

# E&M

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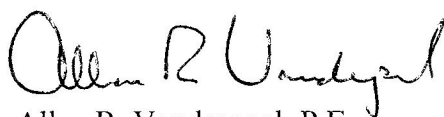
Re: Bridge Submittals

To Whom It May Concern:

This is certify that the attached bridge drawings (File HS25-50, dated 10/27/05) with specifications as listed below will have an HS25 (45 ton) load capacity.

1. The bridge is designed in accordance with the 2002 AASHTO Standard Specification for Highway Bridges, 17<sup>th</sup> Edition with the following load criteria and exceptions.
2. The bridge design will be able to handle HS-25 loads, based on bending moment and shear stress requirements. Deflection limitations recommended by AASHTO have not been taken into account, resulting in some deflection under loads larger than allowed by AASHTO (length in inches/800). Impact to the bridge has been estimated at 10% maximum based on the restriction that the bridge will have a 10 mph speed limit.
3. 50' total length, center of tow bar to center of tow bar, with center to center bearing length of 48' maximum.
4. Axle loads: 10,000 lb (steering axle), 40,000 lb (driving axle), 40,000 lbs (trailer axle), with 14' spacing between the steering axle and driving axle, and a minimum of 14' spacing between the driving axle and the trailer axle.
5. Deck: The typical laminated decking system is nominal 2" x 4" treated southern yellow pine, laid edgeways perpendicular to the bearing stringers. 3½" x 6" white oak has been tested and field proven to be an acceptable alternative, although horizontal shear stress is larger than recommended in the National Design Specification for wood construction by the National Forest Products Association.

Very truly yours,  
E & M ENGINEERS AND SURVEYORS, P.C.



Allan R. Vanderpoel, P.E.  
Project Engineer

ARV/mm

