

SECTION 09271
GLASS REINFORCED GYPSUM FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Factory-molded, glass-reinforced gypsum fabrications for interior use include the following types:
 - a. Column covers.
- B. Related Sections:
 - 1. Division 6 Section "Miscellaneous Carpentry" for blocking, nailers, shims, and carpentry supporting glass-reinforced gypsum fabrications.

1.3 SUBMITTALS

- A. Product Data: For each type of glass-reinforced gypsum fabrication indicated. Include construction details, material descriptions, weights, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show profiles, thicknesses, finishes, joints, ornamentation, installation tolerances, and anchorage details. Indicate attachment methods, embedded supports, reinforcement, fabrication methods, joint treatments, clearances, and supports.
- C. Samples: For each exposed product in each profile and size required, and as follows:
 - 1. Linear Moldings: 2-foot- long section with finished joint. Show complete pattern.
- D. Installer Qualification Data: To demonstrate capabilities and experience of Installer. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed glass-reinforced gypsum fabrication installations similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- C. Fire-Test-Response Characteristics: Provide glass-reinforced gypsum fabrications with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 by UL or another independent testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. Flame Spread: 25 or less.
 - 2. Smoke Developed: 450 or less.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Ship and store glass-reinforced gypsum fabrications in factory-wrapped crates, packaged to keep units dry. Avoid cracking, warping, or staining the units.

- B. Comply with manufacturer's written instructions for storage, temperature, and humidity requirements.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install glass-reinforced gypsum fabrications until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Acclimatize glass-reinforced gypsum fabrications to ambient temperature and humidity of spaces in which they will be installed. Remove packaging and move units into installation spaces not less than 48 hours before installing them.
- C. Field Measurements: Where glass-reinforced gypsum fabrications are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating products without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.7 COORDINATION

- A. Coordinate layout and installation of glass-reinforced gypsum fabrications and suspension system components with other construction, including ceilings, light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Casting Designs, Inc.
 - 2. DEC Assoc.
 - 3. Formglas Inc.
 - 4. Plastrglas.

2.2 GLASS-REINFORCED GYPSUM FABRICATION MATERIALS

- A. Glass-Reinforced Gypsum Fabrications: ASTM C 1355/C 1355M.
- B. Embedments: As standard with glass-reinforced gypsum fabrication manufacturer and as required for reinforcement and for anchorage to substrates and framing.

2.3 AUXILIARY MATERIALS

- A. Steel Drill Screws: Provide fasteners, complying with the following requirements, that are of sufficient length and size to securely fasten gypsum-reinforced fabrications to framing members:
 - 1. Screws complying with ASTM C 1002 for fastening glass-reinforced gypsum fabrications to steel members less than 0.033 inch thick.
 - 2. Screws complying with ASTM C 1002 for fastening glass-reinforced gypsum fabrications to wood members.
 - 3. Screws complying with ASTM C 954 for fastening glass-reinforced gypsum fabrications to steel members from 0.033 to 0.112 inch thick.

- B. Joint Treatment Materials: Provide materials complying with ASTM C 475 and with the recommendations of the manufacturers of both glass-reinforced gypsum fabrications and joint treatment materials for each application indicated.

2.4 FABRICATION

- A. Fabricate glass-reinforced gypsum units from molds constructed of rigid materials that will result in smooth-finished surfaces conforming to profiles, dimensions, and tolerances indicated. Provide units as large as practical to minimize joints.
- B. Remove units from molds and repair hollows, voids, scratches, and other surface imperfections.
- C. Material Compatibility: Fabricate glass-reinforced gypsum fabrications with surface characteristics required for a high-gloss paint finish.
- D. Embedments: Incorporate embedments so they develop the full strength of glass-reinforced gypsum fabrications. Cover embedments with glass-reinforced gypsum composite not less than 3/16 inch thick.
- E. Connection Hardware: Custom designed and fabricated to support and connect glass-reinforced gypsum fabrications to hangers, support framing, and substrates.
- F. Dimensional Tolerances of Units: As follows:
 - 1. Overall Assembled Length and Width: Plus or minus 1/8 inch per 10 feet.
 - 2. Chords, Radii, and Diameters: Plus or minus 1/8 inch.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for environmental conditions, installation tolerances, and other conditions affecting performance of glass-reinforced gypsum fabrications.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 GLASS-REINFORCED GYPSUM FABRICATION INSTALLATION

- A. Install glass-reinforced gypsum fabrications level, plumb, true, and aligned with adjacent materials. Use concealed shims where required for alignment.
- B. Predrill fastener holes in glass-reinforced gypsum fabrications. Clean fastener holes to remove dirt and oil.
- C. Attach glass-reinforced gypsum fabrications to framing and substrates with steel drill screws. Do not use pneumatic staple guns. Countersink screw heads below adjoining finished surface.
- D. Fasten as required to comply with dimensional tolerances and not less than 5/16 inch from edge to end.
- E. Cover screw heads with joint compound to produce flush, smooth, and level finished surfaces.
- F. Attach glass-reinforced gypsum fabrications at joints with adhesive, and band or brace together until adhesive is cured. Cure adhesive according to glass-reinforced gypsum fabrication manufacturer's written instructions.
- G. Joint Finishing: Comply with ASTM C 840 for the following finish level:
 - 1. Level 5.

3.3 ERECTION AND LOCATION TOLERANCES

- A. Erection Tolerances: Install glass-reinforced gypsum fabrications so each unit complies with the following dimensional requirements:

1. Variation from Plumb: Plus or minus 1/8 inch per 10 feet.
2. Assembly Deflection: Not greater than the length of the assembly divided by 240.
3. Joint Alignment: Not more than 1/8 inch.
4. Joint Width: Not more than 3/8 inch.

END OF SECTION 09271