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**The mission of Iowa's LTAP:**

To foster a safe, efficient, environmentally sound transportation system by improving skills and knowledge of local transportation providers through training, technical assistance, and technology transfer, thus improving the quality of life for Iowans.

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ISU Research Park  
2901 S. Loop Drive, Ste. 3100  
Ames, Iowa 50010-8632  
Telephone: 515-294-8103  
Fax: 515-294-0467  
www.ctre.iastate.edu/

**Stephen J. Andrie**  
Director of CTRE  
andrie@iastate.edu

**Duane Smith**  
Director of Iowa LTAP  
desmith@iastate.edu

**Marcia Brink**  
Editor  
mbrink@iastate.edu

**Tom McDonald**  
Safety Circuit Rider  
tmcdonal@iastate.edu

**Lori Wildeman**  
Program Coordinator  
lwild@iastate.edu

Rebekah Bovenmyer  
Brett Hansen  
Contributing Writers

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**Spanish continued from page 1**

The Survival Course teaches an English vocabulary of construction-related terms in a culturally meaningful format. The course also helps participants span the cultural divide by

- explaining why safety is important and illustrating how cultural differences can play an important role in safety issues.
- incorporating teaching methods found in Hispanic countries to make it easier for employees to learn and retain the information.
- encouraging supervisors to hire instructors with multicultural experience in the construction sector.
- encouraging supervisors to combine course content with on-the-job practice to improve language skills and safety practices.

**Preparing future supervisors**

Moving from performing job functions to delegating them requires a new set of skills. The Supervisor Course helps prepare Hispanic employees transitioning into supervisory roles.

The supervisor training course focuses on three areas: self-management, managing individuals, and teamwork.

**Reciprocal training**

The ISU team is now developing a training program that teaches basic Spanish to English-speaking supervisors, focusing on job-related vocabulary and situations.

**For more information**

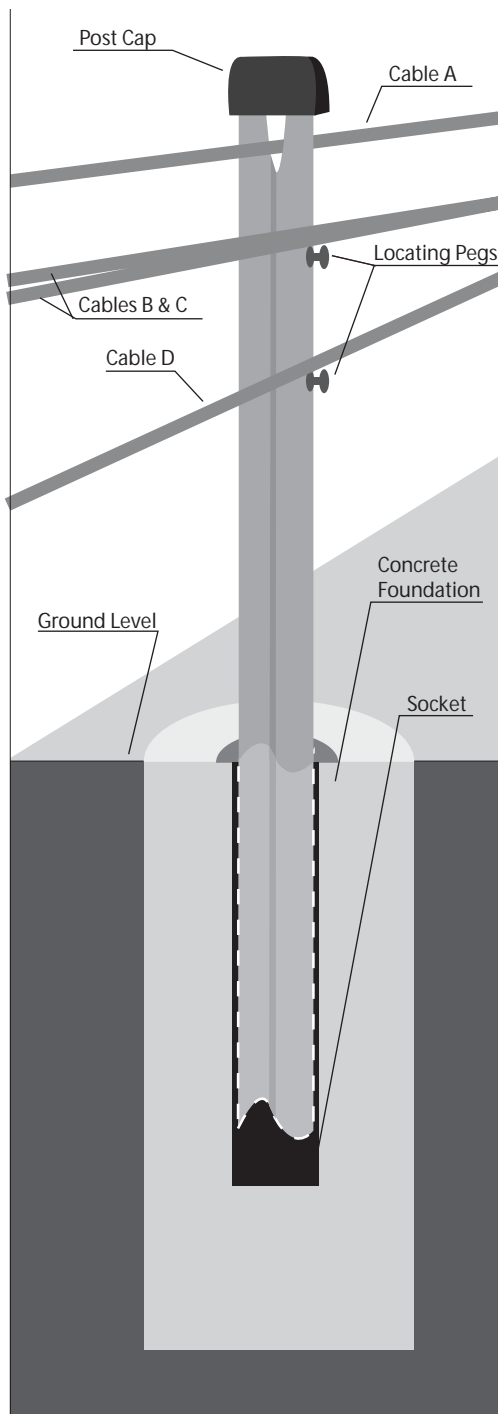
To bring *English as a Second Language (ESL) Survival Course* or *Stepping Up to Supervisor for Hispanic Construction Workers* to your road workers, contact Augusto Canales, 515-294-7531, acanales@iastate.edu.

For additional information, contact Ed Jaselskis, associate professor of civil engineering, ISU, 515-294-0250, ejaselsk@iastate.edu, or Charles Jahren, associate professor of civil engineering, ISU, 515-294-3829, cjahren@iastate.edu. •

**New guardrail system should save lives**

A NEW TYPE of median cable barrier has recently been installed along a 3.5-mile stretch of I-35 between Des Moines and Ankeny at a cost of \$330,000.

Cables continued on following page



This cutaway installation view of the median cable barrier is not necessarily to scale.

Cables continued from previous page

Manufactured by Brifen USA Inc., the system consists of four high-tension cables. Three cables weave back and forth between posts; the fourth runs through slots at the tops of the posts.

The posts are designed to bend or break on impact. They are installed in metal sleeves, which are embedded in concrete foundations (see figure).

#### Advantages of the new system

The new system has some distinct advantages over concrete median barriers or other cable systems.

**Safety.** The cable system prevents errant vehicles from entering oncoming lanes of traffic, thereby reducing head-on collisions.

In addition, the cables absorb the energy of an impact, minimizing injuries or reducing their severity. Even after some posts have been damaged, the cables maintain their tension and can endure another impact if necessary.

The system is NCHRP-350 certified.

**Cost.** The cost of the Brifen cable barrier system is significantly less than concrete median barriers, which require a paved median and storm sewer.

**Quick repair.** To repair the system after an impact, the damaged posts are simply removed from the sleeves, new posts are inserted, and the cables are reattached. The repair process can usually be done quickly and without any lane closures or heavy equipment.



Four cables absorb energy from an impact. Photos courtesy of the Iowa DOT.

**Little environmental impact.** The new cable barrier system reduces the impact on visual aesthetics and on snow drifting during the winter.

#### Good results in Oklahoma

Iowa is one of a handful of states using the Brifen cable barrier system. The Iowa DOT has been particularly impressed with the results of an installation in Oklahoma.

In 2001 the cable barrier system was installed along a seven-mile stretch of Oklahoma City's Lake Hefner Parkway, which carries over 108,000 vehicles per day.

In the four years prior to 2001, cross-median crashes had resulted in four fatalities and six injuries. Since its installation, the cable barrier system has been hit more than 150 times, with no cross-median crashes, no fatalities, and no serious injuries.

#### For more information

Contact William Stein, Iowa DOT design methods engineer, 515-239-1402. •

*Editor's note: CTRE does not endorse product lines. The cable guardrail system described in this article is patented by Brifen USA Inc.*

#### LTAP Advisory Board

The people listed below help guide and direct the policies and activities of Iowa's Local Technical Assistance Program (LTAP). Contact any of the advisory board members to comment, make suggestions, or ask questions about any aspect of LTAP.

Saleem Baig  
Local Systems, Iowa DOT  
Telephone: 515-239-1051

Gary Fox  
Traffic and Transportation  
Director  
City of Des Moines  
Telephone: 515-283-4973

John Goode  
Monroe County Engineer  
Telephone: 641-932-7123

Neil Guess  
Howard R. Green Company  
Telephone: 515-278-2913

Bret Hodne  
City of West Des Moines  
Telephone: 515-222-3475

Larry Jesse  
Local Systems, Iowa DOT  
Telephone: 515-239-1291

Wally Mook  
Director of Public Works  
City of Bettendorf  
Telephone: 319-344-4128

Greg Parker  
Cedar Rapids Engineer  
Telephone: 319-286-5828

Bob Sperry  
Story County Engineer  
Telephone: 515-382-7355

Chris Whitaker  
Transportation Planner  
Region XII Council of  
Governments  
Telephone: 712-792-9914



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