



FWFO.EWS0021 - EXTERIOR WALL SYSTEMS

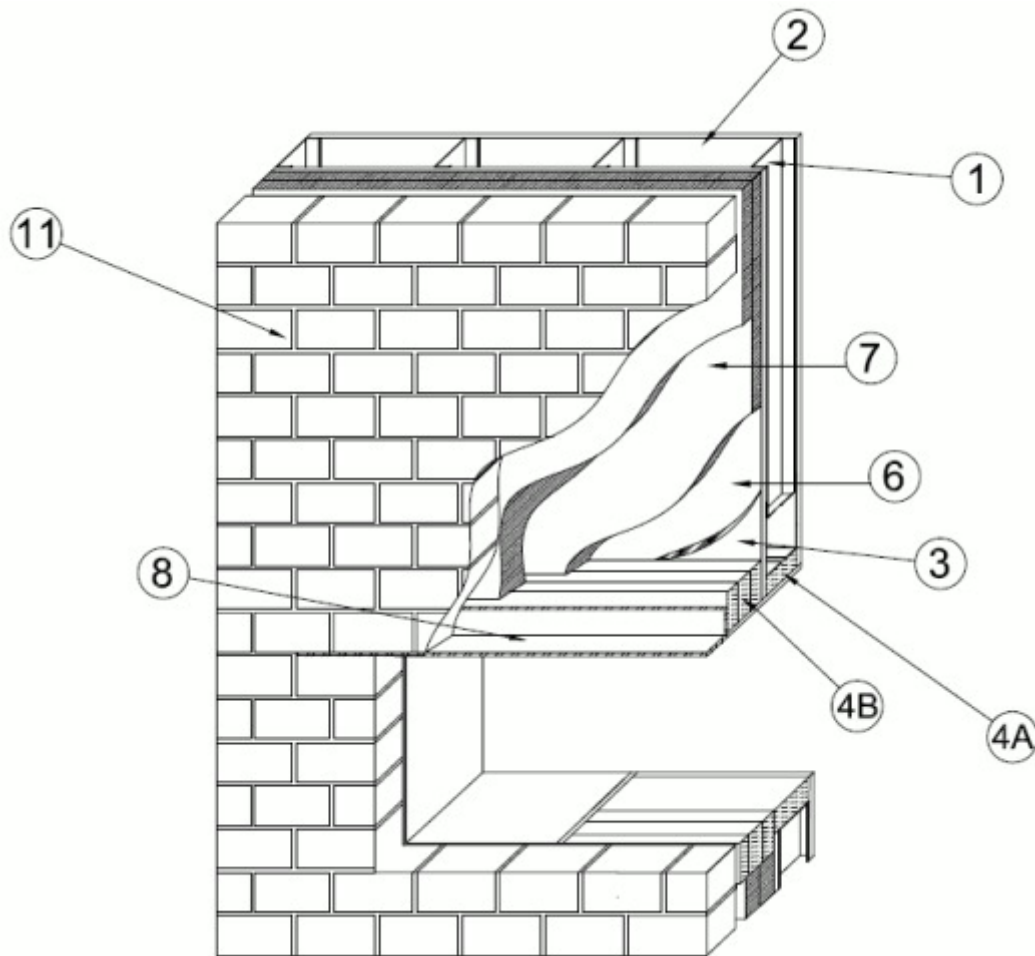
FWFO - Exterior Wall Systems

See General Information for Exterior Wall Systems

System No. EWS0021

April 16, 2019

Exterior Wall System



1. **Steel Studs** — Min 3-5/8 in. (92 mm) deep, formed of min 20 ga. galv steel spaced max 16 in. (406 mm) OC. Additional studs to be used to completely frame window openings.

1A. **Alternate Base Walls (Not Shown)** — Cast concrete walls or concrete masonry units (CMU) concrete walls may be used in lieu of Items 1 through 3.

2. **Interior Gypsum Board (CKNX)*** — Min 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide, attached to steel studs with 1-1/4 in. (32 mm) long, Type S steel screws spaced max 8 in. (203 mm) OC. Joints oriented vertically and covered with paper tape and joint compound. Screw heads covered with joint compound. Additional interior gypsum may be used to line depth of framed window opening in lieu of exterior sheathing (Item 3).

UNITED STATES GYPSUM CO — Type SCX

2A. **Interior Wall System Component** — Sealant (Optional - Not Shown) — Sealant may be applied to the interior gypsum board at areas and gaps of air leakage, such as penetrations and transitions. Not to exceed individual openings no greater than 5/8 in. (16 mm) diameter, and seam / joint openings no greater than 5/8 in. (16 mm) across.

AEROSEAL LLC — Aerobarrier X1

3. Exterior Gypsum Sheathing (CKNX)* — Exterior-grade glass mat sheathing gypsum board, minimum 5/8 in. (16 mm) thick, attached to steel studs with 1-1/4 in. (32 mm) long, Type S steel screws spaced max 8 in. (203 mm) OC. Joints oriented vertically or horizontally. Additional sheathing used to line depth of framed window opening.

UNITED STATES GYPSUM CO — Type USGX

3A. Exterior Wall System Component — Sealant* — (Not Shown) - Sealant applied to all exterior sheathing joints and screw heads prior to application of air barrier sealant (Item 5).

TREMCO INC — Dymonic 100

4. Window System — The following items shall be used as framing materials:

A. Treated Lumber (BPVV)* — Window Framing — One layer of nom 2 by 4 in. (50 by 102 mm) treated lumber secured to steel studs with two rows of min No. 6 by 1-7/8 in. (48 mm) self-tapping steel screws, spaced max 12 in.(305 mm) OC, to line framed window opening.

HOOVER TREATED WOOD PRODUCTS INC — Pyro-Guard

B. Treated Lumber (BPVV)* — Buck Extension — Three layers of nom 2 by 4 in. (50 by 102 mm) treated lumber secured to exterior sheathing (Item 3) with one row of min No. 8 by 2-5/8 in. (67 mm) self-tapping steel screws and a second row of min No. 10 by 2-1/2 in. (64 mm) wood screws, spaced max 16 in. (406 mm) OC, to frame exterior window opening.

HOOVER TREATED WOOD PRODUCTS INC — Pyro-Guard

5. Exterior Wall System Component — Sealant* — (Optional) — (Not Shown) - Sealant applied to gypsum sheathing window lining (Item 3) and buck extension (Item 4B) prior to application of air barrier sealant (Item 5).

TREMCO INC — Dymonic 100

6. Exterior Wall System Component — Combustible Air and Vapor Barrier* — Applied to completely cover the gypsum sheathing at a min thickness of 40 mil (1.0 mm) dry, 70 mil (1.8 mm) wet thickness.

TREMCO INC — ExoAir 220

7. Foam Insulation (BRYX)* — Max two layers of nom 4 by 8 ft (1.2 by 2.4 m) by 2 in. (51 mm) thick nom 1.55 pcf (24.8 kg/m³) extruded polystyrene insulation. First and second layer secured through gypsum sheathing into steel stud with min No. 10 by 3-1/2 in. (89 mm) and 5-1/2 in. (140 mm) long self-tapping steel screws in conjunction

with 2 in. (51 mm) diameter, 0.2 in. (5 mm) thick plastic pronged continuous insulation washers. Screws/washers evenly spaced at min 4 per board per layer, to secure foam board.

OWENS CORNING SCIENCE AND TECHNOLOGY, LLC – FOAMULAR 250

7A. **Masonry Veneer Anchors** – (Not Shown) – Max 3-1/2 in. (89 mm) zinc barrel screw masonry veneer anchors with min 1 in. (25 mm) long self-drilling tip attached into steel studs. Includes flanged head/integral zinc/EPDM washer, and thermal break clip to receive double pintle wire tie. Installed on each stud spaced 18 in. (457 mm) vertically with 2 in. (51 mm), 0.2 in. (5 mm) thick plastic pronged brick-tie washers.

8. **Steel Lintel** – Nom 4 by 4 in. (102 by 102 mm) by min 3/8 in. (10 mm) thick steel extending from face of the buck extension (Item 4B) into exterior brick (Item 10) at top of window opening and extending min 9 in. (229 mm) beyond each side of the window opening.

9. **Flashing System** – (Not Shown) – One of the following items may be used as flashing materials to cover the exterior air and vapor barrier (Item 6) by min 12 in. (305 mm), buck extension (Item 4B). Flashing materials to overlap onto steel lintel (Item 8) min 4 in. (102 mm) at top of window opening and extending min 5 in. (127 mm) beyond each side of the window opening:

A. **Exterior Wall System Component – Combustible Air and Vapor Barrier*** – Self-Adhered air and vapor barrier.

TREMCO INC – ExoAir 111

B. **Metallic Flashing** – Aluminum, bronze, copper, galvanized or stainless steel.

10. **Mineral Wool** – (Not Shown) – Nom 4 pcf (64 kg/m³), 4 in. (102 mm) thick mineral batt insulation installed within air gap along full height of window opening jambs, across sill and between the inside of the brick veneer (Item 10) and the buck extension (Item 4B), min 2 in. (51 mm) thick. Additional mineral batt insulation installed within each wall stud cavity at each floor line, held in place with any standard installation method.

11. **Exterior Finishing** – The following items may be used as exterior finishing for the wall system:

A. **Exterior Veneer – Brick** – Nom 3-5/8 in.-thick clay brick offset to provide a nom 1 in. (25 mm) air gap between foam insulation (Item 7) and brick veneer with standard type veneer anchors (Item 7A).

B. **Concrete** – Min 2 in. (51 mm) thick with max 1 in. (25 mm) air gap between exterior wall insulation (Item 7) and concrete.

C. **Concrete Masonry Units** – Min 2 in. (51 mm) thick with max 1 in. (25 mm) air gap between exterior wall insulation (Item 7) and concrete masonry units.

D. **Stone Veneer** – Min 2 in. (51 mm) thick natural stone veneer with any standard non-open joint installation technique.

E. **Terracotta Cladding** – Min 1-1/4 in. (32 mm) thick with any standard non-open joint installation technique such as ship lap.

F. **Stucco** – Min 3/4 in. (19 mm) thick exterior cement plaster lath.

12. **Window Flashing** — (Optional) — (Not Shown) — Formed of min 0.040 in. (1 mm) aluminum, bronze, copper, galvanized or stainless steel to completely line window opening and overlap onto both surfaces of the wall assembly a min 1/2 in. (13 mm).

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2019-04-16

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2019 UL LLC"