

## SECTION 09260 - GYPSUM BOARD ASSEMBLIES

### PART 1 - GENERAL

#### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.02 SUMMARY

- A. This Section includes the following:
  1. Interior gypsum wallboard.
  2. Acoustical insulation in framed assemblies.
  3. Firestopping.
  4. Smoke sealing.
- B. Related Sections include the following:
  1. Division 5 Section "Metal Framing" for framing, furring and concealed blocking.
  2. Division 7 Section "Building Insulation" for exterior thermal insulation and vapor retarders.
  3. Division 7 Section "Through-Penetration Firestop Systems" for systems not part of this Section.

#### 1.03 DEFINITIONS

- A. Gypsum Board Terminology: Refer to ASTM C 11 and GA-505 for definitions of terms for gypsum board assemblies not defined in this Section or in other referenced standards.

#### 1.04 SUBMITTALS

- A. General: Submit in accordance with Section 01330.
- B. Product Data: For each type of product indicated.
- C. Shop Drawings: Show locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.
- D. Firestopping: For each joint condition where fire-rated walls and partitions interface other walls, floors, structural members or other building structure, provide UL firestop system description and drawing. Show each kind of construction condition and relationships to adjoining construction. Indicate which firestop materials will be used where and thickness for different hourly ratings. Include UL firestop design designation that evidences compliance with requirements for each condition.

#### 1.05 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
  - 1. Fire-Resistance-Rated Assemblies: Indicated by design designations from UL's "Fire Resistance Directory," GA-600, "Fire Resistance Design Manual" or in the listing of another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Source Limitations for Panel Products: Obtain each type of gypsum board and other panel products from a single source from a single manufacturer.
- C. Source Limitations for Finishing Materials: Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels flat to prevent sagging.

#### 1.07 PROJECT CONDITIONS

- A. Environmental Limitations: Establish and maintain environmental conditions for applying and finishing gypsum board to comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40 deg F (4 deg C). For adhesive attachment and finishing of gypsum board, maintain not less than 50 deg F (10 deg C) for 48 hours before application and continuously after until dry. Do not exceed 95 deg F (35 deg C) when using temporary heat sources.
- C. Ventilation: Ventilate building spaces as required to dry joint treatment materials. Avoid drafts during hot, dry weather to prevent finishing materials from drying too rapidly.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Gypsum Board and Related Products:
    - a. CertainTeed - Pro Roc Brand Gypsum Board products.
    - b. Manufacturing location: Toronto, ON, Canada L5JK4

## 2.02 INTERIOR GYPSUM WALLBOARD

- A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
- B. Gypsum Wallboard: ASTM C 36.
  - 1. Type X:
    - a. Thickness: **5/8 inch, 1/2 inch.**
    - b. Long Edges: Tapered.
- C. Water-Resistant Gypsum Board (MR): ASTM C 630/C 630M.
- D. Thickness: **5/8 inch**, toilet room.
- E. Long Edges: Tapered.
- F. 5/8 inch thick cement board located at feature tile walls.

## 2.03 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047, galvanized steel.
  - 1. Shapes:
    - a. Cornerbead: **1-1/4 inch x 1-1/4 inch** external corner with **1/8-inch** nose bead. Use at outside corners, unless otherwise indicated.
    - b. LC-Bead (Casing): J-shaped casing with **1/16-inch** nose bead ground, not less than 30 gage; exposed long flange receives joint compound; use at exposed panel edges.
    - c. Expansion (Control) Joint: One-piece control joint formed with V-shaped slot and removable strip covering slot opening.

2.04 Accessories for Curved Edges: Corner bead formed of metal, plastic, or metal combined with plastic, with either notched or flexible flanges that are bendable to curvature radius.

## 2.05 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.
- B. Joint Tape:
  - 1. Interior Gypsum Wallboard: Paper reinforcing tape. Fiberglass tape not permitted.
- C. Setting-Type Joint Compound: Factory-packaged, job-mixed, chemical-hardening powder products formulated for uses indicated.
  - 1. Where setting-type joint compounds are indicated as a taping compound only or for taping and filling only, use formulation that is compatible with other joint compounds applied over it.
  - 2. For topping compound, use sandable formulation.
- D. Drying-Type Joint Compound: Factory-packaged vinyl-based products complying with the following requirements for formulation and intended use.
  - 1. Ready-Mixed Formulation: Factory-mixed product.

- E. Type of Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
  - 1. Pre-filling: At open joints, beveled panel edges, and damaged surface areas, use setting-type taping compound.
  - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
  - 3. Fill Coat: For second coat, use setting-type, sandable topping compound or drying-type, all-purpose compound.
  - 4. Finish Coat: For third coat, use setting-type, sandable topping compound or drying-type, all-purpose compound.

## 2.06 ACOUSTICAL SEALANT

- A. Products: Subject to compliance with requirements, provide one of the following:
  - 1. Acoustical Sealant for Exposed and Concealed Joints:
    - a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
    - b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
  - 2. Acoustical Sealant for Concealed Joints:
    - a. Ohio Sealants, Inc.; Pro-Series SC-170 Rubber Base Sound Sealant.
    - b. Pecora Corp.; BA-98.
    - c. Tremco, Inc.; Tremco Acoustical Sealant.
- B. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
- C. Acoustical Sealant for Concealed Joints: Nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.

## 2.07 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
  - 1. Fastening gypsum board to wood members: Type W bugle head.
- C. Sound Attenuation Insulation: ASTM C 665, Type I (fiberglass blankets without membrane facing) used as acoustical insulation.
  - 1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Certainteed.
    - b. Owens Corning.
    - c. Johns Manville.
- D. Thermal Insulation: Specified in Division 7 Section "Building Insulation."

- E. Insulation Support Anchors: Insul-Fast 25 gauge galvanized continuous metal support strip with pre-punched tabs at 8 inches on center.
- F. Polyethylene Vapor Retarder: Specified in Division 7 Section "Building Insulation."
- G. Firestopping: See Division 7 Section "Through-Penetration Firestop Systems." Provide firestopping where fire rated gypsum board assemblies butt dissimilar materials; including masonry, steel deck, joists, beams and structural members as part of the gypsum board assembly work. Penetrations through fire-resistance-rated walls and partitions by Division 15 and 16 work, including both empty openings and openings containing cables, pipes, ducts and conduits are specified as part of the Division 15 and 16 work.

### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Additionally, inspect the walls for dents and imperfections, with the Installer and painter present, prior to painting. Inspect walls again after primer and first coat of paint applied, with Installer and painter present. Installer shall touch-up as follows:
    - a. Touch-up visible gypsum board imperfections before priming of walls.
    - b. Touch-up imperfections found in field of boards and joints made visible from painting after first finish coat applied.

#### 3.02 INSTALLATION OF ACOUSTICAL INSULATION

- A. Install acoustical insulation at locations indicated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections that interfere with placement.
- B. Install a single layer of insulation of required thickness to fill the full depth of cavity, unless otherwise shown. Where cavity requires insulation that is thicker than standard size, install next larger size and compress into cavity.
- C. Hold batt insulation in place with insulation support anchors located at 5 feet on center full height of wall, starting at the top of each stud space.
- D. Stuff glass fiber loose fill insulation into miscellaneous voids and cavity spaces. Fill box headers, and voids while framing is being erected that will be inaccessible for installation later. Compact to approximately 40 percent of normal maximum volume (to a density of approximately 2.5 pcf).

#### 3.03 APPLYING AND FINISHING PANELS, GENERAL

- A. Gypsum Board Application and Finishing Standards: ASTM C 840 and GA-216, except as specified otherwise.

- B. Install acoustical insulation, where indicated, before installing gypsum panels, unless blankets are readily installed after panels have been installed on one side.
- C. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- D. Install gypsum panels with face side out. Butt panels together for a light contact at edges and ends with not more than **1/16 inch** of open space between panels. Do not force into place.
- E. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- F. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- G. Attach gypsum panels to framing provided at openings and cutouts.
- H. Do not attach gypsum panels across the flat grain of wide-dimension lumber. Float gypsum panels over these members.
- I. Form control and expansion joints with space between edges of adjoining gypsum panels.
  - 1. Where control joints are not shown, provide control joints at a maximum spacing of 30 feet; review proposed locations with Architect.
- J. Cover both faces of stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
  - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than **8 sq. ft.** in area.
  - 2. Fit gypsum panels around ducts, pipes, and conduits.
  - 3. Where partitions intersect open structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by members; allow **1/4- to 3/8-inch** wide joints to install sealant.
- K. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors. Provide **1/4- to 1/2-inch** wide spaces at these locations, and trim edges with casing bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- L. Floating Construction: Where feasible, including where recommended in writing by manufacturer, install gypsum panels over wood framing, with floating internal corner construction.
- M. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's written recommendations.
  - 1. Space screws a maximum of **12 inches** o.c. for vertical applications.
- N. Space fasteners in panels that are tile substrates a maximum of 8 inches o.c.

- O. Remove screws that do not hit studs, supports, or blocking.

### 3.04 PANEL APPLICATION METHODS

#### A. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
2. On underside of trusses, install ceiling gypsum panels before installing wall studs to provide continuous surface over partitions for both rated and non-rated conditions.
3. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
  - a. Stagger abutting end joints not less than one framing member in alternate courses of board.

- B. Multilayer Application on Partitions/Walls: Apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.

- C. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.

- D. Multilayer Fastening Methods: Fasten base layers and face layers separately to supports with screws.

### 3.05 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

- B. Install corner bead at external corners.

- C. Install edge trim where edge of gypsum panels would otherwise be exposed. Provide edge trim type with face flange formed to receive joint compound, except where other types are indicated. Screw attach trim in addition to crimping.

1. Install LC-bead where gypsum panels are tightly abutted to other construction and back flange can be attached to framing or supporting substrate.
2. Install L-bead where edge trim can only be installed after gypsum panels are installed.
3. Install U-bead where indicated.

- D. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

### 3.06 FINISHING GYPSUM BOARD ASSEMBLIES

- A. General: Treat gypsum board joints, interior angles, flanges of corner bead, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare

gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

- B. Pre-fill open joints, rounded or beveled edges, and damaged surface areas using setting-type joint compound.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Apply joint tape over gypsum board joints and to flanges of trim accessories as recommended by trim accessory manufacturer.
- E. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
  - 1. Level 1: At ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for fire-resistance-rated assemblies and sound-rated assemblies.
  - 2. Level 4: At panel surfaces that will be exposed to view, unless otherwise indicated.
- F. Where Level 1 gypsum board finish is indicated, embed tape in joint compound. Surface shall be free of excess joint compound.
- G. For Level 4 gypsum board finish, embed tape in joint compound and apply first, fill (second), and finish (third) coats of joint compound over joints, angles, fastener heads, and accessories. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects and ready for decoration.
  - 1. At tapered edge joints, draw the compound down to a level plane, leaving a monolithic surface that is flush with the paper face. Finish coat shall be feathered a minimum of 8 inches beyond both sides of the center of joint tape.
  - 2. At end to end butt joints, draw the compound down to minimize the hump created by the joint tape application. Finish coat shall be feathered a minimum of 16 inches beyond both sides of the center of the joint tape.
  - 3. The end product shall be a surface that appears level without telegraphing joint locations as high spots when viewed down the wall after painting.
  - 4. Finish board to within 1/4 inch of the floor, providing full support for resilient wall base without telegraphing joint.

### 3.07 FIELD QUALITY CONTROL

- A. Above-Ceiling Observation: Before Contractor installs gypsum board ceilings, Architect will conduct an above-ceiling observation and report deficiencies in the Work observed. Do not proceed with installation of gypsum board to ceiling support framing until deficiencies have been corrected.
  - 1. Notify Architect seven days in advance of date and time when Project, or part of Project, will be ready for above-ceiling observation.

### 3.08 CLEANING AND PROTECTION

- A. Promptly remove any residual joint compound from adjacent surfaces.



- B. Provide final protection and maintain conditions, in a manner acceptable to Installer, that ensure gypsum board assemblies are without damage or deterioration at the time of Substantial Completion.

END OF SECTION 09260