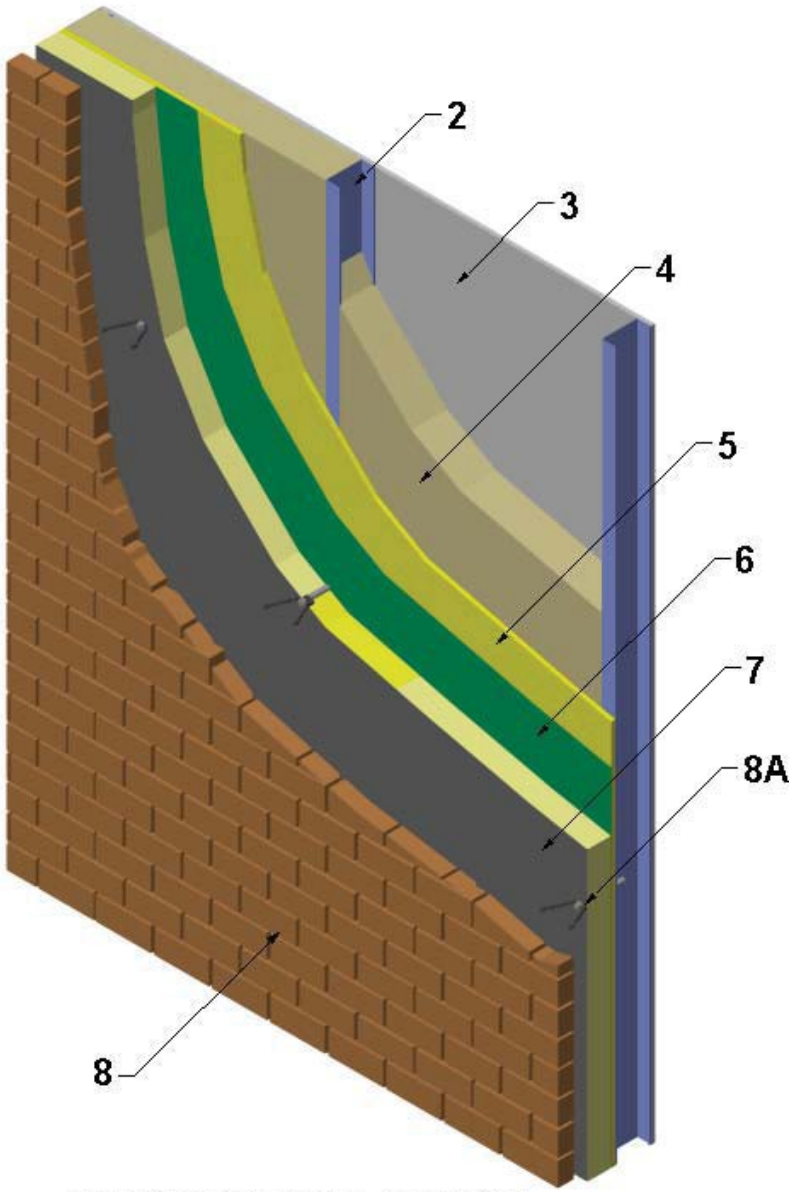
Johns Manville Corporation
Design No. JMC/FBI 30-01
Exterior Wall Assembly
AP™ Foil Faced Foam Sheathing and CI Max®
NFPA 285
Meets Conditions of Acceptance



Item 1: Exterior Wall Assembly

1. **EXTERIOR WALL ASSEMBLY:** Incorporate construction features in the exterior wall assembly as described in Items 2 through 9.

2. **STEEL FRAMING:** Install nominal 3-5/8 in., 25 GA steel studs spaced nominally 24 in. on center (oc). Attach steel studs to 25 GA top and bottom steel tracks using nominal 7/16 in. long, self-drilling, sheet metal framing screws attached to the front and back of each steel stud.

3. **INTERIOR GYPSUM:** On the interior side of the exterior wall assembly, apply one layer of 5/8 in. thick, Type X gypsum board with the long dimension perpendicular to the steel framing. Secure using #6 x 1-1/4 in. long, Type S, screws spaced 8 in. oc around the perimeter and 12 in. oc in the field.

   A. JOINT TAPE AND COMPOUND – (Not Shown) Apply a level 2 finish of vinyl or casein, dry or premixed, joint compound applied in two coats to all exposed fastener heads and gypsum board joints. Embed min. 2 in. wide paper, plastic, or fiberglass tape in first layer of compound over joints in gypsum board.

4. **INSULATION:** Install Johns Manville 3-1/2 in. thick, R-13 unfaced fiberglass insulation in between the steel framing.

5. **EXTERIOR SHEATHING:** Install one layer of 1/2 in. thick Georgia Pacific DenGlass Gold® Exterior Sheathing to the exterior side of the exterior wall assembly. Install sheathing with the long dimension perpendicular to the steel framing and secure using #6 x 1-1/4 in. long self-drilling, bugle-head screws spaced 8 in. oc around the perimeter and 12 in. oc in the field.

6. **WATER RESISTIVE BARRIER:** Install a single layer of 36 in. wide Grace Perm-a-Barrier® VPS, self-adhering vapor permeable barrier to the exterior side of the exterior sheathing with min. 2 in. overlaps at the seams.

7. **FOAM INSULATION PANEL:**

   CERTIFIED PRODUCT: Johns Manville AP™ Foil Faced Foam Sheathing or CI Max®

   Install nominal 4 in. thick, nominal 2-pcf density, foam insulation panels measuring nominally 4 ft. wide x 8 ft. long. Install foam insulation panels over water resistive barrier with the long edges horizontal. Prior to installing foam insulation panels and when needed, trim foam insulation panels. Secure the foam insulation panels to steel framing using 5-1/8 in. long Heckman Building Products Wing Nut POS-I-Tie anchors.

8. **EXTERIOR VENEER:**

8.1. BRICK VENEER: (Shown) Install a brick veneer using the following elements:

   A. BRICK VENEER ANCHORS – Install 5-1/8 in. long Heckman Building Products Wing Nut POS-I-Tie anchors through the foam insulation panels secured into the steel framing. Space brick anchors 16 in. oc on vertical edges on the perimeter of the foam insulation panels and 24 in. oc in the field. Insert and position Heckman Building Products 3 in. Wing Nut Pintle Tie into anchor expansion slots and rest tie base horizontally in mortar bed between exterior brick layers.

   B. EXTERIOR BRICK – Install standard 4 in. thick, red clay brick laid in a "running bond" pattern using mortar. Provide a nominal 1 in. air gap between the unexposed side exterior brick face and the outer most surface of the foam insulation panels.

   C. MORTAR – Use Type S mortar between exterior brick joints.

D. LINTEL – (Not Shown) Install 4 in. x 4 in. x 1/4 in. steel angle lintel above window opening, extending past the window opening by 8 in. on both sides.

8.2. STUCCO: Min. 3/4 in. thick, exterior cement plaster and metal lath. A secondary water-resistive barrier may be installed between the exterior insulation and the lath. The secondary water-resistive barrier must comply with Item 6.

8.3. STONE VENEER: Min. 2 in. thick, Limestone or natural stone veneer, or min. 1-1/2 in. thick cast artificial stone veneer. Any standard non-open jointed installation technique can be used. A max. 1 in. air gap between exterior insulation and cladding.

8.4. TERRA COTTA CLADDING: Use any terracotta cladding system in which terracotta is min. 1-1/4 in. thick. Any standard non-open jointed installation technique can be used. A max. 1 in. air gap between exterior insulation and cladding.

8.5. PRECAST CONCRETE PANELS OR CONCRETE MASONRY UNIT (CMU): Min. 1-1/2 in. thick. Any standard non-open jointed installation technique can be used. A max. 1 in. air gap between exterior insulation and cladding.

9. FLASHING: (Not Shown) Install min. 2 in. x 8 in., 14 GA steel angle around the window opening. Install from interior and exterior sides with min. 2 in. overlap of steel angle legs at the inside perimeter of the window opening. Fasten the steel angle leg to the steel framing at the overlap with #12 x 1-1/2 in. long self-drilling screws spaced nominal 16 in. oc along the top and bottom, and 12 in. oc along the sides. Fasten steel angle into steel framing from interior side with #12 x 1-1/2 in. long self-drilling screws spaced nominal 24 in. oc. Fasten steel angle to brick veneer (Item 8) using 1/4 in. X 1-1/4 in. long TITEN® Simpson Strong Ties spaced 24 in. oc.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.