14. MISCELLANEOUS TOPICS

14.1 Dust Palliatives

At some construction sites dust palliatives may be applied for dust control. Prior to application, it must be determined whether the dust palliative will create a corrosion problem or be deleterious to concrete due to salt content in the palliative. Chlorides in the dust palliative can cause corrosion of pavement dowels, reinforced concrete, or steel structures. Also, sulfates in the dust palliative can attack Portland cement concrete pavement or concrete structures. There can be high accumulations of sulfates and chlorides, particularly if the dust palliative is applied in multiple applications. Contact the Corrosion Branch, if necessary for assistance related to the corrosion potential of dust palliative additives.

14.2 Miscellaneous Metals

Miscellaneous metal parts and components are often used in roadway facilities and transportation structures. Fasteners, concrete anchors, plates, and frames are just a few examples. Typical corrosion protection includes zinc galvanizing in accordance with the ***Standard Specifications***. However, in corrosive environments such as in coastal areas, the splash zone, or underwater, improved corrosion protection may be necessary. Stainless steel is often specified instead of galvanized steel. Alternatively thermal diffusion galvanizing as specified in ASTM A1059 can be applied to small items such as pins and fasteners for corrosion protection in marine environments. For critical components in corrosive environments; stainless steel alloys (UNS designation S31603, S31653, S32304, S31803 and S32205) should be considered.

If you have questions regarding materials selection for miscellaneous metal parts and components for a particular environment, contact the Corrosion Branch for assistance.