## Part 1 General

### 1.1 SECTION INCLUDES

.1 Aluminum framing and doors for interior applications.

.2 Aluminum frames for wood doors.

.3 Glazing.

.4 Perimeter sealant.

### 1.2 RELATED SECTIONS

.1 Section 07 92 00 - Joint Sealants: System perimeter sealant and back-up materials.

.2 Section 08 14 16 - Wood Doors.

.3 Section 08 71 00 - Door Hardware.

.4 Section 08 80 00 - Glazing.

### 1.3 REFERENCES

.1 AA (Aluminum Association) - Designation System for Aluminum Finishes.

.2 AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

.3 AAMA 611 - Specification for Anodized Architectural Aluminum.

.4 AAMA SFM-1 - Aluminum Store Front and Entrance Manual.

.5 ASTM B209-10 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

.6 ASTM B221-12 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

### 1.4 DESIGN REQUIREMENTS

.1 Unless specified otherwise, glazing systems shall be designed to the following industry standards and references:

.1 IGMA 'North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use'.

.2 GANA 'Glazing Manual'.

.3 American Architectural Manufacturers Association (AAMA).

## 1.5 SUBMITTALS FOR REVIEW

.1 Section 01 33 00: Submission procedures.

.2 Product Data:

.1 Provide component dimensions, describe components within assembly, anchorage and fasteners, glass.

.2 Submit for each glazing unit located in exterior wall assemblies, as supplied by this Section.

.3 Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work and expansion and contraction joint location and details.

.4 Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

## 1.6 QUALITY ASSURANCE

.1 Perform Work in accordance with AAMA SFM-1 and AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual. .

.2 Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems with minimum three years documented experience.

## 1.7 DELIVERY, STORAGE, AND PROTECTION

.1 Protect finished aluminum surfaces with wrapping or strippable coating. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

## 1.8 PROJECT CONDITIONS

.1 Coordinate the Work with installation of air barrier, vapour retarder, and blocking components or materials.

# Part 2 Products

## 2.1 MANUFACTURERS

.1 Aluminum Swing Doors and Frames: Extruded aluminum, centre-pane glazed, non-thermally broken.

.1 Acceptable Manufacturers:

.1 PC350.

.2 PSL Partition Systems Ltd.

.3 Contemporary Walls.

## 2.2 MATERIALS

.1 Extruded Aluminum: ASTM B221/B221M; 6063 alloy, T5 temper.

.2 Sheet Aluminum: ASTM B209/B209M.

.3 Fasteners: coated or stainless steel.

## 2.3 COMPONENTS

.1 Glazing frames: Extruded aluminum with concealed screw applied glazing stops.

.1 Furnish neoprene glazing gaskets for setting glass.

.2 Door frames: Extruded aluminum for doors as indicated on schedule; fixed stops, continuous resilient gasket for silencing.

.1 Prepare for hardware specified in Section 08 71 00 - Door Hardware, with cutouts and 5 mm aluminum reinforcing.

.3 Aluminum Doors: Extruded aluminum as indicated on schedule; 45 mm thick, with fixed stops.

.1 Prepare for hardware specified in Section 08 71 00 - Door Hardware.

.4 Wood Doors: Refer to Section 08 14 16.

## 2.4 GLASS AND GLAZING MATERIALS

.1 Glass and Glazing Materials: As scheduled; Refer to Section 08 80 00.

## 2.5 SEALANT MATERIALS

.1 Sealant and Backing Materials:

.1 Perimeter Sealant: Latex, as specified in Section 07 92 00; colour to match framing.

## 2.6 FABRICATION

.1 Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.

.2 Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.

.3 Prepare components to receive anchor devices. Fabricate anchors.

.4 Arrange fasteners and attachments to conceal from view.

.5 Reinforce interior horizontal head rail to receive surface mounted window treatments.

.6 Reinforce framing members for imposed loads.

**2.7 FINISHES**

.1 Finish Coatings: Conform to AAMA 611.

.1 Exposed Aluminum Surfaces: AA-M12C22A31, Class II Clear Anodic Coating.

**Part 3 Execution**

**3.1 EXAMINATION**

.1 Verify dimensions, tolerances, and method of attachment with other work.

**3.2 INSTALLATION**

.1 Install system in accordance with manufacturer's instructions and AAMA Metal Curtain Wall, Window, Store Front and Entrance Guide Specifications Manual.

.2 Attach to framing to permit sufficient adjustment to accommodate construction tolerances and other irregularities.

.3 Provide alignment attachments and shims to permanently fasten system to building structure.

.4 Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances.

.5 Install glass in accordance with Section 08 80 00.

.6 Install wood doors in accordance with Section 08 14 16.

.7 Install perimeter sealant in accordance with Section 07 92 00.

**3.3 CLEANING**

.1 Remove protective material from pre-finished aluminum surfaces.

.2 Wipe surfaces clean.

.3 Remove excess sealant by method acceptable to sealant manufacturer.

## 3.4 PROTECTION OF FINISHED WORK

.1 Protect finished Work from damage.

**END OF SECTION**

## Part 1 General

### 1.1 SECTION INCLUDES

.1 Flush wood doors; non-rated and fire rated.

### 1.2 RELATED SECTIONS

.1 Section 08 11 16 - Aluminum Doors and Frames.

.2 Section 08 71 00 - Door Hardware.

.3 Section 08 80 00 - Glazing.

### 1.3 REFERENCES

.1 AWMAC (Architectural Woodwork Manufacturers Association of Canada) - Quality Standards.

.2 CAN4 S104-80(R1985) - Fire Tests of Door Assemblies.

.3 NFPA 80-1999 - Standard for Fire Doors and Fire Windows.

.4 NFPA 252-1999 - Standard Method of Fire Tests of Door Assemblies.

### 1.4 SUBMITTALS FOR REVIEW

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

.3 Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, factory machining criteria, factory finishing criteria.

.4 Samples:

.1 Samples full range of factory finished colours available for selection by Departmental Representative.

.2 Submit one full corner section, minimum 300 mm x 300 mm legs, representative of completed and finished doors specified. Sample will be retained by Departmental Representative for verification of installed doors.

**1.5 SUBMITTALS FOR INFORMATION**

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Manufacturer's Installation Instructions: Indicate special installation instructions.

**1.6 REGULATORY REQUIREMENTS**

.1 Fire Door Construction: Conform to NFPA 252.

.2 Installed Fire Rated Door Assembly: Conform to NFPA 80 for fire rated class indicated.

**1.7 QUALITY ASSURANCE**

.1 Perform work in accordance with AWMAC Quality Standard, Premium Grade.

.2 Finish doors in accordance with AWMAC Quality Standard.

.3 Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum ten years experience.

**1.8 DELIVERY, STORAGE, AND PROTECTION**

.1 Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

**1.9 PROJECT CONDITIONS**

.1 Coordinate the work with door opening construction, door frame and door hardware installation.

**Part 2 Products**

**2.1 NON-RATED FLUSH DOORS**

.1 Flush Interior Doors: 45 mm thick;

.1 Face: Veneer Facing to AWMAC Grade AA face veneer, Uniform White Birch or Uniform White Maple, plain sliced, for clear factory finish.

.2 Particleboard Core: urea-formaldehyde free particleboard.

.3 Stiles and Rails: Manufacturer’s optional lifetime anti-warping warranty.

## 2.2 FIRE-RATED FLUSH DOORS

.1 Fire-Rated Flush Interior Doors: 45 mm thick, neutral pressure, Fire Rating as scheduled;

.1 Face: Veneer Facing to AWMAC Grade AA face veneer, Uniform White Birch or Uniform White Maple, plain sliced, for clear factory finish.

.2 Fire Rated Core: Manufacturers' mineral core.

.3 Stiles and Rails: Manufacturer's optional lifetime anti-warping warranty.

## 2.3 ACCESSORIES

.1 Louvres: Hardwood louvres, sightless chevron style blades, continuous frame with mitred corners, finish with door finish. Refer to Drawings for sizes.

.2 Glass and Glazing: Types as scheduled; to Section 08 80 00.

.3 Glazing Beads: Rolled steel, mitred corners; prepared for countersink style tamper proof screws. Factory painted, colour by Departmental Representative.

## 2.4 FABRICATION

.1 Fabricate non-rated doors in accordance with AWMAC Quality Standards requirements.

.2 Fabricate fire rated doors in accordance with AWMAC Quality Standards and to ULC requirements. Attach factory-applied, riveted metal fire rating label to door.

.3 Size doors to have 19 mm gap between bottom of door and finished floor.

.4 Factory Preparation for Light Openings and Louvers: Cut and trim openings through doors to comply with NFPA 80 requirements where indicated; maintain door manufacturer's warranty.

.5 Provide lock blocks at lock edge and top of door for closer and for hardware reinforcement.

.6 Vertical Exposed Edge of Stiles: Matching wood veneer.

.7 Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware.

.8 Provide solid blocking for through bolted hardware.

.9 Factory fit and bevel doors for frame opening dimensions identified on shop drawings.

.10 Provide edge clearances in accordance with AWMAC unless noted otherwise.

### 2.5 FINISHING

.1 Factory finish veneer doors in accordance with AWMAC Quality Standard Section 1500 to the following finish designations:

.1 Premium Finish: Conversion Varnish system, sheen selected by Departmental Representative.

.2 Factory pre-finished doors to be individually protected with either transparent or opaque poly-wrap at the factory.

## Part 3 Execution

### 3.1 EXAMINATION

.1 Verify that opening sizes and tolerances are acceptable.

.2 Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

### 3.2 INSTALLATION

.1 Install fire rated and non-rated doors in accordance with AWMAC Quality Standard and NFPA 80 requirements.

.2 Trim non-rated door width by cutting equally on both jamb edges.

.3 Trim door height by cutting bottom edges to a maximum of 19 mm. Trim fire door height at bottom edge only, in accordance with fire rating requirements.

.4 Machine cut for hardware.

.5 Coordinate installation of doors with installation of frames specified in Section 08 11 16 and hardware specified in Section 08 71 00.

.6 Coordinate installation of louvres, glass and glazing.

### 3.3 INSTALLATION TOLERANCES

.1 Conform to AWMAC requirements for fit and clearance tolerances.

.2 Conform to AWMAC Section 1300 requirements for maximum diagonal distortion.

## 3.4 ADJUSTING

.1 Adjust door for smooth and balanced door movement.

.2 Adjust closer for full closure.

**END OF SECTION**

## Part 1 General

### 1.1 GENERAL REQUIREMENTS

.1 Comply with requirements of Division 1.

.2 Furnish and delivery of all finish hardware necessary for all doors. Also hardware as specified herein and as enumerated in “Set Numbers” and as indicated and requested by actual conditions of the building. The hardware shall include the furnishing of all necessary screws, special screws, bolts, special bolts, expansion shields, drop plates and all other devices necessary for the proper installation of the hardware.

.3 The Engineer-Architect approval of the schedule will not be construed as certifying that the list is complete. Acceptance of the Hardware Schedule does not relieve the supplier of responsibility of errors or omissions.

.4 Hardware should not be ordered unless a corrected copy of the shop drawings is reviewed and returned from the specification writer and bearing the approval of the Engineer-Architect.

.5 Aluminum Door hardware is to be ordered immediately after approval of shop drawings and shipped directly to the Aluminum Door supplier.

.6 Furnish, deliver and install all finish hardware necessary for all doors, also hardware as specified herein and as enumerated in hardware group indicated by actual conditions at the project site.

.7 The electrical hardware shall include the furnishing of plug in connections and final connections of Low voltage wiring at the door opening. Electrical hardware devices to be installed by section 08 71 00 with all final connection with termination above the frame. Electric hardware devices for the proper operation and application of the hardware noted by connection notes in the hardware schedule. Power, conduit, low voltage wire to junction box above the frame. Connection of the card readers, maglocks and high voltage wire by the electrical section Division 16.

.8 Division 16 to provide high voltage wiring and conduit to the door opening or power supplies including conduit to hardware locations.

### 1.2 REFERENCES

.1 American National Standards Institute (ANSI) A117.1 Specification

- .1 ANSI/BHMA A156.1-2006, Butts and Hinges.
- .2 ANSI/BHMA A156.13-2005, Mortise Locks and Latches.
- .3 ANSI/BHMA A156.4-2000, Door Controls (Closers)
- .4 ANSI/BHMA A156.7-2003, Template Hinge Dimensions.
- .5 ANSI/BHMA A156.8-2005, Door Controls - Overhead Holders.
- .6 ANSI/BHMA A156.18-2006, Materials and Finishes.
- .7 ANSI/BHMA A156.19-2007, Power Assist and Low Energy Power Operated Doors.

.8 ANSI/BHMA A156.22-2005, Door Gasketing and Edge Seal Systems.

.9 ANSI/BHMA A156.31-2001, American National Standards for Electric Strikes and Frame Mounted Actuators.

.2 Canadian Standards Association (CSA)

.1 CAN/CSA-B651-04.Accessible Design for the Built Environment.

.3 Canadian Steel Door Manufacturer's Association (CSDMA).

.1 Standard Hardware Locations in Accordance with the Canadian Steel Door and Frame Association Guidelines.

.2 Recommended locations for Architectural Hardware for Wood Flush Doors.

.4 National Fire Protection Agency(NFPA)

.1 NBC - National Building Code (1995)

.2 NFPA-80 - 2007 - Standard for Fire Doors and Windows.

.3 NFPA101 - Life Safety Code (2000)

.4 NFPA-105 - Smoke and Draft Control

## 1.3 ABBREVIATIONS

.1 The following abbreviations are applicable to this section:

| | | |
|---|---|---|
| .1 | AHC | Architectural Hardware Consultant |
| .2 | ALD ALF | Aluminum Door and Frame |
| .3 | ATMS/STMS | Arm/Strike to Template with Machine Screws |
| .4 | BB or FBB | Ball Bearing Hinges |
| .5 | BC | Back Check |
| .6 | BTB | Back to Back |
| .7 | B3E or B4E | Bevel 3 or 4 sides |
| .8 | C to C, C/L | Centerline to Centerline |
| .9 | CDC | Certified Door Consultant |
| .10 | CMK | Construction Masterkeyed |
| .11 | CSC | Construction Specifications Canada |
| .12 | CSK | Countersunk Screw Holes. |
| .13 | Cyl. | Cylinder of a lock |
| .14 | Deg. | Degree of opening |
| .15 | DEL | Delay Action |
| .16 | DHI | Door and Hardware Institute |
| .17 | DR | Door |
| .18 | FC | Full Cover |
| .19 | FS | Fail Safe |
| .20 | FSE | Fail Secure |
| .21 | FTMS | Full template machine screws |
| .22 | ½ TMS | Half template machine screws |
| .23 | GMK | Grand Masterkeyed |
| .24 | KA/KD | Keyed Alike, Keyed Different |

| | | |
|---|---|---|
| .25 | HMD/PSF | Hollow Metal Door, Pressed Steel Frame |
| .26 | LH/RH | Left Hand, Right Hand |
| .27 | LHR/RHR | Left Hand Reverse, Right Hand Reverse |
| .28 | MK or MKD | Master Keyed |
| .29 | NBC | National Building Code |
| .30 | NRP | Non removable pin |
| .31 | TB/SB | Thru Bolts, Sex Bolts |
| .32 | TJ | Top Jamb |
| .33 | ULC | Underwriters Laboratories Canada |
| .34 | WD | Wood Door |

**1.4 SUBMITTALS**

.1 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheets in accordance with Sections 01 00 01 and 01 00 02.

.2 Samples:

.1 Upon Engineer-Architect request submit samples of door hardware in accordance with Sections 01 00 01 and 01 00 02.

.2 Identify each sample by label indicating applicable specification paragraph number, brand name and number, finish and hardware package number.

.3 After approval samples will be returned for incorporation in the Work.

.3 Hardware List:

.1 Submit detailed hardware list and keying schedule in accordance with Sections 01 00 01 and 01 00 02.

.2 Hardware Schedule is to be submitted as per DHI vertical format which is in the "Sequence and Format for Hardware Schedules".

.3 Indicate specified hardware including make, model, material, function, size, finish and other pertinent information.

.4 Furnish other Sections with templates required for hardware preparation and installation. Issue templates when requested so as not to cause any delays but not before hardware list has received final review by Engineer-Architect.

.5 Keying Schedule to be in accordance with DHI manual "Keying Systems Names and Nomenclature". Key schedule is not to hold up the processing of the hardware list.

.6 Wiring Diagrams will only be supplied after the final approval of the Hardware Schedule. Submit wiring diagrams as requested for proper installation of electrical, electrical-mechanical and electrical-magnetic products.

.4 Manufacturer's Instructions: Submit manufacturer's installation instructions.

.5 Closeout Submittals: Provide operation and maintenance data for door closers, locksets, door holders, electrified hardware and fire exit hardware for incorporation into Operations and Maintenance Manuals specified in Section 01 00 02.

**1.5 WARRANTY**

.1 Provide guarantee.

| | | |
|---|---|---|
| .1 | Closers | 10 year |
| .2 | Mortise Locks | 10 year mechanical / 2 year electrical |
| .3 | Electronic Closer | 2 year |
| .4 | Exit Device | 3 years |
| .5 | Hinges | Lifetime of Building |
| .6 | All other Hardware | 1 year |

**1.6 QUALITY ASSURANCE**

.1 Regulatory Requirements: hardware for doors in fire separations and exit doors certified by a Canadian Certification Organization accredited by Standards Council of Canada.

.2 Meet requirements of National Building Code of Canada and other applicable regulations.

.3 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.

.4 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

.5 Pre-installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

.6 Upon completion of finish hardware installation, hardware supplier shall inspect work and shall certify in writing that all items and their installation are in accord with requirements of Contract Documents and are functioning properly.

**1.7 PRODUCT DELIVERY, HANDLING & STORAGE**

.1 Packing, Shipping, Handling and Unloading:

.1 Deliver, store, handle and protect materials in accordance with Sections 01 00 01 and 01 00 02.

.2 Package each item of hardware including fastenings, separately or in like groups of hardware, with necessary screws, keys, instructions and installation templates.

.3 All items of hardware should be itemized and tagged as per the approved Finish Hardware Schedule.

.4 Hardware for Aluminum Doors to be shipped directly to the Aluminum Door supplier. Hardware for Aluminum Doors will be ordered immediately after approval of shop drawings. Delays in ordering the Aluminum Door hardware will not be accepted.

.5 Shortages will not delay installation.

.6 Items damaged in shipment will be replaced properly with proper material.

.7 All Hardware shall be handled in a manner to avoid damage, marking and scratching.

.8 Hardware is to be inventoried on site and confirmed by the Contractor and Hardware Supplier.

.2 Storage and Protection:

.1 Store hardware in locked, clean and dry area.

**1.8 WASTE DISPOSAL AND MANAGEMENT**

.1 Separate and recycle waste materials in accordance with Section 01 74 19.

.2 Collect and separate metal, plastic, paper packing and corrugated cardboard and deposit in appropriate on site recycling bins.

.3 Dispose of corrugated cardboard, plastic packaging material in appropriate on-site bin for recycling in accordance with site waste management program.

**1.9 MAINTENANCE**

.1 Provide maintenance materials in accordance with Section 01 00 02.

.2 Provide three sets of maintenance tools for closers, locks and exit devices as well as a complete set of installation instructions.

.3 After the building is occupied, arrange for an appointment with the owner to instruct them of proper use, service, adjusting and maintenance of the hardware furnished in this section.

.4 Extra Material if required.

**1.10 INSPECTION**

.1 The hardware supplier shall arrange at least four visits to the job site.

.1 Visit project at time of delivery of hardware and inspect the personnel who will be looking after the installation and issuing of hardware at the job site. Delivered hardware to be received, sorted and itemized at the jobsite with contractor.

.2 Second visit will be required for key meeting with the owner/representative at a location at their request.

.3 Third visit will take place when about sixty percent of hardware is installed.

.4 Check all hardware on site and correct any errors or shortages. Co-ordinate with contractor to determine proper time for visit.

.5 Fourth visit shall take place just prior to building turnover. All hardware shall be checked for proper installation and adjustment. Any errors shall be corrected and adjustments made. Check the key system and furnish a report along with maintenance manuals detailing any errors found.

.6 Cost of this service will be included as part of this Section and is not covered by any allowance amount.

**Part 2 Products**

**2.1 HARDWARE ITEMS**

.1 Only locksets and latchsets listed are acceptable for use on this project.

.2 Use one manufacturer’s products only for all similar items.

.3 Manufacturer's Listed:

.1 Hinges

.1 McKinney – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.2 Locks

.1 Sargent – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.3 Closers

.1 Sargent – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.4 Overhead Stops

.1 Sargent – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.5 Flatware

.1 Rockwood Manufacturing – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.6 Floor/Wall Stops

.1 Rockwood Manufacturing – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.7 Weatherstrip/Thresholds

.1 Pemko – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan, Ontario, L4H 4T9.

.8 Power Supplies

.1 Securitron – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan Ontario, L4H 4T9.

.9 Electric Strikes

.1 HESS – ASSA ABLOY Door Security Solutions Canada, 160 Four Valley Drive, Vaughan Ontario, L4H 4T9.

## 2.2 DOOR HARDWARE

.1 All fasteners to come complete with the hardware as described. Hardware supplier must be Advised immediately if required fasteners are not enclosed with hardware.

.2 Hardware must be installed with fasteners supplied by the manufacturer.

.3 Hinges Butts and hinges: to ANSI/BMHA A156.1, as listed in Hardware Schedule.

.1 Non removable pins (NRP) for all exterior and out swinging secure doors.

.2 Exterior hinges and hinges in wet areas of stainless steel, brass or bronze.

.3 Interior hinges of plated steel, unless otherwise noted.

.4 Size and quantity to be as the manufacturers hinge selection guide.

.5 Unless otherwise scheduled, supply (1) hinge for every 762mm of door height.

.6 The width of hinges shall be sufficient to clear all trim.

.7 All hinges to be five-knuckle design and ball bearing.

.8 All electric hinges to be supplied with Electrolynx QC plug in connectors as specified.

.9 Finish to Dull Chrome 26D.

.10 Standard of Acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | McKinney | Hager | Stanley |
| .3 | TA2714 | BB1279 | FBB179 |
| .4 | TA2314 | BB1191 | FBB191 |
| .5 | TA3786 | BB1168 | FBB168 |
| .6 | TA3386 | BB11699 | FBB199 |

.4 Bored locks and Preassembled Locks and Latches:

.1 Bored locks and latches: Locks shall exceed the requirements of ANSI/BHMA A156.2 -2003, series 4000 bored lock, grade 1, designed for function as stated in Hardware Schedule. Exceeds 1.5 times A156.2 Grade 1 requirements.

.2 Locks shall be non-handed with bi-directional lever operation, except the “G” and “Y” lever designs.

.3 Through-bolt mounting shall be adaptable to fit a variety of standard cylindrical lock preps.

.4 Locks shall comply with UL10C and UBC 7-2 positive pressure requirements.

.5 Locks required for fire doors shall be listed by Underwriters Laboratories for ratings of 3 hours (A label) and less, for doors up to 4'0" (1.2m) x 10'0" (3.0m) and pairs of doors 8'0" (2.4m) x 10'0" (3.0m). Lock levers shall be made of solid material.

.6 Lock shall be available in a minimum of six different lever designs.

.7 Locks shall have a 2-3/4 inch (70mm) backset standard.

.8 Strikes shall be non-handed with a curved lip. Provide wrought boxes with strikes.

.9 Locks shall have brass 6-pin cylinder standard.

.10 Provide two nickel silver keys with each lock.

.11 Finished to 26D.

.12 Standard of Acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | Sargent | Corbin | Yale |
| .3 | 10 Line | CL3300 | 5400LN |

.5 Mortise locks and latches: to ANSI/BMHA A156.13, Series 1000 mortise lock, grade 1, designed for function as stated in Hardware Schedule.

.1 Locks shall meet or exceed the requirements of ANSI/BHMA A156.13 Series 1000, Operational Grade 1, and Security Grade 1 with all standard trims.

.2 Meets or exceeds impact requirements of ASTM F1577-95b Detention Locks for Swinging Doors.

.3 Locks shall be easily re-handed without opening the lock body.

.4 Multi-functional lock body to make it easy to change functions in the field.

.5 Locks shall comply with UL10C and UBC.

.6 Construction: Lock functions shall be manufactured in a single-sized case formed from 2.6mm steel minimum.

.7 Locks shall have field adjustable, beveled, armored front, with a 3mm thickness minimum.

.8 Locks shall have a one piece, 19mm throw anti-friction stainless steel latch.

.9 Deadbolts, where specified, shall be full one inch 25mm throw made of one-piece hardened stainless steel.

.10 Locks shall have a 70mm backset, standard.

.11 Electrical functions Fail Safe and Fail Secure, Voltage 12VDC or 24VDC Regulated. Full wave rectification installed inside the lockbody. Current .25 at 24VDC and .5 at 12VDC. UL and CUL listed for use on fire doors. Operating temperature: Max 66 (C) degrees and Min. -35(C) degrees.

.12 Strikes shall be non-handed with a curved lip. Strikes for pairs of doors to be supplied with short lip strike (82-0229). Not to extend beyond the face of the door.

.13 To ensure proper alignment, trim, knobs or levers, shall be through-bolted and fully interchangeable between rose and escutcheon.

.14 Lever handles: "LNL" design.

.15 Roses: round.

.16 Finished to 26D.

.17 Standard of Acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | Sargent | Corbin | Yale |
| .3 | 8200 – Series | ML2200 | 8800 |

.6 Door controls (closers): to ANSI/BMHA A156.4 as listed in Hardware Schedule.

.1 Modern type, surface applied.

.2 All closers for both interior and exterior doors shall be the product of one manufacturer and be matched in style.

.3 Surface closers shall be adjustable to provide sizes 1 through 6 and comply with ADA.

.4 Full rack and pinion construction.

.5 Closing speed, latching speed and backcheck shall be controlled by key operated valves.

.6 Captivated valves.

.7 Delayed action feature shall be available and controlled by a separate valve.

.8 Delayed action shall be available in addition to, not in lieu of, backcheck.

.9 The one piece closer body shall be of die cast aluminum alloy with 14% silicon minimum content. An increase of 15% in closing power shall be provided by means of adjustment of the arm leverage at the foot connection. (Standard Arm).

.10 All arms shall be finely finished with heavy duty forged steel main arm.

.11 Two mounting positions of the closer shall meet all requirements. Standard mountings shall provide 120° door opening and alternate mounting 180° door opening.

.12 All closers shall be suitable for standard, top jamb, parallel arm and track type applications when provided with proper brackets and arms.

.13 Closer covers shall be of high impact plastic material of flame retardant grade.

.14 Secured by machine screws.

.15 Spring power shall be continuously adjustable over the full range of closer sizes and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be tamper proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed and backcheck.

.16 All closer to have a forged steel main arm and forged forearm for parallel arm closers.

.17 Finish to Aluminum 689.

.18 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates: | |
| .2 | Sargent | Norton | Corbin |
| .3 | 1431 | 8500 | DC6200 |
| .4 | 351 | 7500 | DC3000 |
| .5 | 421 | 2800ST | DC5000 |

.7 Architectural door trim: to ANSI/BHMA A156.6, as listed in Hardware Schedule, finished to stainless steel 32D.

.1 Door protection plates: kickplates type, 1.3 mm thick stainless steel, 203mm high, unbevelled edges, width less 40mm push side, width less 25mm on pull side for single doors. Width less 25mm for pairs. Finished to stainless steel 630.

.1 Standard of acceptance:

| | | | | |
|---|---|---|---|---|
| .1 | Specified | Acceptable Alternates | | |
| .2 | Rockwood | Standard Metal | Ives | Hager |
| .3 | K1050 | K10A | 8400 | 190S |

.8 Door controls - overhead stop: to ANSI/BMHA A156.8, heavy duty construction, BHMA Grade 1 Certified, heavy duty architectural bronze construction.

.1 UL Classified: The 590 and 690 stops are UL 10B and UL 10C classified as miscellaneous fire door accessories.

.2 Corrosion resistance: Brass construction provides corrosion resistance in a variety of conditions.

.3 Holder Selector: 590 and 690 series holders are equipped with a turn knob to activate and deactivate the hold open function

.4 Thru bolts capture channel and end caps.

.5 Heavy duty shock spring absorbs load and gradually stops door.

.6 Blade shim required for all Aluminum Doors.

.7 Sized as per manufacturer’s guidelines. Take into account other hardware mounted on doors.

.8 Finishes

.1 Exterior to stainless steel, 26D.

.2 Interior to steel sprayed finish, EN.

.9 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | Rixson | Sargent | Glynn Johnson |
| .3 | #1 (Concealed) | 690 | 100 |

| | | | |
|---|---|---|---|
| .4 | #9 (Surface) | 590 | 90 |
| .5 | #2 (Concealed) | 1530 | 410 |
| .6 | #10 (Surface) | 1540 | 450 |

.9 Door Stops and Holders and Auxiliary hardware: to ANSI/BMHA A156.16 designated by letter L and numeral identifiers as listed in Hardware Schedule finished to 26D.

.1 Floor stops dome style classification. Low dome or High dome. Die cast brass. Stops to be sized according to door clearances, thresholds or undercuts as noted in the Door Schedule. Fasteners to suite floor conditions.

.1 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | Rockwood | Standard Metal | Ives |
| .3 | 441 | S101 | FS13 |
| .4 | 443 | S103 | FS17 |
| .5 | 483 | S110 | FS441 |

.2 Wall stops classification, convex or concave, cast brass or bronze. Fasteners to suite wall conditions.

.1 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | Rockwood | Standard Metal | Ives |
| .3 | 406 | S121 | WS406CV |
| .4 | 409 | S123 | WS406CC |

.10 Thresholds and Weatherstripping Thresholds: to ANSI/BMHA A156.21.

.1 Saddle threshold 152.4 mm wide x full width of door opening, extruded aluminum mill finish, serrated surface, with thermal break of rigid PVC.

.2 Panic threshold 93.7 mm wide x full width of door opening, extruded aluminum mill finish, serrated surface, with lip and vinyl door seal insert.

.3 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | PEMKO | KN Crowder | Hager |
| .3 | 179AP | CT-39P | 552W |
| .4 | 252 x 3AFG | CT45A | 421S |
| .5 | 251 x 226AFG | CT49A | 515S |

.11 Door Gasketing and Edge Seal Systems: to ANSI/BMHA A156.22.

.1 Head and Jamb seal:

.1 Extruded aluminum frame and neoprene insert, clear anodized finish.

.2 Surface overhead stops and exit device strikes to mount on top of weatherstrip to provide continuous seal.

.3 Adhesive backed black “Santoprene” to provide smoke, light and sound control. Fire labeled 1 1/2hrs.

.4 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | PEMKO | KN Crowder | Hager |

| | | | |
|---|---|---|---|
| .3 | 319S | W-14S | 878S |
| .4 | 290APK | W20N | 881S |
| .5 | 2891AS | W20S | 881S |
| .6 | S88B | W22 | 726S |
| .7 | 288B | W21 | 726S |

.2 Door bottom seal:

.1 Extruded Aluminum frame and nylon brush sweep, clear anodized finish.

.2 Heavy duty, door seal of extruded aluminum frame and solid closed cell neoprene weather seal, recessed in door bottom, closed ends, automatic retract mechanism when door is open, clear anodized finish.

.3 Standard of acceptance:

| | | | |
|---|---|---|---|
| .1 | Specified | Acceptable Alternates | |
| .2 | PEMKO | KN Crowder | Hager |
| .3 | 3452CNB | W35-1 | 770SB |
| .4 | 18100CNB | W24S | 801SB |
| .5 | 4301 | CT-52 | 747S |

.12 Power Supplies:

.1 Dual output, field selectable 12 or 24 VDC via clearly marked toggle switch.

.2 Supplies 1 full AMP continuous current output, even while charging back-up batteries.

.3 SPDT AC monitoring output allows for remote monitoring of the power supply's 110V AC input.

.4 Separate voltage inputs for load and battery allow the batteries to charge at a higher output while the load remains at exactly 12 or 24 VDC.

.5 LED indication (AC & DC) showing power supply status UL listed low current fire alarm disconnect requires only a minimum size fire alarm relay and wire gauge Polyswitch type breakers allow for large short duration inrush current if batteries are installed (approx. 20A for 1 second) Line voltage and DC fuses Sealed lead acid-gel battery charging capability (battery not included).

.6 UL Class 2, linear regulated power supply provides the cleanest power available sensitive, active safety and security devices.

.7 UL Listed.

.8 CFAR Relay - Securitron's Fire Alarm reset module interconnects with a Securitron BPS series power supply and a fire alarm (made by others). The purpose is to provide additional safety and control in an installation where activation of the fire alarm is intended to switch off the BPS power supply.

.9 This is often done to release power to magnetic locks which are installed on perimeter doors so as to permit safe evacuation in the event of a fire. The module has three specific functions:

.1 It will maintain the released condition of devices released by activation of the fire alarm even after the fire alarm resets and until the module itself is reset by key.

.2 It allows key controlled release of the same devices (separate from the fire alarm control).

.3 It signals the released or "normal" condition of the devices via a bicolor LED.

.10 Standard of acceptance:

| | Specified | Acceptable Alternates |
|---|---|---|
| .1 | | |
| .2 | Securitron | Sargent |
| .3 | BPS | 3500 |

.13 Door Status Switch:

.1 Monitors door position remotely.

.2 SPDT concealed switch (3 wire).

.3 Contacts rated .25 Amp @24 VDC, requires 25mm diameter hole.

.4 Standard of acceptance:

| | Specified | Acceptable Alternates |
|---|---|---|
| .1 | | |
| .2 | Sargent | Securitron |
| .3 | 3287 | DPS W/M |

**2.3 FASTENINGS**

.1 Use only fasteners provided by manufacturer. Failure to comply may void warranties and applicable licensed labels.

.2 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.

.3 Exposed fastening devices to match finish of hardware.

.4 Where pull is scheduled on one side of door and push plate on other side, supply fastening devices, and install so pull can be secured through door from reverse side. Install push plate to cover fasteners.

.5 Use fasteners compatible with material through which they pass.

**2.4 FINISHES**

| | Description | Material | BMHA |
|---|---|---|---|
| .1 | | | |
| .2 | Exterior Hinges | Stainless Steel Metal, Satin | 630 |
| .3 | Interior Hinges | Satin Chromium Plated | 626 |
| .4 | Locks | Stainless Steel Metal, Satin | 630 |
| .5 | Exit Devices | Satin Chromium Plated | 626 |
| .6 | Closers | Aluminum Powder Coated | 689 |
| .7 | Flatware | Stainless Steel Metal, Satin | 630 |
| .8 | All other items | Satin Chromium Plated | 626 |

**2.5 KEYING**

.1 All locks to the existing masterkey system. All locks to be masterkeyed as per the owners instructions.

.2 All locks and cylinders to be visually keyed.

.3 Consult with the Architect/Engineer and the owner and secure written approval of the complete keying layout prior to placing lock order with the factory.

.4 Supply:

| | | |
|---|---|---|
| 1. | Masterkeys | 3 per group |
| 2. | Change Keys/Lock | 4 |

## Part 3 Execution

### 3.1 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.

.2 Furnish metal door and frame manufacturers with complete instructions and templates for preparation of their work to receive hardware.

.3 Furnish manufacturers' instructions for proper installation of each hardware component.

.4 Wiring Diagrams: Provide any special information, voltage requirements and wiring diagrams to other trades requiring such information.

### 3.2 INSTALLATION

.1 Install door hardware in accordance with manufacturer's instructions, using special tools and jigs. Fit accurately and apply securely. Ensure that hardware is installed correctly. Issue instructions if required to Sections concerned.

.2 Install hardware to standard hardware location dimensions in accordance with Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by Canadian Steel Door Manufacturers' Association.

.3 Installation is to be done by a qualified tradesman, if technical assistance is required contact the hardware supplier.

.4 Where door stop contacts door pulls, mount stop to strike bottom of pull.

.5 Install key control cabinet.

.6 Use only manufacturer's supplied fasteners. Failure to comply may void manufacturer's warranties and applicable licensed labels. Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.

.7 Remove construction cores and locks when directed by Contractor; install permanent cores and check operation of locks.

.8 Hardware should not be installed until all finishing is complete.

.9 All hardware to be installed level plumb and true.

.10 All operating parts to work freely and smoothly.

.11 Exterior thresholds to be set in exterior sealants.

.12 Install Power Operators as per manufacturer's instructions and by a qualified installer.

.13 Access control to be installed by a certified installer.

.14 High voltage wiring by division 16. Low voltage wiring by access control supplier.

**3.3 ADJUSTING**

.1 Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, safety and for weather tight closure.

.2 Lubricate hardware, operating equipment and other moving parts.

.3 Adjust door hardware to provide tight fit at contact points with frames.

.4 All defective or damaged hardware will have to be repaired or replaced at the contractors expense.

**3.4 CLEANING**

.1 Perform cleaning after installation to remove construction and accumulated environmental dirt.

.2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacture's instructions.

.3 Remove protective material from hardware items where present.

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

**3.5 DEMONSTRATION**

.1 Keying System Setup and Cabinet:

.1 Set up key control system with file key tags, duplicate key tags, numerical index, alphabetical index and key change index, label shields, control book and key receipt cards.

.2 Place file keys and duplicate keys in key cabinet on their respective hooks.

.3 Lock key cabinet and turn over key to Owner's Representative.

.2 Maintenance Staff Briefing:

.1 Brief maintenance staff regarding:

.2 Proper care, cleaning, and general maintenance of projects complete hardware.

.3 Description, use, handling, and storage of keys.

.4 Use, application and storage of wrenches for door closers, locksets and fire exit hardware.

.5 Demonstrate operation, operating components, adjustment features, and lubrication requirements.

**3.6 FIELD QUALITY CONTROL**

.1 An inspection report will be required 6 months after substantial completion by a qualified Architectural Hardware Consultant to note any deficiencies. The inspection should include checking each lock against the key schedule to make sure the correct locks and cylinders are on the proper doors.

**3.7 PROTECTION**

.1 Protection must be given to all products and finishes until such time as the owner accepts the project.

**3.8 CERTIFICATION**

.1 After installation, Hardware Supplier is to have a regular member of the Architectural Hardware Consultants'' (AHC) Association inspect and certify in writing that all items and their installations are in accordance with specified requirements.

**3.9 DOOR HARDWARE SETS**

.1 The door hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

.2 The supplier is responsible for handing and sizing all products as listed in the door hardware sets. Quantities listed are for each pair of doors, or for each single door.

.3 Products listed in the Door Hardware Sets must meet the requirements described in the specification sections noted.

## 3.10 HARDWARE SCHEDULE

**Set: 1.0**

| | | | | |
|---|---|---|---|---|
| 3 | Hinge | T4A3786 114mm x 102mm | US26D | MK |
| 1 | Passage Set | 28 10U15 LB | US26D | SA |
| 1 | Surface Overhead Stop | 55-X36 | 652 | RF |

**Set: 2.0**

| | | | | |
|---|---|---|---|---|
| 3 | Hinge | T4A3786 114mm x 102mm | US26D | MK |
| 1 | Storeroom Lock | 8204 LE1B | US26D | SA |
| 1 | Electric Strike | 1006-12/24-LBM | 630 | HS |
| 1 | SMART Pac Bridge Rectifier | 2005M3 | | HS |
| 1 | Door Closer (surface) | 421 CTB (Pull Side) | EN | SA |
| 1 | Kickplate | K1050 355mm x 50mm LDW | US32D | RO |
| 1 | Wall Stop | 406 (Convex HD) | US32D | RO |
| 1 | Position Switch | DPS-M-BK | | SU |
| 1 | Power Supply | BPS-24-1 | | SU |
| 1 | By Others | Card Reader | | 00 |
| 1 | By Others | Controller | | 00 |
| 1 | Wiring Harness Wires W/Pins-15'0 | 93998-QC-1500P-QC12-12 | Std | MK |
| 1 | Wiring Diagrams | Wirung Diagrams (Elevations & Point to Point) | Std | SA |

Notes:
REQUIRES 120VAC POWER TO POWER SUPPLY LOCATION BY ELECTRICAL SUPPLIER.
REQUIRES LOW VOLTAGE FROM POWER SUPPLY TO ELECTRIC SRIKE LOCATION.
REQUIRES LOW VOLTAGE AND COMMUNICATION WIRE TO CARD READER LOCATION BY ELECTRICAL SUPPLIER.
REQUIRES LOW VOLTAGE AND COMMUNICATION WIRE TO DOOR POSITION SWITCH LOCATION BY ELECTRICAL SUPPLIER.
REQUIRES CONDUIT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUPPLIER.
REQUIRES WIRE AND WIRE PULL BY ELECTRICAL SUPPLIER.

MODE OF OPERATION:
DOOR TO BE LOCKED AT ALL TIMES. ENTRY BY AUTHORIZED CARD OR KEY.
ENTRY BY AUTHORIZED CARD WILL ACTIVATE ELECTRIC STRIKE FOR DOOR TO BE MANUALLY PUSHED OPEN. STANDARD FUNCTIONALITY FOR DOOR CONTACTS AND REQUEST TO EXIT. LOCK HAS MECHANICAL KEY OVERIDE.
FREE EXIT AT ALL TIMES.

**Set: 3.0**

| | | | | |
|---|---|---|---|---|
| 4 | Hinge | T4A3786 114mm x 102mm | US26D | MK |
| 1 | Office Lock | 28 10G05 LB | US26D | SA |
| 1 | Wall Stop | 409 (Concave HD) | US26D | RO |

**Set: 4.0**

| | | | | |
|---|---|---|---|---|
| 4 | Hinge | T4A3786 114mm x 102mm | US26D | MK |
| 1 | Storeroom Lock | 8204 LE1B | US26D | SA |
| 1 | Electric Strike | 1006-12/24-LBM | 630 | HS |
| 1 | SMART Pac Bridge Rectifier | 2005M3 | | HS |
| 1 | Door Closer (surface) | 421 CTB (Pull Side) | EN | SA |
| 1 | Wall Stop | 406 (Convex HD) | US32D | RO |
| 1 | Position Switch | DPS-M-BK | | SU |
| 1 | Power Supply | BPS-24-1 | | SU |
| 1 | By Others | Card Reader | | 00 |
| 1 | By Others | Controller | | 00 |
| 1 | Wiring Harness Wires W/Pins-15'0 | 93998-QC-1500P-QC12-12 | Std | MK |
| 1 | Wiring Diagrams | Wirung Diagrams (Elevations & Point to Point) | Std | SA |

Notes:
REQUIRES 120VAC POWER TO POWER SUPPLY LOCATION BY ELECTRICAL SUPPLIER.
REQUIRES LOW VOLTAGE FROM POWER SUPPLY TO ELECTRIC SRIKE LOCATION.
REQUIRES LOW VOLTAGE AND COMMUNICATION WIRE TO CARD READER LOCATION BY ELECTRICAL SUPPLIER.
REQUIRES LOW VOLTAGE AND COMMUNICATION WIRE TO DOOR POSITION SWITCH LOCATION BY ELECTRICAL SUPPLIER.
REQUIRES CONDUIT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUPPLIER.
REQUIRES WIRE AND WIRE PULL BY ELECTRICAL SUPPLIER.

MODE OF OPERATION:
DOOR TO BE LOCKED AT ALL TIMES. ENTRY BY AUTHORIZED CARD OR KEY.
ENTRY BY AUTHORIZED CARD WILL ACTIVATE ELECTRIC STRIKE FOR DOOR TO BE MANUALLY PUSHED OPEN. STANDARD FUNCTIONALITY FOR DOOR CONTACTS AND REQUEST TO EXIT. LOCK HAS MECHANICAL KEY OVERIDE.
FREE EXIT AT ALL TIMES.

**Set: 5.0**

| | | | |
|---|---|---|---|
| 1 | Existing | Hardware Existing to be Reused | 00 |

Door Index

| Opening Numbers | Heading Numbers |
|---|---|
| B13A | 1.0 |
| B17A | 4.0 |
| B19A | 3.0 |
| B20A | 3.0 |
| B21A | 5.0 |
| B22A | 5.0 |
| B24A | 3.0 |
| B26A | 2.0 |
| | |
| | |

| Opening Numbers | Heading Numbers |
|---|---|
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| Opening Numbers | Heading Numbers |
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**END OF SECTION**

# Part 1 General

## 1.1 SECTION INCLUDES

.1 Glass and glazing for sections referencing this section for Products and installation.

## 1.2 RELATED SECTIONS

.1 Section 08 11 16 - Aluminum Doors and Frames.

.2 Section 08 14 16 - Wood Doors.

## 1.3 REFERENCES

.1 IGMAC (Insulated Glass Manufacturers Association of Canada) - Quality Standard Specification.

.2 GANA - Glazing Manual and Glazing Sealing Systems Manual.

.3 CAN/CGSB-12.1-M90, Tempered or Laminated Safety Glass.

.4 CAN/ULC-S104-10, Standard Method for Fire Tests of Door Assemblies.

.5 ULC CAN4-S106-M80(R1985), Standard Method for Fire Tests of Window and Glass Block Assemblies.

## 1.4 SUBMITTALS FOR REVIEW

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data on Glass Types Specified: Provide structural, physical and environmental characteristics, size limitations, and special handling or installation requirements.

.3 Samples: Submit two samples 300 x 300 in size, illustrating unit coloration and design.

## 1.5 QUALITY ASSURANCE

.1 Perform Work in accordance with GANA Glazing Manual and IGMAC for glazing installation methods.

.2 Select glazing compounds and sealants in accordance with glass manufacturer’s instructions.

## Part 2 Products

### 2.1 GLASS MATERIALS

.1 Tempered Glass: to CAN/CGSB-12.1, transparent, minimum 6 mm thick.

.1 Special Conditions: Provide abrasive-blasted frosted effect to locations indicated.

.2 Fire Rated Glazing: ULC Labelled fire rated ceramic glass, clear, both surfaces ground and polished to minimize any distortion.

.1 Thickness: 5 mm.

.2 Fire Rating: Fire rating listed and labeled by UL for 20 minute fire rating scheduled at opening locations on drawings, when tested in accordance with ULC CAN4 S-104 and CAN4 S-106.

### 2.2 GLAZING COMPOUNDS

.1 Sealant: manufacturer’s standard to attain specified performance criteria.

### 2.3 GLAZING ACCESSORIES

.1 Setting Blocks: Neoprene, EPDM or Silicone, 80 to 90 Shore A durometer hardness.

.2 Spacer Shims: Neoprene, Silicone, 50 to 60 - Shore A durometer hardness.

.3 Glazing Tape: Preformed butyl compound with integral resilient tube spacing device.

.4 Glazing Splines: Resilient silicone extruded shape.

## Part 3 Execution

### 3.1 EXAMINATION

.1 Verify that openings for glazing are correctly sized, within tolerance and clean.

### 3.2 PREPARATION

.1 Clean contact surfaces with solvent and wipe dry.

.2 Seal porous glazing channels or recesses with substrate compatible primer or sealer.

.3 Prime surfaces scheduled to receive sealant.

## 3.3 GLAZING METHODS

.1 Verify that selected sealants and glazing tapes are compatible.

.2 Perform glazing as required by frame manufacturer to achieve specified performance criteria.

.3 Completed exterior glazed assemblies to provide full perimeter air and vapour seal to the glazed frames and be pressure equalized.

## 3.4 CLEANING

.1 Remove glazing materials from finish surfaces.

.2 Remove labels after Work is complete.

.3 Clean glass.

**END OF SECTION**