(September 8, 2020)

Acceptable Manufacturers

The following manufacturers are known to have prequalified modular expansion joint system details by successfully completing fatigue testing in accordance with Section 6-02.3(13)C:

1. The D.S. Brown Company
   P.O. Box 158
   300 E. Cherry Street
   North Baltimore, Ohio 45872-0158
   Tel. (419) 257-3561
   Fax (419) 257-2200
   www.dsbrown.com

2. Watson Bowman ACME Corporation
   95 Pineview Drive
   Amherst, New York 14228-2166
   Tel. (716) 691-7566
   Fax (716) 691-9239
   www.wbacorp.com

3. Mageba USA, LLC
   575 Lexington Ave FI-4
   New York, New York 10022-6146
   Tel. (212) 644-3335
   Fax (212) 644-3339
   www.magebausa.com

Design Axle Loads and Impact Factors

The vertical load range for fatigue design shall be a 32.0 kip tandem. This tandem shall be taken as two 16.0 kip axles spaced four feet apart. Only one of these tandem axles must be considered in the design, unless the joint opening exceeds four feet. The load range shall be increased by the dynamic load allowance (Impact Factor) of 75%. Load factors shall be applied in accordance with Table 3.4.1-1 of the AASHTO LRFD Bridge Design Specifications, current edition and latest interims.

The vertical load for strength design shall be a 50.0 kip tandem. This tandem shall be taken as two 25.0 kip axles spaced four feet apart. Only one of these tandem axles must be considered in the design, unless the joint opening exceeds four feet. This load shall be increased by the dynamic load allowance (Impact Factor) of 75%. Load factors shall be applied in accordance with Table 3.4.1-1 of the AASHTO LRFD Bridge Design Specifications, current edition and latest interims.

The horizontal load range for fatigue design shall be *** $$1$$ *** percent of the amplified vertical load range (LL+IM) specified above. For modular expansion joint systems installed on vertical grades in excess of five percent, the horizontal component of the amplified vertical load range (LL+IM) specified above shall be added to this horizontal load range.

The horizontal load for strength design shall be 20 percent of the amplified vertical load (LL+IM) specified above. For modular expansion joint systems installed on vertical grades in excess of five percent, the horizontal component of the amplified vertical load (LL+IM) specified above shall be added to this horizontal load.

Fatigue Testing Laboratory

The following facilities are known to be capable of performing the fatigue testing specified in Section 6-02.3(13)C:

1. Structural Engineering Testing Laboratory (SETL)
   University of Washington
   Seattle, WA
   SETL Director:
   Dr. Dawn Lehman: (206) 715-2108
   SETL Manager
   Vince Chaijaroen: (206) 543-7433

2. Bowen Laborabory
   Purdue University
   West Lafayette, IN
   Director of Bowen Laboratory:
   Dr. Amit Varma: (765) 496-3419

3. ATLSS Engineering Research Center
   Lehigh University
   Bethlehem, PA
   ATLSS Engineering Research Center Director:
   Dr. Richard Sause: (610) 758-3565
   ATLSS Engineering Research Center Administrative Director:
   Dr. Chad Kusco: (610) 758-5299