

## Memorandum

*Serious drought.  
Help save water!*

**To:** STRUCTURE POLICY BOARD

**Date:** March 24, 2017

**From:** THOMAS A. OSTROM  
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Structure Policy and Innovation  
Division of Engineering Services

**Subject:** UPDATE OF MEMO TO DESIGNERS 5-1 "ABUTMENTS"

This updated Memo To Designers (MTD) 5-1 provides guidance for design of abutments using the *AASHTO LRFD Bridge Design Specifications*, 6<sup>th</sup> Edition, and corresponding California Amendments (*AASHTO-CA BDS-6*).

It includes updated information for Structure and Geotechnical Designers regarding LRFD requirements, scour effects, general seismic design requirements, and Mechanically Stabilized Embankment Abutments (MSEA). Implementation should lead to an LRFD compliant, more efficient, and consistent design process. Attachment-I provides estimated lateral capacity for Standard Plan and H-piles that can be used for seismic design of abutment shear keys.

MTD 5-1 shall be used for projects designed according to *AASHTO-CA BDS-6*, and may be helpful to projects in progress and designed based on *AASHTO LRFD Bridge Design Specifications*, 4<sup>th</sup> Edition. The document has been posted on the publications website (<http://www.dot.ca.gov/hq/esc/techpubs/>).

For questions or concerns, you may contact Amir Malek, Technical Committee Chair at (916) 227-5981.

### Attachment

c: Michael D. Keever, Chief, Division of Engineering Services  
Mark Samuelson, Chief, Division of Local Assistance  
John Babcock, Structure Construction  
Mark DeSalvatore, Geotech Design Policies & Practices  
Sudhakar Vatti, Program/Project Management  
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