U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION ONE

P. O. BOX 568
MONTPELIER, VERMONT 05601

December 14, 1998
IN REPLY REFER TO:

DEC 16 1998
STRUCTURES DIVISION

Mr. Glenn M. Gershaneck
Secretary, Agency of Transportation
Montpelier, Vermont

Attention: Warren B. Tripp

Dear Mr. Gershaneck:

Enclosed is the approved VAOT Bridge Rail Policy, as requested in Mr. Tripp's December 2, 1998 letter.

Sincerely yours,

Lawrence Dwyer
Acting Division Administrator

Enclosure

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AGENCY OF TRANSPORTATION STRUCTURES DESIGN SECTION

TO: DISTRIBUTION LIST

FROM: Warren B. Tripp, Structures Design Engineer W.B. Tripp

DATE: December 30, 1998

SUBJECT: Bridge Rail Policy

The Bridge Rail Policy which was approved by FHWA on March 23 1998 has recently been revised. The only revision is relative to the replacement of rail on existing bridges and the revision now allows drilled in anchorage rather than complete curb replacement. A copy of the revised Bridge Rail Policy dated by FHWA on 12/10/98 is attached and should replace the earlier policy sent to you.

WBT:mrd
cc: Files

Distribution List:

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VERMONT AGENCY OF TRANSPORTATION

BRIDGE RAIL POLICY

The following policy statements indicate acceptable bridge rail which can be used on all bridges associated with new construction, bridge rehabilitation or 3-R projects which involve the use of Federal funds. NOTE: NHS refers to National Highway System.

1. Any New Structure

a. NETC two-tube galvanized steel box beam rail as detailed on Standards BR1-97 & BR2-97. (BR1-97M & BR2-97M for metric)

b. NETC four-tube galvanized steel box beam rail (subject to successful crash testing) with nested W-beam transition, where pedestrian traffic is anticipated.

c. Jersey barrier

2. Any New Non-NHS Structure

a. Three-tube elliptical aluminum rail in areas with a posted speed of 40mph (60 kph) or less where pedestrian traffic is anticipated.

b. Heavy duty (10 ga.) (3.43 mm) Steel W-beam mounted with a longitudinal steel box beam unit on Federally funded off-system bridges requiring rail meeting Performance Level One.

c. Heavy duty (10 ga.) (3.43 mm) Steel W-beam with offset blocks (Standard R-6) on Federally funded off-system bridges with .ADT <500 and design speed <40 mph (<60 Kph).

d. Texas 411 or C411 for any structure requiring TL-2 crash test criteria in NCHRP report 350.

3. Bridge Rehabilitation Projects

a. Rail replacement shall be in conformance with Section 1 or 2 above on all NHS structures and on other structures requiring either widening of the bridge or removal and replacement of existing rail due to deteriorated concrete in the rail anchorage area. Rail replacement on all NHS structures may be anchored with drilled and grouted anchor bolts unless the condition of the curb warrants curb replacement.

b. The rail on (non-NHS only) bridges where no widening is being done and where the existing rail and rail anchorage is in good condition shall conform to requirements of Section 4 following

c. Railings for unique structures, such as covered bridges and trusses, on the non-NHS, shall be addressed on a project by project basis, using the design exception process as necessary.

4. 3-R Projects including NHS Safety Projects

a. Existing rail meeting the following conditions may be retained:

1.) Two-tube galvanized steel box beam, provided all entrance ends are modified by adding a deflector plate adaptor.

2.) Aluminum two or three tube elliptical (non-NHS only).

3.) Steel W-beam with offset blocks and post spacing not exceeding 6'-3" (1.905m) (non-NHS only)

b. Existing rail not meeting the conditions in 4.a. must be replaced in conformance with any applicable rail in Section 1 or 2 above. Rail replacement on NHS structures may be anchored with drilled and grouted anchor bolts unless the condition of the curb warrants curb replacement

5. OTHER

a. This Policy does not need to be applied to District Force Account Maintenance.

b. This Policy does not apply to Paving or Preventative Maintenance projects.

c. Design exceptions for non-NHS projects do not need FHWA approval.

APPROVED BY:

Glenn Gershaneck, Secretary Vermont Agency of Transportation

12/1/98
DATE

Larry Dwyer, Acting Administrator, Federal Highway Administration

12/10/98
DATE