



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219 2000

Charles A. Kilpatrick, P.E.
Commissioner

May 19, 2017

Mr. Walter C. Waidelich, Jr.
Acting Deputy Administrator
Federal Highway Administration (FHWA)
1200 New Jersey Ave., SE
Washington, D.C. 20590

Dear Mr. ~~Waidelich~~: *SUTCH*

This letter is in response to your May 3, 2017 and Jessie Yung's May 8, 2017 letter regarding guardrail installation and maintenance practices, In-Service Performance Evaluations (ISPE) for roadside hardware, and in-service concerns with particular roadside hardware.

Installation and Maintenance Practices – The Virginia Department of Transportation (VDOT) has an extensive Guardrail Installers Training (GRIT) program aimed at guardrail designers, installers and inspectors and has developed a comprehensive maintenance process to evaluate guardrail and determine maintenance actions. Information on VDOT's GRIT program may be found at: http://www.virginiadot.org/business/resources/locdes/grit_manual.pdf

In-Service Performance Evaluations - Since October 2014, VDOT has been collecting information on guardrail end terminals that are struck during highway crashes. To date, data for over 1600 crashes that involved guardrail terminals has been collected, including the location, speed limit, terminal type, manufacturer name, terminal model name, and channel width of the terminals struck during each crash. We are happy to share our collected information should the Federal Highway Administration (FHWA) wish to receive it. We eagerly await the results of FHWA's ongoing pilot ISPE of guardrail end treatments. Depending on the results of the FHWA pilot, we may enhance VDOT's process for ISPEs related to guardrail terminals.

In-service performance of guardrail terminals continues to be of great importance to VDOT. We continue to support the development of a consistent database of field performance for all state DOTs and appreciate FHWA's leadership in this role. Following provisional acceptance of safety hardware, VDOT recommends that final acceptance only occur after a statistically valid record of field performance is established.

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In-Service Concerns with Particular Hardware - As you may be aware, VDOT has been at the forefront of this issue since 2014. We attempted to form a pool fund with some states to test these products but there was a lack of interest. As a result, in 2015 VDOT contracted with an independent testing facility to perform proactive crash testing on several models of guardrail terminals. Following this testing, VDOT reiterated that the modified ET-Plus is not approved for use on VDOT roadways, and in August 2016 we informed FHWA that we were removing the X-Lite terminal from our Approved Products List; and promptly did so. You can review the results from this testing on our website at the following link:
http://www.virginiadot.org/info/guardrail_safety.asp.

Additionally, we are currently replacing obsolete and functionally deficient guardrail terminals in higher-crash and higher-speed roadway segments as we migrate to MASH standards. We anticipate additional improvements to our processes as the MASH migration moves forward. We are happy to share additional information we gather as a result. Please do not hesitate to contact me should you have any questions.

Sincerely,



Charlie A. Kilpatrick, P.E.
Commissioner of Highways

Cc: Ms. Jessie Yung, P.E. – FHWA Division Administrator/Virginia Division
Garrett Moore, P.E. – Chief Engineer
Mohammad Mirshahi, P.E. – Deputy Chief Engineer
Susan Keen, P.E. – State Location & Design Engineer
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