



## 2017 Frequently Asked Questions Maryland Wood Bridge Challenge February 04, 2017



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In an effort to answer questions about specifications before the competition to reduce bridges requiring alterations, FAQs will be updated periodically. If your question has not been answered, please e-mail [J.S.Krummel@gmail.com](mailto:J.S.Krummel@gmail.com) for urgent questions and [MD.woodbridgechallenge@gmail.com](mailto:MD.woodbridgechallenge@gmail.com) for general inquiries.

**[1] Q:** What are the age/grade requirements to be eligible to participate / earn awards at the MD Challenge?

**A:** None. All students are eligible. (Only high school students are eligible for the International Contest.)

**[2] Q:** Does the maximum width rule apply at the load plane or along the entire bridge?

**A:** This year the bridge may be no wider than 80. mm *at any point along the bridge.*

**[3] Q:** Re: language for the loading plane, MD rules (2d, 2e) state the plane “shall be horizontal” and the bridge “must have horizontal clearance for the 40. mm square loading plate at each loading point.” Does this mean the loading plane must be continuous and the loading plate able to slide freely along the full length of the loading plane?

**A:** No, the loading plane does not need to be continuous, and the plate does not need to slide freely along the plane.

The loading plane must be horizontal. Both loading points need to be on the same plane. The bridge must provide for the loading plate to be slid into place, for testing at both locations (even though it will only be tested at one), and structural members must not interfere with the width of the loading plate +/- 20mm from each loading point.

**[4] Q:** Please explain the minimum vertical clearance rule for the bridge.

**A:** A 20. mm line must be able to pass cleanly under the bridge’s center when the bridge is placed on a flat table.

**[5] Q:** Please explain vertical clearance for the loading road.

**A:** The rod will be threaded from below, with sufficient height for the plate and reinforcing. For clarity, we define this clearance to be an imaginary 10. mm diameter circle extending 70. mm vertically above the support surfaces, within which no material (wood or glue) may coexist or interfere.

**[6] Q:** International Contest rules specify a 30.0 g mass limit; MD rules specify 25.0 g. Is this intentional?

**A:** Yes, largely to encourage students to be more economical in their structures. 25.0 g was based on experience and selected as a fair balance between 20.0 g and International rules to provide an educational challenge in learning to design economically without being unfair to students that already design below the mass limit.

**[7] Q:** The rules clarify bridge failure to include any deflection below the support surfaces. Is this new?

**A:** Yes. FAQs to International rules prohibit deflection that engages the support surface walls. This is a step further to eliminate “judgment calls”, since deflection below the support surfaces violates the spirit of the 300. mm span.

**[8] Q:** Can the student choose the orientation of the bridge, or should the student assume 4 loading locations?

**A:** There are only two loading locations, asymmetric about the bridge’s center, and orientation does not matter. Load will be either 20. mm to one side from center or 60. mm to the other side from center. Bridges able to accept load at both locations will be tested at the one location chosen by the Head Judge the day of the contest.