Roadside Safety Pooled Fund

Research Problem Statement

2019-10-LCB

Project Title:	Transition from Pinned-Down to Rigid Barrier Median Application
Project Synopsis:	States that use portable concrete barrier in permanent and temporary applications require a transition from pinned-down PCB's to ridged barrier in median applications. See figure 1 & 2 for example of the need for permanent application. The current transition from pinned-down to ridged barrier design has been successfully tested for right shoulder applications only. It is desired to modify this design for median application for both asphalt and concrete pavements meeting MASH testing criteria.
Project Goal(s):	The objective of this research effort is to modify the transition for median applications to meet MASH testing criteria.
Project Background:	A transition from pinned-down anchored F-shape temporary concrete barrier to rigid single-slope concrete barrier for both asphalt and concrete pavement was successfully tested to MASH criteria, see Test nos. 405160-34 and 405160-36. However, these designs are for right shoulder applications only.
Proposed Work Plan:	*Following work plan is expected to meet the objectives of this project.* *Task 1: Transition Design – In this task, previously developed roadside version of the transition design (from TTI projects 40516-34 and 405160-36) will be used as basis to develop a median transition design. This design effort will not include simulation.* *If the pinned barrier system desired in the median transition design is the same as the one used in TTI projects 405161-34 and 405160-36, a new crash test is not needed. This is because a median version of the transition design is not expected to deteriorate the crash performance compared to the roadside version.*

Deliverables:	Develop engineering drawings of the transition system.
Urgency and Expected Benefit:	Development of a crashworthy transition from pinned-down anchored F-shape temporary concrete barrier to rigid single-slope barrier would provide states with a safe median barrier connection design.
Problem Funding and Research Period:	*Estimated Costs:* *Task 1 – $15,000* *Estimated Project Period: 5 months*
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Figure 1:

Figure 2: