

## DECISION MEMORANDUM

**TO: COMMISSIONER KJELLANDER  
COMMISSIONER RAPER  
COMMISSIONER ANDERSON  
COMMISSION SECRETARY  
LEGAL  
WORKING FILE**

**FROM: JOHNATHAN FARLEY**

**DATE: JANUARY 22, 2016**

**RE: FORMAL COMPLAINT OF ERIC CONRAD**

On December 27, 2015, Eric Conrad filed a “formal” complaint (Attachment A) with the Commission against Intermountain Gas Company (IGC). Mr. Conrad is unsatisfied with the outcome of the Staff’s efforts to informally resolve his complaint (Rules 21-24) and filed this “formal” complaint. While building a home near Idaho Falls, IGC required Mr. Conrad to purchase and install a meter protection structure at his own expense before the utility would provide gas service at his residence. He was frustrated by his inability to obtain information about the specific requirements for meter protection including technical design specifications for meter protection structures.

In his letter to the Commission, Mr. Conrad requests:

- a. Compensation of \$220 for Gas Cover and \$150 in Labor for installation + \$1,010.82 in construction loan interest because work had to be pushed off inside the home because of no heat.
- b. Review by PUC into Intermountain Gas Practices of requiring roofs over gas meters in an inconsistent manner and with no public facing information for owners or builders to know what is acceptable.

### BACKGROUND

During the month of November 2015, Mr. Conrad was in the process of building a new home. He had been in contact with IGC in order to establish service at the residence. Prior to his initial interaction with IGC, Mr. Conrad’s contracted builder (J.B. Kay Construction) had installed gas lines in the home and predetermined a location for the gas meter to be installed.

When Intermountain Gas came to Mr. Conrad’s residence to install a gas meter and connect service, the Company allegedly determined that the eaves on the residence were too

narrow to protect the gas meter and that additional protection would be required prior to the installation of the meter. Mr. Conrad then built a freestanding wooden structure that would cover the meter when installed. Intermountain Gas allegedly determined that the wooden structure was inadequate because it was not permanently affixed to the residence and was not approved to meet snow load for the area by an engineer.

When Mr. Conrad contacted Intermountain Gas for technical specifications for building snow covers, the Company provided the customer with photographs of protective measures (Attachment B) and a copy of a form letter dated April 19, 2012, that apparently had been sent to builders, dealers and architects. The letter addressed the importance of safe meter locations and the need for an engineered structure if a safe meter location could not be identified. None of the materials provided by IGC had any technical specifications pertaining to what constitutes an adequate structure for protecting a gas meter.

On November 13, 2015, Mr. Conrad contacted the Staff and made an informal complaint. When contacted by Staff, Intermountain Gas maintained that Mr. Conrad's residence needed additional protection for the meter due to the location of the meter and the narrow eaves on the home. Mr. Conrad indicated to Staff that he had driven around Rexburg and noted that a number of homes that had been built in 2015 did not have meter protection structures in place. Intermountain Gas was unable to provide Staff with the specific criteria or standards used to determine if additional meter protection is needed or any technical specifications for meter protection structures. Intermountain Gas did provide the following: (1) excerpts from Title 49, Part 192, Subpart H of the United States Code of Federal Regulations, (2) an excerpt from Sections 409 & 410 of the 2012 International Fuel Gas Code; (3) an excerpt from Intermountain Gas' procedures for *Siting Service Lines and Meter Sets*; and (4) photographic examples of constructed and prefabricated meter protection structures<sup>1</sup>. Staff forwarded documents 1, 2, & 3 above (Attachment C) to Mr. Conrad.

Mr. Conrad subsequently installed a meter protection structure that satisfied the Company's expectations.

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<sup>1</sup> Staff notes that the CFR excerpt provided to staff is dated December 2008. The Commissions Safety and Accidental Reporting Rules adopt by reference the 2011 edition of 49 CFR Part 192. See Safety Rule 201, IDAPA 31.11.01.201.

## STAFF QUESTIONS & CONCERNS

1. It appears the Company does not have any publications or other readily-available written material or detailed specifications regarding what constitutes an acceptable meter protection structure in areas where heavy or deep snow conditions exist. If such materials do exist, please provide copies.

2. It does not appear that builders, contractors or others engaged in construction activities are knowledgeable about Intermountain Gas Company's meter protection requirements. If such information is provided, please provide copies, identifying when, how and to whom the information is provided.

3. What training is provided to Company employees to assure uniform and consistent application of the Company's meter protection requirements?

4. Staff notes that IGC Procedures, Section C.6.f, states that "IGC will provide protection for meter sets when required." See Attachment C3, p.4. To whom and in what circumstances does this provision apply?

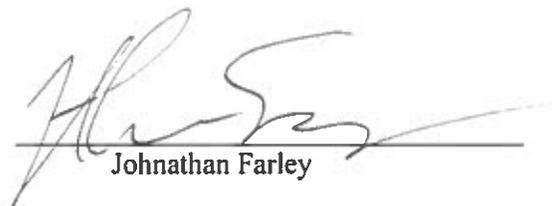
5. The Commission's Safety and Accident Reporting Rules (IDAPA 31.11.01) adopt by reference several national safety codes applicable to natural gas utilities and federal safety regulations applicable to natural gas and pipeline utilities. Staff is concerned that the adopted current editions of these codes and regulations are not made available to the Company's employees, customers and other interested parties.

## STAFF RECOMMENDATION

Staff recommends the Commission issue a summons to Intermountain Gas Company and direct the Company to file a response to the Complaint and address Staff's questions below.

## COMMISSION DECISION

Does the Commission wish to accept Mr. Conrad's formal complaint? Does the Commission wish to issue a summons?



Johnathan Farley

Udmemos/Conrad Complaint dec memo

December 21<sup>st</sup>, 2015

Eric W. Conrad  
2277 Hendricks Circle  
Rexburg, ID 83440  
208-201-6692  
[ericwconrad@gmail.com](mailto:ericwconrad@gmail.com)

RECEIVED

2015 DEC 28 AM 9:41

IDAHO PUBLIC  
UTILITIES COMMISSION

Public Utility Commission Secretary  
Jean Jewell  
472 West Washington Street  
P.O. Box 83720  
Boise, ID 83720-0074

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Dear PUC:

Having held senior management positions at AT&T, U S WEST, AIMCO and CB Richard Ellis I know that working through the PUC is sometimes the only way to get the attention of large monopolistic companies.

Per Rule 54 I am making a complaint on behalf of myself (Owner of new property at 2277 Hendricks Circle) and all other new home owners in the counties of Fremont, Madison, Bonneville, Bingham and Caribou counties who have been required to install snow covers for gas meters.

01) Respondent

- a. Intermountain Gas Company

02) State the Facts

- a. Intermountain Gas Company is requiring covers for gas meters inconsistently across their coverage area.
- b. No public facing information for owners or builders is available to understand what is required to meet their requirements and to estimate the costs of such a requirement.

03) Applicable Provisions

- a. After multiple inquiries to Intermountain Gas for clarification on what would be an acceptable roof over the gas meter I contacted the PUC for help. An informal request was made to Intermountain Gas by Johnathan Farley for clarification. Johnathan was able to obtain IGC Procedures # 4017 (Attached) and Part 192 Transportation of Natural and other gas by Pipeline (Attached). Both of these documents are internal documents to Intermountain Gas and are nowhere to be found in the public domain.
- b. Procedures #4017 states the following:
  - i. "Protected by gutter or eave line if possible."
  - ii. "On the gable end if possible"
  - iii. "IGC will provide protection for meter sets when required."
  - iv. "When heavy or deep snow conditions exist, a higher aspect meter set that exceeds the height of a standard installation should be a consideration"
- c. Part 192 states the following:
  - i. "Be rain and insect resistant"
  - ii. "Be protected from damage caused by submergence in areas where flooding may occur"

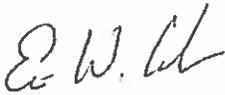
iii. "Each meter and each regulator must be installed so as to minimize anticipated stresses upon the connecting piping and the meter."

04) State the Relief Desired:

- a. Compensation of \$220 for Gas Cover and \$150 in Labor for installation + \$1,010.82 in construction loan interest because work had to be pushed off inside the home because of no heat.
- b. Review by PUC into Intermountain Gas Practices of requiring roofs over gas meters in an inconsistent manner and with no public facing information for owners or builders to know what is acceptable.

05) Process: I am willing to travel to Boise at my expense to testify or work through the PUC in anyway the PUC deems necessary to fix this problem.

As Ever,



Eric W. Conrad

**PART 192 – TRANSPORTATION OF NATURAL AND OTHER GAS BY  
PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS**

**Subpart H—Customer Meters, Service  
Regulators, and Service Lines**

**§192.351 Scope.**

This subpart prescribes minimum requirements for installing customer meters, service regulators, service lines, service line valves, and service line connections to mains.

[Part 192 - Org., Aug. 19, 1970]

**§192.353 Customer meters and regula-  
tors: Location.**

(a) Each meter and service regulator, whether inside or outside a building, must be installed in a readily accessible location and be protected from corrosion and other damage, including, if installed outside a building, vehicular damage that may be anticipated. However, the upstream regulator in a series may be buried.

(b) Each service regulator installed within a building must be located as near as practical to the point of service line entrance.

(c) Each meter installed within a building must be located in a ventilated place and not less than 3 feet (914 millimeters) from any source of ignition or any source of heat which might damage the meter.

(d) Where feasible, the upstream regulator in a series must be located outside the building, unless it is located in a separate metering or regulating building.

[Part 192 - Org., Aug. 19, 1970, as amended by Amdt. 192-85, 63 FR 37500, July 13, 1998; Amdt. 192-93, 68 FR 53895, Sept. 15, 2003]

**§192.355 Customer meters and regula-  
tors: Protection from damage.**

(a) Protection from vacuum or back pressure. If the customer's equipment might create either a vacuum or a back pressure, a device must be installed to protect the system.

(b) Service regulator vents and relief vents. Service regulator vents and relief vents must terminate outdoors, and the outdoor terminal must:

(1) Be rain and insect resistant;

(2) Be located at a place where gas from the vent can escape freely into the atmosphere and away from any opening into the building; and,

(3) Be protected from damage caused by submergence in areas where flooding may occur.

(c) Pits and vaults. Each pit or vault that houses a customer meter or regulator at a place where vehicular traffic is anticipated, must be able to support that traffic.

[Part 192 - Org., Aug. 19, 1970, as amended by Amdt. 192-58, 53 FR 1633, Jan. 21, 1988]

**§192.357 Customer meters and regula-  
tors: Installation.**

(a) Each meter and each regulator must be installed so as to minimize anticipated stresses upon the connecting piping and the meter.

(b) When close all-thread nipples are used, the wall thickness remaining after the threads are cut must meet the minimum wall thickness requirements of this part.

(c) Connections made of lead or other easily damaged material may not be used in the installation of meters or regulators.

**409.2 Meter valve.** Every meter shall be equipped with a shutoff valve located on the supply side of the meter.

**409.3 Shutoff valves for multiple-house line systems.** Where a single meter is used to supply gas to more than one building or tenant, a separate shutoff valve shall be provided for each building or tenant.

**409.3.1 Multiple tenant buildings.** In multiple tenant buildings, where a common *pipng* system is installed to supply other than one- and two-family dwellings, shutoff valves shall be provided for each tenant. Each tenant shall have access to the shutoff valve serving that tenant's space.

**409.3.2 Individual buildings.** In a common system serving more than one building, shutoff valves shall be installed outdoors at each building.

**409.3.3 Identification of shutoff valves.** Each house line shutoff valve shall be plainly marked with an identification tag attached by the installer so that the *pipng* systems supplied by such valves are readily identified.

**409.4 MP regulator valves.** A *listed* shutoff valve shall be installed immediately ahead of each MP regulator.

**409.5 Appliance shutoff valve.** Each *appliance* shall be provided with a shutoff valve in accordance with Section 409.5.1, 409.5.2 or 409.5.3.

**409.5.1 Located within same room.** The shutoff valve shall be located in the same room as the *appliance*. The shutoff valve shall be within 6 feet (1829 mm) of the *appliance*, and shall be installed upstream of the union, connector or quick disconnect device it serves. Such shutoff valves shall be provided with *access*. *Appliance* shutoff valves located in the firebox of a *fireplace* shall be installed in accordance with the *appliance* manufacturer's instructions.

**409.5.2 Vented decorative appliances and room heaters.** Shutoff valves for vented decorative appliances, room heaters and decorative appliances for installation in vented *fireplaces* shall be permitted to be installed in an area remote from the appliances where such valves are provided with ready *access*. Such valves shall be permanently identified and shall serve no other *appliance*. The *pipng* from the shutoff valve to within 6 feet (1829 mm) of the *appliance* shall be designed, sized and installed in accordance with Sections 401 through 408.

**409.5.3 Located at manifold.** Where the *appliance* shutoff valve is installed at a manifold, such shutoff valve shall be located within 50 feet (15 240 mm) of the *appliance* served and shall be readily accessible and permanently identified. The *pipng* from the manifold to within 6 feet (1829 mm) of the *appliance* shall be designed, sized and installed in accordance with Sections 401 through 408.

**409.6 Shutoff valve for laboratories.** Where provided with two or more fuel gas outlets, including table-, bench- and hood-mounted outlets, each laboratory space in educational, research, commercial and industrial occupancies shall be provided with a single dedicated shutoff valve through which all such gas outlets shall be supplied. The dedicated shutoff valve shall be readily accessible, located within the labora-

tory space served, located adjacent to the egress door from the space and shall be identified by approved signage stating "Gas Shutoff."

## SECTION 410 (IFGC) FLOW CONTROLS

**410.1 Pressure regulators.** A line pressure regulator shall be installed where the *appliance* is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be *listed* as complying with ANSI Z21.80. *Access* shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be *approved* for outdoor installation.

**410.2 MP regulators.** MP pressure regulators shall comply with the following:

1. The MP regulator shall be *approved* and shall be suitable for the inlet and outlet gas pressures for the application.
2. The MP regulator shall maintain a reduced outlet pressure under lockup (no-flow) conditions.
3. The capacity of the MP regulator, determined by published ratings of its manufacturer, shall be adequate to supply the *appliances* served.
4. The MP pressure regulator shall be provided with *access*. Where located indoors, the regulator shall be vented to the outdoors or shall be equipped with a leak-limiting device, in either case complying with Section 410.3.
5. A tee fitting with one opening capped or plugged shall be installed between the MP regulator and its upstream shutoff valve. Such tee fitting shall be positioned to allow connection of a pressure-measuring instrument and to serve as a sediment trap.
6. A tee fitting with one opening capped or plugged shall be installed not less than 10 pipe diameters downstream of the MP regulator outlet. Such tee fitting shall be positioned to allow connection of a pressure-measuring instrument.

**410.3 Venting of regulators.** Pressure regulators that require a vent shall be vented directly to the outdoors. The vent shall be designed to prevent the entry of insects, water and foreign objects.

**Exception:** A vent to the outdoors is not required for regulators equipped with and *labeled* for utilization with an *approved* vent-limiting device installed in accordance with the manufacturer's instructions.

**410.3.1 Vent pipng.** Vent *pipng* for relief vents and breather vents shall be constructed of materials allowed for gas *pipng* in accordance with Section 403. Vent *pipng* shall be not smaller than the vent connection on the pressure regulating device. Vent *pipng* serving relief vents and combination relief and breather vents shall be run independently to the outdoors and shall serve only a single device vent. Vent *pipng* serving only breather vents is permitted to be connected in a manifold arrangement

## IGC PROCEDURES

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DATE: 01/31/05

**TITLE: Siting Service Lines and Meter Sets**

NUMBER: 4017

REFERENCES | PURPOSE | SCOPE | GENERAL | RESPONSIBILITY |  
STANDARDS | SERVICE LOCATIONS | METER LOCATIONS | EXAMPLES

### REFERENCES

#### *Regulations*

IGC General Service Provisions  
49 CFR 192, 351, 353, 355, 357

#### *Policy*

501 Gas Delivery Pressure

#### *Procedures*

4019 Curb and Other Property Line Valves  
4015 Upstream Regulation of High Pressure Service Lines (Farm Taps)  
4016 Roof Top Distribution System  
9375 Service Line Installations  
4026 P.E. Plastic Pipe System Design and Installation

### PURPOSE

Provide proper guidelines for determining service line, meter set, and riser locations and routes for the service line that are acceptable and safe under the General Service Provisions and applicable safety, building codes and operating policies.

## **SCOPE**

Applies to all Company personnel assigned the responsibility of selecting service line routes and meter locations.

## **GENERAL**

Service lines will be installed at the minimum total length necessary to conform with Company requirements regarding meter set locations.

The criteria for service lines to be installed in conjunction with new mains is contained in Procedure 9371 Plant Additions-Revenue.

When a service line cannot be located according to the requirements of this Procedure, contact the Operations/Division/District Manager for instructions.

As described in Section A, Paragraph 12.9 of the General Service Provisions, a second service line will be installed for a customer only when the second location is justified and more than fifty (50) feet from the existing service line. See also 4016, Rooftop Distribution Systems, and 9375, Service Line Installation.

Meter sets will be located along the wall of the structure least susceptible to future building, fencing or

other additions. Residential meter sets will not be located in the rear of the dwelling, unless circumstances are such that the rear of the dwelling is the most feasible and desirable location available

(townhouses, alley distribution system, etc.). When a Service Line application shows a rear meter location, an explanation of the conditions requiring such a location must be included on the 512-A. This explanation will be reviewed and accepted by the Marketing Manager and submitted to the Regional/Division/District Manager for approval prior to installation of the service line.

## **RESPONSIBILITY**

The Operations Managers are responsible for the administration of this Procedure.

## STANDARDS

### A. Selecting Service Locations

1. Precautions to take regarding service locations
  - a. When possible, select a termination location for the service line that is at least twelve inches (12") from other underground facilities. If it is a joint trench service line, ensure that the service is installed according to joint trench specifications.
  - b. Do not run plastic systems within the influencing area of any system that radiates temperatures above 100° F. If there is a concern that this may occur, contact General Office Engineering for necessary calculations.
2. When paralleling a foundation for more than five (5) feet, select a location for the service line at least three (3) feet from the foundation, whenever possible. If a basement has been excavated, and there could be excessive soil settling, the service should be run outside of the disturbed soil area.
3. Whenever paralleling a sidewalk or retaining wall and if possible, select a location at least one (1) foot from the sidewalk and three (3) feet from the retaining wall, when possible.
4. Select service line locations so that adjacent private property is not crossed unless a properly executed right-of-way agreement is obtained.
5. Whenever possible, avoid selecting line locations where the service will pass under concrete slabs, carports or through retaining walls. Avoid periodic maintenance areas over septic tanks, oil and gasoline tanks etc.
6. Whenever possible install service line locations so that the service line will run in a straight line from the stub or tee to the service line riser location.
7. Consider possible future additions to the property and locate the service so that it will not be built over or have the meter location fenced in at a later date.
8. Any service lines running under a building will be encased. The casing will be sealed and vented to the outside at the point where it enters the building. Service lines will not be installed under a building without Operations Manager approval.

### C. Riser and Meter Set Locations

1. Position the riser and meter set in a readily accessible location. The meter and meter stop must be easily accessed in case of emergencies and for routine maintenance and meter reading.
1. When possible, select a location outside an area that is, or may be fenced.

684-4/51

1. The meter shall be located at the point on the structure:
  - a. As close to stub or main as possible.
  - b. ~~Protected by gutter or eave line if possible.~~
  - c. ~~On the gable end if possible.~~
  - d. If main line is in the front of the structure; place riser as close as possible to the front of the structure; however, the service riser and meter shall be located at least 18" horizontally from an electrical meter. (See Example 1) (Most common distance is four (4) feet.)
  - e. If main line is behind the house; place the riser at the closest point in the back of the structure maintaining the 18" horizontal distance from the electrical meter or service panel.

1. Manifolds shall be located in the same manner as single meters and allow for the required width for the number and size of the meters. If a stack manifold is required, the upper portion shall be secured to the structure during installation.

1. When the meter and service regulator will be installed outside the building, select location of service line riser to meet the following:

- a. ~~Service line riser will be located a minimum of twelve inches (12") from the building and protected from anticipated traffic, possible flooding and other sources of damage.~~

Where a main customer valve is used, an additional 3" to 4" shall be needed for house line installation. Large meter sets shall be sited as needed for clearance.

- b. Do not locate under or in front of windows or other building openings which may be used as emergency fire exits or under interior or exterior stairways.
- c. When the service line riser is on the driveway side of a dwelling, at least three (3) feet of spacing between the driveway and the building is necessary. Additional protection will be provided, such as a meter guard. (See Example 5)
- d. Where a service line riser is likely to be set in paving of any kind, a short piece of two inch (2") or larger P.E. pipe will be used to sleeve the pipe at ground level.
- e. When a meter is set outside a school, a permanently locked fence or enclosure may be provided by the Company.
- f. ~~IGC will provide protection for meter sets when required.~~
- g. When locating a riser for a large meter set, adequate space and access shall be provided to allow for normal maintenance and testing.

1. Select location for service line and service line riser and meter set for large commercial and industrial services to meet the following additional requirements:

- a. When the service line will parallel the foundation, a minimum of five (5) feet clearance from the building will be maintained.
  - b. The meter will not be located directly underneath and will have at least three (3) feet minimum horizontal clearance from an electric panel, air intake or any equipment that could possibly be a source of ignition.
  - c. Space requirements for large meter sets will be determined from the meter set design. See specified or standard meter set drawings.
  - d. When meters are set outside a school, a permanent locked fence or enclosure may be provided by the Company.
  - e. When meters are set outside a church and extra security is necessary, a permanent locked fence or enclosure, with IGC access, is to be provided by the customer.
1. When the meter and service regulator will be set inside the building, the location for the service line riser will meet the following requirements:
- 1. NOTE: Written approval must be obtained from the Operations Manager for any inside meter set. That approval must be attached to the asbuilt drawing on Form 512-A or 319.
    - a. The service line riser, meter stop and service line entrance into the building will be as near as practicable to the meter and regulator location.
    - b. When possible, the service line riser and meter stop will be above ground outside the building and the entrance of the service line into the building will be above ground with a readily accessible outside shut-off valve.
    - c. Any service entrance into the building below ground will incorporate an outside curbvalve and will be cased and the casing sealed at the points the service line enters and exits the casing. The casing must be vented to the outside atmosphere.
    - d. All regulators located inside a building must be located in a ventilated area and not less than three feet from any source of ignition or heat which could damage the meter. All inside regulators will be vented separately to the outside of the structure and installed to prevent water buildup and entry of insects and debris.
    - e. A meter and regulator installed in a recessed opening is considered an outside meter set if the following conditions are met:
      - i. The recess has an exterior wall
      - ii. The service line enters the recess above ground (over the sill)
      - iii. The recess is lined with fireproof and vapor-proof material
1. Any service line riser cannot be located to meet the requirements of this Procedure shall be referred to the Operations/District Manager.

NOTE: IGC will provide protective steel posts for the meter set, when required, where no protection is provided by the customer. Adequate meter protection consists of either the company approved meter guard, (Example 5) a two inch (2") or four inch (4") diameter post, or a permanent protective wall.

1. No meter or service regulator will be located in a pit or vault. Contact the Operations Manager for alternative locations.
1. When services and meters are on a rooftop system, see Procedure 4016 Rooftop Distribution Systems, for requirements.
1. Meters installed on manufactured housing where flex connectors are utilized shall have the meter bar assembly stabilized by use of a meter bar support.

#### C. Riser and Meter Set Height

1. Standard installation height shall be achieved when the bottom of the stop equals the height of foundation. (Caution should be taken to ensure the bury line on the riser is not below future grade). (See Example 6)
2. Installation height of larger meters and meters installed on multilevel foundations shall be accomplished by determining future grade according to building specification. This may be determined by:
  - a. Contacting builder
  - b. Reviewing plans
  - c. Future grade indicators that exist or are apparent.

#### C. Riser and Meter Height - Heavy or Deep Snow Area's

1. When heavy or deep snow conditions exist, a higher aspect meter set that exceeds the height of a standard installation should be a consideration. (See Example 4)

2. In deep snow areas, snow sliding off the roof should also be considered a damaging force. Snow shields shall be installed if necessary.

3. If a safe meter location can not be identified on a home or building, an engineered structure that allows adequate ventilation and is designed to meet the potential snow load can be used to protect the meter and must be in place prior to service being activated.

4. If an engineered structure for meter protection is used, an engineer's signature will be needed approving the structure's design and ability to protect the meter from snow and ice. (See Example # 7 Approval of Engineered Design for Meter Protection.) This approval shall be signed and added to the asbuilt and added to Scanned Images with the asbuilt

#### D. Regulator Venting Requirements

1. Regulators shall be installed vertically with the vent pointed downward
2. Regulators that cannot be installed with vent pointed downward shall have additional vent piping installed to ensure downward venting
3. Vents will be screened or have caps installed to prevent entry of water, insects, debris, or foreign objects

4. In high snow aspect areas vents will be extended to above the anticipated snow level
5. Extended vent piping will be placed in such a position to prevent entry of water, insects, debris, or foreign objects and protected from heavy snow or water run off
6. Vent piping will be sized according to the size of the vent opening on the regulator
7. Vent piping will be secured as necessary
8. If a meter set is located within three (3) feet of any air intake which is permanently opened into a structure, the regulator will be vented remotely from the area. Note: Windows, whether operable or non-operable, are not considered an air intake.
9. Meter locations protected under roof valleys and eaves where run off due to rain and snow may affect the regulator vent shall have the regulator vent piping extended to a protected location
10. All inside regulators shall be vented separately to the outside of the structure and installed to prevent water buildup and entry of insects and debris

#### E. Meter Stop Valve Installation and Replacements

1. Service riser applications sized  $\frac{3}{4}$ " through 2" (single meter and manifolds) operating at 60 psig or less shall use a valve stop with an insulating union incorporated in the body of the stop
2. Greater than 60 psig operating pressure - High pressure installations shall require
  - a. Non Insulated stop.
  - b. Insulation shall be obtained by one of the following:
    - i. Insulating union downstream of the secondary pressure regulator
    - ii. Flange gasket insulators at the flanges (2) of a flanged by-pass riser
2. Maintenance - In the course of performing maintenance to resolve leaking spuds or to remediate cathodic protection issues at the meter set assembly, the following actions should be performed where applicable:
  - a. Replace a non-insulated valve stop with an insulated valve stop,
  - b. Replace meter loop assembly with a pre fabricated meter loop incorporating a customer valve in the meter loop and non-insulated spuds.
  - c. Replace a non-insulated valve stop with an insulated valve stop without a pre fabricated meter loop when alignment with existing house piping is not feasible.

#### **EXAMPLES**

EXAMPLE 1

Distance from Electrical Meter

EXAMPLE 2

Flex Riser

EXAMPLE 3

Support Assembly

EXAMPLE 4

High Aspect Riser

EXAMPLE 5

Meter Guard

EXAMPLE 6

Standard Meter Installation

EXAMPLE 7

Approval of Engineered Design for Meter Protection

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4017 - Siting Service Lines and Meter Sets



Eric Conrad <ericwconrad@gmail.com>

**Meter Protection**  
27 messages

*E-MAIL CORRESPONDANCE*

Robinson, Sarah <SARAH.ROBINSON@intgas.com>  
To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

Thu, Nov 12, 2015 at 4:47 PM

Per our telephone conversation, please see the attachments regarding meter protection. I have also attached some examples of meter protection that has been approved in our area.

If you have further questions, please let me know.

Thank You,

**Sarah Robinson**  
**Intermountain Gas Company**  
**Operations Aide, Teton District**  
**208-542-6616 (Phone)**  
**208-542-6639 (Fax)**  
**Sarah.Robinson@intgas.com (Email)**



RECEIVED  
2015 DEC 28 AM 9:41  
IDaho PUBLIC  
UTILITIES COMMISSION

5 attachments

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667K

Attachment A  
Decision Memorandum  
Page 13 of 33

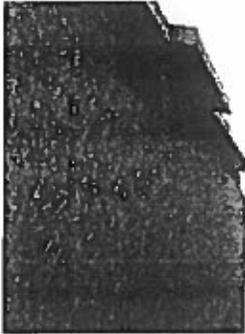


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870K

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Eric Conrad <ericwconrad@gmail.com>  
To: Kami Conrad <kamiconrad@outlook.com>

Thu, Nov 12, 2015 at 4:53 PM

[Quoted text hidden]

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**5 attachments**

IMG\_20130925\_155735\_110.jpg  
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Page 14 of 33



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2708K

 [Untitled].pdf  
870K

 Untitled (12).pdf  
465K

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Eric Conrad <ericwconrad@gmail.com>  
To: bhill@ruddco.com, bhill@senate.idaho.gov

Thu, Nov 12, 2015 at 9:58 PM

Brent: I think I have uncovered something at Intermountain Gas that may not be illegal, but I definitely can not find any information about the requirements of dog house roofs being OK'd by the PUC. I have been on the Idaho Public Utilities Web site and can not find any information on this requirement, nor can I find anywhere to lodge a complaint. Can you direct me to someone at the PUC that I can speak with?

Long story short. Intermountain Gas is holding me hostage and not hooking my Gas meter up because they require some type of cover over the gas meter. When I asked for clarification, I was sent the following PDF and pictures. No height or width requirements, etc. You will see in the letter that it is vague at best on rules to follow.

I called Intermountain Gas out to install the meter over three weeks ago. They came out, left a voice mail on my contractors phone (J.B. Kay and said they couldn't install until the meter was covered.) We had hoped the overhang was out far enough and when the gutter was on we would get approval. So, I called Intermountain Gas again to get clarification and ask them to come out and install the meter. They would not install a Gas Meter until a shed was installed. So my contractor built a temporary shed to cover the

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area of the gas meter until we can get the rain gutters up. They came out today and did not install the gas meter again, saying that I needed a "Permanent Covering".

I called the Idaho Falls office of Intermountain Gas this afternoon to find out what exactly I needed. They sent me the attached information. I read through it and found it very unprofessional in how they could hold anyone to a standard with the required documents. I would expect if it was law, that they would reference the law. If it was an internal requirement that they would have a spec sheet outlining how big the roof should be over the gas meter, how high above the ground, etc.

I have to get gas, I have \$30,000 in wood flooring that is going to fail because they will not provide gas until I meet their demands. I finally relented and said I would have the contractor buy a prefabricated roof and get it installed tomorrow. I asked to schedule another time to get the gas meter installed and they refused to discuss even scheduling a time for an install until I could prove I had the roof installed. I assured them I would have something installed, but at this point I worried if it would be everything they expected when I could not find anything in writing that outlined all expectations.

Anyway, can you forward me to someone at the PUC that can help? Also a media person at the PUC, because I think the public should be aware. I should have an interview tomorrow with Local News 8 lined up by mid morning, they said they are very interested in doing investigative reporting like this.

Thanks, Eric

----- Forwarded message -----

From: Robinson, Sarah <SARAH.ROBINSON@intgas.com>

Date: Thu, Nov 12, 2015 at 4:47 PM

Subject: Meter Protection

To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

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5 attachments



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Page 16 of 33



photo (3).JPG  
2708K

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870K

 Untitled (12).pdf  
465K

Eric Conrad <ericwconrad@gmail.com>  
To: "Robinson, Sarah" <SARAH.ROBINSON@intgas.com>  
Cc: Jared Kay <jared@jbkayconstruction.com>

Thu, Nov 12, 2015 at 10:38 PM

Sarah:

Thanks for sending this information and speaking with me this afternoon. I just wanted to insure I heard you correctly this afternoon. I completely understand the gas company wanting to protect the meter from ice build up. I have an overhang on my new residences and will have gutters installed, but this is not adequate per the attached document and your comments. You mention overhangs that have been approved, how were they approved and what was the criteria to approve them?

- 1) If an overhang is not adequate, the picture of the extended overhang you sent seems to meet the requirement but no specifications are mentioned of what that overhang should be.
- 2) When I asked for clarification on the pictures you sent you said there are no specifications on height from ground, how large the structure should be or any specifications other than the required signature from an engineer? What specifications is an engineer supposed to validate his design calculations against?
- 3) When I questioned why my dog roof that I put in place was not good enough for the gas meter, you said it needed to be "permanent" and also stated that this is what it said in the technician notes. I can not find anything in the information you sent me that uses the word permanent. Although it does state it needs to meet engineers snow load.
- 4) I have driven around Rexburg and have noted a number of homes that have been started and completed construction this year that do not have dog house roofs. I am confused. Would you like the addresses to verify my observations?

As you have required, I will call back once the prefab roof is in place, but can you clarify for my contractor and myself how far above ground it is to be located?

Thanks, Eric Conrad  
208.201.6692  
[Quoted text hidden]

Senator Brent Hill <bhill@senate.idaho.gov>  
To: Eric Conrad <ericwconrad@gmail.com>

Fri, Nov 13, 2015 at 8:54 AM

Senator Brent Hill

Attachment A  
Decision Memorandum  
Page 17 of 33

----- Forwarded message -----

From: Robinson, Sarah <SARAH.ROBINSON@intgas.com>

Date: Thu, Nov 12, 2015 at 4:47 PM

Subject: Meter Protection

To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

<image001.jpg>

Per our telephone conversation, please see the attachments regarding meter protection. I have also attached some examples of meter protection that has been approved in our area.

If you have further questions, please let me know.

Thank You,

**Sarah Robinson**

**Intermountain Gas Company**

**Operations Aide, Teton District**

**208-542-6616 (Phone)**

**208-542-6639 (Fax)**

**Sarah.Robinson@intgas.com (Email)**

<image002.png>

<IMG\_20130925\_155735\_110.jpg><photo.JPG><photo (3).JPG><[Untitled].pdf><Untitled (12).pdf>

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<https://mail.google.com/mail/u/0/?ui=2&ik=dde5549800&view=pt&search=inbox&th=1...> 11/30/2015

Eric Conrad <ericwconrad@gmail.com>  
To: "Robinson, Sarah" <SARAH.ROBINSON@intgas.com>

Fri, Nov 13, 2015 at 8:58 AM

Thanks, will do.

[Quoted text hidden]

Eric Conrad <ericwconrad@gmail.com>  
To: johnathan.farly@puc.idaho.gov

Fri, Nov 13, 2015 at 10:35 AM

Here you go, thanks for your call.

----- Forwarded message -----

From: Robinson, Sarah <SARAH.ROBINSON@intgas.com>

Date: Thu, Nov 12, 2015 at 4:47 PM

Subject: Meter Protection

To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

[Quoted text hidden]

5 attachments



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photo (3).JPG  
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Attachment A  
Decision Memorandum  
Page 19 of 33

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465K

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postmaster@cio.idaho.gov <postmaster@cio.idaho.gov>  
To: ericwconrad@gmail.com

Fri, Nov 13, 2015 at 10:36 AM

--- The following addresses had delivery problems ---

< johnathan.farly@puc.idaho.gov> (5.3.4 Message size exceeds fixed maximum message size)

----- Forwarded message -----  
From: Eric Conrad <ericwconrad@gmail.com>  
To: johnathan.farly@puc.idaho.gov  
Cc:  
Date: Fri, 13 Nov 2015 10:35:33 -0700  
Subject: Fwd: Meter Protection  
Here you go, thanks for your call.

----- Forwarded message -----  
From: Robins

---

 noname.eml  
3K

---

Eric Conrad <ericwconrad@gmail.com>  
To: johnathan.farly@puc.idaho.gov

Fri, Nov 13, 2015 at 10:36 AM

Here is the e-mail I sent last night with my concerns. No response yet.

I also asked for her supervisor to call me, no response yet.

Thanks, Eric  
[Quoted text hidden]

---

Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
To: Eric Conrad <ericwconrad@gmail.com>

Fri, Nov 13, 2015 at 10:44 AM

Hi Eric,

I have your received your email and will get on this issue.

All the best,

John

From: Eric Conrad [mailto:ericwconrad@gmail.com]  
Sent: Friday, November 13, 2015 10:37 AM  
To: Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
Subject: Fwd: Meter Protection

[Quoted text hidden]

Eric Conrad <ericwconrad@gmail.com>  
To: tkunz@kidk.com

Fri, Nov 13, 2015 at 10:54 AM

Todd: Let me know if you are interested in doing any investigative reporting on this, I can be reached at 208.201.6692.

Long story short, I have spoken with Brent Hill Senate Pro Temp President, PUC commissioner and Johnathan Farley of the Consumer Protection Division about the requirement of these roofs over gas meters that are now being required. Doesn't look like anyone in Boise knows about this. Some homeowners required and others not? No specifications on how to build them or where, sounds like SE Idaho Management an Intermountain gas have gone rogue.

Thanks, Eric

----- Forwarded message -----

From: Robinson, Sarah <SARAH.ROBINSON@intgas.com>  
Date: Thu, Nov 12, 2015 at 4:47 PM  
Subject: Meter Protection  
To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

[Quoted text hidden]

5 attachments



IMG\_20130925\_155735\_110.jpg  
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Attachment A  
Decision Memorandum  
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870K

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465K

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Eric Conrad <ericwconrad@gmail.com>  
To: johnathan.farley@puc.idaho.gov

Fri, Nov 13, 2015 at 10:55 AM

Looks like you have a size limit. I'll do individually.

----- Forwarded message -----

From: Robinson, Sarah <SARAH.ROBINSON@intgas.com>  
Date: Thu, Nov 12, 2015 at 4:47 PM  
Subject: Meter Protection  
To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

[Quoted text hidden]

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 [Untitled].pdf  
870K

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Eric Conrad <ericwconrad@gmail.com>  
To: johnathan.farley@puc.idaho.gov

Fri, Nov 13, 2015 at 10:57 AM

A few pictures with no specs...

----- Forwarded message -----

From: Robinson, Sarah <SARAH.ROBINSON@intgas.com>  
Date: Thu, Nov 12, 2015 at 4:47 PM  
Subject: Meter Protection  
To: "ericwconrad@gmail.com" <ericwconrad@gmail.com>

[Quoted text hidden]

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2 attachments

IMG\_20130925\_155735\_110.jpg  
667K



photo (3).JPG  
2708K

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Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
To: Eric Conrad <ericwconrad@gmail.com>

Fri, Nov 13, 2015 at 11:00 AM

Thanks, Eric. I received the pdf and the photos.

Best,

John

**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Friday, November 13, 2015 10:58 AM  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
**Subject:** Fwd: Meter Protection

A few pictures with no specs...

[Quoted text hidden]

---

Eric Conrad <ericwconrad@gmail.com>  
To: Johnathan Farley <Johnathan.Farley@puc.idaho.gov>

Fri, Nov 13, 2015 at 6:24 PM

Any progress today? I have not had any response from my e-mail or phone call yesterday with Intermountain Gas. I assume they are on lockdown in communicating with me? That doesn't really help my problem and even shows they are holding me hostage and stonewalling me even more. Great ethics case.

Anyway, let me know. Thanks for your work. Eric

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[Quoted text hidden]

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**Johnathan Farley** <Johnathan.Farley@puc.idaho.gov>  
To: Eric Conrad <ericwconrad@gmail.com>

Mon, Nov 16, 2015 at 8:03 AM

Good Morning Eric,

When you open a complaint with the PUC, it is our protocol to have to company cease communication with the customer. I should hear back from them today.

All the best,

John

**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Friday, November 13, 2015 6:25 PM  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
**Subject:** Re: Meter Protection

[Quoted text hidden]

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**Eric Conrad** <ericwconrad@gmail.com>  
To: Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
Cc: Jared Kay <jared@jbkayconstruction.com>

Mon, Nov 16, 2015 at 8:07 AM

Good to know. Thanks. Just need to figure out what needs to be done before my house freezes up.

Jared: FYI (Jared is my builder)

[Quoted text hidden]

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**Johnathan Farley** <Johnathan.Farley@puc.idaho.gov>  
To: Eric Conrad <ericwconrad@gmail.com>

Mon, Nov 16, 2015 at 3:11 PM

Hi Eric,

Can you send me a picture of your meter placement and the overhang?

Thank you,

John

**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Monday, November 16, 2015 8:08 AM  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
**Cc:** Jared Kay <jared@jbkayconstruction.com>  
**Subject:** Re: Meter Protection

[Quoted text hidden]

---

**Eric Conrad** <ericwconrad@gmail.com>  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>

Mon, Nov 16, 2015 at 5:14 PM

OK. Here are three examples that are in my subdivision that do not have dog house roofs, you can see why I am confused.

[Quoted text hidden]

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 **Examples of Gas Meters.docx**  
360K

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**Eric Conrad** <ericwconrad@gmail.com>  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>

Mon, Nov 16, 2015 at 5:21 PM

Thanks for your help on this. Attached are two pictures of where my gas lines are run and awaiting meter.

Can you please send me the documentation that intermountain gas sent you and the location it can be found in local domain for either consumer or builder?

Thanks, Eric

On Mon, Nov 16, 2015 at 3:11 PM, Johnathan Farley <Johnathan.Farley@puc.idaho.gov> wrote:

[Quoted text hidden]

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 **Conrad Residence.docx**  
237K

---

**Johnathan Farley** <Johnathan.Farley@puc.idaho.gov>  
**To:** Eric Conrad <ericwconrad@gmail.com>

Tue, Nov 17, 2015 at 10:40 AM

Hi Eric,

Attached you find the procedural documentation that was provided to me by Intermountain Gas. Additionally, I have attached a letter that outlines the formal complaint procedure. Please do not hesitate to email or call me with any questions.

All the best,

John

Attachment A  
Decision Memorandum  
Page 25 of 33

**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Monday, November 16, 2015 5:21 PM

[Quoted text hidden]

[Quoted text hidden]

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4 attachments

 Procedure 4017.docx  
26K

 IFGC 410.1.pdf  
1309K

 192 Pipeline Safety Regulations.pdf  
978K

 Formal Complaint Procedure CONRAD E.doc  
27K

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**Eric Conrad** <ericwconrad@gmail.com>  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>

Tue, Nov 17, 2015 at 11:00 AM

Awesome, thanks for your help. I will definitely do the formal complaint, but will do so after Thanksgiving and my gas is for sure on. Where is this information in the Public Domain? If Intermountain Gas is going to hold consumers and contractors to rules and specifications that are not publicized, I believe that to be an issue.

Thanks, Eric  
[Quoted text hidden]

---

**Johnathan Farley** <Johnathan.Farley@puc.idaho.gov>  
**To:** Eric Conrad <ericwconrad@gmail.com>

Tue, Nov 17, 2015 at 11:27 AM

No problem. I completely understand your frustrations. Best of luck with the rest of your build!

Best,

John

**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Tuesday, November 17, 2015 11:00 AM  
**To:** Johnathan Farley <Johnathan.Farley@puc.idaho.gov>  
**Subject:** Re: Meter Protection

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[Quoted text hidden]

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**Eric Conrad** <ericwconrad@gmail.com>  
**To:** "Robinson, Sarah" <SARAH.ROBINSON@intgas.com>

Tue, Nov 17, 2015 at 7:02 PM

Cc: Johnathan Farley <johnathan.farley@puc.idaho.gov>, Jared Kay <jared@jbkayconstruction.com>

Sarah: As you requested, my contractor has purchased and installed the pre-fabed meter protection. Can you confirm if this will work before we attach it to the home? Can I get a meter set appointment scheduled?

We are anxious to get gas on.

Thanks, Eric

On Thu, Nov 12, 2015 at 4:47 PM, Robinson, Sarah <SARAH.ROBINSON@intgas.com> wrote:  
[Quoted text hidden]



2277 Hendricks Meter Cover.jpg  
3547K

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Robinson, Sarah <SARAH.ROBINSON@intgas.com>  
To: Eric Conrad <ericwconrad@gmail.com>

Wed, Nov 18, 2015 at 9:14 AM

Hi Eric,

I am just waiting for my Supervisor to get out of a meeting so that I can have her take a look at this. I will let you know ASAP.

Thank You,

**Sarah Robinson**

**Intermountain Gas Company**

**Operations Aide, Teton District**

**208-542-6616 (Phone)**

**208-542-6639 (Fax)**

**Sarah.Robinson@intgas.com (Email)**

Attachment A  
Decision Memorandum  
Page 27 of 33



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**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Tuesday, November 17, 2015 7:02 PM  
**To:** Robinson, Sarah  
**Cc:** Johnathan Farley; Jared Kay  
**Subject:** Re: Meter Protection

\*\*\* This is an EXTERNAL email. Exercise caution. \*\*\*

---

[Quoted text hidden]

---

**Robinson, Sarah** <SARAH.ROBINSON@intgas.com>  
**To:** Eric Conrad <ericwconrad@gmail.com>

Wed, Nov 18, 2015 at 10:39 AM

I just spoke to my Supervisor and it is hard to tell from the picture if the meter protection covers the regulator. We are sending a Service Tech out to look at it and will let you know ASAP.

Thanks,

**Sarah Robinson**

**Intermountain Gas Company**

**Operations Aide, Teton District**

**208-542-6616 (Phone)**

**208-542-6639 (Fax)**

**Sarah.Robinson@intgas.com (Email)**



---

**From:** Eric Conrad [mailto:ericwconrad@gmail.com]  
**Sent:** Tuesday, November 17, 2015 7:02 PM  
**To:** Robinson, Sarah  
**Cc:** Johnathan Farley; Jared Kay  
**Subject:** Re: Meter Protection

\*\*\* This is an EXTERNAL email. Exercise caution. \*\*\*

---

Sarah: As you requested, my contractor has purchased and installed the pre-fabed meter protection. Can you confirm if this will work before we attach it to the home? Can I get a meter set appointment scheduled?

[Quoted text hidden]  
[Quoted text hidden]

---

Eric Conrad <ericwconrad@gmail.com>  
To: "Robinson, Sarah" <SARAH.ROBINSON@intgas.com>

Wed, Nov 18, 2015 at 10:56 AM

Thanks.

[Quoted text hidden]



1527 HOLLIPARK DR. • P.O. BOX 51220 • IDAHO FALLS, ID 83405-1220  
(208) 542-6600 • FAX (208) 542-6639  
[www.intgas.com](http://www.intgas.com)

April 19, 2012

XYZ Bullder or Dealer or Archltect  
Bullder or Dealer Business Name  
Address  
Town, Idaho ZIP

Dear XYZ,

Thank you for your support and selection in using Natural Gas for your building's energy needs. We enjoy our joint partnership in providing safe, efficient and the best energy value, Natural Gas, to our mutual customers.

It has always been a priority for Intermountain Gas Company to comply with federal, state and local jurisdictional codes, as well as the manufacturer's recommendations concerning the safety of the Natural Gas metering system. Intermountain Gas Company will ensure the ongoing safe operation to you and our mutual customers through enforcement of meter set locations in such a manner and location to comply with appropriate codes.

For example, meter locations can not be located under roof valleys and eaves where run off due to rain and snow may affect the meter set. Meter locations on any "gable" end of the home's roof line that provides protection from any rain and snow run off or other possible hazards will be allowed.

If a safe meter location can not be identified on a home or building, an engineered structure that allows adequate ventilation and is designed to meet the potential snow load can be used to protect the meter and must be in place prior to service being activated.

If an engineered structure is used, an engineer's signature will be needed approving the structure's design and ability to protect the meter from snow and ice.

Please contact the Customer Sales Representative in your area for further details or if you have any questions.

Again, thank you for your support!

Sincerely,

Teri TeNgalo  
Teton District Manager

cc: file

Intermountain Gas Company

Approval of Engineered Design for Meter Protection.

I hereby certify that the structure being installed over and around the meter set at \_\_\_\_\_ (Address), \_\_\_\_\_ (Town), Idaho: for \_\_\_\_\_ (Customer) will ventilate any gas from the regulator and will withstand the anticipated snow and ice loads that may occur at this address.

Signed:

\_\_\_\_\_  
Customer/ or Builder

\_\_\_\_\_  
Date

\_\_\_\_\_  
Engineer

\_\_\_\_\_  
Date



Gas Meter on South side of home, gutters in place.



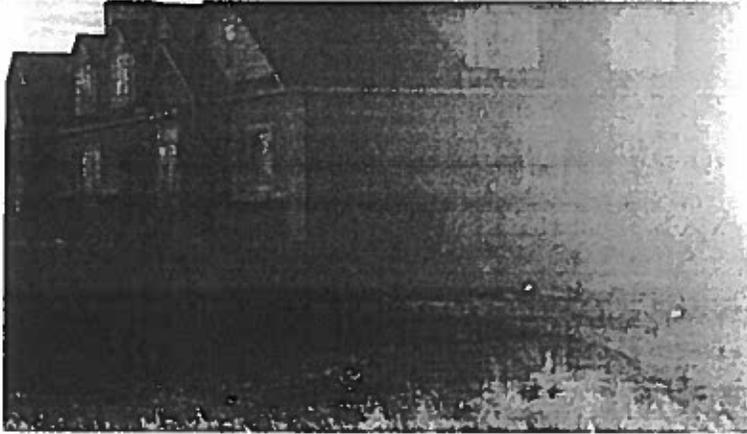
Gas Meter on East side of new home built this summer, no gutters, you can see splash near meter. Approved.



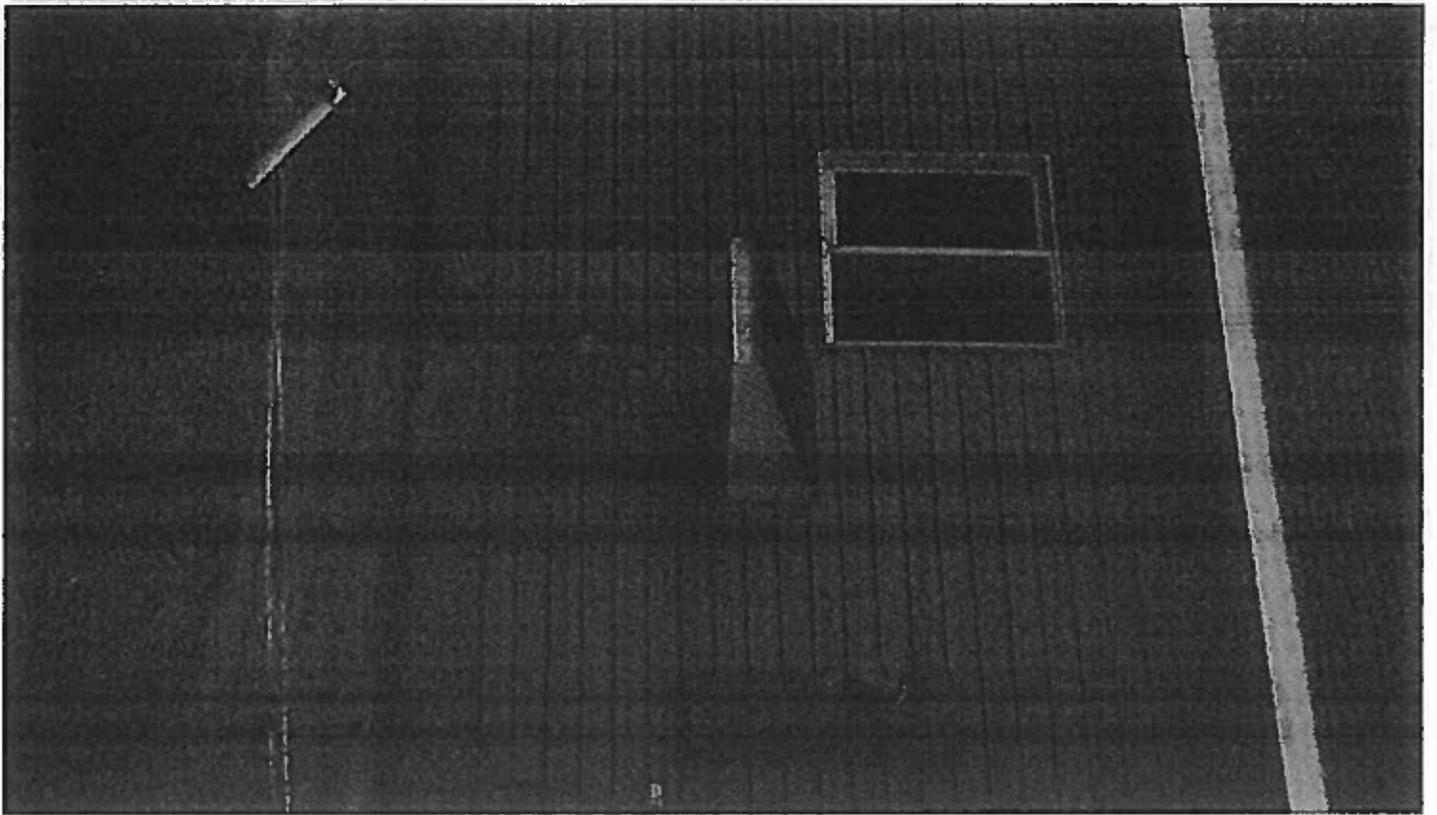
Gas Meter on South East side of new home built this summer.



2277 Hendricks Circle, Gas Placement on North Side of home, away from wind and drifts. Gutters to be installed in two weeks



2277 Hendricks Circle, Gas Placement on North Side of home, away from wind and drifts that come from SE. Gutters to be installed in two weeks





**PART 192 – TRANSPORTATION OF NATURAL AND OTHER GAS BY  
PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS**

**Subpart H–Customer Meters, Service  
Regulators, and Service Lines**

**§192.351 Scope.**

This subpart prescribes minimum requirements for installing customer meters, service regulators, service lines, service line valves, and service line connections to mains.

[Part 192 - Org., Aug. 19, 1970]

**§192.353 Customer meters and regula-  
tors: Location.**

(a) Each meter and service regulator, whether inside or outside a building, must be installed in a readily accessible location and be protected from corrosion and other damage, including, if installed outside a building, vehicular damage that may be anticipated. However, the upstream regulator in a series may be buried.

(b) Each service regulator installed within a building must be located as near as practical to the point of service line entrance.

(c) Each meter installed within a building must be located in a ventilated place and not less than 3 feet (914 millimeters) from any source of ignition or any source of heat which might damage the meter.

(d) Where feasible, the upstream regulator in a series must be located outside the building, unless it is located in a separate metering or regulating building.

[Part 192 - Org., Aug. 19, 1970, as amended by Amdt. 192-85, 63 FR 37500, July 13, 1998; Amdt. 192-93, 68 FR 53895, Sept. 15, 2003]

**§192.355 Customer meters and regula-  
tors: Protection from damage.**

(a) Protection from vacuum or back pressure. If the customer's equipment might create either a vacuum or a back pressure, a device must be installed to protect the system.

(b) Service regulator vents and relief vents. Service regulator vents and relief vents must terminate outdoors, and the outdoor terminal must:

(1) Be rain and insect resistant;

(2) Be located at a place where gas from the vent can escape freely into the atmosphere and away from any opening into the building; and,

(3) Be protected from damage caused by submergence in areas where flooding may occur.

(c) Pits and vaults. Each pit or vault that houses a customer meter or regulator at a place where vehicular traffic is anticipated, must be able to support that traffic.

[Part 192 - Org., Aug. 19, 1970, as amended by Amdt. 192-58, 53 FR 1633, Jan. 21, 1988]

**§192.357 Customer meters and regula-  
tors: Installation.**

(a) Each meter and each regulator must be installed so as to minimize anticipated stresses upon the connecting piping and the meter.

(b) When close all-thread nipples are used, the wall thickness remaining after the threads are cut must meet the minimum wall thickness requirements of this part.

(c) Connections made of lead or other easily damaged material may not be used in the installation of meters or regulators.

**409.2 Meter valve.** Every meter shall be equipped with a shutoff valve located on the supply side of the meter.

**409.3 Shutoff valves for multiple-house line systems.** Where a single meter is used to supply gas to more than one building or tenant, a separate shutoff valve shall be provided for each building or tenant.

**409.3.1 Multiple tenant buildings.** In multiple tenant buildings, where a common *pipng* system is installed to supply other than one- and two-family dwellings, shutoff valves shall be provided for each tenant. Each tenant shall have access to the shutoff valve serving that tenant's space.

**409.3.2 Individual buildings.** In a common system serving more than one building, shutoff valves shall be installed outdoors at each building.

**409.3.3 Identification of shutoff valves.** Each house line shutoff valve shall be plainly marked with an identification tag attached by the installer so that the *pipng* systems supplied by such valves are readily identified.

**409.4 MP regulator valves.** A *listed* shutoff valve shall be installed immediately ahead of each MP regulator.

**409.5 Appliance shutoff valve.** Each *appliance* shall be provided with a shutoff valve in accordance with Section 409.5.1, 409.5.2 or 409.5.3.

**409.5.1 Located within same room.** The shutoff valve shall be located in the same room as the *appliance*. The shutoff valve shall be within 6 feet (1829 mm) of the *appliance*, and shall be installed upstream of the union, connector or quick disconnect device it serves. Such shutoff valves shall be provided with *access*. *Appliance* shutoff valves located in the firebox of a *fireplace* shall be installed in accordance with the *appliance* manufacturer's instructions.

**409.5.2 Vented decorative appliances and room heaters.** Shutoff valves for vented decorative appliances, room heaters and decorative appliances for installation in vented *fireplaces* shall be permitted to be installed in an area remote from the appliances where such valves are provided with ready *access*. Such valves shall be permanently identified and shall serve no other *appliance*. The *pipng* from the shutoff valve to within 6 feet (1829 mm) of the *appliance* shall be designed, sized and installed in accordance with Sections 401 through 408.

**409.5.3 Located at manifold.** Where the *appliance* shutoff valve is installed at a manifold, such shutoff valve shall be located within 50 feet (15 240 mm) of the *appliance* served and shall be readily accessible and permanently identified. The *pipng* from the manifold to within 6 feet (1829 mm) of the *appliance* shall be designed, sized and installed in accordance with Sections 401 through 408.

**409.6 Shutoff valve for laboratories.** Where provided with two or more fuel gas outlets, including table-, bench- and hood-mounted outlets, each laboratory space in educational, research, commercial and industrial occupancies shall be provided with a single dedicated shutoff valve through which all such gas outlets shall be supplied. The dedicated shutoff valve shall be readily accessible, located within the labora-

tory space served, located adjacent to the egress door from the space and shall be identified by approved signage stating "Gas Shutoff."

## SECTION 410 (IFGC) FLOW CONTROLS

**410.1 Pressure regulators.** A line pressure regulator shall be installed where the *appliance* is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be *listed* as complying with ANSI Z21.80. *Access* shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be *approved* for outdoor installation.

**410.2 MP regulators.** MP pressure regulators shall comply with the following:

1. The MP regulator shall be *approved* and shall be suitable for the inlet and outlet gas pressures for the application.
2. The MP regulator shall maintain a reduced outlet pressure under lockup (no-flow) conditions.
3. The capacity of the MP regulator, determined by published ratings of its manufacturer, shall be adequate to supply the *appliances* served.
4. The MP pressure regulator shall be provided with *access*. Where located indoors, the regulator shall be vented to the outdoors or shall be equipped with a leak-limiting device, in either case complying with Section 410.3.
5. A tee fitting with one opening capped or plugged shall be installed between the MP regulator and its upstream shutoff valve. Such tee fitting shall be positioned to allow connection of a pressure-measuring instrument and to serve as a sediment trap.
6. A tee fitting with one opening capped or plugged shall be installed not less than 10 pipe diameters downstream of the MP regulator outlet. Such tee fitting shall be positioned to allow connection of a pressure-measuring instrument.

**410.3 Venting of regulators.** Pressure regulators that require a vent shall be vented directly to the outdoors. The vent shall be designed to prevent the entry of insects, water and foreign objects.

**Exception:** A vent to the outdoors is not required for regulators equipped with and *labeled* for utilization with an *approved* vent-limiting device installed in accordance with the manufacturer's instructions.

**410.3.1 Vent pipng.** Vent *pipng* for relief vents and breather vents shall be constructed of materials allowed for gas *pipng* in accordance with Section 403. Vent *pipng* shall be not smaller than the vent connection on the pressure regulating device. Vent *pipng* serving relief vents and combination relief and breather vents shall be run independently to the outdoors and shall serve only a single device vent. Vent *pipng* serving only breather vents is permitted to be connected in a manifold arrangement

## IGC PROCEDURES

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DATE: 01/31/05

**TITLE: Siting Service Lines and Meter Sets**

NUMBER: 4017

[REFERENCES](#) | [PURPOSE](#) | [SCOPE](#) | [GENERAL](#) | [RESPONSIBILITY](#) |  
[STANDARDS](#) | [SERVICE LOCATIONS](#) | [METER LOCATIONS](#) | [EXAMPLES](#)

### REFERENCES

#### *Regulations*

IGC General Service Provisions  
49 CFR 192, 351, 353, 355, 357

#### *Policy*

501 Gas Delivery Pressure

#### *Procedures*

4019 Curb and Other Property Line Valves  
4015 Upstream Regulation of High Pressure Service Lines (Farm Taps)  
4016 Roof Top Distribution System  
9375 Service Line Installations  
4026 P.E. Plastic Pipe System Design and Installation

### PURPOSE

Provide proper guidelines for determining service line, meter set, and riser locations and routes for the service line that are acceptable and safe under the General Service Provisions and applicable safety, building codes and operating policies.

## **SCOPE**

Applies to all Company personnel assigned the responsibility of selecting service line routes and meter locations.

## **GENERAL**

Service lines will be installed at the minimum total length necessary to conform with Company requirements regarding meter set locations.

The criteria for service lines to be installed in conjunction with new mains is contained in Procedure 9371 Plant Additions-Revenue.

When a service line cannot be located according to the requirements of this Procedure, contact the Operations/Division/District Manager for instructions.

As described in Section A, Paragraph 12.9 of the General Service Provisions, a second service line will be installed for a customer only when the second location is justified and more than fifty (50) feet from the existing service line. See also 4016, Rooftop Distribution Systems, and 9375, Service Line Installation.

Meter sets will be located along the wall of the structure least susceptible to future building, fencing or

other additions. Residential meter sets will not be located in the rear of the dwelling, unless circumstances are such that the rear of the dwelling is the most feasible and desirable location available

(townhouses, alley distribution system, etc.). When a Service Line application shows a rear meter location, an explanation of the conditions requiring such a location must be included on the 512-A. This explanation will be reviewed and accepted by the Marketing Manager and submitted to the Regional/Division/District Manager for approval prior to installation of the service line.

## **RESPONSIBILITY**

The Operations Managers are responsible for the administration of this Procedure.

# STANDARDS

## A. Selecting Service Locations

1. Precautions to take regarding service locations
  - a. When possible, select a termination location for the service line that is at least twelve inches (12") from other underground facilities. If it is a joint trench service line, ensure that the service is installed according to joint trench specifications.
  - b. Do not run plastic systems within the influencing area of any system that radiates temperatures above 100° F. If there is a concern that this may occur, contact General Office Engineering for necessary calculations.
2. When paralleling a foundation for more than five (5) feet, select a location for the service line at least three (3) feet from the foundation, whenever possible. If a basement has been excavated, and there could be excessive soil settling, the service should be run outside of the disturbed soil area.
3. Whenever paralleling a sidewalk or retaining wall and if possible, select a location at least one (1) foot from the sidewalk and three (3) feet from the retaining wall, when possible.
4. Select service line locations so that adjacent private property is not crossed unless a properly executed right-of-way agreement is obtained.
5. Whenever possible, avoid selecting line locations where the service will pass under concrete slabs, carports or through retaining walls. Avoid periodic maintenance areas over septic tanks, oil and gasoline tanks etc.
6. Whenever possible install service line locations so that the service line will run in a straight line from the stub or tee to the service line riser location.
7. Consider possible future additions to the property and locate the service so that it will not be built over or have the meter location fenced in at a later date.
8. Any service lines running under a building will be encased. The casing will be sealed and vented to the outside at the point where it enters the building. Service lines will not be installed under a building without Operations Manager approval.

## C. Riser and Meter Set Locations

2. Position the riser and meter set in a readily accessible location. The meter and meter stop must be easily accessed in case of emergencies and for routine maintenance and meter reading.
3. When possible, select a location outside an area that is, or may be fenced.

4. The meter shall be located at the point on the structure:
  - a. As close to stub or main as possible.
  - b. Protected by gutter or eave line if possible.
  - c. On the gable end if possible.
  - d. If main line is in the front of the structure; place riser as close as possible to the front of the structure; however, the service riser and meter shall be located at least 18" horizontally from an electrical meter. (See Example 1) (Most common distance is four (4) feet.)
  - e. If main line is behind the house; place the riser at the closest point in the back of the structure maintaining the 18" horizontal distance from the electrical meter or service panel.
5. Manifolds shall be located in the same manner as single meters and allow for the required width for the number and size of the meters. If a stack manifold is required, the upper portion shall be secured to the structure during installation.
6. When the meter and service regulator will be installed outside the building, select location of service line riser to meet the following:
  - a. Service line riser will be located a minimum of twelve inches (12") from the building and protected from anticipated traffic, possible flooding and other sources of damage.

Where a main customer valve is used, an additional 3" to 4" shall be needed for house line installation. Large meter sets shall be sited as needed for clearance.
  - b. Do not locate under or in front of windows or other building openings which may be used as emergency fire exits or under interior or exterior stairways.
  - c. When the service line riser is on the driveway side of a dwelling, at least three (3) feet of spacing between the driveway and the building is necessary. Additional protection will be provided, such as a meter guard. (See Example 5)
  - d. Where a service line riser is likely to be set in paving of any kind, a short piece of two inch (2") or larger P.E. pipe will be used to sleeve the pipe at ground level.
  - e. When a meter is set outside a school, a permanently locked fence or enclosure may be provided by the Company.
  - f. IGC will provide protection for meter sets when required.
  - g. When locating a riser for a large meter set, adequate space and access shall be provided to allow for normal maintenance and testing.
7. Select location for service line and service line riser and meter set for large commercial and industrial services to meet the following additional requirements:

- a. When the service line will parallel the foundation, a minimum of five (5) feet clearance from the building will be maintained.
  - b. The meter will not be located directly underneath and will have at least three (3) feet minimum horizontal clearance from an electric panel, air intake or any equipment that could possibly be a source of ignition.
  - c. Space requirements for large meter sets will be determined from the meter set design. See specified or standard meter set drawings.
  - d. When meters are set outside a school, a permanent locked fence or enclosure may be provided by the Company.
  - e. When meters are set outside a church and extra security is necessary, a permanent locked fence or enclosure, with IGC access, is to be provided by the customer.
8. When the meter and service regulator will be set inside the building, the location for the service line riser will meet the following requirements:
6. NOTE: Written approval must be obtained from the Operations Manager for any inside meter set. That approval must be attached to the asbuilt drawing on Form 512-A or 319.
- . The service line riser, meter stop and service line entrance into the building will be as near as practicable to the meter and regulator location.
    - a. When possible, the service line riser and meter stop will be above ground outside the building and the entrance of the service line into the building will be above ground with a readily accessible outside shut-off valve.
    - b. Any service entrance into the building below ground will incorporate an outside curbvalve and will be cased and the casing sealed at the points the service line enters and exits the casing. The casing must be vented to the outside atmosphere.
    - c. All regulators located inside a building must be located in a ventilated area and not less than three feet from any source of ignition or heat which could damage the meter. All inside regulators will be vented separately to the outside of the structure and installed to prevent water buildup and entry of insects and debris.
    - d. A meter and regulator installed in a recessed opening is considered an outside meter set if the following conditions are met:
      - v. The recess has an exterior wall
      - vi. The service line enters the recess above ground (over the sill)
      - vii. The recess is lined with fireproof and vapor-proof material
8. Any service line riser cannot be located to meet the requirements of this Procedure shall be referred to the Operations/District Manager.

NOTE: IGC will provide protective steel posts for the meter set, when required, where no protection is provided by the customer. Adequate meter protection consists of either the company approved meter guard, (Example 5) a two inch (2") or four inch (4") diameter post, or a permanent protective wall.

9. No meter or service regulator will be located in a pit or vault. Contact the Operations Manager for alternative locations.

10. When services and meters are on a rooftop system, see Procedure 4016 Rooftop Distribution Systems, for requirements.

11. Meters installed on manufactured housing where flex connectors are utilized shall have the meter bar assembly stabilized by use of a meter bar support.

#### C. Riser and Meter Set Height

0. Standard installation height shall be achieved when the bottom of the stop equals the height of foundation. (Caution should be taken to ensure the bury line on the riser is not below future grade). (See Example 6)

1. Installation height of larger meters and meters installed on multilevel foundations shall be accomplished by determining future grade according to building specification. This may be determined by:

- a. Contacting builder
- b. Reviewing plans
- c. Future grade indicators that exist or are apparent.

#### C. Riser and Meter Height - Heavy or Deep Snow Area's

0. When heavy or deep snow conditions exist, a higher aspect meter set that exceeds the height of a standard installation should be a consideration. (See Example 4)

1. In deep snow areas, snow sliding off the roof should also be considered a damaging force. Snow shields shall be installed if necessary.

2. If a safe meter location can not be identified on a home or building, an engineered structure that allows adequate ventilation and is designed to meet the potential snow load can be used to protect the meter and must be in place prior to service being activated.

3. If an engineered structure for meter protection is used, an engineer's signature will be needed approving the structure's design and ability to protect the meter from snow and ice. (See Example # 7 Approval of Engineered Design for Meter Protection.) This approval shall be signed and added to the asbuilt and added to Scanned Images with the asbuilt

#### D. Regulator Venting Requirements

0. Regulators shall be installed vertically with the vent pointed downward

1. Regulators that cannot be installed with vent pointed downward shall have additional vent piping installed to ensure downward venting

2. Vents will be screened or have caps installed to prevent entry of water, insects, debris, or foreign objects

3. In high snow aspect areas vents will be extended to above the anticipated snow level
4. Extended vent piping will be placed in such a position to prevent entry of water, insects, debris, or foreign objects and protected from heavy snow or water run off
5. Vent piping will be sized according to the size of the vent opening on the regulator
6. Vent piping will be secured as necessary
7. If a meter set is located within three (3) feet of any air intake which is permanently opened into a structure, the regulator will be vented remotely from the area. Note: Windows, whether operable or non-operable, are not considered an air intake.
8. Meter locations protected under roof valleys and eaves where run off due to rain and snow may affect the regulator vent shall have the regulator vent piping extended to a protected location
9. All inside regulators shall be vented separately to the outside of the structure and installed to prevent water buildup and entry of insects and debris

#### E. Meter Stop Valve Installation and Replacements

0. Service riser applications sized ¾" through 2" (single meter and manifolds) operating at 60 psig or less shall use a valve stop with an insulating union incorporated in the body of the stop
  1. Greater than 60 psig operating pressure - High pressure installations shall require
    - a. Non insulated stop.
    - b. Insulation shall be obtained by one of the following:
      - i. Insulating union downstream of the secondary pressure regulator
      - ii. Flange gasket insulators at the flanges (2) of a flanged by-pass riser
  2. Maintenance - In the course of performing maintenance to resolve leaking spuds or to remediate cathodic protection issues at the meter set assembly, the following actions should be performed where applicable:
    - . Replace a non-insulated valve stop with an insulated valve stop,
      - a. Replace meter loop assembly with a pre fabricated meter loop incorporating a customer valve in the meter loop and non-insulated spuds.
      - b. Replace a non-insulated valve stop with an insulated valve stop without a pre fabricated meter loop when alignment with existing house piping is not feasible.

## **EXAMPLES**

EXAMPLE 1

Distance from Electrical Meter

EXAMPLE 2

Flex Riser

EXAMPLE 3

Support Assembly

EXAMPLE 4

High Aspect Riser

EXAMPLE 5

Meter Guard

EXAMPLE 6

Standard Meter Installation

EXAMPLE 7

Approval of Engineered Design for Meter Protection

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