

**W6**

**EXTERIOR BEARING & NON-BEARING WALL**

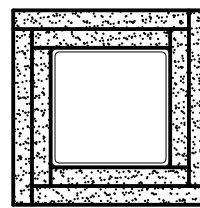
R-VALUE = 32 (R-20 Cavity + R-12 1/2 cont.)  
GA FILE NO. WP 8105 UL DESIGN NO. 314 - 1 HOUR

1. EXTERIOR SIDE: One layer 48" wide 5/8" type X gypsum sheathing applied parallel to 2 x 4 wood studs 24" o.c. with 1-3/4" galvanized roofing nails 4" o.c. at vertical joints and 7" o.c. at intermediate studs and top and bottom plates. Joints of gypsum sheathing may be left untreated. Exterior cladding to be attached through sheathing to studs.
2. INTERIOR SIDE: One layer 5/8" type X gypsum wallboard, water-resistant gypsum backing board, or gypsum veneer base applied parallel or at right angles to studs with 6d coated nails, 17/8" long, 0.0915" shank, 1/4" heads, 7" o.c.
3. Joints and Nailheads -- (Not Shown) -- Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. Fiber, Sprayed -- Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3.
5. Wood Structural Panel Sheathing (see structural design)
- 5a. 1x6 diagonal board sheathing at 3rd Floor (see structural design)
6. Exterior Insulation - 2-1/2 inch extruded polystyrene rigid insulation, with a min. R-value of 5 per inch.
7. 5/8" gypsum wallboard @ garage
8. Weather resistive barrier

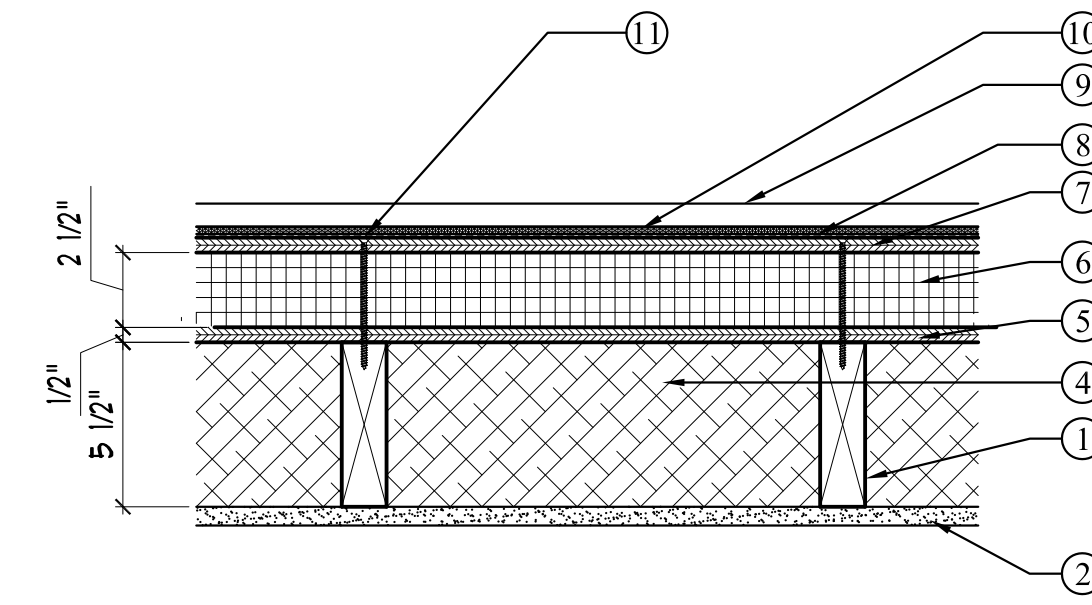
**W5**

**1 HOUR COLUMN ASSEMBLY**

GA FILE NO. CM 1450  
U.L. Design No. X526  
Ratings — 1 Hr.



Base layer 1/2" type X gypsum wallboard applied around TS4x4 tube steel column and held in place with paper masking tape. Second layer 1/2" type X gypsum wallboard applied around column and held in place with paper masking tape. Face layer either No. 24 MSG galvanized steel column cover consisting of two L-shaped sections with snaplock sheet steel joints or No. 22 MSG galvanized steel column covers consisting of two L-shaped sections with lap joints fastened with No. 8x1/2" sheet metal screws 12" o.c.



**NOTE:**  
All walls that have cellulose insulation are to have horizontal blocking the full width of the studs at 5'-0" intervals.

**W1**

**EXTERIOR BEARING & NON-BEARING WALL**

R-VALUE = 32 (R-20 Cavity + R-12 1/2 cont.)  
UL DESIGN NO. 326 - 1 HOUR

1. **Wood Studs** -- Nom 2 by 6 in. spaced 16 in. OC with two 2 by 6 in. top and one 2 by 6 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) and effectively fire stopped at top and bottom of wall.
- 1a Use 2x4 studs where shown at Stair #2
2. **Wallboard, Gypsum** -- Any UL Classified 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates attached with Type S steel screws spaced 8 in. OC, along edges of board and 12 in. OC in the field of the board.
3. **Joints and Nailheads** -- (Not Shown) -- Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. **Fiber, Sprayed** -- Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3.
5. **Wood Structural Panel Sheathing** -- Min 1/2 in. thick, 4 ft wide wood structural panels - apa rated, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 6 in. wood blocking.
- 5a. 1x6 diagonal board sheathing at 3rd Floor
6. **Exterior Insulation** -- 2-1/2 inch extruded polystyrene rigid insulation, with a min. R-value of 5 per inch.
7. **Wood Structural Panel Sheathing** -- Min 5/8" for cedar shingles 7/16" for cement fiberboard fin panels, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 6 in. wood blocking. Sheathing screwed through insulation to studs.
8. **Tyvek**
9. **Siding** --  
1. Cedar shingles  
2. Fiber cement panel system
10. **Rainscreen Matrix** - Rainscreen wall system comprised of a positively draining open matrix type pressure-moderated air space of min. 1/4 in., vented at top and bottom of the wall.
11. 4" screws @ 16" o.c. each way, minimum 1/2" embedment in wall stud

**W2**

**1 HOUR WALL ASSEMBLY - 61 STC**

DESIGN NUMBER U.L. U370  
STC RATING - 61 Sound Test: Riverbank Acoustical Laboratories, NU-Wool Company

1. **Wood Studs** -- Double row of nominal 2 x 4 in. studs, spaced 16 in. OC and cross-braced at mid-height. Opposite rows spaced 1 in. apart, staggered 8 in. OC and joined at the top and bottom with single bottom plate and double top plate.
2. **Bearing Plates** -- (not shown) Nominal 2 x 4 in. Two layers on top and one layer on bottom for each row of studs.
3. **Wallboard, Gypsum** -- 5/8 inch thick, 4 ft wide, gypsum wallboard applied horizontally (backed by 2 x 4 in. wood framing) or vertically and attached to studs and bearing plates Type S steel screws spaced 8 in. OC, along edges of board and 12 in. OC in the field of the board. When gypsum board is applied vertically, joints to be centered over studs. When gypsum board is applied horizontally, vertical butt joints to be centered over the studs and horizontal joints to be backed by 2 x 4 in. wood framing.
4. **Joints and Screwheads** -- (Not shown) -- Wallboard joints taped and both joints and nailheads covered with joint compound.
5. **Fiber, Sprayed** -- Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3.

**W3**

**CORRIDOR BEARING WALL ASSEMBLY - 1 HOUR**

GA FILE NO. WP 3240 PROPRIETARY 1 HOUR FIRE  
58 STC SOUND

Fire Test: UL R1319-93, 94, 129; 8-10-66; UL Design U311;  
Sound Test: Riverbank Acoustical Laboratories, NU-Wool Company

1. **Wood Studs** -- Nom 2 by 6 in. spaced 16 in. or 24 in. OC with two 2 by 6 in. top and one 2 by 6 in. bottom plates.
2. **Resilient Channel** -- 25 MSG galv steel resilient channels spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1/2 in. long type S-12 panhead steel screws.
3. **Insulation** -- 5 1/4" high density Fiberglass Batts
4. **Gypsum Board** -- 5/8 in. thick, 4 ft wide Type X "Sheetrock" brand wallboard, attached to wood studs with Type S steel screws spaced 8 in. OC, along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly 48 in. OC. When attached to item 2 (resilient channels), wallboard is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.
5. **Joint Tape and Compound** -- Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

**Note:**

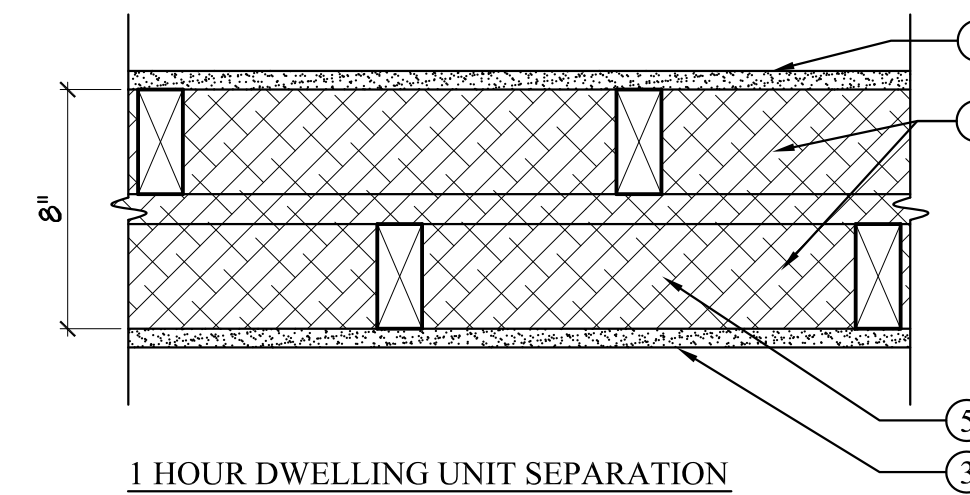
1. See reference plan on cover sheet for locations of rated stairwells and corridors
2. Rated Stairwells: Wall assembly continuous from slab on grade to underside of roof sheathing
3. Rated Corridors: Wall assembly continuous from top side of floor sheathing to underside of sheathing above

**W4**

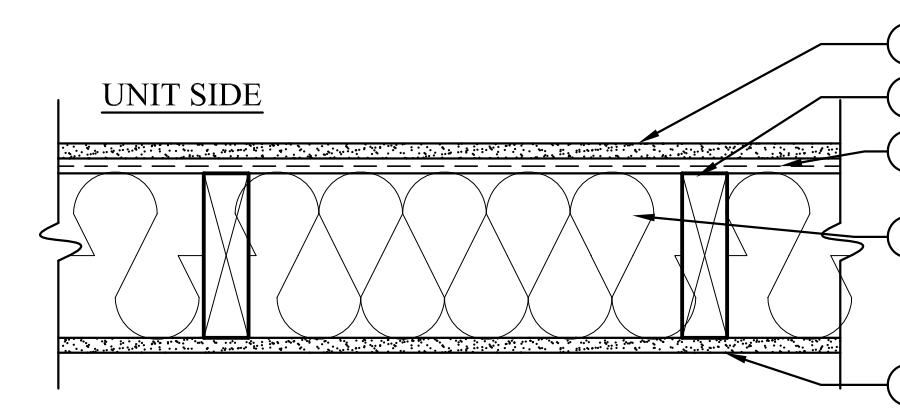
**DWELLING UNIT PARTITION WALL ASSEMBLY**

1. **Wood Studs** @ 16 in. OC or 3 5/8" metal studs with 6" studs @ plumbing walls.

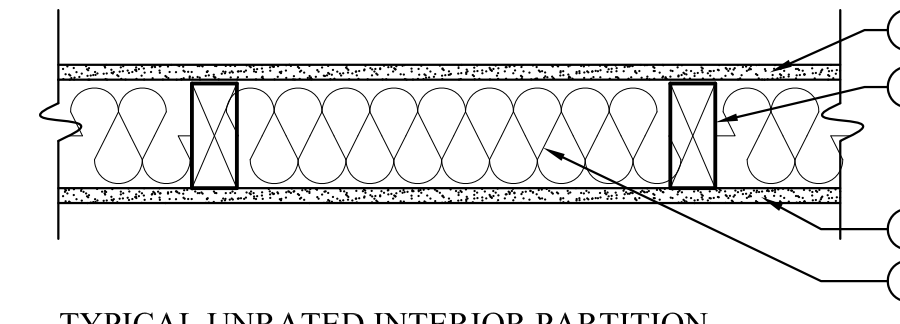
- NOTE: All plumbing wet walls shall be framed with 2 x 6 wood studs.
2. **Gypsum Board** -- 5/8 in. thick, 4 ft wide, attached to wood studs with Type S steel screws spaced 8 in. OC, along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly 48 in. OC.
  3. **Joint Tape and Compound** -- Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.
  4. **Insulation** -- 3 1/2" high density Fiberglass Batts



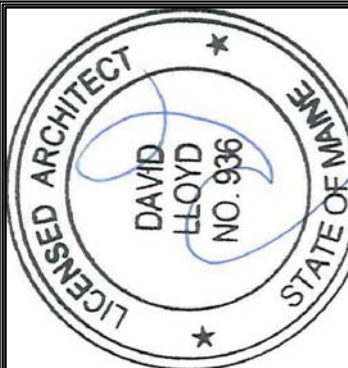
1 HOUR DWELLING UNIT SEPARATION



1 HOUR CORRIDOR/STAIRSHAFT WALL



TYPICAL UNRATED INTERIOR PARTITION



Prepared For:  
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Gorham Maine

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Revisions:

Scale: Not To Scale

Date: March 07, 2014

WALL TYPES

a4.1