

ITEM 555.0801 01 - FOOTING CONCRETE FOR RAILROAD STRUCTURES

DESCRIPTION

This work shall consist of furnishing Concrete materials, concrete mix design, testing and placing Portland cement concrete for railroad structures.

MATERIALS

The materials used for the structural concrete shall comply with the material requirements of American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, Chapter 8, Part 1 latest edition and shall conform to the following additional requirements:

- Concrete shall be made with a low alkali normal Portland cement (Type 1A) in accordance with ASTM C 150, latest edition, with less than 0.6% sodium equivalents.
- Maximum size of aggregate shall be 19 mm.
- Slump at point of discharge shall be a minimum of 50mm and a maximum of 100mm.
- Maximum water/cement ratio shall be in accordance with AREMA Chapter 8 section 1.12 and minimum concrete strength shall be 31.0 MPa at 28 days
- Air entraining agent shall be used in accordance with ASTM C 260 and air content shall be 5% to 8%.

CONSTRUCTION DETAILS

Construction shall be in accordance with American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, Chapter 8, Part 1 latest edition.

METHOD OF MEASUREMENT

The work will be measured for payment as the number of cubic meters of concrete for structures satisfactorily placed, measured to the nearest 0.1 cubic meters within the lines of the structure as shown in the contract documents. No deductions shall be made for the volume of joint material, embedded metal reinforcement, structural shapes, and chamfers, tops of piles, or pipe with an end area of less than 0.1 M².

BASIS OF PAYMENT

The unit price bid per cubic meter shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, except reinforcement will be paid for separately under its appropriate item. Unless otherwise provided, the unit price bid shall include the cost of furnishing and placing flashing or other metal strips, flexible water stops, sheet packing, pipe drains, bituminous material, water for wetting, joint materials, felt, tar paper, joint sealing compounds, joint fillers, and concrete curing materials.

No extra compensation for falsework or falsework piling will be paid. This work is included as part of the formwork.

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No extra compensation for corrective finishing or repairs to damaged or defective concrete will be paid.

Bridge bearings, expansion joints, and anchor bolts will be paid for under their appropriate items. Progress payments will be made, after the concrete and curing applications have been properly placed, to the extent that payment will be made at 90% of the computed quantity of each concrete placement, with the balance to be paid after completion of all curing and corrective work thereon.