

PART 1 - GENERAL

1.1 REFERENCES

- .1 Canadian Steel Door Manufacturers' Association (CSDMA)
 - .1 CSDMA, Recommended Specifications for Commercial Steel Doors and Frames, 2000.
 - .2 CSDMA, Selection and Usage Guide for Commercial Steel Doors, 1990.
- .2 National Fire Protection Association (NFPA)
 - .1 NFPA 80-2013, Standard for Fire Doors and Other Opening Protectives.
 - .2 NFPA 252-2012, Standard Methods of Fire Tests of Door Assemblies.
- .3 National Building Code of Canada (NBC), 2010.
- .4 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S104-10, Standard Method for Fire Tests of Door Assemblies.
 - .2 CAN/ULC-S105-09, Standard Specification for Fire Door Frames Meeting the Performance Required by CAN/ULC-S104.

1.2 SYSTEM DESCRIPTION.

Design Requirements:

- .1 Steel fire rated doors and frames: labelled and listed by an organization accredited by Standards Council of Canada in conformance with CAN4-S104 for ratings specified or indicated.
- .2 The maximum temperature rise of steel fire rated doors shall conform to the National Building Code of Canada Table 3.1.8.15.
- .3 Provide fire labelled frames for openings requiring fire protection ratings. Test products in conformance with CAN4-S104, and listed by nationally recognized agency having factory inspection services.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide shop drawings: in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Indicate each type of door, material, steel core thicknesses, mortises, reinforcements, location of exposed fasteners, openings, arrangement of hardware, fire rating and finishes.
 - .2 Indicate each type frame material, core thickness, reinforcements, glazing stops, location of anchors and exposed fastenings, fire rating, finishes.

- .3 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.
- .4 SPEC NOTE: Use the following paragraph for radiation shielding steel doors and frames.
- .5 Submit test and engineering data, and installation instructions.

1.4 DELIVERY, STORAGE .1
AND HANDLING

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

PART 2 - PRODUCTS

2.1 STEEL DOORS

- .1 Type: Fire Rated, ULC labelled, with flush faces.
- .2 Material: Commercial quality cold rolled sheet steel (galvanneal) wiped zinc coat finish.
- .3 Fire Rated, ULC Labelled Doors: Minimum 1.2 mm surface sheets, core material and door construction in accordance with ULC label requirements.
- .4 Reinforcements for hardware:
 - .1 Locks: Minimum 1.6 mm steel.
 - .2 Butts: Minimum 3.4 mm steel. Drill and tap for butt screws.
 - .3 Flush Bolts: Minimum 1.6 mm steel.
 - .4 Door Closures: Minimum 2.7 mm steel.

2.2 FABRICATION

- .1 Fabricate steel doors and frames in accordance with requirements of Canadian Manufacturing Specifications for Steel Doors and Frames produced by the Canadian Steel Door and Frame Manufacturers' Association.
- .2 Fabricate fire rated, ULC labelled, steel doors and frames in accordance with requirements of Underwriters' Laboratories of Canada (ULC). Place ULC labels where visible when in installed position.
- .3 Longitudinal edges of honeycomb core type doors shall be mechanically interlocked with seams welded and filled and sanded flush.
- .4 Reinforce and prepare doors and frames to receive hardware. Refer to Section 08 71 00 for hardware requirements.
- .5 Reinforce doors and frames for door closers to ensure rigid and deflection-free installation.

- .6 Weld, in place, all required reinforcing for doors and frames.
- .7 Attach channel or angle spreaders at bottom of welded type door frames to ensure proper alignment while shipping.
- .8 Fill surface depressions of steel doors and frames with metallic paste filler and sand to a smooth finish.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION GENERAL

- .1 Install labelled steel fire rated doors and frames to NFPA 80 except where specified otherwise.
- .2 Install doors and frames to CSDMA Installation Guide.

3.3 DOOR INSTALLATION

- .1 Install doors and hardware in accordance with hardware templates and manufacturer's instructions and Section 08 71 00 - Door Hardware.
- .2 Provide even margins between doors and jambs and doors and finished floor as follows.
 - .1 Hinge side: 1.0 mm.
 - .2 Latchside and head: 1.5 mm.
 - .3 Finished floor: 13 mm.
- .3 Adjust operable parts for correct function.

3.4 FINISH REPAIRS

- .1 Touch up with primer finishes damaged during installation.
- .2 Fill exposed frame anchors with metallic paste filler and sand to a uniform smooth finish.

END OF SECTION

PART 1 - GENERAL

1.1 REFERENCES

- .1 CAN4-S104-M80(R1985) - Method for Fire Tests of Door Assemblies.
- .2 CSDMA (Canadian Steel Door Manufacturers Association).
- .3 DHI (Door and Hardware Institute Canada) - AHC and EHC certification programs.
- .4 DHI (Door Hardware Institute) - A115 series.
- .5 BHMA (Builders Hardware Manufacturers Association) - A156 series.
- .6 NFPA 80 - Standard for Fire Doors and Other Opening Protectives, 2010 Edition.
- .7 NFPA 252 - Fire Tests of Door Assemblies (2008 Edition).
- .8 UL 10B-2008 - Fire Tests of Door Assemblies (10th Edition).

1.2 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop drawings shall be submitted with a minimum of one copy of manufacturers published literature for each item of hardware to be supplied. Manufacturer's literature will be retained on file by the Departmental Representative.
- .3 Shop drawings shall be submitted with a complete list of abbreviations applicable to shop drawings.
- .4 Shop drawings shall indicate angle at which door is restrained by hold open device.
- .5 Submit templates to door and frame manufacturers to enable proper and accurate sizing and locations of cut outs for hardware.

1.3 CLOSEOUT
SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.

1.4 QUALITY ASSURANCE

- .1 The supplier of Door Hardware is to examine the installation of all hardware on site and provide the Departmental Representative with a Certificate of Inspection stating all hardware and accessories have been inspected and are installed in a manner consistent

with requirements of the specifications, drawings and manufacturers recommendations. Hardware Certificate of Inspection shall be submitted prior to date of Substantial Performance of the Work.

1.5 PACKAGING AND SHIPPING

- .1 Include, with each item of hardware the following:
 - .1 Screws, bolts and fastenings necessary for installation.
 - .2 Installation instructions.
 - .3 Special tools required for installation.
- .2 Deliver finish hardware with all items in individual packages, legibly marked and adequately labelled indicating the part of the work for which it is intended.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Locks shall be wrought brass with lever handles.
- .2 Interior butts steel plated.
- .3 Provide ULC approved hardware at all ULC labelled doors.

2.2 FINISH / DOOR HARDWARE

- .1 Hardware except items otherwise specified shall be:
 - .1 ANSI 630 Satin Stainless Steel.

2.3 FASTENINGS

- .1 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
- .2 Exposed fastening devices to match finish of hardware.
- .3 Use fasteners compatible with material through which they pass.

2.4 MANUFACTURED UNITS

- .1 Strike Plate: Stainless steel, 32D ASA.
- .2 Locksets: Falcon XC501 630
 - .1 Intent is to replace knob style locksets with levers. Check existing to confirm operation and functions.
 - .2 Shall meet Grade 1 requirements of ANSI/BHMA A156.2, Series 4000.
 - .3 Lever handle design.
 - .4 Shall be UL Listed for use on 3 hour A Label doors.

- .3 Closer:
 - .1 Regular surface type. Check existing closure to confirm operation and functions. Closer is being replaced due to rust.
 - .2 Closers for interior doors shall have a closing period not less than 3 seconds measured from when the door is in an open position 70° to the doorway, to when the door reaches a point 75 mm from the closed position, measured from the leading edge of the latch side of the door.
 - .3 Finish: Powder coat with special rust inhibitor primer.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Install hardware to manufacturer's written instructions.
- .2 Use fasteners compatible with material through which they pass.
- .3 Secure door closers or door closer arms to doors with through bolts.

3.2 KEYING

- .1 All doors are to be keyed in like-groups, keyed differently, master keyed and grand master keyed, to match existing system. Obtain keying details from Departmental Representative prior to order placement.

3.3 DEMONSTRATION

Maintenance Staff Briefing:

- .1 Brief maintenance staff regarding:
 - .1 Proper care, cleaning, and general maintenance of projects complete hardware.
- .2 Demonstrate operation, operating components, adjustment features, and lubrication requirements.

3.4 PROTECTION

- .1 Protect installed products and components from damage during construction.

END OF SECTION