



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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Earl Ray Tomblin
Governor

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Secretary of Transportation/
Commissioner of Highways

August 10, 2015

MEMORANDUM

TO: All C and H Level Staff
All District Engineers/Managers
All Division Directors

FROM: Stephen T. Rumbaugh, P. E. 
Deputy State Highway Engineer –
Construction and Development

SUBJECT: Removing and Resetting Class I Guardrail

This memorandum is being circulated in an effort to clarify the height at which to remove and reset guardrail. Class I Guardrail that is removed and reset will be installed at the original height. If there are questions as to the original height, reference should be made to the standard drawings and the location of the rail panel splice. The mid post splice is the indicator of the 31" installation height versus the post splice associated with the 28-1/2" height.

The following are problems that have been associated with attempting to convert 28-1/2" rail to 31" usage.

- Removing and resetting existing guardrail to 31" height has raised constructability issues with the placement of adequate slotted holes in the W-beam to attach it to the posts (posts are attached off splice). For the guardrail system to perform as intended, these holes must be slotted per the dimensions in Standard Detail GR-1A.
- The FHWA discourages the drilling of holes to attach the W-beam to the posts per guidance on their website at: http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/ga_btabr.cfm#btcc10.

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- **Field punching of slotted holes is possible with a truck mounted hydraulic press. However, this method is currently untested and cost prohibitive. This solution may be revisited when proven effective.**
- **It is important that slotted holes be punched cleanly, as damage to surrounding metal can result in tearing of the W-beam when struck in a collision. Per the FHWA guidance above, drilling to achieve slotted holes can damage the W-beam. Additional slotted holes are still required in certain situations, for example placing posts at 3' 1-1/2" spacing. When attaching the W-beam to a post, slotted bolt holes are required and should not be drilled, but be placed as described above.**

Class II and III Guardrail installed at 28-1/2" can be removed and reset at the original height, or if raised, must follow the applicable standard drawing for the 31" height.

Should you require any additional information, please contact Mr. Todd West, of our Engineering Division, at (304) 558-9738 or by e-mail at Todd.G.West@wv.gov.

STR:Skc

cc: AC, HD, DDC(TGW, MDL), DD(MF), DD(via e-mail)