

**Section 1743**

**(B) Disconnect Switch**

At all locations, where the antenna is mounted on a joint use pole, install a double pole, snap switch to remove power from the spread spectrum radio system. Do not mount weatherproof box on the traffic signal cabinet door. Drill a hole in the side of the traffic signal cabinet. Mount the outlet box over the hole using a half inch chase nipple and bushings. Ensure sealing gaskets are in place and no water can enter the cabinet. Securely mount the weatherproof outlet box with additional mounting screws. Bond the outlet box to the equipment ground bus. See plans for approximate mounting height. Run the power supply cord of the spread spectrum radio unit into the outlet box and connect to switch. Securely attach power supply cord to equipment rack. Install disconnect switch with lockout tag cover. If the antenna is mounted on a joint use pole, the “disconnect switch” is required.

Do not install power supply for the radio in a GFCI protected outlet.

**(C) Warning Sign(s) and Decal(s)**

At all locations, where the antenna is mounted on a joint use pole, secure a warning sign to pole. Mount warning sign(s) at locations called for in the plans. Ensure there are no conflicts between the warning sign and surrounding utilities. Mount warning sign to be easily viewed. Do not mount warning sign under pole grounds or conduit. If the antenna is mounted on a joint use pole, the RF warning sign is required.

Clean and remove any dirt or oil on traffic cabinet before placing decal. Place decal adjacent to the disconnect switch located on the outside of traffic cabinet. If the antenna is mounted on a joint use pole, the decal is required.

**1736-4 MEASUREMENT AND PAYMENT**

900MHz Radio will be measured and paid as the actual number of 900 MHz radios furnished, installed and accepted. This item includes the appropriate sized antenna(s), radio, power supplies, disconnect/snap switch, signs, decals, data interface cable/serial cable, coaxial cable, lightning arrestor, radio frequency signal jumper, coaxial cable power divider (splitter), coaxial cable connectors, coaxial cable shield grounding system with weatherproofing, labeling and any integration between the radio system and a fiber optic network if necessary, installation materials and configuration software necessary to complete this work, including the radio path Site Survey test and warranties.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
900MHz Radio	Each

**SECTION 1743  
PEDESTALS**

**1743-1 DESCRIPTION**

Furnish and install the size and type of support assembly for vehicular or pedestrian signal heads, pedestrian pushbuttons, Intelligent Transportation System technologies or other traffic control devices as shown in the plans. Furnish assembly with foundation, grounding system and all necessary hardware as shown in the *Roadway Standard Drawings*. Provide a pedestal assembly that meets *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals* in effect on the date of project advertisement. Unless otherwise required by the plans, install signal pedestals and pedestrian pushbutton posts on FHWA-approved breakaway support or anchor systems.

1 **1743-2 MATERIAL**

2 Refer to Division 10.

<b>Item</b>	<b>Section</b>
Grounding Electrodes	1091-6
Signal Pedestals	1098-14
Wire	1091-2

3 Furnish material, equipment and hardware under this section that is pre-approved on the  
4 ITS and Signals QPL.

5 Pedestals are defined as follows:

6 **(A) Type I - Pedestrian Pushbutton Post**7 **(B) Type II - Normal-Duty Pedestal**8 **(C) Type III - Heavy-Duty Pedestal**9 **1743-3 CONSTRUCTION METHODS**10 **(A) Type I Pedestrian Pushbutton Post**11 Install pushbutton post for mounting pedestrian pushbutton or an accessible pedestrian  
12 signal (APS) assembly (refer to Section 1705).13 Install underground conduit for pushbutton lead-in cable in the pushbutton post's  
14 concrete foundation.15 Attach or anchor pushbutton post to the top of foundation via a breakaway support in  
16 a vertical plumb orientation. Ensure post is of sufficient length to accommodate the  
17 pushbutton, accessible pedestrian signals and any associated pedestrian informational  
18 signing at the mounting heights shown in the plans or *Roadway Standard Drawings*  
19 No. 1705 and 1743.20 **(B) Type II and III Pedestals**21 Locate foundations, determine elevation and submit findings for normal-duty and  
22 heavy-duty pedestals. Obtain the Engineer's approval of foundation locations and  
23 elevations before constructing foundations.24 Excavate in accordance with Section 410. If encountered, remove rock or boulders to  
25 a sufficient depth to obtain stability necessary to support the structure for design loads.  
26 Ensure ground is level before installing foundations.27 Construct foundations in accordance with Section 825. Cast concrete for pole  
28 foundations against undisturbed soil unless otherwise permitted. Provide forms with  
29 chamfer strips that measure one inch along diagonal face at all corners above ground  
30 level. Do not install foundations over uncompacted fill or muck.

31 Install conduit in foundations.

32 Securely place, position and align anchor bolts symmetrically about the center of  
33 foundation.34 Give exposed vertical concrete surfaces an ordinary surface finish. Give exposed  
35 horizontal surfaces a float finish.36 Level tops of concrete foundations. Do not allow tops to exceed 4" above adjacent  
37 ground surface. Pour and finish foundation to a level that is flush with the surrounding  
38 sidewalk when possible.

**Section 1745**

1 Do not erect pedestals until concrete has attained a minimum compressive strength of  
2 2,500 psi as determined by cylinder breaks.

3 Refer to *Roadway Standard Drawings* No. 1705 and 1743.

4 **1743-4 MEASUREMENT AND PAYMENT**

5 *Type I Post with Foundation* will be measured and paid as the actual number of pedestrian  
6 pushbutton posts furnished, installed and accepted.

7 *Type II Pedestal with Foundation* will be measured and paid as the actual number of normal-  
8 duty pedestals with foundations furnished, installed and accepted.

9 *Type III Pedestal with Foundation* will be measured and paid as the actual number of heavy-  
10 duty pedestals with foundations furnished, installed and accepted.

11 No measurement will be made for pedestal foundations, grounding systems and any  
12 peripheral pedestal mounting hardware as these are incidental to furnishing and installing  
13 pedestals.

14 Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Type I Post with Foundation	Each
Type II Pedestal with Foundation	Each
Type III Pedestal with Foundation	Each

15 **SECTION 1745**  
16 **SIGNS INSTALLED FOR SIGNALS**

17 **1745-1 DESCRIPTION**

18 Furnish and install signs for signals with cable hangers, rigid sign mounting brackets,  
19 U-channel posts and all necessary hardware.

20 **1745-2 MATERIAL**

21 Refer to Division 10.

<b>Item</b>	<b>Section</b>
Signs and Hardware	1092-1
Retroreflective Sheeting	1092-2

22 Use Grade C retroreflective sheeting, except for black sheeting. Use non-reflective for black  
23 sheeting.

24 Conform to the message layout, size and color as required in the MUTCD.

25 For messenger cable mounting, furnish either messenger cable hangers with free-swinging,  
26 360° adjustable sign brackets or 3-bolt clamps as directed. Furnish aluminum, galvanized  
27 steel or stainless steel sign supporting hardware.

28 For ground mounting, furnish steel, 3 lb, U-channel posts with hardware for ground mounting.  
29 Comply with Section 903.

30 For mast-arm mounting, furnish rigid aluminum, galvanized steel or stainless steel sign  
31 mounting brackets.

32 **1745-3 CONSTRUCTION METHODS**

33 Install signs with applicable mounting hardware. Comply with sign offsets and mounting  
34 heights as shown in the MUTCD and the *Roadway Standard Drawings* No. 904.50.

35 For messenger cable mounting, install signs 6" minimum from signal heads.