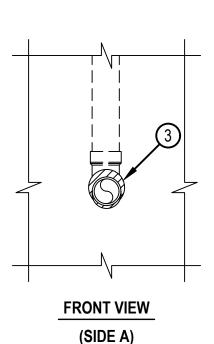
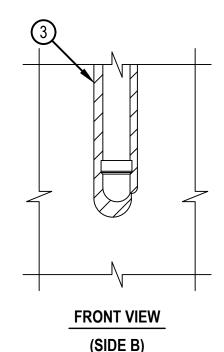
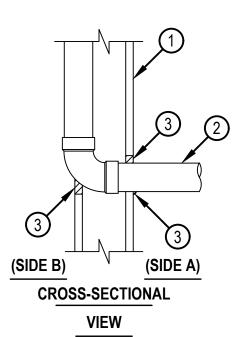


System No. W-L-1412

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 Hr	F Rating — 1Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 1Hr
	FTH Rating — 0 Hr







- 1. Wall Assembly The 1 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - A. Studs Wall framing shall consist of 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 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC.
 - B. Gypsum Board* Min 5/8 in. (16 mm) thick gypsum board. Max diam of opening shall be 3 in. (76 mm) on through penetration side. Maximum width of opening on membrane penetration is to be max 3 in. (76 mm).
- 2. Through Penetrant One nom 2 in. (51 mm) pipe to be installed concentrically or eccentrically within opening on one side of the wall. On one side of the wall the pipe is allowed to penetrate the membrane continuously in a plane parallel with the wall and the studs. The annular space between the through penetrant and the periphery of opening shall be min 0 in. (0 mm, point contact) to max 3/4 in. (19 mm). Through penetrant to be rigidly supported on the through penetration side of the wall assembly. The following types and sizes of through penetrants may be used:
 - A. Steel Pipe Nom 2 in. (51 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Conduit Nom 2 in. (51 mm) diam (or smaller) rigid steel conduit or electrical metallic tubing (EMT).
- 3. Firestop System Sealant Min 5/8 in. (16 mm) thickness of fill material applied with annulus flush with both surfaces of the wall. Additional min 1/4 in. (6 mm) diam bead of fill material applied at the penetrant/gypsum board interface on both sides of wall.

 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC FS-ONE Sealant, or FS-ONE MAX Intumescent Sealant
- * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

