

PART 1 - GENERAL

1.1 References

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM A325M-08, Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength Metric
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 1.40-97, Anticorrosive Structural Steel Alkyd Primer.
- .3 Canadian Standards Association (CSA)
 - .1 CSA W59-13, Welded Steel Construction (Metal Arc Welding).
 - .2 CSA G40.20/G40.21-04 (R2009), General Requirements for Rolled or Welded Structural Quality Steel / Structural Quality Steels.

1.2 Codes and Standards

- .1 Do welding in accordance with CSA W59.
- .2 Submit written documentation within two weeks after award of contract from the Canadian Welding Bureau certifying that the steel subcontractor is qualified to requirements of CSA W47.1, Division 1 or 2.1.

1.3 Delivery, Storage and Handling

- .1 Deliver the products to the site in the largest practical sections.

PART 2 - PRODUCTS

2.1 Materials

- .1 Steel plates and rods:
CSA G40.20/G40.21, 300W.
- .2 Rolled structural steel section
material: to CSA G40.20/G40.21, 350W.
- .3 Hollow structural steel (HSS) section
material: to CSA G40.20/G40.21, 350W
Class H.
- .4 Steel roof deck: minimum base steel
thickness, depth and profile as
indicated on drawings, non-cellular,
overlapping side laps.

2.2 Workmanship and
Fabrication

- .5 Nuts and bolts:
 - .1 High-strength bolts: to ASTM A325M.
- .6 Prime coat of paint: to CAN/CGSB 1.40.
- .1 Fabricate miscellaneous metal work with structural qualities to withstand strain and stresses to which the item will be subjected.
- .2 Fit and shop-fabricate the various items of work in sections as large and complete as possible. Make inconspicuous connections, and clearly mark matching surfaces to insure correct reassembly on the site. Do not use paint or grease markers for identifying steel work sections.
- .3 Fabricate the work true to dimensions, free from distortion and defects detrimental to the appearance and performance. Accurately fit joints and intersecting members with adequate fastening.
- .4 Shop weld connections where possible; otherwise, bolt connections. Ensure bolts are free of burrs, deformations, discolorations, or other blemishes and of the same material, texture, colour and finish as the base material on which they occur, unless required for structural or safety reasons.
- .5 Drill or punch holes in base and template plates.
- .6 Provide all miscellaneous clips, anchors and necessary accessories.
- .7 Separate dissimilar metals to prevent galvanic corrosion using fibrated paint.
- .8 Grind exposed welds and steel sections smooth.

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| <u>2.3 Shop Painting</u> | .1 | Thoroughly clean steel work to receive primer in accordance with manufacturer's instructions, and apply one coat, unadulterated, to items with exception of stainless steel, aluminum and galvanized items; surfaces to be embedded in concrete, and machined surfaces. |
| | .2 | Clean surfaces to be field-welded; do not paint. |
| <u>2.4 Miscellaneous Metal Items</u> | .1 | Contractor is responsible for all miscellaneous metal items shown and specified. |
| | .2 | Refer to drawings for location, layout and details of all miscellaneous items. Work that is existing or supplied by Others is indicated on the drawings. |
| | .3 | Fabricate items from steel unless noted otherwise. |
| | .4 | Miscellaneous metal items consist of, but are not limited to the following:
.1 Roof deck infill and support framing.
.2 Guywire anchor support steel. |

PART 3 - EXECUTION

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| <u>3.1 General</u> | .1 | Take necessary field dimensions where required before fabrication. |
| | .2 | Repair items with errors in fabrication, or where damaged during installation, to satisfaction of Departmental Representative. If items are beyond repair, replace with new at no increase in Contract Price. Departmental Representative's decision as to repair or replacement is final. |
| <u>3.2 Installation</u> | .1 | Install the work of this section using skilled craftsmen in accordance with the best practice and according to manufacturer's recommendations where applicable. |

- .2 Install the work plumb, level and structurally free from defects detrimental to the finished appearance. Install work rigidly and securely.
- .3 Provide all drilling of concrete, masonry or other materials for fastening of work specified in this section.
- .4 Touch up bolts, field welds and burned or scratched surfaces with primer.

END OF SECTION
