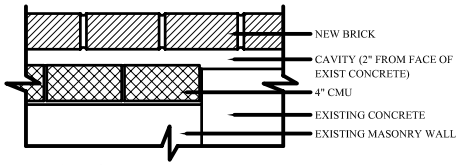
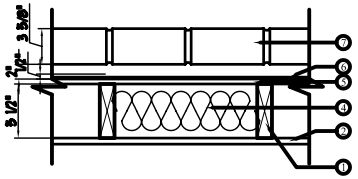
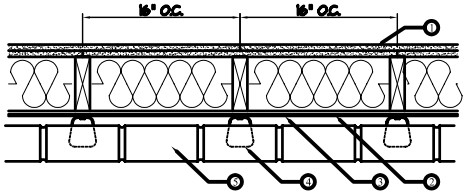
EXTERIOR WALLS



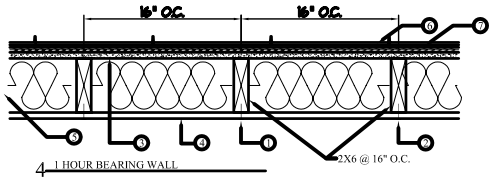
1 EXTERIOR BRICK VENEER WALL



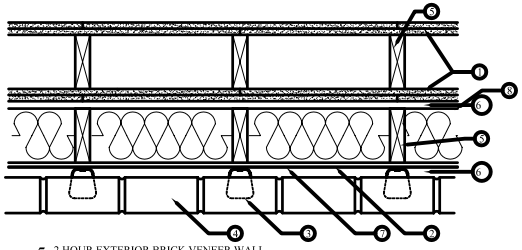
2 1 HOUR EXTERIOR BRICK VENEER WALL



3 2 HOUR EXTERIOR BRICK VENEER WALL



4 1 HOUR BEARING WALL



5 2 HOUR EXTERIOR BRICK VENEER WALL
AT ELEVATOR SHAFT

#1 1 HOUR EXTERIOR BRICK VENEER WALL
FIRE TEST U.L. U356

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) [SUBSTITUTE **EXT. GYP.**]and effectively fire stopped at top and bottom of wall.

2. **Wallboard, Gypsum-** 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. **Batts and Blankets-** Glass fiber insulation, 6 in. thick, pressure fit to fill wall cavities between studs and plates. Glass fiber insulation to have a min density of 0.9 pcf (min R-19 thermal insulation rating)

5. Sheathing - 1/2" thick exterior gypsum sheathing, 24" wide sheets, T&G edges. Min weight of sheets 1800 lb per 1000 sq ft, min thickness 0.480". Attached to studs horizontally with 1-3/4" long, 11d, 7/16" diam flathead galv roofing nails spaced 6" O.C. Vertical joints located over studs and staggered between adjacent rows.

6. **#15 Felt**

7. **Brick Veneer-** Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than sixth course of brick and max 32 in. OC horizontally. Two in. air space provided between brick veneer and sheathing.

[8. Add 6 mil poly vapor barrier]

#2 EXTERIOR BEARING WALL RATING - 2 HOUR
Design No. U302 - Finish Rating - 59 Min.

1. Gypsum Wallboard - 5/8" thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 6d cement coated nails 1-7/8" long, 0.0915" shank diam and 1/4" diam heads spaced 8" O.C. Outer layer attached to studs over inner layer with 8d cement coated nails 2-3/8" long, 0.113" shank diam. and 9/32" diam heads, spaced 8" O.C. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with fiber tape and compound, nailheads covered with joint compound. As an alternate, nom 3/32" thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Wallboard other than 48" wide must be applied horizontally.

2. Sheathing - 1/2" thick exterior gypsum sheathing, 24" wide sheets, T&G edges. Min weight of sheets 1800 lb per 1000 sq ft, min thickness 0.480". Attached to studs horizontally with 1-3/4" long, 11d, 7/16" diam flathead galv roofing nails spaced 6" O.C. Vertical joints located over studs and staggered between adjacent rows.

3. #15 Felt
4. [Added - Adjustable Brick Ties]
5. Clay Face Bricks
6. [Added - 6 mil poly V.B.]

#3 EXTERIOR BEARING WALL RATING - 1 HOUR
Design No. U305 - Finish Rating - See Item 3.

1. Nailheads - Exposed or covered with joint compound.

2. Joints - Exposed or covered with fiber tape and joint compound, except where required for specific edge configuration. For tapered, rounded-edge wallboard, joints covered with joint compound or fiber tape and joint compound.

3. Gypsum Board* - 5/8 in. thick wallboard paper , with beveled, square, or tapered edges, applied either horizontally or vertically. Wallboard nailed 7 in. OC with 6d cement coated nails 1 7/8 in. long, 0.0915 in. shank diam and 1/4 in.

4. United States Gypsum, Co. - Type SHX (finish rating 26 min.), Type FRX (finish rating 20 min.), Type IRX-G (finish rating 29 min.), Type IP-AR (finish rating 26 min.), Type IPC-AR (finish rating 26 min.).

5. 6" Glass Fiber Insulation
6. [Added- Lead-Coated Copper on #15 Felt on 1/2" Plywood Sheathing]
7. 'Typar'
8. [Added- 6 mil poly V.B.]

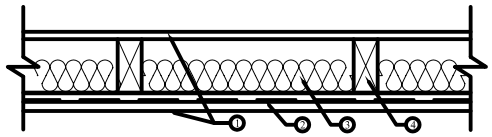
#4 EXTERIOR BEARING WALL RATING - 2 HOUR

1. Gypsum Wallboard - 5/8" thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 6d cement coated nails 1-7/8" long, 0.0915" shank diam and 1/4" diam heads spaced 8" O.C. Outer layer attached to studs over inner layer with 8d cement coated nails 2-3/8" long, 0.113" shank diam. and 9/32" diam heads, spaced 8" O.C. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with fiber tape and compound, nailheads covered with joint compound. Wallboard other then 48" wide must be applied horizontally.

2. Sheathing - 1/2" thick exterior gypsum sheathing, 24" wide sheets, T&G edges. Min weight of sheets 1800 lb per 1000 sq ft, min thickness 0.480". Attached to studs horizontally with 1-3/4" long, 11d, 7/16" diam flathead galv roofing nails spaced 6" O.C. Vertical joints located over studs and staggered between adjacent rows.

3. [Added- Adjustable Brick Ties]
4. Clay Face Bricks
5. 2X6 Wall at 16" O.C.
6. [Added Air Space - 2"]
7. #15 Felt
8. [Added - 6 mil poly VB]

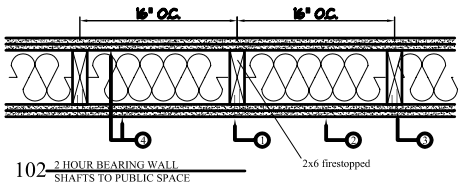
INTERIOR WALLS



101 1 HOUR WALL ASSEMBLY
PARTY WALL AND CORRIDOR WALL

1 HR. WALL ASSEMBLY 50 to 54 STC
GYPSUM BOARD, WOOD STUDS, RESILIENT CHANNEL, INSULATION
Fire Test OSU T 3127, 10-4-65
Sound Test RAL TL77-138,5-5-77

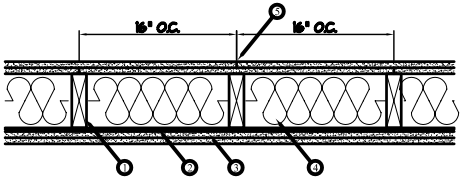
1. One layer 5/8" type "X" gypsum board applied parallel to resilient furring channels
2. 1" Type S drywall screws 12" o.c.@ intermediate furring channels and 6" o.c. @ ends.. Resilient furring channels applied at right angles to 2x4 woodstuds @ 24" o.c. with 6d coated nails, 1 7/8" long, 0.085" shank, 1/4" heads, two per joist.
3. .8 psf, 3-1/2" glass fiber insulation insulation stapled to studs in stud space.
4. 2x4 wood studs @ 16" o.c.



102 2 HOUR BEARING WALL
SHAFTS TO PUBLIC SPACE

#104 BEARING WALL RATING - 2 HOUR (SHAFT SOUND WALL)
Design No. U301 - Finish Rating - 66 Min.

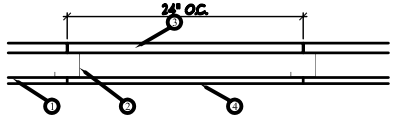
1. Nailheads - Exposed or covered with joint finisher.
2. Joints - Exposed or covered with fiber tape and joint finisher.
3. Nails - 6d cement coated nails 1 7/8 in. long, 0.0915 in. shank diam, 1/4 in. diam heads, and 8d cement coated nails 2-3/8 in. long, 0.113 in. shank diam, 9/32 in. diam heads.
4. Wallboard, Gypsum - * - 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with the 1-7/8 in. nails spaced 6 in. OC. Outer layer attached to studs over inner layer with the 2-3/8 in. long nails spaced 8 in. CO. Vertical joints located ovre studs. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
4. USG Firecode Core



103 2 HOUR BEARING WALL
SHAFTS TO UNIT

#104 BEARING WALL RATING - 2 HOUR
Design No. U334

1. Wood Studs - Nom 2 by 6 in., spaced 16 in. OC. Studs cross braced at mid-height and effectively fire stopped at top and bottom of wall.
2. Furring Channel - Resilient, 25 MSG galv steel, nom 2-1/2 in. wide by 1/2 in. deep. Furring channels placed perpendicular to studs, spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1 in. long Type S steel screws.
3. Wallboard, Gypsum - * - 5/8 in. thick, 4 ft. wide. Attach to furring channels: base layer with 1 in. long Type S steel screws spaced max 24 in. OC, face layer with 1-5/8 in. long Type S steel screws spaced max 12 in. OC, Attached to wood studs: base layer with 1-7/8 long 6d coated nails spaced max 14 in. OC; face layer with 2-3/8 in. long 8d coated nails spaced max 7 in. OC. Base layers installed vertically. Face layers installed horizontally with butt joints offset 16 in. from base layers.
UNITED STATES GYPSUM CO - Types C, IP-X2.
4. Batts and Blankets* - Nom 2 in. thick mineral wood insulation, 96 in. long, cuts to 15 in. widths, friction fitted between studs in wall cavity.
THERMAFIBER LLC - Type SAFB
5. Joint Tape and Compound - Vinyl, dry or premixed joint compound, applied to joints, screw heads, and nail heads (two applications); paper tape, 2 in. wide embedded in first layer of compound over all joints.
* Bearing the UL Classification Marking



104 1 HOUR NON-BEARING - SYSTEM A
UP TO 3 STORIES

#105-106 NON BEARING WALL RATINGS - 1, 2, 3 Hr.
Design No. U415

1. Floor, Side and Ceiling Runners - "J" - shaped runner, min 2-1/2 in. deep, with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. Steel Studs - "C-H" - shaped studs, min 2-1/2 in deep, fabricated from min 25 MSG glav steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC.

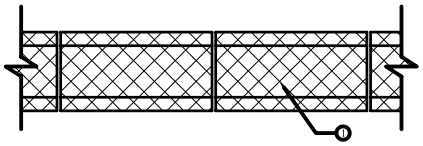
3. Wallboard, Gypsum* - Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling heights. Vertical edged inserted in "H" - shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall.

UNITED STATES GYPSUM CO. - Type SLX

4. Wallboard, Gypsum* - SYSTEM A
Gypsum panels, nom 5/8 in. thick, 48 in., applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally (24 in. OC when installed vertically or 16 in. OC when installed horizontally in System D).

5. Wallboard, Gypsum* - SYSTEM B
Gypsum panels, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. when installed vertically and staggered 12 in. from base layer screws, or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Joints between inner and outer layers staggered a min of 12 in. when applied horizontally. Joints centered over studs and staggered 24 in when applied vertically.

UNITED STATES GYPSUM CO - 5/8 in. Types C
6. Joint Tape and Compound - Systems A, B, & C.
Joints between outer layers of Gypsum Wallboard (Item 4) covered with paper tape and joint compound. Exposed screws heads covered with joint compound.
7. Batts and Blankets* - Systems A & B
Glass fiber batts completely filling stud cavity. Any glass fiber batt bearing the UL Classification Marking as to Fire Resistance.
THERMAFIBER LLC - Type SAFB

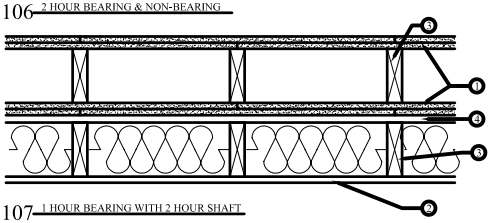


105 2 HOUR NON-BEARING - SYSTEM B
4 STORIES AND ABOVE

106 2 HOUR BEARING & NON-BEARING

#108 BEARING/NON-BEARING CMU WALL 2-HOUR
Design No. U905

1. D-2 Block



107 1 HOUR BEARING WITH 2 HOUR SHAFT

#107 1 HOUR BEARING WITH 2 HOUR SHAFT

1. Gypsum Wallboard - 5/8" thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 6d cement coated nails 1-7/8" long, 0.0915" shank diam and 1/4" diam heads spaced 8" O.C. Outer layer attached to studs over inner layer with 8d cement coated nails 2-3/8" long, 0.113" shank diam. and 9/32" diam heads, spaced 8" O.C. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with fiber tape and compound, nailheads covered with joint compound. As an alternate, nom 3/32" thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Wallboard other than 48" wide must be applied horizontally.
2. 5/8" Gypsum Wallboard
3. 2X6 Wall at 16" O.C.
4. 3/4" Air Space

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MAINE WORKFORCE HOUSING, LLC

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Project:
CASCO TERRACE
41 STATE STREET,
PORTLAND, MAINE

May 28, 2003
Scale: 1/2" = 1'-0"
Revisions

WALL TYPES

A13

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