



Illinois Department of Transportation

Memorandum

To: All Regional Engineers
From: Omer M. Osman, P.E.
Subject: Special Provision for Light Tower
Date: September 26, 2014

Omer M. Osman
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This special provision was developed by the Bureau of Design and Environment to correct an inconsistency between Highway Standard 835001 and Article 1069.08 of the Standard Specifications. It also provides updated material requirements for the tower shaft, ring terminal box, liquidtight flexible nonmetallic conduit, safety chain, support and hoist cable, and cable terminals.

This special provision should be inserted into contracts requiring light towers.

The districts should include the BDE Check Sheet marked with the applicable special provisions for the January 16, 2015 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 26, 2014.

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LIGHT TOWER (BDE)

Effective: January 1, 2015

Revise the second paragraph of Article 1069.08(a) of the Standard Specifications to read:

“All tower shaft components shall be fabricated from high strength, low alloy, steel according to AASHTO M 270 (M 270M); ASTM A 595 (A 595M), Grade A or B; ASTM A 1011 (A 1011M); ASTM A 606 (A 606M); ASTM A 588 (A 588M), or ASTM A 871 (A 871M) Grade 65, with a minimum yield strength of 50,000 psi (345,000 kPa).”

Revise the first sentence of the seventh paragraph of Article 1069.08(e) of the Standard Specifications to read:

“The ring shall be equipped with an enclosed wire raceway and a stainless steel terminal box built according to NEMA Type 4X requirements for wiring of the luminaires.”

Revise the eleventh paragraph of Article 1069.08(e) of the Standard Specifications to read:

“Ring designs that incorporate liquidtight flexible nonmetallic conduit to the terminal box shall use stainless steel conduit fittings. Liquidtight flexible nonmetallic conduit shall be according to Article 1088.01(a)(4).”

Revise the third sentence of the seventh paragraph of Article 1069.08(f) of the Standard Specifications to read:

“Chains shall be stainless steel.”

Revise the first sentence of the first paragraph of Article 1069.08(g) of the Standard Specifications to read:

“Cables (wire rope) shall be manufactured from Type 304 or Type 302 stainless steel and shall be stranded assembly coated with a friction-limiting non-corrosive lubricant.”

Revise the second sentence of the second paragraph of Article 1069.08(g) of the Standard Specifications to read:

“Cables shall be manufactured and listed for compliance with military specification MIL-DTL-83420, Type 1, Composition B.”

Revise the third paragraph of Article 1069.08(g) of the Standard Specifications to read:

“Cable terminals shall be stainless steel whenever possible, shall be compatible with the cable, and shall be as recommended by the cable manufacturer. The terminals,

swaging, etc., shall meet the requirements of military specification MIL-DTL-781. Stainless steel oval sleeves shall be according to military specification MS51844.”

Revise the second and third sentences of the first paragraph of Article 1069.08(m) of the Standard Specifications to read:

“The tower main breaker and the motor breaker shall be housed in a stainless steel NEMA Type 4 enclosure mounted on the inside of the handhole pocket door. The main and motor breakers shall have an external position indicating, trip free operating handle having padlock provisions and shall be labeled by two color engraved nameplates clearly marking the “RESET”, “ON”, and “OFF” positions.”

Revise the second paragraph of Article 1069.08(m) of the Standard Specifications to read:

“The main and motor circuit breakers shall be molded case, 2-pole, thermal magnetic, bolt-on type having a UL-listed interrupting rating of not less than 14,000 rms symmetrical amps at 480 V. The main breaker shall be sized for the motor but shall be a minimum of 30 A.”

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