

PART 1 - GENERAL

- 1.1 REFERENCES
- .1 Aluminum Association (AA)
 - .1 AA DAF 45-03(R2009), Designation System for Aluminum Finishes.
 - .2 ASTM International
 - .1 ASTM C 475/C475M-15, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 - .2 ASTM C 514-(2014, Standard Specification for Nails for the Application of Gypsum Board.
 - .3 ASTM C 557-03(2009el), Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.
 - .4 ASTM C 840-17, Standard Specification for Application and Finishing of Gypsum Board.
 - .5 ASTM C 954-15, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
 - .6 ASTM C 1002-16, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - .7 ASTM C 1047-14a, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 - .8 ASTM C 1280-13a, Standard Specification for Application of Gypsum Sheathing.
 - .9 ASTM C 1177/C 1177M-13, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
 - .10 ASTM C 1178/C 1178M-13, Standard Specification for Glass Mat Water-Resistant Gypsum Backing Board.
 - .11 ASTM C1396/C1396M-14a, Standard Specification for Gypsum Wallboard.
 - .3 Association of the Wall and Ceilings Industries International (AWCI)
 - .1 AWCI/GA-214-2015 Recommended Levels of Finish for Gypsum Board, Glass Mat & Fibre-Reinforced Gypsum Panels.
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1.1 REFERENCES
(Cont'd)

- .4 Canada Green Building Council (CaGBC)
 - .1 LEED Canada-NC-2009, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.
- .5 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.34-M86(R1988), Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
 - .2 CAN/CGSB-71.25-M88, Adhesive, for Bonding Drywall to Wood Framing and Metal Studs.
- .6 Green Seal Environmental Standards (GS)
 - .1 GS-11-2008, 2nd Edition, Paints and Coatings.
- .7 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1113-A2007, Architectural Coatings.
 - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
- .8 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-07, Standard Method of Test of Surface Burning Characteristics of Building Materials and Assemblies.

1.2 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for gypsum board assemblies and include product characteristics, performance criteria, physical size, finish and limitations.
 - .3 Sustainable Design Submittals:
 - .1 LEED Canada Submittals: in accordance with Section 01 35 21 - LEED Requirements.
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1.3 DELIVERY,
STORAGE AND
HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
 - .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
 - .3 Storage and Handling Requirements:
 - .1 Store gypsum board assemblies materials level off ground, indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect gypsum board assemblies from nicks, scratches, and blemishes.
 - .3 Protect from weather, elements and damage from construction operations.
 - .4 Handle gypsum boards to prevent damage to edges, ends or surfaces.
 - .5 Protect prefinished aluminum surfaces with strippable coating. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.
 - .6 Replace defective or damaged materials with new.
 - .4 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 35 21 - LEED Requirements.
 - .5 Packaging Waste Management: remove for reuse or return of pallets, crates, padding, banding, and packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
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1.4 AMBIENT
CONDITIONS

- .1 Maintain temperature 10 degrees C minimum, 21 degrees C maximum for 48 hours prior to and during application of gypsum boards and joint treatment, and for 48 hours minimum after completion of joint treatment.
- .2 Apply board and joint treatment to dry, frost free surfaces.
- .3 Ventilation: ventilate building spaces as required to remove excess moisture that would prevent drying of joint treatment material immediately after its application.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Standard board: to ASTM C1396/C1396M regular, 16 mm thick and Type X, 16 mm thick, 1200 mm wide x maximum practical length, ends square cut, edges bevelled.
 - .2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
 - .3 Resilient drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board.
 - .4 Steel drill screws: to ASTM C 1002.
 - .5 Stud adhesive: to CAN/CGSB-71.25.
 - .6 Laminating compound: as recommended by manufacturer, asbestos-free.
 - .7 Casing beads, corner beads, control joints and edge trim: to ASTM C 1047, zinc-coated by electrolytic process, 0.5 mm base thickness, perforated flanges, one piece length per location, tape-in type.
 - .8 Sealants: in accordance with Section 07 92 00 - Joint Sealants.
 - .1 VOC limit 250 g/L maximum to SCAQMD Rule 1168.
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| <u>2.1 MATERIALS</u>
(Cont'd) | .8 Sealants: (Cont'd) |
| | .2 Acoustic sealant: in accordance with Section 07 92 00 - Joint Sealants. |
| | .9 Polyethylene: to CAN/CGSB-51.34, Type 2. |
| | .10 Insulating strip: rubberized, moisture resistant, 3 mm thick closed cell neoprene strip, 12 mm wide, with self sticking permanent adhesive on one face, lengths as required. |
| | .11 Joint compound: to ASTM C 475, asbestos-free. |

PART 3 - EXECUTION

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| <u>3.1 EXAMINATION</u> | .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for gypsum board assemblies installation in accordance with manufacturer's written instructions.
.1 Visually inspect substrate in presence of Departmental Representative.
.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative. |
| <u>3.2 ERECTION</u> | .1 Do application and finishing of gypsum board to ASTM C 840 except where specified otherwise.
.2 Do application of gypsum sheathing to ASTM C 1280.
.3 Erect hangers and runner channels for suspended gypsum board ceilings to ASTM C 840 except where specified otherwise.
.4 Support light fixtures by providing additional ceiling suspension hangers within |
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3.2 ERECTION
(Cont'd)

- .4 (Cont'd)
150 mm of each corner and at maximum 600 mm around perimeter of fixture.
 - .5 Install work level to tolerance of 1:1200.
 - .6 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles, and other equipment.
 - .7 Install 19 x 64 mm furring channels parallel to, and at exact locations of steel stud partition header track.
 - .8 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
 - .9 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.
 - .10 Install wall furring for gypsum board wall finishes to ASTM C 840, except where specified otherwise.
 - .11 Furr openings and around built-in equipment, cabinets, and access panels, on four sides. Extend furring into reveals. Check clearances with equipment suppliers.
 - .12 Furr duct shafts, beams, columns, pipes and exposed services where indicated.
 - .13 Erect drywall resilient furring transversely across studs and joists, spaced maximum 600 mm on centre and not more than 150 mm from ceiling/wall juncture. Secure to each support with 38 mm common nail 25 mm drywall screw. Unless noted otherwise on the drawings.
 - .14 Install 150 mm continuous strip of 12.7 mm gypsum board along base of partitions where resilient furring installed.
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3.3 APPLICATION

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, electrical and mechanical work have been approved.
 - .2 Apply gypsum board to metal furring or framing using screw fasteners for first layer, screw fasteners for second layer. Maximum spacing of screws 200 mm on centre.
 - .1 Single-Layer Application:
 - .1 Apply gypsum board on ceilings prior to application of walls to ASTM C 840.
 - .2 Apply gypsum board vertically or horizontally, providing sheet lengths that will minimize end joints.
 - .2 Double-Layer Application:
 - .1 Install gypsum board for base layer and exposed gypsum board for face layer.
 - .2 Apply base layer to ceilings prior to base layer application on walls; apply face layers in same sequence. Offset joints between layers at least 250 mm.
 - .3 Apply base layers at right angles to supports unless otherwise indicated.
 - .4 Apply base layer on walls and face layers vertically with joints of base layer over supports and face layer joints offset at least one stud cavity with base layer joints.
 - .3 Apply layer of gypsum board to concrete surfaces, where indicated, using laminating adhesive.
 - .1 Comply with gypsum board manufacturer's recommendations.
 - .2 Brace or fasten gypsum board until fastening adhesive has set.
 - .3 Mechanically fasten gypsum board at top and bottom of each sheet.
 - .4 Apply 12 mm diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut building components. Seal full perimeter of cut-outs around electrical boxes, ducts, and equipment, in partitions where perimeter sealed with acoustic sealant.
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3.3 APPLICATION
(Cont'd)

- .5 Install ceiling boards in direction that will minimize number of end-butt joints. Stagger end joints at least 250 mm.
- .6 Install gypsum board on walls vertically to avoid end-butt joints. At stairwells and similar high walls, install boards horizontally with end joints staggered over studs, except where local codes or fire-rated assemblies require vertical application.
- .7 Install gypsum board with face side out.
- .8 Do not install damaged or damp boards.
- .9 Locate edge or end joints over supports. Stagger vertical joints over different studs on opposite sides of wall.

3.4 INSTALLATION

- .1 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges. Secure at 150 mm on centre.
 - .2 Install casing beads around perimeter of suspended ceilings.
 - .3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.
 - .4 Install insulating strips continuously at edges of gypsum board and casing beads abutting window and exterior door frames, to provide thermal break.
 - .5 Construct control joints of preformed units set in gypsum board facing and supported independently on both sides of joint.
 - .6 Provide continuous polyethylene dust barrier behind and across control joints.
 - .7 Locate control joints at changes in substrate construction.
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3.4 INSTALLATION
(Cont'd)

- .8 Install control joints straight and true.
 - .9 Construct expansion joints, at building expansion and construction joints. Provide continuous dust barrier.
 - .10 Install expansion joints straight and true.
 - .11 Splice corners and intersections together and secure to each member with 3 screws.
 - .12 Install access doors to electrical and mechanical fixtures specified in respective sections.
 - .1 Rigidly secure frames to furring or framing systems.
 - .13 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.
 - .14 Gypsum Board Finish: finish gypsum board walls and ceilings to following levels in accordance with AWCI Levels of Gypsum Board Finish:
 - .1 Levels of finish:
 - .1 Level 1: For use at areas above finished ceilings. Embed tape for joints and interior angles in joint compound. Surfaces to be free of excess joint compound; tool marks and ridges are acceptable.
 - .2 Level 2: For use at areas to receive final tile finish. Embed tape for joints and interior angles in joint compound and apply one separate coat of joint compound over joints, angles, fastener heads and accessories; surfaces free of excess joint compound; tool marks and ridges are acceptable.
 - .3 Level 5: For use at the remainder of areas not otherwise noted. Embed tape for joints and interior angles in joint compound and apply three separate coats of joint compound over joints, angles, fastener heads and accessories; apply a thin skim coat of joint compound to
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3.4 INSTALLATION
(Cont'd)

- .14 Gypsum Board Finish: (Cont'd)
 - .1 Levels of finish: (Cont'd)

entire surface; surfaces smooth and free of tool marks and ridges.
- .15 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.
- .16 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.
- .17 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .18 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.
- .19 Mix joint compound slightly thinner than for joint taping.
- .20 Apply thin coat to entire surface using trowel or drywall broad knife to fill surface texture differences, variations or tool marks.
- .21 Allow skim coat to dry completely.
- .22 Remove ridges by light sanding or wiping with damp cloth.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
 - .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition
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- 3.5 CLEANING
(Cont'd)
- .2 Waste Management: (Cont'd)
Waste Management and Disposal and Section
01 35 21 - LEED Requirements.
.1 Remove recycling containers and bins
from site and dispose of materials at
appropriate facility.
- 3.6 PROTECTION
- .1 Protect installed products and components
from damage during construction.
- .2 Repair damage to adjacent materials caused by
gypsum board assemblies installation.