

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 06 40 00 Architectural Woodwork

1.2 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.
 - .2 ASTM E90 - Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - .3 ASTM E336/E413 - Test Method for Measurement of Airborne Sound Insulation in Buildings.
 - .4 ASTM E557 – Standard Guide for the Installation of Operable Partitions
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-11.3-M87, Hardboard.
- .3 Canada Green Building Council (CaGBC)
 - .1 LEED Canada-CI Version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide For Commercial Interiors.
- .4 Canadian Standards Association (CSA International)
 - .1 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.
 - .2 CSA O151-04, Canadian Softwood Plywood.
- .5 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.
- .6 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 54 tested to ASTM E90..

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:

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- .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials.
 - .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in the Province of Ontario, Canada.
 - .1 Indicate installation requirements including dimensions, head and jamb conditions, track layout, stacking arrangement, switching, hardware, finish and colour, operating mechanism and location.
 - .2 Confirm that structural slab can meet weight load requirements of operable partition.
 - .3 Provide seismic restraint details as required to comply to building code requirements.
 - .4 Samples:
 - .1 Submit duplicate 300 x 300mm samples of partition finish for each colour selected.
 - .5 Sustainable Design Submittals:
 - .1 LEED Canada- CI Version 1.0 Submittals: in accordance with Section 01 35 21 - LEED Requirements.
 - .6 Submit Project Materials and Cost Data: provide statement for total cost for building materials used for project.
 - .1 Include statement indicating total cost of mechanical and electrical components.
 - .7 Provide submittals indicating how following requirements will be met.
 - .1 Materials and Resources Credit MRc7 Certified Wood: submit product data Certificates of Chain-of-Custody of proposed certified wood ensuring that wood products used, comply with forest certification requirements.
 - .1 Include evidence that manufacturer is certified for chain-of-custody by FSC Accredited Certification Body.
 - .2 Indoor Environmental Quality Credit EQc4.4 - Low Emitting Materials: Composite Wood and laminate Adhesives: submit product data ensuring that bonding agent for each composite wood and agrifiber product used, contains no urea formaldehyde.
 - .8 Quality assurance/control submittals: submit following in accordance with Section 01 45 00 - Quality Control.
 - .1 Test reports: submit certified test reports for folding panel partitions from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
 - .2 Submit test data indicating compliance with design requirements regarding sound transmission and fire hazard classification.
 - .3 Submit acoustical test data to ASTM E90 and ensure construction details and weight are provided.

- .4 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .5 Manufacturer's Instructions: submit manufacturer's installation instructions. Indicate special handling criteria, installation sequence, cleaning procedures and perimeter conditions requiring special attention.
- .6 Manufacturer's Field Reports: manufacturer's field reports specified.
- .9 Closeout Submittals:
 - .1 Provide operation and maintenance data for folding panel partitions for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.5 QUALITY ASSURANCE

- .1 Forest Certification: provide operable panel partitions made from wood obtained from forests certified by FSC accredited certification body to comply with FSC-STD-01-001.
- .2 Site Meetings: as part of Manufacturer's Services described in PART 3 - FIELD QUALITY CONTROL, schedule site visits, to review Work, at stages listed.
 - .1 Upon completion of Work, after cleaning is carried out.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and/or recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

Part 2 Products

2.1 SUSTAINABLE REQUIREMENTS

- .1 Materials and products in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

2.2 MATERIALS

- .1 Folding Panel Partition: Manually operated paired panels. Acceptable manufacturers are as follows; Corflex, Modernfold and Moderco.
 - .1 Panels: Nominal 92mm thick x 1220mm width (or less)
 - .2 Panel Faces: Class “A” rated material laminated to appropriate substrate to meet STC rating specified, mounted in full perimeter protective steel frames. Panel faces must be removable and replaceable on site. Provide 51 x 51 mm steel channels, 18 ga. Thickness installed horizontally at inside of each panel spaced at 610mm to 762mm on center
 - .3 Frames shall fully enclose and protect all edges of the surface material. The panels framing will be made of steel with charcoal grey powder coated finish.
 - .4 Vertical sound seals between panels shall be tongue and groove configuration consisting of steel astragals incorporating vinyl acoustical seals. Install alignment moulding made of unbreakable PVC on the edge of each panel to ensure proper alignment and good acoustic seal.
 - .5 Retractable top and bottom seals: formed steel, incorporating 6 mm vinyl strips for proper acoustical seal on activating.

- .6 Hinges: steel, projecting no more than 6 mm beyond panel faces.
- .7 Weight: panels shall weigh between 29 and 56 kg per square meter based upon panel size and options selected.
- .2 Wood panel facing:
 - .1 Architectural grade factory finished FSC certified maple veneer as per designer's sample.
- .3 Particleboard: ANSI A208.1, made with binder containing no urea formaldehyde.

2.3 COMPONENTS

- .1 Overhead suspension system:
 - .1 Track: Anodized thermally treated architectural grade extruded aluminum track (painted steel track not acceptable).
 - .1 Directly anchored to concrete slab by pairs of threaded steel rods.
 - .2 Built-in ceiling trim shall be of anodized aluminum finish providing enclosure of plenum sound barrier on both sides of track for maximum sound control.
 - .3 A section of track will be removable in order to make it possible for a panel to be removed from the track for later maintenance.
 - .4 Each panel shall be supported by one trolley assembly.
 - .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.
- .3 Sound seals:
 - .1 Provide retractable manual 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.

2.4 ACCESSORIES

- .1 Provide manufacturer's standard telescopic closure panel, with lever operator.

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 E336.
- .2 Manufacturer's Field Services:
 - .1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of product and submit Manufacturer's Field Reports as described in PART 1 - SUBMITTALS.
 - .2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
 - .3 Schedule site visits, to review Work, as directed in PART 1 - QUALITY ASSURANCE.

3.4 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

3.5 VERIFICATION

- .1 Verification requirements in accordance with Section 01 47 17 - Sustainable Requirements: Contractor's Verification], include:
 - .1 Materials and resources.
 - .2 Storage and collection of recyclables.
 - .3 Construction waste management.
 - .4 Resource reuse.
 - .5 Local/regional materials.
 - .6 Low-emitting materials.

END OF SECTION

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 09 21 16 Gypsum Wall Assemblies.

1.2 REFERENCES

- .1 Aluminum Association (AA)
 - .1 AA DAF 45-03(R2009), Designation System for Aluminum Finishes.
- .2 Canada Green Building Council (CaGBC)
 - .1 LEED Canada-CI Version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Green Building Rating System for Commercial Interiors.
- .3 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.

1.3 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 wall and corner guards and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS - Indicate VOC's for material as follows:
 - .1 Adhesives.
- .3 Installation Drawings:
 - .1 Indicate on drawings large scale details, materials, finishes, dimensions, anchorage and assembly.
- .4 Samples:
 - .1 Submit duplicate 300 mm long samples of profiles and colours for corner guards.
- .5 Sustainable Design Submittals:
 - .1 Construction Waste Management:
 - .1 Submit project Waste Management Plan Waste Reduction Workplan highlighting recycling and salvage requirements.
 - .2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged.

1.4 QUALITY ASSURANCE

- .1 Test Reports:

- .1 Submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates:
 - .1 Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 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 materials off ground indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect corner guards from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Develop Construction Waste Management Plan Waste Reduction Workplan related to Work of this Section.
- .5 Packaging Waste Management: remove for reuse and return by manufacturer of pallets, crates, padding, packaging materials as specified in Construction Waste Management Plan Waste Reduction Workplan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

Part 2 Products

2.1 MATERIALS

- .1 Metal corner guards: 2 mm thick, 50 x 50 mm by length to align with main corridor reveal height, type 302 satin finished stainless steel, with removable protective paper cover, surface mounted, with adhesive. and mechanically fastened,

2.2 ACCESSORIES

- .1 Fasteners: self-tapping stainless steel, concealed mounting.
- .2 Adhesive: water resistant type as recommended by manufacturer for substrate.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for corner guards 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 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.3 INSTALLATION

- .1 Install units on solid backing and erect with materials and components straight, tight and in alignment.
- .2 Mechanically fasten at 200 mm on centre corner guards as indicated. Provide additional anchorage at corner guards with continuous adhesive application.,

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .3 Clean surfaces after installation using manufacturer's written recommended cleaning procedures.
- .4 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.
- .5 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .6 Waste Management: separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.5 PROTECTION

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

3.6 VERIFICATION

- .1 Verification requirements in accordance with Section 01 47 17 - Sustainable Requirements: Contractor's Verification], include:
 - .1 Materials and resources.
 - .2 Storage and collection of recyclables.
 - .3 Construction waste management.

- .4 Resource reuse.
- .5 Local/regional materials.
- .6 Low-emitting materials.

END OF SECTION

PART 1 - GENERAL

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| <u>1.1 REFERENCES</u> | .1 | National Fire Protection Association (NFPA) |
| | .1 | NFPA (Fire) 10, Standard for Portable Fire Extinguishers, 2013 Edition. |
| | .2 | Underwriters Laboratories of Canada (ULC) |
| | .1 | CAN/ULC S508-02 (R2013), Standard for the Rating and Fire Testing of Fire Extinguishers, Including Amendments 1 and 2. |
| <u>1.2 ACTION AND INFORMATIONAL SUBMITTALS</u> | .1 | Provide submittals in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Closeout Submittals: |
| | .1 | Provide operation and maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals. |

PART 2 - PRODUCTS

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| <u>2.1 MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS</u> | .1 | Stored pressure rechargeable type with hose and shut-off nozzle, ULC labelled for A, B and C class protection. |
| | .1 | Size 2.25 kg, 3A-10BC rating. |
| <u>2.2 KITCHEN EXTINGUISHERS (CLASS K)</u> | .1 | Stored pressure rechargeable type ULC labelled for K class protection. |
| | .1 | Size 6.0 litres, PKD-4-G rating. |
| <u>2.3 EXTINGUISHER BRACKETS</u> | .1 | Type recommended by extinguisher manufacturer. |
| <u>2.4 CABINETS</u> | .1 | Flush, surface or semi-recessed type as indicated, constructed of 1.6 mm thick steel, 180 degrees opening door of 2.5 mm thick steel with latching device. |
| | .2 | Cabinet to maintain fire resistive rating of construction in which they occur. |
| | .3 | Cabinet door: with 5 mm full glass panel. |
| | .4 | Finish: |
| | .1 | Tub: prime coated. |
| | .2 | Door and frame: No.4 satin finish stainless steel. |
| <u>2.5 IDENTIFICATION</u> | .1 | Identify extinguishers in accordance with recommendations of NFPA (Fire) 10 CAN/ULC-S508. |

PART 3 - EXECUTION

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| <u>3.1 MANUFACTURER'S INSTRUCTIONS</u> | .1 | Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets. |
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| <u>3.2 INSTALLATION</u> | .1 | Install or mount extinguishers in cabinets or on brackets as indicated & in accordance with NFPA (Fire) 10. |