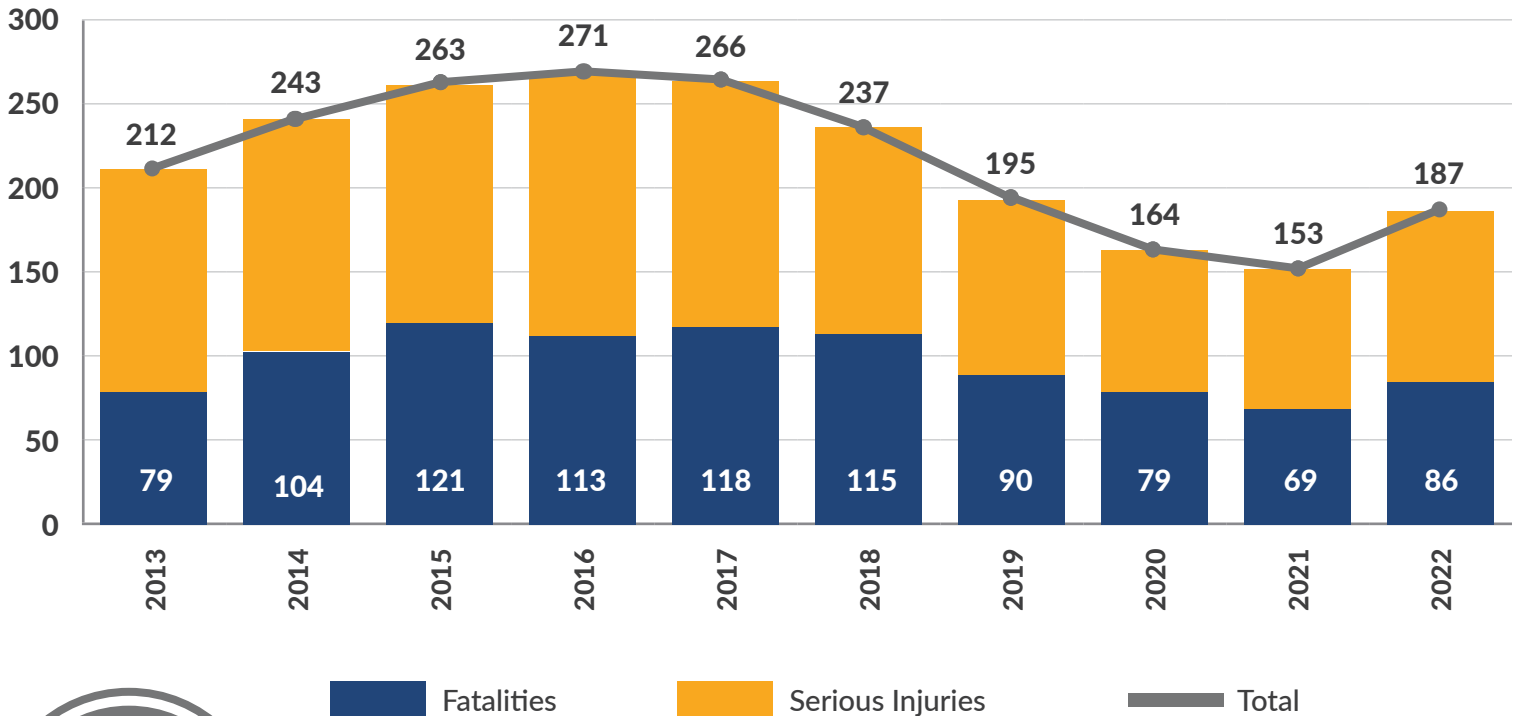


EMPHASIS AREA DEFINITION

Tribal Land crashes occur within Tribal Lands.



HIGHLIGHTS

10%

of total fatalities
occur on Tribal
Lands.*

The proportion of fatal crashes compared
to all crashes on Tribal Lands is

4X GREATER

than the statewide average.*

*Data taken from 2013-2022, crashes may overlap with other Emphasis Areas

STRATEGIES

ID	STRATEGY	TIMEFRAME	COST/ EFFORT
 SAFE ROADS			
TL.1A*	Keep vehicles in their lane.	Medium term	Medium
TL.1B	Improve recovery area.	Long term	High
TL.1C	Minimize roadside object crash severity.	Long term	High
TL.1D	Separate animals from vehicles using space.	Long Term	Medium
TL.1E	Simplify roadway environment.	Medium Term	Medium
 SAFE ROAD USERS			
TL.2A*	Promote seat belt education program.	Short term	Low
TL.2B	Promote impairment and aggressive driving enforcement and education programs	Short term	Medium
TL.2C	Support increased safety education and testing for all road users.	Medium term	Low
TL.2D	Support, through the provision of information, laws and agency policies that promote safety.	Medium term	Low
TL.2E*	Conduct high-visibility enforcement at intersections.	Short Term	Medium
TL.2F	Collaborate with stakeholders to develop positive social-norming public information media campaigns.	Medium term	Medium
 SAFE SPEEDS			
TL.3A	Improve driver awareness of appropriate speeds.	Short term	Medium
TL.3B*	Increased automated/mobile enforcement of speeds.	Short term	Medium
 SAFE VEHICLES			
TL.4A	Support vehicle systems that discourage impaired driving.	Short term	Low
TL.4B	Support vehicle systems that discourage distracted/drowsy driving.	Short term	Low
TL.4C	Collaborate with private stakeholders on traffic safety initiatives.	Medium term	Low
TL.4D	Support increased vehicle inspections.	Medium term	Low
 POST-CRASH CARE			
TL.5A*	Promote safety at crash scenes.	Short term	Medium
TL.5B	Support improvements in communication options in rural areas.	Long term	Medium
TL.5C	Improve Tribal crash data collection and sharing.	Short term	Low

*High Priority Strategy

STRATEGY EXAMPLES

KEEP VEHICLES IN THEIR LANE

Develop infrastructure projects that aim to keep vehicles in their lane and on the road.

Pavement design features that can reduce lane departure include:

- » Edgeline pavement markings
- » Wider pavement markings
- » Rumble strips (edgeline, centerline)
- » High friction surfaces

Roadway design features may include:

- » Guardrail
- » Cable barrier
- » Curbs

Priority locations may include those that experience wet weather, narrow shoulders, steep side slopes, curvature, and mountainous terrain. Ongoing maintenance of these design elements is important to maintain effectiveness.

Rumble Strips



Source: FHWA

Guardrail



Source: ADOT

IMPROVE RECOVERY AREA

Develop infrastructure projects that improve the vehicle recovery area along roadways to reduce the severity of a crash in the event that a vehicle leaves the lane. Pavement design features include:

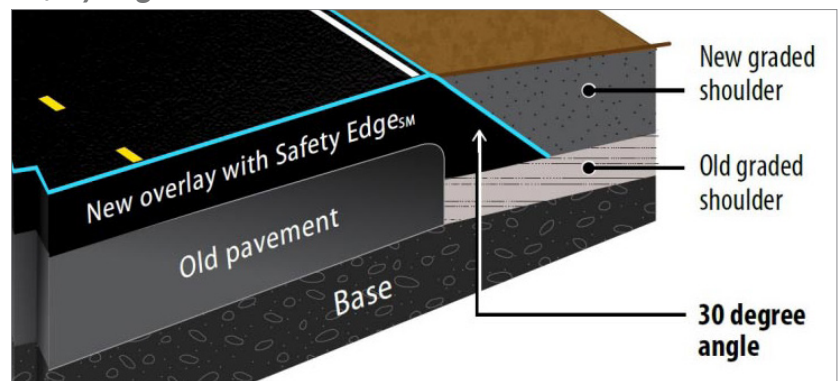
- » Wider shoulders to increase buffer area
- » Pavement safety edge to allow drivers an opportunity to recover

Roadside design features include:

- » Slope flattening to reduce rollovers
- » Removing obstacles within the clearzone

Ongoing maintenance of the clear zone is important to ensure an unobstructed, traversable area.

Safety Edge



Source: FHWA

MINIMIZE ROADSIDE OBJECT CRASH SEVERITY

Develop infrastructure projects that minimize the impact of collisions with roadside objects. This includes roadside design features that dissipate or reduce impact forces and redirect vehicles such as:

- » Breakaway bases and technology
- » Longitudinal barriers such as guardrail, concrete and cables
- » Barrier terminals

Cable Barriers



Source: NVDOT

SEPARATE ANIMALS FROM VEHICLES USING SPACE

Develop infrastructure projects that provide separation of animals from vehicular traffic, especially at locations with a high observation of animal crossings and/or reported crashes.

Lower cost projects may include:

- » Fencing
- » Cattleguard
- » Animal warning signs

For locations with high risks due to higher posted speeds and/or higher levels of wildlife activity, grade-separated wildlife crossings (underpass/overpass) may be used.

Wildlife Warning Sign



Source: ADOT

SIMPLIFY ROADWAY ENVIRONMENT

Minimize visual distractions within the roadway prism particularly at decision points and/or reduce the number of decision required by the driver.

- » Reduce distractions such as sign clutter or excess pavement markings
- » Provide physical emphasis for decision points to positively reinforce a user's intent

Examples:

- Channelization
- Turn lanes
- Separated bicycle lanes

Channelized Intersection



Source: PEDSafe

PROMOTE SEAT BELT EDUCATION PROGRAM

Provide data and input that supports the need for seatbelt use. Readily available statistics at the national, state, and Tribal-level regarding the relationship between crash severity and occupant protection can be presented to elected officials to increase awareness.

Distribution can be done:

- » Online
- » Promoted on social media
- » Presented to community groups

Tribal education campaigns can be developed utilizing the same data and in Tribal languages where appropriate.

Click It or Ticket Sign



Source: NHTSA

PROMOTE IMPAIRMENT AND AGGRESSIVE DRIVING ENFORCEMENT AND EDUCATION PROGRAMS

Utilize existing data and statistics regarding impairment and aggressive driving to refine enforcement locations and tactics. Increase enforcement visibility and promote awareness using media platforms.

Distribution can be done:

- » Online
- » Promoted on social media
- » Presented to community groups

Tribal education campaigns can be developed utilizing the same data and in Tribal languages where appropriate.

Police Car



Source: AdobeStock

SUPPORT INCREASED SAFETY EDUCATION AND TESTING FOR ALL ROAD USERS

Provide data and input that supports the need for increased safety education and testing within the younger and older age brackets.

Readily available statistics at the national and state levels regarding the relationship between crash severity and road user age can be presented to elected officials to increase awareness and offer support to new initiatives such as:

- » Graduated drivers' licenses
- » Renewal requirements
- » Traveler safety education in schools

Teen Driver Safety



Source: NHTSA

SUPPORT, THROUGH THE PROVISION OF INFORMATION, LAWS AND AGENCY POLICIES THAT PROMOTE SAFETY

Provide data and input that supports proposed new and/or revised laws and policies that promote safety. Readily available statistics at the national, state, and Tribal levels regarding the relationship between crash severity and human behavior can be presented to increase awareness and offer support to new initiatives.

CONDUCT HIGH-VISIBILITY ENFORCEMENT AT INTERSECTIONS

Conduct at locations with a high number of violations or crash patterns. The purpose of high-visibility enforcement is to educate the public on existing laws and increase long term voluntary compliance. Utilize automated systems where feasible to reduce the need for resources and increase the efficiency of the effort. Utilize mobile systems where feasible to target more areas and increase the efficacy of the effort.

Enforcement activities:

- » Red-light-running
- » Failure to yield to VRUs in the crosswalk
- » Distracted/aggressive driving.



Source: Governors Highway Safety Association



Source: Oro Valley Police

COLLABORATE WITH STAKEHOLDERS TO DEVELOP POSITIVE SOCIAL-NORMING PUBLIC INFORMATION MEDIA CAMPAIGNS

Develop media campaigns that focus on positive social-norming around traffic safety. Positive social-norming uses existing data to highlight positive norms already existent in populations to reduce commonly held misconceptions that contribute to risky behavior.

Media campaigns can be created to support a wide variety of measures including;

- » Behaviors
- » Attitudes
- » Support for policy

Statewide, regional, and Tribal efforts can be combined to reach larger audiences and increase efficiency of resources.



Source: AdobeStock

IMPROVE DRIVER AWARENESS OF APPROPRIATE SPEEDS

Increase awareness of appropriate speeds through the use of high-visibility feedback systems. These systems provide drivers additional information beyond static posted speed limits by utilizing real-time, variable feedback. Examples include:

- » Variable speed limits that can change based on environmental conditions
- » Speed feedback systems that provide awareness/warning of actual user speeds compared to limit

These devices should be accompanied by increased enforcement to encourage driver compliance.

Variable Speed Sign



Source: WSDOT

Speed Feedback Sign



Source: Iowa DOT

INCREASE AUTOMATED/MOBILE ENFORCEMENT OF SPEEDS

Utilizing existing data and statistics regarding speeding to refine enforcement locations and tactics.

- » Utilize automated systems where feasible to reduce the need for resources and increase the efficiency of the effort.
- » Utilize mobile systems where feasible to target more areas and increase the efficacy of the effort.

Priority should be given to locations with a high number of speed violations or fatalities and serious injuries.

Red Light Camera



SUPPORT VEHICLE SYSTEMS THAT DISCOURAGE IMPAIRED DRIVING

Provide the automotive industry and state legislature existing data regarding the relationship between crash frequency and severity and driver impairment.

Offer support to potential new equipment and design initiatives such as mandatory impaired driving prevention technology on all new passenger motor vehicles

SUPPORT VEHICLE SYSTEMS THAT DISCOURAGE DISTRACTED/DROWSY DRIVING

Provide the automotive industry and state legislature existing data regarding the relationship between crash frequency and severity and distracted driving/fatigue. Offer support to potential new equipment and design initiatives such as drowsy driving detection systems that use a combination of sensors and algorithms to identify signs of drowsiness.

COLLABORATE WITH PRIVATE STAKEHOLDERS ON TRAFFIC SAFETY INITIATIVES

Collaborate with private stakeholders on traffic safety initiatives related to vehicle improvements and operations. Potential partnerships can include fleet/owner operators who oversee large numbers of businesses vehicles and insurance agencies who manage risk-based policies.

SUPPORT INCREASED VEHICLE INSPECTIONS

Provide data and input that supports the need for new and/or revised laws and policies that promote vehicle safety inspection. Arizona currently requires safety inspections on commercial vehicles but not passenger vehicles. Determine appropriate level of inspection based on other state practices that require passenger vehicles to undergo inspection on an annual or biennial cycle or when sold/transfer ownership.

TRIBAL LANDS

PROMOTE SAFETY AT CRASH SCENES

Promote traffic safety at crash scenes through internal training on traffic incident management (TIM), incident command system (ICS), and other topics to law enforcement, first responders, and other public agencies. Provide public education on the need for safety around active crash scenes and the importance of responder safety. Educate on supporting initiatives such as “Move Over” law and clearing roadway with minor crashes.

Promote stop-the-bleed and CPR training for all motorists and bystanders so they can render emergency care at crash scenes as needed until emergency responders arrive. Support training of emergency medical care technicians and job placement in rural and medically underserved areas.

Move Over AZ



Source: NHTSA

SUPPORT IMPROVEMENTS IN COMMUNICATION OPTIONS IN RURAL AREAS

Support private industry efforts to increase broadband and cellular communication in rural areas particularly those that improve reliability along major transportation corridors. Agencies can implement policies, permit processes, and projects to support the expansion of services to underserved areas. Partnerships may include leveraging Arizona’s broadband activities under the Arizona Commerce Authority. In rural and/or mountainous locations where there is little to no cell reception, roadside call boxes may support emergency response.

Broadband Tower



Source: AdobeStock

IMPROVE TRIBAL CRASH DATA COLLECTION AND SHARING

Improve crash data collection at the scene of incidents on Tribal lands to ensure accurate and complete safety data. Crash data collection should follow the state’s crash record form, ideally in electronic format, to facilitate efficiency in transmittal to the statewide crash database. Crash narratives should provide a descriptive account of the crash with details not explicitly within the form. Improve incident EMS and trauma registry data collection, maintenance, and enhancement of related databases. Data can consist of public agency data as well as third-party private data aggregation

STRATEGY RESOURCES

FHWA – Safety Resources		https://highways.dot.gov/safety
Proven Safety Countermeasures		https://highways.dot.gov/safety/proven-safety-countermeasures
Zero Death Resources		https://highways.dot.gov/safety/zero-deaths/resources
Intersection Safety Resources		https://highways.dot.gov/safety/intersection-safety/resources
Safe System Intersections		https://highways.dot.gov/safety/intersection-safety/safe-system-intersections
Transportation Safety Planning		https://highways.dot.gov/safety/other/transportation-safety-planning-tsp
Intersection Control Evaluation		https://highways.dot.gov/safety/intersection-safety/ice
Bicycle and Pedestrian Safety		https://highways.dot.gov/safety/pedestrian-bicyclist
Local & Rural Safety		https://highways.dot.gov/safety/local-rural/training-tools-guidance-and-countermeasures-locals-practitioners
Speed Management Safety		https://highways.dot.gov/safety/speed-management/reference-materials
Roadway Departure Safety		https://highways.dot.gov/safety/RwD
NHTSA – Safety Resources		https://www.nhtsa.gov/
Risky Driving		https://www.nhtsa.gov/risky-driving
Vehicle Safety		https://www.nhtsa.gov/vehicle-safety
Road Safety		https://www.nhtsa.gov/road-safety
Other Resources		
Arizona–Move Over AZ		https://moveoveraz.org/
BIKESAFE–Bicycle Safety		http://www.pedbikesafe.org/BIKESAFE/countermeasures.cfm
FHWA - Bicycle and Pedestrian Program		https://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/
GHSA – Speed and Red Light Cameras		https://www.ghsa.org/issues/speed-and-red-light-cameras
IIHS – Highway Loss Data Institute		https://www.iihs.org/
MAG – See Me AZ		https://azmag.gov/Programs/Transportation/Safety-Programs/See-Me-AZ
PEDSAFE–Pedestrian Safety		http://www.pedbikesafe.org/PEDSAFE/countermeasures.cfm
TZD–Marketing & Communications Toward Zero deaths		https://www.towardzerodeaths.org/marketing-communications/#plans
USDOT – Preparing for the future of transportation		https://www.transportation.gov/AV
USDOT – Traffic Safety Marketing		https://www.trafficsafetymarketing.gov/