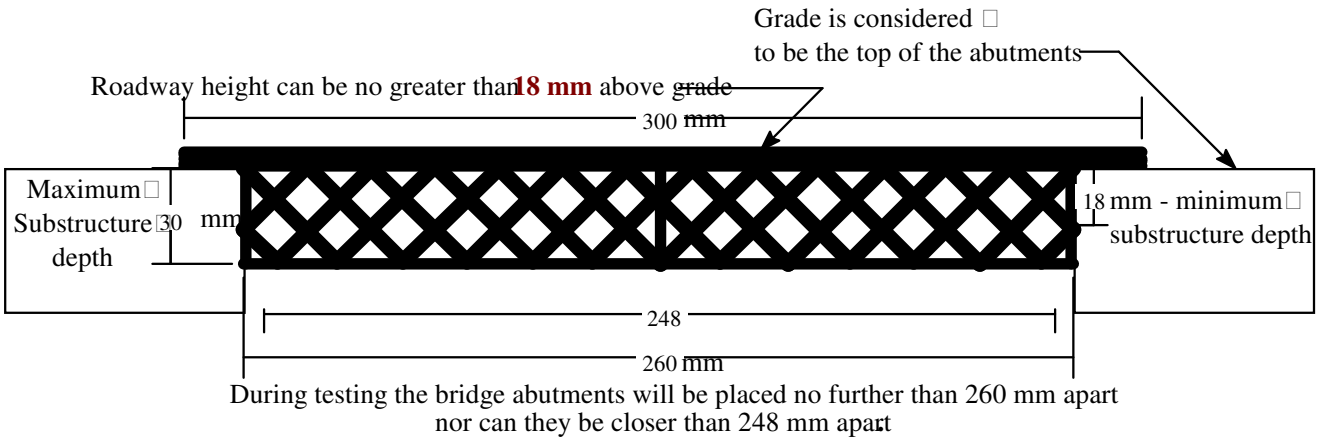
Bridge Engineering



***Substructure (Defined) – The Parts Of A Bridge's Structure setting below the roadway between the Abutments**

Bridge Engineering Evaluation Sheet

Name: _____ Level: I or II *(circle one)* School: _____

Rules And Regulations Checklist

Checklist of Items / Requirements:

The Student Entering The Bridge Must Provide The Following:

_____ A. Full Size Set Of Elevation Drawings Of The Proposed Bridge.

_____ B. Bridge Corresponding To The Set Of Drawings For Testing.

Bridge Specifications

_____ 1. Minimum Roadway Width Of 50 mm (between any structure above the roadway)

_____ 2. Minimum Length (Bridge/Roadway) Of 300 mm And Maximum Length Of 300 mm

_____ 3. Maximum Roadway Height Of 18 mm

_____ 4. Maximum Bridge Mass Of 28 Grams

_____ 5. Maximum Lengthwise Laminations Of beams (No more than 2)
Defined As Length Of Beam.

_____ 6. Bridge Has a ***Sub structure**

_____ 7. The Bridge allows a 50 mm X 50mm X 30mm Vehicle To Pass **Through** The Bridge Roadway

Judge Scoring:

Bridge Efficiency Will Be Determined By The Formula above:

_____ **Bridge Weight In Grams**

_____ **Bridge Failure Weight In Grams**

$$\text{Bridge Efficiency} = \frac{\text{Weight Supported in Grams}}{\text{Weight of Bridge in Grams}}$$

_____ **Total Score - Bridge Efficiency %** _____

_____ **Any Rules And Regulation Checklist Violation**
(-25% Of Bridge Efficiency Per Violation)
3 Or More Violations Will Result In Disqualification

_____ **Final Score**

_____ **Entrant Ranking**