

PART 1 - GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

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| ASTM C 36 | (1997) Gypsum Wallboard |
| ASTM C 475 | (1994) Joint Compound and Joint Tape for Finishing Gypsum Board |
| ASTM C 514 | (1996) Nails for the Application of Gypsum Board |
| ASTM C 630/C 630M | (1996; Rev. A) Water-Resistant Gypsum Backing Board |
| ASTM C 840 | (1998) Application and Finishing of Gypsum Board |
| ASTM C 954 | (1998) Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness |
| ASTM C 1002 | (1998; Rev. A) Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases |
| ASTM C 1047 | (1998) Accessories for Gypsum Wallboard and Gypsum Veneer Base |
| ASTM E 84 | (1998) Surface Burning Characteristics of Building Materials |

GYPSUM ASSOCIATION (GA)

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| GA 216 | (1996) Application and Finishing of Gypsum Board |
| GA 600 | (1997) Fire Resistance and Sound Control Design Manual |

UNDERWRITERS LABORATORIES INC. (UL)

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| UL FRD | (1997) Fire Resistance Directory |
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1.2 RELATED DOCUMENTS

The following sections of the specifications apply to this section:

- a. Section 05400 Cold-Formed Metal Framing
- b. Section 07840 Firestopping

- c. Section 09212 Plaster and Stucco
- d. Section 09651 Resilient Tile Flooring
- e. Section 10260 Wall and Corner Guards

1.3 DELIVERY, STORAGE, AND HANDLING

1.3.1 Delivery

Deliver materials in the original packages, containers, or bundles with each bearing the brand name, applicable standard designation, and name of manufacturer, or supplier.

1.3.2 Storage

Keep materials dry by storing inside a sheltered building. Where necessary to store exterior gypsum board outside, store off the ground, properly supported on a level platform, and protected from direct exposure to rain, snow, sunlight, and other extreme weather conditions. Provide adequate ventilation to prevent condensation.

1.3.3 Handling

- a. Neatly stack gypsum board flat to prevent sagging or damage to the edges, ends, and surfaces.
- b. Distribute gypsum board as directed by Contracting Officer to facilitate installation and to avoid load concentrations at upper floor levels.

1.4 ENVIRONMENTAL CONDITIONS

1.4.1 Temperature

Maintain a uniform temperature of not less than 50 degrees F in the structure for at least 48 hours prior to, during, and following the application of gypsum board, and joint treatment materials.

1.4.2 Exposure to Weather

Protect gypsum board products from direct exposure to rain, snow, sunlight, and other extreme weather conditions; exception: exterior gypsum board once installed.

PART 2 - PRODUCTS

2.1 MATERIALS

Conform to specifications, standards and requirements specified herein. Provide gypsum board and finishing materials manufactured from asbestos-free materials.

2.1.1 Gypsum Board

ASTM C 36.

2.1.1.1 Type X (Special Fire-Resistant)

48 inches wide, 5/8 inch thick, tapered edges.

2.1.2 Regular Water-Resistant Gypsum Backing Board (to be used in wet areas and areas finished in ceramic tile wainscot.)

ASTM C 630/C 630M

2.1.3 Joint Treatment Materials

ASTM C 475.

2.1.3.1 Embedding Compound

Specifically formulated and manufactured for use in embedding tape at gypsum board joints and compatible with tape, substrate and fasteners.

2.1.3.2 Finishing or Topping Compound

Specifically formulated and manufactured for use as a finishing compound.

2.1.3.3 All-Purpose Compound

Specifically formulated and manufactured to serve as both a taping and a finishing compound and compatible with tape, substrate and fasteners.

2.1.3.4 Setting or Hardening Type Compound

Specifically formulated and manufactured for use with fiber glass mesh tape.

2.1.3.5 Joint Tape

Cross-laminated, tapered edge, reinforced paper, or fiber glass mesh tape recommended by the manufacturer.

2.1.4 Fasteners

2.1.4.1 Nails

ASTM C 514.

2.1.4.2 Screws

ASTM C 954 steel drill screws for fastening gypsum board to steel framing members 0.033 to 0.112 inch thick.

2.1.5 Adhesives

Do not use adhesive containing benzene, carbon tetrachloride, or trichloroethylene.

2.1.5.1 Adhesive for Fastening Gypsum Board to Metal Framing

Type recommended by gypsum board manufacturer.

2.1.5.2 Adhesive for Laminating

For laminating two-ply gypsum board systems, provide adhesive recommended by gypsum board manufacturer.

2.1.6 Accessories

- a. ASTM C 1047.
- b. Fabricate from corrosion protected steel designed for intended use. Accessories manufactured with paper flanges are not acceptable.
- c. Flanges shall be free of dirt, grease, and other materials that may adversely affect bond of joint treatment.

2.1.7 Water

Clean, fresh, and potable.

2.2 STEEL SUSPENDED CEILING AND SOFFIT FRAMING

2.2.1 Components, General

Comply with ASTM C 754 for conditions indicated

2.2.2 Tie Wire

ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch diameter wire, or double strand of 0.0474-inch diameter wire.

2.2.3 Hangers, as follows:

2.2.3.1 Wire Hangers

ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch diameter.

2.2.3.2 Rod Hangers

ASTM A 510 (ASTM A 510M), mild carbon steel.

- a. Diameter: As indicated.
- b. Protective Coating: Corrosion-resistant paint.

2.2.4 Carrying channels

Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch, a minimum 1/2 inch wide flange, with manufacturer's standard corrosion-resistant zinc coating.

- a. Depth: As indicated.

2.2.5 Furring Channels (Furring Members)

Commercial-steel sheet with manufacturer's standard corrosion-resistant zinc coating.

2.2.5.1 Cold Rolled Channels

0.0538 bare steel thickness, with minimum 1/2 inch wide flange, 3/4 inch deep.

2.2.5.2 Hat-Shaped, Rigid Furring Channels

ASTM C 645, 7/8 inch deep.

- a. Minimum Base Metal Thickness: As indicated.

2.2.6 Grid Suspension system for Interior Ceilings

ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.

2.2.6.1 Available Products

Subject to compliance with requirements, products that may be incorporated into the work include, but are not limited to, the following:

- a. Armstrong World Industries, Inc.; furring systems/Drywall.
- b. USG Interiors, Inc.; Drywall Suspension System.

2.3 STEEL PARTITION AND SOFFIT FRAMING

2.3.1 Components, General: As follows:

2.3.1.1 Comply with ASTM C 754 for conditions indicated.

2.3.1.2 Steel Sheet Components

Complying with ASTM C 645 requirements for metal and with manufacturer's standard corrosion-resistant zinc coating.

2.3.2 Steel Studs and Runners

ASTM C 645

2.3.2.1 Minimum Base Metal Thickness: 0.0179 inch.

2.3.2.2 Depth: As indicated.

2.3.3 Flat Strap and Backing Plate

Steel sheet for blocking and bracing in length and width indicated.

2.3.3.1 Minimum Base Metal Thickness: 0.0179 inch.

2.3.4 Fasteners for Metal Framing

a. Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

PART 3 - EXECUTION

3.1 EXAMINATION

3.1.1 Framing and Furring

Verify that framing and furring are securely attached and of sizes and spacing to provide a suitable substrate to receive gypsum board. Verify that all blocking, headers and supports are in place to support plumbing fixtures and to receive soap dishes, grabbars, towel racks, and similar items. Do not proceed with work until framing and furring are acceptable for application of gypsum board.

3.1.2 Gypsum Board and Framing

Verify that surfaces of gypsum board to be bonded with an adhesive are free of dust, dirt, grease, and any other foreign matter. Do not proceed with work until surfaces are acceptable for application of gypsum board with adhesive.

3.2 APPLICATION OF GYPSUM BOARD

Apply gypsum board to framing and furring members in accordance with ASTM C 840 or GA 216 and the requirements specified herein. Apply gypsum board with separate panels in moderate contact; do not force in place. Stagger end joints of adjoining panels. Neatly fit abutting end and edge joints. Use gypsum board of maximum practical length. Cut out gypsum board as required to make neat close joints around openings. In vertical application of gypsum board, provide panels in lengths required to reach full height of vertical surfaces in one continuous piece. Surfaces of gypsum board and substrate members may be bonded together with an adhesive, except where prohibited by fire rating(s). Treat edges of cutouts for plumbing pipes, screwheads, and joints with water-resistant compound as recommended by the gypsum board manufacturer. Provide type of gypsum board for use in each system specified herein as indicated.

3.2.1 Semi-Solid Gypsum Board Partitions

Provide in accordance with ASTM C 840, System IV or GA 216 .

3.2.2 Solid Gypsum Board Partitions

Provide in accordance with ASTM C 840, System V or GA 216.

3.2.3 Application of Gypsum Board to Steel Framing and Furring

Apply in accordance with ASTM C 840, System VIII or GA 216.

3.2.4 Arches and Bending Radii

Apply gypsum board in accordance with ASTM C 840, System IX or GA 216.

3.2.5 Gypsum Board for Wall Tile or Tile Base Applied with Adhesive

In humid areas other than tubs, shower enclosures, saunas, steam rooms, gang shower rooms, apply water-resistant gypsum backing board in accordance with ASTM C 840, System X or GA 216.

3.2.6 Exterior Application

Apply exterior gypsum board in accordance with ASTM C 840, System XI or GA 216.

3.2.7 Control Joints

Install expansion and contraction joints in ceilings and walls in accordance with ASTM C 840, System XIII or GA 216, unless indicated otherwise.

3.3 FINISHING OF GYPSUM BOARD

Tape and finish gypsum board in accordance with ASTM C 840 or GA 216. Provide joint, fastener depression, and corner treatment. Do not use fiber glass mesh tape with conventional drying type joint compounds; use setting or hardening type compounds only. Provide treatment for water-resistant gypsum board as recommended by the gypsum board manufacturer.

3.4 SEALING

Seal openings around pipes, fixtures, and other items projecting through gypsum board and cementitious backer units as specified in Section 07920, "Joint Sealants." Apply material with exposed surface flush with gypsum board or cementitious backer units.

3.5 FIRE-RESISTANT ASSEMBLIES

Wherever fire-rated gypsum board construction is indicated, provide materials and application methods, including types and spacing of fasteners, in accordance with the specifications contained in UL FRD or GA 600.

3.6 PATCHING

Patch surface defects in gypsum board to a smooth, uniform appearance, ready to receive finish as specified.

END OF SECTION