

The Executed Agreement including General Conditions and Supplementary Conditions, Division 01, applicable Drawings and amendments are part of and are to be read in conjunction with this Section

PART 1 - GENERAL

1.1 SUMMARY OF THIS SECTION

- .1 Summarized but not restricted to:
 - .1 To provide insulated steel frame and doors as noted on plan

1.2 REFERENCES

- .1 American Society for Testing and Materials International (ASTM):
 - .1 ASTM C591-13, Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation
- .2 Canadian Steel Door and Frame Manufacturers' Association, (CSDFMA).
 - .1 CSDFMA, Specifications for Commercial Steel Doors and Frames, latest edition.
- .3 Underwriters Laboratories of Canada (ULC).
 - .1 CAN/ULC-S104-10, Standard Method for Fire Tests of Door Assemblies - Third Edition

1.3 DESIGN REQUIREMENTS

- .1 Design exterior frame assembly to accommodate to expansion and contraction when subjected to minimum and maximum surface temperature of -35C to 35C.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Fabrication of Doors:
 - .1 Fabricate steel doors as detailed, in accordance with Canadian Steel Door and Frame Manufacturers' Association, "Canadian Manufacturing Specification for Steel Doors and Frames" latest edition.
 - .2 All doors to be manufactured from 18 gauge material, weldseam.
 - .3 Mortise, reinforce, drill and tap doors to receive hardware using templates provided by finish hardware supplier.
 - .4 All 1/2" diameter holes and larger to be factory prepared, with the exception of mounting holes, as they are site work by installer. Holes less than 1/2" diameter will be factory prepared when they are required for the function of the device such as knob, lever, cylinder or turn holes.
 - .5 Reinforcement gauges to meet or exceed CSDFMA specification.

- .6 Pressure laminate faces to core with adhesive.
- .7 Conceal welds where possible; if exposed, grind and buff smooth to match adjacent surfaces.
- .8 Close head and jambs of doors with welded flushed sealed joints, closures, bottom recessed channel.
- .9 All edge profile to be revealed vertically on locking jamb edge 1/8".
- .10 After fabrication, clean, sand, fill and grind tool marks and surface imperfections and make face and vertical edges smooth, level and free from irregularities.
- .11 Weep holes to be provided in bottom closure channel of all exterior doors.
- .12 Fire labelled products provided for all openings requiring fire protection ratings as noted on schedule. All products test in strict accordance with CAN/ULC-S104, NFPA 252
- .13 Door Construction:
 - .1 Exterior Door:
 - .1 18 gauge material
 - .2 Stiffened: face sheets laminated, welded, insulated core.
 - .3 Polyurethane: to ASTM C591 rigid, modified poly/isocyanurate, closed cell board. Density 32 kg/m.
 - .2 Interior Door:
 - .1 Honeycomb structural core consisting of Kraft Paper having 20mm cell size to thickness identical.
 - .2 Adhesive heat resistant and spray grade, resin reinforced.
- .14 Accessories:
 - .1 Door silencers: single stud rubber/neoprene type.
 - .2 Exterior and top and bottom caps, rigid polyvinylchloride extrusion.
 - .3 Fabricate glazing stops as formed channel, minimum 16mm height, accurately fitted, butted at corners and fastened to frame sections with counter-sunk oval head sheet metal screws.
 - .4 Metallic paste filler: to manufacturer's standard.
 - .5 Fire labels: metal rivited.
- .2 Fabrication of Frames (Door Frames):
 - .1 Fabricate frames as detailed, to Canadian Steel Door and Frame Manufacturers' Association, "Canadian Manufacturing Specifications for Steel Doors and Frames" except where specified otherwise.
 - .2 Cut mitres and joints accurately and weld continuously all joints and seams on inside of frame profile.
 - .3 Grind welded corners and joints of flat plane, fill with metallic paste filler and sand to uniform smooth finish.
 - .4 Touch up frames with primer where galvanized finish is damaged during fabrication.
 - .5 Provide jamb anchors for fixing at floor.
 - .6 Stiffen frames over 4'-0" unsupported width with minimum 14 ga. formed steel channel, funnel thickness and width of frame, welded into head profile.
 - .7 Install 2 bumpers on strike jamb for each single door and 2 bumpers at head for pair of doors.
 - .8 Exterior frame to be manufactured from 16 gauge wiped zinc finished steel.
 - .9 Provide 2 spreader bars per frame of 16 gauge materials, welded at base of frame to ensure alignment.

2.2 PAINT

- .1 Refer to Sections 09 91 00.

PART 3 - EXECUTION

3.1 INSTALLATION GENERAL

- .1 Installation of doors and hardware in Section 06 10 00 Carpentry, in accordance with hardware templates and manufacturer's instructions and Section 08 71 00 - Finish Hardware.
- .2 Provide even margins between doors and jambs and doors and finished floor and thresholds as follows.
 - .1 Hinge side: 1.0 mm.
 - .2 Latchset and head: 1.5 mm.
 - .3 Finished floor, and thresholds: 13 mm.
- .3 Adjust operable parts for correct function.
- .4 Refer to door schedule for locations of all doors.

3.2 FRAME INSTALLATION

- .1 Set frames plumb, square, level and at correct elevation.
 - .2 Installation in steel girt framing, refer to structural drawings.
 - .3 Secure anchorages and connections to adjacent construction.
 - .4 Brace frames rigidly in position while building-in. Install temporary horizontal wood spreader at third points of door opening to maintain frame width. Provide vertical support at centre of head for openings over 4'-0" wide. Remove temporary spreaders after frames are built-in.
 - .5 Make allowances for deflection of structure to ensure structural loads are not transmitted to frames.
 - .6 Refer to frame schedule for locations of all frames.
 - .7 Provide foam insulation at all door frame installations.
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3.3 FINISH REPAIRS

- .1 Touch up with primer galvanized finish damaged during installation.

END OF SECTION