

**SECTION 05300
METAL DECKING**

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Metal decking for floor and roof applications.

B. Related Sections:

1. Section 05120 - Structural Steel.
2. Section 05210 - Steel Joists.
3. Section 05400 - Cold Formed Metal Framing.
4. Section 05500 - Metal Fabrications: Secondary support members.

1.2 SUBMITTALS:

A. Calculations:

1. Submit calculations, bearing the seal and signature of a professional engineer registered in the State of Colorado, for each deck type, showing required metal deck section moduli and moment of inertia. In addition, for composite decks, submit calculation for each slab type showing required composite slab section moduli and moment of inertia transformed to steel.

B. LEED MRc5: Regional Materials

Provide a statement from the manufacturer stating that materials provided were manufactured within a 500 mile radius of the project. Include location.

C. LEED MRc4: Recycled Content

Provide a statement from the manufacturer including recycled content percentage, by weight, and whether the recycled content is post-industrial or post-consumer.

1.3 QUALITY ASSURANCE:

A. Codes and Standards:

1. Comply with provisions of the following codes and standards, except as otherwise indicated:
 - a. AISI "Specification for the Design of Cold-Formed Steel Structural Members".
 - b. AWS D1.3 "Structural Welding Code - Sheet Steel".
 - c. SDI "Design Manual for Composite Decks, Form Decks, and Roof Decks", Publication No. 25.

B. Manufacturer Qualifications:

1. Manufacturer who is regularly engaged in production of metal decking.

C. Erector Qualifications:

1. Minimum of 5 years experience in erection of metal decking for projects of similar size and difficulty.

D. Qualification of Welding Work:

1. Qualify welding processes and welding operators in accordance with "Welder Qualification" procedures of AWS.
2. Welded decking in place is subject to inspection and testing. Owner will bear expense of removing and replacing any portion of decking for testing purposes if welds are found to be satisfactory. Remove work found to be defective and replace with new acceptable work, at no additional cost to Owner.

E. Testing Agency:

1. Testing and inspection will be made by an approved testing agency selected and paid by the Owner. Furnish testing agency access to work, facilities, and incidental labor required for testing and inspection. Retention by the Owner of an independent testing agency will not relieve the Contractor of responsibility for performing all work in accordance with the Contract Documents.

A. Underwriter's Label:

1. Provide metal deck units listed in Underwriter's Laboratories "Fire Resistance Index", with each required deck unit bearing the UL label and marking for the specific system detailed.

DELETE UL LABEL IF UL FLOOR OR ROOF DECK IS NOT REQUIRED.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Steel:

1. Steel for Painted Metal Floor Deck Units: ASTM A611, Grade C as required to comply with SDI specifications.
2. Steel for Galvanized Metal Roof and Floor Deck Units: ASTM A446, Grade as required to comply with SDI specifications, ASTM A525 G60 galvanizing.

GALVANIZED DECK IS REQUIRED FOR ROOF APPLICATIONS. GALVANIZED OR PAINTED DECK CAN BE PROVIDED FOR FLOOR APPLICATIONS. PROVIDE ONLY GALVANIZED FLOOR DECK WHERE FIREPROOFING IS REQUIRED.

3. **LEED MRc4: Recycled Content**
Steel must contain recycled content.

B. Galvanizing Repair:

1. Where galvanized surfaces are damaged, prepare surfaces and repair in accordance with procedures specified in ASTM A780.

PART 3 - EXECUTION

3.1 TOUCH-UP PAINTING:

- A. After roof deck installation, wire brush, clean, and paint scarred areas, welds, and rust spots on top and bottom surfaces of roof deck, and supporting steel members.
 1. Touch-up galvanized surfaces with galvanizing repair paint following manufacturer's instructions.

END OF SECTION 05300