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This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets ( ); delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies extruded polystyrene insulation for wall and steel stud applications marketed under the trade name FOAMULAR and manufactured by Owens Corning. FOAMULAR, FOAMULAR 250, FOAMULAR 150 and PROPINK are registered trademarks of Owens Corning. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

**SECTION 07210**  
**BUILDING INSULATION**  
**(STEEL STUD FRAMING & MASONRY VENEER INSULATION SYSTEM)**

**PART 1 GENERAL**

1.01 SUMMARY

Specifier Note: Products specified in this section for insulated steel stud framing and masonry veneer include: extruded polystyrene rigid foam insulation sheathing, masonry ties, joint sealant, batt insulation, cold formed steel framing, gypsum board (fire-rated) and face brick. Specified products are either included in this section or included by reference to another section. Coordinate specified products herein with Related Sections Article below to suit project requirements.

- A. Section Includes: Rigid extruded polystyrene insulation board sheathing for steel stud framing and masonry veneer applications.
  - 1. Types: Types of rigid extruded polystyrene insulation include:
    - a. FOAMULAR 250 Rigid Foam Insulation.
    - b. Owens Corning PROPINK Sheathing

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

- B. Related Sections: Section(s) related to this section include:
  - 1. Concrete: Division 3 Concrete Sections.
  - 2. Masonry: Division 4 Masonry Sections.
  - 3. Steel Studs: Division 5 Metal Framing and Division 9 Metal Stud Sections.
  - 4. Batt Insulation: Division 7 Building Insulation Section.
  - 5. Vapor Retarder: Division 7 Vapor Barrier/Retarder Section.



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6. Head and Sill Flashings: Division 7 Flashing Section.
7. Gypsum Board: Division 9 Gypsum Wallboard Assemblies Section.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standards referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This Article does not require compliance with standards but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

## 1.02 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- B. American Society for Testing and Materials (ASTM):
  1. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- C. Brick Institute of America (BIA):
  1. BIA Technical Note on Brick Construction, 28B (latest edition 11/99).
- D. American Iron and Steel Institute (AISI):
  1. AISI Design of Cold-Formed Steel Structural Members.

Specifier Note: Coordinate 2 paragraphs below with Quality Assurance, Regulatory Requirements Article herein.

- E. Underwriters Laboratories, Inc., (UL):
  1. UL Fire Resistance Directory, Vol. 1, Assembly Design No. V414 and V434.

## 1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide extruded polystyrene insulation which has been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.
- B. System Description:
  1. Cold formed steel stud framing system for exterior wall, load bearing or non-load bearing, with batt insulation and vapor retarder; covered on the interior with gypsum board finish; covered on the exterior with FOAMULAR extruded polystyrene rigid insulation, air space and masonry veneer, attached through the FOAMULAR insulating sheathing to the steel stud framing with an approved load transferring masonry tie system.
    - a. One to three hour maximum fire resistance rated, load bearing or non-load bearing cold formed steel stud framing system. Fire resistance rating shall be determined by testing in accordance with ANSI/UL 263, ASTM E119, see UL Fire Resistance Directory, Volume 1, Assembly Design No. V414 or V434 for Construction Specifications. Steel framing members may be nominal (4" or 6" (102 or 152 mm)), (18 or 20 gauge).
  2. Cold formed steel framing shall be designed in accordance with the current edition of the specification for the design of cold formed steel structural members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies.
  3. Design and size system components to withstand all axial dead and live loads, and all loads imposed by positive and negative wind pressures acting perpendicular to the plane of the wall to a design pressure of (-) psf (kg/m<sup>3</sup>), calculated in accordance with (-I) code. Sheathing shall not be considered as bracing for the cold formed steel stud framing system.

4. Maximum allowable system deflection: 1/360, 1/600 or 1/720.
5. Design wall system to provide for movement of components without damage, failure of joint seals, undue stress on fasteners or ties, or other detrimental effects when subject to cyclic seasonal or diurnal temperature variation.
6. Design system to accommodate construction tolerances, deflection of building structural members and clearances of intended openings.
7. Structural design shall be consistent with the American Iron and Steel Institute, Design of Cold-Formed Steel Structural Members and all other applicable codes and standards.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor either before, during or after construction. Coordinate this Article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

#### 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.
  1. Structural Verification: Provide calculations bearing the seal of a professional structural engineer for loading, deflection and stresses of exterior wall system.
  2. Product Data: Provide data describing standard framing member materials, finish, load charts and structural properties.
- C. Samples: Submit selection and verification samples for finishes, colors and textures.
- D. Quality Assurance Submittals: Submit the following:
  1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
  2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.
  3. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

4. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- E. Closeout Submittals: Submit the following:
    1. Warranty: Warranty documents specified herein.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria which establish an overall level of quality for products and workmanship for this section. Coordinate below Article with Division 1 Quality Assurance Section.

#### 1.05 QUALITY ASSURANCE

- A. Qualifications:
  1. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

Specifier Note: Retain paragraph below to suit project requirements; otherwise delete paragraph below.

- a. Certificate: When requested, submit certificate indicating qualifications.
2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction and approving application method.



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Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

- B. Regulatory Requirements: (Specify applicable requirements of regulatory agencies.).

Specifier Note: Building Codes. Edit paragraph below to suit project. Current data on building code requirements and product compliance may be obtained from Owens Corning technical support specialists. Installation must comply with the requirements of all applicable local, state and national code jurisdictions. For code compliance, see the following reports: HUD Use of Materials Bulletin #71a for sheathing; California Energy Commission and Department of Consumer Affairs; State of Minnesota Department of Energy; City of New York B.S.A. #978-79-S; Underwriters Laboratories, Inc., Classification Certificate U-197; ICBO Evaluation Report #3628; BOCA Research Report 96-24; SBCCI PST & ESI 9727.

1. Building Code: (Specify applicable requirements of building code to suit project requirements.).

Specifier Note: Approvals. Edit paragraph below to suit project. Current data on approvals and product compliance may be obtained from Owens Corning technical support specialists. For code compliance, see the following reports: HUD Use of Materials Bulletin #71a for sheathing; California Energy Commission and Department of Consumer Affairs; State of Minnesota Department of Energy; City of New York B.S.A. #978-79-S; Underwriters Laboratories, Inc., Classification Certificate U-197; ICBO Evaluation Report #3628; BOCA Research Report 96-24; SBCCI PST & ESI 9727.

2. Approvals: (Specify applicable requirements for approvals to suit project requirements.).

Specifier Note: Coordinate paragraph below with Division 1 Project Management And Coordination (Project Meetings) Section.

- C. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

Specifier Note: Article below should include special and unique requirements. Coordinate Article below with Division 1 Product Requirements Section.

#### 1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by manufacturer.
1. Handle and store product according to Owens Corning recommendations. Materials should be delivered in their original unopened units, stored off the ground, protected from direct sunlight with a light colored opaque polyethylene film and ventilated to prevent excessive temperature. Damaged or deteriorated materials should be removed from the premises.

Specifier Note: Coordinate Article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

#### 1.07 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

Specifier Note: Warranty: It is the responsibility of the contractor to install FOAMULAR in accordance with Owens Corning's published recommendations. The presence of an Owens Corning representative at the jobsite does not relieve the contractor from the responsibility to follow these instructions. Owens Corning is not responsible for any liability resulting from a failure to follow these instructions. The manufacturer offers a warranty on retention of R-value over time. The manufacturer's liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to the manufacturer within 30 days from the date it was, or reasonably should have been, discovered. Further information on warranty conditions, duration and remedies may be obtained from Owens Corning.

- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.

1. Warranty Period: (Specify term.) years commencing on Date of Substantial Completion.

## **PART 2 PRODUCTS**

Specifier Note: Retain Article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

### **2.01 STEEL STUD FRAMING & MASONRY VENEER INSULATION SYSTEM**

- A. Manufacturer: Owens Corning.

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

1. Contact: One Owens Corning Parkway, Toledo, OH 43659; Telephone: (800) 438-7465, (800) GET-PINK, (419) 248-8000; Fax: (419) 248-8052; website: [www.owenscorning.com](http://www.owenscorning.com).

Specifier Note: Owens Corning FOAMULAR is an extremely lightweight closed cell polystyrene panel used to insulate residential and commercial structures of all kinds. It is an all purpose foam panel insulation for masonry, cast-in-place concrete and other applications. FOAMULAR 250 is well suited for use in masonry cavity walls, perimeter, foundation and underslab applications in most types of residential and commercial buildings. Owens Corning's patented Hydrovac process technology makes the unique closed cell polystyrene structure of FOAMULAR insulation highly resistant to moisture while retaining its initial R-value year after year even following prolonged exposure to humidity, condensation, ground water and freeze/thaw cycling. FOAMULAR's superior R-value of 5 per inch of product thickness, outstanding moisture resistance for long-term performance and tough compressive strength are significant performance benefits of these products. Limitations: FOAMULAR is practical for buildings having normal temperature conditions but should not be used in contact with chimneys, heater vents, steam pipes or other surfaces where temperatures exceed 150 degrees F (65 degrees C). It is not recommended for applications where sustained temperatures exceed 165 degrees F (74 degrees C). Construction should be evaluated by a qualified design professional for the necessity of providing vapor retarders to avoid condensation and subsequent damage to the structure. (See current ASHRAE Handbook of Fundamentals for more information.) Provisions should be made to protect the insulation from excessive exposure to direct sunlight by covering the insulation as soon as possible. Some plastic or oil based adhesives and many solvent laden mastics are not compatible with polystyrene based rigid foam insulation. FOAMULAR is a nonstructural material and must be installed on framing or other substrate that is independently structurally adequate to meet required construction and service loading conditions. Weep holes through exterior masonry and flashing are required to drain moisture from cavity. FOAMULAR panels are available in thicknesses of 1/2" - 4" (12.7 - 102 mm) and sizes from 16" - 48" (406 - 1219 mm) wide x 96" (2438 mm) long. Custom panel sizes are also available. FOAMULAR panels are offered in square, scored square, and tongue-and-groove edges.

- B. Proprietary Product(s)/System(s): FOAMULAR Extruded Polystyrene Insulation.



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Specifier Note: Owens Corning FOAMULAR 250 below is an extruded polystyrene insulation ideal for perimeter/foundation, cavity wall, crawlspace, precast concrete, under slab, roofing systems, sheathing and other applications. Performance benefits include: High R-value (R-5 per inch of product thickness); compressive strength of 25 psi (172 kPa); effective resistance against moisture, mildew, corrosion and rot; ease of handling and installation; easy to saw, cut and score; wide selection of sizes and thickness; availability in straight, tongue-and-groove, or scored square edges; compliance with building codes and standards. Consult manufacturer's literature; coordinate thickness, size and edge treatment with available products.

1. FOAMULAR 250 Rigid Foam Insulation: Extruded polystyrene closed cell foam panel with continuous skins on face and back surfaces, 25 psi (172 kPa) minimum compressive strength in accordance with ASTM D1621.
  - a. Thickness: (Specify thickness.) Available thicknesses: 3/4", 1", 1 1/2" (19.1, 25.4, 38 mm).
  - b. Size: (Specify size.) Available sizes: 48" x 96" (1219 x 2438 mm), 48" x 108" (1219 x 2743 mm) or size as indicated on drawings.
  - c. Edges: (Specify edge treatment.) Tongue-and-groove, square edge.

Specifier Note: Owens Corning PROPINK Insulating Sheathing below is an extruded polystyrene reinforced with high impact polystyrene. It is ideal for sheathing applications. Effective resistance against moisture, mildew, corrosion and rot; ease of handling and installation; easy to saw, cut and score; available with straight edges; compliance with building codes and standards. Consult manufacturer's literature; coordinate thickness, size and edge treatment with available products.

2. PROPINK Sheathing: Extruded polystyrene closed-cell reinforced with high impact polystyrene.
  - a. Thickness: (Specify thickness; available thicknesses; 3/4" (19.1 mm) (R4, Tongue-and-groove edge); 1" (25.4 mm) (R5, Tongue-and-groove edge).)
  - b. Size: (Specify size. Available 4' x 8' and 9' (1.2 x 2.4 and 2.7 m) panels and as indicated on drawings.)
- C. Polystyrene Material Standard: Provide FOAMULAR insulation products complying with ASTM C578 standards for Type IV.

Specifier Note: Paragraph below lists properties for Owens Corning FOAMULAR 250 insulation. Revise paragraph below to suit project requirements.

- D. Product(s) Testing: Provide extruded polystyrene insulation complying with the following properties:
  1. Flexural Strength (ASTM C203): 75 psi (517 kPa) minimum.
  2. Water Absorption (ASTM C272): 0.1% by volume maximum.
  3. Thermal Conductivity k-Value at 75 degrees F (24 degrees C) (ASTM C518): 0.2.
  4. Thermal Conductivity k-Value at 40 degrees F (4 degrees C) (ASTM C518): 0.18.
  5. Compressive Strength (ASTM D1621): 25 psi (172 kPa) minimum.
  6. Dimensional Stability (ASTM D2126): 2.0% linear change maximum.
  7. Oxygen Index (ASTM D2863): 24 minimum.
  8. Flamespread (ASTM E84): 5.
  9. Smoke Developed (ASTM E84): 45 - 175.
  10. Water Vapor Permeance (ASTM E96): 1.1 perm max.

## 2.02 INSULATED STEEL STUD FRAMING & MASONRY VENEER SYSTEM

Specifier Note: Edit paragraph below to suit project. Select either Owens Corning FOAMULAR 250 extruded polystyrene rigid insulation or PROPINK sheathing. Verify through Owens Corning representative that edge configuration selected is available in the thickness specified. FOAMULAR insulation is not recommended for use where sustained temperatures exceed 165 degrees F (74 degrees C). Do not use in contact with chimneys, heater vents, steam pipes, or surfaces with temperatures of over 150 degree F (degrees C). This product should be installed only with a thermal barrier such as 1/2" (12.7 mm) thick gypsum board on the interior

side of the wall. This requirement applies to return air plenums and may apply to interstitial dead air spaces above suspended ceilings. Check local building codes.

- A. Extruded Polystyrene Rigid Insulation: Extruded polystyrene sheathing; conforming with ASTM C578 Types IV, FOAMULAR 250 or PROPINK sheathing, 2' x 8' (610 x 2438 mm) or 4' x 8' (1219 x 2438 mm); thickness, 1/2", 3/4", 1" (12.7, 19.1, 25.4 mm) or as indicated on drawings with a maximum 2" (51 mm) thickness for fire resistance rated wall assembly; straight or tongue-and-groove edge treatment; flamespread no greater than 5; smoke developed no greater than 175, measured in accordance with ASTM E84.
1. K-Factor: Not exceeding 0.2 BTU x in/sf x hr x degree F measured by ASTM C518.
  2. Compressive strength: 25 psi (172 kPa), minimum, measured by ASTM D1621.
  3. Water absorption: Not exceeding 0.1% by volume measured by ASTM C272.

Specifier Note: Edit paragraph below. Masonry tie system includes: Hohmann and Barnard DW-10-X bracket with Textroseal self-sealing membrane gasket; BYNA-TIE and Seismicclip interlock. Separate Textroseal from DW-10-X and BYNA-TIE/Seismicclip or equal.

- B. Masonry Ties: Hohmann and Barnard DW-10-X; #14 or #12 gauge sheet steel conforming to ASTM A366, with a hot dipped galvanized finish conforming to ASTM A153 class B2 or Type 304 stainless steel conforming to ASTM A240; 6" (152 mm) long x 1 1/4" (32 mm) wide; with a pronged leg 1/2" through 3" (12.7 through 76 mm) in length at each end.
1. Textroseal self-sealing membrane gasket: 0.04" (1.02 mm) thick x 2.5" (64 mm) wide. BYNA-TIE: round looped wire of carbon steel conforming to ASTM A82 with zinc coating conforming to ASTM A153, Class B3; or stainless steel conforming to ASTM A580, size length to fit cavity width.

Specifier Note: Specify below where required for earthquake resistant design, not required for fire resistance rated wall assembly, except where earthquake resistant design is also required.

2. Seismicclip rectangular PVC extrusion with retaining slots to receive BYNA-TIE and continuous joint reinforcement wire.

Specifier Note: Edit paragraph below to suit project. Gypsum board, for use in 3 hour fire-rated assembly, includes: Boral Gypsum, Inc., Type BG-C; Canadian Gypsum Co. LTD., Type C; Celotex Corp., Type FRP; Domtar Gypsum, Type 5; Eagle Gypsum Products, Type EG-C; Georgia-Pacific Corp., Gypsum Div., Type GPFS-C; Pabco Gypsum Co. Type C or PG-C; Republic Gypsum Co., Type RG-C; Standard Gypsum Corp., Type SG-C; TempleMand Forest Products Corp., Type TP-5; United States Gypsum Co., Type C. Include Gypsum Board (Regular) as appropriate.

- C. Gypsum Board: For up to 3 hour maximum fire resistance rating, 5/8 minimum "third generation," Type X gypsum board conforming to ASTM C36, with specially formulated mineral core to provide additional fire resistance. Comply with UL Fire Resistance Directory, Vol. 1, Assembly Design No. V414. Gypsum board for 1 hour fire resistance rating shall be 5/8" Type X, UL classified. See UL assembly design No. V434. Gypsum board for nonfire-rated assemblies shall be ASTM C36, regular, nonfire-rated.

Specifier Note: Edit paragraph below to suit project. Include glass fiber batt insulation; for fire-rated or nonfire-rated assembly.

- D. Glass Fiber Batt Insulation: Kraft paper, foil or unfaced Owens Corning Thermal Batt Insulation or Flame Spread 25 insulation, minimum 3 1/2" (89 mm) thick, minimum density 0.8 pcf (12.8 kg/m<sup>3</sup>).

Specifier Note: Edit paragraph below to suit project. Include vapor retarder for fire-rated or nonfire-rated assembly. Optional assemblies should be evaluated for effectiveness and location of vapor retarders to avoid condensation and subsequent damage to structures.

- E. Vapor Retarder: 4 or 6 mil polyethylene.

Specifier Note: Edit paragraph below to suit project. Include cold formed steel framing; for fire-rated or nonfire-rated assembly.



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- F. Cold Formed Steel Framing: Corrosion protected cold formed steel framing for fire resistance-rated assemblies minimum 20 gauge and minimum 3 1/2" (89 mm) wide, minimum 1 5/8" (41 mm) legs and minimum 5/16" (7.9 mm) stiffened flanges, maximum spacing 16" (406 mm) oc, designed in accordance with current edition of AISI Specification for the Design of Cold-formed Steel Structural Members. Design details enhancing the structural integrity of wall assembly, including the axial design load of the studs, shall be as specified by steel stud designer and/or producer, and shall meet requirements of applicable local code agencies.

Specifier Note: Edit paragraph below to suit project. Include masonry veneer, for fire-rated or nonfire-rated assembly; for nonfire-rated assembly any approved unit masonry; for fire-rated assembly, any 4" (102 mm) wide face brick.

- G. Masonry Veneer: (Specify masonry veneer unit.).

Specifier Note: Edit Article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

### 2.03 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted, unless noted "or equal."

### 2.04 RELATED MATERIALS

- A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

## PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise Article below to suit project requirements and specifier's practice.

### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

### 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
1. Verify jobsite conditions are suitable as planned per contract documents.
  2. Verify jobsite progress is ready to receive system installation.

### 3.03 PREPARATION

- A. Surface Preparation: (Specify applicable product preparation requirements.).

Specifier Note: Coordinate Article below with manufacturer's recommended installation details and requirements. Although it does contain a flame retardant additive to inhibit ignition from small fire sources, Owens Corning FOAMULAR insulation will ignite if exposed to fire of sufficient heat and intensity. Products intended for wall applications should be installed only with a thermal barrier on the interior side of the wall. During shipping, storage, installation and use, this product should not be exposed to open flame or other ignition sources.

### 3.04 INSTALLATION

- A. FOAMULAR panels should be applied vertically. Close all joints tightly. All areas of the wall requiring insulation should be covered with FOAMULAR insulation. Fasten the FOAMULAR insulation using metallic fasteners driven by manual, pneumatic or electric gun, or by powder actuated charge. Fastener length should be sufficient to penetrate steel stud flange as recommended by manufacturer. Install finish (gypsum) panels in accordance with manufacturer's latest printed instructions and attach using the recommended fastener to the channel.

B. Veneer System Installation:

1. Erect metal stud framing system in accordance with steel stud framing section. Install adequate steel stud bracing against lateral and rotational forces.
2. Install FOAMULAR insulation or PROPINK sheathing 2' x 8' (610 x 2438 mm) or 4' x 8' (1219 x 2438 mm), horizontally or vertically. Install tongue up if using 2' x 8' (610 x 2438 mm) tongue-and-groove panels installed horizontally over steel stud framing system spaced no greater than 16" or 24" (406 or 610 mm) oc, 16" (406 mm) oc maximum for 3 hour fire resistance rated assembly 24" (610 mm) or for 1 hour fire resistance rated assembly. Secure FOAMULAR insulation to steel studs with 1 1/2" or 2" (38 or 51 mm), or 2 1/2" or 3" (64 or 76 mm) self-drilling, self-tapping steel screws with 1" (25.4 mm) diameter steel or plastic washers spaced 12" (305 mm) oc. Joints between FOAMULAR boards should be sealed with a suitable sealant.
3. Underlay masonry ties. Bracket legs shall firmly engage steel stud flange. Place bracket over a steel stud framing member and impale into FOAMULAR sheathing. Secure bracket to steel stud in accordance with manufacturer's instructions.
  - a. Insert BYNA-TIE into slotted portion of masonry tie bracket. Adjust vertically to fit masonry coursing.
  - b. Where required for structural or seismic reinforcement, Snap-fit BYNA-TIE masonry wire tie and continuous joint reinforcement wire into Seismiclip and embed in mortar joint of masonry veneer system.
4. Install head and sill flashings, shingle-style, under foam sheathing to shed water.
5. Install masonry veneer in accordance with masonry section. Maintain 2" (51 mm) clear air space between masonry veneer and FOAMULAR sheathing. Minimum of 2/3 of veneer width shall bear on support.
6. Install batt insulation in accordance with building insulation section.
7. Install vapor retarder in accordance with vapor retarder section.
8. Install interior gypsum board finish in accordance with gypsum wallboard assembly section. For fire-rated assembly, install gypsum board finish with type S screws spaced 8" (203 mm) oc at edges and 12" (305 mm) oc in field.

C. Related Products Installation: Refer to other sections listed in Related Sections paragraph herein for related products installation.

3.05 FIELD QUALITY REQUIREMENTS

- A. Site Tests (Installation and Post-Installation Testing): (Specify applicable test requirements to be performed during and/or after product installation.)

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer, and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- B. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

1. Site Visits: (Specify number and duration of periodic site visits.)

3.06 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.07 PROTECTION

- A. Protection: Protect installed product and finish surfaces from damage during construction.

**END OF SECTION**

