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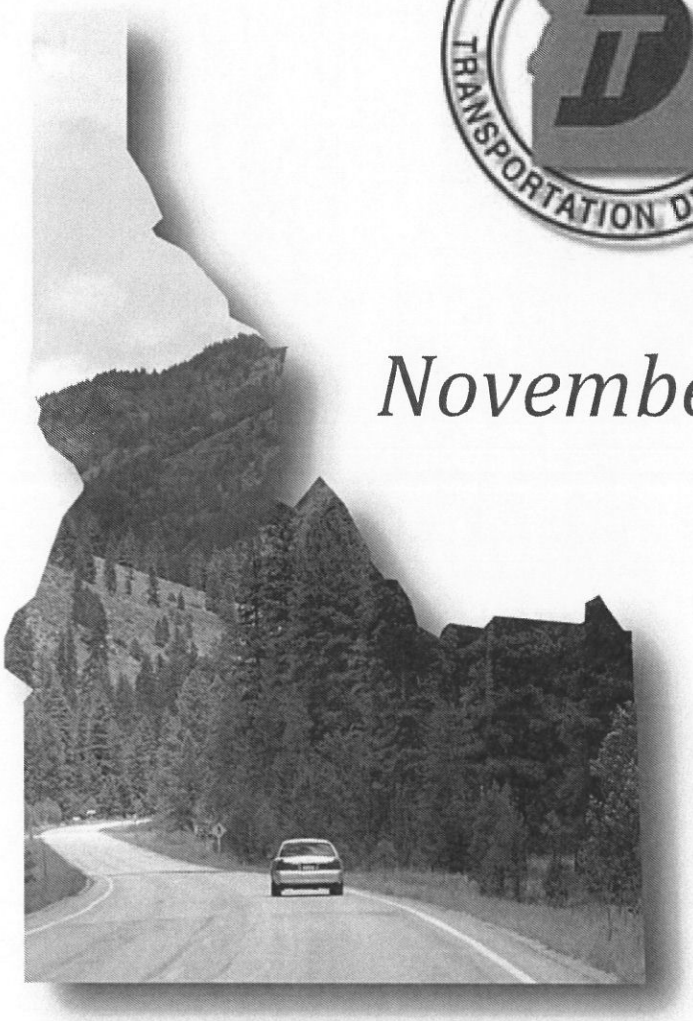
Standard Specifications for Highway Construction – 2012



November 2012

and included with precast elements. Payment will be made on "plan quantities," except for authorized additions.

Concrete Parapet. At the contract unit price per foot and include reinforcing steel and epoxy coating, if required, that is cast within the parapets in whole or in part.

Approach Slabs. At the contract unit price per square yard including site preparation (e.g. excavation or other shaping), reinforcing steel, joint sealers, sleeper beams, concrete deadman, and curbs.

Price Adjustment. The Department will adjust the contract unit prices for strength deficiency in accordance with 502.01.B. The Engineer will apply a price adjustment to the unit price of the concrete class of required for the quantity represented by the individual strength tests. The Department will apply this price adjustment provision to the contract unit price of other items of work by their respective units of measurement and payment that incorporate concrete under 502. Should concrete be at incidental cost or included in the overall cost of an item, the Engineer will establish a value of the concrete proportional to the total contract price for purposes of establishing a price reduction on the concrete that does not meet specified strength, but is allowed to remain in place.

SECTION 503 - METAL REINFORCEMENT

503.01 Description. Provide and install reinforcing steel.

The contract pay item "Metal Reinforcement, Schedule No. 1" includes metal reinforcements placed in substructures. The contract pay item "Metal Reinforcement, Schedule No. 2 includes metal reinforcement placed in superstructures. The Department will show the schedules on the plans for the structures involved.

503.02 Materials. Provide materials as specified in:

Reinforcing Steel	708.02
Epoxy Coated Metal Reinforcement	708.02
Dowel Bars	708.03
Tie Bars	708.04

Accompany each shipment of reinforcing steel delivered to the project with a completed form ITD0914 and a copy of the mill test report attached for each heat included in the shipment. The Engineer will obtain field samples for each heat number and bar size from material delivered to the project. Submit proper identification with each shipment delivered to the project to allow the Department to readily identify each bar

If concrete blocks are used, embed the appropriate tie wires or coated tie wires during their forming stage and tie each block to the reinforcing bar it supports to hold the block in place. Ensure concrete blocks have approximately the same strength quality as the concrete placed around them. The Department requires plastic coated tie wire and plastic coated metal bar supports whenever they will be in direct contact with epoxy coated reinforcing. Do not use pebbles, pieces of broken stone, broken concrete, metal pipe or wooden blocks. Tie down top layers or mats of metal reinforcement in bridge decks to stirrups, shear studs, or as Engineer approved. Locate tiedowns so that there is at least one tiedown per 16 ft^2 of deck surface. Provide tiedowns strong enough to prevent upward movement of reinforcement from any cause. Do not deviate more than ±0.25 in in the vertical direction from the position shown on the plans for concrete deck reinforcing steel.

Do not place concrete until the Engineer has inspected the reinforcement. Repair damage to epoxy coating of reinforcing steel, occurring during installation before placing. Remove rust and contaminants from the steel surface and adjacent coating, by wire brushing, immediately before applying patching material. Use a patching material certified to meet AASHTO M284 and apply it in accordance with the manufacture's recommendations.

Tie reinforcing bars at intersections unless spacing is less than 1 ft in each direction, then tie the alternate intersections. Where bundled bars are shown on plans, tightly tie bundles at intervals not exceeding 3 ft with No. 16 or larger black or plastic coated steel wire. Do not weld reinforcing steel unless shown on plans, or Engineer approval has been obtained. Weld in accordance with AWS D1.4 "Structural Welding Code - Reinforcing Steel."

The Contractor may weld reinforcing steel assemblies, if approved for pre-cast items instead of tieing, as follows:

1. Weld at locations shown on the approved shop drawings.
2. Do not weld at the casting bed when pre-stress reinforcement is on the bed.
3. The Contractor may tack weld design bars shown on the plans to extra No. 4 bars for positioning. Do not exceed 1 in weld length tack welds, and locate only at the very ends of design bars. Show the extra bars on the shop drawings and identify as bars whose only function is to position the design bars. Extra bars and design bars have the same concrete cover requirement. Locate extra bars to not interfere with pre-