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**DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION**  
**Section: 07 81 33 – Mineral-Fiber Fireproofing**

**REPORT HOLDER:**

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**REPORT SUBJECT:**

**DuraDuct KEX Prefabricated Grease Duct Enclosure System**

### 1.0 SCOPE OF EVALUATION

This Research Report addresses compliance with the following Codes:

- 2018, 2015, 2012, and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012, and 2009 *International Mechanical Code*® (IMC)

The DuraDuct KEX grease duct enclosure system has been evaluated for the following properties:

- Durability
- Fire Resistance
- Non-combustibility
- Surface Burning Characteristics
- Mechanical Strength
- Leakage

NOTE: This report references 2018 Code sections. Earlier versions of the code may have different section numbers.

### 2.0 USES

The DuraDuct KEX prefabricated grease duct system is a zero-clearance, fire resistance rated grease duct enclosure assembly serving Type I kitchen hoods. The system described in this report is an alternative to the factory-built grease duct assemblies specified in IMC Section 506.3.11 and satisfies the requirements for a two-hour fire resistance rating. The system may be used in plenums in accordance with IMC Section 602.2.1.

### 3.0 DESCRIPTION

#### 3.1 DuraDuct KEX Duct:

The DuraDuct KEX duct consists of an inner duct of minimum 0.060 inch mild carbon steel, an outer liner of minimum number 20 gauge galvanized steel and an intervening layer of insulation. See Figure 1. The ducts are manufactured with maximum inside width of 60 inches and maximum inside height of 46 inches maximum inside cross sectional area permitted is 19.17 square feet, with maximum width to height ratio of 4:1.

#### 3.2 Duct Joints:

Duct joints consist of the duct liner flange, welded 1-1/2 by 1-1/2 by 1/8 inch angle, silicone grease-seal gasket, joint sealant or gasket, bolts to connect the flanges, packing material and a joint cover. The joints are assembled in the field using the above-noted components, supplied by DuraSystems Barriers, Inc.

#### 3.3 Access Doors:

Grease duct access doors, maximum 20 inches by 22 inches, are factory installed in the side wall of the grease duct section. See Figure 4.

### 4.0 INSTALLATION

#### 4.1 General:

The grease duct system must be installed in accordance with IMC Section 506.3, the manufacturer's instructions, Intertek Listing Report [DuraDuct KEX Grease Duct](#), and this Research Report. The DuraDuct KEX system may be installed with zero clearance between the exterior surface of the duct. The KEX duct system may be used where a grease duct enclosure is required by IMC Section 506.3.11. The system is recognized for penetrations of fire resistance rated assemblies when the construction is as described in Section 4.2 of this report.

Duct sections are connected with a self-adhering UL 1978 Grease Seal Gasket, and either a self-adhering High Temperature Gasket or UL 1978 High Temperature Sealant,



then bolting the flange assemblies together. See Figures 2 and 3.

The joints are protected with three layers of insulation and covered with a No. 18 gauge stainless steel hat channel. See Figure 5.

Ducts must be supported as described in the manufacturer's instructions and the Intertek Listing Report [DuraDuct KEX Grease Duct](#).

All the components required for construction of the duct are supplied by DuraSystems Barriers, Inc.

#### 4.2 Through-Penetrations:

**4.2.1 General:** Penetrations through minimum 4-1/2 inches thick concrete floor-ceiling assemblies complying with IBC Table 721.1(3), or minimum 4-1/2 inches thick wall assemblies complying with IBC Table 721.1(2), must be protected as described in Intertek Listing Report [DuraDuct KEX Grease Duct](#).

#### 5.0 CONDITIONS OF USE

The DuraSystems Barriers, Inc. DuraDuct KEX grease duct enclosure system described in this report complies with, or is a suitable alternative to, what is specified in those Codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** The enclosure system must be constructed and installed in accordance with this report. In the event of a conflict between this report and the manufacturer's instructions, this report governs.

**5.2** The duct sections and components are manufactured in Vaughan, Ontario, Canada, under a quality control program with inspections by Intertek Testing Services NA, Inc.

#### 6.0 SUPPORTING EVIDENCE

**6.1** Data in accordance with the ICC-ES Acceptance Criteria for Grease Duct Enclosure Assemblies: Segmented

Grease Duct Systems (AC101.2), dated June 2012.

**6.2** Testing in accordance with applicable sections of UL 1978.

**6.3** Quality documentation.

#### 7.0 IDENTIFICATION

Each DuraDuct KEX duct section is permanently marked with the following: the DuraSystems Barriers, Inc. name, the product name, the Code Compliance Research Report number (CCRR-1046) and the wording "Install and Use Only in Accordance with DuraSystems Barriers, Inc., Installation and Maintenance Instructions."

A label stating "Zero Clearance to Combustibles" shall be placed on every grease duct section and again every 5 feet. on sections longer than 5 feet. in length.

The grease duct shall also be labeled at regular intervals with the wording "FIRE-RESISTIVE ENCLOSURE, DO NOT REMOVE". This label shall be visible when installed.

Sealants used for through-penetration firestops must be labeled with the sealant manufacturer's name and the product name.

#### 8.0 OTHER CODES

This section is not applicable.

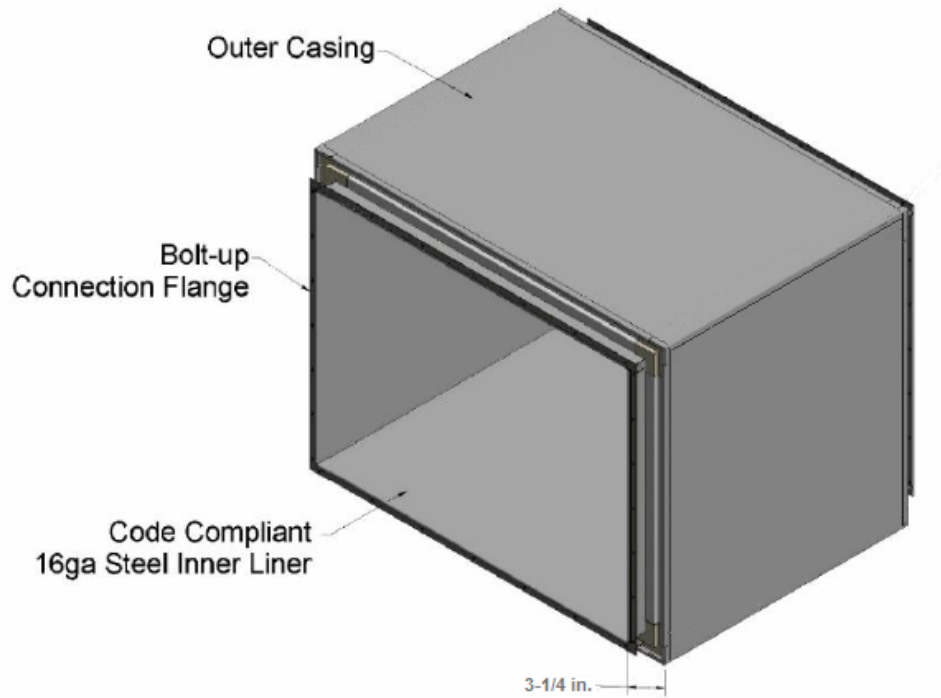
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**9.2** Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek. Reference to <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

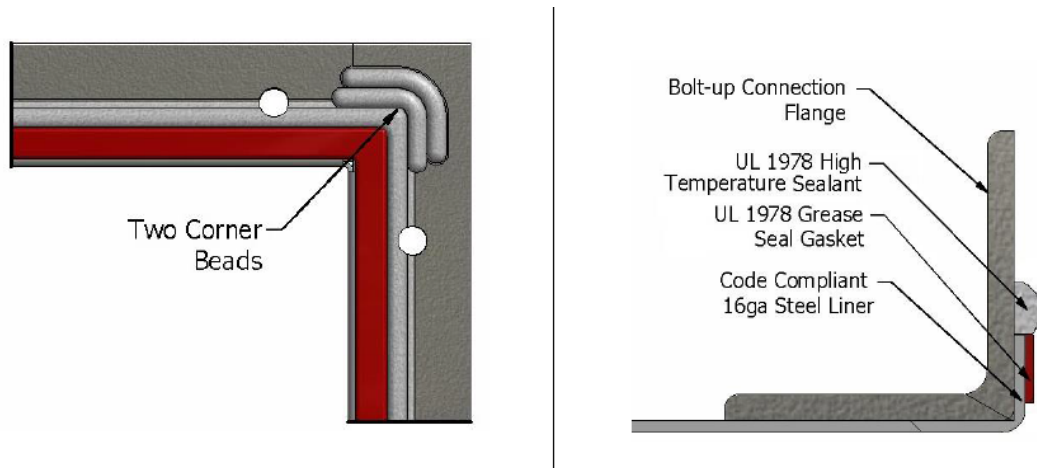
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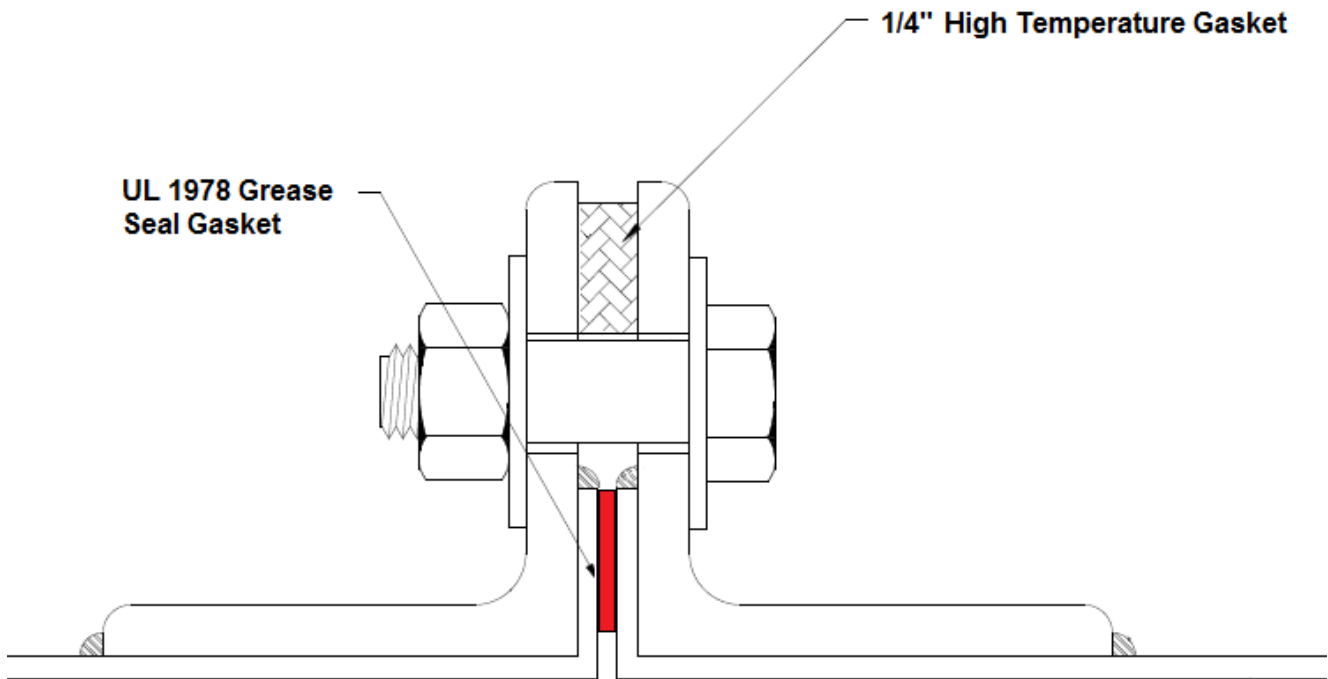


**General Construction Detail**

Figure 1 – General Construction Detail



UL 1978 Grease Seal Gasket and UL 1978 High Temperature Sealant – Option 1



UL 1978 Grease Seal Gasket and High Temperature Gasket – Option 2

Figure 2 – Typical Duct Sealing Methods

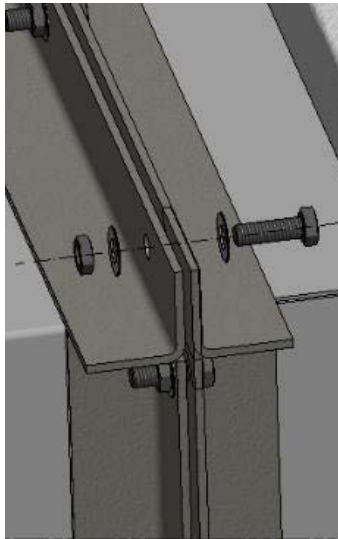


Figure 3 – Typical Duct Connection

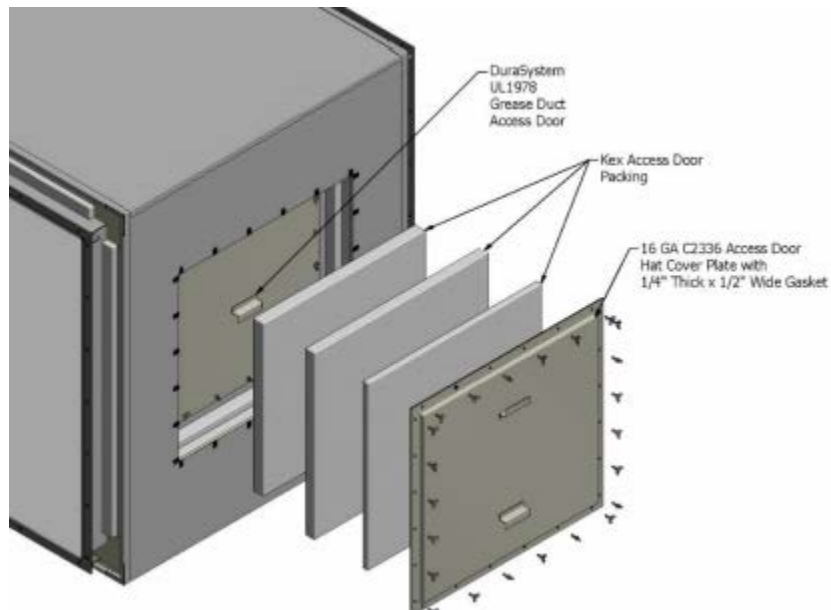


Figure 4 – Factory-installed Access Door

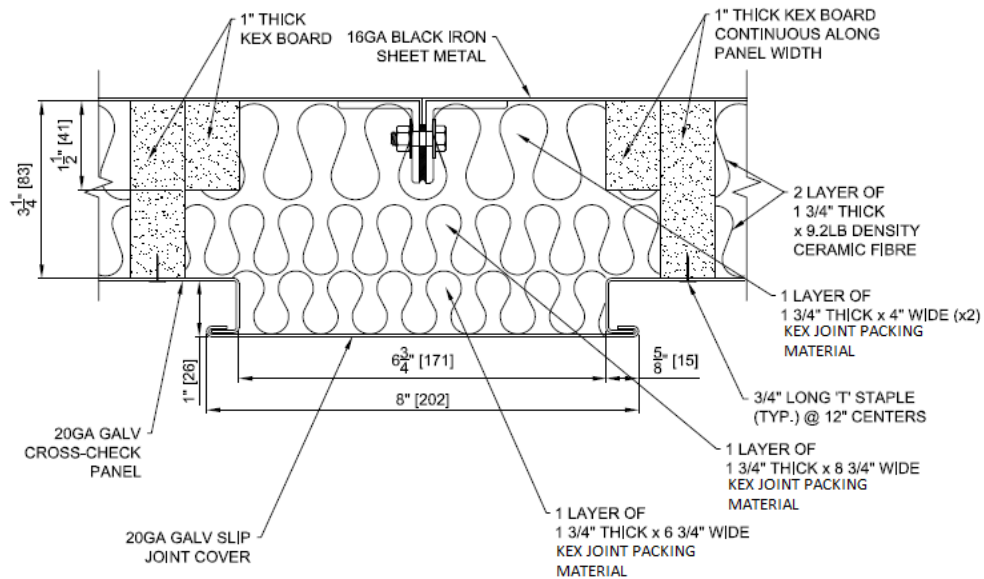


Figure 5 – Joint Protection Detail

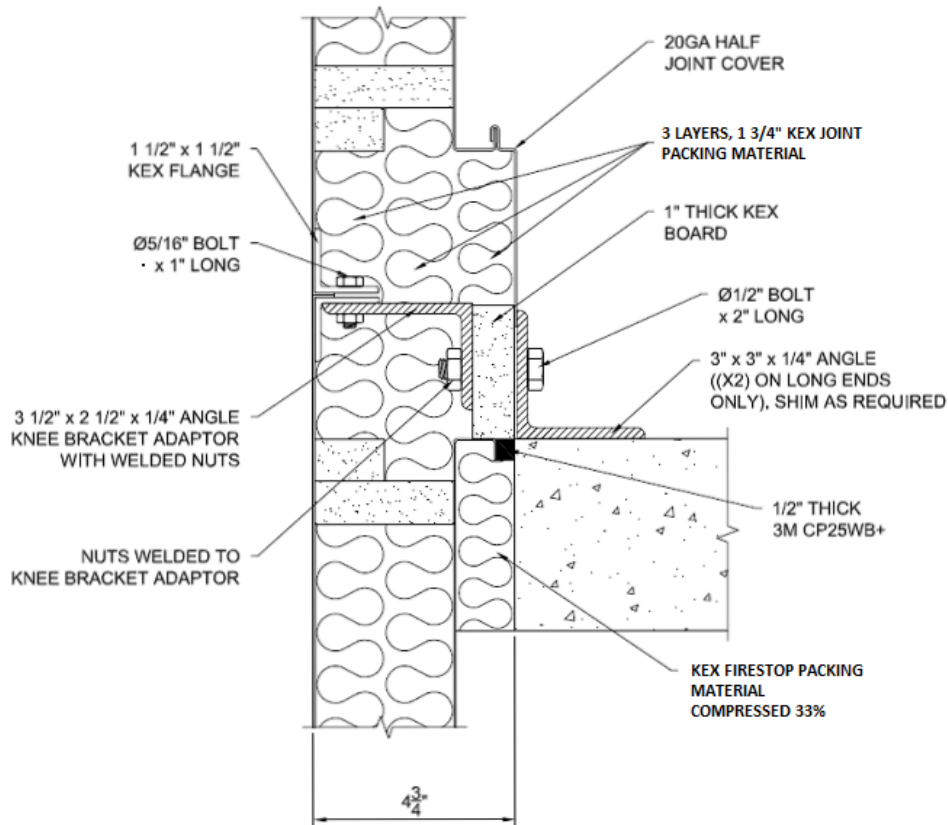


Figure 6 – Through-Penetration Details –Floor Penetration

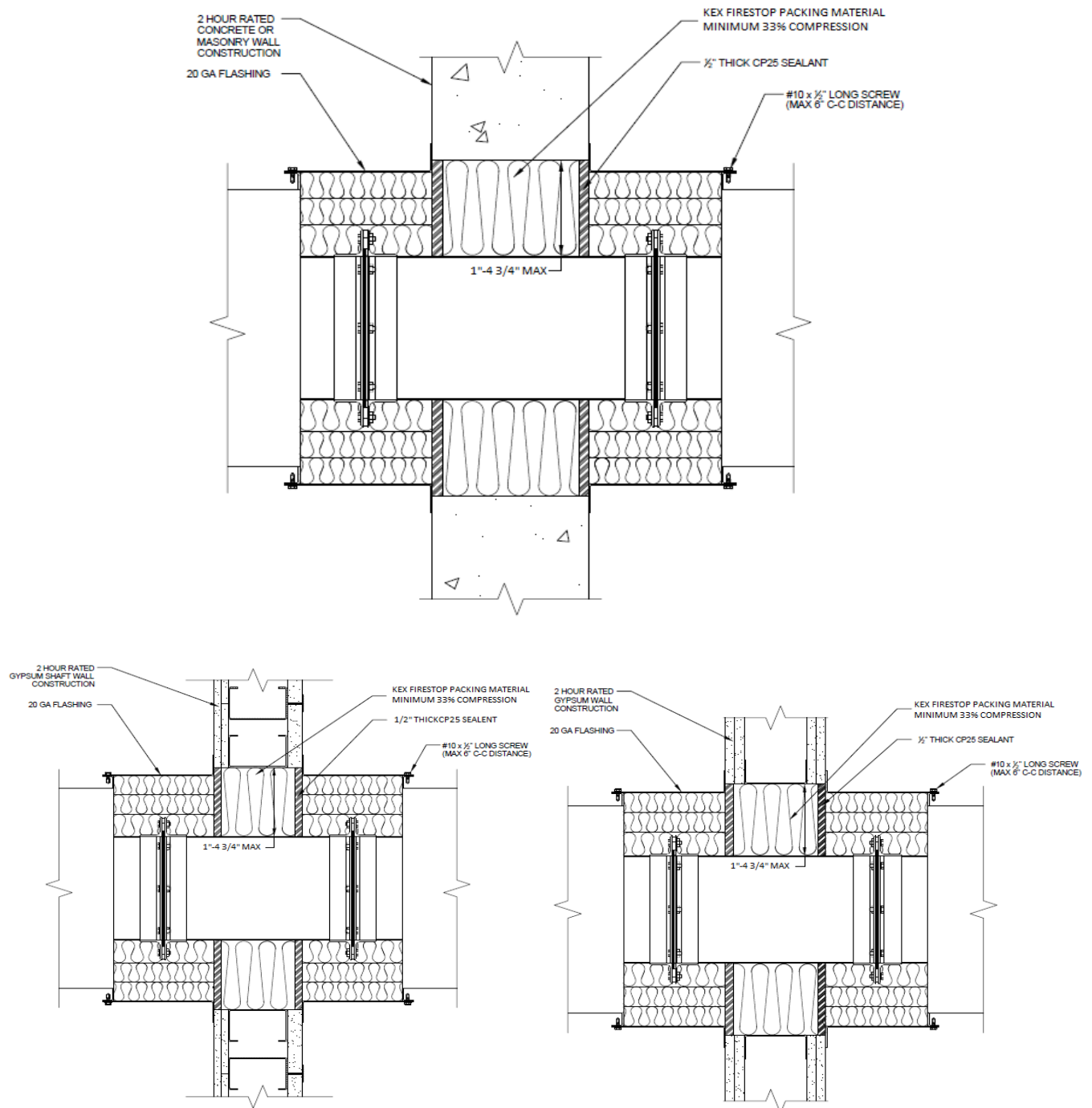


Figure 7 – Through-Penetration Details –Wall Penetrations