

6. Insulated Joint Installation.

- a. Insulated joints, where required, shall be furnished by the Contractor in accordance with these specifications.

7. Rail Bonding Installation.

- a. All non-insulated joint bars in the crossing circuited territory shall be double bonded with one 48 inch long welded web bond and one 60 inch plug type web bond.
- b. Track switch, frog fouling bonds, and track circuit connections shall be exothermically welded bonds.
- c. Welded Bonds.

1. The surfaces of the rails where the bond is to be applied shall be ground clean with a reinforced grinding wheel, of a type as recommended by the bonding material manufacturer. The use of vitrified grinding wheels will not be allowed. After grinding, the surface shall be cleaned with an approved non-toxic solvent to remove all traces of grease and dirt. After the surface has been ground and cleaned, it shall be heated to drive out any moisture. The bond wire shall then be welded to the rail in a manner to ensure a thorough mechanical and electrical connection.

2. The Contractor shall insure that each bond connection is thoroughly welded to the rail. The Engineer reserves the right to require a test of each weld by hammer and striker, or in any other manner that in the opinion of the Engineer is reasonable.

3. The Contractor shall demonstrate that the bonding is accordance with the requirements of this Section and as specified in AREMA Signal Manual Part 8.1.32 and AREMA Drawing Number 8.1.25 figure 1 (type 2 plugs).

d. Plug-Type Rail Web Bonds.

1. Plug type web 60 inch bonds shall be installed in accordance with AREMA Signal Manual Part 8.1.25 and AREMA Drawing number 8.1.25 figure 1 (type 2 plug).

2. Rail shall be drilled in accordance with AREMA Signal Manual Part 8.6.25. Rail shall be drilled with an approved 3/8 inch bonding drill bit and drill normally used for this purpose to permit the application of the bond to the rail web.

e. Track Circuit Connections.

1. Track Circuit Connectors shall be furnished and installed in accordance with AREMA Signal Manual, Part 8.1.32 and meet the requirements of AREMA Signal Manual, Part 8.1.33. Connectors shall have a tab end