



Highway Safety & Design Engineering Instructions (HSDEI)

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Approved: Kevin S. Marshia **Date:** 6/28/12
Kevin S. Marshia,
Highway Safety and Design Program Manager

Subject: **Discontinued Use of ASTM A588 Weathering Steel Guardrail**

Administrative Information:

Effective Date: HSDEI 12 - 002 shall be effective from the date of approval.

Superseded HSDEI: Not applicable.

Exceptions: Not applicable.

Disposition of HSDEI Content: The content of HSDEI 12 - 002 will be incorporated into a future revision to the Roadway Design Manual and/or other applicable design guidance documentation.

Purpose:

HSDEI 12 - 002 distributes the Vermont Agency of Transportation's (VTrans) decision to eliminate the use of ASTM A588 weathering steel for guardrail to design and construction personnel.

Technical Information:

VTrans utilizes guardrail to shield motorists from natural or man-made hazards located along either side of a traveled way. Guardrail helps to reduce the probability of an errant vehicle striking one of these hazards that is less forgiving than striking the guardrail itself.

In the past VTrans has installed ASTM A588 weathering steel (also known as Cor-Ten or rusting steel) guardrail on projects to improve aesthetics. ASTM A588 weathering steel was initially expected to resist corrosion. VTrans field observations, along with studies performed by other states and entities, has shown that ASTM A588 weathering steel deteriorates rapidly when exposed to moisture, salt, shade, and other environmental factors. This deterioration is a safety concern since the guardrail no longer

adequately shields motorists from roadside hazards. This deterioration also results in increased maintenance and inspection costs.

Due to these safety and maintenance concerns VTrans has decided to eliminate the use of ASTM A588 weathering steel guardrail. As deterioration becomes apparent on existing ASTM A588 weathering steel guardrail, they should be replaced using an approved longitudinal barrier.

Implementation:

The content of HSDEI 12 – 002 is to be implemented beginning immediately for all projects produced and or managed by VTrans.

Transmitted Materials:

Not applicable.