SECTION 8-20,ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL
April 5, 2004

8-20.3(5) Conduit

The third sentence in the seventeenth paragraph is revised to read:

> Grout shall obtain a minimum of 4000 psi compressive strength at 7 days.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes

This section is supplemented with the following:

> Where conduit and junction boxes are placed in barrier, the Prime Contractor shall coordinate the work of the Contractor constructing the barrier and the electrical Contractor so that each junction box placed in the barrier is placed in correct alignment with respect to the barrier, with the face of the box flush or uniformly chamfered within ½ inch of the barrier surface. If any point on the surface of the junction box placed in barrier is recessed more than 1/2 inch from the surface of the barrier, the Contractor shall install a box extension meeting the Engineer's approval and grout around the extension or remove and replace the entire section of barrier.

8-20.3(9) Bonding, Grounding

The first paragraph is revised to read:

> All metallic appurtenances containing electrical conductors (luminaires, light standards, cabinets, metallic conduit, non-metallic conduit, etc.) shall be made mechanically and electrically secure to form a continuous systems which shall be effectively grounded. Where metallic conduit systems are employed, the conduit system constitutes the equipment grounding conductor. Where nonmetallic conduit is installed, the installation shall include an equipment ground conductor, in addition to the conductors noted in the contract. Bonding jumpers and equipment grounding conductors shall be installed in accordance with Section 9-29.3. The equipment ground conductor between the isolation switch and the sign lighter fixtures may be No. 14 AWG stranded copper conductor. Where parallel circuits are enclosed in a common conduit, the equipment grounding conductor shall be sized by the rating of the largest overcurrent device serving any circuit contained within the conduit.

8-20.3(11) Testing

The fourth paragraph is revised to read:

> When the project includes a traffic signal system, the Contractor shall conduct tests noted in Section 8-20.3(14)D. The Contractor shall provide the Engineer a minimum of five days advance written notice of the proposed traffic signal turn-on date and time. The traffic signal turn-on procedure shall not begin until all required channelization, pavement markings, illumination, signs, and sign lights are substantially complete and operational unless otherwise allowed by the Engineer. The Contractor shall provide traffic control to stop all traffic from entering the intersection. The Contracting Agency electronics technician will program the controller and enter the timing data, then turn the traffic signal system to its flash mode to verify proper flash indications. The Contracting Agency electronics technician will then conduct functional tests to demonstrate that each part of the traffic signal system functions as specified. The Contractor shall conduct functional tests to demonstrate that each part of the illumination system, or other electrical system, functions as specified. These

demonstration shall be conducted in the presence of a Contracting Agency electronic technician, the Contracting Agency electrical inspector, and Regional Traffic Engineer or his/her designee. The Contracting Agency electronics technician will then turn the traffic signal to stop-and-go operation for no less than one full cycle. Based on the results of the turn-on, the Engineer will direct the Contracting Agency electronics technician to either turn the traffic signal on to normal stop-and-go operation, to turn the signal to flash mode for a period not to exceed five calendar days, or to turn the signal off and require the Contractor to cover all signal displays and correct all deficiencies.