



09 2116
Gypsum Board Assemblies

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A. General:

1. Section includes exterior gypsum sheathing, interior gypsum boards, tile backer boards, plaster base boards.
2. Exterior light-gage metal framing criteria are defined in Division 05 Section "Cold-Formed Metal Framing". Interior light-gage metal framing criteria are defined in Division 09 Section "Non-Structural Metal Framing". Ceiling suspension systems criteria are defined in Division 09 Section "Acoustical Panel Ceilings".
3. Products installed but not supplied under this section:
 - a. Wood blocking
 - b. Metal stud insulation
 - c. Sound attenuation batt insulation

B. Design Criteria:

1. Acoustical Criteria: Provide the minimum STC rating, determined in accordance with ASTM E413:
 - a. Between Offices and other spaces: STC 43
 - b. Between Classrooms and other spaces: STC 50
 - c. Between Conference Rooms and other Spaces: STC 43
 - d. Between Restrooms and Other spaces: STC 50
 - e. Between Mechanical Rooms and other spaces: STC 50
 - f. Music Practice or Performance spaces: STC 54
 - g. Confer with Owner about rooms requiring special acoustical considerations.

C. Submittals:

1. Acoustical Data: Provide details and installation requirements for systems tested in accordance with ASTM E413 or listed in Gypsum Association GA-600 or UL.

D. Coordination:

1. Determine the need for "extra" metal studs or blocking for attachment of their Work or framed openings and coordinate locations of such.



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2. Locate blocking in walls to support wall-mounted items.

E. Gypsum Board Products:

1. Provide only products that have been mined, recycled, and manufactured in the United States or Canada.
2. Drywall: ASTM C 36 or C 1396, Type X
 - a. Thickness:
 - 1) General: 5/8 inch
 - 2) Curved fire-rated assemblies: 2 layers 3/8", for wall radius range 3 feet to 18 feet. Note: Curved walls should only be designed after Owner approval.
 - b. Edges: Tapered
 - c. Location: Where drywall indicated, fire-rated assemblies and non-fire-rated assemblies except where otherwise indicated.
3. Mold-resistive drywall: ASTM C 36 or C 1396, Type X, having improved mold resistance over standard gypsum board.
 - a. Mold resistance: ASTM D3273 with a score of 10 and/or ASTM G21 with a score of 0.
 - b. Thickness: 5/8 inch.
 - c. Long Edges: Tapered
 - d. Location: At exterior walls. At interior plumbing walls not located in toilet rooms, shower and locker rooms, or kitchens. Where required for specific mold-resistance assembly indicated.
4. Shaft wall liner board: ASTM C 36 or C 1396, Type X, with enhanced mold resistance.
 - a. Location: cavity shaft walls, horizontal shaft walls
5. Water-resistive drywall with enhanced resistance to mold:
 - a. Mold resistance: ASTM D3273 with a score of 10 and/or ASTM G21 with a score of 0.
 - b. ASTM C 473 water absorption less than 5%.
 - c. Thickness: 5/8"
 - d. Edges: tapered
 - e. Location:
 - 1) Areas exposed to high intermittent moisture levels (mechanical rooms, toilets, locker rooms, kitchens, and behind counters with sinks).



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- 2) Walls with ceramic tile wainscot, not subject to direct water exposure (public restrooms).
 - 3) Ceilings in rooms subject to high intermittent moisture levels (toilet rooms, food service rooms) and not subject to direct water exposure.
 - 4) Walls of areas located below grade level.
6. Abuse-resistant drywall:
- a. Thickness: 5/8"
 - b. Edges: tapered
 - c. Location: Outer layer on corridor and storage room walls; lower 4 feet on classroom walls. Abuse-resistant drywall is recommended for corridors, service and storage rooms, classrooms, and locations subject to cart traffic. Confer with Owner on locations.
7. Acoustically enhanced gypsum drywall:
- a. Drywall product consisting of two layers of gypsum drywall laminated to a viscoelastic polymer interlayer.
 - b. Thickness: 5/8"
 - c. Weight: 2.7 lbs/square foot, min.
 - d. Edges: tapered
 - e. Minimum partition STC rating, 3-5/8 inch metal stud wall, applied two sides: 55
 - f. Location: Where required to achieve acoustical rating. Confer with Owner on locations.
8. Veneer plaster base:
- a. Thickness: 5/8"
 - b. Edges: tapered
 - c. Face: Glass-mat, with factory applied waterproof coating suitable for direct application of ceramic tile when used with ceramic tiles.
 - d. Location: base board for veneer plaster on fire-rated assemblies and non-fire-rated assemblies
9. Tile backer boards:
- a. Gypsum board complying with ASTM C1325:
 - 1) Thickness: 5/8"
 - 2) Edges: tapered
 - 3) Face: Glass-mat, with factory applied waterproof coating suitable for direct application of ceramic tile when used with ceramic tiles.



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- b. Cementitious tile backer board complying with ASTM C1288:
 - 1) Thickness: 1/2" or 5/8"
 - 2) Size: 36" by length required to minimize horizontal joints
 - 3) Location: Use where indicated and as substrate for horizontal ceramic tile or stone tile installation on casework or framed walls.
 - c. Location, General:
 - 1) Use on walls scheduled to receive porcelain tile and subjected to direct moisture.
 - 2) Use on walls subject to direct water exposure to height of ceramic tile wainscot.
 - 3) Use as substrate for above-floor horizontal ceramic or porcelain tile installations.
 - 4) Use gypsum boards in areas of high continuous humidity, shower and locker room ceilings.
 - 10. Gypsum sheathing: Exterior gypsum wall and soffit sheathing with enhanced water and mold resistance complying with ASTM C 1177.
 - a. Thickness: 1/2" or 5/8"
 - b. Edges: square
 - c. Size: 4'-0" by length required to minimize joints.
 - d. Location: exterior wall studs and soffit framing.
- F. Joint treatment
- 1. General:
 - a. Provide joint treatment materials complying with ASTM C475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.
 - 2. On fire-rated partitions, fire-rated drywall finishing tape, tested in accordance with ASTM E119 is acceptable for use above ceilings and in concealed spaces.
 - 3. Level 5 Finish: Provide at all surfaces with critical viewing conditions
 - a. Primer/surfacer for Level 5 Finish: dual-purpose high-build acrylic latex based coating, for finishing and priming drywall.
 - 1) VOC Limits for architectural paints, coatings and primers: Use materials that do not exceed the VOC content limits established in Green Seal Standard GS-11, less water, when calculated according to 40 CFR 59, Subpart D (EPA Method 24), 50 g/L



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- G. Acoustical sealant: Nondrying, non-hardening, non-skinning, non-staining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound.
- H. Installation:
1. Control joints:
 - a. Install double studs with 1/2 inch minimum clearance between studs at control joint locations.
 - b. At door jambs, Install cripple stud at head adjacent to jamb stud, with a minimum 1/2-inch clearance from jamb stud.
 - c. At fire rated walls, provide fire-blocking consisting of two layers of 5/8 inch fire-rated drywall or a 3-inch minimum length of safining insulation the full depth of the wall, centered behind the control joint.
 - d. Wall Locations:
 - 1) Provide where partitions of dissimilar construction meet and remain in the same plane.
 - 2) A maximum of 30 feet in any one direction.
 - 3) Except at dissimilar partitions and where walls exceed 30 feet in length without interruption, install control joints at the door jamb adjacent to the largest unbroken wall area.
 - 4) At building expansion or control joints in furred masonry walls.
 - e. Ceiling Locations:
 - 1) Provide where soffits or ceilings of dissimilar construction meet and remain in the same plane.
 - 2) Where the wings of 'L', 'U', 'T' shaped ceilings are joined.
 - 3) At ceilings with perimeter relief: a maximum of 50 feet in any one direction.
 - 4) At ceilings without perimeter relief and exterior ceilings: a maximum of 30 feet in any one direction.
 - 5) At building expansion joints.
 2. Where pipe chases are formed by two rows of studs, tie such rows adequately together with metal stud bracing located at the quarter points of such studs, a maximum of 4 feet on center vertically, 4 feet on center horizontally..
 3. Blocking:
 - a. Coordinate all installed blocking where required for recessed and wall hung items.
 - b. Install anchor strap or blocking to studs in continuous manner between studs for support of grab bars, handrails, wall cabinets and all other wall hung items.
 - c. Provide wood blocking at grab bars, hand rails, door stops, and toilet partitions.



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- d. Provide wood blocking or anchor strap at all other locations, as required by Owner.
- 4. Wall board installation:
 - a. Install in accordance with GA-216.
 - b. Apply wall board vertically or horizontally, whichever will minimize joints, so that edges or ends are positioned over studs.
 - 1) Use maximum practical lengths to minimize joints.
 - 2) Stagger joints on opposite sides of partitions.
 - 3) Locate end joints on studs.
 - 4) Install boards with bottom edge 1/2 inch minimum above floor level. Seal with silicone sealant, or acoustical sealant at walls with acoustical insulation.
 - 5) Provide concealed dust membranes behind joints between wall board and dissimilar materials. Lap dust membrane and seal with acoustical sealant.
 - c. Space screws in accordance with manufacturer's recommendations or UL assembly requirements, but no greater than 12" o.c.
 - d. Seal cut edges in water-resistant type and exterior type gypsum drywall according to the manufacturer's recommendations.
 - e. Wall and ceiling vapor retarders specified in Division 07 Section "Vapor Retarders" shall be installed and inspected prior to application of gypsum drywall.
 - f. Where full-height walls and walls containing sound attenuation blankets are required, seal the perimeter of the drywall, gaps, and around penetrating items, such as pipes, conduits, electrical boxes, grilles, etc. with acoustical sealant.
 - g. Vacuum clean all spaces within walls and chased areas.
- 5. Trim:
 - a. Install trim of proper types at all external and internal corners and at all terminations of gypsum drywall materials against dissimilar materials.
 - b. Install control joints at locations where control joints are indicated or required.
- 6. Joint treatment:
 - a. Finish joints in conformance with the Level descriptions given in GA-214 and GA-216.
 - b. All gypsum wall board exposed to view, including mechanical rooms and service spaces, shall be finished to Level 4 finish, unless approved otherwise.
 - 1) Critical lighting and gloss sheen painted walls: Level 5 for walls or ceilings with strong cross lighting (natural or artificial) and/or gloss sheen paint finishes.
 - a) Finish by skim coating with drywall compound or by application of Surfacer/Primer.



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- b) At walls with reveals, trowel or screed skim coat of drywall compound to level finish between reveals.
- 2) Walls indicated to receive overlay finishes, such as paneling, acoustical wall panels, etc.: Level 3
- 3) Gypsum wallboard in unexposed areas shall be finished to a minimum Level 2 finish, except as permitted.
 - a) Fire-rated drywall finishing tape may be used in lieu of level 2 finish on fire-rated walls.

END OF SECTION