

SECTION 061600

SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

- 1. Exterior wall and roof parapet sheathing.
- 2. Weather-Resistant sheathing paper (Porte Cochere).
- 3. Sheathing joint-and-penetration treatment.

- B. Related Sections include the following:

- 1. Division 06 Section "Rough Carpentry" for plywood backing panels.
- 2. Division 07 Section "Fluid-Applied Vapor Permeable Membrane Air Barrier" for treatment of wall sheathing on building.
- 3. Division 07 Section "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing" for flashing on parapet sheathing and thermal barrier sheathing.
- 4. Division 09 Section "Gypsum Board" for interior gypsum core board materials.

1.3 SUBMITTALS

- A. Product Data: For each type of product, indicating properties of materials, including fire resistance and ability to withstand extremes of weather.
- B. Samples for Verification: For each type of sheathing product indicated, provide 4" square unit samples.

1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory." GA-600, "Fire Resistance Design Manual."

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 EXTERIOR WALL AND ROOF PARAPET SHEATHING

- A. Paper-Surfaced Gypsum Sheathing: ASTM C 79/C 79M or ASTM C 1396/C 1396M, gypsum sheathing; with water-resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges.
 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. American Gypsum.
 - b. LaFarge North America Inc.
 - c. G-P Gypsum Corporation.
 - d. National Gypsum Company.
 - e. Temple-Inland Forest Products Corporation.
 - f. United States Gypsum Co.
 2. Recycled Content: Wherever possible, provide gypsum panel products with recycled content such that postconsumer, recycled content plus one-half of postconsumer content constitutes a minimum of 25 percent by weight.
 3. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
 4. Edge and End Configuration: V-shaped, tongue-and-groove long edges; square-shaped short edges or square edges on all sides.
 5. Size: 24 by 96 inches (610 by 2438 mm) for horizontal; 48 by 96 inches (1219 by 2438 mm) for vertical; 48 by 108 inches (1219 by 2743 mm) for vertical; 600 by 2400 mm for horizontal; 1200 by 2400 mm for vertical; 1200 by 2750 mm for vertical installation.
- B. Glass-Mat Gypsum Wall Sheathing: ASTM C 1177/1177M.
 1. Product: Subject to compliance with requirements, provide "Dens-Glass Gold" by G-P Gypsum Corporation.
 2. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
 3. Size: 48 by 96 inches (1219 by 2438 mm), 48 by 108 inches (1219 by 2743 mm) 48 by 120 inches (1219 by 3048 mm) 1200 by 2400 mm 1200 by 2750 mm 1200 by 3050 mm for vertical installation.

- C. Cellulose Fiber-Reinforced Gypsum Sheathing: ASTM C 1278/C 1278M, gypsum sheathing.
1. Product: Subject to compliance with requirements, provide "Fiberock Sheathing with Aqua-Tough" by United States Gypsum.
 2. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
 3. Size: 48 by 96 inches (1219 by 2438 mm), 48 by 108 inches (1219 by 2743 mm), 48 by 120 inches (1219 by 3048 mm) 1200 by 2400 mm, 1200 by 2750 mm, 1200 by 3050 mm.

2.2 FASTENERS

- A. General: Screws for Fastening Sheathing to Cold-Formed Metal Framing: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing board to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.
1. For steel framing less than 0.0329 inch (0.835 mm) thick, attach sheathing to comply with ASTM C 1002.
 2. For steel framing from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick, attach sheathing to comply with ASTM C 954.

2.3 WEATHER-RESISTANT SHEATHING PAPER

- A. On sheathing hung from framing on Porte Cochere and specific locations in the Building indicated on the Drawings.

2.4 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

- A. Sealant for Paper-Surfaced Gypsum Sheathing Board: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials, recommended by sheathing manufacturer for application indicated, and complying with requirements for Elastomeric sealants specified in Division 07 Section "Joint Sealants."
- B. Sealant for Glass-Mat Gypsum Sheathing Board: Silicone emulsion sealant complying with ASTM C 834, compatible with sheathing tape and sheathing, and recommended by tape and sheathing manufacturers for use with glass-fiber sheathing tape and for covering exposed fasteners.
- C. Sheathing Tape for Glass-Mat Gypsum Sheathing Board: Self-adhering glass-fiber tape, minimum 2 inches (50 mm) wide, 10 by 10 or 10 by 20 threads/inch (390 by 390 or 390 by 780 threads/m), of type recommended by sheathing and tape manufacturers

for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing board and with a history of successful in-service use.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
- D. Coordinate wall and roof parapet sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 GYPSUM SHEATHING INSTALLATION

- A. Comply with GA-253 and with manufacturer's written instructions.
 - 1. Fasten gypsum sheathing to cold-formed metal framing with screws.
 - 2. Install boards with a 3/8-inch (9.5-mm) gap where non-load-bearing construction abuts structural elements.
 - 3. Install boards with a 1/4-inch (6.4-mm) gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.
- B. Apply fasteners so heads bear tightly against face of sheathing boards but do not cut into facing.
- C. Horizontal Installation: Install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent boards without forcing. Abut ends of boards over centers of studs, and stagger end

joints of adjacent boards not less than one stud spacing. Attach boards at perimeter and within field of board to each steel stud.

1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of boards.
2. For sheathing under stucco cladding, boards may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.

D. Vertical Installation: Install board vertical edges centered over studs. Abut ends and edges of each board with those of adjacent boards. Attach boards at perimeter and within field of board to each stud.

1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of boards.

3.3 WEATHER-RESISTANT SHEATHING-PAPER INSTALLATION

A. General: Cover sheathing with weather-resistant sheathing paper as follows:

1. Cut back barrier 1/2 inch (13 mm) on each side of the break in supporting members at expansion- or control-joint locations.
2. Apply barrier to cover vertical flashing with a minimum 4-inch (100-mm) overlap, unless otherwise indicated.

B. Building Paper: Apply horizontally with a 2-inch (50 mm) overlap and a 6-inch (150-cm) end lap; fasten to sheathing with galvanized stapled or roofing nails.

3.4 SHEATHING JOINT-AND-PENETRATION TREATMENT

A. Seal sheathing joints according to sheathing manufacturer's written instructions.

1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient quantity of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.

3.5 PROTECTION

A. Paper-Surfaced Gypsum Sheathing: Protect sheathing by covering exposed exterior surface of sheathing with weather-resistant sheathing paper securely fastened to framing. Apply covering immediately after sheathing is installed.

END OF SECTION 061600