Vermont Agency of Transportation

2018 Standard Specifications for Construction

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(c) After completion and acceptance of all work under this Section, including extended weights being received and checked, 100% of the quantity will be paid.

All nondestructive testing and required quality control activities will be considered incidental to fabrication, and no separate payment will be made.

Payment will be made under:

Pay Item		Pay Unit
506.50	Structural Steel, Rolled Beam	Pound
506.55	Structural Steel, Plate Girder	Pound
506.56	Structural Steel, Curved Plate Girder	Pound
506.57	Structural Steel, Truss	Pound
506.60	Structural Steel	Pound
506.75	Structural Steel	Lump Sum

SECTION 507 – REINFORCING STEEL

507.01 DESCRIPTION. This work shall consist of furnishing and placing bar reinforcement of the level specified, dowels, wire, welded wire reinforcement (WWR), and mechanical bar connectors.

Levels and associated types of reinforcing steel are specified as follows:

(a) Level I (Limited Corrosion Resistance). Level I reinforcing includes plain, low-alloy, and epoxy-coated reinforcing steel.

(b) Level II (Improved Corrosion Resistance). Level II reinforcing includes stainless-clad, dual-coated, and continuously-galvanized reinforcing steel.

(c) Level III (Exceptional Corrosion Resistance). Level III reinforcing includes solid stainless reinforcing steel.

The location, level, and when specified, type of reinforcing shall be as indicated in the Plans. Reinforcing supplied shall meet the requirements of the level specified or any higher level. Only one type of reinforcing steel shall be used for each level for the Contract work, unless permitted in writing by the Engineer.

507.02 MATERIALS. Materials shall meet the requirements of the following Subsections:

Mortar, Type IV	707.03
Bar Reinforcement	713.01
Mechanical Splices for Bar Reinforcement	713.02
Cold Drawn Steel Wire	713.04
Welded Wire Reinforcement	713.05

(c) Cut ends of continuously-galvanized reinforcing steel shall be coated with a zinc-rich paint. The paint used in the repair shall be organic-rich and contain at least 92% zinc by weight in the dry film. The paint shall be applied per the manufacturer's recommendations to a thickness equivalent to the surrounding galvanizing.

507.05 PLACING AND FASTENING REINFORCING STEEL. Steel reinforcement shall be placed in the position shown on the Plans and held securely in place during the placing of concrete. Unless otherwise noted on the Plans, placement tolerances for reinforcing steel shall be 1/4 inch for cover and clearance and 1 inch for spacing of bars. Stirrups and spirals shall pass around main tension members and be securely attached to those members.

Reinforcing steel shall be spaced as specified from the face of the forms. Horizontal layers shall be spaced vertically by means of approved supports. Support material within 1-1/2 inches of a finished concrete surface shall be stainless steel, epoxy, plastic coated galvanized steel, or plastic.

Bar reinforcement shall not be further bent or straightened from the curvature produced at initial fabrication except when approved by the Engineer. If heating is approved for field bends, the temperature should not exceed that which produces a dull red color in the bar.

Bars spaced 12 inches apart or further shall be tied at every intersection. Bars spaced less than 12 inches apart shall be tied at every other intersection. If reinforcement shows signs of distress during construction, the Engineer may direct additional tying.

Welding procedures shall be submitted for approval for any type of reinforcement welding. Welding of reinforcement steel will not be permitted without written permission of the Engineer. Welding shall conform to the requirements of Subsection 506.10. Special care shall be taken so that no undercut will occur and reduce the effective area of the reinforcing bars.

Tie wires and supports used for installation of reinforcement shall be composed of the same material as any steel being contacted or shall be plastic. When forms are to be removed in their entirety, uncoated steel chairs equipped with snug-fitting, high-density, polyethylene tips which provide a 1/4-inch clearance between the metal and any exposed surface may be used.

Horizontal mats of reinforcing steel shall have lines of support not exceeding a 4-foot spacing in either direction. Additional individual chairs may be required near the fascia.

Reinforcement placed in any member shall be inspected and approved before any concrete is placed. Mechanical bar connectors shall be installed per the manufacturer's instructions.

507.06 PLACING DOWELS. Dowels shall be placed in existing concrete or ledge at locations shown on the Plans. Where Type IV mortar is to be used, holes shall be drilled to the depth shown on the Plans and shall be at least 1 inch greater in diameter than the dowel. Where approved adhesives are used, the manufacturer's recommendations shall be followed for hole sizing. Dowels shall be grouted with Type IV mortar or other approved material.