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Zack Stewart  
Northern District Commissioner

Dick Hall  
Central District Commissioner

Wayne H. Brown  
Northern District Commissioner



Larry L. "Butch" Brown  
Executive Director

James H. Kopf  
Deputy Executive Director/  
Chief Engineer

*7/27/01*

*SONDRA - COPY FOR PURVIS, SECT. ENG., STEVE R. J.P.*

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July 23, 2001

**MEMORANDUM**

**TO:** Mr. William P. Swindoll  
Mr. James Q. Dickerson  
Mr. Walter G. Lyons  
Mr. William R. May  
Mr. Richard Lee  
Mr. Darrell L. Broome

**FROM:** Chief Engineer *JHK*  
James H. Kopf

**RE:** Guardrail Maintenance & Installation Policy for the National Highway System (NHS)

**RECEIVED**

JUL 26 2001

**ROADWAY DESIGN**

*THIS REVISED WITH LETTER DATED NOV. 2, 2001*

As a result of a joint FHWA/MDOT quality review on the policy and practices of the maintenance of safety hardware on the National Highway System (NHS) **only**, the attached policy has been developed for your reference.

Should you have any questions or if clarification is needed, please contact either John Vance or Mark McConnell in the Maintenance Division.

JHK/mm  
Attachment

PC: Assistant Chief Engineer - Operations  
Assistant Chief Engineer - Pre-Construction  
District Maintenance Engineers  
State Maintenance Engineer  
Roadway Design Engineer  
Central Records



## Guardrail Maintenance & Installation Policy for National Highway System (NHS) (7-12-01)

This replaces the existing policy as stated in the Chief Engineer's memorandum dated March 23, 1995.

### Breakaway Cable Terminals (BCTs)

- Repair damaged BCTs if only one post is damaged.
- BCTs damaged beyond one post requires replacement with NCHRP Report 350 approved hardware.
- Replace BCTs with NCHRP Report 350 approved hardware on roadway projects requiring adjustment of the existing hardware.

### Modified Eccentric Loader Terminals (MELTs)

- Repair damaged MELTs if only one post is damaged.
- MELTs damaged beyond one post requires replacement with NCHRP Report 350 approved hardware.
- Replace MELTs with NCHRP Report 350 approved hardware on roadway projects requiring adjustment of the existing hardware.

### Timeliness of Repairs

- Once made aware of the damages, schedule repairs as soon as practicable.
- Until repairs are made, delineate damaged hardware with the appropriate traffic control devices, such as Type I barricades, barrels, cones, etc.

### Identification of End Treatments

- Identification of the make, model number, and date of installation of new hardware should be written on the head of the device with a grease pencil.

### Training on Guardrail Installation

- Training will be provided as needed and will be scheduled by the Maintenance Division.

### Basis for Selecting "Flared" vs. "Straight" NCHRP Report 350 End Treatments (When Replacement is Required)

- If the existing end treatment is "flared" and you have a minimum of five (5) feet recovery behind the rail, replace with a NCHRP Report 350 approved "flared" treatment.
- If the existing end treatment is "flared" and you **do not** have a minimum of five (5) feet recovery behind the rail, do one of the following:
  - Build out the embankment to acquire the minimum five (5) feet recovery behind the rail, then replace with a NCHRP Report 350 approved "flared" treatment.
  - OR**
  - Replace with a NCHRP Report 350 approved "straight" treatment.
- If the existing end treatment is "straight" and you **cannot** widen the embankment to meet the requirements for a "flared" end treatment, replace with a NCHRP Report 350 approved "straight" treatment.
- If the existing end treatment is "straight" and you **can** widen the embankment to meet the requirements for a "flared" end treatment, replace with a NCHRP Report 350 approved "flared" treatment.