
Part 1 General

1.1 SECTION INCLUDES

- .1 Interior panels for walls.
- .2 Panel and joint treatment.

1.2 RELATED SECTIONS

- .1 Section 07 92 00 - Joint Sealants.
- .2 Section 09 22 16-Non-Structural Metal Framing.

1.3 REFERENCES

- .1 ANSI A118.9-99, Cementitious Backer Units (CBU).
- .2 ASTM C475/C475M-02 - Standard Specification For Joint Compound And Joint Tape For Finishing Gypsum Board.
- .3 ASTM C840-04A - Standard Specification For Application And Finishing Of Gypsum Board.
- .4 ASTM C1002-01 - Steel Self-Piercing, Tapping Screws For The Application Of Gypsum Panel Products Or Metal Plaster Bases To Steel Studs.
- .5 ASTM C1278 / C1278M – 07A Standard Specification For Fiber-Reinforced Gypsum Panel.
- .6 ASTM C1280-04 - Standard Specification For Application Of Gypsum Sheathing.
- .7 STM C1396/C1396M-04 - Standard Specification For Gypsum Board.
- .8 ASTM E119-00A - Method For Fire Tests Of Building Construction And Materials.
- .9 GA-201 (Gypsum Association) - Gypsum Board For Walls And Ceilings.
- .10 GA-214 (Gypsum Association) - Recommended Specification: Levels Of Gypsum Board Finish.
- .11 GS-216 (Gypsum Association) - Application And Finishing Of Gypsum Board.
- .12 GA-801 (Gypsum Association) - Handling Gypsum Board.
- .13 Scientific Certification Systems (SCS).

- .1 Specification SCS-RRC-01, Certification Specifications For Recycled And Recovered Content.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver materials in original packages, containers or bundles bearing Manufacturers brand name and identification.
- .2 Store materials inside, level, under cover. keep dry. protect from weather, other elements and damage from construction operations and other causes.
- .3 Handle gypsum boards to prevent damage to edges, ends or surfaces. protect metal accessories and trim from being bent or damaged.

1.5 SITE ENVIRONMENTAL REQUIREMENTS

- .1 Maintain temperature minimum 10 degrees C, maximum 21 degrees C for 48 hours prior to and during application of gypsum boards and joint treatment, and for at least 48 hours 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.

1.6 SUBMITTALS FOR REVIEW

- .1 Provide submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product data: provide data on metal framing, gypsum board, joint tape.
- .3 Samples: submit samples for exterior fasteners for all applications.

1.7 QUALITY ASSURANCE

- .1 Perform work in accordance with ASTM C840.
- .2 Applicator qualifications: company specializing in performing the work of this section with minimum 5 years documented experience.
- .3 Handling gypsum board: comply with GA-801.

Part 2 Products

2.1 PANEL MATERIALS

- .1 Fire rated gypsum board (type X): ASTM C1396/C1396M, Fire Resistive Type, UL, ULC, or its rated; thickness as indicated, maximum available length in place; ends square cut, tapered edges.
 - .1 Acceptable Manufacturers: CGC, Certainteed, Temple Inland or approved alternate.

2.2 ACCESSORIES

- .1 Framing: in accordance with Section 09 22 16 Non-Structural Metal Framing
- .2 Acoustic sealant: Low VOC to Section 07 92 00.
- .3 Corner beads: GA-216, metal corner bead.
- .4 Edge trim: GA-216; casing bead, L-bead, LK-bead, LC-bead and control joints, as required.
- .5 Joint materials: ASTM C475; paper reinforcing tape, joint compound, adhesive, and water. mesh tape only where required by ULC design.
- .6 Panel fasteners: ASTM C1002, type S12 screws. Exterior finish to be corrosion resistant.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that site conditions are ready to receive work and opening dimensions are as instructed by the Manufacturer.

3.2 WALL FURRING INSTALLATION

- .1 Erect Furring Channels: Space Maximum As Indicated On Drawings, Not More Than 100 Mm From Floor And Ceiling Lines And Abutting Walls.
- .2 Secure in place on alternate channel flanges at maximum 600 mm on centre.
- .3 Shim wall and rigidly secure to substrate to prevent deflection.

3.3 FURRING FOR FIRE RATINGS

- .1 Install furring as required for fire resistance ratings indicated.

3.4 ACCESSORIES INSTALLATION

- .1 Install acoustic sealant at gypsum board perimeter at:

- .1 Metal framing: two beads.
- .2 Base layer.
- .3 Face layer.
- .4 Fire stop all penetrations of partitions by conduit, pipe, duct work, rough-in boxes.

3.5 PANEL INSTALLATION

- .1 Install Panels In Accordance With Manufacturer's Written Instructions.
- .2 Erect Single Layer Board In Most Economical Direction, With Ends And Edges Occurring Over Firm Bearing.
- .3 Erect base layer fire rated gypsum board vertically, with joints butted over studs and fastened to studs 250mm o/c.
- .4 Erect face layer fire rated gypsum board horizontally with joint finisher cement and fastened 300mm o/c temporarily to base layer until cement sets. All joints in face layers staggered with joints in base layers and with joints on opposite sides.
- .5 Use screws when fastening to metal furring or framing. use wafer-head screws for attachment of backer board.
- .6 Double layer applications: secure second layer to first with fasteners. offset joints of second layer from joints of first layer.
- .7 Treat cut edges and holes in mineral fiber cement panels with exterior latex masonry sealer.
- .8 Place control joints consistent with lines of building spaces or as directed.
- .9 Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

3.6 JOINT TREATMENT

- .1 Finish in accordance with GA-214 Level 4.
- .2 Feather coats on to adjoining surfaces so that camber is maximum 0.8 mm.

3.7 TOLERANCES

- .1 Maximum variation of finished gypsum board surface from true flatness: 3 mm in 3 m in any.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
- .2 Section 07 92 00 - Joint Sealants.
- .3 Section 09 21 16 - Gypsum Board Assemblies.

1.2 REFERENCES

- .1 American Society For Testing And Materials International, (ASTM).
 - .1 ASTM C645, Specification For Nonstructural Steel Framing Members.
 - .2 ASTM C754, Specification For Installation Of Steel Framing Members To Receive Screw-Attached Gypsum Panel Products.
- .2 The Master Painters Institute (MPI).
 - .1 Architectural Painting Specification Manual, MPI #26, Primer, Galvanized Metal, Cementitious.

Part 2 Products

2.1 MATERIALS

- .1 Non-load bearing channel stud framing: to ASTM C645, roll formed hot dipped galvanized steel sheet, 0.55 mm thickness for stud lengths up to 3500 mm, 0.91 mm thickness for stud lengths greater than 3500 mm, unless indicated otherwise on the drawings, for screw attachment of gypsum board. Knock-out service holes at 460 mm centres.
 - .1 Stud sizes shall be as indicated on the drawings.
 - .2 Bottom track: single piece.
 - .3 Top track: single piece track or double track or slotted single top track. (double track or slotted single top track to accommodate deflection).
- .2 Acoustical sealant: To Section 07 92 00 - Joint Sealants.
- .3 Insulating strip: rubberized, moisture resistant 3 mm thick cork foam strip, 12 mm wide, with self-sticking adhesive on one face, lengths as required.
- .4 Dampproof course: closed cell, polyethylene foam, 6.3 mm thick, 89 mm wide.

Part 3 Execution

3.1 ERECTION

- .1 Align partition tracks at floor and ceiling and secure at 600 mm o/c maximum.
- .2 Allow minimum deflection gap of 16.5 mm for double track or slotted single top track.
- .3 Install damp proof course under stud shoe tracks of partitions on slabs on grade.
- .4 Place studs vertically as indicated on drawings and not more than 50 mm from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.
- .5 Erect metal studding to tolerance of 1:1000.
- .6 Attach studs to bottom and ceiling track using screws.
- .7 Co-ordinate erection of studs with installation of service lines. when erecting studs ensure web openings are aligned.
- .8 Co-ordinate erection of studs with installation of door frames and special supports or anchorage for work specified in other sections.
- .9 Provide two studs extending from floor to ceiling at each side of openings wider than stud centres specified. secure studs together, 50 mm apart using column clips or other approved means of fastening placed alongside frame anchor clips.
- .10 Erect track at head of door openings to accommodate intermediate studs. Secure track to studs at each end, in accordance with manufacturer's instructions. Install intermediate studs above and below openings in same manner and spacing as wall studs.
- .11 Frame Openings and around built-in equipment, cabinets, access panels, on four sides. extend framing into reveals. Check clearances with equipment suppliers.
- .12 Install Steel studs or furring channel between studs for attaching electrical and other boxes.
- .13 Extend partitions to ceiling height except where noted otherwise on drawings.
- .14 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs.
- .15 Install continuous insulating strips to isolate studs from uninsulated surfaces, where applicable.

3.2 CLEANING

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 08 11 00 - Metal Doors and Frames.
- .2 Section 09 21 16 - Gypsum Board Assemblies.
- .3 Section 09 22 16 – Non-Structural Metal Framing

1.2 REFERENCES

- .1 Master Painters Institute (MPI)
 - .1 MPI Architectural Painting Specifications Manual, Latest Edition.
- .2 Test Method For Measuring Total Volatile Organic Compound Content Of Consumer Products, Method 24 (For Surface Coatings) Of The Environmental Protection Agency (EPA).
- .3 American Society For Testing And Materials (ASTM) ASTM D2369-20, Standard Test Method For Volatile Content Of Coatings.

1.3 QUALITY ASSURANCE

- .1 Qualifications: contractor with minimum of five years proven satisfactory experience. When requested, provide list of last three comparable jobs including, job name and location, specifying authority, and project manager.

1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data and instructions for each paint and coating product to be used.
- .3 Samples: submit full range colour sample chips to indicate where colour availability is restricted.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Packing, shipping, handling and unloading: in accordance with Manufacturer's written instructions.
- .2 Remove damaged, opened and rejected materials from site.
- .3 Storage and protection:
 - .1 Provide and maintain dry, temperature controlled, secure storage.
 - .2 Store materials and supplies away from heat generating devices.

- .3 Store materials and equipment in well ventilated area with temperature range 7°C to 30°C.

1.6 SITE CONDITIONS

- .1 Heating, ventilation and lighting:
 - .1 Provide heating facilities to maintain ambient air and substrate temperatures above 10°C for 24 hours before, during and after paint application until paint has cured sufficiently.
 - .2 Provide continuous ventilation for seven days after completion of application of paint.
 - .3 Provide temporary ventilating and heating equipment where permanent facilities are not available or supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements.
- .2 Surface and environmental conditions:
 - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.
 - .2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits.
 - .3 Apply paint only when previous coat of paint is dry or adequately cured.

Part 2 Products

2.1 MATERIALS

- .1 Paint materials shall be listed on the current edition of the MPI approved products list. where selection of finishes from MPI approved products list is limited, selection of alternate materials will be at the option of the Departmental Representative.
- .2 Under no circumstance shall paint materials be applied without prior review of VOC limits by the Departmental Representative.
- .3 Provide interior paint products with a VOC range 151 g/l.
- .4 Provide paint materials for paint from single Manufacturer.
- .5 Conform to latest MPI requirements for interior painting work including preparation and priming.

2.2 COLOURS

- .1 Departmental Representative will provide colour schedule after contract award.
- .2 Selection of colours from Manufacturer's full range of colours.

- .3 Second coat in three coat system to be tinted slightly lighter colour than top coat to show visible difference between coats.

2.3 MIXING AND TINTING

- .1 Perform colour tinting operations prior to delivery of paint to site.
- .2 Use and add thinner in accordance with paint Manufacturer's recommendations. Do not use kerosene or similar organic solvents to thin water-based paints.
- .3 Thin paint for spraying in accordance with paint Manufacturer's instructions.

2.4 GLOSS/SHEEN RATINGS

- .1 Paint gloss shall be defined as the sheen rating of applied paint, in accordance with the following values:
 - .1 G1 - Matte 0 To 5 Max. 10
 - .2 Gloss Level Category Units @ 60° Units @ 85°
 - .3 G2 - Velvet 0 To 10 10 To 35
 - .4 G3 - Eggshell 10 To 25 10 To 35
 - .5 G4 - Satin 20 To 35 Min. 35
 - .6 G5 - Semi-Gloss 35 To 70
 - .7 G6 - Gloss 70 To 85
 - .8 G7 - High Gloss 85
- .2 Gloss level ratings of painted surfaces shall be selected by Departmental Representative after contract award, unless noted otherwise.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with Manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

3.2 GENERAL

- .1 Perform preparation and operations for interior painting in accordance with MPI architectural painting specifications manual except where specified otherwise.
- .2 Apply paint materials in accordance with paint Manufacturer's written application instructions.

3.3 PREPARATION

- .1 Protection:
 - .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore surfaces as directed by Departmental Representative.
 - .2 Protect items that are permanently attached such as fire labels on doors and frames.
 - .3 Protect factory finished products and equipment.
 - .4 Protect Passing pedestrians, building occupants and general public in and about the building.
- .2 Clean and prepare surfaces in accordance with MPI architectural painting specification manual requirements.
- .3 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.

3.4 APPLICATION

- .1 Conform to Manufacturer's application instructions unless specified otherwise.
- .2 Apply coats of paint continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .3 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by Manufacturer.
- .4 Sand and dust between coats to remove visible defects.
- .5 Finish surfaces both above and below sight lines as specified for surrounding surfaces.
- .6 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.

3.5 INTERIOR PAINT AND COATING SYSTEMS

- .1 Provide interior paint products with a VOC range 151 g/l. Where selection of finishes from MPI approved products list is limited, selection of alternate materials will be at the option of the Departmental Representative.
- .2 Interior painting systems to be based on MPI premium grade unless noted otherwise. The Following is list of principal items only. Surfaces Not included in this schedule shall be painted at the discretion of the Departmental Representative.
 - .1 Int 5.1c - waterborne dry wall finish.
 - .1 One coat VOC compliant primer,
 - .2 One coat waterborne dry fall MPI #118.
 - .3 Galvanized metal: interior steel doors and frames.

- .1 Shop primed or one coat VOC compliant primer,
- .2 Two finish coats Pitt-glaze WB water borne acrylic epoxy white & pastel comp A (pastel only).
- .4 Plywood mounting boards: electrical room.
 - .1 Int 6.4p - Pigmented Fire Retardant Finish:
 - .1 Apply to ULC approved procedures.
 - .2 Use MPI#64 fire retardant coating, latex, interior, flat (ULC approved); VOC range 51 g/l.
- .5 Gypsum board - dry areas: drywall surfaces, cement board, other wall and ceiling panels inc. wall-mounted equipment to be painted-out.
 - .1 Int 9.2b - Hipac Latex:
 - .1 One coat latex primer sealer,
 - .2 Two coats hipac latex.

3.6 MECHANICAL AND ELECTRICAL EQUIPMENT

- .1 Paint finished area exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment with colour and finish to match adjacent surfaces, except as indicated.
- .2 Other unfinished areas: leave exposed conduits, piping, hangers, ductwork and other mechanical and electrical equipment in original finish and touch up scratches and marks.
- .3 Touch up scratches and marks on factory painted finishes and equipment with paint as supplied by manufacturer of equipment.
- .4 Do not paint over nameplates.
- .5 Keep sprinkler heads free of paint.

3.7 SITE TOLERANCES

- .1 Walls: no defects visible from a distance of 1000 mm at 90 degrees to surface.
- .2 Ceilings: no defects visible from floor at 45 degrees to surface when viewed using final lighting source.
- .3 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.

3.8 RESTORATION

- .1 Clean and re-install hardware items removed before undertaken painting operations.
- .2 Remove protective coverings and warning signs as soon as practical after operations cease.

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- .3 Remove paint splashings on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.
 - .4 Protect freshly completed surfaces from paint droppings and dust. Avoid scuffing newly applied paint.

END OF SECTION