

XVIII. Safety Programs

Overview. Every year, more than 30,000 motorists die¹ and almost 3,000,000 are injured on roadways in the United States. Fatalities and injuries resulting from motor vehicle crashes are a particular concern within Indian Country. Between 1975 and 2002, the number of fatal crashes on Indian reservations increased more than 50 percent, while the number of fatal crashes in the Nation declined 2 percent.

American Indians suffer far more from motor vehicle related deaths and injuries than would be expected, given their proportion of the population. In general, Native Americans have the highest risk of motor vehicle related deaths of all ethnic groups.² Motor vehicle crashes are the leading cause of death for Native Americans ages 4 to 44. Beyond motor vehicle deaths, other transportation modes such as maritime travel or snow machine use contribute significantly to the transportation safety problem in many tribal communities.

The rest of this chapter is broken into two sections. First, a number of proven strategies are described in the “Tools and Resources” section. Next an overview of available funding programs is provided.

A. Tools and Resources

Several successful strategies are commonly used to evaluate and address transportation safety issues. In addition, some specific initiatives have begun to be implemented in Indian Country. The following is a brief description of the major tools and resources available to address transportation safety issues in Indian Country.

1. Transportation Safety Plans

Tribal Transportation Safety Plans are a tool intended to identify and address those risk factors within a geographical area that are associated with transportation and have a potential of leading to serious injury or death. Safety Plans also organize the efforts of a variety of entities to more effectively reduce risk. Safety Plans can cover multiple transportation modes (roads, maritime, trails, air travel, and others). Safety plans may lead to implementation of a project or program, renewed efforts in an existing program, or further study of a roadway section (such as an engineering study or Road Safety Audit).

A Safety Plan should not be developed with a focus on one particular funding source. Rather, a plan should demonstrate the safety concerns in a community and the strategies that could effectively address those concerns. To the greatest extent possible the concerns demonstrated by a safety plan should be selected based on incident history (data). This allows funding entities to understand the needs and may even compel the funding of the community’s needs.

¹ Source: NHTSA Fatality Analysis Reporting System, <http://www-fars.nhtsa.dot.gov/Main/index.aspx>

² Fatal Motor Vehicle Crashes on Indian Reservation 1975-2002 NCSA, April 2004

The following six step process is one method for arriving at a comprehensive and strategic Tribal Transportation Safety Plan.

Step 1. Identify the Author

The plan author needs to have the ability to obtain the participation of a wide array of safety partners, assign tasks, and document the outcomes. In many situations the author of a Transportation Safety Plan may be the tribe's Transportation Director. In some cases a private consultant, the Tribal Technical Assistance Program, or a federal agency may act as a co-author.

Step 2. Identify Safety Partners

Approaching safety using a collaborative approach across many disciplines is proven as an effective strategy for safety planning. Some initial safety partnerships to consider are with administration (such as Tribal Council), enforcement, emergency medical services (fire, search and rescue, clinics), educators, behavioral specialists, engineers, planners, community special interest groups, and in some cases the public. Where appropriate, partnerships should seek to include the Tribe, City, County, Borough, State, and/or federal agencies. When making initial contact on the topic of developing safety plans, the following topics may be discussed:

- Is the partner interested in a comprehensive transportation safety plan?
- What data sources does the partner know about or maintain?
- Are there additional agencies that this partner would recommend which you have not identified?
- Would this partner commit to attending a community safety summit?

Step 3. Public Involvement

Public Input can be a critical element of identifying safety needs. Often the traveling public can point to near misses or unreported incidents that would never show up in traditional data sets. Public input is an especially critical tool in communities where formal data sets are known to be incomplete or missing.

Step 4. Data Collection and Summarization

Communities that have successfully used transportation safety plans in the past usually point to data based decision making as the key to success. Preparing a summary of the available data prior to a safety planning meeting with the partners allows the summit to be fact based more than opinion based. A summary of incident data should consider both behavioral factors (speeding, impairment, age, etc.) and tangible factors (location, road feature, weather conditions, crash type, etc.)

Incident data always exists. In some communities incident data may look very different than in others. Some potential sources of incident data include:

- Formal police crash reports or incident reports
- Ambulance run reports, clinic records, or search & rescue logs
- City/county complaint registers
- Public input

Step 5. Safety Planning Forum

A Safety Planning Forum gives identified partners a chance to collaboratively develop a safety plan. The forum should include the following topics:

- Review Existing Efforts

- Summary of Available Data
- Identify top risks
- Assign champion to each top risk. Task champion with researching countermeasures and leading implementation.
- Discuss the establishment of a regular safety management system committee to discuss progress and update the plan as needed.

Step 6. Writing the Safety Plan

The final safety plan document should include a summary of the safety plan development process used, a list of the top risks identified and priority initiatives to address the top risks. The document length should be between 2 to 4 pages plus addendums. The following is a sample outline of topics that may be included in the safety plan.

- A. Introduction describing the intent of the plan
- B. List of partners
- C. Brief summary of data analysis
- D. Existing Activities
- E. Top Risk Areas (a.k.a. Emphasis Areas)
 - a. Description of Risk
 - b. Strategies to address risk
 - c. Safety Champion overseeing implementation
 - d. Next step(s) in implementation

References and Resources

- Developing Safety Plans – A Manual for Local Rural Road Owners, FHWA, March 2012, http://safety.fhwa.dot.gov/local_rural/training/fhwasa12017/
- TTAP Centers, <http://www.ltap.org/centers/>
- Sample Completed Tribal Safety Plans, <http://flh.fhwa.dot.gov/programs/irr/safety/sms.htm#plans>

2. Road Safety Audits or Reviews (RSA/RSARs)

A Road Safety Audit is a formal evaluation of a roadway section by an independent, multi-disciplinary team to identify specific recommendations for a section of roadway. The RSA team should be independent from everyday operations of the facility being studied to avoid biases. The most effective RSA teams will consist of a variety of professional disciplines, including engineering, enforcement, and emergency medical services. An RSA team identifies risks using many different information sources such as crash data, maintenance logs, interviews of roadway authorities, public testimony, and multiple field observations before making recommendations. Many Tribal Governments have utilized the RSA program to assist them in determining roadway deficiencies, maintenance issues and to help in the planning for future work and needs. Assistance in coordinating and setting up an RSA is available from the TTAP Centers, Federal Lands, and consultants, and may be available through the state department of transportation.

References and Resources

- FHWA Office of Safety - RSA webpage, <http://safety.fhwa.dot.gov/rsa/>
- Road Safety Audits Peer to Peer Program, <http://safety.fhwa.dot.gov/rsa/resources/p2p/brochure/>
- Road Safety Audits video, <http://safety.fhwa.dot.gov/rsa/video2009/>

- Federal and Tribal Lands Road Safety Audits: Case Studies, <http://safety.fhwa.dot.gov/rsa/resources/casestudiesflh/>

3. Traffic Engineering Safety Study

When a safety problem is known to be related to the engineering of a facility, a traffic engineering safety study may be effective. An engineering study involves an in depth review of a facility by a tribal, municipal, or private engineer with knowledge of traffic engineering to determine roadway features that are contributing to poor safety performance on a facility. Engineering studies may include a review of items such as sight distance, traffic control device operation and placement, posted speed limits, or roadway alignment.

References and Resources

- Sample Traffic Engineering Safety Study from Oglala Sioux.
- Hydaburg Highway Engineering Safety
- Highway Safety Manual Implementation by Chehalis Tribe
- “Mini-RSA” Engineering Study by Stillaguamish

Safety Data Collection

A key component to effective transportation safety efforts is an incident database. The first step to improving transportation safety in your community may be the establishment of incident databases or developing partnerships with agencies that are already collecting data (such as the State DOT).

4. Sign Maintenance and Nighttime Visibility Assessments (Retroreflectivity)

About half of traffic fatalities occur at night, although only about one quarter of travel occurs after dark. Although intoxication and fatigue contribute to the high rate of nighttime crashes, nighttime driving is inherently hazardous because of decreased driver visibility.

Adequately maintained retroreflective signs and pavement markings improve highway safety and prevent roadway departure crashes by making the signs and markings appear brighter and easier to see and read. Because the retroreflective properties of traffic control devices deteriorate over time, highway agencies need to actively manage the maintenance of signs and pavement markings in order to ensure that they are clearly visible at night.

Roadway lighting is another means to increase visibility for drivers and other roadway users. Properly designed roadway lighting allows road users to quickly assess roadway conditions and creates a safe environment within the roadway vicinity.

More information is available on the FHWA retroreflectivity links below in the areas of:

- [Regulations / Standards](#)
- [Technical Guidance](#)
- [Implementation Tools](#) **NEW!**
- [Frequently Asked Questions](#)
- [Funding Assistance](#)
- [Research](#)

The current edition of the Manual on Uniform Traffic Control Devices (MUTCD) contains a standard that requires agencies to implement a method to maintain sign retroreflectivity above prescribed minimum levels. In addition, several methods were identified that agencies can use to meet that requirement. An example method was a pilot assistance program, conducted in partnership with FHWA-FLHD and BIA, in Pendleton, Oregon for the Confederated Tribe of the Umatilla Indian Reservation (CTUIR). The program included a panel that reviewed the CTUIR's traffic sign situation, provided information on the available retroreflectivity maintenance methods and helped the tribe identify a method that is most effective given their resources and constraints. The CTUIR pilot is documented in the final report which can be found at:

<http://www.cflhd.gov/programs/techDevelopment/safety/SignRetroMaintUmatilla/documents/Sign-Retroreflectivity-Maintenance-Umatilla.pdf>

References and Resources

- FHWA Retroreflectivity, <http://www.fhwa.dot.gov/retro/>
- 2009 MUTCD Section 2A.08, <http://MUTCD.fhwa.dot.gov/>

5. Model HSIP project

The Office of Federal Lands Highways has funded a pilot initiative to improve transportation safety on Tribal lands. Their contractor, VHB Inc., is currently working with three Tribes to model the best way for Tribes to improve safety. From the Native Village of Loudon located in Galena, Alaska, to the Lummi Tribe located near Mt. Baker Washington, to the Wind River Indian Reservation in Wyoming, these diverse settings are assisting the project team to develop safety management training toolkits for Tribes.

After the pilots are complete, training toolkits will be available to Tribes to create their own unique Transportation Safety Management Plan. The training toolkits will be multidisciplinary and involve internal and external safety stakeholders who are involved in education, enforcement, engineering and emergency medical services (“the 4-Es”) to target high concentrations of death and injury. The training toolkits will assist Tribes and their partners to be locally-focused and prioritize programs and specific countermeasures to address local Tribal safety needs. It is anticipated the training toolkits will be ready for use in the Summer of 2013.

6. Safety Management System

To address the dire safety needs in Indian Country, FHWA and BIA have developed a Tribal Safety Management System (SMS) with assistance from the Tribes. This is documented in two separate plans, the Strategic Highway Safety Plan for Indian Lands and the Tribal SMS Implementation Plan. These plans, particularly the Implementation Plan, identify strategies that the federal government is undertaking with the Tribes to improve safety for travelers on Indian Lands. These plans can be found at the FHWA FLH TTP website.

References and Resources

- FHWA FLH TTP SMS website, <http://flh.fhwa.dot.gov/programs/ttp/safety/>

7. Other Safety Resources

Numerous other written resources are available. Some of the additional documents that may be of interest include:

- The Highway Safety Manual, AASHTO, <http://www.highwaysafetymanual.org>
- NCHRP 500 Reports, TRB, <http://www.trb.org/Main/Blurbs/152868.aspx>
- Crash Modification Factors Clearinghouse, <http://www.cmfclearinghouse.org/>
- Various resources available from the FHWA Office of Safety, <http://safety.fhwa.dot.gov/>
- TTAP Centers, <http://www.ltap.org/centers/>
- Email the FHWA Tribal Transportation Safety Engineers, TTPSF@dot.gov

8. Tribal Safety Thumb Drives

Tribal Safety Thumb Drives have been developed that have extensive information on Tribal Safety Summits that have been held, completed safety plans, federal and state safety programs, as well as much of the resource information that is included in this section. To request one or more of the thumb drives for your use or to provide to participants at an upcoming tribal safety conference, send an email to the FHWA Tribal Transportation Safety Engineers at:

TTPSF@dot.gov

E. Safety Funding Programs

This section includes a brief description of various safety programs that are administered by the FHWA and the National Highway Traffic Safety Administration (NHTSA). Additional funding programs may be available from state governments or other federal agencies. The programs represent multiple strategies—engineering, education, and enforcement—that collectively help reduce the number of motor vehicle related crash fatalities and injuries.

Tribes are encouraged to solicit information about these programs from state partners. The principals guiding these programs may help to develop higher Safety projects regardless of the funding source used. Tribal Governments are encouraged to use a Tribal Transportation Safety Plan to initiate conversations with State Governments.

1. Tribal Transportation Program Safety Funding (TTPSF)

Overview. MAP-21 provided a 2% set aside from the Tribal Transportation Program for Tribal Safety Efforts. As of this writing the details on implementation of that program have not been released. This program will be administered by the FHWA.

References and Resources

- MAP-21 Sec. 1119
- 23 USC Section 202(e)
- Federal Lands Highway, Tribal Transportation Program Website, <http://flh.fhwa.dot.gov/programs/ttp/>
- Contact the TTPSF Team, TTPSF@dot.gov

2. Highway Safety Improvement Program (HSIP)

Overview. This program is delivered through the FHWA by each state Department of Transportation. The HSIP emphasizes a data-driven, strategic approach to improving highway safety that focuses on results. Each state is required to develop and continually update a Strategic Highway Safety Plan (SHSP) as a part of implementing the HSIP. SHSP's are to be developed based on data analysis and in consultation with safety stakeholders including Tribal Governments (23 U.S.C. 148). Tribal Governments are encouraged to work with State Governments when the State SHSP is being developed since only projects and activities in the SHSP are eligible for HSIP funds.

References and Resources

- MAP-21 §1112
- Section 148 of Title 23 of the United State Code (23 U.S.C. 148)
- Section 924 of Title 23 of the Code of Federal Regulations (23 CFR 924)
- FHWA Office of Safety, HSIP Program, <http://safety.fhwa.dot.gov/hsip/>
- State Strategic Highway Safety Plans, http://safety.fhwa.dot.gov/hsip/shsp/state_links.cfm

3. High Risk Rural Roads Program (HRRRP)

Overview. The purpose of this program is to achieve a significant reduction in traffic fatalities and incapacitating injuries on rural major or minor collectors, and/or rural local roads. The HRRRP Program is a special set-aside that is only implemented in states that had an increase in rural fatalities during the most recent two-years of data. The states where HRRRP set asides will be implemented are re-assessed each year. This program is delivered through the Federal Highway Administration by each state Department of Transportation.

References and Resources

- 23 U.S.C. 148.
- FHWA HRRRP Memorandum, <http://safety.fhwa.dot.gov/safetealu/memos/memo051906.cfm>

4. Elimination of Hazards Relating to Railway-Highway Crossings

Guidelines/Procedures.

This program is a set aside from the HSIP. Funds are for the elimination of hazards and the installation of protective devices at railway-highway crossings. All public rail-highway crossing safety improvement projects meeting the eligibility description in 23 U.S.C. 130 are eligible. This program is delivered through the Federal Highway Administration by each state Department of Transportation.

References and Resources

- 23 USC 130
- 23 CFR 924
- FHWA Railway-Highway Crossing Program, <http://safety.fhwa.dot.gov/xings>

5. Safe Routes to School (Transportation Alternatives Program)

Under MAP-21 states have the option to fund Safe Routes to School (SRTS) projects as one of many options under the Transportation Alternatives Program. The purpose of the Safe Routes To School Program is to enable and encourage children to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development, and implementation of projects that will improve safety; and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

References and Resources

- MAP-21 §1122
- 23 USC 101, 206, 213
- SAFETEA-LU Section 1404 (This section is applicable if a State chooses to implement SRTS)
- FHWA Safe Routes to Schools Program, http://safety.fhwa.dot.gov/safetealu/fact_sheets/ftsht1404.cfm
- National Center for Safe Routes to School, www.saferoutesinfo.org

6. NHTSA Administered Program: State and Community Highway Safety Grant Program

Statutory/Regulatory Requirements

- Chapter 4 of 23 U.S.C §402 as amended by MAP-21 authorizes the State and Community Highway Safety formula grant program. The program is designed to reduce traffic crashes and resulting deaths, injuries, and property damage through State Highway Safety Programs.
- 23 CFR Part 1200.3 Definitions - *Governor's Representative for Highway Safety*...provides that an official appointed by the Governor will implement the State's highway safety program or, for the application of this part to Indian Country as provided in 23 U.S.C. 402(h), an official of the BIA or other DOI official who is duly designated by the Secretary of the Interior will implement the Indian highway safety program.
- 23 CFR Part 1200.3 Definitions – State ... for the application of this part to Indian Country as provided in 23 U.S.C. § 402(h), the Secretary of the Interior.

Guidelines/Procedures

- Funds specifically for Indian Country are administered by the DOI-BIA, Office of Justice Services, and the Indian Highway Safety Program (IHSP). Tribal Governments are also eligible for State and Community highway safety funds as provided for through the planning processes of various State Highway Safety Agencies.
- BIA IHSP is projected to receive approximately \$4.6 million annually for highway safety purposes under the MAP 21 authorization.
- 95 percent of the funds apportioned to the Secretary of the Interior under this section will be expended by Tribes to carry out highway safety programs within their jurisdictions.
- Traffic safety grants are awarded on an annual fiscal year basis. The deadline for submission of proposals each year is May 1st.

Role of Tribal Governments

- Only federally recognized Tribes can apply for these funds through the BIA's Indian Highway Safety Program.

References and Resources

- <https://www.federalregister.gov/articles/2013/01/23/2013-00682/uniform-procedures-for-state-highway-safety-grant-programs>

7. NHTSA Administered Program: State Traffic Safety Information System Improvement Grants Program**Statutory/Regulatory Requirements**

- Chapter 4 of 23 U.S.C §408 of SAFETEA-LU authorized the State Traffic Safety Information System Improvement Grants Program to encourage States to adopt and implement effective programs to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of State data needed to identify priorities for national, State, and local highway and traffic safety programs; to evaluate the effectiveness of efforts to make such improvements; to link these State data systems, including traffic records, with other data systems within the State; and to improve the compatibility of the State data system with national data systems and data systems of other States to enhance the ability to observe and analyze national trends in crash occurrences, rates, outcomes, and circumstances.
- Section 408 was rescinded under MAP-21. Funds will continue to be governed by the applicable implementing regulations at the time of grant award until all funds are expended.

Guidelines/Procedures

- These grant funds can only be used to implement data improvement programs.
- Section 408 funds received by the BIA on behalf of the Tribes are administered by the Office of Indian Highway Safety Program.

Role of Tribal Governments:

Tribes can only apply for these funds through the BIA's Office of Indian Highway Safety Program.