MSU Type ST Aluminum Stair Systems

Part 1- General

1.1 Standards

.1 Conform to CAN3-S157 -M83 Strength Design in Aluminum.

.2 Conform to CSA W59.2 -M191 Welded Aluminum Construction and CSA W47.2-M1987 Certification of Companies for Fusion Welding of Aluminum.

.3 Occupational Health and Safety Act Section 89.

1.2 Quality Assurance

.1 Welding shall only be undertaken by a company Certified by the Canadian Welding Bureau to the requirements of CSA Standard W47.2-M1987, Certification of Companies for the Fusion Welding of Aluminum.

1.3 Shop Drawings

.1 Submit shop drawings in accordance with Section 01300 - Submittals.

.2 Indicate design criteria, structural loadings, materials, thicknesses, weld symbols, reinforcement, connections, details and accessories.

.3 Manufacturer shall supply installation drawings and instructions.

.4 Shop drawings to be stamped by a professional engineer registered in the Province of Ontario.

Part 2- Products

2.1 Materials

.1 Aluminum Extruded Shapes: to CSA HA.5-M1980, Alloys 6061, 6063 or 6351 in Temper 6.

.2 Fasteners in 304 stainless steel.

.3 Concrete to be minimum 3000 psi.

2.2 Fabrication

.1 Fabricate square, true, and accurate to required size, with joints closely fitted. Remove all burrs and sharp edges.

.2 Stair System shall be consist of aluminum stringers and Borden type B completely banded on all edges. Grating, stairtreads and framing to safely carry a superimposed uniform live load of 4.8 kN/m2 with a deflection of less than 6mm or 1/300 of span. Grating sections accessing ladders shall have a be equiped with a self locking hinged panel.

2.2 Fabrication (continued)

.3 Main structural supports shall be C channels or I beams which shall attach to concrete footings with MSU type ADCS adjustable attachment brackets.

.4 Stairtreads to have slip resistant checkerplate nosings.

.5 Both sides of stairways and landings to have handrailings. Railings shall be 40mm sch 40 pipe minimum. Railing design shall meet the applicable section of the Ontario Building Code.

.6 Alluminum surfaces coming in contact with concrete shall be isolated with 1.58mm thick 80 durometer neoprene isolation pads.

2.3 Stairways

.1 Provide the appropriate stairways complete with all necessary attachment brackets to the dimensions on the Contract Drawings. Ensure all stairways and railings are:

.a assembled using GMAW or GTAW welding methods, and

.b MSU type ST.

Part 3- Execution

3.1 Installation

.1 Install where indicated on the drawings.