

Project Title:	Determine deflection distances for MASH TL-2 (and maybe TL-1) of the MGS with half post spacing and quarter post spacing using existing TL-3 MASH designs. (2024-04-LSRB)
Project Synopsis:	<p>Previous research has indicated MASH compliance of MGS guide rail with lower speeds (TL-2 and TL-1). Previous research has also provided MASH compliant MGS guide rail with reduced post spacing (half and quarter spacing).</p> <p>This research is to look at the combination of MGS guide rail with reduced post spacing and with lower speeds.</p> <p>Researchers would perform computer simulations to predict deflections at lower speeds (45 mph and/or 25 mph).</p>
Project Goal(s):	Determine MASH compliance and deflections of MGS guide rail with reduced post spacing (half and quarter spacing) at TL-2 and TL-1 speeds
Project Background:	<p>Deflection of guide rail is based on TL-3 deflections around the state, and there are many circumstances where knowing what TL-2 or TL-1 deflections could greatly benefit the design of a location on a low speed road.</p> <p>There is currently a Lower Impact Severity Project funded through the Pooled Fund. In that project, states are prioritizing previously tested barrier systems for evaluation at lower impact severities. If reduced post spacing MGS is prioritized in that project, then this Problem Statement would be rescinded. If reduced post spacing MGS is not prioritized in that project, then this Problem Statement would be pursued for prioritization.</p>
Proposed Work Plan:	<ol style="list-style-type: none"> 1.) Task 1 – Literature Review 2.) Task 2 – Engineering Analysis and Simulation 3.) Reporting
Deliverables:	A report describing the results of the engineering analysis and simulation. Specifically document deflections from the various analyses.
Urgency and Expected Benefit:	MGS guide rail with reduced post spacings at half and quarter post spacing are used where lower deflections are needed. If deflections for lower speeds (45mph and/or 25 mph) are known, then fewer applications with extra close post spacing might be needed.
Problem Funding and Research Period:	Total Estimated Cost = TBD Total Estimated Time = TBD
Developer(s) of the Problem Statement:	Name: Nina Ertel, P.E., PennDOT Email: nertel@pa.gov Phone: 717-425-7679