

PART I – GENERAL**WORK SPECIFIED HEREIN**

All labor, materials, equipment and services necessary to furnish and install all metal roof deck as indicated or specified.

This Specification is based on the metal roof deck being provided by XYZ Company.

- Contractor shall purchase all metal roof deck under a National Account agreement with XYZ Company
- General Contractor is to use standard purchase agreement as shown in Section 01010.

SUBSTITUTIONS

No substitutions.

SUBMITTALS

Submit shop drawings in accordance with Section 01340 for all work under this section. Furnish detailed drawings and lists showing the mark, number, type, and location of all metal roof deck. Show method of attachment to the supporting structure. Show all openings for hatches, mechanical equipment, etc. Show type of paint and all accessories and details as may be required for proper installation of metal roof deck.

PRODUCT DELIVERY, STORAGE AND HANDLING

Deliver, store and handle all metal roof deck in such a manner that it will not be damaged or deformed. Stack decking stored at the site before erection on platforms or pallets, and suitably protect from the weather.

PART II – PRODUCTS**MATERIALS**

- Steel deck shall be formed from sheet steel conforming to CSSBI 10M-08 zinc-coated structural quality sheet steel for steel deck with a minimum nominal thickness not less than noted on the drawings and a minimum zinc coating designation of ZFO75 (wiped coat).
- Conform to CAN CSA-S136-01 and S136S1-04, North American Specifications for the design of cold formed steel structural members (using the Appendix B provisions applicable to Canada)
- Conform to CSA W47.1-03, Certification of Companies for Fusion Welding of Steel.
- Conform to W55.3-1965 (R2003) Resistance Welding Qualification Code for Fabrication of Structural Members used in Buildings, W59-03 Welded Steel Construction (metal arc welding), CSSBI 10M-8, Standard for Steel Roof Deck.
- Steel deck specified as galvanized to have a zinc coating as per designation Z275.
- Zinc Rich paint to CAN CGSB 1.181-99 ready-mixed organic zinc-rich coating.
- Steel for Painted Deck: Comply with SDI Specifications
- Accessories: Manufacturer's standard

- Shop paint: Manufacturer's standard

FABRICATION

- Metal roof deck shall be fabricated in accordance with SDI Specifications and CSA S136-94.
- Welding shall be performed by firms fully approved by the Canadian Welding Bureau under the requirements of CSA Standard W47.1-03, certification of companies for fusion welding.
- Design deck profiles for indicated loads. Minimum thickness and section depths are shown on the drawings. Limit roof deflection under total specified load to 1/240TH of span and under total specified live/snow loads to 1/360TH of span. Make sections continuous over three spans or increase thickness of material to give the equivalent stiffness and strength of a three span deck. Design anchorage to resist a gross uplift of 30 psf and 45 psf for cantilevers. Steel deck shop drawings shall carry the seal of a registered Professional Engineer licensed to practice in the province of Ontario, who shall be responsible for the design, fabrication and erection of the metal deck.
- Submit five white prints of erection diagrams and shop details for review prior to fabrication. Review of shop drawings is a precaution against oversight and error. It is not a detailed check and shall not be construed as relieving the contractor of responsibility for making the work accurate and in conformity with the contract documents. Maintain a set of reviewed drawings on site.

PART III – EXECUTION**INSTALLATION**

Install deck units and accessories in accordance with CAN CSA-S136-01 North American Specifications for the design of cold formed steel structural members, the specifications, manufacturer's recommendations, and final shop drawings, and as specified herein.

Placing:

- Do not start placement of deck units before all supporting members are installed. Place deck units on supporting steel framework and adjust to final position with ends bearing on supporting members and accurately aligned end to end before being permanently fastened. Lap ends not less than 2". Do not stretch or contract the side-lap interlocks.
- Metal roof deck shall be continuous over at least three spans.
- Provide all required closures, reinforcing sheet steel plates and reinforcements at edges of free spanning deck and at all other locations indicated in the drawings.
- Coordinate and cooperate with structural steel erector in locating decking bundles to prevent overloading of structural members.
- Do not use deck units for storage or working platforms until permanently secured in position.

- Do not hang or support any loads from metal roof deck.

Fastening:

- Weld deck to supports at all bearing points with 3/4" diameter puddle welds as per fastening schedule. Stagger welds along flanges of supporting members. Place one weld in each flute where side lap is made. Make end laps over supports not less than 2". Connect side laps with #10 screws as per fastening schedule. Paint welds with zinc-rich paint. Weld deck to perimeter angles with 3/4" diameter puddle welds at 6" on center where angles are parallel to the valleys in the deck.

Cutting and Fitting:

- Cut and fit deck units and accessories around other work projecting through or adjacent to the decking. Provide neat, square, and trim cuts.

Reinforcement at Openings:

- Reinforce openings over 6" up to 12" wide across the flutes with L 2" x 2" x 1/4" angles under flutes on each side. Weld angles to at least two flutes on each side of the opening. Design and provide reinforcing for opening over 12" to 17" wide to support the loads indicated.

Touch-Up Painting:

- After decking installation, wire brush, clean and paint scarred areas, welds and rust spots on the top and bottom surfaces of decking units and supporting steel members.
- In areas where touch-up painted surfaces are to be exposed, apply the paint to blend into the adjacent surfaces in a manner that will minimize visual discontinuity in the coatings.

Independent Inspection and Testing:

- The Architect will appoint an Independent Inspection and testing Agency. Work will be inspected when deck is erected to determine conformance to the drawings and specifications.

END OF SECTION