Part 1 General

1.1 SECTION INCLUDES

.1 Non-rated, fire rated and thermally insulated steel frames.

.2 Non-rated, fire rated and thermally insulated steel doors.

1.2 REFERENCES

.1 ANSI A1 17.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.

.2 ASTM A653JA653M - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.3 CSDFMA (Canadian Steel Door and Frame Manufacturers Association).

.4 DHI - Door Hardware Institute: The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.

.5 SDI-100 - Standard Steel Doors and Frames.

1.3 SUBMITTALS

.1 Product Data: Indicate frame configuration and finishes. Indicate door configurations, location of cut-outs for hardware reinforcement.

.2 Shop Drawings: Indicate frame elevations, reinforcement, anchor types and spacings, and finish. Indicate door elevations, internal reinforcement, closure method, and cut-outs for finishes.

1.4 QUALITY ASSURANCE

.1 Conform to requirements of CSDFMA SDI-100 and ANSI A117.1.

1.5 PROJECT CONDITIONS

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

Part 2 Products

2.1 MANUFACTURERS

.1 Allmar.

.2 Other acceptable manufacturers offering functionally and aesthetically equivalent products.

.1 Shanahan’s.

.3 Substitutions: Refer to City of Winnipeg Bid Opportunity

2.2 MATERIALS

.1 Sheet Steel: Galvanized steel to ASTM A653/A653M, commercial grade (CS), Type B.

.1 Exterior Doors and Frames: Coating designation Z275 (G90).

.2 Reinforcement Channel: To CSA G40.20/G40.21, Type 44W, coating designation to ASTM A653/A653M, coating designation to match door.

2.3 DOOR CORE MATERIALS

.1 Honeycomb Core: Structural small cell 25.4 mm (1 inch) maximum kraft paper honeycomb; weight 36.3 kg (80 lb) per ream minimum, density 16.5 kg/cu m (1.03 pcf) minimum, sanded to required thickness.

.2 Polystyrene Core: ASTM C578, Type 1, rigid extruded fire retardant, closed cell board, density 16 to 32 kg/cu m (1 to 2 pcf), thermal values RSI-1.0 (R-6.0) minimum.

2.4 ADHESIVES

.1 Cores and Steel Components: Heat resistant, structural reinforced epoxy, resin based adhesive.

.2 Lock Seam: Reinforced epoxy resin, high viscosity, thicksotroptic sealant.

2.5 PRIMERS

.1 Rust inhibitive touch-up only.

2.6 ACCESSORIES

.1 Door Silencers: Single stud rubber/neoprene.

.2 Exterior Top Caps: Rigid polyvinylchloride extrusion conforming to CGSB 41-GP- 19MA.

.3 Frame Thermal Breaks: Rigid polyvinylchloride extrusion conforming to CGSB 41-GP- 19MA.

.4 Weatherstripping: Specified in Section 08 71 00.

2.7 FABRICATION - DOORS

.1 Exterior Doors: Laminated core construction.

.2 Longitudinal Edges: Tack welded, filled and sanded with no visible edge seams.

.3 Mortised, blanked, reinforced, drilled and tapped for templated hardware, in accordance with templates provided by hardware supplier.

.4 Reinforce for surface mounted hardware, anchor hinges, thrust pivots, pivot reinforced hinges, or non-templated hardware.

.5 Top and Bottom Channels: Inverted, recessed, welded steel channels.

.6 Exterior Door: Flush PVC top caps.

.7 Provide factory-applied touch-up primer at areas where zinc coating has been removed during fabrication.

2.8 LAMINATED CORE CONSTRUCTION

.1 Exterior Doors: Both face sheets 1.2 mm (18 gauge) steel, with polystyrene core, laminated under pressure to face sheets.

2.9 FABRICATION - FRAMES

.1 Exterior Frames: 1.6 mm (14 gauge) thick base metal thickness.

.1 Frames: Welded type construction thermally broken.

.2 Mortised, blanked, reinforced, drilled and tapped for templated hardware, in accordance with templates provided by hardware supplier.

.3 Configure exterior frames with special profile to receive recessed weatherstripping.

Part 3 Execution

3.1 EXAMINATION

.1 Section 01 71 00: Verify existing conditions before starting work.

.2 Verify that opening sizes and tolerances are acceptable; check floor area within path of door swing for flatness.

.3 Verify doors and frames are correct size, swing, rating and opening number.

.4 Remove temporary shipping spreaders.

3.2 INSTALLATION

.1 Install doors and frames to CSDMA.

.2 Coordinate with wall construction for anchor placement and throat depths.

.3 Coordinate installation of doors and frames with installation of hardware and view holes specified in Section 08 71 00.

.4 Set frames plumb, square, level and at correct elevation.

.5 Secure anchorages and connections to adjacent construction.

.6 Brace frames rigidly in position while building-in. Install wood spreaders at third points of frame rebate height to maintain frame width. Provide vertical support at centre of head for openings exceeding 1 200 mm (48 inches) in width.

.7 Remove wood spreaders after frames have been built-in.

.8 Make allowance for deflection to ensure structural loads are not transmitted to frame product.

.9 Install doors, and hardware in accordance with hardware templates and manufacturer's instructions.

.10 Adjust operable parts for correct clearances and function.

3.3 ERECTION TOLERANCES

.1 Section 01 73 00: Execution Requirements.

.2 Maximum Diagonal Distortion: 1.5 mm (1/16 inch) measured with straight edges, crossed corner to corner.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 Canadian Steel Door and Frame Manufacturers' Association (CSDFMA).

.1 CSDFMA Canadian Metric Guide for Steel Doors and Frames (Modular

.2 Canadian General Standards Board (CGSB).

.1 CAN/CGSB-69.17-M86(R1993), Bored and Preassembled Locks and Latches.

.2 CAN/CGSB-69.18-M90/ANSI/BHMA A156.1-1981, Butts and Hinges.

.3 CAN/CGSB-69.20-M90/ANSI/BHMA A156.4-1986, Door Controls (Closers).

.4 CAN/CGSB-69.21-M90/ANSI/BHMA A156.5-1984, Auxiliary Locks and Associated Products.

.5 CAN/CGSB-69.28-M90/ANSI/BHMA A156.12-1986, Interconnected Locks and Latches.

.6 CAN/CGSB-69.29-93/ANSI/BHMA A156.13-1987, Mortise Locks and Latches.

.7 CAN/CGSB-69.30-93/ANSI/BHMA A156.14-1991, Sliding and Folding Door Hardware.

.8 CAN/CGSB-69.32-M90/ANSI/BHMA A156.16-1981, AuxiliarY Hardware.

.9 CAN/CGSB-69.36-M90/ANSI/BHMA A156.20-1984, Strap and Tee Hinges and Hasps.

1.2 SUBMITTALS

.1 Product Data: Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.

.2 Samples:

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

.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 contract hardware list in accordance with Section 01 33 00 – Submittal Procedures.

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

.4 Manufacturer's Instructions:

.1 Submit manufacturer's installation instructions.

.5 Closeout Submittals

.1 Provide operation and maintenance data for door closers, and locksets, for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.3 QUALITY ASSURANCE

.1 Regulatory Requirements:

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

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

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Packing, Shipping, Handling and Unloading:

.1 Deliver, store, handle and protect materials in accordance with Section 01 61 00 – Common Product Requirements.

.2 Package each item of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.

.2 Storage and Protection:

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

1.5 MAINTENANCE

.1 Extra Materials:

.1 Provide maintenance materials in accordance with Section 01 78 00 – Closeout Submittals.

.2 Supply two sets of wrenches for door closers, and locksets.

Part 2 Products

2.1 DOOR HARDWARE

.1 As indicated on Schedule.

2.2 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.

2.3 KEYING

.1 Doors to be keyed as directed by Contract Administrator. Prepare detailed keying schedule in conjunction with City.

.2 Provide keys in duplicate for every lock in this Contract.

.3 Stamp keying code numbers on keys and cylinders.

.4 Provide construction cores.

.5 Provide all permanent cores and keys to Contract Administrator.

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 manufacturers' instructions for proper installation of each hardware component.

3.2 INSTALLATION

.1 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 and Frame Manufacturers' Association.

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

.3 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.

.4 Remove construction cores, locks when directed by Contract Administrator; install permanent cores and check operation of locks.

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.

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 manufacturer’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 SCHEDULE

.1 As indicated on Drawings.

END OF SECTION