

ITEM 10596.01 M - OPEN STEEL FLOOR WITH NON-SKID STUDS (GALVANIZED)

DESCRIPTION. The work shall consist of furnishing and placing open steel floor (including connection hardware) at the locations and of the configuration indicated on the contract plans, and furnishing and installing by fusion-welding, studs to the riding surface of the main bars on the open steel floor where indicated on the Plans.

MATERIALS.

Steel. All steel for the component parts of the open steel floor shall conform to the requirements of ASTM A 36M. It shall be furnished with a minimum copper content of 0.20 percent. The Contractor shall furnish the Department with two certified copies of the record of physical tests and chemical analyses of the steel used.

Studs. Studs shall be manufactured of cold finished, low carbon steel conforming to ASTM Designation A 108, Grade 1020 with a hardness of 30 Rockwell C, no thread type, full diameter base and flux filled.

Studs shall be 7.9 mm in diameter and shall have a finished, installed height of between 6.4 mm and 7.9 mm measured to the base of the shoulder.

Fabrication. All requirements and provisions of the SCM shall apply.

Galvanizing. The open steel floor shall be shop galvanized in accordance with Section 719-01. Type I galvanizing shall be used for all shop galvanizing. Surfaces which are to be field welded shall be galvanized in accordance with the repair method of Section 719-01.

CONSTRUCTION DETAILS. Before welding studs, the surfaces that are to receive studs shall be cleaned of all paint, grease, dirt, concrete, and other adhering material by wire brush or other mechanical means so as to obtain good contact between the studs and the grating bars. The requirements of the N.Y.S. Steel Construction Manual, Section II, "Fabrication," Section 7, Part C - "Stud Welding" shall apply to this work.

Studs shall be end-welded by the electric-arc method using the standard, automatic equipment recommended by the manufacturer of the studs.

Welding operators shall have had previous experience with, and shall be proficient in, the application of studs by the use of automatic end-welding, electric-arc equipment.

Studs shall not be applied to that area of the open steel flooring which lies within a longitudinal strip 150 mm wide adjacent to each curb, areas of concrete filled grid deck, and sidewalk grid deck.

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After the studs have been welded to the grating, they shall be inspected visually and shall be given a light blow with a hammer. If failure occurs in the weld zone of a stud, it shall be removed and replaced with a new stud.

All locations requiring studs shall have studs installed and tested.

Open steel framing shall be placed true to line and grade and shall make full and even bearing on the underlying surface. Field welds shall be made in accordance with the plans. All welding requirements and provisions of the SCM shall apply.

METHOD OF MEASUREMENT. This work will be measured for payment for the actual area (in square meters) of open steel flooring furnished and installed, including any portions that are filled with concrete.

BASIS OF PAYMENT. The unit price bid per square meter shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work, including the cleaning and preparation of surfaces, field welding, field galvanizing, and installation and provision of connection hardware (shims and splice bars).