A recent study by the Texas Transportation Institute provides the most compelling evidence yet that wider paint lines on roadway shoulders (commonly called edge lines) are a cost-effective, statistically sound approach to reducing crashes and fatalities on rural two-lane highways. The study, entitled “An Evaluation of the Effectiveness of Wider Edge Line Pavement Markings,” was sponsored by the American Glass Bead Manufacturers’ Association.

“This is the first formal evidence of a correlation between wider edge lines and improved crash safety,” said Paul Carlson, a TTI Research Engineer and one of the authors of the study. “Previous studies over the last 10 years were small and naïve in analyses, and lacked data to provide statistically significant results.”
Study suggests wider edge lines reduce total crashes

In the past, many states adopted wider edge lines (6 inches instead of 4 inches) for a range of reasons, but adoption has been slow and uncoordinated without sound empirical findings to support the decision, according to the study. Glass bead products are frequently used for highway safety markings such as these, providing the light-reflective lane markings found on highways around the world. Previous studies found indirect evidence to support wider edge lines, but evidence showing direct reduction in crashes was difficult to provide due to data issues. The recent analysis of Federal Highway Administration data from three states (Kansas, Michigan and Illinois) provides the necessary evidence to support adoption of wider edge lines (see Safety effects of wider edge lines on rural, two-lane highways http://www.sciencedirect.com/science/article/pii/S0001457512000486).

“With the ultimate goal being highway safety, transportation agencies across the United States now have strong data to support the undertaking of a relatively low-cost measure to improve highway safety and reduce fatalities,” said Kevin Goforth, president of the American Glass Bead Manufacturers’ Association.

The study demonstrated that wider edge lines have been shown to reduce total crashes 15 to 30 percent and fatal-plus-injury crashes 15 to 38 percent. In addition, the benefit-cost ratio for wider edge lines is $33 to $55 for each $1 spent, which is similar to shoulder rumble strips. If an agency is considering installing rumble strips as a safety countermeasure but is concerned about potential noise or pushback from the bicycle community, wider edge lines appear to offer similar results but without the concerns.

Since the safety benefits of wider edge lines are now better documented, the study suggests that it would be beneficial if the Manual on Uniform Traffic Control Devices was amended so that minimum edge-line width on rural two-lane highways was 6 inches. Agencies would then be able to implement the policy in a uniform and consistent manner.

This is the first formal evidence of a correlation between wider edge lines and improved crash safety. Previous studies over the last 10 years were small and naive in analyses, and lacked data to provide statistically significant results.

– Paul Carlson, Research Engineer
United Arab Emirates project addresses crash investigation and reporting

Despite the vastly different cultures between the United Arab Emirates and the United States, the Emirate of Abu Dhabi is finalizing a nine-month contract agreement with the Texas Transportation Institute’s Center for Transportation Safety (CTS). The project will center on crash investigation and post-crash site inspection and analysis.

“The United Arab Emirates, and especially the Emirate of Abu Dhabi, has an extremely high fatality rate,” says Associate Research Scientist Troy Walden, who will lead the project for CTS. “According to its Department of Transport [DOT], the Abu Dhabi fatality rate [based on population] is 50 percent higher than in the United States.”

Walden says the DOT is motivated in making its roads safer, and wants to start that process by developing a comprehensive set of procedures and guidelines that deal with the investigation and analysis of its fatal and injury crashes. Walden will produce separate guidebooks for both the DOT and Abu Dhabi law enforcement officers.

The DOT guidebook will cover crash investigation requirements, data analysis requirements and options for a reporting process. The guidebook for law enforcement officers will focus on proper data collection and investigation procedures.

Walden says a goal of the DOT is to have standardized crash-reporting forms. “By having all these elements in place, the DOT will be able to conduct effective crash analysis so that countermeasures can be identified and then placed into effect,” he says. “And that’s the first step in reducing fatalities and injury-related crashes.”

According to a DOT publication, 40 percent of all fatalities in Abu Dhabi involve pedestrians. The publication identifies Abu Dhabi’s poor driving standards and its high population of non-residents as contributing to the overall traffic deaths.

“Because of the differences in the way our countries operate, this is an extremely interesting project for us,” Walden says. “I think the DOT is seeking direction from us so we can work together in pinpointing the causes of the crashes and help suggest effective countermeasures.”
Prominent speakers highlight annual Safety Conference

With speakers that include the administrator of the National Highway Transportation Safety Administration (NHTSA) and the retiring state legislator known by many as “Senator Safety,” the 2012 Statewide Traffic Safety Conference in San Antonio June 4–6 is expected to be well attended.

“We are honored that NHTSA Administrator David Strickland and State Sen. Steve Ogden will be our main speakers this year,” Center for Transportation Safety (CTS) Director John Mounce said of the upcoming conference. The annual event attracts public policy makers, traffic safety practitioners, law enforcement, traffic engineers, public health officials and many other safety professionals from all over the state.

“The conference seems to become more relevant each year as we learn from each other and share what’s new and what’s working in other places,” Mounce said. “We all have important individual roles in traffic safety, but when we team up for a common cause, we can’t help but become more successful.”

Administrator Strickland, who took office on January 4, 2010, “has overseen the development of the first national fuel-efficiency program, helped establish ejection mitigation requirements for automakers, and brought national public focus to child passenger safety issues including the threat of heat stroke from hot cars and back-over deaths and injuries.” NHTSA is the nation’s principal agency dedicated solely to highway safety.

Ogden, who was first elected to the Texas Senate in 1997, authored the legislation that created CTS at the Texas Transportation Institute (TTI) more than 10 years ago. He is a strong and vocal proponent of traffic safety. Ogden recently announced his decision not to seek reelection after his term ends in January 2013.

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2012 Safety Conference preview

This year’s conference theme, “Saving Lives: Nothing’s More Important,” was borrowed from a line in a speech Ogden gave at TTI several years ago.

The 2012 Traffic Safety Conference will begin with a Welcome Reception and Exhibitor Showcase June 4. The Opening Session will take place the next morning prior to a full day of numerous breakout sessions. Conference topics will include discussions and examinations of distracted driving, impaired driving, new speed limits in Texas, motorcycle safety, wrong-way driving and teen driving safety.

The Closing Session of the conference will be a round-table discussion by invited Texas legislators on what they believe will be the main traffic safety issues for the 2013 legislative session.

Conference sessions will include:

- “No Refusal” DWI Policies and Practices
- Public Engagement in Traffic Safety Policy
- Federal Highway Administration’s Safety Programs
- Communitcity Partnerships Working Together to Make a Difference: The Traffic Jam Traffic Safety Coalition
- What’s new with young driver safety?
- Motorcycle safety resources and information
- The Evolution of the San Antonio–Bexar County Metropolitan Planning Organization’s Safety Program
- Wrong-Way Driving: Recent Initiatives and Research in Texas
- Issues in Distracted Driving
- Lifespan Occupant Protection
- Complete Streets: Potential Safety Benefits When Streets Are Designed and Constructed to Enhance Neighborhoods, Commercial Corridors and Communities for Multimodal Travel
- Partnering with Probation to Reduce Impaired-Driving Recidivism
- Changes in Texas Speed Limits
- Law Enforcement Crash Reporting: An Update on C.R.A.S.H.

Conference exhibitors will include:

- Brinkly & Barfield, Inc.
- The Center for Transportation Safety
- Federal Highway Administration, Office of Safety
- Smart Start, Inc.
- Texas Department of Public Safety
- Teens in the Driver Seat
- Trinity Highway Products
- Texas Transportation Institute - Human Factors Driver Simulator

Conference registration will be available at the Crowne Plaza San Antonio Riverwalk immediately prior to the conference.
Teens in the Driver Seat spreads to south Georgia

A large percentage of teens at H.V. Jenkins High School in Georgia admit to engaging in risky driving habits, according to a recent survey, so they’ve launched the Teens in the Driver Seat® program to help each other become safer drivers.

More than 60,000 teen drivers in Georgia each year are involved in traffic crashes, by far the number-one killer of young people. Researchers attribute the crashes to inexperience, combined with one or more of the five main risks that plague young drivers: driving at night, distractions (primarily cell phones, texting and other teen passengers), speeding, limited seat-belt use and alcohol.

Researchers at the Texas Transportation Institute surveyed H.V. Jenkins High School students. The findings illustrate how much they know about driving risk factors and how often they engage in risky driving behavior:

- Nighttime driving is the most common danger that young drivers face, yet it’s the one risk they know the least about. Only 11 percent of the teens surveyed were aware of the danger, yet 49 percent say they often drive late at night.
- Nearly three-fourths of the teens were aware that texting while driving is dangerous, yet a third of them say they do so “a lot.”
- Only a third recognize that speeding is dangerous, and 43 percent say they frequently exceed the speed limit by more than 10 miles per hour.
- On a more positive note, 77 percent recognize the danger of impaired driving, and even more — 86 percent — say they “never” drive after drinking.

Unlike other safety initiatives targeting young people behind the wheel, Teens in the Driver Seat involves students directly to help develop and deliver the right safety messages.

“Let’s remember that even though drunk driving has been against the law for a long time, there was a time when people still accepted it,” says Brianna O’Reilly, a program leader at Jenkins High School. “Then slowly but surely, drunk driving became something that more and more people would simply not accept.”

“We can do the same with distracted driving, but only if we change the way we think about it…only if we change our driving culture. To do that, we need to start with young drivers. That’s what Teens in the Driver Seat is all about,” says O’Reilly.

TTI developed Teens in the Driver Seat and provides the science, materials and support for the program, while each student group determines how the program will work in their school. It was originally launched in Texas, where more than 500 schools now have active programs. After a pilot effort at Duluth High School in 2007, the program has spread to nearly 50 more schools in Georgia, by far the most extensive deployment of the program outside of Texas.

Teen driver crashes have been on a decline statewide and nationwide in recent years, but teens’ prevalent use of cell phones threatens to stall that improvement. More than a third of teen drivers who were surveyed admit to talking or texting while driving, even though Georgia state law prohibits any form of wireless communication behind the wheel for drivers under age 18. TTI research has demonstrated that texting doubles a driver’s reaction time, making it much more difficult to avoid sudden hazards.

“Most young drivers don’t know that they’re far more likely to die in a crash than people in other age groups,” says Russell Henk of TTI, the program’s creator. “But they need to hear the message from a source they trust; they need to hear it from each other. That’s what Teens in the Driver Seat is all about.”

The Teens in the Driver Seat program is the nation’s first peer-to-peer program focused exclusively on driving safety, and it is available to Georgia schools through funding support from the Georgia Department of Transportation.
Secretary of State hosts second TDS Day at the Capitol

Texas Secretary of State Hope Andrade hosted the 2012 Teens in the Driver Seat (TDS) Day at the Capitol on May 4.

The purpose of the Day at the Capitol was to recognize outstanding individuals that are part of the TDS program and celebrate the program’s 10th anniversary.

Secretary Andrade presented awards to the Texas Teens in the Driver Seat Cup winners and SponStar winners, and TDS Teen Advisory Board members were recognized with signed proclamations. She also recognized TDS partners— the Texas Department of Transportation, the Houston-Galveston Area Council and State Farm-Texas Zone— and thanked them for supporting such an important cause.

“I want to acknowledge that your passion for traffic safety and hard work that has continued to help us save lives throughout the state is greatly appreciated,” said Secretary Andrade.

The day also included the first meeting of the 2012–2013 TDS Teen Advisory Board. Board members are instrumental in the program and serve as ambassadors and leaders for TDS.
Center Director receives career achievement award

Center for Transportation Safety (CTS) Director John Mounce, has received the Texas Transportation Institute (TTI)/Trinity Charley V. Wootan Career Achievement for Research Award — the highest honor bestowed by the Institute upon a senior researcher.

“I am very grateful to TTI and Trinity for this award. It is truly an honor,” said Mounce. “I feel so fortunate to have been mentored by so many great professionals, especially Dr. Wootan. I had the opportunity give back by mentoring so many outstanding young people over the years.”

Mounce’s career in transportation engineering spans more than three decades. In that time he has authored numerous research studies, has served as a lecturer at Texas A&M University and a professor at Montana State University, and has led CTS as director since 2003.

His award reads, “From championing safety on low-volume rural roads in the 1970s to leading one of the most highly regarded safety programs in the country, John has focused on outcomes to the public. Beyond his own significant research, he has fostered a culture of growth and achievement for those who work with him.”

Texas Transportation Institute Director Dennis Christensen, presents CTS Director John Mounce with the TTI/Trinity Charley V. Wootan Career Achievement for Research Award.