

Memorandum

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Be energy efficient!*

To: ALL BRIDGE DESIGNERS
Division of Engineering Services

Date: June 5, 2012

From: BARTON NEWTON
Deputy Division Chief
Structure Policy and Innovation
Division of Engineering Services

Subject: New MTD 20-8: Analysis of Ordinary Bridges that Cross Faults.

Bridges that cross faults must be designed for the fault offset and the ground motion hazard. In the past this issue has been addressed by project specific seismic design criteria on a case by case basis. **MTD20-8: Analysis of Ordinary Bridges that Cross Faults**, shall be used for all projects that have not reached the Type Selection milestone prior to June 1, 2012.

MTD20-8 is a new memo that provides a simple method for analyzing and designing bridges that cross active faults. It is based on a Caltrans Research Project, "Analysis of Ordinary Bridges Crossing Fault Rupture Zones," Research conducted for Caltrans, Contract No. 59A0435, Earthquake Engineering Research Center, University of California at Berkeley, February 2008 Report, No. UCB/EERC-2008/01). The only software required for implementation is a finite element analysis program like CSIBridge, which is already used for seismic analysis.

All current projects with bridges that cross faults would have required the development of project specific seismic design criteria. Therefore, it is not required to redesign bridges or write change orders on any existing projects.

MTD20-8 was reviewed and approved for publication by the General Earthquake Committee, the Executive Earthquake Committee, Geotechnical Services, the Division of Research and Innovation, and by Structures Independent Quality Assurance.

For questions or concerns on application of this memo to a specific project, consultants and local agencies should contact the Oversight Engineer or Structure Local Assistance. Caltrans staff may contact Mark Yashinsky at (916) 227-8719.

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