

**ENGINEERING DIRECTIVE**

*Richard J. [Signature]*  
Chief Engineer

# SUPERSEDED

**POLICY FOR THE USE OF  
MODIFIED ECCENTRIC LOADING BREAKAWAY CABLE TERMINALS****NEW CONSTRUCTION OR MAJOR RECONSTRUCTION - DESIGN SPEED 40 MPH  
OR GREATER**

The design of new highways, or the major reconstruction of existing highways with design speeds of 40 mph or greater shall include Modified Eccentric Loading Breakaway Cable Terminals (MELBCT) as the standard required end treatments for guard rail. However, other acceptable alternatives include closing guard rail gaps, extending the guard rail full height into an existing backslope or created earth berm. Impact attenuators at the beginning and end impact points of the guard rail may also be considered. Should all of these design possibilities be impractical because of impacts on wetlands, excessive right of way costs, or excessive costs of the improvements in relation to the total cost of the project, a design waiver will be sought. Design waivers will be approved by the FHWA on NHS roadways, and by the Chief Engineer or his designees on Non-NHS roadways.

**RESURFACING OR MINOR RECONSTRUCTION - DESIGN SPEED 50 MPH OR  
GREATER**

The design of resurfacing or minor reconstruction projects with design speeds of 50 mph or greater, will include the retrofit of guard rail with MELBCT where such modifications can reasonably be made. Other acceptable alternatives include closing guard rail gaps, extending the guardrail full height into the backslope or created earth berm, or installing impact attenuators.

During the design process, the costs and impacts of such changes will be evaluated within the scope of the proposed project improvements. Where conversion will impact on wetlands, require significant earth work, require right of way takings, require extensive clearing and grubbing, require the removal of more than 5 trees, negatively impact local roads or ramps, or result in any change which causes a MEPA threshold for project filing to be met, or cause any other significant change in the scope of the proposed project or require significant additional cost in