SECTION 967
RAIL ELEMENTS FOR GUARDRAIL

967-1 Steel Guardrail.

Steel guardrail materials shall meet the requirements of AASHTO M 180, (except as specified below), and for either Class shown. Type 2 zinc coating will be required.

As an exception to the requirements of AASHTO M 180, the coating properties, sampling, test methods, inspection, and certification related to galvanizing regardless of the method of galvanization of the rail elements shall meet the requirements of ASTM A 123.

All supports, fastenings and other accessories, including bolts, nuts, washers, etc., (and including the steel trailing end-anchorage rods required to be used with aluminum guardrail) shall be galvanized as specified in ASTM A 153.

Acceptance of steel guardrail materials shall be based on manufacturer's certified mill analysis of test results meeting the specification limits of the ASTM or AASHTO designation as stated above. Certification of these test values, representing each shipment of guardrail materials, shall be provided to the Engineer for each project.

967-2 Aluminum Guardrail.

Except as might be specified otherwise in the plans, aluminum rail and hardware shall meet the requirements specified in this Article.

The aluminum rail element shall consist of a 0.125 inch aluminum sheet, Alloy Alclad 2024-T3, formed into a deep-beam type rail in accordance with the details shown on the Design Standards.

The rail element shall meet the following requirements:

(1) Minimum ultimate tensile strength - 62,000 psi.

(2) Minimum longitudinal strength through splice joint - 80,000 lbs.

(3) Minimum thickness of plate - 0.125 inch.

(4) A 2 inch test specimen shall elongate not less than 15%.

Bolts shall be aluminum alloy 2024-T4, shall have an anodic coating of at least 0.0002 inch in thickness and shall be chromate sealed.

Nuts shall be aluminum alloy 6061-T6.

Washers shall be aluminum alloy Alclad 2024-T4.

(The steel trailing end-anchorage rods, required to be used with aluminum guardrail, are specified in 967-1.)

Mill analysis reports shall be submitted as specified in 965-2.