

# 2005 National Roadway Safety Awards





## *From the Administrator*

A handwritten signature in black ink that reads "J. Richard Capka". The signature is fluid and cursive, ending with a long horizontal stroke.

J. Richard Capka, Administrator (Acting)  
Federal Highway Administration

*I* am very pleased to have the opportunity to recognize and celebrate the successes of this year's award winners. The Roadway Safety Foundation and the Federal Highway Administration jointly sponsor this program to showcase and share the "best safety practices" recognized throughout the United States.

With the passage of SAFETEA-LU, Congress demonstrated its support for a safer transportation network through significantly increased funds for a new "core" safety program and a data-driven, results oriented approach to safety planning and investments. Recognizing exemplary projects that address the "4Es"—Education, Enforcement, Emergency Medical Services and Engineering—is another way to help state and local governments find models for improved safety programs.

I congratulate the award winners honored in this publication and each of the nominees representing the sixty-five life-saving projects that participated in this year's competition. I urge others throughout the country to commit themselves to similar efforts to save lives and prevent injuries. I hope they will also consider participating in the next National Roadway Safety Awards competition scheduled for 2007.

Meeting and surpassing our safety goals is critical to a better quality of life and greater productivity. Emulating the outstanding projects featured in this brochure can help us achieve these goals.

# 2005 *National Roadway Safety Awards*

## **Jointly sponsored by Federal Highway Administration and Roadway Safety Foundation.**

*This Best Practices brochure showcases the winning entries of the 2005 National Roadway Safety Awards program. The entries were rated on their innovation, effectiveness, and efficient use of resources. Of the entries received, those noted herein were found to be the outstanding examples of highway safety projects. We congratulate all of the award recipients and are proud to display their projects as models for all agencies to emulate as we strive to maintain the safest transportation system in the world.*

## **The Federal Highway Administration (FHWA)**

*The FHWA, in partnership with the highway and transportation community, is preparing for the future and improving transportation for a strong economy. Our vision is to create the safest and most efficient highway system in the world for the American people--where everyone has access; crashes, delays, and congestion are significantly reduced; freight moves easily and at the lowest cost; ecosystems and the quality of the air are protected; pedestrians and bicyclists are accommodated; and where transportation services are restored immediately after disasters and emergencies.*

## **About the Roadway Safety Foundation**

*The Roadway Safety Foundation is a 501(c)(3) nonprofit educational and charitable organization solely dedicated to reducing highway deaths and injuries by improving the physical characteristics of America's roads.*

## **Mission of the Roadway Safety Foundation**

*To build public awareness and support actions to assure that national, and local safety agendas recognize the role of the roadway in reducing highway deaths and injuries. To accomplish this, RSF focuses on improving the physical characteristics of roadways that affect safety, such as design and engineering, operating conditions, removal of roadside hazards, and effective use of safety features.*

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# Florida

## Intersection Enforcement Lights Florida Department of Transportation



The Florida DOT is promoting the widespread usage of enforcement lights at signalized intersections to facilitate the enforcement of red light running (RLR) violations. The lights, also known as “white lights,” are electronically attached to the red light and are visible to a law enforcement officer stationed downstream of a traffic signal. White lights are illuminated when the signal turns red, enabling a single officer, who must have a view of the stop bar and a red light indicator, to apprehend drivers who run a red signal. Without the white lights, two officers would be required for a RLR operation – one upstream to observe the infraction and one downstream of an intersection to write the citation. This enforcement light technology must get acceptance from the local traffic court judiciary prior to installation to assure that the citations written will be accepted in court proceedings.

In 2003, there were approximately 111 traffic fatalities and 1,703 serious injuries due to RLR in Florida. This program’s effectiveness is clear: as an example, the initial installation at the Intersection of SR 60 and US 19 in Clearwater in 2001 resulted in a 50% decrease in RLR violations and an 11% decrease in crashes over a 3-month evaluation period, with 519 citations issued.

Improving intersection safety continues as one of the key areas in the state’s 2003 Strategic Highway Safety Plan, with a critical initiative to install white lights at a minimum of 60 signalized intersections per year for the five-year duration of the Plan. To date, white lights have been installed at over 400 high RLR intersections throughout the state, already exceeding the five-year target, with many more to be installed as the initiative gains support.



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Winner

# Montana

## Temporary Traffic Control for Wildland Fire Incident Management Activities

### USDA Forest Service



During a wildfire, incident management activities directly affect highway safety. A single wildfire may burn over 10,000 acres, be fought by 1,000 firefighters and last many days. Travelers during this time could be presented with potentially life threatening fire conditions, poor driving visibility due to smoke, and changing traffic patterns. Adding to the problem is the increased traffic that incident management operations generate. Distracted or surprised motorists are a threat to the safety of incident responders. People's lives depend on being able to recognize the traffic hazards in these areas, follow warning and directional signs, slow down, and safely pass through incident zones.



In 2000, a major wildfire outbreak in the Northern Region caused the Forest Service, the Montana Department of Transportation (MDT), and the Montana Department of Natural Resources and Conservation (MDNRC) to begin developing standard procedures and products for temporary traffic control at wildland fire locations. The final measures now include:



- Standard sign designs that meet the Manual of Uniform Traffic Control Devices (MUTCD) requirements;
- Manual for design and placement of temporary traffic control devices;
- Development of the *Incident Sign Installation Guide* for nationwide distribution; and
- A memorandum of understanding signed by MDT and MDNRC, adopting these measures and clearly defining the roles and responsibilities of the various state and federal agencies involved in incident response.

Practices developed in this program have broad application and are being incorporated nationwide by the Forest Service.

While both the MDT traffic incident responders and wildland fire fighting agency incident managers use incident control systems, this program is the first where both land management agencies and the MDT report to a single incident commander that manages fire fighting and traffic through a single incident organization. The agreement streamlines the process to approve encroachment permits, establishes agency contacts for emergencies and assures that interruptions to highway travel will be minimized. Of paramount importance, the management of fire fighting and traffic management activities under a single Incident Command System organization eliminates duplication and improves responsiveness of communications and the safety of both the public and incident responders.

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*Winner*





# Ohio

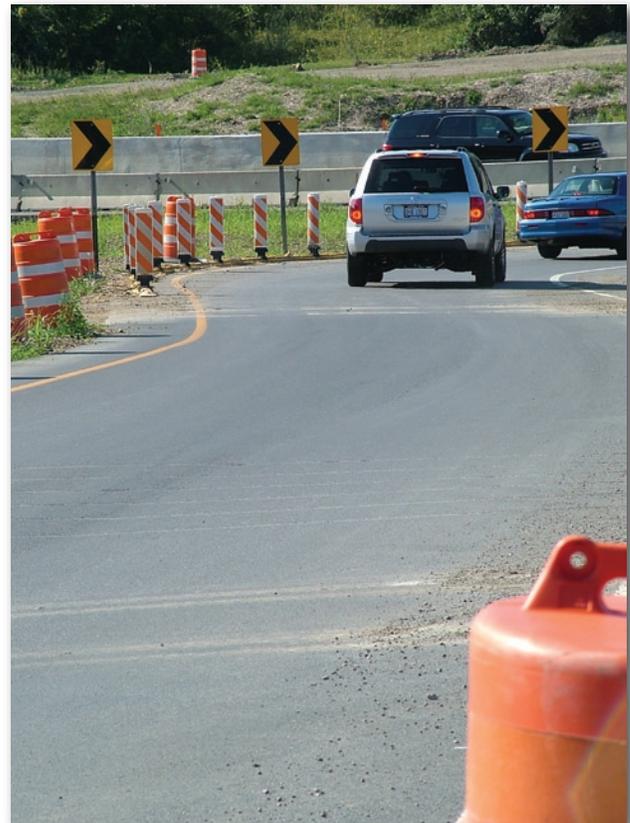
## Work Zone Crash Analysis Ohio Department of Transportation



In 2004, ODOT initiated a new crash-analysis program designed to identify work zone configurations that contribute to crash problems. The program uses historical and near real-time crash data to prevent crashes and detect problems in the field so the department can respond quickly.

Based on historical data, the department identified four major contributing factors to work zone crashes: inadequate ramp merges, insufficient paved shoulders, inadequate off-ramps at interchanges and speed. New statewide standards were created to improve the design of future projects. The department also developed a near real-time analysis/tracking system, including bi-weekly coordination meetings with local law enforcement to collect crash reports. When spikes in crashes occur, the department can work quickly with construction personnel to identify problems and modify the work zones accordingly.

In addition to its efficiency, the crash analysis program is very cost effective. For about \$5,000 invested to create the tracking mechanism and crash analysis database, each low-cost, short-term adjustment made in a work zone can prevent dozens of crashes to save lives and millions of dollars statewide. It also reduces congestion-related delays caused by work zone crashes.



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Winner

# Washington



## Fatality Collision Reduction Washington State Patrol

Since 2001, the Washington State Patrol has used an accountability driven leadership model to hold managers accountable for performance outcomes within their areas of responsibility. The Field Operations Bureau (FOB) has used this management style to focus on the reduction of fatal collisions on state highways. Collision data was analyzed to identify the driving behaviors related to the majority of fatal and preventable injuries. These included driving under the influence, dangerous speed, aggressive driving and restraint violations.

The process of reviewing data, performance measures and outcomes occurred during monthly meetings of a Strategic Advancement Forum (SAF) between the FOB Deputy Chief and the regional district commanders. As issues develop, the SAF process encourages lieutenants and sergeants to devise creative ideas to solve these core issues. This data-driven decision-making allows all district employees an opportunity to provide input and use problem-solving skills to find solutions.

The SAF process allows troopers and sergeants to work together toward achieving a mutual goal. Citizens have seen the positive results as more lives have been saved through the SAF process. Prior to 2001, the East Region typically handled over ten fatal collisions a year.

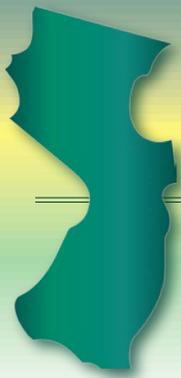


By focusing on the four key goal areas and increased enforcement targeted to these areas, the East Region reached the pinnacle of traffic law enforcement in 2004 by not having to investigate a single fatal collision. Previously known for some of the most dangerous highways in the country, the East Region has benefited from the lives saved by the Washington State Patrol's accountability and data-driven leadership.

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# New Jersey

## Local Road Safety Audit South Jersey Transportation Planning Organization



The South Jersey Transportation Planning Organization (SJTPO) instituted its *Local Road Safety Audit* program in 2004 in response to the disproportionate share of crashes occurring on rural two-lane roads in the SJTPO region. SJTPO took a data-driven and proactive approach to the safety audit program. Audits were first conducted on two Cape May County roads with documented crash histories and significant crash potential.

A consultant firm conducted the audits with the assistance of the Cape May County Engineer's office and SJTPO. Of special interest is the interdisciplinary nature of the audit teams, which consisted of county representatives, the police, engineering and public works staff of the affected municipalities, the state DOT, the NJ Division of Highway Traffic Safety and Federal Highway Administration.



The audits have raised awareness among local decision-makers by identifying low-cost, quick turnaround safety improvements that are expected to yield immediate safety benefits. It is one of the first local programs of its kind, utilizing federal planning funds to systemically identify local road segments of concern, organizing a team of independent specialists under the auspices of a metropolitan planning organization, engaging a consultant team for the audits and securing federal funding for the resulting recommended improvement packages.



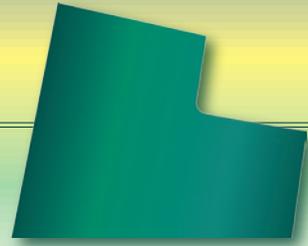
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*Honorable Mention*

# Utah



## High Tensioned Cable Barrier as an Interim Safety Solution on I-15

### Utah Department of Transportation

In early 2003, the Utah Department of Transportation (UDOT) identified a serious and growing problem: crossover fatalities and serious injuries on I-15 in the Provo/Orem area. This 15-mile segment saw an annual average of 92 crashes resulting in five fatalities and 22 serious injuries. The six-lane facility was reaching capacity spurring talks of reconstruction, but the work would not begin for at least two years. While median barriers would mitigate the problem, the investment of limited safety funds for a two-year period was questioned at first.

Using high tensioned cable barrier as an interim solution seemed viable to UDOT Region Three engineers, especially considering that reusing the cables could recapture nearly half of the costs. The decision was made to install the barrier in two phases with completion scheduled in January 2004 and January 2005. Since its installation, the barrier has been struck over 100 times with no fatalities and only two serious injuries—a reduction of 91 percent from the annual average of fatalities and injuries on this segment of I-15. Crash reports suggest that more than 40 high-speed crossovers were prevented. Based on previous crash history, the estimated benefit is five lives saved and 21 serious injuries prevented. Considering the number of likely crossover crashes prevented, these numbers could have been much higher.

UDOT is documenting every hit to the cable barrier and is using this information to guide the creation of a standard specification and standard drawings for future projects. Reuse of the cables and hardware in other projects facilitates the recapture of up to 45 percent of the cost, resulting in a vastly reduced net construction cost at each interim location.

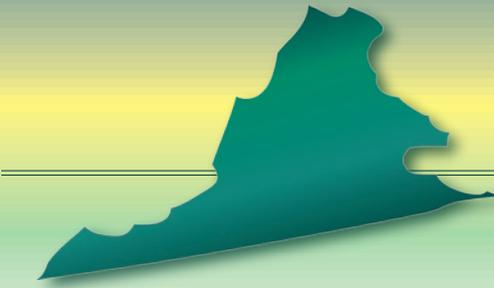


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*Honorable Mention*





# Virginia

## Safety at Sea Virginia State Police



According to the US Navy, vehicle crashes are the leading cause of death for off-duty Navy personnel each year. To address this tragic trend, the Navy provides its sailors and Marines a variety of traffic safety tools and educational programs. The Safety at Sea program has become a mainstay with the US Navy.

Safety at Sea puts a Virginia State Police trooper at the disposal of approximately 10,000 sailors and Marines, all of whom have been deployed at sea for over six months and are anxious to hit the US roadways to visit with family and friends. When they reach port, these sailors and Marines face numerous driving challenges, including “welcome home” celebrations involving alcohol, lengthy road trips to get home with little to no sleep, a vehicle that has not been driven for months and newly enacted traffic laws.

Through the Safety at Sea program, a trooper is flown out to rendezvous with a returning ship. The trooper spends two weeks aboard the ship conducting highway safety programs addressing issues such as safety belt use, child safety seats, drinking and driving, road rage and driving while distracted and/or drowsy. The trooper also identifies new traffic laws that have been enacted during the ship’s deployment and offers other general safety reminders.

During 2004, more than 35,000 service personnel were trained by Virginia State Police uniformed troopers aboard the USS Independence, USS WASP, USS George Washington Battle Group and the USS John F. Kennedy.



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*Honorable Mention*

# Idaho

## Impact/WebCARS

### Idaho Transportation Department



*I*mpact2K (Idaho Mobile Program for Accident CollecTion) /WebCARS is an innovative software system allowing for state-of-the-art crash data collection and analysis, providing the tools and information needed to aid safety officials in identifying problem areas and developing strategies for increasing the safety of Idaho's roadways.

The program simplifies and facilitates the reporting process for officers in describing crashes, and offers an entirely paperless reporting system. Experienced police officers have stated that they can complete a crash report in less than half the time it takes to create a paper version. Used in conjunction with Easy Street Draw to create a collision sketch, users can generate a detailed crash scene diagram in minutes.



Timely and accurate collision data is critical to effective safety programs. WebCARS helps agencies address specific information needs including high accident location identification, intersection analysis, listing accidents by street, segment code and milepost and monthly summaries, to name a few of its applications. WebCARS also features Easy Street Draw and Intersection Magic Diagramming Wand, which allow a user to view collision sketches and engineering collision diagrams while analyzing the crash data. Another outstanding feature of this system is that it is available free of charge to all local agencies.

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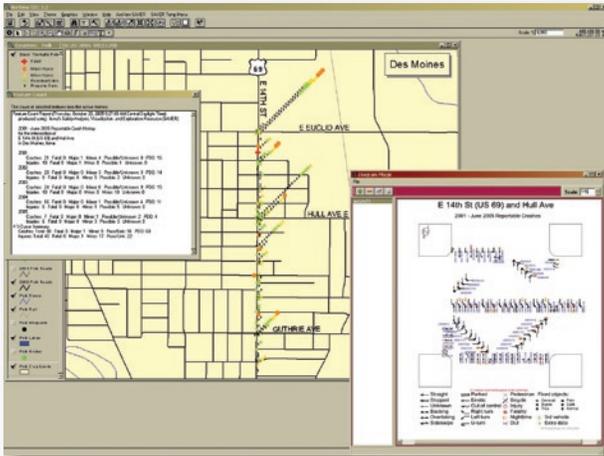
*Winner*





# Iowa

## Highway Safety GIS Iowa Department of Transportation



The Iowa Statewide Traffic Records Committee convened in 1994 and participated in an external assessment of the state's traffic records by experts in the fields of data collection and management. The assessment led to the development of a strategic plan for data improvements. Key recommendations from the assessment included: improve timeliness of the accident data available for local and state users and improve accident location systems by exploring new technologies. A major concern was the crash location coding of the existing link-node location system. It was labor-intensive and a major contributor to the lag in available data. Replacing that system became a top priority.

Solutions to both the lag time and the cumbersome location coding method were not found until Iowa began to move crash data into a Geographic Information System (GIS) format. Development of Iowa's Highway Safety GIS began in 1997 by converting 10 years of crash history to a GIS platform. The user-friendliness of the system has been enhanced over the years and GIS is now used as a multidisciplinary and multi-agency tool by local and state agencies. The GIS is distributed statewide on a CD and is provided with free training and technical support. Summaries and analyses are also available via several web resources.

The unified database covers all crashes on all Iowa public roadways, allowing the tool to be useful at every level of government. In 2000, Iowa implemented electronic location software to capture coordinates and add locations to the roadway network. This "smart map" technology ensured that all crashes were located by a highly reliable method. In April 2005, the final steps were achieved. The Highway Safety GIS now complies with the *Minimum Model Uniform Crash Criteria*, a national standard for uniform, accurate and reliable crash data. The system also achieved its goal for providing timely data with the inclusion of 2005 crash data.



The impact of the Highway Safety GIS has been dramatic. Information from the GIS is supplied to a wide range of safety programs such as Safety Conscious Planning, the Iowa Safety Circuit Rider, the Transportation Engineering Assistance Program, 3R Roadway Safety Audits, and many others. Thanks to Highway Safety GIS, the entire state is now empowered with data-driven decision-making for highway safety.

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Winner

# Minnesota

## Comprehensive Highway Safety Plan Minnesota Department of Transportation



The Minnesota *Comprehensive Highway Safety Plan* (CHSP) evolved as a coordinated effort between the Minnesota Departments of Transportation and Public Safety to reduce the number of traffic fatalities and serious injuries on all roadways in the state. The CHSP was designed to address the state's crash problems by focusing on the number of lives lost rather than the fatal crash rate. The goal is to reduce the number of traffic fatalities to 500 or less per year by 2008, down from approximately 650 fatalities per year currently, and ultimately moving toward zero deaths.

The Minnesota Plan is based on the comprehensive, data-driven and collaborative approach to safety used by the American Association of State Highway and Transportation Officials (AASHTO) in developing its Strategic Highway Plan. The National Cooperative Highway Research Program (NCHRP) *Series 500 Implementation Guides* were also used as a resource for information on key safety issues and countermeasures. The CHSP includes the "4 Es" of highway safety—engineering, education, enforcement and emergency medical services. The plan addresses traffic safety both proactively and reactively by reaching out and coordinating with the state's safety partners, and addressing local roadway system safety needs.



The CHSP created a new focus on providing local agencies with funding, training and technical assistance in order to reduce the more than 45 percent of fatal crashes that occur on local roadways. The CHSP *Safety Toolbox* was developed for this purpose and is a companion document to the CHSP, providing local agencies guidance in developing, prioritizing and implementing safety strategies in their jurisdictions.



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Winner





# Missouri

## Blueprint for Safer Roadways Missouri Department of Transportation



In response to an alarming 2,400+ fatalities in traffic crashes and 142,000 injuries in Missouri over the past two years, safety advocates, organizations and agencies across the state joined together to create *Missouri's Blueprint for Safer Roadways*. The Blueprint outlines strategies to reduce fatal and serious injuries on the state's roadways with a goal of 1,000 or fewer fatalities by 2008, which represents an ambitious 18.8 percent decrease over 2003 data.

The Missouri Coalition for Roadway Safety is charged with leading the statewide implementation of the Blueprint. This group represents efforts among state and local agencies, law enforcement, planning organizations, non-profit organizations and other safety advocates throughout the state. The Blueprint will serve as an umbrella guide to increase coordination, communication and cooperation among safety advocates throughout the state to successfully reduce serious motor-vehicle crash injuries and deaths.

Missouri identified eight essential strategies toward making significant progress, including but not limited to passing a primary safety belt law, increasing enforcement, improving public education, expanding safety measures such as rumble strips and barriers, and improving roadways to provide shoulders and clear areas to allow drivers more recovery time.



Since the development of the *Missouri Blueprint for Safer Roadways*, the coalition has grown and expanded to form committees that address specific target areas such as driving while intoxicated, implementation, judicial, legislative and public information and education.

In addition, ten regional safety coalitions were formed to focus on crash problems associated with their local geographic area through crash data analysis. Each regional committee developed plans, submitted applications for funding and received allocation for funding through the coalition's implementation and executive committees. Regional safety coalitions are working in partnership with representatives from engineering, education, enforcement, and emergency medical services to implement strategies and target local problems.

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*Winner*

# Pennsylvania

## Problem Specific Policing/PROphesy Pennsylvania State Police



*P*roblem specific policing is an incident analysis and police management process built on the premise that the police can proactively prevent traffic crashes by using real-time data to make informed decisions and respond appropriately. It is the driving force to transition from a reactive mindset to one that embraces proactive policing. By using predictive risk-assessment to target specific problems, personnel are now assigned on an as needed basis rather than the traditional idea of high-visibility police omnipresence as a visual deterrent.

In recent years, Pennsylvania State Police acquired an automated geospatial software application called PROphesy, which enables personnel to geographically display crash data on detailed maps of Pennsylvania and pinpoint trouble spots by time of day, day of week and location. The application uses global positioning system (GPS) capabilities to instantly identify and map individual crashes, and utilizes an Incident Classification System to further specify the type of crash that has occurred.

A review of 2002 crash data revealed 744 fatal crashes throughout the Commonwealth of Pennsylvania. PROphesy was instituted May 1, 2003. Upon review of 2004 data, it was determined that fatal crashes had decreased to 689, nearly a seven percent reduction in less than two years.



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*Winner*





# California

## Run Off Road Task Force CALTRANS



Pursuant to the emphasis areas posed by the American Association of State Highway and Transportation Officials (AASHTO) *Strategic Highway Safety Plan* in 1998, the California Department of Transportation (Caltrans) assembled a task force to develop a set of criteria that would more effectively utilize safety data for identifying Run Off Road (ROR) collision concentrations on the state's highways and subsequently assist in prioritizing safety improvements. While highway locations with high collision concentrations are routinely identified by the Caltrans Traffic Safety Program, this particular approach was intended to take additional proactive steps through the identification of repeated ROR sites or longer segments that would not have otherwise been identified.

The task force was successful in the development of a process to monitor the more severe ROR collisions resulting in death or injury. The process is also intended to result in a prioritized list of high-collision concentration locations. Selected locations are investigated at the regional or district level and the improvement types are identified. The ROR task force process will then recommend several low cost improvements -- including rumble strips, guard rails and end treatments -- to reduce the number and severity of roadway departures. Once a repair strategy is chosen, a cost-benefit analysis is used to prioritize the site relative to similar locations.



The task force has also gone one step further by developing guidelines for using its ROR process. This new and useful tool can now be used to identify concentrations of roadway departure collisions and appropriate countermeasures throughout California.



### CONTACT

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*Honorable Mention*

# Ohio

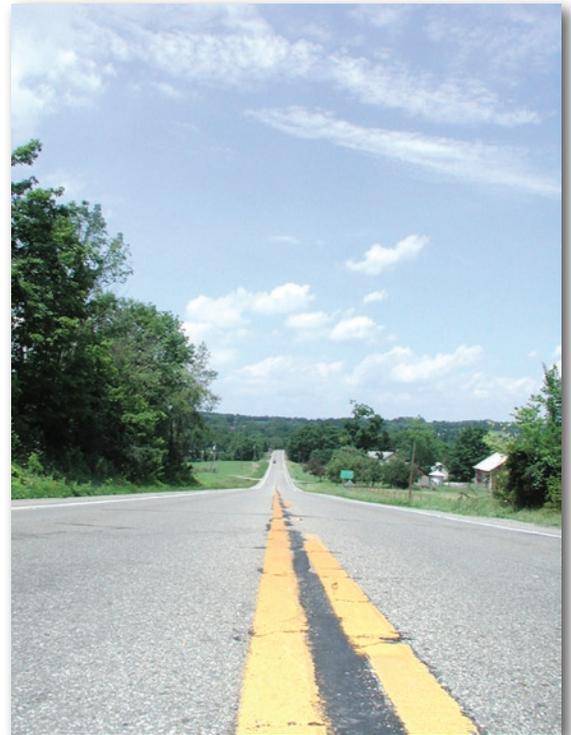
## New Highway Safety Program Ohio Department of Transportation



In 2003, the Ohio Department of Transportation (ODOT) began revitalizing its highway safety efforts to diversify programs, collect real-time data, and work across jurisdictional boundaries to implement solutions quickly that can reduce fatalities and crashes. To support this, ODOT doubled its funding for improving high-crash locations from \$30M to \$60M annually.

These changes are showing results: in 2003, Ohio had the second largest national decrease in fatalities, dropping from 1,418 in 2002 to 1,277 in 2003. In 2004, fatalities were 1,285, well below the national rate of 1.48 fatalities per motor vehicle miles traveled.

The new safety program places greater emphasis on timely crash data to identify emerging trends that can be addressed quickly. Annually, ODOT studies and addresses hundreds of locations, including the top 200 freeway and 50 non-freeway high-crash locations. The department addresses “hot spots” where crashes exceed set thresholds and congested locations statewide. ODOT also works with highway maintenance forces to improve basic highway maintenance, especially on high crash routes. Through the collaborative effort, Ohio has reduced guardrail deficiencies by 75 percent, signing deficiencies by 67 percent, shoulder drop-offs by 88 percent and pavement marking deficiencies by 55 percent. ODOT is also working with local governments, businesses and others to develop a comprehensive highway safety plan for the State.



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*Honorable Mention*



*Thanks to our  
Blue Ribbon Panel of Judges*



*Left to Right: Anthony Giancola, Executive Director, National Association of County Engineers; Ken Kobetsky, Program Director for Engineering, American Association of State Highway and Transportation Officials; Barbara Harsha, Executive Director, Governors Highway Safety Association; Phil Caruso, Deputy Director, Institute of Transportation Engineers, and Gregory Cohen, Executive Director, Roadway Safety Foundation.*

*A Special Thanks to our technical review panel.*

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U.S. Department  
of Transportation

**Federal Highway  
Administration**

