



WHAT IS SAFETY EDGE?

The Safety Edge_{SM} is a simple but extremely effective pavement edge solution that can help save lives by allowing drivers who drift off highways and rural roadways, such as two-lane roads with unpaved shoulders, to return to the road safely. Instead of a vertical drop-off, the Safety Edge_{SM} consolidates the edge of the pavement at 30 degrees. Research has shown this transition from the roadway surface to the shoulder and back reduces the severity of edge drop-offs and over correcting. Even at higher speeds, vehicles can return to the paved road smoothly and easily. Including the Safety Edge_{SM} treatment while paving can be implemented system-wide at a very low cost. The Safety Edge_{SM} also provides a more durable pavement edge that prevents edge raveling.

Pavement edge drop-off has been linked to many serious crashes, including fatal collisions. Roadway departures account for over half of all fatal crashes. If a driver overcompensates by steering too hard, the vehicle can fishtail, swerve into another lane, or go off the road entirely. The vehicle may roll over or veer into oncoming traffic. To mitigate vertical drop-offs, the Federal Highway Administration (FHWA) advocates installing the Safety Edge_{SM} on pavements during paving or resurfacing projects. This technology allows drivers who drift off highways and rural roadways to return to the pavement safely. This simple, inexpensive solution is a focus of the FHWA's *Every Day Counts* program.

GRANT PROGRAM

FHWA's goal is to accelerate the use of the Safety Edge_{SM} technology, working with States to develop specifications and adopt this pavement edge treatment as a standard practice on all new and resurfacing pavement projects. In Arizona, the Arizona Department of Transportation (ADOT) has developed an Implementation Plan to install Safety Edge on demonstration projects across the state and is looking to pursue adopting a policy or guide for a Safety Edge standard in the next year.

In addition, the FHWA Arizona Division Office has received grant funding through a FHWA Technology Transfer (T2) Deployment program—which finances research, development, technology and innovation transfer activities—to purchase fifteen (15) Safety Edge Shoe Devices that will be made available specifically to Local Agencies to further implement Safety Edge in Arizona. This **Local Agency Safety Edge Grant Program** will be administered through the Arizona Local Technical Assistance Program (AZ-LTAP). With the Safety Edge Shoe Devices already procured, Local Agencies who are a recipient of a grant award through this program will not have to be concerned about federal reimbursement requirements or the federal procurement process. The physical Safety Edge Shoe Device will be awarded to the Local Agency recipient who will become the owner of the Safety Edge Shoe, provided the additional requirements per this Grant Program are met as follows.

FHWA's goal is to advance the implementation of the Safety Edge_{SM} technology, so that more lives can be saved. By providing the Safety Edge Shoe Device to Local Agencies, implementation of the pavement edge treatment on resurfacing and new paving projects across Arizona can be accelerated and information about Safety Edge disseminated to contractors and inspectors statewide. The expectation is that Local Agencies lend out the Safety Edge Shoe Device to contractors on local paving projects to incorporate Safety Edge into pavement treatments. The LTAP Center will provide training to local agencies on the use of Safety Edge, provide education materials, and distribute the Safety Edge Shoe Devices.



ELIGIBILITY REQUIREMENTS

Grants shall be made only to applicants that are local agencies having jurisdiction over local transportation systems (cities, towns, counties, tribes) and that have a process within their agency to program, manage construction of and inspect new paving and/or resurfacing projects.

GRANT RECIPIENT REQUIREMENTS

The Local Agency Safety Edge Grant Program is 100% funded and not a reimbursable program. In lieu of this grant program being a federal reimbursement program, its purpose is to meet the intent of implementing Safety Edge as an accelerated, innovative technology across the state of Arizona, a commitment from Local Agency recipients to the following seven (7) requirements will be needed.

1. Demonstration Project: Local agency recipients will be required to commit to and identify a minimum of one (1), but can be more than one, Demonstration Project within one (1) year (twelve months) of being awarded a Safety Edge Shoe Device. The Demonstration Project shall include an Open House at which training and invitations to other contractors and surrounding agencies can attend to learn about Safety Edge. AZ-LTAP will provide further assistance/guidance on Open House requirements.
2. Training. A minimum of one (1) representative shall be identified from the Local Agency to be the lead contact and coordinator for Safety Edge. This Local Agency Safety Edge Coordinator will be required to be trained as a Safety Edge Trainer who will then be required to train other personnel at the local agency and contractors on the use of Safety Edge. The Safety Edge Coordinator Training will range from 4 to 8 hours, and subsequent responsibilities that the Safety Edge Coordinator will be required to train others will range from 15 to 60 minute job site training for contractors to other instruction for inspectors and additional technical assistance as needed.
3. Implementation Plan. The Local Agency will be required to develop an Implementation Plan that outlines a description of the projects planned that will incorporate Safety Edge, how Safety Edge will be marketed and promoted, how the Safety Edge Shoe Device will be utilized, and plans to adopt a policy, specification, and or standard detail to incorporate Safety Edge as part of routine construction practices at the Local Agency.
4. Long-term Commitment. A statement regarding the Local Agency's long-term commitment for using Safety Edge as an integrated part of the agency's construction practices including intent to implementing Safety Edge beyond a single Demonstration Project.
5. Policy/Standard Adoption. Local agencies will be required to adopt a policy, guideline, specification, standard detail, or any combination thereof, on the use of Safety Edge within the Local Agency within one (1) year of being awarded the grant.
6. Evaluation. Local agencies will be required to develop a plan to evaluate the effectiveness of Safety Edge, and evaluate the use of Safety Edge for a minimum of 3 years after implementation on the first Demonstration Project. Baseline data should be obtained prior to the Demonstration Project or any other paving projects in which Safety Edge is implemented. Local agencies can establish their own criteria for measuring the effectiveness of Safety Edge. At a minimum, crash data history including roadway departure and fatal & serious injury crashes, should be evaluated. Additional measures may include economic benefits (construction costs/savings and/or societal savings due to reduced fatalities, maintenance costs), indirect costs such as the effect Safety Edge has on other policies (shoulder pull back) or necessitating prioritization of other projects (object removal from clear zones). In addition, the adoption of a policy or standard on the use of Safety Edge in the local agency will be tracked.



7. Annual Report. For 3 years after receipt of the Safety Edge Shoe Device, the Local Agency will be required to submit a letter to the AZ-LTAP Center, with cc: to FHWA Arizona Division, on agency letterhead, summarizing the last year's activities and accomplishments regarding safety edge. At a minimum, the letter/annual report shall include 1.) the number of projects and a short description on which Safety Edge was implemented, 2.) the status of a Safety Edge policy and/or standard adoption, 3.) photos (if available), and 4.) the status and results of the evaluation process.

The FHWA has joined with state and local agencies in 20 states to sponsor or initiate project demonstrations installing this technology. Working together with State partners, contractors, equipment manufacturers, and the industry on this 21st century initiative, we can prevent the tragedy of pavement edge drop-off related crashes.

Grant Evaluation Process

The Federal Highway Administration and Arizona Local Technical Assistance Program will receive grant application submissions and will conduct a review based on the seven (7) requirements listed on pages 2-3 of this Local Agency Safety Edge Grant Program Application. All applications will be reviewed for completeness, eligibility and technical merits. Incomplete or improperly completed applications will be eliminated from further consideration.

Highest priority will be based on need and ensuring Safety Edge is distributed across the state of Arizona.

APPLICATION SUBMITTAL REQUIREMENTS

In order to accept applications, all items must be complete and submitted at the same time. Faxed and electronic applications will not be accepted.

1. Signed Safety Edge Grant Program Application Form
2. Letter of commitment from the Local Agency to implement Safety Edge, on agency letterhead, signed by the Agency executive officer or his/her designee
3. A Photo release form (see LTAP example/template or submit standard form from Local Agency)
4. Agreement to the Safety Edge Grant Recipient Requirements as outlined above and Description of a Local Agency Implementation Plan or Action Plan on the following items, in no more than 4 pages. (The Letter of commitment, photo release form, and application form are not counted as part of the 4-pages).
 - Demonstration Project: Identify the Demonstration Project that the Safety Edge device will be used on within the next year. Include the Project name, location, segment termini, MP if applicable and local agency TIP reference. Although not required, if the project is a Federal-aid funding project, include FA# and TRACS#. If the Safety Edge is planned to be utilized on more than one project, list applicable projects, which can also span more than one year.
 - Implementation Plan: Describe the Local Agency's plan to implement Safety Edge. How will the Safety Edge Shoe Device be loaned/distributed to contractors? Who in the Local Agency will be the responsible representative to oversee the Safety Edge program? Where will the Device be housed?
 - Long-Term Outlook: Describe the Local Agency's plan to implement Safety Edge on other paving projects in the next 3-5 years according to a long-term transportation plans or other programmed projects.



- **Policy/Standard Adoption:** Describe the Local Agency’s commitment to adopting a policy and/or standard detail for Safety Edge
- **Evaluation:** Describe the Local Agency’s plan for evaluating Safety Edge benefits. For example, identification of rural roadways with horizontal curves susceptible to roadway departure incidents, before and after crash analysis of high roadway departure crash locations, or cost savings associated with reduced shoulder maintenance of locations that have received Safety Edge pavement treatments.

First Review of Applications will be accepted no later than 5:00 PM on Friday, March 30, 2012. Grant awards will be announced beginning May 1, 2012, until all Safety Edge Shoe Devices are distributed, or a third round of applications will be accepted for review Winter 2012/13. Awards will be granted depending on the number and type of requests received and the size and scope of the projects. Faxed and electronic applications will not be accepted. Please submit original plus one (1) copy of grant application package to:

Landon Mays
ARIZONA LTAP Center (HRDC)
1130 N. 22nd Avenue
Phoenix, AZ 85009

For questions, contact:

Landon Mays, ARIZONA LTAP Regional Instructor at 602-712-4064 or LMays@azdot.gov
Kelly LaRosa, FHWA Arizona Division Safety Engineer at 602-382-8991 or Kelly.larosa@dot.gov

ADDITIONAL RESOURCES

FHWA Safety Edge Website www.fhwa.dot.gov/everydaycounts/technology/safetyedge/

FHWA Every Day Counts Website for other methods to accelerate project delivery, improve safety and reduce congestion available at: www.fhwa.dot.gov/everydaycounts/

APPENDICES

Appendix A—Local Agency Safety Edge Grant Program Application Form

Appendix B—FHWA Safety Edge Flyer “How Does Safety Edge Compare to Conventional Paving?”

Appendix C—Sample Safety Edge Specification from Iowa



Appendix A

Local Agency Safety Edge Grant Program Application Form



Local Agency Safety Edge Grant Program Application Form

<p>Agency Name: _____</p>	<p>County: _____</p> <p>ADOT District: _____</p> <p>Congressional District: _____</p>
<p>Applicant Information:</p> <p>Name: _____</p> <p>Title: _____</p> <p>Address: _____</p> <p>_____</p> <p>Email: _____</p> <p>Phone: _____</p>	
<p>Designated Safety Edge Coordinator:</p> <p>Name: _____</p> <p>Title: _____</p> <p>Address: _____</p> <p>_____</p> <p>Email: _____</p> <p>Phone: _____</p>	
<p>TERMS OF AGREEMENT (Check Concurrence):</p>	
<p><input type="checkbox"/> The Local Agency will implement Safety Edge on a Demonstration Project and host and Open House. Estimated Project Start Date: _____</p>	
<p><input type="checkbox"/> The Safety Edge Coordinator will attend Safety Edge Training and agree to train others on Safety Edge for Local Agency Projects.</p>	



<input type="checkbox"/> The Local Agency will adopt a Safety Edge policy/standard/specification/ or guidance.	
<input type="checkbox"/> The Local Agency will submit the required Annual Reporting documents and evaluations.	
<p>I, the undersigned, do hereby certify that I am an authorized applicant for the Local Agency (Authorized applicant must be a person who has received permission from Local Agency management to apply for this grant).</p> <p>I, the undersigned, do hereby certify that I or my staff has read and understand the application requirements, and the conditions contained herein that shall be complied with if a grant is awarded.</p> <p>If a grant is awarded as a result of this application, the local agency agrees to comply with all applicable federal grant requirements.</p> <p>To the best of my knowledge and belief, the information contained in this application is accurate and complete.</p>	
Signature: _____ Print Name: _____	Date: _____ Title: _____

GRANT APPLICATION DOCUMENT CHECKLIST	CHECK ATTACHED
PART 1. SIGNED SAFETY EDGE GRANT APPLICATION FORM	
PART 2. SIGNED LETTER OF COMMITMENT ON AGENCY LETTERHEAD	
PART 3. PHOTO RELEASE FORM	
PART 4. AGREEMENT TO SAFETY EDGE RECIPIENT REQUIREMENTS & DESCRIPTION OF LOCAL AGENCY IMPLEMENTATION PLAN	



Appendix B

FHWA Safety Edge Flyer

*“How Does Safety Edge Compare to
Conventional Paving?”*



Appendix C

Example Safety Edge Specification

From Iowa



Photo Release Form

I hereby grant the Arizona Local Technical Assistance Program permission to use my likeness in a photograph in any and all of its publications, including websites, without payment or any other consideration.

I hereby authorize the Arizona Local Technical Assistance Program permission to edit, alter, copy, exhibit, publish or distribute all photos for purposes of publicizing the Arizona Local Technical Assistance Program's projects or for any other lawful purpose. In addition, I waive the right to inspect or approve any product, including written or electronic, wherein my likeness appears. Additionally, I waive any right to royalties or other compensation arising or related to the use of the photograph.

I have read this release before signing below and I fully understand the contents, meaning, and impact of this release.

(Signature)

(Date)

(Printed Name)

(Date)

(Organization)



FHWA Arizona Division / AZ-LTAP Program
Local Agency Safety Edge Grant Program Application—2011/2012