System No. WW-D-0040

1. Concrete Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks*.

   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

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

   A. Steel Runners — Runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Runner to be provided with 1-1/4 in. (32 mm) flanges. Runner secured to concrete wall assembly with steel concrete fasteners spaced 12 in. (305 mm) OC.

   B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. First stud adjacent to concrete wall assembly located max 4 in. (102 mm) from wall face. Stud spacing not to exceed 24 in. (610 mm) OC.

   C. Gypsum Board* — For 1 hr assembly, one layer of 5/8 in. (16 mm) thick gypsum board is required in the individual Wall and Partition Design. For 2 hr assembly, two layers of 5/8 in. (16 mm) thick gypsum board are required in the individual Wall and Partition Design. Wall to be constructed as specified in the individual U400 Series Design in the UL Fire Resistance Directory, except that a max 3/4 in. (19 mm) gap shall be maintained between the side of gypsum board and face of concrete wall assembly. The screws attaching the gypsum board to the first stud shall be located 4 in. (102 mm) from face of concrete wall assembly. Gypsum board not attached to side runner. The hourly fire rating of the joint system is equal to the hourly rating of the gypsum wall assembly.

3. Fill, Void or Cavity Material* Sealant — Max separation between side of gypsum board and face of concrete wall assembly is 3/4 in. (19 mm). The joint system is designed to accommodate a max 17 percent compression or extension from its installed width. Min 5/8 in. (16 mm) thickness of fill material installed on each side of the wall between the side of the gypsum board and the face of the concrete wall assembly, flush with each surface of the gypsum wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S Elastomeric Firestop Sealant or CP606 Flexible Firestop Sealant. L Ratings apply only when CP606 Sealant is used.

*Bearing the UL Classification Mark

Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc.
June 26, 2008