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**PART 1      GENERAL**

**1.1            REFERENCES**

- .1    ASTM International
  - .1    ASTM C 475-15, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
  - .2    ASTM C 840-17, Standard Specification for Application and Finishing of Gypsum Board.
  - .3    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.
  - .4    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.
  - .5    ASTM C 1047-14A, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
  - .6    ASTM C 1396/C 1396M-14, Standard Specification for Gypsum Wallboard.
  - .7    ASTM C1629/C1629M-18A, Standard Specification for Abuse-Resistant Non-Decorated Interior Gypsum Panel Products and Fibre-Reinforced Cement Panels.
  - .8    ASTM C1766-15, Standard Specification for Factory-Laminated Gypsum Panel Products
- .2    Association of the Wall and Ceilings Industries International (AWCI)
  - .1    AWCI Levels of Gypsum Board Finish-10.
- .3    Underwriters' Laboratories of Canada (ULC)
  - .1    CAN/ULC-S102-10, 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.

### **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.

### **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 C 1396/C 1396M regular and Type X, thickness as indicated, 1220 mm wide x maximum practical length. Mould resistance score of 10 when tested to ASTM D 3273.
- .2 Abuse and mold resistant interior gypsum board:
  - .1 Abrasion Resistance; Level 2.
  - .2 Indentation Resistance; Level 1.
  - .3 Soft Body Impact Resistance; Level 3
  - .4 Hard Body Impact Resistance; Level 3
  - .5 UL: Type Designation "AR"
  - .6 Thickness: 16 mm
  - .7 Length: maximum practical length
  - .8 Widths: 1220 mm
  - .9 Weight: 13.67 kg/m<sup>2</sup>
  - .10 Long Edges: Tapered
  - .11 Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

- .3 Metal furring runners, hangers, tie wires, inserts, and anchors: to CSA A 82.30.
- .4 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
- .5 Resilient clips drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board.
- .6 Nails: to ASTM C 514.
- .7 Steel drill screws: to ASTM C 1002.
- .8 Stud adhesive: to ASTM C 557.
- .9 Laminating compound: as recommended by manufacturer, asbestos-free.
- .10 Casing beads, corner beads, control joints and edge trim: to ASTM C 1047, metal, zinc-coated by hot-dip process, 0.5 mm base thickness, perforated flanges, one piece length per location.
- .11 Sealants: in accordance with Section 07 92 00 - Joint Sealants.
- .12 Polyethylene: to CAN/CGSB-51.34, Type 2.
- .13 Insulating strip: rubberized strip, moisture resistant, 5 mm thick recycled rubber with acrylic polymers, width to suit stud track, lengths as required.
- .14 Joint compound: to ASTM C 475, asbestos-free.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- .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.

### **3.2 ERECTION**

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

### 3.3 APPLICATION

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, electrical and mechanical work has been approved.
  - .2 Apply single layer gypsum board to metal furring or framing using screw fasteners for first layer. Maximum spacing of screws 300 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 250 mm with base layer joints.
  - .3 Apply water-resistant gypsum board adjacent to slop sinks and janitors closets. Apply water-resistant sealant to edges, ends, cut-outs which expose gypsum core and to fastener heads.
  - .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 fixed building components. Seal full perimeter of cut-outs around electrical boxes, ducts, in partitions where perimeter sealed with acoustic sealant.
  - .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.
- 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 metal 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 approximate 10 m spacing on long corridor runs at approximate 15 m spacing on ceilings.
- .8 Install control joints straight and true.
- .9 Construct expansion joints at building expansion and construction joints. Provide continuous dust barrier.
- .10 Install expansion joint 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 Apply acoustic sealant at perimeter of assembly and around all penetrations.
- .14 Install acoustical putty pads at all receptacles and switch locations.
- .15 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.
- .16 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 5: 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 entire surface; surfaces smooth and free of tool marks and ridges.
- .17 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.
- .18 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.
- .19 Sand lightly to remove burred edges and other imperfections. Avoid sanding adjacent surface of board.
- .20 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

- .21 Apply one coat of white primer sealer over surface to be textured. When dry apply textured finish in accordance with manufacturer's instructions.
- .22 Mix joint compound slightly thinner than for joint taping.
- .23 Apply thin coat to entire surface using trowel or drywall broad knife to fill surface texture differences, variations or tool marks.
- .24 Allow skim coat to dry completely.
- .25 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.

### **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.

**END OF SECTION**