

Durham Region Popsicle Stick Bridge Competition Rules

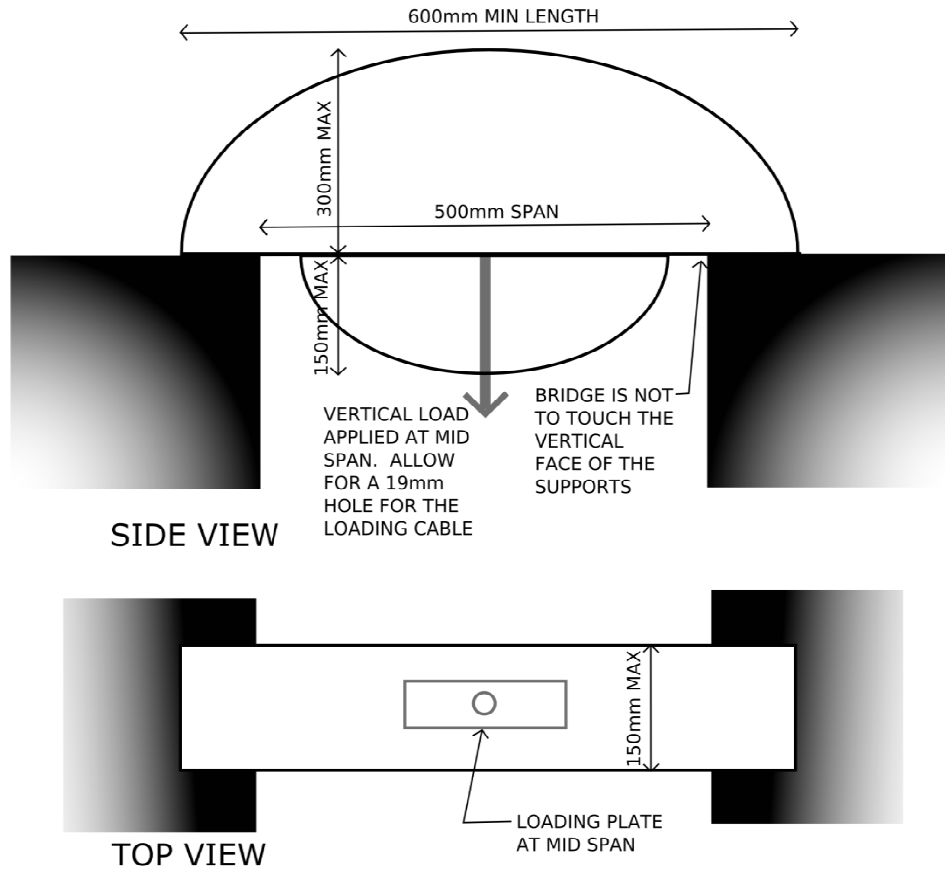
PART 1 General

- 1.1 The objective is to build a bridge out of Popsicle sticks and white glue to span a 500mm gap. The bridges will be judged on the maximum weight they can support as well as the performance rating (weight carried / bridge weight)
- 1.2 Bridges will be judged in the following categories:
 - .1 Junior – For students in Grades 4, 5 and 6
 - .2 Intermediate – For students in Grades 7 and 8
- 1.3 There is an entrance fee of \$5 per bridge.
- 1.4 Participants may enter the competition as teams of one to four people. Participants must all be in the same grade category, 4, 5 and 6 for Junior or 7 and 8 for Intermediate.
- 1.5 The bridge design may follow any configuration provided it complies with the rules below. Any diagrams shown are for illustration purposes only.
- 1.6 Prizes will include:
 - .1 Gift Certificates from Mastermind.
- 1.7 The Competition will be held on Saturday, April 9, 2016 at Durham College / University of Ontario Institute of Technology, registration and bridge testing will begin at 11:00am.
- 1.8 Bridges must be constructed before the event, please ensure adequate time is given for the glue to dry.
- 1.9 Further information will be posted our web site at www.DurhamPopsicleBridge.ca.

PART 2 Rules

- 2.1 A maximum of 200 Popsicle sticks may be used to construct the bridge. Popsicle sticks must be left whole. (Popsicle sticks should be approximately 115mm x 10mm x 2mm)
- 2.2 Only regular white all-purpose glue such as Bondex or Lepages Bondfast glue may be used. No epoxies, contact cement or carpenter's glue is permitted. A bridge with evidence of glue, other than white glue, being used will not be eligible for prizes.
- 2.3 Construction paper is to be used only as the deck of the bridge. The construction paper deck must be glued to the bridge and may be cut to fit the design of the bridge.
- 2.4 No materials other than the Popsicle sticks, glue and construction paper may be used. (Note all materials are available at "Dollar Stores")

- 2.5 The following physical dimensions must be followed:
- .1 Minimum Total Length = 600mm
 - .2 Clear Span = 500mm
 - .3 Max Height Above bridge deck = 300mm
 - .4 Max Height Below Bridge deck = 150mm
(bridges must allow 25mm clearance at either end to any framing below the bridge deck)
 - .5 Maximum Width = 150mm



- 2.6 A matchbox car (approximately 30 mm wide by 70 mm long by 25mm high) must be capable of being rolled across the bridge deck
- 2.7 The roadway portion of the bridge should be designed to support the load distribution plate.
- 2.8 The bridge structure is not permitted to apply loading to the vertical faces of the support structure at any time during testing.
- 2.9 Important for testing: the bridge must allow for the loading plate (100mm x 30mm) to be placed at the centre of the bridge span on the bridge deck and a 19mm diameter rod to pass down through the centre of the loading plate for the application of the load. A hole will be made in the construction paper bridge deck before testing.

PART 3 Testing

- 3.1 The Judging panel will ensure that each entry complies with the rules above. Only bridges that comply with the rules will be eligible for prizes. Bridges not complying with the rules may not be tested.
- 3.2 Bridges will be weighed before testing.
- 3.3 The load will be applied from below to the loading plate at the mid span of the bridge on the bridge deck. Please ensure adequate reinforcement is provided to transfer the load from the loading plate to the bridge.
- 3.4 Load will be applied until either the bridge breaks or deflects more than 50mm. The peak load recorded will be considered the failure load.
- 3.5 Bridges will be ranked by two values
 - .1 Maximum load carried
 - .2 Highest performance rating = Failure Load / Bridge Weight
- 3.6 All bridges will be destroyed during testing.
- 3.7 All decisions of the Judging Panel will be final.
- 3.8 The testing of all bridges may be photographed and / or videotaped.
- 3.9 Results including participants' names will be posted to our web site following the event and may be published in PEO and OACETT newsletters.

Registration can be done on our website at www.DurhamPopsicleBridge.ca.

Thank you for your interest and HAVE FUN!