

1 **Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation**  
2 **Systems, and Electrical**  
3 **January 3, 2017**

4 **8-20.1(1) Regulations and Code**

5 The second paragraph is revised to read:

6

7 Wherever reference is made in these Specifications or in the Special Provisions to the  
8 Code, the rules, or the standards mentioned above, the reference shall be construed to  
9 mean the code, rule, or standard that is in effect on the Bid advertisement date.

10

11 **8-20.3(5)A General**

12 The last paragraph is revised to read:

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14 Immediately after the sizing mandrel has been pulled through, install an equipment  
15 grounding conductor if applicable (see Section 8-20.3(9)) and any new or existing wire  
16 or cable as specified in the Plans. Where conduit is installed for future use, install a  
17 200-pound minimum tensile strength pull string with the equipment grounding  
18 conductor. The pull string shall be attached to duct plugs or caps at both ends of the  
19 conduit.

20

21 **8-20.3(5)A1 Fiber Optic Conduit**

22 The last paragraph is deleted.

23

24 **8-20.3(5)B Conduit Type**

25 The second and third paragraphs are deleted and replaced with the following new  
26 paragraph:

27

28 PVC and HDPE conduits shall be Schedule 80 unless installed as innerduct.

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30 **8-20.3(5)D Conduit Placement**

31 Item number 2 is revised to read:

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33 2. 24-inches below the top of the untreated surfacing on a Roadbed.

34

35 **8-20.3(9) Bonding, Grounding**

36 The following two new paragraphs are inserted after the first paragraph:

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38 Install an equipment grounding conductor in all new conduit, whether or not the  
39 equipment grounding conductor is called for in the wire schedule.

40

41 For each new conduit with innerduct install an equipment grounding conductor in only  
42 one of the innerducts unless otherwise required by the NEC or the Plans.

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44 The fourth paragraph (after the preceding Amendments are applied) is revised to read:

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46 Bonding jumpers and equipment grounding conductors meeting the requirements of  
47 Section 9-29.3(2)A3 shall be minimum #8 AWG, installed in accordance with the NEC.  
48 Where existing conduits are used for the installation of new circuits, an equipment  
49 grounding conductor shall be installed unless an existing equipment ground conductor,  
50 which is appropriate for the largest circuit, is already present in the existing raceway.

1 The equipment ground conductor between the isolation switch and the sign lighter  
2 fixtures shall be minimum #14 AWG stranded copper conductor. Where parallel circuits  
3 are enclosed in a common conduit, the equipment-grounding conductor shall be sized  
4 by the largest overcurrent device serving any circuit contained within the conduit.  
5

6 The second sentence of the fifth paragraph (after the preceding Amendments are applied) is  
7 revised to read:  
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9 A non-insulated stranded copper conductor, minimum #8 AWG with a full circle crimp  
10 on connector (crimped with a manufacturer recommended crimper) shall be connected  
11 to the junction box frame or frame bonding stud, the other end shall be crimped to the  
12 equipment bonding conductor, using a "C" type crimp connector.  
13

14 The last two sentences of the sixth paragraph (after the preceding Amendments are applied)  
15 are revised to read:  
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17 For light standards, signal standards, cantilever and sign bridge Structures the  
18 supplemental grounding conductor shall be #4 AWG non-insulated stranded copper  
19 conductor. For steel sign posts which support signs with sign lighting or flashing  
20 beacons the supplemental grounding conductor shall be #6 AWG non insulated  
21 stranded copper conductor.  
22

23 The fourth to last paragraph is revised to read:  
24

25 Install a two grounding electrode system at each service entrance point, at each  
26 electrical service installation and at each separately derived power source. The service  
27 entrance grounding electrode system shall conform to the "Service Ground" detail in the  
28 Standard Plans. If soil conditions make vertical grounding electrode installation  
29 impossible an alternate installation procedure as described in the NEC may be used.  
30 Maintain a minimum of 6 feet of separation between any two grounding electrodes  
31 within the grounding system. Grounding electrodes shall be bonded copper, ferrous  
32 core materials and shall be solid rods not less than 10 feet in length if they are 1/2 inch in  
33 diameter or not less than 8 feet in length if they are 5/8 inch or larger in diameter.  
34

### 35 **8-20.3(13)A Light Standards**

36 The first sentence in the second to last paragraph is revised to read:  
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38 All new and relocated metal light standards shall be numbered for identification using  
39 painted 4 inch block gothic letters (similar to series C highway lettering) and numbers  
40 installed 3 feet above the base facing the Traveled Way.  
41

42 The numbered list in the second to last paragraph is deleted and replaced with the following:  
43

44 NN  
45 CC-SSSS  
46 VVV  
47

48 Where:

49 **NN** – Is the pole number as identified in the Plans. May be one or more characters.  
50 **CC** – Is the circuit letter as identified in the Plans. May be one or more characters.  
51 **SSSS** – Is the service cabinet number as identified in the Plans. Do not include the  
52 two or three letter prefix. Up to four digits - do not include leading zeros.

1            **VVV** – Is the operating voltage of the luminaire. Always three digits.

2

3            **8-20.3(13)C Luminaires**

4            The first paragraph is revised to read:

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6            The Contractor shall mark the installation date on the inside of the luminaire ballast or  
7            driver housing using a permanent marking pen.