

Highway & Traffic Engineering

HIGHWAY GEOMETRIC DESIGN (VERTICAL ALIGNMENT) - ASSESMENT

by

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Activity 1

- A vertical curve is to be designed to join a +4% grade with a -2.5% grade at a section of a newly proposed road project near Universiti Malaysia Pahang, Pekan Campus. The minimum length of curve is prohibited at 300m. Calculate the minimum sight distance available for the driver to safely stop their vehicles once obstructions are sighted.

Activity 2

- A crest curve was proposed to replace the existing parabolic curves near Taman Mahkota Permai, Kuantan. The existing profile is 2.5% grade intersects with 4% grade at station 4+20 having elevation of 180.05 m. The total length of the curve is measured as 300 m. Design and sketches the vertical curves of this road by incorporating all these parameters.
 - Station and elevation of PVC and PVT
 - Station and elevations at highest point of the curves
 - Station and elevations at every 30 m station

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