

Through Penetrations

Misc. Mechanical

7000 Series

Gypsum

WL

System No. W-L-7196
July 12, 2010
F Ratings – 1 and 2 Hr (See Item 1)
T Rating – 0 Hr

SECTION A-A

1. **Wall Assembly** – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board*** – Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Diam of opening to be max 2 in. (51 mm) larger than OD of steel duct (Item 2). Max diam of opening is 14 in. (356 mm).

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Steel Duct** – Nom 12 in. (305 mm) diam (or smaller) No. 26 gauge (or heavier) spiral wound or long seam galv steel duct. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. Annular space between duct and periphery of opening to be min 0 in. (point contact) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of the wall assembly.

3. **Fill, Void or Cavity Material*** – **Sealant** – Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. (6 mm) diam bead of fill material applied at steel duct/gypsum board interface on both surfaces of wall.

3M COMPANY
3M FIRE PROTECTION PRODUCTS – IC 15WB+, CP 25WB+ or FB-3000 WT sealant

*Bearing the UL Classification Mark

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3M Fire Protection Products
www.3m.com/firestop

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Product Support Line
1-800-328-1687

3M

Fire Protection Products

ENGINEERING JUDGMENT FOR:

8/23/2017

Rane Certain

3M FPP Manufacturers Agent

11700 Mukilteo Spdwy, Ste 201

Mukilteo, WA 98275

Project: King & Parks Multi Family

Fire Stopping Category: Pen Seals / Misc Mechanical

Penetrating Item: Duct: Penetrant Shape : Round

Space Between Penetrants: Single Penetrating Item

Contractor: Wall Construction

Hourly Rating Requested/ Type: 1 and 2 Hour / F

Opening Size: Circle: Diameter : 10 inch

Annular Space: Min: 0 inch Max: 2 inch

Special Conditions: Max 4 in. and 6 in. round steel 28 ga ducts penetrating gypsum shaft walls. Interior walls are 2 in. x 6 in. studs 24 in. on center with a single layer of gypsum each side and exterior walls are 2 in. x 6 in. studs 24 in. on center with double layer of gypsum both sides.

Application Details: To firestop this application, install in accordance with UL System W-L-7196 with the following modifications/clarifications:

1. Install sealant into the annular space full depth of the gypsum on both sides of the assembly. Sealant to be tooled flush with the face of the wall on both sides of the assembly.
2. Install an additional ½ in. depth of sealant at the duct/wall interface on both sides of the assembly.
3. Due to the thinner gauge duct, the obtainable rating is reduced to "Up to 1 or 2 hours or as long as the duct remains fully intact in a fire scenario."

Note: If the ducts are dampered, this Engineering Judgment is null and void. Dampered ducts must be fire stopped per damper manufacturer's installation instructions. The ducts must be constructed to IMC and/or SMACNA guidelines for gauge, construction, and support.

3M Fire Barrier Material: CP 25WB+ Sealant, FB 3000WT Silicone Sealant

Based On: W-L-7196

This Engineering Judgment (EJ) is based upon the sole and exclusive use of 3M brand Fire Protection Products as described within. Modification of any of the parameters of this EJ, including, without limitation, the use of non-3M brand Fire Protection Products, shall render this EJ null and void. The firestop design is expected to achieve the hourly rating indicated above. This engineering judgment is based on performance results obtained in testing with independent laboratories and / or internal 3M fire tests, which have been tested in accordance to ASTM E 814 (UL 1479).

Engineering Judgment Prepared By:

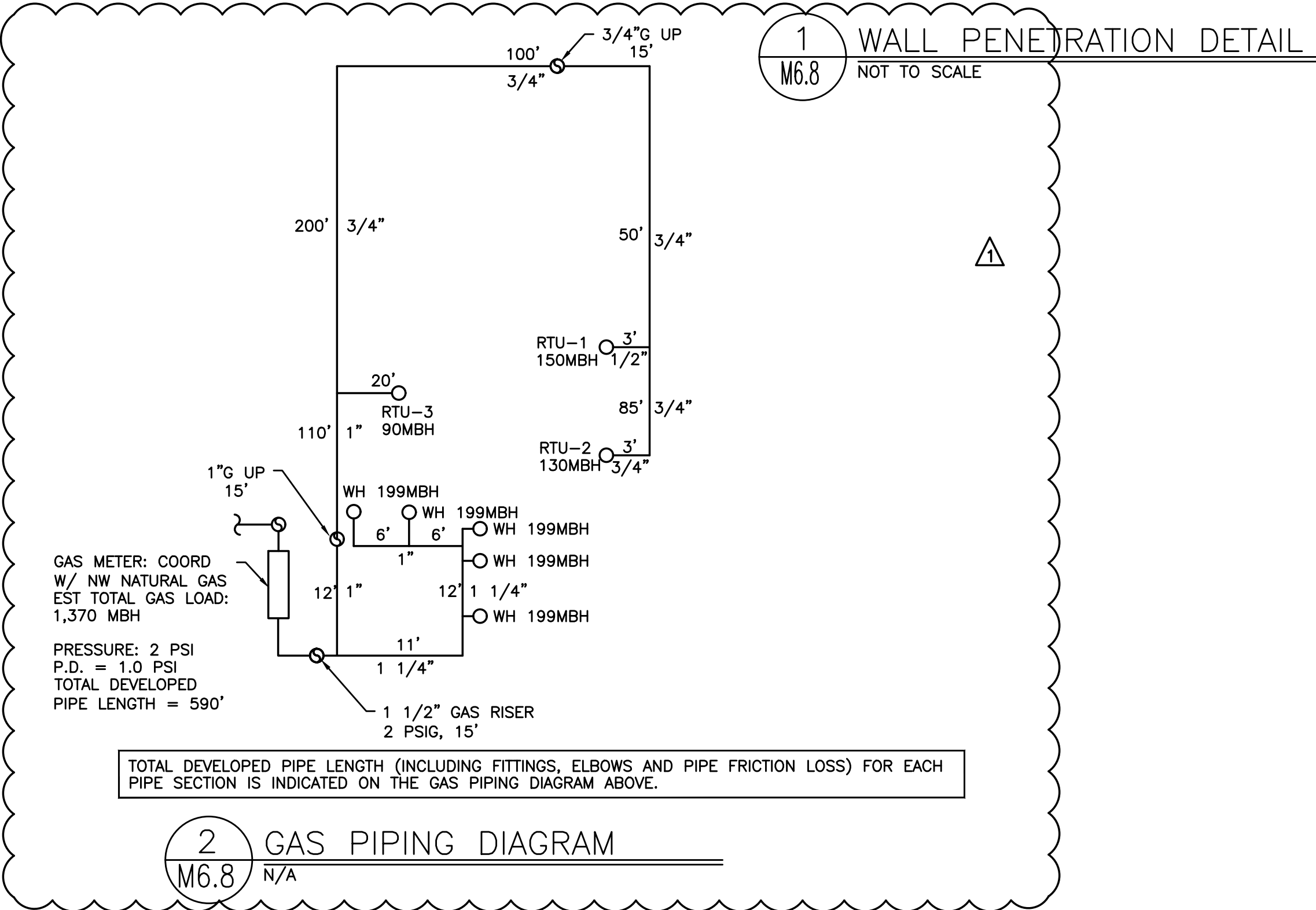
Reviewed By:

Anthony Kilmer
Technical Service Representative

585412
Rev. 1 AEK 9-5-17: Modified per field conditions
cc: Rane Certain
Email: ranecertain@gmail.com

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KING+PARKS MULTI-FAMILY RESIDENCES

PROJECT SITE: NE Martin Luther King Jr. Boulevard & N Rosa Parks Way
OWNER: Portland Community Reinvestment Initiatives Inc. (PCRI)
6329 NE Martin Luther King Jr. Blvd. Portland, Oregon 97211

PROJECT NO. 16-0602
ISSUE DATE 11.15.2017

REVISIONS
PLAN CHECK RESPONSE 07.15.2018

SHEET

MECHANICAL
DETAILS

M6.8

PERMIT SET

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