INDIANA DEPARTMENT OF TRANSPORTATION

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Eric Holcomb, Governor
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January 8, 2020

CONSTRUCTION MEMORANDUM
20-01

TO: District Deputy Commissioners
District Construction Directors
District Capital Program Directors
District Technical Services Directors
District Area Engineers
District Highway Maintenance Directors
Managing Director of Project Delivery
Project Engineers/Managers/Supervisors
Field Engineers
Highway Maintenance Director

FROM: Greg Pankow, P.E., Director
Division of Construction Management and District Support

SUBJECT: Inspection of Impact Attenuator and Guardrail End Treatments

SUPERSEDES: Construction Memo 18-04

The purpose of this memorandum is to notify all field personnel involved with the installation of impact attenuators and guardrail end treatments of the updated procedures for inspecting these devices after installation or repairs. This document discusses the personnel certification process, how to verify if an installer is certified, who to contact once the device is installed, and a basic checklist of items to inspect on the devices to ensure correct installation.

Construction and Maintenance personnel will split responsibility for the visual inspection of both new and repaired attenuators and end treatments as follows.

Certified Construction personnel are responsible for inspection of:

- All devices installed on non-maintenance contracts let after January 1, 2019.

Certified Maintenance personnel are responsible for inspections of:

- All contracts let prior to January 1, 2019
- All device repairs made by the Maintenance personnel
- All device installations on maintenance contracts.

The following outlines the procedure for inspecting impact attenuators and guardrail end treatments.

1. **Personnel Certification Process**. The Construction Department typically coordinates with the manufacturers of the different devices every two years to implement a training program so that Contractors and the Department's Construction and Maintenance personnel are trained in the proper methods for installation and repair. It is up to each District to determine whom will be certified for different devices. The District personnel or Contractors who are not at this training may independently coordinate with manufactures to attain certification training.

2. **Inventory of Certified Employees**. Once a person is trained and certified, the device manufacturer sends the name of the individual to Construction Management to be added to the Department's website. The website states what devices the individual is certified for and when their certification expires. This information can be found at http://www.in.gov/indot/2739.htm.

3. **Confirming Certification**. Construction personnel that have devices to be installed on their projects are required to verify on the Department's website above that at least one member of the crew, typically the foreman, is certified to install the device called out in the contract documents. The individual's name shall be recorded within SiteManager.

4. **Request for Certified Inspector.** Once a device is installed, replaced, or repaired, the Project Engineer or Supervisor (PE/S) should immediately notify the appropriate party, either the Subdistrict for Maintenance personnel or their Area Engineer (AE) for Construction personnel to request a certified inspector to visually inspect the device. The communication should include device type and location.

5. **Device Inspection**. The certified inspector shall perform a visual inspection to verify that the device was installed correctly. This visual inspection shall be performed within 15 calendar days of the PE/S's request and noted in SiteManager.

6. **Follow up Corrections**. If it is determined that there is a problem with the installation, the certified inspector shall notify the project PE/S and AE. The Contractor shall then be notified of any deficiencies found during the visual inspection. The Contractor will be required to remobilize to the site, provide proper traffic controls, and fix all problems at no cost to the Department.

The following should aid PE/S(s) that are witnessing the installation of a specific device but are not certified. These are some basic items to be aware of when inspecting to ensure proper installation.

Guardrail End Treatments

- Cables taut with brackets properly engaged
- Blockouts and posts not damaged
- All bolts and nuts snug
- Ground under and in front of device free of damaging or disruptive debris
- Delineation panel securely attached and free of damage.

Gravel Barrels

- Barrels show no sign of cracks
- All lids locked down and secured
- Ground under and in front of device free of damaging or disruptive debris.

Impact Attenuators

- Cables taut and not sagging
- Diaphragms and bays aligned straight
- All rail panels tight and not damaged
- Cartridge/rip plates not damaged
- Cylinders show no signs of cracking
- All bolts and nuts snug
- Ground under and in front of device free of damaging or disruptive debris
- Delineation panel securely attached and free of damage.

Any questions or comments should be directed to your Construction Management Field Engineer.

GGP/jjn/ddh