

**Part 1            General**

**1.1            SECTION INCLUDES**

- .1    Non-rated steel frames.

**1.2            RELATED SECTIONS**

- .1    Section 07 92 00 - Joint Sealants.
- .2    Section 08 14 16 – Flush Wood Doors
- .3    Section 08 34 75 - Acoustic Wood Door and Frame Assemblies
- .4    Section 08 80 50 - Glazing.
- .5    Section 09 21 16 - Gypsum Board Assemblies
- .6    Section 09 91 00 – Painting.

**1.3            REFERENCES**

- .1    ASTM A653/A653M-06a - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2    CSA G40.20-04/G40.21-04 - General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
- .4    Canadian Steel Door Manufacturers Association (CSDMA), Recommended Dimensional Standards for Commercial Steel Doors and Frames, Latest Edition.
- .5    Canadian Steel Door Manufacturers Association (CSDMA), Selection and Usage Guide for Steel Doors and Frames, Latest Edition.

**1.4            SUBMITALS FOR REVIEW**

- .1    Submit in accordance with Section 01 33 00.
- .2    Shop Drawings:
  - .1    Indicate frame elevations, reinforcement, anchor types and spacing, location of cut-outs for hardware, and finish.

**1.5            QUALITY ASSURANCE**

- .1    Conform to requirements of Canadian Steel Door and Frame Manufacturers Association standards.

**1.6            DELIVERY, STORAGE, AND PROTECTION**

- .1    Remove doors and frames from wrappings or coverings upon receipt on site and inspect for damage.
- .2    Store in vertical position, spaced with blocking to permit air circulation between components.

- .3 Store materials on planks or dunnage, out of water and covered to protect from damage.
- .4 Clean and touch up scratches or disfigurement caused by shipping or handling with zinc rich primer.

**1.7 COORDINATION**

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

**Part 2 Products****2.1 MATERIALS**

- .1 Sheet Steel: Galvanized steel to ASTM A653/A653M, commercial grade (CS), Type B:
  - .1 Coating designation ZF001 for interior doors and frames.
- .2 Reinforcement Channel: To CSA G40.20/G40.21, Type 44W, coating designation to ASTM A653M, ZF75.

**2.2 ACCESSORIES**

- .1 Joint Sealers - Interior: Acrylic latex, to Section 07 92 00.
- .2 Door Silencers: Single stud rubber/neoprene.
- .3 Glazing Stops: Formed galvanized steel channel, minimum 16 mm high, accurately fitted, butted at corners and fastened to frame sections with counter-sunk tamper proof sheet metal screws.
- .4 Glass: In accordance with Section 08 80 50; Types as indicated.

**2.3 FABRICATION - FRAMES**

- .1 Interior Frames: Face sheet thickness 1.52 mm (16 gauge); welded..
- .2 Mortised, blanked, reinforced, drilled and tapped to receive existing hardware.
- .3 Reinforce frames wider than 1200 mm with roll formed steel channels fitted tightly into frame head, flush with top.
- .4 Prepare frames for silencers. Provide three single silencers for single doors on strike side.
- .5 Infill Panels: Fabricate infill panels as metal sheet laminated to plywood core using construction adhesive. Field paint to match frames.

**2.4 FINISH**

- .1 Finish: Field painted in accordance with Section 09 91 00

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verify that opening sizes and tolerances are acceptable; check floor area within path of door swing for flatness.
- .2 Verify doors and frames are correct size, swing, rating and opening.
- .3 Remove temporary shipping spreaders.

**3.2 INSTALLATION**

- .1 Install frames to CSDMA.
- .2 Coordinate with wall construction for anchor placement.
- .3 Set frames plumb, square, level and at correct elevation.
- .4 Secure anchorages and connections to adjacent construction.
- .5 Brace frames rigidly in position while building-in.
  - .1 Install wood spreaders at third points of frame rebate height to maintain frame width.
  - .2 Provide vertical support at centre of head for openings exceeding 1200 mm in width.
  - .3 Remove wood spreaders after frames have been built-in.
- .6 Make allowance for deflection to ensure structural loads are not transmitted to frame product.
- .7 Install door silencers.
- .8 Coordinate installation of glass and glazing.
- .9 Coordinate installation of frames with installation of re-used hardware

**3.3 ERECTION TOLERANCES**

- .1 Maximum Diagonal Distortion: 3 mm measured with straight edges, crossed corner to corner.

**END OF SECTION**

**Part 1                      Part 1                      General**

**1.1                      SECTION INCLUDES**

- .1                      Pre-Finished flush wood doors.

**1.2                      RELATED SECTIONS**

- .1                      Section 08 11 00 –Metal Doors and Frames
- .2                      Section 08 34 75 - Acoustic Wood Door and Frame Assemblies
- .3                      Section 08 80 50 - Glazing

**1.3                      REFERENCES**

- .1                      AWMAC (Architectural Woodwork Manufacturers Association of Canada) –  
Quality Standards.
  - .1                      Quality Standards for Architectural Woodwork Latest Edition.

**1.4                      SUBMITTALS FOR REVIEW**

- .1                      Submit in accordance with Section 01 33 00.
- .2                      Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- .3                      Shop Drawings:
  - .1                      Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special bevelling, special blocking for existing hardware, factory machining criteria, factory finishing criteria.
- .4                      Samples:
  - .1                      Submit, 300 mm x 300 mm sample cut from corner of door, for each type of wood door proposed.
  - .2                      Samples must show the details of the manufacturing as well as details of the core, glazing and door cladding.

**1.5                      QUALITY ASSURANCE**

- .1                      Perform work in accordance with AWMAC Quality Standard, Premium Grade.
- .2                      Finish doors in accordance with AWMAC Quality Standard.

**1.6                      DELIVERY, STORAGE, AND PROTECTION**

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

**1.7 PROJECT CONDITIONS**

- .1 Coordinate the work with the door frame and installation of door hardware.

**Part 2 Products**

**2.1 ACCEPTABLE PRODUCTS**

- .1 Acceptable Manufacturers: Baillargeon, Lambton, Algoma.

**2.2 DOOR TYPES**

- .1 Flush Interior Doors: 45 mm thick; AWMAC Premium grade; Particle Core: urea-formaldehyde free.
  - .1 Stiles and Rails: Anti-warping.
    - .1 Stiles: Solid wood to match species of face veneer
- .2 Core (Solid, Non-Rated): AWMAC Section 1300, Type PC-7, Grade LD-1 bonded particle core.
- .3 Door Veneer Facing: AWMAC Grade AA face veneer, white Oak, flat cut, with book & running grain, for stained factory finish.

**2.3 ACCESSORIES**

- .1 Glazing: refer to Section 08 80 50. Supplied and installed by this Section.
- .2 Glazing Stops: Door manufacturer's standard hardwood mouldings (oak) finished to match face veneer.

**2.4 FABRICATION**

- .1 Fabricate doors in accordance with AWMAC Quality Standards requirements.
- .2 All doors to receive solid wood blocking at lock edge and top of door for closer and for hardware including doors not scheduled to receive such hardware
- .3 Reinforcement . All doors
- .4 Factory machine doors for finish hardware in accordance with hardware requirements and dimensions.
  - .1 Do not machine for surface hardware.
  - .2 Provide solid blocking for through bolted hardware.
- .5 Provide edge clearances in accordance with AWMAC.

**2.5 FINISHING**

- .1 Factory finish doors in accordance with AWMAC Quality Standard Section 1500 to the following finish designations:
  - .1 Premium Finish: Conversion Varnish system, stain colour, semi-gloss finish.
  - .2 Stain colour selected by the Departmental Representative

**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 doors in accordance with AWMAC Quality Standards.
- .2 Machine cut for hardware.
- .3 Coordinate installation of doors with installation of existing hardware.
- .4 Install glazing specified under Section 08 80 50.
  - .1 Ensure glazing rebate is stained and finished prior to installation of glass.
- .5 Install glazing stops with countersunk finish nails, filled with wood putty.
  - .1 Apply coat of compatible varnish on all surfaces of stops.

**3.3 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 SECTION INCLUDES**

- .1 Non-rated acoustic pressed steel frames.
- .2 Non-rated acoustic wood door.
- .3 Glazed lite acoustic steel frames.
- .4 Glass and glazing.
- .5 Perimeter and bottom acoustic seals.

### **1.2 RELATED SECTIONS**

- .1 Section 09 81 16 - Acoustic Blanket Insulation: Insulation inside door frames.
- .2 Section 07 92 00 - Joint Sealing: Caulking between doors and adjacent construction.
- .3 Section 08 71 10 - Door Hardware - General.
- .4 Section 09 91 15 - Painting: Field painting of frames.

### **1.3 REFERENCES**

- .1 ASTM E90-04 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- .2 ASTM E413-04 - Classification for Rating Sound Insulation.
- .3 ANSI/WDMA I.S. 1A-2004 - Industry Standard for Architectural Wood Flush Doors. ANSI/ICC

### **1.4 REQUIREMENTS**

- .1 Acoustic Performance: Minimum Sound Transmission Class STC 53 to ASTM E9

### **1.5 SUBMITTALS.**

- .1 Section [01 33 00]: Submission procedures.
- .2 Shop Drawings: Indicate door and frame elevations, anchor types and closure methods, location of cut-outs for hardware [and cut outs for glazing].
- .3 Samples: Submit manufacturer's door finish samples, showing range of colour variation, manufacturer's frame corner sample, as well as perimeter acoustic gasket.

.4 Test Data:

- .1 Submit test data indicating compliance with the Sound Transmission Class (STC) requirements. Include laboratory name, test report number, and date of test.
- .2 Submit certification from test laboratory qualified under the National Voluntary Accreditation Program (NVLAP) of the U.S. Bureau of Standards.

.5 Installation Instructions: Submit manufacturer's installation instructions.

**1.7 QUALITY ASSURANCE**

- .1 Perform work to requirements of [CSDMA (Canadian Steel Door Manufacturers Association)] [HMMA (Hollow Metal Manufacturers Association)] [WDMA (Window and Door Manufacturers Association)] standards.
- .2 Manufacturer: Minimum 5 years documented experience manufacturing acoustic wood door and frame assemblies.

**1.8 DELIVERY, STORAGE AND PROTECTION**

- .1 Section [01 61 00]: Transport, handle, store, and protect products.
- .2 Comply with WDMA I.S. 1A for wood doors.
- .3 Comply with HMMA 840 for steel frames.
- .4 Weld minimum two temporary jamb spreaders per frame prior to shipment.
- .5 Remove frames from wrappings or coverings upon receipt on site and inspect for damage. Leave doors covered for protection until hung.
- .6 Store doors in horizontal position, frames in vertical position, spaced with blocking to permit air circulation between components.
- .7 Store materials out of water and covered to protect from damage. Use covering that allows air circulation and does not permit light to penetrate.
- .8 Store doors between 50 to 90 degrees F (10 to 32 degrees C) and 25 to 55 percent relative humidity.
- .9 Clean and touch up scratches or disfigurement to metal surfaces on frame or wood surfaces on door.



**1.9      WARRANTY**

- .1      Manufacturer's Limited Warranty: Five (5) years from date of supply, covering material and workmanship.

**Part 2      Products****2.1      MANUFACTURERS**

- .1      Fleming Doors (Assa Abloy)
- .2      Other Acceptable Manufacturers:
  - .1      Ambico Limited
- .3      Substitutions: Approved equal

**2.2      MATERIALS.**

- .1      Reinforcement [Channel]: To CSA G40.20/G40.21, coating designation to ASTM A653/A653M, [ZF75] ([A25]).
- .2      Wood Door Panel: Acoustic core with wood veneer facing.
  - .1      Door Facing: Wood Face Veneer: White Oak species.Flat cut: minimum thickness before sanding 0.6 mm (1.4 inch)
  - .2      Door Edging:
    - .1      Where door face is wood face veneer, door edges shall be supplied with matching stiles and rails

**2.3      ACCESSORIES**

- .1      Hinges: Heavy weight butt type by section #08 71 10
- .2      Primer: Rust inhibitive zinc chromate on frames
- .3      Perimeter and bottom acoustic seals: to provide an acoustic seal for door in closed position.

## **2.4 FABRICATION**

- .1 Manufacture doors and frames to STC rating of 53,  
Measure in accordance with ASTM E90
- .2 Wood Doors:
  - .1 Fabricate doors to ANSI/WDMA IS1A. Provide suitable thickness, design, and core to achieve specified STC (55) and fire performance ratings.
  - .2 Reinforce doors where surface-mounted hardware is required.
  - .3 Drill and tap for mortised, templated hardware
- .3 Steel Frames:
  - .1 Sheet steel, metal thickness and appropriate to maintain door STC and fire ratings, mitered corners, fully welded seams.
  - .2 Factory assemble and weld frames.

## **2.5 FINISHES**

- .1 Metal Frame Finish: [factory applied zinc chromate primer]
- .2 Factory Door Finish: Catalyzed polyurethane, premium grade, TR-6 finish to WDMA I.S. 1A. Stain and Clear Coat - colour approved by Interior Designer
- .3 Top and Bottom Rails: Factory sealed with wood sealer.

## **Part 3 Execution**

### **3.1 INSTALLATION**

- .1 Install components to manufacturer's written instructions.
- .2 Install wood doors and frames to ANSI/WDMA IS 1A standards, and in accordance with [NFPA 80] [UL10C], and local authority having jurisdiction.
- .3 Utilize welders certified by [Canadian Welding Bureau (CWB)] for field welding of frame.
- .4 Coordinate with gypsum board wall construction for anchor placement
- .5 Set frames plumb, square, level and at correct elevation.

- .6 Allow for deflection to ensure that structural loads are not transmitted to frame
- .7 Adjust operable parts for correct clearances and function.
- .8 Install and adjust perimeter and bottom acoustic seals.
- .9 [Finish paint in accordance with Section 09 91 15.]

### **3.2 ERECTION TOLERANCES**

- .1 Section 01 73 00: Tolerances.
- .2 Installation tolerances of installed frame for squareness, alignment, twist and plumbness are to be no more than  $\pm 1/16$ in (1.5mm).

### **3.3 FIELD QUALITY CONTROL**

- .1 Provide qualified manufacturer's representative to instruct installers on the proper installation and adjustment of door assemblies.
- .2 Provide manufacturer's representative to inspect door installation, and test minimum five (5) Cycles of operation. Correct any deficient door and frame assemblies.

**END OF  
SECTION**

**Part 1            General**

**1.1            SECTION INCLUDES**

- .1      Access doors in ceilings and walls supplied by mechanical and electrical trades and installed by drywall trade.

**1.2            RELATED SECTIONS**

- .1      Section 07 92 00 – Joint Sealants
- .2      Section 09 21 16 – Gypsum Board Assemblies
- .3      Section 09 91 00 - Painting.
- .4      Mechanical Sections
- .5      Electrical Sections

**1.3            SUBMITTALS**

- .1      Provide submittals in accordance with Section 01 33 00.
- .2      Product Data: Provide data indicating material characteristics, performance criteria, and limitations.
- .3      Manufacturer's Installation Instructions: Indicate preparation and installation requirements, techniques.
- .4      Provide two (2) sample doors minimum 300 x 300 mm.

**Part 2           Products**

**2.1            MATERIALS**

- .1      Access Doors: steel, un- insulated, flush access door designed for flush installation in drywall.
  - .1      Drywall taping flange.
  - .2      Screwdriver operated cam latches.
  - .3      Concealed hinge
  - .4      Factory primes for field painting
  - .5      Sizes & Quantity: As required for access to mechanical and electrical or other items.
  - .6      Acudor DW-5040

- .2 Access Doors: Stainless Steel, un- insulated flush access door designed for flush installation in drywall.
  - .1 Drywall taping flange.
  - .2 Screwdriver operated cam latches.
  - .3 Concealed hinge
  - .4 Sizes & Quantity: As required for access to mechanical and electrical or other items.
  - .5 Acudor DW-5040
- .3 Fire Rated Access Doors: Same construction as non-rated access doors specified by this Section, except with fire resistance rating to suit installed assembly.
  - .1 Sizes & Quantity: As required for access to mechanical and electrical or other items.
  - .2 Acudor FB-5060 DW

**Part 3 Execution**

**3.1 INSTALLATION**

- .1 Coordinate installation with erection and finishing of ceiling assembly, in accordance with manufacturer's printed instructions.
- .2 Adjust door operating components to ensure smooth opening and closing of doors.
- .3 Install Stainless steel doors in all exposed lavatory, toilet or wet locations.
- .4 Paint out non stainless steel doors and frames with ceiling or wall finish to Section 09 91 00.

**END OF SECTION**

**Part 1 General**

**1.1 GENERAL**

- .1 The Departmental Representative's review of the schedule will not be construed as certifying that the list is complete.
  - .1 Acceptance of the Hardware Schedule does not relieve the supplier of responsibility of errors or omissions.
- .2 Hardware to be ordered after shop drawings are reviewed.
- .3 All similar items must be from one manufacturer.
- .4 Furnish all finish hardware necessary for all doors as specified herein and as enumerated in "Set Numbers" and as indicated and required by actual conditions of the building.
  - .1 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

**1.2 RELATED SECTIONS**

- .1 Section 08 34 75 - Acoustic Wood Doors and Frames
- .2 Section 08 14 16 – Flush Wood Doors
- .3 Electrical Sections

**1.3 REFERENCES**

- .1 American National Standards Institute,
  - .1 ANSI/BHMA A156 Latest Editions.
- .2 NBC - National Building Code latest adopted edition
- .3 CSA - Construction Standards Association
  - .1 CAN/CSA-B651-95 Barrier-Free Design
- .4 Canadian Steel Door and Frame Manufacturers' Association (CSDFMA)/Association.
  - .1 Canadian Metric Guide for Steel Doors and Frames (Modular Construction) standard hardware location dimensions.
- .5 NFPA 80-1999, Standard for Fire Doors and Fire Windows.
- .6 NFPA101 - Life Safety
- .7 NFPA-105 - Smoke and Draft Control

**1.4 SUBMITTALS**

- .1 Submit product data and specifications and the manufacturer's documentation for products in accordance with Section 01 33 00 Documents and samples to be submitted.
- .2 Submit a list of hardware for doors in accordance with Section 01 33 00 Documents and samples to be submitted.

- .3 List of hardware prescribed taking care to indicate the brand, model, material, function and finish, as well as any other relevant information.
- .4 Submit installation instructions provided by the manufacturer.

## **1.5 QUALITY ASSURANCE**

- .1 Hardware for doors mounted in fire rated walls must be certified by a Canadian Certification Body accredited by the Standards Council of Canada.

## **1.6 WARRANTY**

- .1 Warranty start date is from substantial completion.
- .2 No liability is to be assumed where damage is due to improper installation, usage or abuse.
- .3 Provide guarantee.
  - .1 Closers 10 year
  - .2 Exit Device 3 years
  - .3 Hinges Lifetime of Building
  - .4 All other Hardware 1 year

## **1.7 MAINTENANCE**

- .1 Provide two sets of maintenance tools for closers, locks as well as a complete set of installation instructions.

## **Part 2 Products**

### **2.1 GENERAL**

- .1 Hardware shall be the best grade for each item or service specified and free from all defects in manufacture and finish.
- .2 Where a particular item of hardware is not listed for a door, but is required for proper function of the door or fire rating, provide items as listed for similar locations or if not listed as required.
- .3 Supply screws, bolts, expansion shield and other fastening devices required for satisfactory and complete installation and operation of finish hardware, as well as compatibility with door material.
- .4 Exposed fastening devices to match finish of hardware.
- .5 Use fastenings that are compatible with material through which they pass.

### **2.2 MATERIALS**

- .1 All fasteners to come complete with the hardware as described.
- .2 Hardware must be installed with fasteners supplied by the manufacturer.

- .3 **Mortise Locks and Latches:** to ANSI/BHMA A156.13-2005, series 1000 mortise lock, grade 1, designed for function.
  - .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 Construction: Lock functions shall be manufactured in a single-sized case formed from 12 gauge steel minimum.
  - .3 Locks shall have field adjustable, beveled, armored front, with a 3mm thickness minimum.
  - .4 Locks shall have a one piece 19 mm throw anti-friction stainless steel latch with a 70mm backset, standard.
  - .5 Strikes shall be non-handed with a curved lip.
  - .6 Roses: round.
  - .7 Standard of Acceptance: Hes
  - .8 Acceptable alternates: Sargent 8200, Corbin ML2200, Schlage L9000
- .4 **Hinges:** to ANSI/BMHA A156.1-2006.
  - .1 Non removable pins (NRP) for all out swinging secure doors.
  - .2 Interior hinges of plated steel, unless otherwise noted.
  - .3 Standard of acceptance: McKinney TA2714
  - .4 Acceptable alternates: Dorma BB81, Stanley FBB179
- .5 **Door Closers:** to ANSI/BMHA A156.4-2000.
  - .1 Delayed action feature shall be available and controlled by a separate valve. Delayed action shall be available in addition to, not in lieu of, backcheck.
  - .2 All arms shall be finely finished with heavy duty forged steel main arm.
  - .3 Two mounting positions of the closer shall meet all requirements. Standard mountings shall provide 120° door opening and alternate mounting 180° door opening.
  - .4 All closers shall be suitable for standard, top jamb, parallel arm and track type applications when provided with proper brackets and arms.
  - .5 All closer to have a forged steel main arm and forged forearm for parallel arm closers.
  - .6 Standard of acceptance: Sargent 1431
  - .7 Acceptable alternates: Norton 8500, Corbin DC6200, LCN 1460 FC, Dorma 8616 FC.



.6      **ARCHITECTURAL DOOR TRIM:** to ANSI/BHMA A156.6

.1      Kickplates 1.3 mm thick stainless steel, unbeveled edges.

Specified : Standard Metal K10A  
Acceptable alternates: Hager 190S, CDH 92A

.2      Wall Stops: to ANSI/BMHA A156.16-2002

Specified: Standard Metal S122 26D  
Acceptable alternates: Hager, CDH

.3      Door Seal Systems: to ANSI/BMHA A156.22-2005

.1      Head and Jamb seal:

- .1      Adhesive backed, black “ Santoprene” to provide smoke, light and sound control  
Fire labeled.  
Specified : KN Crowder W22  
Acceptable alternates: Pemko, Hager

- .1 Standard of acceptance: KN Crowder W21
  - .2 Acceptable alternates: PEMKO S88D, Hager 726S
- .10 **Power Supplies:** UL Class 2, linear regulated
  - .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 poly switch 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.
  - .6 CFAR Relay - Fire Alarm reset module interconnects with a BPS 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.
  - .7 Release power to magnetic locks which are installed on perimeter doors to permit safe evacuation in the event of a fire. The module to have three specific functions:
    - .1 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 Allow key controlled release of the same devices (separate from the fire alarm control).
    - .3 Signal the released or "normal" condition of the devices via a bicolour led.
    - .4 Standard of acceptance: Securitron BPS
    - .5 Acceptable Alternates: Sargent 3500; Von Duprin PS800
- .11 **Electric Strikes and Frame mounted actuators:** to CAN/CGSH-69.31-2001, Grade 1 and numeral identifiers as indicated in Hardware Groups.
  - .1 Strikes shall be designed for use with type of locks indicated in Hardware Groups.
  - .2 Strikes shall be Burglary-Resistant and Fire Rated where required.
  - .3 Solenoids shall be of the continuous duty type for voltage specified.
  - .4 Strikes will be Fail Secure unless noted otherwise.
  - .5 Provide plug connectors where wiring is concealed in removable frame mullions to allow for easy disconnection as/when required.
  - .6 Coordinate with electrical contractor.
  - .7 Standard of acceptance: HES1006
  - .8 Acceptable Alternates: Locknetics 9000; Von Duprin 6000

## **2.3 KEYING**

- .1 Doors to be keyed differently, master keyed and grand master keyed into the building's existing keying system as directed by Departmental Representative. The existing master key system is from Yale. Prepare a detailed keying schedule in conjunction with the Departmental Representative prior to proceeding with keying.
- .2 Provide two (2) keys for every lock in this Contract, provide two (2) keys for every Master key and Grand master key groups.
- .3 Construction keying: Provide locksets and construction keys for perimeter doors of various work areas until final keying. Supply 3 copies of construction keys to Departmental Representative for use.
  - . 1 Also supply bored locksets, master keyed into the building system, for temporary doors in dust walls as may be required as part of the work phasing specified in section 01 14 10.
  - . 2 Limit distribution and control of keys only to Contractor's personnel approved by Departmental Representative.
- .4 Stamp keying code on keys and cylinders barrels. Do not stamp codes on cylinder face.
- .5 Turn over all final cut keys, complete with keying schedule, directly to Departmental Representative. Submit as one only shipment at completion of project.

## **Part 3 Execution**

### **3.1 INFORMATION FOR OTHERS**

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

### **3.2 PREPARATION**

- .1 Examine all doors and frames to assure all doors have a proper fit before hardware is installed.
- .2 Ensure contractor is aware of cutting, patching or recesses in slab, walls, thresholds, etc. required to make hardware function properly.

### **3.3 INSTALLATION**

- .1 Do not install hardware until all finishing is complete.
- .2 Installation is to be done by a qualified installer.
- .3 Install hardware to standard hardware locations and dimensions in accordance with the Canadian Metric Guide for Steel Doors and Frames (Modular Construction) prepared by the Canadian Steel Door and Frame Manufacturer's Association.
- .4 Only screws and fastenings furnished by the manufacturer will be allowed.
- .5 All hardware to be installed level plumb and true.

- .6 All operating parts to work freely and smoothly.
- .7 High voltage wiring by Electrical Sections. Low voltage wiring by control supplier

### 3.4 HARDWARE SETS

Item#	Description	Supplier
	Set one: Door D101	
1	3 only hinges 4 1/2 x 4 NRP 26D TA2714	McKinney
2	1 only lockset 28-10G04 LL 26D	Sargent
3	1 only electric strike 1006J x 2005M3	Hes
4	1 only power supply BPS 24-1	Securitron
5	1 only card reader 4301	Sargent
6	1 only PCH-L 30 cards (25 pack)	Sargent
7	1 ES-G1 x CDSOLO1 (enrollment/software)	Sargent
8	1 only closer EN 1431 UO	Sargent
9	1 only kickplate 34 x 10 32D K10A	Std Metal
10	1 only kickplate 35 x 10 32D K10A	Std Metal
11	1 only smoke seal W-22 x 17'	KNC
12	1 only sweep W-24S x 36"	KNC

	Set two: Door D102, D103		
13	Acoustic cam lift		Manufacture
14	1 only lockset 28-31-10G05 LL 26D		Sargent
15	1 only closer EN 1431 UO		Sargent
16	1 only wall stop S122 26D		Std Metal
	NOTE: Acoustic seals and cam lift hinges by door manufacture		

	Set three: Door D104		
17	3 only hinges 4 1/2 x 4 26D TA2714		McKinney
18	1 only lockset 28-10G04 LL 26D		Sargent
19	1 only closer EN 1431 UO		Sargent
20	1 only kickplate 34 x 10 32D K10A		Std Metal
21	1 only wall stop S122 26D		Std Metal
	Set four: Door D106, D107		
22	3 only hinges 4 1/2 x 4 26D TA2714		McKinney
23	1 only lockset 28-10G05 LL 26D		Sargent
24	1 only smoke seal W22 x 17'		KNC
25	1 only wall stop S122 26D		Std Metal
26	1 only coat hook P146 26D		Std Metal
	Set five: Door D110		
27	3 only hinges 4 1/2 x 4 NRP 26D TA2714		McKinney
28	1 only lockset 28-10G37 LL 26D		Sargent
29	1 only overhead stop 598S 26D		Sargent
30	1 only smoke seal W22 x 17'		KNC

**END OF SECTION**

**Part 1            General**

**1.1            SECTION INCLUDES**

- .1            Glass and glazing for wood doors and hollow metal frames.

**1.2            RELATED SECTIONS**

- .1            Section 08 11 00 –Metal Doors and Frames.
- .2            Section 08 14 16 – Flush Wood Doors.

**1.3            REFERENCES**

- .1            GANA - Glazing Manual and Glazing Sealing Systems Manual.
- .2            CAN/CGSB 12.1-M90 - Tempered or Laminated Safety Glass.

**1.5            SUBMITTALS**

- .1            Submit shop drawings 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 mm in size for each item specified

**1.6            QUALITY ASSURANCE**

- .1            Perform Work in accordance with GANA Glazing Manual 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: CAN/CGSB 12.1 clear; 6 mm thick.
- .2            Glass film: Topical film with semi transparent finish.

**2.3            ACCESSORIES**

- .1            Setting Blocks: Neoprene, EPDM or Silicone, 80 to 90 Shore A durometer hardness according to ASTM D2240.
- .2            Spacer Shims: Neoprene, Silicone, 50 to 60 - Shore A durometer hardness according to ASTM D2240.
- .3            Glazing Tape: Preformed butyl compound with integral resilient tube spacing device. resilient and tubular shape, of a Shore A hardness of 10-15 durometer according to ASTM D2240.

- .4 Window film with sandblast finish.
  - .1 Locations as shown on drawings.
  - .2 Provide samples for selection.
  - .3 Approved Manufacturer: 3M or approved alternate.

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verify that openings for glazing are correctly sized, within tolerance and clean.
- .2 Verify that opening has been finish painted or varnished.
- .3 Verify that selected sealants and glazing tapes are compatible.

**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**

- .1 Install glazing in locations noted.

**3.( GLAZING FILM METHODS**

- .1 Clean glass before beginning installation following manufacturer's instructions.
- .2 Remove any window stops.
- .3 Install film to glass windows ensuring no blisters, bubbles, scratches or distortions following manufacturer's instructions.
  - .1 Ensure film is installed behind window stops.

**3.5 CLEANING**

- .1 Remove glazing materials from finish surfaces.
- .2 Remove labels after Work is complete.
- .3 Clean glass.

**END OF SECTION**