

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1        Section 01 33 00 - Submittal Procedures.
- .2        Section 01 45 00 - Quality Control.
- .3        Section 01 61 00 - Common Product Requirements
- .4        Section 01 74 21 – Construction Demolition Waste Management and Disposal
- .5        Section 01 78 00 - Closeout Submittals.
- .6        Section 06 20 00 – Finish Carpentry.
- .7        Section 09 91 23 – Interior Painting.

**1.2                REFERENCES**

- .1        ASTM International
  - .1        ASTM A269, Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
  - .2        ASTM A307-14, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .2        CSA International
  - .1        CSA S16-09, Design of Steel Structures.
  - .2        CSA W48-06, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
  - .3        CSA W59-13(R2013), Welded Steel Construction (Metal Arc Welding) Metric.
- .3        Environmental Choice Program
  - .1        CCD-047-98(R2005), Architectural Surface Coatings.
  - .2        CCD-048-98(R2006), Surface Coatings - Recycled Water-borne.
- .4        Health Canada / Workplace Hazardous Materials Information System (WHMIS)
  - .1        Material Safety Data Sheets (MSDS).
- .5        The Master Painters Institute (MPI)
  - .1        Architectural Painting Specification Manual - current edition.

**1.3                ACTION AND INFORMATIONAL SUBMITTALS**

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

- .2 Submit two copies of WHMIS MSDS in accordance with Section 01 33 00 For finishes, coatings, primers, and paints applied on site: indicate VOC concentration in g/L.
- .3 Shop Drawings:
  - .1 Submit shop drawings in accordance with Section 01 33 00 – Submittal Procedures.
  - .2 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

#### **1.4 QUALITY ASSURANCE**

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certifications: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

#### **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Replace defective or damaged materials with new.

### **Part 2 Products**

#### **2.1 MATERIALS – INFILL PANEL FOR EXISTING LINEAR METAL CEILING**

- .1 Prefinished custom metal for existing linear metal ceiling infill panels. Match material type, thickness and colour to existing panel construction. Refer to Drawings for locations.

#### **2.2 MATERIALS – STAINLESS STEEL CORNER GUARDS**

- .1 Size: 2" (51mm) x 2" (51mm) x 48" (1220mm)
- .2 #4 Satin Finish
- .3 16 Gauge .059"
- .4 Type #304 Stainless Steel
- .5 Adhesive mount: ADH-50
- .6 Locations and quantities as indicated on drawings

## **2.3 FABRICATION**

- .1 Fit and shop assemble items in largest practical sections, for delivery to Site.
- .2 Fabricate items with joints tightly fitted and secured.
- .3 Continuously seal joined members by continuous welds.
- .4 Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- .5 Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- .6 Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- .7 Use self-tapping shake-proof screws on items required to be assembled by screws or as indicated. Use screws for interior metal work, except where noted otherwise. Use welded connections for exterior metal work, unless otherwise approved by Contract Administrator.
- .8 Where possible, work to be fitted and shop assembled, ready for erection.
- .9 Ensure exposed welds are continuous for length of each joint. File or grind exposed welds smooth and flush.
- .10 All exposed fastenings shall be of the same material, colour, and finish as the metal to which applied unless specifically shown or listed otherwise.
- .11 All items supplied by this section shall be complete with all fastenings.
- .12 Drill for countersunk screws and anchor bolts. Prime paint.
- .13 Galvanize all exterior work except for materials scheduled for painting.
- .14 All metal fabrications accessible to the public shall have burrs, sharp filings, or dangerous protrusions removed and ground smooth. Contractor shall correct any dangerous installation as direct by the Contract Administrator.
- .15 Site confirm field dimensions prior to fabrication.

## **2.4 FABRICATION TOLERANCES**

- .1 Squareness: 3 mm (1/8 inch) maximum difference in diagonal measurements.
- .2 Maximum Offset Between Faces: 1.6 mm (1/16 inch).
- .3 Maximum Misalignment of Adjacent Members: 1.6 mm (1/16 inch).
- .4 Maximum Bow: 3 mm in 1.2 m (1/8 inch in 4 ft).
- .5 Maximum Deviation From Plane: 1.6 mm in 1.2 m (1/16 inch in 4 ft).

## **2.5 FINISHES - STEEL**

- .1 Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- .2 Do not prime surfaces in direct contact with concrete or where field welding is required.
- .3 Prime paint items with two (2) coats.
- .4 Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M. Provide minimum 600 g/sq m (2.0 oz/sq ft) galvanized coating.
- .5 Non-structural Items: Galvanized after fabrication to ASTM A123/A123M. Provide minimum 380 g/sq m (1.25 oz/sq ft) galvanized coating.
- .6 Shop Painting:
  - .1 Apply one shop coat of primer to metal items, with exception of galvanized or concrete encased items. Apply two coats of primer to areas inaccessible after final installation.
  - .2 Use primer unadulterated, as prepared by manufacturer. Paint on dry surfaces, free from rust, scale, and grease. Do not paint when temperature is lower than 7°C.
  - .3 Clean surfaces to be field welded. Do not paint.
  - .4 Non-ferrous metals shall be finished as specified by item.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verify that field conditions are acceptable and are ready to receive work.
- .2 Verify dimensions, tolerances, and method of attachment with other work.

### **3.2 PREPARATION**

- .1 Clean and strip primed steel items to bare metal where Site welding is required.
- .2 Supply steel items required to be cast into concrete or embedded in masonry with setting templates to appropriate sections.

### **3.3 INSTALLATION**

- .1 Install items plumb and level, accurately fitted, free from distortion or defects.
- .2 Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- .3 Field weld components indicated on Drawings.
- .4 Perform field welding to CSA requirements.
- .5 Hand items over for casting into concrete or building into masonry to appropriate trades together with setting templates.

- .6 Touch-up rivets, field welds, bolts, and burnt or scratched surfaces after completion of erection with primer.
- .7 Obtain approval prior to Site cutting or making adjustments not scheduled.

### **3.4 ERECTION TOLERANCES**

- .1 Section 01 73 00: Tolerances.
- .2 Maximum Variation From Plumb: 6 mm (1/4 inch), non-cumulative.
- .3 Maximum Offset From True Alignment: 6 mm (1/4 inch).
- .4 Maximum Out-of-Position: 6 mm (1/4 inch).

### **3.5 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

### **3.6 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by metal fabrications installation.

**END OF SECTION**