

All Regional Engineers

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Special Provision for Metal Hardware Cast into Concrete

September 30, 2011

This special provision was developed by the Bureau of Bridges and Structures to standardize the corrosion protection for steel inserts and brackets cast into concrete. It has been revised to fit with the 2012 Standard Specifications and also specifies when stainless steel hardware is required.

It should be inserted in contracts with structures involving cast-in-place, precast, or precast prestressed concrete.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the January 20, 2012, and subsequent lettings. The Project Development and Implementation Section will include a copy in the contract.

This special provision will be available on the transfer directory September 30, 2011.

80203m

## METAL HARDWARE CAST INTO CONCRETE (BDE)

Effective: April 1, 2008

Revised: January 1, 2012

Add the following to Article 503.02 of the Standard Specifications:

“(h) Metal Hardware Cast into Concrete ..... 1006.13”

Add the following to Article 504.02 of the Standard Specifications:

“(j) Metal Hardware Cast into Concrete ..... 1006.13”

Revise Article 1006.13 of the Standard Specifications to read:

“**1006.13 Metal Hardware Cast into Concrete.** Unless otherwise noted, all steel hardware cast into concrete, such as inserts, brackets, cable clamps, metal casings for formed holes, and other miscellaneous items, shall be galvanized according to AASHTO M 232 or AASHTO M 111. Aluminum inserts will not be allowed. Zinc alloy inserts shall be according to ASTM B 86, Alloys 3, 5, or 7.

When stainless steel junction boxes or other stainless steel appurtenances are specified, Type 304 stainless steel hardware shall be used when cast into concrete.

The inserts shall be UNC threaded type anchorages having the following minimum certified proof load.

Insert Diameter	Proof Load
5/8 in. (16 mm)	6600 lb (29.4 kN)
3/4 in. (19 mm)	6600 lb (29.4 kN)
1 in. (25 mm)	9240 lb (41.1 kN)”