AASHTO Technology Implementation Group
Nomination of Technology Ready for Implementation

Sponsoring DOT	1. Sponsoring DOT (State): North Carolina		
Primary Technical Contact	2. Name: Richard Powers		
	Organization: FHWA		
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Technology Description	3. Name of Technology: Cable Median Barrier		
	4. Briefly describe the technology. Cable barrier is a cost-effective flexible traffic barrier that is ideally suited for use as a retrofit design in existing relatively wide and flat medians to prevent cross-over crashes. This traffic barrier differs from concrete and from metal-beam median barrier in that it can be installed on sloped terrain and still perform effectively. It is a more "forgiving" system when struck by an errant motorist because it deflects laterally and reduces impact forces transmitted to vehicle occupants. Three designs (two of which are proprietary) are seeing increased usage in the U.S. as retrofit barriers installed in existing medians.		
	5. Briefly describe the history of its development. Cable barrier been in use as a roadside barrier since the 1960's. In the 1980's, some State DOTs, including Missouri, started using a modified cable rail as a median barrier. Today, many more states (e.g. , Arizona, Colorado, North Carolina, Oklahoma, Ohio, Oregon, South Carolina, and Utah) are installing cable barrier in the medians of freeways originally built without barrier. In addition to the original "generic" low-tensioned desgn, there now exist competing proprietary high-tension designs that require less maintenance after a crash.		
State of Development	6. For how long and in approximately how many applications has your organization used this technology? A few states have used the generic roadside cable design since its development over 20 years ago, and several have installed the modified median version in recent years, but high maintenace costs, both actual and in some cases, perceived, have limited its use. Several states are beginning to use the proprietary designs which are damaged less in crashes and are generally easier to repair when struck.		
	7. What additional development is necessary to enable routine deployment of the technology? As more states adopt increasingly conservative warrants for median barriers, designers need to be aware of the barrier choices available. As noted above, cable barrier can usually be installed in existing medians with a minimum of site work and remain one of the most cost-effective choices for barrier.		
	8. Have other organizations used this technology? If so, please list organization names and contacts.		
	Organization	Name	Phone / E-mail
	Oklahoma DOT	Faria Emamian	405 521-2867
	NC DOT	Kevin Lacy	919 733-3915 / JKlacy@dot.state.NC.US
	Oregon DOT	Dan McDonald	503 986-3779
	Colorado	Skip Outcalt	303 757-9984
Potential for Payoff	9. What benefits has your organization realized from using this technology? Include cost savings, safety improvements, transportation efficiency or effectiveness, environmental benefits, or other advantages over other existing technologies. Cable barrier is a relatively cost-effective barrier that can reduce the number of freeway crossover crashes and their resultant fatalities. Both the number and severity of crashes varies significantly from state to state. North Carolina and Oregon DOTs have completed detailed in-service evaluation reports documenting the number of impacts into their cable median barrier installations and reported near-100% effectiveness in preventing deadly crossover crashes on freeways. Because of its relatively low installation cost and the need for minimal site preparation in existing medians, the cable median barrier is the least costly barrier to install in freeway medians and will reduce the number of fatalities resulting from head-on and opposite direction sideswipe crashes. When the current AASHTO median barrant warrants are revised, there will be a need in most states to consider addingl barrier in medians that fall within the more conservative warrants.		

Implementation Potential	10. Please describe what actions another transportation agency would need to take to adopt this technology. DOTs can review cross-median crashes and select locations where barrier installation should be considered, especially in conjunction with the more conservative warrants that AASHTO plans to adopt in the near future.
	11. What is the estimated cost, effort, and length of time required for procurement or adoption by another transportation agency? Cable barrier, both the generic design and the competing proprietary designs, can be specified by a highway agency exactly like any other type of traffic barrier.
	12. What organization(s) currently supply and provide technical support for this technology? The generic barrier, like W-beam guardrail or New Jersey Concrete Barrier, is a standard bid item. Detailed information on the proprietary designs can be obtained from the manufacturers - Brifen USA for the Brifen cable design and Trinity Industries for its CASS system.
	13. Please describe any legal, regulatory, social, intellectual property, or other issues that could affect ease of implementation. Federal law (23 USC, Section 635.411) prohibits state agencies from specifying proprietary products on federally-funded projects, with some exceptions. These exceptions include competitive bidding between equal products and an FHWA public interest finding.
Willingness to Champion	14. Is the sponsoring DOT willing to promote this technology to other states, if partially supported by the AASHTO Task Force on Technology Implementation? ☒ Yes ☐ No
Date Submitted	15. Date: 08/23/2004

16. Please include image(s) of sketches or photographs, if available ☐ Image(s) are attached

Please E-mail or Fax by August 27, 2004 to	Jeremy Fissel Program Manager for Engineering AASHTO	Phone: 202.624.3640 Fax: 202.624.5469 jfissel@aashto.org