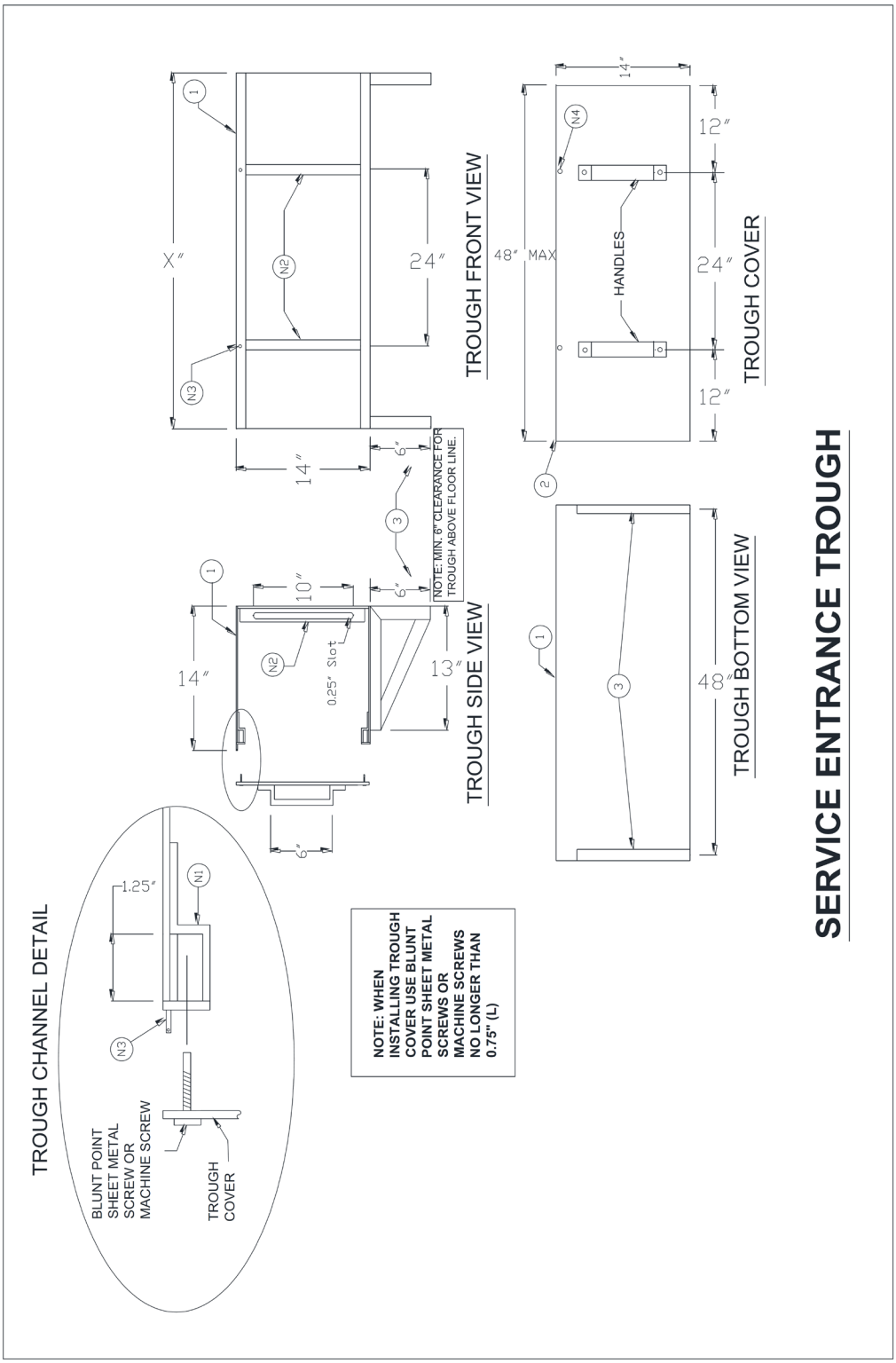

SERVICE ENTRANCE TROUGH
TROUGH FRONT VIEW
TROUGH COVER
TROUGH SIDE VIEW
TROUGH BOTTOM VIEW
TROUGH CHANNEL DETAIL
X″
24″
14″
6″
10″
13″
48″ MAX
HANDLES
12″
48″
0.25″ Slot
1.25″
BLUNT POINT SHEET METAL SCREW OR MACHINE SCREW
TROUGH COVER
NOTE: MIN. 6" CLEARANCE FOR TROUGH ABOVE FLOOR LINE.
NOTE: WHEN INSTALLING TROUGH COVER USE BLUNT POINT SHEET METAL SCREWS OR MACHINE SCREWS NO LONGER THAN 0.75" (L)

Figure 4

Combined Gas and Electric Meter Protection

The following are general rules for pipe bollards used to provide protection for combined gas and electric metering assemblies subject to vehicle traffic. The assembly requires protection from vehicle traffic in either direction, which may require utilization of multiple bollards. For example, an assembly located next to a driveway needs to be protected from cars either pulling in or backing out of that driveway.

A. Townhome (Combined Gas and Electric) Residential Meter Protection Requirements

Meters, regulators and risers require protection on each side from vehicle traffic. For example, meter and/or regulator assemblies located next to a driveway requires protection from cars pulling into or backing out of that driveway. Figures 5 through 7 show bollard placement requirements for meters, regulators, and compact meter & regulator assemblies next to a driveway, respectively.

The following are general rules for bollards (pipe guards) to provide protection for residential meters:

1. Steel-pipe bollards, 2-1/2" diameter and filled with concrete.

2. Each bollard to be set in a footer consisting of a 3 ½ gallon bucket, filled with concrete, or Company approved equivalent.

3. The bollards should be located two (2) feet from the finished wall. This is an approved exception to the rule requiring customers to maintain at least three (3) feet of unobstructed space in front of the meter.

4. The bollards shall extend at least 36" above final grade and at least 12" below grade.

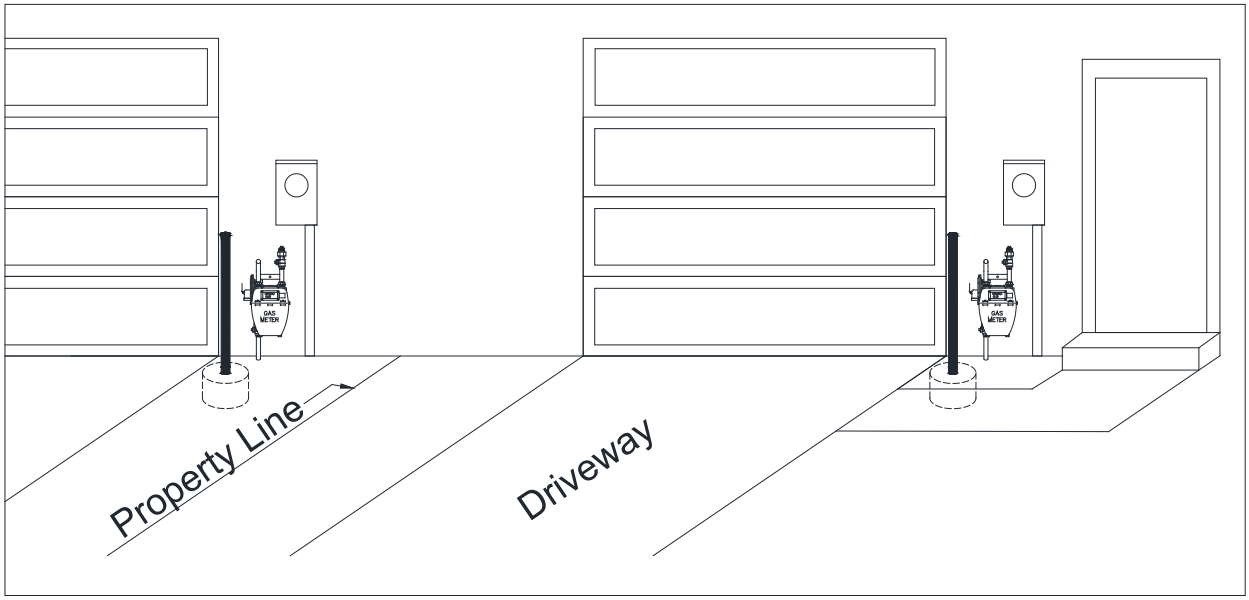


Figure 5 – Meter Set

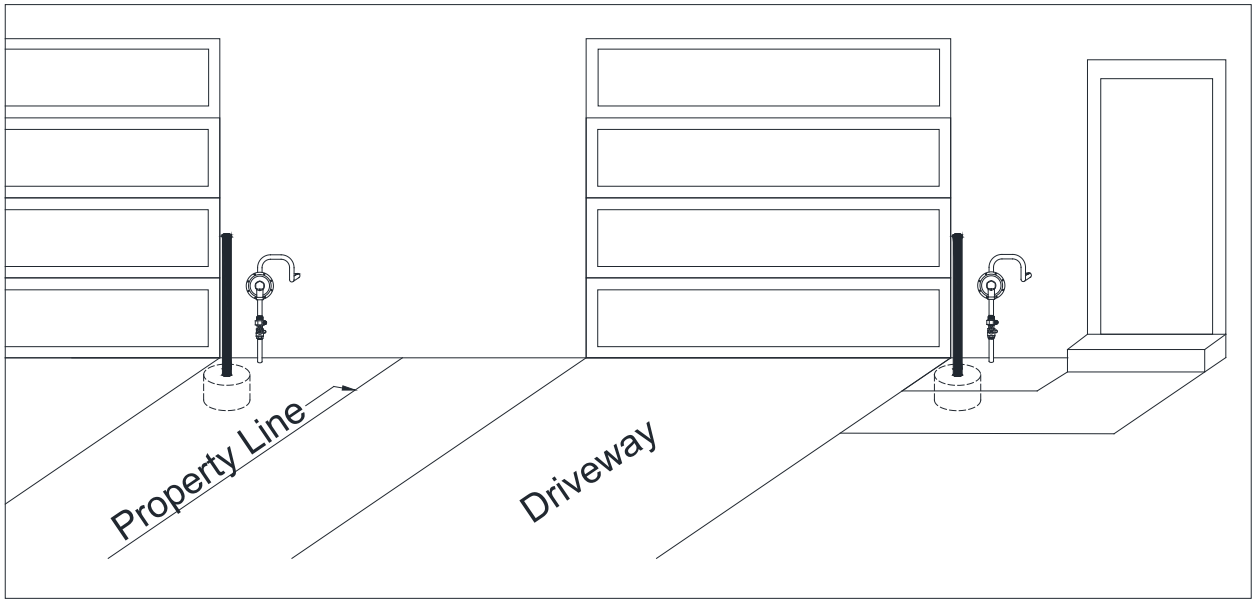


Figure 6 – Regulator Set

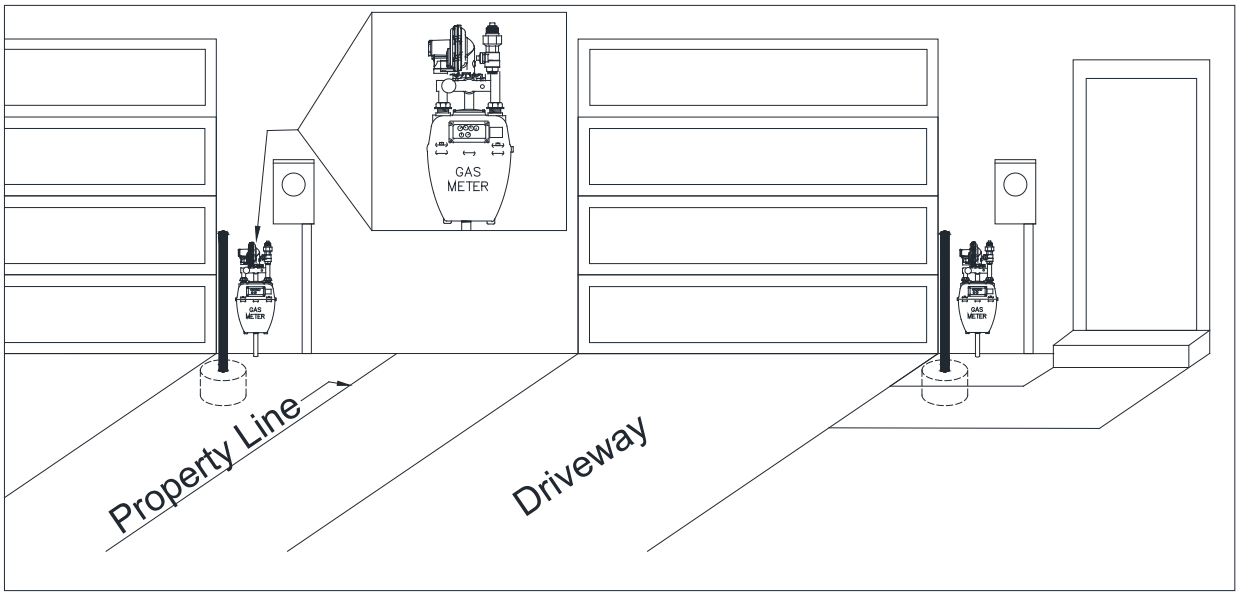


**Figure 7 – Compact Meter &
Regulator Assembly**

B. Single Family Home Residential Gas Meter Protection Requirements

1. Steel pipe bollards, 2 1/2" diameter and filled with concrete, shall extend at least 36" above final grade and at least 12" below grade

2. Each bollard to be set in a footer consisting of a 3 ½ gallon bucket (11.75”D x 11”H), filled with concrete or Company approved equivalent.

3. The bollards should be located two (2) feet from the wall. This is an exception to the customer shall maintain at three (3) feet of unobstructed space in front of the meter.

4. The bollards should not be placed directly over the gas or electric service.

5. If the gas metering assembly is located so that a building wall can provide adequate protection, only one bollard is required.

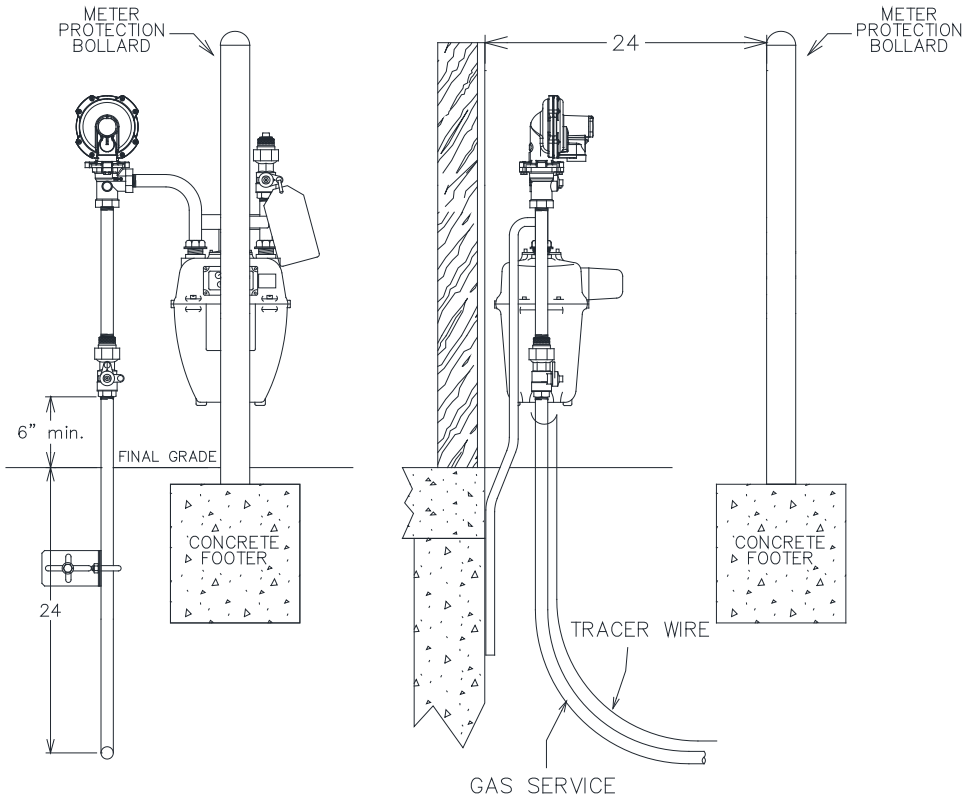

METER
PROTECTION
BOLLARD
6" min.
FINAL GRADE
CONCRETE
FOOTER
24
24
METER
PROTECTION
BOLLARD
CONCRETE
FOOTER
TRACER WIRE
GAS SERVICE

Figure 8

Gas Meter Protection Standards

Meter & Riser Protection

Measures shall be taken to protect gas metering assemblies from vandalism, damage and unauthorized tampering with assembly. It is the responsibility of the Customer to provide protection for the meter assembly. Please contact a BGE representative in advance of BGE running services to confirm if proper protection is required.

(Reference: BGE Gas Service Tariff, Section 2.4(a), 4.1, 5.3, and 6.1)

If metering equipment is to be installed within three (3) feet of an area subject to vehicular traffic (driveway, alley, roadway, garage, etc.), a meter protection bollard is required. **Effective for any Extension Relocation Contracts (ERC) issued after August 1, 2009**, BGE will install the required traffic protection for residential single family homes at the expense of the customer. This does not include multi-meter manifolds for apartment/condo installations, that requirement is covered under Commercial & Industrial installations.

Note: If bollards are to be installed call Miss Utility before any digging.

Commercial & Industrial Gas Meter Protection

For Commercial & Industrial or multi-meter installations (apartment / condo buildings) the Customer/Builder will be required to provide protection for the equipment -- typically a concrete-filled steel bollard or bollards -- at their expense. If necessary, the Customer is notified in advance that they must provide protective equipment. The protection levels and parameters are specified by BGE for the Customer. The preferred method is that the customer arrange for this.

If the Customer cannot provide the protection, the Company will provide it and charge the Customer the full cost on a charge-order. The Company does not include meter or regulator protection costs into the total capital cost of the project, and will apply the actual cost the amount charged. There is also an important distinction between meter or regulator protection and transformer protection. The above policy only covers meter / regulator protection.

Other requirements may apply, please consult with your BGE representative for further details.

(Reference: BGE Gas Service Tariff, Customer's Installation, Section 6.1.)

Commercial and Industrial Meter Protection Requirements

For a gas metering assembly with the BGE gas service riser on the left side, follow the general rules listed below. For an assembly with the service on the right side, just reverse the bollard locations.

1. Steel pipe bollards 4" diameter that extend at least 48" from final grade and filled with concrete are adequate protection.

2. Each bollard to be placed in a minimum of a 12" x 12" x 36" high concrete footer. At least 24" of the bollard is to be encased in the footer.

3. From the piece of equipment protruding furthest from the metering assembly, the bollards should be located a minimum of two (2) feet outwards from this point.

4. The first bollard should start one (1) foot from the center of the service riser.

5. The last bollard should be about one (1) foot from the center of the metering assembly.

6. There should be not more than three (3) feet center-to-center spacing between each bollard. If required, additional bollards should be installed between the two outer bollards to provide additional protection.

7. Do not install a bollard in-line with gas meter in order to ensure proper access for maintenance.

8. If bollards are to be installed where they may be restricting access to equipment, BGE requires “removable” bollards to be installed. See Figure 1001-3C on the next page.

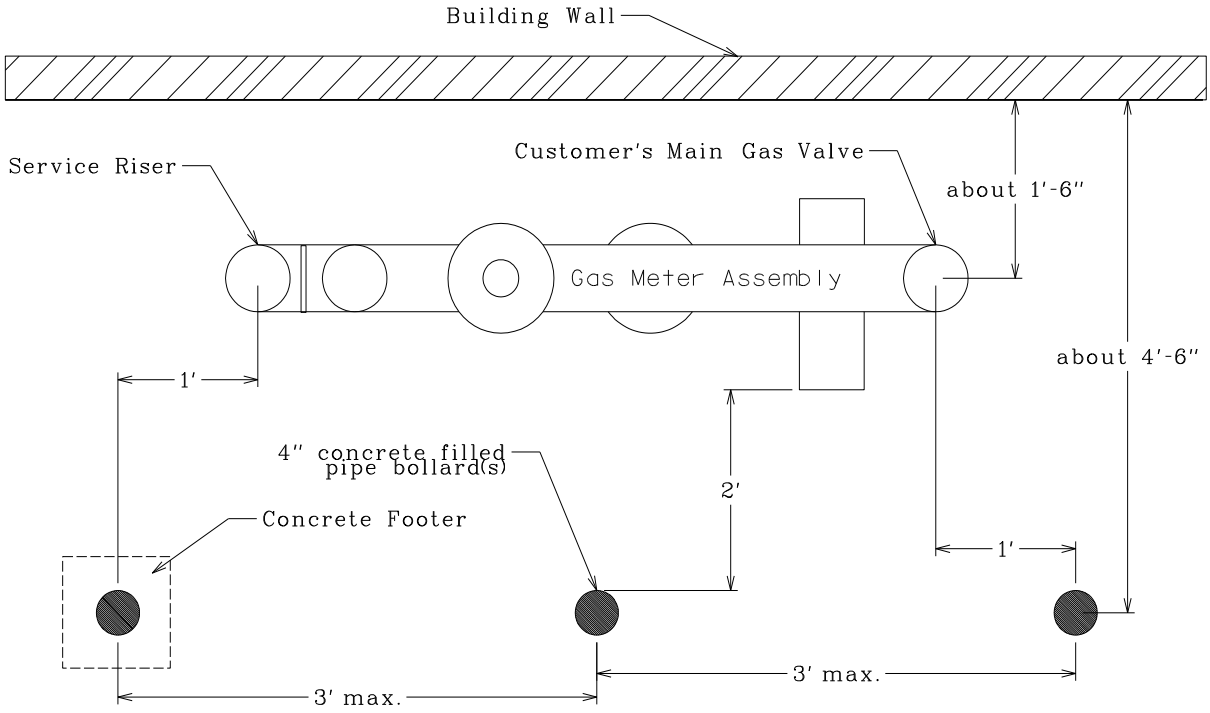


Figure 9

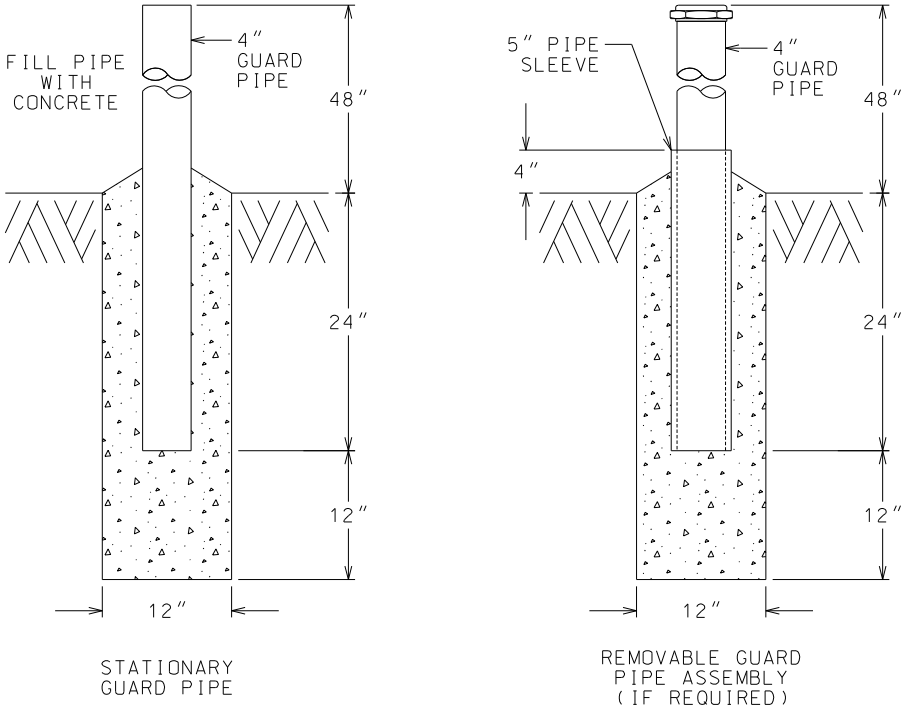

FILL PIPE WITH CONCRETE
4″ GUARD PIPE
48″
24″
12″
12″
STATIONARY GUARD PIPE
5″ PIPE SLEEVE
4″ GUARD PIPE
4″
48″
24″
12″
12″
REMOVABLE GUARD PIPE ASSEMBLY (IF REQUIRED)

Figure 10

101 Characteristics of Supply

101-1 General

The Customer shall consult the Company as to the characteristics and availability of the Company's service at a particular location before proceeding with plans for any installation, whether it be a new one, an addition, a replacement, or a transfer from one location within the territory to another.

101-2 Standard Service at Secondary Distribution System Voltages

The characteristics of standard service, namely alternating current at 60 hertz, are as follows (voltages are nominal):

A. Single-phase, three-wire, 120/208 volts — For a service not exceeding 60 amps when supplied from the Network secondary distribution system, which supplies the central business district of Baltimore City, or for a service not exceeding 200 amps when supplied from the radial distribution system, which supplies the territory beyond the Network. – See Map in Section 107-3.

B. Single-phase, three-wire, 120/240 volts — For lighting, appliances, and small motors (refer to Section103-3).

C. Three-phase, four-wire, 208Y/120 volts — For all requirements.

D. Three-phase, four-wire, 480Y/277 volts — For all requirements where the Customer's connected load exceeds 150 kW or for connected loads less than 150 kW where approved by the Company.

E. Three-phase, three-wire, 240 volts — For all requirements in combination with single-phase, 120/240 volts, used as an alternative to the voltages noted in C and D.

NOTE: High-leg delta (120/208/240) three-phase, four-wire (radial) service is not a standard service. Single-phase, two-wire, 120 volts is not a standard service.

Refer to Section 502 for diagrams of the various electrical services.

102 Conditions of Supply

102-1 Supply Points

BGE provides electric service to customers based on the conditions set forth by the Maryland Public Service Commission – BGE Electric service Tariff. The following excerpt is the "Conditions of Supply" of the BGE Electric Service Tariff, Part 2 that discusses "Supply Points".

BGE Electric Service Tariff, Part 2

Section 2: Conditions of Supply

2.2 Supply Points: *It is the standard practice of the company to provide (subject to the provisions of Section 8 Extensions):*

(a) One service connection

1. *for all the requirements of the Customer on a single property; where the supply is for his use in a group of buildings, the supply point is located, wherever practicable, at a location central to the group;*
2. *for any separate building of a group on a Customer's property, upon request, provided such service is for the entire requirements of that building;*
3. *for any separate building occupied by one or more Customers.*

Where practicable, a single loop is provided for a pair of adjoining buildings.

(b) One meter installation – for all requirements of each Customer at each supply point; where two or more Customers are supplied from one service connection, a centralized meter location is required wherever practicable. Each meter installation shall have a separate application of the rate schedule.

The Company will supply:

A. One Service Connection

1. For all the requirements of a Customer on a single property, centrally located, whenever supplying a group of buildings.
2. For the entire requirements of any one of a group of buildings on a Customer's property, upon request.
3. For any building occupied by one or more Customers.

B. One Meter Installation

1. For each Customer at a service connection, centrally located, whenever the service connection is supplying more than one Customer.

Note: The Company considers as one service connection and as one meter installation, the combination of single-phase and three-phase services as stated in Section 101-2E.

Two or more service connections of the same characteristics where required by the Company:

1. By reason of the size of the load.
2. By reason of the character of the load such as where a combination of a welder or any X-ray on the same service with lighting is impracticable.
3. Will normally permit more than one meter per Customer on the same class of service where the Customer takes over more than one meter area and wiring is existing and wiring changes are not planned. If the combined load exceeds 30,000 kWH per month, the meters must be totalized so that coincidental demand can be captured. Customer must pay based on BGE calculations from customer provided load estimates for any required wiring and totalizing equipment.
4. Will not permit more than one meter on the same class of service in new construction or where service entrance equipment is being rewired.

102-2 Dual Services

Change of Service

BGE provides more than one service connection where warranted by exception for special conditions, special occupancies and capacity requirements. During new construction or renovation, BGE will provide a new service connection of different characteristics and allow the original service connection to remain for up to five (5) days. After five (5) days, the original service connection will be removed. Extensions for large industrial and commercial projects may be considered upon review and with written consent from BGE. This policy does not apply for Doubtful Permanency services.

103 Conditions of Use

103-1 Avoidance of Injury to Equipment

The Customer shall not use equipment to injuriously affect the Company's equipment or the Company's service to other Customers. Any protective devices necessary to attain that end shall be furnished, installed, and maintained by the Customer, subject to the approval of the Company.

103-2 Loss or Damage from Use of Electricity

The Company is not liable to any party for any loss , damage, or expense resulting from the use or presence of current, potential, or an electric appliance on the Customer's premises. Where the normal utilization and operation of its facilities, the Customer utilizes equipment or apparatus which is adversely affected by variations in the Company's supply, the Customer shall furnish, install and maintain, subject to the approval of the Company, any corrective devices necessary for the satisfactory utilization of the Company's service.

103-3 Installation Requiring Special Consideration

The Company shall be consulted (BGE New Business Planning) prior to the preparation of plans for the installation of any of the following:

A. A single-phase motor with 3 or more horse-power.

B. A three-phase motor with 25 or more horse-power.

C. A motor requiring frequent starting.

D. A synchronous motor. (Motors of this type are recommended for large installations for power factor correction.)

E. A single-phase motor on a three-phase service..

F. Group operated motors started automatically. (Sequence starting may be required.)

G. Certain AC equipment such as welders, X-rays, radio transmitters, rectifiers, signal systems and air conditioning.

H. Service at Primary Systems voltages.

I. A sign, phone booth, CATV, etc., Company supplies 1Ø,3W 120/240 volts line side, Customer connects 1Ø,2W 120 volts load side, one 20 ampere circuit or two 15 ampere circuits.

Where this equipment requires other than standard construction by the Company to prevent objectionable interference with the Company's service to any of its Customers, the Customer shall install and maintain any corrective measure to prevent this interference or, as compensation, pay the Company the estimated cost for special construction.

103-4 Load Balancing

The Customer's load shall be balanced over the phases as equally as commercial practice will permit, and the Customer shall maintain this balance.

103-5 Superposition of Electric Energy on the Company's Electric System

Where the Customer's equipment couples electric energy to his electric system for equipment control, carrier current transmission, signal systems, broadcasting, communication, or any other purpose, the Customer shall install equipment suitable to prevent this energy from being imposed upon or entering the Company's electric system.

103-6 Available Fault Currents

A. Single (Detached) Residences – Overhead or Underground Supply:

1. Service Ampacity Not Exceeding 200 - Available fault currents at the service equipment will be more than 5,000 amps but will not exceed 10,000 amps.

2. Service Ampacity Exceeding 200 - The magnitude of maximum available fault currents at the service equipment, which may exceed 10,000 amps, will be furnished by the Company upon request.

B. Townhouse, Semi-Detached or Duplex Residences – Overhead or Underground Supply:

The magnitude of maximum available fault currents at the service equipment, which may exceed 10,000 amps, will be furnished by the Company upon request. However, the available secondary fault current will not exceed 22,000 amps.

C. Commercial and Industrial Occupancies and Apartment Buildings - Overhead or Underground Supply:

Consult the Company for available fault currents since they will vary for each installation.

104 Customer's Installation

104-1 Governing Rules

All wiring upon the Customer's premises shall be installed and maintained in accordance with applicable laws and the rules of the governmental authority having jurisdiction and the Company. The rules of the Company are in addition to, not a waiver of, the rules of the inspection authority having jurisdiction.

104-2 Certificate of Approval

The Customer shall obtain such certificates of approval as may be legally prescribed for wiring upon the premises. Before service is supplied to the Customer, the Company must be notified of such approval in writing, by either the inspection department of the governmental authority having Jurisdiction or its authorized inspection agency.

104-3 Space Provisions for Company Equipment

The Customer shall provide, acceptable to the Company, suitable space and sufficient supporting structure for the Company's metering and service equipment. Where applicable, the Customer shall provide, acceptable to the Company, suitable space (including a vault, if required) for the Company's transformers and auxiliary equipment.

104-4 Protection Against Loss of Service and Damage to Company Metering Equipment

The Customer, where required, shall furnish and install traffic protection barriers and/or an enclosure of sufficient size (made of a minimum 12-gauge sheet metal) for meter and meter device at certain otherwise unprotected, outdoor installations. See Section 106.

104-5 Point of Service Connection

The Customer shall bring the service wiring to a point of service connection specified by the Company. If it becomes necessary to change the point of connection, the Customer shall bring the wiring to the new point.

ALL CONNECTIONS TO AND DISCONNECTIONS FROM THE COMPANY'S SYSTEM SHALL BE MADE BY THE COMPANY.

104-6 Change in Class of Service

Where the class of service is to be changed, the Customer shall be responsible for all necessary changes in the wiring and equipment to comply with the governing rules (refer to Section 104-1).

104-7 Grounding

The Customer shall install and connect the grounding electrode conductor on the line side of the Customer's main disconnecting means, for each service supplied by the Company.

Gas piping systems shall not be used as grounding electrodes. All other grounding electrodes and grounding and bonding conductors shall be used as required by the National Electrical Code®.

104-8 Provisions for Sealing

The Customer shall, before service is supplied, equip all cabinets, switches or circuit breakers, fittings and other enclosures giving access to unmetered wiring, for the application of seals which will be provided by the Company and which, together with the meter seal, shall be readily accessible to the Company. By the application of a Company seal, BGE assumes no ownership, liability, or responsibility for maintenance of said equipment.

The main disconnecting means, when installed on the supply side (line side) of the meter, shall be so designed that the unmetered conductors are inaccessible without breaking the Company seal, even during the renewal of fuses or the operation of circuit breaker trip handles.

Note: The fusible pull-out type shall not be installed without prior approval of Meter Engineering.

104-9 Customer-Owned Metering Equipment

The Company will accept specific UL approved metering equipment for use on its electrical system. Equipment from various sources was evaluated for construction quality, accessibility, and provisions for sealing. The following list describes the equipment and references sections in the manual where additional information can be found.

A. Current Transformer Cabinet - See Section 400 - Electric Metering.

B. Switchgear - Company approved compartments in switchgear to house Company metering instrument transformers, unmetered service equipment, or cable termination facilities.

   Note: Prior to manufacture of the switchgear, the Customer shall submit at least three sets of the switchgear drawings (the Company will retain two sets) for Company approval

C. Modular Metering - Company approved modular (group) metering units are listed in Table 402.

   Note: See Sections 219, 321 and 402 for modular metering equipment.

D. Pedestal Metering - Company approved pedestal units are listed in Table 401.

104-10 Pulse Metering

At the request of the Customer, the Company will provide pulse-metering service. Pulse metering is available to Customers who want near real time data for load management. A pulse output from the meter is available which allows the Customer or the Customer's Electricity Supplier to monitor total load of the service or building.

A junction box is provided by the Company to interface with the Customer's wiring. **The Company will make all wiring connections from the metering equipment to the junction box.** The Customer is responsible for providing the required voltage input (less than 120 Volts, 75 VA MAX,) and the wiring from the interface box to their computer/load management system.

104-11 Maximum Number of Disconnects

No more than six service disconnects shall be permitted for one service connection, as defined by 102-1. When more than six service disconnects are required, a main disconnect shall be provided ahead of the service disconnects, unless approved by NEC and local authorities.

105 Location of Metering Equipment

105-1 General Provisions

Locations for metering equipment are mutually agreed upon by the Customer and the Company, subject to final approval by the Company.

These locations shall be free of any conditions detrimental to the Company's metering equipment, and the equipment or its location shall not create a hazard or an inconvenience. No metering equipment shall be located on a marina (boat) pier. See Section 105-3 regarding indoor installations, which are non-standard.

Where more than one Customer is to be supplied, each meter shall be readily accessible to the Customer served by it and the Company. All meters shall be grouped at one location.

Each Customer's service disconnect shall be legibly and durably marked to designate the specific area served. Durable, legible labeling (with paint) denoting area/unit(s) served by each meter and disconnecting device. Experience shows that failure to provide proper identification on multiple meter installations (area/unit(s) served; apartments, offices, or stores) often results in meters being installed that supply other than the area/unit(s) for which intended. Therefore, electric meters will not be installed on such installations until you have properly identified the area/unit(s) and sub-panel(s) on the meter socket and disconnecting device.

105-2 BGE Outdoor Metering Location Standard

In conjunction with the BGE Electric Service Tariff, BGE has developed a "BGE Outdoor Metering Location Standard". All meters are to be installed on the outside of buildings, except as provided for in the **Exceptions to the BGE Outdoor Metering Location Standard** section below. All meter locations are agreed upon by the Customer and the Company in advance of construction and are subject to final approval by the Company. Contact your BGE representative before any construction begins.

Failure to comply with the BGE Outdoor Metering Location Standard will prevent BGE from providing electric service to the requested service location.

Note: An acceptable meter location shall be free of any conditions detrimental to the metering equipment, and such location shall not create a hazard or inconvenience. The customer shall maintain at least three (3) feet of unobstructed space in front of the meter, and such space shall be free of any source of ignition or heat which may damage the meter or related equipment. The sole exception to the three (3) feet of unobstructed space in front of the meter is the use of bollards for protection from vehicular traffic where required; see Meter Protection Section of manual.

The space provided for meters, regulators and service risers shall be clear of all obstructions, such as shutters, doors, and rainspouts, and the placement of obstructions such as concrete equipment pads, shrubbery, porches, patios, decks and gardens shall not interfere with the installation and servicing of the metering equipment or reading of the meter. Meters shall not normally be located over porches or patios.

The following excerpt is the "Location of Service Equipment" from the BGE Electric Service Tariff; Part 2, Section 6. This is provided for reference in outlining the BGE Outdoor Metering Location Standard.

BGE Electric Service Tariff; Section 6

6. Location of Metering Equipment

6.1 Service at Secondary Distribution Systems Voltages

6.11 General

Meter locations are agreed upon by the Customer and the Company, subject to final approval by the Company. Under normal conditions an outdoor location is required. These locations shall be free of any conditions detrimental to the metering equipment, and such equipment or its location shall not create a hazard or an inconvenience. Meters shall be so situated that there is not less than 3 feet of unobstructed space in front thereof. The Company may require that the Customer provide, at his expense, suitable meter protection equipment.
In the event it becomes necessary to change the service entrance wiring or meter installation, the meter location shall conform with these rules.

6.12 Outdoor Location

An outdoor location is generally required for meter installations not exceeding six meters. Space shall be provided for meters clear of all obstructions such as shutters, doors and rainspouts, and so that the placement of shrubbery, flower beds and gardens will not interfere with installing, servicing or reading. Where, in the Company's judgment, an outdoor location in the municipal duct area is impracticable, or where instrument current transformers for either an existing or a new installation are indoors, or where an outdoor location would result in metering equipment extending over a public right-of-way, an indoor location may be required. No meter is permitted on any pole owned by the Company or jointly used by it and another public utility. Where the location of a meter on a building is impracticable, it may be installed according tothe provisions of Sec. 9.2121(b).

New Services

New services are defined as an electric service installation for a premise that has not previously had electric delivery from BGE.

For new service work, the following applies:

- Meters must be installed outdoors
- Installations with greater than 6 meters are allowed indoor.

If a situation exists which prevents the installation of a newly installed meter outdoors, refer to your BGE representative.

105-3 Outside Meter Locations Requirements

All efforts should be made to utilize outdoor locations. When locating outdoor gas and electric meters, there are specific requirements that should be followed. In general, the meters are set at the location where the service terminates at the building being served.

Outside metering location must be used if one of the following conditions exists:

- Clear wall space is available: 24” W x 57” H (stacked meter configuration – wall mount electric meter socket). See Section 601-5.

OR

- Clear wall space is available: 36” W x 47” H (side by side meter configuration – pedestal electric meter socket). See Section 601-6.

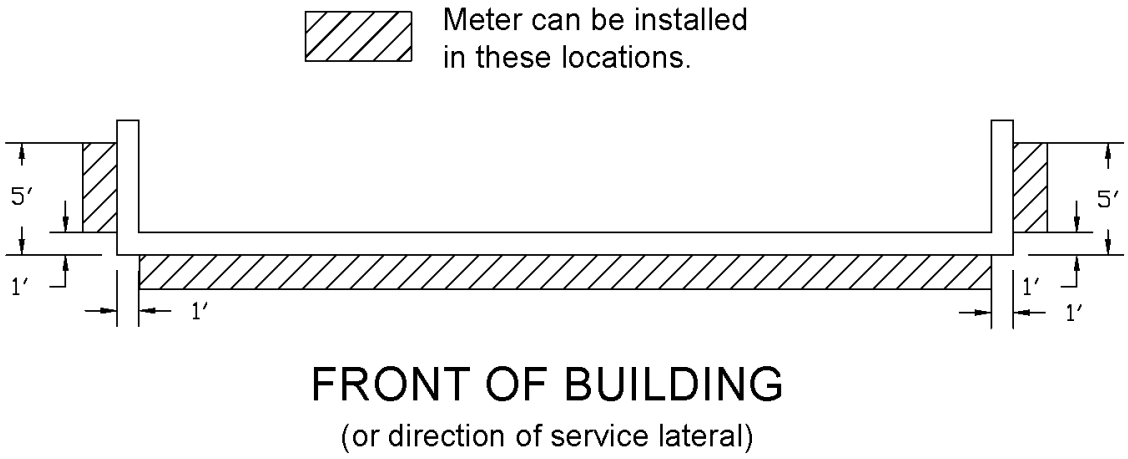
OR

- There is adequate clear wall space to split the meters and install them separate from each other. The gas meter requires 15” W x 36” H and the electric meter requires 17” W x 57” H (200 Amp wall mount box) or 16” W x 47” H (200 Amp pedestal box) of clear wall space. See Section 601-7.

Standard service line extension to a residence shall extend no more than 75 feet for a single family home and 30 feet for a town house from the property line where the service enters the property to be served to the nearest corner of the building. Distances greater than these are non-standard and all additional costs will be borne by the customer/builder. For additional information, please consult with your BGE Representative. (Reference: BGE Electric Service Tariff, Section 8.23)

Note: The "front of the building" is defined by the portion of the building facing the utilities, which typically run along the street.

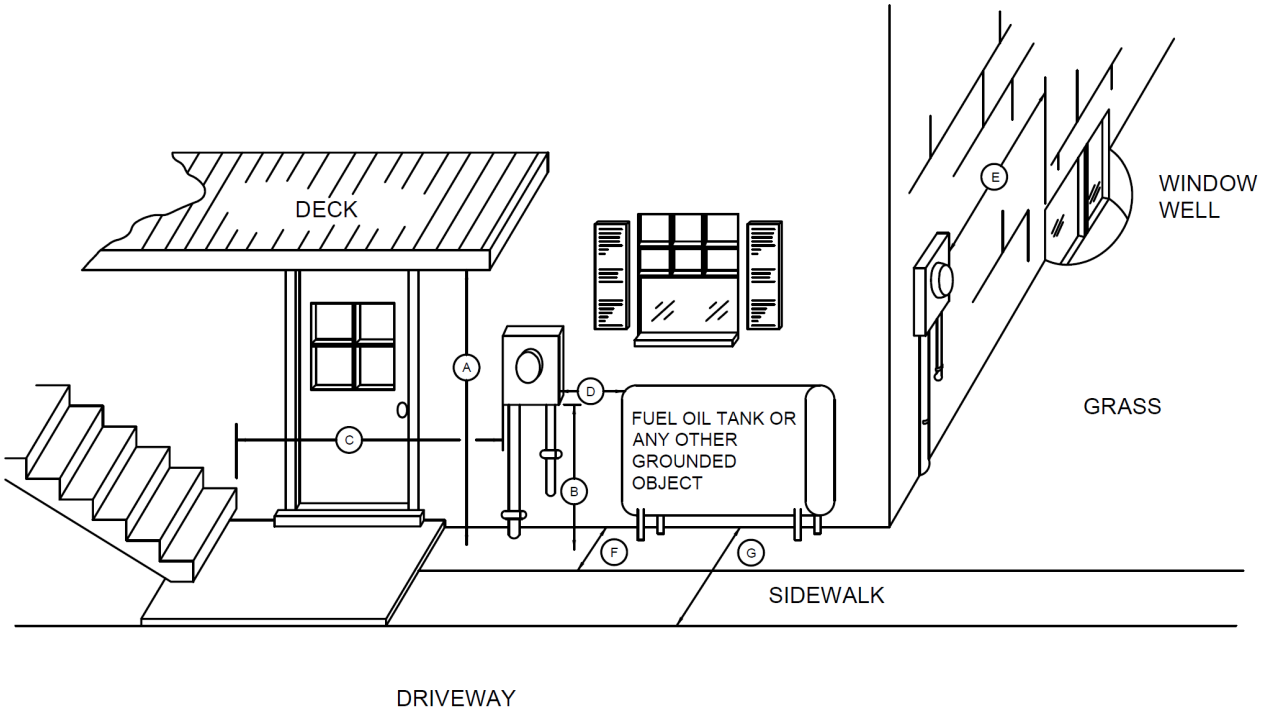
A. Authorized Residential Meter Installation Zones (New Construction)



B. Building/Hazard Clearances (Meter Socket Locations)

Shown below are minimum clearances required by the Company for installations of a watt-hour meter without requiring the Customer to supply mechanical protection for it.

See beginning of the manual for meter protection requirements.



Clearance dimensions:

(A) Final grade to deck or overhang - 6'-3"

(B) Final grade to center of meter - Refer to Sections 200, 300 and 400.

(C) Top or bottom of steps to side/front of meter socket - 6'

(D) Side of any grounded object to side of meter socket - 18"

(E) Side of meter socket to side of window well or any opening - 18"

(F) 18" minimum unpaved to sidewalk

(G) 36" minimum to driveway (less than 36" requires traffic protection – See Section 412)

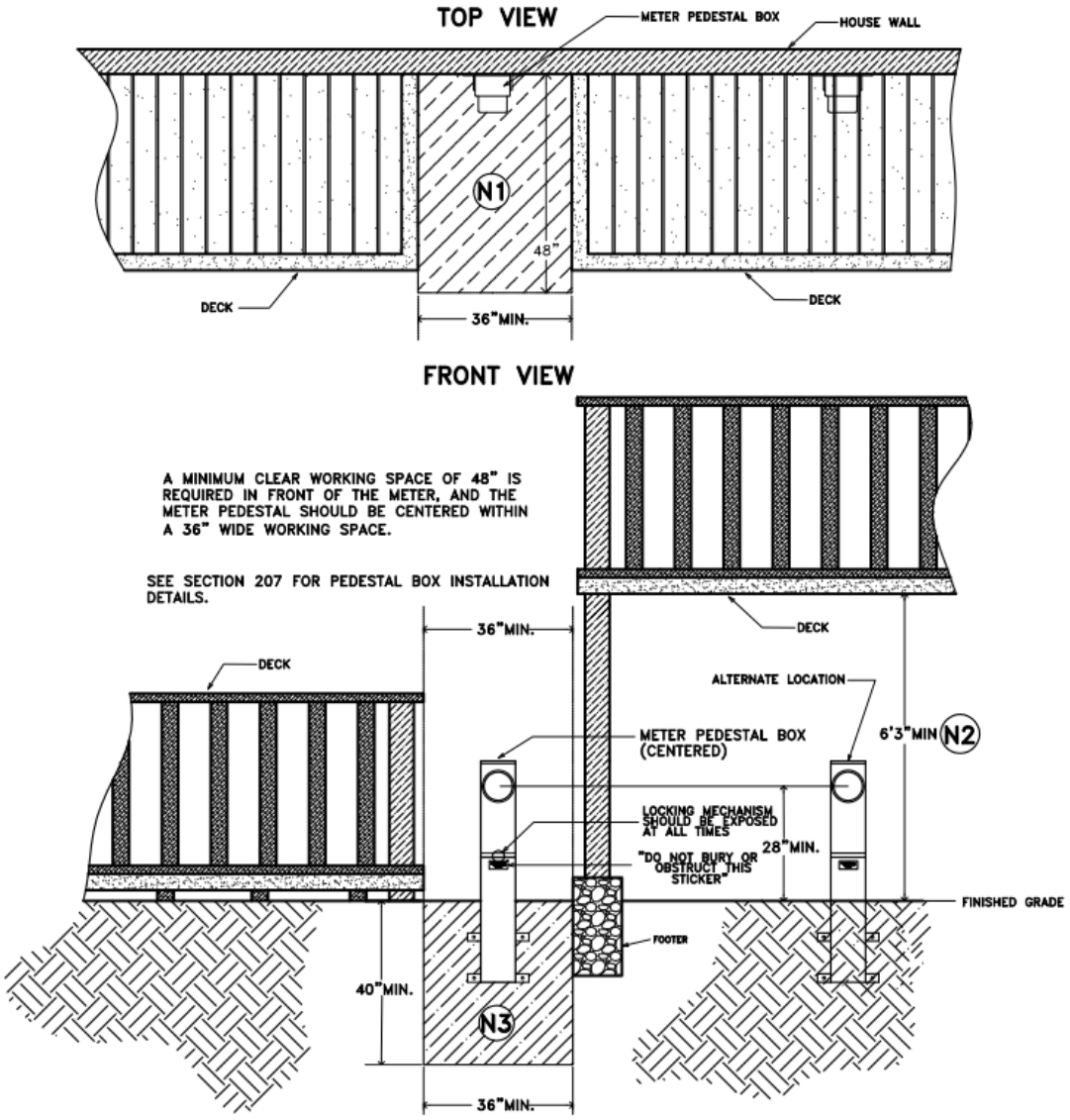
(H) Where one or more service cable is installed underneath a build-over, such as a deck, patio, or paving, a 4" PVC conduit extending a minimum of 2' beyond the edge of the build-over, is required for the underground cables.

Note: Generally, a meter should not be installed under any first floor window and must have sufficient clearance from the side of windows to allow room for shutters. Metering equipment must not be installed on an unfinished wall.

C. Deck Installation Clearances (Meter Socket Locations)

Shown on the following pages are minimum clearances required by the Company when planning for deck installations around a watt-hour meter.

For this type of installation, consult the company.



METER PEDESTAL

Note:

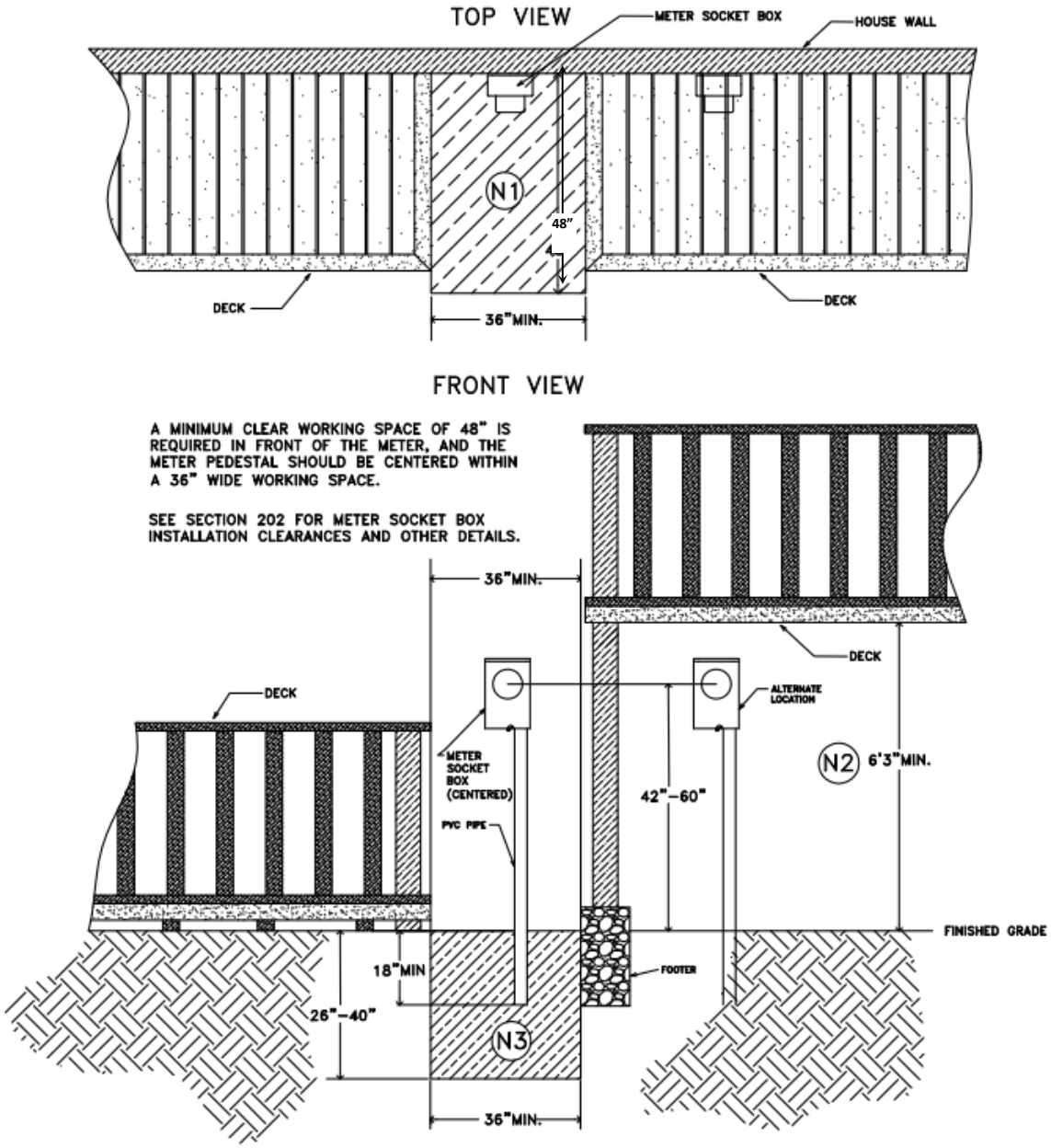
(N1) A minimum clear working space of 36”W x 48”D shall be provided in front of the meter.

(N2) When a deck is built over or above the meter box, a minimum head room of 6’3” shall be maintained. (N1) and other clearances shown above still apply. Also, the space under the deck shall be easily accessible. Do not install any barrier, gate or any means that will prevent ready access to the meter box and cable connections.

(N3) A clear space of 36”W x 40”D shall be provided underground for service lateral. A clear path above ground shall be maintained for the service lateral.

* See beginning of the manual for meter protection requirements.

For this type of installation, consult the company.



METER SOCKET BOX

Note:

(N1) A minimum clear working space of 36”W x 48”D shall be provided in front of the meter.

(N2) When a deck is built over or above the meter box, a minimum head room of 6’3” shall be maintained. (N1) and other clearances shown above still apply. Additionally, the space under the deck shall be easily accessible. Do not install any barrier, gate or any means that will prevent ready access to the meter box and cable connections.

(N3) A clear space of 36”W x 26”-40”D shall be provided underground for service lateral. A clear path above ground shall be maintained for the service lateral.

* See beginning of the manual for meter protection requirements.

105-4 Indoor Locations - NON-STANDARD

An indoor location is NON-STANDARD (refer to 105-2).

In the event that metering equipment is located indoors, the equipment shall be located as near as practicable to the point of entry of the service entrance wiring, but in an area free from moisture and extremes of temperature and not in bath or toilet rooms, bedrooms, closets, restaurant kitchens, and any areas with less than 6'-3" head room. Metering equipment shall not be installed over stoves, sinks, oil tanks, sump pumps or other obstructions making safe access difficult for the installation and servicing of the metering equipment or the reading of the meter. Refer to 105-3(B).

A. Accessibility

Metering equipment shall be located so as to be readily accessible to the Company.

1. Generally, metering equipment will not be located in an area where the only access is through a trap door. Exception to this rule requires specific permission from the Company.
2. Where one Customer is to be supplied, the metering equipment shall not be located above the first floor level, unless required by the AHJ and Company.
3. Where more than one Customer is to be supplied, the metering equipment shall be at one location. In a high-rise building (typically 4 floors or greater), the metering equipment shall be located in group(s) on every other floor. Meter rooms fed by the same riser shall be in vertical alignment from floor to floor.
4. The Customer shall provide a pad-lockable key box with a key for BGE access to all meter locations.

Note: The Company may require that meter rooms be provided.

B. Metering Equipment Remote from Point of Entry

Where metering equipment is located remote from the point of entry of the service entrance wiring, the Customer's unmetered wiring from the point of entry or the main disconnecting means to the line side of the metering equipment shall be enclosed in rigid or intermediate metal conduit, electrical metallic tubing, or wireways. Any pull boxes must have provisions for sealing (refer to 104-8). Busway may be used provided it is installed in an open and visible location and provided all openings designed to provide access to unmetered conductors are in use and are occupied by acceptable tap or disconnect devices at the time the installation is first energized.

105-5 Residential Meters in a Flood Zone

Electric meter installations for new residential construction in areas defined as a flood zone[1] by local, state, or federal authorities are required to meet the following criteria:

1. Elevation of Meter Equipment[2]
   a. Electric meter sockets must be installed at a minimum of **one (1) foot above** the greater of the following two elevations:
      i. The base flood elevation (BFE)[3], **or**
      ii. The design flood elevation (DFE), which is determined by the local authority having jurisiction.
   b. The meter may be installed at the standard maximum height of 60 inches if it meets **requirement 1a**.
2. Meter Accessibility
   a. For outdoor electric meter installations that are higher than 60 inches, an elevated platform must be installed with a minimum of three (3) feet of clear space in front of the electric meter.
      i. A railing, gate and staircase must be provided on the platform (see Figure 1 below).
      ii. If an existing elevated platform, such as a porch or deck exists, the meter may be installed at a height not to exceed 60 inches beyond the platform and **requirement 1** is met.

Note(s): **(1)** flood hazard areas with 1-percent chance of annual flood; flood zones include Zone A and Zone AE (Flood Zones | FEMA.gov); **(2)** requirement 1a is in alignment with ASCE (American Society of Civil Engineers) Standard 24-14, which is deemed by FEMA to meet or exceed the minimum National Flood Insurance Program (NFIP) requirements for buildings and structures (Highlights of ASCE 24 Flood Design Resistant and Construction | FEMA.gov); **(3)** BFE is the computed elevation to which flood water is anticipated to rise and shown on the Flood Insurance Rate Maps (FIRMs) or on the flood profiles (Floodplain Management | FEMA.gov).

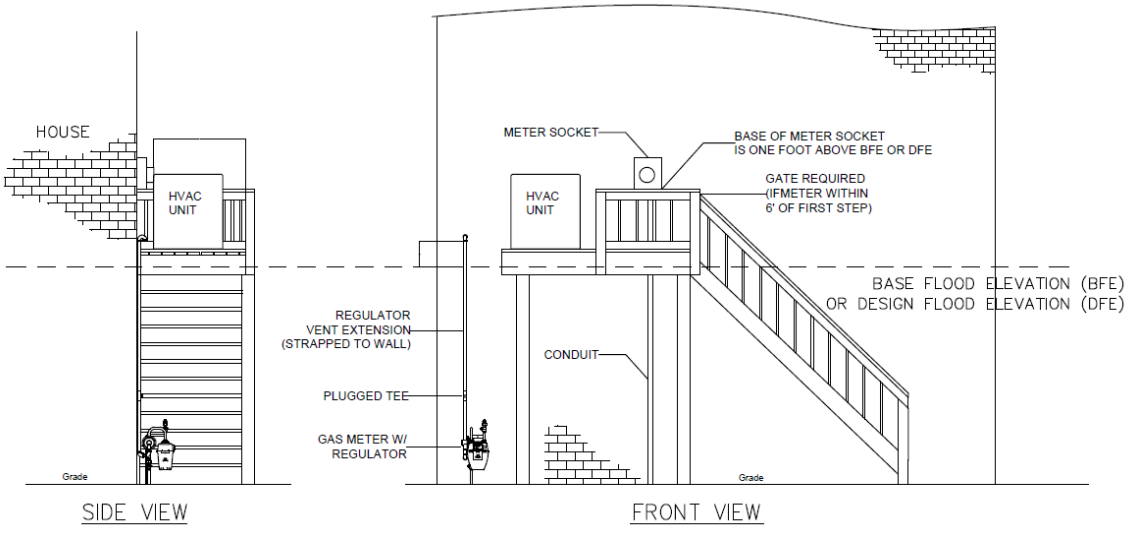


Figure 105-4: construction setup for electric and gas meter installations in a flood zone

106 Electric Enclosures Protection

106-1 Protection Enclosures

Protection enclosures are required for new, outdoor metering installations that are:

A. **Remote and unattended** to the extent that an act of vandalism such as the breaking of meter glass would not likely be observed or detected most of the time by the customer, general public, or any responsible party. Examples of remote and unattended meter locations are those where service is provided at:
   a. Signboards
   b. Recreation areas
   c. Public parks
   d. Neighborhood/school ball fields
   e. Pumping stations
   f. Railroad crossing gates and signals
   g. Off-the-road installations for highway and highway sign lighting

B. **Highly visible** and the equipment installation constitute an attractive target for vandals. Examples of highly visible meter locations are those where service is provided at:
   a. Apartment, condominium, cooperative, or townhouse buildings with multiple meters (three or more) installed in an assembly or in a group close together on an outside wall.
   b. Roadside installations for highway and highway sign lighting.

C. **Obscure**; that is, not generally in the view of the customer or occupant, and where an act of vandalism would not likely be observed or detected most of the time by the customer, general public, or any responsible party. Examples of obscure meter locations are those where service is provided at:
   a. Shopping centers
   b. Fast food/convenience stores
   c. Business areas, generally, if subject to vandalism.

Meter protection enclosures are not required for the overwhelming majority of new installations and is not required for new metering installations cited above which are screened from view of passersby and where the meter(s) is (are) located within a secured fenced or walled area, in a guarded property, or in an area not normally accessible to the public.

Design of Protecting Devices

The protecting enclosure shall be of sufficient size to cover the metering equipment. It shall be made of sheet metal (minimum of 12-gauge) with a full-sized hinged door and hasp to accommodate a Company lock.

106-2 Conditions for Applying the Guidelines

A. For new metering installations judged to be vulnerable to damage by vandals, the customer shall provide, at his expense, suitable meter protection equipment.
B. For existing metering installations that have suffered damage by vandals and where future protection is considered necessary, the Company shall bear the cost of adding suitable protecting devices.
C. The Meter Inspector - Meter & Installation shall make the judgment whether or not protection is required for each metering installation. The Supervisor - Meter & Installation shall be the arbiter of any disputes that may arise regarding the need for metering protection.

The enclosures can be provided by many contractors and are obtainable from various sheet metal fabricators. The customer's architect or contractor should obtain the size of enclosure by contacting the responsible Distribution Department Designer who will coordinate with appropriate Meter Inspector - Meter Installation to determine the enclosure size. (For phone numbers, refer to Section 106-1). **No** meters shall be installed until the enclosures are in place.

106-3 Types of Enclosures

Applicable to Figures 1 and 2.

- Enclosures shall be minimum 12-gauge galvanized steel or equivalent.
- Back may be omitted on wall mounted enclosure and 1¼" mounting flange provided instead.
- Wall mounted enclosure may be used for overhead or underground supply; support mounted enclosure for underground only.
- Supports for support mounted enclosure shall be furnished and installed by customer and shall not be smaller than 2" galvanized conduit set in concrete.

Applicable to Figure 3.

- Pad-mounted enclosure on concrete base shall be used for underground supply.
- Enclosure shall be minimum 10-gauge galvanized steel or equivalent.

Applicable to Figures 1, 2 and 3.

- Enclosure shall be provided, installed, and maintained by customer.
- Customer is responsible for the enclosure and supports being structurally adequate.
- Customer shall provide ¾" exterior plywood equipment mounting board, except where mounting flange is provided.
- Weather tight construction is not required for enclosure sizes given in table.
- Drainage means shall be provided by the customer.
- Door edges shall be formed for telescopic fit with enclosure.
- The maximum single door width shall be 20". The door opening shall be not less than the dimensions given in the table below.
- All doors shall be equipped with tamperproof hinges.
- A hasp for 2 locks shall be provided if customer equipment is enclosed (See Detail "A"). Otherwise, only a hasp for the Company lock is needed.
- Consult the Company for quantity, size, and spacing of supply conduits.
- Dimensions in the table provide space for one meter and socket, with line and load conductors entering bottom of socket. Dimensions shall be increased appropriately if customer equipment is enclosed. For multiple meters or multiple sets of service entrance wiring, consult the Company.

106-3 Types of Enclosures (continued)

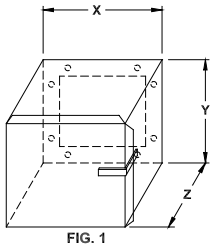


FIG. 1
WALL MOUNTED

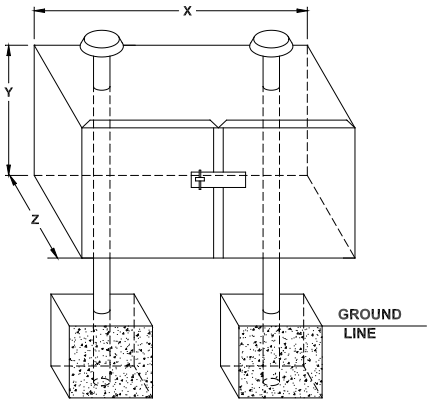
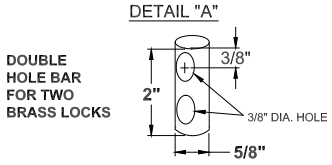


FIG. 2
SUPPORT MOUNTED



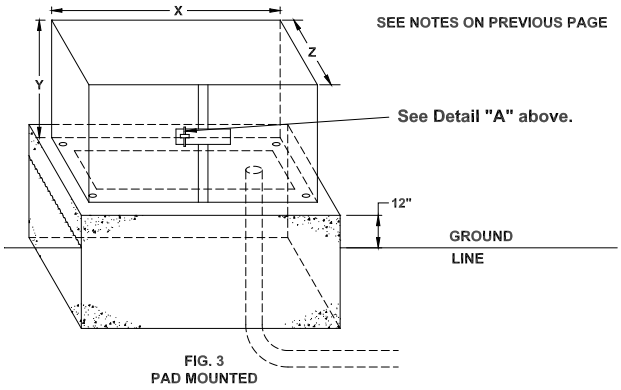


FIG. 3
PAD MOUNTED

SEE NOTES ON PREVIOUS PAGE

NOTE: X, Y AND Z ARE INSIDE DIMENSIONS

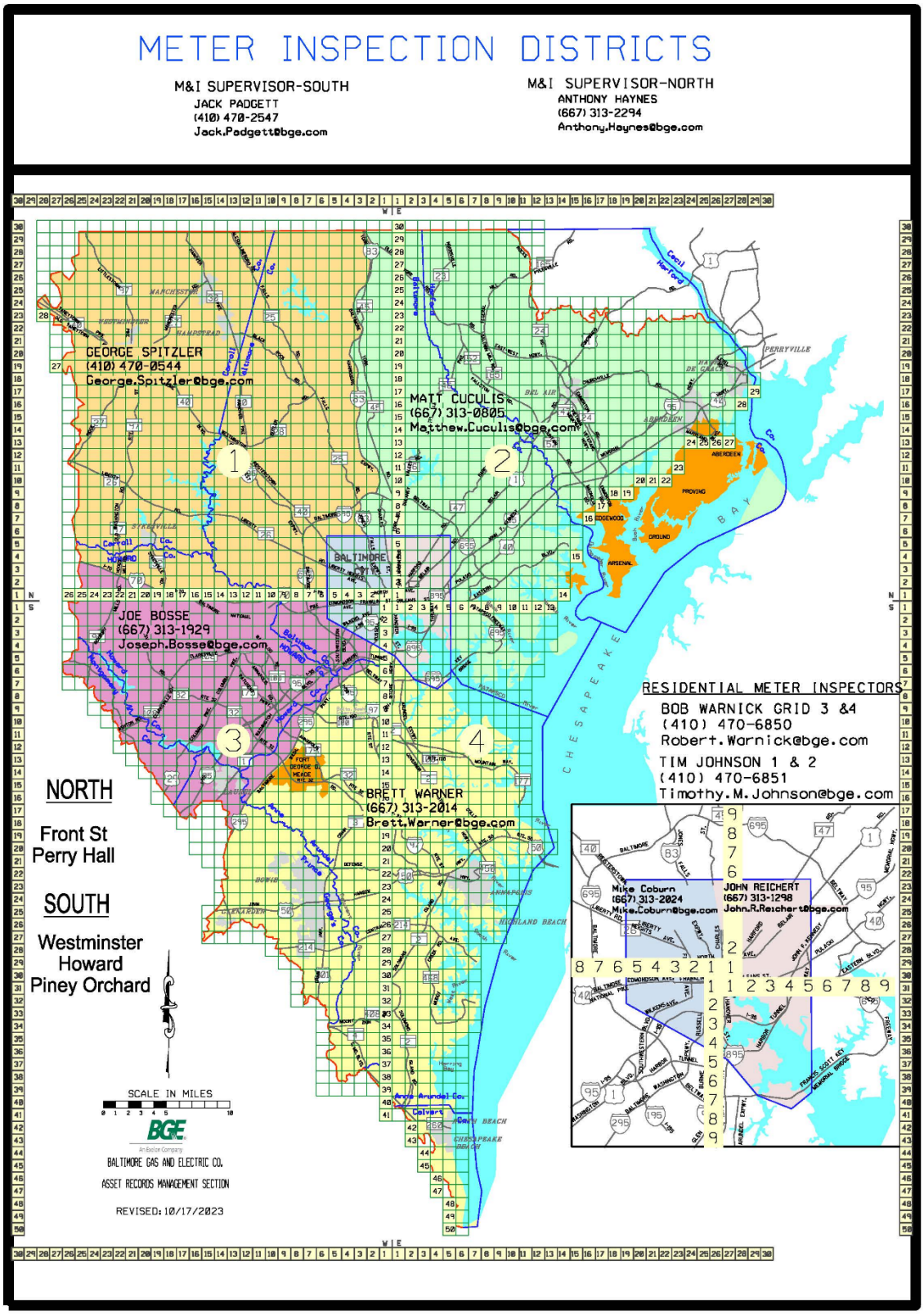
Max. conductor size, line side of meter	Total Ampacity, Customer Service Entrance Wiring	Class of Service	Inside dimension/Meter Equipment space (in inches)		
			X	Y	Z
No. 2	0-100	1Ø 3W	18	18	13
		3Ø 3W	18	18	15
4/0	0-100	3Ø 4W	20	24	15
4/0	101-200	1Ø 3W	20	24	13
		3Ø 3W	20	24	15
		3Ø 4W	20	24	15
Over 4/0	Over 200	Consult the Company			

107 Service Information

107-1 Where to call

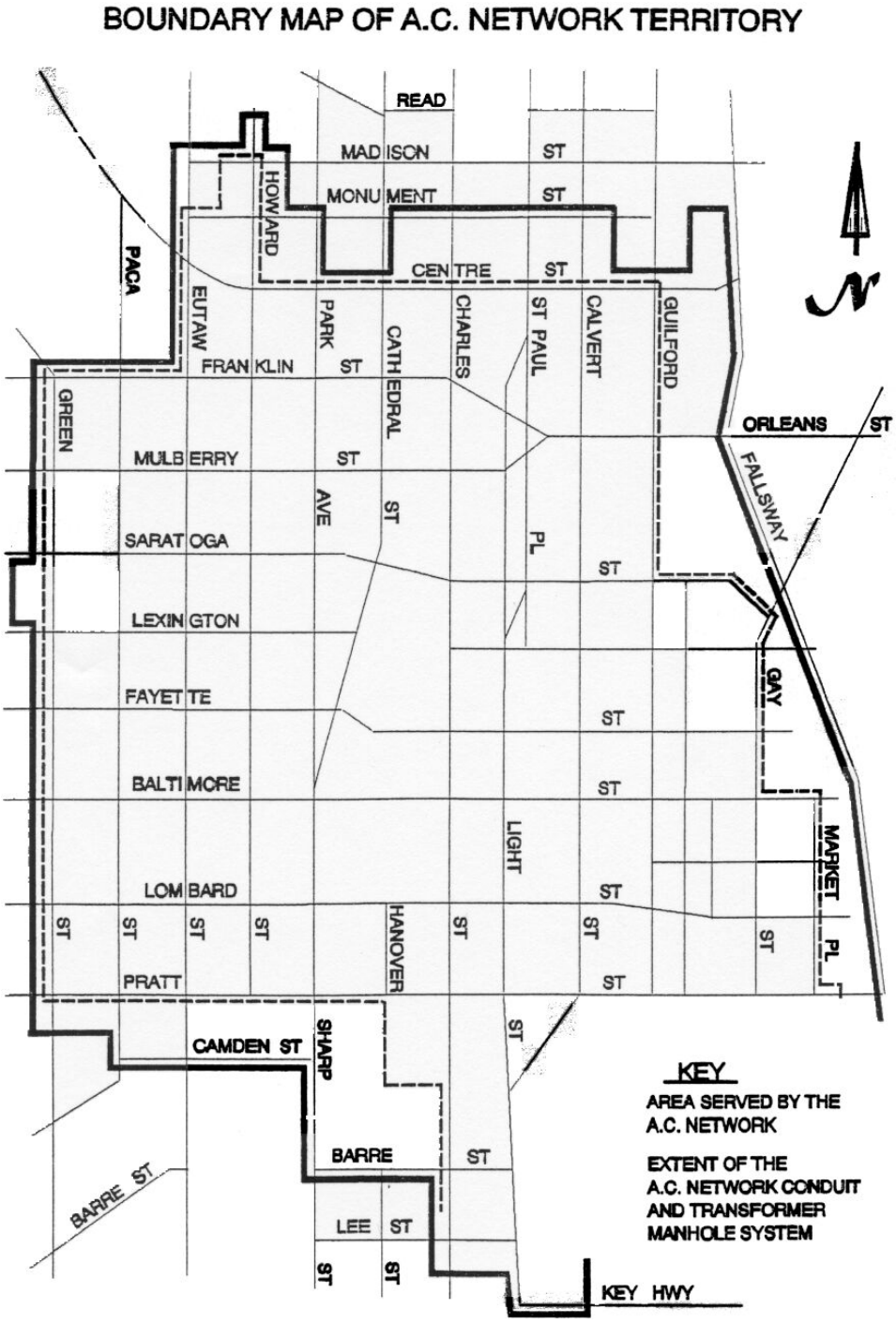
For inquiries, arrangements or Information pertaining to: New services - Gas or Electric Pending jobs or construction Relocation of Company equipment Removal of Company equipment Meter Locations Certificates of Inspection Significant increases in load Increase in service entrance size Fault current Values Voltage Problems Planned Outages Customer-owned metering equipment	<u>Residential, Commercial, & Industrial</u> New Business and Customer Contact 410-637-8713 (7:00 AM - 4:30 PM) 800-233-1854 (7:00 AM - 4:30 PM) Fax 410-712-9323 Baltimore Gas & Electric Company New Construction Services 1068 N. Front Street Baltimore, Maryland 21202
Emergency service Turn on, turn off meters Meter reading	800-685-0123
Residential: General Conservation Information Efficient utilization of energy Insulation	410-265-4000 or 410-265-4100

107-2 Map of Electric Meter Inspector Responsibilities



*See 107-1 for other Company phone numbers. *See 701-4 for Gas M&I district info.

107-3 Map of Network Territory (Baltimore City)

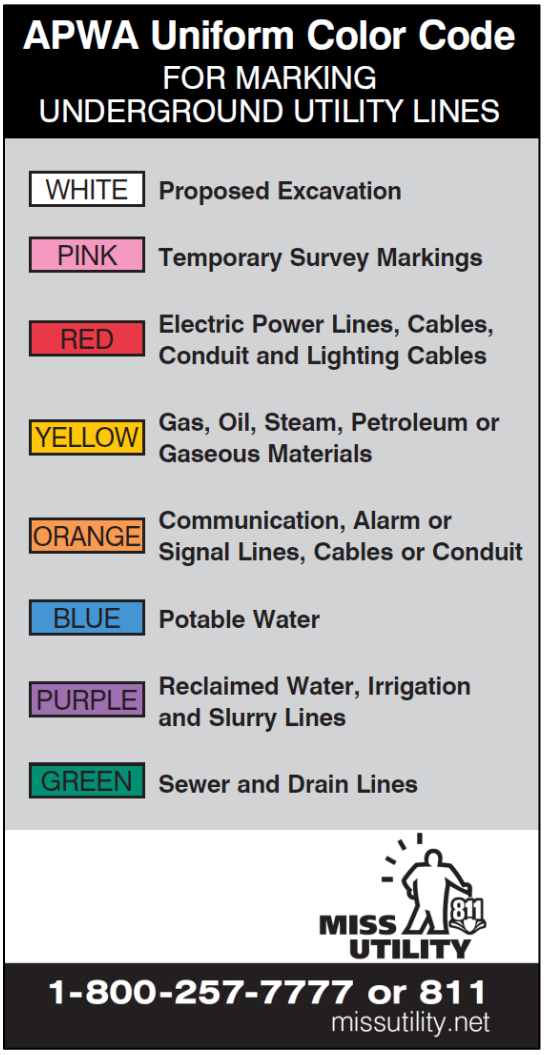


107-4 Location of Underground Facilities

Call Miss Utility: 811, or 1-800-257-7777 (7:00 AM - 5:00 PM) 24 hr. service in case of emergency.

Call *at least* 48 hours before you dig, plant, drill, blast, or grade. A utility representative will mark underground facilities at your site free of charge.

Color codes appearing on wire flags or as spray painted stripes on the grass, sidewalk or street mark underground utility lines. Whether you're planning a large construction project or minor landscaping, call Miss Utility at 811 or 1-800-257-7777 before you dig and exercise caution where you see these codes:



201 Underground Service

201-1 Terminus of Service

The terminus of the Company's service is the point of attachment of the underground service cable at or within a building or at Company equipment. The Customer provides the service conductors beyond that point.

201-2 Trenching and Service Lateral Installation

For single phase residential installations, the Company shall trench for and install its service lateral. For commercial installations, the customer shall trench for and install duct on the line side of the meter.

201-3 Grading

The Customer must clear obstructions from and grade the property within six (6) inches of final grade before the Company will begin construction of its extension to meet the Customer's service requirements.

201-4 Service Raceways in Municipal Duct Areas

A. Within public rights-of-way: The Company shall be consulted to determine who will furnish and install the raceway. The Customer may be required to install the raceway in concrete.
B. On private property: The Customer shall furnish and install the raceway.

Note: Under certain conditions where mechanical protection of a vertical cable rise is necessary, the Company will furnish and install a raceway of standard flexible metal conduit.

201-5 Service Raceways in Areas Other Than Those With Municipal Duct

A. Within public rights-of-way: The Company shall be consulted to determine who will furnish and install the raceway. If the customer is required to install a raceway from the manhole to the meter enclosure (e.g. Baltimore City), the raceway should connect directly to the meter enclosure.
B. On private property:
    1. For an existing residence with meter(s) to be located outdoors, the Company will furnish and install the vertical raceway at the meter location. Under paved or other hard surface areas such as driveways, sidewalks, patios, concrete slabs or equipment pads, etc., the Customer shall furnish and install all Company-required raceways.
    2. For an existing residence with meter(s) to be located indoors, the Customer shall furnish and install any raceway.
    3. For a new residence, excluding multiple-occupancy buildings (see Note 1), with meter(s) to be located outdoors, the Company will furnish and install the vertical raceway at the meter location (including one ell). Under paved or other hard surface areas such as driveways, sidewalks, patios, concrete slabs or equipment pads, etc., the Customer shall furnish and install all Company-required raceways.
    4. For a new residence, excluding multiple-occupancy buildings (see Note 1), with meter(s) to be located indoors, under paved or other hard surface areas such as driveways, sidewalks, patios, concrete slabs or equipment pads, etc., the Customer shall furnish and install all Company-required raceways. The Customer shall furnish and install the raceway from the point of building entrance to the terminus of service.
    5. For new or existing commercial, industrial or multiple-occupancy building (see Note 1), with meter(s) to be located indoors or outdoors, the Customer shall furnish and install any raceway. Conduits shall extend 4" above floor line and shall be in square configuration (rather than linear) unless otherwise shown in detail.

Note 1: A multiple-occupancy building is a structure designed to contain four or more individual units.

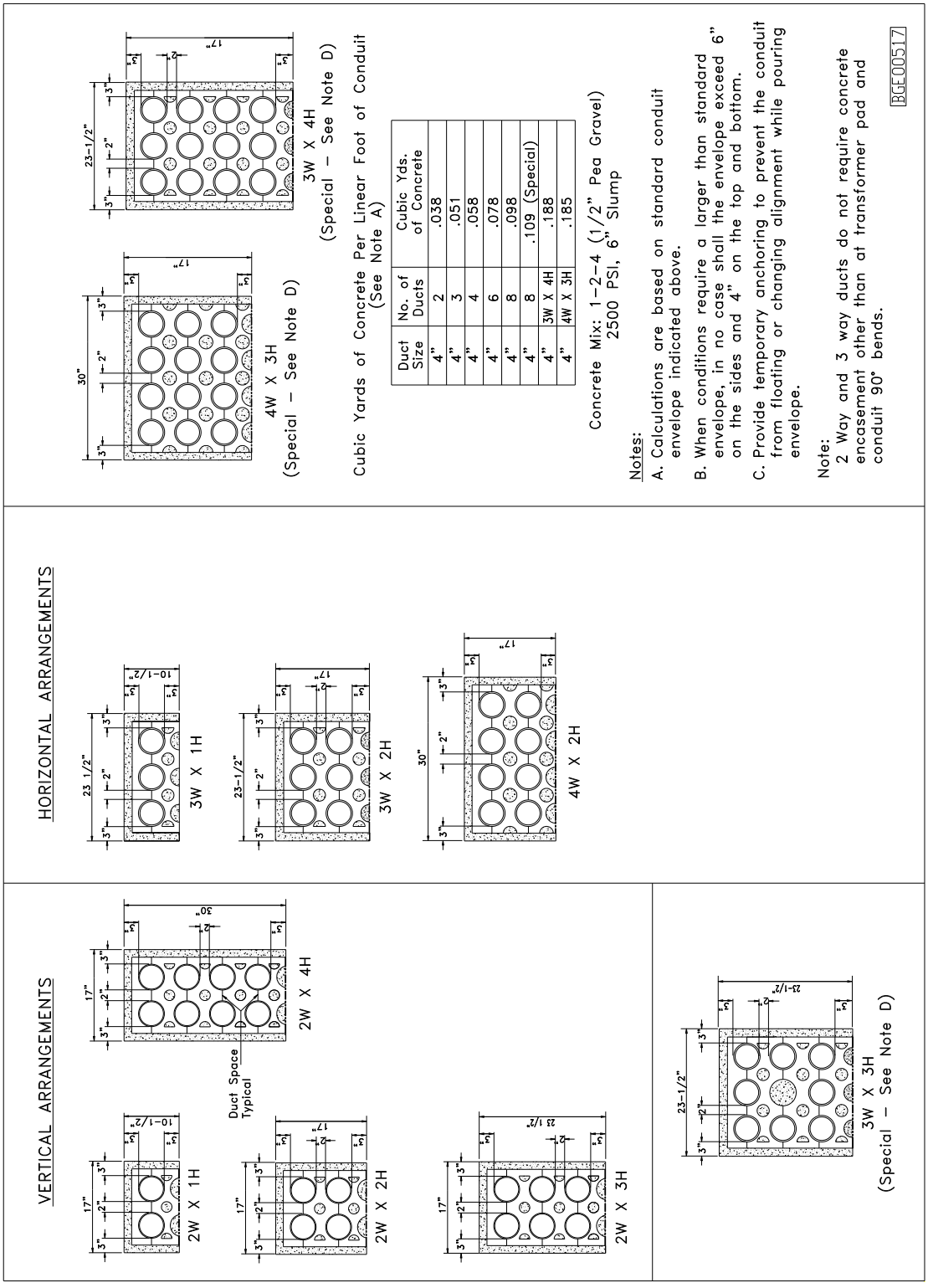
Note 2: A meter enclosure/box shall NOT be entered through the back wall or top.

C. Required Number of Secondary Service Conduits (Consult the Company before installation)
   1. The duct system must be concrete encased if a vertical (or stacked) configuration is installed
   2. A maximum of 180 degrees of bend is allowed. Total bends exceeding 180 degrees require a splice or pull box.
   3. All bends must be concrete encased to prevent duct separation during cable installation.

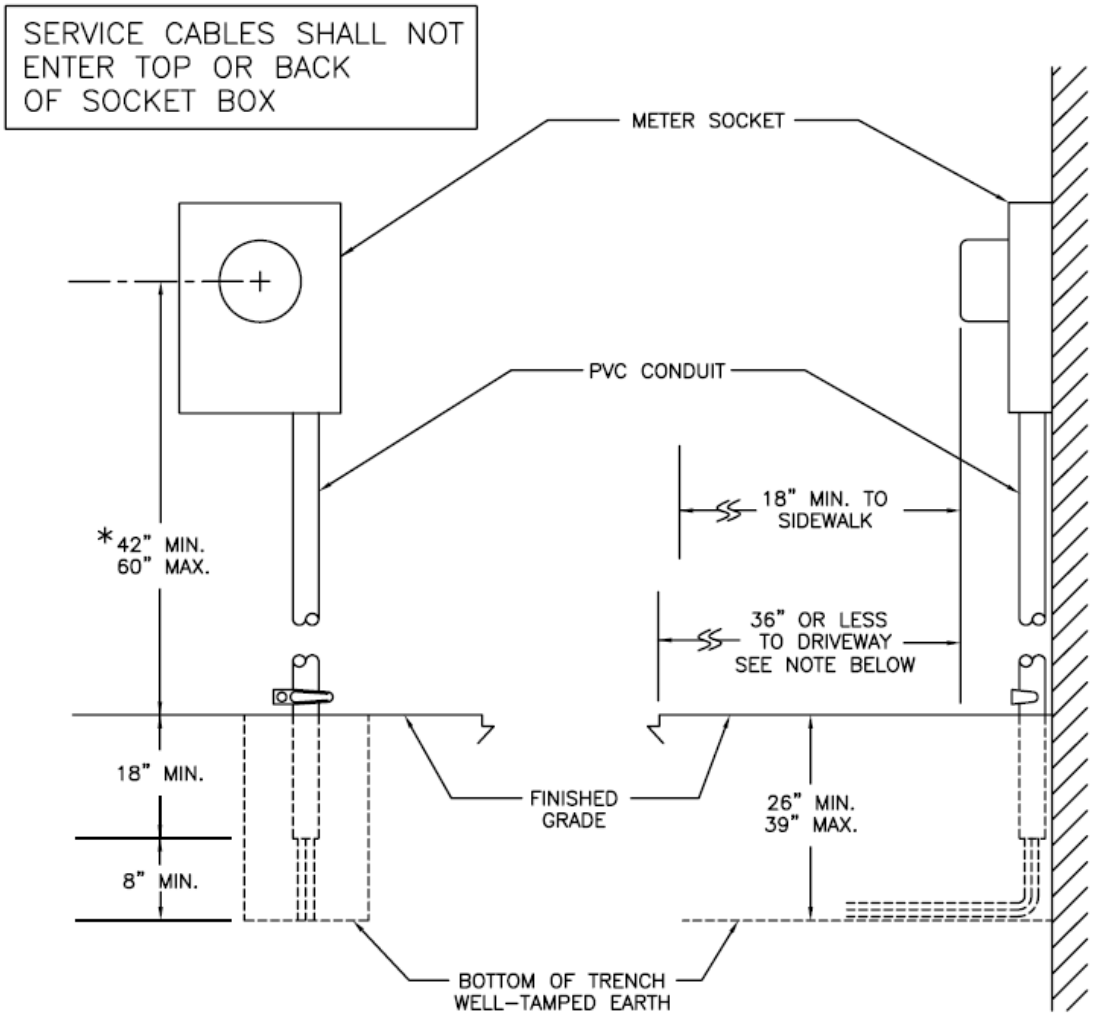
Number of Ducts *(Sized by Disconnect Nameplate Capacity (in Amps)***:**

Single Phase	# of Ducts	Three Phase	# of Ducts
0-200	2	0-200	2
201-400	3	201-400	2
401-1200	6	401-600	3
		601-800	4
		801 -1 000	4
		1001 -1 600	4
		1601-2400	6
		2401-3000	8
		3001-4000	12

D. Duct Bank Arrangement / Installation



202 Clearances from Sidewalk, Driveway, Grade, and Trench



Note:

If metering equipment is to be installed within 36” of an area subject to vehicular traffic (driveway, alley, roadway, etc.), the Customer will be required to provide protection for the equipment in the form of concrete filled bollard(s).

See Sections 201-4 and 201-5 for Raceway Installations.
See Sections 411 and 412 for Protection of Metering Installations

* Except meter pedestal.

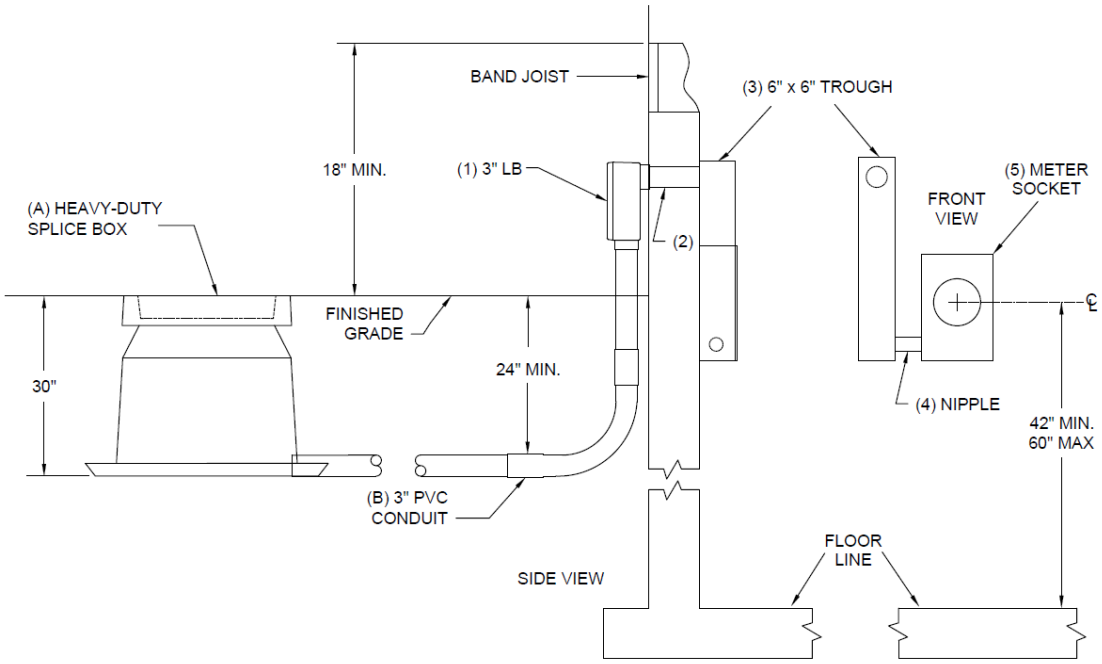
203 Indoor Raceway Installations (For Town Houses Only)

See Section 600 for a summary of construction practices for gas and electric meter installations.
See Sections 201-4 and 201-5 for additional details concerning raceway installations.

203-1 Basement Installation with LB Fitting

This configuration should be used when the electric meter will be installed indoors in a town house basement. To minimize the chance for water leakage, the conduit turns vertically, and transitions from an "LB" fitting, before penetrating the foundation wall (or band joist). For indoor installations on town houses, this is the preferred installation method.

Note: This installation requires 18" vertically from final grade to top edge of band joist as shown in diagram. If this requirement is not met, the installation detailed in 203-2 should be used.



Customer Furnishes and Installs:

(1) 3" PVC LB fitting (Approved models: Cantex 5133670, Picoma ME986L or Carlon E986L). Bottom of edge of LB fitting must be above final grade.

Note: If the length of unfused cable inside the house from wall penetration to meter enclosure will be greater than five (5) feet, disconnecting means (see Section 104-8) may be required outdoors. If so, it may be substituted for the LB fitting.

(2) 3" PVC conduit (through-wall). Sleeve may be installed prior to concrete pouring or core-drilled for prefabricated wall.
(3) 6" x 6" trough with screw-on lid (length is field to fit).
(4) Nipple – minimum 2" diameter.
(5) Meter enclosure (Company furnished – 200 amp model is BGE Mech# 13-582).

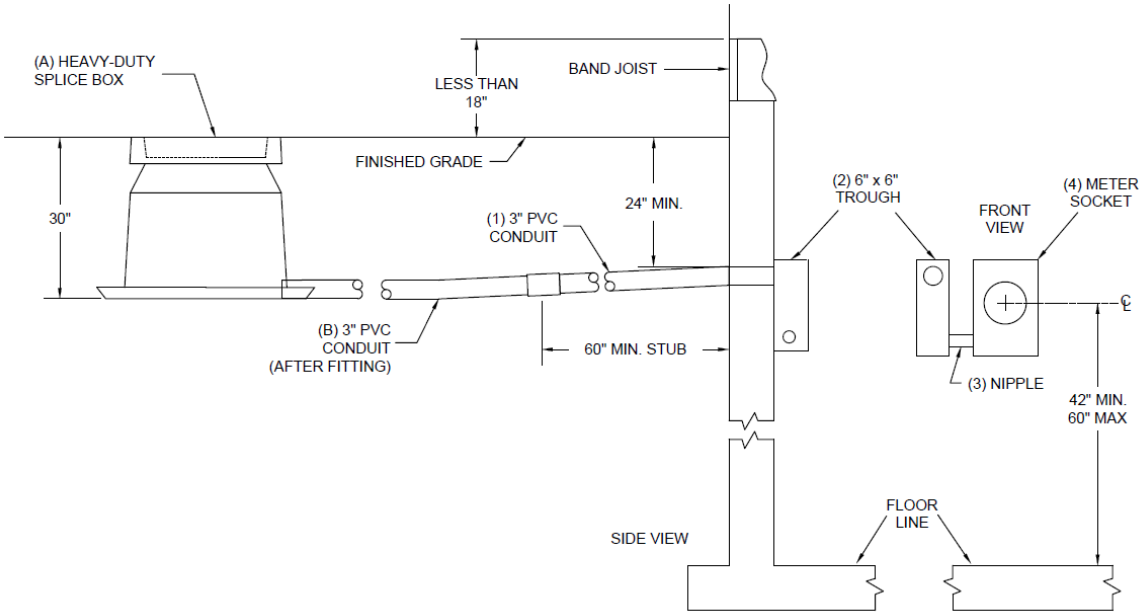
Company Furnishes and Installs:

(A) Heavy-duty underground splice box (BGE Mech #291-7). Top edge will be set to level of final grade.
(B) 3" PVC conduit and fittings from splice box to bottom of LB fitting. PVC conduit must be installed perpendicular to face of building and not on an angle.

203-2 Basement Installation without LB Fitting

This configuration should be used when the electric meter will be indoors in a town house basement and exterior wall space prohibits the use of an LB fitting. An example of such an installation would be a town house with a full front porch.

Note: If adequate clear wall space exists outdoors and the vertical distance from final grade to the top edge of the band joist will be 18" or greater, the installation detailed in Section 203-1 should be used.



Customer Furnishes and Installs:

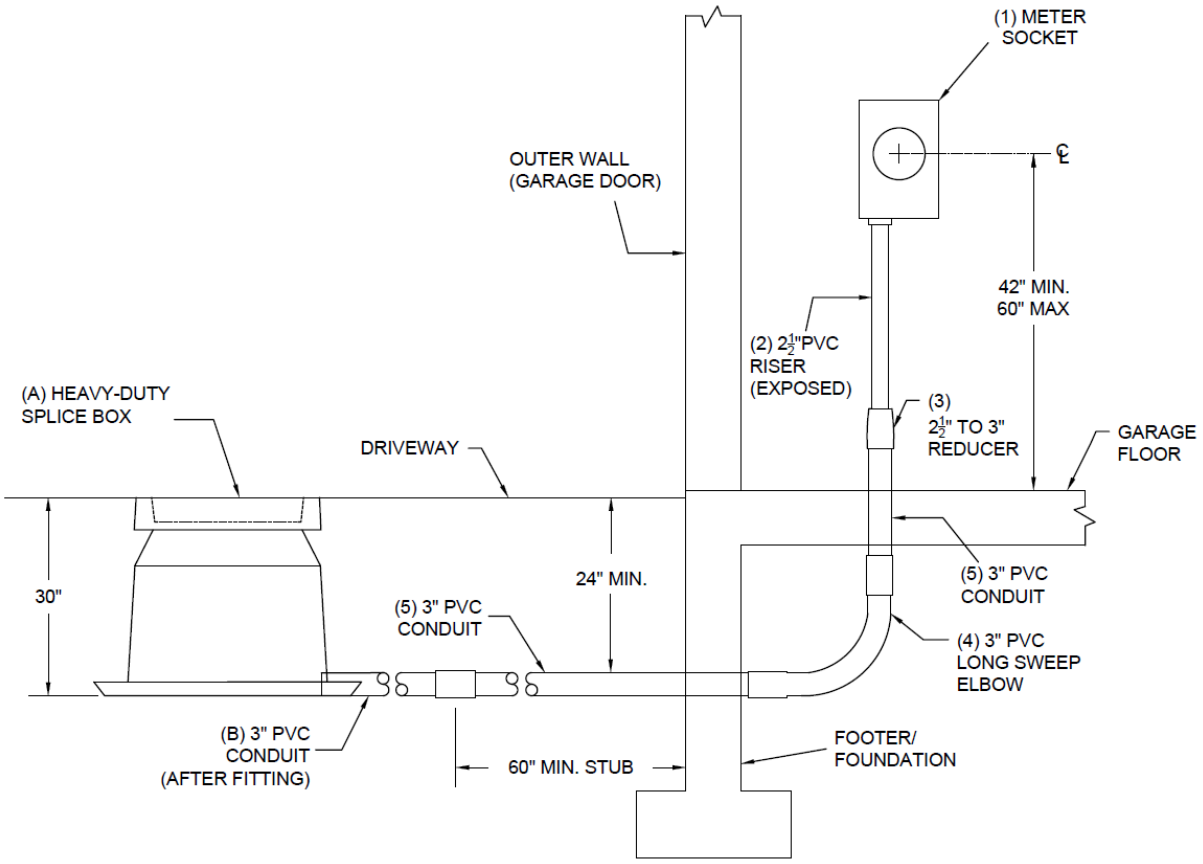
(1) 3" PVC through-wall conduit, that extends a minimum of 60" beyond foundation, and coupling.
(2) 6" x 6" trough with screw-on lid (length is field to fit).
(3) Nipple – minimum 2" diameter.
(4) Meter enclosure (Company furnished – 200 amp model is BGE Mech# 13-582).

Company Furnishes and Installs:

(A) Heavy-duty underground splice box. Top edge will be set to level of final grade.
(B) 3" PVC conduit from splice box to through-wall conduit stub.

203-3 Garage Installation

This configuration should be used when the electric meter will be located indoors in a town house garage.



Customer Furnishes and Installs:

(1) Meter enclosure (Company furnished – 200 amp model is BGE Mech# 13-582).
(2) 2-½" PVC riser to meter enclosure.
(3) 2-½ " to 3" PVC reducer.
(4) 3" PVC long sweep elbow.
(5) 3" PVC conduit and couplings - including stub that extends a minimum of 60" beyond edge of footer.
(6) Meter Traffic Protection (not shown) – 2-1/2" steel pipe filled with concrete (see Meter Protection Section)

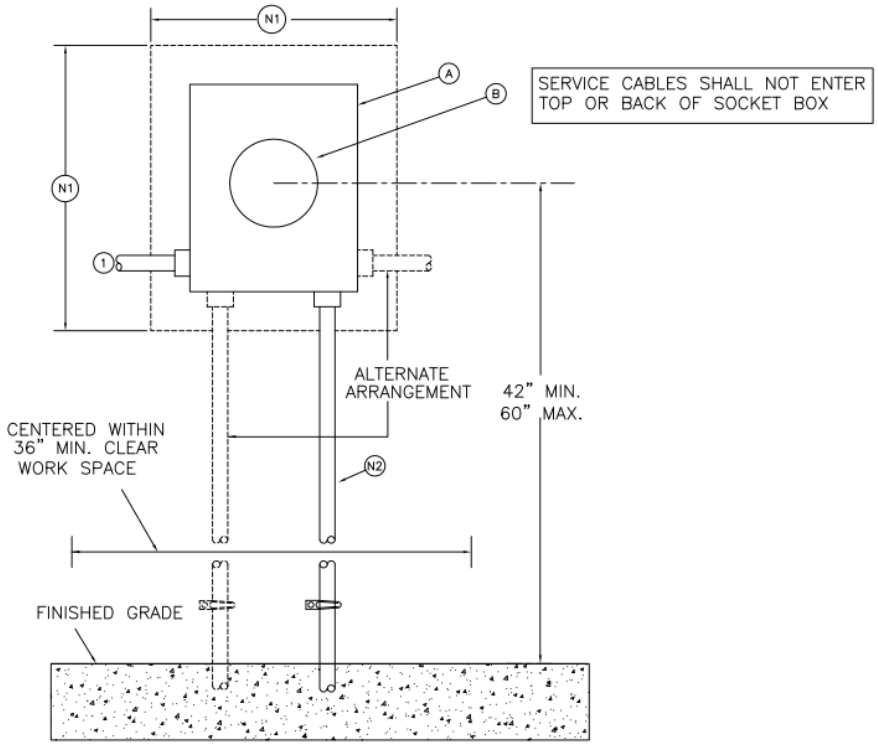
Company Furnishes and Installs:

(A) Heavy-duty underground splice box. Top edge will be set to level of final grade.
(B) 3" PVC conduit and fitting from splice box to stub.

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure

	Service	**1Ø,3W; 3Ø,4W**
	Max. Volts	**208Y/120**
	Max. Amps	**200 – One Set of Load Conductors**



Service Conductors:

Line and Load Side of Meter Enclosure — 1 set, Max. 350 kcmil

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure, maximum 2½" PVC riser. Alternate meter enclosure is available which accepts 3" PVC riser. The alternate meter enclosure should be used in jurisdictions requiring a continuous 4" conduit run from manhole to meter enclosure - see Note (N2). Leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure.

(2) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

(A) Meter enclosure (Customer may install).
Standard meter enclosure BGE Mech # 13-582 (maximum 2½" knockout) [23"H x 11"W x 4-1/8"D]
Alternate meter enclosure BGE Mech # 13-013 (maximum 3" knockout) [28¼"H x 13"W x 4-27/32"D]

(B) Watt-hour meter.

(C) Service lateral (not shown).

Notes:

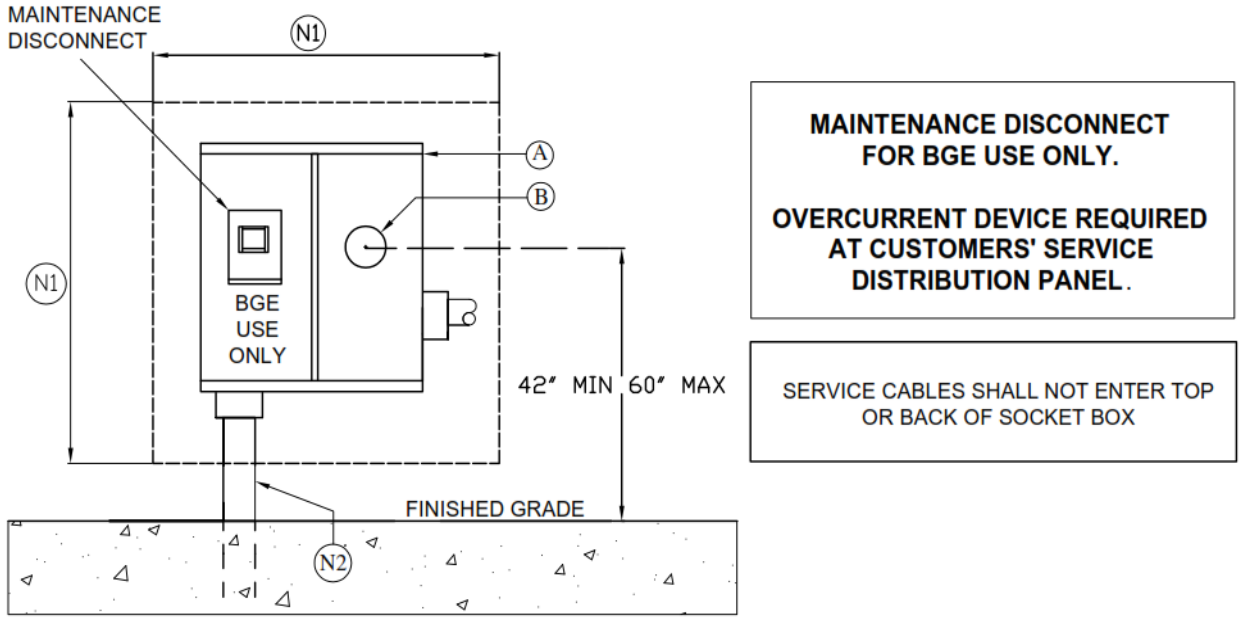
(N1) Maintain 3" clearance on all sides of meter enclosure.

(N2) Where continuous run conduit is used, meter enclosure shall be installed by Customer.

(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" minimum to driveway.

	Service	**3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**200**

Indoor Location – **NON-STANDARD** – See Section 105-3. Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of Disconnect and Load Side of Meter Enclosure – 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure).
(2) See Notes (N1), (N2) and (N3)

Company Furnishes and Installs:

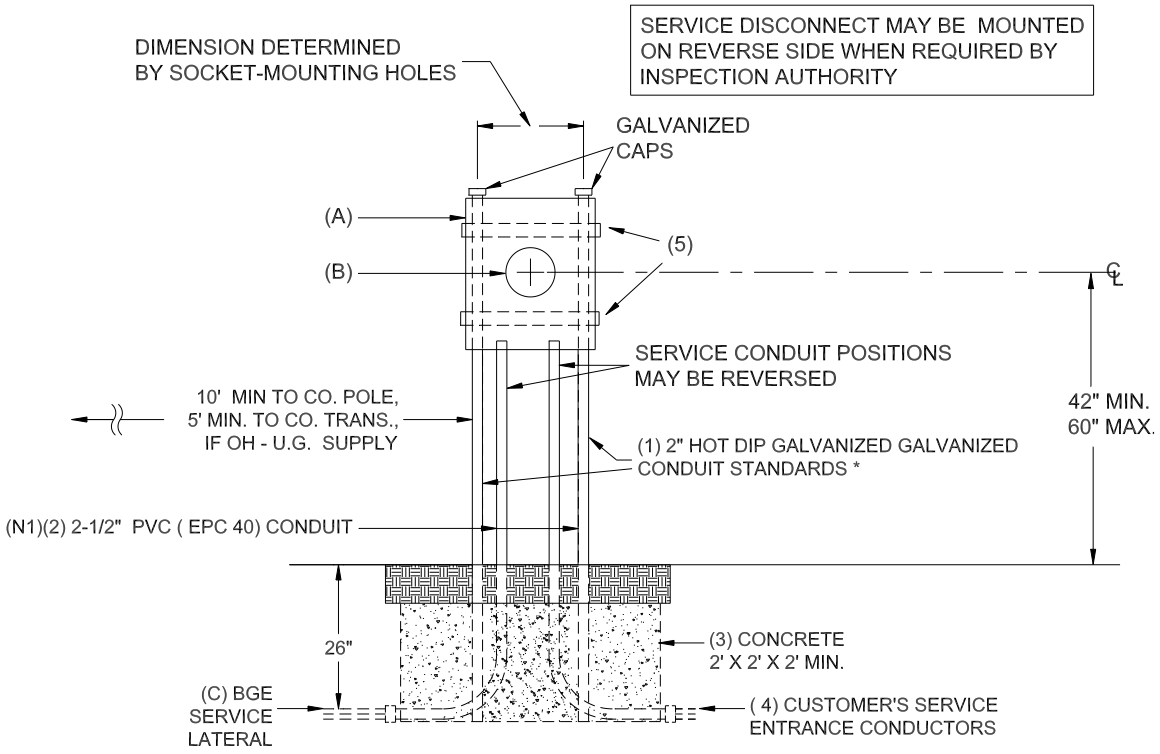
(A) Meter Enclosure/Utility Disconnect Enclosure.
Maintenance disconnects (left side of enclosure) will be locked for BGE exclusive use only.
Meter side (right side of enclosure) will be sealed.
BGE Mech # 13-591 [28"H x 26"W x 4-27/32"D]
(B) Watt-hour meter
(C) Service lateral (not shown)
(D) See Note (N2)

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure & disconnect enclosure.
(N2) Service raceway. See sections 201-4 and 201-5 for details.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" minimum to driveway.

	Service	**1Ø,3W; 3Ø,4W**
	Max. Volts	**208Y/120**
	Max. Amps	**200 – One Set of Load Conductors**

COMMERCIAL USE ONLY



A Company-approved meter pedestal is a recommended alternate to this installation (single phase only).

See 401 for approved pedestals.

Service Conductors:

Line and Load Side of Meter Enclosure — 1 set, Max. 350 kcmil

Customer Furnishes and Installs:

All material except. See Note (N2).

(1) Two 2” hot dip galvanized conduit standards and install Company meter enclosure.
(2) PVC conduit raceway (EPC 40) for line and load wiring. Ells should be a minimum 36” radius. See Note (N2).
(3) Assembly must be installed in concrete as shown.
(4) Service entrance wiring from load side of meter enclosure (Leave 30” of each conductor for connection inside meter enclosure).
(5) 1-1/2” x 1-1/2” Kindorf for mounting enclosure boxes. Use non-corrosive mounting bolts.
(6) See Notes (N1), (N2), and (N3)

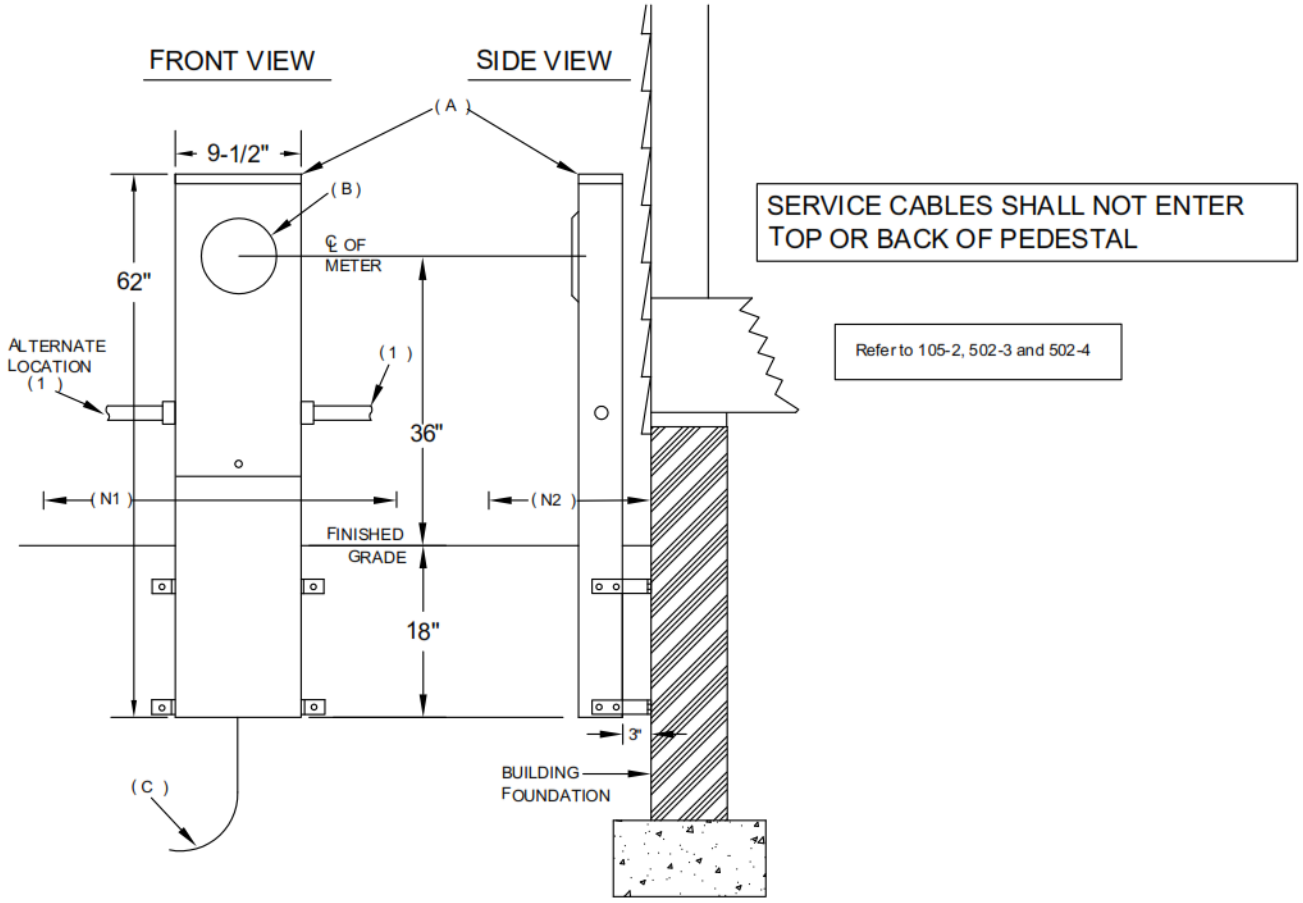
Company Furnishes and Installs:

(A) Meter Enclosure (Customer shall install)
Standard meter enclosure BGE Mech # 13-582 (maximum 2½” knockout) [23”H x 11”W x 4-1/8”D]
Alternate meter enclosure BGE Mech # 13-013 (maximum 3” knockout) [28¼”H x 13”W x 4-27/32”D]
(B) Watt-hour meter.
(C) Service lateral.
(D) See Note (N1).

Notes:

(N1) Maintain 3” clearance on all sides of meter enclosure.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” mininum to driveway.

[207] Single Outdoor Meter Pedestal	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	200 - One or Two Sets of Load Conductors



Service Conductors:

Line and Load Side of Meter Enclosure — 1 set, Max. 350 kcmil

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter pedestal (leave 18” minimum length to point of entry through wall and 30” of each conductor for connection inside meter enclosure).
(2) See Notes (N1) and (N2)

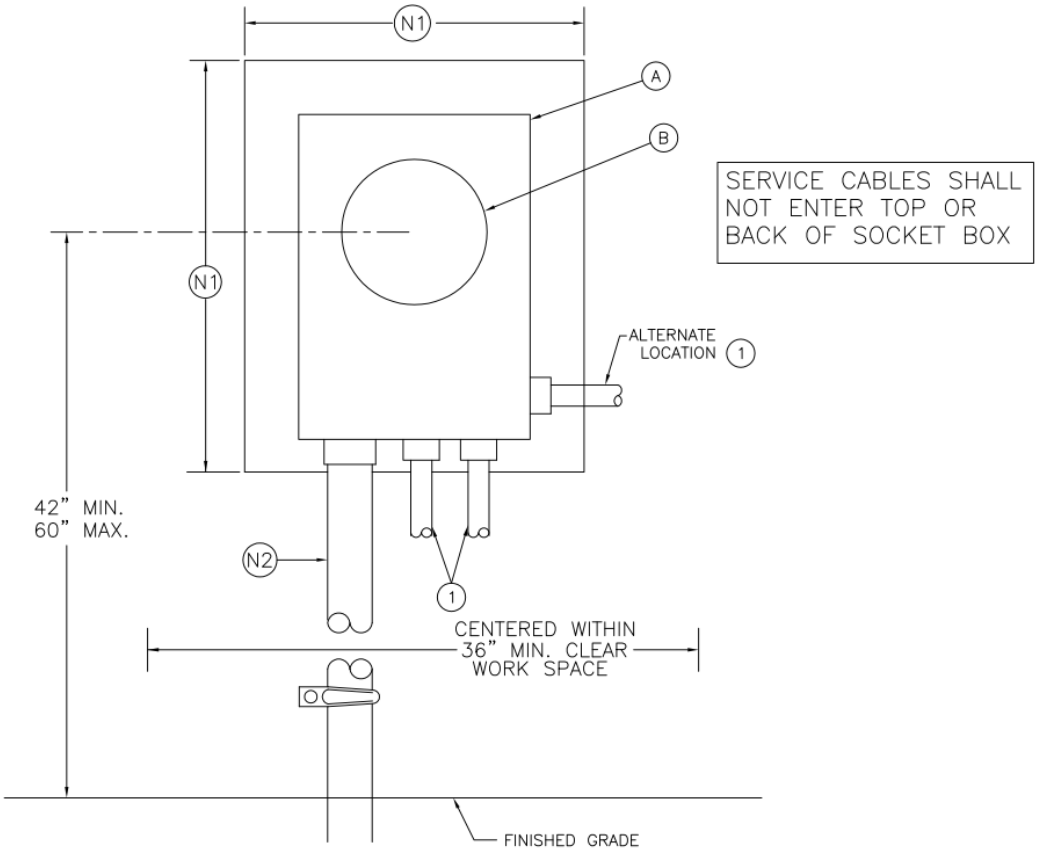
Company Furnishes and Installs:

(A) Meter Enclosure: BGE Mech # 13-247 [62”H x 9-1/2”W x 4-1/8”D]
(B) Watt-hour meter.
(C) Service lateral.

Notes:

(N1) 36” minimum clear work space.
(N2) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” mininum to driveway.

[208] Residential Only Single Outdoor Meter	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**400 (320A Continuous)**



Service Conductors:

Line and Load Side of Meter Enclosure - 1 set, Max. 350 kcmil
2 sets, Max. 4/0

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure).
(2) See Notes (N1), (N2) and (N3).

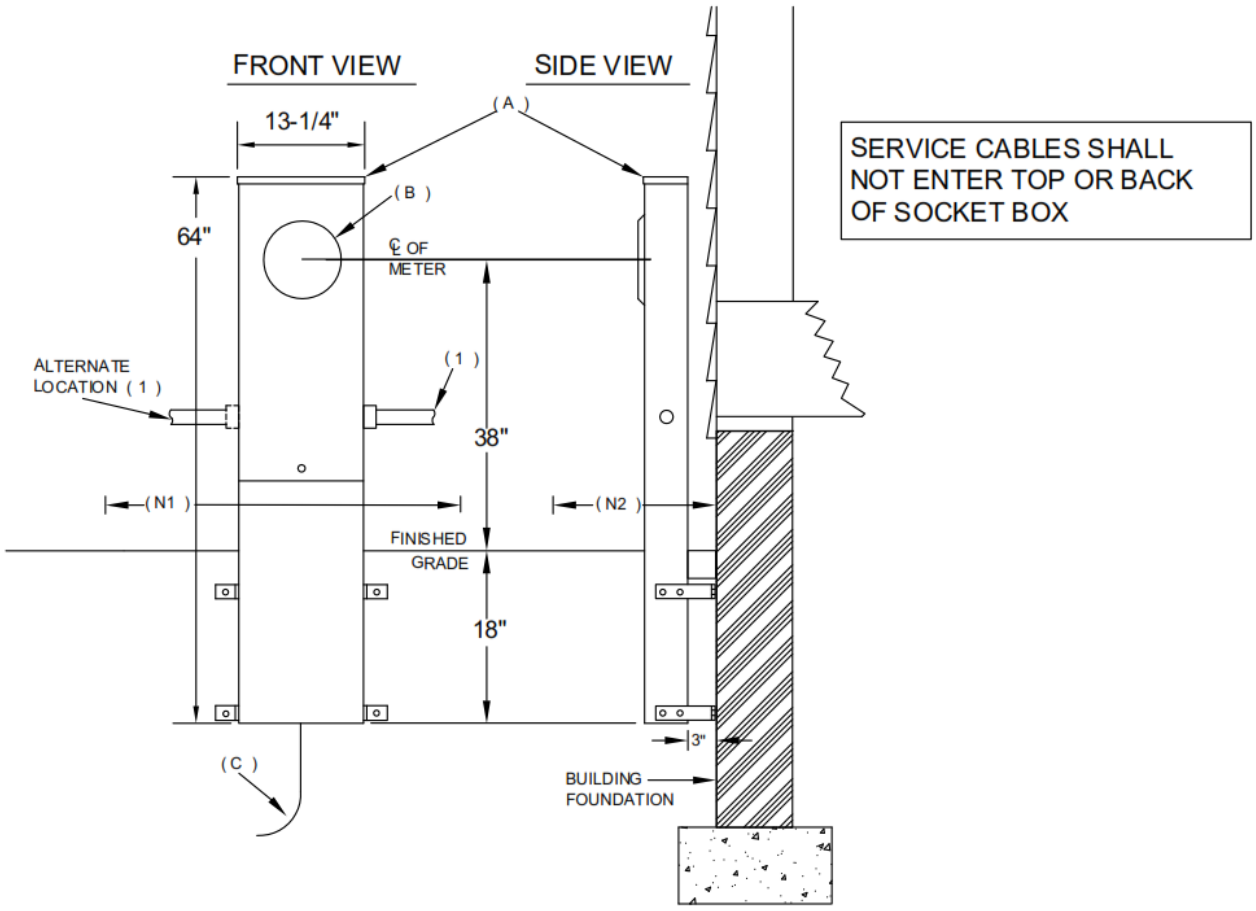
Company Furnishes and Installs:

(A) Meter Enclosure (Customer may install). BGE Mech # 13-009 [30"H x 15"W x 4-27/32"D]
(B) Watt-hour meter.
(C) Service lateral (not shown).
(D) See Note (N2).

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" mininum to driveway.

[209] Residential Only Single Outdoor Meter Pedestal	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	400 (320A Continuous)



Service Conductors:

Line Side of Meter Enclosure - 1 set, Max. 350 kcmil
Load Side of Meter Enclosure - 2 sets, Max. 4/0
2 sets, Max. 1-4/0 and Max. 1-2/0

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter pedestal (leave 18" minimum length to point of entry through wall and 24" of each conductor for connection inside meter enclosure). Residential Only - 2 sets.
(2) See Notes (N1) and (N2)

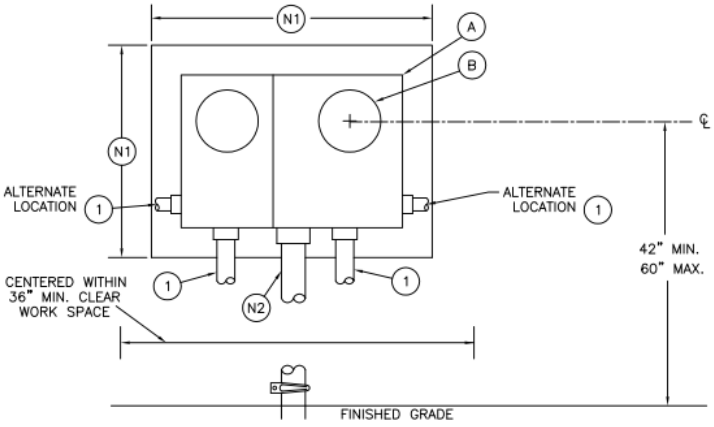
Company Furnishes and Installs:

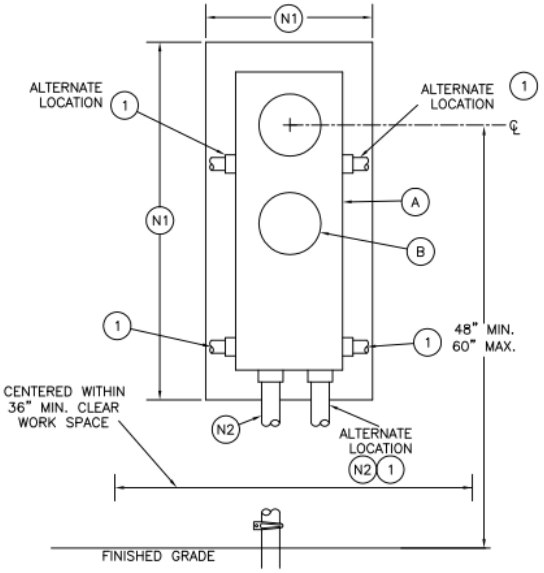
(A) Meter Enclosure. BGE Mech # 13-250 [64"H x 13-1/4"W x 4-7/8"D]
(B) Watt-hour meter.
(C) Service lateral.

Notes:

(N1) 36" minimum clear work space.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" mininum to driveway

[210] Two Outdoor Meters	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**150 Each Meter Position - One Set of Load Conductors at Each Meter Position**





SERVICE CABLES SHALL NOT ENTER TOP OR BACK OF SOCKET BOX

Service Conductors:

Line Side of Meter Enclosure - 1 set, Max. 350 kcmil
Load Side of Meter Enclosure - 1 set, Max. 2/0 to each meter position

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure).
(2) See Notes (N1), (N2) and (N3).

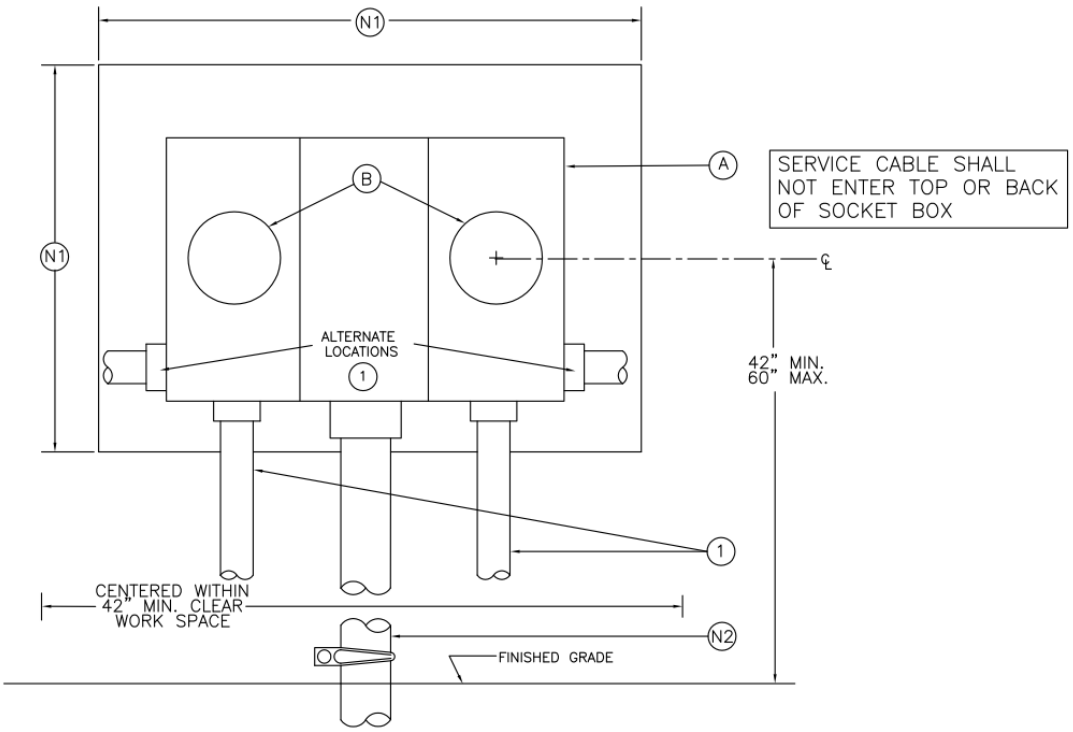
Company Furnishes and Installs:

(A) Meter Enclosure (Customer may install).
Horizontal 2-Gang 150A Meter Enclosure BGE Mech # 13-165 [17½" H x 20-5/16" W x 4½"D]
Vertical 2-Gang 150A Meter Enclosure BGE Mech # 13-166 [27"H x 16"W x 4-27/32"D]
(B) Watt-hour meter.
(C) Service lateral (not shown).
(D) See Note (N2).

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway, 36" mininum to driveway.

[211] Two Outdoor Meters	**Service**	**1Ø,3W; 3Ø,4W**
	Max. Volts	**208Y/120**
	Max. Amps	**200 Each Meter Position - One Set of Load Conductors at Each Meter Position**



For 480Y/277V Services – Consult Baltimore Gas and Electric Company

Service Conductors:

Line Side of 2-Position Meter Enclosure - 1 set, Max. 500 kcmil
Load Side of Each Meter Position - 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 24" of each conductor for connection inside meter enclosure).
(2) See Notes (N1), (N2) and (N3).

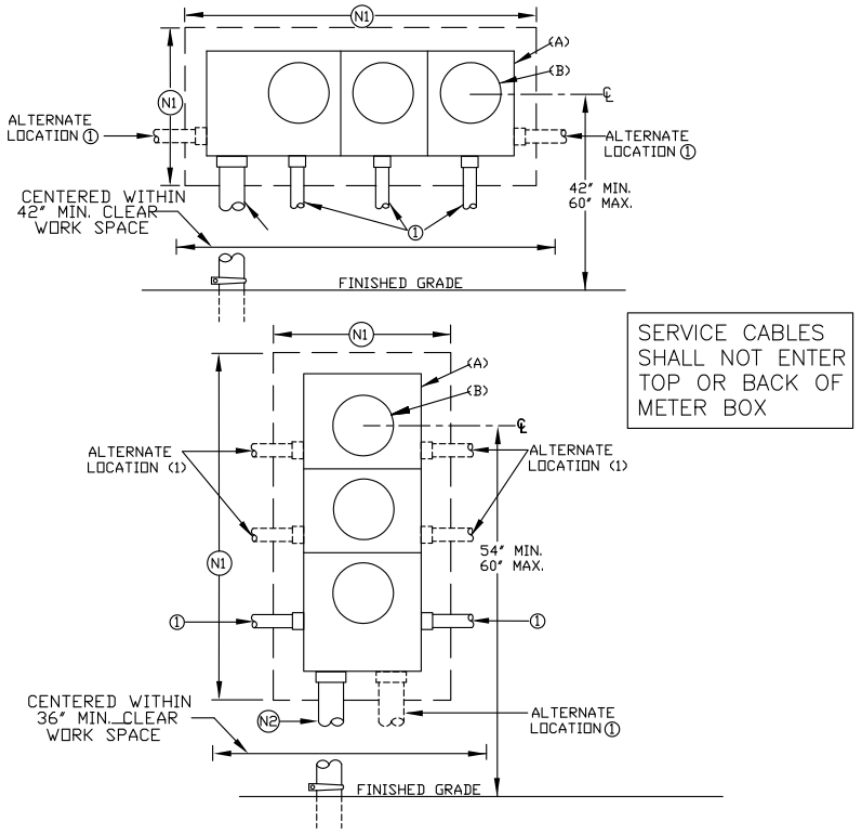
Company Furnishes and Installs:

(A) 2-Position Meter Enclosure. (Customer may install).
Single Phase BGE Mech # 13-067 [30-1/8"W x 20"H x 4-27/32"D]
Three Phase BGE Mech # 13-122 [30-1/8"W x 19"H x 5½"D]
(B) Watt-hour meters.
(C) Service lateral (not shown).
(D) See Note (N2).

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" mininum to driveway.

[212] Three Outdoor Meters	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**150 Each Meter Position - One Set of Load Conductors at Each Meter Position**



Service Conductors:

Line Side of 3-Position Meter Enclosure - 1 set, Max. 350 kcmil
Load Side of Each Meter Position - 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) Service Entrance Wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 24" of each conductor for connection inside meter enclosure).
(2) See Notes (N1), (N2) and (N3).

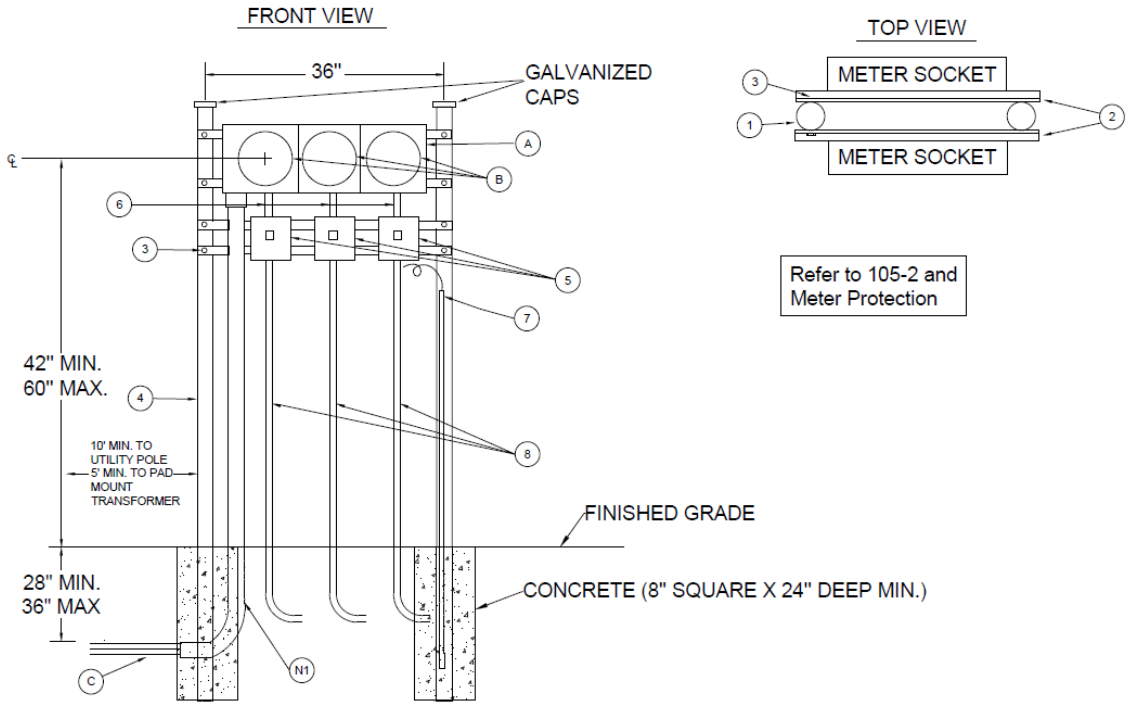
Company Furnishes and Installs:

(A) 3-Position Meter Enclosure. (Customer may install).
Horizontal 3-Gang 150A Meter Enclosure BGE Mech # 13-181 [17½" H x 28½" W x 4½"D]
Vertical 3-Gang 150A Meter Enclosure BGE Mech # 13-182 [37½"H x 16"W x 4-27/32"D]
(B) Watt-hour meters.
(C) Service lateral (not shown).
(D) See Note (N2).

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" mininum to driveway.

[213] Freestanding Multiple Outdoor Meters	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**150 Each Meter Position - One Set of Load Conductors at Each Meter Position**



Service Conductors:

Line Side of 2- or 3-Position Meter Enclosure – 1 set, Max. 350 kcmil
Load Side of Each Meter Position – 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) 2” galvanized steel pipe.
(2) 1-1/2” x 1-1/2” Kindorf channel for mounting enclosure boxes.
(3) 3/8” galvanized or stainless steel bolts.
(4) Supports – rigid and free from vibration, embedded in concrete, minimum of 24” deep and 8” square.
(5) Rain-tight disconnecting means.
(6) Service entrance wiring from load side of each meter position to disconnecting means (leave 24” of each conductor for connection inside meter enclosure).
(7) Grounding electrode conductor – terminated in Customer’s equipment.
(8) Feeder to Customer’s load.
(9) See Notes (N1) and (N2).

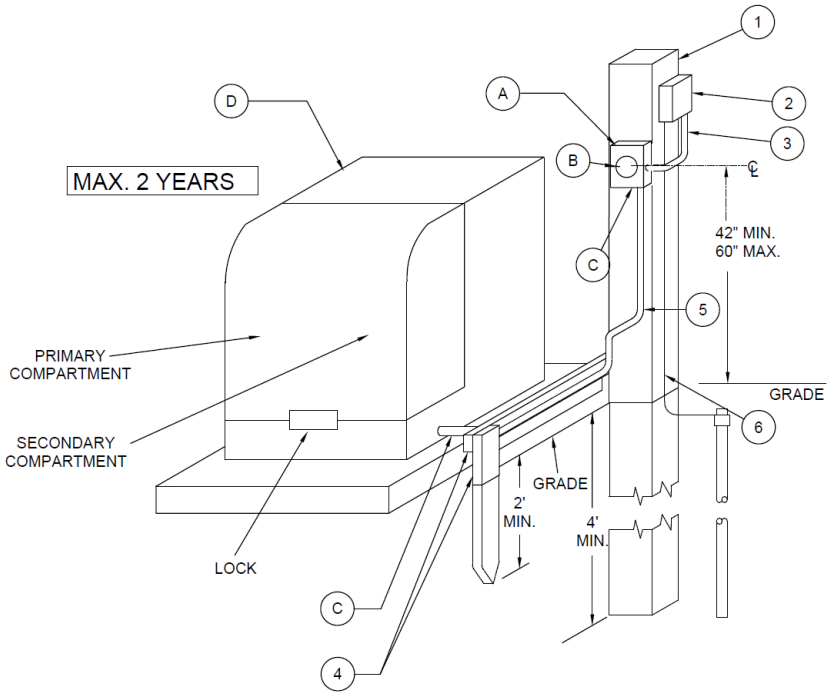
Company Furnishes and Installs:

(A) 2- or 3-Position Meter Enclosure (Customer may furnish and install Company-approved rain-tight stack or pedestal type meter equipment).
Horizontal 2-Gang 150A Meter Enclosure BGE Mech # 13-165 [17½” H x 20-5/16” W x 4½”D]
Horizontal 3-Gang 150A Meter Enclosure BGE Mech # 13-181 [17½” H x 28½” W x 4½”D]
(B) Watt-hour meters.
(C) Service lateral spliced for back-to-back enclosures.

Notes:

(N1) Service raceway. Ells should be a minimum of 36” radius. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” mininum to driveway.
10’ minimum to utility pole.
5’ minimum to padmount transformer.

[214] Doubtful Permanency (Max. 2 years) Service Pad-Mounted Transformer Single Outdoor Meter	Service	1Ø,3W; 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	200 - One Set of Load Conductors



NOTE: Overhead wires shall not be attached to the same support on which meter is mounted

Service Conductors:

Line Side of Meter Enclosure – 1 set, Max. 4/0
Load Side of Meter Enclosure – 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) 6" x 6" or 3 – 2" x 6" pressure treated timber(s) set at right rear edge of transformer pad (as viewed from front).
(2) Disconnecting means.
(3) Service entrance wiring from load side of meter enclosure to disconnecting means (leave 24" of each conductor for connection inside meter enclosure).
(4) 2" x 4" board at transformer knockout height.
(5) Service entrance cable or conduit; if for 480Y/277 volts, it must be a complete conduit system, made of steel or Scheduled 40 PVC, from meter to transformer (leave 60" of each conductor for connection inside transformer.
(6) Grounding electrode conductor connected to driven rod.
(7) See Notes (N1) and (N2).

Company Furnishes and Installs:

(A) Meter Enclosure. (Customer may install).
(B) Watt-hour meter.
(C) Service entrance cable connector.
(D) Pad-Mounted Transformer.

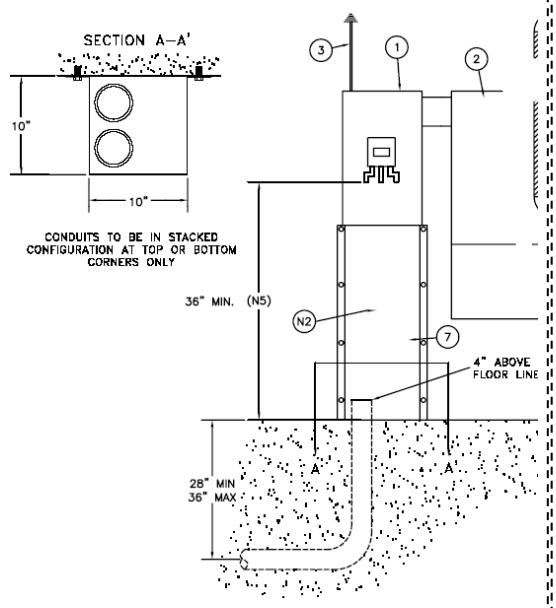
Notes:

(N1) Overhead wires shall not be attached to same support on which meter is mounted.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" mininum to driveway.
(N3) Doubtful permanency good for 2 years maximum.

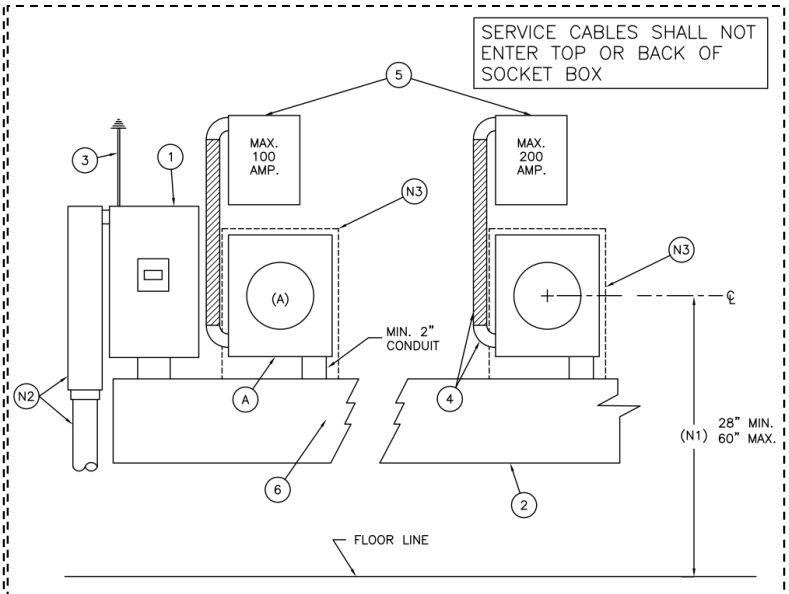
[215] Multiple Meters Customer's Trough (Indoor/Outdoor)	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**100 or 200 Each Meter Enclosure - One Set of Load Conductors at Each Meter Enclosure**

Consult Baltimore Gas and Electric Company.

OPTION 1



OPTION 2



Service Conductors:

Line Side of Meters (in trough) - Governed by Size of Main
Load Side of Disconnecting Means - Each Meter Enclosure – 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(2) Sealable wire trough, 14" x 14" minimum size, with guide pin studs and handles. Conductors from load terminals of main disconnecting means shall extend the full length of the wire trough. Consult Company for length of trough. Trough shall be installed below meter enclosures. See Section 414 for service entrance trough requirements.
(3) Grounding electrode conductor.
(4) Conductors from load side of each meter position and connectors as required (leave 30" of each conductor for connection inside each meter enclosure).
(5) Individual disconnecting means durably and legibly marked with paint as to area served. See Sections 105-1.
(6) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps.
(7) Line conductors from trough to 200A meter enclosures. The customer is responsible for all wiring after landing block in trough.
(8) See Notes (N1), (N2), (N3), (N4) and (N5).

Company Furnishes and Installs:

(A) Meter enclosures (Customer may install) and miscellaneous materials to make connections.
100A: BGE Mech #13-594 or 13-068 [10½"H x 8"W x 3-5/16"D] 200A: BGE Mech # 13-582 [23"H x 11"W x 4-1/8"D]
(B) Watt-hour meters.
(C) Service lateral (not shown).
(D) See Note (N2).

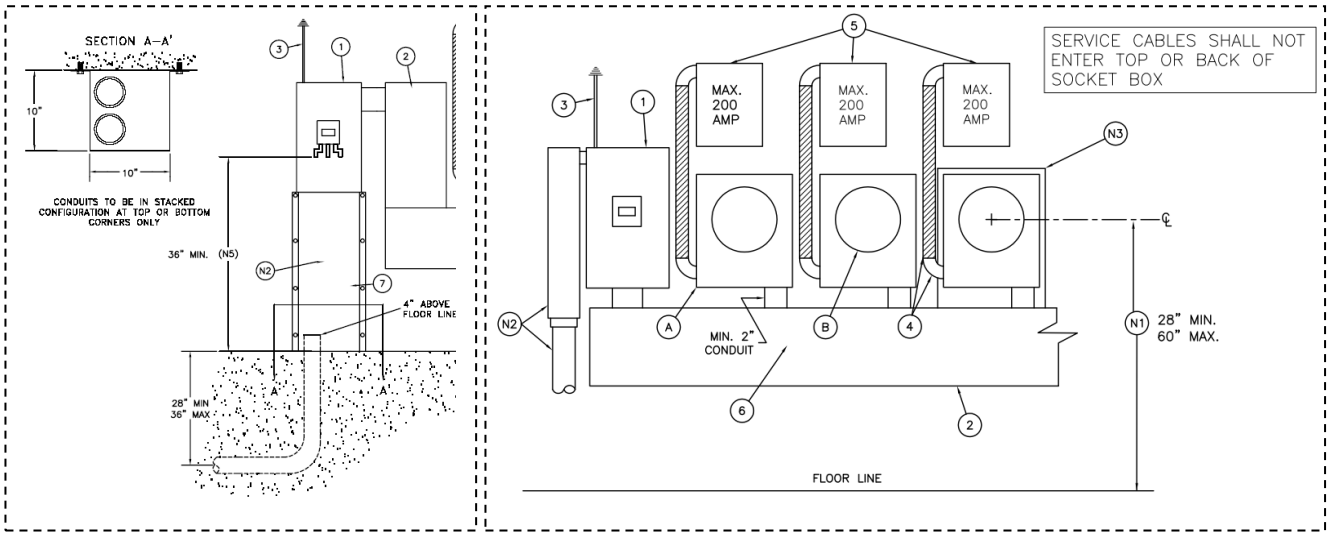
Notes:

(N1) 28" minimum, 60" maximum.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) Maintain 3" clearance on all sides of meter enclosure.
(N4) A minimum clear space of 48" in front of all metering equipment is required.
(N5) A minimum clearance of 36" shall be provided from the finished floor line to the bottom terminals of the main disconnect switch.

[216] Multiple Meters Customer's Trough (Outdoor/Indoor)	Service	3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	200 Each Meter Enclosu–e - One Set of Load Conductors at Each Meter Enclosure

Indoor Location - <u>NON-STANDARD</u> - See Section 105-3. Consult Baltimore Gas and Electric Company.

OPTION 1 **OPTION 2**



Service Conductors:

Line Side of Meters (in trough) - Governed by Size of Main
Load Side of Disconnecting Means Each Meter Enclosure - 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(2) Sealable wire trough, 14" x 14" minimum size, with guide pin studs and handles. Conductors from load terminals of main disconnecting means shall extend the full length of the wire trough. Consult Company for length of trough. <u>Trough shall be installed below meter enclosures</u>. See Section 41 for service entrance trough requirements.
(3) Grounding electrode conductor.
(4) Conductors from load side of meters and connectors as required (leave 30" of each conductor for connection inside each meter enclosure).
(5) Individual disconnecting means durably and legibly marked with paint as to area served. See Sections 105-1.
(6) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps.
(7) Line conductors from trough to 200A meter enclosure. The customer is responsible for all wiring after landing block in trough.
(8) See Notes (N1), (N2), (N3), (N4) and (N5).

Company Furnishes and Installs:

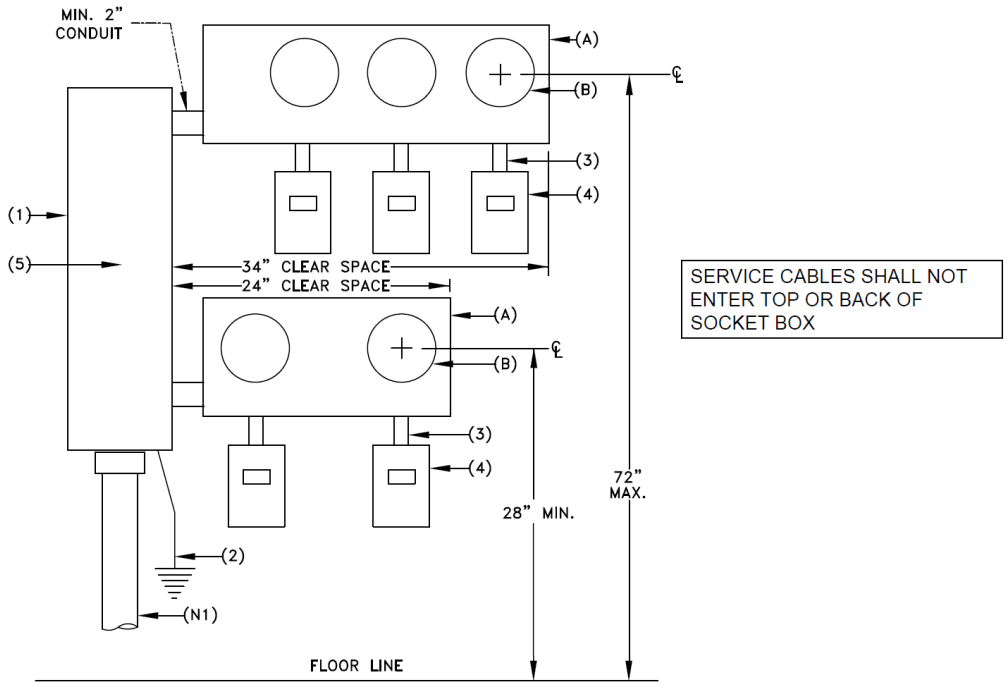
(A) Meter enclosures (Customer may install) and miscellaneous materials to make connections.
BGE Mech # 13-013 [28-1/4"H x 13"W x 4-27/32"D]
(B) Watt-hour meters.
(C) Service lateral (not shown).
(D) See Note (N2).

Notes:

(N1) 28" minimum, 60" maximum.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.
(N3) Maintain 3" clearance on all sides of meter enclosure.
(N4) A minimum clear space of 48" in front of all metering equipment is required.
(N5) A minimum clearance of 36" shall be provided from the finished floor line to the bottom terminals of the main disconnect switch.

[217] Six or Fewer Indoor Meters Company's Horizontal 2 or 3 Position Meter Enclosures	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**150 Each Meter Position - One Set of Load Conductors at Each Meter Position**

Indoor Location - <u>NON-STANDARD</u> - See Section 105-3. Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of 3-Position Meter Enclosure - 1 set, Max. 350 kcmil
Load Side of Each Meter Position - 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) Sealable wire trough, 14" x 14" x 48" minimum size, with guide pin studs and handles. Service entrance conductors shall extend the full length of the wire trough. See Section 414 for service entrance trough requirements.
(2) Grounding electrode conductor.
(3) Load conductors in raceway or cable and connectors as required (leave 24" of each conductor for connection inside each meter enclosure).
(4) Individual disconnecting means durably and legibly marked with paint as to area served. See Section Sections 105-1. Shall not be installed above enclosure box.
(5) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps. Trough shall not be installed above meter enclosures.
(6) Line conductors from trough to 200A meter enclosure. The customer is responsible for all wiring after landing block in trough.
(7) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

(A) 2- or 3-Position meter enclosures (Customer may install) and miscellaneous materials to make connections.
Horizontal 2-Gang 150A Meter Enclosure BGE Mech # 13-165 [17½" H x 20-5/16" W x 4½"D]
Horizontal 3-Gang 150A Meter Enclosure BGE Mech # 13-181 [17½" H x 28½" W x 4½"D]
(B) Watt-hour meters.
(C) Service lateral (not shown).
(D) See Note (N2).

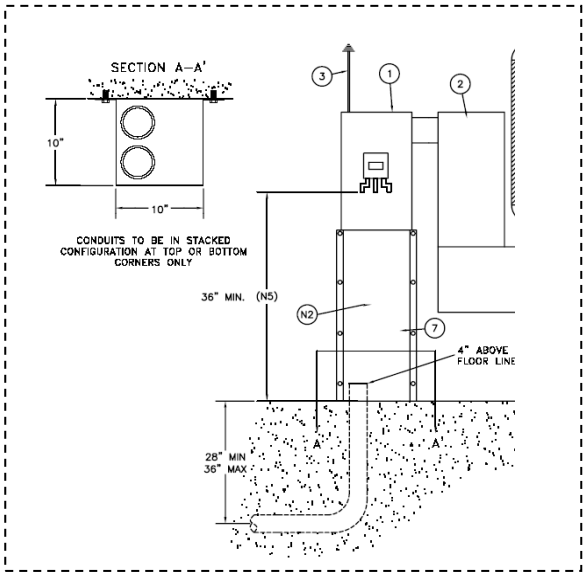
Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of all metering equipment is required.

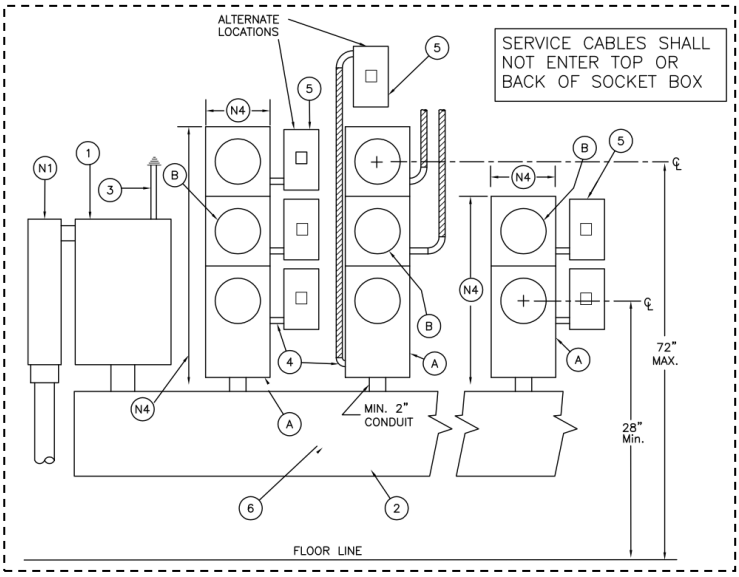
[218] Multiple Outdoor/Indoor Meters Company's Vertical 2 or 3 Position Meter Enclosures	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**150 Each Meter Position - One Set of Load Conductors at Each Meter Position**

Indoor Location – <u>NON-STANDARD</u> – See Section 105-3. Consult Baltimore Gas and Electric Company.

OPTION 1



OPTION 2



Service Conductors:

Line Side of Meters (in trough) – Governed by Size of Main
Load Side of Disconnecting Means Each Meter Enclosure – 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(2) Sealable wire trough, 14" x 14" minimum size, with guide pin studs and handles. Conductors from load terminals of main disconnecting means shall extend the full length of the wire trough. Consult Company for length of trough. <u>Trough shall be installed below meter enclosures</u>. See Section 41 for service entrance trough requirements.
(3) Grounding electrode conductor.
(4) Conductors from load side of each meter position and connectors as required (leave 24" of each conductor for connection inside each meter enclosure).
(5) Individual disconnecting means durably and legibly marked with paint as to area served. See Section 105-1.
(6) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps.
(7) Line conductors from trough to 200A meter enclosure. The customer is responsible for all wiring after landing block in trough.
(8) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

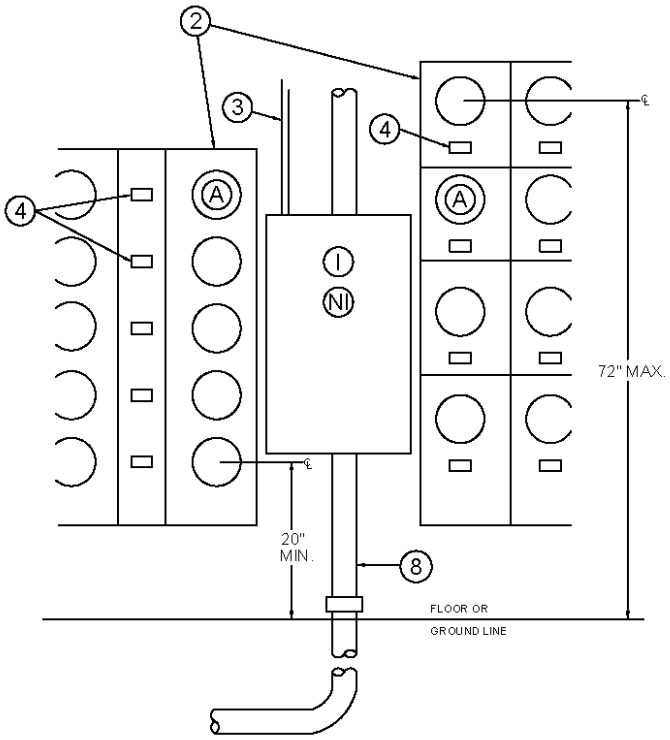
(A) 2- or 3-position meter enclosures (Customer may install) and miscellaneous materials to make connections.
Vertical 2-Gang 150A Meter Enclosure BGE Mech # 13-166 [27"H x 16"W x 4-27/32"D]
Vertical 3-Gang 150A Meter Enclosure BGE Mech # 13-182 [37½"H x 16"W x 4-27/32"D]
(B) Watt-hour meters.
(C) Service lateral (not shown).
(D) See Note (N1).

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
(N3) minimum clearance of 36" shall be provided from the finished floor line to the bottom terminals of the main disconnect switch.
(N4) Maintain 3" clearance on all sides of meter enclosure.

[219] Modular Meters Outdoor/Indoor Customer's Equipment	**Service**	**1Ø,3W or 3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**200 Each Meter Position (400A/320A continuous up to 240V)**

Indoor Location - <u>NON-STANDARD</u> - See Section 105-3.
Not for use on the Company's 240/120 delta (power wire) system. See Section 101-2
Consult Baltimore Gas and Electric Company.



Customer Furnishes and Installs:

(1) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch equipped with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(2) Approved group metering equipment and is responsible for all maintenance. See Section 402 for listing of approved equipment.
(3) Grounding electrode conductor.
(4) Individual disconnecting device.
(5) Durable, legible labeling (with paint) denoting area/unit(s) served by each meter and disconnecting device. Experience shows that failure to provide proper identification on multiple meter installations (area/unit(s) served; apartments, offices, or stores) often results in meters being installed that supply other than the area/unit(s) for which intended. Therefore, electric meters will not be installed on such installations until you have properly identified the area/unit(s) to be served; 1. meter enclosure and disconnecting device, 2. the sub-panel in the area/unit served. See Section 105-1.
(6) <u>A lever type bypass for each meter which supplies other than a residential occupancy</u>.
(7) A fifth jaw (potential terminal) on each meter enclosure supplying other than 1Ø, 3W, 120 volt metering. The fifth jaw shall be installed in the 9 o'clock position.
(8) Service raceway for underground. See Sections 201-4 and 201-5.
(9) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

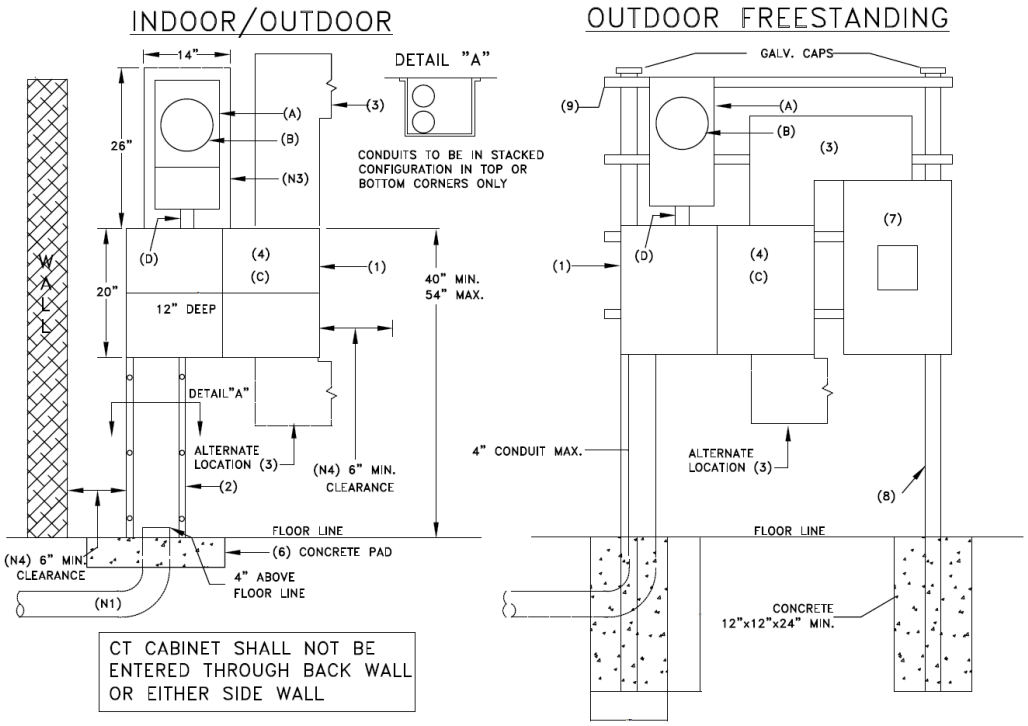
(A) Watt-hour meters.
(B) Service lateral (not shown).

Notes:

(N1) Consult the Company for details regarding underground cable entry and termination.
(N2) Outdoor installations may require enclosures for mechanical protection, consult Company. See Sections 411 and 412 for details.
(N3) A minimum clear space of 48" in front of metering equipment is required.
18" minimum to walkway, 36" mininum to driveway.

[220] Outdoor / Indoor Instrument Current Transformer (C.T. Meter)	**Service**	**1Ø,3W**
	Max. Volts	**240**
	Max. Amps	**201 - 400**

Consult Baltimore Gas and Electric Company.
See Section 403 for C.T. Cabinet details.



Service Conductors:

Line and Load Side of C.T. Cabinet – Max. 1 set 500 kcmil

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 403 for details.
(2) Three-sided trough, minimum 10" x 10", with 1" flanges to be constructed of 14-gauge steel or 10-gauge aluminum to enclose service conductors. If installed on a combustible surface, a sheet metal plate against the wall is required. The trough may be located at either left or right as shown.
(3) Minimum 10" x 10" trough secured and bonded to C.T. cabinet. Load wiring from C.T. cabinet may be out of top or bottom, near either end, but shall be on opposite end from supply wiring. See Section 414 for service entrance trough requirements.
(4) Load conductors – leave 36" of each conductor inside C.T. cabinet.
(5) See Notes (N1), (N2), (N3), and (N4).
(6) Concrete pad (4" thick) to provide insect/rodent barrier (outdoor only).
(7) Disconnecting means.
(8) 2" minimum galvanized steel pipe.
(9) 1-1/2" x 1-1/2" Kindorf channel.

Company Furnishes and Installs:

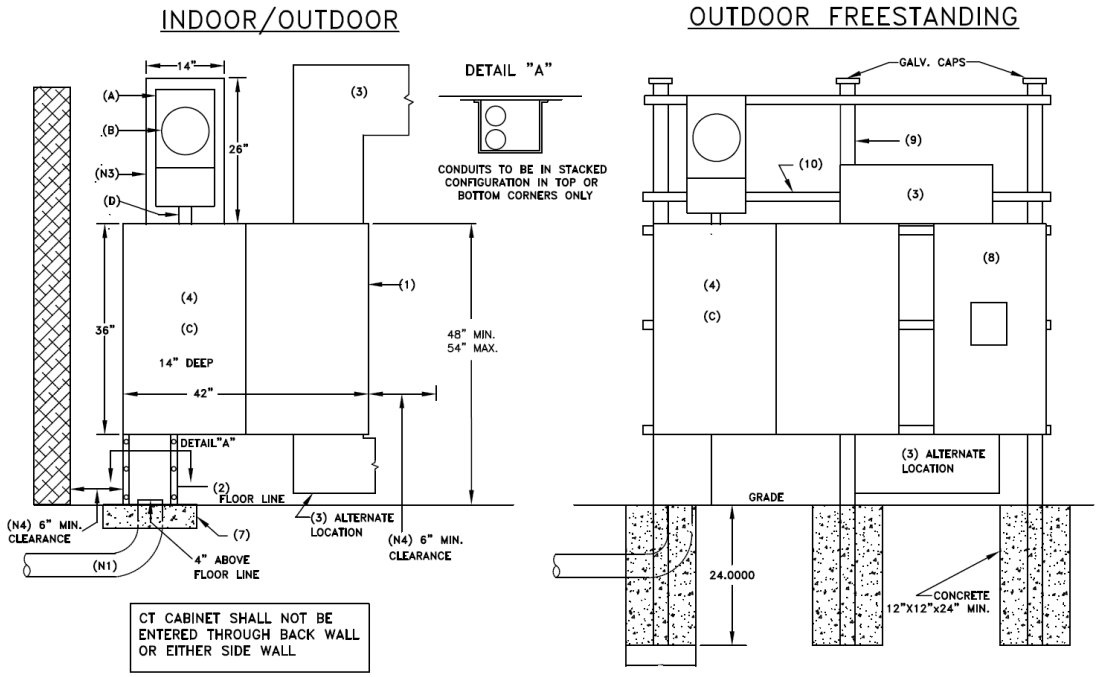
(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3", 1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N3) Space required for C.T. rated meter enclosure.
(N4) Minimum clear space of 6" on both sides of C.T. cabinet is required. If meter is to be installed adjacent to the C.T. Cabinet, see Note 3.

[221] Outdoor / Indoor Instrument Current Transformer (C.T. Meter)	**Service**	**1Ø,3W; 3Ø,3W; or 3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**201 - 1600**

Indoor Location - <u>NON-STANDARD</u> - See Section 105-3. Consult Baltimore Gas and Electric Company. See Section 404 for C.T. Cabinet details.



Service Conductors:

Line and Load Side of C.T. Cabinet - Min. 2 sets 1/0
Max. 5 sets 500 kcmil
Max. 4 sets 600 kcmil

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 404 for details.
(2) Three-sided trough, minimum 12" x 12", with 1" flanges to be constructed of 14-gauge steel or 10-gauge aluminum to enclose service conductors. If installed on a combustible surface, a sheet metal plate against the wall is required. The trough may be located at either left or right as shown. See Section 414 for service entrance trough requirements.
(3) Minimum 12" x 12" trough secured and bonded to C.T. cabinet. Load wiring from C.T. cabinet may be out of top or bottom, near either end, but shall be on opposite end from supply wiring.
(4) Load conductors - leave 60" of each conductor inside C.T. cabinet.
(5) See Notes (N1), (N2), (N3), and (N4).
(6) Holes in CT cabinet for line and load wires to be maximum 10" x 10".
(7) Concrete pad (4" thick) to provide insect/rodent barrier (outdoor only)
(8) Disconnecting means.
(9) 2" minimum galvanized steel pipe.
(10) 1-1/2" x 1-1/2" Kindorf channel.

Company Furnishes and Installs:

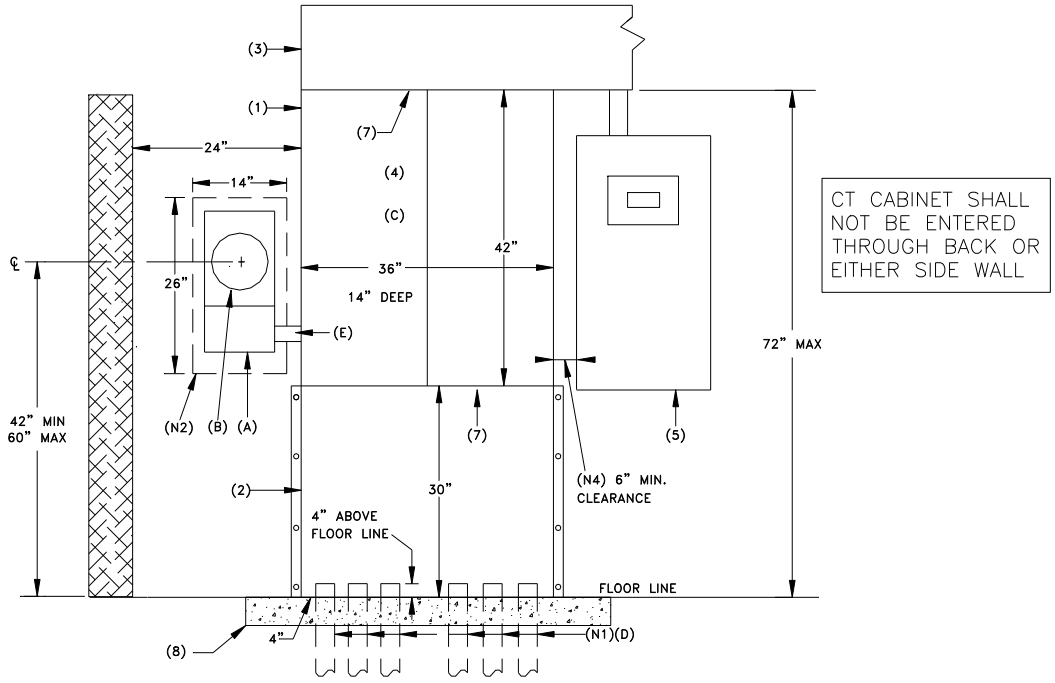
(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3", 1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N3) Space required for C.T. rated meter enclosure.
(N4) Minimum clear space of 6" on both sides of C.T. cabinet is required. If meter is to be installed adjacent to the cabinet, see (N3).

[222] Outdoor / Indoor Instrument Current Transformer (C.T. Meter)	**Service**	**3Ø,3W; or 3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**201 – 3000**

Indoor Location - NON-STANDARD - See Section 105-3. Consult Baltimore Gas and Electric Company. See Section 405 for C.T. Cabinet details.



Service Conductors:

Line and Load Side of C.T. Cabinet - Max. 12 sets 500 kcmil
Max. 8 sets 600 kcmil

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 405 for details.
(2) Three-sided trough, with 1" flanges to be constructed of 14-gauge steel or 10-gauge aluminum to enclose service conductors. If installed on a combustible surface, a sheet metal plate against the wall is required.
(3) Minimum 12" x 12" trough secured and bonded to the top of the C.T. cabinet. Bus duct may be used in lieu of trough. See Section 414 for service entrance trough requirements.
(4) Load conductors - leave 48" of each conductor inside C.T. cabinet.
(5) Disconnecting means.
(6) See Notes (N1), (N2), (N3), (N4) and (N5).
(7) Cut out top and bottom 10" x 34" to mate with trough.
(8) Concrete pad (4" thick) to provide insect/rodent barrier (outdoor only).

Company Furnishes and Installs:

(A) Current transformer rated meter enclosure. (For alternate locations, consult the Company).
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Service lateral (not shown).
(E) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3", 1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) Space required for C.T. rated meter enclosure.
(N3) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N4) Minimum clear space of 6" on both sides of C.T. cabinet is required.
(N5) Installation may be inverted for top feed to cabinet.

[223] Outdoor Instrument Current Transformer (C.T. Meter)	**Service**	**1Ø,3W; 3Ø,3W; or 3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**1Ø – 800; 3Ø – 3000**

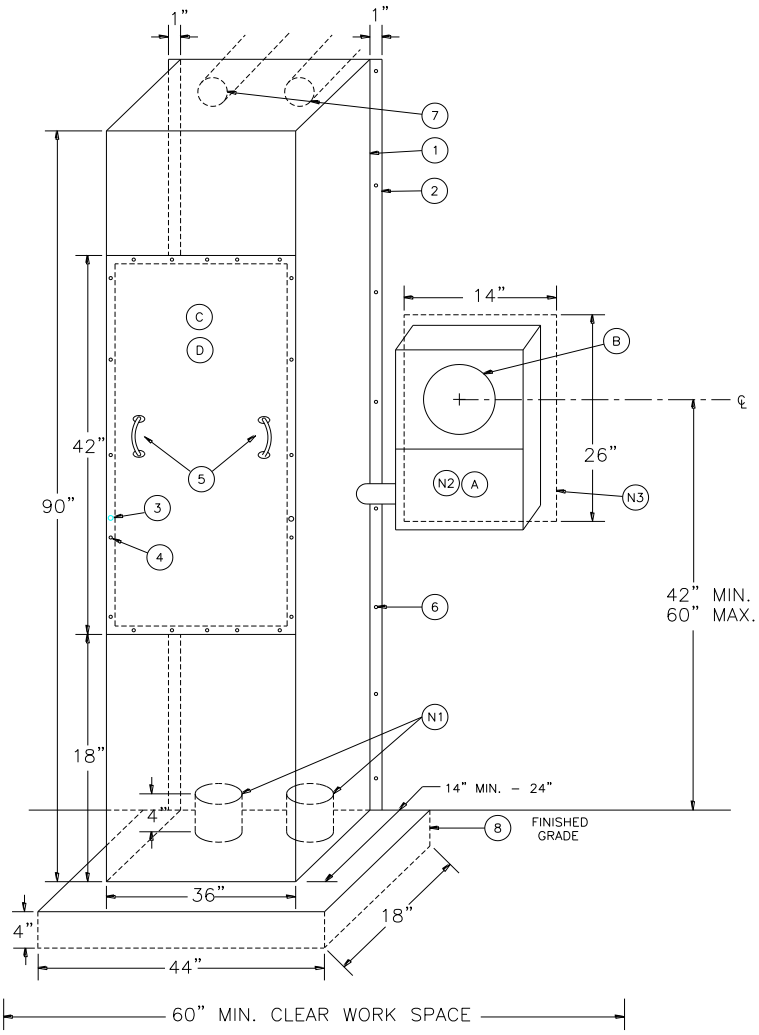
Consult Baltimore Gas and Electric Company.

Service Conductors:

Line Side of Current Transformer -
Max. 10 sets 500 kcmil
Load Side of Current Transformer -
Max. 10 sets 600 kcmil
Max. 8 sets 600 kcmil

Customer Furnishes and Installs:

(1) Three-sided trough effectively bonded (additional plate on wall required for installation against combustible surface), constructed of 14-gauge rust resistant steel and painted, or 10-gauge aluminum. All joints on trough must be welded. A weather-tight C.T. cabinet or a weather-tight enclosure for a Company-supplied C.T. cabinet may be used in lieu of this trough.
(2) 1” flange on 3-sided trough.
(3) Guide pins (studs).
(4) Minimum of two sealing screws for provision of Company seals.
(5) Two handles, 4” from each side.
(6) Rust-resistant fastening devices.
(7) Conductors from load side of current transformer.
(8) Concrete pad.
(9) See Notes (N1), (N2), (N3) and (N4).



Company Furnishes and Installs:

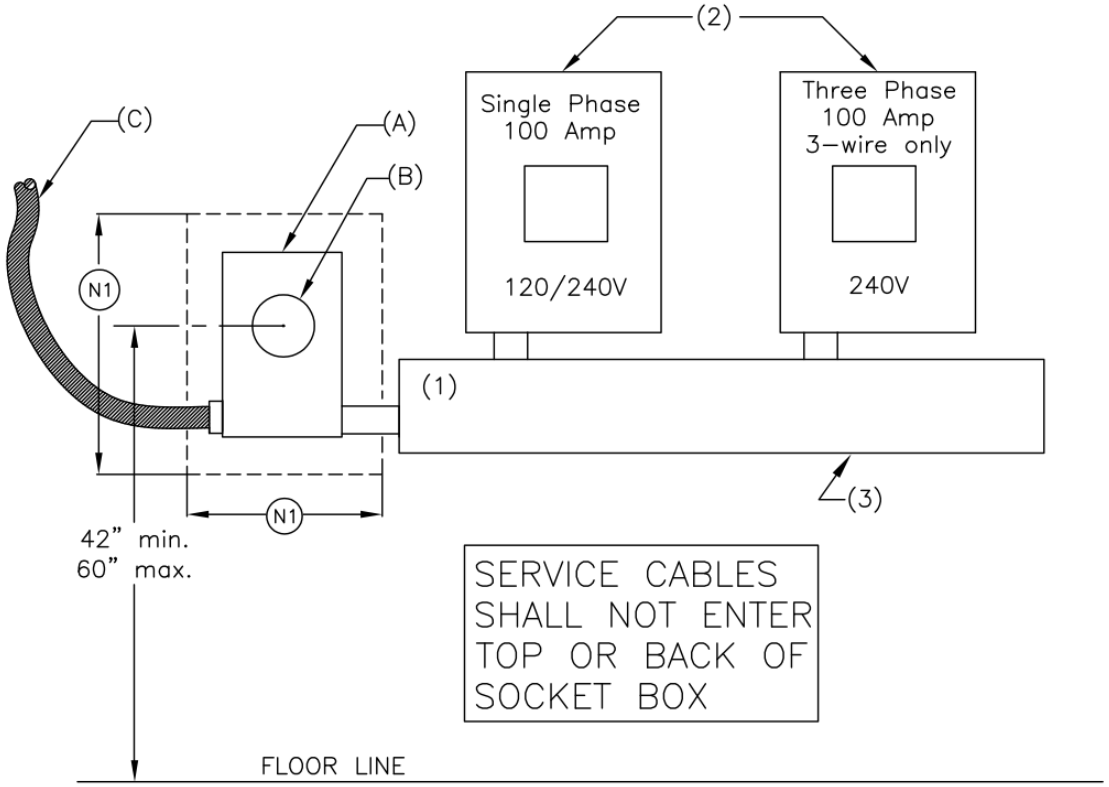
(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Terminal blocks (not shown).

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details. 90º elbows are required on bottom of compacted trench, turned up inside mechanical protection, 4” above pad.
(N2) Meter enclosure may be set on either side. Where 1Ø and 3Ø meters are installed, arrange enclosures to be set between current transformer compartments, allowing space (18”) between the meter enclosures for totalizing - pulse accumulating time-of-use equipment.
(N3) Space required for C.T. rated meter enclosure.
(N4) A minimum clear space of 48” in front of C.T. cabinet is required.

[224] Outdoor/Indoor Delta Service Self-Contained Meter	**Service**	**1Ø,3W; 3Ø,3W**
	Max. Volts	**120/240/240 Delta (U.G. Radial)**
	Max. Amps	**200**

Indoor Location – NON-STANDARD – See Section 105-3. Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of Meter Enclosure – Sized by the Company
Load Side of Meter Enclosure – 1 Set, Max. 4/0

Customer Furnishes and Installs:

(1) Conductors from load side of meter enclosure (leave 30" of each conductor for connection inside meter enclosure).
(2) Disconnecting means
(3) Wiring trough (sized per code). See Section 414 for service entrance trough requirements.
(4) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

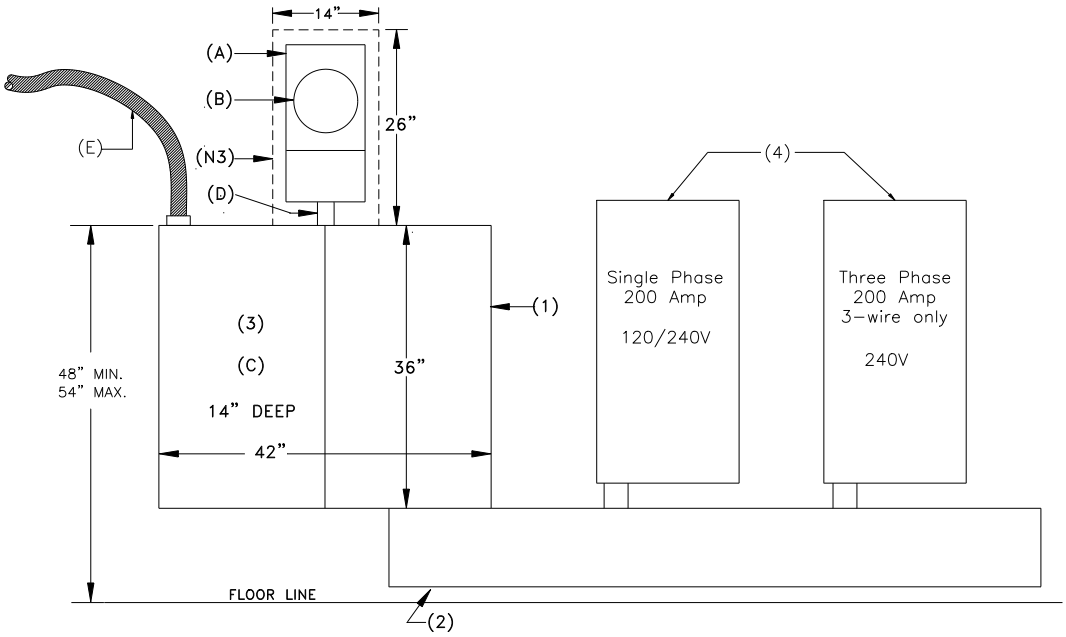
(A) Meter Enclosure.
100A: BGE Mech #13-594 or 13-068 [10½"H x 8"W x 3-5/16"D]
200A: BGE Mech # 13-582 [23"H x 11"W x 4-1/8"D]
(B) Watt-hour meter.
(C) Service lateral (not shown).
(D) See Note (N2).

Notes:

(N1) Maintain 3" clearance on all sides of the meter enclosure.
(N2) Service raceway. See Sections 201-4 and 201-5 for details.

[225] Outdoor/Indoor Delta Service Current Transformer (C.T. Meter)	**Service**	**1Ø,3W; 3Ø,3W**
	Max. Volts	**120/240/240 Delta (U.G. Radial)**
	Max. Amps	**201 – 1600**

Indoor Location - <u>NON-STANDARD</u> - See Section 105-3. Consult Baltimore Gas and Electric Company. See Section 404 for C.T. Cabinet details.



Service Conductors:

Line Side of C.T. Cabinet – Sized by the Company
Load Side of C.T. Cabinet – Sized per local authority

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 404 for details.
(2) Trough secured and bonded to C.T. cabinet. See Section 414 for service entrance trough requirements.
(3) Load conductors - leave 60" of each conductor inside C.T. cabinet.
(4) Disconnecting means.
(5) See Notes (N1), (N2), (N3), and (N4).

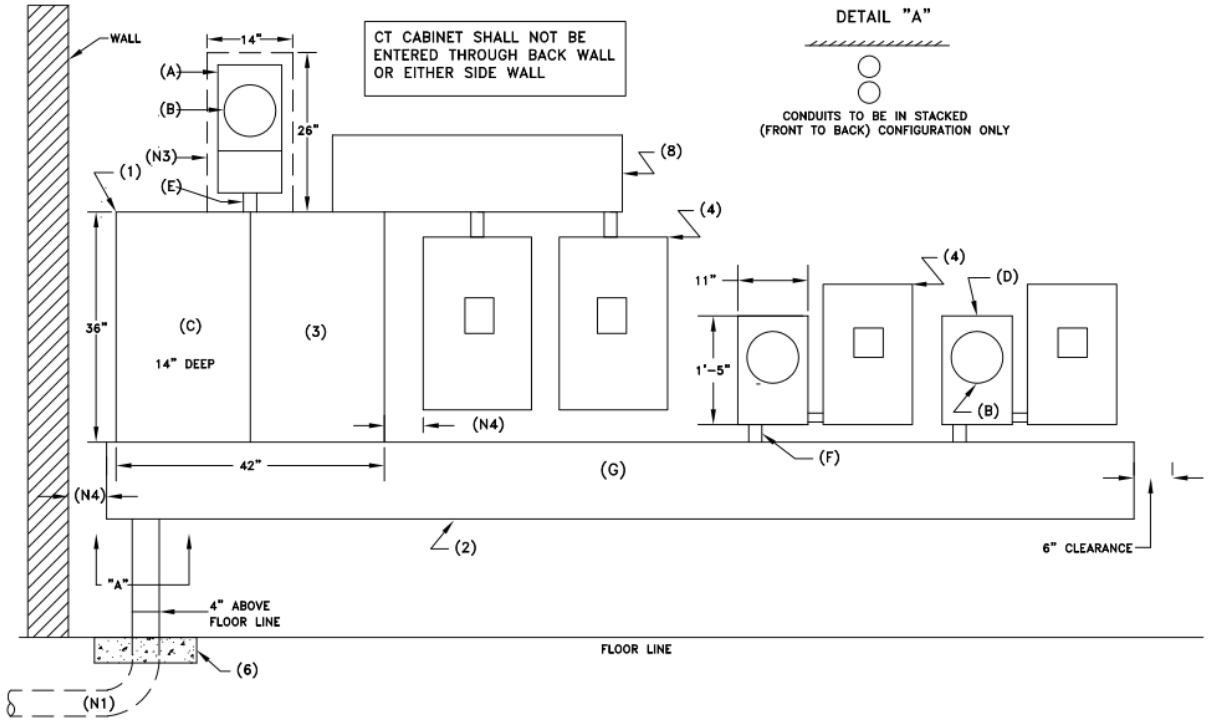
Company Furnishes and Installs:

(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3",
1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.
(E) Service lateral.

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N3) Space required for C.T. rated meter enclosure.
(N4) Minimum clear space of 6" on both sides of C.T. cabinet is required. If meter is to be installed adjacent to the C.T. Cabinet, see (N3).

[226] Combination Self-Contained and Current Transformer (C.T.) Meters	**Service**	**1Ø,3W; 3Ø,3W**
	Max. Volts	**480Y/277**
	Max. Amps	**201 – 1200**



Indoor Location – <u>NON-STANDARD</u> – See Section 105-3. Consult Baltimore Gas and Electric Company. See Section 404 for C.T. Cabinet details.

Service Conductors:

Line Side Conductors before landing block in trough – Sized by the Company
Line Side Conductors after landing block in trough – Sized per local authority
Load Side of C.T. Cabinet – Sized per local authority

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 404 for details.
(2) 14" x 14" line side trough secured and bonded to C.T. cabinet. See Section 414 for service entrance trough requirements.
(3) Load conductors – leave 60" of each conductor inside C.T. cabinet.
(4) Disconnecting means.
(5) Line conductors from landing blocks to CT cabinet.
(6) Line conductors from trough to 200A meter socket. The customer is responsible for all wiring after landing block in trough.
(7) See Notes (N1), (N2), (N3), and (N4).
(8) 12" x 12" load side trough secured and bonded to C.T. cabinet.

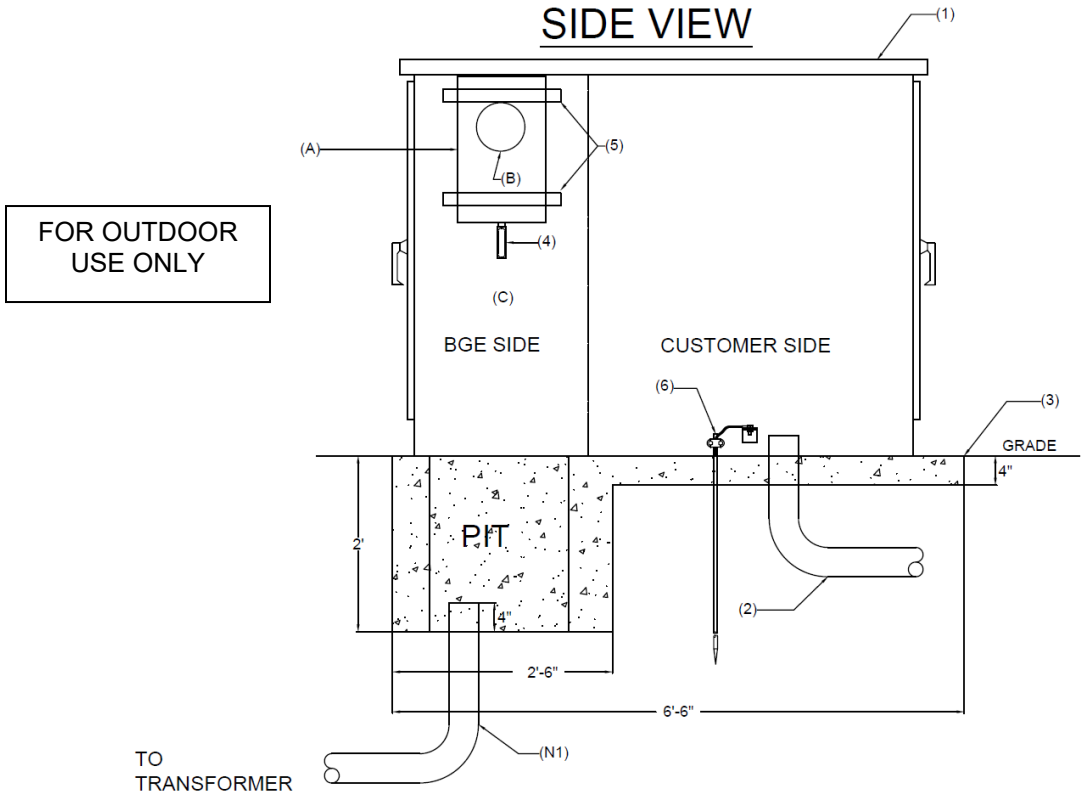
Company Furnishes and Installs:

(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
€ Current transformers (not shown).
(D) Self-contained meter enclosur€(E) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3",
1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.
(F) Raceway between trough and self-contained meter enclosure (2" diameter minimum).
(G) Service lateral (not shown).

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N3) Space required for C.T. rated meter enclosure.
(N4) Minimum clear space of 6" on both sides of C.T. cabinet is required. If meter is to be installed adjacent to the cabinet, see (N3).

[227] Outdoor C.T./Service Termination Cabinet	**Service**	**3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**4000**



See 413 for C.T./Service Termination Cabinet details.

Service Conductors:

Line Side of C.T./Termination Cabinet - Max. 12 sets 500 kcmil
Load Side of C.T./Termination Cabinet - Sized per local authority

Customer Furnishes and Installs:

(1) Outdoor C.T./service termination cabinet. See Section 413 for details.
(2) Raceway(s) to Customer equipment.
(3) 6'-6" L x 4'-0" W x 4" thick concrete pad (24" deep pit required for 8 or more conduits – Company end).
(4) Raceway between meter enclosure and cabinet.
(5) 1-1/2" x 1-1/2" Kindorf (galvanized) for meter enclosure mounting.
(6) Eight (8) foot ground rod (½" dia.) with #4 bar copper wire tied to ground lug on customer side of cabinet
(7) See Notes (N1) and (N2).

Company Furnishes and Installs:

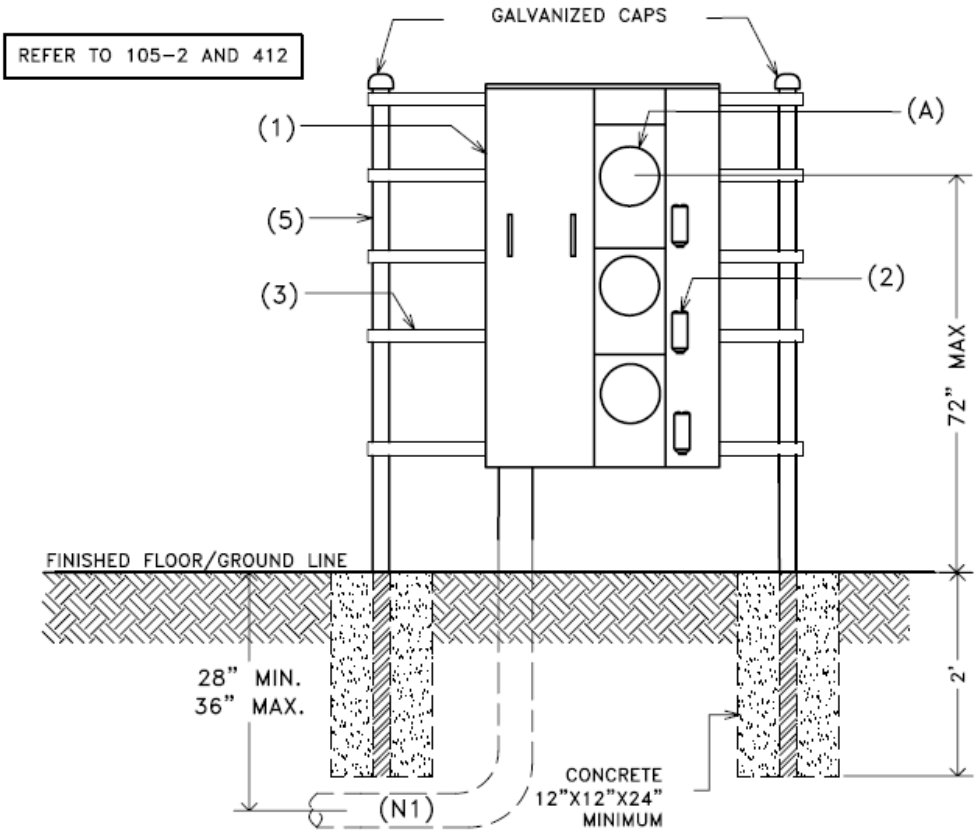
(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
(C) Current transformers (not shown).

Notes:

(N1) Service raceway from transformer. Conduit should extend 4" above pad or into bottom of pit. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of door on Company end of cabinet is required.

[228] Cellular Site Installation for <u>Transmission</u> Towers	**Service**	**1Ø,3W; 3Ø,4W**
	Max. Volts	**240**
	Max. Amps	**400A/320A continuous per position in Meter Stack at 240V Max.**

Consult Baltimore Gas and Electric Company for this type of installation.



Service Conductors:

Line Side Conductors – Sized by the Company
Load Side Conductors – Sized per local authority

Customer Furnishes and Installs:

(1) Approved three (3) position Modular Metering Equipment (see section 402)
(2) Disconnecting means
(3) 1-1/2" x 1-1/2" Kindorf channel.
(4) Concrete footer 12" x 12" x 24" minimum
(5) 2" minimum galvanized steel pipe
(6) Galvnized Caps
(7) See Notes (N1)

Company Furnishes and Installs:

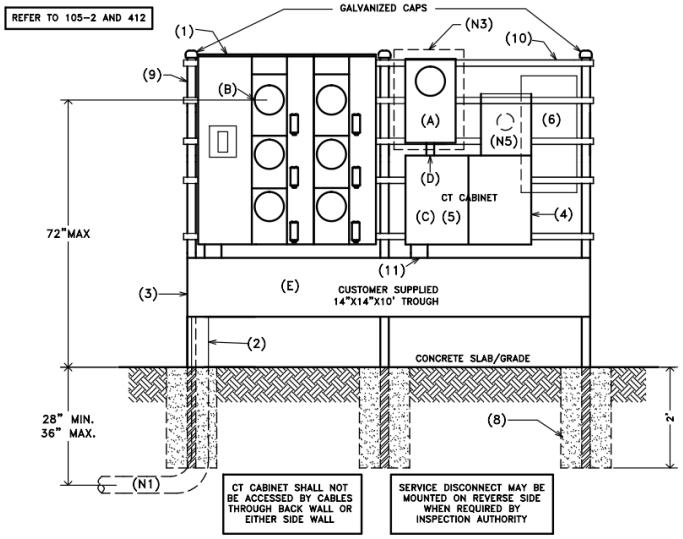
(A) Watt-hour meter
(B) Service entrance cables (not shown)

Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.

[229] Cellular Site Installation for Communication Towers	**Service**	**1Ø,3W or 3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**3000A with CT Cabinet; 400A/320A continuous per position in Meter Stack at 240V Max.**

Consult Baltimore Gas and Electric Company for this type of installation.
See Section 402 for Modular Metering Equipment details. See Section 414 for Trough details.



Service Conductors:

Line Side Conductors before landing block in trough - Sized by the Company
Line Side Conductors after landing block in trough – Sized per local authority
Load Side of C.T. Cabinet - Sized per local authority

Customer Furnishes and Installs:

(1) Approved six (6) position Modular Metering Equipment (see Section 402) with main disconnecting means ahead of meters. Individual meter positions may be 200 or 400 amp (320 amp continuous).
(2) PVC conduit(s) – maximum 4" diameter.
(3) Minimum 14" x 14" trough secured and bonded to modular metering equipment and/or C.T. cabinet. Load wiring from C.T. cabinet may be out of top or bottom, near either end, but shall be on opposite end from supply wiring.
(4) If required - C.T. Cabinet – for service requirements exceeding 400 amps (320 amps continuous). See Section 404 for details.
(5) Load conductors - leave 60" of each conductor inside C.T. cabinet.
(6) Disconnecting means for C.T. cabinet.
(7) Holes in C.T. cabinet for line and load wires to be maximum 10" x 10". (not shown)
(8) Concrete footer 12" x 12" x 24" minimum.
(9) 2" minimum galvanized steel pipe.
(10) 1-1/2" x 1-1/2" Kindorf channel.
(11) 4" minimum diameter of connector from trough to C.T. cabinet.
(12) See Notes (N1), (N2), (N3), (N4) and (N5).

Company Furnishes and Installs:

(A) Current transformer rated meter enclosure. (if required)
(B) Watt-hour meters.
(C) Current transformers and landing blocks in C.T. cabinet. (if required)
(D) Raceway from C.T. Cabinet to transformer rated meter enclosure.
(E) Landing blocks inside trough.

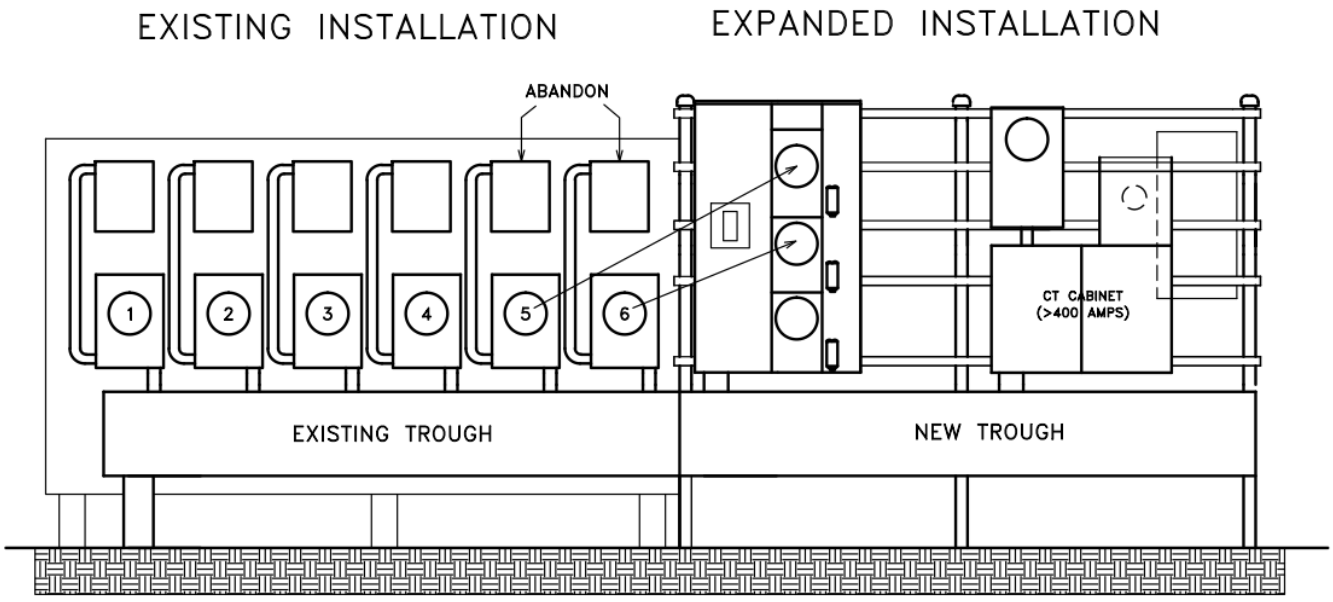
Notes:

(N1) Service raceway. See Sections 201-4 and 201-5 for details.
(N2) A minimum clear space of 48" in front of metering equipment is required.
(N3) Space required for transformer rated meter enclosure.
(N4) Minimum clear space of 6" on both sides of C.T. cabinet is required. If meter is to be installed adjacent to the cabinet, see (N3).
(N5) Pipe or trough. Maximum of 2 conduits inside trough.

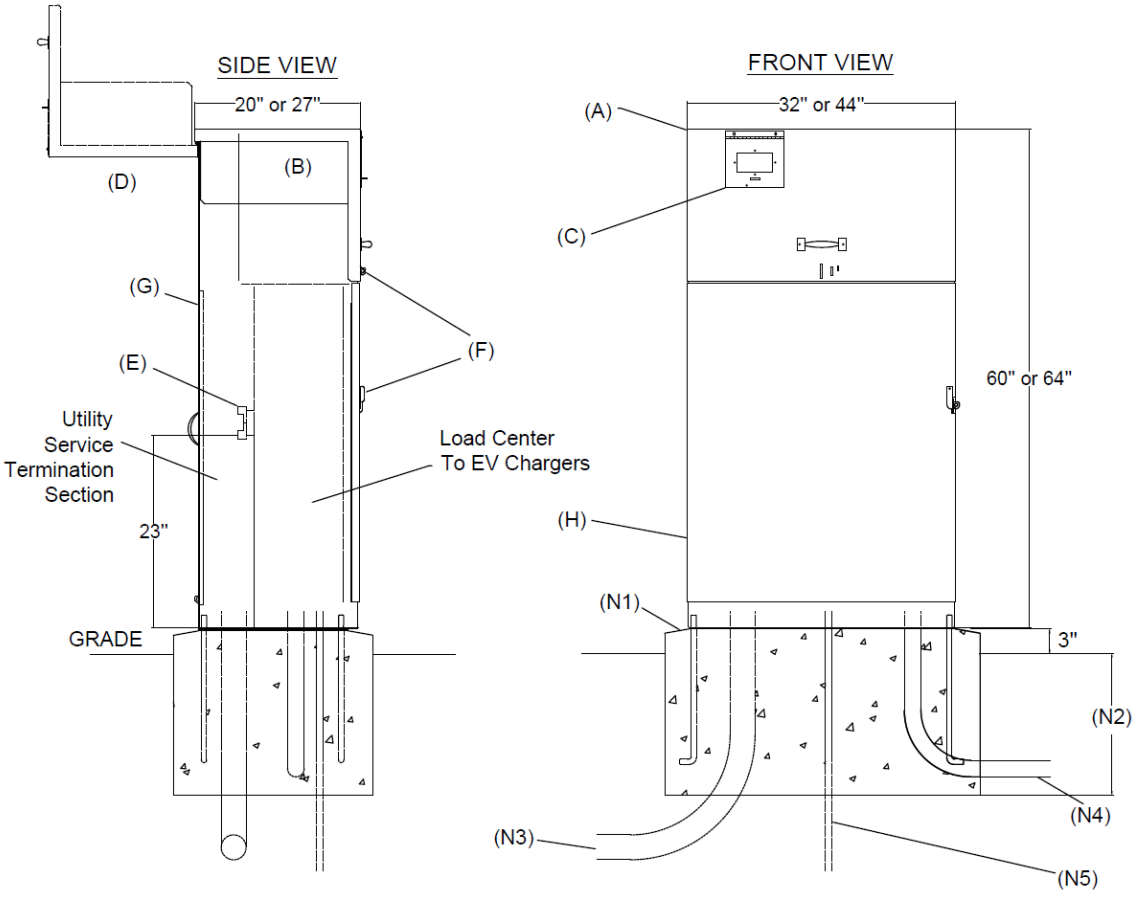
[229] Cellular Site Installation for Communication Towers (Continued)	Service	1Ø,3W or 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	100 - 3000

Rules for Expanding Existing Communication Tower Installations

A. No greater than six (6) main disconnects are allowed per supply (Reference 2017 NEC 225.33).
B. If less than six (6) main disconnects exist, and a new customer requests service, a metering position with main disconnect may be added to the existing trough. The new equipment may be mounted on the existing wood backboard or steel structure if space is available. The backboard or steel structure must be deemed safe by the Company. All existing meters, services and disconnects will be left in place.
C. If six (6) main disconnects exist and are serving active Customers OR the existing installation cannot be expanded the new Customer must:
   1. Install a 10'L x 14"W x 14"H trough adjacent to the existing trough mounted to galvanized steel pipe risers with Kindorf cross members as detailed in this section. The new trough must meet design requirements detailed in Section 414.
   2. Install meter stack with main disconnect and three (3) 200 amp meter positions (400 amp also allowed) on new trough.
   3. For existing installations with six (6) main disconnects, a minimum of one (1) meter/disconnect must be transferred from the existing installation to the new installation. The equipment vacated by the transferred customer will be made safe and abandoned in place. The new equipment and the transfer of the existing Customer (typically the Customer whose meter location is closest to the new trough installation) is the responsibility of the new Customer. See drawing below.
   4. If required by new Customer, install CT cabinet with main disconnet on trough for services exceeding 400 Amps. BGE will provide meter enclosure for CT cabinet. The Customer must also install a new meter stack to accommodate the transferred meters from the old trough. The drawing below illustrates this scenario. Note, meters #5 and 6 have been moved to the new meter stack to meet the six (6) main disconnect rule. Their original enclosures and switches will be abandoned in place.



[230] Commercial Pedestals for Public EV Charging Stations	Service	1Ø,3W or 3Ø,4W
	Max. Volts	120/240 or 480Y/277
	Max. Amps	320 (Continuous)



Service Conductors:

Line Side Conductors before landing block – Sized by the Company.
Line Side Conductors after landing block – Pre-wired by Manufacturer.
Load Side Conductors after load center – Sized by the Company.

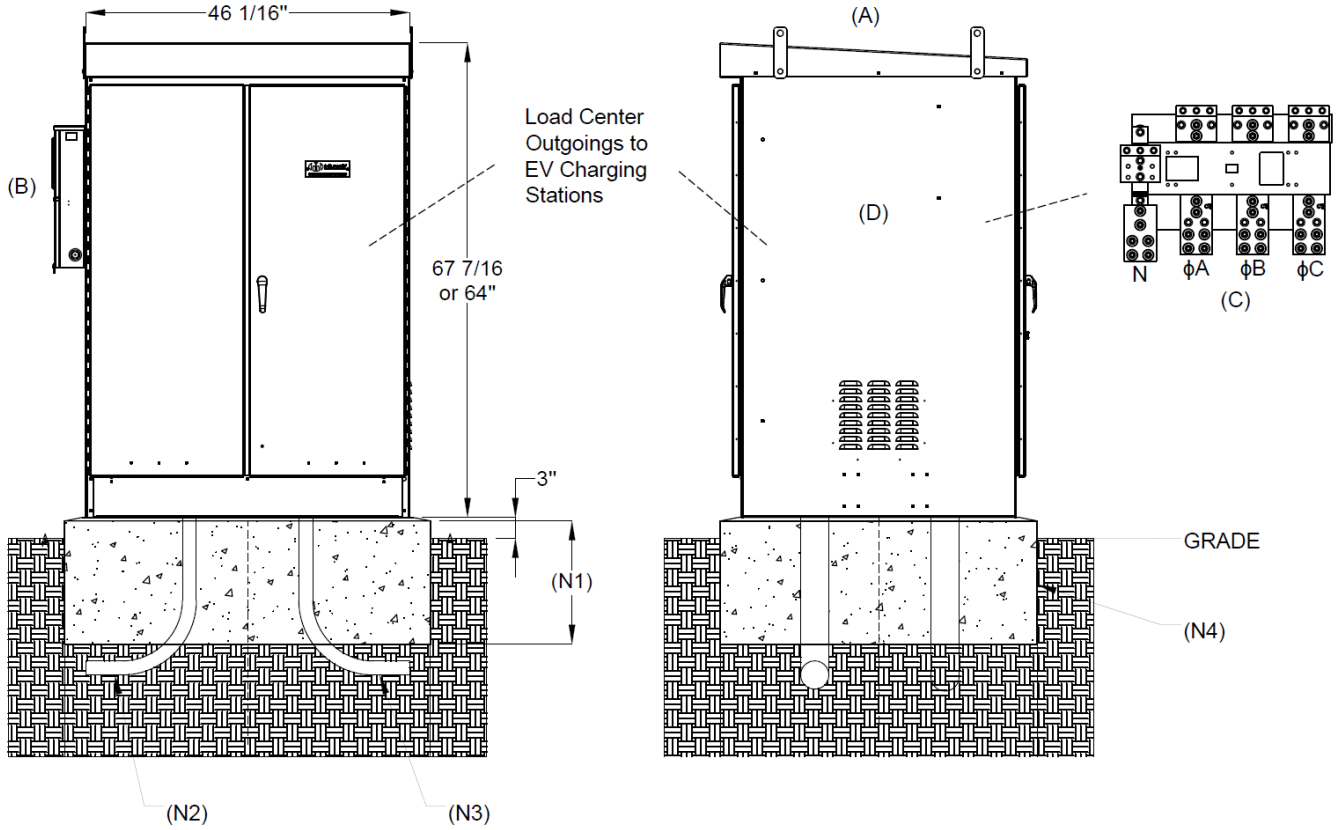
Company Furnishes and Installs:

(A) Approved Commercial Pedestals and Cabinets (see Section 416). Dimensions vary with each option.
(B) Watt-hour meter - individual meter 200 amp or 320 amp continuous.
(C) Hinged meter cover with window. Padlockable.
(D) 180 degrees hinged meter cover.
(E) Utility termination landing.
(F) Padlock bracket.
(G) Lift off service cover with pad-lockable handle
(H) Hinged exterior door.

Notes:

(N1) Minimum 1'' slope.
(N2) 6" Minimum but should encase anchor bolts, or 17" minimum for CP-ABK5/8.
(N3) Service conduit – 4'' minimum.
(N4) Load conduits – 1 set of two 4'' minimum conduits.
(N5) Ground rod with ground clamp 3/4'' x 120''.

[231] Meter Cabinets with Current Transformers for Public EV Charging Stations	**Service**	**3Ø,4W**
	Max. Volts	**480Y/277**
	Max. Amps	**400**



Service Conductors:

Line Side Conductors before landing block - Sized by the Company.
Line Side Conductors after landing block – Pre-wired by Manufacturer.
Load Side Conductors after load center – Sized by the Company.

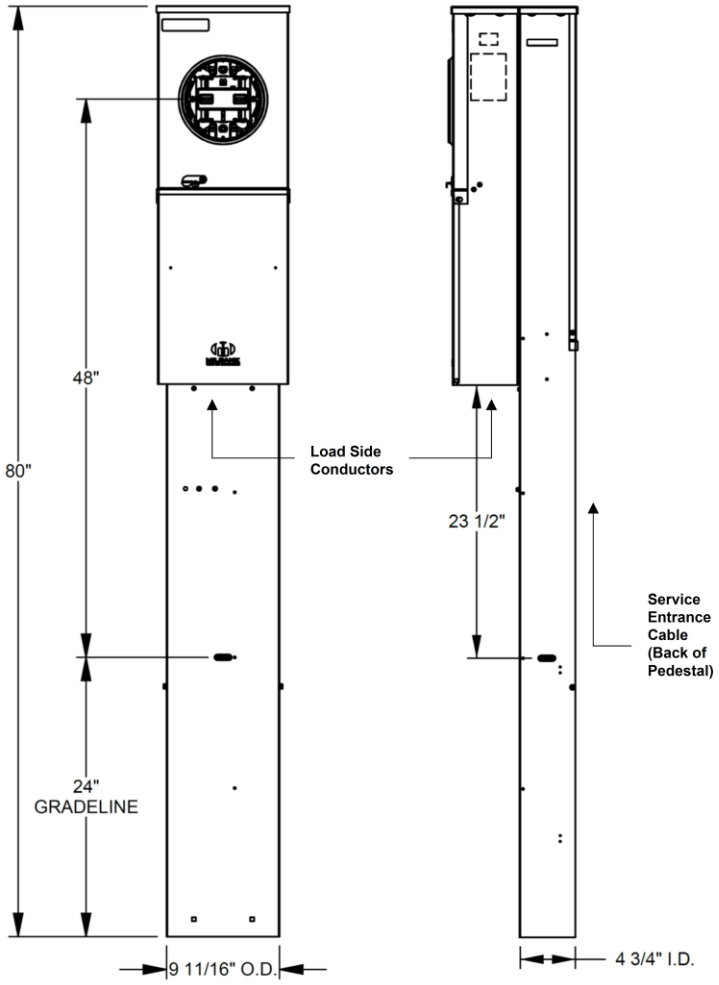
Company Furnishes and Installs:

(A) Approved Commercial Pedestals and Cabinets (see Section 416).
(B) Watt-hour meter – Individual meter 20 amp continuous.
(C) Utility termination landing – CT Rack. (1/4-20 voltage taps available for A,B,C & N on Rack)
(D) Additional inner enclosure for 480V step-down transformer (see Section 416).

Notes:

(N1) 6'' minimum but should encase anchor bolts.
(N2) Service conduit – 4'' minimum.
(N3) Load conduit – 4'' minimum.
(N4) Concrete foundation.

[232] Meter Pedestals for Traffic Control Signals with Lever Bypass	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	200



Meter pedestals that are used for traffic light signals shall have a lever bypass.

Customer Furnishes and Installs:

(1) Meter Pedestal **with a Lever Bypass**
Customer shall install one of the following meter pedestals, depending on loading:
For 100A: Milbank, U6221-O-100 [80''H x 9-11/16''W x 4-3/4''D]
For 200A: Milbank, U6221-O-200 [80''H x 9-11/16''W x 4-3/4''D]

(2) See Notes (N1) and (N2)

Company Furnishes and Installs:

(A) Watt-hour meter.

(B) Underground lateral.

Notes:

(N1) 36" minimum clear work space.

(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" mininum to driveway.

301 Overhead Service

301-1 Terminus of Service

The terminus of the Company's service is the point of attachment of its service drop from which the Customer runs his service wiring.

301-2 Service Drop

A. Location:

The service drop and service entrance head shall be located so as to be out of reach from doors, windows, porches, etc. and, where practicable, out of the way of snow slides. The point of attachment of the service drop for adjoining buildings shall be located, where applicable, above the second floor window and, where practicable, at the common property line so as to supply both buildings. Where there is no rear exit from the first-floor level and the basement floor is at ground level, the service drop may be located above the first floor windows. Where the adjoining buildings have an open area between them not over 10 ft. wide, one of the buildings may be supplied by a sub-drop across the rear opening of the area

Where decks, porches, awnings or other obstructions render the point of attachment to a building inaccessible by extension ladder for installation and maintenance, suitable provisions for attaching the drop at a location accessible by extension ladder and usually at the outer edge of the above-mentioned obstructions, shall be provided by the Customer.

The point of attachment shall be readily accessible to the Company at all times for installation and maintenance.

B. Support:

The support or supporting structure provided by the Customer for the point of attachment shall be sufficient to withstand the maximum pull for the required service drop.

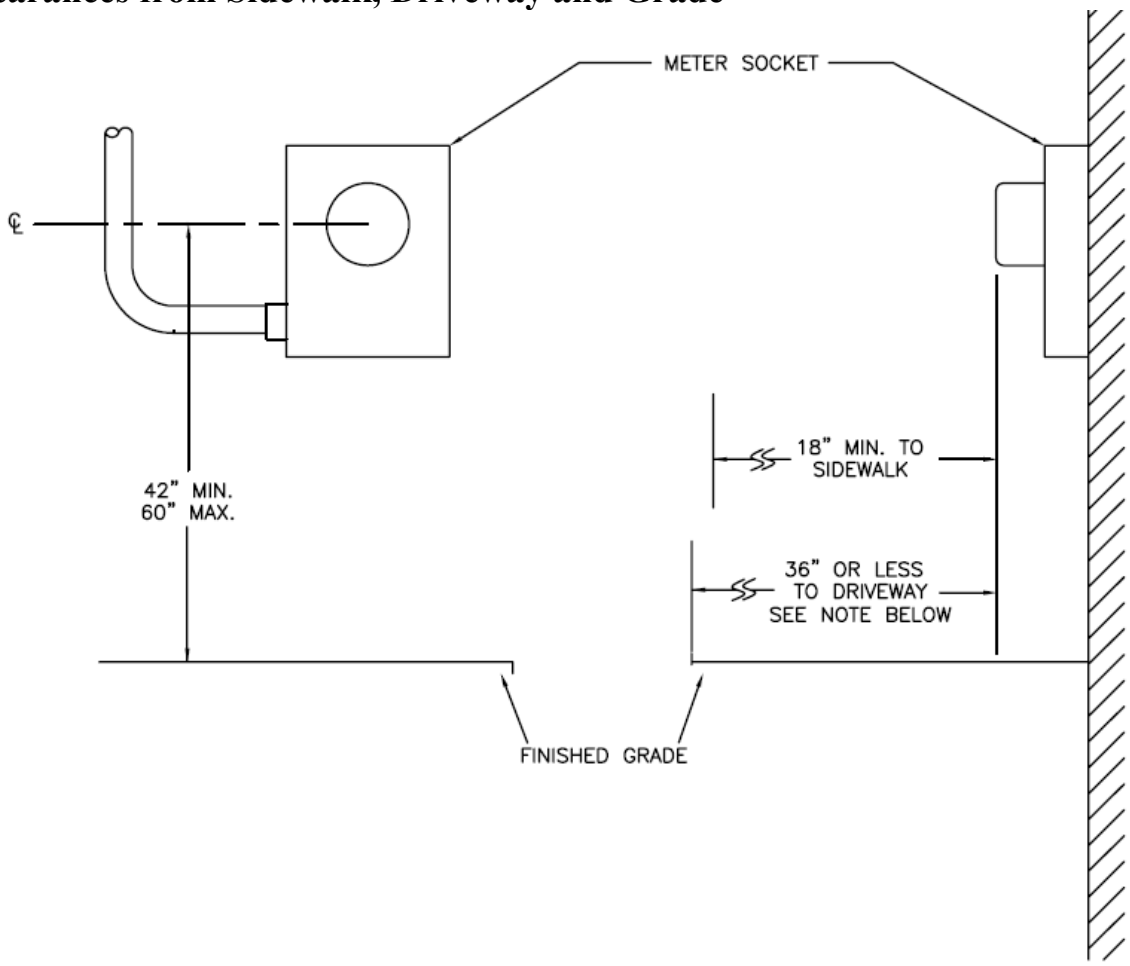
Where a building is of insufficient height to provide the required clearance for the service drop, the Customer shall furnish and through-bolt to the building a service mast (support). See Section 307.

Where the service drop cannot be attached to a building or service mast or where there is no building to attach the service drop, the Customer shall furnish and erect an approved pole or structure to provide the required clearance for the service drop. See Section 308.

Note: No Customer's wiring or equipment shall be located on poles owned by the Company or jointly used by the Company and another public utility.

Note: A meter enclosure/box shall NOT be entered through the back wall or top.

302 Clearances from Sidewalk, Driveway and Grade

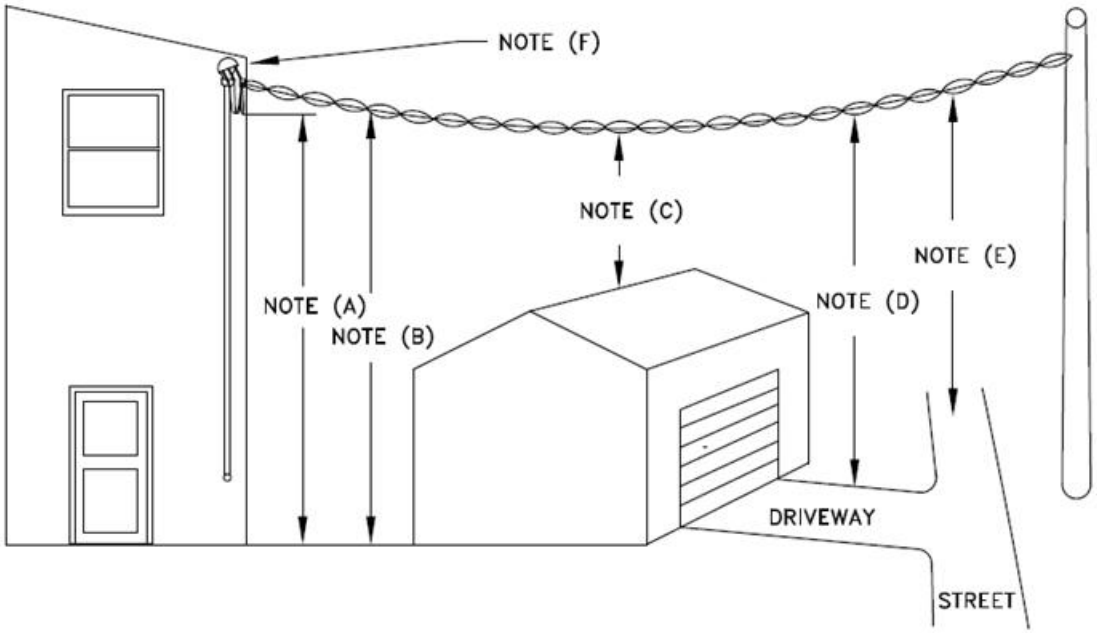


Note:

If metering equipment is to be installed within 36” of an area subject to vehicular traffic (driveway, alley, roadway, etc.), the Customer will be required to provide protection for the equipment in the form of concrete filled bollard(s).

See Sections 411 and 412 for Protection of Metering Installations.

303 Service Drop Clearances for Residential and Commercial Properties



Notes:

(A) The height of the service loop attachment must be of sufficient height to provide the required loop clearances listed below. On two story semi-attached and row houses, the point of attachment must be above the second-floor windows. Where both single and three phase service loops are present, the clearance requirements must be maintained from the three phase loop, which occupies the lower position.

(B) Lawns and walkways subject to pedestrian traffic only must maintain a minimum clearance of 12 ft.-6 in. (open wire) and 12 ft.-0 in. (multiplex).

(C) Over a readily accessible roof, open wire and multiplex loops must maintain a minimum clearance of 11 ft.-6 in. (open wire) and 11ft.-0 in. (multiplex). Open wire loops must maintain a minimum vertical clearance of 10 ft.-6 in. over an inaccessible roof. Multiplex loops may have a clearance of 3 ft.-6 in. over an inaccessible roof.

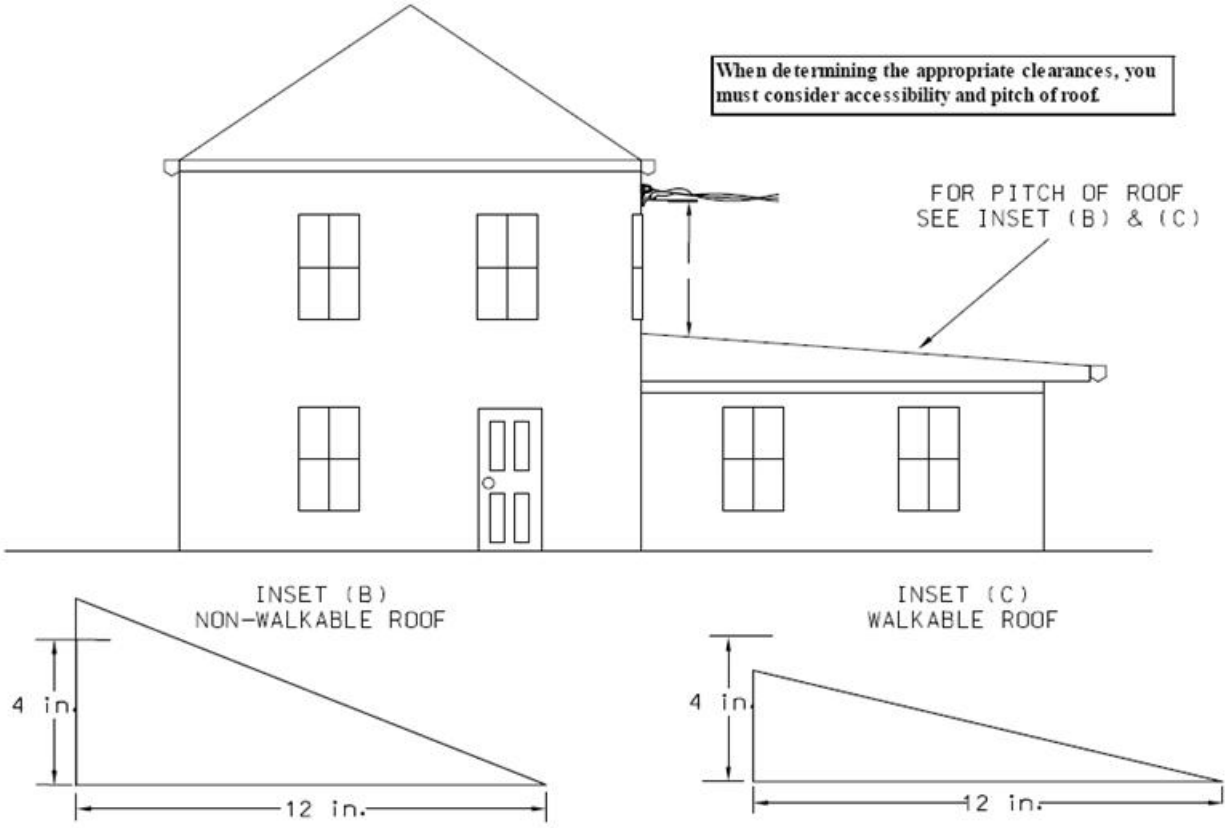
A roof or balcony is considered readily accessible if it can be casually accessed through a doorway, ramp, window, stairway, or permanently mounted ladder. A permanently mounted ladder is not accessible if the bottom rung is 8 ft. or more above the ground or other permanently mounted surface. A roof or balcony is inaccessible if a person exerts extraordinary effort or employs tools to gain entry.

(D) Above residential driveways, a clearance of 16 ft.-6 in.(open wire) and 16 ft.-0 in. (multiplex) must be maintained. The clearance may be reduced to 12 ft.-6 in. (open wire) and 12 ft.-0 in. (multiplex) where the height of the building does not permit the loop to meet the initial open wire and multiplex requirement.

(E) Above streets, alleys, parking lots, etc, a clearance of 16 ft.-6 in. (open wire) and 16 ft-0 in. (multiplex) must be maintained.

(F) Wire holder (bracket) furnished and installed by company. The bottom of service head shall be higher than loop wire at building. Where it is necessary to place the house bracket or wire holders at an elevation above the customer's service head, sufficient loop wire must be allowed to connect the customer's service wires to the loop wires at a point between the service head and the bottom of the drip loop. Connectors on the covered wire must be taped.

303 Service Drop Clearances for Residential and Commercial Properties (cont)



Definitions:

Accessible – Roof can be casually accessed through a doorway, window, ramp, stairway, or permanently mounted ladder** by a person who neither exerts extraordinary physical effort nor employs tools or devices to gain entry. (NESC 234C3d1)

**A permanently mounted ladder is not considered a means of access if its bottom rung is 8 foot or more from the ground or other permanently installed accessible surface.

Inaccessible – Roof can only be accessed through the use of a piece of equipment (i.e. portable ladder or scaffolding) or through extraordinary effort.

Walkable- The roof has a slope **less** than 4" (rise) in 12" (run). (NEC 225.19A)

Non Walkable – The roof has a slope **greater** than 4" (rise) in 12" (run). (NEC 225.19A)

Multiplex (all voltages)

	Walkable (ft)	Non-walkable (ft)
Accessible	10	10
Inaccessible	8*	8*

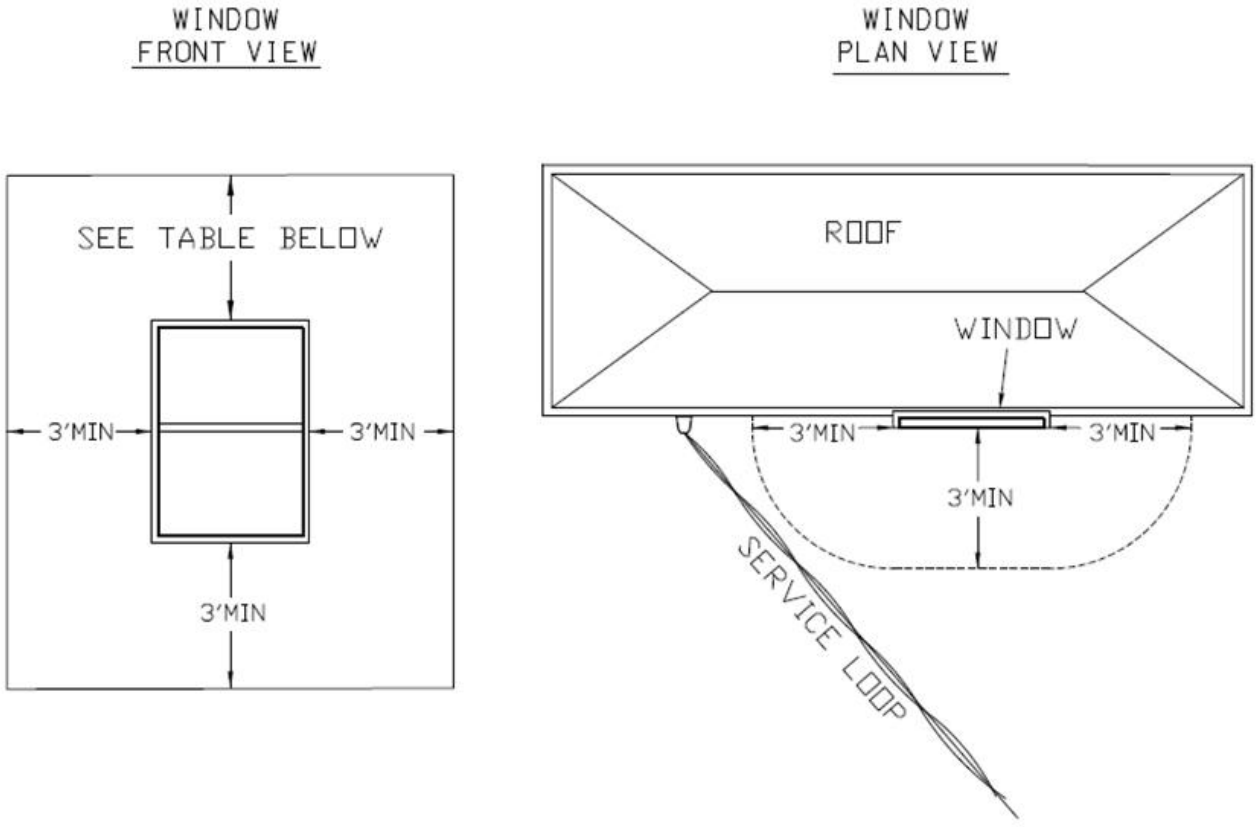
Open Wire (120/240V)

	Walkable (ft)	Non-walkable (ft)
Accessible	10	10
Inaccessible	8*	3

Open Wire (all remaining voltages)

	Walkable (ft)	Non-walkable (ft)
Accessible	10	10
Inaccessible	10	10

303 Service Drop Clearances for Residential and Commercial Properties (cont)



Maintain Clearance	Multiplex (ft)	Open Wire (ft)
Above	no clearance required*	3
Below	3	3
Sides	3	3

*Although no clearance is required, thought should be given to ladder accessibility.

Notes:

A 3'-0" clearance must be maintained in any direction from windows, doors, porches, and fire escapes or similar locations. 120/240V single phase, 120/208V three phase, and 277/480V three phase multiplex loops are exempt from this requirement when installed above the top of window. For windows designed not to open, no minimum clearance is required.

All clearances apply to the service drop and service drip loop.

304 Swimming Pool Clearances

The National Electrical Code gives the following definitions and regulations concerning swimming pools.

Permanently Installed Swimming, Wading, and Therapeutic Pools: Those that are constructed in the ground, on the ground, or in a building in such a manner that the pool cannot be readily disassembled for storage, whether or not served by electrical circuits of any nature.

Storable Swimming or Wading Pool: Pool with a maximum dimension of 18 feet and a maximum wall height of 42 inches and so constructed that it may be readily disassembled for storage and reassembled to its original integrity.

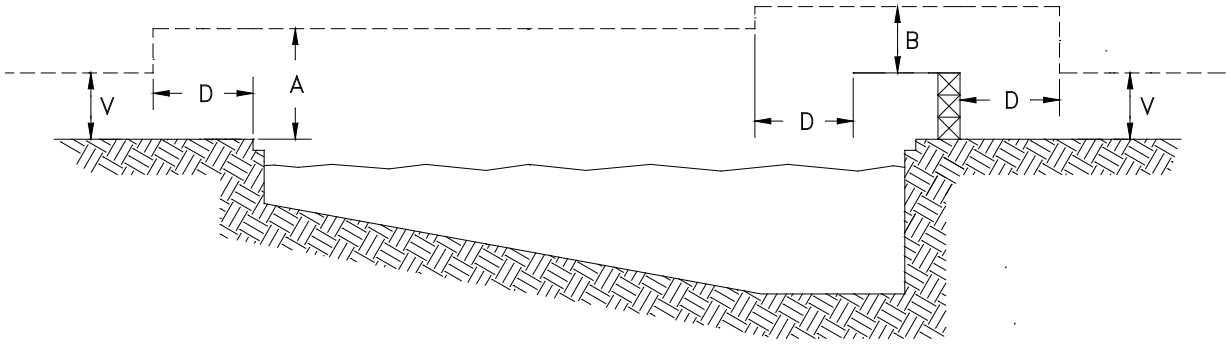
The following parts of swimming and wading pools shall not be placed under existing service-drop conductors or any other open overhead wiring; nor shall such wiring be installed above the following:

(1) Swimming and wading pools and the area extending 10 feet horizontally from the inside of the walls of the pool.
(2) Diving structure.
(3) Observation stands, towers, or platforms.

Exception No. 1:

Structures listed in (1), (2), and (3) above shall be permitted under utility-owned, -operated, and -maintained supply lines or service drops where such installations provide the following clearances:

CLEARANCE OF SECONDARIES PASSING OVER OR NEAR SWIMMING POOLS



	Insulated communication conductors, messengers, neutral and triplex	Open wire bus and loops
A	22’-6”	23’-0”
B	14’-6”	15’-0”
D	10’-0”	23’-0”
V	Note (B)	Note (B)

A = Vertical clearance over the water level, edge of the pool, or the anchored raft.
B = Vertical clearance over the diving platform or tower.
D = Horizontal clearance from the edge of the pool or base of the diving platform.
V = Vertical clearance over adjacent land.

Notes:

(A) Clearances from pools, which are fully enclosed by a solid or screened permanent structure, may be the same as those given for buildings.

(B) When the conductors are outside the area required by D, they shall be governed by the nature of the surface underneath the conductor. Refer to Section 303.

304 Swimming Pool Clearances (continued)

Therefore, current Company practices are:

A. Pools shall be clear of overhead conductors, and the installation of new pools under existing wiring is not permitted, except when it is not practicable to either:

1. Select another location for the pool.
2. Relocate or remove the existing wiring.
3. Relocate the point of attachment of the service drop.

Note: The electrical inspection authority having jurisdiction shall be contacted so that mutual agreement may be obtained regarding the question of impracticability.

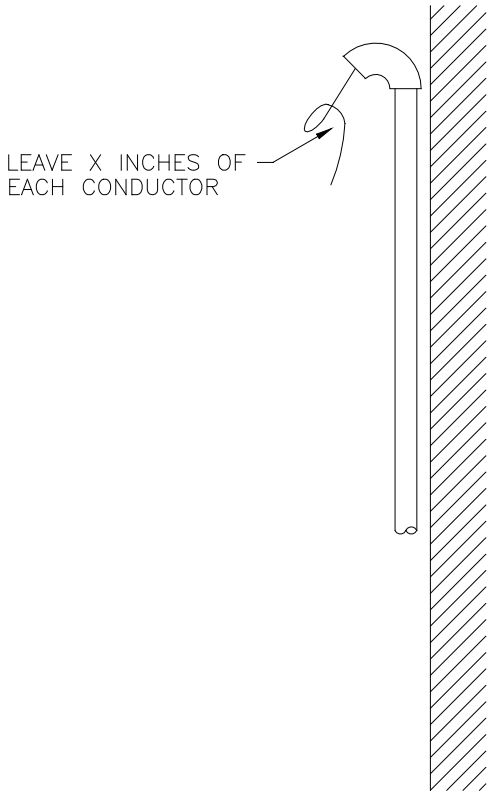
B. The Company will not install any new overhead wiring above a swimming pool or in area extending 10 feet horizontally from the inside of the walls of the pool, as specified in the Code.

C. The Code is prospective, not retroactive; therefore, the replacement, renewal, or upgrading of existing service drops (loops) over or near a swimming pool is permitted, provided the clearances required in the utility exception are obtained. Triplex wire, without splices, shall be used in such replacements, renewals, or upgrading.

Relocation or modification to Company facilities occasioned by these rules is subject to BGE's approval based on its Overhead Construction Standards.

Note: Primary conductors must not cross over swimming pools.

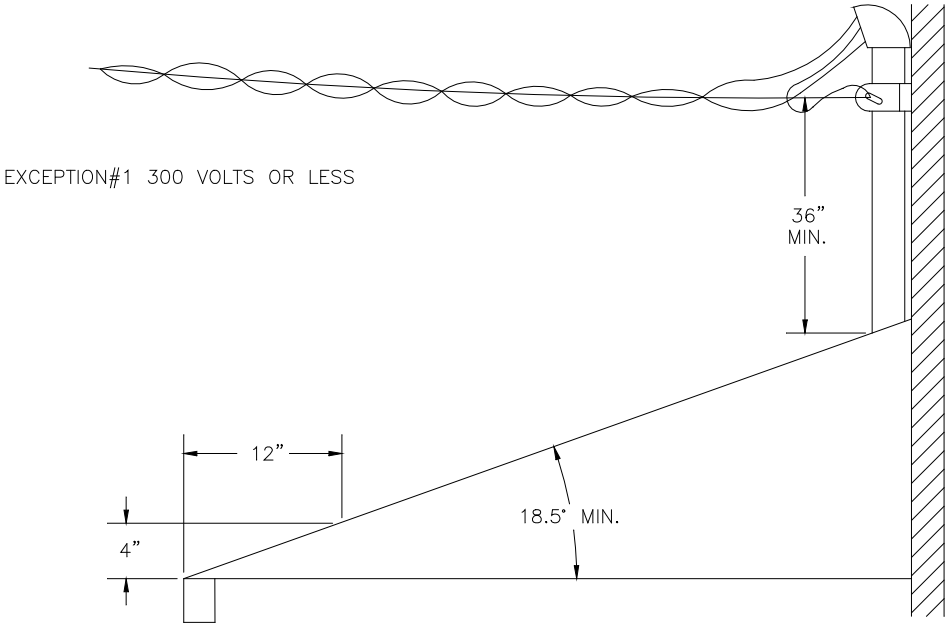
305 Length of Service Conductor at Service Head



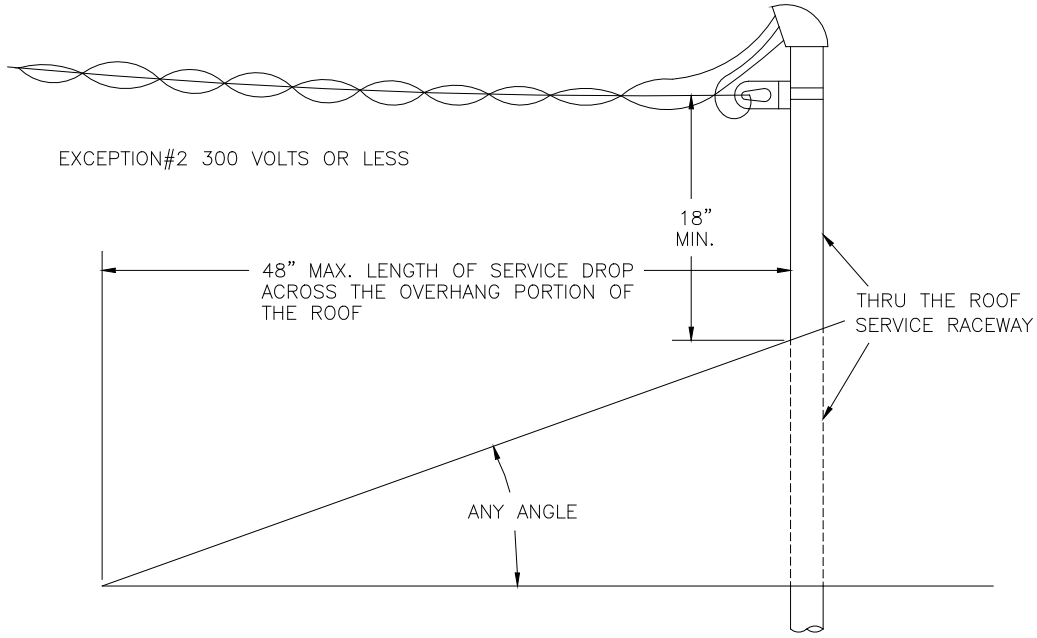
Size of Conductor	X Inches
#8 to 1/0	24
2/0 to 4/0	36
250 kcmil to 500 kcmil	48
500 kcmil to 1000 kcmil	60

306 Clearances of Service Drops Over Roofs

<u>600 Volts or Less</u> - Service drop shall have a clearance of not less than 11'-6" from the highest point of roofs over which it passes, with the following exceptions:



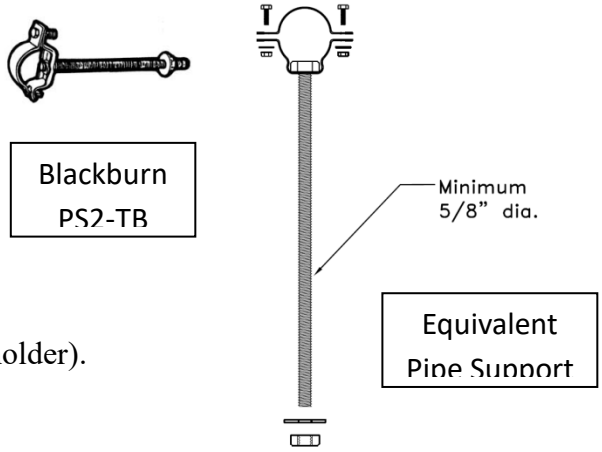
4" FALL IN 12"= APPROXIMATELY 18.5 DEGREES



307 Typical Service Mast Installations

Customer Furnishes and Installs:

(1) Service entrance head.
(2) Service mast. See table for size.
(3) Neoprene collar and flash plate.
(4) Service entrance conductors (leave 24" beyond service head).
(5) Galvanized steel ring bolts (Blackburn type PS2-TB or equivalent pipe supports) (min. of 2) through wall.
(6) Wood blocking.
(7) See Note (N1) and (N2).

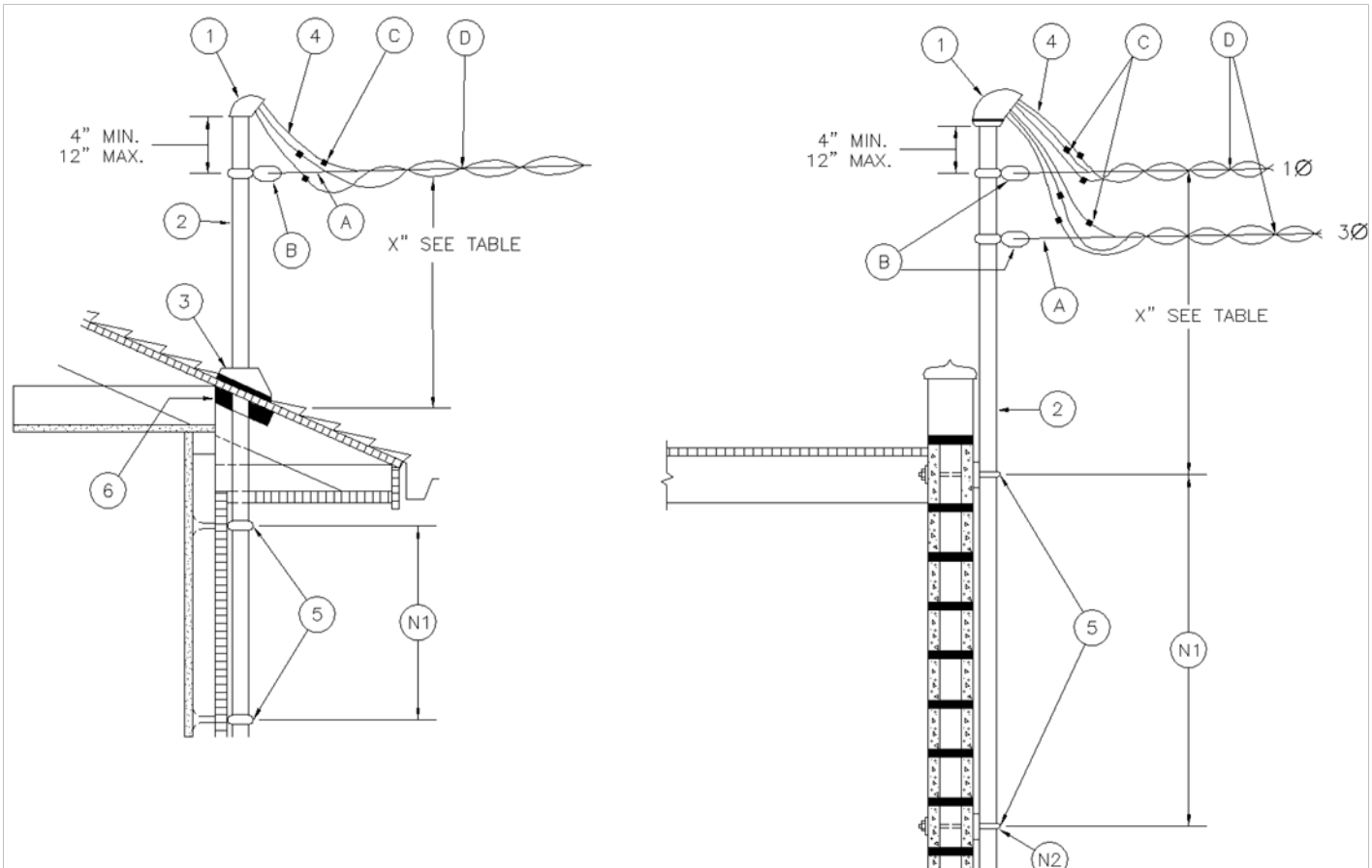


Company Furnishes and Installs:

(A) Service drop deadends.
(B) Service drop attachment (clamp type wire-holder).
(C) Service connectors.
(D) Service drop.

Notes:

(N1) Not less than **X** dimension. See table for service drop and service mast sizes.
(N2) No coupling allowed above lowest point of attachment, unless welded. No Kindorf or two (2) hole bands may be used to attach the mast to the wall.
(N3) Eaves dimension greater than 36", consult company.



307 Typical Service Mast Installations (continued)

Service Mast Size For Pipes

		Length OF X *					
		<=24”	30”	36”	42”	48”	> 48”
Length Of Triplex Service Drop Not Exceeding	Size of Triplex Service Drop	Trade Sizes (Inside Diameter) of Galvanized Pipe or Galvanized Rigid Metal Conduit **					
60’	#2	2”	2”	2”	2”	2”	Consult Electric Distribution Engineering and Standards
	3/0	2”	2”	2”	2½”	2½”	
70’	#2	2”	2”	2”	2”	2½”	
	3/0	2”	2”	2½”	2½”	2½”	
80’	#2	2”	2”	2”	2½”	2½”	
	3/0	2”	2½”	2½”	2½”	2½”	
90’	#2	2”	2”	2”	2½”	2½”	
	3/0	2”	2½”	2½”	2½”	2½”	
100’	#2	2”	2”	2½”	2½”	2½”	
	3/0	2½”	2½”	2½”	2½”	3”	
110’	#2	2”	2”	2½”	2½”	2½”	
	3/0	2½”	2½”	2½”	2½”	3”	
120’	#2	2”	2½”	2½”	2½”	2½”	
	3/0	2½”	2½”	2½”	3”	3”	
130’	#2	2”	2½”	2½”	2½”	3”	
	3/0	2½”	2½”	2½”	3”	3”	
140’	#2	2”	2½”	2½”	2½”	3”	
	3/0	2½”	2½”	3”	3”	3”	

* **X** is the distance between the highest point of attachment of the mast to the building and the point of attachment of the top service drop to the mast.

** Where both single-phase and three-phase service drops are necessary, increase the size of the mast as follows:

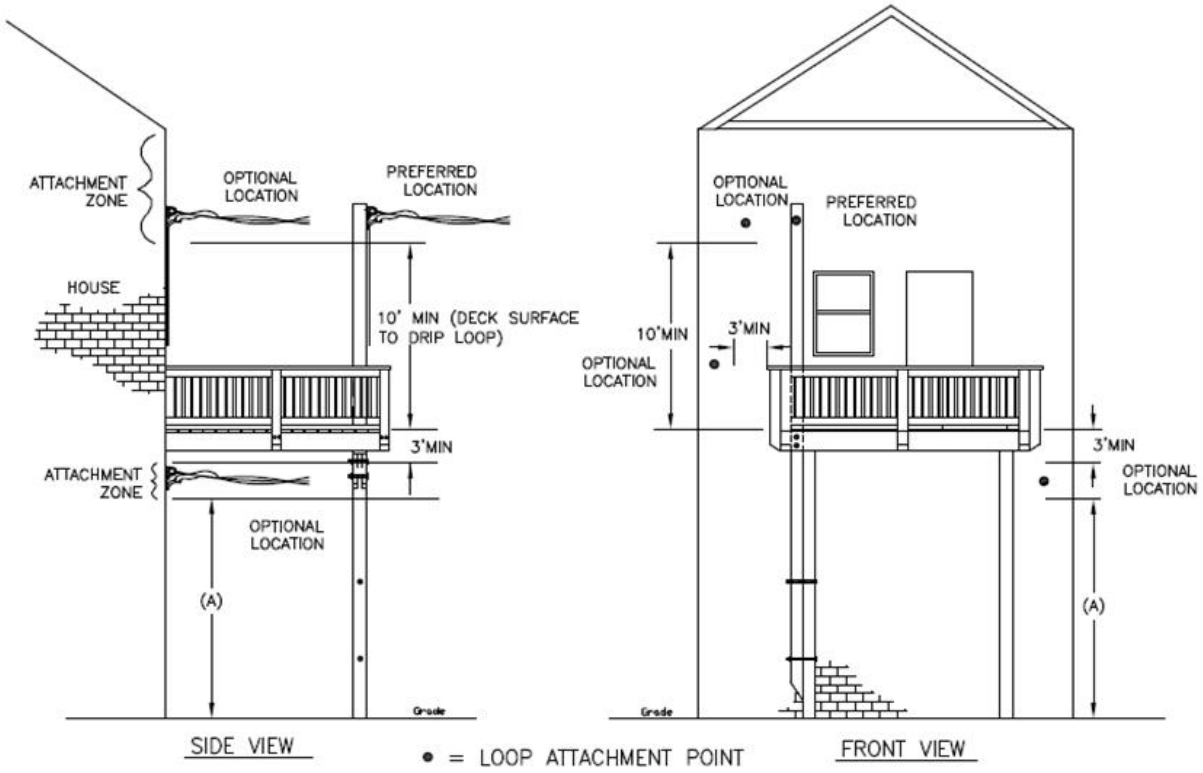
If both service drops are #2 triplex, increase the size listed for #2 triplex by ½“.

If one or both service drops are 3/0 triplex, increase the size listed for 3/0 triplex by 1”.

Note: Consult with Electric Distribution Engineering & Standards before using I-beams as service masts.

307 Typical Service Mast Installations (continued)

Deck Installations



Specific Notes:

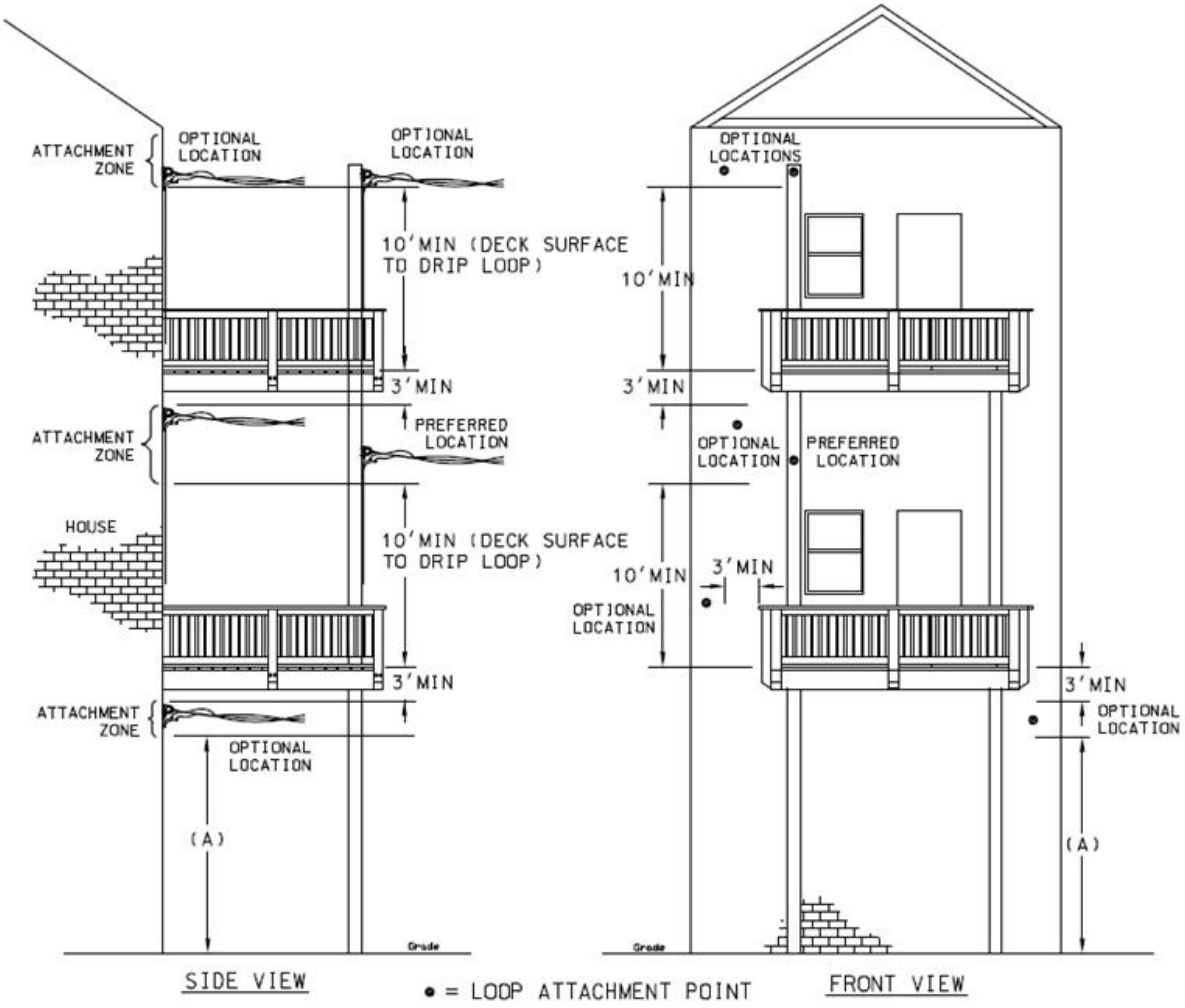
(A) This clearance shall be governed by the nature of the surface underneath the conductor. Refer to Section 303.

General Notes:

(N1) All clearances are minimum values, and apply to the service drop and service drip loop.
(N2) A minimum of 3'-0" horizontal clearances from decks and similar structures is preferred to allow space for ladder access to the ground.
(N3) Area for loop wire attachment at building must be accessible, from the ground, by extension ladder.
(N4) If the loop is less than 3'-0" horizontally from the outer edge of the deck, a minimum 10'-0" distance shall be maintained from the deck floor to the service drip loop.
(N5) Either horizontal or vertical clearance must be met.
(N6) The service mast shall be continuous 6" x 6" timber and be sufficient length to maintain minimum height requirements, and extend to the ground, not to exceed 10' below the deck surface.
(N7) The service mast shall be secured to the base pillar by no fewer than two ½" through bolts beginning within 6"-12" of the base of the deck.
(N8) Individual through bolts shall be spaced with a minimum of 12" vertical separation.
(N9) For service masts which are secured to base pillars not embedded in concrete, please contact a BGE meter inspector to ensure all structural requirements are met.

As field conditions may not be exactly as shown, if you have any concerns or questions, contact BGE prior to any installation of new equipment. Should you encounter any problems, contact BGE New Business Planning or the Meter Inspector for your District (Refer to Section 106).

307 Typical Service Mast Installations (continued)



Specific Notes:

(A) This vertical clearance shall be governed by the nature of the surface underneath the conductor. Refer to Section 303.

General Notes:

(N1) All clearances are minimum values, and apply to the service drop and service drip loop.
(N2) A minimum of 3'-0" horizontal clearance from decks and similar structures is preferred to allow space for ladder access to the ground.
(N3) Area for loop wire attachment at building must be accessible, from the ground, by extension ladder.
(N4) If the loop is less than 3'-0" horizontally from the outer edge of the deck, a minimum 10'-0" distance shall be maintained from the deck floor to the service drip loop.
(N5) Either horizontal or vertical clearance must always be met.
(N6) The service masts shall be continuous 6" x 6" timber and be sufficient length to maintain minimum height requirements.
(N7) For a two story deck, the vertical clearances above and below the deck must continue to be met.
(N8) On two story semi-attached and row houses, the point of attachment must be above the second floor windows.

As field conditions may not be exactly as shown, if you have any concerns or questions, contact BGE prior to any installation of new equipment. Should you encounter any problems, contact BGE New Business Planning or the Meter Inspector for your District (Refer to Section 106).

308 Typical Layout of Service Entrance Wiring on a Customer's Pole

Consult Baltimore Gas and Electric Company.

Service Conductors:

Line Side of Meter Enclosure -1 set, Max. 4/0
Load Side of Meter Enclosure - 1 set, Max. 4/0"

Customer Furnishes and Installs:

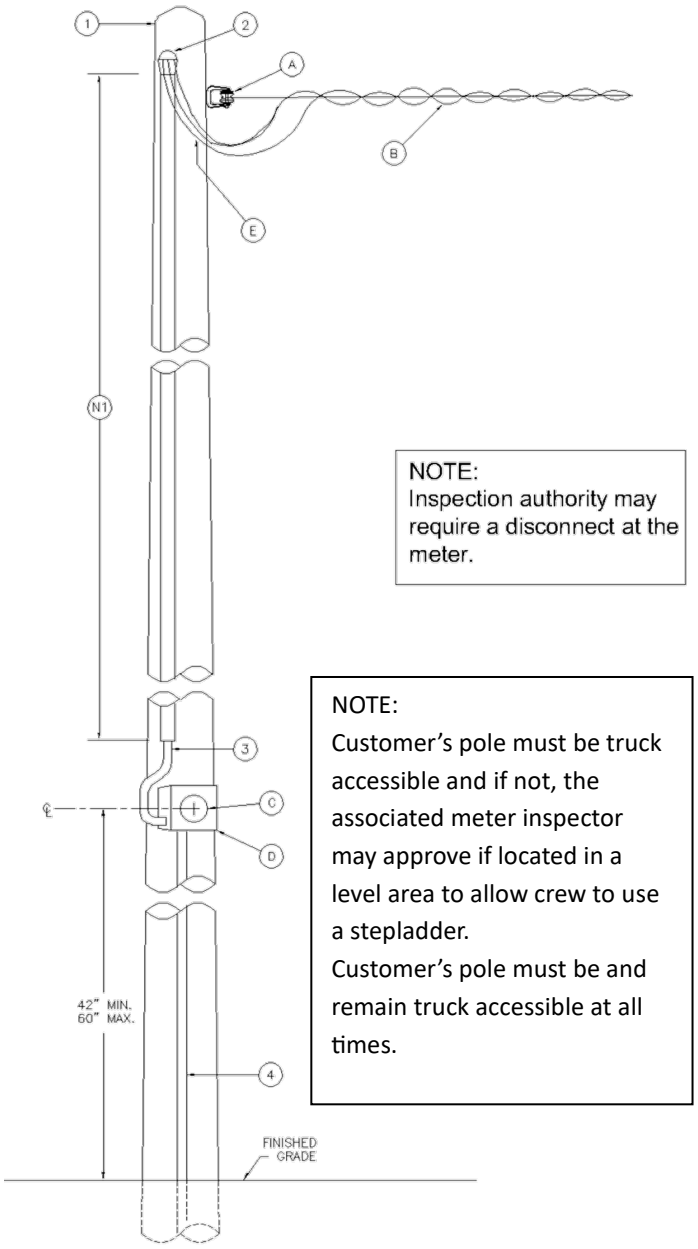
(1) Treated Class 7 pole, properly guyed,or a treated Class 4 pole, unguyed, in well-tamped earth. See dimensions below.
(2) Service entrance head (shall be located above the service drop).
(3) Service entrance wiring - line side of meter enclosure.
(4) Service entrance wiring - load side of meter enclosure.

Company Furnishes and Installs:

(A) Wireholder.
(B) Service drop.
(C) Watt-hour meter.
(D) Meter enclosure (Customer may install).
(E) Service connectors.

Notes:

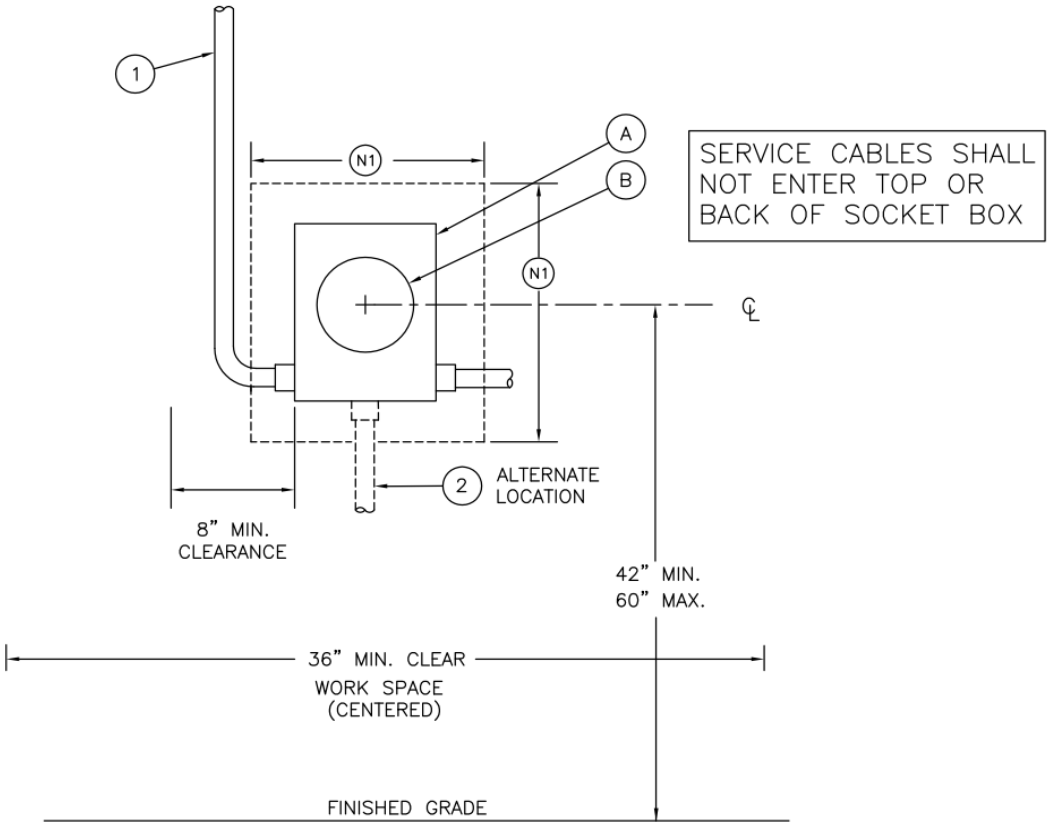
(N1) If Service Entrance Cable (SEC) is being installed, then that SEC must be protected with Schedule 40 PVC conduit or other approved method.



		Pole Dimensions Diameter		
Class	Length	Top of Pole	6’ from Butt	Setting Depth
4	30’	6.7”	9.5”	5.0’
	35’	6.7”	10.2”	5.5
	40’	6.7”	10.8”	6.0’
	45’	6.7”	11.5”	6.5’
7	25’	4.7”	6.9”	5.0’
	30’	4.7”	7.6”	5.0’
	35’	4.7”	8.0”	5.5’
	40’	4.7”	8.5”	6.0’

	45’	4.7”	9.0”	6.5’

[309] Single Outdoor Meter	**Service**	1Ø,3W or 3Ø,3W
	Max. Volts	240
	Max. Amps	100 - One Set of Load Conductors



Service Conductors:

Line and Load Side of Meter Enclosure — 1 set, Max. #2

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure.
(2) Service entrance wiring from load side of meter enclosure (leave 12” minimum length to point of entry through wall and 24” of each conductor for connection inside meter enclosure).
(3) See Notes (N1) and (N2).

Company Furnishes and Installs:

(A) Meter Enclosure (Customer may install).

BGE Mech # 13-068 [10½”H x 8”W x 3-5/16”D]

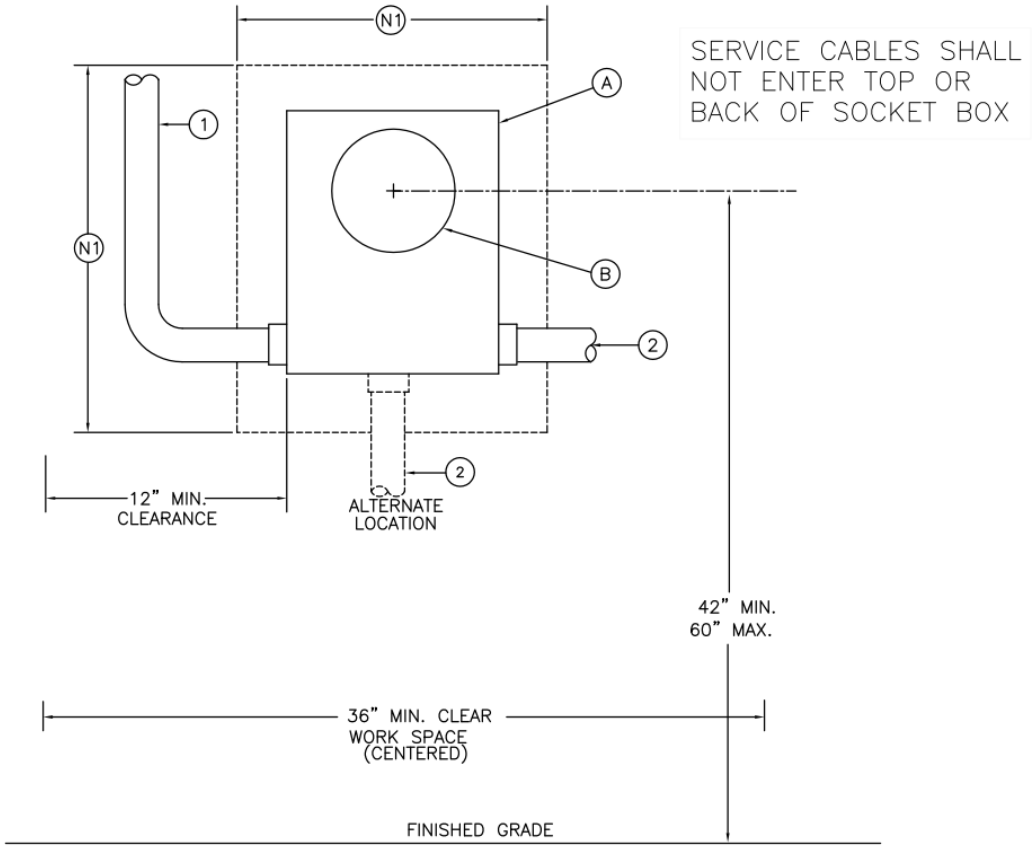
(B) Watt-hour meter.

Notes:

(N1) Maintain 3” clearance on all sides of the meter enclosure.

(N2) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” minimum to driveway.

[310-1] Single Outdoor Meter		
	Service	1Ø,3W; 3Ø,4W
	Max. Volts	240
	Max. Amps	200 - One Set of Load Conductors



Service Conductors:

Line and Load Side of Meter Enclosure — 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure.

(2) Service entrance wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure).

(3) See Notes (N1) and (N2).

Company Furnishes and Installs:

(A) Meter Enclosure (Customer may install).
Single Phase BGE Mech # 13-582 (maximum 2½" knockout) [23"H x 11"W x 4-1/8"D]
Three Phase BGE Mech # 13-013 (maximum 3" knockout) [28¼"H x 13"W x 4-27/32"D]

(B) Watt-hour meter.

Notes:

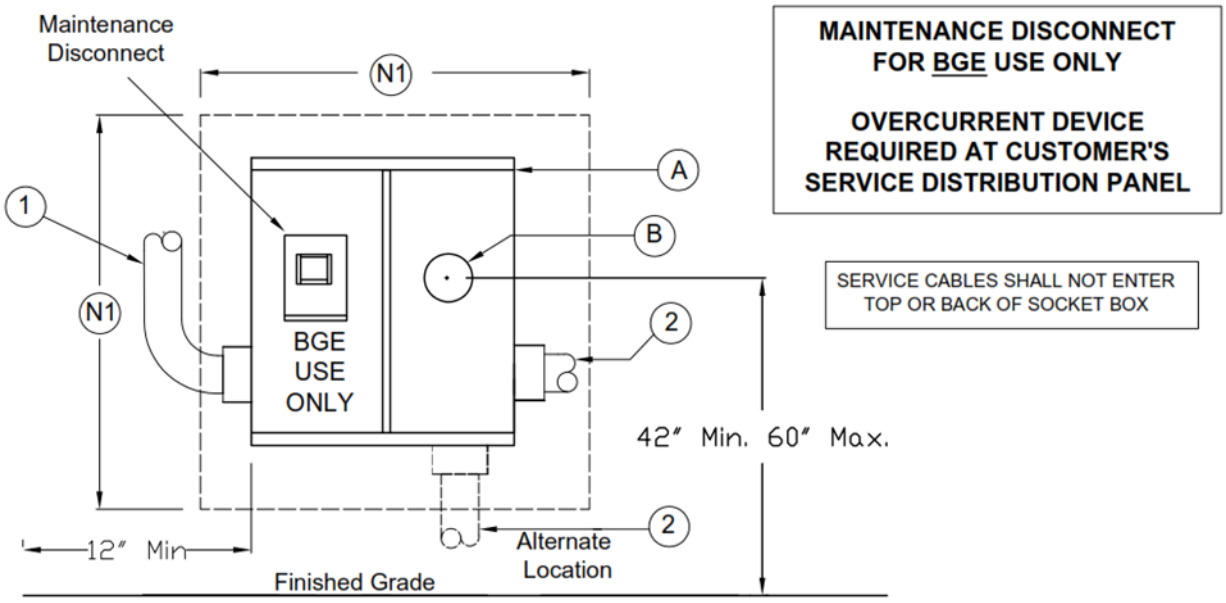
(N1) Maintain 3" clearance on all sides of the meter enclosure.

(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.

36” minimum to driveway.

[310-2] Single Outdoor Meter with Utility Disconnect 277/480V Wye Services Only		
	Service	3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	200

Indoor Location - **NON-STANDARD** - See Section 105-3. Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of Disconnect and Load Side of Meter Enclosure - 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure.
(2) Service entrance wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure).
(3) See Notes (N1) and (N2).

Company Furnishes and Installs:

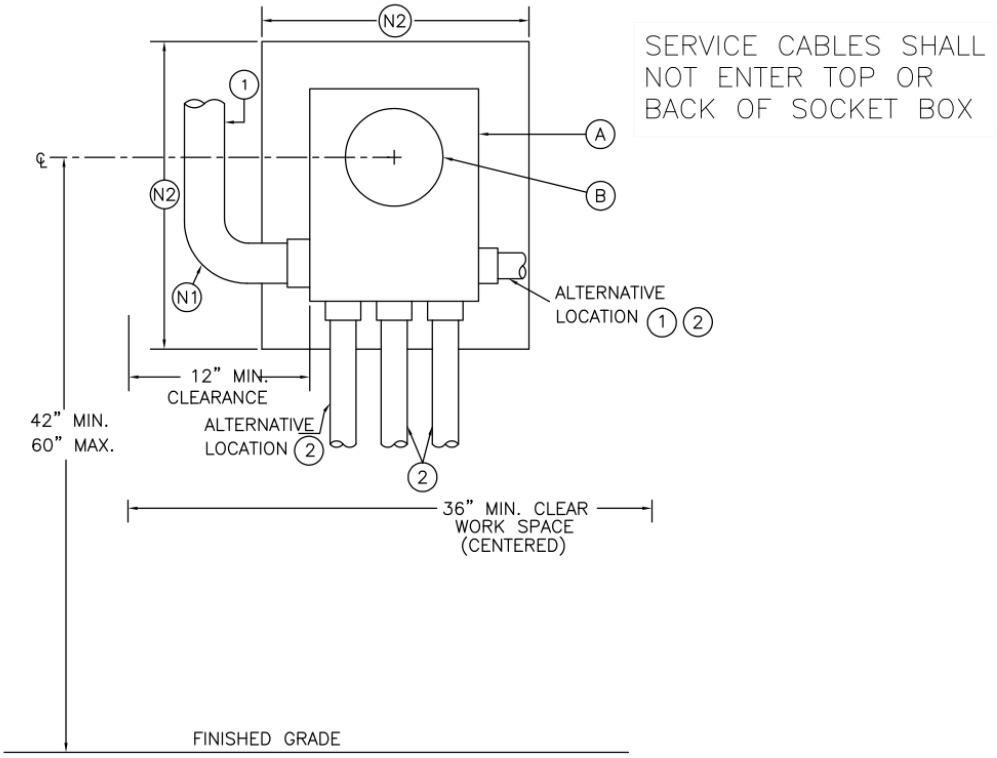
(A) Meter Enclosure/Utility Disconnect Enclosure. Maintenance disconnect (left side of enclosure) will be locked for BGE exclusive use only. Meter side (right side of enclosure) will be sealed. BGE Mech # 13-591 [28"H x 26"W x 4-27/32"D]
(B) Watt-hour meter

Notes:

(N1) Maintain 3" clearance on all sides of meter enclosure and 12" clearance for service entrance.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.

36” minimum to driveway.

[311] Single Outdoor Meter	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	200 - One or Two Sets of Load Conductors



Service Conductors:

Line and Load Side of Meter Enclosure - 1 set, Max. 250 kcmil

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure, maximum 2½" conduit. Alternate meter enclosure is available which accepts 3" conduit. See Note (N1).

(2) Service entrance wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 30" of each conductor for connection inside meter enclosure).

(3) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

(A) Meter Enclosure (Customer may install).

Standard meter enclosure BGE Mech # 13-582 (maximum 2½" knockout) [23"H x 11"W x 4-1/8"D]

Alternate meter enclosure BGE Mech # 13-013 (maximum 3" knockout) [28¼"H x 13"W x 4-27/32"D]

(B) Watt-hour meter.

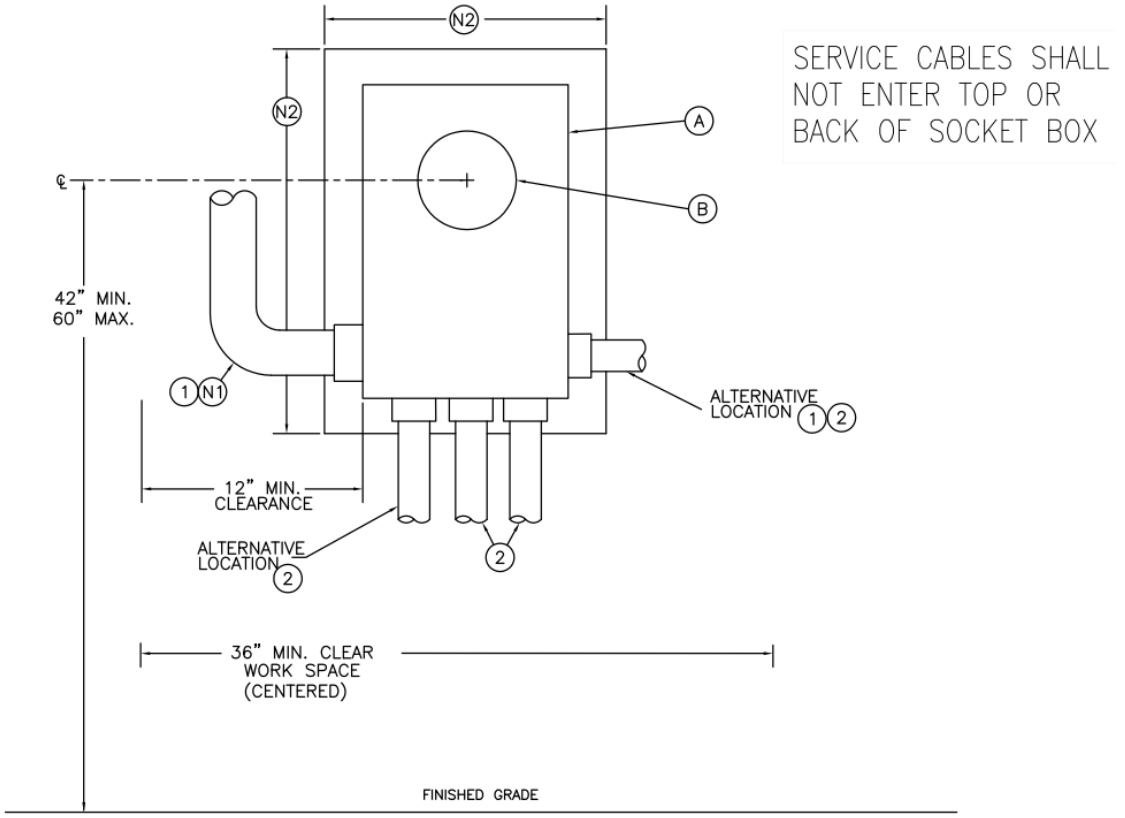
Notes:

(N1) Where conduit is used, meter enclosure shall be installed by Customer.

(N2) Maintain 3” clearance on all sides of meter enclosure and 12” clearance for service entrance.

(N3) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” minimum to driveway.

[312] Residential Only Single Outdoor Meter		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	400 (320A Continuous)



Service Conductors:

Line and Load Side of Meter Enclosure - 1 set, Max. 500 kcmil
2 sets, Max. 4/0

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure, maximum 3" conduit - see Note (N1).
(2) Service entrance wiring from load side of meter enclosure (leave 18" minimum length to point of entry through wall and 36" of each conductor for connection inside meter enclosure).
(3) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

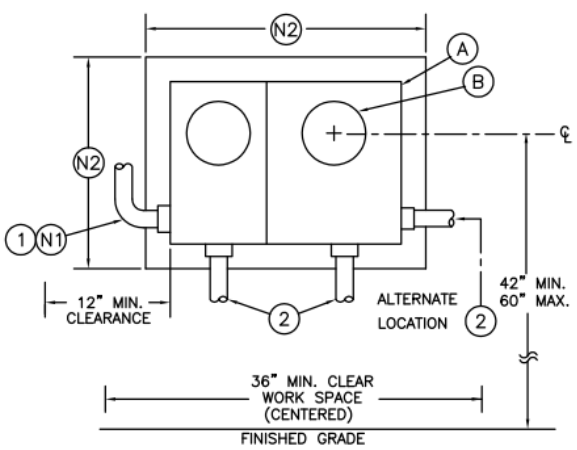
(A) Meter Enclosure (Customer may install).
BGE Mech # 13-009 [30"H x 15"W x 4-27/32"D]
(B) Watt-hour meter.

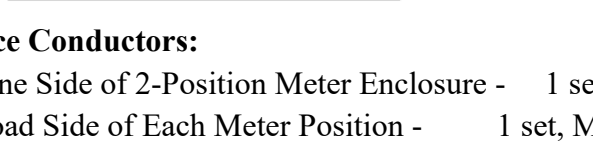
Notes:

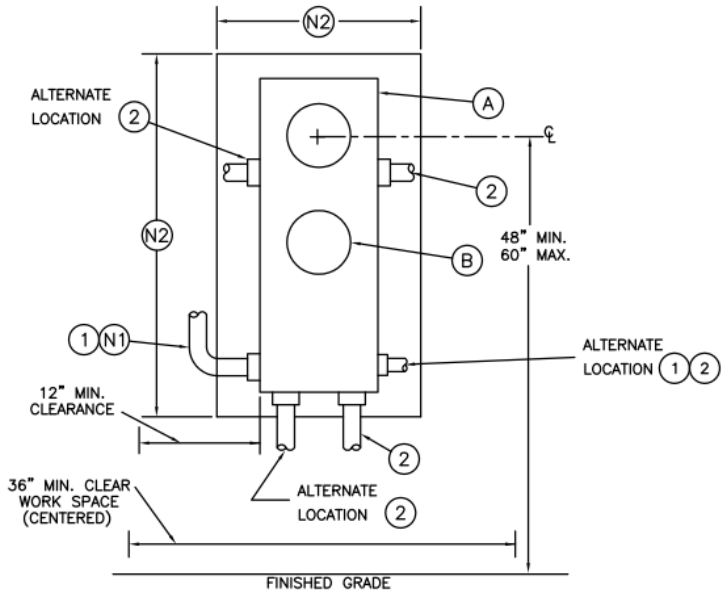
(N1) Where conduit is used, meter enclosure shall be installed by Customer.
(N2) Maintain 3" clearance on all sides of meter enclosure and 12" clearance for service entrance.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.

36” minimum to driveway.

[313] Two Outdoor Meters	**Service**	1Ø,3W or 3Ø,3W
	Max. Volts	240
	Max. Amps	150 Each Meter Position - One Set of Load Conductors at Each Meter Position







Service Conductors:

Line Side of 2-Position Meter Enclosure - 1 set, Max. 350 kcmil
Load Side of Each Meter Position - 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure, maximum 2½" conduit - see Note (N1).
(2) Service entrance wiring from load side of each meter position (leave 18" minimum length to point of entry through wall and 24" of each conductor for connection inside meter enclosure).
(3) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

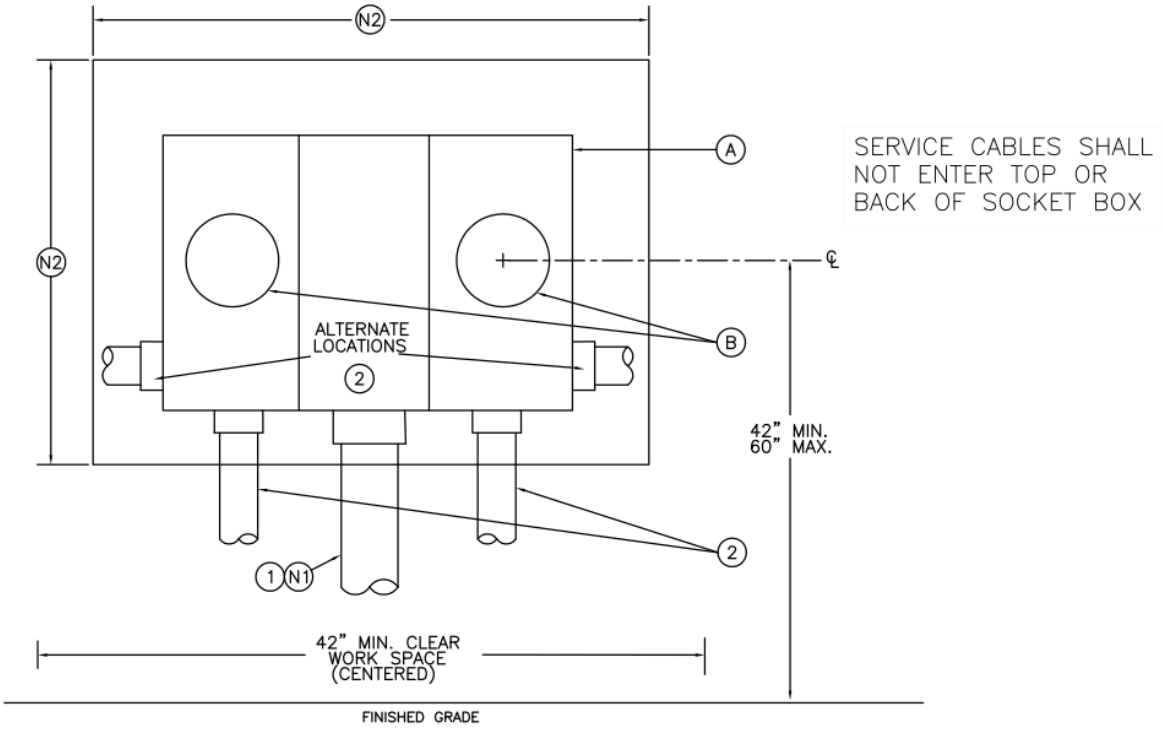
(A) 2-Position Meter Enclosure (Customer may install).
Horizontal 2-Gang 150A Meter enclosure BGE Mech #13-165 [17½" H x 20-5/16" W x 4½"D]
Vertical 2-Gang 150A Meter nnclosure BGE Mech #13-166 [27"H x 16"W x 4-27/32"D]
(B) Watt-hour meters.

Notes:

(N1) Where conduit is used, 2-position meter enclosure shall be installed by Customer.
(N2) Maintain 3" clearance on all sides of meter enclosure and 12" clearance for service entrance.
(N3) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.

36” minimum to driveway.

[314] Two Outdoor Meters	**Service**	1Ø,3W or 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	200 Each Meter Position - One Set of Load Conductors at Each Meter Position



Service Conductors:

Line Side of 2-Position Meter Enclosure - 1 set, Max. 500 kcmil
2 sets, Max. 4/0

Load Side of Each Meter Position - 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure, maximum 4" conduit - see Note (N1).

(2) Service entrance wiring from load side of each meter position (leave 18" minimum length to point of entry through wall and 24" of each conductor for connection inside meter enclosure).

(3) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

(A) 2-Position Meter Enclosure (Customer may install).
Single Phase BGE Mech # 13-067 [30-1/8"W x 20"H x 4-27/32"D]
Three Phase BGE Mech # 13-122 [30-1/8"W x 19"H x 5½"D]

(B) Watt-hour meters.

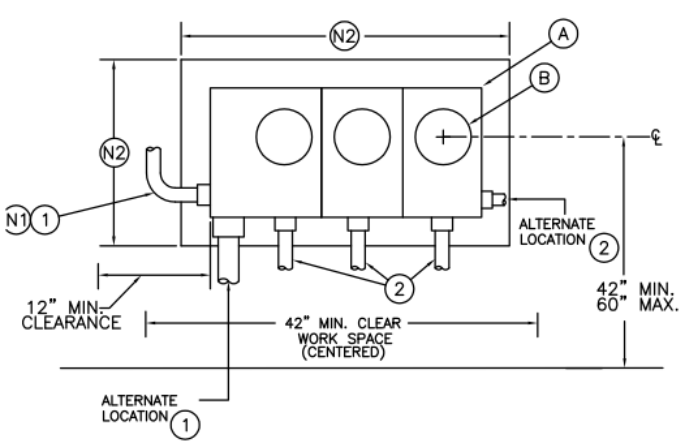
Notes:

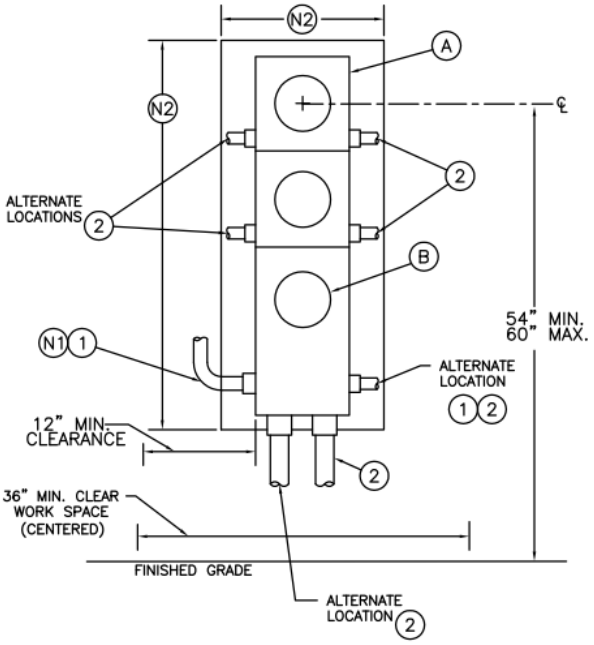
(N1) Where conduit is used, 2-position meter enclosure shall be installed by Customer.

(N2) Maintain 3" clearance on all sides of meter enclosure and 12" clearance for service entrance.

(N3) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” minimum to driveway.

[315] Three Outdoor Meters	**Service**	1Ø,3W or 3Ø,3W
	Max. Volts	240
	Max. Amps	150 Each Meter Position - One Set of Load Conductors at Each Meter Position





Service Conductors:

Line Side of 3-Position Meter Enclosure — 1 set, Max. 350 kcmil
Load Side of Each Meter Position — 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) Service entrance wiring - line side of meter enclosure, maximum 2½” conduit - see Note (N1).
(2) Service entrance wiring from load side of each meter position (leave 18” minimum length to point of entry through wall and 24” of each conductor for connection inside meter enclosure).
(3) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

(A) 3-Position Meter Enclosure (Customer may install).
Horizontal 3-Gang 150A Meter Enclosure BGE Mech # 13-181 [17½” H x 28½” W x 4½”D]
Vertical 3-Gang 150A Meter Enclosure BGE Mech # 13-182 [37½”H x 16”W x 4-27/32”D]
(B) Watt-hour meters.

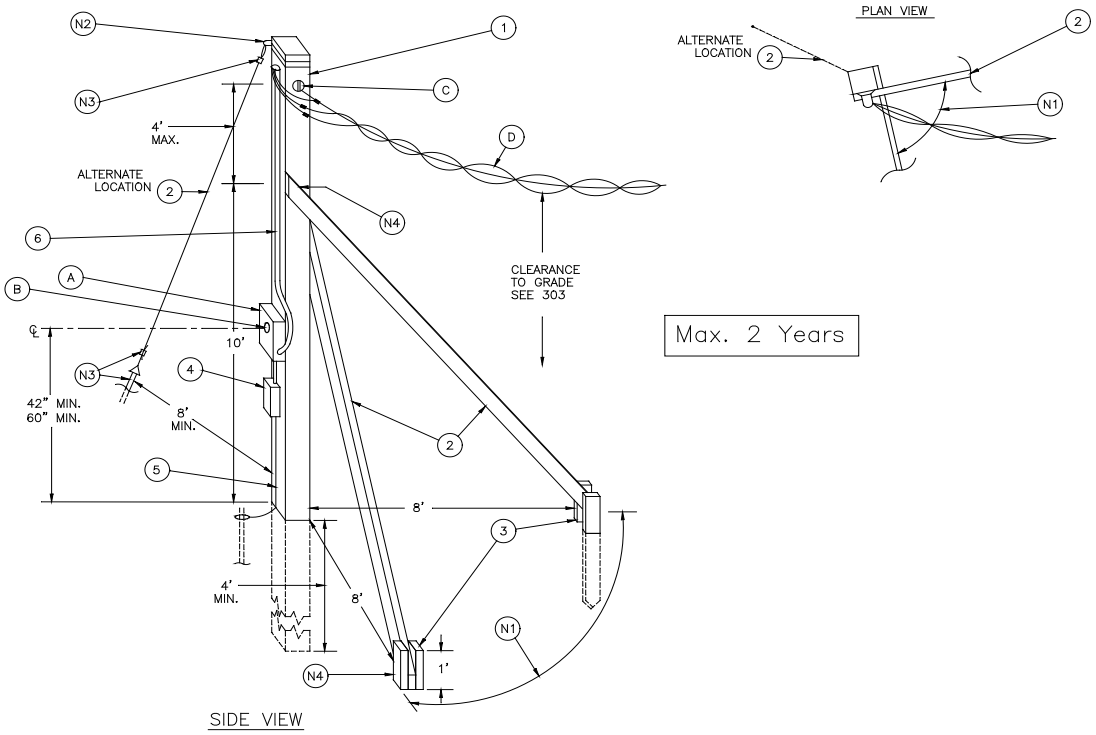
Notes:

(N1) Where conduit is used, 3-position meter enclosure shall be installed by Customer.

(N2) Maintain 3” clearance on all sides of meter enclosure and 12” clearance for service entrance.

(N3) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” minimum to driveway.

[316] Doubtful Permanency (Max. 2 years) Service Single Outdoor Meter	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	200 - One Set of Load Conductors



Freestanding timber structure must be truck accessible and if not, the associated meter inspector may approve if located in a level area to allow crew to use a stepladder.

Service Conductors:

Line and Load Side of Meter Enclosure - 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) 6" x 6" timber or three 2" x 6" boards spiked together (no splices), to be set in well-tamped earth at a minimum depth of 4' and to be located at a distance not exceeding 140' from Company pole. All lumber shall be sound. NOTE: If you are using a pole, see table in Section 308 for specifications.
(2) 2" x 4" wood braces (no splices). If the service drop exceeds 100', a ¼" steel wire back-guy is also required.
(3) 2" x 4" x 36" wood stakes.
(4) Disconnecting means.
(5) Grounding electrode conductor.
(6) Service entrance wiring.
(7) See Notes (N1), (N2), (N3), (N4) and (N5).

Company Furnishes and Installs:

(A) Meter Enclosure.
(B) Watt-hour meter
(C) Wireholder.
(D) Service drop.

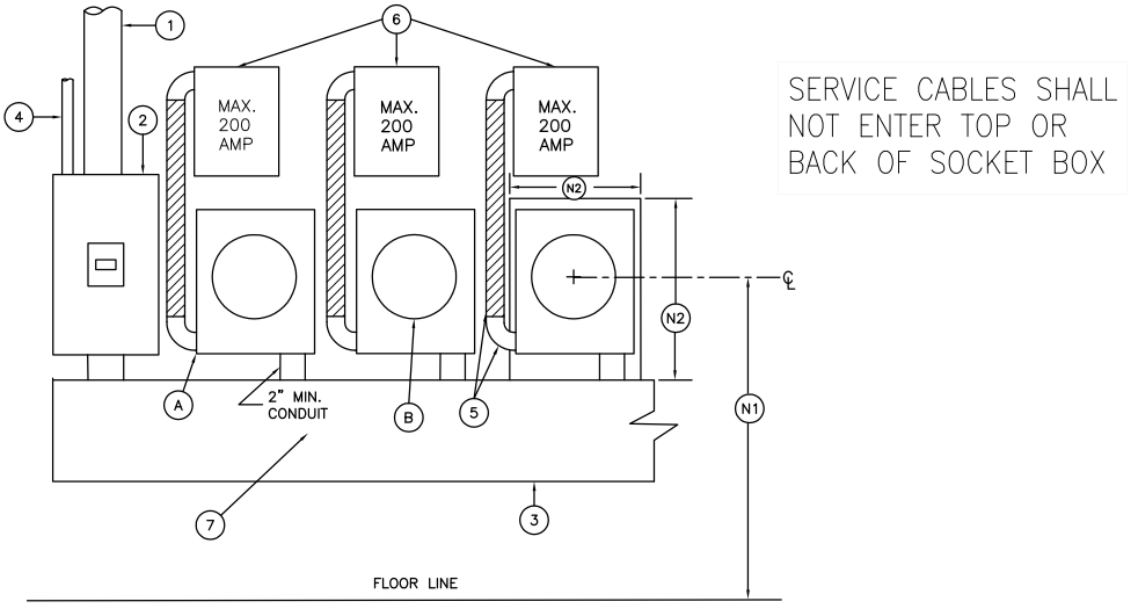
Notes:

(N1) Service drop must run in angle between wood braces.
(N2) Guy wire — two wraps around timber or thru-bolted to timber.
(N3) Clamps or grips and guy anchor.
(N4) Minimum of four 16-penny nails in each joint.

(N5) A minimum clear space of 48” in front of all metering equipment is required. (18” minimum to walkway, 36” minimum to driveway).

[317] Multiple Indoor Meters Customer's Trough		
	Service	1Ø,3W; 3Ø,3W; or 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	200 Each Meter Enclosure - One Set of Load Conductors at Each Meter Enclosure

Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of Meters (in trough) — Determined by Size of Main
Load Side of Disconnecting Means Each Meter Enclosure— 1 set, Max. 4/0

Customer Furnishes and Installs:

(1) Service entrance wiring.
(2) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(3) Sealable wire trough, 14" x 14" minimum size, with guide pin studs and handles. Conductors from load terminals of main disconnecting means shall extend the full length of the wire trough. Consult Company for length of trough. Trough shall be installed below meter enclosures.
(4) Grounding electrode conductor.
(5) Conductors from load side of meters and connectors as required (leave 30" of each conductor for connection inside each meter enclosure).
(6) Individual disconnecting means durably and legibly marked with paint as to area served. See Section 105-1.
(7) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps.
(8) Line conductors from trough to 200A meter enclosures. The customer is responsible for all wiring after landing block in trough.
(9) See Notes (N1), (N2) and (N3).

Company Furnishes and Installs:

(A) Meter enclosures (Customer may install) and miscellaneous materials to make connections.
BGE Mech # 13-013 [28¼"H x 13"W x 4-27/32"D]
(B) Watt-hour meters.

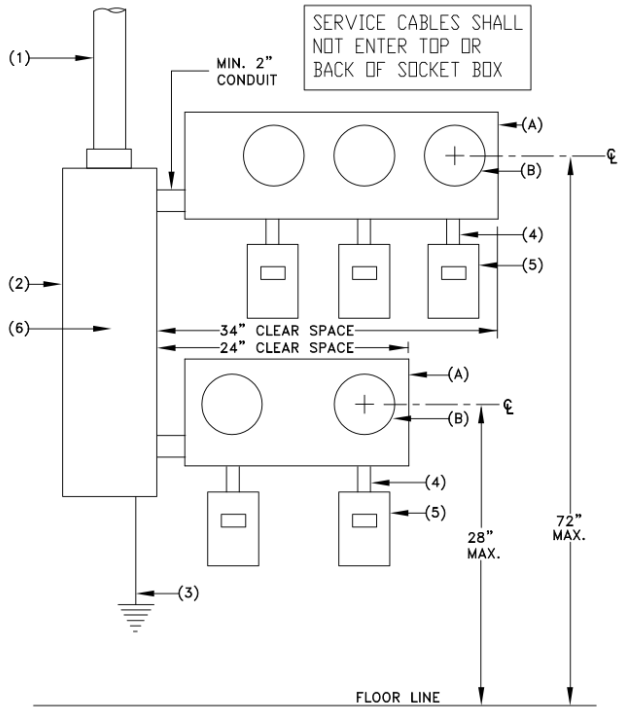
Notes:

(N1) 28" minimum, 60" maximum.
(N2) Maintain 3" clearance on all sides of meter enclosure and 12" clearance for service entrance.

(N3) A minimum clear space of 48” in front of all metering equipment is required.

[318] Six or Fewer Indoor Meters Company's Horizontal; 2 or 3 Position Meter Enclosures	Service	1Ø,3W or 3Ø,3W
	Max. Volts	240
	Max. Amps	150 Each Meter Position - One Set of Load Conductors at Each Meter Position

Indoor Location - **NON-STANDARD** - See Section 105-3. Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of 3-Position Meter Enclosure - 1 set, Max. 350 kcmil
Load Side of Each Meter Position - 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) Service entrance wiring.
(2) Sealable wire trough, 14" x 14" x 48" minimum size, with guide pin studs and handles. Conductors from load terminals of main disconnecting means shall extend the full length of the wire trough. Trough shall not be installed above meter enclosures.
(3) Grounding electrode conductor.
(4) Load conductors in raceway or cable and connectors as required (leave 24" of each conductor for connection inside each meter enclosure).
(5) Individual disconnecting means **durably and legibly marked** with paint as to area served. See Section 105-1. Shall not be installed above enclosure box.
(6) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps.
(7) Line conductors from trough to 200A meter enclosures. The customer is responsible for all wiring after landing block in trough.
(8) See Note (N1).

Company Furnishes and Installs:

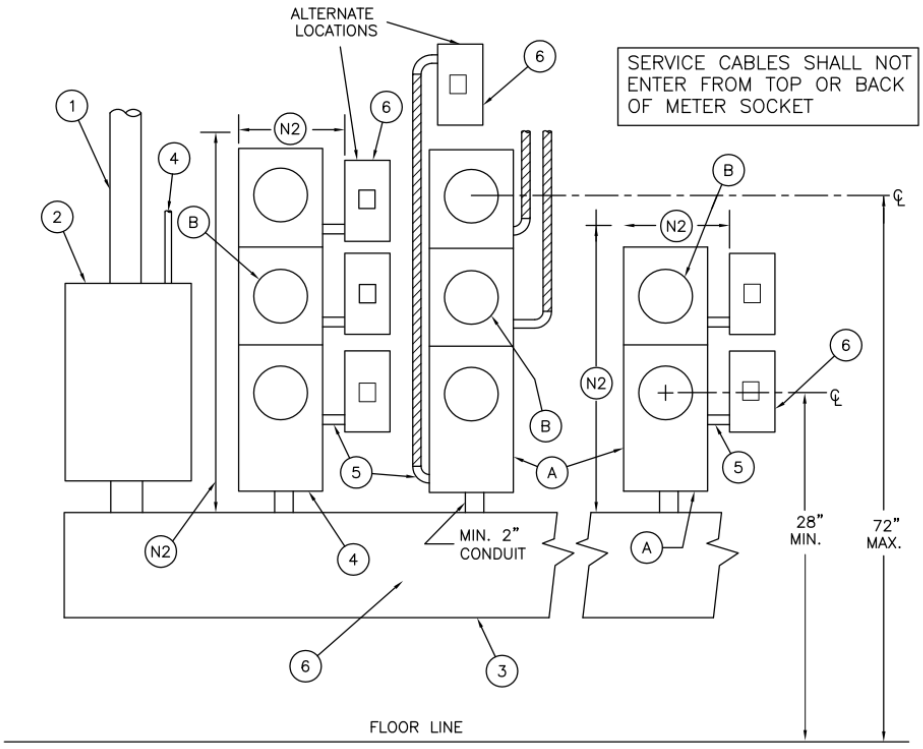
(A) 2- or 3-Position meter enclosures (Customer may install) and miscellaneous materials to make connections.
Horizontal 2-Gang 150A Meter Enclosure BGE Mech # 13-165 [17½" H x 20-5/16" W x 4½"D]
Horizontal 3-Gang 150A Meter Enclosure BGE Mech # 13-181 [17½" H x 28½" W x 4½"D]
(B) Watt-hour meters.

Notes:

(N1) A minimum clear space of 48” in front of all metering equipment is required.

[319] Multiple Indoor Meters Company's Vertical 2 or 3 Position Meter Enclosures	**Service**	1Ø,3W or 3Ø,3W
	Max. Volts	240
	Max. Amps	150 Each Meter Position - One Set of Load Conductors at Each Meter Position

Indoor Location - **NON-STANDARD** - See Section 105-3. Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side of Meters (in trough) — Governed by Size of Main
Load Side of Disconnecting Means Each Meter Enclosure — 1 set, Max. 2/0

Customer Furnishes and Installs:

(1) Service entrance wiring.
(2) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(3) Sealable wire trough, 14" x 14" minimum size, with guide pin studs and handles. Conductors from load terminals of main disconnecting means shall extend the full length of the wire trough. **Consult Company for length of trough.** Trough shall be installed below meter enclosures.
(4) Grounding electrode conductor.
(5) Conductors from load side of each meter position and connectors as required (leave 24" of each conductor for connection inside each meter enclosure).
(6) Individual disconnecting means durably and legibly marked with paint as to area served. See Section 105-1.
(7) Company-approved terminal blocks, when the total capacity of one or more main disconnecting means exceeds 1000 amps.
(8) Line conductors from trough to 200A meter enclosures. The customer is responsible for all wiring after landing block in trough.
(9) See Note (N1).

Company Furnishes and Installs:

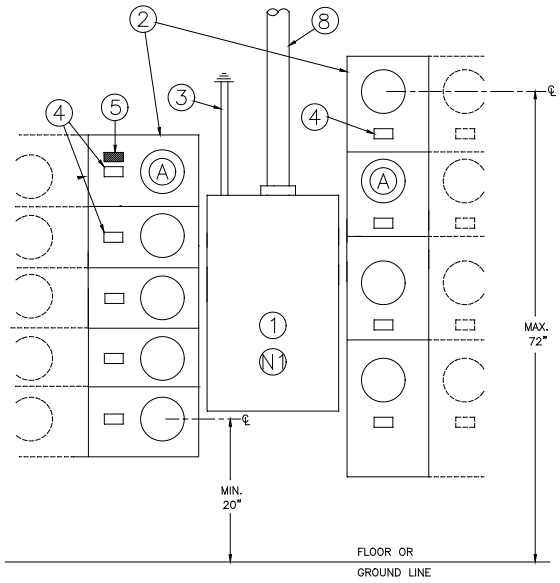
(A) 2- or 3-position meter enclosures (Customer may install) and miscellaneous materials to make connections.
Vertical 2-Gang 150A Meter Enclosure BGE Mech # 13-166 [27"H x 16"W x 4-27/32"D]
Vertical 3-Gang 150A Meter Enclosure BGE Mech # 13-182 [37½"H x 16"W x 4-27/32"D]
(B) Watt-hour meters.

Notes:

(N1) A minimum clear space of 48” in front of all metering equipment is required.
(N2) Maintain 3” clearance on all sides of meter enclosure.

[320] Modular Meters Outdoor Indoor Customer's Equipment	**Service**	1Ø,3W; or 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	200 Each Meter Position (400A/320A continuous up to 240V)

Not for use on Company's 240/120 delta (power wire) **system.** See Section 101-2.
Indoor Location - **NON-STANDARD** - See Section 105-3.
Consult Baltimore Gas and Electric Company.



Customer Furnishes and Installs:

(1) When required by inspection authority having jurisdiction, main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(2) Approved group metering equipment and is responsible for all maintenance. See Section 402 for listing of approved equipment.
(3) Grounding electrode conductor.
(4) Individual disconnecting device.
(5) Durable, legible labeling (with paint) denoting area/unit(s) served by each meter and disconnecting device. Experience shows that failure to provide proper identification on multiple meter installations (area/unit(s) served; apartments, offices, or stores) often results in meters being installed that supply other than the area/unit(s) for which intended. Therefore, electric meters will not be installed on such installations until you have properly identified the area/unit(s) to be served; 1. meter enclosure and disconnecting device, 2. the sub-panel in the area/unit served. See Section 105-1.
(6) A lever type bypass for each meter which supplies other than a residential occupancy.
(7) The Company requires a fifth jaw, installed and wired at the 9 o'clock position, on each enclosure with 1Ø, 3W Network metering (120/208V).
(8) Service entrance wiring.
(9) See Notes (N1), and (N2).

Company Furnishes and Installs:

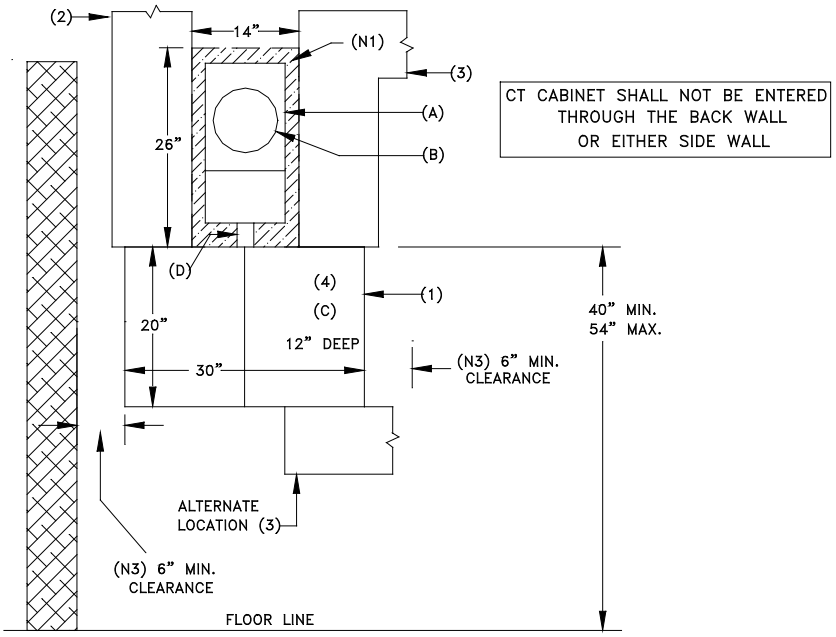
(A) Watt-hour meters.

Notes:

(N1) Outdoor installations may require enclosures for mechanical protection, consult Company. See Section 411.
(N2) A minimum clear space of 48" in front of mounting surface is required.
18" minimum to walkway, 36" minimum to driveway.

[321] Outdoor / Indoor Instrument Current Transformer (C.T. Meter)	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	201 - 400

Indoor Location - **NON-STANDARD** - See Section 105-3. Consult Baltimore Gas and Electric Company.



See Section 403 for CT Cabinet details.

Service Conductors:

Line and Load Side of C.T. Cabinet — Max. 1 set 500 kcmil

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 403 for details.
(2) Service entrance wiring — trough, minimum 10" x 10", to be constructed of 14-gauge steel or 10-gauge aluminum to enclose service conductors. The trough may be located at either left or right as shown.
(3) Minimum 10" x 10" trough secured and bonded to C.T. cabinet. Load wiring from C.T. cabinet may be out of top or bottom, near either end, but shall be on opposite end from supply wiring.
(4) Load conductors - leave 36" of each conductor inside C.T. cabinet.
(5) See Notes (N1), (N2), and (N3).

Company Furnishes and Installs:

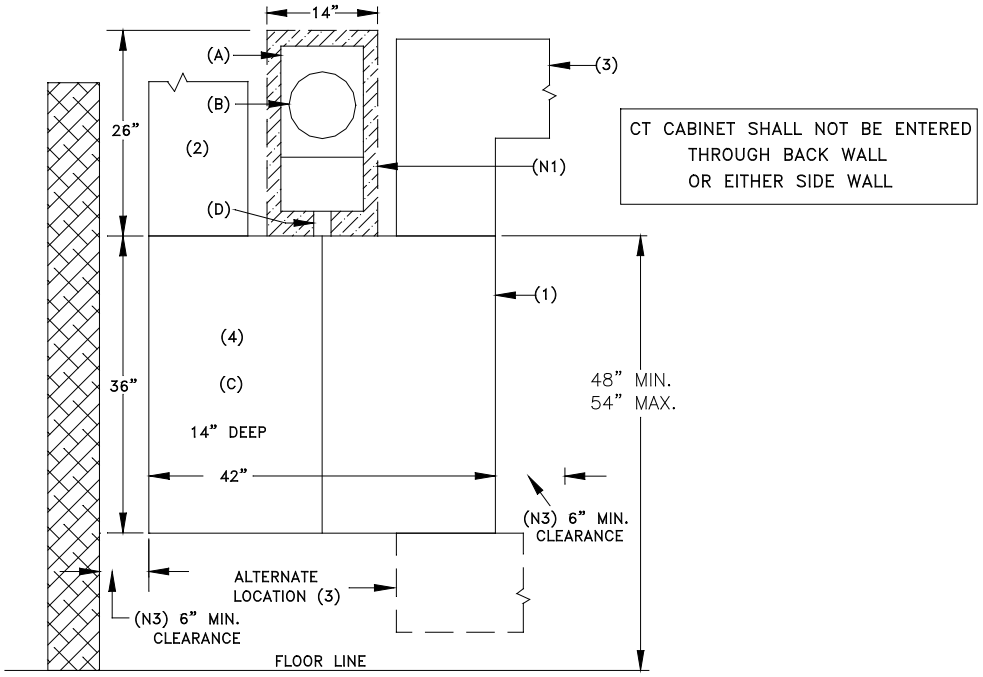
(A) Current transformer rated meter enclosure.
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Raceway between C.T. cabinet and meter enclosure (Not more than 3". For indoor locations greater than 3", 1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.)

Notes:

(N1) Space required for C.T. rated meter enclosure.
(N2) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N3) Minimum clear space of 6" on both sides of CT cabinet is required. If meter is to be installed adjacent to the C.T. Cabinet, see (N1).

[322] Outdoor / Indoor Instrument Current Transformer (C.T. Meter)	**Service**	1Ø,3W; 3Ø,3W; or 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	201 - 1600

Indoor Location - **NON-STANDARD** - See Section 105-3
See Section 404 for C.T. Cabinet details
Consult the Baltimore Gas and Electric Company.



Service Conductors:

Line and Load Side of C.T. Cabinet - Max. 5 sets 500 kcmil
Max. 4 sets 600 kcmil

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 404 for details.
(2) Service entrance wiring — trough, minimum 12" x 12", to be constructed of 14-gauge steel or 10-gauge aluminum to enclose service conductors. The trough may be located at either left or right as shown.
(3) Minimum 12" x 12" trough secured and bonded to C.T. cabinet. Load wiring from C.T. cabinet may be out of top or bottom, near either end, but shall be on opposite end from supply wiring.
(4) Load conductors - leave 60" of each conductor inside C.T. cabinet.
(5) See Notes (N1), (N2), and (N3).

Company Furnishes and Installs:

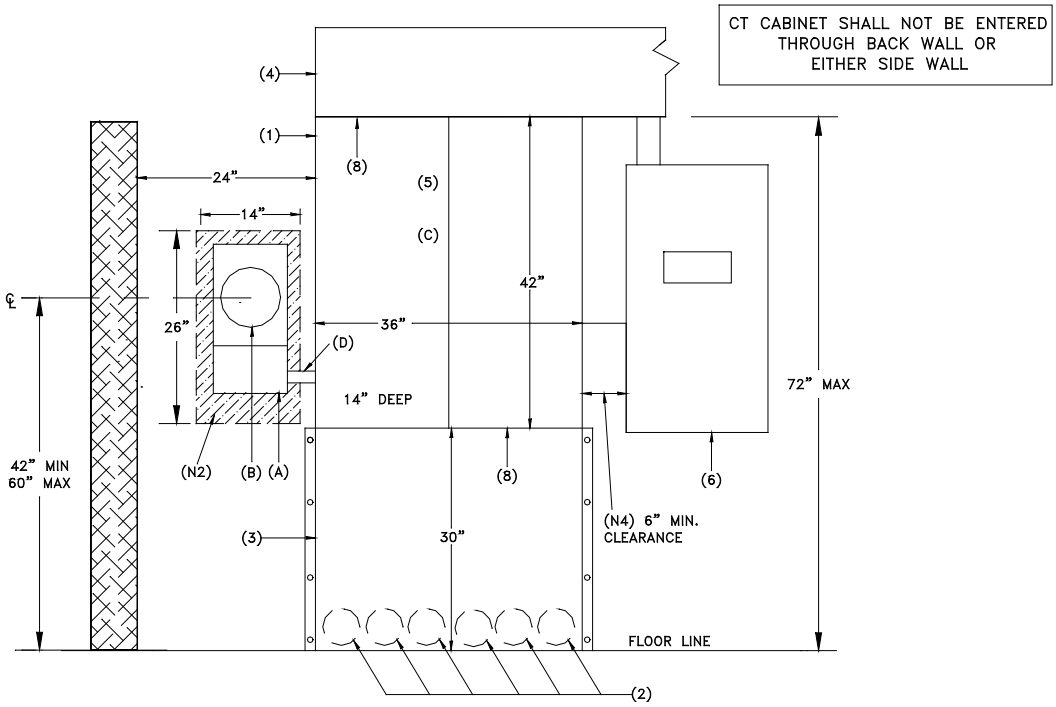
(A) Current transformer rated meter enclosure. (For alternate locations, consult Company).
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3", 1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.

Notes:

(N1) Space required for C.T. rated meter enclosure.
(N2) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N3) Minimum clear space of 6" on both sides of CT cabinet is required. If meter is to be installed adjacent to the C.T. Cabinet, see (N1).

[323] Outdoor / Indoor Instrument Current Transformer (C.T. Meter)	**Service**	3Ø,3W or 3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	201 - 3000

Consult Baltimore Gas and Electric Company.
Indoor Location - NON-STANDARD - See Section 105-3
See Section 405 for C.T. Cabinet details



Service Conductors:

Line and Load Side of C.T. Cabinet - Max. 9 sets 500 kcmil
Max. 8 sets 600 kcmil

Customer Furnishes and Installs:

(1) C.T. Cabinet. See Section 405 for details.
(2) Service entrance wiring in trough — may enter back (maximum 4" above floor line) or bottom of trough.
(3) Three-sided trough, with 1" flanges to be constructed of 14-gauge steel or 10-gauge aluminum to enclose service conductors. If installed on combustible surface, a sheet metal plate against the wall is required.
(4) Minimum 12" x 12" trough secured and bonded to the top of the C.T. cabinet. Bus duct may be used in lieu of trough.
(5) Load conductors - leave 48" of each conductor inside C.T. cabinet.
(6) Disconnecting means.
(7) See Notes (N1), (N2), (N3) and (N4).
(8) Cut out top and bottom 10" x 34" to mate with trough.

Company Furnishes and Installs:

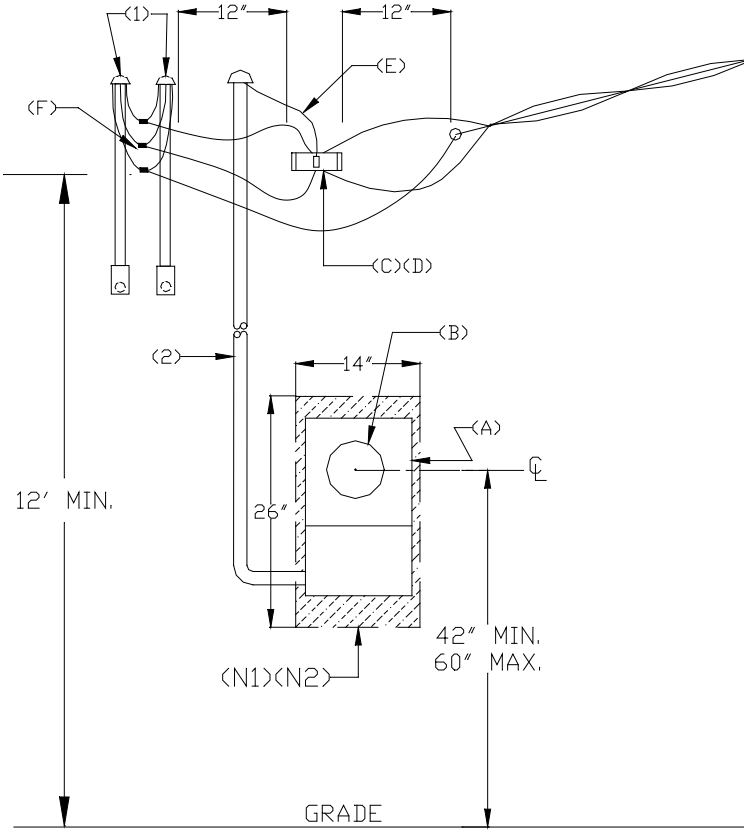
(A) Current transformer rated meter enclosure. (For alternate locations, consult Company).
(B) Watt-hour meter.
(C) Current transformers (not shown).
(D) Raceway between C.T. cabinet and meter enclosure (not more than 3"). For indoor locations greater than 3", 1-1/4" rigid conduit is required. For alternate locations, greater than 50', consult with Company.

Notes:

(N1) Installation may be inverted for top feed to cabinet.
(N2) Space required for C.T. rated meter enclosure.
(N3) A minimum clear space of 48" in front of C.T. Cabinet is required.
(N4) Minimum clear space of 6" on both sides of CT cabinet is required.

[324] Outdoor Instrument Current Transformer (C.T. Meter) Wall Mounted		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	N/A

Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side (Customer's Service Wiring) - Determined by size of service.

Customer Furnishes and Installs:

(1) Service entrance wiring, leave 36" of each conductor for connection to service loop.
(2) 1¼" rigid conduit (outdoor/indoor) or Schedule 40 PVC (outdoor only) (with pull-wire if necessary), with service head and fittings to C.T. rated meter enclosure, not to exceed 50'.
(3) See Notes (N1), (N2), (N3), and (N4).

Company Furnishes and Installs:

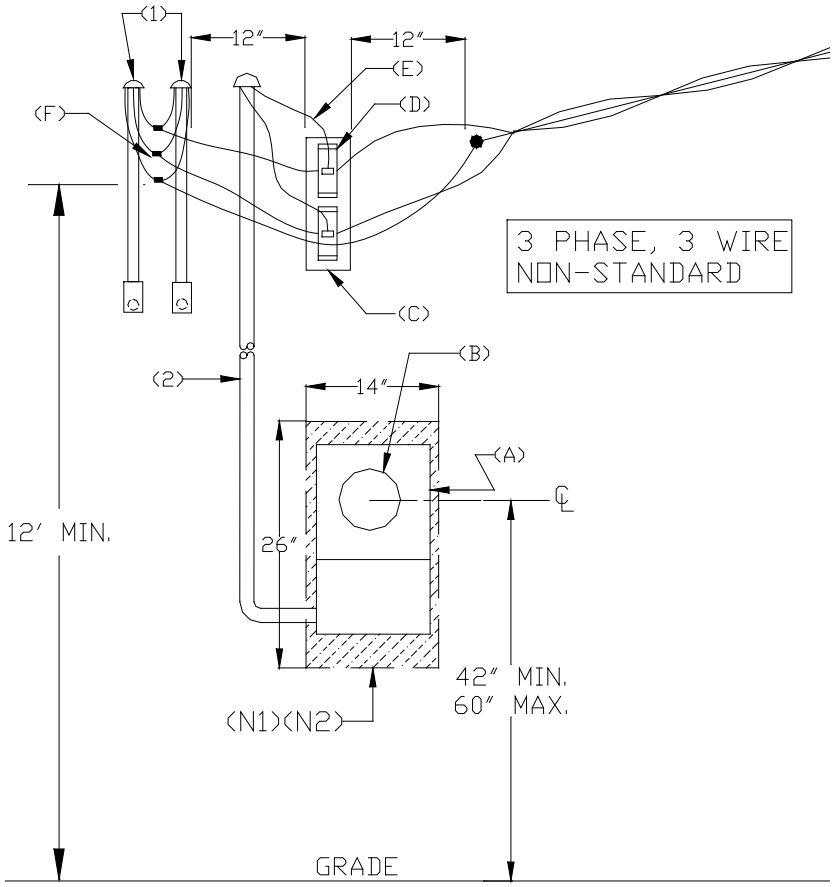
(A) Current transformer rated meter enclosure. (For alternate locations, consult Company).
(B) Watt-hour meter.
(C) Current transformer mounting plate (if necessary).
(D) Current transformer.
(E) Current transformer wiring between service loop and current transformer rated meter enclosure.
(F) Necessary connectors to terminate Customer's wiring to service loop and instrument transformer wiring.

Notes:

(N1) Space required for C.T. rated meter enclosure.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
(N3) See Section 302 for meter clearances.
(N4) See Section 303 for loop clearances.
(N5) Refer to 412-1 and 412-2 concerning protection of meter.

[325] Outdoor Instrument Current Transformer (C.T. Meter) Wall Mounted		
	Service	3Ø,3W
	Max. Volts	480
	Max. Amps	N/A

NON-STANDARD - Consult the Baltimore Gas and Electric Company.



Service Conductors:

Line Side (Customer's Service Wiring) - Determined by size of service.

Customer Furnishes and Installs:

(1) Service entrance wiring, leave 48" of each conductor for connection to service loop.
(2) 1¼" rigid conduit (outdoor/indoor) or Schedule 40 PVC (outdoor only) (with pull-wire if necessary), with service head and fittings to C.T. rated meter enclosure, not to exceed 50'.
(3) See Notes (N1), (N2), (N3), (N4), and (N5).

Company Furnishes and Installs:

(A) Current transformer rated meter enclosure. (For alternate locations, consult Company).
(B) Watt-hour meter.
(C) Current transformer mounting plate.
(D) Current transformers.
(E) Current transformer wiring between service loop and current transformer rated meter enclosure.
(F) Necessary connectors to terminate Customer's wiring to service loop and instrument transformer wiring.

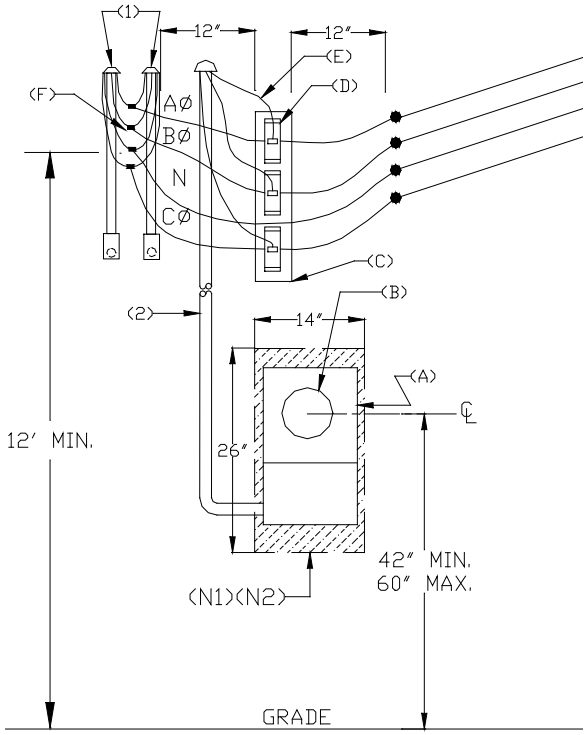
Notes:

(N1) Space required for C.T. rated meter enclosure.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
(N3) See Section 302 for meter clearances.
(N4) See Section 303 for loop clearances.
(N5) Consult Company for details of larger services than shown using a wall bus.

(N6) Refer to 412-1 and 412-2 concerning protection of meter.

[326] Outdoor Instrument Current Transformer (C.T. Meter) Wall Mounted		
	Service	3Ø,4W
	Max. Volts	480Y/277
	Max. Amps	N/A

Consult Baltimore Gas and Electric Company.



Service Conductors:

Line Side (Customer's Service Wiring) - Determined by size of service.

Customer Furnishes and Installs:

(1) Service entrance wiring, leave 60" of each conductor for connection to service loop.
(2) 1¼" rigid conduit (outdoor/indoor) or Schedule 40 PVC (outdoor only) (with pull-wire if necessary), with service head and fittings to C.T. rated meter enclosure, not to exceed 50'.
(3) See Notes (N1), (N2), (N3), (N4), and (N5).

Company Furnishes and Installs:

(A) Current transformer rated meter enclosure. (For alternate locations, consult Company).
(B) Watt-hour meter.
(C) Current transformer mounting plate.
(D) Current transformers.
(E) Current transformer wiring between service loop and current transformer rated meter enclosure.
(F) Necessary connectors to terminate Customer's wiring to service loop and instrument transformer wiring.

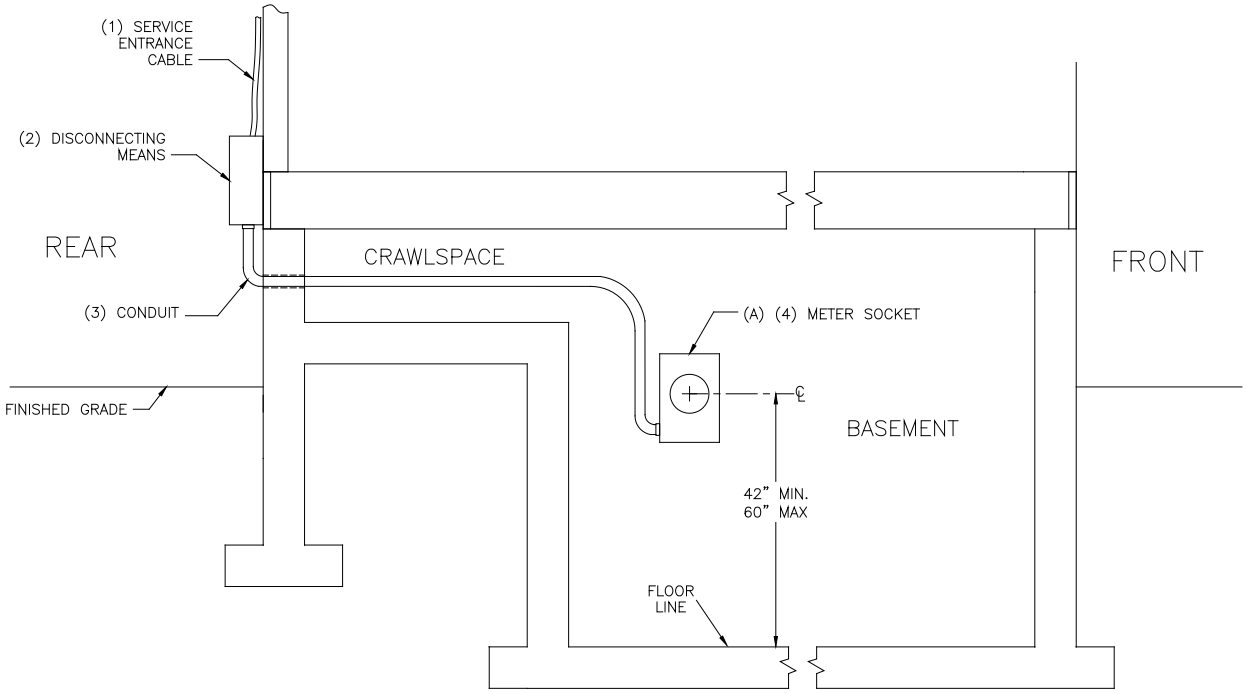
Notes:

(N1) Space required for C.T. rated meter enclosure.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
(N3) See Section 302 for meter Clearances.
(N4) See Section 303 for loop clearances.
(N5) Consult Baltimore Gas and Electric Company for details of larger services than shown using a wall bus.
(N6) Refer to 412-1 and 412-2 concerning protection of meter.

327 Existing Town House Installations

Indoor Location - NON-STANDARD - See Section 105-3. Consult Baltimore Gas and Electric Company.

Town (row) house meter installations, particularly in Baltimore City, involving load increases, rehabs, renovations, etc. require unique wiring and meter enclosure configurations. The following diagram illustrates one of the more common situations and shows the Company's preferred installation method. **This configuration is not for new buildings since as they will be fed by an underground service line (See Section 602 for additional details).**



Service Conductors:

Line and Load Side of Meter Enclosure - Determined by size of service (typically 100 – 200 A)

Customer Furnishes and Installs:

(1) Service entrance cable.
(2) Main disconnecting means which shall be a sealable circuit breaker or a fused switch with sealable barriers which enclose all unmetered conductors/connections except the fuses.
(3) Conduit (can be rigid, PVC or EMT) – diameter determined by size of service. Four (4) individual conductors are required – two hot, one neutral and one ground – between the disconnecting means and the meter enclosure.
(4) Meter Enclosure (BGE furnishes).
(5) See Note (N1).

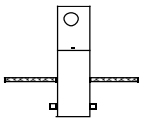
Company Furnishes and Installs:

(A) Meter Enclosure (Customer installs).
(B) Watt-hour meter.

Notes:

(N1) A minimum clear space of 48" in front of all metering equipment is required.

401 Approved Pedestal Metering Equipment (Freestanding)

 Manufacturer	Catalog Designations 200 Amp Pedestal Metering Equipment		Service/Voltage
	Model Numbers		
	Pedestal	Stabilizer Feet	
Midwest Electric (507-345-2543)	M281C1P6H (single meter) M282E1P6H (single meter) M281C1B6H (dual meter)	SFEM6	**1Ø, 3 Wire 120/240 V**
Milbank (816-483-5314)	U5300-0 CP3B52115BMLBGE[1]	K5415	
RV Park Hookups, Inc. (800-723-8009)	Powerhouse PH305020[1]	Direct Burial Mounting Stand	
Millbank (816-483-5314)	U5136-O-**** (ringless; single meter)	N/A	
Millbank (816-483-5314)	U5137-O-**** (ringless; dual meter)	N/A	
Millbank (816-483-5314)	U6221-O-100[2] (ringless with lever bypass) U6221-O-200[2] (ringless with lever bypass)	N/A	
Millbank (816-483-5314)	U6226-O-100 (ring type) U6226-O-200 (ring type)	N/A	
Milbank (816-483-5314)	CP3B52519BMLBGE[1]	N/A	**3Ø, 4 Wire 120/208 V**

* Mounts on customer installed concrete pad.

Pedestals for applications such as mobile homes, public area lighting, traffic signs, CATV amplifier, and 5G antenna installations.

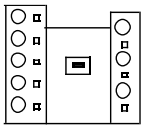
1. Meter protection required. See Section 412.
2. Pedestal shall be for electric use only.

Customer supplies, installs and maintains all materials (except underground lateral and meter).

1. Maximum capacity per meter position - 200 amps.
2. Stabilizer foot required for units installed in the ground.
3. For Powerhouse:
    - Meter socket shall be of ring type.
    - Provide hasp to seal bottom cover.

Note(s): 1. Height to C/L of meters - min. 36”, max. 42”
2. For Commericial and Maryland Department of Transportation (MDOT) use

402-1 Approved 200 Amp Modular Metering Equipment

<table>
<tr><td></td><td colspan="5">Catalog Designations
Modular Metering Equipment
Class of Service at Meter</td></tr>
<tr><td rowspan="3"></td><td colspan="5">Model Numbers</td></tr>
<tr><td colspan="2">1Ø,3W</td><td>3Ø,3W</td><td colspan="2">3Ø,4W</td></tr>
<tr><td>Manufacturer</td><td>120/240V</td><td>120/208V</td><td>240V[1]</td><td>208/120V</td><td>480/277V</td></tr>
<tr><td>General Electric
(800-431-7867)</td><td>TMP
TMM</td><td>TMP</td><td rowspan="3">New
Modular
Metering
Equipment
Not Permitted

Consult BGE.</td><td>TMPR</td><td></td></tr>
<tr><td>Siemens
(ITE Electrical)
(800-964-4114)</td><td>HM
PAK
WMM</td><td>MMWMM</td><td>W3MM</td><td></td></tr>
<tr><td>Square D [2]
(888-778-2733)</td><td>EZ
MP[3]</td><td>EZ
MP[3]</td><td>EZ</td><td></td></tr>
<tr><td>Eaton [4][5]
Cutler/Hammer
(800-888-0211)</td><td>1MM
1MP
35MM</td><td>1MM
35MM
3MM</td><td></td><td>37MM</td><td>PRLC-WCMS</td></tr>
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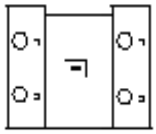
Additional Requirements:

1. Main disconnect devices shall comply with the Company's sealing requirements. See Section 104-8.
2. Bypass Requirements (meter can be pulled without disrupting service):
   (a) Three-phase -manual (lever type) bypass is required on all three-phase meter sockets supplying industrial and commercial customers. Meter cover must be ringless.
   (b) Single phase commercial - one of the following bypass configurations is required for all single phase meter sockets supplying commercial customers:
   – lever bypass with ring-less cover (preferred)
   – horn bypass with ring-less cover (acceptable)
   – slide bypass with ring-type cover (acceptable)
3. Maximum capacity per meter position - 200 amps
4. Height to center line of meters - minimum 20" (lowest position), maximum 72"(highest position).
5. The Company requires a fifth jaw, installed and wired at the 9 o'clock position with 1Ø, 3W network metering (120/208V).
6. If an item is not on the list, or to make changes, notify the Company for approval.
7. Stud and lay-in connections are permissible.

Notes:

(1) Not for use on 240/120V delta (power wire) systems (see Section 101-2). Not for use on jobs involving modifications (service relocation, heavy up, etc.) to 240V delta services.
(2) Square D stud kit for MP series is MMSK2. See note 7 above.
(3) For commercial installations which require bypass capability.
(4) Eaton, Cutler/Hammer studkit is MPSC2-TB.
(5) 6 position switchboard (this is switchboard metering)

402-2 Approved 400 Amp Modular Metering Equipment (320 Amp Continuous)

	**Catalog Designations Modular Metering Equipment Class of Service at Meter**	
	Model Numbers	
	1Ø,3W	**3Ø,4W**
Manufacturer	**120/240V**	**120/208V**
General Electric (800-431-7867)	TMPR	TMPR
Siemens (ITE Electrical) (800-964-4114)	W1MM	W3MM
Square D [(2)] (888-778-2733)	EZM	EZML
Eaton [(1)(3)] Cutler/Hammer (800-888-0211)		37MM

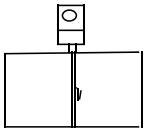
Additional Requirements:

1. Main disconnect devices shall comply with the Company's sealing requirements. See Section 104-8.
2. Bypass Requirements (meter can be pulled without disrupting service): Manual (lever type) bypass is required on all meter sockets supplying industrial and commercial customers. Meter cover must be ringless.
3. Maximum capacity per meter position - 400 amps (320 amps continuous)
4. Height to center line of meters - minimum 20" (lowest position), maximum 72"(highest position).
5. If an item is not on the list, or to make changes, contact the Company for approval.
6. Stud and lay-in connections are permissible.

Notes:

(1) Eaton, Cutler/Hammer studkit is MPSC2-TB.
(2) Square D Stud Kit for MP Series is MMSK2.
(3) Only available in Two-breaker model.

403 Approved Current Transformer Cabinet; 1Ø, 3W; 201-400 Amps

 **Dimensions (20"H x 30"W x 12"D)**	**Catalog Designations 1Ø,3W 201-400 Amps Current Transformer Cabinet**
Manufacturer	**Model Number**
Atlantic Sheet Metal (410-391-8066)	ATL 400
J. M. Gillin Corp. (484-459-0360	G-203012-UCT(A) or (G)
Meter Devices Co. (888-367-6383)	507U6523 (Steel)
S.A.R. Metal Products (410-780-5434)	SAR003G (Galv.)
Hoffman Enclosures (763-422-2181)	A203012BGECT
N.J. Sullivan Co. (703-464-5944)	P10116

Company-approved, Customer-supplied cabinet to house Company metering current transformers.

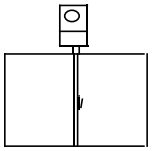
The following criteria must be used:

1. Customer supplied current transformer cabinet may be purchased from local suppliers that handle this C.T. cabinet. The Company has pre-approved specifications for this cabinet. The cabinet must comply with NEMA Type 3R standards.
2. Main disconnecting device, when ahead of the instrument transformers, shall comply with the Company's sealing requirements. See Section 104-8
3. Company shall furnish and install an approved terminal board in the C.T. cabinet to provide for stud type/compression terminals provided and installed by the Company.
4. Customer shall install a 1¼" rigid conduit from the C.T. cabinet to the meter up to a maximum of 50' to facilitate a remote meter. The Company will install the #10 meter wiring. For distances greater than 50', consult the Company.

Note: Height to C/L of meter – min. 42", max. 60".
Consult the Company.

See Sections 220 for underground or 322 for overhead installation clearances.

404 Approved Current Transformer Cabinet; 1Ø, 3W; 3Ø, 4W; 201-1,600 Amps

 **Dimensions (36”H x 42”W x 14”D)**	**Catalog Designations 1Ø,3W, 3Ø,4W 201-1600 Amps Current Transformer Cabinet**
Manufacturer	**Model Number**
Atlantic Sheet Metal (410-391-8066)	ATL 1600
J. M. Gillin Corp. (484-459-0360)	G-364214-U.C.T.
Meter Devices Co. (888-367-6383)	507U6521
S.A.R. Metal Products (410-780-5434)	SAR001A
Hoffman Enclosures (763-422-2181)	A364214BGECT
N.J. Sullivan Co. (703-464-5944)	P10117

Company-approved, Customer-supplied cabinet to house Company metering current transformers.

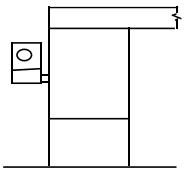
The following criteria must be used:

1. Customer supplied current transformer cabinet may be purchased from local suppliers that handle this C.T. cabinet. The Company has pre-approved specifications for this cabinet. The cabinet must comply with NEMA Type 3R standards.
2. Main disconnecting device, when ahead of the instrument transformers, shall comply with the Company’s sealing requirements. See Section 104-8
3. Company shall furnish and install an approved terminal board in the C.T. cabinet to provide for stud type/compression terminals provided and installed by the Company.
4. Customer shall install a 1¼” rigid conduit from the C.T. cabinet to the meter up to a maximum of 50’ to facilitate a remote meter. The Company will install the #10 meter wiring. For distances greater than 50’, consult the Company.

Note: Height to C/L of meter – max. 60”.
Consult the Company.

See Sections 221 for underground or 323 for overhead installation clearances.

405 Approved Current Transformer Cabinet; 3Ø, 4W; 201-3,000 Amps

 **Dimensions (42"H x 36"W x 14"D)**	**Catalog Designations 3Ø, 4W 201-3000 Amps** **Current Transformer Cabinet**
Manufacturer	**Model Number**
Atlantic Sheet Metal (410-391-8066)	ATL 3000
J. M. Gillin Corp. (484-459-0360)	G-423614-U.C.T.
Meter Devices Co. (888-367-6383)	507U6532
S.A.R. Metal Products (410-780-5434)	SAR002A
Hoffman Enclosures (763-422-2181)	A423614BGECT
N.J. Sullivan Co. (703-464-5944)	P10118

Company-approved, Customer-supplied cabinet to house Company metering current transformers.

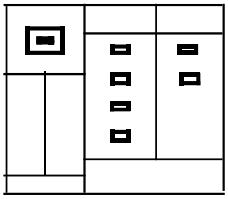
The following criteria must be used:

1. Customer supplied current transformer cabinet may be purchased from local suppliers that handle this C.T. cabinet. The Company has pre-approved specifications for this cabinet. The cabinet must comply with NEMA Type 3R standards.
2. Main disconnecting device, when ahead of the instrument transformers, shall comply with the Company's sealing requirements. See Section 104-8
3. Company shall furnish and install an approved terminal board in the C.T. cabinet to provide for stud type/compression terminals provided and installed by the Company.
4. Customer shall install a 1¼" rigid conduit from the C.T. cabinet to the meter up to a maximum of 50' to facilitate a remote meter. The Company will install the #10 meter wiring. For distances greater than 50', consult the Company.

Note: Height to C/L of meter - min. 42", max. 60".
Consult the Company.

See Sections 222 for underground or 324 for overhead installation clearances.

406 Approved Service Entrance Compartment; 3Ø, 4W; Up to 6,000 Amps



Service Supplied by Underground Cable
Drawing No. 14061-C (next page)

Company-approved manufacturers of compartments in switchgear to house Company metering instrument transformers or cable termination facilities.

Name of Manufacturer	Drawing No.	Termination Type
Eaton / Cutler-Hammer	8451C89	Bottom
	1C97091	Top
Schneider Electric / Square D	80266-449-R1	Bottom
	80266-448-R1	Top
	43-0036-175-2	CT Links
General Electric	75C323034A	Bottom
	75C143992	CT Links
Siemens	DJN14061-C	Bottom
	7S-8500-03A	CT Links
FMI	BGE-TF-01	Top
	BGE-BF-01	Bottom
Allied Power / PWRQ	BGE200-6000	Top
	BGE200-6000	Bottom
	BGE800-4000	CT Links
Lincoln	YXC-HS-BF	Bottom

The following criteria must be used:

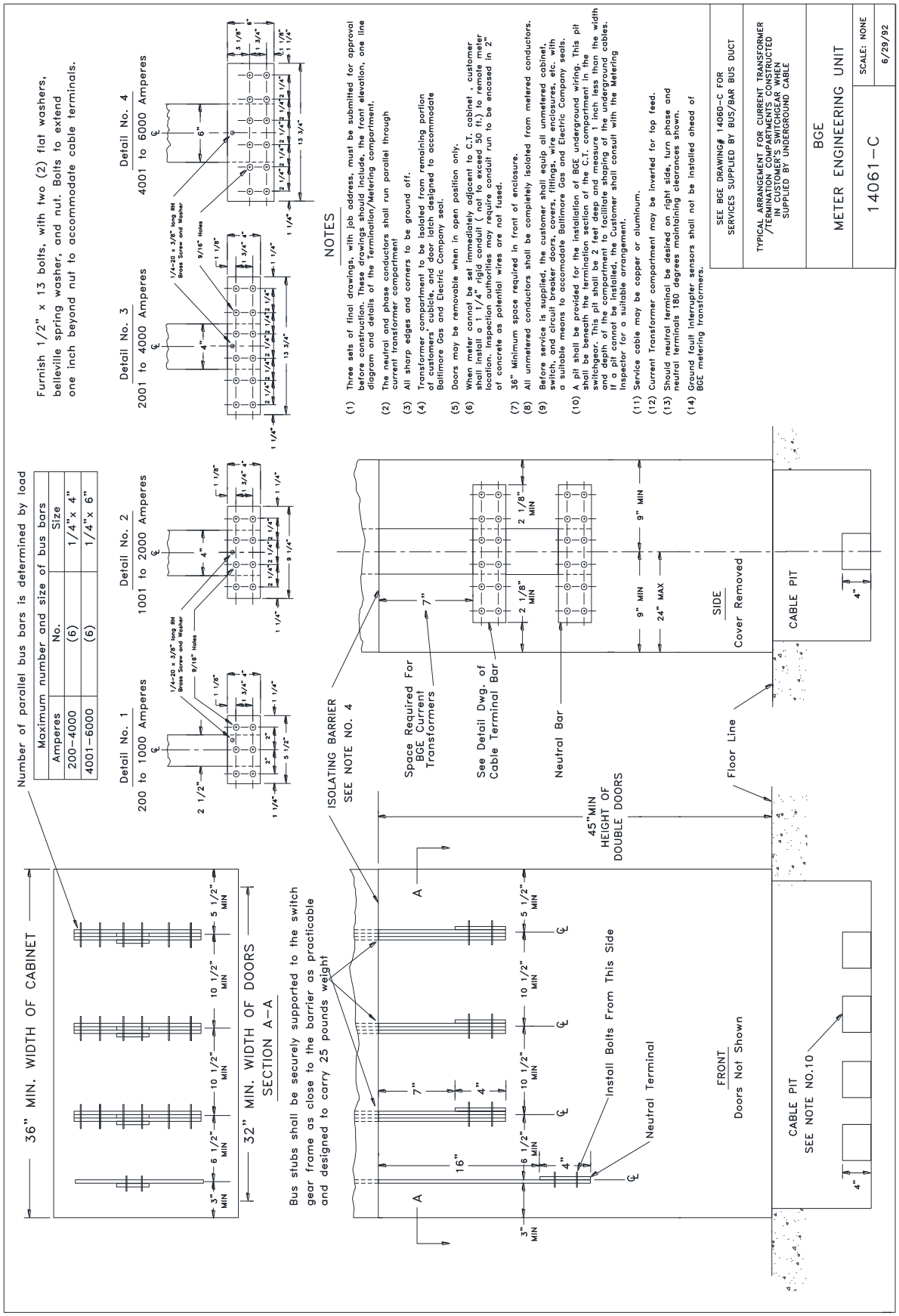
1. Prior to manufacture of the switchgear, the Customer shall submit at least three sets of the switchgear drawings (the Company will retain two sets) for Company approval to the responsible Gas and Electric New Business Department, I&C Customer Representative. Drawing should include the front elevation, one line diagram, and details of the metering/termination compartment. Submittals may be e-mailed to SMT for review at SmartMetering&Technology2@exeloncorp.com.
2. The instrument transformer compartment shall have two doors that are latched with a sealable handle. Handle must not contain a key.
3. Customer shall install a 1¼" rigid conduit from the compartment to the meter up to a maximum of 50' to facilitate a remote meter. The Company will install the #10 meter wiring. For distances greater than 50', consult the Company.
4. Meter socket may be installed on side of the compartment with 1-1/2" x 1-1/2" Kindorf (galvanized).

Note: Height to C/L of meter - min. 42", max. 60". Meter may be adjacent to the instrument transformer compartment, or remote from the switchgear equipment. Consult the Company.

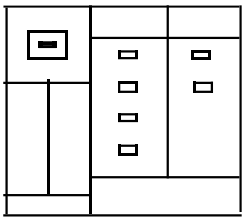
See Drawing No. 14061-C (next page) for details of typical arrangement for current transformer compartment constructed in customer's switchgear when supplied by underground cable. Invert drawing for top entry.

Note: A pit is required for the installation of Company Underground wiring. This pit shall be beneath the underground section of the C.T. compartment in the switchgear. This pit shall be two (2) feet deep and measure one (1) inch less than the width and depth of the compartment to facilitate shaping of the underground cables. The walls of the pit shall be of solid material (concrete or fiberglass). Duct to enter bottom of pit in a vertical position and extend to 4" into pit. Consult the Company. If a pit cannot be installed, the Customer shall consult with the Metering Inspector for a suitable arrangement.

Drawing No. 14061-C



407 Approved Switchgear Current Transformer Compartment; 3Ø, 4W; Up to 6,000 Amps



Drawing No. 14060-C (next page)

Company-approved compartments in switchgear to house Company metering instrument transformers or unmetered service equipment.

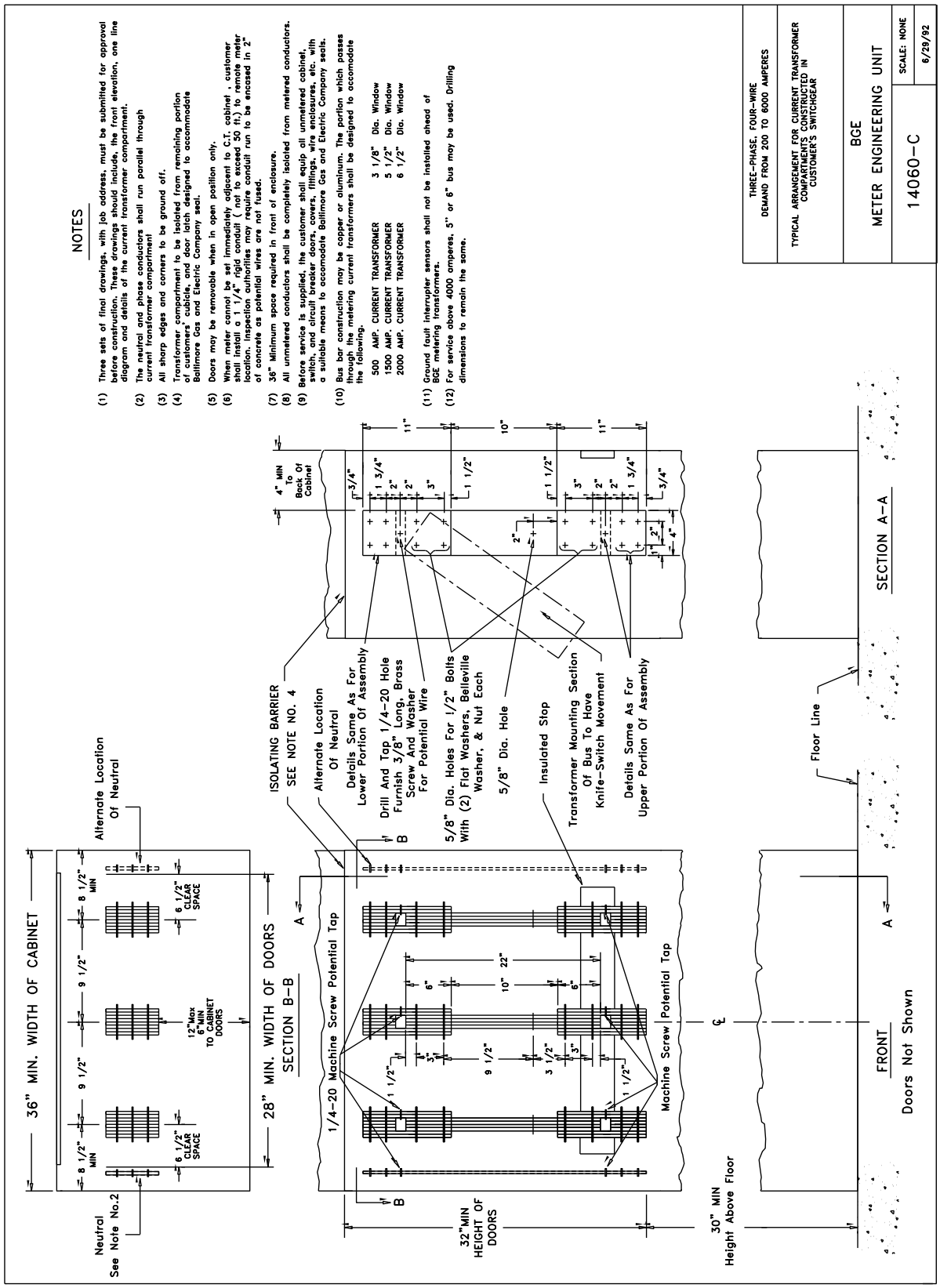
The following criteria must be used:

1. Prior to manufacture of the switchgear, the Customer shall submit at least three sets of the switchgear drawings (the Company will retain two sets) for Company approval to the responsible Gas and Electric New Business Department, I&C Customer Representative.
2. Main disconnecting device, when ahead of the instrument transformers, shall comply with the Company's sealing requirements. See Section 104-8
3. The instrument transformer compartment shall have two doors that are latched with a sealable handle. Handle must not contain a key.
4. Customer shall install a 1¼" rigid conduit from the C.T. compartment to the meter up to a maximum of 50' to facilitate a remote meter. The Company will install the #10 meter wiring. For distances greater than 50', consult the Company.
5. Meter socket may be installed on side of the C.T. compartment with 1-1/2" x 1-1/2" Kindorf (galvanized).

Note: Height to C/L of meter - min. 42", max. 60". Meter may be adjacent to the instrument transformer compartment, or remote from the switchgear equipment. Consult the Company.

See Drawing No. 14060-C (next page) for details of typical arrangement for current transformer compartment constructed in customer's switchgear.

Drawing No. 14060-C



A checklist guide is provided below and may be used optionally for ensuring the low-voltage switchgear submittal is approved in a timely manner.

Checklist Guide for Switchboard Drawings Submittal	**Address:**	
	Work Order #:	
	Date:	
	M&I Inspector:	
	Customer Name:	

Required Drawings			
1.	Front Elevation View – Front View of Switchgear	☐	
2.	One Line Diagram	☐	
3.	Submittal references BGE's standard drawing	☐	
4.	Top View Drawing with width & depth requirements	☐	
5.	Are installing current transformers (CTs) in each of the switchboard's incoming cable termination and/or CT compartment?	Yes ☐	No ☐
5a.	If yes to #5, switchboard utility termination compartment meets BGE-approved drawing specifications.	Yes ☐	N/A ☐
6.	Are submitting only one switchboard?	Yes ☐	No ☐
7.	If no to either #5 or #6,		
	• Provide Riser diagram	Yes ☐	N/A ☐
	• Determine metering location, i.e., modular metering or trough with multiple meters, etc.	Yes ☐	N/A ☐

[408-1] Communication Service on Company or Joint-Owned Pole	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	30

Service Conductors:

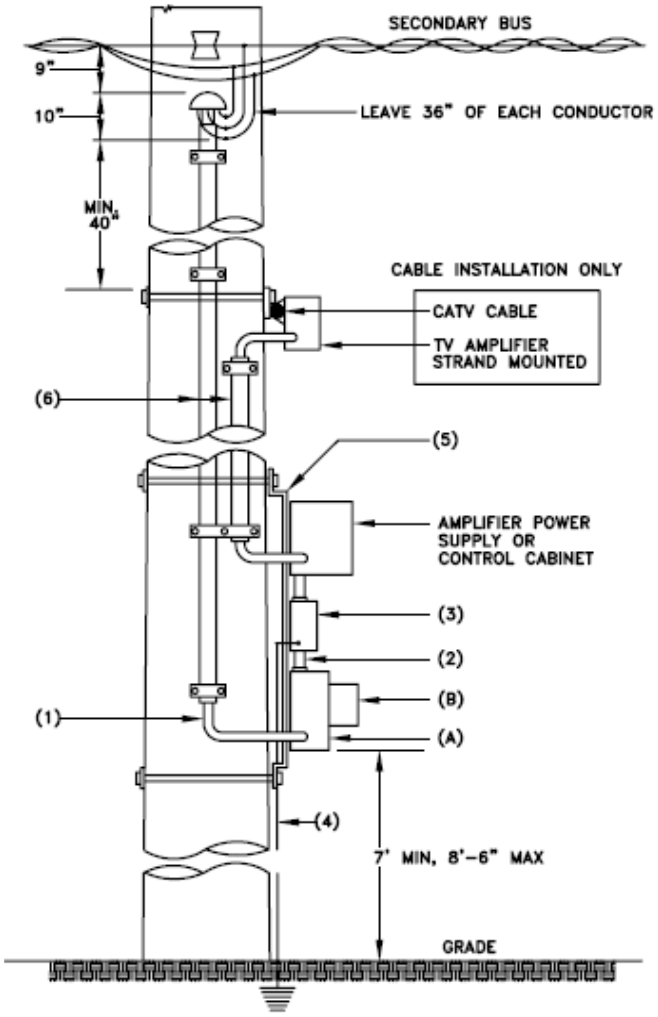
Line Side of Meter Socket — 1 set, Max. #2
Load Side of Meter Socket — 1 set, Max. #8

Customer Furnishes and Installs:

Communication Company furnishes and installs all material and equipment (except meter socket and meter).

Communication Company installs the Company furnished meter socket.

(1) Service entrance wiring - line side of meter. Must be 3-wire.
Note: Service head shall be nine (9) inches below the lowest wire of the secondary bus, 1Ø or 3Ø.
(2) Service entrance wiring from load side of meter socket.
(3) Main disconnect shall be three (3) wire, to permit the installation of a three-wire meter.
(4) Grounding electrode conductor.
(5) Metal bracket made in one piece, fastened to the pole with a thru-bolt at the top and bottom of bracket. All equipment shall be fastened to this bracket. This design is to facilitate the transfer of equipment. Thru-bolts are to be cut off flush with the nut.
(6) All cables run vertically on the pole, shall be covered with conduit, PVC-EPC 40, for cable protection. PVC conduits are to be fastened with two-(2)-hole bands.
(7) See Notes (N1) and (N2).



Company Furnishes and Installs:

(A) Meter Socket 100A (Communication Company shall install).
(B) Watt-hour meter.
(C) Makes connection to secondary bus.

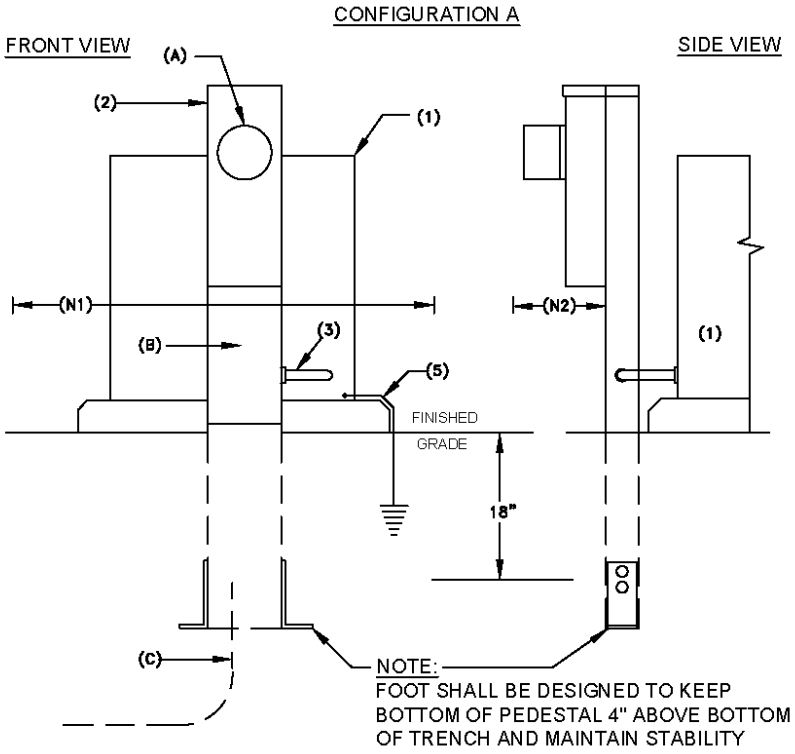
Notes:

(N1) Meter and other equipment to be installed on field side of pole.
(N2) A minimum clear space of 48” in front of all metering equipment is required.
18” minimum to walkway.
36” minimum to driveway.

Note: For an underground installation, see Section 408-2.

[408-2] 5G or CATV Service from Underground Service	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	125 – 200 (Continuous)

NOTE: There are two approved configurations for metering CATV amplifiers and wireless antenna sites fed from underground service laterals. With wireless antenna sites, the wireless service provider's (WSP) equipment is housed in a padmounted/ground mounted cabinet. Alternate designs or configurations shall be reviewed and approved by BGE EDES and SM&T Units prior to installation. See following pages for alternate configuration.



Service Conductors:

Line and Load Side of Meter Socket — 1 set, Max. 4/0

Customer Furnishes and Installs:

WSP or CATV Company furnishes and installs all material and equipment, including meter socket (except meter).

(1) Appropriate equipment cabinet for 5G; cabinet with amplifier and power supply for CATV. Cabinet to be mounted on a concrete (or other suitable material) base.
(2) Company-approved freestanding meter pedestal (See Section 401 for requirements).
(3) Service entrance wiring from load side of meter pedestal. Must be installed in flexible conduit.
(4) Main disconnect shall be three (3) wire, to permit the installation of a three-wire meter.
(5) Grounding electrode conductor.
(6) See Notes Section below.

Company Furnishes and Installs:

(A) Watt-hour meter.
(B) Makes connections in meter pedestal.
(C) Underground lateral service cable. Cable to be installed and spliced by BGE Crews or a BGE approved contractor.

Notes:

(N1) Meter equipment to be installed on field side of WSP equipment or CATV unit.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" minimum to driveway.
(N3) Service conduit from transformer/main shall be 4" PVC Conduit.

[408-2] 5G or CATV Service from Underground Service (Continued)		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 – 200 (Continuous)

Additional 5G Service Requirements:

(N4) WSP Antenna/Radio Equipment cannot be vented into the Meter or Cable space.

(N5) Installation must meet local jurisdictional requirements as well as any National Electrical Code (NEC) or National Electrical Safety Code (NESC) requirements deemed applicable.

(N6) A certificate of inspection from the local authority having jurisdiction is required prior to meter installation.

(N7) The WSP company is responsible for all cabling on the load side of the meter. A minimum of 12 inches of cable shall be left at the meter socket. Qualified BGE personnel or approved contractors shall make the terminations at the meter socket.

(N8) The WSP Equipment Cabinet shall meet all jurisdictional requirements, including but not limited to installation locations, right-of-way requirements and safety requirements associated with box shape, size, and allowable exterior temperatures.

(N9) The WSP installation must include a disconnect switch to allow electric utility (BGE) to disable the communication site to safely perform emergency or routine maintenance work.

(N10) All applicable NESC clearance requirements must be met when communication installations are in proximity to overhead electric supply conductors.

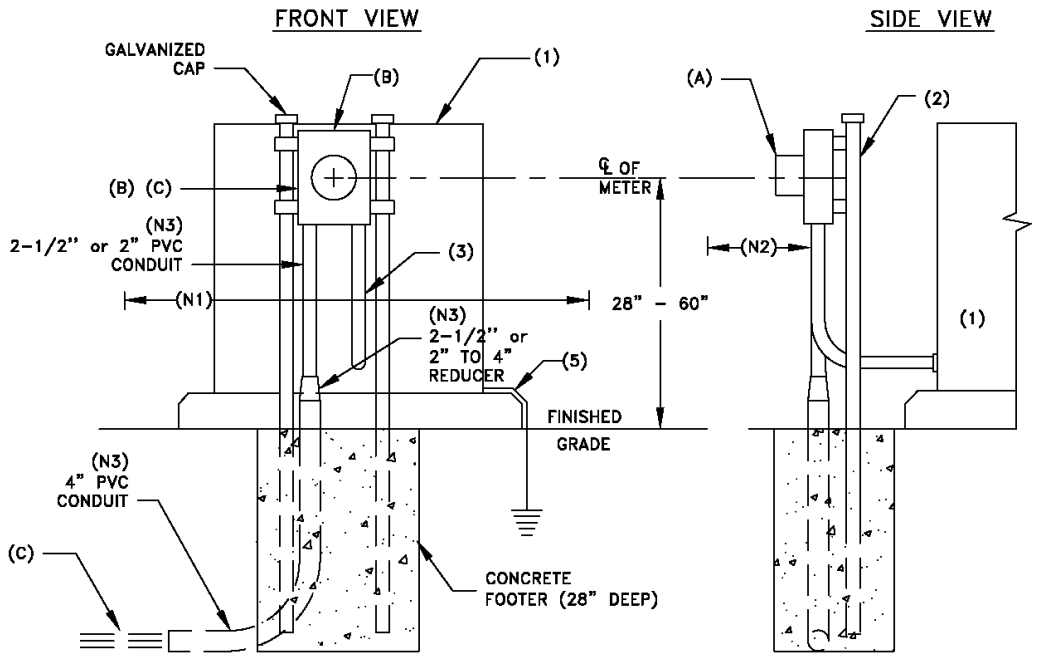
(N11) If ground mounted cabinet is to be installed within close proximity of a utility pole, a minimum of 5 ft. radial clearance is required to allow for future safe maintenance/replacements.

(N12) WSP Contact Information must be included on the exterior of the ground mounted cabinet, including a 24/7 emergency contact number.

[408-2] 5G or CATV Service from Underground Service (Continued)	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	125 – 200 (Continuous)

NOTE: There are two approved configurations for metering CATV amplifiers and wireless antenna sites fed from underground service laterals. With wireless antenna sites, the wireless service provider's (WSP) equipment is housed in a padmounted/ground mounted cabinet. Alternate designs or configurations shall be reviewed and approved by BGE EDES and SM&T Units prior to installation. See preceding pages for alternate configuration.

CONFIGURATION B



Service Conductors:

Line and Load Side of Meter Socket — 1 set, Max. 4/0

Customer Furnishes and Installs:

(WSP or CATV) Company furnishes and installs all material and equipment, including meter socket (except meter).

(1) Appropriate equipment cabinet for 5G; cabinet with amplifier and power supply for CATV Cabinet to be mounted on a concrete (or other suitable material) base.
(2) Two 2" hot dip galvanized conduit standards and install meter socket.
(3) Service entrance wiring from load side of meter socket. Must be installed in flexible conduit.
(4) PVC conduit raceways (EPC 40) for line wiring. Ell should be a minimum of 36" radius. See Sections 201-4 and 201-5 for details.
(5) Main disconnect shall be three (3) wire, to permit the installation of a three-wire meter.
(6) Grounding electrode conductor.
(7) See Notes Section below.

Company Furnishes and Installs:

(A) Watt-hour meter.
(B) 200 Amp meter socket box (Customer shall install).
(C) Makes connections in socket box.
(D) Underground lateral cable. Cable to be installed and spliced by BGE Crews or a BGE approved contractor.

Notes:

(N1) Meter equipment to be installed on field side of WSP equipment or CATV unit.
(N2) A minimum clear space of 48" in front of all metering equipment is required.
18" minimum to walkway.
36" minimum to driveway.

[408-2] 5G or CATV Service from Underground Service (Continued)		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 – 200 (Continuous)

5G Service Requirements:

(N4) WSP Antenna/Radio Equipment cannot be vented into the Meter or Cable space.

(N5) Installation must meet local jurisdictional requirements as well as any National Electrical Code (NEC) or National Electrical Safety Code (NESC) requirements deemed applicable.

(N6) A certificate of inspection from the local authority having jurisdiction is required prior to meter installation.

(N7) The WSP company is responsible for all cabling on the load side of the meter. A minimum of 12 inches of cable shall be left at the meter socket. Qualified BGE personnel or approved contractors shall make the terminations at the meter socket.

(N8) The WSP Equipment Cabinet shall meet all jurisdictional requirements, including but not limited to installation locations, right-of-way requirements and safety requirements associated with box shape, size, and allowable exterior temperatures.

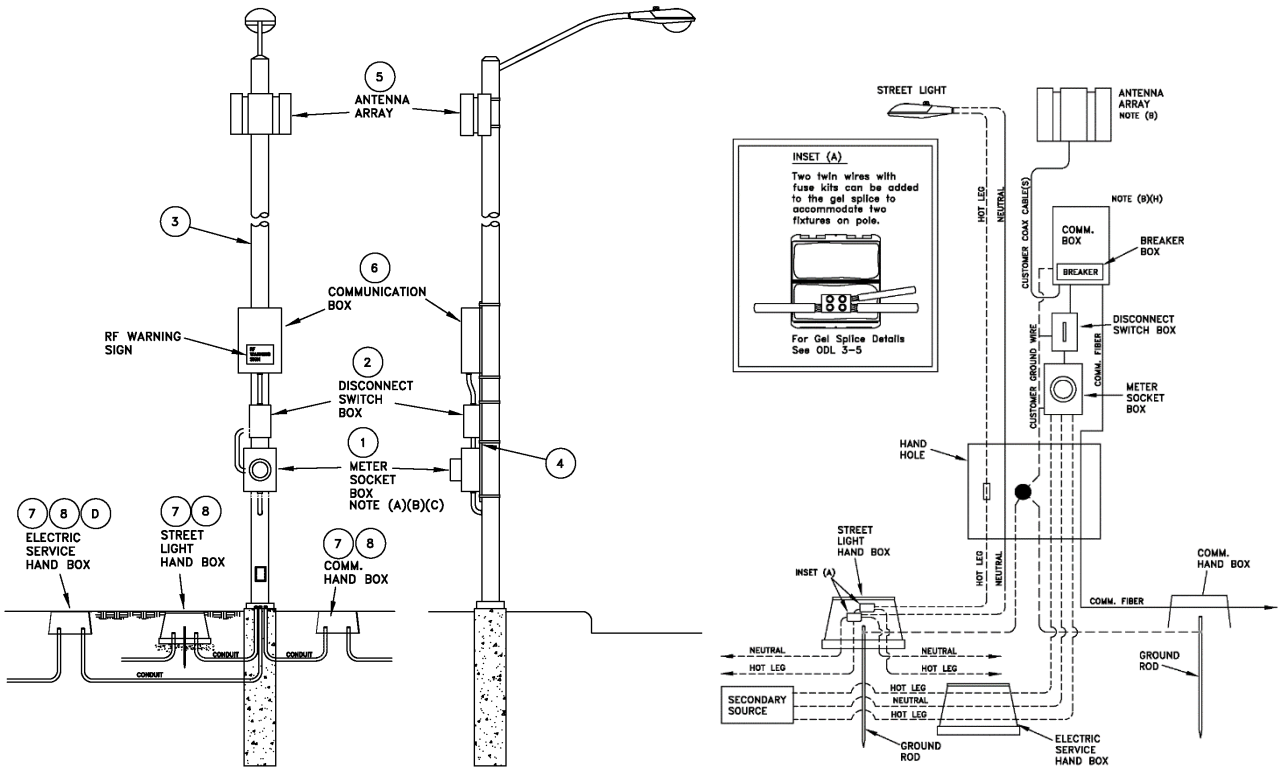
(N9) The WSP installation must include a disconnect switch to allow electric utility (BGE) to disable the communication site to safely perform emergency or routine maintenance work.

(N10) All applicable NESC clearance requirements must be met when communication installations are in proximity to overhead electric supply conductors.

(N11) If ground mounted cabinet is to be installed within close proximity of a utility pole, a minimum of 5 ft. radial clearance is required to allow for future safe maintenance/replacements.

(N12) WSP Contact Information must be included on the exterior of the ground mounted cabinet, including a 24/7 emergency contact number.

[408-3] 5G on a Customer-Owned Metal Pole	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)



Service Conductors:
Line and Load Side of Meter Socket — 1 set, Max. #2 Cu

Customer Furnishes and Installs:
Wireless Service Provider (WSP) furnishes and installs all material and equipment to support their installation including the following:

(1) WSP installs the Company approved/furnished meter socket (except meter).
(2) Main disconnect shall be three (3) wire, to permit the installation of a three-wire meter.
(3) Multi chambered metal pole mounted on concrete base. Other means of separating communication, underground service and/or streetlight cables may be used to establish separate raceways within the pole per NEC (National Electrical Code) requirements.
(4) Mounting provision for communication cabinet, meter, and disconnect switch shall be provided. To facilitate possible transfer of equipment, a single mounting bracket is recommended for all equipment but not required.
(5) Antenna and antenna mounting bracketry.
(6) Any WSP specific equipment not listed above including power cable and fiber/coax.
(7) All subsurface enclosures and conduit to support communication, electric service, and ODL (Outdoor Lighting) cable (when applicable). This may include up to three separate subsurface enclosures and accompanying duct between the enclosures and the pole. Electric service, streetlight, and communication circuits shall be in separate subsurface enclosures.
(8) All conduit runs must be unique for each cable, no shared conduits are permitted.
(9) 3'' to 2'' conduit reducer above foundation. Service conduit to meter box shall be 2.0'' max. Flexible conduits above foundation is recommended.
(10) Streetlight fuse inside handhole. Alternate location for the streetlight fuse is the streetlight hand box. Note, conduit is still required after fuse.

[408-3] 5G on a Customer-Owned Metal Pole (Continued)	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)

Company Furnishes and Installs:

(A) Meter Socket 100A: 13-594 (Communication Company shall install).
(B) Watt-hour meter.
(C) Makes all meter connections.
(D) Installs electric service cable from energy source to the meter.

General Requirements:

(GR1) Only one pole mounted antenna installation per pole
(GR2) Installation must meet local jurisdictional requirements as well as any National Electrical Code (NEC) or National Electrical Safety Code (NESC) requirements deemed applicable.
(GR3) A structural loading analysis and/or letter of approval supplied by the pole owner guaranteeing all BGE attachments to the non-BGE owned structure are approved. The letter of approval and/or structural analysis shall give consideration to the impact of attachment points, holes drilled, weight, dimensions of attachments, etc.
(GR4) To support BGE electric service to all devices and equipment being attached to the structure, the pole installation design must be agreed upon with BGE prior to start of construction. This includes electrical loading requirements, any equipment or material changes that impact structural or electrical loading of the asset must be communicated to BGE prior to the installation.

Meter/Service requirements:

(MS1) A minimum clear space of 48” in front of all metering equipment is required.
(MS2) The preferred location for the meter and all pole mounted communication equipment associated with the installation facing the roadway, unless equipment is less than 4’ from the roadway. Exceptions are permitted given they do not create a hazard or clearance issue to foot traffic or extend over any roadway.
(MS3) The preferred mounting height from the base of the meter socket to the ground line is a minimum of 7’6’’ from grade. 10’ clearance shall be maintained from the antenna. This allows for easy and safe access for maintenance and reading. If the meter socket obstructs pedestrian walkways, vehicle traffic, or vehicle parking, the installation location is not acceptable.
(MS4) A minimum of 4 ft. (48 inches) of clear level space must exist around the base of the pole below the meter socket to allow for a ladder to be placed for safe access to the equipment.
(MS5) A certificate of inspection from the local authority having jurisdiction is required prior to meter installation.
(MS6) The WSP is responsible for all cabling beyond the meter. A minimum of 12 inches of cable shall be left at the meter socket. Qualified BGE personnel shall make the terminations at the meter socket.
(MS7) Electric service duct sizes will be as follows;

- A maximum 2-inch schedule 40 duct shall be installed by customer between meter box and 3’’ to 2’’ conduit reducer.
- A minimum 3-inch schedule 40 duct shall be installed by customer between the pole and adjacent subsurface enclosure to provide an isolated raceway for the service to the meter.
- A minimum 4-inch schedule 40 duct from the electric source to the subsurface enclosure.

(MS8) Conduit between meter socket to disconnect shall be 1.5’’ max.
(MS9) No vertical runs of electric supply and/or streetlight cable are permitted on the exterior of the pole.

Grounding Requirements

(GRR1) Internal pole grounding provision shall be provided that is accessible via the streetlight hand hole access location near the base of the pole.
(GRR2) All conductive equipment supporting WSP installations (cabinet, antenna assembly, mounting brackets, etc.) and any ancillary equipment shall be grounded and bonded by the customer.
(GRR3) The customer shall extend an equipment grounding conductor not less than a no. 6 Covered CU to a driven ground rod in virgin soil in base of the communication subsurface enclosure.

[408-3] 5G on a Customer-Owned Metal Pole (Continued)	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)

Outdoor Lighting Requirements

(OL1) A 4-inch-wide by 9-inch-tall hand hole located approximately 18 inches above the ground line on the field side or side opposite traffic on the pole.

(OL2) A simplex double bolt mounting hub shall be located on the street side of the pole. The mounting location shall allow the lights to be mounted no higher than 30 ft. above ground line, with the rise of the arm included. Contact BGE for simplex mounting specification. Attachment point should allow luminaire mounting height above ground to match that of neighboring installations.

(OL3) Wire entrance way into pole shall be able to accommodate a 3-inch duct with 36-inch radius upsweep.

(OL4) Streetlight duct size will be as follows;

- A minimum 3-inch schedule 40 duct to be installed by customer between streetlight hand box and pole location.

(OL5) No WSP equipment shall be installed between a luminaire and a surface (road, parking lot, sidewalk, etc.) intended to be illuminated, as this may interfere with the required illumination pattern.

(OL6) If non BGE approved luminaires are expected to be maintained by BGE, they must be approved by BGE. Customer shall supply the following:

- sample luminaire
- manufacturers specification
- appropriate LM79 report focused on wattage consumption
- Order code
- review of overcurrent protection and grounding

(OL7) Any change in luminaire energy consumption must be reported to BGE outdoor lighting unit.

(OL8) All access points to lighting equipment on pole such as hand hole covers shall be labeled as “Street Lighting”.

(OL9) See ODL 4-1, 4-2, and 4-3 for hand box installation requirements.

- Local jurisdiction hand box requirements may exceed ODL hand box rating
- Complete Outdoor Lighting Information Request form at https://secure.bge.com/myaccount/myservice/pages/outdoorlighting.aspx to acquire a street light hand box

(OL10) National Electrical Manufacturers Association (NEMA) stickers to be applied to fixture indicating High Intensity Discharge (HID) comparable size.

Safety Requirements

(SR1) An RF warning sign shall be mounted on the wireless receiver cabinet. The sign shall indicate the minimum safe working distance from the antenna based on the maximum permissible exposure limits. The wireless service providers name and 24-hour contact number shall be identified on the sign. Its dimensions shall be a minimum of 9 in. high by 11 in. wide.

(SR2) The WSP’s installation must include a disconnect switch to allow the electric utility (BGE) to disable the WSP site to safely perform emergency or maintenance work.

(SR3) All applicable NESC clearance requirements must be met when WSP installations are in proximity to overhead electric supply conductors.

(SR4) All applicable OSHA working clearance requirements and the Maryland High Voltage Line Act must be met when WSP installations are in proximity to overhead electric supply conductors. No unqualified worker is permitted within 10 ft. of electric supply conductors. For additional details, go to https://www.bge.com/safetycommunity/safety/pages/marylandhighvoltagelineact.aspx

(SR5) Overhead personnel shall maintain a minimum safe working distance of 10 ft. in all directions from any operating communication antennas. The minimum safe working distance may be reduced to the WSP's posted safe working distance at each site. Refer to OP-BE-083 (DWP 453-1) constructing, maintaining, and working in proximity to wireless communication antenna systems.

[408-4] Communication Antenna on a BGE or Joint-Owned Distribution Wooden Pole	**Service**	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)

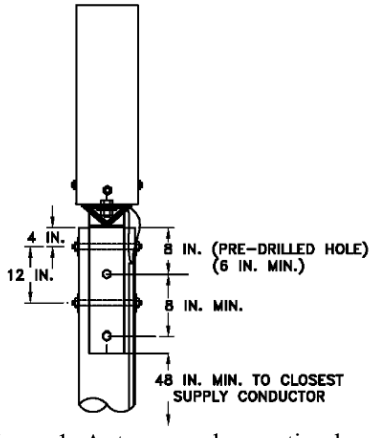


Figure 1: Antenna and mounting bracket

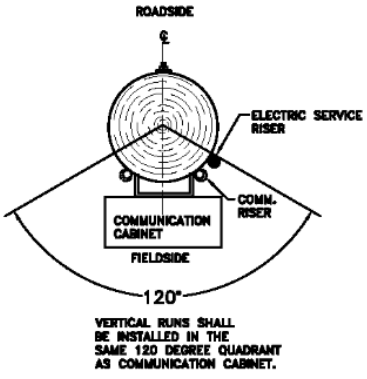


Figure 2: Top view of pole

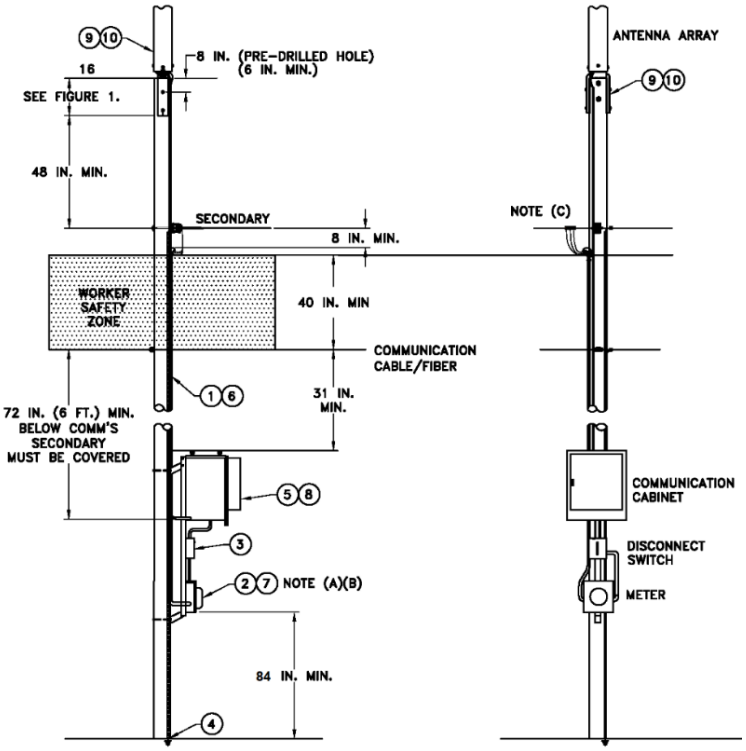


Figure 3: Overhead-Fed Secondary Pole

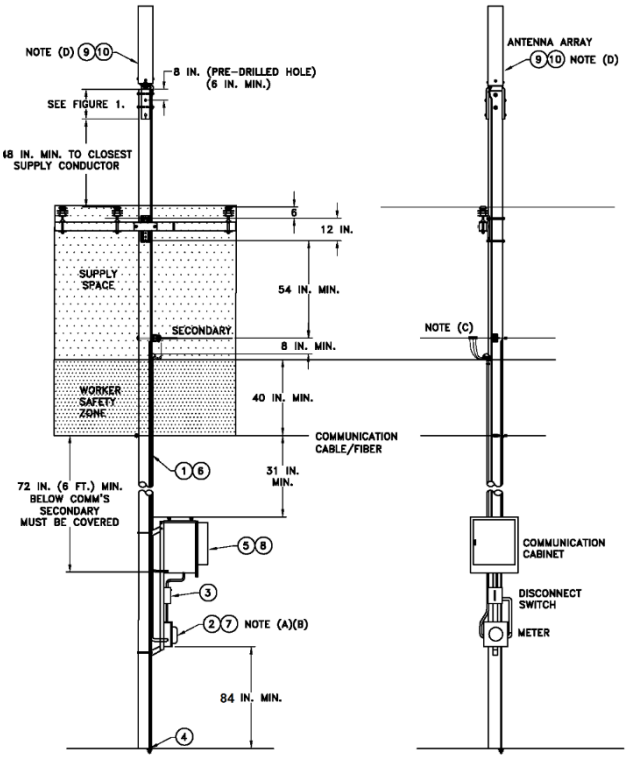


Figure 4: Overhead-Fed Primary Pole

[408-4] Communication Service on a BGE or Joint-Owned Distribution Wooden Pole (Continued)		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)

Service Conductors:

Line Side of Meter Socket — 1 set, Max. #2 Cu
Load Side of Meter Socket — 1 set, Max. #2 Cu

Customer Furnishes:

Communication Company furnishes all material and ancillary equipment to support their installation including but not limited to the following;

Installed (and/or assembled) by Customer

(1) Service entrance cable - line side of meter. Must be 3-wire. Note: Service head shall be nine (9) inches below the lowest wire of the secondary bus, 1Ø or 3Ø. The service entrance cable will be preassembled by the customer/WSP, then installed on the pole by qualified BGE field personnel or a qualified BGE contractor.
(2) All service entrance wiring from load side of meter socket.
(3) Main disconnect shall be three (3) wire, to permit the installation of a three-wire meter.
(4) If ground rod is present, use existing ground rod. If no ground rod is present, install ground rod and extend minimum #6 Covered CU ground wire to all communication equipment.
(5) A minimum 4-inch metal standoff bracket made in one piece (Unistrut or C-Channel), fastened to the pole with a 5/8 inch thru-bolt at the top and bottom of bracket. All equipment shall be fastened to this bracket. This design is to facilitate the transfer of equipment. Thru bolts are to be cut off flush with the nut.
(6) All cables run vertically on the pole below communication, shall be covered with conduit, PVC-EPC 40, for cable protection. PVC conduits are to be fastened with two-(2)-hole bands every 10 ft.
(7) Communication Company installs the BGE approved/furnished 100A meter socket (except meter).
(8) Any communication specific equipment (antenna, antenna bracketry, cable/fiber, etc.) not listed above including power cable and fiber/coax.

<u>Customer-supplied equipment, Installed by BGE</u>

(9) Antenna and antenna mounting bracketry.
(10) Any equipment/cable that must be installed/extend above the communication space must be installed by qualified BGE field personnel.

Company Furnishes and Installs:

In support of the installation, BGE furnishes and installs the items listed below:

(A) 100A meter.
(B) Makes all meter connections.
(C) Makes connection to secondary bus.
(D) Install 5/8-inch double arming bolts at 4 inches and 12 inches from pole top. This is done to prevent pole top failure due to splitting.
(E) Service conduit to side of meter socket shall be 2.0'' max.
(F) Conduit from side of meter socket to disconnect shall be 2.0'' max.

Notes:

(N1) Triplex or top wire of open wire secondary buss.
(N2) Use separate connector for each connection to common neutral.
(N3) All third-party equipment attachments to the pole must be secured with 5/8 inch through bolts.

[408-4] Communication Service on a BGE or Joint-Owned Distribution Wooden Pole (Continued)		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)

General Requirements (GR):

(GR1) Only one pole mounted antenna installation per pole

(GR2) Installation must meet local jurisdictional requirements.

(GR3) All Wireless Service Provider (WSP) equipment shall be designed and assembled to meet all requirements of current version of the National Electrical Safety Code (NESC) and National Electric Code (NEC).

(GR4) WSP installations must not create an Americans with Disabilities Act (ADA) violation.

(GR5) All installation locations must be bucket truck accessible and mounted on 40, 45, or 50 ft. poles with maximum 43 ft. of pole above grade.

(GR6) All pole mounted equipment and vertical runs of cable, both new and existing, must be installed or re-located to the same 120° quadrant on the pole circumference to preserve climbing space. The 120° quadrants circumference varies based on pole class and mounting height above ground line.

(GR7) To preserve pole space and increase mounting options, a minimum 4 in. standoff bracket is required for communication cabinet and all ancillary equipment located below communication space.

(GR8) The installation of the WSP equipment mounted below the communication space shall not result in a readily climbable pole to unauthorized persons. Fences and other structures in proximity to the communication cabinet shall not create a stepped climbing opportunity.

(GR9) All vertical runs of communication cable (fiber/coaxial) must be covered with riser shield.

(GR10) A transformer is not depicted in this standard, but may be installed if space can be obtained, where service is not available from an existing 120/240v secondary bus or secondary bus cannot be extended from adjacent or nearby existing poles.

Meter/Service requirements (MS):

(MS1) A minimum of 4 ft. (48 inches) of clear level space must exist around the base of the pole below meter socket to allow for a ladder to be placed for safe access to the equipment.
18” minimum to walkway
36” minimum to driveway

(MS2) The preferred location for the meter and all pole mounted communication equipment associated with the installation is on the field side of the pole. Exceptions are permitted given they do not create a hazard or clearance issue to foot traffic or extend over any roadway.

(MS3) A certificate of inspection from the local authority having jurisdiction is required prior to meter installation.

(MS4) The preferred mounting height from the base of the meter socket to the ground line is a minimum of 7’6’’ above grade. This allows for easy and safe access for maintenance and reading. If the meter socket obstructs pedestrian walkways, vehicle traffic, or vehicle parking, the installation location is not acceptable.

(WSP5) WSP is responsible for the assembly of the conduit with service entry cable inside from the weather head to the line side of the 100-amp meter socket including the disconnect switch. Leave a minimum of 36 inches of cable at the service head and a minimum of 12 inches at the meter socket. Qualified BGE personnel shall make the terminations at the secondary bus and the meter.

[408-4] Communication Service on a BGE or Joint-Owned Distribution Wooden Pole (Continued)		
	Service	1Ø,3W
	Max. Volts	240
	Max. Amps	125 (Continuous)

Grounding Requirements (GRR):

(GRR1) All conductive equipment supporting communication installations (cabinet, antenna assembly, mounting brackets, etc.) and any ancillary equipment shall be grounded and bonded by the customer.

(GRR2) The WSP shall extend an equipment grounding conductor not less than a no. 6 covered CU to a driven ground rod in virgin soil. If an existing BGE grounding conductor is present the WSP grounding conductor must be bonded to it.

(GRR3) The WSP shall bond to all foreign communication messengers in the communication space.

(GRR4) The WSP shall cover their equipment grounding conductor with a riser shield.

Clearance Requirements (CR):

The vertical clearance at the pole shall be:

(CR1) A minimum of 40 inches between the secondary electric supply conductors (or neutral) including the service drip loop and to any communication cables or associated attachments.

The vertical clearance within the span shall be:

(CR2) A minimum of 30 inches must be maintained between the secondary or system neutral and communications cables.

Outdoor Lighting Requirements (OL):

(OL1) No communication equipment shall be installed between a luminaire and a surface (road, parking lot, sidewalk, etc.) intended to be illuminated, as this may interfere with the required illumination pattern.

Safety Requirements (SR):

(SR1) An RF warning sign shall be mounted on the wireless receiver cabinet. The sign shall indicate the minimum safe working distance from the antenna based on the maximum permissible exposure limits. The wireless service providers name and 24-hour contact number shall be identified on the sign. Its dimensions shall be a minimum of 9 in. high by 11 in. wide.

(SR2) The wireless service providers installation must include a disconnect switch to allow electric utility (BGE) to disable the communication site to safely perform emergency or maintenance work.

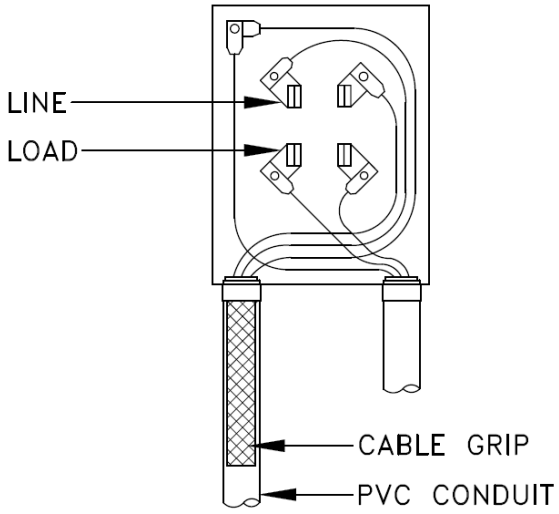
(SR3) All applicable NESC clearance requirements must be met when communication installations are in proximity to overhead electric supply conductors.

(SR4) No maintenance work shall be performed by the WSP inside the supply space. If any work is needed that would encroach on the supply space, the WSP must contact BGE.

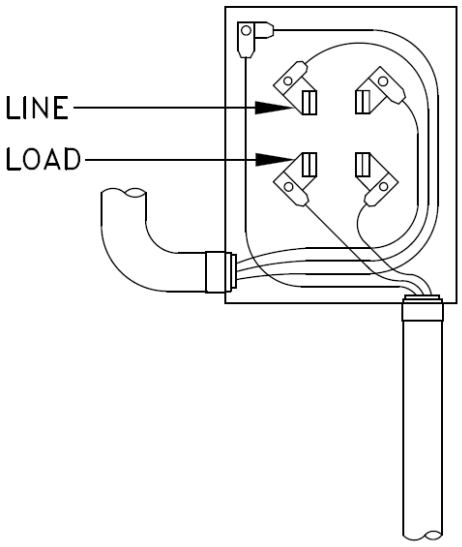
(SR5) Overhead personnel shall maintain a minimum safe working distance of 10 ft. in all directions from any operating communication antennas. The minimum safe working distance may be reduced to the WSP's posted safe working distance at each site. Refer to OP-BE-083 (DWP 453-1) constructing, maintaining, and working in proximity to wireless communication antenna systems.

409 Typical Wiring Method for a Single Meter Socket

UNDERGROUND FED METER SOCKET



OVERHEAD FED METER SOCKET



410 Fire Pump Installations

NOTE: All fire pump installations must be in a CT-rated meter.

The AHJ determines whether the building requires a fire pump. The fire pump can be made in accordance with the NEC or or a separate service and meter provided per utility. A tap for the fire pump requires approval by the AHJ.

Acceptable documentation to BGE for showing the fire pump supply are the following:

- Switchboard diagram
- Power riser diagram

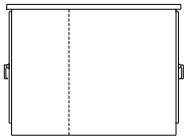
The attached table provides the related sizing of fire pump services and their associated metering needs. Use of this table will help ensure consistent application of service cable and metering equipment for these installations.

Fire Pump
Cabinet and Conductor Sizing

Fire Pump Horsepower Rating	Motor FLA Amperes	Motor Starting Amperes	KVA Load	Locked Rotor Amperes	Locked Rotor KVA	Type of Installation	CT Size	Service Conductors
by Voltage Class	From 2005 NEC Table 430.250	FLA x 125%		From 2017 NEC Table 430.251(B)				Up to 100 ft
120/208V								
7.5	24	30	9	140	50	CT-Rated	500/5	4/0
10	31	39	11	179	64	CT-Rated	500/5	4/0
15	46	58	17	257	84	CT-Rated	500/5	4/0
20	59	74	21	321	104	CT-Rated	500/5	4/0
25	75	94	27	404	146	CT-Rated	500/5	4/0
30	88	110	32	481	173	CT-Rated	500/5	4/0
40	114	143	41	641	231	CT-Rated	500/5	4/0
50	143	179	52	802	289	CT-Rated	500/5	1 set 500 kcmil
60	169	211	61	962	347	CT-Rated	500/5	1 set 500 kcmil
75	211	264	76	1200	432	CT-Rated	500/5	1 set 500 kcmil
100	273	341	98	1603	577	CT-Rated	500/5	1 set 500 kcmil
125	343	429	124	2007	723	CT-Rated	500/5	2 sets 500 kcmil
150	396	495	143	2400	865	CT-Rated	500/5	2 sets 500 kcmil
200	528	660	190	3207	1155	CT-Rated	500/5	3 sets 500 kcmil
277/480V								
7.5	11	14	9	63.5	53	CT-Rated	500/5	4/0
10	14	18	12	81	67	CT-Rated	500/5	4/0
15	21	26	17	116	96	CT-Rated	500/5	4/0
20	27	34	22	145	121	CT-Rated	500/5	4/0
25	34	43	28	183	152	CT-Rated	500/5	4/0
30	40	50	33	218	181	CT-Rated	500/5	4/0
40	52	65	43	290	241	CT-Rated	500/5	4/0
50	65	81	54	363	302	CT-Rated	500/5	4/0
60	77	96	64	435	362	CT-Rated	500/5	4/0
75	96	120	80	543	451	CT-Rated	500/5	4/0
100	124	155	103	725	603	CT-Rated	500/5	4/0
125	156	195	130	908	755	CT-Rated	500/5	1 set 500 kcmil
150	180	225	150	1085	902	CT-Rated	500/5	1 set 500 kcmil
200	240	300	200	1450	1205	CT-Rated	500/5	2 sets 500 kcmil

Reference NEC Article 695 - Fire Pumps

411 Approved Outdoor C.T./Service Termination Cabinet 3Ø, 4W 4000 Amps

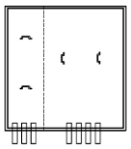
 **Dimensions (72”W x 54”H x 43”D)**	**Catalog Designations 1Ø,3W, 3Ø,4W 4000 Amps Service Termination Cabinet**
Manufacturer	**Model Number**
J. M. Gillin Corp. (484-459-0360)	G-544372-STC

Company-approved, Customer supplied free-standing service termination cabinet to house Company metering current transformers. Use of this cabinet is detailed in Section 227. This cabinet contains two (2) separate compartments, one for the Company and the other for the Customer. The Company side will provide a termination area for cables running underground from the secondary side of the Company transformer. It will also house the current transformers. The Customer side will provide a termination area for load cables. The watthour meter socket will be attached to the exterior of the cabinet on the Company’s side using 1-1/2” x 1-1/2” Kindorf (galvanized).

The following criteria must be used:

1. Customer supplied service termination transformer cabinet may be purchased from one of the pre-approved local suppliers listed above. The cabinet comes supplied with copper bus bars that are attached to copper termination strips. It must comply with NEMA Type 3R standards.
2. Customer shall furnish and install a 1-1/4” raceway that runs from the bottom of the meter socket through the side of the cabinet into the Company compartment.
3. Customer shall furnish and install a 4” thick concrete pad. If 8 or more ducts are required between the transformer and the cabinet, a 24” pit will be required on the Company end of the pad. See Section 226 for further details.
4. Customer shall furnish and install eight (8) foot ground rod with #4 bare copper wire tied to ground lug on customer side of cabinet.

412 Approved Indoor Service Termination Cabinet; 3Ø, 4W; 1,600-3,000 Amps



Catalog Designations
3Ø, 4W 1600-3000 Amps
Service Termination Cabinet

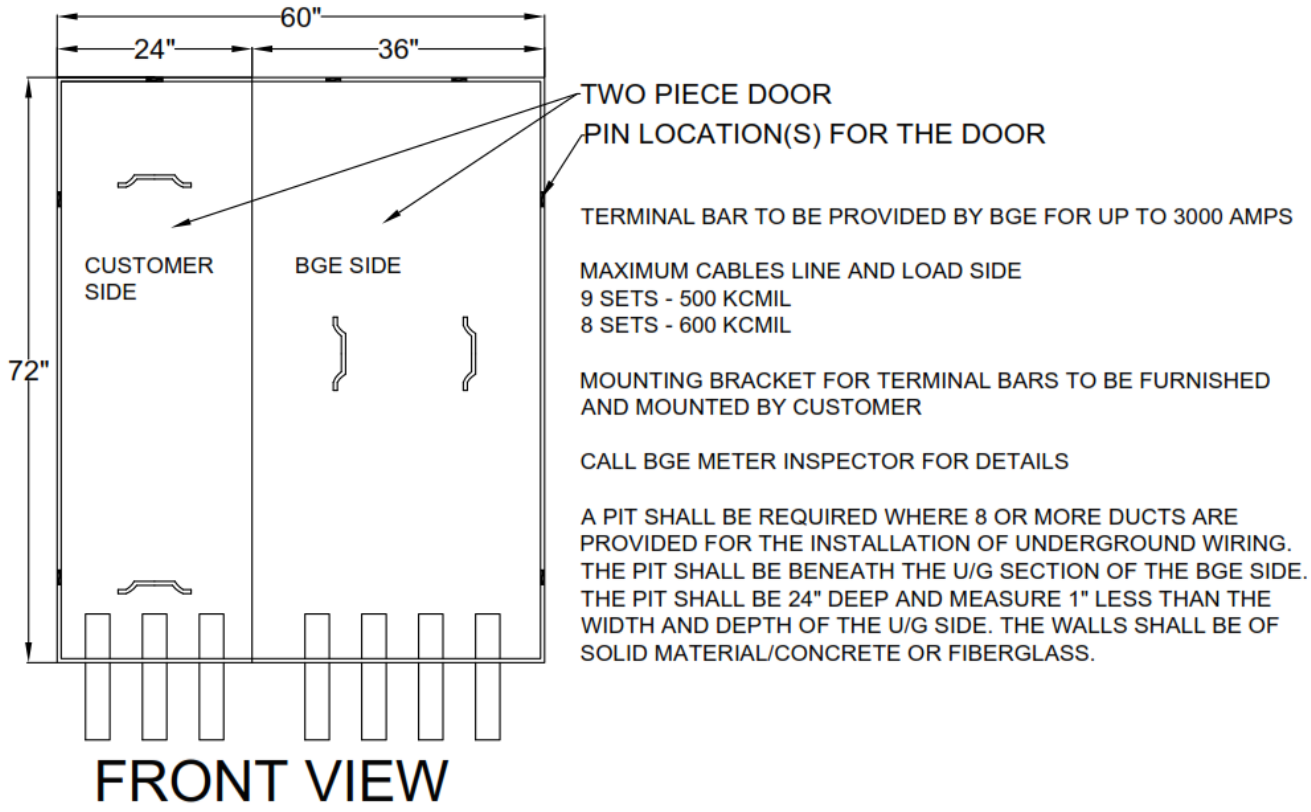
Manufacturer	Dimensions	Model Number
J. M. Gillin Corp. (484-459-0360)	**(72”H x 60”W x 14”D)**	G-726014-STC

Company-approved, Customer-supplied cabinet to house Service Terminations of underground line and load cables.

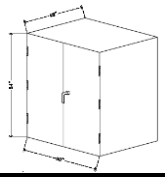
The following criteria must be used:
1. Customer supplied service termination cabinet may be purchased from local suppliers. The Company has pre-approved specifications for this cabinet.
2. Termination Cabinet shall comply with the Company’s sealing requirements. See Section 104-8
3. Company shall furnish and install an approved terminal board.
4. Service cables can only enter from the bottom of the cabinet.

Note: For this type of installation, consult the Company.

See Section 222 for underground installation clearances.



413 Approved Indoor Service Termination Cabinet; 3Ø, 4W; Above 3,000 Amp

	**Catalog Designations** **3Ø, 4W Above 3000 Amps** **Service Termination Cabinet**	
Manufacturer	**Dimensions**	**Model Number**
S.A.R. Metal Products (410-780-5434)	**(84”H x 60”W x 48”D)**	Custom made
J.M. Gillen Corp (484-459-0360)	**(84”H x 60”W x 48”D**	Custom made

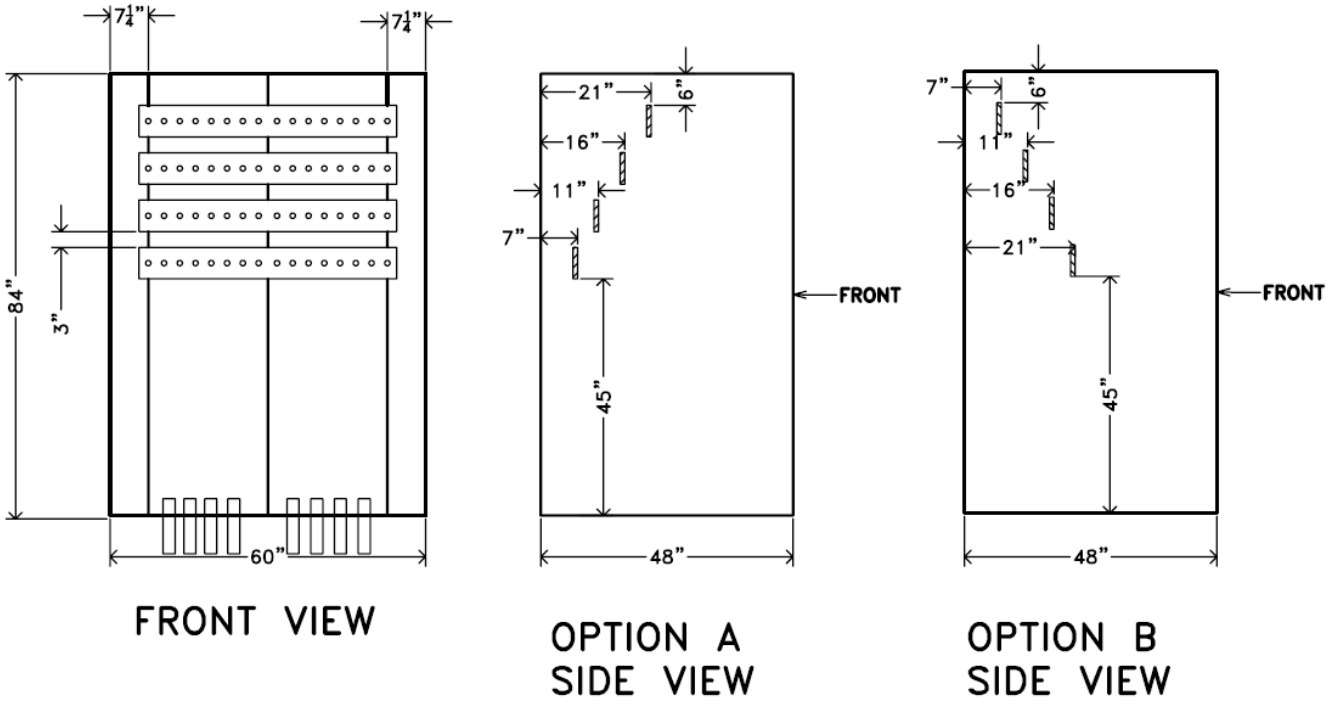
Note: For this type of installation, consult the Company.

Company-approved, Customer-supplied cabinet to house Service Terminations of underground line and load cables. This cabinet is not design to house BGE metering equipment.

The following criteria must be used:

1. Customer supplied service termination cabinet may be purchased from local suppliers. The Company has pre-approved specifications for this cabinet. Note that bars and cabinet must be UL approved.
   - Copper bars are 3’9”L x 6”W.
   - Connector holes are 2” on center and 9/16” in diameter.
   - Bracket bolts are 1” off end of bar and center bracket is 22” from end.
2. Termination Cabinet shall comply with the Company’s sealing requirements. See Section 104-8
3. Service cables can only enter from the bottom of the cabinet.

See Section 222 for underground installation clearances.



414 Service Entrance Trough Requirements

BGE has implemented new service entrance trough requirements to protect utility and contract personnel from electrical injury. These requirements focus on protecting, supporting and training service entrance cables. They also include new requirements for trough support and trough covers. New trough access procedures are also detailed below.

The company has pre-approved specifications for service entrance troughs with the vendors listed below.

	**14"(W) x 14" (H) Service Entrance Trough (various lengths)**
Manufacturer	**Phone number**
J.M. Gillin Corp.	(484-459-0360)
S.A.R Metal Products	410-780-5434
Atlantic Sheet Metals	410-391-8066
N.J. Sullivan Co.	703-464-5944

See drawing (following page) for details of service entrance trough requirements.

Customer Furnishes and Installs

(1) 14" (W) x 14" (H) service entrance trough (various lengths) to be constructed of 14-gauge steel or 10-gauge aluminum.
(2) Trough cover(s) – maximum 48" in length. Two handles per cover (see drawing).
(3) Trough support brackets – affixed to wall every 48". A minimum 6" clearance is required below trough support brackets.
(4) See Notes (N1), (N2), (N3), and (N4).

Company Furnishes and Installs:

(A) Terminal Blocks (Not Shown)

Notes:

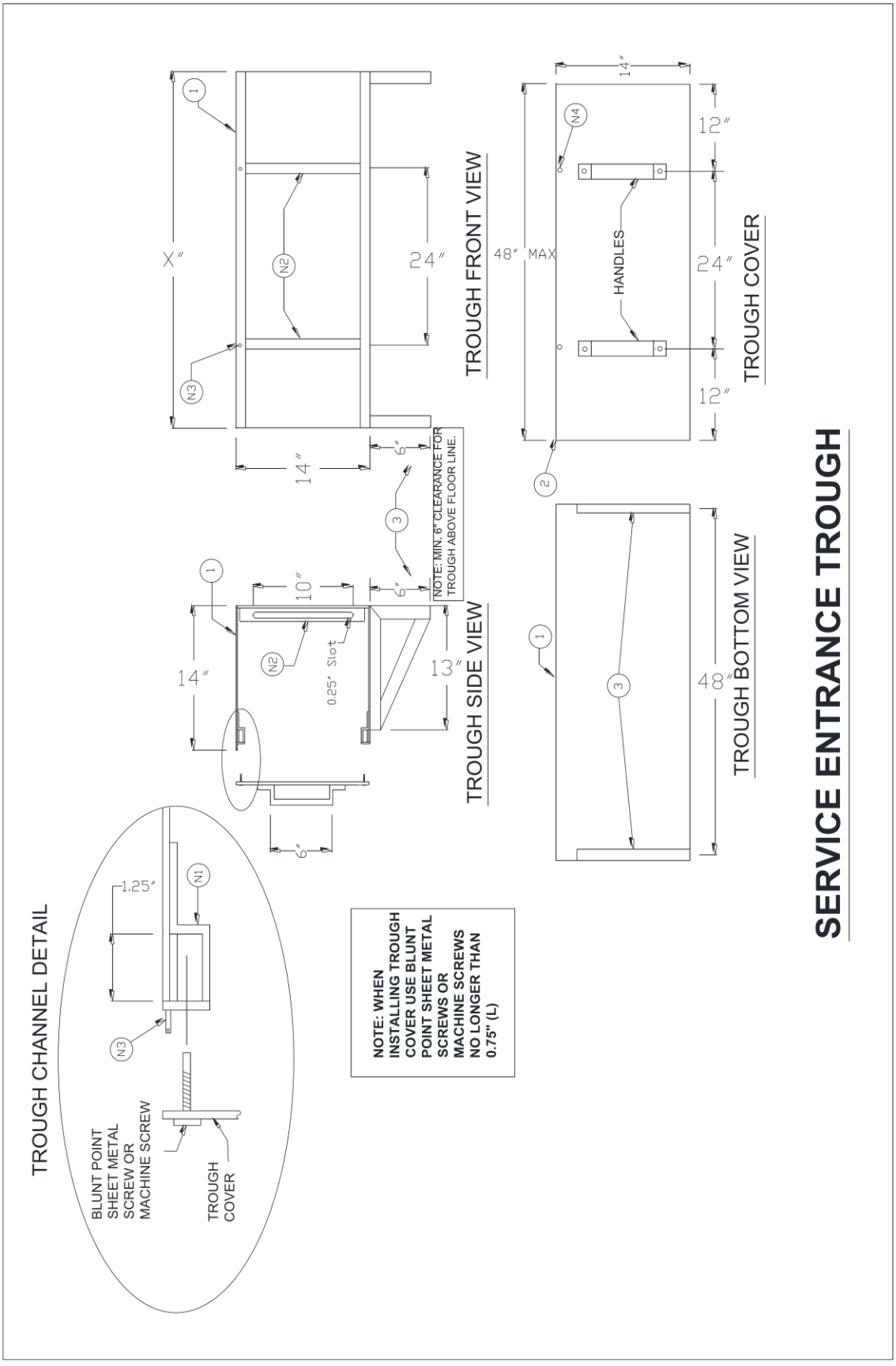
(N1) Enclosed channel to prevent screw penetration into trough as shown in drawing. Use blunt point sheet metal screws or machine screws no longer than 3/4". Design may vary by manufacturer. Any variations from drawing must be approved by BGE.
(N2) Wire tie channel with 1/4" inch slot inside trough every 24" for cable training and support.
(N3) Guide pins or tabs to align and support trough cover. Two guide pins or tabs minimum per trough cover. They should also provide provisions for sealing trough.
(N4) Guide pin holes.

See Sections 215-218, 220-222, 224-226, and 228-230 for underground installation. See sections 318-320, 322-324 for overhead installation.

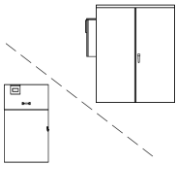
<u>Trough Access Procedure (effective April 2009)</u>

1. Master or Licensed Electrician calls BGE (G&E New Business Line: 410-637-8713/800-233-1854) to inform us of planned worked involving an electrical trough.
2. Call is routed to appropriate M&I Meter Inspector based on geographic responsibility.
3. Meter Inspector discusses job with electrician to obtain necessary information (e.g. Work Order# (if available), address, customer, reason for access, electrician's name, expected date of completion, etc.)
4. Meter Inspector notes request in Asset Suite (if job exists at this location) or meter inspection reports (if job does not exist in Asset Suite) maintained by M&I.
5. If necessary, Meter Inspector travels to job site for pre-work inspection and contacts with electrician.
6. Master or Licensed Electrician performs work on the trough and calls Meter Inspector to indicate work is complete.
7. If BGE follow up work remains, field crew will reseal trough. If follow up BGE work is not required, Meter Inspector reseals trough. If Meter Inspector has not heard from electrician within a week or so after expected completion date, he contacts electrician to follow-up on job status.

414 Service Entrance Trough Requirements (cont)



415 Approved Commercial Pedestals and Cabinets for Public EV Charging Stations

	**Cabinets and Pedestals Metering Equipment Catalog Designations 200 Amp and 400 Amp**	**Service/Voltage**
Manufacturer	**Model Numbers**	
Milbank (816-483-5314)	*CP3B5411GKDGSP4[1,2]	**1Ø, 3 Wire 120/240 V**
Milbank (816-483-5314)	*CP3BC481XW14ADGSP1[3]	**3Ø, 4 Wire 480/277 V**
Milbank (816-483-5314)	*CP3BC481XW35APBGE2[3,4]	**3Ø, 4 Wire 480/277 V**
Milbank (816-483-5314)	*CP3B5281FB14DGCSSP1[2,5]	**3Ø, 4 Wire 480/277 V**
Milbank (816-483-5314)	*CP3B5281XD14DGCSSP1[2,4,5]	**3Ø, 4 Wire 480/277 V**
Milbank (816-483-5314)	*CP3B51115A22P13SP1[6]	**1Ø, 3 Wire 120/240 V**
Milbank (816-483-5314)	*CP3B52115ADGSP6[5]	**1Ø, 3 Wire 120/240 V**

* Mounts on concrete pad.

Cabinets for public EV charging stations.

BGE supplies, installs and maintains all materials (except underground lateral and meter).

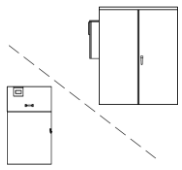
Notes:

1. Maximum capacity – 400 amps (320 amps meter)
2. Self-contained meter pedestal.
3. CT-rated cabinet.
4. Contains an inner enclosure for a 480V step-down transformer that is used for applications with both level 2 and level 3 charging stations.
5. Maximum capacity – 200 amps
6. Maximum capacity – 100 amps

Additional Requirements:

1. Height to C/L of meters - min. 36”, max. 42”
2. If metering equipment is to be installed within 36’’ of an area subject to vehicular traffic (driveway, roadway, etc.), Customer shall provide protection in the form of concrete-filled bollards. See Meter Protection section for bollard requirements.

416 Approved Commercial Pedestals and Cabinets

	**Cabinets and Pedestals Metering Equipment Catalog Designations**	**Service/Voltage**	**Amperage**	**Comments**
Manufacturer	**Model Numbers**			
Milbank (816-483-5314)	CP3xxxxBGE	**1Ø, 3 Wire 120/240 V**	100A	Self-Contained
Milbank (816-483-5314)	CP3xxxxBGE	**1Ø, 3 Wire 120/240 V**	200A	Self-Contained
Milbank (816-483-5314)	CP3xxxxBGE	**1Ø, 3 Wire 120/240 V**	320A	Self-Contained
Milbank (816-483-5314)	CP3FxxxxBGE	**1Ø, 3 Wire 120/240 V**	600A	CT-Rated U7446-O-WC-111-BGE
Milbank (816-483-5314)	CP3FxxxxBGE	**1Ø, 3 Wire 120/240 V**	800A	CT-Rated U7446-O-WC-111-BGE
Milbank (816-483-5314)	CP3xxxxBGE	**3Ø, 4 Wire 480/277 V**	100A	Self-Contained
Milbank (816-483-5314)	CP3xxxxBGE	**3Ø, 4 Wire 480/277 V**	200A	Self-Contained Cold Sequenced
Milbank (816-483-5314)	CP3FxxxxBGE	**3Ø, 4 Wire 480/277 V**	400A	CT-Rated UC7449-O-WC-41-BGE
Milbank (816-483-5314)	CP3FxxxxBGE	**3Ø, 4 Wire 480/277 V**	600A	CT-Rated UC7449-O-WC-41-BGE
Milbank (816-483-5314)	CP3FxxxxBGE	**3Ø, 4 Wire 480/277 V**	800A	CT-Rated UC7449-O-WC-41-BGE
Milbank (816-483-5314)	CP3xxxxBGE	**3Ø, 4 Wire 120/208 V**	100A	Self-Contained
Milbank (816-483-5314)	CP3xxxxBGE	**3Ø, 4 Wire 120/208 V**	200A	Self-Contained
Milbank (816-483-5314)	CP3xxxxBGE	**3Ø, 4 Wire 120/208 V**	320A	Self-Contained
Milbank (816-483-5314)	CP3FxxxxBGE	**3Ø, 4 Wire 120/208 V**	600A	CT-Rated UC7449-O-WC-41-BGE
Milbank (816-483-5314)	CP3FxxxxBGE	**3Ø, 4 Wire 120/208 V**	800A	CT-Rated UC7449-O-WC-41-BGE

* Mounts on concrete pad.

501 Metering Calculations

501-1 Table I - Formulas for Determining Amps, HP, KW, and kVA

E = Voltage **eff** = Efficiency **hp** = Horsepower
I = Current **pf** = Power Factor

TO FIND	SINGLE-PHASE (AC)	THREE-PHASE (AC)
Amps when horsepower is known	$\frac{hp \times 746}{E \times eff \times pf}$	$\frac{hp \times 746}{1.73 \times E \times eff \times pf}$
Amps when kilowatts is known	$\frac{kW \times 1000}{E \times pf}$	$\frac{kW \times 1000}{1.73 \times E \times pf}$
Amps when kVA is known	$\frac{kVA \times 1000}{E}$	$\frac{kVA \times 1000}{1.73 \times E}$
Kilowatts	$\frac{I \times E \times pf}{1000}$	$\frac{I \times E \times 1.73 \times pf}{1000}$
kVA	$\frac{I \times E}{1000}$	$\frac{I \times E \times 1.73}{1000}$
Horsepower (output)	$\frac{I \times E \times eff \times pf}{746}$	$\frac{I \times E \times 1.73 \times eff \times pf}{746}$

501-2 Table II - Full-Load Currents in Amps for Single-Phase Circuits

$$Full-Load\ Current\ (Amps) = \frac{kVA \times 1000}{Line-Line\ voltage}$$

	Voltage	
kVA	**120V**	**240V**
3	25.0	12.5
5	41.7	20.8
10	83.3	41.7
15	125.0	62.5
25	208.0	104.0
37.5	313.0	156.0
50	417.0	208.0
75	625.0	313.0
100	833.0	417.0
167	1392.0	696.0
250	2083.0	1042.0
333	2775.0	1388.0
500	4167.0	2083.0

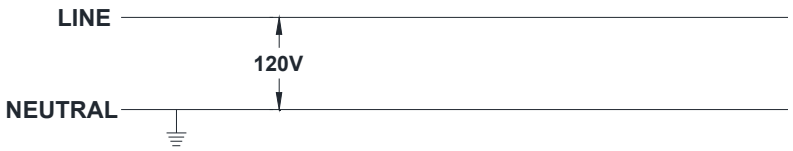
501-3 Table III - Full-Load Currents in Amps for Three-Phase Circuits

$$Full-Load\,Current\,(Amps)=\frac{kVA\times 1000}{1.73\times Line-Line\,Voltage}$$

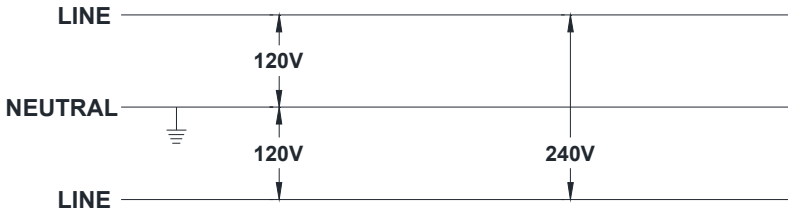
	Voltage					
kVA	**208V**	**240V**	**480V**	**4160V**	**7200V**	**13200V**
9	25.0	21.7	10.8	1.25	.72	.39
15	41.6	36.1	18.0	2.08	1.20	.66
30	83.3	72.2	36.1	4.17	2.41	1.31
45	125.0	108.0	54.1	6.25	3.61	1.97
75	208.0	180.0	90.2	10.40	6.01	3.28
112.5	312.0	271.0	135.0	15.60	9.02	4.92
150	416.0	361.0	180.0	20.80	12.00	6.56
225	625.0	541.0	271.0	31.30	18.00	9.84
300	833.0	722.0	361.0	41.70	24.10	13.10
500	1388.0	1203.0	601.0	69.40	40.10	21.90
750	2082.0	1804.0	902.0	104.00	60.10	32.80
1000	2776.0	2406.0	1203.0	139.00	80.20	43.70
1500	4164.0	3608.0	1804.0	208.00	120.30	65.60
2000	5552.0	4811.0	2406.0	278.00	160.40	87.40

502 Electric Service Diagrams

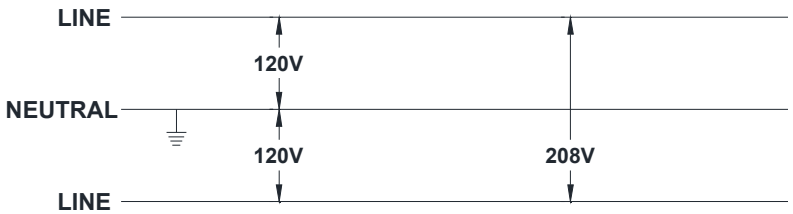
Single Phase, 2-Wire, 120 Volt Service



Single Phase, 3-Wire, 120/240 Volt Service

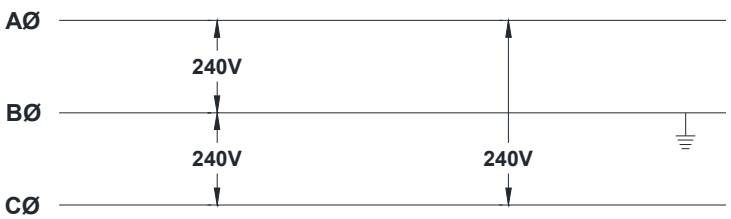


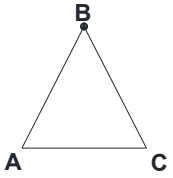
Single Phase, 3-Wire, 120/208 Volt "Network" Service





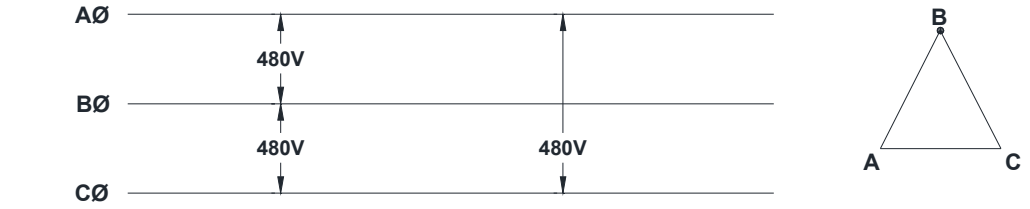
Three Phase, 3-Wire, 240 Volt Service



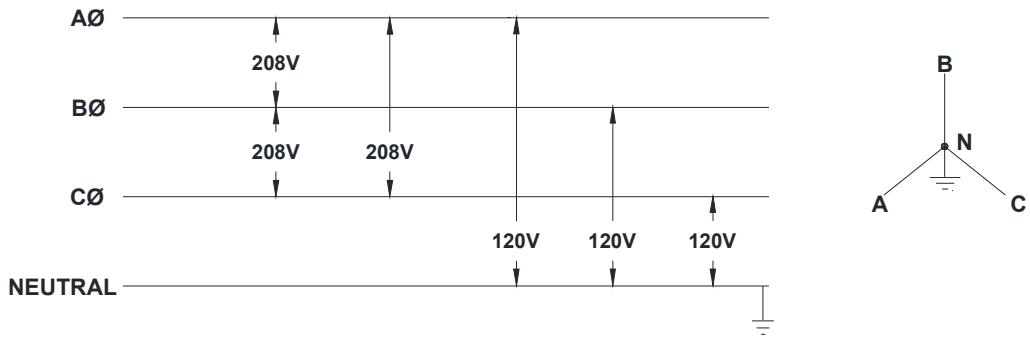


502 Electric Service Diagrams (Continued)

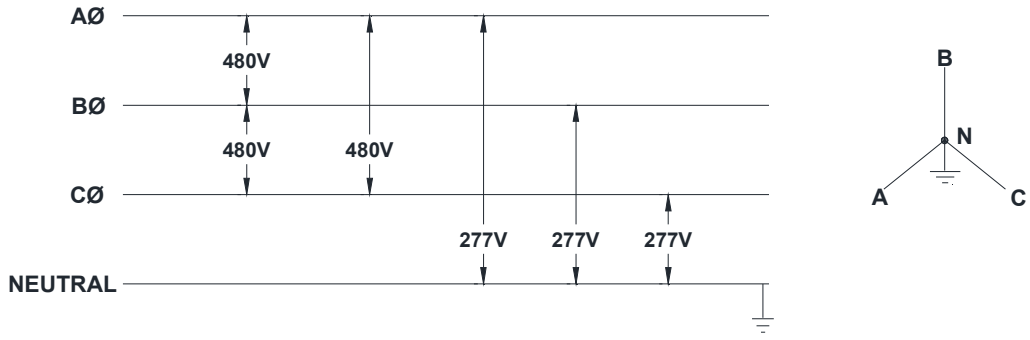
Three Phase, 3-Wire, 480 Volt Service



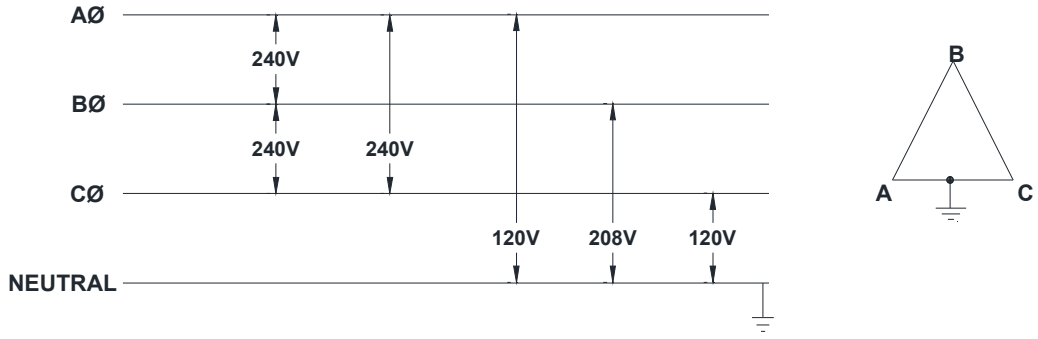
Three Phase, 4-Wire Wye, 120/208 Volt Service



Three Phase, 4-Wire Wye, 277/480 Volt Service



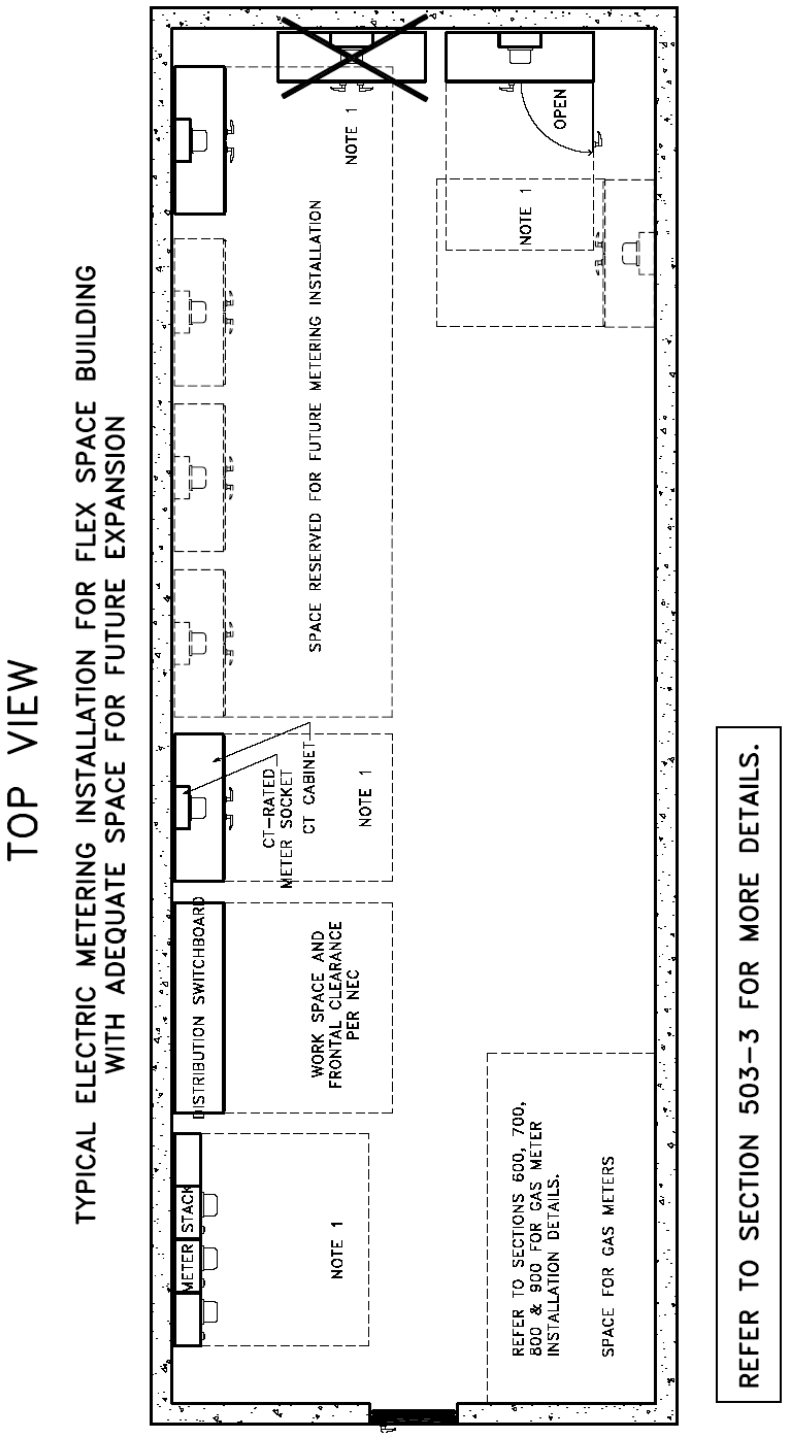
Three Phase, 4-Wire Delta, 120/240/240 Volt Service



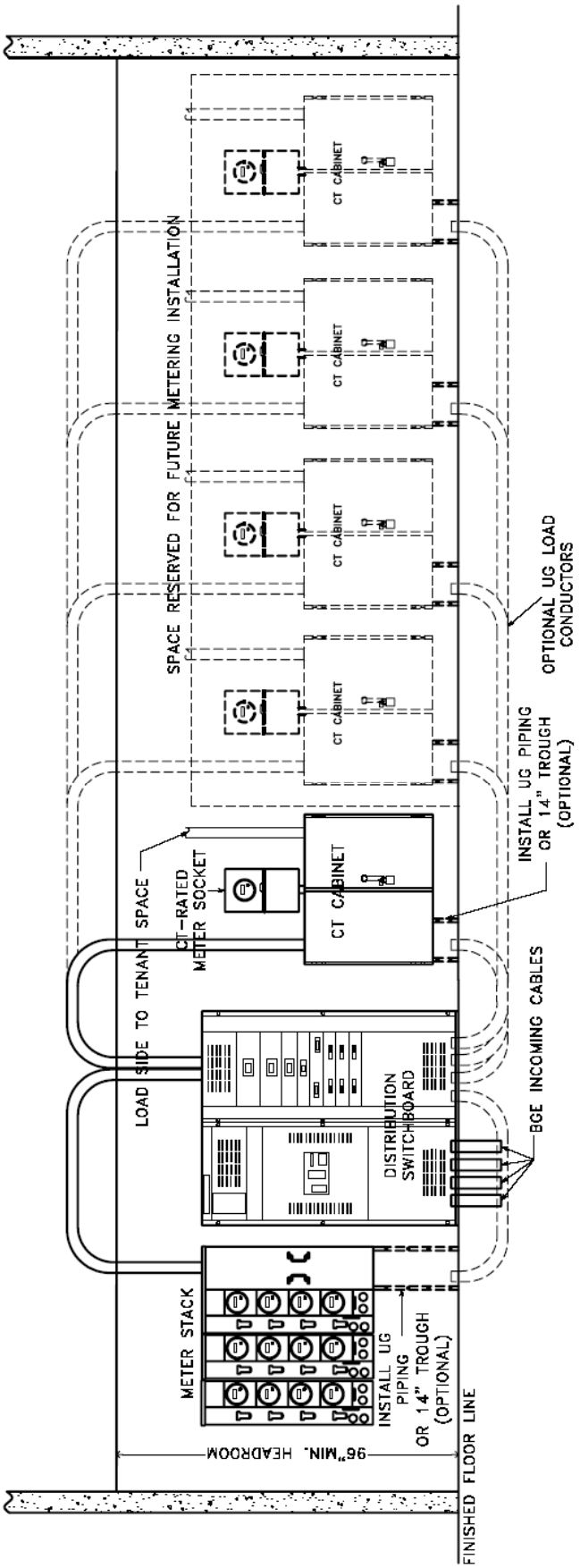
503 Flex Space Metering

The purpose of this section is to address the need for adequate space for future electric metering installation in Flexible Space Buildings. The customer is responsible for allocation of this adequate space. Consult the company for this type of installation.

503-1 Typical Metering Installation in a Dedicated Metering Room of a Flexible Space Building



TYPICAL ELECTRIC METERING INSTALLATION FOR FLEX SPACE BUILDING WITH ADEQUATE SPACE FOR FUTURE EXPANSION

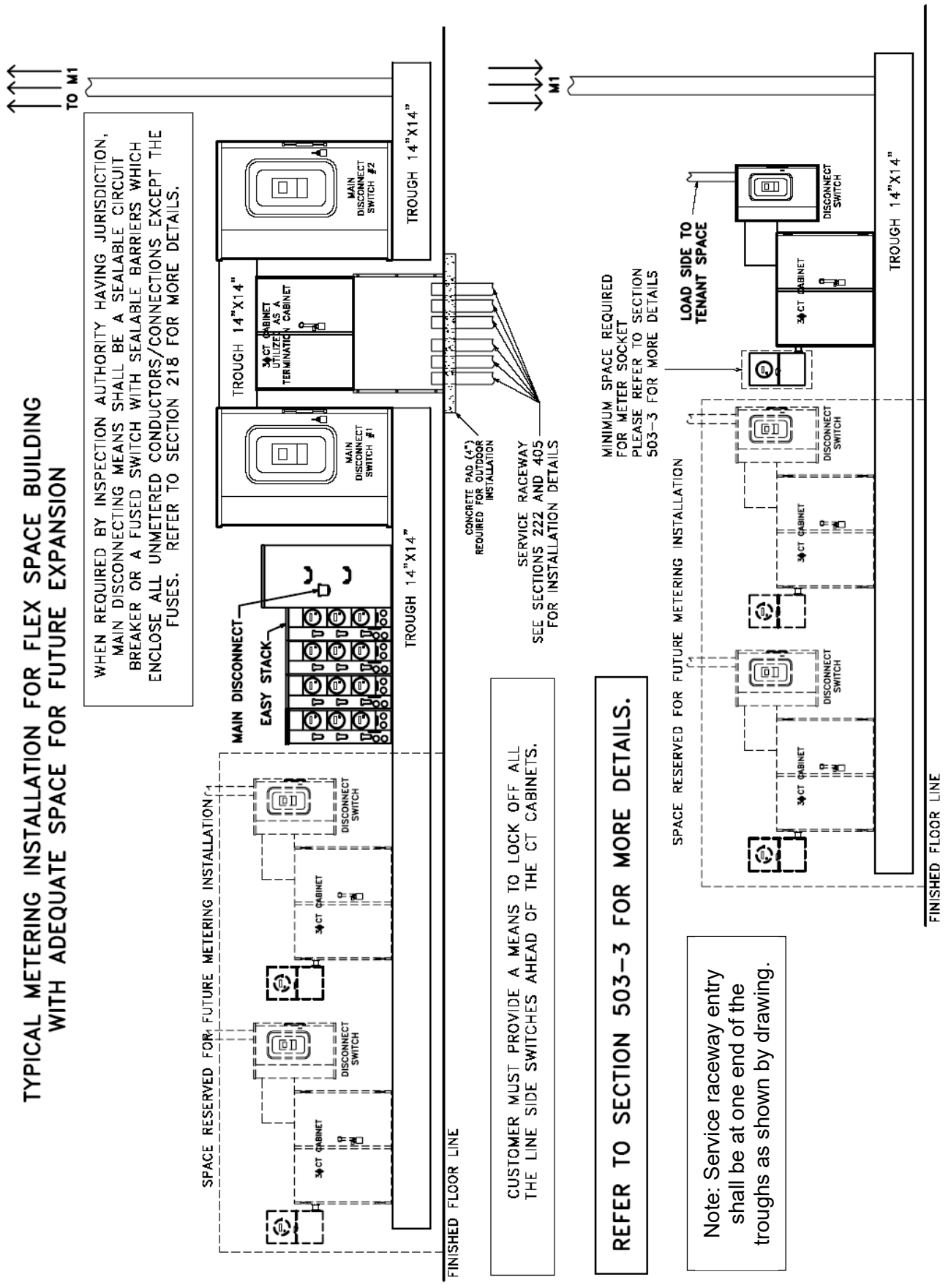


CUSTOMER MUST PROVIDE A MEANS TO LOCK OFF ALL THE LINE SIDE SWITCHES AHEAD OF THE CT CABINETS.

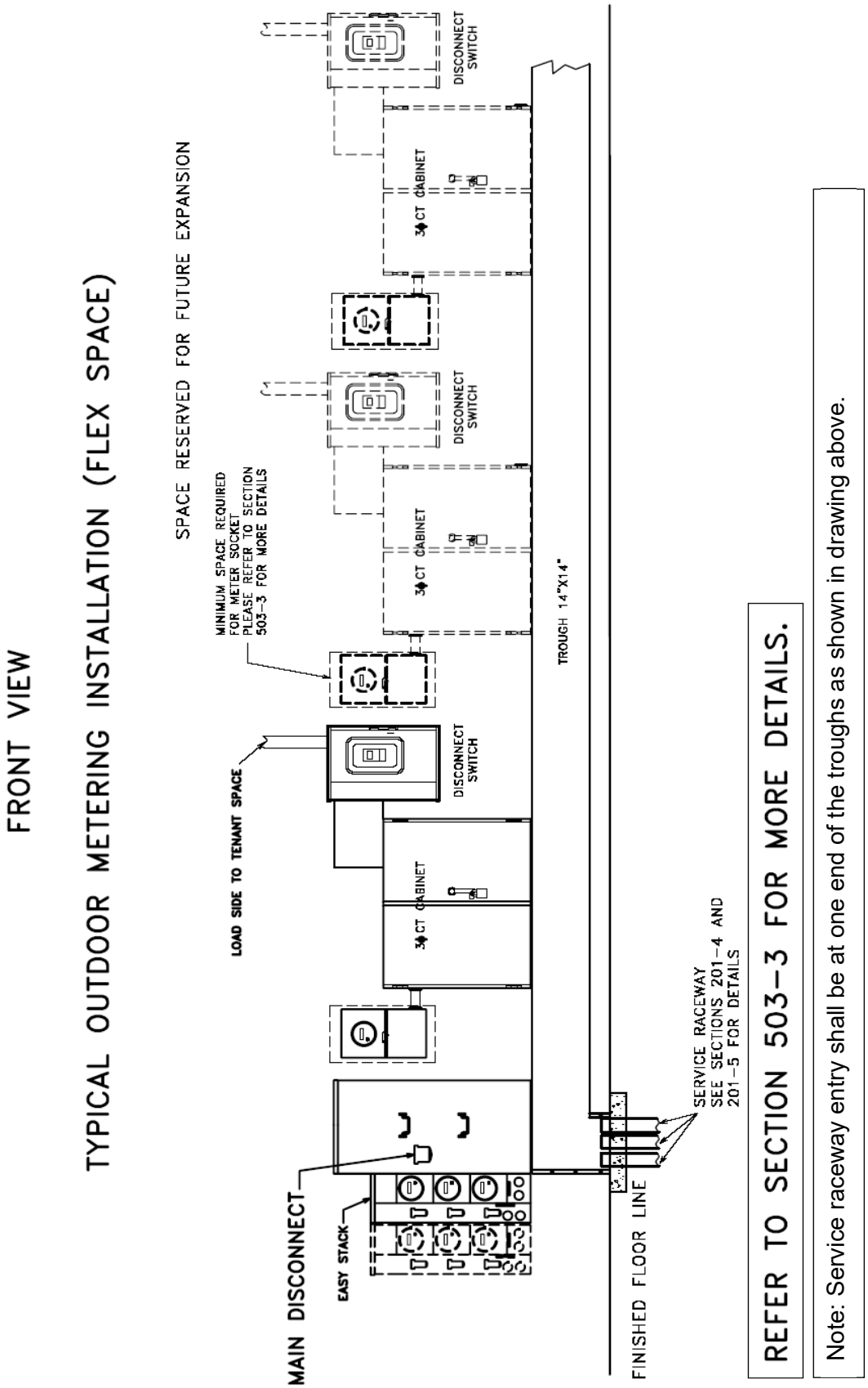
LOAD CONDUCTORS MAY BE FED EITHER UNDERGROUND OR OVERHEAD.

WHEN REQUIRED BY INSPECTION AUTHORITY HAVING JURISDICTION, MAIN DISCONNECTING MEANS SHALL BE A SEALABLE CIRCUIT BREAKER OR A FUSED SWITCH WITH SEALABLE BARRIERS WHICH ENCLOSE ALL UNMETERED CONDUCTORS/CONNECTIONS EXCEPT THE FUSES. REFER TO SECTION 218-219 FOR MORE DETAILS.

REFER TO SECTION 503-3 FOR MORE DETAILS.


TYPICAL METERING INSTALLATION FOR FLEX SPACE BUILDING WITH ADEQUATE SPACE FOR FUTURE EXPANSION
TO M1
WHEN REQUIRED BY INSPECTION AUTHORITY HAVING JURISDICTION, MAIN DISCONNECTING MEANS SHALL BE A SEALABLE CIRCUIT BREAKER OR A FUSED SWITCH WITH SEALABLE BARRIERS WHICH ENCLOSE ALL UNMETERED CONDUCTORS/CONNECTIONS EXCEPT THE FUSES. REFER TO SECTION 218 FOR MORE DETAILS.
TROUGH 14"X14"
MAIN DISCONNECT SWITCH #2
TROUGH 14"X14"
36 CT CABINET UTILIZED AS A TERMINATION CABINET
MAIN DISCONNECT SWITCH #1
TROUGH 14"X14"
MAIN DISCONNECT
EASY STACK
CONCRETE PAD (4") REQUIRED FOR OUTDOOR INSTALLATION
SERVICE RACEWAY
SEE SECTIONS 222 AND 405 FOR INSTALLATION DETAILS
SPACE RESERVED FOR FUTURE METERING INSTALLATION
DISCONNECT SWITCH
36 CT CABINET
DISCONNECT SWITCH
36 CT CABINET
FINISHED FLOOR LINE
CUSTOMER MUST PROVIDE A MEANS TO LOCK OFF ALL THE LINE SIDE SWITCHES AHEAD OF THE CT CABINETS.
REFER TO SECTION 503-3 FOR MORE DETAILS.
Note: Service raceway entry shall be at one end of the troughs as shown by drawing.
M1
MINIMUM SPACE REQUIRED FOR METER SOCKET PLEASE REFER TO SECTION 503-3 FOR MORE DETAILS
LOAD SIDE TO TENANT SPACE
DISCONNECT SWITCH
36 CT CABINET
TROUGH 14"X14"
SPACE RESERVED FOR FUTURE METERING INSTALLATION
DISCONNECT SWITCH
36 CT CABINET
DISCONNECT SWITCH
36 CT CABINET
DISCONNECT SWITCH
36 CT CABINET
FINISHED FLOOR LINE

503-2 Typical Outdoor Metering Installation for a Flexible Space Building



503-3 Space requirements for electric metering equipment

The requirements specified in this table shall be followed when planning and allocating space in the metering room.

MINIMUM SPACE REQUIREMENTS FOR ELECTRIC METERING EQUIPMENT

		TYPE OF EQUIPMENT				
	Meter Stack	Self-Contained Meter Socket	CT-Rated Meter Socket	1Ø CT Cabinet	3Ø CT Cabinet	Service Termination Cabinet
TYPICAL DIMENSIONS (H x W x D)	44" x 30" x 7 1/2" (with Termination Cabinet)	17" x 11" x 7 1/2" (up to 200A 1Ø Service)	20" x 12" x 4 3/16"	20" x 30" x 12"	36" x 42" x 14" (up to 1600A)	72" x 60" x 14" (up to 3000A)
		19" x 13" x 4 27/32" (up to 200A 3Ø Service)			42" x 36" x 14" (up to 3000A)	84" x 60" x 48" (above 3000A)
	44" x 12 1/2" x 7 1/2" (Expansion Stack)	22" x 13" x 4 27/32" (400A 1Ø Service)				
MINIMUM SPACE REQUIRED FOR METER SOCKET (H x W)	Note 3	24" x 18" (200A)	26" x 14"	N/A	N/A	N/A
MINIMUM CLEAR WORK SPACE (W x D)	Note 1	36" x 48" (Note 1)	36" x 48" (Note 1)	Notes 1 and 2	Notes 1 and 2	Notes 1 and 2
METER HEIGHT FROM FINISHED FLOOR LINE	28" to 72"	42" to 60"	42" x 60"	N/A	N/A	N/A

REFER TO SECTIONS 200, 300, 400, 500 AND 600 FOR MORE DETAILS.

NOTES:

1. A minimum clear space 36" wide (or width of equipment, whichever is greater) and 48" in front of all metering equipment are required. Do not install a metering cabinet or any related equipment that will violate the stated work space requirements. Equipment doors/covers must swing open unobstructed.
2. A minimum clear space of 6" on both sides of CT cabinet is required.
3. For meter stack, refer to sections 321 and 402.
4. For services above 200A, consider the dimensions of CT cabinets stated above. CT-rated metering shall be applied to all commercial services rated above 200A.
5. For 3000A service, refer to Section 405.
6. A minimum headroom of 75" inside the metering room shall be maintained. However, if gas meters will be installed in the same room, a minimum headroom of 8' shall be applied.
7. All space requirements stated above shall be considered by the customer when designing the metering room. All future metering needs should be considered.
8. BGE shall install the metering equipment based on the existing approved load conditions. In the event that the customer applies for an upgrade of service (above 200A), the customer shall provide adequate space for all metering equipment upon recommendation and approval by BGE and local jurisdiction having authority.
9. Consult the company for these installations.
10. Load balancing required. Refer to section 103-4.

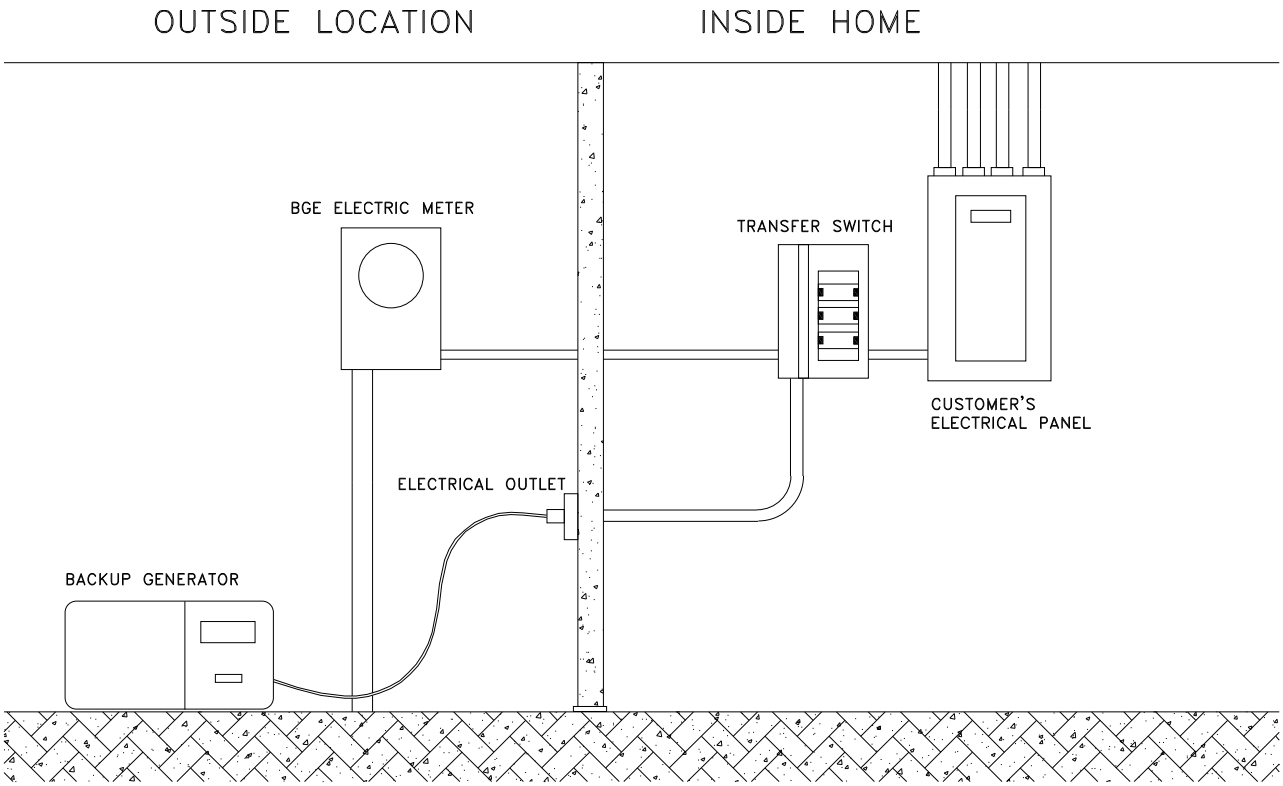
504 Backup Generators and Transfer Switches

During power outages some customers utilize backup (portable or permanently installed) electric generators to provide emergency power to their business or residence. To ensure the safety of field personnel, BGE requires that these generators do not back feed our electric distribution system. Back feed conditions can be prevented with the installation of a transfer switch after the BGE metering device. A properly installed transfer switch isolates generator supplied power from the BGE service conductors. Installation of a transfer switch should be made by a qualified electrician and must comply with all applicable laws, the National Electrical Code (NEC) and be inspected by the local authority having jurisdiction.

Isolation between the generator and service conductors is required because BGE utilizes transformers to reduce or "step down" voltage on our service conductors before providing power to the customer's premise. These transformers can also work in reverse and "step up" voltage if fed in the opposite direction from a generator that is not isolated from BGE wiring. An electrical back feed can cause equipment and property damage, and may result in severe injury to utility personnel.

In addition to protecting BGE employees and equipment, a properly installed transfer switch also protects the customer's electrical system. Improperly connecting a generator output directly into a panel box or an electrical outlet can be dangerous. This could cause damage to existing premise wiring and also result in significant damage to the generator once BGE power is restored.

Shown below is a typical residential transfer switch installation:



505 Small Generator Interconnection

Small generator interconnection is a general name for the process of registering and connecting small scale power generation equipment to BGE's electric utility distribution system. Therefore, the customer may back feed BGE's distribution system. In addition, special metering, often referred to as "net metering", may be required to comply with tariff requirements associated with some of these installations.

Small generator interconnection equipment may include:

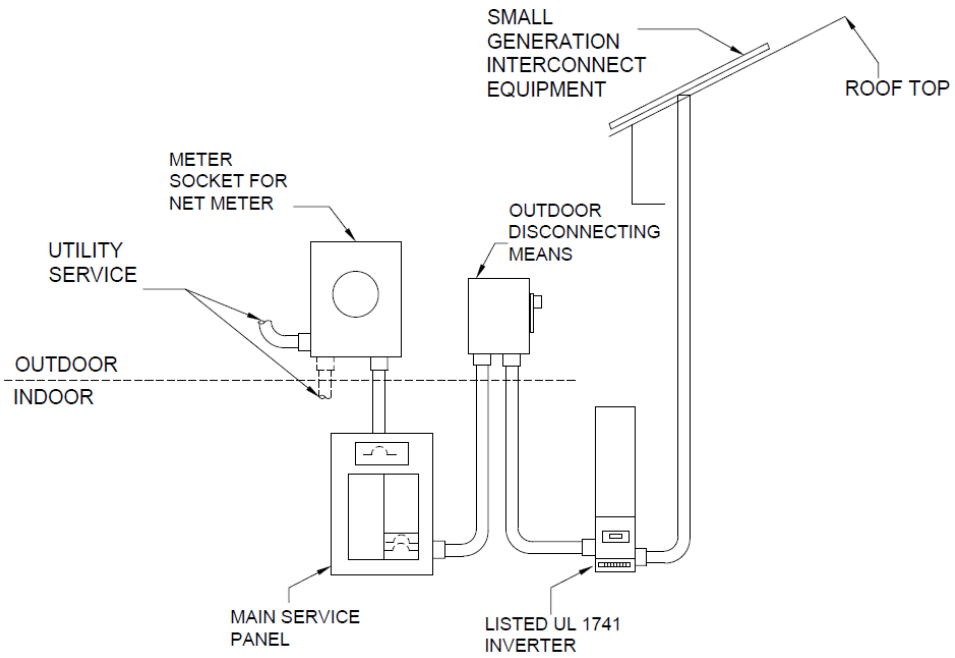
- Wind turbines
- Photovoltaics (PV) or solar panels
- Micro-turbines
- Small gas-turbine generator
- Fuel cells
- Small internal combustion-engine generator (ICE)
- Small steam turbine units (cogeneration)

Refer to www.bge.com, Choosing a Supplier/Your Energy Supply Options/Customer-Generated Power under My Account for more information. This website provides detailed information regarding the application process and specific technical requirements.

Notes (disconnect requirements for small generator interconnections):

1. Outdoor disconnecting means shall be accessible to BGE personnel and capable of being locked in the open position. Its status (open or closed), must be clearly indicated.
2. Disconnecting means should be located within ten (10) feet of the meter socket.
3. Indoor meter: Consult BGE for appropriate disconnect location.

A typical small generator interconnection installation (solar panel in this example) is shown below.



506 Meter Requirements Review - Small Generator Interconnection

Review this section annually as part of the yearly review of this Manual. Customers with behind-the-meter storage should be treated the same as net-metering customers without behind-the-meter storage.

- If standard metering requirements have been modified, determine if BGE/Exelon Commitment verification is required to be completed. If it needs to be completed, follow instructions below.
- Otherwise, follow schedule below.
    - Last confirmation: March 2023.
    - Next confirmation required: February 2026.

THE EXELON REPORTING COMMITMENT
Applicable to Smart Metering & Technology (SMT), a verification shall be performed to determine if there has been changes to BGE's standards that would require additional metering equipment or monitoring equipment for customers with behind the meter storage. This verification shall be performed on a three-year period.

INSTRUCTIONS FOR VERIFICATION
Send form, "BGE-Exelon Commitment Verification 06.045 - Behind the Meter Solar Storage," to the Sr. Business Analyst/Commitment Tracking administrator in Energy Efficient Programs.

Click here for the location of the form.

507 Meter Collar Adapters

Starting October 4th, 2024, Baltimore Gas & Electric will cooperate with Maryland regulations in regard to the implementation of meter collar adapters on residential electric services. Regulations allow a customer to opt in to having a meter collar adapter installed at the residence as long as all conditions are met.

Customers may select a meter collar adapter once it has been approved by BGE and listed on the BGE website. The customer must have a compatible meter socket in order to complete the meter collar adapter installation at the residence. A compatible meter socket is crucial to ensure that the meter collar adapter would fit securely, as well as ensure peak safety performance.

Manufacturers will have the opportunity to submit their meter collar adapters for review on the BGE website. Once a manufacturer successfully fills out the application on the BGE website along with providing all required item(s), BGE will have 90 days to review the meter collar adapter submission and either approve or deny the product on BGE-owned equipment.

BGE personnel are required to be on site during the installation of any/all meter collar adapters. BGE personnel and/or an explicitly approved subcontractor may perform the installation of meter collar adapters at a residence. In situations where, but not limited to, the safety of customers, BGE equipment and/or personnel is compromised, BGE is allowed to perform the removal of residential meter collar adapters.

Baltimore Gas & Electric will only approve load side interconnections regarding meter collar adapters and installations. Customers are responsible for selecting the appropriate meter collar adapter for their residence.

Electric Vehicle – EV
Photovoltaics – PV
Backup & Transfer Switch - TS
Meter Collar Adapter – MCA

Approved Meter Collar Adapters

Make	Model	Service Amperage Rating	Circuit Breaker Amperage	Use Case	Compatible Meter Form(s)
ConnectDER	E-B-4-22-40-100	100A	40	EV	2S
ConnectDER	E-B-4-22-60-100	100A	60	EV	2S
ConnectDER	E-B-4-22-40-125	100A	40	EV	2S
ConnectDER	E-B-4-22-60-125	100A	60	EV	2S
Tesla	1624171-XX-Y	200A	N/A	TS	2S

Make	Model	Service Amperage Rating	Circuit Breaker Amperage	Use Case	Compatible Meter Form(s)
Enphase Energy	MC-200-011-V01	200A	N/A	TS	2S
Global Power Products	MA24-N	200A	N/A	TS	2S
ConnectDER	V-1-A-X	200A	N/A	TS	2S, 12S
ConnectDER	V-1-D-X	200A	N/A	TS	2S, 12S
ConnectDER	C-B-5-22-60	200A	60A	PV	2S, 12S
ConnectDER	C-B-5-22-80	200A	80A	PV	2S, 12S
ConnectDER	D-B-5-22-40	200A	40A	PV	2S, 12S
ConnectDER	D-B-5-22-60	200A	60A	PV	2S, 12S
ConnectDER	D-B-5-22-80	200A	80A	PV	2S, 12S

BGE Customer Meter Collar Adapter Eligibility Requirements

1. A Meter Collar Adapter installed in BGE territory must be one of the approved meter form(s), located in the Approved BGE Meter Collar Adapter List.
2. A BGE Customer's meter form must be appropriately paired with a BGE-approved Meter Collar Adapter.
3. A BGE Customer cannot install a Meter Collar Adapter on top of another Meter Collar Adapter.
4. A customers electrical panel must be 'Maxed Out' before being considered for an EV or PV Meter Collar Adapter.
5. The residence must have a 200-amp service or less.
6. All existing meters on both single and multi-dwelling units must meet minimum space requirements.
7. There must be a 3ft radius of customer-owned free space around the meter. The 3ft radius excludes adjacent neighboring land as well as road right-of-way.

Only authorized BGE personnel are permitted to remove the electric meter. A meter may be removed only by authorized BGE personnel on-site, including when removal is required to install additional equipment such as a meter collar. Tampering with or breaking the meter seal may result in fines or service disconnection. For any meter collar installation, BGE must be present on-site to safely remove the meter.

601 Combined Gas and Electric Metering

601-1 Combined Metering – General

Meter Protection

FOR METER PROTECTION STANDARDS, REFER TO THE METER PROTECTION SECTION IN THE BEGINNING OF THE MANUAL.

General Information
The purpose of this section is to address the location and installation of combined metering equipment for town houses and single-family homes.

This combined metering equipment is for conditions which have loads up to, but not larger than:

- Electric Service: 120/240 volts at 200 amps
  AND / OR
- Natural Gas Service: 295 CFH at standard delivery or 330 CFH at 2 PSIG delivery

However, this section is to be used in conjunction with the other sections in this manual. Please be familiar with the other sections as well. If the loads are larger than those listed above, then follow the information in the other sections of this manual.

601-2 BGE Outdoor Meter Assembly Location Policy

In conjunction with the BGE Gas Service Tariff and Maryland Legislation (Gas Service Regulator Safety), BGE has developed a “BGE Outdoor Meter Assembly Location Policy". All meters and regulators are to be installed on the outside of buildings, except as detailed below. All meter locations are agreed upon by the Customer and the Company in advance of construction and are subject to final approval by the Company. Contact your BGE representative before any construction begins.

Failure to comply with the BGE Outdoor Meter Assembly Location Policy will prevent BGE from providing electric/natural gas to the requested service location.

New Services

New services are defined as a gas service installation for buildings or structures that do not have active gas supplied to the structure and does not have an active service agreement. Meter Assemblies (aka Meter Sets) consist of both the Meter(s) and Regulator(s)

For new service work, the following applies:

- All regulators must be outside.
- Meter Assemblies up to and including 5 must be outdoors.
- Meter Assemblies with 6 or more meters are allowed to be located indoors per the Gas Service Tariff (regulators still need to be outdoors).

In all other cases, meter assemblies must be located outdoors. If a situation exists which prevents the installation of a newly installed meter and/or regulator outdoors, refer to your BGE representative.

Existing Services

Existing residential services are defined as a gas service installation for a building or structure that has active gas supplied to the structure and/or an active service agreement.

For existing residential service work, the following applies:

- Regulators must be installed outdoors
- Meters are preferred to be installed outdoors if feasible

For existing indoor gas meters, the Gas Service Tariff allows the meters to remain indoors. However, it is strongly encouraged that existing indoor gas meters also be relocated to an outdoor location when the existing gas service is to be replaced, renewed, sleeve inserted, size changed (heavy-up), pressure increased, or relocated. Regardless of final meter location, it is required that all regulators be installed outdoors.

For existing commercial work, the following applies:

Commercial customers with existing service who are receiving a gas service regulator for the first time shall be offered a choice for an outdoor/indoor regulator installation location UNLESS the service meets any of the following conditions:

- The service is fed from an OHP main
- The structure has a maximum occupancy of 100 or more persons as designated by the fire department (Ref COMAR 20.55.01.04 – Places of public assembly)
- The service requires two or more regulators to be installed
    - Pressure relief valves do not contribute to total regulator count

If a situation exists which prevents the installation of a regulator outdoors, refer to your BGE representative.

Note: The customer shall maintain at least three (3) feet of unobstructed space in front of the meter, and such space shall be free of any source of ignition or heat which may damage the meter or related equipment. The sole exception to the three (3) feet of unobstructed space in front of the meter is the use of bollards for protection from vehicular traffic where required; see Meter Protection Section of this manual.

The space provided for meters, regulators and service risers shall be clear of all obstructions, such as shutters, doors, and rainspouts, and the placement of obstructions such as concrete equipment pads, shrubbery, porches, patios, decks and gardens shall not interfere with the installation and servicing of the metering equipment or reading of the meter. Metering equipment shall not normally be located over porches or patios.

The following excerpt is the "Location of Service Equipment" from the BGE Gas Service Tariff; Part 2, Section 6. This is provided for reference in outlining the BGE Metering Location Standard.

BGE Gas Service Tariff; Section 6
6. Location of Service Equipment

6.1 ***General:*** *Under normal conditions an outdoor location is required. Meter locations are agreed upon by the Customer and the Company, subject to final approval by the Company.*

An acceptable meter location shall be free of any conditions detrimental to the metering equipment, and such location shall not create a hazard or inconvenience. The Customer shall maintain at least three (3) feet of unobstructed space in front of the meter, and such space shall be free of any source of ignition or heat which may damage the meter or related equipment. The Company may require the Customer to provide, at the Customer's expense, suitable protective equipment for the meter or exposed service riser.

Where more than one Customer is to be supplied, each meter shall be readily accessible to the Customer served by it and to the Company. The fuel lines shall be so installed that the meters may be grouped at one location.

In the event it becomes necessary to change an existing service entrance or meter installation the location shall conform to these rules except that existing indoor meters may remain indoors.

6.11 ***Outdoor Location:*** *An outdoor location is generally required for meter installations not exceeding six (6) meters.*

Space shall be provided for meters, regulators and service risers clear of all obstructions such as shutters, doors and rainspouts, and so that the placement of shrubbery, flower beds and gardens will not interfere with meter installation, servicing, or reading. In no event shall meter equipment extend beyond the Customer's property line.

601-3 Town House Combined Meter Locations Requirements

Combined outside metering is BGE's required construction standard. All efforts should be made to utilize outside locations. When locating gas and electric meters outside, there are specific requirements that should be followed. Typically, the meters are set at the location where the service terminates at the building being served. See Figure 601-3.

Outside metering location must be used if one of the following conditions exists:

- Clear wall space is available: 24" W x 57" H (stacked meter configuration – wall mount electric meter socket). See Section 601-5.

OR

- Clear wall space is available: 36" W x 47" H (side by side meter configuration – pedestal electric meter socket). See Section 601-6.

OR

- There is adequate clear wall space to split the meters and install them separate from each other. The gas meter requires 15" W x 36" H and the electric meter requires 17" W x 57" H (200 Amp wall mount box) or 16" W x 47" H (200 Amp pedestal box) of clear wall space. See Section 601-7.

Standard service line extension to a residence shall extend not more than 75 feet for a single-family home and 30 feet for a town house from the property line where the service enters the property to be served to the nearest corner of the building. Distances greater than these are non-standard, and all additional costs will be borne by the customer/builder. For additional information, please consult with your BGE Representative. (Reference: BGE Electric Service Tariff, Section 8.23)

A. The outdoor residential customer meters shall be placed as close to the exterior building wall as possible for both new service lines and service lines that are replaced. (Reference: COMAR 20.55.09.07.D.)

B. The residential gas metering assembly installed outside shall be located on a building either one (1) foot inward from the building edge along the "front", or no more than five (5) feet deep on the building side(s). See Figure 601-4.

Note: The "front of the building" is defined by the portion of the building facing the utilities, which typically run along the street.

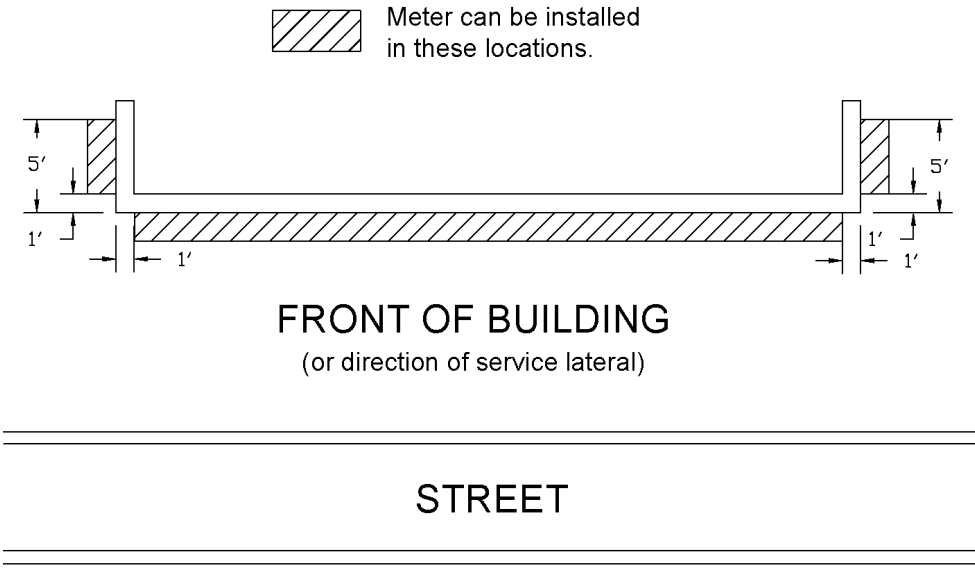


Figure 601-4

602 Outdoor Metering Installation Options

602-1 Stacked Gas & Electric Installation

The following are general requirements for combined meters in a stacked installation. See Figure 602-2, for specific installation requirements, reference the electric and/or the gas metering sections of this manual.

- This installation is for mounting on a "rigid" wall surface such as concrete, brick, or stone. The installation may also be allowed on a "flexible" wall surface such as siding only if a backer board is applied. Please contact your BGE representative for details if a backer board is used.

- The above final grade MINIMUM clear space requirements are 24" W x 57" H x 58" out from the finished wall.

- The below final grade MINIMUM clear space requirements are 24" W x 40" H x 58" out from the finished wall.

- A minimum of a 12" radial separation between the gas line and the electric, CATV, communication…lines is required.
  (Reference: National Electric Safety Code - 2017 Edition, Section 354.A.2)

- Finishing wall products such as siding, brick, stone or other materials shall protrude no more than one (1) inch from the vertical face of the foundation. This will provide adequate clearance between the BGE gas meter bracket / electric riser and the foundation wall.

Note: See Section 602 for Proposed Penetration zones to bring the house lines to the BGE metering equipment.

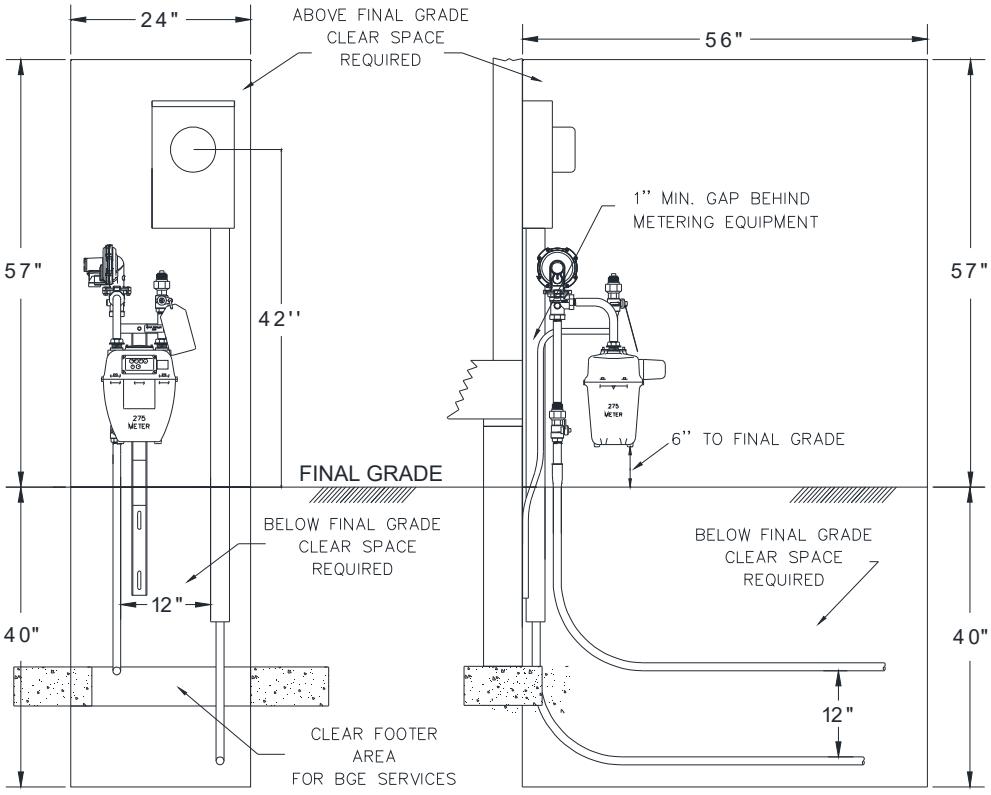


Figure 602-1: Stacked Installation

602-2 Side-by-Side Installation

The following are general requirements for combined meters in a Side-by-Side installation. BGE offers two versions for Side-by-Side installations. See Figures 602-1A and 602-1B on the following page. For specific installation requirements, reference the electric and/or the gas metering sections of this manual.

- Use this installation standard when 24” W x 57" H of clear, rigid wall space above the final grade is not available. A typical example of this is a masonry foundation that transitions to vinyl, aluminum, or wood siding within 3-4’ of grade. Note that the bracket for the meters is mounted to the "rigid" building foundation.

- The above final grade MINIMUM clear space required is 36" W x 47" H x 58" out from the finished wall.

- The below final grade MINIMUM clear space requirements are 36" W x 40" H x 58" out from the finished wall

- A minimum of a 12" radial separation between the gas line and the electric, CATV, communication…lines is required.
  (Reference: National Electric Safety Code - 2017 Edition, Section 354.A.2)

- Finishing wall products such as siding, brick, stone or other materials shall protrude no more than one (1) inch from the vertical face of the foundation. This will provide adequate clearance between the BGE gas meter bracket / electrical pedestal box and the foundation wall.

Note: See Section 602 for proposed penetration zones to bring the house lines (gas and electric) to the BGE metering equipment.

A. Electric Meter on the Left Option:

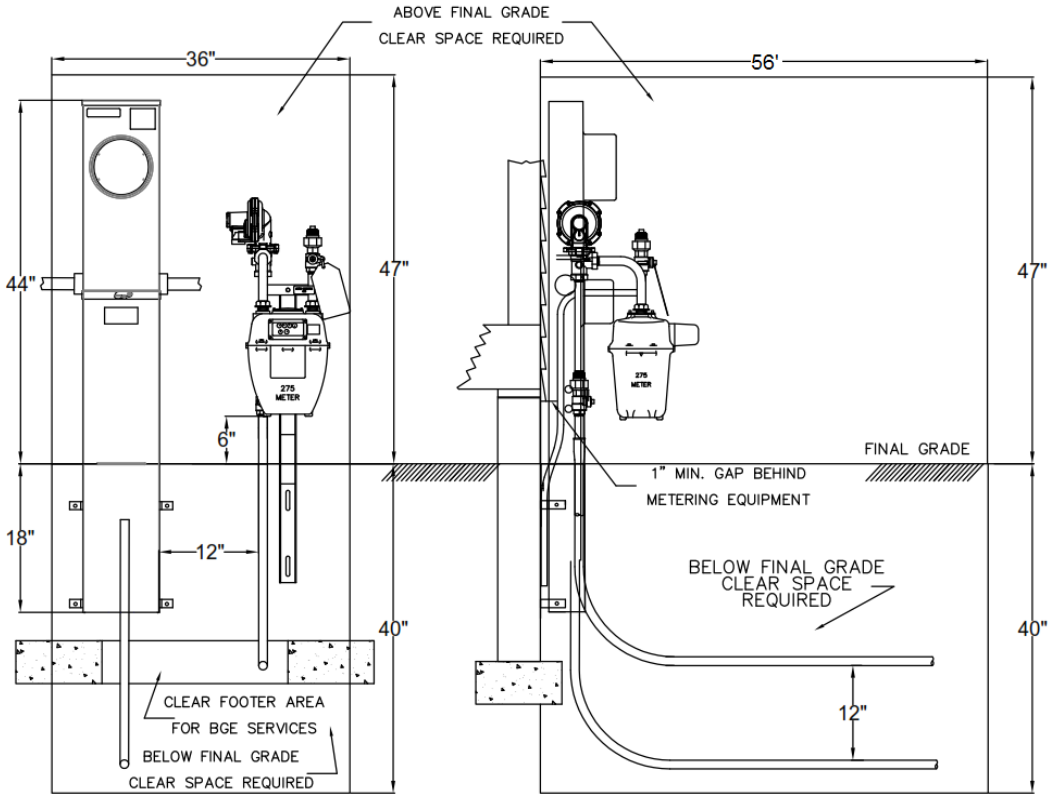


Figure 602-2A

B. Electric Meter on the Right Option:

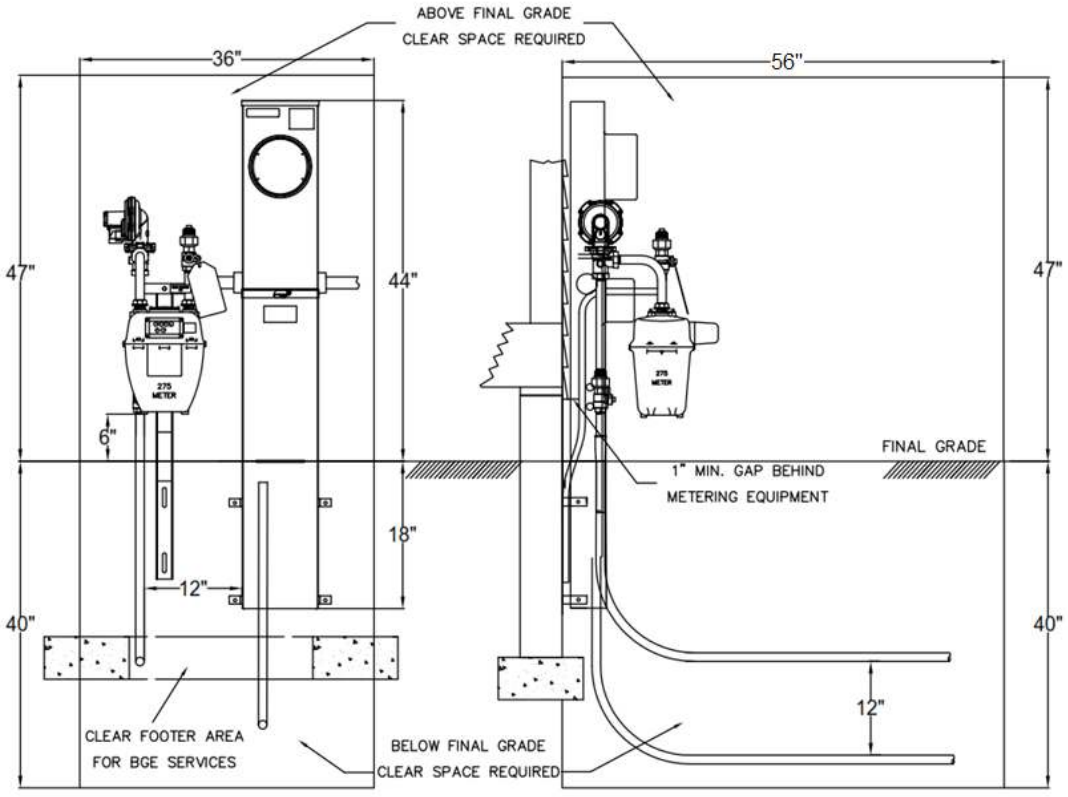


Figure 602-2B

602-3 Separated Installation

The following are general requirements for meters installed separately (not in combination) from each other. See Figures 602-3, plus 602-3A and 602-3B on the following pages.

Figure 602-3 shows a typical town house design which does not allow enough clear wall space for either the stacked or the side-by-side “combined” meter installations. For more specific installation requirements in addition to this section, reference the gas and electric metering sections of this manual.

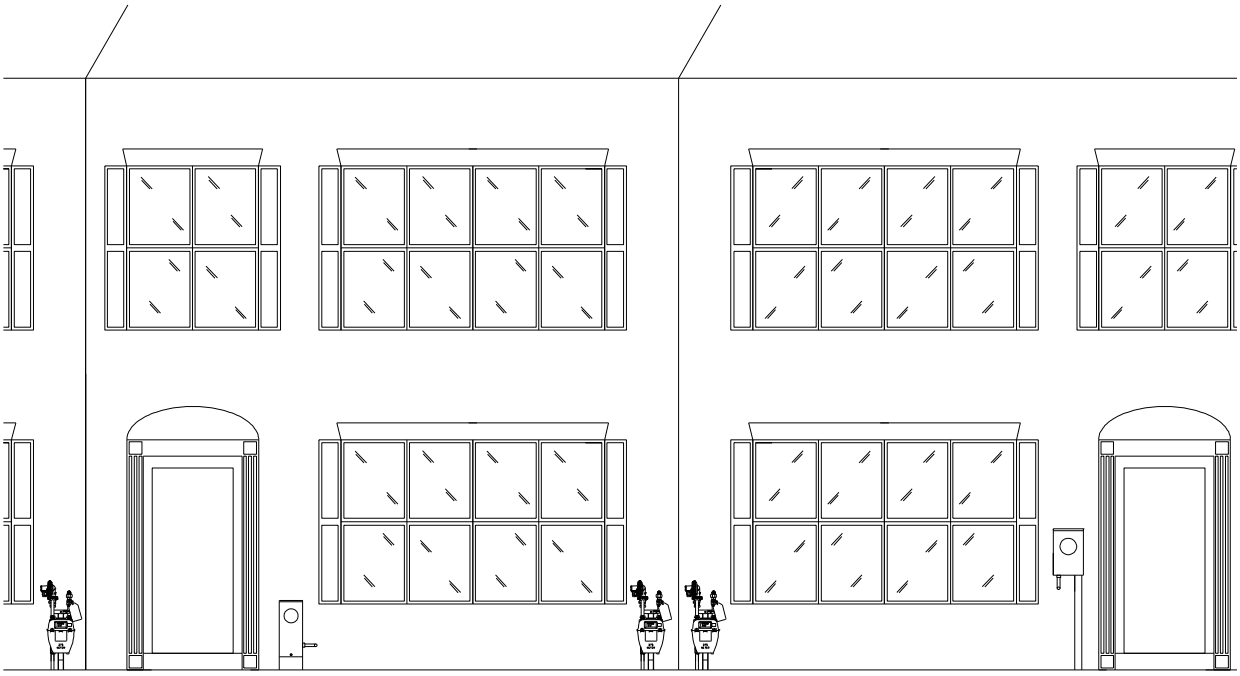


Figure 602-3

A. General Guidelines of a Separated Installation – gas meter & electric wall mounted socket box.

- The electric wall mounted box installation is for mounting on a "rigid" wall surface such as concrete, brick, or stone. The installation may also be allowed on a "flexible" wall surface such as siding only if a backer board is applied. Please contact your BGE representative for details if a backer board is used.

- The above final grade MINIMUM clear space requirements for the gas meter assembly are 15" W x 36" H x 56" out from the finished wall and for the electric wall mounted box are 17" wide x 57" H x 56" out from the finished wall.

- The below final grade MINIMUM clear space requirements for the gas meter assembly are 15" wide x 40" H x 56" out from the finished wall and for the electric wall mounted box are 17" wide x 40" H x 56" out from the finished wall.

- A minimum of a 12" radial separation between the gas line and the electric, CATV, communication…lines is required.
  (Reference: National Electric Safety Code - 2017 Edition, Section 354.A.2)

- Finishing wall products such as siding, brick, stone or other materials shall protrude no more than one (1) inch from the vertical face of the foundation. This will provide adequate clearance between the BGE gas meter bracket / electric riser and the foundation wall.

Note: See Section 602 for Proposed Penetration zones to bring the house lines to the BGE metering equipment.

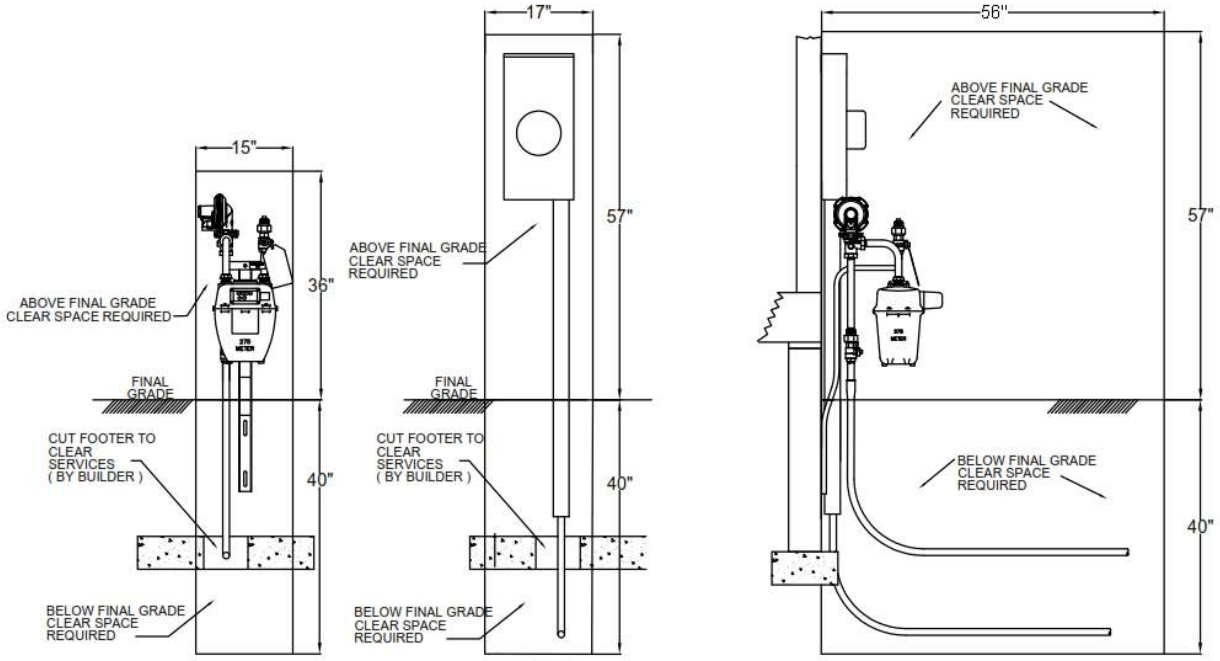


Figure 602-3A

B. General Guidelines for a Separated Installation – gas meter & electric pedestal box

- Use this installation standard when 24" W x 57" H of clear, rigid wall space above the final grade is not available. A typical example of this is a masonry foundation that transitions to vinyl, aluminum, or wood siding within 3' to 4' of finished grade. Note that the brackets for the meter pedestal are mounted to the "rigid" building foundation.

- The above final grade MININUM clear space required for the gas meter assembly are 15" W x 36" H x 56'' out from the finished wall and for the electric pedestal are 16" W x 47" H x 56" out from the finished wall.

- The below final grade MINIMUM clear space requirements for the gas meter assembly are 15" W x 40" H x 56" out from the finished wall and for the electric pedestal are 16" W x 40" H x 56" out from the finished wall.

- A minimum of a 12" radial separation between the gas line and the electric, CATV, communication…lines is required.
  (Reference: National Electric Safety Code - 2017 Edition, Section 354.A.2)

- Finishing wall products such as siding, brick, stone or other materials shall protrude no more than one (1) inches from the vertical face of the foundation. This will provide adequate clearance between the BGE gas meter bracket / electric pedestal box and the foundation wall.

Note: See Section 602 for proposed penetration zones to bring the house lines (gas and electric) to the BGE metering equipment.

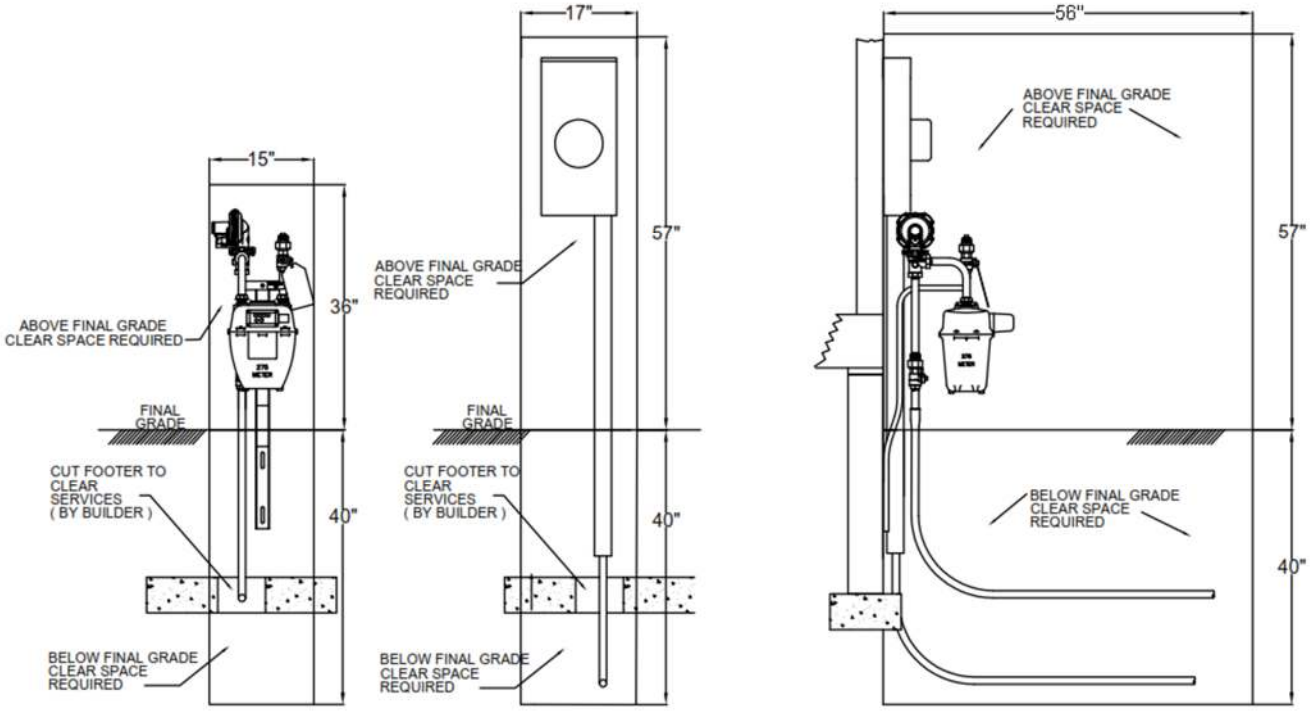


Figure 602-3B

602-4 Minimum Building Clearance Requirements for Combined Metering

When the gas and the electric meter are installed in combination on an outside wall, specific space requirements and clearances must be met. BGE offers three (3) meter options for these installations: Stacked, Side-by-Side and Separated. The following (Figure 602-4) illustrates the various space requirements and clearances for each option.

The Figure and Table 602-4 shows locations on the building(s) that has a dimension “H” and "W". Depending on which option is selected, the following minimum space is required. Note that only one combined meter installation area is required for each residence.

Table 602-4

Installation Options (both meters outdoors)	Minimum Width Required (W)	Minimum Height Required (H)	Minimum Clear Space Required in Front of Meter(s) (from wall)
Stacked	24"	57"	56"
Side-by-Side	36"	47"	56"
Separated gas with electric socket box	Gas = 15” Electric = 17”	Gas = 36” Electric = 57”	56”
Separated gas with electric pedestal	Gas = 15” Electric = 16”	Gas = 36” Electric = 47”	56”

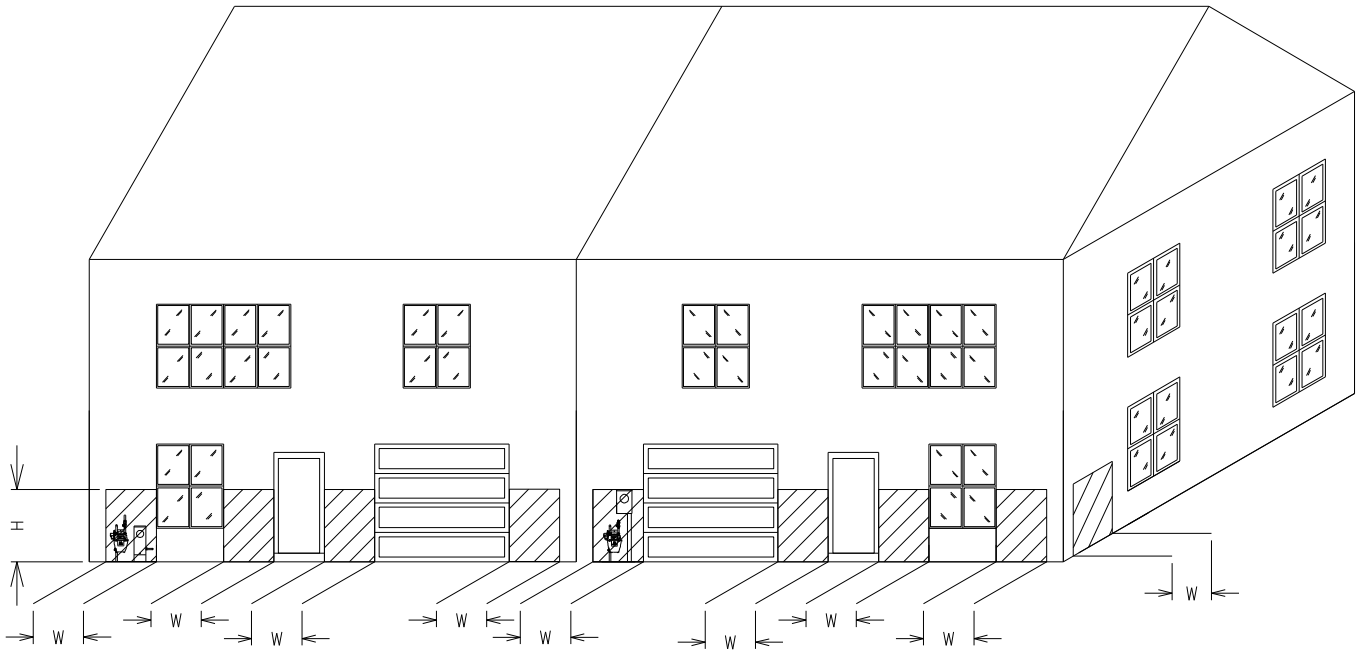


Figure 602-4

602-5 Proposed Penetration Zones

To aid in the installation of stacked or side-by-side gas and electric meters, proposed penetration zones are provided as a reference for service contractors. These zones detail areas in which electricians and plumbers should bring electric load cables (service entrance on load side of meter) and gas fuel lines through exterior walls so that they interface easily with combined BGE metering equipment. See Figures 602-5-A, 602-5-B, and 602-5-C on the following pages.

The following are general requirements for the penetration zones:

1. Electric load cables should be in the electric zone and the gas fuel line should be in the gas zone. Neither the electric load cable nor the gas fuel line shall be in the same zone.

2. Side-by-Side installation:

    a. If the electric pedestal box is mounted to the right of the gas meter, the electric load cables must exit on the right side of the pedestal. See Figure 602-5-B.

    b. If the electric pedestal box is mounted to the left of the gas meter, the electric load cables can exit either side of the pedestal. See Figure 602-5-C.

3. Gas fuel line:

    a. If rigid piping is used, the line should not extend more than 4" horizontally from the finished wall surface. This distance will provide adequate clearance for the addition of elbows and fittings to reach the Customer’s Main Gas Valve (point of service connection).

    b. If flexible piping is used, it should be of adequate length to prevent kinking when connected to the Customer’s Main Gas valve (point of service connection). Plumbers should be fully aware of, and follow, the installation requirements associated with the flexible piping they are installing.

4. For the electric load cable, electricians should provide adequate length to extend from the finished wall surface to allow a minimum bending radius of 4" to be achieved when it is installed inside of the meter box.

5. Follow the appropriate codes such as the National Fuel Gas Code (NFPA 54), the National Electrical Code (NEC), and the codes of the local jurisdiction when placing electrical load and/or gas fuel lines through the building walls.

The rules of BGE for the customer’s installation are in addition to and in no way a waiver of the rules of the inspection authority having jurisdiction. (Reference: Electric & Gas Tariff Sections 4.3)

A. Proposed "Penetration Zones" for a Stacked Installation or Separated Installation (Electric Socket Box)

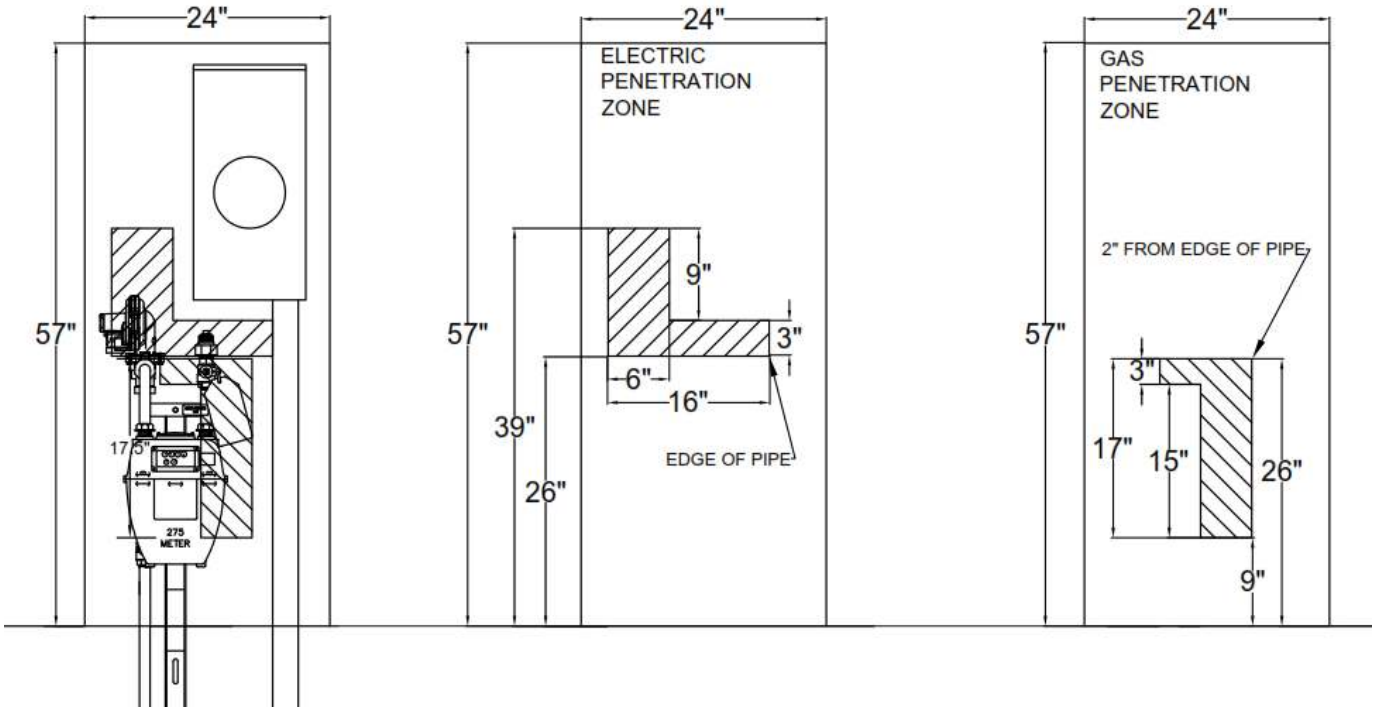


Figure 602-5-A

B. Proposed "Penetration Zones" for a Side-by-Side Installations or Separated Installation (Electric Pedestal)

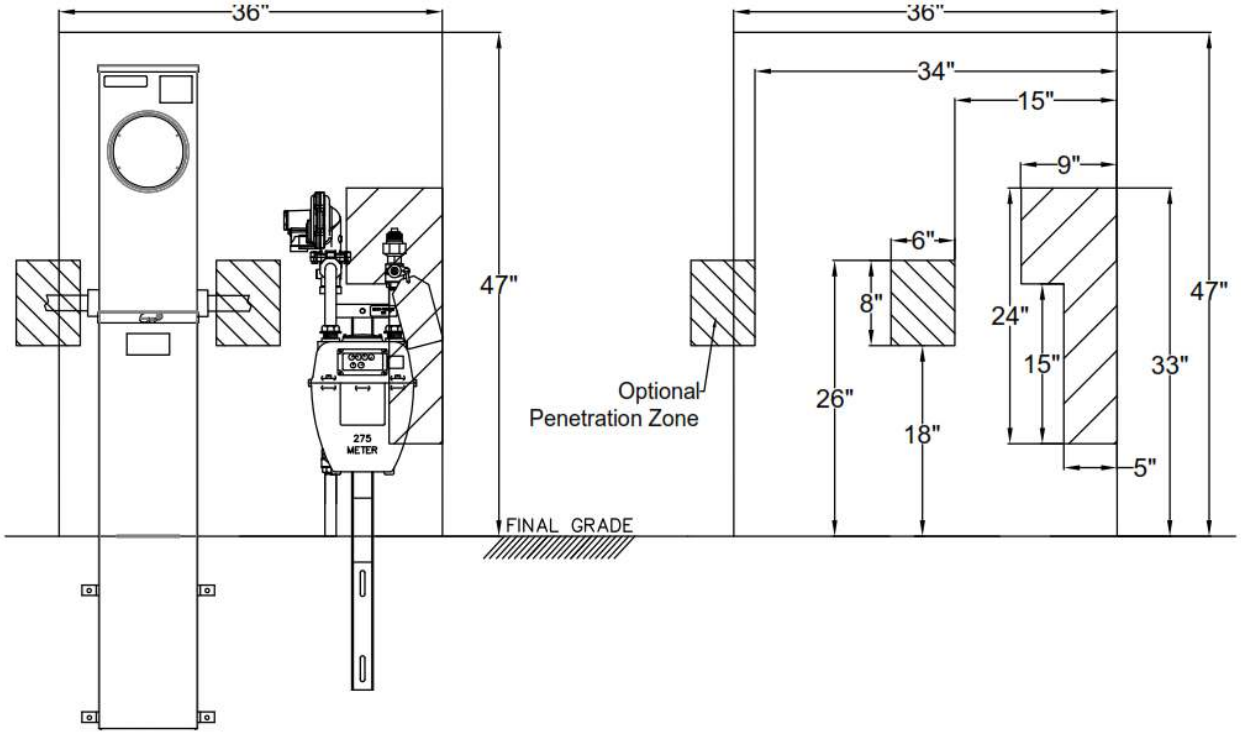


Figure 602-5-B

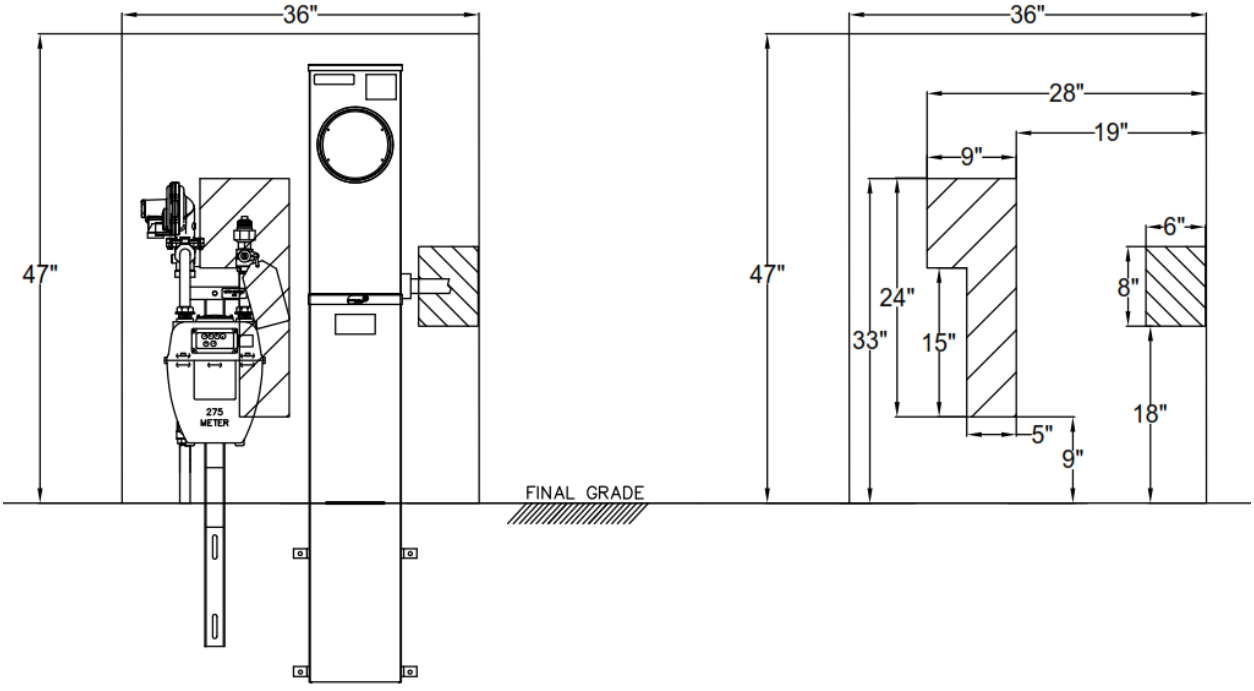


Figure 602-5-C

603 Metering Configuration for Town House (Only)

603-1 General

This section is a summary of BGE's construction practices for gas and electric meter installations for town houses.

Please contact your BGE Representative before construction.

603-2 Standard Construction: Both Gas and Electric Meters Installed Outdoors

This is BGE's required configuration. All construction efforts should be made to use this configuration.

Meters will be installed on the front of the building (side facing service lateral), or within five feet of the front corners.

Configuration A will be used if one of the following conditions exists:

- Clear wall space is available: 24" W x 57" H (stacked meter configuration – wall mount electric meter socket). See Section 602-1.

OR

- Clear wall space is available: 36" W x 47" H (side by side meter configuration – pedestal electric meter socket). See Section 602-2.

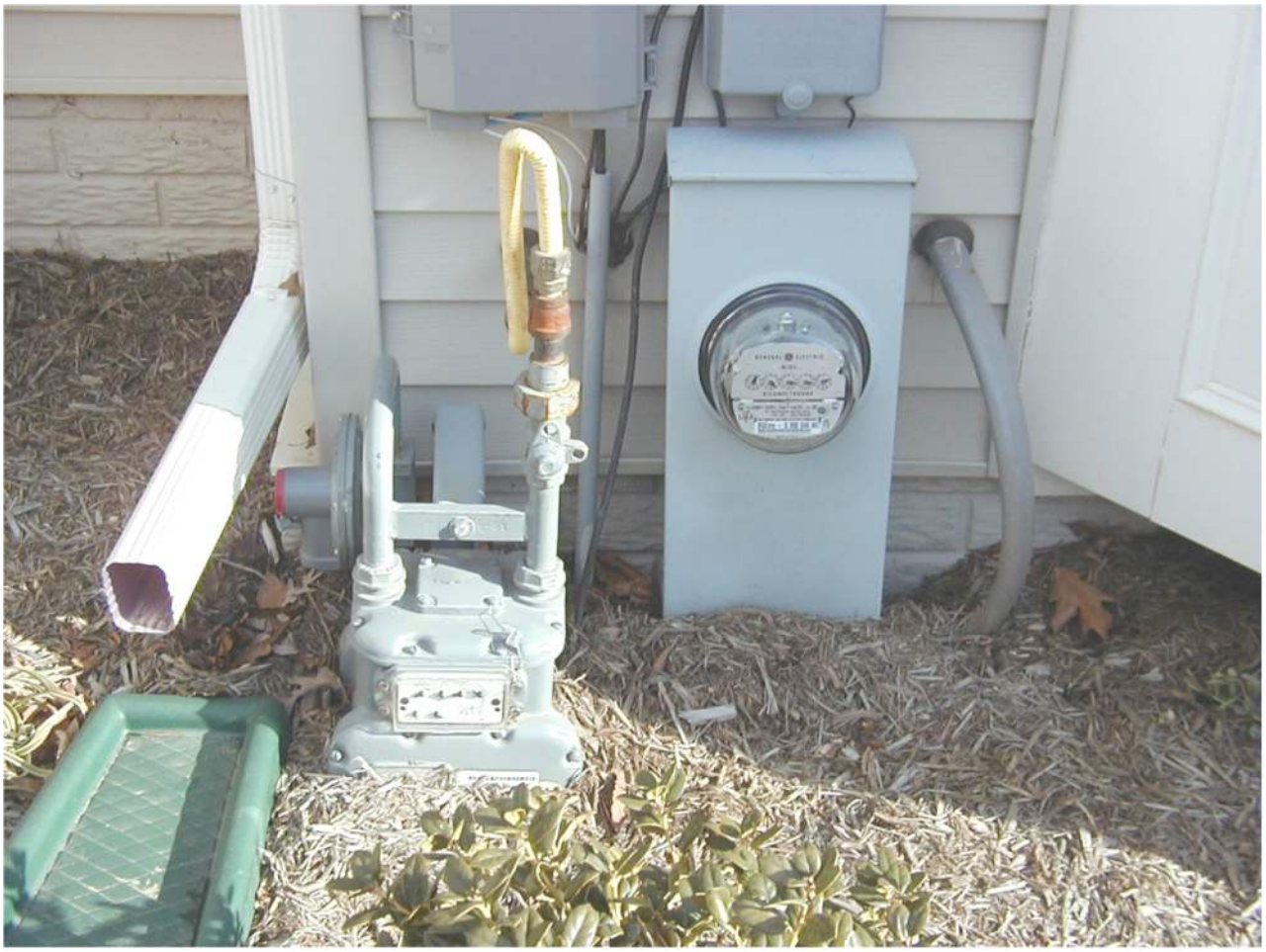
OR

- There is adequate clear wall space to split the meters and install them separate from each other. The gas meter requires 15" W x 36" H and the electric meter requires 17" W x 57" H (200 Amp wall mount box) or 16" W x 47" H (200 Amp pedestal box) of clear wall space. See Section 602-3.

604 Improper Installations

The following pictures are examples of improper combined meter installations.

A. In the picture below, there are several improper installation practices shown. The cause was the back-fill or final grade was placed higher than the local jurisdictional requirement.
   - Riser valve is buried
   - Regulator vent has less than 12" clearance to final grade
   - Gas meter is buried
   - Electric meter box cover opening is buried
   - Due to incorrect meter placement to grading, the downspout can cause freezing issues



B. The following example shows two gas meters with improper frontal clearances.

- The clearance in front of the meter on the left is inadequate. The fence impedes the 3’ space requirement.
- The clearance in front of the meter on the right is also inadequate. A clear space of 3’ between mature shrubbery and the meter is required. By the time the shrubbery matures, it is likely to cover the meter.



C. In the following picture, a meter is shown that was mounted improperly.

- The meter is located on the neighbor's wall. Metering equipment from one customer may not be attached to or located on another’s property.



D. The following pictures show an improper stacked meter installation.

- Due to the penetration location of the load cable, the meter socket had to be installed higher than normal. Because of this, the customer cannot access the light fixture to install a light bulb.





701 Gas General

701-1 Gas General

BGE supplies natural gas service to customers throughout Central Maryland. Service is provided to residential, commercial, and industrial customers. Each customer is supplied gas service through a service line, which terminates at a gas metering assembly. It is BGE's policy to locate meters outside and as close to the service side of the building (generally the front) as practical.

BGE owns and maintains all service piping and facilities (including the gas metering assembly) up to the "Point of Service". This maintenance includes, but is not limited to, leak survey, corrosion monitoring, painting, and relocation of the piping to accommodate building renovations. This is applicable whether the gas metering assembly is located outside or inside the building being served.

Note: The customer may repaint the exposed piping and meter for aesthetic reasons but must take care not to paint over any dials, reading devices, or vent line openings. If you have questions, please call our Customer Care Center at 1-800-685-0123.

BGE only uses new materials in the installation of gas metering assemblies. The reuse of materials and components is prohibited except where reconditioned for use under the direction of Smart Metering & Technology.

BGE gas metering assemblies always consist of uniform steel pipe and steel or malleable fittings. Plastic, cast iron, lead or copper pipe/tubing are not used for gas metering assemblies. Please check with the applicable county/city codes as to allowable materials for customer piping.

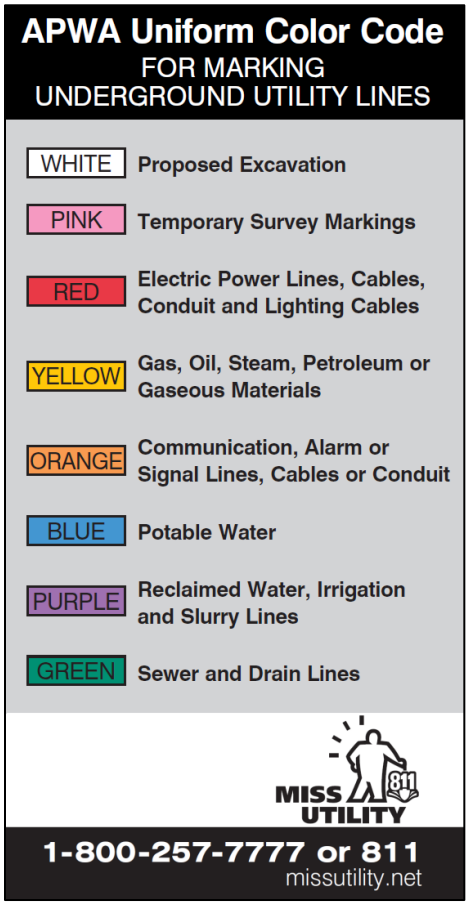
Prior to beginning construction please review the Meter Protection section in the beginning of this manual.

701-2 Location of Underground Facilities

Call *at least* 48 hours before you dig, plant, drill, blast, or grade. A utility representative will mark underground facilities at your site free of charge.

Call Miss Utility at 811 or 1-800-257-7777 (7:00 AM - 5:00 PM) 24 hr. service in case of emergency.

Color codes appearing on wire flags or as spray painted stripes on the grass, sidewalk or street mark underground utility lines. Whether you're planning a large construction project or minor landscaping, call Miss Utility at 811 or 1-800-257-7777 before you dig and exercise caution where you see these codes:



701-3 Properties of Natural Gas

- Natural Gas contains no toxic material before being burned; however, it will not support life.
- BGE's natural gas is rated at 1040 BTU per cubic foot; vapor density 0.6 (air is 1.0).
- Natural gas requires a temperature of 1200ºF to ignite.
- The flammability range of natural gas is between 5 and 15 percent in air.
- Natural gas requires 10 times as much air as gasoline to burn properly.
- The products of combustion of natural gas will contain carbon dioxide, nitrogen, and water vapor. All are harmless.
- Any hydrocarbons that lack air while burning will produce carbon monoxide.
- Carbon monoxide is colorless, odorless, tasteless, and very deadly.

701-4 Meter & Installation Unit - Natural Gas Responsibilities

The following is a list of contacts with groups involved

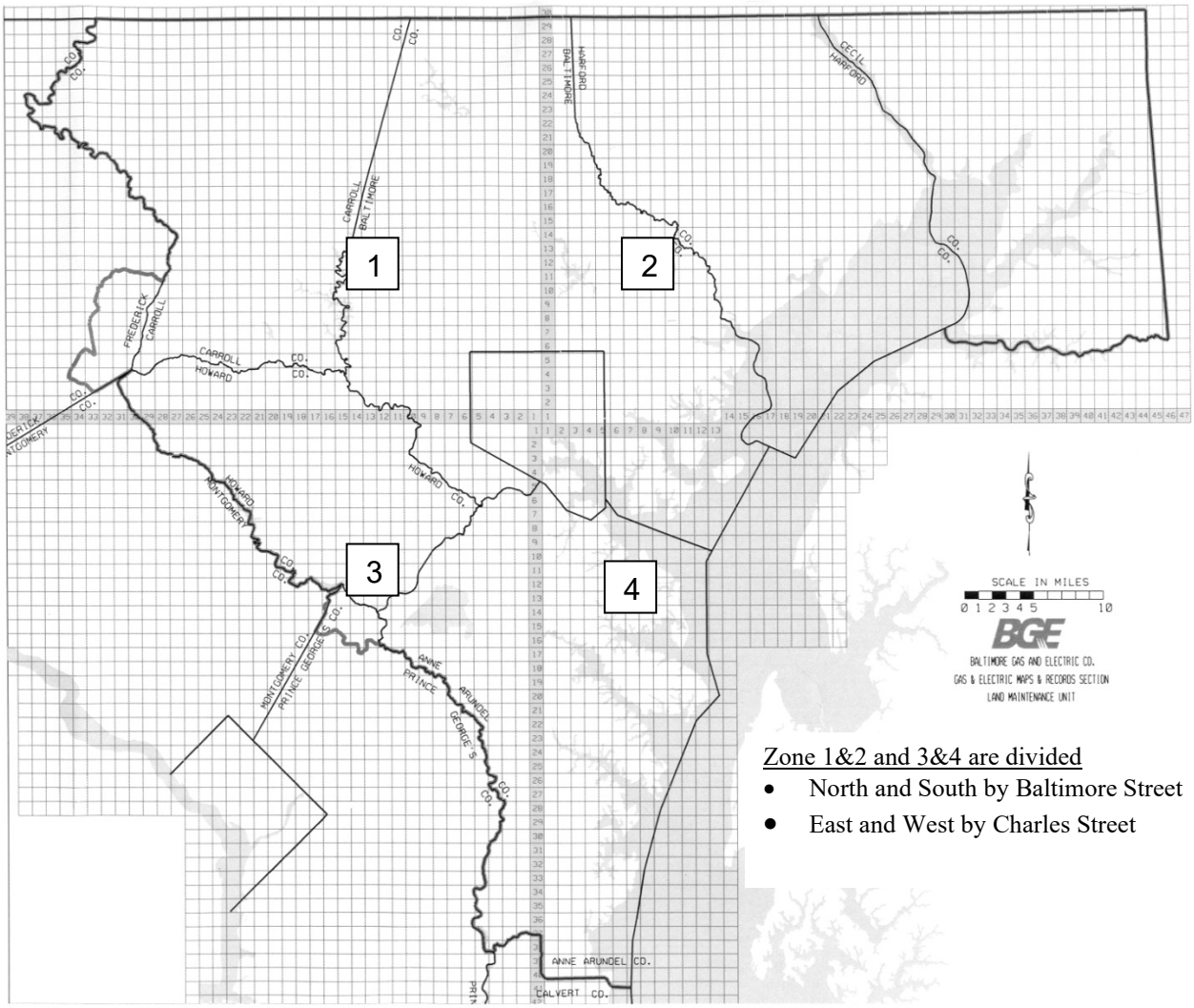
Gas Meter & Installation Unit Supervisor:
Mike Simmons, 410-470-7095, Michael.Simmons@constellation.com

Measurement Specialist for (North) grids 1 & 2:
Brian Brest, 410-470-6885, Brian.L.Brest@bge.com

Measurement Specialist for (South) grids 3 & 4:
Kevin Kline, 410-470-9021, Kevin.Kline@bge.com

Supervisor, Field Meter Test – Gas:
John Shrader, 410-470-0430, John.Shrader@bge.com

Measurement Specialist for grids 1, 2, 3, & 4:
Al Brazil, Albert.W.Brazil@bge.com



Zone 1&2 and 3&4 are divided

- North and South by Baltimore Street
- East and West by Charles Street

701-5 Other BGE Contacts

For inquiries, arrangements or Information pertaining to: New services - Gas or Electric Pending jobs or construction Relocation of Company equipment Removal of Company equipment Meter Locations Certificates of Inspection Significant increases in load Increase in service entrance size Fault current Values Voltage Problems Planned Outages Customer-owned metering equipment	<u>Residential, Commercial, & Industrial</u> New Business and Customer Contact 410-637-8713 (7:00 AM - 4:30 PM) 800-233-1854 (7:00 AM - 4:30 PM) Fax 410-712-9323 Baltimore Gas & Electric Company New Construction Services 1068 N. Front St. Baltimore, MD 21203
Emergency service Turn on, turn off meters Meter reading	800-685-0123
Residential: General Conservation Information Efficient utilization of energy Insulation	800-265-6177 or 410-265-4100

702 Gas Supply Conditions

702-1 Characteristics of Supply

BGE has a contract with the State of Maryland to supply natural gas to customers in our service territory. This contract is in a form of a tariff. The following excerpt from the BGE Gas Service Tariff; Part 2, Section 1 describes the characteristics of this supply.

BGE Gas Service Tariff; Section 1
1. Characteristics of Supply

1.1 ***General:*** *The Customer should consult the Company as to the availability of the Company's service at a particular location before proceeding with plans for any installation whether new, additional, replacement, or a transfer from one location within the territory to another.*

1.2 ***Standard Service****: The heating value of the gas supplied will vary from time to time due to changes in the composition of the Company's sendout. The composition of the gas sendout will consist of natural gas, liquefied natural gas, propane-air gas, and synthetic gas in varying proportions depending upon the gas supply situation at any given time. The normal range of heating value will be from 1000 to 1200 Btu per cubic foot (cu. ft.) of gas.*

Standard delivery to the Customer is at low pressure. Where, at the discretion of the Company, gas is supplied at higher than standard delivery pressure, the meter reading is corrected from the absolute delivery pressure (14.7 atmospheric pressure) in pounds per square inch absolute to a pressure base of 14.85 pounds per square inch absolute. This correction is accomplished by applying a fixed pressure correction factor to the meter reading or by a base pressure corrector attached directly to the meter.

BGE has six pressure systems to deliver natural gas which are detailed later in this section. The Low Pressure system requires no regulator. Meter sizing capacity must meet or exceed customer's gas demand with 0.5" w.c. allowable pressure drop across the meter assembly. Other pressure systems require regulator(s) to control delivery pressure at prescribed level for all flow rates up to maximum demand.

702-2 Delivery Pressure

The gas pressure which BGE provides to the customer and upon which the customer's piping must be sized is called the "Delivery Pressure". For a summary of the BGE pressure deliveries, see Table 702-2 below. The following text provides more detailed information.

Table 702-2

BGE Pressure Systems	BGE Standard Delivery Pressure (3" w.c. guarantee)	Higher than Standard Delivery Pressure* - Non-Fixed Factored Billing	Higher than Standard Delivery Pressure - Fixed Factored Billing	Higher than Standard Delivery Pressure** - Line Pressure Delivery
LP	3" w.c - 10" w.c. (max)	Not available	Not available	Not available
MP	3" w.c - 10" w.c. (max)	14" w.c., 1,200 to 23,000cfh	Not available	1.46 psig to 10 psig (1.46 psig minimum)
HP	3" w.c - 10" w.c. (max)	14" w.c. to 15 psig	2 psig, 0 to 12,375cfh or 5 psig, 0 to 14,600 cfh	20 to 99 psig (20 psig minimum)
OHP	3" w.c - 10" w.c. (max)	14" w.c. to 100 psig	2 psig, 0 to 12,375cfh or 5 psig, 0 to 14,600 cfh	120 to 300 psig (120 psig minimum)
436	3" w.c - 10" w.c. (max)	14" w.c. to 300 psig	2 psig, 0 to 12,375cfh or 5 psig, 0 to 14,600 cfh	345 to 436 psig (345 psig minimum)
720	3" w.c - 10" w.c. (max)	14" w.c. to 300 psig	2 psig, 0 to 12,375cfh or 5 psig, 0 to 14,600 cfh	345 to 720 psig (345 psig. minimum)

* Higher than Standard Delivery Pressure Non-Fixed Factored Billing requires Pressure-Compensating Instrument, which is only available for Rotary class metering.

** BGE does not provide any pressure regulation on Line Pressure Delivery

Note: 27.7" water column (w.c.) = 1 PSIG (Pounds Per Square Inch Gauge)

A. Standard Delivery Pressure - for design purposes Standard Delivery Pressure has been established as 3" w.c. minimum at the outlet of the gas metering assembly when service is provided off of the Low Pressure System. When gas is supplied to the customer from other than the Low Pressure System a regulator(s) must be used by BGE to control the delivery pressure at a minimum of 3" w.c. at the Customer's Main Gas Valve (point of service connection). Common settings are 6" w.c. for residential customers and 7" w.c. for commercial and industrial customers. For all pressure systems, Standard Delivery Pressure shall not exceed 10" w.c. at the outlet of the meter. Standard Delivery Pressure assemblies up to 23,000 CFH demand are shown in this manual and are subject to "Standard Designs". Capacities in excess of 23,000 CFH require individual designs by BGE.
(Reference: National Fuel Gas Code - 2015 Edition - Section 5.8.1)

B. Above Standard Delivery Pressure - For loads of 1,200 cfh and greater, BGE may supply gas to a customer at higher than Standard Delivery Pressure (greater than 10" w.c.) from other than the Low Pressure Gas Distribution System.
   - From the Medium Pressure System, delivery pressure may be 14" w.c. (0.5 PSIG) for capacities from 1,200 to 23,000 cfh or available main pressure. For capacities requirements greater than 23,000 cfh the Customer must take available line pressure.
   - From the High Pressure and Over High Pressure System, delivery pressure can be up to the service terminal pressure. Certain guidelines apply to availability; please refer to your BGE representative for current criteria.

Capacities of meters and regulators operating at Above Standard Delivery Pressure will incorporate the use of fixed factor billing with regulators approved by BGE Smart Metering & Technology (SMT) for this purpose. Where a SMT approved regulator is not available, meters must be equipped with a pressure-compensating instrument. All instrumentation must be of a type approved by SMT and designed to compensate to a pressure base of 14.85 PSIA.

C. Two and Five PSIG Delivery Pressure - The Company shall provide 2 and 5 PSIG delivery pressure to customers without the design limitations that restrict the availability of other elevated delivery pressures. As stated, 2 and 5 PSIG delivery pressure can be obtained from the High Pressure and Over High Pressure gas distribution systems. In order to provide 2 and 5 PSIG delivery pressure the customer's interior piping system requires approval from the local authority having jurisdiction. Delivery Pressures of 2 and 5 PSIG assemblies up to 25,875 CFH demand are shown in this manual and are subject to "Standard Designs". Capacities in excess of 25,875 CFH require individual designs by BGE. These pressure systems are not available in all areas, please check with your BGE Representative.

702-3 Capacity Design

The capacity design of a gas metering assembly is predicted on the ability to meet two conditions:

A. To provide adequate flow at sufficient delivery pressure to meet the customer's expected gas load under BGE's minimum service terminal pressures. See Table 702-3.

B. To provide safe emergency levels of customer house-line pressure under the worst conditions, namely, BGE's maximum main/service terminal pressure, and complete regulator failure. Protection may be afforded by pressure relief or monitor control. Maximum main/service terminal pressure is taken to be maximum allowable operating pressure of the main.

Table 702-3

BGE Pressure System	BGE Minimum Main Pressure	BGE Maximum Main Pressure	BGE Minimum Service Terminal Pressure	Allowable Pressure Drop
LP	4.0" w.c.	10" w.c.	3.5" w.c. (0.13 psig)	0.5" w.c.
MP	2 psig	10 psig	1.46 psig	0.54 psig
HP	25 psig	99 psig	20 psig	5 psig
OHP	125 psig	300 psig (varies)	120 psig	5 psig
436	350 psig	436 psig	345 psig	5 psig
720	350 psig	720 psig	345 psig	5 psig

702-4 Conditions of Supply

BGE provides gas service to customers based upon the conditions set forth in the Maryland Public Service Commission - BGE Gas Service Tariff. The following excerpt is the "Conditions of Supply" of the BGE Gas Service Tariff; Part 2, Section 2. This is provided for Reference in outlining our general conditions of service.

BGE Gas Service Tariff; Section 2
2. Conditions of Supply

2.1 ***Limitations on Extensions:*** *Service is supplied only where, in the opinion of the Company, adequate service is available or can be made available under the provisions of these rules.*

The Company's obligation to extend its facilities is limited to the assumption of new investment to the extent warranted by the revenue anticipated from the business to be supplied.

Where the business in prospect does not warrant the expenditure required to serve it, the Company determines from the circumstances of each case, what financing shall be required of the Customer, subject to the approval of the Commission.

2.2 ***Supply Points****: It is the standard practice of the Company to provide (subject to the provisions of Sec. 8 Extensions):*

(a) One service
1. *for all requirements of the Customer on a single property; where the supply is for his use in group of buildings, the supply point is located, wherever practicable, at a location central to the group;*
2. *for each building on the Customer's property, upon request, provided the service to any building is in each instance for the major requirements of that building;*
3. *for any building occupied by two or more Customers;*

(b) One meter (or metering unit) - for each Customer at each supply point; where two or more Customers are supplied from one service, a centralized meter location is required wherever practicable. Each meter shall have a separate application of the schedule.

Where, in the Company's judgment and under conditions specified by it, more than one service is required for a building or pair of adjoining buildings, the Company provides such additional service upon request and upon payment by the Customer to the Company of the charges stated in Sec 8.32. Each meter shall have a separate application of the rate schedule.

A group of buildings with interconnected passageways is considered as one building.

Where, under unusual conditions, more than one service (supply point) is necessary to supply the Customer's requirements for large connected loads on property comprising single or contiguous land parcels, the Company provides such service upon request under standard extension provisions. Whenever the Customer requests and the Company in its judgment finds it practicable to provide more than one service on his property, the service use is metered at each supply point. The registrations of these meters are combined and the Customer is billed for the total use, computed as if all service had been furnished through one service on a single application of Schedule C, provided one of the supply points requires metering capacity of not less than 150 therms per hour and each additional supply point requires metering capacity of not less than 50 therms per hour. In determining contiguity hereunder of parcels abutting opposite sides of public or private roads or other ways, the boundaries of such parcels shall be considered as extending to the center of such roads or ways.

2.3 ***Curtailment of Supply****: The supply of gas is subject to any orders of Federal or State authorities establishing any priority of or limitations to service. In the event a curtailment is required, the Company will implement limitations to supply in accordance with the Natural Gas Curtailment Plan in Appendix A.*

2.4 ***Refusal or Discontinuance of Supply Cause****: The Company may refuse or discontinue service and remove its property without being liable to the Customer, or to tenants or occupants of the premises served, for any loss, cost, damage or expense occasioned by such refusal, discontinuance or removal, for any of the following reasons.*

(a) Customer's failure to comply with any of the provisions of the contract, or any applicable regulations of the Commission, or any of the Company's applicable rules or practices currently in effect.

(b) Customer's nonpayment of bill within the net-payment period, and then after reasonable attempt to effect collection of the bill plus the applicable Late Payment Charge, including written notice of at least 3 days exclusive of Sundays and holidays.

(c) Customer's failure to provide a deposit to insure payment of bills, when requested by the Company under the provisions of Sec. 7.7.

(d) Customer's failure to pay any of the regular monthly installments under payment plans for extensions. (The unpaid deferred charges shall thereupon become due and payable.)

(e) Customer's failure to maintain his equipment in safe condition, in the judgment of the Company.

(f) Customer's failure to permit Company or its agents reasonable access to its equipment located on or in the customer's premises.

(g) Withdrawal or termination of the proper permits, certificates or rights-of-way.

(h) Removal of the Customer.

(i) Evidence of fraud, by any method, including the diversion of gas around the meter.

(j) Unauthorized adjustment of or tampering with Company's equipment.

(l) Customer's use of his equipment in a manner judged by the Company to adversely affect its equipment or its service to others.

The Company may discontinue service without notice for reasons (e), (i), (j), and (l) above.

2.41 ***Reconnection Charge****: Where the Company has discontinued service for nonpayment of bill or for other reasons listed in Sec. 2.4, the Customer is subject to the following charge, payable at a Company business office, as a condition of resuming service at the same location or at a different location:*

(a) Where the disconnection was made at the meter location without the necessity of legal action-

$20.00 where the reconnection can be made under routine scheduled working conditions, or

$30.00 where the Customer requires reconnection on the same day on which, before 1 p.m., cause for discontinuance is removed, except on Saturday and on the day before a Company holiday,

(b) where the Company was unable to obtain access to the meter and the disconnection was made at other than the meter location or at the meter location as a result of legal action, $70.00 without regard to the conditions of reconnection but, other than on Saturday and the day before a Company holiday, cause for discontinuance must be removed before 1 p.m. to have service reconnected on the same day.

2.42 ***Field Collection Fee****: Where the Customer makes a payment to a Company Representative at the Customer's premises to avoid discontinuance of service, the Customer is subject to a $15.00 fee per occurrence. Payment to maintain service must be in the form of a check or credit card. No cash will be accepted by the Company Representative.*

Effective February 4, 2015, for Customers served under rate Schedules C (Daily Metered Customers only), IS, EG, or ISS, payments to a Company Representative at the Customer's premise to avoid discontinuance of service shall only be allowed one time over the duration of the account. Thereafter, no payments at the Customer's premise will be accepted from Customers served under these Rate Schedules.

2.5 ***Loss or Damage From Failure to Supply****: The Company is not liable for any loss, cost, damage or expense to any Customer occasioned by any failure to supply gas according to the terms of the contract or by any interruption of the supply of gas, if such failure or interruption is due to storm, lightning, fire, flood, drought, strike, or any cause beyond the control of the Company, or any cause except willful default or neglect on its part.*

702-5 Dual Services

BGE provides more than one supply point where, in BGE's judgment and under conditions specified by BGE, more than one service is required. During new construction or renovation, BGE will not provide dual services. Upon installation of the new service, the original service must be disconnected. For large industrial and commercial installations, the BGE Meter Inspector may waive this policy and provide up to 10 days of dual services before the original service must be disconnected.

703 Ownership Responsibilities

703-1 Ownership Responsibilities

The Maryland Public Service Commission provides the regulations which govern the conditions of service supplied by Gas Companies. (Ref. COMAR Title 20 - Subtitle 55)

These regulations are intended to promote safe and adequate service to the public, to provide standards for uniform and reasonable practices by utilities, and to outline the responsibility of the public in requesting and receiving service from the utilities.

The BGE Gas Service Tariff is supplementary to the "Regulations Governing Service Supplied by Gas Companies" of the Public Service Commission of Maryland, and comprises the rules and rates under which gas service is supplied to its customers by Baltimore Gas and Electric Company (Hereafter Referred to as "The Company").

The following requirements cover the ownership of gas service equipment and responsibilities of each party.

703-2 Company's Installation

For a list of BGE's installation responsibilities, the following excerpt is from the BGE Gas Service Tariff; Part 2, Section 5. In addition to the requirements below in the BGE Gas Service Tariff, BGE also has a Point Of Service (P.O.S.) Policy that must be followed. BGE installs a valve at its expense at the outlet (or "back") of the meter. This valve is called the Customer's Main Gas Valve, or P.O.S. valve. After BGE installs and checks for leaks and proper operation, the valve becomes the property of the customer.

BGE Gas Service Tariff; Section 5
5. Company's Installation

5.1 ***Service Equipment Furnished by the Company:*** *For the purpose of determining the amount of gas used, a meter is installed by the Company upon the Customer's premises.*

The Company also furnishes, installs and maintains:

A. the line from the end of the "service" to the meter including a valve or cock at the inlet (or "front") connection of each meter, and where more than one meter is installed, the inlet manifold.

B. the outlet (or "back") connection from each meter [Point of Service], and where two or more meters are used as a metering unit, the outlet manifold including a valve or cock on each "back"[Point of Service] connection.

C. the pipe from the connection between the end of the service and the meter, described in (a) above, to the opposite side of the foundation wall between basements of adjoining buildings where one service is branched [inside a building] to supply two [attached] buildings [houses].

D. one or more pressure regulators where they are deemed by the Company to be necessary.

E. in accordance with Federal regulations, eligible customers may request to have the Company install, at the Customer's expense, an excess flow valve on an existing Service Line supplying the Customer. The charge to the Customer shall be the estimated installed cost for the excess flow valve installation that exceeds the related material costs. The Company does not guarantee or warrant the operation of the excess flow valve (see Sec. 3.4).

F. any necessary valves, cocks and piping associated with the Company's installation.

Where a meter with a capacity of 450 cubic feet per hour or less is located indoors and the electric meter is also read outdoors, where requested by the Customer, the Company will install a remote index reading device at the Customer's expense. The charge for such device is $75.

5.2 ***Ownership:*** *All meters and other equipment furnished by the Company, [except the customer's main gas valve] remains its [BGE's] property.*

5.3 ***Responsibility for Damage or Loss****: The Customer is responsible for all damages to, or loss of, the Company's property located upon his premises unless occasioned by fire or the Company's negligence, or any cause beyond the control of the Customer.*

5.4 ***Access to Company's Equipment****: Permission is given the Company to enter the Customer's premises at all reasonable times, for the purpose of reading its meters, and operating, inspecting, modifying and keeping in repair or removing any or all of its apparatus used in connection with the supply of gas, and for said purposes the Customer authorizes and requests his landlord, if any, to permit the Company to enter said premises.*

5.5 ***Tampering Charge:*** *In the event of unauthorized service use resulting from unauthorized adjustment to, reconnection of, or tampering with Company equipment, the Customer receiving the unauthorized service shall pay a charge to cover the Company costs of tampering investigations, inspections, billing, and corrective action on unsafe equipment. The Tampering Charge is $90 for confirmed tampering by a residential Customer and $45 per hour of investigation for confirmed tampering by a non-residential Customer.*

703-3 Customer's Installation

For lists of the Customer's Installations responsibilities, the following excerpt is from the BGE Gas Service Tariff; Part 2, Section 4.

BGE Gas Service Tariff; Section 4
4. Customer's Installation

4.1 ***Service Equipment Furnished by the Customer:*** *The Customer provides within his premises, without charge, suitable space for the Company's metering and service equipment.*

All service equipment other than that specifically stated in Section 5.1 below [Company's Installation] as furnished by the Company, is furnished, installed and maintained by the Customer (or owner, if more than one Customer in the building), subject to the approval of the Company. This includes the pipe to the appliance (the fuel line) from the outlet connection referred to in Sec.5.1.[Point of Service]. Where the meter has been installed, the fuel line is brought (Sic.by the Customer) to the meter location and connected to the meter outlet, or to the point of connection of the Company's installation where it is downstream from the meter outlet. Where the meter is not installed, the fuel line is brought (Sic. by the customer) to within 2 feet of the designated meter outlet location measured horizontally, and within the meter room where provided. It also includes any meter enclosure required by the Customer, and acceptable to the Company, where the meter is installed outdoors. The service equipment furnished, installed and maintained by the Customer also includes a dedicated telephone line where an Automated Meter Reading device is installed by the Company for Delivery Service purposes.

4.11 ***Customer's Responsibility to Maintain Service Equipment:*** *The Customer is responsible for maintaining all service equipment provided by them in proper working order. In the event that a malfunction with the Customer's dedicated telephone line results in the need for the Company to visit the Customer's premises to manually download data from an Automated Meter Reading device to prevent loss of the data, the Customer shall pay the cost of the site visit, unless the Customer has taken timely action to resolve the telephone line problem through its telephone service provider.*

4.2 ***Point of Connection to Company's Service:*** *The piping upon the Customer's premises is brought by the Customer to any point of service connection specified by the Company and if it becomes necessary to change such point of connection, the Customer brings such piping to the new point of connection.*

Where the meter is installed with a meter outlet valve, the fuel line is brought to the meter location and connected by the Customer. All other connections to or work of any kind on the Company's system, which is defined in Section 5.1[which terminates at the Point of Service], is done by the Company.

4.3 ***Rules Governing Customer's Installation****: All piping and gas appliances upon the Customer's premises shall be installed and maintained in accordance with applicable laws and the rules of the governmental authority having jurisdiction, the National Fire Protection Association, the applicable standards of the American National Standards Institute, and the Company. The rules of the Company are in addition to and in no way a waiver of the rules of the inspection authority having jurisdiction.*

4.4 ***Certificates of Approval Required****: The Customer obtains such certificates of approval of piping and gas appliances upon his premises as may be legally prescribed, and before service is supplied, the Company shall be so notified in writing by the inspection authority. In the absence of a certificate of approval being required by the governmental authority having jurisdiction, such piping and gas appliances shall be acceptable to the Company.*

4.5 ***Access to Customer's Equipment****: Permission is given the Company to enter the Customer's premises at all reasonable times, for the purpose of service test, and for such purpose the Customer authorizes and requests his landlord, if any, to permit the Company to enter said premises.*

4.6 ***Wastage of Gas and Adjustment of Appliances:*** *Upon notice by the Customer, the Company investigates suspected gas leakage or improper adjustment of gas appliances.*

Leakage inspections are made without charge, and where such leakage in a residential Customer's piping or appliances is found to have caused gas wastage, allowance for a share of such gas wastage is made by the Company where the occurrences is without the knowledge of the Customer. Adjustments of appliance burners and pilots are made by the Company without charge where the adjustment can be made within a reasonable time.

A. Customer Owned Gas Booster/Compressor (In reference to section 4.1 above):

Gas Booster/Compressors shall be allowed for LP (Low Pressure) and Line Pressure Delivery (Unregulated) customers only. A low pressure cut-off device which is acceptable to BGE shall be installed with each customer owned gas booster/compressor installation (Ref. NFPA 54-Z223.1 para. 5.10). A back pressure protection device shall be required where the design of the gas booster/compressor could potentially force pressure back into BGE's distribution system (Ref. NFPA 54-Z223.1 para. 5.9).

When installed the low pressure cut-off device and back pressure protection device should be connected as close as is practical to the customer side of the point of service valve. The minimum setpoint for cut off devices shall be determined by Gas System Planning.

703-4 Company Responsibilities

The Company maintains and monitors all gas piping and equipment up to the Point of Service (POS), or customer's main gas valve. These facilities are monitored for leaks and corrosion on a prescribed basis.

Based upon Public Service Commission guidelines, BGE performs an In-Service Performance Test Program for gas meters. This program involves the replacement of selected Group I, II, and III meters on a scheduled basis for performance testing. It is the responsibility of BGE to coordinate any customer service issues to ensure safety and minimize impact to customers.
(Reference: COMAR 20.55.07.07).

The Public Service Commission requires a gas leakage test to be conducted whenever work is performed on the service or meter installation.
(Reference: COMAR 20.55.09.05)

703-5 Customer Responsibilities

Based upon U.S. Department of Transportation Regulations, all natural gas utilities must provide notification to their customers of the customer's responsibility in monitoring and maintaining their piping and facilities. BGE has provided this notification through inclusion in our system-wide mailing of the "Scratch-and-Sniff" insert in all bills as required by the Maryland Public Service Commission.

The following is the notification wording as printed on the "Scratch-and-Sniff" billing insert:

Do You Know What Natural Gas Smells Like?



Report gas leaks immediately. Gas can enter your building through walls even if you are not supplied with gas. Natural gas is colorless, tasteless, and odorless. We add an unpleasant odor to the gas so you will know if natural gas is escaping.

If you smell a gas leak:

- ✔ Extinguish all open flames. Do not use matches or lighters, and do not attempt to light your appliance.
- ✔ Do not touch electric switches, thermostats, or appliance controls. If the odor is strong, do **NOT** use any phone. All of these devices can cause sparks.
- ✔ Leave the premise and go to a safe place where you can call BGE at **410-685-0123** or **1-800-685-0123** from outside the Baltimore Metropolitan area. TTY/TDD users call **1-800-735-2258** (Maryland Relay Services). Remain at the safe location and wait for BGE to arrive.

Our Customer Care Center will have a gas mechanic respond promptly to survey the area, perform safety measures, and repair BGE's equipment. There is no charge to stop a gas leak.

Warning – Possible Flexible Connector Safety Hazard

BGE is alerting all of its natural gas customers to a possible safety hazard involving customers' older brass flexible gas connectors and home appliances. Appliance *(continued on back)*

September 2008

Warning – Possible Flexible Connector *(continued)*

gas connectors are corrugated metal tubes used to connect gas appliances to gas supply lines and are the responsibility of the customer. Some older brass connectors can separate from the tubing and cause a serious gas leak, explosion or fire. To our knowledge, these dangerous uncoated brass connectors have not been made for more than 20 years, but some of them may still be in use, particularly in homes with older appliances. Moving the appliance, even slightly, whether to clean behind it or inspect its gas connector can cause the connector to crack or break. Do not attempt to move the appliance yourself to check the connector. BGE recommends customers with older appliances contact a licensed plumber or qualified professional appliance repair service to inspect your appliance connectors.

Please remember, when planning any digging projects, call Miss Utility at **1-800-257-7777** at least 48 hours* before you start. A utility representative will mark underground facilities at your site. All digging around gas lines should be done by hand.

** Excluding weekends and holidays.*

Each gas customer is responsible for the maintenance and monitoring of all aboveground and buried pipe after the meter. If such piping is not maintained, it may corrode and leak. You should periodically inspect buried gas piping located after the meter for leaks and corrosion, and repair it if any unsafe condition is discovered.

To find contractors who can perform maintenance and repairs of gas fuel piping in your home, after the meter, please look up "Plumbing Contractors" in the yellow pages of the telephone directory—look for plumbers who are state certified to work on gas piping.

A U.S. Department of Transportation regulation requires all natural gas utilities to notify gas customers of their gas line maintenance responsibilities. BGE owns and maintains all natural gas piping up to and including the gas meter. BGE strives to provide all of our customers safe, reliable service while ensuring that gas piping owned by the company is properly maintained to avoid the potentially damaging effects of leaks and corrosion.

BGE

703-6 Qualified Agency

Installation and replacement of customer gas piping, gas utilization equipment, or accessories, and repair and servicing of equipment, shall only be performed by a qualified agency. The term "qualified agency" means any individual, firm, corporation, or company that either in person or through a representative is engaged in and is responsible for (1) the installation, testing, or replacement of gas piping or (2) the connection, installation, testing, repair, or servicing of equipment, that is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.
(Reference: National Fuel Gas Code - 2018 Edition; Section 3.3.81)

703-7 Interruptions of Service beyond the Meter

Notification of Interrupted Service: When the gas supply is to be turned off, it shall be the duty of the qualified agency to notify all affected users. Where two or more users are served from the same supply system, precautions shall be exercised to ensure that only service to the proper user is turned off.
Exception: In cases of emergency, affected users shall be notified as soon as possible of the actions taken by the qualified agency.
(Reference: National Fuel Gas Code - 2018 Edition; Section 4.2.1)

Before Turning Gas Off: Before turning off the gas to the premises, or section of piping to be serviced, for the purpose of installation, repair, replacement, or maintenance of gas piping or gas utilization equipment, all equipment shutoff valves shall be turned off.

Please refer to the applicable codes of the governmental jurisdiction and/or The National Fuel Gas Code - 2018 Edition for guidance and requirements of Customer piping installation, repair and safety procedures.

703-8 Inspection and Testing

It is the customer's responsibility to provide evidence that prior to acceptance and initial operation, all piping installations have been inspected and tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of the local jurisdiction having authority.
(Reference: COMAR 20.55.09.03 Customer Piping)

Code of Maryland Regulations
20.55.09.03

Customer Piping:

A. Before permitting the use of gas at any location, the piping shall be tested for tightness and leaks in accordance with Part 4 of the American National Standard "National Fuel Gas Code", ANSI Z223.1 (1998) [latest version is dated 2009], which is incorporated by reference under COMAR 20.50.02.02.
B. Pressure Test. Before any system of gas piping is finally put in service, it shall be tested for tightness and certified by the proper inspection authority that the test has been made.
C. Leakage Test. Before turning gas into any piping, it shall be tested for leaks.

The test procedure used shall be capable of disclosing all leaks in the section being tested and shall be selected after giving due consideration to the volumetric content of the section and to its location.

In accordance with the local jurisdictional requirements, the customer piping test should incorporate the following practices: (Reference: National Fuel Gas Code - 2018 Edition, Section 8)

A. The [customer] piping system shall withstand the test pressure specified without showing any evidence of leakage or other defects. Any reduction of test pressures as indicated by pressure gages shall be deemed to indicate the presence of a leak unless such reduction can be readily attributed to some other cause.
(Reference: National Fuel Gas Code - 2018 Edition; Section 8.1.5.1)

B. The leakage shall be located by means of an approved gas detector, a non-corrosive leak detection fluid (soap and water), or other approved leak detection methods. **Matches, candles, open flames, or other methods that could provide a source of ignition shall not be used.**
(Reference: National Fuel Gas Code - 2018 Edition; Section 8.1.5.2)

Where leakage or other defects are located, the affected portion of the piping system shall be repaired or replaced and re-tested.
(Reference: National Fuel Gas Code – 2018 Edition; Section 8.1.5.3)

C. All testing of piping systems shall be done with due regard for the safety of employees and the public during the test.
(Reference: National Fuel Gas Code - 2018 Edition; Section 8.1.3.6)

703-9 Turning Gas On

During the process of turning gas on into a system of new gas piping, the entire system shall be inspected to determine that there are no open fittings or ends and that all valves at unused outlets are closed and plugged or capped.
(Reference: National Fuel Gas Code - 2018 Edition; Section 8.2.2)

703-10 Test for Leakage

Immediately after the gas is turned on [by the qualified agency] into a new system [or into a system that has been initially restored after an interruption of service,] the piping system should be checked for leakage. Where leakage is indicated, the gas supply shall be shut-off until the necessary repairs have been made.
(Reference: National Fuel Gas Code - 2018 Edition; Section 8.2.3)

703-11 Placing Equipment in Operation

Gas utilization equipment shall not be placed in operation [by the qualified agency] until after the piping system has been checked for leakage in accordance with 8.2.3, the piping system purged in accordance with 8.3, and connections to the appliances checked for leakage.
(Reference: National Fuel Gas Code - 2018 Edition; Section 8.2.4, 8.2.3, 8.3)

703-12 Premises Test for Gas Leakage

Prior to any connection of customer piping to BGE facilities, which could facilitate the introduction of natural gas into a customer's premises, a premises test for gas leakage must be performed. The leakage test must be performed by a licensed plumber or qualified agency.

A. The Public Service Commission requires a gas leakage test to be conducted whenever work is performed on the service or gas metering assembly. The appropriate excerpts from these regulations are as follows:

Code of Maryland Regulations
20.55.09.05.c.2

Customer's Premises:

When a utility service person enters a customer's premise for the purpose of inspecting or serving any gas equipment (excluding meter reading) a leakage survey shall be conducted at appropriate locations, including atmosphere samples and at all utility service entrances. In multiple - occupancy buildings, an individual apartment or dwelling unit shall constitute the customer's premises specified above. The customer shall cooperate with the Company in the conduct of such tests as regards to accessibility to meters and service lines.

B. The leakage test will be conducted using a combustible gas indicator. A smell and soap test, although used as supplementary means to pinpoint leaks, will not be considered adequate to conduct the actual test. Take readings across the wall through which the service enters at all utility entrances, i.e. water, sewer, electric, etc. and at any cracks or openings in the walls.

704 Construction

704-1 Building Requirements

The Company's policy is to locate distribution facilities in the front of buildings. Rear distribution is permitted only in shopping centers or apartment/condominium (multiple occupancy buildings) complexes where our facilities are made readily accessible to vehicles and construction equipment for operating or maintenance purposes. Rear distribution is not normally permitted for individual or multiple-attached dwellings where the property is individually owned or has potential for occupant improvement/impact over our facilities.

All new gas services shall terminate at an outside location. If extenuating circumstances exist and an outside termination is not feasible, please consult with your BGE representative.

A. One service will be installed for all the requirements of the customer on a single property. Where supply is for his use in a group of buildings the supply point is located wherever practical at a location central to the group, or

B. One service will be installed for each building on Customer's property, or

C. One service will be installed for any building occupied by two or more customers. (Reference: BGE Gas Service Tariff, Conditions of Supply, Section 2.2).

D. A central meter location for all leased areas within a horizontally constructed nonresidential multiple occupancy building is preferred. If this is impractical, two or more centralized meter locations are acceptable. The least preferred method to supply service is via services to individual areas. However, service may be provided to any leased area of the building that:

   1. Has one or more exterior wall(s) at least 25 feet in length, or 8 inch masonry fire walls (the 25 feet requirement may be satisfied by taking the average exterior width of all rental areas which meet the condition in 2. and 3. below); and

   2. Satisfies all applicable code(s) requirements for classification as a separate building; and

   3. Has an automatic alarm and recloser on all fire doors which activates when the door is opened; and

   4. The occupancy and gas usage is established for the leased area to be supplied and a gas certificate is pending.

   5. In areas to be paved, gas services (or mains) may be installed to prospective lease areas at the Owner's request (subject to tariff charges) even if occupancy and gas usage are not known. However, such services (or mains) shall not be connected to the source of gas until occupancy and gas usage is determined and a gas certificate is received. Facilities will be sized based on the best available information. Service risers, when appropriate, will be installed as part of the initial installation. Gas service piping will not be installed until a permanent building wall is constructed at the Point Of Service.

E. Although not stated in the Gas Service Tariff, the Company definition of a building is a "permanent structure that is enclosed within exterior walls or fire walls" as described in an architectural drawing based on the latest International Building Code and Local Code and stamped by the architect on record with the State of Maryland.

F. Location of Service Equipment - Multiple Occupancy Buildings

1. Under normal conditions, a separate meter is required for each customer served within a building. A single service and central meter location is preferred to service a structure enclosing one or more buildings unless each wall separating adjoining buildings is based on the latest International Building Code and Local Code. In that event, services to each building may be provided.

    a. A commercial or I&C building within a structure enclosing one or more buildings, as defined by the latest International Building Code and Local Code, may be served by a separate service provided the service is constructed with an exposed outside riser terminating in a valve. Note: This is not applicable to residential or public occupancy buildings.

    b. A structure, regardless of whether standing alone or separated into areas classified as buildings may be supplied by one service to a central meter location or one service for each building.

    c. Meter locations on multiple occupancy residential buildings, may be at one central location supplied by one service or may be in small groups located around the building with each location supplied by a service. Design of the service location and route should be the most economical while allowing access for surveys and maintenance. Construction of services beyond the building wall nearest the main shall be as described in section 704-2,A.

Note: For a flex warehouse building gas service is provided by a single service to a central meter location.

704-2 Gas Service Piping Location Requirements

A. Gas Service Piping Location

Gas services will generally be installed perpendicular from the gas main being tapped directly to the service entrance of the building being served. An offset, if required, will be made at and parallel to the front property line. From there the service will run perpendicular from the property line to the building. See Figure 704-2A.

1. Preferably services should not extend more than 5 feet beyond the building wall nearest the gas main. Where it is necessary to extend the service more than five feet beyond the wall, the service will be installed parallel to the building and no closer than 5 feet to it. Cover of at least 24 inches must be maintained.

    a. If the service is steel, all joints on this portion of the service must be welded. All joints on a plastic service must be fused (if IPS size); and if the service is plastic tubing, the couplings should be kept to a minimum. Extension of the service around a building to a rear meter location is prohibited, except for multiple occupancy residential buildings.

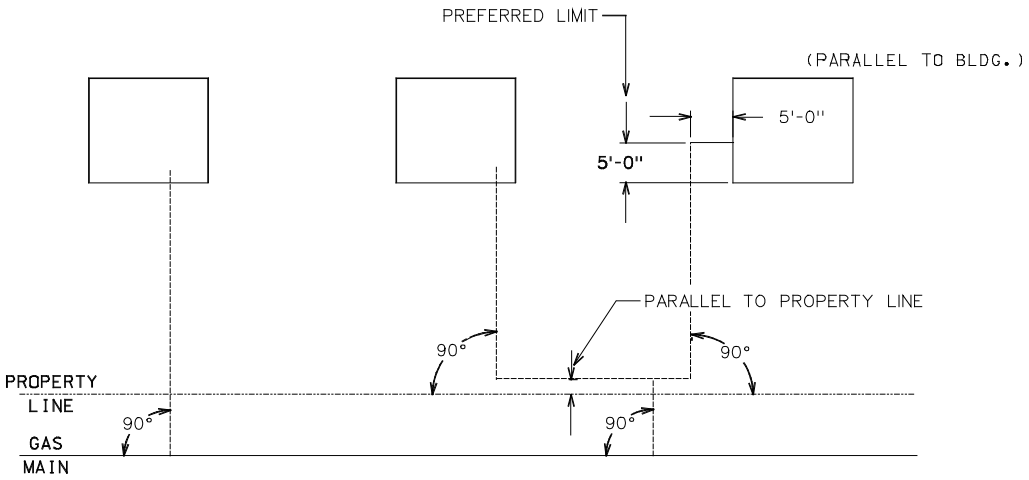


Figure 704-2A

B. Conduit Requirements and Encasement

Gas services shall not be installed directly under a building or roofed passageway or an enclosed or limiting structure, such as storage tanks or pools.

1. Gas services shall not be installed under enclosed auxiliary structures attached to a building (i.e., porches) that have less than 36 inches of clearance above ground, unless installed in a steel casing pipe, for inside meter installations, that is vented outside and sealed inside the building or structure to prevent escaping gas inside the casing from entering the building. (Ref: D.O.T., Office of Pipeline Safety, CFR 49 Regulation 192.361). See Figure 704-2B.

   a. Gas services requiring regulator vents (MP & HP) must have a 2-1/2 inch Schedule 40 PVC or steel casing pipe installed under the enclosed structure. The sleeve will facilitate installation of the regulator vent piping so that escaping gas will vent away from the building. For pipe and casing sizes contact your BGE Representative. (Ref: D.O.T., Office of Pipeline Safety, CFR 49 Regulation 192.355)

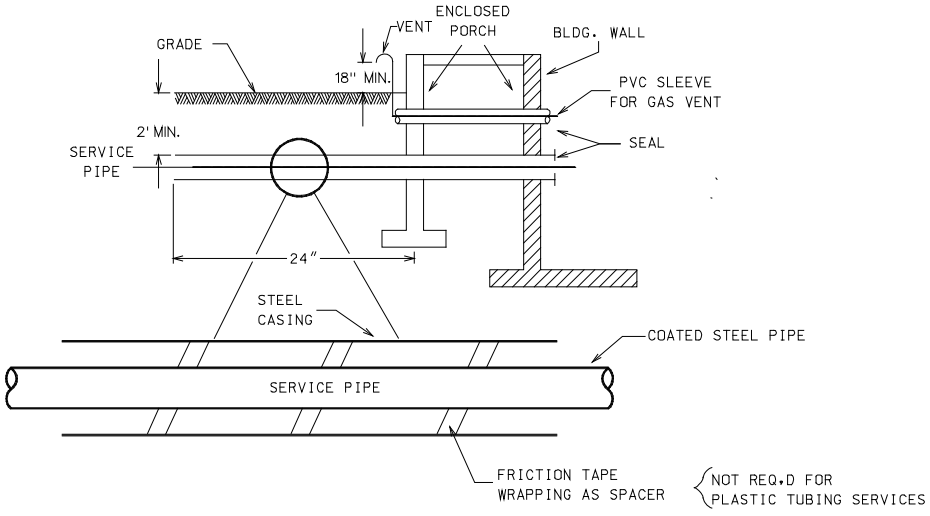


Figure 704-2B

2. Gas services shall not be installed under or near steps, retainer walls, footers or certain equipment that are within an area defined by a 45 degree slope from the bottom corner of the gas main trench to the base of these structures, unless installed in an encasement pipe. See Figure 704-2B2.

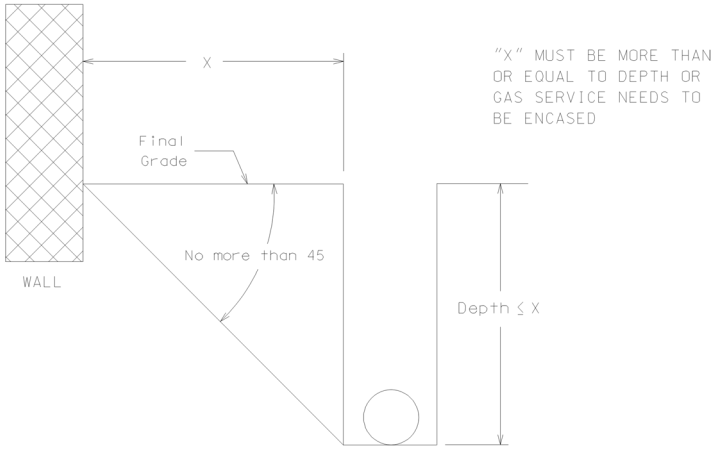


Figure 704-2B2

3. Encasement of existing services is not required when the following are constructed over the service (minimum cover requirements apply):

   a. Driveways, sidewalks, patios, and concrete slabs at ground level that are not enclosed by walls, and/or roof as long as separated from the building wall by at least an expansion joint.

   b. Decks at ground level that are not enclosed by walls and/or roof.

   c. Residential HVAC units that can be moved and having a minimum clearance of 36” from the face of gas and electric metering installations.

4. Encasement required for new services/new business:

   a. In order to facilitate service installation, encasement is required, of the homebuilder, for new services, which encounter the above situations.

C. Service Piping Installation - Site Requirements

Services will be installed where they are accessible for maintenance purposes (repairs, leak surveys, etc.) and not subject to undue stresses or hazardous conditions. Where an obstruction hinders the company’s ability to conduct surveys or effect repairs, the obstruction may require removal.

1. The planting of shrubs, hedges or flowers over the service shall be avoided. The planting of trees over the service pipe is prohibited. Installation of storage tanks such as propane or oil tanks, or swimming pools, or other fixed equipment or structures is also strictly prohibited.

2. Services will not be encased in concrete, brick or timber foundations for steps, retaining walls or similar structures.

   Note: This includes the building's footer, and the builder shall provide a clear area for the service piping. This clear space may either be cast when the footer is poured or cut away before the gas service is installed.

3. Services will be installed in locations free of erosion of the ground surface or the ponding of water. Areas subject to blasting operations or anticipated settlement from dewatering or tunneling operations are also to be avoided.

4. Common trench occupancy of gas services is a preferred practice whenever feasible. For examples of common trenching, see Figures 704-2C4A and 704-2C4B. The installation of gas services in a common trench is prohibited where:

   a. The operating voltages of electric cables are in excess of 15 kV.

   b. The gas service is larger than 6" in diameter.

   c. Vertical separation of at least 12” between gas and electric, streetlight, or communication lines cannot be maintained.
   (Reference: National Electric Safety Code - 2017 Edition, Section 354.A.2 - Radial separation of supply and communication cables or conductors from steam lines, gas, and other lines that transport flammable materials shall be not less than 300mm (12in) and shall meet Rule 353)

   d. The gas service is O.H.P. (in excess of 99 psig) and 18” of vertical clearance cannot be maintained from electric primary or secondary cable.

Common Trench Configuration for Services –
Low Pressure, Medium Pressure, High Pressure
(common trench is not permitted with gas lines larger than 6" in diameter)

Trench Cross Section Sketch

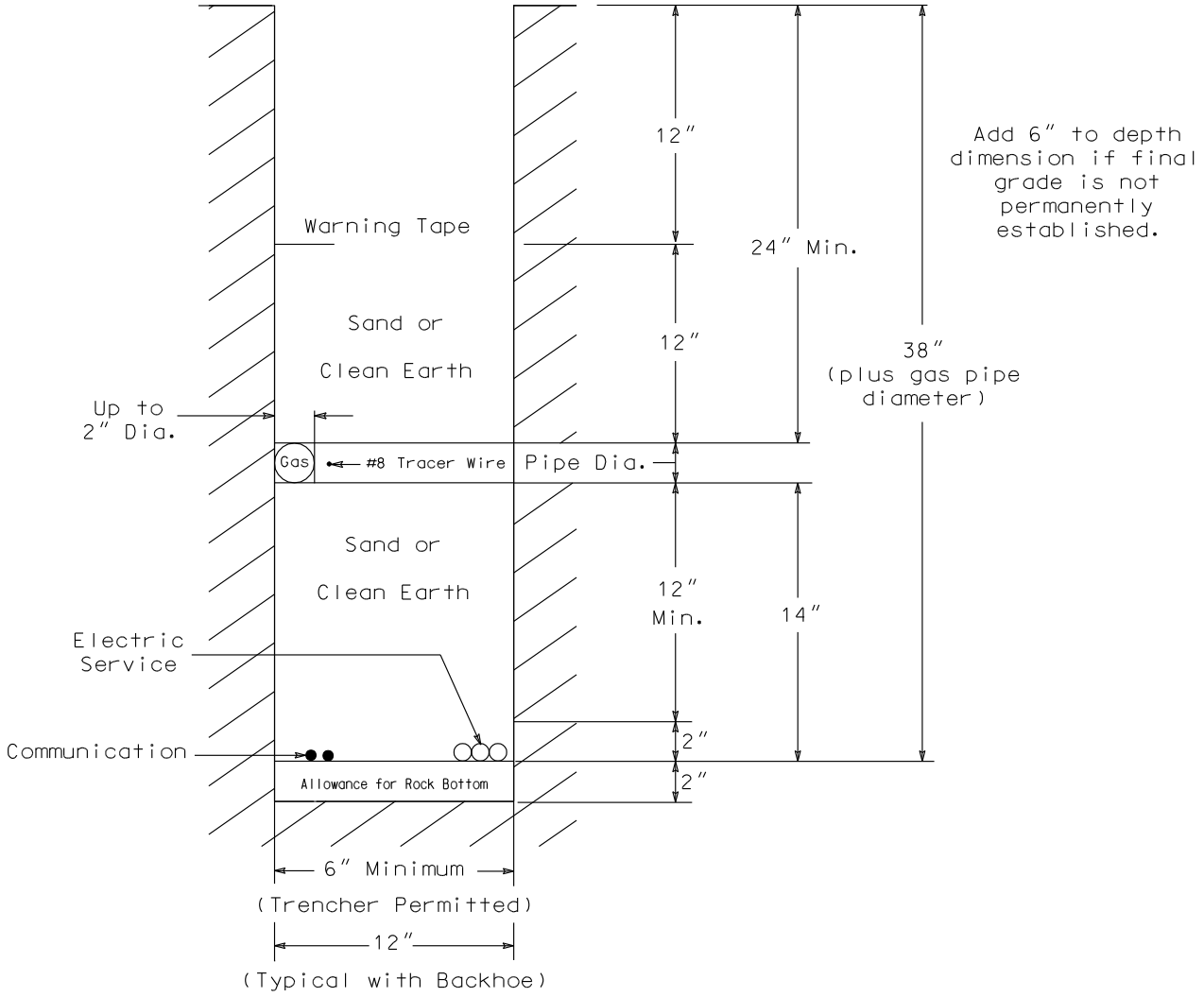


Figure 704-2C4A

Common Trench Configuration for Services - LP, MP, HP. See the below requirements.

a. Depth of trench shall provide a minimum of 24" of cover for gas pipe.

b. The service trench depth must be 38 inches plus the pipe diameter.

c. Plastic services require #8 wire - tracer (BGE material #40-B08) and warning tape (BGE material #66-579). Steel services require warning tape only.

Common Trench Configuration for Services –
Over-High Pressure
(common trench is not permitted with gas lines larger than 6” in diameter)

Trench Cross Section Sketch

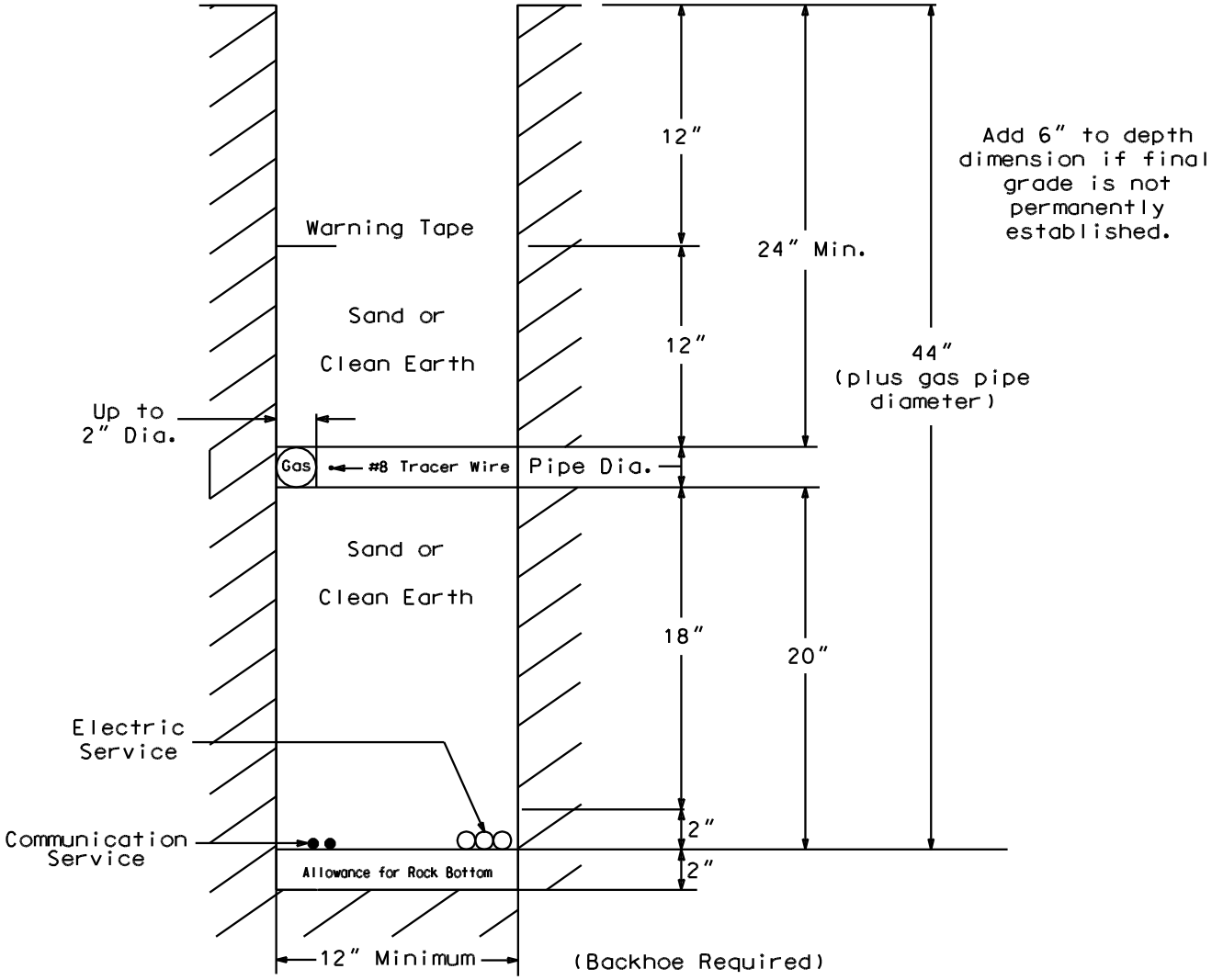


Figure 704-2C4B

Common Trench Configuration for Services - OHP. See the below requirements.

a. Depth of trench shall provide a minimum of 24” of cover for gas pipe.

b. The service trench depth must be 44 inches plus the pipe diameter.

c. Steel services require warning tape (BGE material #66-579).

5. Gas services will not be installed in a common trench above or below other utilities, i.e., water, sewer or storm drain. When gas services are to be installed parallel to other utilities, horizontal clearance must be maintained to provide space for the maintenance of the gas service as well as the other utilities. As a rule of thumb, the separation should equal at least the depth, "d", of the other utility as indicated in the following Figure 704-2C5.

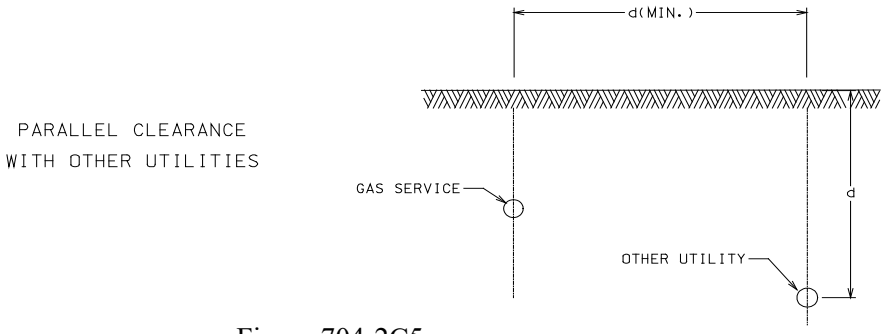


Figure 704-2C5

6. When crossing other underground structures (non-current carrying) not used in conjunction with the installation, gas mains and services will have the following vertical clearances:

   a. Steel mains and services sized 6 inches and smaller: 3" clearance. If the required 3" clearance cannot be maintained, the steel gas pipe will be insulated from other structures by inserting an approved non-conductive material between the two.

   b. Steel mains and services sized 8 inches and larger: 12" clearance.

   c. Plastic mains and services all sizes: 12” clearance.

   d. When crossing stream mains or services only steel piping is permitted with minimum clearance of 12” measured from piping O.D.’s

7. Above ground service piping outside buildings will be protected from damage by external forces and atmospheric corrosion.

8. Where practical, the gas service should be designed to enter buildings above ground, in a ventilated location and away from windows or other wall openings.

   Note: Meters and/or regulators shall not be installed near building openings used as outside air intakes where a gas leak or venting gas could allow the gas to be drawn into the building.

9. The gas service piping, when entering buildings, shall terminate immediately inside the customer meter/regulator set assembly nor shall it be concealed as in a chase, by wall paneling or ceiling tile. (Note: Extensions of the service line greater than 5-feet within buildings must be approved by the Gas Standards and Engineering Unit, Gas Planning and Engineering Department.).

   a. The installation of a branch service from one gas service through a common wall to supply an adjacent customer is prohibited. However, if an inside branch service exists it may be renewed, if necessary provided there is no customer objection.

b. Outside branching of a gas service may be used with discretion for economic reasons, e.g., avoid extensive paving cuts or extraordinary service construction, provided no more than two customers are supplied by the gas service, all other requirements of these standards are met, and only with the direct approval of Gas Engineering & Standards. Outside valves must be installed on each branch to control the flow of gas independently to each building. Outside branches should normally be made only from a gas service located on the dividing property line between two abutting customers at or adjacent the front property line. An effort should be made to utilize main piping (or re-classify existing service pipe) for this type of installation. An outside-branched service may also be utilized to supply no more than two buildings of a customer on his premises.

10. In order to allow for future main extensions gas services shall not be connected within 10 feet of the end of the main.

11. PVC conduit (solid wall, not split) may be used as a sleeve installed in advance of paving to facilitate future installation of small size (2" and smaller) gas services where a casing is not required, provided it is more economical than alternatives. The PVC conduit should be at least two sizes larger than the outside diameter of the service pipe. The ends of the sleeve should not be sealed after insertion of the carrier pipe to avoid containment of gas in case of a gas leak. However, the end of a sleeve on a service line nearest the building should be sealed after installation of the carrier pipe and the opposite end of the sleeve left open.

    The following is a list of solid wall PVC casing that may be used for gas services.

Service Size	**Duct Size**	BGE Material No.
1/2", 1", 1-1/4", or 2"	4"	12-746
4"	6"	12-640

12. The use of plastic pipe and tubing within the City of Baltimore is restricted as detailed herein:

    a. In the downtown area the use of plastic pipe or tubing is prohibited within 8' of any steam distribution piping (mains or services). This clearance must be maintained even if the plastic main or service is inserted in casing or duct. All installations closer than 8' must be made using steel pipe with minimum separations of 1' vertically (from outside of piping to outside of steam main/service pipe) and 2' horizontally.

    b. Within public rights-of-way in the City of Baltimore, plastic pipe and tubing must be backfilled with sand 6 inches above the top of the plastic pipe or tubing.

13. The gas service and associated metering equipment shall not be located where it may cause an obstruction to a Siamese fire connection. An area with a 36" radius measured from the center of the connection and extending downward to grade, shall be kept clear of all associated piping and equipment.

704-3 Gas Metering Assembly Supports

BGE gas metering assemblies are installed with enough flexibility to prevent thermal expansion or contraction from causing excessive stresses in the pipe or components. The gas metering assembly will be supported or anchored to protect pipe joints from the maximum end force caused by internal pressure and any external forces caused by persons using exposed piping as a step stool, etc. See Figures 704-3A and 704-3B on the following pages.
(Reference: National Fuel Gas Code – 2018 Edition - Section 5.7.3)

Note: The customer is responsible for all damages to company property as stated in Ownership/Responsibilities Section of the manual.

It is the customer's responsibility to provide adequate, safe and accessible space for the BGE gas metering assembly. Please consult with your BGE representative prior to designing the meter location in any building construction plans.

Required Space and Location for Service and Meter Brackets - Left Building Corner

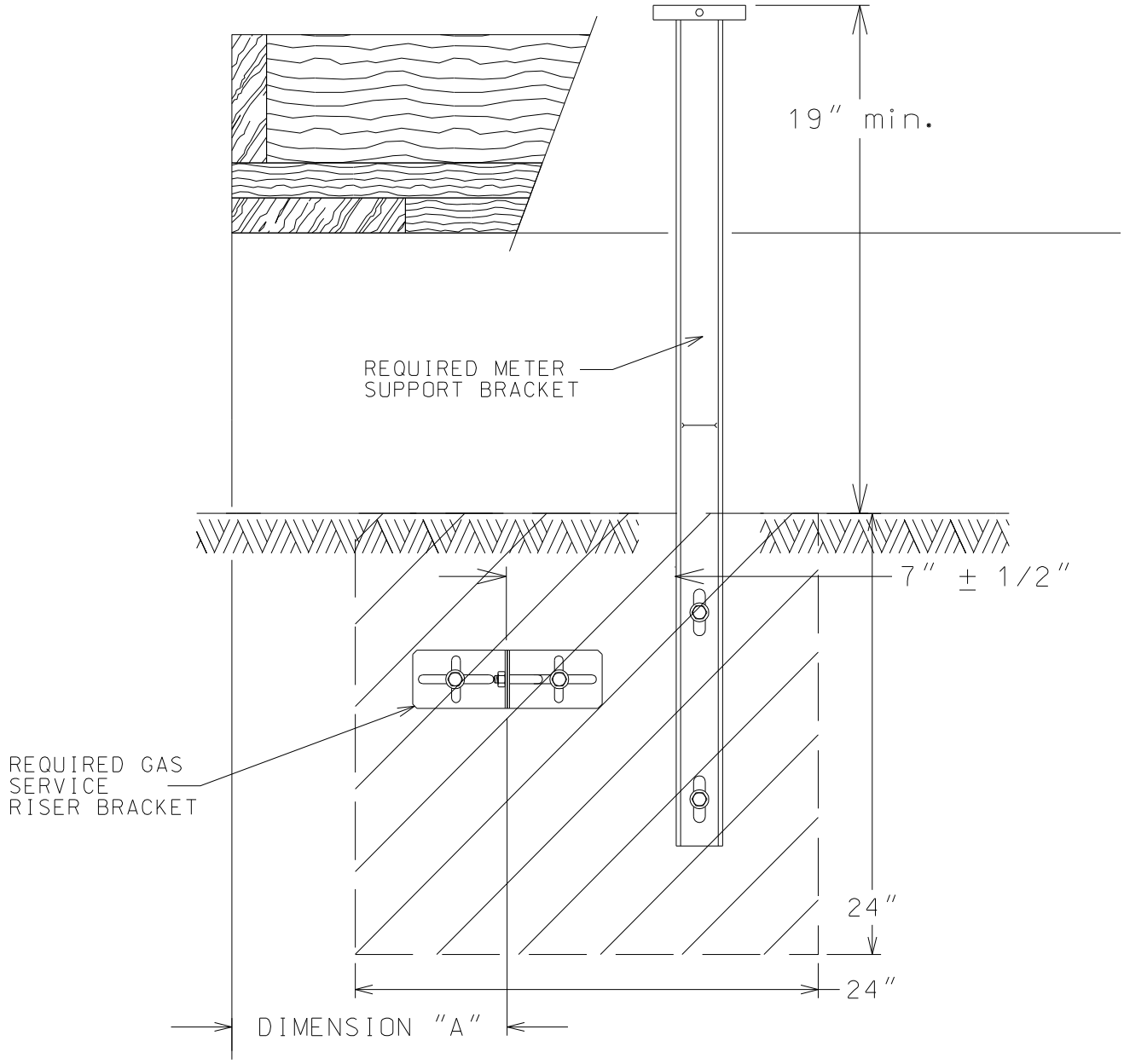


Figure 704-3A

If the meter is located at the front of the building starting from the Left Building Corner
Then the distance needs to be no less than Dimension "A" = 12" minimum.
If the meter is located at the Right Side Wall from the Front Building Corner
Then the distance shall be Dimension "A" = 12" minimum to 60" maximum.

The indicated hatched area shown on the foundation wall is clear space to be provided by the builder. This space shall be located below final grade with the dimensions of 24" wide by 24" deep and it shall be relatively flat and smooth so as to facilitate the installations of the support brackets.

Required Space and Location for Service and Meter Brackets - Right Building Corner

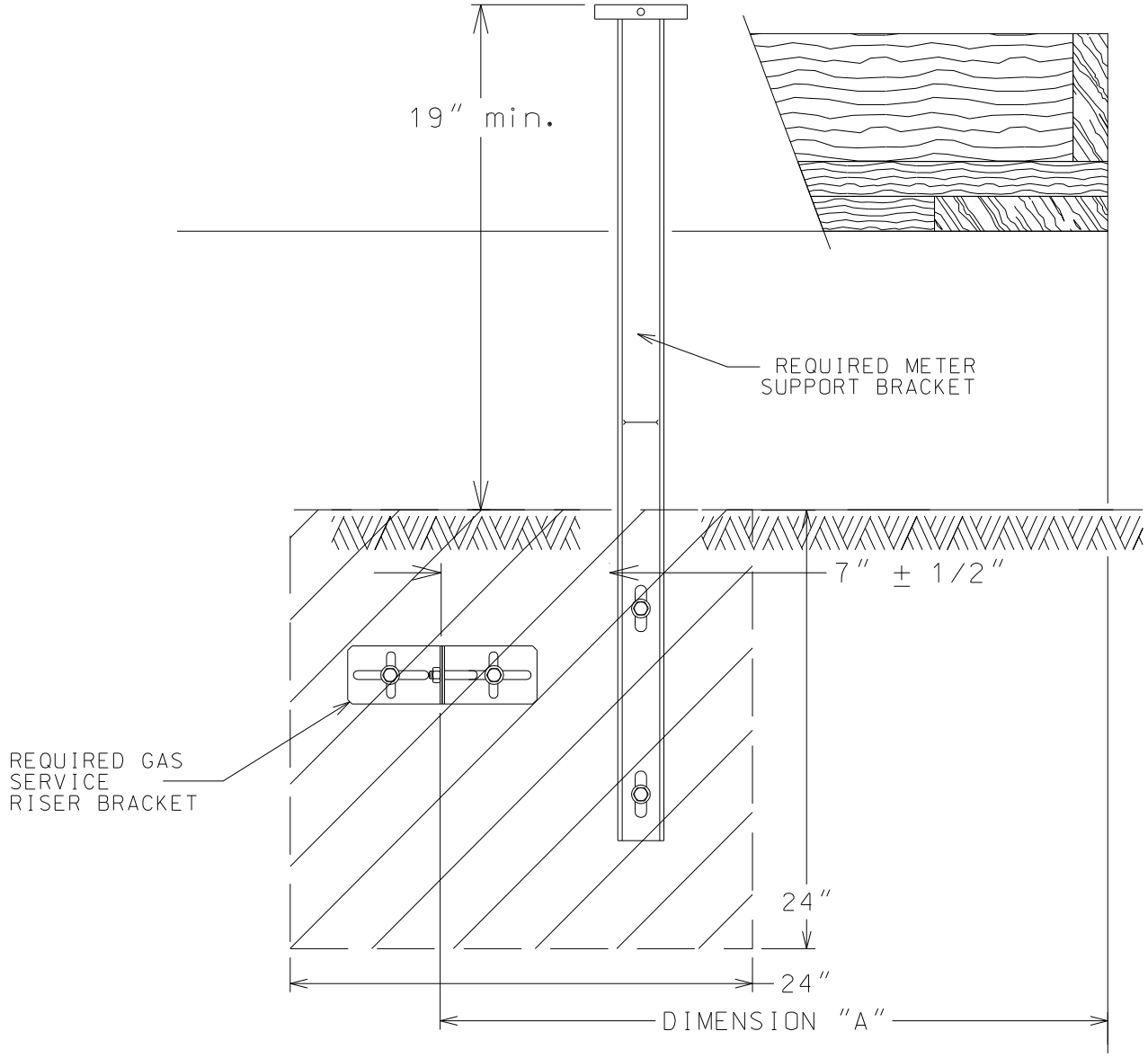


Figure 704-3B

If the meter is located at the front of the building starting from the Right Building Corner
Then the distance needs to be no less than Dimension "A" = 30" minimum.
If the meter is located at the Right Side Wall from the Front Building Corner
Then the distance shall be Dimension "A" = 30" minimum to 60" maximum.

The indicated hatched area shown on the foundation wall is clear space to be provided by the builder. This space shall be located below final grade with the dimensions of 24" wide by 24" deep and it shall be relatively flat and smooth so as to facilitate the installations of the support brackets.

705 Metering Locations

705-1 BGE Outdoor Meter Assembly Location Policy

In conjunction with the BGE Gas Service Tariff and Maryland Legislation (Gas Service Regulator Safety), the following policy and rules shall govern the location/placement of gas meter and regulation equipment.

There is a difference for exception approvals between New Services and Existing Services based on the Tariff. New services require an exception to install a meter indoors, but existing services do not require an exception to allow an existing indoor meter to remain indoors. An exception is required to allow an indoor regulator for all reasons except when an indoor location was chosen by the customer and that choice is permitted in accordance with PSC Order 90783.

New Services
New services are defined as a gas service installation for a building or structure that does not have active gas supplied to the structure AND does not have an active service agreement.

For new service work, the following applies:

- All regulators must be outside.
- Meter assemblies up to and including 5 must be outdoors.
- Meter Assemblies with 6 or more meters are allowed to be located indoors per the Gas Service Tariff (regulators still need to be outdoors).

In all other cases, meter assemblies must be located outdoors. If a situation exists which prevents the installation of a newly installed meter and/or regulator outdoors, refer to your BGE representative.

Existing Services
Existing services are defined as a gas service installation for a building or structure that has active gas supplied to the structure AND/OR an active service agreement.

For existing service work, the following applies:

- Regulators must be installed outdoors except where exemptions are granted in accordance with this standard.
- If there is an existing outdoor gas meter, the Company will not install an indoor regulator.
- Existing outdoor regulators must remain outdoors unless:
    - The existing regulator was not installed as part of a New Service
      AND
    - The structure has less than 6 dwelling units
- In accordance with PSC Order 90783, residential customers with existing service who choose to have their regulators installed indoors will be granted an automatic exemption (which does not need approval via AM-BE-P3066) to BGE's Outdoor Meter Assembly Location Policy unless: (a) that choice violates state or federal law or regulation; or (b) the customer is found to have made its interior equipment inaccessible through the construction of permanent walls or fixtures, or (c) indoor installation is otherwise impracticable or unsafe based upon accepted good engineering standards, as defined in COMAR 20.55.02.01.

Existing Commercial Work

Commercial customers with existing service who are receiving a gas service regulator for the first time shall be offered a choice for an outdoor/indoor regulator installation location UNLESS the service meets any of the following conditions:

- The service is fed from an OHP main
- The structure has a maximum occupancy of 100 or more persons as designated by the fire department (Ref COMAR 20.55.01.04 – Places of public assembly)
- The service requires two or more regulators to be installed
    - Pressure relief valves do not contribute to total regulator count

- Existing outdoor commercial regulators must remain outdoors unless:
    - The existing regulator was not installed as part of a New Service

AND

    - The structure has less than 6 dwelling units

For existing indoor gas meters, the Gas Service Tariff allows the meters to remain indoors. However, it is strongly encouraged that existing indoor gas meters also be relocated to an outdoor location when the existing gas service is to be replaced, renewed, sleeve inserted, size changed (heavy-up), pressure increased, or relocated.

If a situation exists which prevents the installation of a regulator outdoors, refer to your BGE representative.

Note: The customer shall maintain at least three (3) feet of unobstructed space in front of the meter, and such space shall be free of any source of ignition or heat which may damage the meter or related equipment. The sole exception to the three (3) feet of unobstructed space in front of the meter is the use of bollards for protection from vehicular traffic where required; see Meter Protection Section of this manual.

The space provided for meters, regulators and service risers shall be clear of all obstructions, such as shutters, doors, and rainspouts, and the placement of obstructions such as concrete equipment pads, shrubbery, porches, patios, decks and gardens shall not interfere with the installation and servicing of the metering equipment or reading of the meter. Metering equipment shall not normally be located over porches or patios.

The following excerpt is the "Location of Service Equipment" from the BGE Gas Service Tariff; Part 2, Section 6. This is provided for reference in outlining the BGE Metering Location Standard.

BGE Gas Service Tariff; Section 6
6. Location of Service Equipment

6.1 ***General:*** *Under normal conditions an outdoor location is required. Meter locations are agreed upon by the Customer and the Company, subject to final approval by the Company.*

An acceptable meter location shall be free of any conditions detrimental to the metering equipment, and such location shall not create a hazard or inconvenience. The Customer shall maintain at least three (3) feet of unobstructed space in front of the meter, and such space shall be free of any source of ignition or heat which may damage the meter or related equipment. The Company may require the Customer to provide, at the Customer's expense, suitable protective equipment for the meter or exposed service riser.

Where more than one Customer is to be supplied, each meter shall be readily accessible to the Customer served by it and to the Company. The fuel lines shall be so installed that the meters may be grouped at one location.

In the event it becomes necessary to change an existing service entrance or meter installation the location shall conform to these rules except that existing indoor meters may remain indoors.

6.11 ***Outdoor Location:*** *An outdoor location is generally required for meter installations not exceeding six (6) meters.*

Space shall be provided for meters, regulators and service risers clear of all obstructions such as shutters, doors and rainspouts, and so that the placement of shrubbery, flower beds and gardens will not interfere with meter installation, servicing, or reading. In no event shall meter equipment extend beyond the Customer's property line.

705-2 Outside Meter Locations Requirements

All efforts should be made to utilize outside locations. When locating gas and electric meters outside, there are specific requirements that should be followed. Typically the meters are set at the location where the service terminates at the building being served.

Outside metering location must be used if one of the following conditions exists:

- Clear wall space is available: 24" W x 57" H (stacked meter configuration – wall mount electric meter socket). See Section 602-1.

OR

- Clear wall space is available: 36" W x 47" H (side by side meter configuration – pedestal electric meter socket). See Section 601-2.

OR

- There is adequate clear wall space to split the meters and install them separate from each other. The gas meter requires 15" W x 36" H and the electric meter requires 17" W x 57" H (200 Amp wall mount box) or 16" W x 47" H (200 Amp pedestal box) of clear wall space. See Section 601-3.

Standard service line extension to a residence shall extend not more than 75 feet for a single family home and 30 feet for a town house from the property line where the service enters the property to be served to the nearest corner of the building. Distances greater than these are non-standard and all additional costs will be borne by the customer/builder. For additional information, please consult with your BGE Representative. (Reference: BGE Electric Service Tariff, Section 8.23)

The assembly will be installed at the location indicated on the customer service agreement or the gas service drawing in accordance with Section 704-2.A.1 (Gas Service Piping Location) and Section 705-8 (Meters - General Rules) of this manual below:

A. The outdoor residential customer meter shall be placed as close to the exterior building wall as possible for both new service lines and service lines that are replaced. (Reference: COMAR 20.55.09.07.D.)

B. The residential gas metering assembly installed outside shall be located on a building either one (1) foot inward from the building edge along the "front", or no more than five (5) feet deep on the building side(s). See Figure 705-2B.

Note: The "front of the building" is defined by the portion of the building facing the utilities, which typically run along the street.

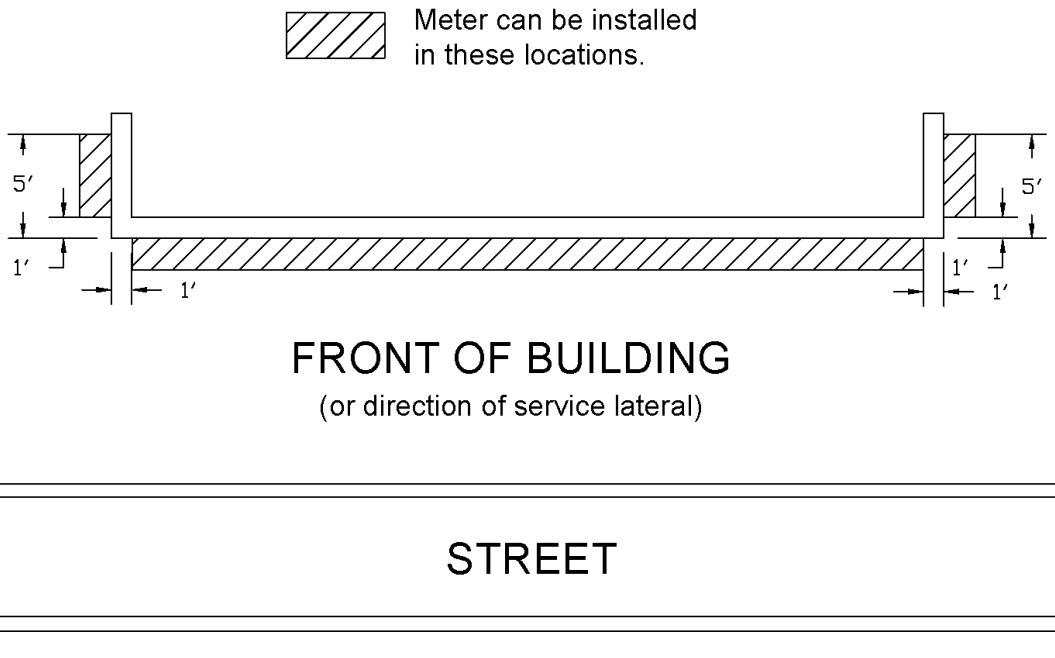


Figure 705-2B

C. Commercial and Industrial gas meter assemblies may be located in places other than the "front of the building", provided that BGE can readily access the assembly. A general rule of thumb is if a commercial service vehicle (BGE truck, fire engines, etc.) can access the proposed location, the location is accessible. Please contact a BGE representative in advance of the building's construction to confirm if the proposed location is "readily accessible".

D. On Over High-Pressure assemblies, two service regulators will be installed as part of gas metering assembly.

705-3 Remote Reading Devices

A. Policy
BGE's current policy is to use Automated Meter Reading (AMR) technology for all gas meters in the 212XX zip codes and the Mt. Airy, Maryland area. The meters considered in the Mt. Airy area are those in the gas franchise portion in the BGE gas service territory. Effective April 1, 2004, all gas meter sets on new construction will utilize AMR or AMI (smart meter) technology.

B. Other considerations relating to remote reading devices:

1. The inside meter must be accessible to be read once every twelve months to verify gas usage.

2. The Company at its expense will perform maintenance of the remote device unless willfully damaged or tampered with.

705-4 Corrosion Protection

A. External Corrosion
All BGE gas measurement facilities are protected against external corrosion. Painting maintenance may be required during periodical inspections.

Note: Gas metering assemblies known to be subject to extreme atmospheric corrosion environments, such as fertilizer plants, may need to have additional coating applied either upon installation or as a remedial measure. BGE coatings will only be applied to piping up to the Customer's main gas valve.

B. Bonding
In order to electrically separate BGE gas system components and piping from the customer's house piping, all new gas metering assemblies utilize insulated Service and Customer Main Gas Valves. Because of this, there is no electrical continuity from the house piping to the gas service riser through the meter assembly. This applies to both inside and outside meter locations.

When bonding CSST (customer piping), the bonding connection between the electrical service grounding electrode and the house piping should be made downstream of the Customer Main Gas Valve (or Point of Service). **Customers are prohibited from making bonding connections to any part of the gas service or metering assembly. In addition, use of the electric service or electric meter assembly as a grounding electrode is not permitted by BGE.**

Bonding of the fuel line is the responsibility of the customer and/or qualified electrician. To effectively bond the customer fuel line, the connection must be made downstream of the Customer Service Valve (or Point of Service)
(Reference: National Fuel Gas Code - 2015 Edition - Section 7.13)
(Reference: National Electric Code - 2017 Edition - Section 250.104)
(Reference: Standard for Installing Lightning Protection Systems - 2008 Edition - Section 3.14.1)
(Reference: NFPA 780 – 2017 Edition – Section 4.14.1.3)

705-5 Service Renewals & Relocations

If an existing residential gas metering assembly that is not equipped with a customer's main gas valve is relocated, the new assembly will be installed with a customer's main gas valve.

Whenever an inside gas meter assembly is renewed by BGE and the electric meter is located outside, the gas meter assembly should be relocated to the outside if possible.

705-6 Meters - General Rules

The following general rules govern the location of gas metering assembly. If the location for the gas metering assembly does not meet these specifications, consult your BGE representative.

A. Gas metering assemblies will not be installed in unventilated spaces. If an enclosed gas metering assembly is required, the enclosure is to be a tightly constructed compartment to prevent the uncontrolled migration of gas into building walls. Provision must be made for ventilation openings in the door of the enclosure that permits access to the assembly for maintenance. (Reference: National Fuel Gas Code - 2018 Edition - Section 5.7.2.1)

B. Gas metering assemblies will not be installed in places where it may be subjected to damage, such as driveways & sidewalks (without suitable protection), public passages, halls, coal bins, chimneys, under porches, in crawl spaces, etc. or where it will be subjected to excessive corrosion, extreme temperature or sudden changes in temperatures.
(Reference: National Fuel Gas Code - 2018 Edition - Section 5.7.2.2, 5.7.2.3, 5.8.3, 5.8.4)

C. Gas metering assemblies located indoors will not be installed within three (3) feet of any equipment with an open flame or subject to electric arcing; such as: circuit breaker panel boxes, water heaters, house heating, furnaces, boilers, A/C compressors, etc. It is recommended that gas meter assemblies be located outdoors and be at least three (3) feet from any equipment with an open flame or subject to electric arcing.
(Reference: D.O.T., Office of Pipeline Safety, CFR 49 Regulation 192.353 (c)).

D. Gas metering assemblies will not be installed on walls or partitions subject to excessive vibration; nor any wall or partition which appears to have structural defects of any kind.

E. Gas metering assemblies will not be installed in areas where the clearance from the front of the meter to the opposite wall is less than three (3) feet; nor where it will be necessary to remove one meter to make possible the removal of another. Gas meters will be installed so that there is at least four (4) feet clearance from the front of the meter to the wall directly opposite where an electric meter is located.

F. Gas metering assemblies will not be installed under a non-insulated, combustible stairway or at the foot of a stairway where the distance between the bottom step and the meter will be less than four (4) feet measured horizontally.

G. Gas metering assemblies will not be installed in bath or toilet rooms (Existing installations found in bathrooms will not be relocated except at the customer's request, in which case the relocation will be made at our regular schedule of prices.) Toilet rooms where hazards exist are an exception.

H. Gas metering assemblies located indoors will not be installed in garages, unless approved as an exception to the BGE Outdoor Meter Location Standard per section 705-1 and with sufficient protection.

I. If the gas metering assembly is to supply more than one apartment in an existing dwelling, there must be a stop-cock or valve in each fuel line near the meter so that maintenance work on the fuel line may be done without interrupting the supply to any other line served by the meter.

J. Regulator/Relief valve vents
(Reference: National Fuel Gas Code - 2018 Edition – Section 5.8.5.1 and 5.9.8)

1. Must be vented to the outside and terminate at least 12” above grade.

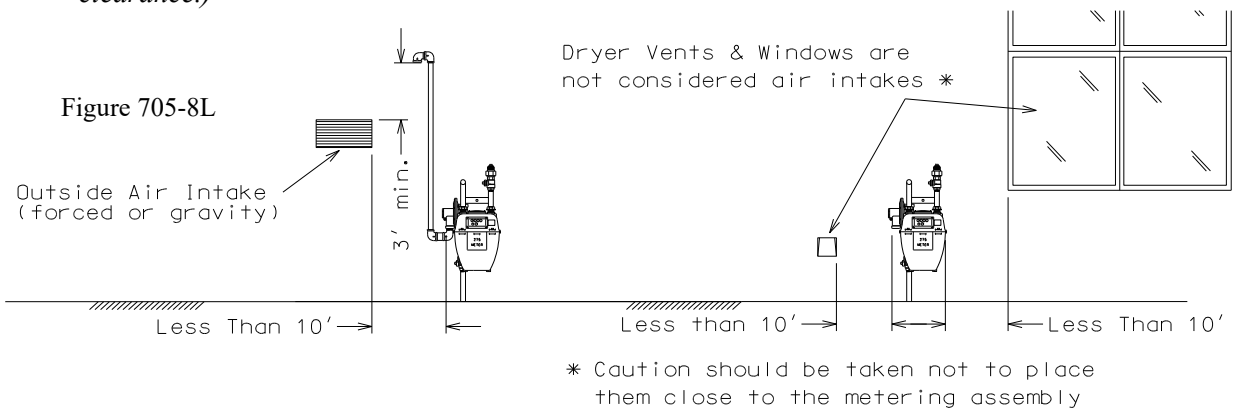
2. Two or more regulator/relief vent lines may be manifolded to a single vent provided the manifold flow area equals or exceeds the combined flow area of the relief valve outlets. The minimum combined line size allowed is 1-1/2”.

3. All vent lines must be designed and installed to prevent the entry of water, insects, or other foreign material.

K. Gas metering assemblies will not be located where the clearance between the floor and any overhead structure is less than 6'-3" for Residential or eight (8) feet for Industrial & Commercial.

L. Outdoor gas metering assemblies or vent lines from inside regulators shall not be installed within three (3) feet of an opening (excluding windows) used as an outside air intake (forced or gravity) for ventilation, where venting gas could be drawn into a building or an enclosed space under an occupied portion of a building. Regulator/relief valve vents located within 10 feet (measured horizontally) of an air intake shall terminate at least three (3) feet above the highest point of the air intake, see Figure 705-8L. Dryer vents and windows are not considered air intakes, but a reasonable distance should be allowed between them and a gas metering assembly and/or regulator/relief vent. This rule does not apply to the combustion air intake of a direct vent appliance.
The preferred location of a gas meter is <u>not</u> under a window, but maybe allowed if all other possible locations are not available.
(Reference: D.O.T., Office of Pipeline Safety, CFR 49 Regulation 192.355 (b)).
(Examples: *Louvers installed in a foundation intended to provide air circulation for a crawl space under an occupied portion of a home, such as a family room or a bedroom, would require the 10 foot clearance. The intake of a direct vent appliance does not require the 10 foot clearance.)*

Figure 705-8L



M. If a gas metering assembly is to be located in the proximity of a combustion air intake, the manufacturers installation instruction or the local authority having jurisdiction should be consulted for minimum clearance requirements. In the absence of specific requirements by the aforementioned, BGE recommends a horizontal clearance of four (4) feet. This recommendation will in no way supersede any requirements to be or currently established by the authorities having jurisdiction.

N. Where more than one customer is to be supplied, the gas metering assemblies will be grouped at one location and located so that each assembly is readily accessible to the customer served by it and the Company. Each assembly shall measure all the gas to be used in the individual occupancy unit. Central source heating, cooling and hot water systems or combinations thereof for the building are permitted.

O. On outside gas metering assemblies it is preferred for the assembly to be installed in the vicinity of the electric meter.

P. The gas service and the gas metering assembly will not be located where it may cause an obstruction to a Siamese fire connection. An area with a 36" radius measured from the center of the connection and extending downward to grade shall be kept clear of all associated piping and the gas metering assembly.

Q. In areas subject to flooding and possible tidal surges (Zone "A" or Zone "AE", based on flood maps), the regulator vent(s) shall terminate at least one (1) foot above the 100-year base flood elevation.[1] BGE will consider the Base Flood Elevation (BFE)[2] in the design process, and is subject to enforcement by the authority having jurisdiction. If the height of the vent is greater than five (5) feet from grade, a plugged tee should be installed about one (1) foot above the regulator. Gas assemblies may be required to have additional protection from damage due to floating debris during a flood. BGE is responsible for determining if additional protection is needed; the customer is responsible for the associated costs for additional protection.

Note(s): **(1)** All vent lines must be designed and installed to prevent the entry of water, insects, or other foreign material. Pipe dope shall be utilized on all threaded pipe and joints will be wrench-tightened; **(2)** BFE is the computed elevation to which flood water is anticipated to rise and shown on the Flood Insurance Rate Maps (FIRMs) or on the flood profiles (Floodplain Management | FEMA.gov).

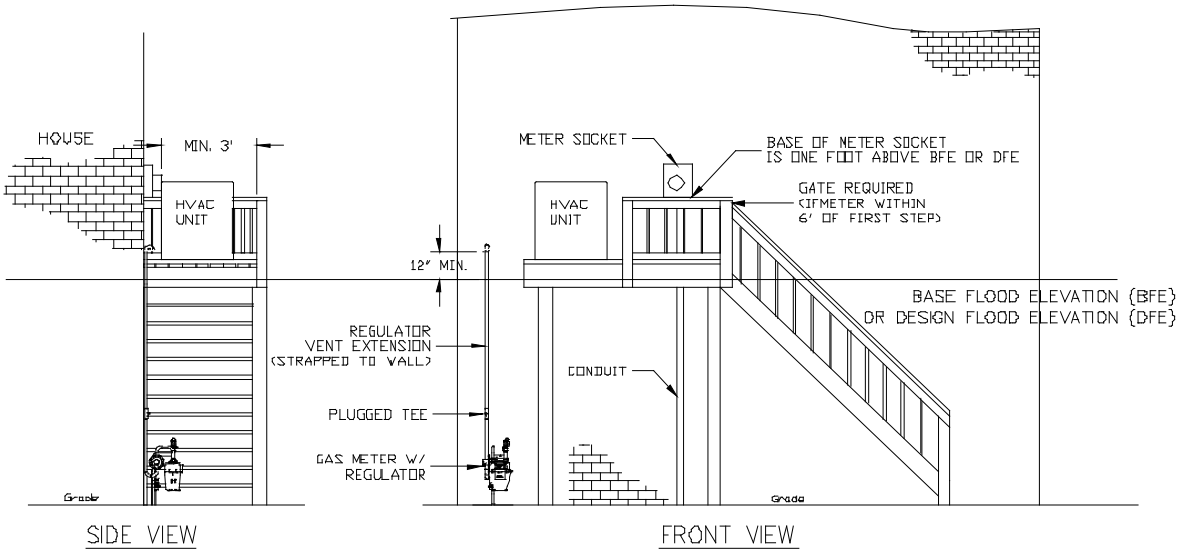


Figure 705-8S

R. A minimum of 1" clearance must be maintained between all meters and any structural materials (i.e. building wall).

706 Gas Inspection, Testing, and Service Activation

706-1 Customer Piping Activation

The appropriate inspections and leakage tests are approved by the inspecting agency. The following items are presented as informational and best practices. **Introducing gas into the customer fuel line(s) is the responsibility of the licensed plumber/qualified agency.** BGE may re-introduce gas into the customer's fuel line(s) under certain conditions, see Section 706-7.

Over the years the pressure test required for new piping systems, including additions to existing systems, has been confused with the test for leakage. As specified, the pressure test is required only for new piping systems or new additions, not including equipment shutoff valves, equipment connection, or equipment.

Before gas is introduced into a system of new gas piping by the qualified agency, or back into an existing system after being shut off, the entire system will be inspected to determine that there are no open fittings or ends and that all manual valves at outlets on equipment are closed and all unused valves at outlets are closed and plugged or capped.

The test for leakage is applicable whenever a gas piping system is placed in service either initially or after being shut off. The medium used for the test is the gas supplied at its supply pressure. The gas is applied to the piping, equipment, and equipment connections and valves.

Immediately after turning on the gas, the piping system will be leak tested to ascertain that no gas is escaping. If leakage is indicated, the gas supply will be shut off until the necessary repairs have been made.

706-2 Added or Converted Equipment

When additional or replacement equipment is installed, or an appliance is converted to gas from another fuel, the location in which the equipment is to be operated shall be checked to verify that it meets the requirements of the National Fuel Gas Code. BGE will not release set a meter until we receive a certification from the local jurisdiction that the equipment has met these requirements. (Reference: National Fuel Gas Code - 2015 Edition - Section 9.1.2)

706-3 Underground Piping After the Meter – Residential

The Code of Maryland Regulations prevents gas utilities from providing gas service to residential customers with underground piping after the gas meter.

> **Code of Maryland Regulations**
> **20.55.09.07.D2**
>
> ***Location of Residential Service Lines and Meters:***
>
> *Gas service may not be provided to new or renewed service lines if there is any underground pipeline after the meter, unless the pipeline carries gas only to gas utilization equipment located outdoors*.

BGE will provide gas service to a meter if the underground piping is to supply gas utilization equipment such as pool heaters or gas grills. BGE will not provide or may revoke service if the gas line runs underground after the meter and then enters back into a building or structure with a living space.

This regulation does not apply to commercial and industrial customers. Gas service can be provided to commercial and industrial customers with underground piping after the meter. For commercial or industrial customers, it is their responsible to meet the State of Maryland's requirements for leak survey of their lines. Consult with the State for their requirements.

706-4 Pressure Testing

All new customer piping systems will be tested to insure integrity. The tests will be conducted by the customer's qualified representative and witnessed by the appropriate personnel of the local jurisdiction having authority if deemed necessary. The following requirements are based on *typical* National Fuel Gas Code procedures (check with the local inspection authority for specific test requirements).

Test Pressure: Test pressure will be measured with a manometer or with a pressure measuring device designed and calibrated to read, record, or indicate a pressure loss due to leakage during the pressure test period. The source of pressure will be isolated before the pressure tests are made. The test pressure to be used will be no less than 1-1/2 times the proposed maximum working pressure, but not less than 3 psig (20 kPa gauge), irrespective of design pressure.
(Reference: National Fuel Gas Code - 2018 Edition - Section 8.1.4)

Test duration will be 1/2 hour for each 500 cubic feet (14 m^3) of pipe volume or fraction thereof. When testing a system having a volume less than 10 cubic feet (0.28 m^3) or a system in a single-family dwelling, the test duration may be reduced to 10 minutes. For piping systems having a volume of more than 24,000 cubic feet (680 m^3), the duration of the test will not be required to exceed 24 hours.
(Reference: National Fuel Gas Code - 2018 Edition - Section 8.1.4.3)

Test Medium: The test medium will be air, nitrogen, or carbon dioxide.
OXYGEN SHALL NEVER BE USED
(Reference: National Fuel Gas Code - 2015 Edition - Section 8.1.2)

706-5 Purging

When applicable the service piping may require purging with inert gas prior to activation. Please consult with your BGE representative.

706-6 BGE Procedures for Activation of New Gas Service Installations

A. If the meter certificate has NOT been received, BGE will:

1. base the delivery pressure (standard, 2 PSIG, or other as specified) on the customer service agreement/contract;

2. complete the necessary tests and leak checks on the service;

3. leave the service valve in the “off” position (operated by BGE only);

4. set the meter bar assembly and install a meter nut plug at the meter inlet connection and perform a leak test;

5. leave the customer’s main gas valve in the “off” position and plug the point of service connection outlet and conduct a PSC leak check;

6. complete the “New Gas Service” tag (See Figure 706-5) which notifies the customer to call the licensed plumber to have the fuel line inspected. Note that the meter will not be set.

B. If the meter certificate has been received, BGE will:

1. base the delivery pressure (standard, 2 PSIG, or other as specified) per the certification;

2. complete the necessary tests and leak checks on the service;

3. leave the service valve in the “on” position (operated by BGE only);

4. set the meter bar assembly including the meter and leak test;

5. leave the customer’s main gas valve in the “off” position and plug point of service connection and conduct a PSC leak check;

6. complete the “New Gas Service” tag (See Figure 706-5) which notifies the customer to call the licensed plumber to introduce gas into the fuel line.

The following notification cards will be provided to the customer or left at the meter location, if the customer is not present, in the case of BGE encountering the above two conditions.

Figure 706-5

Attention: Customer, Gas Service Installed

Your new natural gas service has been installed.

☐ Meter not installed. Contact your licensed plumber to have your fuel line inspected and approved by your local jurisdiction.

☐ Meter installed. Contact your licensed plumber to introduce natural gas into the fuel line.

If you have any questions, please call BGE at 410-850-4620 or 1-800-233-1854 outside the Baltimore metropolitan area.

Attention: Licensed Plumber

Please read the other side of this card

BGE
An Exelon Company

Attention: Licensed Plumber

Only a licensed plumber or qualified agency shall tie in and introduce natural gas into this building.

Per the National Fuel Gas Code and local regulations, the licensed plumber is responsible for performing a leak test immediately after turning on the gas.

☐ BGE has installed a **2 PSIG** meter bar regulator assembly; if this is incorrect, contact BGE prior to introducing natural gas into the customer's building.

☐ BGE has installed a **standard pressure** meter bar regulator assembly; if this is incorrect, contact BGE prior to introducing natural gas into the customer's building.

- ✓ **Do NOT remove the Customer's Main Gas Valve**
- ✓ **Multi-meter manifold installations, VERIFY customer's fuel lines match the customer's meter**
- ✓ **Meter assembly MUST remain plumb**

706-7 BGE Procedures for Re-Connection of Existing Gas Service Installations (Relocations & Meter Increases)

A. Customer initiated jobs:

1. BGE will install a customer's main gas valve (P.O.S. valve) at the outlet of the meter, which is plugged and placed in the "closed" position.

2. The customer is responsible for retaining a licensed plumber or qualified agency to bring (connect) the fuel line (piping) to the customer's main gas valve (P.O.S.), re-introduce gas into the customer's fuel line, and re-light the customer's equipment at the completion of the job.

3. The licensed plumber or qualified agency shall ***NOT*** tie in a new fuel line until after the meter and/or service has been increased by BGE.

B. BGE initiated jobs:

1. BGE will introduce gas into the customer's fuel line, and re-light the customer's equipment at the completion of the job.

(Reference: BGE Gas Service Tariff, Customer's Installation, Section 4.2)

C. Re-Lights: Proper Practices

1. Master valves to items such as furnaces and water heaters should be turned off before starting any work on the customer's fuel line.

2. The job should be properly pressure and leak tested upon completion.

3. All necessary documentation should be completed.

4. Do not re-light appliances if the delivery pressures are different between the BGE metering equipment and the customer's fuel line (piping) and/or equipment.

5. Do not re-use old fittings.

6. Do not use a series of nipples and couplings to achieve the proper length needed.

7. Do not apply pipe dope to the female threads of a fitting, apply it to all male threads.

8. Do not cut off a branch service unless all meters can be turned off, or there is an emergency.

9. Do not re-light appliances if they are found to be in an unsafe condition.

800 Typical Residential & Small Commercial Gas Meter Sets

800-1 General Comments

This section was developed to show drawings of typical meter sets that BGE may install. These drawings are to be used as reference for understanding the size of the meter sets. In addition, the following are general rules for the meter assemblies shown in this section.

A. A 6" minimum of exposed pipe from the bottom of the service riser valve or service flange connection to final grade must be allowed.

B The vents from the regulators must face downwards. If the vent is not facing downwards, then piping shall be installed to direct the vent downwards.

C. A 12" minimum between final grade and the regulator's vent shall be maintained.

D. BGE uses insulated unions on the Service Valve and at the Point of Service on the Customer's Main Gas Valve, therefore all gas meter assemblies are electrically insulated from the houseline. Do not electrically bond the houseline to the metering equipment.

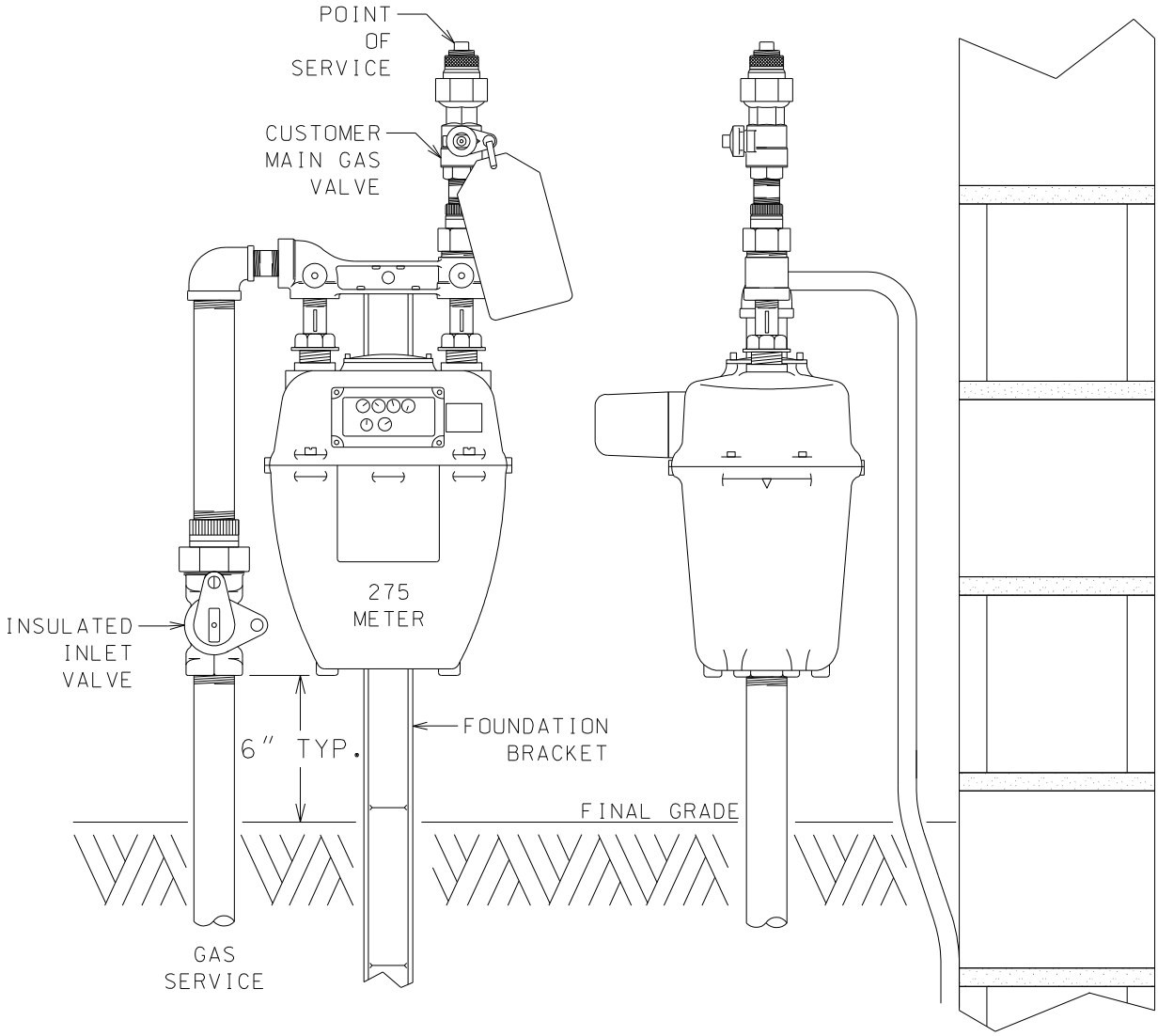
E. Be sure that the respective clear work space is provided for each meter installation.

F. There must be a minimum of at least 1" between the back of the meter and the finished wall.

G. Inside meter installations are shown ONLY for locations that do not meet the BGE Outside Metering Policy. The regulator, if needed, shall be vented outside of the building.

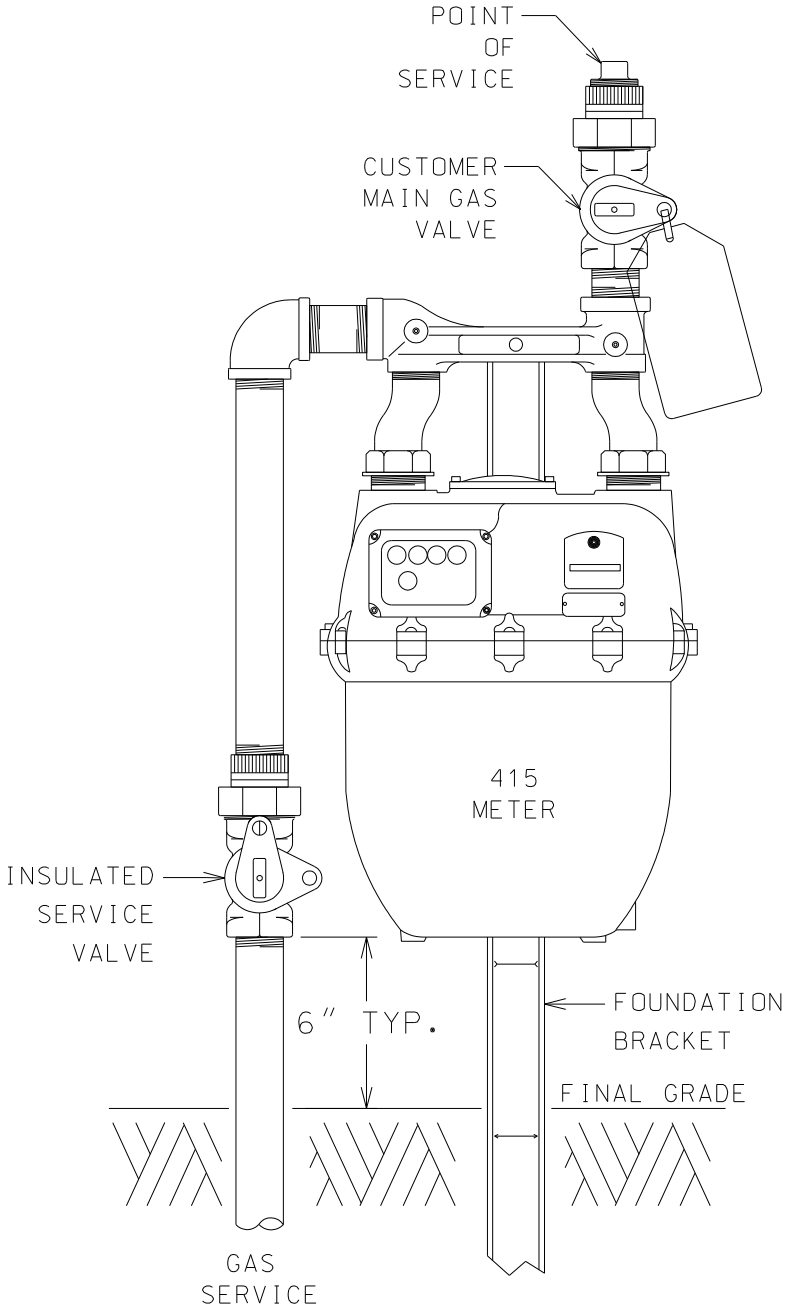
801 Residential & Small Commercial Low Pressure (LP)

801-1 Single Meter Set; 275; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	0 - 275



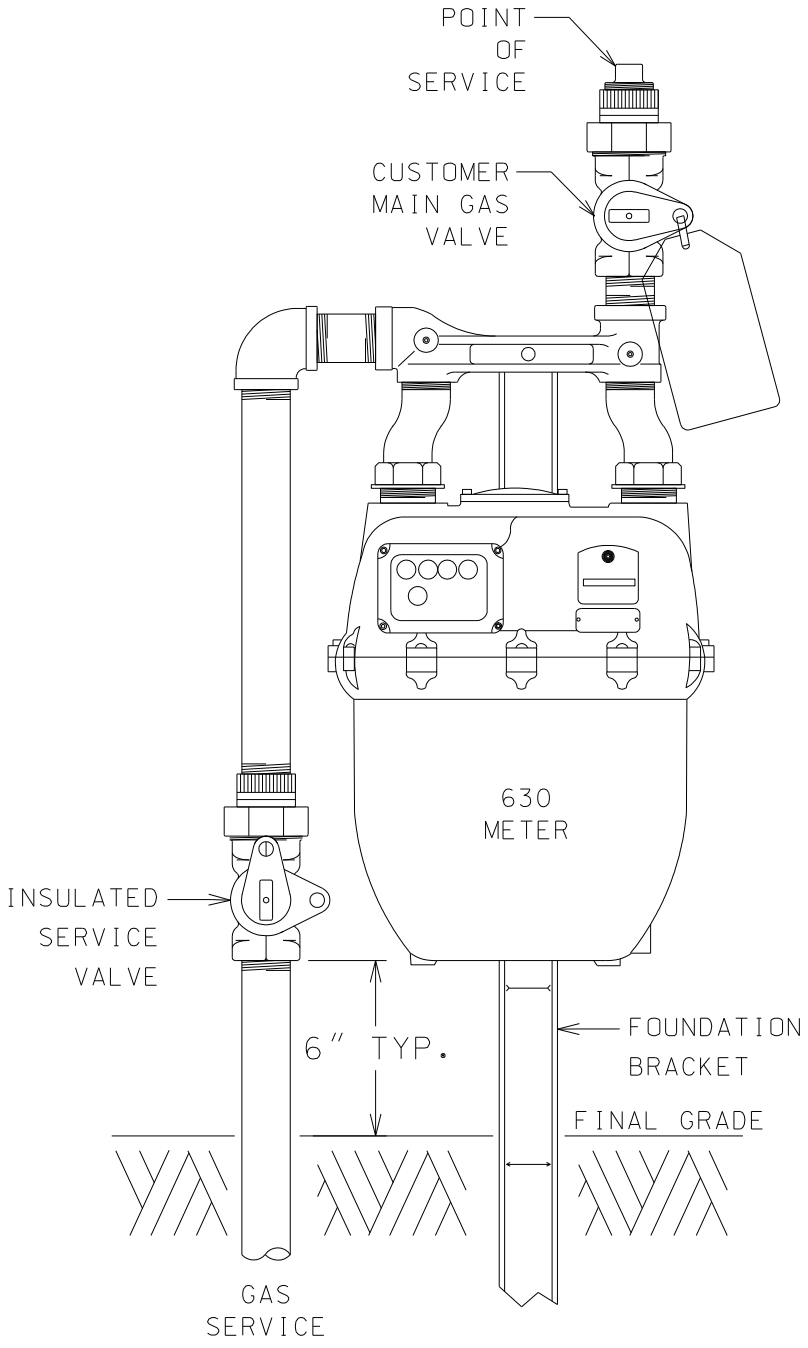
Approximate Space Requirement: 14" W x 32" H (min.) x 16" D
Minimum Clear Work Space Required: 38" W x 44" H x 52" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

801-2 Single Meter Set; 415; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	276 - 425



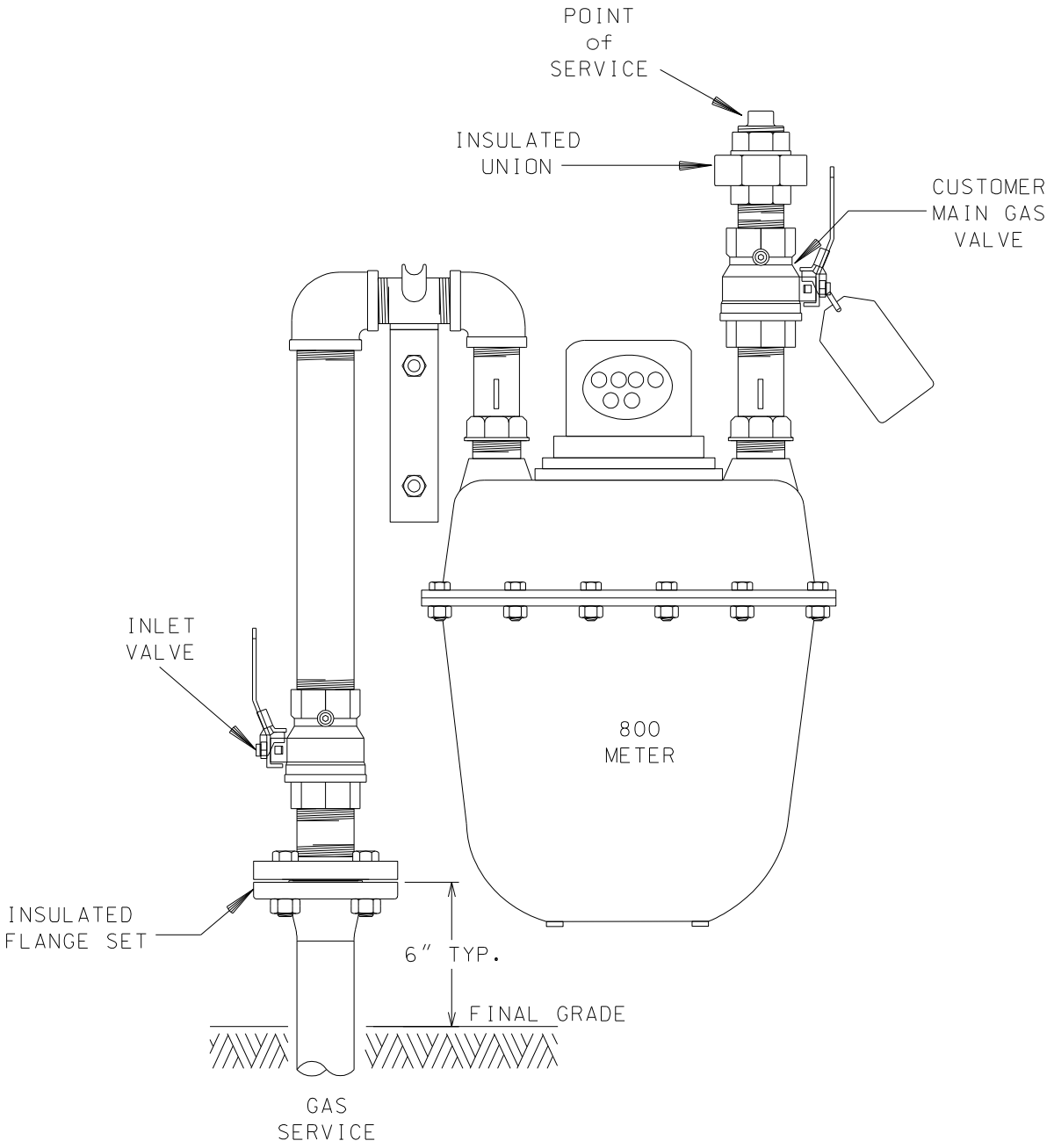
Approximate Space Requirement: 17" W x 37" H (min.) x 16" D
Minimum Clear Work Space Required: 41" W x 49" H x 52" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

801-3 Single Meter Set; 630; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	426 - 630



Approximate Space Requirement: 17" W x 37" H (min.) x 16" D
Minimum Clear Work Space Required: 41" W x 49" H x 52" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

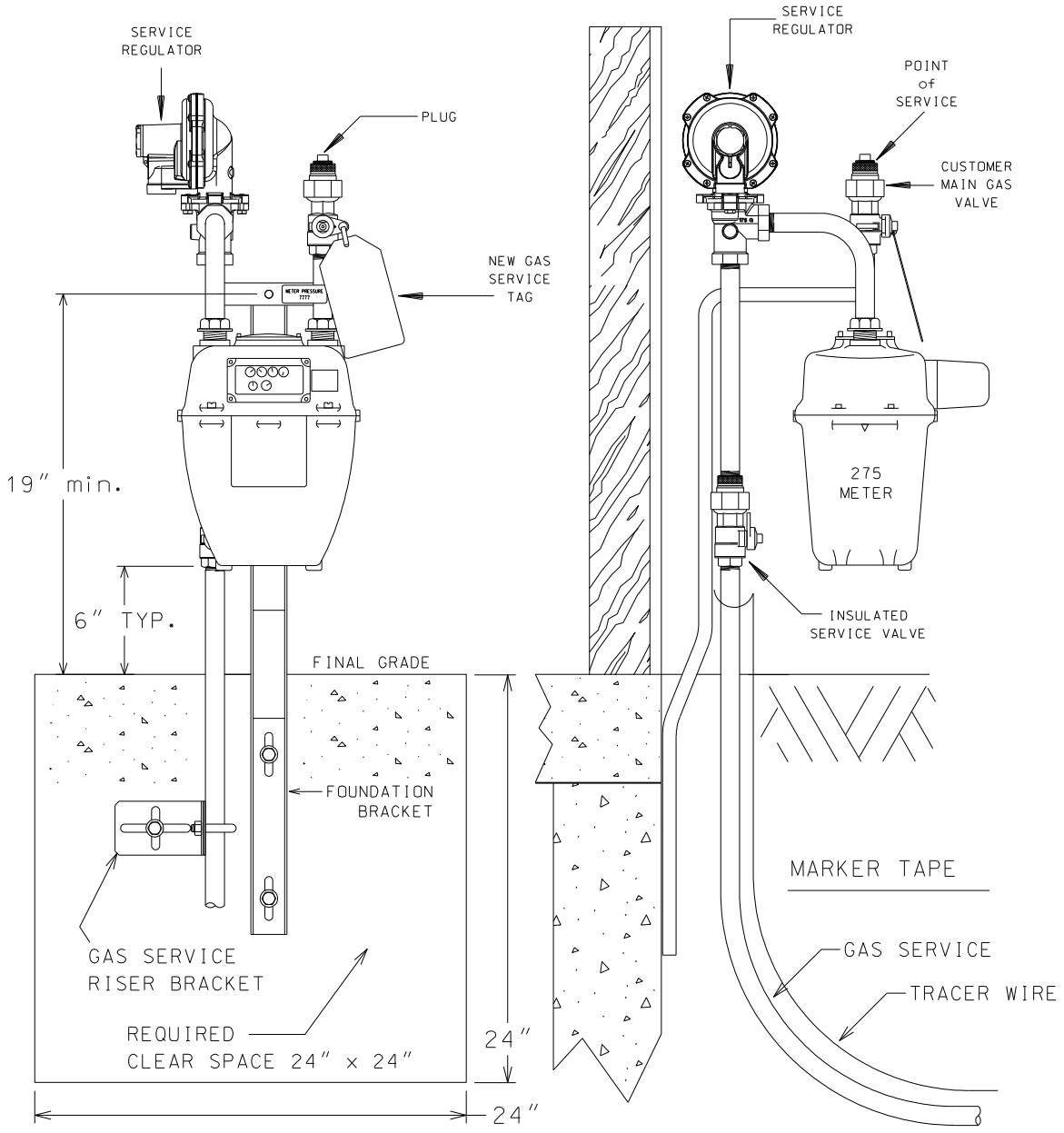
801-4 Single Meter Set; 800; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	631 - 800



Approximate Space Requirement: 29" W x 36" H (min.) x 16" D
Minimum Clear Work Space Required: 53" W x 48" H x 52" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

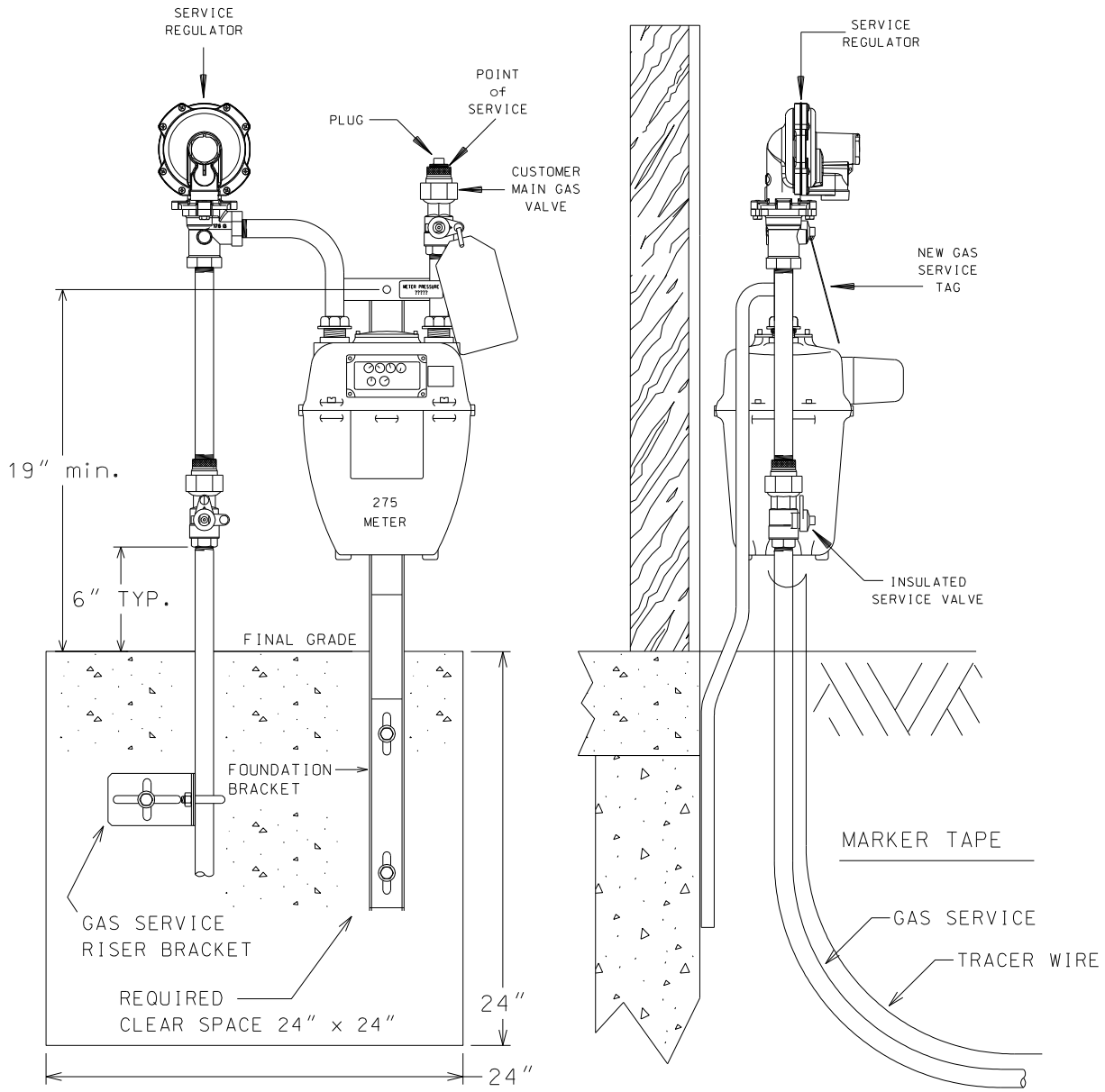
802 Residential & Small Commercial Medium Pressure (MP)

802-1 Single Meter Set; 275; Outside - Compact	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	0 - 295



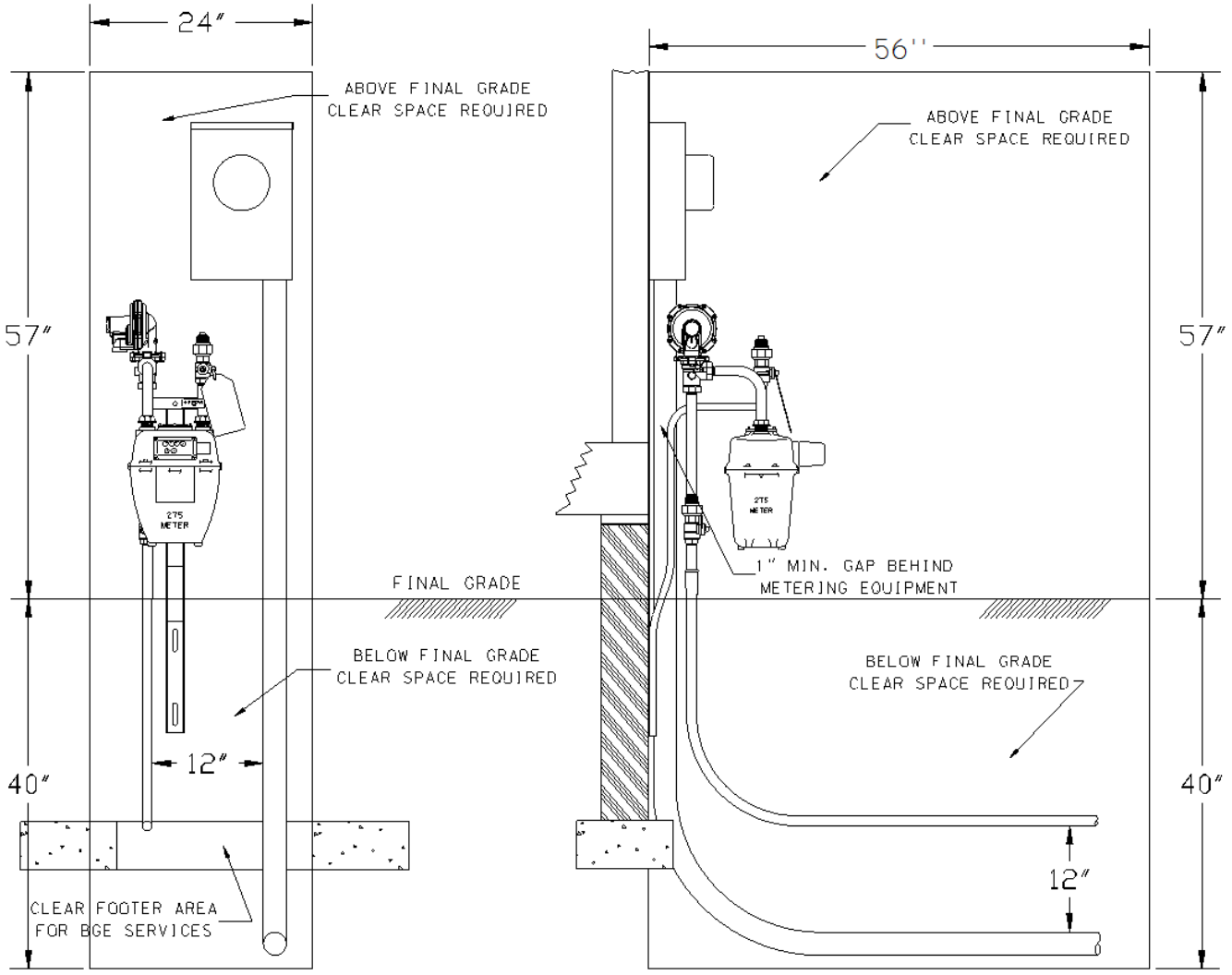
Approximate Space Requirement: 13" W x 34" H x 20" D
Minimum Clear Work Space Required: 37" W x 46" H x 56" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-538

802-2 Single Meter Set; 275; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	0 - 295



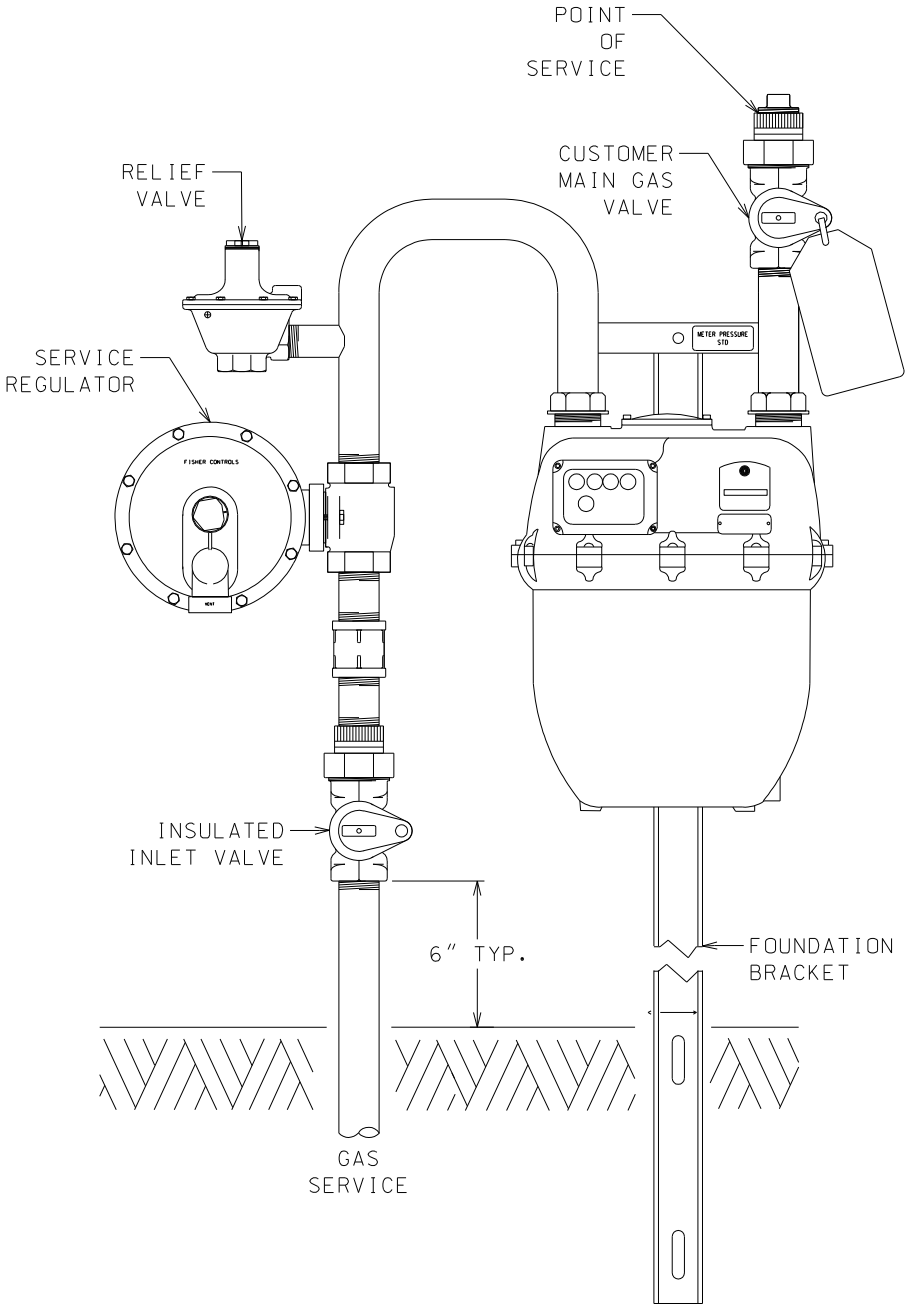
Approximate Space Requirement: 20" W x 34" H x 13" D
Minimum Clear Work Space Required: 37" W x 46" H x 49" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 40-C89

802-3 Single Meter Set; 275; Stacked Installation	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	0 - 295



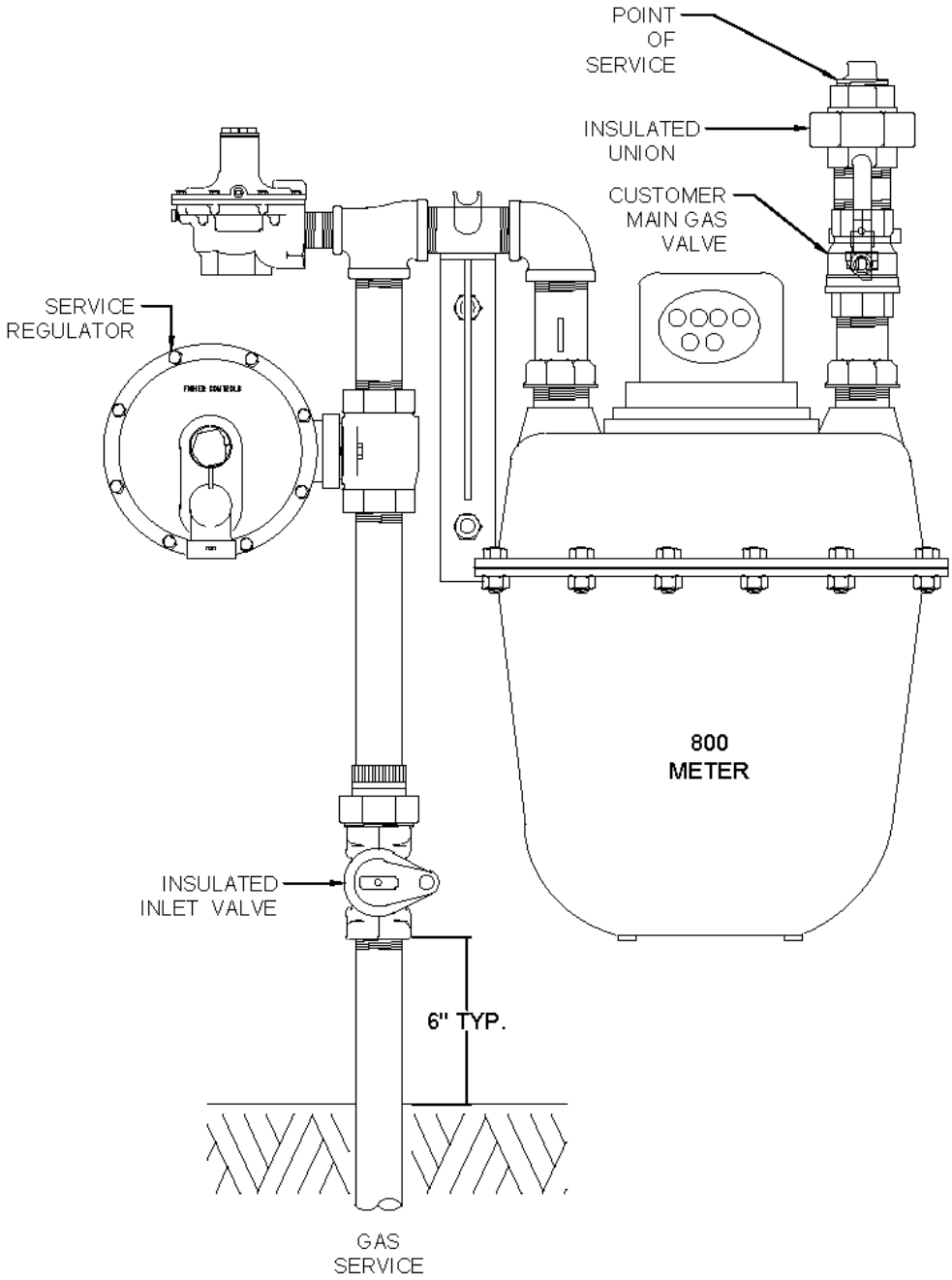
Approximate Space Requirement: 24" W x 57" H (min.) x 20" D
Minimum Clear Work Space Required: 48" W x 69" H (min) x 56" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

802-4 Single Meter Set; 415/630; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	296 – 600 / 601 – 800



Approximate Space Requirement: 30" W x 38" H x 17" D
Minimum Clear Work Space Required: 66" W x 50" H x 54" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
If Installed Inside, Vent Must Be Extended Outside
BGE Reference Only 31-840

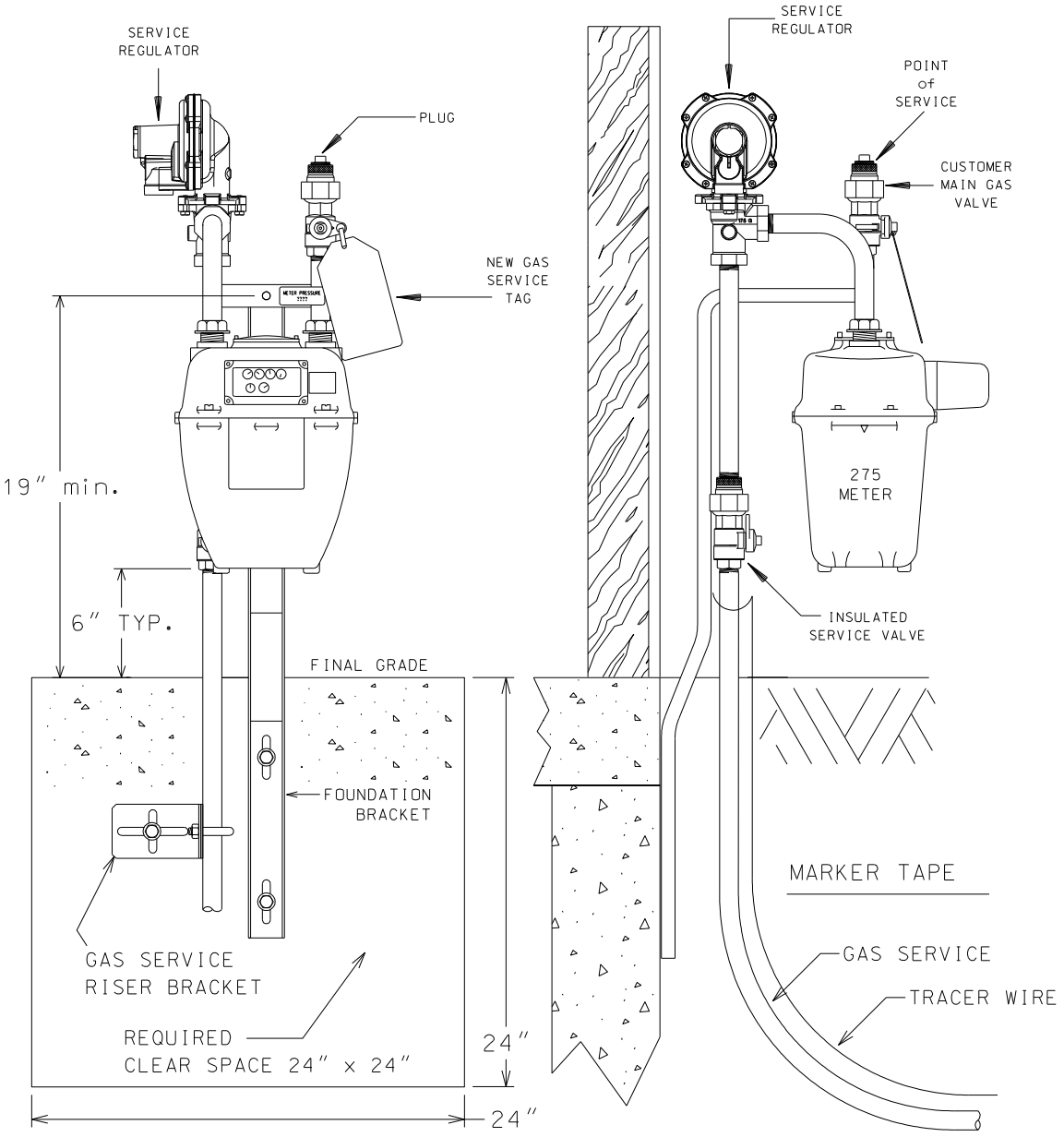
802-5 Single Meter Set; 800; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	801 - 1200



Approximate Space Requirement: 40" W x 38" H (min.) x 18" D
Minimum Clear Work Space Required: 64" W x 44" H x 54" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
If Installed Inside, Vent Must Be Extended Outside

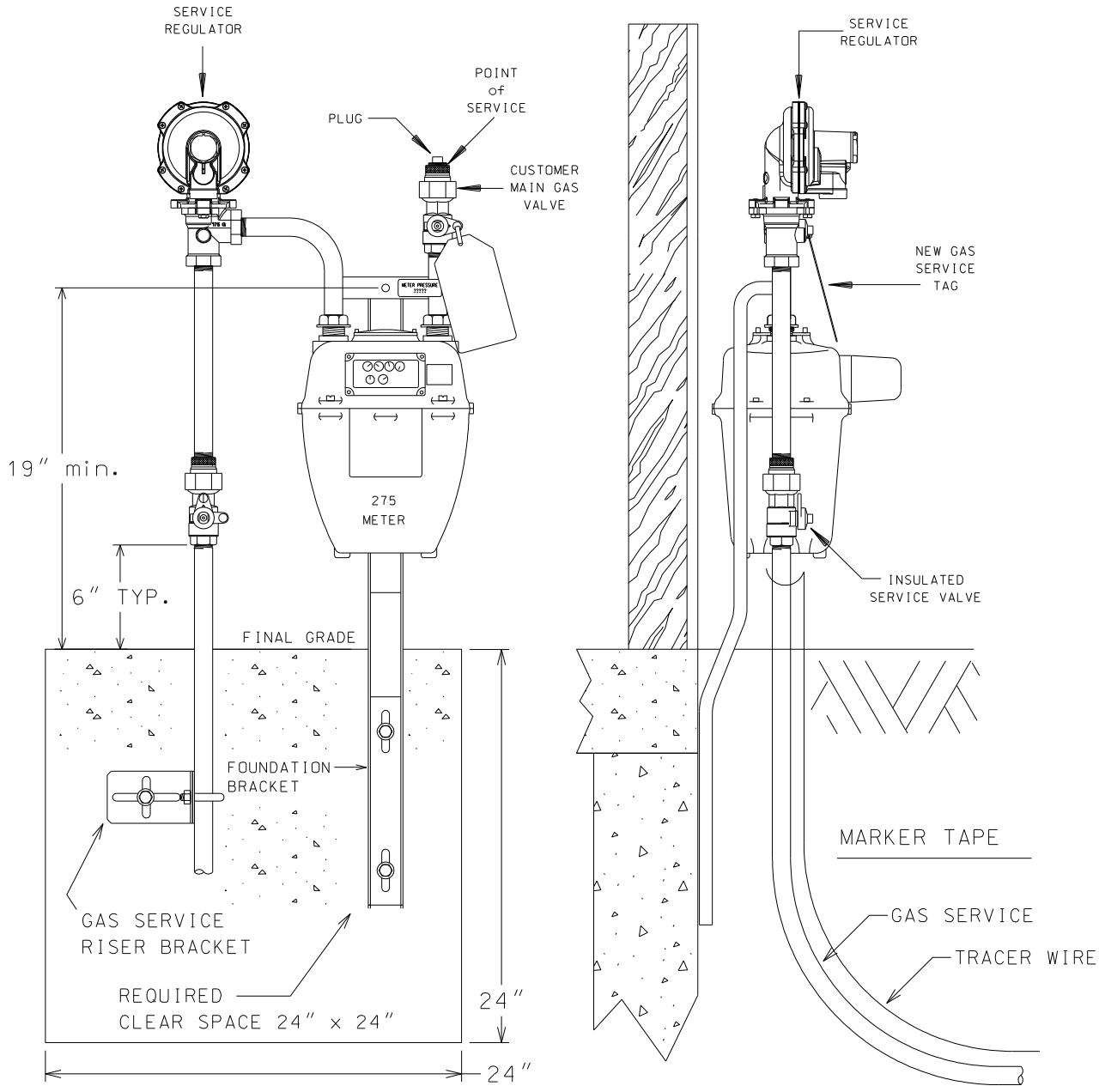
803 Residential & Small Commercial High Pressure (HP)

803-1 Single Meter Set; 275; Compact Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard or 2 PSIG
	CFH	0 – 295 (std) or 0 – 330 (2 PSIG)



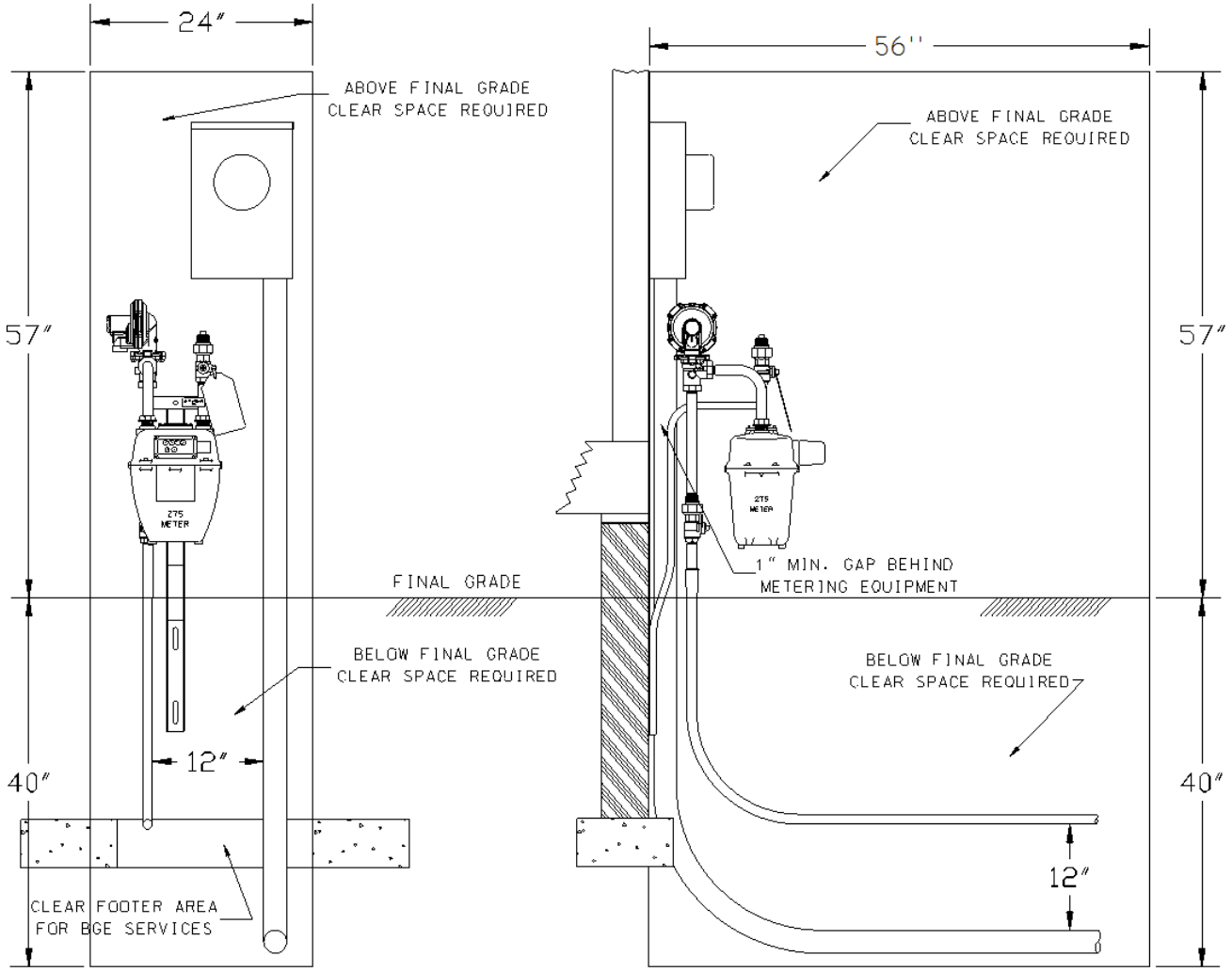
Approximate Space Requirement: 13" W x 34" H x 20" D
Minimum Clear Work Space Required: 37" W x 46" H x 56" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-802 (std) or 31-801 (2 PSIG)

803-2 Single Meter Set; 275; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard or 2 PSIG
	CFH	0 – 295 (std) or 0 – 330 (2 PSIG)



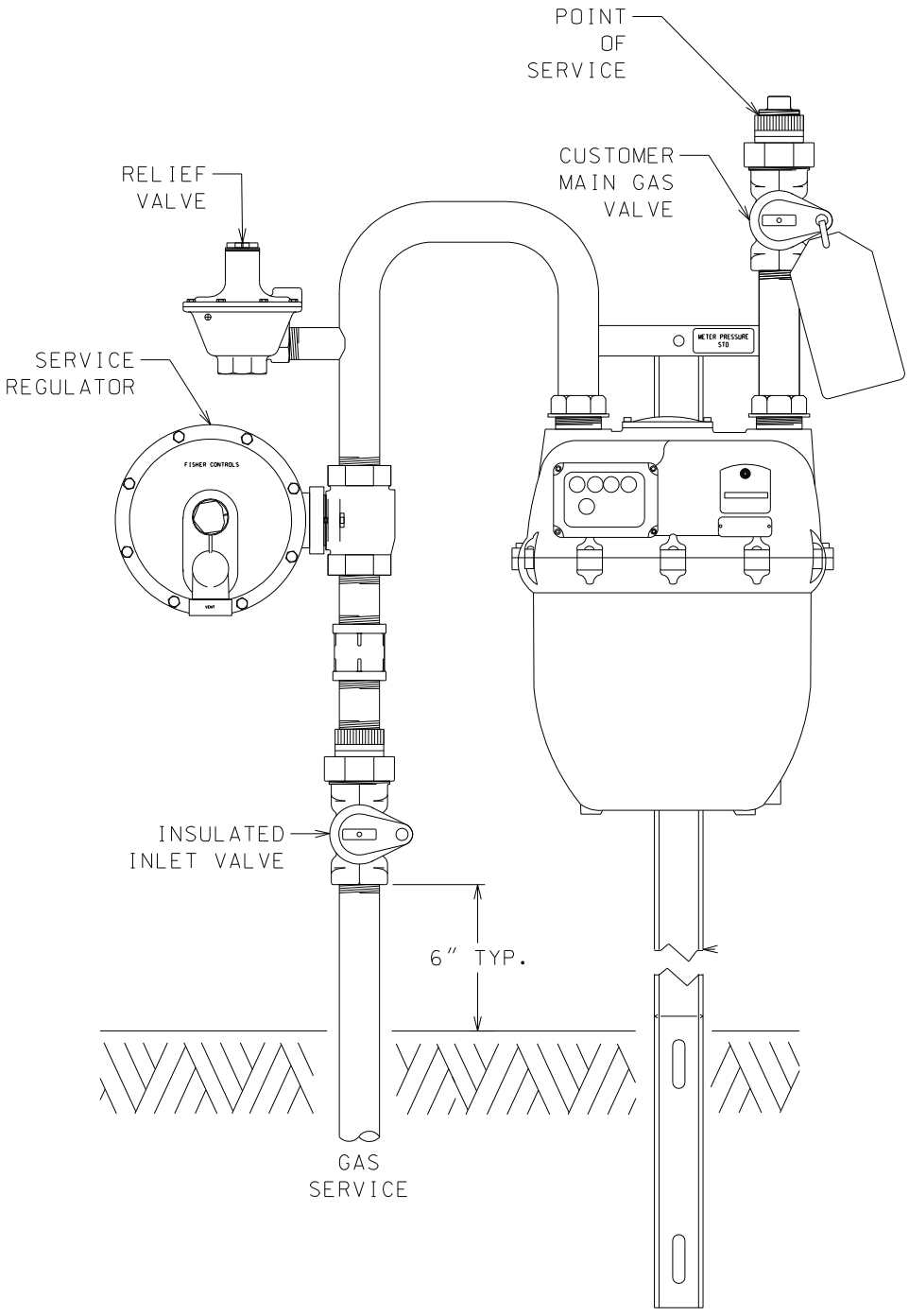
Approximate Space Requirement: 20" W x 34" H x 13" D
Minimum Clear Work Space Required: 37" W x 46" H x 49" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-060 (std) or 31-054 (2 PSIG)

803-3 Single Meter Set; 275; Stacked Installation	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard or 2 PSIG
	CFH	0 – 295 (std) or 0 –330 (2 PSIG)



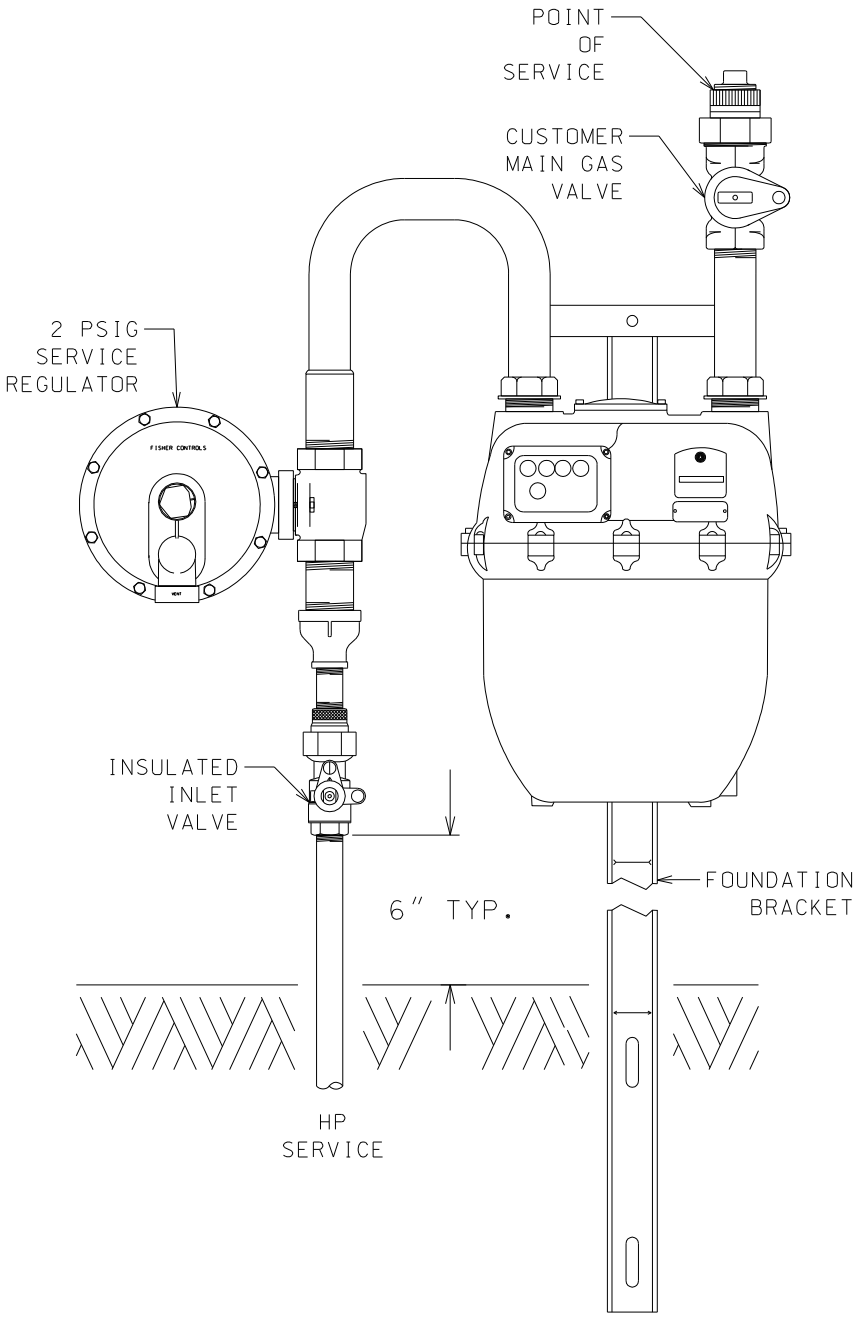
Approximate Space Requirement: 24" W x 57" H x 20" D
Minimum Clear Work Space Required: 48" W x 69" H (min) x 56" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

803-4 Single Meter Set; 415/630; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	296 – 600 / 601 – 800



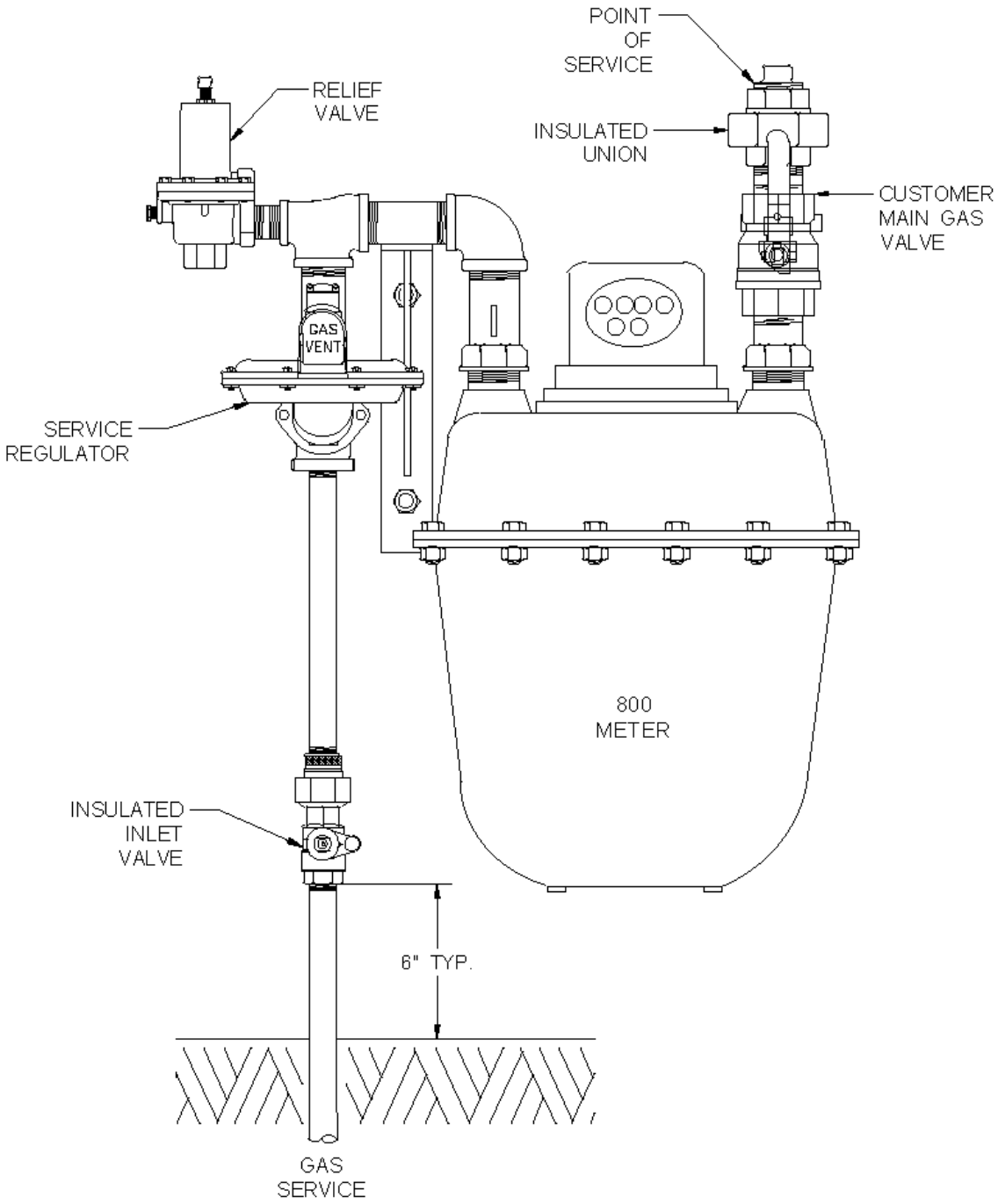
Approximate Space Requirement: 30" W x 38" H x 17" D
Minimum Clear Work Space Required: 54" W x 50" H x 53" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-842

803-5 Single Meter Set; 415/630; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 PSIG
	CFH	331 – 675 / 676 – 999



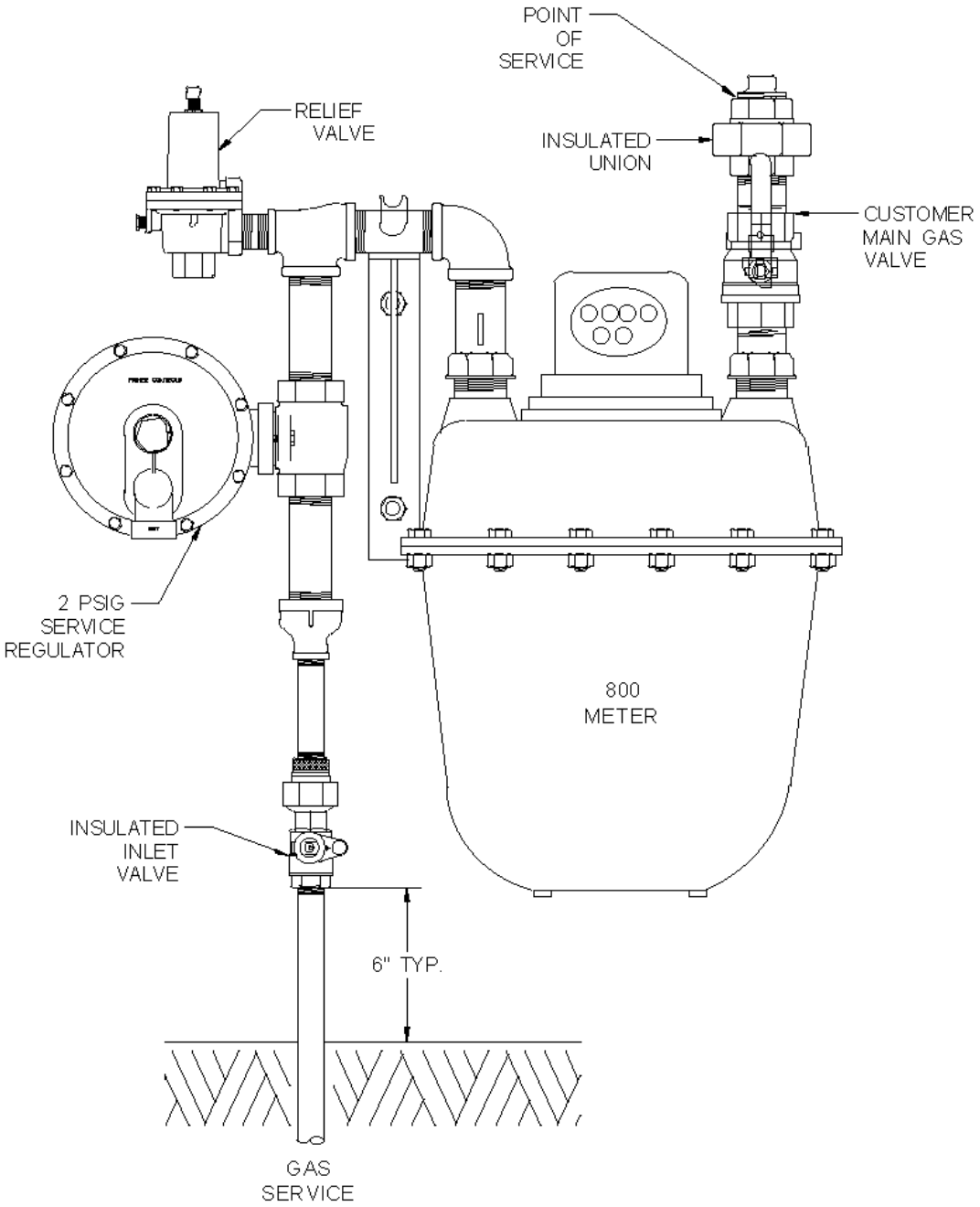
Approximate Space Requirement: 30" W x 38" H x 17" D
Minimum Clear Work Space Required: 54" W x 50" H x 50" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 40-C67

803-6 Single Meter Set; 800; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	801 – 1200



Approximate Space Requirement: 32" W x 38" H x 18" D
Minimum Clear Work Space Required: 56" W x 50" H x 54" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

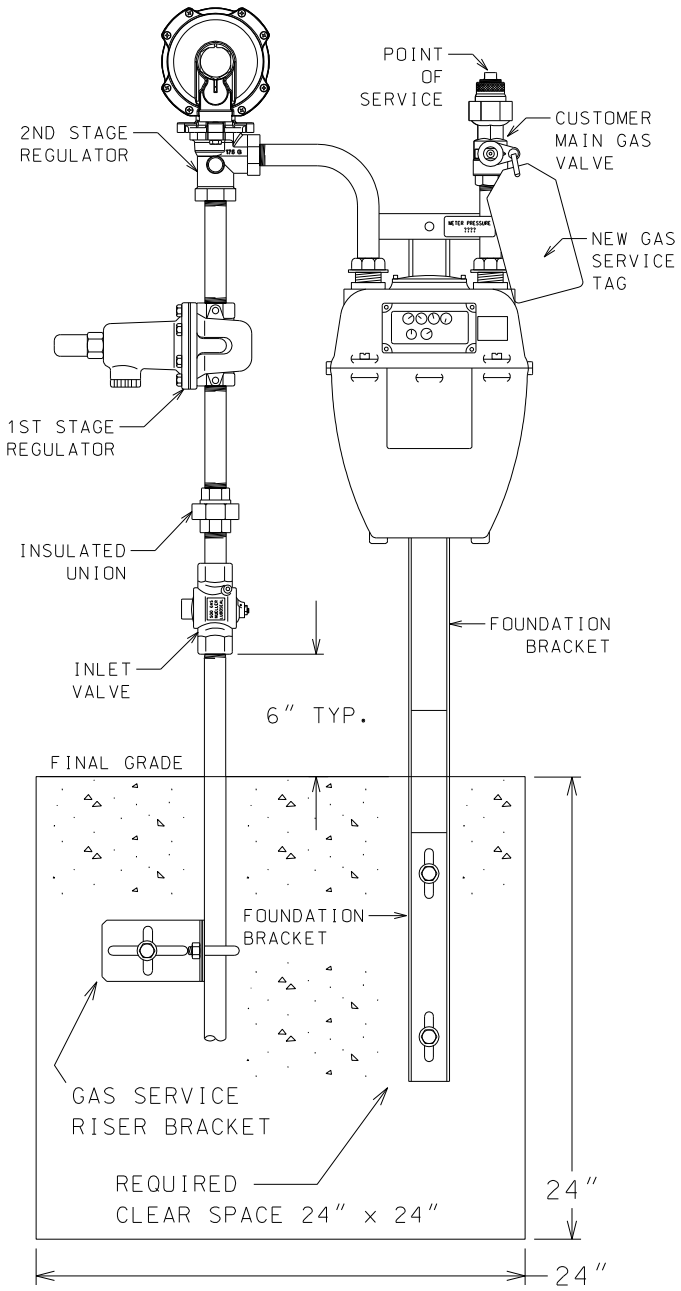
803-7 Single Meter Set; 800; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 PSIG
	CFH	1000 – 1350



Approximate Space Requirement: 32" W x 38" H x 18" D
Minimum Clear Work Space Required: 56" W x 50" H x 54" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

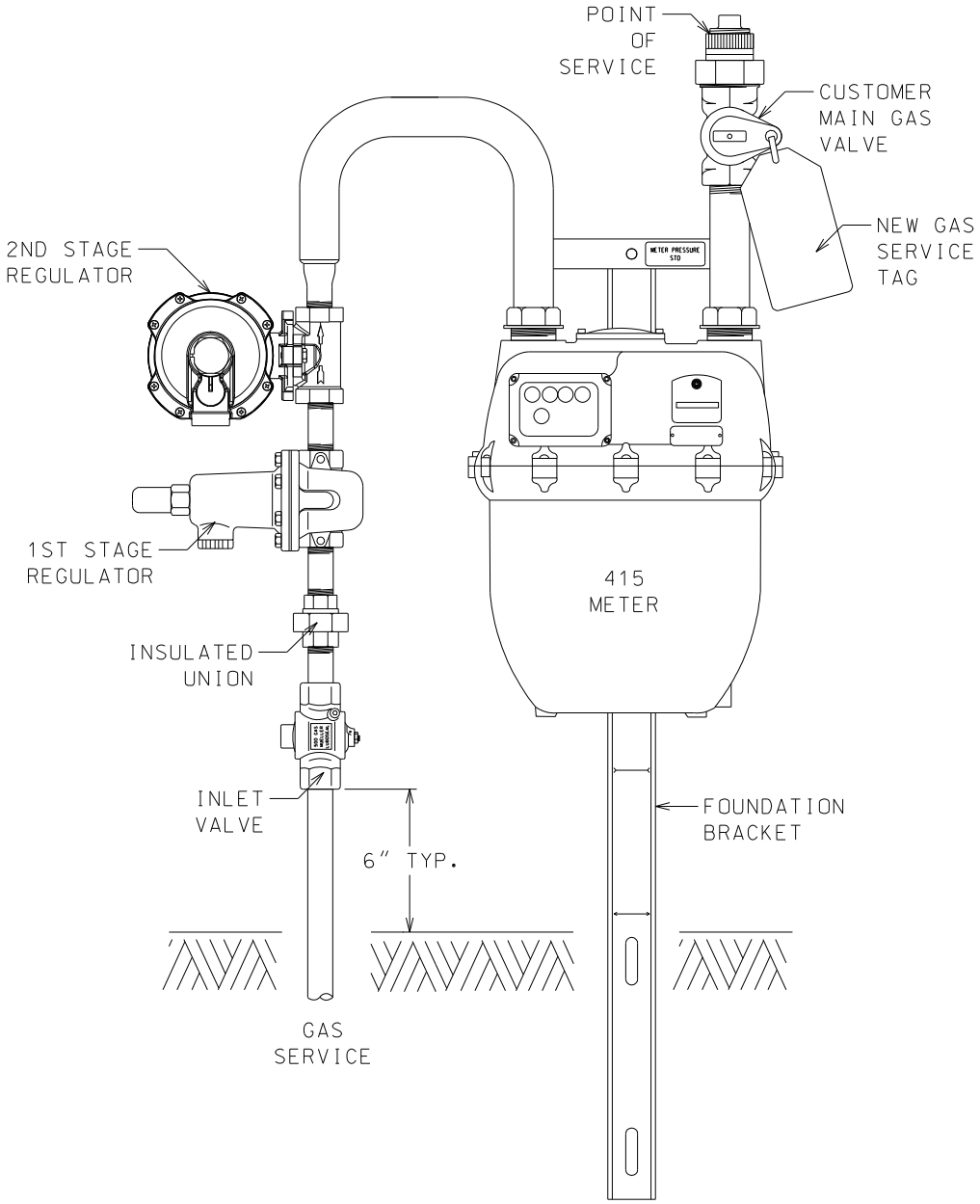
804 Residential & Small Commercial Over High Pressure (OHP)

804-1 Single Meter Set; 275; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard or 2 PSIG
	CFH	0 – 295 (std) or 0 – 330 (2 PSIG)



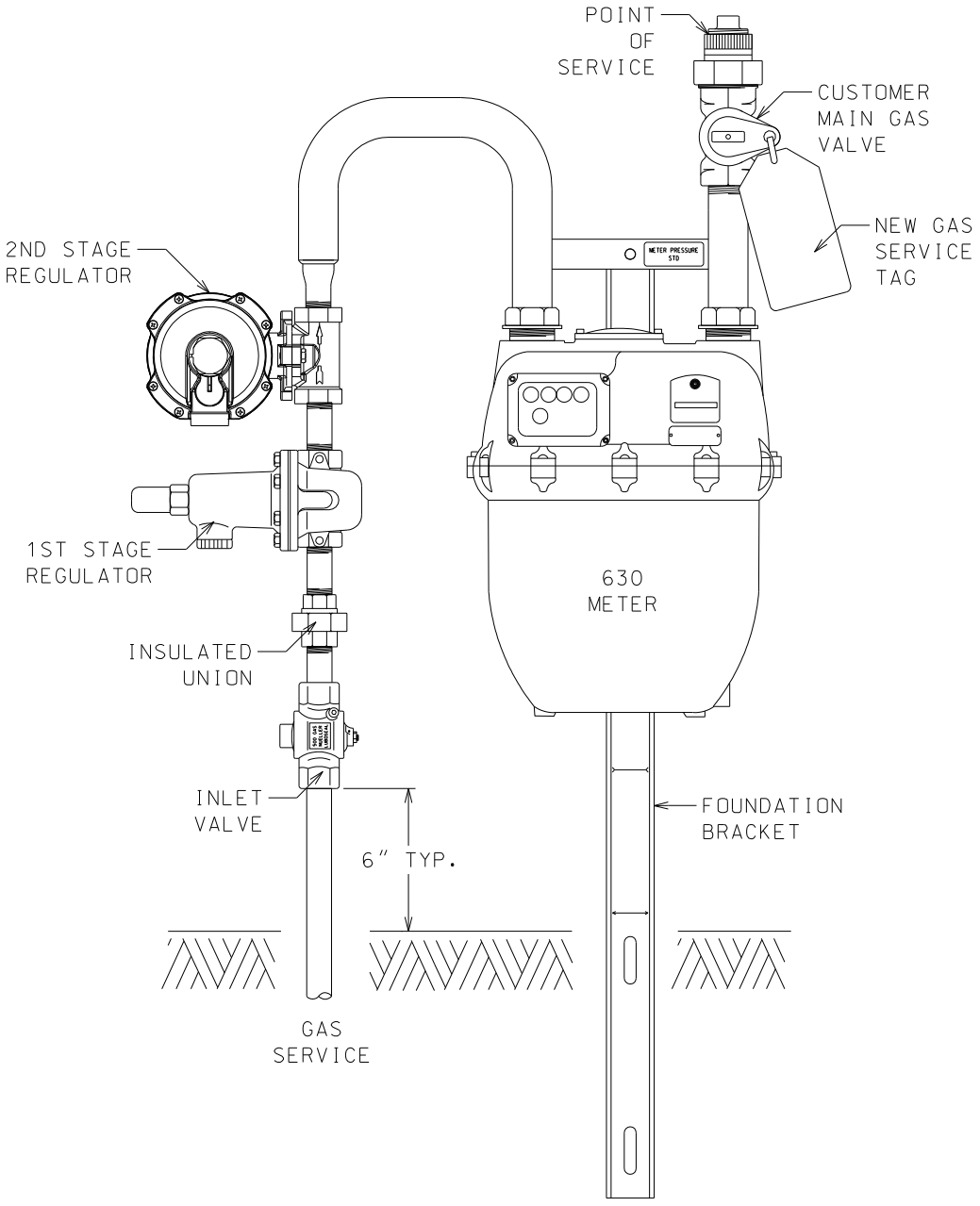
Approximate Space Requirement: 24" W x 36" H x 16" D
Minimum Clear Work Space Required: 48" W x 48" H x 52" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-533 (std) or 31-909 (2 PSIG)

804-2 Single Meter Set; 415; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard or 2 PSIG
	CFH	296 – 600 (std) or 331 – 675 (2 PSIG)



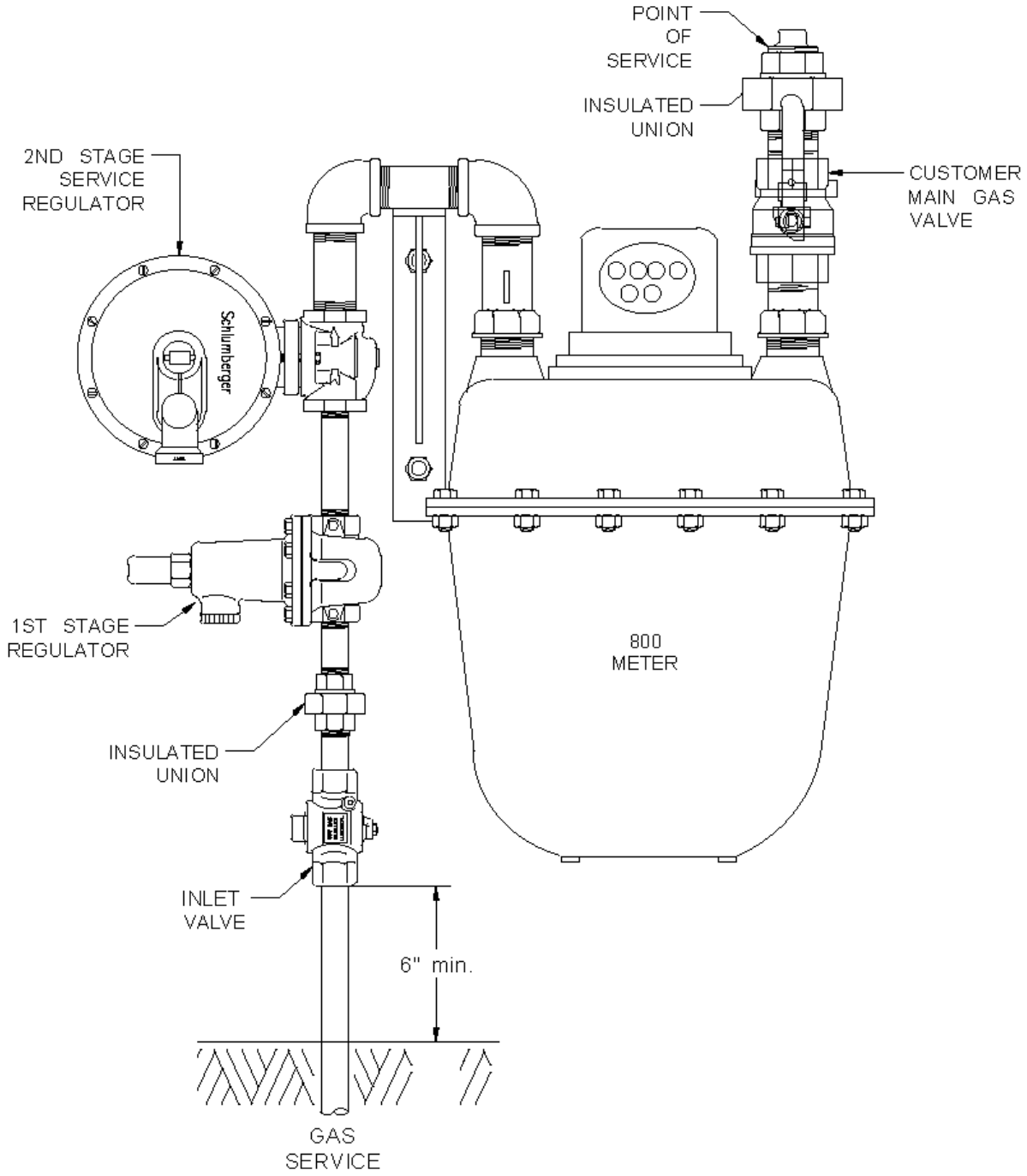
Approximate Space Requirement: 28" W x 39" H x 17" D
Minimum Clear Work Space Required: 48" W x 51" H x 53" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-844 (std) or 40-C68 (2 PSIG)

804-3 Single Meter Set; 630; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard or 2 PSIG
	CFH	601 – 800 (std) or 676 – 999 (2 PSIG)



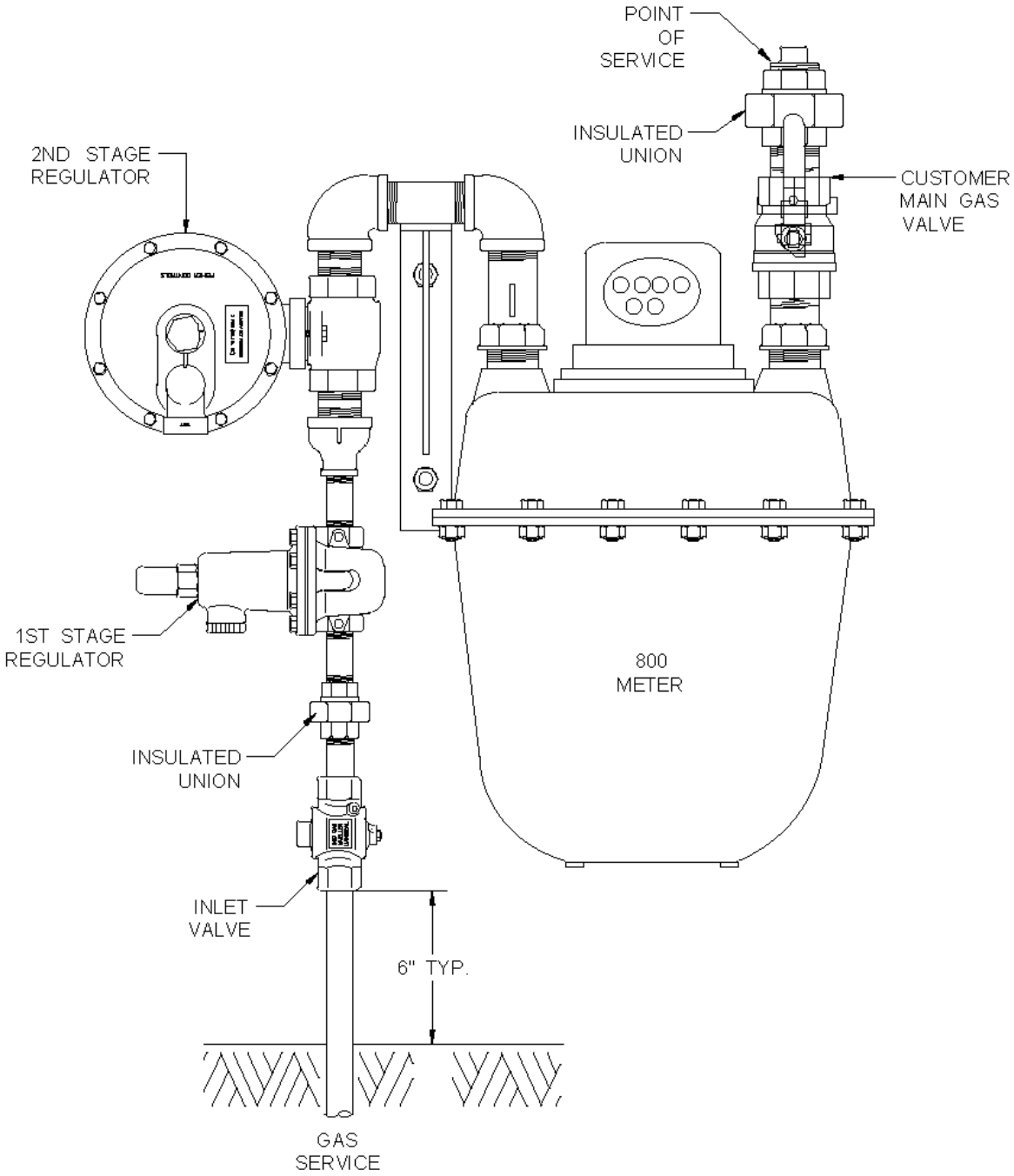
Approximate Space Requirement: 30" W x 38" H x 17" D
Minimum Clear Work Space Required: 54" W x 50" H x 53" D
Important: Gas Meter Assembly Must Be Insulated From House Piping
BGE Reference Only 31-844 (std) or 40-C68 (2 PSIG)

804-4 Single Meter Set; 800; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard
	CFH	801 - 1200



Approximate Space Requirement: 32" W x 39" H x 18" D
Minimum Clear Work Space Required: 54" W x 51" H x 54" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

804-5 Single Meter Set; 800; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	2 PSIG
	CFH	976 -1350



Approximate Space Requirement: 32" W x 39" H x 18" D
Minimum Clear Work Space Required: 54" W x 51" H x 54" D
Important: Gas Meter Assembly Must Be Insulated From House Piping

900 Typical Commercial & Industrial Gas Meter Sets

900-1 General Comments

This section was developed to show drawings of typical meter sets that BGE may install. These drawings are to be used as reference for understanding the size of the meter sets. In addition, the following are general rules for the meter assemblies shown in this section.

A. A 6" minimum of exposed pipe from the bottom of the service riser valve or service flange connection to final grade must be allowed.

B. The vents from the regulators must face downwards. If the vent is not facing downwards, then piping shall be installed to direct the vent downwards.

C. A 12" minimum between final grade and the regulator's vent shall be maintained.

D. BGE uses insulated unions on the Service Valve and at the Point of Service on the Customer's Main Gas Valve, therefore all gas meter assemblies are electrically insulated from the houseline. Do not electrically bond the houseline to the metering equipment.

E. Be sure that the respective clear work space is provided for each meter installation.

F. There must be a minimum of at least 1" between the back of the meter and the finished wall.

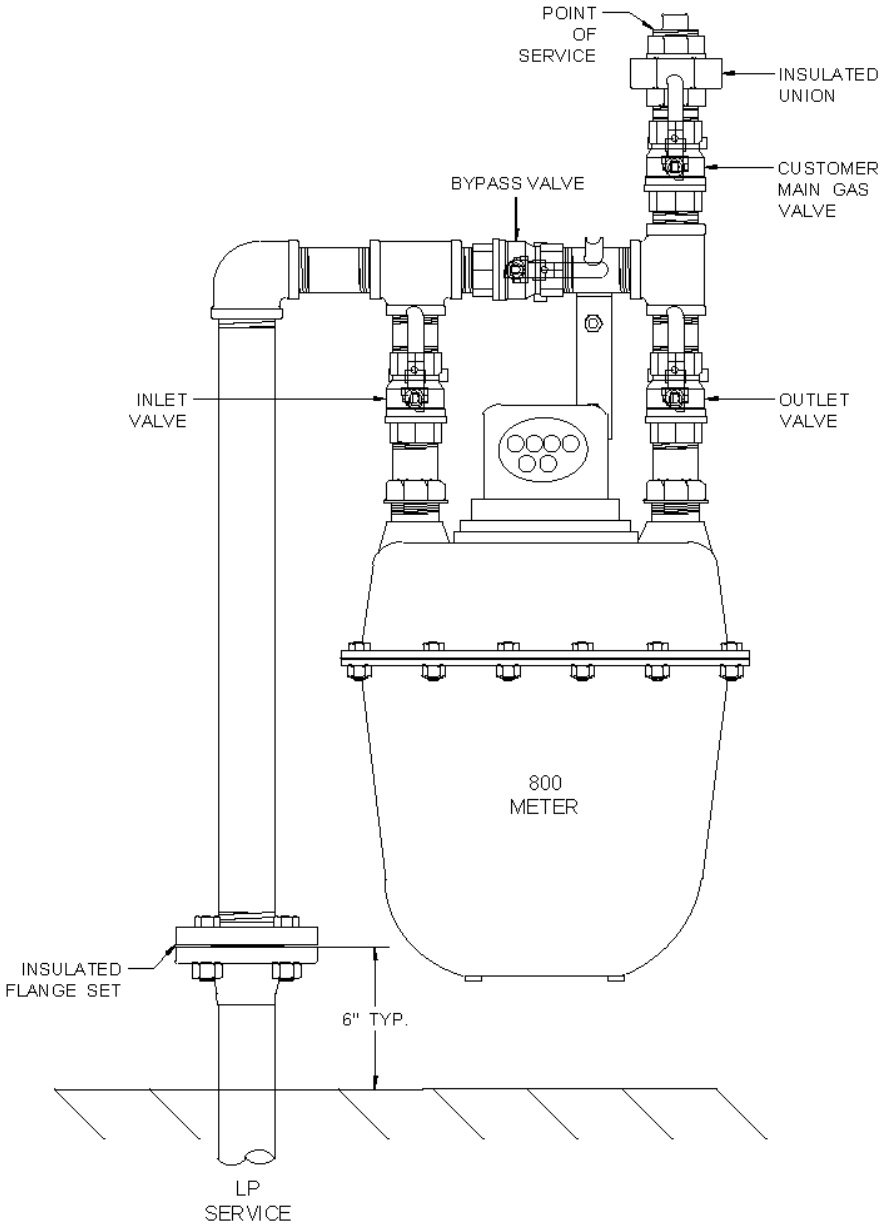
G. BGE connections (outlet) sizes per meter size.

Meter Size	Outlet Piping Size
250	3/4"
415, 630	1 ¼"
800	1 ½"
3M	2"
5M & 7M	3"
11M, 16M & 23M232	4"
23M & 38M	6"
56M	8"
102M	10"

H. Inside meter installations are shown ONLY for locations that do not meet the BGE Metering Location Standard. The regulator, if needed, shall be vented outside of the building.

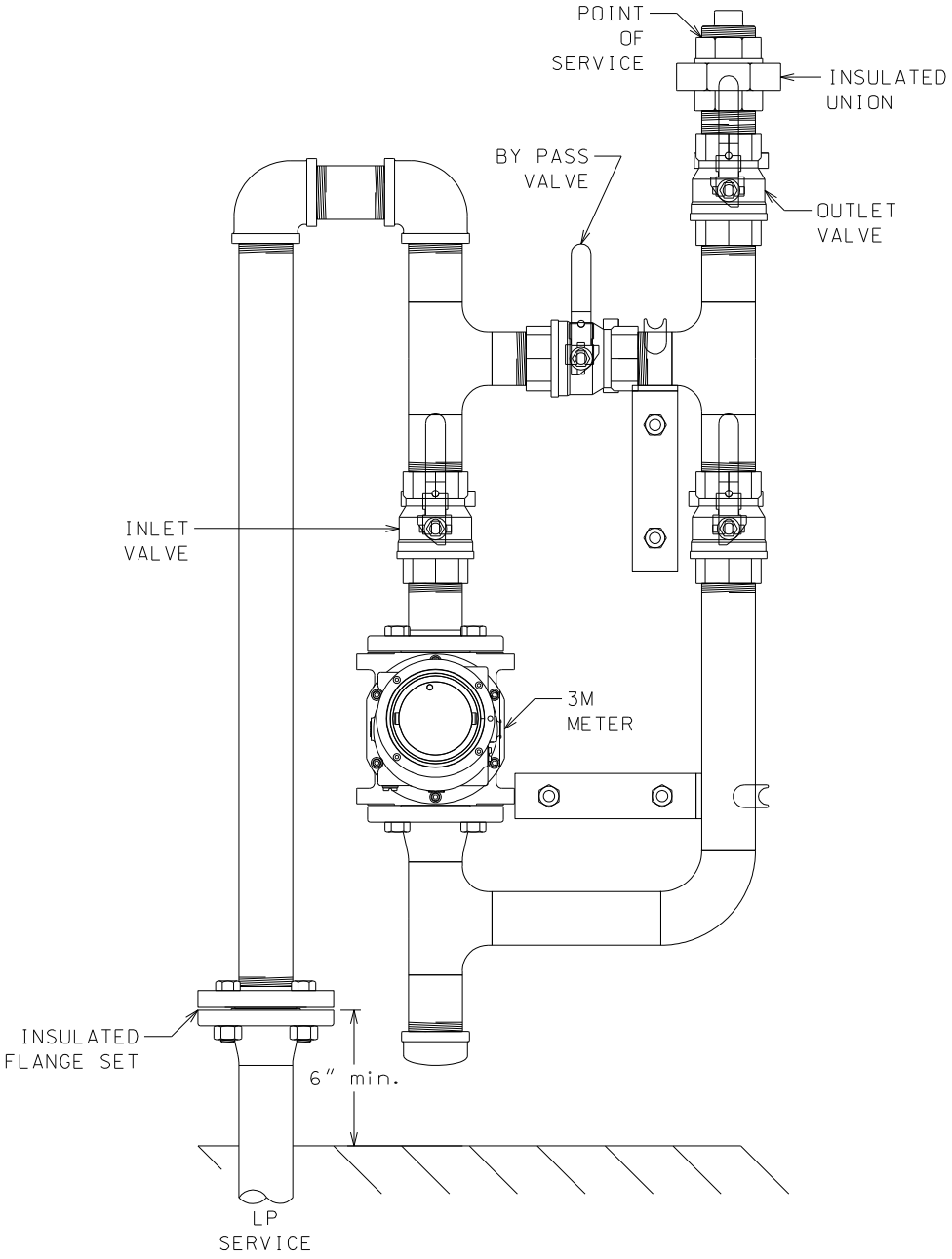
901 Commercial & Industrial Low Pressure (LP)

901-1 Single Meter Set; 800; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	631 - 800



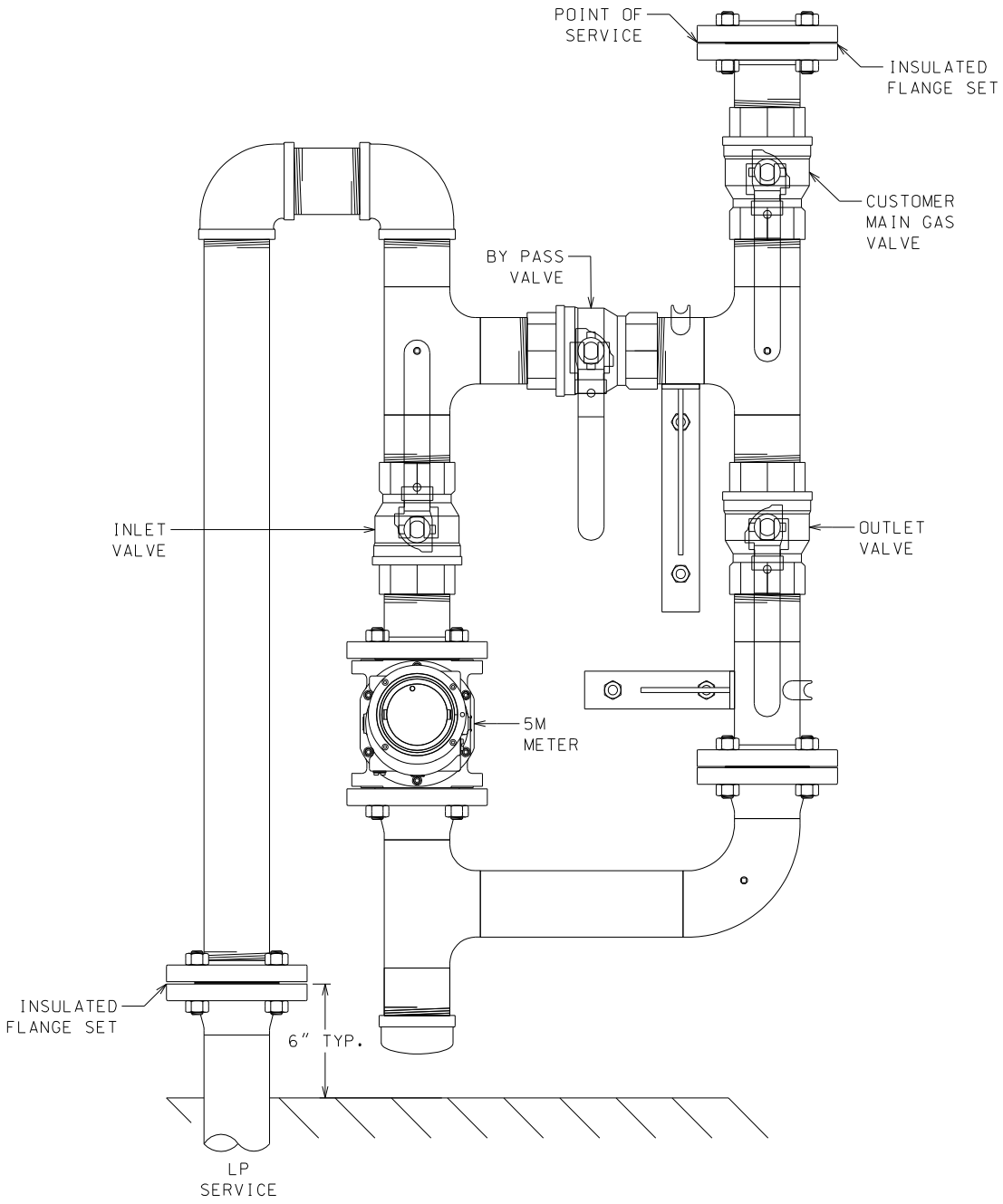
Assembly Dimensions: 25" W x 46" H x 17" D
Minimum Clear Work Space Required: 49" W x 58" H x 65" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 1 ½"

901-2 Single Meter Set; 3M; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	801 - 2580



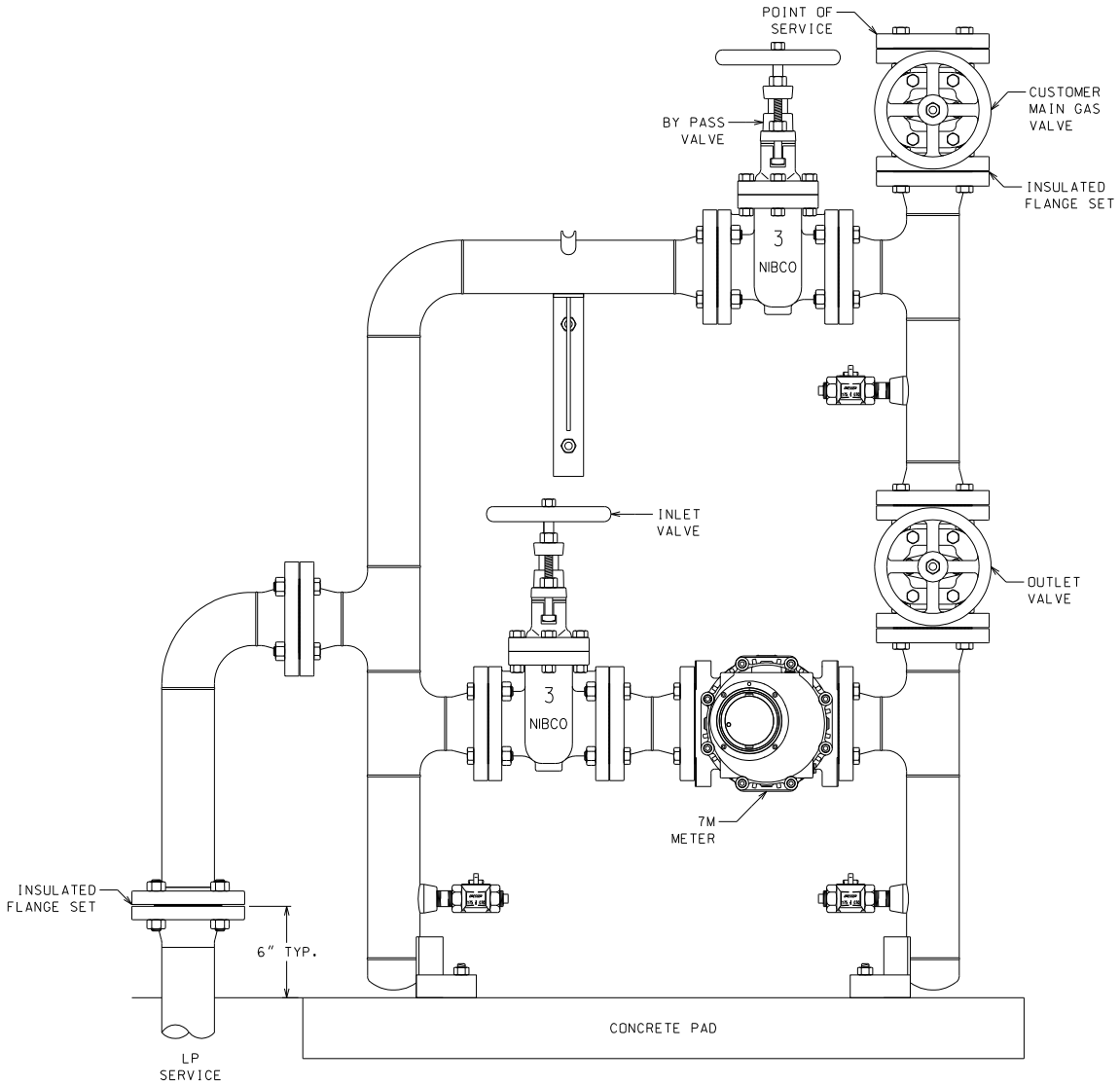
Assembly Dimensions: 26" W x 50" H x 24" D
Minimum Clear Work Space Required: 50" W x 62" H x 72" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 2"

901-3 Single Meter Set; 5M; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	2581 - 3975



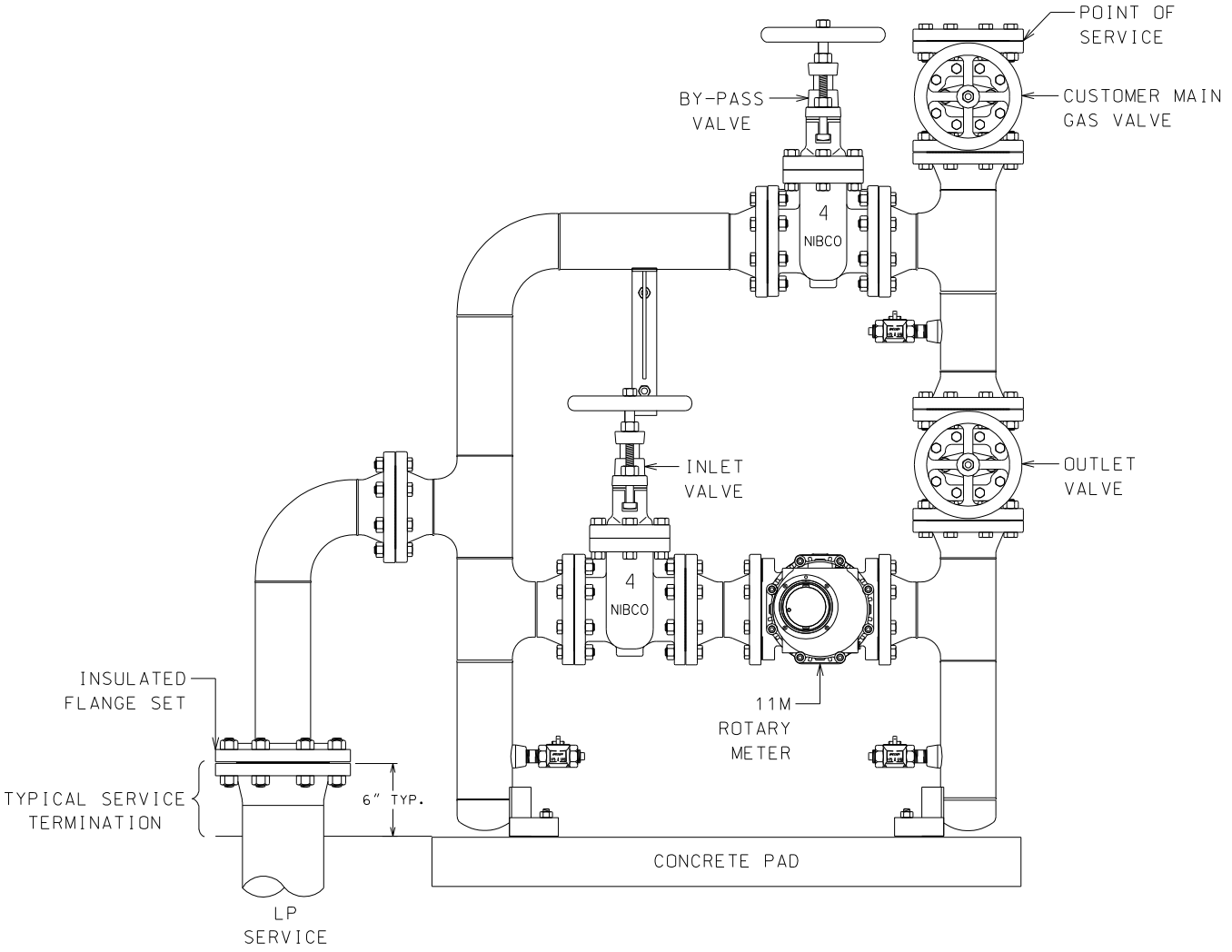
Assembly Dimensions: 35" W x 57" H x 26" D
Minimum Clear Work Space Required: 59" W x 69" H x 74" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

901-4 Single Meter Set; 7M; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	3976 - 5400



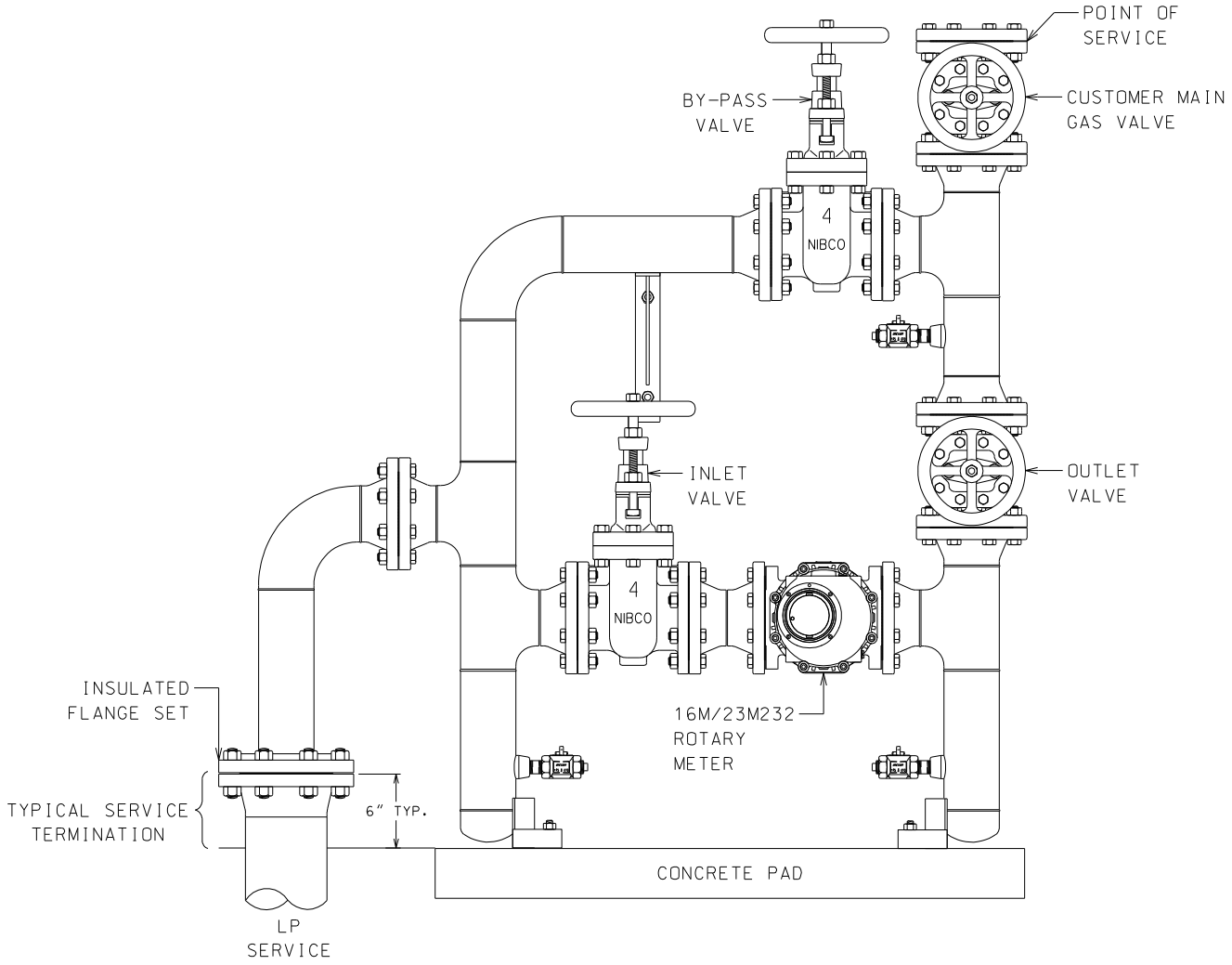
Assembly Dimensions: 32" W x 50" H x 24" D
Minimum Clear Work Space Required: 56" W x 62" H x 72" D
Pad Size Required: 3' x 4' (min.) 4” – 6” Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

901-5 Single Meter Set; 11M; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	5401 - 7300



Assembly Dimensions: 50" W x 72" H x 28"
Minimum Clear Work Space Required: 74" W x 84" H x 76" D
Pad Size Required: 3' x 4' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

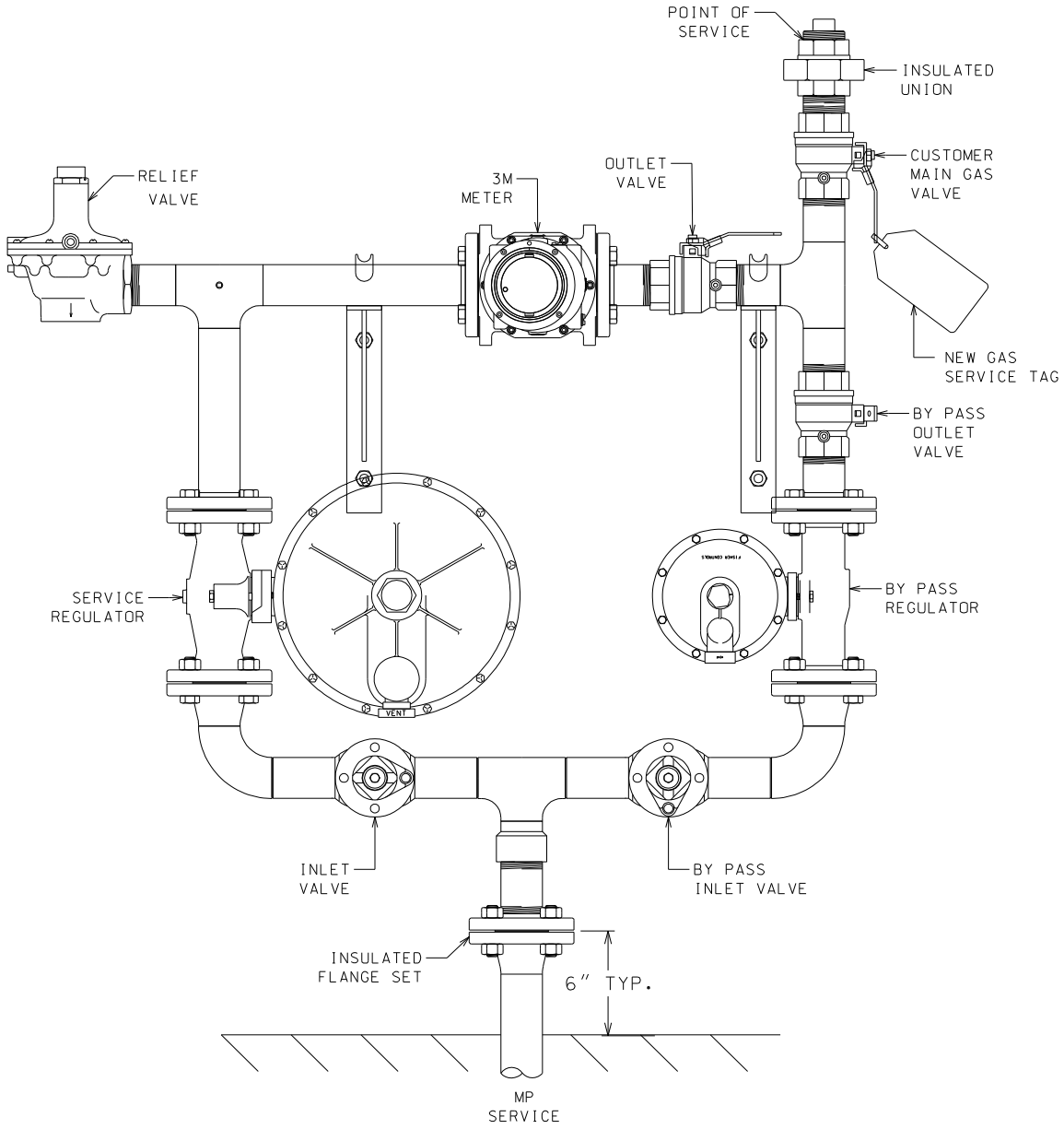
901-6 Single Meter Set; 16M/23M232; Outside	**Service Pressure**	Low Pressure (LP)
	Delivery Pressure	Standard
	CFH	7301 – 9950 / 7301 – 10950



Assembly Dimensions: 50" W x 72" H x 32" D
Minimum Clear Work Space Required: 74" W x 84" H x 80" D
Pad Size Required: 3' x 4' (min.) 4” – 6” Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

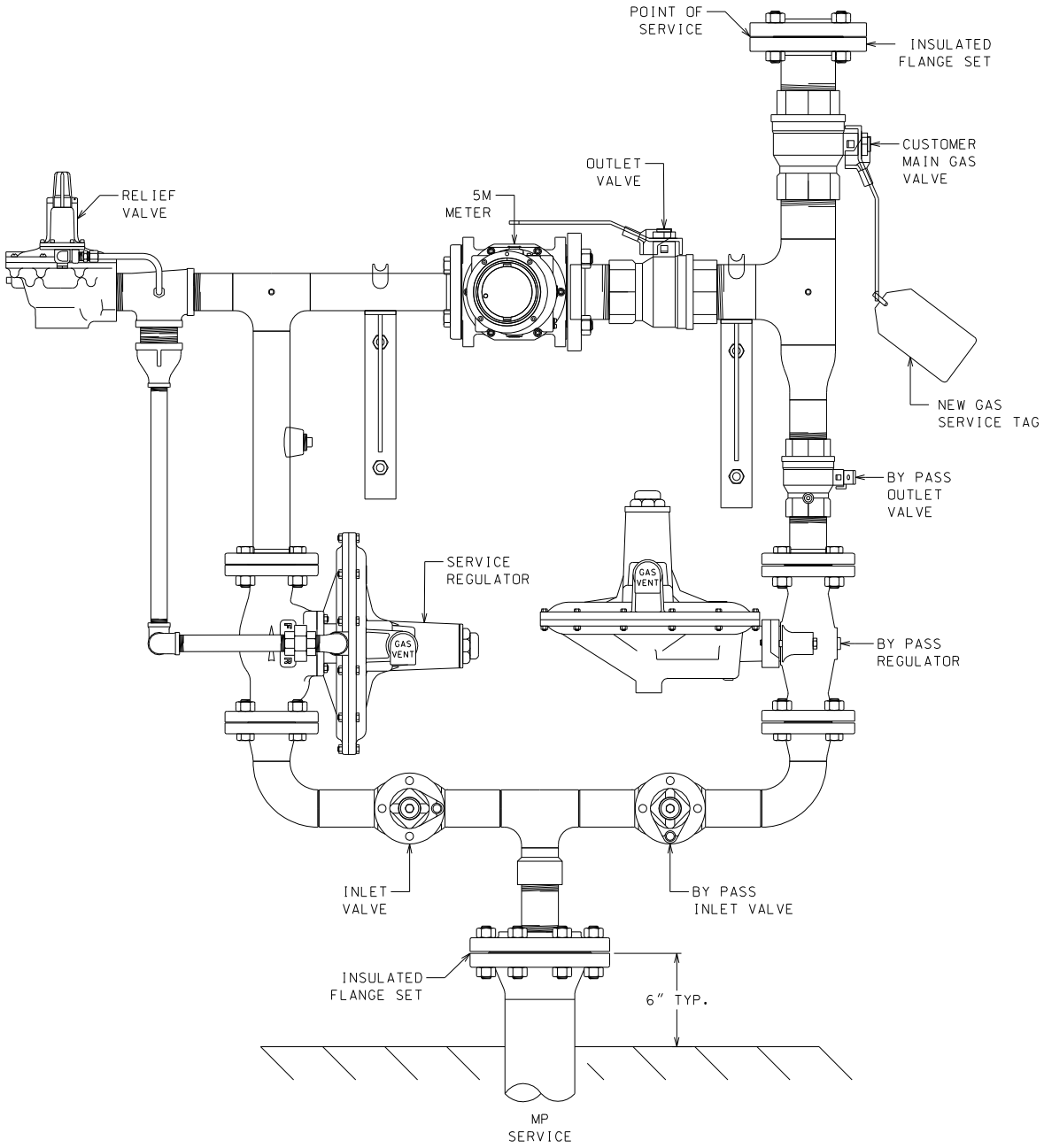
902 Commercial & Industrial Medium Pressure (MP)

902-1 Single Meter Set; 3M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	1201 - 3000



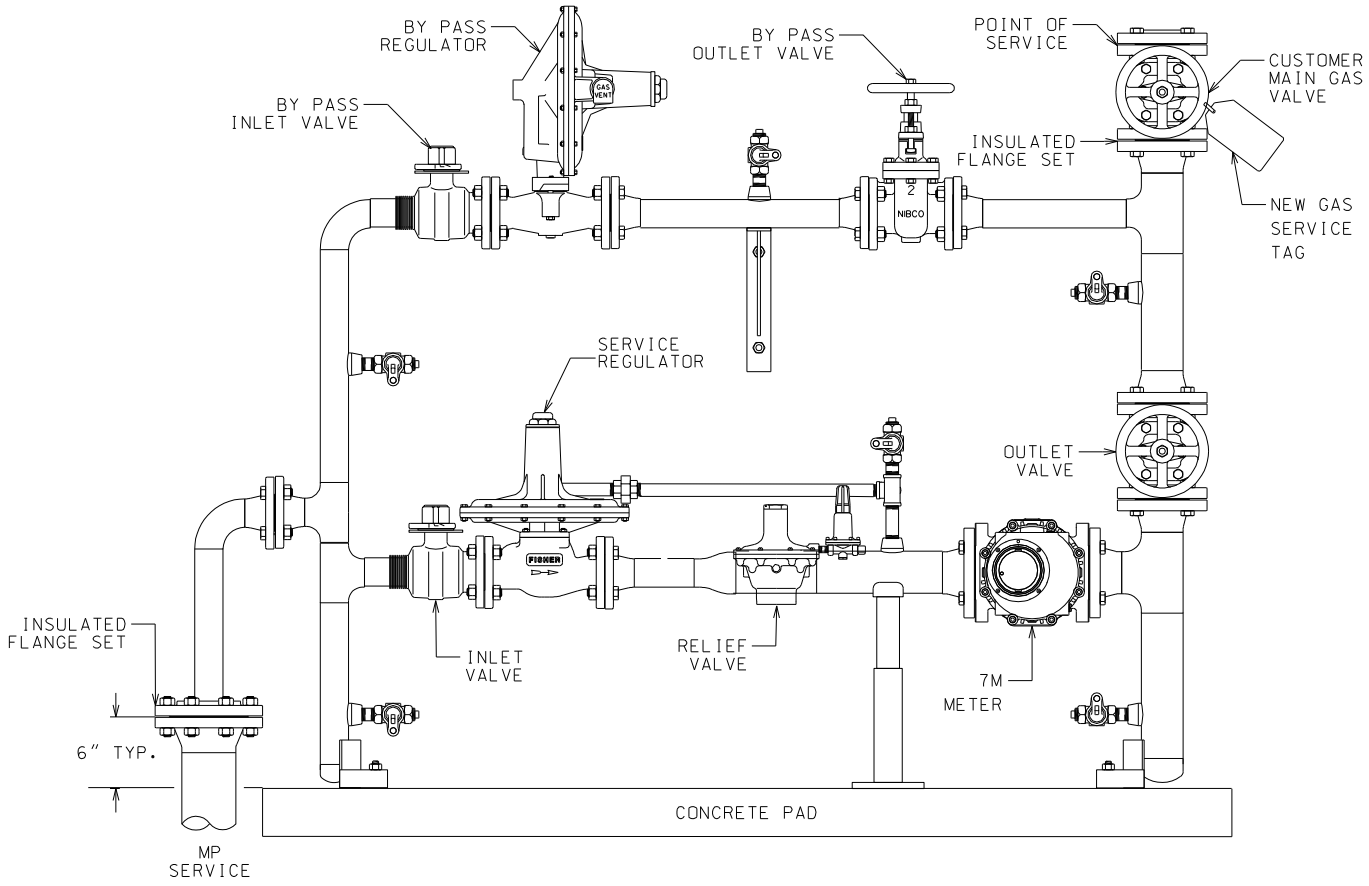
Assembly Dimensions: 50" W x 59" H x 23" D
Minimum Clear Work Space Required: 74" W x 71" H x 71" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 2"

902-2 Single Meter Set; 5M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	3001 - 5000



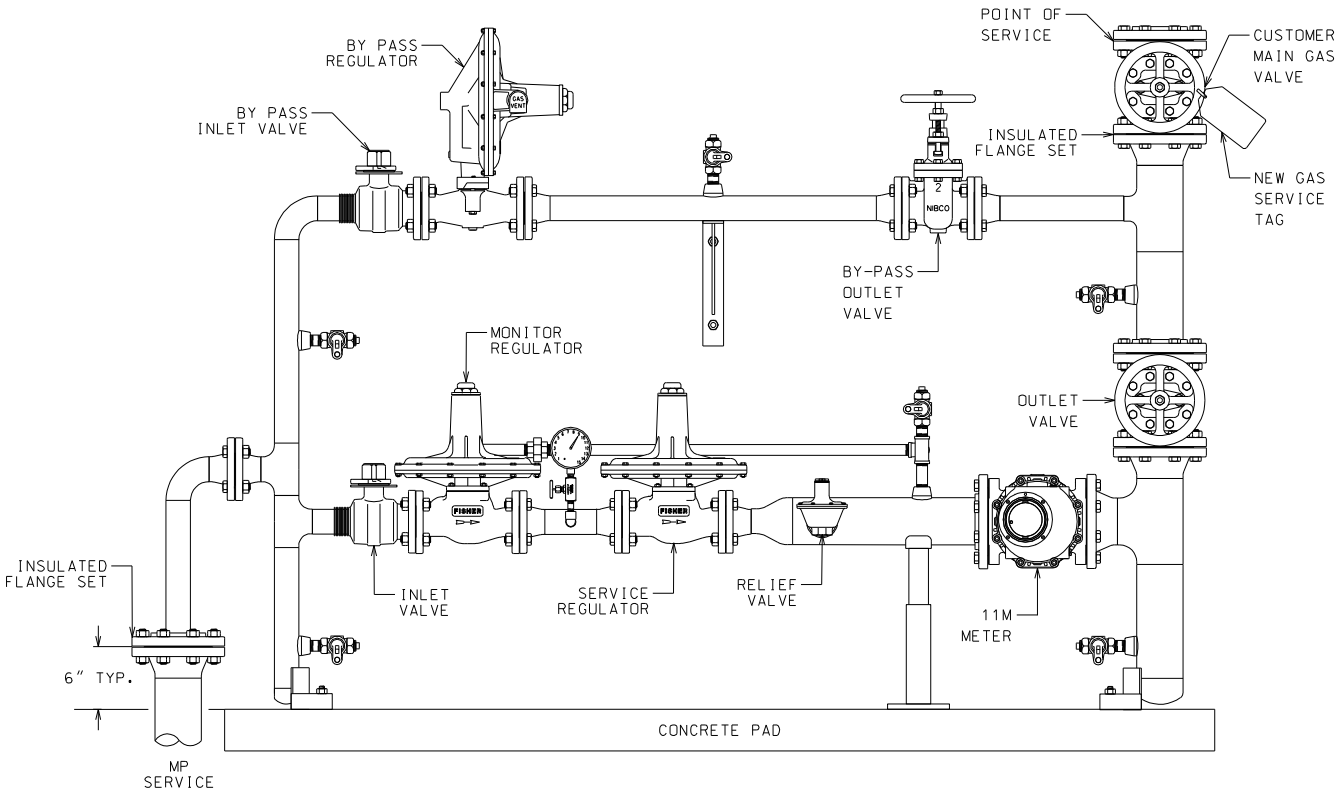
Assembly Dimensions: 55" W x 65" H x 26" D
Minimum Clear Work Space Required: 79" W x 77" H x 74" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

902-3 Single Meter Set; 7M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	5001 – 7000



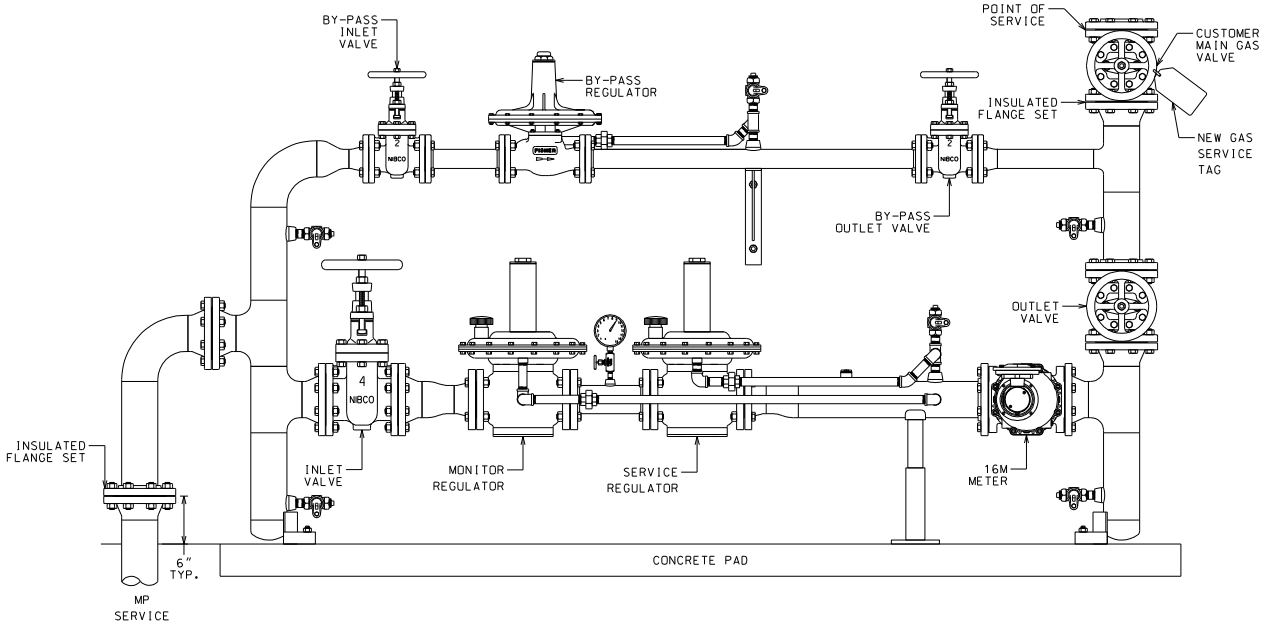
Assembly Dimensions: 82" W x 66" H x 24" D
Minimum Clear Work Space Required: 106" W x 78" H x 72" D
Pad Size Requirement: 3' x 6' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

902-4 Single Meter Set; 11M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	7001 – 11000



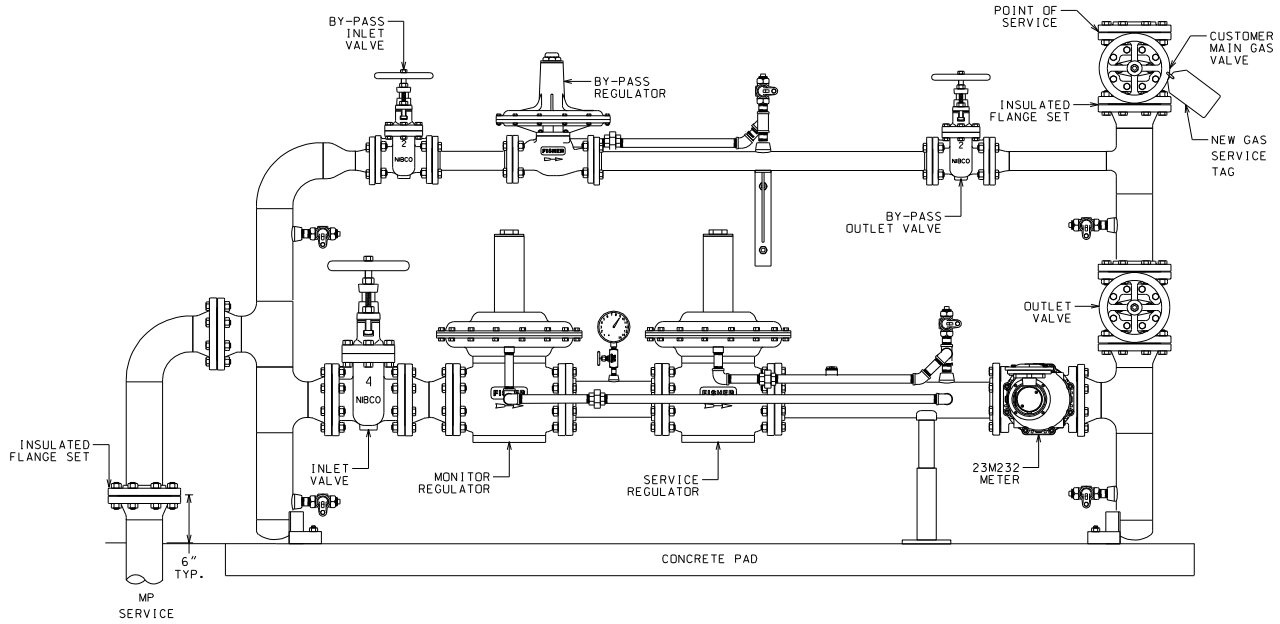
Assembly Dimensions: 106" W x 66" H x 24" D
Minimum Clear Work Space Required: 130" W x 78" H x 72" D
Pad Size Requirement: 3' x 8' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

902-5 Single Meter Set; 16M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	11001 - 16000



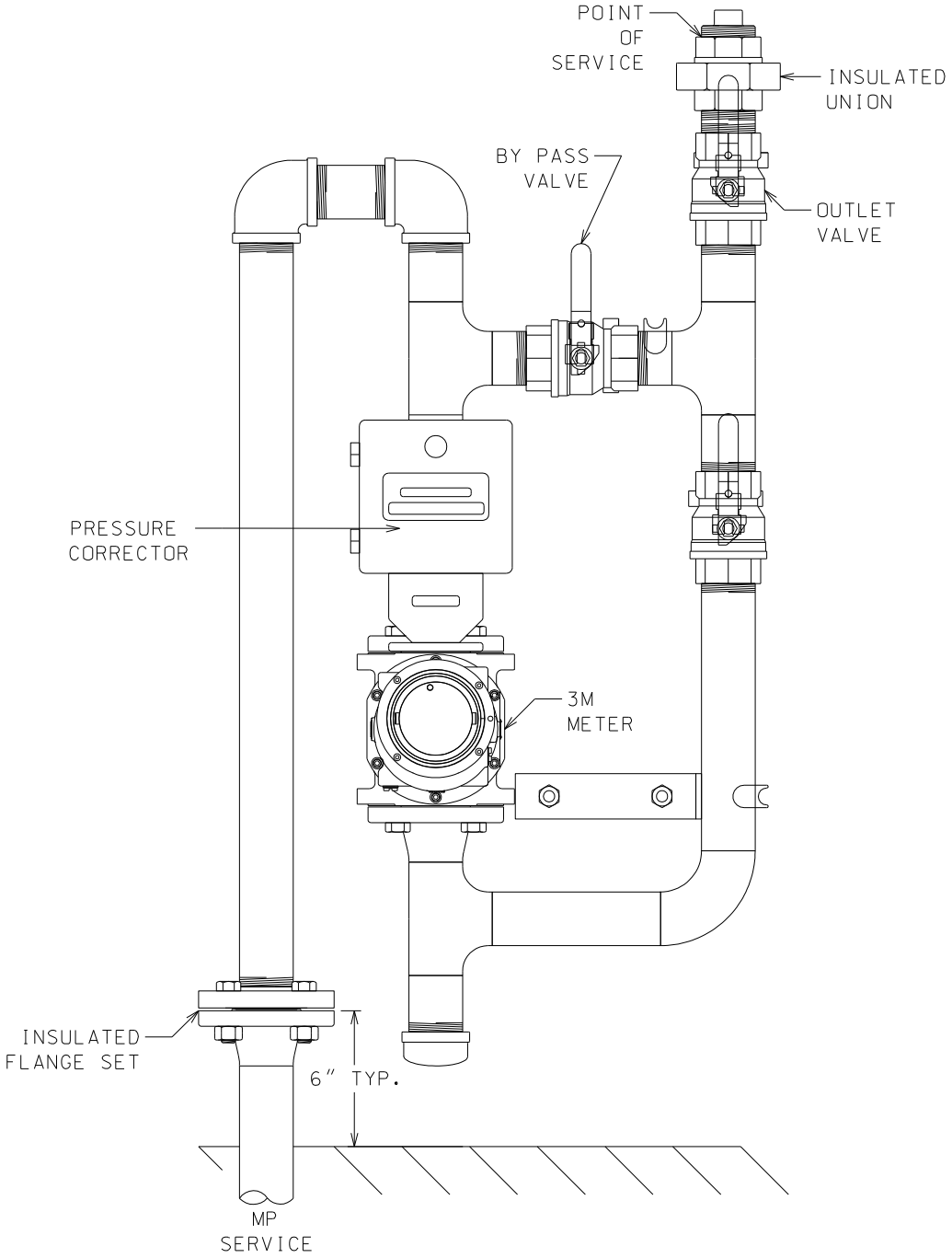
Assembly Dimensions: 132" W x 66" H x 28" D
Minimum Clear Work Space Required: 156" W x 78" H x 76" D
Pad Size Requirement: 4' x 10' (min.) 4” – 6” Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

902-6 Single Meter Set; 23M232; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Standard
	CFH	16001 - 23000



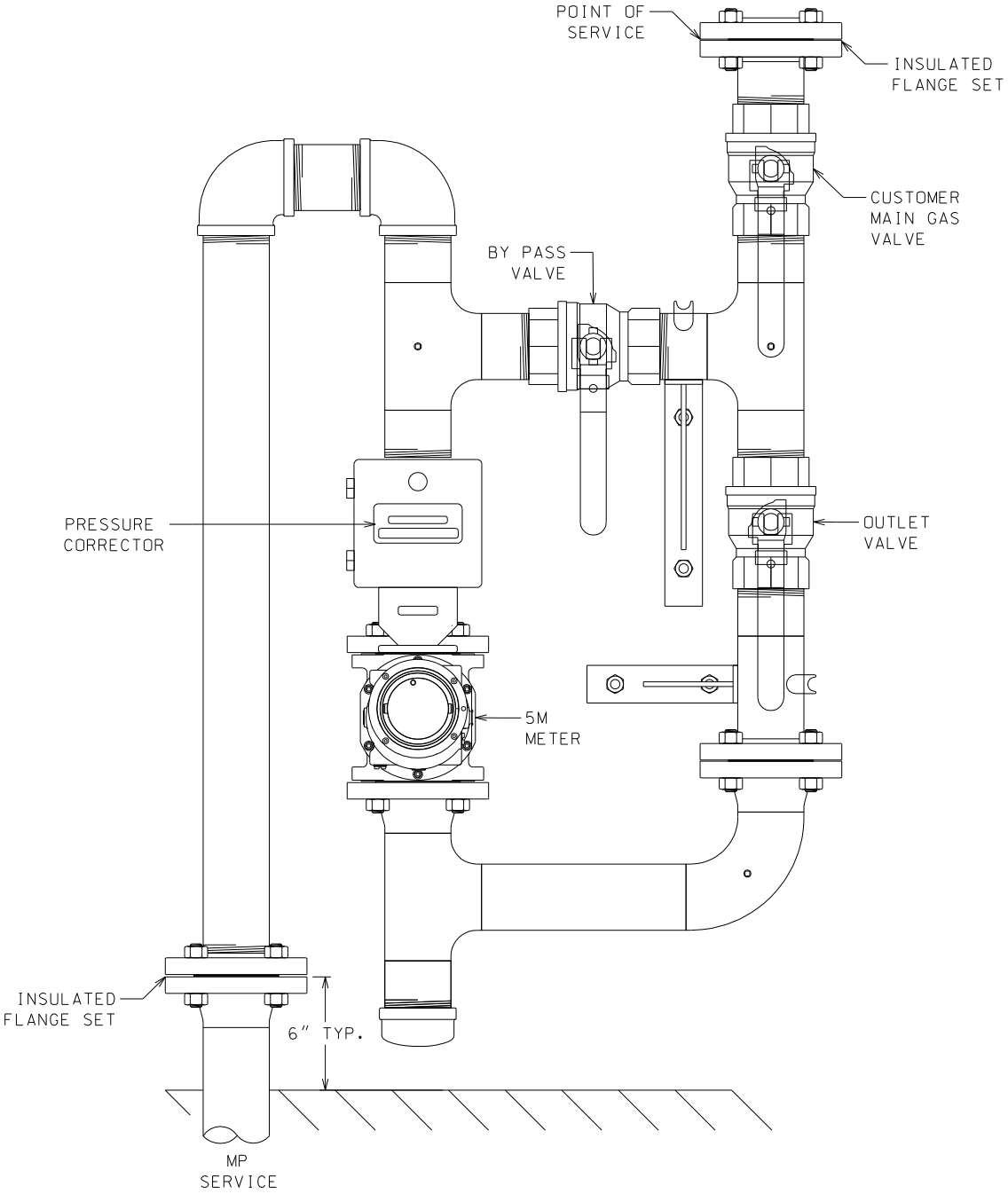
Assembly Dimensions: 132" W x 66" H x 32" D
Minimum Clear Work Space Required: 156" W x 78" H x 80" D
Pad Size Requirement: 4' x 10' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

902-7 Single Meter Set; 3M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Line Pressure
	CFH	1200 - 3270



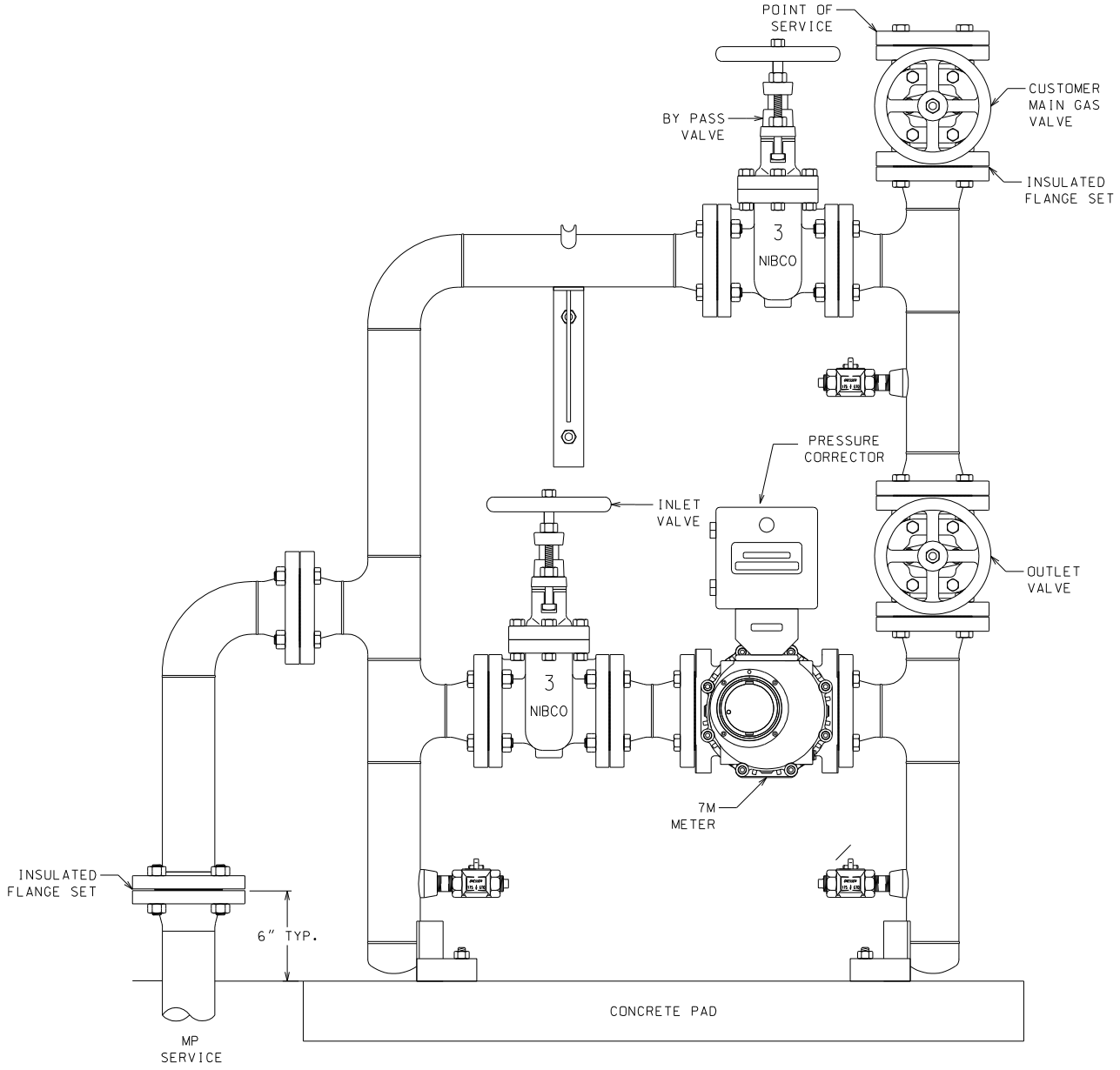
Assembly Dimensions: 26" W x 50" H x 24" D
Minimum Clear Work Space Required: 50" W x 62" H x 72" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 2"

902-8 Single Meter Set; 5M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Line Pressure
	CFH	3271 - 5450



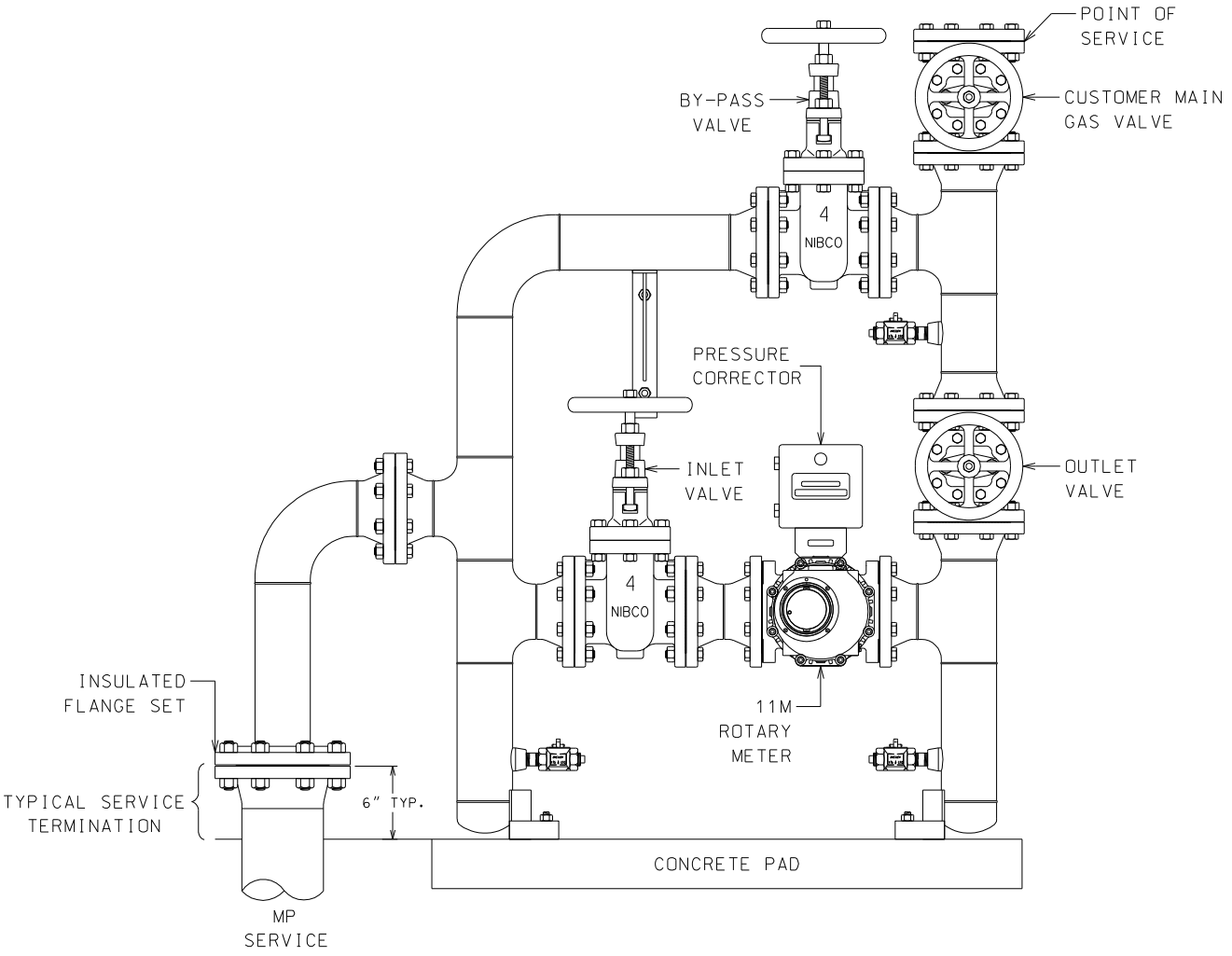
Assembly Dimensions: 35" W x 57" H x 26" D
Minimum Clear Work Space Required: 59" W x 69" H x 74" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

902-9 Single Meter Set; 7M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Line Pressure
	CFH	5451 - 7630



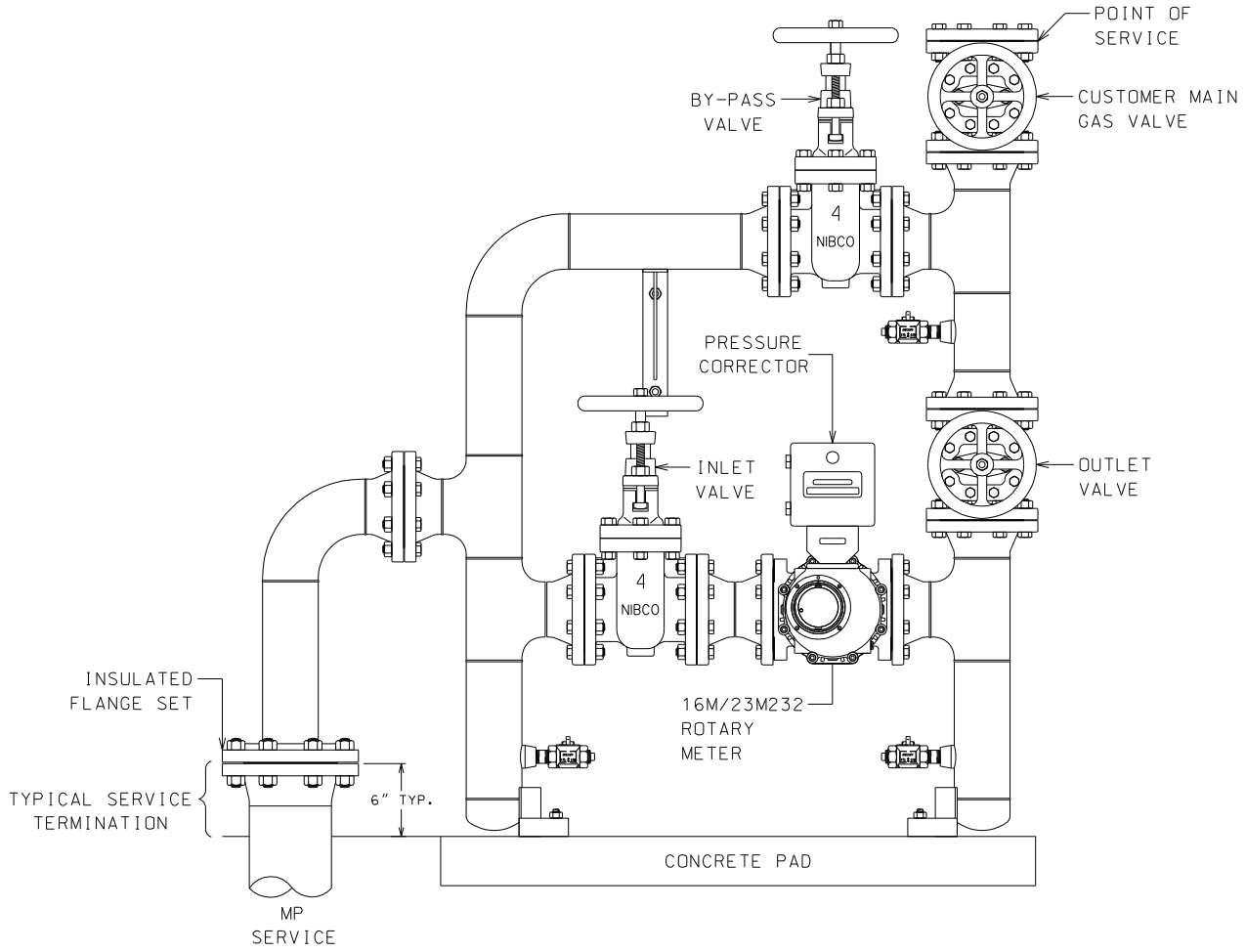
Assembly Dimensions: 32" W x 50" H x 24" D
Minimum Clear Work Space Required: 56" W x 62" H x 72" D
Pad Size Required: 3' x 4' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

902-10 Single Meter Set; 11M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Line Pressure
	CFH	7631 - 11990



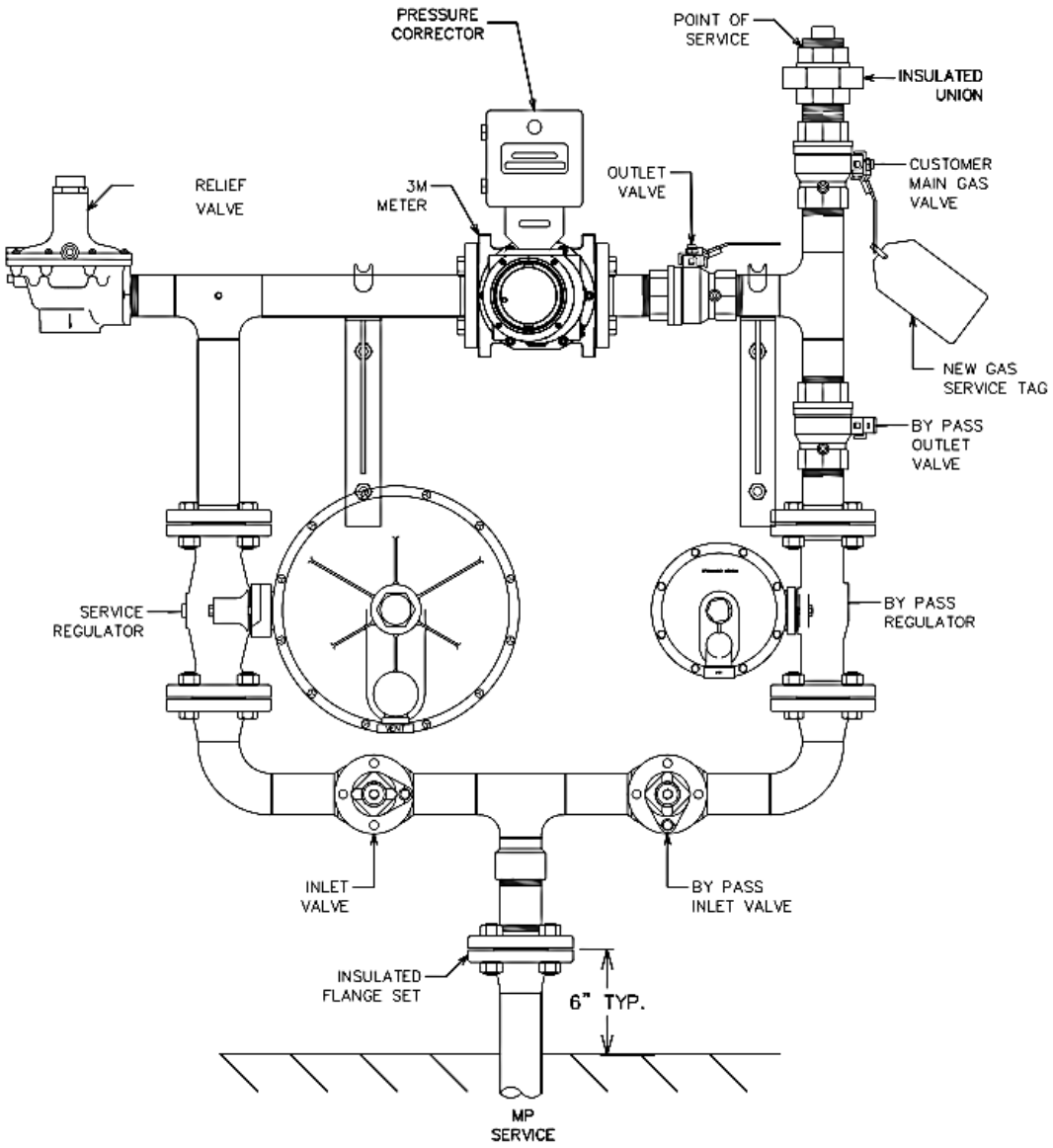
Assembly Dimensions: 50" W x 72" H x 28"
Minimum Clear Work Space Required: 74" W x 84" H x 76" D
Pad Size Required: 3' x 4' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

902-11 Single Meter Set; 16M/23M232; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	Line Pressure
	CFH	11991 - 17440 / 17441 - 25070



Assembly Dimensions: 50" W x 72" H x 32" D
Minimum Clear Work Space Required: 74" W x 84" H x 80" D
Pad Size Required: 3' x 4' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

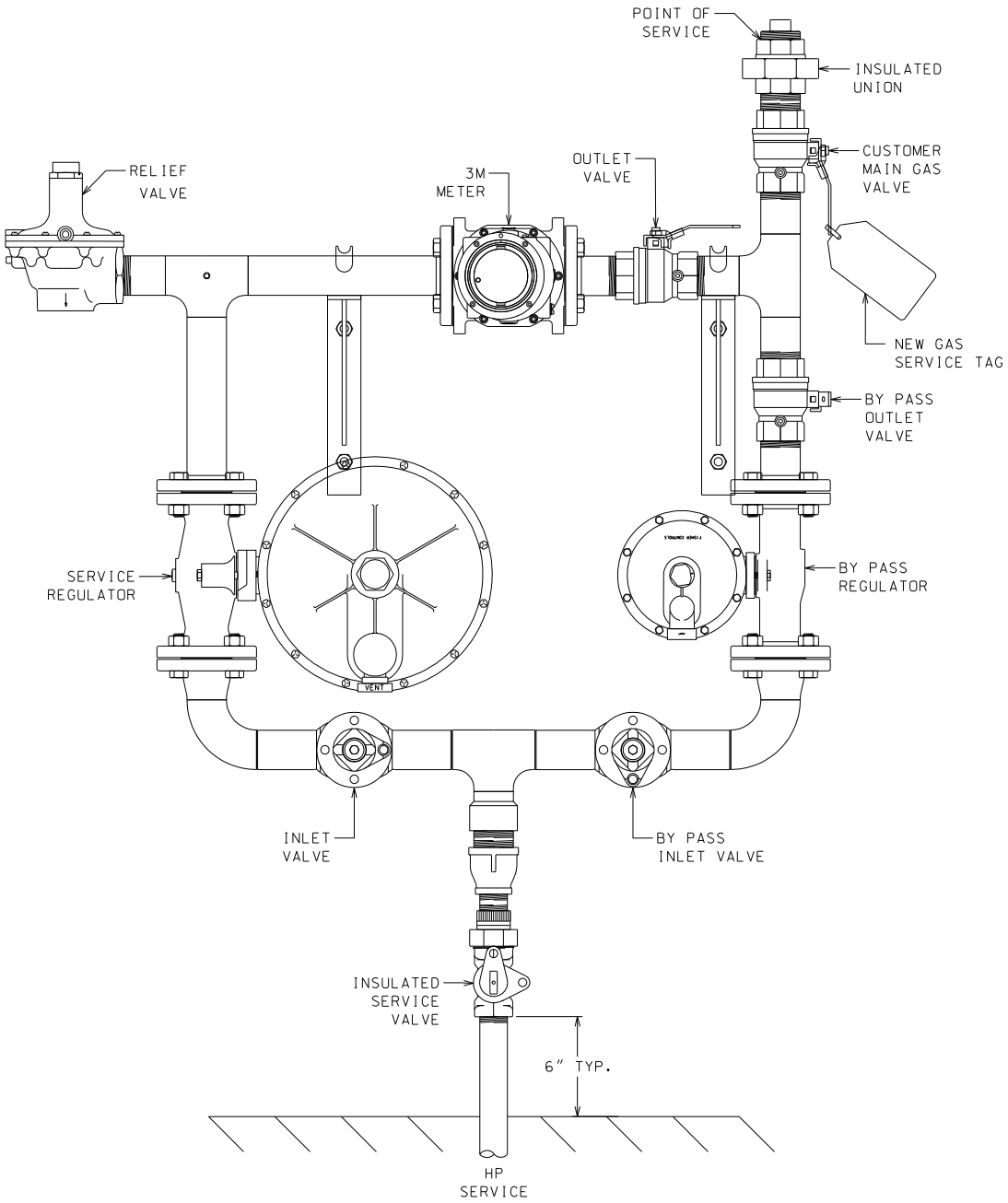
902-12 Single Meter Set; 3M; Outside	**Service Pressure**	Medium Pressure (MP)
	Delivery Pressure	14” water column (½ psi)
	CFH	1200 - 3070



Assembly Dimensions: 50" W x 59" H x 23" D
Minimum Clear Work Space Required: 74" W x 71" H x 71" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 2"

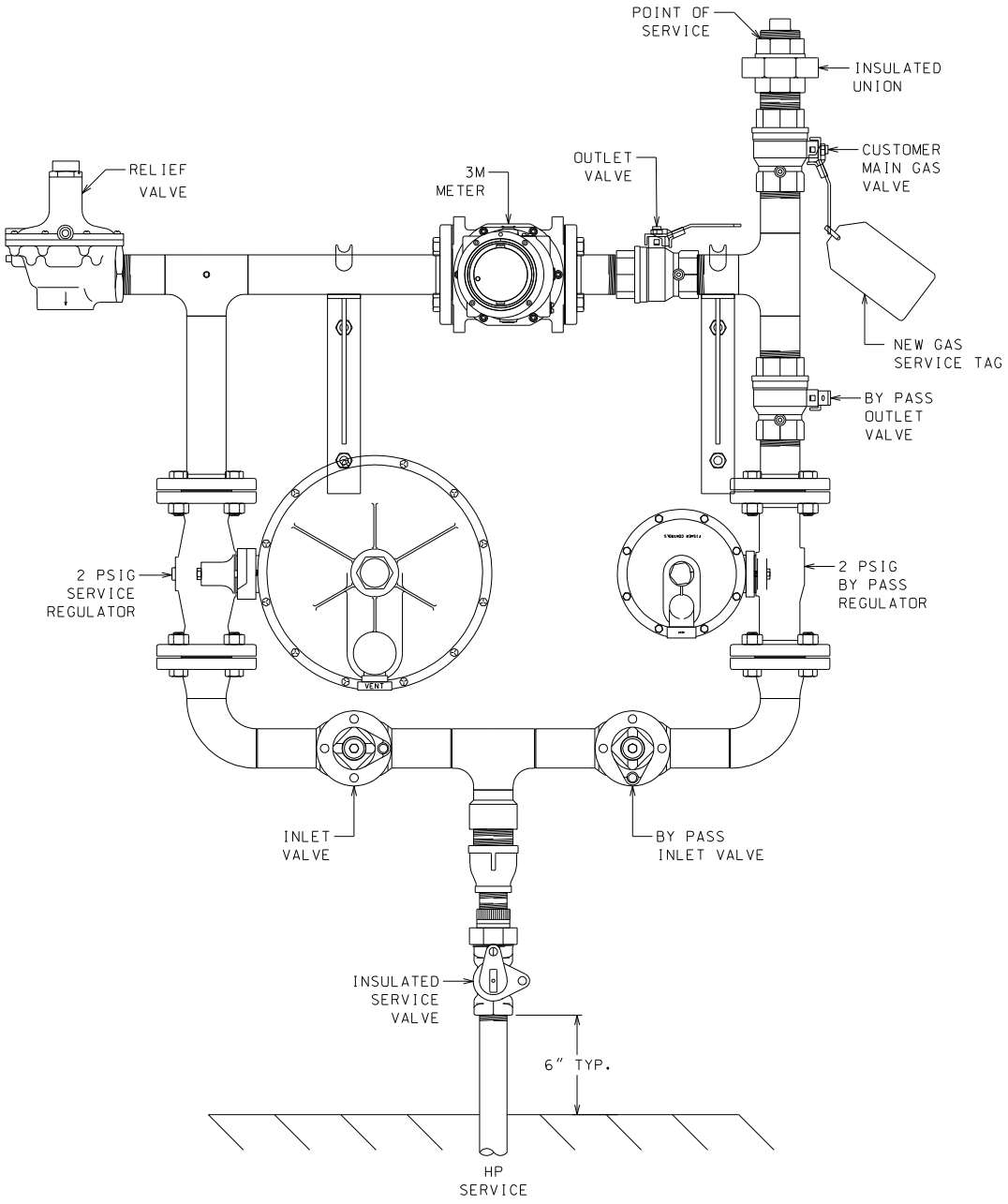
903 Commercial & Industrial High Pressure (HP)

903-1 Single Meter Set; 3M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	1201 - 3000



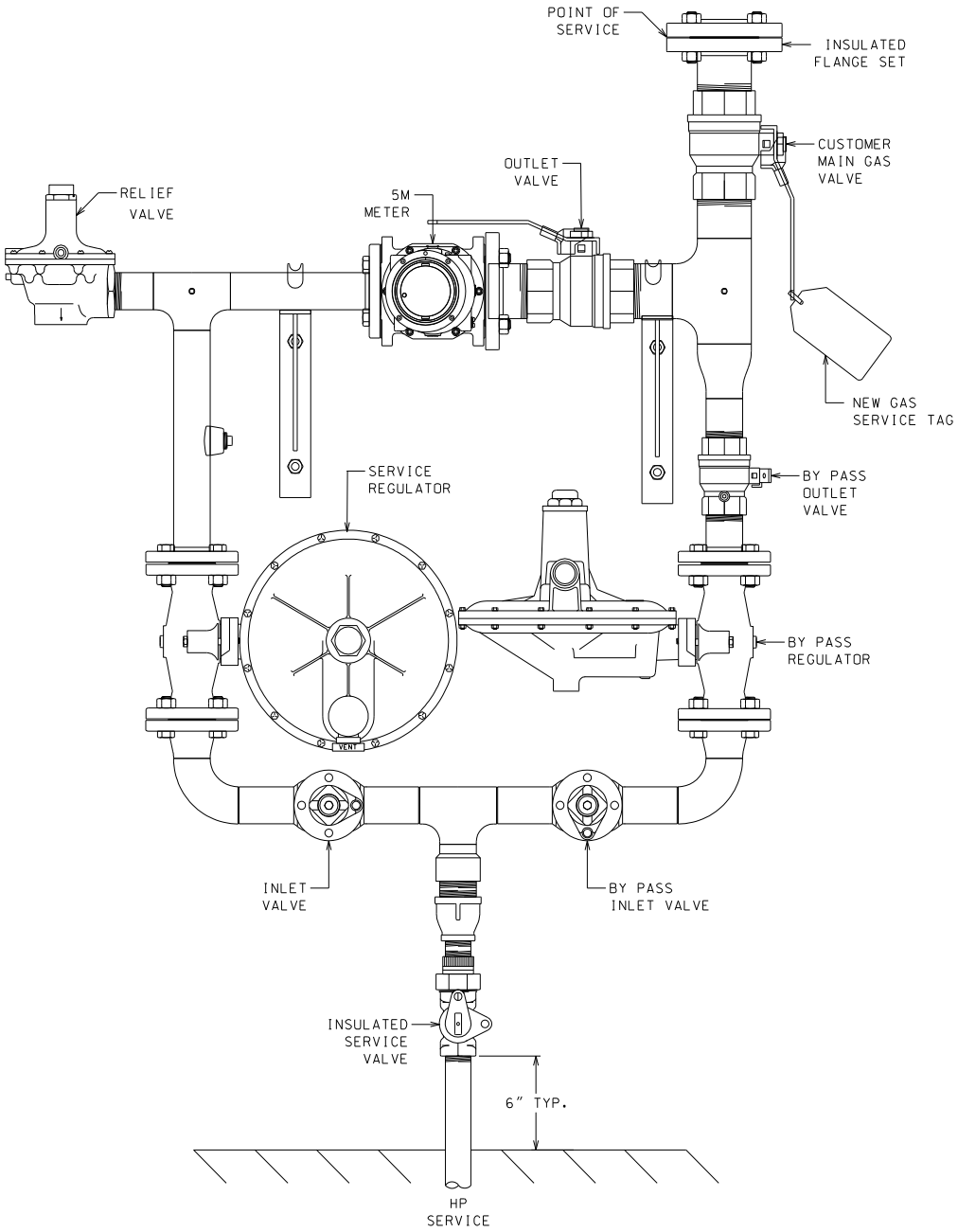
Assembly Dimensions: 50" W x 68" H x 23" D
Minimum Clear Work Space Required: 74" W x 80" H x 71" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 2"

903-2 Single Meter Set; 3M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 psig
	CFH	1351 - 3375



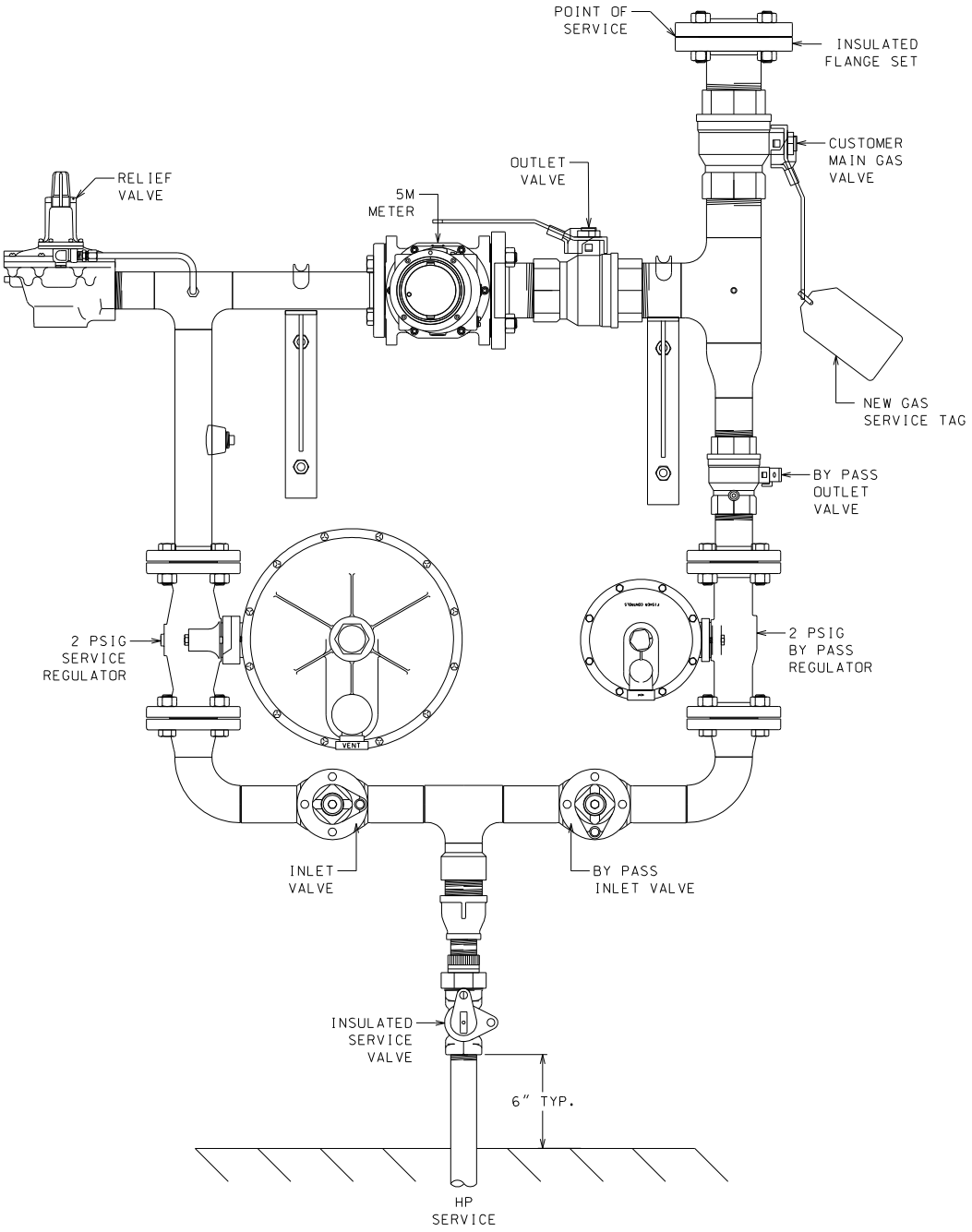
Assembly Dimensions: 50" W x 68" H x 23" D
Minimum Clear Work Space Required: 74" W x 80" H x 71" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size =2"

903-3 Single Meter Set; 5M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	3001 - 5000



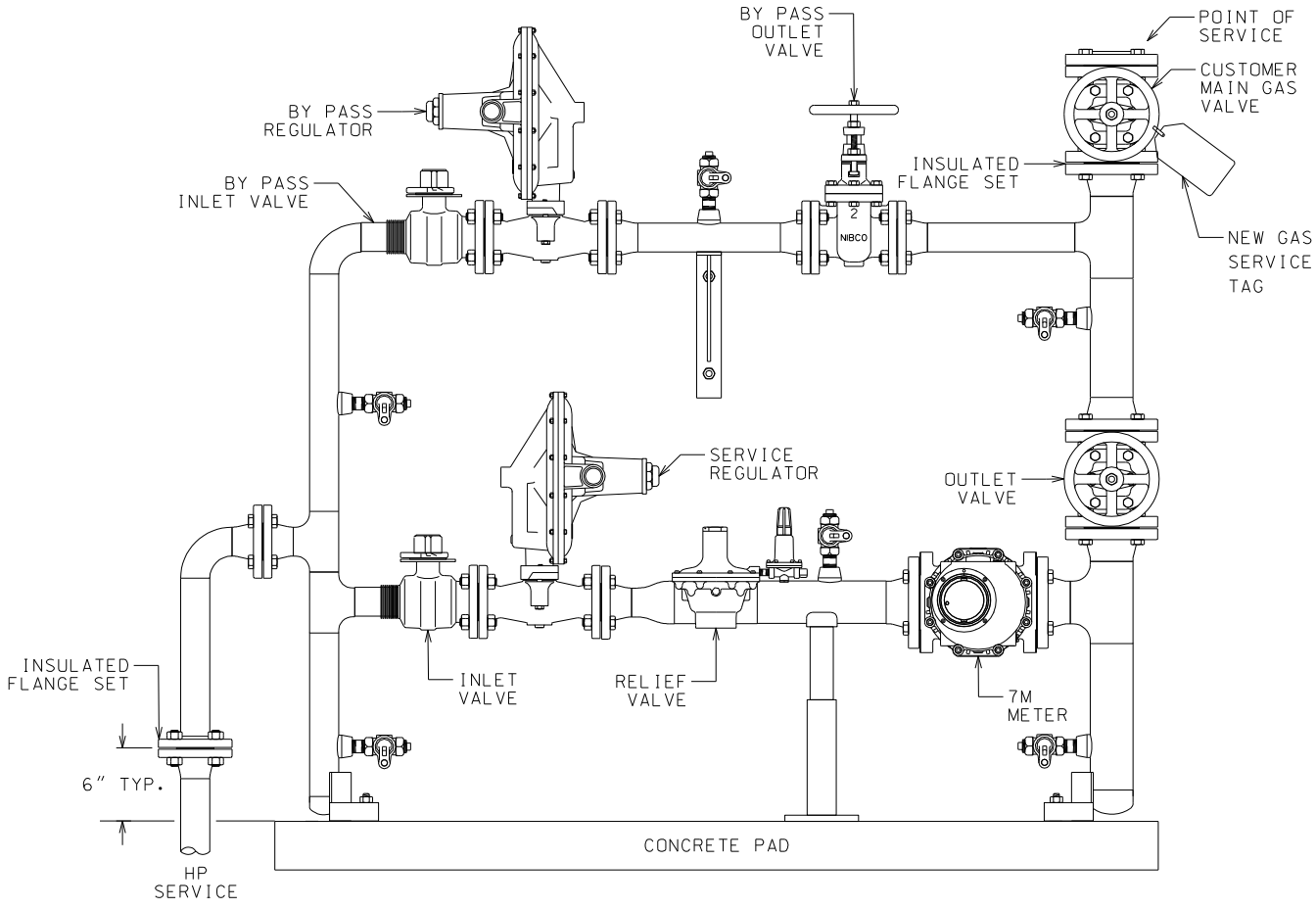
Assembly Dimensions: 50" W x 72" H x 26" D
Minimum Clear Work Space Required: 74" W x 84" H x 74" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

903-4 Single Meter Set; 5M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 psig
	CFH	3376 - 5625



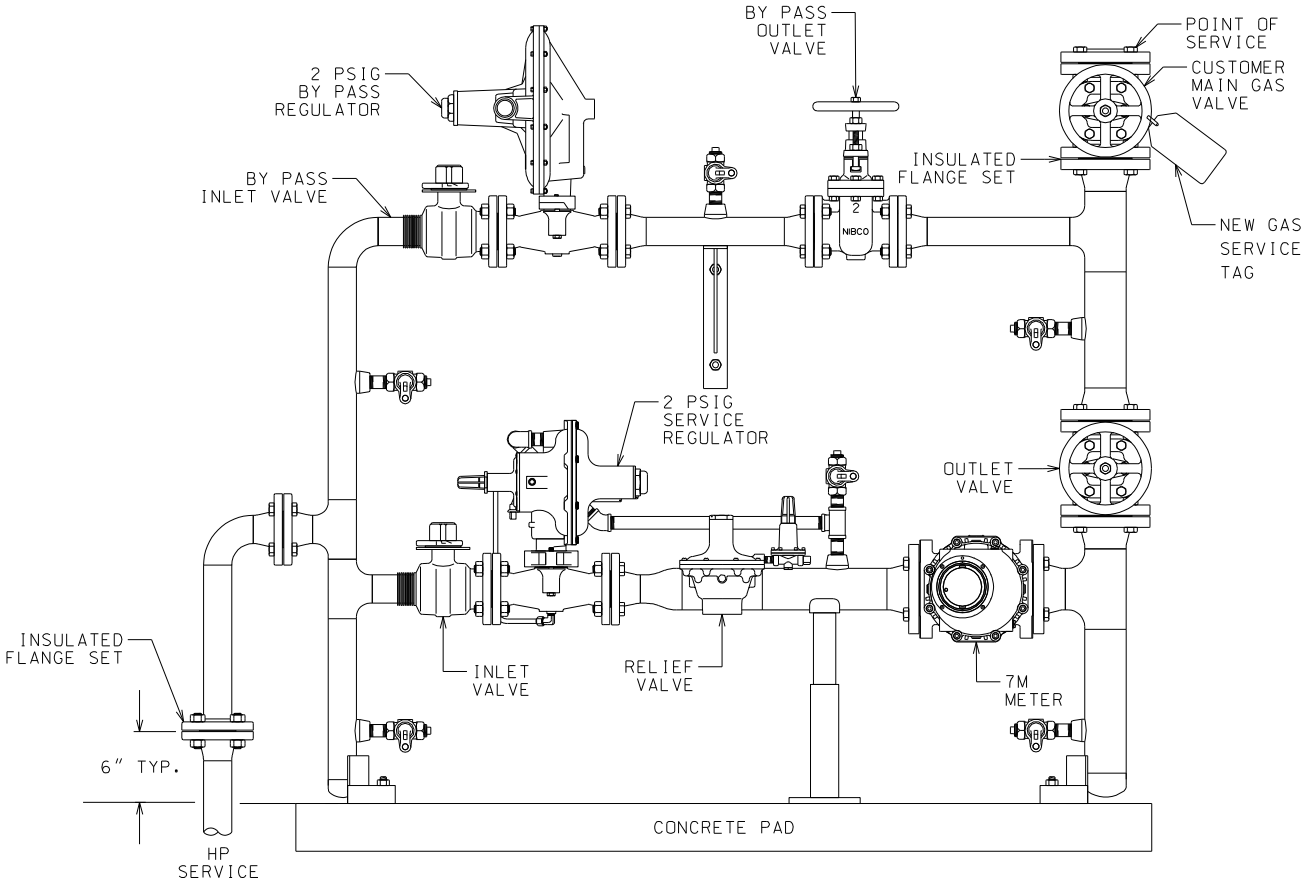
Assembly Dimensions: 50" W x 72" H x 26" D
Minimum Clear Work Space Required: 74" W x 84" H x 74" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

903-5 Single Meter Set; 7M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	5001 - 7000



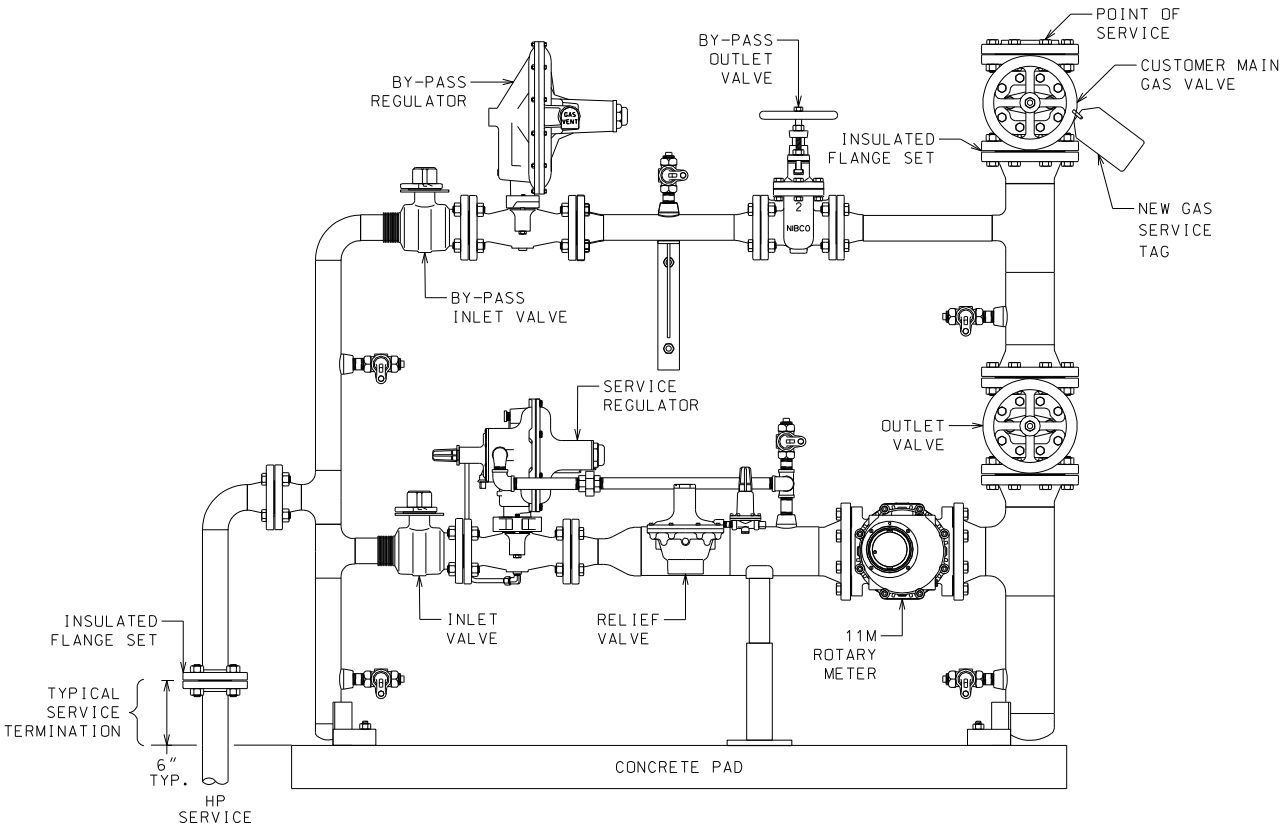
Assembly Dimensions: 82" W x 66" H x 24" D
Minimum Clear Work Space Required: 106" W x 78" H x 72" D
Pad Size Requirement: 3' x 6' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

903-6 Single Meter Set; 7M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 psig
	CFH	5626 - 7875



Assembly Dimensions: 82" W x 66" H x 24" D
Minimum Clear Work Space Required: 106" W x 78" H x 72" D
Pad Size Requirement: 3' x 6' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

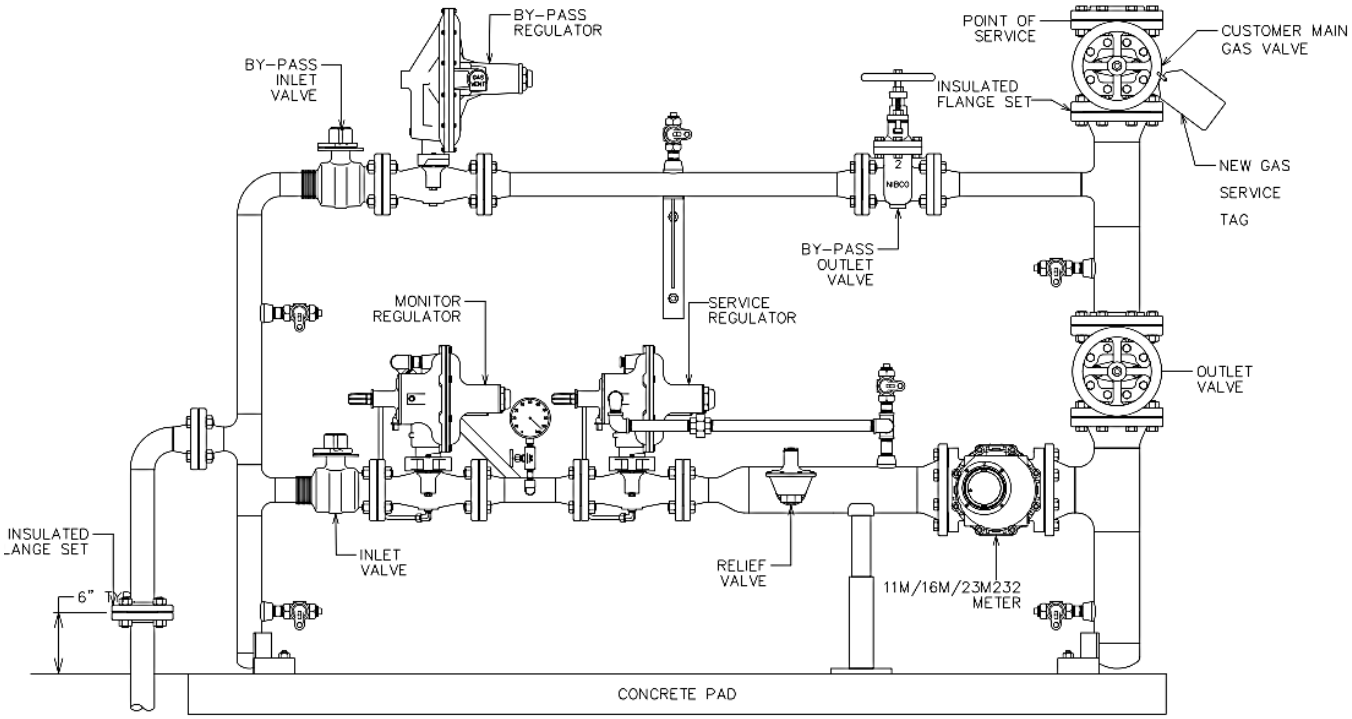
903-7 Single Meter Set; 11M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	7001 - 9000



Assembly Dimensions: 84" W x 66" H x 28" D
Minimum Clear Work Space Required: 108" W x 78" H x 72" D
Pad Size Requirement: 3' x 6' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

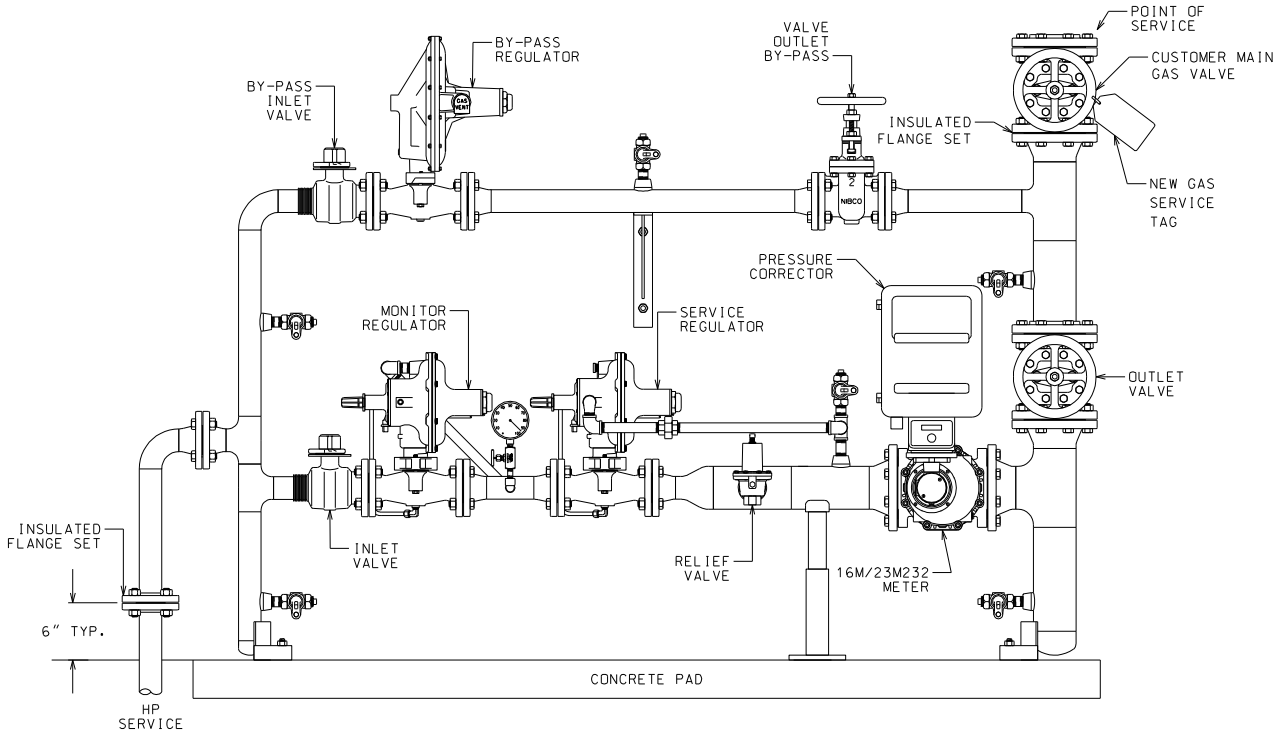
903-8 Single Meter Set; 11M; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 psig
	CFH	7876 - 12375

903-9 Single Meter Set; 16M/23M232; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	Standard
	CFH	9001 – 16000 / 16001 – 23000



Assembly Dimensions: 104" W x 66" H x 32" D
Minimum Clear Work Space Required: 128" W x 78" H x 80" D
Pad Size Requirement: 3' x 8' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

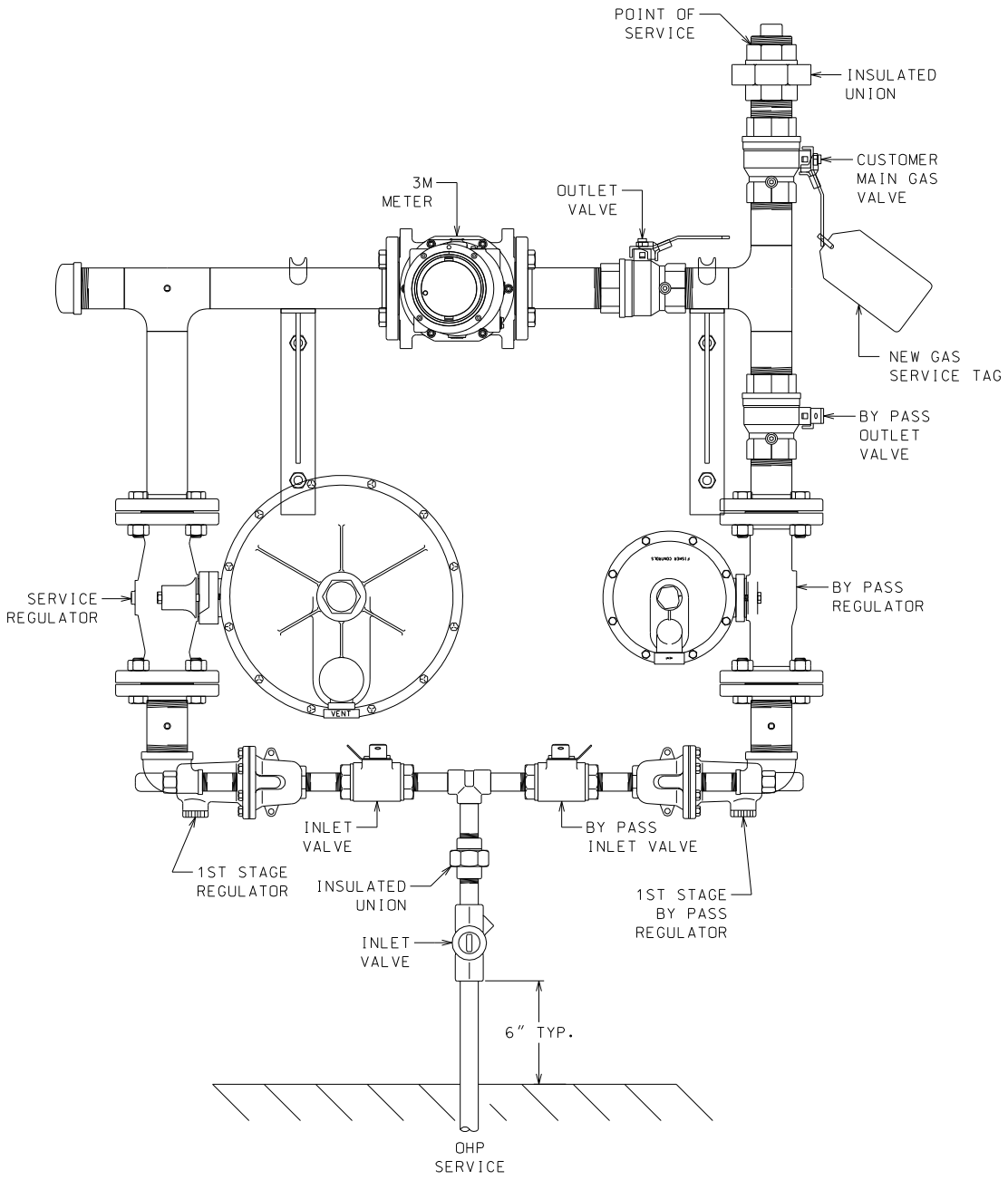
903-10 Single Meter Set; 16M/23M232; Outside	**Service Pressure**	High Pressure (HP)
	Delivery Pressure	2 psig
	CFH	12376 – 18000 / 18001 – 25875



Assembly Dimensions: 104" W x 66" H x 32" D
Minimum Clear Work Space Required: 128" W x 78" H x 80" D
Pad Size Requirement: 3' x 8' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

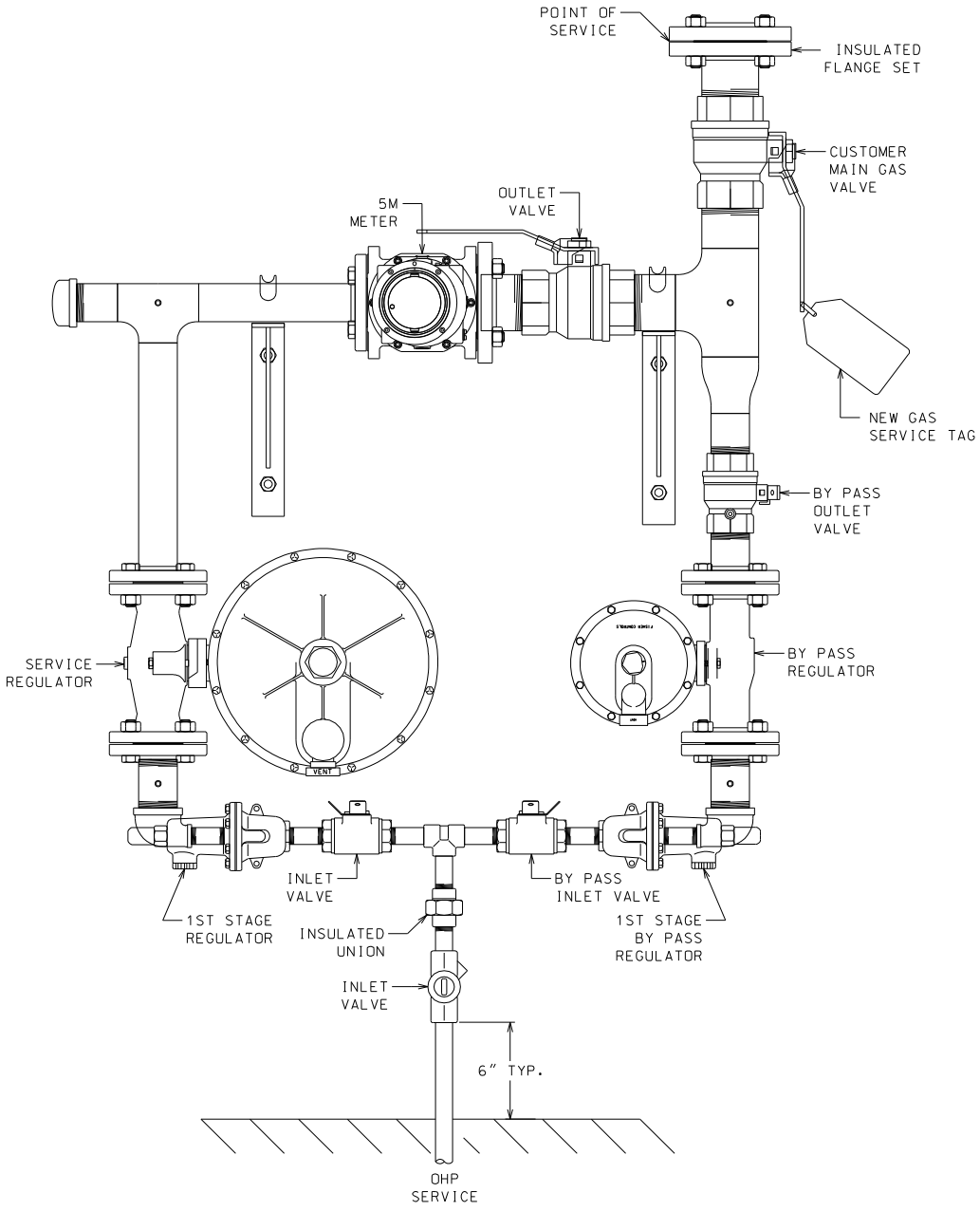
904 Commercial & Industrial Over High Pressure (OHP)

904-1 Single Meter Set; 3M; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard or 2 psig
	CFH	1201 - 3000 or 1351 - 3375



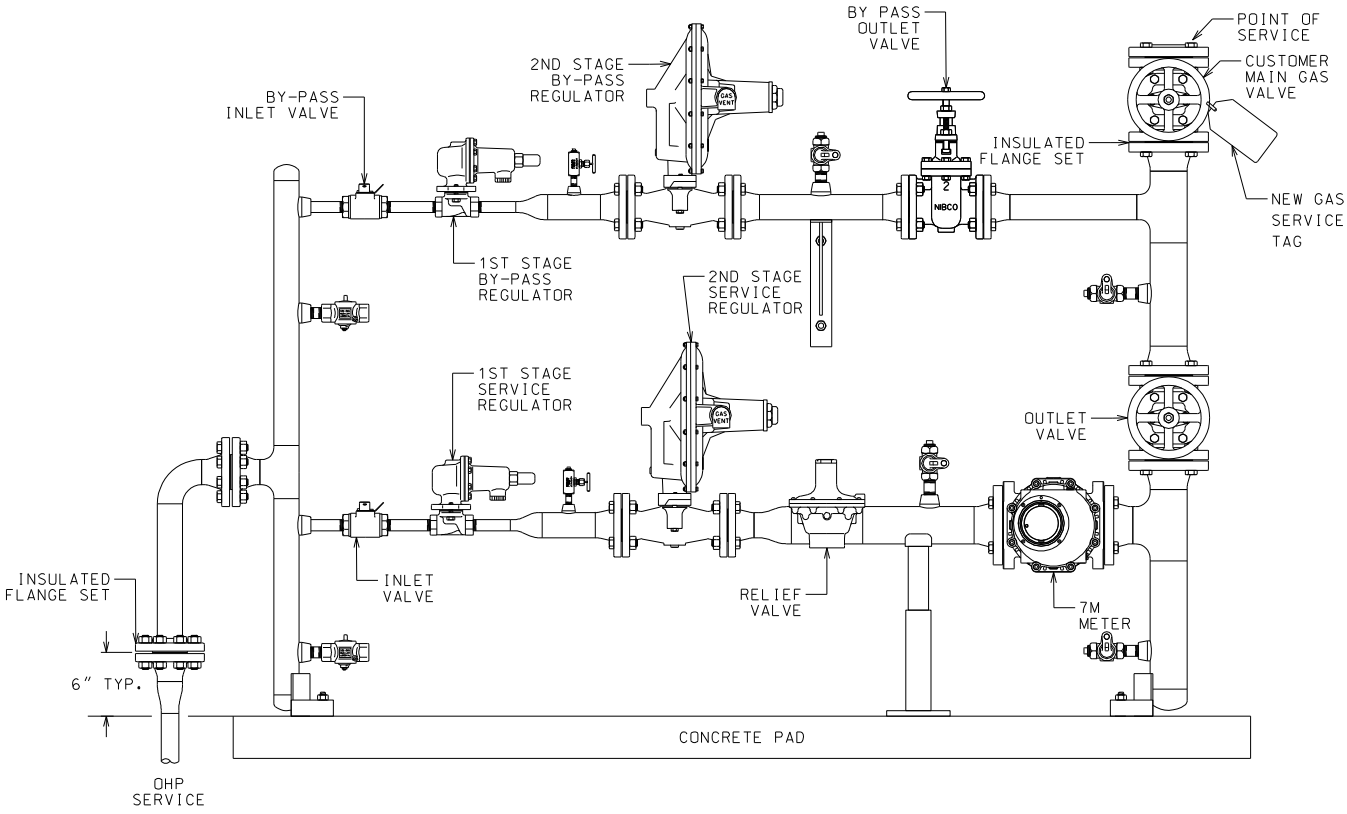
Assembly Dimensions: 45" W x 62" H x 23" D
Minimum Clear Work Space Required: 64" W x 74" H x 71" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 2"

904-2 Single Meter Set; 5M; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard or 2 psig
	CFH	3001 – 5000 or 3376 – 5625



Assembly Dimensions: 46" W x 68" H x 26" D
Minimum Clear Work Space Required: 70" W x 80" H x 74" D
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

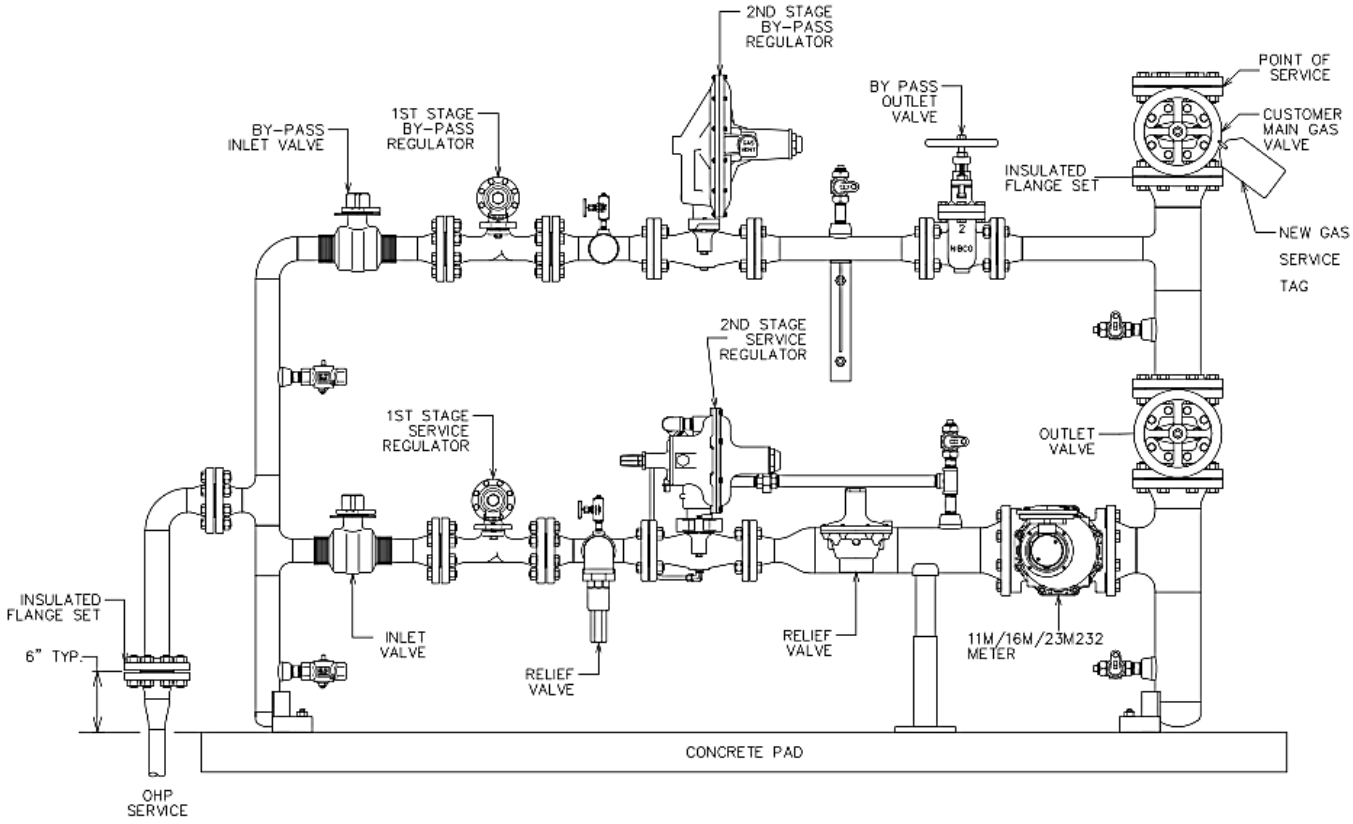
904-3 Single Meter Set; 7M; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard or 2 psig
	CFH	5001 – 7000 or 5626 – 7875



Assembly Dimensions: 102" W x 66" H x 24" D
Minimum Clear Work Space Required: 126" W x 78" H x 24" D
Pad Size Requirement: 3' x 8' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 3"

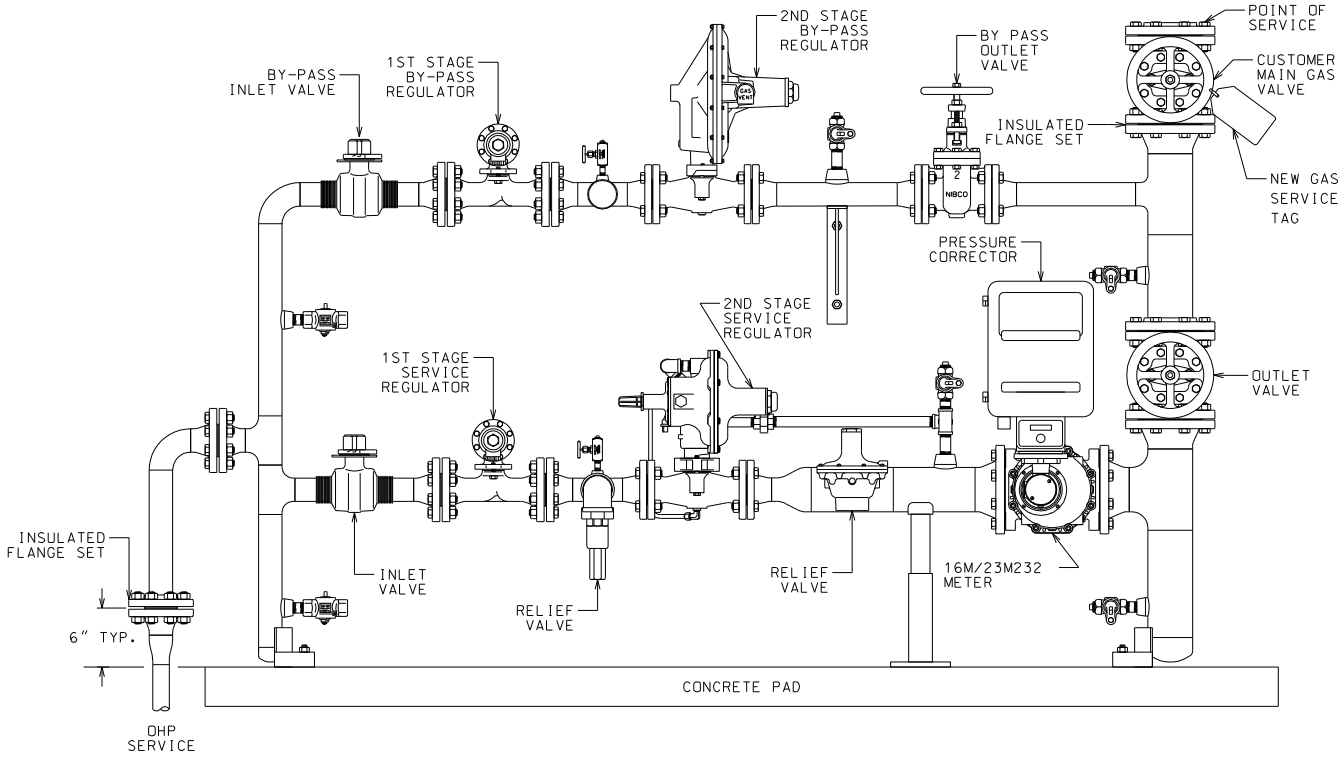
904-4 Single Meter Set; 11M/16M/23M232; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	Standard
	CFH	7001 – 11000 / 11,001 – 16,000 / 16001 – 23000

904-5 Single Meter Set; 11M; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	2 psig
	CFH	7876 - 12375



Assembly Dimensions: 110" W x 66" H x 32" D
Minimum Clear Work Space Required: 134" W x 78" H x 80" D
Pad Size Requirement: 3' x 9' (min.) 4” – 6” Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

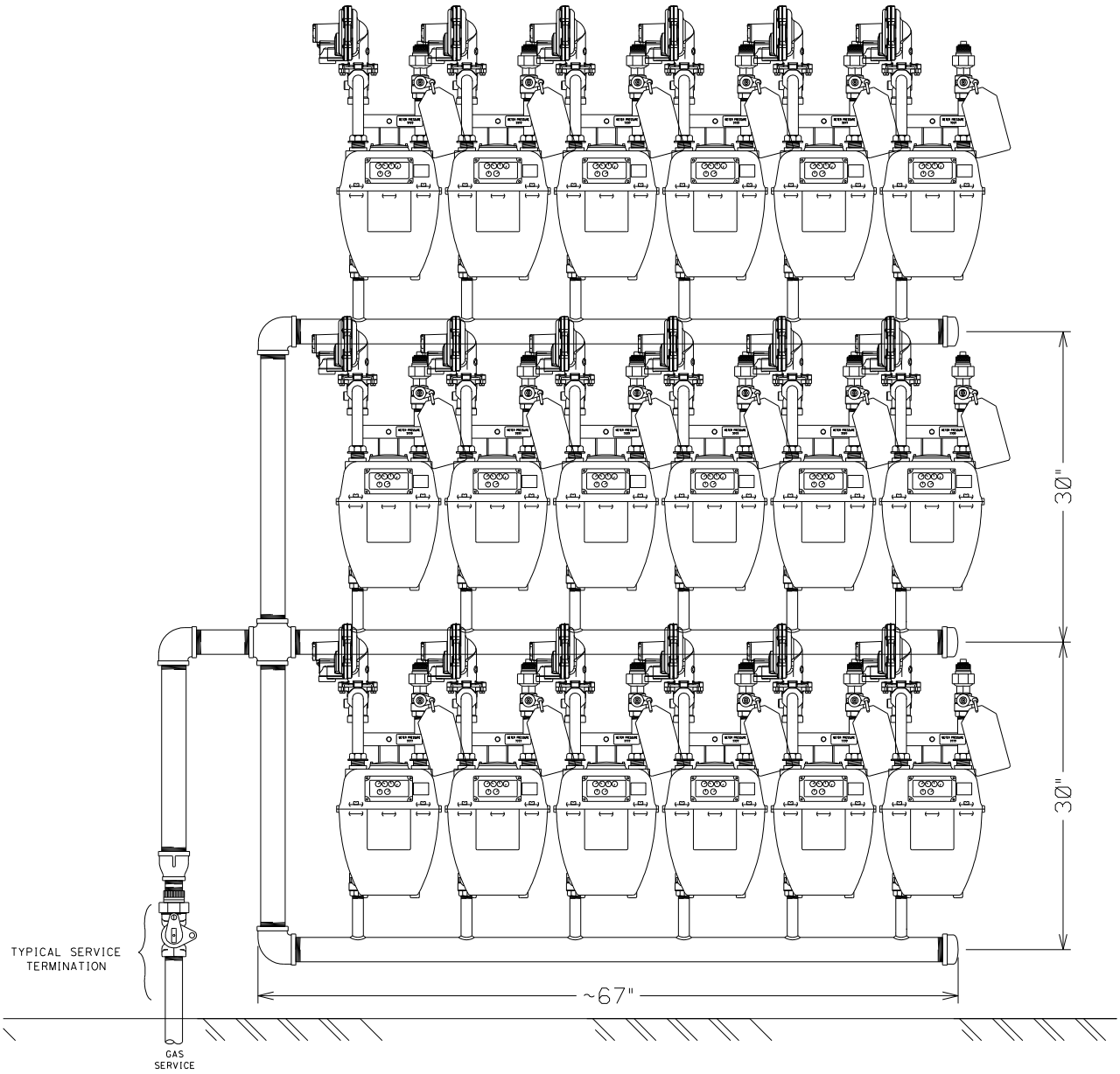
904-6 Single Meter Set; 16M/23M232; Outside	**Service Pressure**	Over High Pressure (OHP)
	Delivery Pressure	2 psig
	CFH	12376 – 18000 / 18001 – 25875



Assembly Dimensions: 110" W x 66" H x 34" D
Minimum Clear Work Space Required: 134" W x 78" H x 80" D
Pad Size Requirement: 3' x 9' (min.) 4" – 6" Thick
Important: Gas Meter Assembly Must Be Insulated from House Piping
Meter / Customer Main Valve Outlet Size = 4"

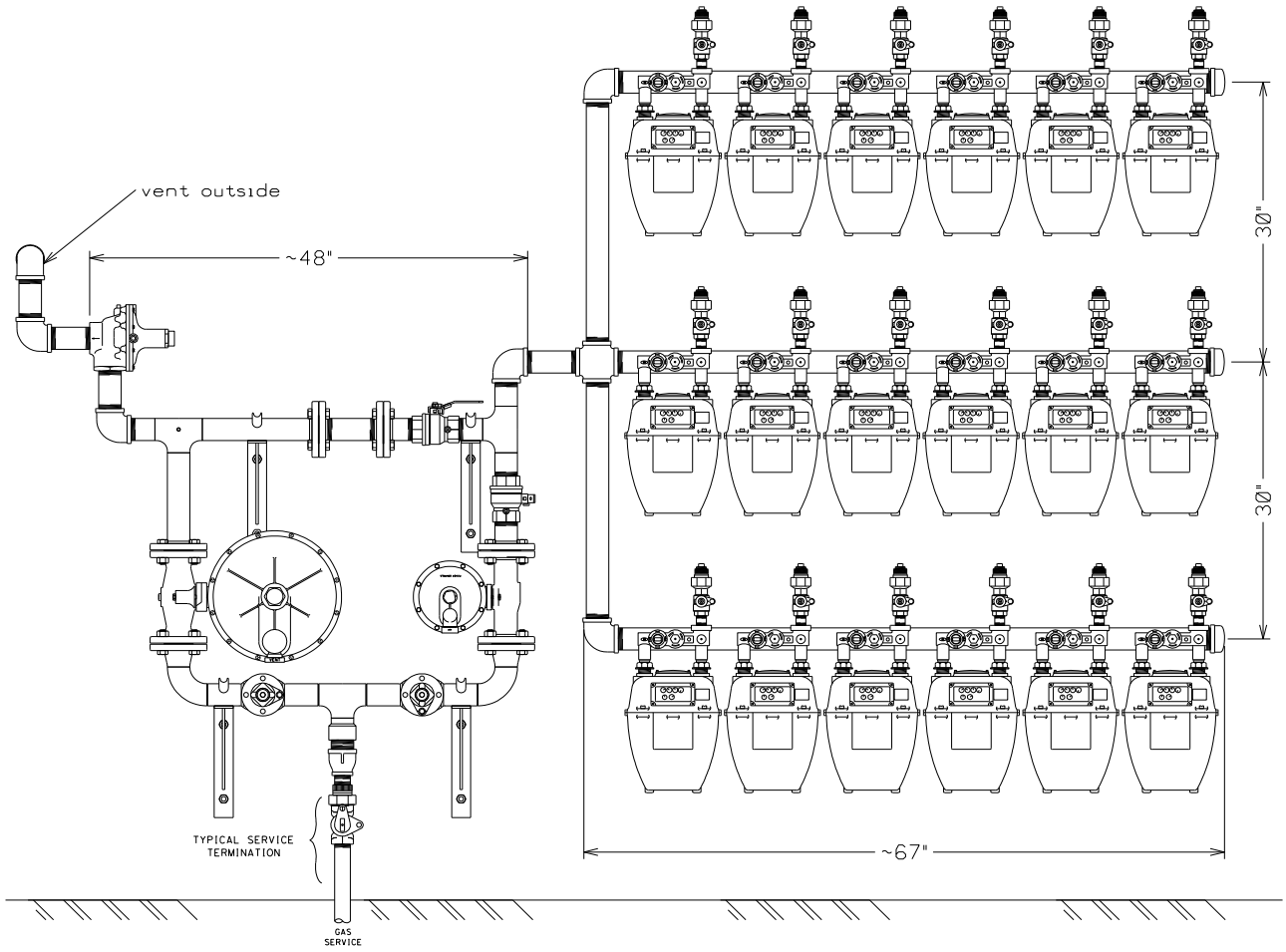
905 Multi-Meter Manifold (HP)

905-1 6 - 12 - 18 Meter; Multi-Meter-Manifold; Outside	**Service Pressure**	Various
	Delivery Pressure	Standard or 2 psig
	CFH	0 - 1650, 3300, 4950



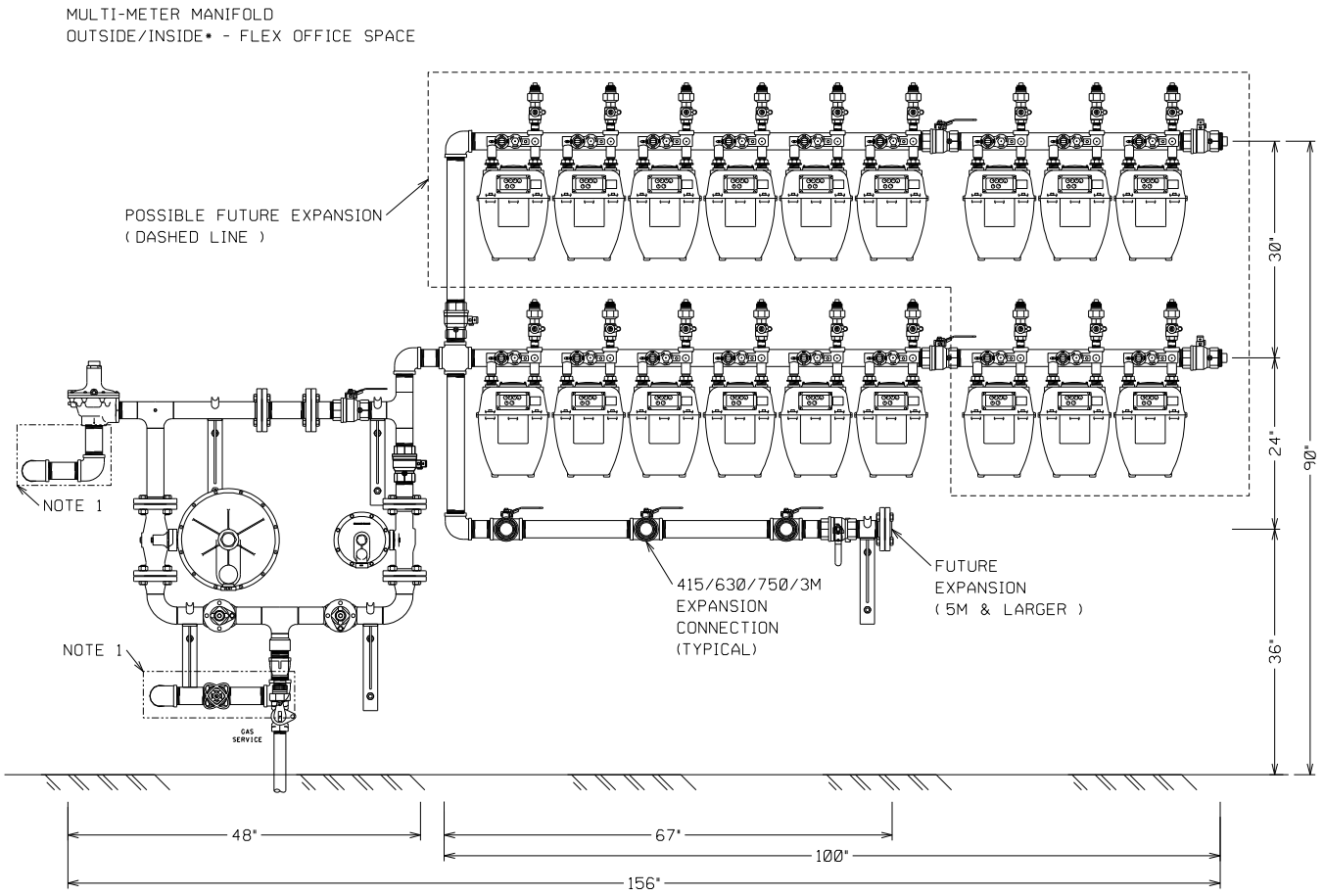
Assembly Dimensions: 76" W x 90" H x 16" D
Minimum Clear Work Space Required: 100" W x 102" H x 54" D
Important: Gas Meter Assembly Must Be Insulated from House Piping

905-2 6 - 12 - 18 Meter; Multi-Meter Manifold; Inside	**Service Pressure**	Various
	Delivery Pressure	Standard or 2 psig
	CFH	0 - 1650, 3300, 4950



Assembly Dimensions: 128" W x 90" H x 16" D
Minimum Clear Work Space Required: 152" W x 102" H x 54" D
Important: Gas Meter Assembly Must Be Insulated from House Piping

905-3 Flex Office Space Various Meters; Multi-Meter Manifold; Outside/Inside	**Service Pressure**	Various
	Delivery Pressure	Standard or 2 psig
	CFH	0 - 7000

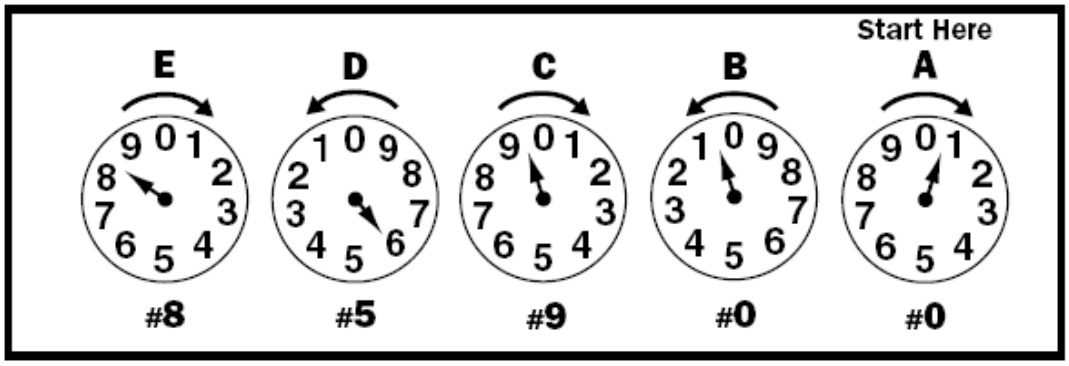


*** Note 1: Customer to provide opening in walls if the manifold is located inside the building.**

Assembly Dimensions: 168" W x 90" H x 16" D
Minimum Clear Work Space Required: 192" W x 102" H x 54" D
Important: Gas Meter Assembly Must Be Insulated from House Piping

1001 How to Read Your Meter

1001-1 Reading a gas meter dial index.
The following are instructions of how to read gas meter dial indexes. Most BGE meters have either four or five dials with pointers.



Note: The pointers rotate clockwise or counterclockwise as indicated in the illustration.

1. Always begin with the dial on the far right.

2. Record the lowest number the pointer has passed, even if the pointer has almost reached the next number.

3. Follow the same procedure for each dial. Note that as you move from right to left, each dial rotates in the direction opposite the one before it. If the first dial rotates clockwise, the next will rotate counterclockwise, the third clockwise, and so on.

4. The four- or five-digit number that you record is all we need to measure your energy use for the month.

In our example, the correct reading is 85900. The pointer on dial A moving clockwise has passed 0. The pointer moving counterclockwise on dial B has passed 0. The pointer on dial C has just passed 9. Dial D is 5 and E is 8. Record the numbers in reverse order, so the reading is 85900. Remember, you can always tell if a pointer has passed a number by looking at the dial immediately to the right of it. If the pointer on that dial has passed 0 on the top, the pointer on the dial to its left has passed the number that it is closest to.

Note: If your meter has a digital readout, simply record this number.

1002 Cubic Rate Charts

1002-1 Cubic Rate Charts - Cubic Feet per Hour at Standard Delivery - Read from a 1/2 & 1 and 2 & 5 cubic feet dials

Cubic Rate Chart - Cubic Feet Per Hour at Standard Delivery					
Seconds for One Revolution	Size of Test Dial		Seconds for One Revolution	Size of Test Dial	
	1/2 cu. ft.	1 cu. ft.		1/2 cu. ft.	1 cu. ft.
10	180	360	35	51	103
11	164	327	36	50	100
12	150	300	37	49	97
13	138	277	38	47	95
14	129	257	39	46	92
15	120	240	40	45	90
16	113	225	41	44	88
17	106	212	42	43	86
18	100	200	43	42	84
19	95	189	44	41	82
20	90	180	45	40	80
21	86	171	46	39	78
22	82	164	47	38	77
23	78	157	48	38	75
24	75	150	49	37	73
25	72	144	50	36	72
26	69	138	51	35	71
27	67	133	52	35	69
28	64	129	53	34	68
29	62	124	54	33	67
30	60	120	55	33	65
31	58	116	56	32	64
32	56	113	57	32	63
33	55	109	58	31	62
34	53	106	59	31	61
35	51	103	60	30	60

Cubic Rate Chart - Cubic Feet Per Hour at Standard Delivery					
Seconds for One Revolution	Size of Test Dial		Seconds for One Revolution	Size of Test Dial	
	2 cu. ft.	5 cu. ft.		2 cu. ft.	5 cu. ft.
10	720	1800	55	131	327
11	655	1636	56	129	321
12	600	1500	57	126	316
13	554	1385	58	124	310
14	514	1286	59	122	305
15	480	1200	60	120	300
16	450	1125	62	116	290
17	424	1059	64	113	281
18	400	1000	66	109	273
19	379	947	68	106	265
20	360	900	70	103	257
21	343	857	72	100	250
22	327	818	74	97	243
23	313	783	76	95	237
24	300	750	78	92	231
25	288	720	80	90	225
26	277	692	82	88	220
27	267	667	84	86	214
28	257	643	86	84	209
29	248	621	88	82	205
30	240	600	90	80	200
31	232	581	92	78	196
32	225	563	94	77	191
33	218	545	96	75	188
34	212	529	98	73	184
35	206	514	100	72	180
36	200	500	102	71	176
37	195	486	104	69	173
38	189	474	106	68	170
39	185	462	108	67	167
40	180	450	110	65	164
41	176	439	112	64	161
42	171	429	116	62	155
43	167	419	120	60	150
44	164	409	125	58	144
45	160	400	130	55	138
46	157	391	135	53	133
47	153	383	140	51	129
48	150	375	145	50	124
49	147	367	150	48	120
50	144	360	155	46	116
51	141	353	160	45	113
52	138	346	165	44	109
53	136	340	170	42	106
54	133	333	175	41	103
55	131	327	180	40	100

1002-2 Cubic Rate Charts - Cubic Feet per Hour at 2 psig Delivery - Read from a 1/2 & 1 and 2 & 5 cubic feet dials

Cubic Rate Chart - Cubic Feet Per Hour at 2 psig Delivery					
Seconds for One Revolution	Size of Test Dial		Seconds for One Revolution	Size of Test Dial	
	1/2 cu. ft.	1 cu. ft.		1/2 cu. ft.	1 cu. ft.
10	203	405	35	58	116
11	184	368	36	56	113
12	169	338	37	55	109
13	156	312	38	53	107
14	145	289	39	52	104
15	135	270	40	51	101
16	127	253	41	49	99
17	119	238	42	48	96
18	113	225	43	47	94
19	107	213	44	46	92
20	101	203	45	45	90
21	96	193	46	44	88
22	92	184	47	43	86
23	88	176	48	42	84
24	84	169	49	41	83
25	81	162	50	41	81
26	78	156	51	40	79
27	75	150	52	39	78
28	72	145	53	38	76
29	70	140	54	38	75
30	68	135	55	37	74
31	65	131	56	36	72
32	63	127	57	36	71
33	61	123	58	35	70
34	60	119	59	34	69
35	58	116	60	34	68

Cubic Rate Chart - Cubic Feet Per Hour at 2 psig Delivery					
Seconds for One Revolution	Size of Test Dial		Seconds for One Revolution	Size of Test Dial	
	2 cu. ft.	5 cu. ft.		2 cu. ft.	5 cu. ft.
10	810	2025	55	147	368
11	736	1841	56	145	362
12	675	1688	57	142	355
13	623	1558	58	140	349
14	579	1446	59	137	343
15	540	1350	60	135	338
16	506	1266	62	131	327
17	476	1191	64	127	316
18	450	1125	66	123	307
19	426	1066	68	119	298
20	405	1013	70	116	289
21	386	964	72	113	281
22	368	920	74	109	274
23	352	880	76	107	266
24	338	844	78	104	260
25	324	810	80	101	253
26	312	779	82	99	247
27	300	750	84	96	241
28	289	723	86	94	235
29	279	698	88	92	230
30	270	675	90	90	225
31	261	653	92	88	220
32	253	633	94	86	215
33	245	614	96	84	211
34	238	596	98	83	207
35	231	579	100	81	203
36	225	563	102	79	199
37	219	547	104	78	195
38	213	533	106	76	191
39	208	519	108	75	188
40	203	506	110	74	184
41	198	494	112	72	181
42	193	482	116	70	175
43	188	471	120	68	169
44	184	460	125	65	162
45	180	450	130	62	156
46	176	440	135	60	150
47	172	431	140	58	145
48	169	422	145	56	140
49	165	413	150	54	135
50	162	405	155	52	131
51	159	397	160	51	127
52	156	389	165	49	123
53	153	382	170	48	119
54	150	375	175	46	116
55	147	368	180	45	113

1003 Pressure Factor Charts

1003-1 Pressure Factor Charts for commonly evaluated delivery. Some customers require a higher than Standard Delivery (about 6" w.c. or ¼ PSIG) for their equipment. A higher delivery pressure will allow more natural gas to flow through a pipe. Therefore a correction factor needs to be applied. Each elevated pressure above Standard Delivery needs to be multiplied by a correction factor in order to account for the "extra" gas. The table below shows correction factors for set elevated delivery pressures.

Pressure Correction Factor			
Elevated Delivery Pressure (in PSIG)	Correction Factor	Elevated Delivery Pressure (in PSIG)	Correction Factor
1	1.057	15	2.005
2	1.125	20	2.345
5	1.328	25	2.684
10	1.666	100	7.847

Example: If a section of pipe with a set diameter and length would allow 100 cfh of gas flow at Standard Delivery, what would happen if the same pipe now had 2 PSIG delivery? To find this, multiply the Standard Delivery of 100 cfh by the 2 PSIG correction factor of 1.125. The pipe could now pass 112.5 cfh.

1004 Clocking a Meter

1004-1 Clocking a meter is a simple way of knowing what a specific piece of equipment or all the equipment is consuming. To determine the consumption, we need to locate the smaller measureing dial on the gas meter. For this example, we will focus on a the ½ cubic foot dial. With consumption on the meter, pick a location on the ½ cubic foot dial while it is on the up swing (counter-clockwise position from 6 o'clock to 12 o'clock). With a stop watch and your known location on the up swing of the ½ cubic foot, start recording the time it takes the ½ cubic foot hand to travel one full cycle around the dial till it reaches the start location again. Record the number of seconds it takes for the dial to make one full revolution. With this time reading from the stop watch, now take 3600 and divide it by the seconds it took to make one full revolution, this will give you the capcaity. Since your used the ½ cubic foot dial, now divide the capacity by the ½. This is give you cubic feet per hour (cfh) consumed.

Example: Starting with the dial at "4", measure the time it takes the dial to travel around once. If the dial took 20 seconds, then the gas consumed was 90cfh, assuming standard delivery*.

This is how the cfh was determined:

$$\frac{3600 \text{ sec/hour}}{20 \text{ sec}} \times \frac{1 \text{ cubic foot hour}}{2} = 90 \text{ cfh}$$

*If the delivery pressure was 2 psig, then 90 cfh would be multiplied by the correction factor of 1.125, which would give 101.25 cfh.

