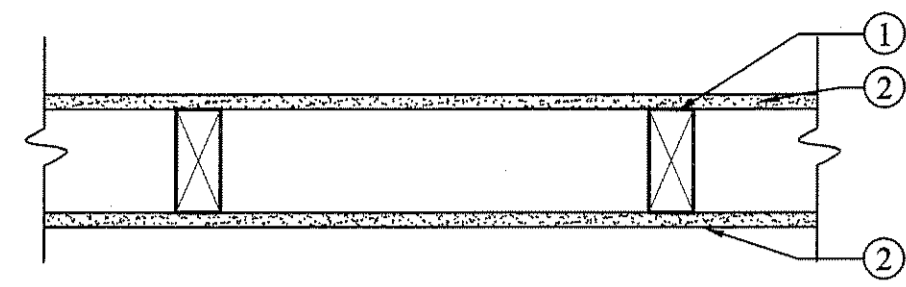
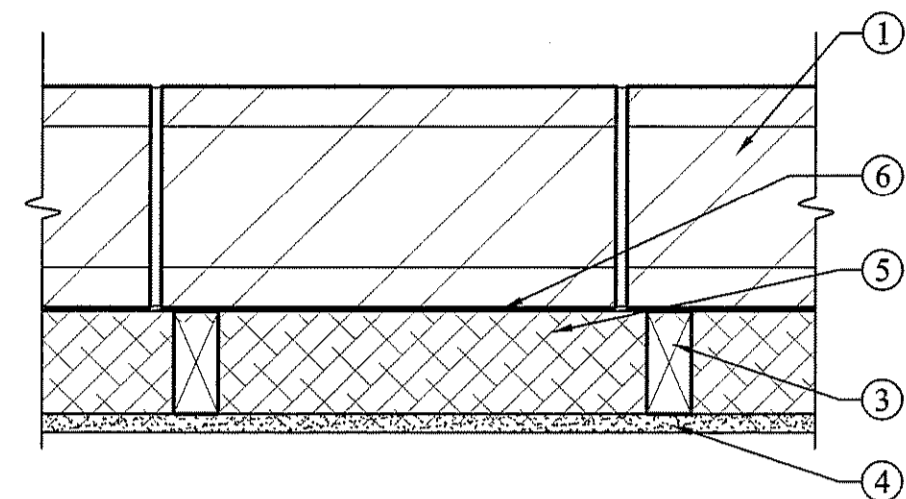


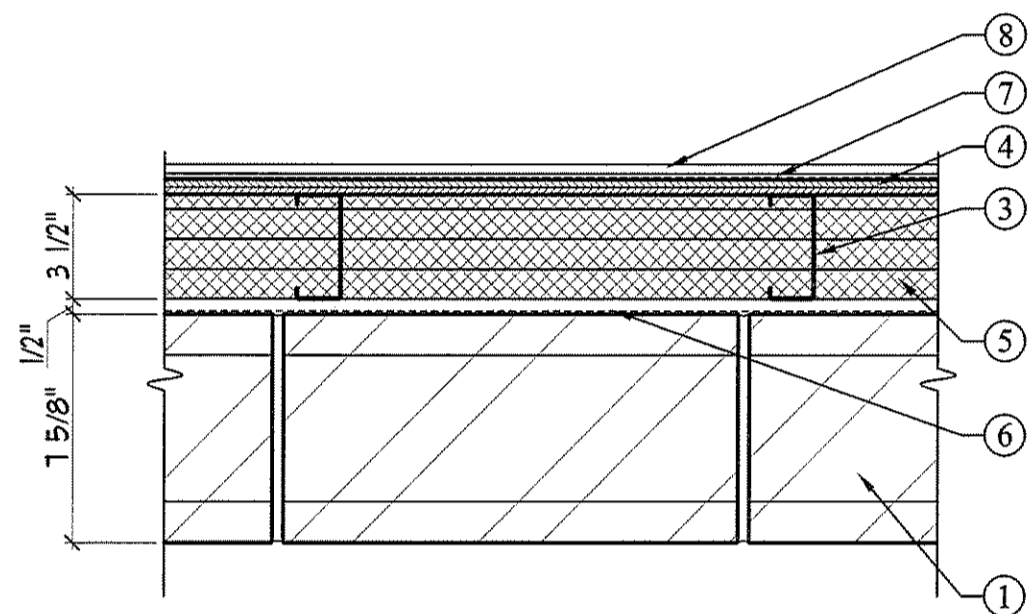
WALL TYPES



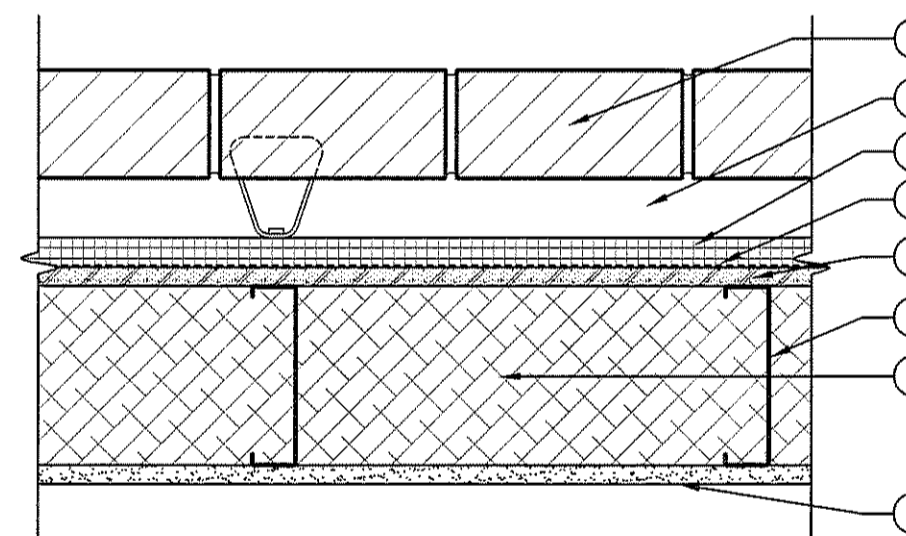
W5 TYPICAL UNRATED INTERIOR PARTITION



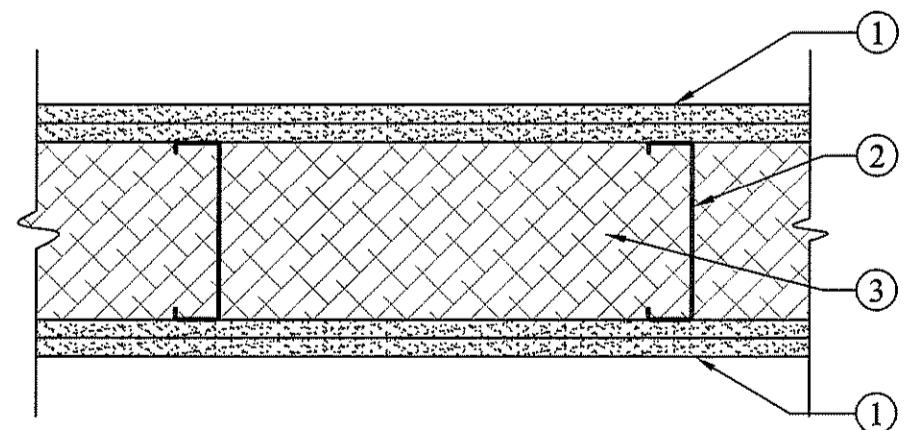
W6 2 HOUR WALL ASSEMBLY



W7 2 HOUR WALL ASSEMBLY STAIR TOWER EXT. WALL



W8 UNRATED BRICK MASONRY EXTERIOR WALL



W9 2 HOUR STEEL STUD WALL

W5 DWELLING UNIT PARTITION WALL ASSEMBLY

1. **Wood Studs** - Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. NOTE: All plumbing wet walls shall be framed with nominal 2X6 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.

W6 BEARING/NON-BEARING CMU WALL 2-HOUR DESIGN NUMBER U.L. U905

1. **Concrete Blocks** - Classification D-2 (2 hr).
2. **Mortar** - Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Wood Bearing Wall** - (ADDED) 2X4 wood stud bearing wall. 16" O.C.
4. **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.
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. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³. Insulation substitution allowed with UL Test U311, Alternate Item "4B - Fiber, Sprayed".
6. **Waterproofing** - Trowel applied asphalt emulsion waterproofing.

W7 BEARING/NON-BEARING CMU WALL 2-HOUR DESIGN NUMBER U.L. U905

1. **Concrete Blocks** - Classification D-2 (2 hr).
2. **Mortar** - Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Metal Stud Wall** - (ADDED) 3 1/2" metal stud wall.
4. **Wood Structural Panel Sheathing** - Min 7/16 in. thick, 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. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
5. **Rigid Insulation** - 3 1/2"
6. **Waterproofing** - Trowel applied asphalt emulsion waterproofing.
7. **#15 Asphalt Felt**
8. **Siding** - Cement board exterior siding with 5" exposure.

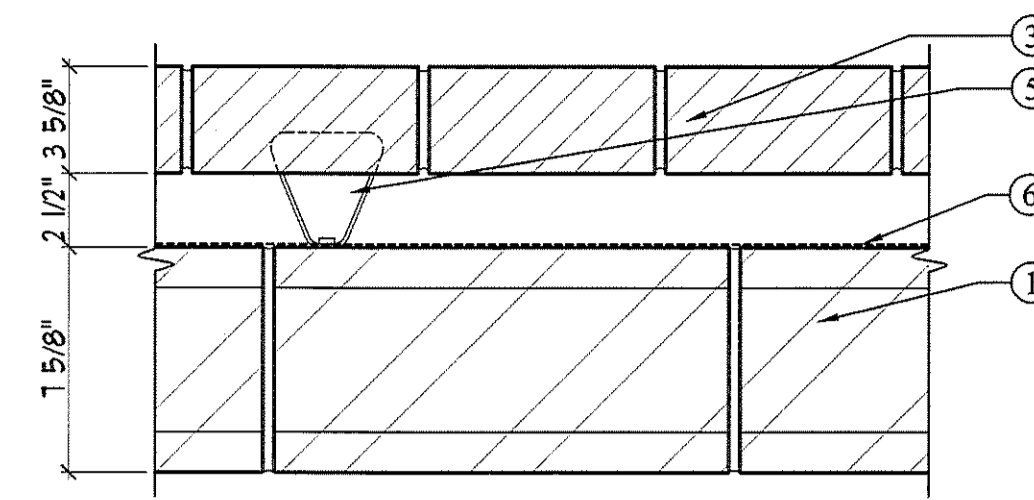
W8 UNRATED - BRICK EXT. WALL

1. **Brick Veneer** - Nominal 4 in. wide brick veneer fastened with stainless steel adjustable brick ties attached over sheathing to metal studs with stainless steel screws; ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. (Stone Veneer used where shown in documents).
2. **Air Space** - 1 1/2 inch air space provided between brick veneer and insulation/sheathing.
3. **Insulation** - One inch Tongue and Groove extruded polystyrene with 25 psi min. compressive strength similar to DOW Styrofoam.
4. **#15 Asphalt Felt**
5. **Exterior Sheathing** - One layer 5/8" densglass gypsum wallboard applied parallel or at right angles to wall studs with 1-5/8" Type S drywall screws 12" o.c.
6. **Metal Studs** - Six inch metal studs.
7. **Insulation** - Spray applied cellulose insulation in wall cavity.
8. **Interior Wallboard** - One layer 5/8" Type X gypsum wallboard applied parallel or at right angles to studs with 1" Type S drywall screws at 24" o.c.

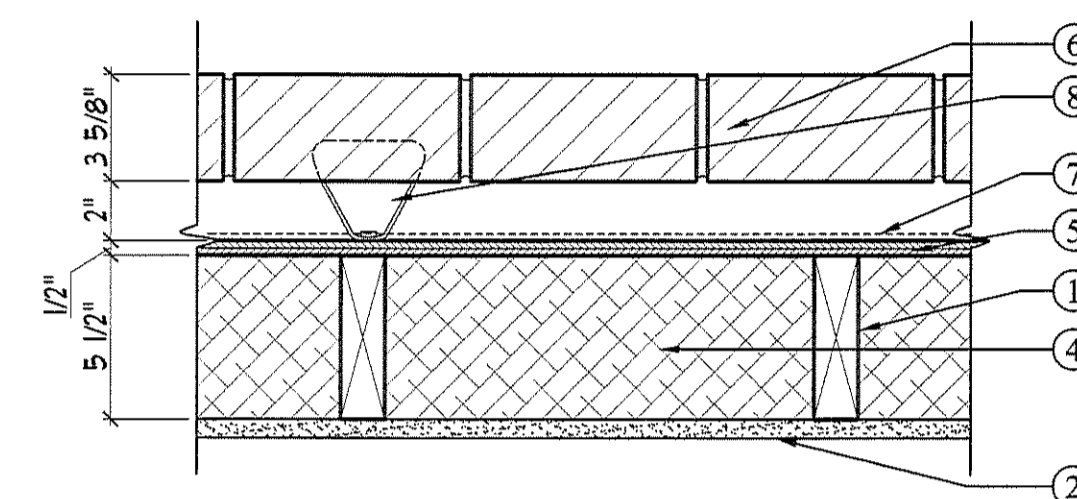
W9 2 HOUR WALL ASSEMBLY GA FILE NO. WP 1521 GENERIC 2 HOUR FIRE - 55 to 59 STC SOUND Fire Test See WP 1545 (ULC, 9-7-04; ULC 80T499, 3-26-81), ULC Design W414) Sound Test: NRCC 815-NV, 2-3-81 GYPSUM WALLBOARD, STEEL STUDS (LOAD-BEARING)

1. **Gypsum Board** - Base layer 1/2" type X gypsum wallboard or gypsum veneer base applied parallel to each side of steel studs with 1" Type S drywall screws 24" o.c. Face layer 1/2" type X gypsum wallboard or gypsum veneer base applied parallel to each side with 1-5/8" type S drywall screws 12" o.c. Joints staggered 24" each layer and side.
2. **Steel Studs** - 6" Steel studs.
3. **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. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³. Insulation substitution allowed with UL Test U311, Alternate Item "4B - Fiber, Sprayed".

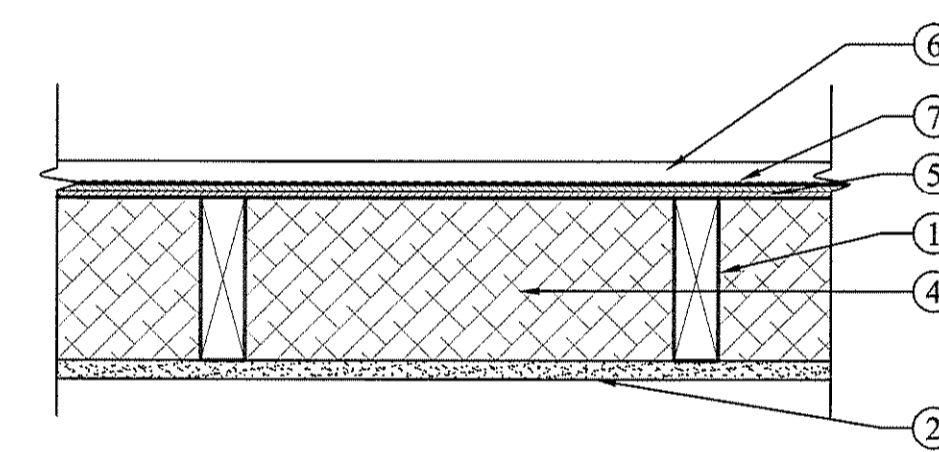
WALL TYPES



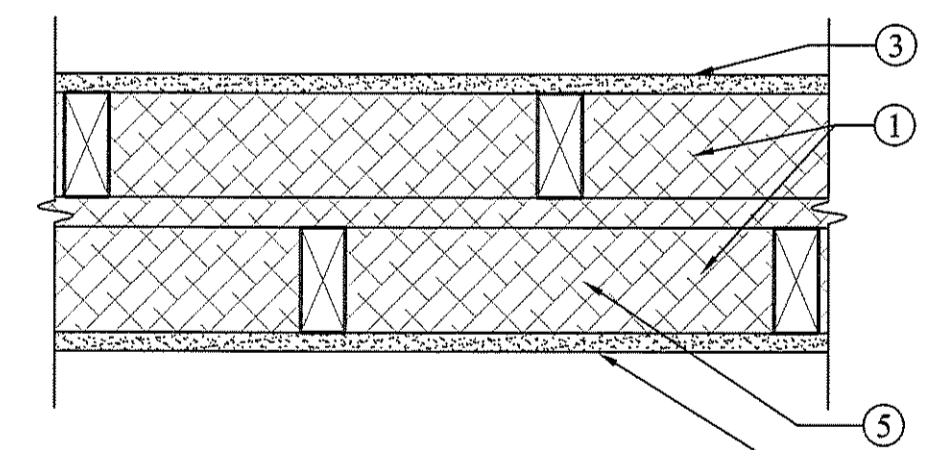
W0 1 HOUR BLOCK & BRICK MASONRY WALL



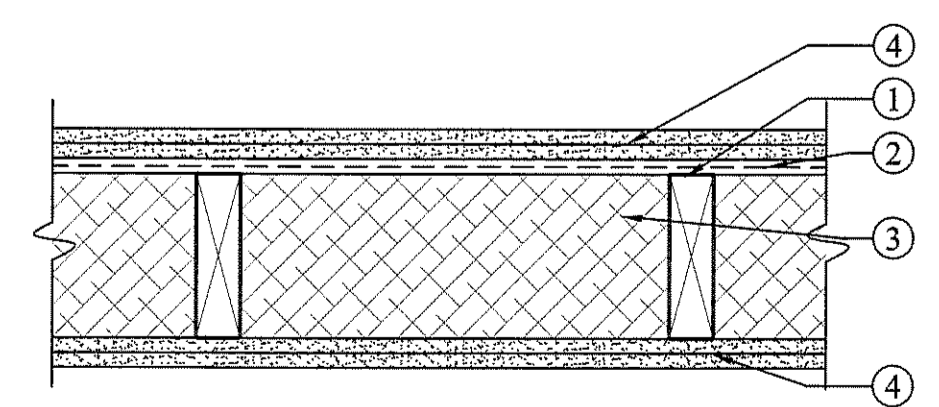
W1 1 HOUR BEARING & NON-BEARING BRICK MASONRY WALL



W2 CEMENT-BOARD SIDING EXTERIOR WALL



W3 1 HOUR DWELLING UNIT SEPARATION WALLS EXTEND TO BOTTOM OF DECK



W4 1 HOUR CORRIDOR/BEARING WALL

W0 BEARING/NON-BEARING CMU WALL 2-HOUR DESIGN NUMBER U.L. U905

1. **Concrete Blocks** - Classification D-2 (2 hr).
2. **Mortar** - Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Brick Veneer** - Any type of nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Air space provided between brick veneer and back-up material. (Stone Veneer used where shown in documents).
4. **Air/Moisture Barrier** - Provide continuous barrier protection over exterior sheathing. (ADDED)
5. **Stainless Steel Adjustable Brick Ties (ADDED)** - Ties attached over sheathing to studs with stainless steel screws; ties spaced not more than each sixth course of brick and max 32 in. OC horizontally.
6. **Waterproofing** - Trowel applied asphalt emulsion waterproofing.

W1 EXTERIOR BRICK VENEER WALL - 1 HOUR DESIGN NUMBER U.L. U356 R-VALUE = 21

1. **Wood Studs** - Nom 2 by 6 in. (SEE STRUCTURALS FOR SPACING) 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.
2. **Wallboard, Gypsum** - Any UL Classified 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.
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. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³.
5. **Wood Structural Panel Sheathing** - Min 7/16 in. thick, 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. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
6. **Brick Veneer** - Any type of nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Two in. air space provided between brick veneer and sheathing. (Stone Veneer used where shown in documents).
7. **#15 Asphalt Felt (ADDED)**
8. **Stainless Steel Adjustable Brick Ties (ADDED)** - Ties attached over sheathing to studs with stainless steel screws; ties spaced not more than each sixth course of brick and max 32 in. OC horizontally.

W2 EXTERIOR BEARING & NON-BEARING WALL RATING - 1 HOUR DESIGN NUMBER U.L. U356 R-VALUE = 21

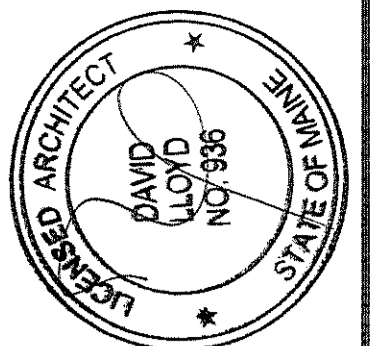
1. **Wood Studs** - Nom 2 by 6 in. spaced 16 in. OC with two 2 by 6 in. top and one 2 by 6 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) and effectively fire stopped at top and bottom of wall.
2. **Wallboard, Gypsum** - Any UL Classified 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.
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. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³.
5. **Wood Structural Panel Sheathing** - Min 7/16 in. thick, 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. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
6. **Siding** - Cement board exterior siding with 5" exposure.
7. **#15 Asphalt Felt (ADDED)**

W3 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 bearing plates.
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** - (For 1-1/2 and 2 Hr. Ratings) 5/8 inch thick, 4 ft wide, gypsum wallboard applied horizontally (backed by 2 x 4 in. wood framing) or vertically and nailed to studs and bearing plates 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diameter and 1/4 in. diameter head. 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. As an alternative, No. 6 bugle head drywall screws, 1-7/8 in. long may be substituted for the 6d cement coated nails.
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. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³.
6. **Mesh Netting** - (Not shown) - Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

W4 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 5-12 panhead steel screws.
3. **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. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³. Insulation substitution allowed with UL Test U311, Alternate Item "4B - Fiber, Sprayed".
4. **Gypsum Board** - Double layer 5/8 in. thick (SECOND LAYER ADDED FOR SOUND), 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.



OWNER:
53 DANFORTH STREET, LP
C/O THE SZANTON COMPANY
ONE CITY CENTER - 4TH FLOOR
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53 DANFORTH STREET
PORTLAND, MAINE

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|------------|--|
| Date | 28 May 2008 |
| Revisions: | 28 May 2008 - 50% MSHA Submittal 1 July 2008 - 90% MSHA Submittal 15 July 2008 - Pricing Set 25 July 2008 - 100% MSHA Submittal |

Scale: Not to Scale
Date: 28 May 2008
WALL ASSEMBLIES

A4.01