



COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET  
Frankfort, Kentucky 40622  
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Matthew G. Bevin  
Governor

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**DESIGN MEMORANDUM NO. 02-19**

**TO:** Chief District Engineers  
KYTC Central Office Directors  
Project Development Branch Managers  
Active Consultants

**FROM:** **Jill Asher, P.E., Director** *JA*  
Division of Highway Design

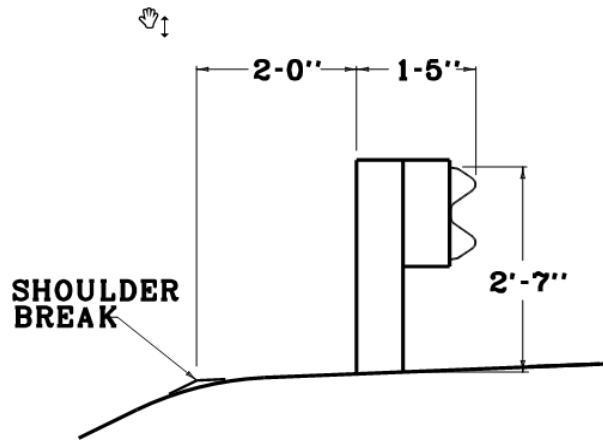
**DATE:** August 13, 2019

**SUBJECT:** Shoulder Widening for Guardrail

Considerable contribution to a guardrail system's redirection capability comes from the strength of its guardrail posts. As such, it is necessary to ensure a post has adequate support to prevent it from pushing backward too easily. Kentucky's standard guardrail installation will require the emplacement of 2 ft. minimum of fill behind the rail for support of the system. If it is not practical to widen the shoulder by 2 ft. behind the barrier, 7 ft. post lengths may be used. The drawing below depicts shoulder widening for guardrail. The updated shoulder width should be used for all projects that have not advanced beyond Preliminary Line and Grade (PL&G). Shoulder and guardrail width dimensions on the drawing below will be included on the Standard Drawing for Typical Guardrail Installations in the next release of the Standard Drawings. This release is expected in January 2020.

Projects that have advanced beyond PL&G should be evaluated where guardrail deflections at greater distances are undesirable. The Project Manager should decide whether it is necessary to address the entire project or site-specific areas. For projects let before the updated Standard Drawings are released in 2020, if the roadway designers determine that 2 ft of fill can be provided behind the post without significantly impacting disturb limits, Right-of-Way, etc., a note should be included in the plans stating contrary to Sepia 024, widening for guardrail should include the width of the guardrail and 2 ft. of fill behind the guardrail post.





**NORMAL GUARDRAIL INSTALLATION**

JMA:klm:gsn:lmj