

Part 1 General**1.1 RELATED SECTIONS**

- .1 Section 08 80 50 - Glazing.
- .2 Section 09 21 16 – Gypsum Board Assemblies.
- .3 Section 09 22 16 – Non-structural Metal Framing

1.2 REFERENCES

- .1 Aluminum Association (AA)
 - .1 AA DAF45-R03, Designation System for Aluminum Finishes, 9th Edition.
- .2 American National Standards Institute (ANSI) / National Particleboard Association (NPA)
 - .1 ANSI/NPA A208.1-1999, Particleboard.
- .3 American National Standards Institute (ANSI) / Hardwood Plywood and Veneer Association (HPVA)
 - .1 ANSI/HPVA HP-1-04, Standard for Hardwood and Decorative Plywood.
- .4 American National Standards Institute (ANSI) / National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD-3-05, High-Pressure Decorative Laminates.
- .5 American National Standards Institute (ANSI) / Business and International Furniture Manufacturers Association (BIFMA International)
 - .1 ANSI/BIFMA X5.6-2003, American National Standard For Office Furnishings - Panels Systems.
- .6 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM A1008/A1008M-08a, Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
 - .2 ASTM C960/C960M-01, Specification for Pre-decorated Gypsum Board.
 - .3 ASTM E90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .7 Association of Contract Textiles (ACT)
 - .1 Performance Guidelines
- .8 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
 - .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 [2003].
- .9 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-03, Surface Burning Characteristics of Building Materials and Assemblies.

- .10 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-G40.20-04/G40.21-04, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
 - .2 CAN/CSA G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .11 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.3 SYSTEM DESCRIPTION

- .1 Basic system to be non-progressive, movable and reconfigurable Component Based partition system, from single manufacturer, where basic partition elements are assembled on site and can be disassembled, relocated, and reassemble in different layouts, with all parts reusable.

1.4 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit manufacturer's printed product literature, specifications and data sheets.
- .3 Submit two (2) copies of WHMIS MSDS - Material Safety Data Sheets.
- .4 Shop drawings:
 - .1 Submit for the Departmental Representative's review, three (3) copies of each shop drawing.
 - .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where components attach or connect to existing ceilings, floors and walls, indicate items and methods. Indicate cross references to design drawings and specifications.
 - .3 The review is for the sole purpose of ascertaining conformance with the general design concept, and does not mean approval of the design details inherent in the shop drawings, responsibility for which shall remain with the Contractor. Such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents.
 - .4 Do not commence manufacture or order materials before shop drawings are reviewed.
- .5 Samples:
 - .1 Submit samples of materials, components, connection and attachment devices, glazed sections, door frames and trim.
 - .2 Submit duplicate 300 x 300mm representational samples for each type of finishes. Submit full sample card, showing complete range of colour, pattern and texture of finish options available.
- .6 Submit operation and maintenance data for incorporation into manual.
 - .1 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

- .2 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .3 Instructions for cleaning agents and methods, and recommended schedule for cleaning and maintenance.

1.5 PERFORMANCE REQUIREMENTS

- .1 Finished panels, connecting assemblies and components to be stable, interchangeable, uniform in quality, style, material and workmanship and be clean and free from defects that may affect appearance, serviceability or safety.
- .2 Design movable Component Based partition systems to ensure panel system components withstand functional and proof load tests to avoid tip over, structural breakage or damage and to meet various acceptance levels of serviceability to: ANSI/BIFMA X5.6.
- .3 Design movable Component Based partition systems in accordance with National Building Code of Canada (NBC) 2005, latest revision.
- .4 Partition assembly to be non-combustible construction.
- .5 Comply with requirements of Workplace Hazardous Information System (WHMIS) regarding use, handling, storage and disposal of hazardous material; and regarding labelling and the provision of Material Safety Data Sheets.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and recycling.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

Part 2 Products

2.1 MATERIALS

- .1 Aluminum extrusions: Aluminum Association alloy AA6063-T5 or AA6063-T6.
- .2 Framing members: ceiling and base tracks, posts and cross members, galvanized or painted steel, to CAN/CSA-G40.20/G40.21, Grade 300W.
 - .1 Ceiling track: continuous, attached to T-Bar ceiling grid using non-marking ceiling clip. Lined with closed cell neoprene sound and light seals. Ceiling track to host continuous mounted ceiling trim on each side.
 - .2 Base track: continuous, designed to grip and hold to carpet flooring. Threaded rust-proof adjustable levelling legs with leveller saddles set into floor channel. Sidewalls to provide continuous mount for base on each side.
 - .3 Intermediate posts and cross members: design internal structure to provide strength and rigidity required to support all loads, made to suit specific function and to have been proven in use.
 - .4 Finish
 - .1 Galvanizing: hot dipped galvanizing with zinc coating 600 g/m² to CAN/CSA-G164.
 - .2 Shop coat primer: to CAN/CGSB-1.40.
 - .3 Zinc primer: zinc rich, ready mix to CAN/CGSB-1.181.
 - .4 Shop painted: to manufacturer's standard.

2.2 GLASS AND GLAZING

- .1 Glazing frames: extruded aluminum, with neoprene glazing gaskets, concealed snap-on glazing stops of matching metal.
 - .1 Glass and glazing: in accordance with Section 08 80 50 – Glazing.
 - .2 Glazing sections: anodized aluminum, extruded glazing section to suit glazing channel retaining slot, to Movable Partition System manufacturer's standard.

2.3 ACCESSORIES

- .1 Sound/light seal: closed cell, inorganic, permanently elastic, sponge type recommended by partition manufacturer, black.
- .2 Miscellaneous trim, anodized aluminum extrusions, bracing, fasteners, clips, and other accessories for installation: as recommended by Movable Partition System manufacturer.
- .3 Miscellaneous steel brackets, clips and other sections: to CAN/CSA-G40.20/G40.21, Grade 300W.

2.4 COMPONENT BASED PARTITION SYSTEM

- .1 Movable Partition System;
 - .1 All interconnecting movable partition system components and accessories shall meet the acceptance criteria provided in ANSI/BIFMA X5.6.
 - .2 Tiles shall be segmented and allow for stackable elements and one section full height monolithic as shown.
- .2 Design and size Movable Partition System, nominal thickness as indicated, module to accommodate partition layout shown on floor plans and to approval of Departmental Representative.
 - .1 Partition heights: as indicated.
 - .2 Panel width: various standard widths to respond to the drawings in an efficient and design- oriented manner.
- .3 Non-progressive, allow for disassembly, removal and reassembly of various panels at any position, from either side of partition, without disturbing adjacent panels, accommodate floor/ceiling variations of not less than 38 mm.
- .4 Extend in multiple directions using 2, 3 and 4-way corner posts.
- .5 Movable partition system to accommodate Power and Communication conduit, wiring, outlets and others devices installed by others.
- .6 Components to be distortion free, uniform in dimension, construction and appearance, made to suit specific function and to have been proven in use.

2.5 TRIM

- .1 Wall surface runner: vertical, extruded aluminum wall start channel. Lined with closed cell neoprene sound and light seals.
- .2 Partition head and base: adjustable for variation in floor and ceiling levels.
 - .1 Ceiling: continuous, extruded aluminum top rail, profile to press against panel face without gaps, friction fit to ceiling track.
 - .2 Base: continuous, extruded aluminum base, profile to press against panel face without gaps, friction fit to floor channel, nominal 100mm high

- .3 Exposed ends and corners, one piece snap-on aluminum extrusion, to match panel veneer.

2.6 FINISHES

- .1 Aluminum surfaces
 - .1 Finish exposed surfaces of aluminum components to AA DAF45.
 - .1 Clear anodic finish: designation AA-M12C22A31.
 - .2 Galvanizing: hot dipped galvanizing with zinc coating 600g/m² to CAN/CSA-G164.
 - .3 Shop coat primer: to CAN/CGSB-1.40.
 - .1 Apply one shop coat of primer to metal items, with exception of galvanized items.
 - .2 Use primer unadulterated, as prepared by manufacturer. Paint on dry surfaces, free from rust, scale, grease. Do not paint when temperature is lower than 7 degrees C.
 - .4 Shop Paintings:
 - .1 Clean, degrease and neutralize steel components with phosphate or chromate treatment.
 - .2 Apply primer and finish enamel to manufacturer's standard, free of scratches or other blemishes

Part 3 Execution

3.1 ERECTION

- .1 Construct movable component based partition system after floor and ceiling finishes, in accordance with manufacturer's instructions.
- .2 Base track to grip floor finish and securely hold partition in accordance with performance requirements.
- .3 At ceiling use fasteners that rigidly support partition without damaging or defacing ceiling panels or grid system members.
- .4 Place intermediate posts vertically at spacing recommended by manufacturer, and at each side of openings and corners. Position posts in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation and to support tiles.
- .5 Erect partitions, plumb, square and level, to tolerance of 1:1000.
- .6 Accurately fit and fasten to abutting surfaces.
- .7 Install continuous light/sound seal at junction of ceiling height partitions with floors, ceilings and vertical surfaces.

END OF SECTION

PART 1 - GENERAL

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| <u>1.1 RELATED REQUIREMENTS</u> | .1 | Section 09 21 16 - Gypsum Board Assemblies. |
| | .2 | Section 09 22 16 - Non-structural Metal Framing. |
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| <u>1.2 REFERENCES</u> | .1 | American National Standards Institute (ANSI)
.1 ANSI A208.1-99, Particleboard, Mat-Formed Wood.
.2 ANSI A208.2-02, Medium Density Fiberboard (MDF) for Interior Application. |
| | .2 | American Society for Testing and Materials International (ASTM)
.1 ASTM E 90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
.2 ASTM E 336-05, Standard Test Method for Measurement of Airborne Sound Insulation in Buildings. |
| | .3 | Canadian General Standards Board (CGSB)
.1 CAN/CGSB-11.3-M87, Hardboard. |
| | .4 | Canada Green Building Council (CaGBC)
.1 LEED Canada-NC Version 1.0-2004, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations (including Addendum 2007).
.2 LEED Canada-CI Version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide For Commercial Interiors. |
| | .5 | Canadian Standards Association (CSA International)
.1 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.
.2 CSA O151-04, Canadian Softwood Plywood. |
| | .6 | Forest Stewardship Council (FSC)
.1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
.2 FSC-STD-20-002-2004, Structure and Content of Forest Stewardship Standards V2-1.
.3 FSC Accredited Certification Bodies. |
| | .7 | Underwriters Laboratories' of Canada (ULC)
.1 CAN/ULC-S102-03, Method of Test for Surface Burning Characteristics of Building Materials and Assemblies. |

1.3 DESIGN REQUIREMENTS

- .1 Design and fabricate folding partitions with minimum STC of 45 tested to ASTM E 90.
- .2 Use vinyl fabric for covering with maximum:
 - .1 flame spread -25;
 - .2 fuel contributed -35;
 - .3 smoke developed -50; when tested to CAN/ULC-S102.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of ,Quebec Canada.
 - .1 Indicate installation requirements including dimensions, head and jamb conditions, track layout, stacking arrangement, switching, hardware, finish and colour, operating mechanism, and location.
- .4 Samples:
 - .1 Submit duplicate 300 x 300mm samples of partition finish for each colour selected.
- .5 Closeout Submittals:
 - .1 Provide operation and maintenance data for folding panel partitions for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Folding partitions.
 - .1 To STC 52.
- .2 Panel core: steel frame complete with horizontal steel reinforcement and protective panel edge, plywood core with Type I bond manufacturer's standard fabrication.
- .3 Particleboard: ANSI A208.1, made with binder containing no urea formaldehyde.
- .4 Medium-Density Fiberboard (MDF): to ANSI A208. 1 , made with binder containing no urea formaldehyde.
- .5 Vinyl-coated fabric wall covering: selected from manufacturer's standard range of finishes.

2.2 COMPONENTS

- .1 Overhead suspension system:
 - .1 Track: manufacturer's standard painted cold rolled steel channel housing designed to support partitions.
 - .1 Equip track with integral brackets for hanger attachment.
 - .2 Provide switching for X, L or T pattern track intersections of manufacturer's standard curved track system as indicated on drawings.
 - .3 Provide threaded steel rods and nuts type hangers and stabilizers.
 - .2 Trolley: steel wheels with ball bearings, equipped with thrust bearing and steel pendant bolt at each wheel assembly for height adjustment.
- .2 Hardware:
 - .1 Equip partition with manufacturer's standard hardware. Hardware finish selected from manufacturer's standard finishes.
 - .2 Install standard latch to accept masterkeyed cylinder.
- .3 Sound seals:
 - .1 Provide retractable automatic mechanical sound seals to manufacturer's standard.
 - .2 Use head and floor retractable compression type floor and head seals.
 - .3 Design retractable seals to secure panel in position.
 - .4 Use manufacturer's standard astragal inserts for jamb and panel joint seal.

2.3 ACCESSORIES

- .1 Provide manufacturer's standard stack jamb hinged telescopic closure panel, with lever operator.
- .2 Provide integrated whiteboards where indicated.

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 datasheets.

3.2 INSTALLATION

- .1 Secure and level track.
- .2 Install folding partitions in accordance with manufacturer's printed instructions.
- .3 Touch up damaged finishes, repair damage to partitions to match original finish.
- .4 Clean folding partition system and protect from damage.

- .5 Adjust and leave partitions in smooth operating condition.

3.3 FIELD QUALITY CONTROL

- .1 Site Tests:
 - .1 Acoustic field testing: have field sound performance certified by independent acoustical consultant in accordance with ASTM E 336.

3.4 CLEANING

- .1 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

PART 1 - GENERAL

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| <u>1.1 RELATED REQUIREMENTS</u> | .1 | Section 09 21 16 - Gypsum Wallboard Assemblies. |
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| <u>1.2 REFERENCES</u> | .1 | ASTM International
.1 ASTM A 167-99(2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
.2 ASTM B 456-03, Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
.3 ASTM A 653/A 653M-09, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
.4 ASTM A 924/A 924M-09, Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process. |
| | .2 | CSA International
.1 CAN/CSA-B651-04, Accessible Design for the Built Environment.
.2 CAN/CSA-G164-M92 (R2003), Hot Dip Galvanizing of Irregularly Shaped Articles. |
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| <u>1.3 ACTION AND INFORMATIONAL SUBMITTALS</u> | .1 | Provide submittals in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Product Data:
.1 Provide manufacturer's printed product literature and data sheets and include product characteristics, performance criteria, physical size, finish and limitations. |
| | .3 | Shop Drawings:
.1 Indicate size and description of components, base material, surface finish inside and out, hardware and locks, attachment devices, description of rough-in-frame. |
| | .4 | Samples:
.1 Submit samples for surface finishes options for selection by Departmental Representative. |
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| <u>1.4 CLOSEOUT SUBMITTALS</u> | .1 | Provide maintenance data for toilet and bath accessories for incorporation into manual specified in Section 01 78 00 - Closeout Submittals. |
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| 1.5 DELIVERY, | .1 | Deliver, store and handle materials in accordance with |

STORAGE AND
HANDLING

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 materials off ground, indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect toilet and bathroom accessories from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Sheet steel: to ASTM A 653/A 653M with ZF001 designation zinc coating.
- .2 Stainless steel sheet metal: to ASTM A 167, Types 304 and 316, with satin finish.
- .3 Sustainability Characteristics:
 - .1 Laminate Adhesives.
 - .1 Urea Formaldehyde Free.
- .4 Fasteners: concealed screws and bolts hot dip galvanized, exposed fasteners to match face of unit. Expansion shields fibre, lead or rubber as recommended by accessory manufacturer for component and its intended use.

2.2 COMPONENTS

- .1 Paper towel dispenser: for single fold paper towels, stainless steel cabinet, piano hinged front panel, refill indicator slot, tumbler lock and key, surface mounted.
- .2 Soap dispenser: liquid, push-in valve, 64 mm spout, self contained 1.2 L tank , stainless steel piston and valve assembly, tamper proof filler lock, surface mounted, stainless steel construction, satin finish.

2.3 FABRICATION

- .1 Weld and grind joints of fabricated components flush and smooth. Use mechanical fasteners only where approved.
- .2 Wherever possible form exposed surfaces from one sheet of stock, free of joints.
- .3 Brake form sheet metal work with 1.5 mm radius bends.
- .4 Form surfaces flat without distortion. Maintain flat surfaces without scratches or dents.

- .5 Back paint components where contact is made with building finishes to prevent electrolysis.
- .6 Hot dip galvanize concealed ferrous metal anchors and fastening devices to CAN/CSA-G164.
- .7 Shop assemble components and package complete with anchors and fittings.
- .8 Deliver inserts and rough-in frames to job site at appropriate time for building-in. Provide templates, details and instructions for building in anchors and inserts.
- .9 Provide steel anchor plates and components for installation on studding and building framing.

2.4 FINISHES

- .1 Stainless Steel, satin finish.
- .2 Manufacturer's or brand names on face of units not acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrates and surfaces to receive accessories previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's instructions prior to toilet and bathroom accessories installation.
- .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 from Departmental Representative.

3.2 INSTALLATION

- .1 Install and secure accessories rigidly in place as follows:
 - .1 Stud walls: install steel back-plate to stud prior to plaster or drywall finish. Provide plate with threaded studs or plugs.
 - .2 Hollow masonry units, existing plaster or drywall: use toggle bolts drilled into cell or wall cavity.
 - .3 Solid masonry, marble, stone or concrete: use bolt with lead expansion sleeve set into drilled hole.
 - .4 Toilet and shower compartments: use male to female through bolts.
- .2 Use tamper proof screws/bolts for fasteners.

- .3 Fill units with necessary supplies shortly before final acceptance of building.

3.3 ADJUSTING

- .1 Adjust accessories components and systems for correct function and operation in accordance with manufacturer's written instructions.
- .2 Lubricate moving parts to operate smoothly and fit accurately.

3.4 CLEANING

- .1 Progress Cleaning:
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by accessories installation.

3.6 SCHEDULE

- .1 Locate accessories where indicated. Exact locations determined by Departmental Representative.