Highway Safety Improvement Program Manual

Nevada Department of Transportation

Traffic Safety Engineering Division

July 2020

1. INTRODUCTION

The Highway Safety Improvement Program (HSIP) is implemented by the Nevada Department of Transportation (NDOT) to fund projects that advance highway safety goals in Nevada.

1.1. HSIP Description

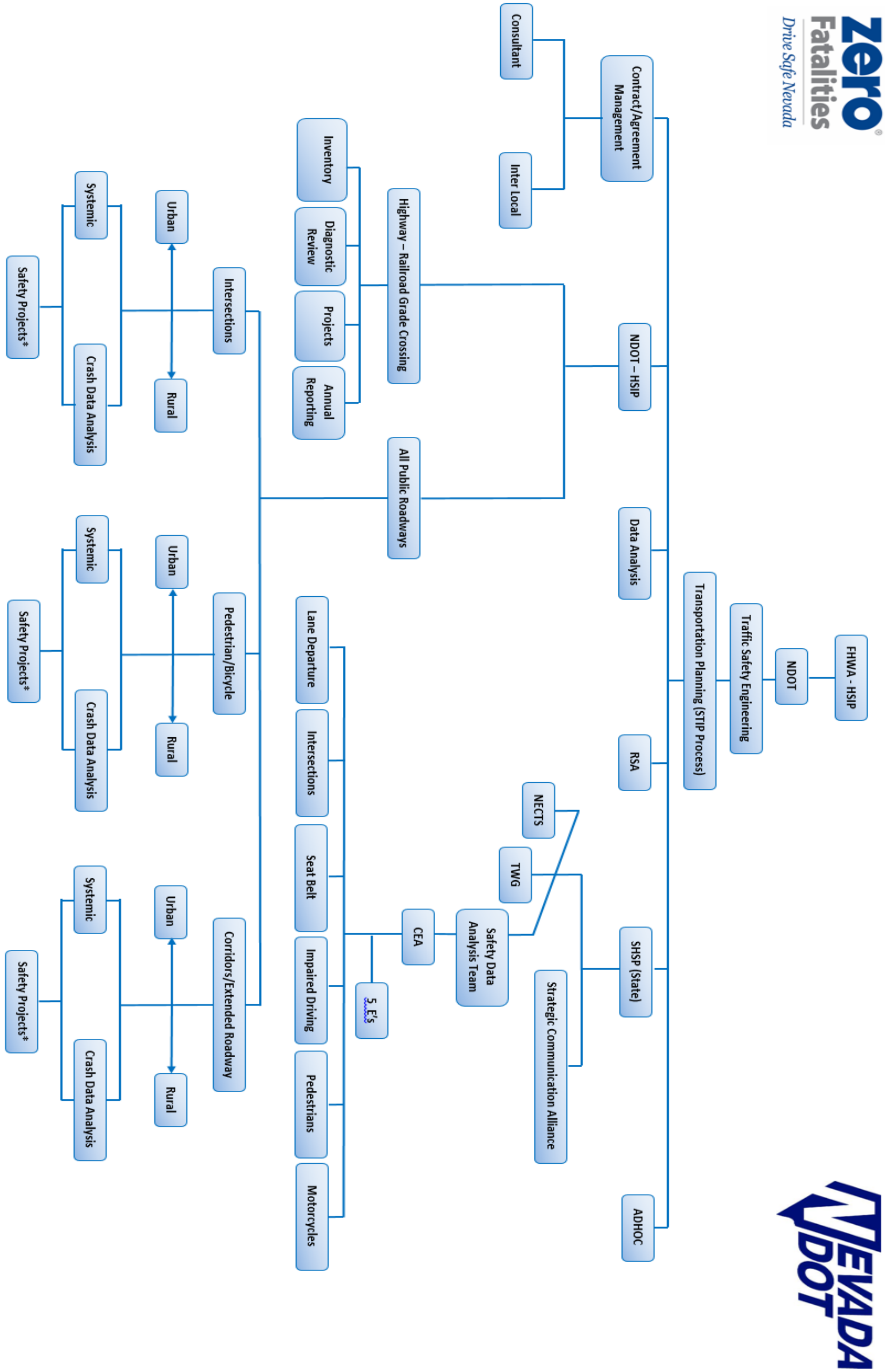
The Highway Safety Improvement Program is a core federal-aid program administered by the Federal Highway Association (FHWA). The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

The federal HSIP includes the following sub-programs:

- Highway Safety Improvement Program (State)
- Strategic Highway Safety Plan (SHSP)
- Road Safety Assessments (RSA)
- Data Analysis
- Railroad-Highway Crossings

The focus of this manual is the core HSIP and not the sub-programs. Each of these subcategories is covered in separate publications in more detail in the appendix. The flowchart depicting the HSIP Program is shown in Figure 1.

Figure 1- HSIP Flowchart



1.2. Purpose of the HSIP Manual

The purpose of this manual is to:

- Define the parameters of the HSIP
- Define the roles of different parties involved with this program
- Define and describe HSIP processes
- Provide readers with a solid understanding of how the HSIP is managed within the State of Nevada by NDOT

The manual is useful for the following audiences:

- NDOT employees and managers involved with HSIP processes
- NDOT consultants that are contracted to perform functions within HSIP processes
- Federal regulators (e.g. the FHWA), seeking to determine how NDOT is implementing the HSIP
- Local Public Agencies (LPAs) and Metropolitan Planning Organizations (MPOs)
- General public

This manual can be downloaded from the NDOT website by going to the following webpage: https://www.nevadadot.com/safety/highways-safety-improvement-program-hsip.

1.3. Manual Outline

This manual is organized into the chapters listed below. The appendix contains more detailed information about specific elements that readers may be interested in, but which are not included in the main chapters of the manual.

- Chapter 1: Introduction
- Chapter 2: Program Oversight Funding
- Chapter 3: Partners
- Chapter 4: Infrastructure Project Process
- Chapter 5: Non-Infrastructure Project Process
- Chapter 6: Reporting
- Appendix

Chapters 4 and 5 contain the bulk of the information that will be most useful to readers. A flowchart depicting the HSIP infrastructure process is shown in Figure 2. A separate flowchart depicts the non-infrastructure project process.

1.4. Safety Program Information Legal Protections

Under U.S. law (Section 23 USC 409), crash data is protected from use in a court of law. NDOT aggressively exercises its rights to keep crash data and associated HSIP program information out of courts of law. Section 23 USC 409 reads as follows:

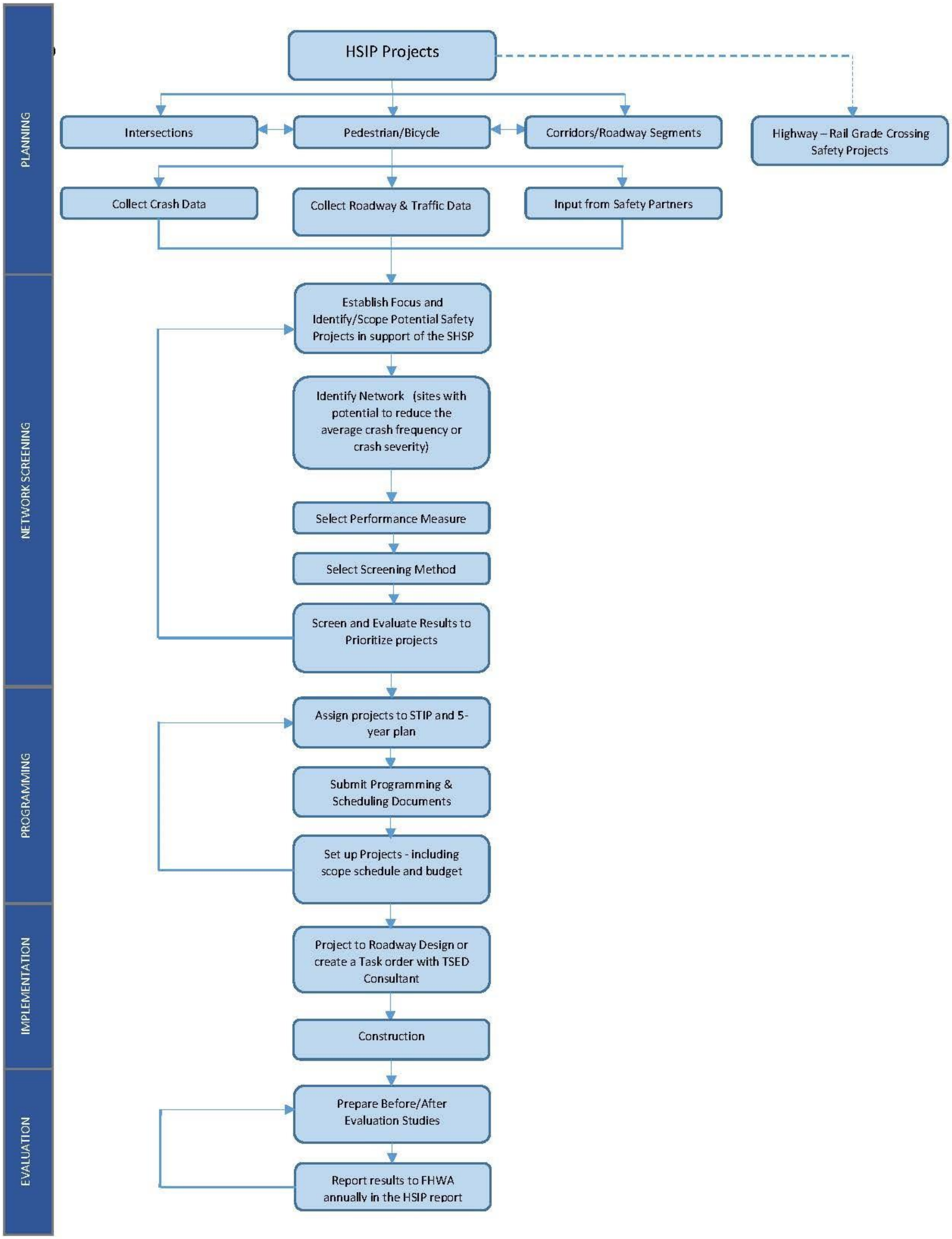
Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railroad highway crossings, pursuant to sections 130, 144, and 148 [152] of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

1.5. Acronyms

Many different acronyms are used throughout this manual. The following is a list of those acronyms and a description of what each of them stands for.

DOT…………….. US Department of Transportation
NDOT…………. Nevada Department of Transportation
TSE……………… Traffic Safety Engineering
FHWA…………. Federal Highway Administration
HSIP……………. Highway Safety Improvement Program
MPO……………. Metropolitan Planning Organization
LPA……………… Local Public Agency
OTS…………….. Office of Traffic Safety
PE………………… Professional Engineer
PM……………… Project Manager
MAP-21………. Moving Ahead for Progress in the 21st Century Act
FAST…………….Fixing America’s Surface Transportation Act
SHSP……………. Strategic Highway Safety Plan
23 USC ………… Title 23 United States Code
RE………………… Resident Engineer
SMP…………….. Safety Management Plan
TSED……………. Traffic Safety Engineering Design
HSM….…………Highway Safety Manual
FRA…………….. Federal Railroad Administration

Figure 2- HSIP Infrastructure Project Process



2. PROGRAM OVERSIGHT FUNDING

On December 4, 2015, President Obama signed into law the Fixing America's Surface Transportation Act, or "FAST Act" - the first Federal law in over ten years to provide long-term funding certainty for surface transportation. The FAST Act authorizes approximately $305 billion over fiscal years 2016 through 2020 for the Department's highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, research, technology and statistics programs. With its enactment, States and local governments may now move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a Federal partner over the long term.

Information about FAST is at this site: https://www.fhwa.dot.gov/fastact

2.1. HSIP

The goal of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

2.1.1. Federal Funding

Funded by contract authority from the Highway Account of the Highway Trust Fund. Funds are subject to the overall Federal-aid obligation limitation.

2.1.2. State Funding

NDOT’s Chief Traffic Safety Engineer oversees HSIP activities within Nevada. This person is responsible for setting the policies and procedures required to fulfill the federal HSIP mandate. NDOT uses its federal HSIP apportionment to pay for the following items:

- HSIP infrastructure projects
- Non-infrastructure needs, such as crash database development, which are important to furthering the HSIP goals
- Fees for consultants that perform specific supporting roles in the HSIP

NDOT provides feedback to the FHWA in the form of the annual HSIP Report. Annual HSIP report documents are described in Chapter 6, Reporting.

2.2. Strategic Highway Safety Plan (SHSP)

2.2.1 SHSP Goal

The goal of the SHSP is to reduce motor vehicle crashes and the resulting fatalities and serious injuries. This is accomplished by combining and sharing resources across disciplines and targeting efforts to the areas of greatest need. Nevada enlists state, local, and federal agencies; institutions; private-sector firms; and concerned citizens to help solve this problem.

2.2.2 SHSP Background

The Nevada SHSP was first adopted in 2006 and is updated every 5 years to address key Critical Emphasis Areas (CEA) where there were a relatively high number of fatalities and serious injuries. Current emphasis areas are:

- Impaired Driving
- Occupant Protection
- Pedestrians
- Intersections
- Lane Departure Crashes
- Motorcycles (added in 2015)
- Young Drivers (added in 2016)

Nevada adopted a Zero Fatality goal in 2010, consistent with the national Toward Zero Deaths concepts supported by the FHWA, the National Highway Traffic Safety Administration (NHTSA), Federal Motor Carrier Safety Administration (FMCSA), American Association of State Highway and Transportation Officials (AASHTO), and the Governors Highway Safety Association (GHSA). As part of reaching this target, each of the CEA teams adopted interim goals to reduce the number of fatalities and serious injuries associated with their respective CEA. These goals were based on a baseline five-year average set. The sixth CEA, Motorcycles, was created in 2015 to address the increase in motorcycle fatalities and serious injuries. Young Drivers was added in 2016 as the number of young drivers in crashes was noted to be overrepresented.

3. PARTNERS

The HSIP is a partnership between federal agencies, NDOT's Traffic Safety Engineering Division (TSE Division), NDOT District Offices, local agencies, consultants, and construction contractors. Each partner plays an important role in the success of this program. Chapter 3 describes the roles of these major partners.

3.1. Federal Highway Administration

It is FHWA's responsibility to manage the HSIP on the federal level. They work with state DOTs to implement the program. FHWA provides program implementation guidance on their website, which may be found at https://safety.fhwa.dot.gov/hsip/. Each fiscal year, NDOT must submit a Highway Safety Improvement Program report, as well as a Railway-Highways Crossing report (described in Chapter 4) to the FHWA Nevada Division office. The FHWA Nevada Division office reviews and then forwards the reports to the FHWA Office of Safety in Washington, DC. Contact information for the current Safety Program Manager in the FHWA Nevada Division is listed on the following page.

Juan M. Balbuena-Merle
Safety and Operations/ITS Engineer FHWA-Nevada Division
705 North Plaza Street, Suite 220
Carson City, NV 89701
(775) 687-8582
Juan.Balbuena@dot.gov

3.2. NDOT Traffic Safety Engineering Division

NDOT's TSE Division is responsible for the general implementation and oversight of NDOT's traffic safety programs, including the HSIP. Division staff perform multiple functions to facilitate the infrastructure and non-infrastructure processes described in Chapters 4 and 5. The TSE Division heads the HSIP implementation effort. The contact information for the current TSE Division Chief at the time of this writing is listed below. The organizational chart representing NDOT TSE staff is shown in Figure 3.

Fred Shakal, PE
Chief Traffic Safety Engineer
1263 S. Stewart Street
Carson City, NV 89712
(775) 888-7335
FShakal@dot.nv.gov

3.2.1. NDOT Traffic Safety Engineering Division, Highway Safety Improvement Program Manager

NDOT's TSE Division is responsible for the general implementation and oversight of all the HSIP and to facilitate the infrastructure processes. The Highway Safety Improvement Program Manager heads this implementation effort. The contact information for the person in this position at the time of this writing is listed below.

Lori Campbell
Highway Safety Improvement Program Manager
1263 South Stewart St.
Carson City, NV 89712
(775) 888-7462
LCampbell@dot.nv.gov

3.2.2. NDOT Traffic Safety Engineering Division, Railroad Traffic Safety Program Coordinator

The NDOT TSE Division is responsible for the general implementation and oversight of the Railway-Highway Grade Crossing Program. The Railroad Traffic Safety Program Coordinator heads this implementation effort. The contact information for the person in this position at the time of this writing is listed below.

Douglas Fromm
Railroad Traffic Safety Program Coordinator
1263 South Stewart St.
Carson City, NV 89712
(775) 888-7333
DFromm@dot.nv.gov

3.3. NDOT District Offices

The three NDOT district offices play a major role in the development and implementation of HSIP projects. Once projects are selected and funded in each region, the district offices assign Resident Engineers (REs), and implement them according to standard federal environmental, design, and construction processes.

Contact information for NDOT's District offices are available on the Internet at https://nevadadot.com/About_NDOT/Regional_Info/Regional_Information.aspx

3.4. Local Public Agencies

HSIP funds can be used for infrastructure improvements on any publicly owned roadway. If NDOT's TSE chooses to fund a project on a non-state road, the Local Public Agency with ownership of the right-of-way will be involved as a partner. This includes all MPOs, Regional Transportation Commission(RTCs), and tribes as well as local county and city transportation officials. NDOT TSE Division participates in county workshops to increase communication and create partnerships with local officials.

3.5. Consultants Contractors

The NDOT TSE Division and district offices may contract portions of HSIP projects (both infrastructure and non-infrastructure) to consultants and contractors. Infrastructure projects shall be constructed by private contractors chosen through standard NDOT procurement processes.

3.6. Safety Organizations

The TSE Division partners with numerous public safety agencies and organizations that are involved in roadway safety and support Nevada's goal of Zero Fatalities. These organizations' input is sought as programs are developed and implemented. Their insight is especially valuable for creating roadway safety education and enforcement campaigns. Below is a partial list of NDOT TSE Division's partners in Traffic Safety:

- Nevada Department of Public Safety
- Nevada Department of Motor Vehicles
- Nevada Department of Health and Human Services
- Nevada Department of Education
- Regional Transportation Commission of Southern Nevada
- Regional Transportation Commission of Washoe County
- Nevada Association of Counties
- Nevada Sheriffs' and Chiefs' Association
- Administrative Office of the Courts
- Nevada League of Cities
- Southern Nevada Health District
- Inter-Tribal Council of Nevada
- Federal Highway Administration
- Federal Motor Carrier Safety Administration
- National Highway Traffic Safety Administration

4. INFRASTRUCTURE PROJECT PROCESS

This chapter discusses the process by which HSIP infrastructure projects are identified, selected, and implemented. This process is the same for Intersection Safety projects, Pedestrian/Bicycle Safety projects, and Corridors and/or Extended Roadway Safety projects. The process outlines the methodology used to select projects and then move them through to construction. Each of the intermediate processes from planning to evaluation is discussed in the following sections.

4.1.1. Planning

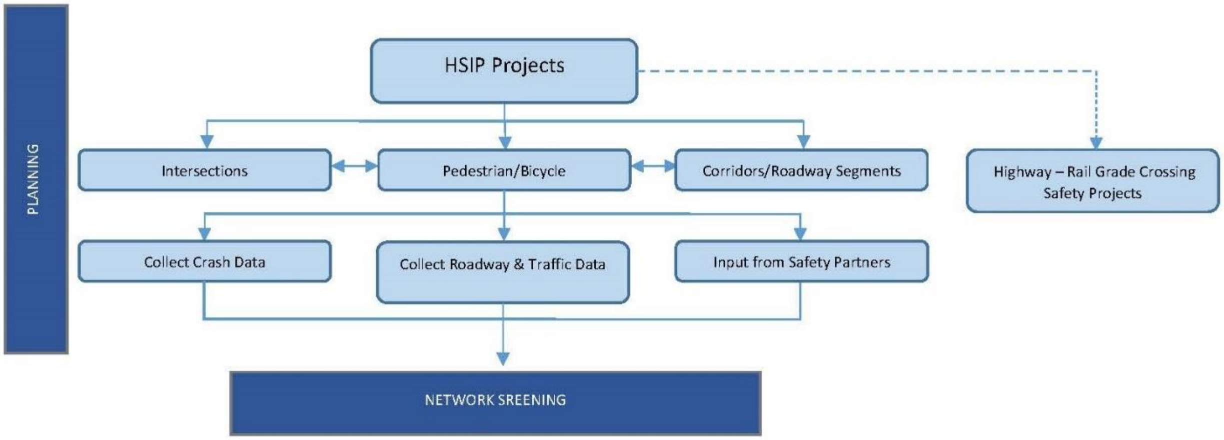
The flowchart in Figure 3 illustrates the activities that are part of the planning steps of the HSIP infrastructure project process. The first steps in the annual planning process are crash and traffic data collection, crash and traffic data evaluation, and solicitation of input from all of our safety partners. The TSE Division then screens the crash data, traffic data, and input from the safety partners to identify potential safety locations.

The crash data on all public roadways is extracted from the Nevada Citation and Accident Tracking System (NCATS) and crash databases and prepared for TSE's analysis as a normalized view. After the crash data is downloaded from the NCATS and the crash databases, it is processed through our geo-location software and is linearly referenced to the statewide street centerline data. The geo-location software tools automate the cleanup of location attributes and assign a spatial location to the crash data through a series of database procedure.

In order to maintain a spatially located crash database, NDOT TSE group has implemented a four step Quality Assurance (QA) and Quality Control (QC) process. Step one is part of the QA process, and includes a proactive focus on incoming data from NCATS to ensure all necessary fields (i.e. County Codes, Dates, etc..) are property populated. Step two is also part of the QA process and includes loading step one's data into the location software tool. The location software tool was developed as part of a quality-verification process and catches many location issues with crashes. Step three, QC process comprises a thorough review of each crash including those identified as having initial location issues to those having no issues. Step 4 (QC) involves another thorough review of any crash data requested for a particular area as a final check before the data is released.

Traffic Data is linearly referenced centerline data maintained by NDOT's Roadway Systems Division and is part of the Highway Performance Monitoring System (HPMS) report. Roadway Systems is responsible for maintaining roadway information on all public roads, as well as housing many other characteristics (i.e. Average Annual Daily Traffic).

Figure 3- Planning Process



4.1.2. Network Screening

The flowchart in Figure 4 illustrates the activities that are part of the Network Screening steps of the HSIP project process. Following the Planning steps, network screening is performed to review the transportation network and to identify and rank locations. These ranks or ratings show the locations where proposed countermeasures to be constructed may be the most effective in reducing crash frequency. Those sites identified as most likely to realize a reduction in crash frequency are studied in more detail to identify patterns, contributing factors, and an appropriate countermeasure. The 5 steps for Network Screening are:

Figure 4- Network Screening Process

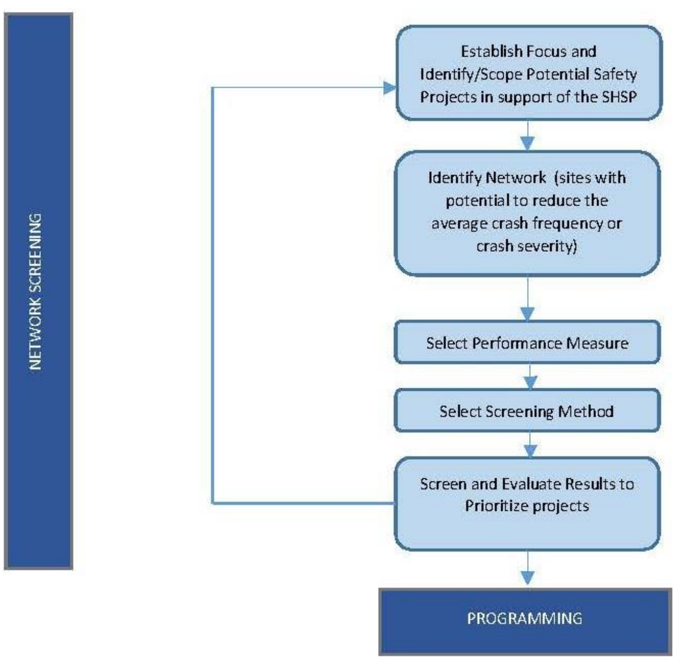


Figure 5 below illustrates the network screening steps to find the index ratings of intersections. Intersections where the AADT for all legs are present and are function classes 3, 4, 5, and 6 are selected as a study object. Equivalent Property Damage (EPDO), Crash Rate (CR), and Average Crash Frequency (F) are chosen as the performance measures. Then the calculated result of the three performance measures are calculated together using a mathematical process, which computes an index ranking from high to low.

Figure 5 – Network Screening Steps for Intersections

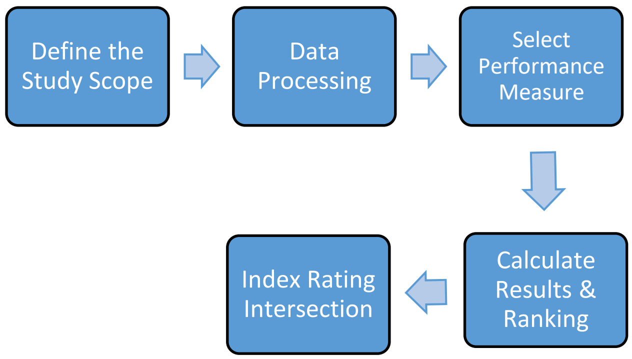
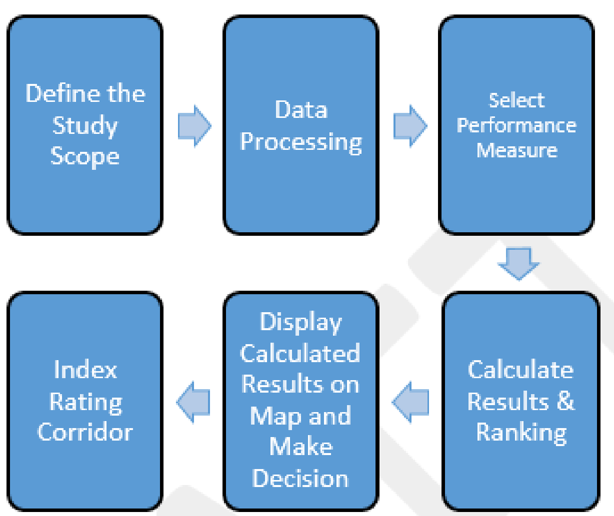


Figure 6, below, illustrates the process of the network screening steps to find the index ratings of corridors. The CR and EPDO are chosen as the performance measures. The calculated result of the two performance measures are calculated together using a mathematical process, which computes an index ranking from high to low. The synthesized indexes are displayed on county wide maps and adjoining sections where corridors with high indexes are found.

Figure 6 – Network Screening Steps for Corridors



Definitions:

- EPDO (Equivalent Property Damage Only): the relative severity of crashes at a given intersection
- Crash Rate (CR): the total number of crashes per million vehicle miles
- Average Crash Frequency: total number of crashes divided by number of years in study period
- SCR (Societal Cost Ratio): Current Societal Cost Ratios for K, A, B, C, PDO.
- KABCO Scale, number of crashes: K – Fatal; A – Incapacitating injury; B – Nonincapacitating injury; C – Possible injury; and O – No injury

Formulas:

$$EPDO = \frac{(SCR(K) * K) + (SCR(A) * A) + (SCR(B) * B) + (SCR(C) * C) + (SCR(PDO) * PDO)}{K + A + B + C + O = Total\ Crashes}$$

$$Int. Crash\ Rate\ (CR) = \frac{(\#\ of\ crashes)\ x\ (1MM\ vehicles\ entering\ the\ intersection)}{(\#\ of\ years\ of\ data\ used)\ x\ (365\ days)\ x\ (Average\ AADT\ of\ intersection)}$$

$$Corridor\ Crash\ Rate\ (CR) = \frac{(\#\ of\ crashes)\ x\ (1MM\ vehicles\ miles)}{(\#\ of\ years\ of\ data\ used)\ x\ (365\ days)\ x\ (Average\ AADT\ of\ corridor)}$$

$$Average\ Crash\ Frequency\ (F) = \frac{Total\ Number\ of\ Crashes}{\#\ of\ years\ data\ was\ collected}$$

The network screening steps for pedestrians and bicycle project are currently under development.

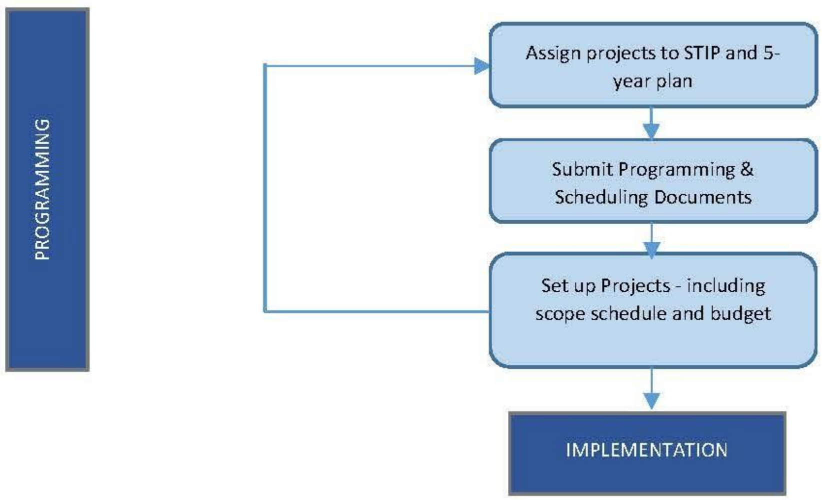
TSE references the “Nevada Statewide Bicycle Plan” as well as local and county agencies bicycle master plans to provide guidance for bicycle safety projects. These plans focus on infrastructure and connectivity needs for bicycle safety. In addition, TSE models Bicycle Level of Service (BLOS), a process that classify streets according to the stress they impose on cyclists (or, conversely, the level of comfort cyclists feel). Streets are graded from A to F, similar to the level of service for motor traffic.

For the network screening for pedestrian projects, TSE uses their “Pedestrian Safety Improvement Evaluation Guideline for Uncontrolled Crossings” and NDOT Traffic Operations “Appendix H - Pedestrian Safety Improvement Evaluation”. These documents provide guidance for choosing locations for pedestrian safety enhancement projects. TSE also performs analysis of pedestrian experience with models such as the Pedestrian Experience Index (PEI) to aid in the identification and prioritization of locations. It incorporates infrastructure and built environment data to quantify the quality of the pedestrian experience. It relies on factors well-known in the transportation and urban design literature for their connection to walkability and pedestrian comfort. The output is a PEI score. A score of 1 indicates a more comfortable pedestrian environment, while a score of 4 indicates a less comfortable pedestrian environment. PEI scores can be used to help prioritize pedestrian improvements or to evaluate progress toward improving pedestrian comfort over time.

4.1.3. Programming

The flowchart in Figure 9 illustrates the activities that are part of the Programming steps of the HSIP project process. The TSE Division conducts the programming process.

Figure 7- Programming Process

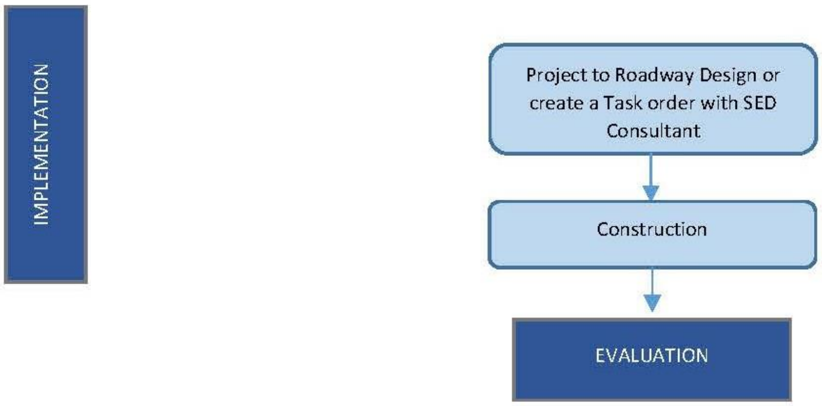


Projects that receive priority to warrant funding as a result of the Network Screening process outlined in section 4.1.2, are assigned to the five-year planning horizon. The projects are assigned to the NDOT Statewide Transportation Improvement Program (STIP). Programming and Scheduling documents are submitted to NDOT's Financial Management division where they are sent to the FHWA for approval. Each project is set up in NDOT's Project Scheduling and Management System (PSAMS) including the scope, schedule, and budget. Because this covers a five-year period but is re-evaluated yearly, it is possible for reprioritization or shifts in funding to occur periodically that may result in modified or new projects with higher priorities taking the place of previously programmed projects.

4.1.4. Implementation

The flowchart in Figure 8 illustrates the activities that are part of the Implementation steps of the HSIP project process.

Figure 8- Implementation Process

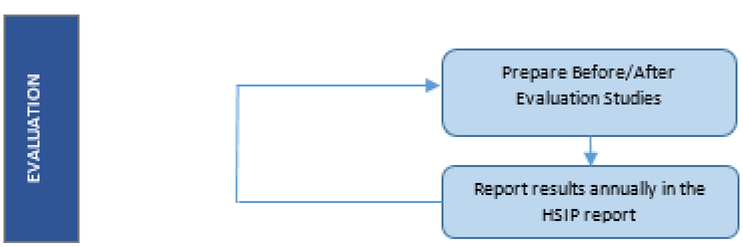


After projects have been programmed through the TSE Division, they are either assigned to a NDOT Roadway Design Squad or to a Traffic Safety Engineering consultant under administrative task order. The NDOT Highway Safety Program Manager directs NDOT system projects through the standard environmental, right of way, design, and construction processes following the NDOT and federal guidelines.

4.1.5. Evaluation

A key component of successfully managing any program is the periodic evaluation and reporting of progress toward pre-determined goals. As mentioned in Chapter 1, federal legislation states that the goal of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related highway safety improvements. This section describes the ways in which NDOT evaluates progress toward this goal. The flowchart in Figure 9 illustrates the evaluation part of the HSIP project process.

Figure 9- Evaluation Process



As outlined in Chapter 9 of the HSM, five years of crash history is analyzed at each HSIP project location as part of the initial screening process. After four years have elapsed following construction of a given HSIP project, the crash history for the three-year post-construction period is analyzed. The TSE Division utilizes Observational Before/After Evaluation Studies to assess the effectiveness of a specific countermeasure or project. The before/after evaluations are a major input to the HSIP Report that NDOT submits to FHWA each year.

4.2. Highway-Rail Crossing Safety Program

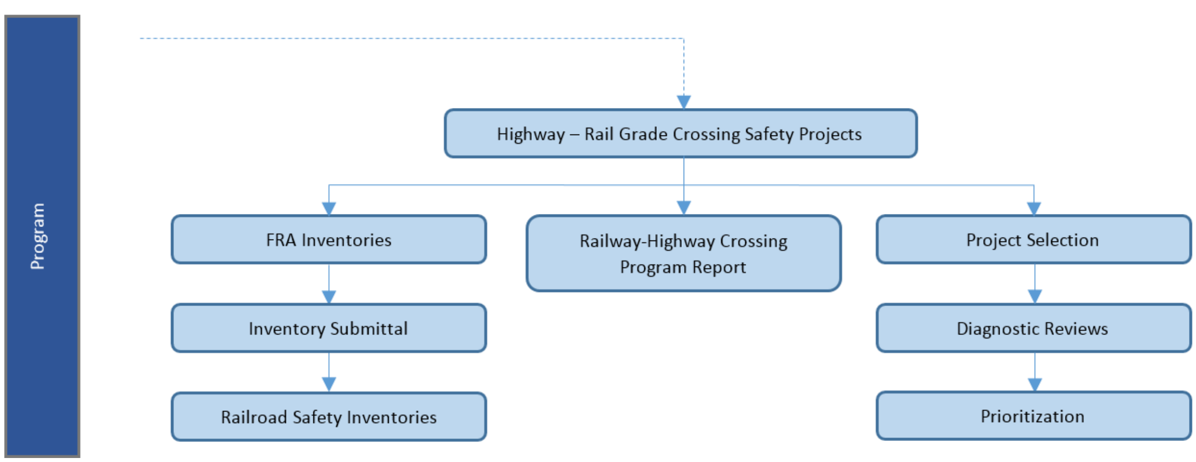
The TSE Division coordinates and administers the Nevada Highway-Rail Crossing Safety Program (Section 130). The Section 130 program, in accordance with 23 USC 130(d), requires each state to conduct and systematically maintain a survey of all highway-rail crossings. This is done to identify railroad crossings that may require separation, relocation, or protective devices, as well as establishing and implementing a schedule of projects for this purpose. The purpose of the safety program is to improve highway-railway grade crossing safety throughout the state. The Nevada Highway-Rail Crossing Safety Program is required to submit annual reports on the progress being made to implement this program along with updated information in the DOT crossing inventory database, including information about warning devices and signage, for each public crossing. The TSE Division maintains a crossing inventory database and sends annual updates to the Federal Railroad Administration (FRA) after inventories have been completed.

NDOT is the administrative agency for the State of Nevada for all public at-grade railroad crossings. The Public Utilities Commission of Nevada is the regulator agency for the State of Nevada for the Railroads, tracks and crossings.

The Section 130 program funds are eligible for projects at all public crossings including roadway, bike trail and pedestrian paths. The state's allocated fund dedicates 50% for the installation of protective devices at crossings and the remaining 50% can be used for hazard elimination projects; including protective devices. his includes the closure of at grade crossings and installations of traffic signs and signals.

The flowchart in Figure 10 illustrates the activities that are part of the Highway-Rail Safety Grade Crossing program and project selection:

Figure 30- Highway-Rail Safety Grade Crossing program



4.3. Road Safety Assessment

A Road Safety Assessment (RSA) is the formal safety performance examination of an existing or future road or intersection by a multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users. The TSE Division performs RSAs on NDOT department and district projects. They work with local jurisdictions and Tribal Governments to aid in the integration of RSAs into their project development process for new and existing roads and intersections. RSAs have been identified by the FHWA as a proven countermeasure to reduce fatal and serious injury crashes on public roadways. TSE Division utilizes a tracking database to analyze mitigation strategies that have been implemented through RSAs.

5. NON-INFRASTRUCTURE PROJECT PROCESS

NDOT utilizes state funds for non-infrastructure projects that aid roadway safety efforts. This chapter describes the different categories of non-infrastructure work items that NDOT implements. FHWA requires states to include a narrative explaining their non-infrastructure efforts in their annual reporting.

5.1. Educational Program

The *Zero Fatalities Drive Safe Nevada* campaign is a mutual effort between various partners to address the top behaviors that lead to fatalities on Nevada's roads. Behaviors such as drowsy driving, distracted driving, aggressive driving, impaired driving, and lack of seatbelt usage are emphasized. Television and radio public service announcements, community events, internet articles, and local media stories are used to convey the Zero Fatalities message. The *Zero Fatalities Drive Safe Nevada* website is located at: http://www.zerofatalitiesnv.com/

In addition to the *Zero Fatalities Drive Safe Nevada* campaign, NDOT TSE Division in partnership with the Office of Traffic Safety, sponsors *Zero Teen Fatalities*, a program that seeks to educate young drivers about the importance of being safe behind the wheel. The goal of the program is to empower teens to spread the word among their peers about the consequences of unsafe driving behaviors and in turn, save lives.

We also team with Driver's Edge, a non-profit organization and public charity dedicated to one simple thing – teaching young drivers what's not being taught in traditional driver's education. Their sole mission is to help save lives with their unique and innovative behind the wheel program.

5.2. Improving Crash Data Analysis

HSIP funding is also used to improve NDOT's crash database capability. The ability to accurately locate crash sites and understand their characteristics is vital for efforts to program limited funding for projects that best address existing safety concerns.

TSE Division is currently working with Nevada Law Enforcement Partners to utilize one statewide reporting system which will improve accuracy and timeliness of the crash reports.

5.3. Integrating Safety into Planning

NDOT's TSE Division is located within the NDOT Planning Division. This allows for the integration of safety planning, not only into the division's core processes, but into the core processes of NDOT as a whole. NDOT also works with Metropolitan Planning Organizations (MPOs) and LPAs across the state to supply them with data and tools to better integrate safety into their internal planning processes. Integrating safety into NDOT and MPO planning processes helps all agencies address safety in a proactive way.

5.4. Consultant Support

The TSE Division uses HSIP non-infrastructure funding to contract with universities and consultants who assist with various non-infrastructure functions. The TSE Division has developed a TSED program that allows consultants and universities to help design and implement projects, prepare reports and studies, and supply training needs to the TSE Division staff. Examples of these would include the design of plan sheets for safety projects, Safety Management Plans (SMPs), and assisting with the 5-year updates to the Nevada Strategic Highway Safety Plan (SHSP). Consultants and universities are utilized under the NDOT Task Order process to work with the local tribes in order to develop safety projects within their tribal lands.

6. REPORTING

FHWA requires NDOT to submit their HSIP report annually. NDOT's ability to obligate HSIP funds is conditional upon submission of this report. This report is due to the FHWA on August 31, prior to fiscal year end. The current HSIP report can be found on the FHWA website at: http://safety.fhwa.dot.gov/hsip/reports/.

6.1. HSIP Report

The HSIP Report contains information about NDOT's implementation of both HSIP infrastructure and non-infrastructure projects. FHWA requires the HSIP Report to include the following elements:

- Description of progress toward implementing highway safety improvement projects
- Assessment of effectiveness of projects towards achieving safety goals
- Assessment of HSIP projects' contribution to reducing roadway-related fatalities, injuries, and crashes
- Assessment of HSIP projects' contribution to mitigating the impacts of roadway related crashes
- A summary of project funds/allocations

7. APPENDIX

The appendix contains more detailed information about specific elements of the HSIP that readers may be interested in, but which do not merit inclusion in the previous portions of the manual. The following list shows the items that can be found in the appendix. Each item is coded as an active electronic link.

- FHWA HSIP Manual – http://safety.fhwa.dot.gov/hsip/resources/fhwasa09029/fhwasa09029.pdf
- Nevada SHSP - https://www.nevadadot.com/safety/nevada-strategic-highway-safety-plan
- AASHTO - A Policy on Geometric Design of Highways and Streets - https://aashtojournal.org/2018/09/28/aashto-releases-7th-edition-of-its-highway-street-design-green-book/
- Highway Safety Manual – https://safety.fhwa.dot.gov/rsdp/hsm.aspx
- Federal RSA – https://safety.fhwa.dot.gov/rsa/guidelines/
- 23 USC 409 (safety program information legal protections) – https://www.govinfo.gov/content/pkg/USCODE-2011-title23/pdf/USCODE-2011-title23-chap4-sec409.pdf
- 23 USC 148 (Federal authorization for the HSIP)- https://www.govinfo.gov/content/pkg/USCODE-2011-title23/pdf/USCODE-2011-title23-chap1-sec148.pdf
- HSIP Report – http://safety.fhwa.dot.gov/hsip/reports
- Highway-Railway Crossing Program – https://www.fhwa.dot.gov/map21/guidance/guiderhcp.cfm
- Zero Fatalities Drive Safe Nevada – https://www.zerofatalitiesnv.com/
- National Highway-Rail Crossing Inventory – https://railroads.dot.gov/crossing-and-inventory-data/grade-crossing-inventory/crossing-inventory
- Manual on Uniform Traffic Control Devices (MUTCD) - https://mutcd.fhwa.dot.gov/
- HSIP Annual Report requirements under 23 U.S.C. 148(h) and 23 CFR 924.15 - https://safety.fhwa.dot.gov/legislationandpolicy/fast/hsip_reporting_guidance.cfm