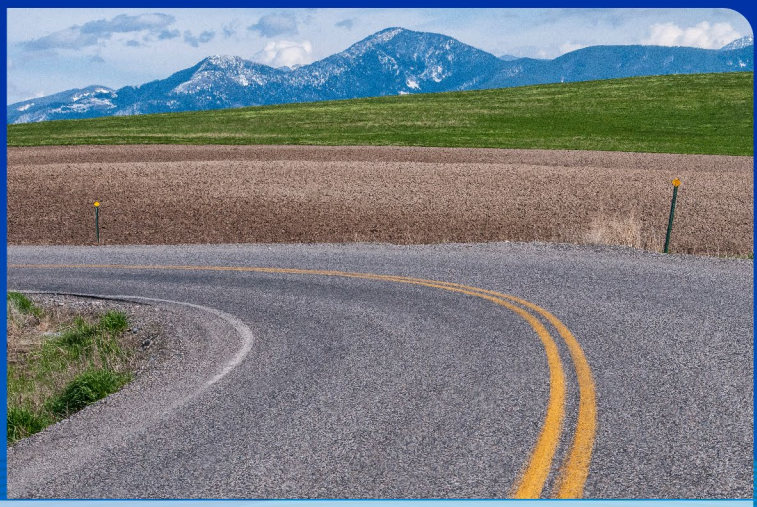
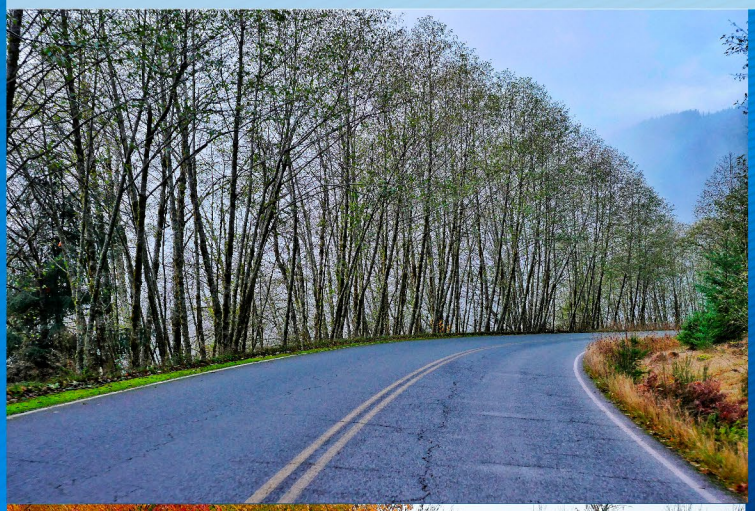
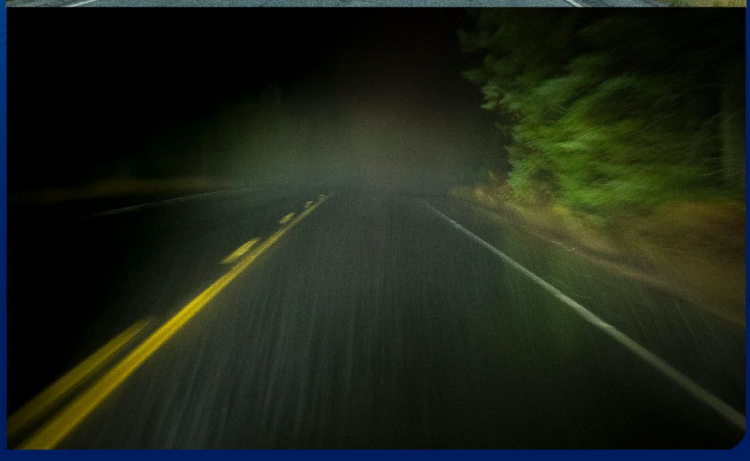


A Handbook with Tips and Tools for Developing A Local Road Safety Plan for Your Community





Prepared for the

U.S. Department of Transportation, Federal Highway Administration (FHWA)

By the

National Center for Rural Road Safety

January 2022

National Center for Rural Road Safety

Your "safety sidekick" to make rural road travel safer!

Table of Contents

List of Acronyms and Abbreviations

4 E's (of safety)	Engineering, Enforcement, Education, and Emergency Response
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CHSP	Comprehensive Highway Safety Plan (Montana)
CTSP	Community Transportation Safety Plan
DIY	Do It Yourself
DOT	Department of Transportation
DUI	Driving Under the Influence
FHWA	Federal Highway Administration
FIRST	Fatality and Injury Reporting System Tool
HFST	High Friction Surface Treatment
HSIP	Highway Safety Improvement Program
LaDOTD	Louisiana Department of Transportation and Development
LRSP	Local Road Safety Plan
LTAP	Local Technical Assistance Program
MDT	Montana Department of Transportation
MPO	Metropolitan Planning Organization
MVPICCS	Motor Vehicles Prioritizing Interventions Cost Calculator
NACE	National Association of County Engineers
NADO	National Association of Development Organizations
NHTSA	National Highway Traffic Safety Administration
PSA	Public Service Announcements
RSA	Road Safety Audit
RTPO	Regional (or Rural) Transportation Planning Organization
Rural Safety Center	National Center for Rural Road Safety
SHSP	Strategic Highway Safety Plan
TSAP	Transportation Safety Action Plan (Oregon)
usRAP	United States Roadway Assessment Program
YRBSS	Youth Risk Behavior Surveillance System

Gaining Momentum for a Local Road Safety Plan

Local Road Safety Plans (LRSPs) are an opportunity for local agencies and other stakeholders to actively engage in a process to identify and implement safety improvements to eliminate fatalities and serious injuries on the roadways in their communities.

LRSPs can help agencies meet safety goals, by:

- Using data-driven approaches to guide the selection, prioritization, and implementation of proven safety countermeasures for specific local road safety challenges.
- Collaborating with local, regional, and state transportation safety stakeholders to strengthen relationships and share resources in order to achieve zero deaths on all public roadways.
- Leveraging innovative deployment of safety strategies and projects through flexible funding, collaboration, and construction methods.

If you and your agency manage local, rural, or Tribal roads, as others have already recognized, there are many potential benefits of developing an LRSP to help people get home safely in your community. The Federal Highway Administration (FHWA), many state Departments of Transportations (DOT), and the National Association of County Engineers (NACE) support and have developed resources for the development of Tribal and Local Road Safety Plans.

This Handbook

This handbook is aimed at local practitioners in the initial stages of developing an LRSP that have questions about the resources and capabilities needed to create a successful plan. It focuses on strategies to address some of the obstacles or limitations that discourage or delay the creation process. In addition to drawing on LRSP practices, this handbook offers key lessons learned from local agencies that have successfully completed an LRSP, as well as those agencies who have supported locals in development and implementation. It highlights:

- **Top 10 lessons learned** for your LRSP
- **Answers** to the commonly asked questions:
- "How do I convince others that we need an LRSP?"
- "I'm from a small agency; how do I get started developing an LRSP?"
- **Steps** to develop concise yet effective plans
- **LRSP success stories**
- **Tools and resources** to streamline development of LRSPs

> *"I've always been a believer in taking advantages of opportunities when they present themselves. It would have been very easy for me to say, 'Well, you know maybe in a few years when I have a little more time, or next year.' When you have an opportunity to do something that's going to be good for your community, or good for you personally, you have to kind of strike when the opportunity presents itself, and that's what we tried to do in our county, and I think it's going to pay off. Someone told me one time the best time to plant a tree was 40 years ago, and the second-best time is today. And so, to the extent that you can get started and formalize your process of increasing the safety and improving the safety in your county, there's no better time than today."*
>
> *Kevin Russel, Former Hamilton County, IN Engineer*

Top 10 Lessons Learned for Your Local Road Safety Plan (LRSP)

LRSPs are a strategy to improve safety on our local roads and "help people get home safely." They empower the local agency to be proactive in addressing safety on its transportation network through a data-driven, risk-based approach.

1. **Just Start:** Starting an LRSP does not require that you have everything figured out in advance. Rather, utilize the FHWA LRSP template or an example plan to get started. Create your vision, mission, and goals that align with relevant strategic plans for your community.

2. **Be a Roadway Safety Champion:** A local road safety champion is instrumental in the development of an LRSP. The champion(s) can help achieve buy-in of those within the local community, both internal and external to the agency.

3. **Be Data-driven:** Use safety data from crash reports, traffic violations, 911 records, maintenance logs, and the road characteristics themselves to identify risk areas and potential emphasis areas where you can first focus your efforts.

4. **Engage Stakeholders:** Include stakeholders from the 4 E's - Engineering, Enforcement, Education, and Emergency Services - to ensure an LRSP covers all the elements of what creates safe roadways. Include other stakeholders such as, public health, construction and maintenance staff, school district, large employers, and local advocacy groups, to name a few.

5. **Low Cost Safety Improvements –**There are many low-cost safety improvements, such as, signing and pavement marking, trimming vegetation, and grading a proper crown on a gravel road that can provide significant safety benefits. Investing in safety solutions that have a proven safety record will help you reach your safety goals.

6. **Double Down on What Works -** FHWA's Proven Safety Countermeasures (2021) and NHTSA's Countermeasures that Work (2020) are good places to start for safety solutions.

7. **Share your Safety Message -** Creating and deploying safety education opportunities can ensure that the public is aware of on-going efforts to address safety. This can also enhance the safety culture in your community. Public Service Announcements provide awareness of your local road issues and share what solutions work, like rumble strips and seat belts.

8. **Adoption by Governing Body:** Request that your governing body (i.e., county board, city council) adopt the resulting LRSP. Adopting your LRSP will help institutionalize the vision, mission, and goals of the plan including opportunities to implement solutions and projects that will reduce fatal and serious injury crashes.

9. **Celebrate Milestones –** Safety goals can be incremental. Going 30 days without a severe injury or death is notable. And going an entire year without a teenager dying in a crash is reason to celebrate.

10. **Evaluate your progress and update your plan:** Revisit your LRSP annually as you assess your crash data and consider a complete update every 3-5 years as you are able to evaluate the results from your deployment of safety solutions.

Remember, no matter what your resources, an LRSP will guide you to data-driven solutions and safer roads.

"How do I convince others that we need an LRSP?"

If you're considering an LRSP, you likely already recognize that it may help advance your agency's safety vision, mission, and goals. In your efforts to move an LRSP forward, it may be valuable to understand, identify, and articulate the many potential benefits of creating and implementing an LRSP. ***Communicating these benefits can help to "sell" the importance of roadway safety to decision-makers, secure internal and external support for the plan, broaden your team of stakeholders, and obtain resources for implementation***.

Key benefits include:

- **Mission to Save Lives –** An LRSP is an important roadmap to frame your roadway safety issues and needs on the local transportation network as well as identify infrastructure, behavioral, and educational solutions that can reduce serious injuries and fatalities, and ultimately develop an implementation plan.
- **Coordination and Collaboration –** LRSPs should include the 4 Es of safety - Engineering, Enforcement, Education, and Emergency Response - as well as stakeholders including, but not limited to, public health, maintenance, planning, elected officials, schools, and advocacy groups. The LRSP development and implementation process presents opportunities to encourage collaboration across stakeholders. An LRSP can initiate dialogue among local agency staff, elected officials and the public, raising awareness around the key local safety issues, thus "elevating" safety and safety culture as your number one priority. Learn more in Step 1 on page 7.
- **Data-Driven Approach –** Through a data-driven approach to safety, your local agency will use crash data, traffic violations, maintenance logs, and roadway characteristics to inform the emphasis areas and priorities included in your LRSP. Greater awareness of road safety risks will allow for more transparency in prioritization of projects. The data-driven approach includes both a systemic (proactive) approach to safety as well as addressing high crash locations (reactive) which will lead to implementation activities that are more likely to result in crash reductions. Learn more in Step 2 on page 10.

> *"Saving lives is at the core of what we do as transportation professionals. We need to message safety more effectively – after all it's personal. "How many traffic deaths are acceptable in your family?" ZERO! The answer is always ZERO!"*
>
> *Hillary Isebrands, FHWA Resource Center*

- **Delivering Low Cost Safety Improvements –** Several of the FHWA Proven Safety Countermeasures are low cost solutions to safety risks and issues. These include signing and pavement marking, SafetyEdge, rumble strips, retroreflective backplates for signal heads, crosswalk visibility, and more. Learn more in Step 3 on page 13.
- **Leverage Funding Opportunities –** A data-driven LRSP opens the door to various funding sources. Sometimes the quickest way to deploy low cost safety countermeasures is to include them in routine maintenance projects and existing capital improvement projects. Funding opportunities may include various state funding programs, Highway Safety Improvement Program (HSIP) funding for all public roads through the State DOT, and other grant opportunities such as Section 402 Highway Safety Programs and Section 405 National Priority Safety Programs.

"I'm from a small agency; how do I get started developing an LRSP?"

States and local governments have been developing and implementing LRSPs for nearly a decade, so there are a lot of resources, guidance, and lessons learned available to help. The **FHWA Local Road Safety Plan Do It Yourself (DIY) website** has a wealth of resources for developing an LRSP. These are good reference documents for the process of initiating a plan. To start with, there is an effective process to follow for development of an LRSP. The FHWA **Local Road Safety Plans: Your Map to Safer Roadways** infographic below and its accompanying **video** provides an overview for developing an LRSP which distills the process down to four key steps:

- Identify stakeholders.
- Use safety data.
- Choose proven countermeasures.
- Implement solutions.

Additionally, the **Developing Safety Plans: A Manual for Local Rural Road Owners** follows the LRSP process in more detail.

> *"Do what you can, with what you have, where you are."*
>
> *Theodore Roosevelt*

While starting an LRSP can seem overwhelming, early adopters have provided their insights and effective tips below to get you started on the right path for creating simple, scalable, and effective plans. While there are many different styles for your LRSP, the key elements remain the same. You may be wondering "How long and detailed should our LRSP be?" LRSPs range from a few pages to a few hundred pages, based on the size and complexity of the agency's transportation network. It should be created to get your community to where **YOU** need to go and not be too big or burdensome. Your LRSP should be your own, and it should fit your unique needs and challenges.

Some local agencies create their LRSP in-house and others find support through a Local Technical Assistance Program (LTAP), State DOT, FHWA, or a consultant. You do not need to complete the LRSP in a short period of time or create a massive report at the outset. Rather, it can begin as a simple, "living" document of a few pages, which can be expanded in subsequent versions, as long as it is implementable for you.

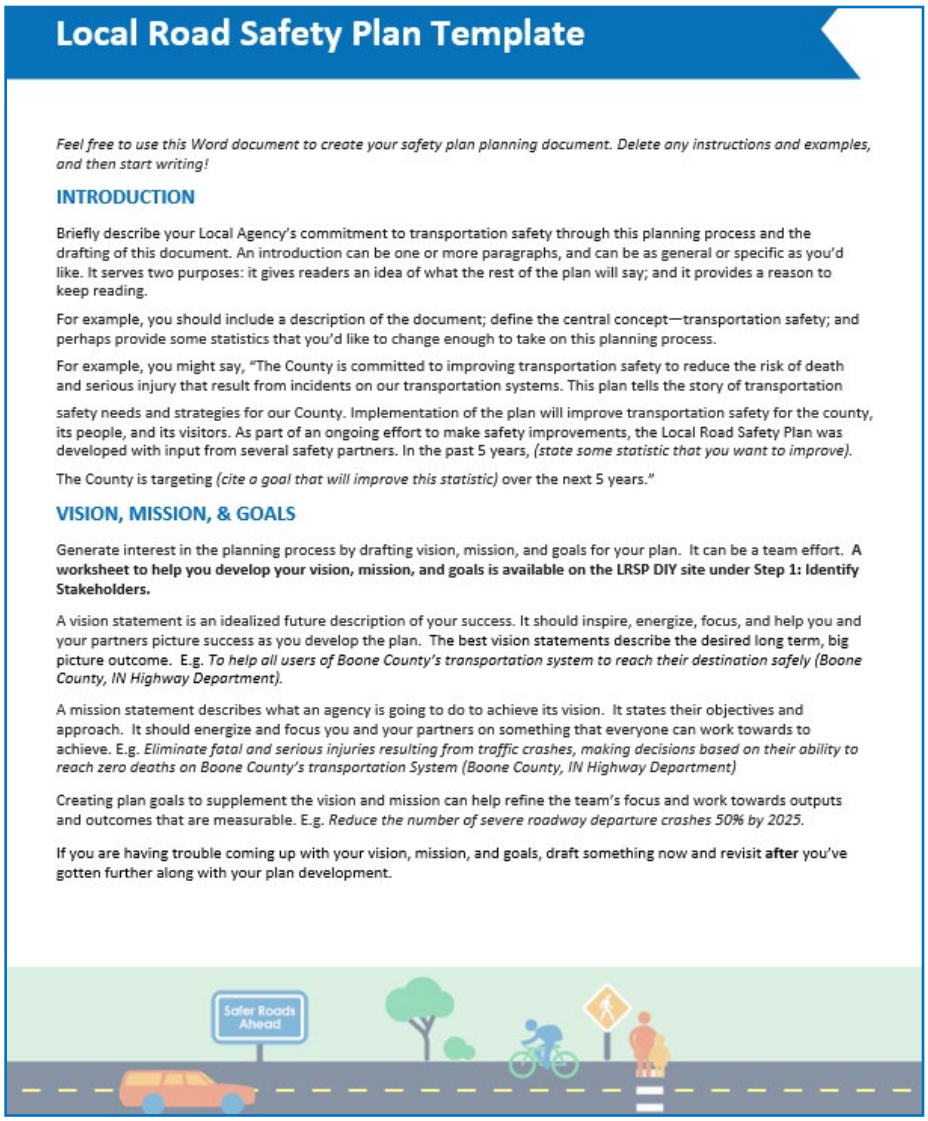
Local Road Safety Plans Infographic (Source: FHWA)

You may want to review examples of LRSPs that vary in size and style, then select a format that fits best for your time and resources. FHWA created a **Local Road Safety Plan Template** with the following plan components that has been used by many local and Tribal agencies:

- Introduction
- Vision & Goals
- Safety Stakeholders
- Process
- Existing Efforts
- Data Summary
- Emphasis Areas
- Evaluation & Implementation

Everyone is busy, especially local agency staff who are responsible for multiple transportation duties. Here are some things you can do as you get started with your LRSP development:

- **Review Your Agency Mission and Goals -** Start with your agency's current mission, vision, and goals as well as any strategic or comprehensive plans that include safety as a priority. An LRSP is typically a 3-5 year plan detailing safety strategies, solutions, programs, and most importantly, projects and countermeasures to address the key safety needs and should link to other critical plans.
- **Leadership and Elected Officials –** Safety is likely your agency's number one priority. Early buy-in from leadership and elected officials can benefit not only the development of the LRSP but also its implementation. It will address your safety culture and generally how safety solutions are integrated into day-to-day operations and future projects.



Local Road Safety Plan Template

Feel free to use this Word document to create your safety plan planning document. Delete any instructions and examples, and then start writing!

INTRODUCTION

Briefly describe your Local Agency's commitment to transportation safety through this planning process and the drafting of this document. An introduction can be one or more paragraphs, and can be as general or specific as you'd like. It serves two purposes: it gives readers an idea of what the rest of the plan will say; and it provides a reason to keep reading.

For example, you should include a description of the document; define the central concept—transportation safety; and perhaps provide some statistics that you'd like to change enough to take on this planning process.

For example, you might say, "The County is committed to improving transportation safety to reduce the risk of death and serious injury that result from incidents on our transportation systems. This plan tells the story of transportation safety needs and strategies for our County. Implementation of the plan will improve transportation safety for the county, its people, and its visitors. As part of an ongoing effort to make safety improvements, the Local Road Safety Plan was developed with input from several safety partners. In the past 5 years, *(state some statistic that you want to improve).*

The County is targeting *(cite a goal that will improve this statistic)* over the next 5 years."

VISION, MISSION, & GOALS

Generate interest in the planning process by drafting vision, mission, and goals for your plan. It can be a team effort. **A worksheet to help you develop your vision, mission, and goals is available on the LRSP DIY site under Step 1: Identify Stakeholders.**

A vision statement is an idealized future description of your success. It should inspire, energize, focus, and help you and your partners picture success as you develop the plan. The best vision statements describe the desired long term, big picture outcome. E.g. *To help all users of Boone County's transportation system to reach their destination safely (Boone County, IN Highway Department).*

A mission statement describes what an agency is going to do to achieve its vision. It states their objectives and approach. It should energize and focus you and your partners on something that everyone can work towards to achieve. E.g. *Eliminate fatal and serious injuries resulting from traffic crashes, making decisions based on their ability to reach zero deaths on Boone County's transportation System (Boone County, IN Highway Department)*

Creating plan goals to supplement the vision and mission can help refine the team's focus and work towards outputs and outcomes that are measurable. E.g. *Reduce the number of severe roadway departure crashes 50% by 2025.*

If you are having trouble coming up with your vision, mission, and goals, draft something now and revisit **after** you've gotten further along with your plan development.

LRSP Template (Source: FHWA)

- **Review your State's Strategic Highway Safety Plan (SHSP) -** Review your State's SHSP to identify which emphasis areas and goals are relevant in your agency. Common emphasis areas seek to address roadway departure, pedestrians, and intersection crashes. Other common emphasis areas include speeding, impaired driving, distracted driving, and seat belt use.

- **Safety Data** – Safety data can include crash data, traffic violations, and maintenance logs. Crash data (typically three to five years of data) - total crashes, serious injuries, and fatalities - are extremely valuable as you begin your LRSP. Additional data, such as contributing factors and crash types, are also beneficial as you drill down on where your most prevalent roadway risks are located. This information can be found on the crash reports. Your State DOT, LTAP, or law enforcement agency may be able to assist you with access to crash data and analysis.
- **Familiarize Yourself with Existing Safety Plans** – Become familiar with other LRSPs, SHSPs, or Vision Zero plans. The plans all include some common steps, but they're tailored to reflect your community's needs. Reviewing these documents can provide ideas for strategies and actions that can be adopted or customized for inclusion in the LRSP. FHWA has created an LRSP DIY website that provides many example LRSPs. Other plans and documents to review for LRSP content may include:
  - State SHSP
  - City/County Vision Zero Plan
  - Previously Implemented Safety Projects
  - Public Health Plans
  - Active Transportation Plan
  - Road Safety Audits (RSA)
- **Participate in Safety Training** – Think about the types of training your agency needs and identify available opportunities related to safety. Many state DOTs and LTAPs offer safety workshops on specific safety plan elements such as data collection, data analysis, and project identification. Relevant trainings include, Local Road Safety Plans, Road Safety 365, Systemic Safety Part 1 and Part 2 and Part 3, and Low Cost Safety Improvements. Many of these can be found on the FHWA LRSP DIY website.
- **Funding Opportunities**– Local, state, and federal funding opportunities may be available for development and implementation of an LRSP. First, you should look internally for opportunities to integrate low cost safety improvements, such as signs and pavement markings, into existing maintenance and capital improvement projects. Second, look for grants and opportunities for state and federal funding for safety projects. Some state DOTs fund the development of LRSPs as well as projects from the LRSP.

Development and implementation of LRSPs across the country have helped **agencies of all sizes** (big and small) meet their safety goals, become proactive with deploying proven safety countermeasures, create safer roads, and ultimately work towards a goal of zero fatalities and serious injuries. The most important thing is to get started.

> *"If we can even save one life, this will be worth it."*
>
> *LRSP Champion*

Once you have committed to the development of an LRSP, it is time to get started. The four main steps are to **Identify Stakeholders, Use Safety Data, Choose Proven Solutions, and Implement Solutions.** Key elements and noteworthy practices from these steps are shown below and further covered by the steps in the LRSP infographic on the FHWA LRSP DIY website.

STEP 1
IDENTIFY STAKEHOLDERS

One element of an effective stakeholder team is to identify at least one champion. If you are reading this document, chances are YOU might be that safety champion for your LRSP. The champion leads development of the local road safety plan and your working group will include people both within and outside your agency, such as public health, maintenance, and law enforcement. It can also include planning organizations and elected officials. Think about those in your community who share a common goal of **getting people home safely**. After you form a team, it is time to develop a mission, vision, and goals. Let us dig a little deeper into your stakeholder group and your mission, vision and goals.

- **Plan Champion(s)** – The champion is the "driving force" for the LRSP. Often there will be more than one champion as the plan is developed, for example a safety data champion and a stakeholder champion. The champion(s) will ensure the inclusion of local safety and roadway data, assist with local buy-in, and help secure adoption of the plan by leadership.
- **Engage Internal Departments/Offices** – Make sure to include multiple departments/offices within your own agency to discuss issues, current actions, and options for collaboration and coordination moving forward. Common offices to coordinate with include engineering, road and bridge, maintenance, planning, law enforcement, public health, and elected officials. Safety is everyone's priority and each of these representatives bring a different perspective and role to improving roadway safety.

> *"Success of an LRSP often depends upon the presence of a local champion, the clarity of the plan's mission, collaboration between partners, and open lines of communication.""*
>
> *LRSP Champion*

- **Gather Representatives from the 4E's** – The LRSP will address safety more comprehensively if representatives from all 4E's - Engineering, Enforcement, Education, and Emergency Response - are providing input and are a part of the solution. Many times, the LRSP process improves relationships and communication amongst these stakeholders that will continue far beyond the completion of the LRSP. Do not forget that there can be multiple representatives from city, county and state agencies. Other agencies such as Metropolitan Planning Organization (MPO) and Regional Transportation Planning Organization (RTPO) planners; city police, county Sherriff, State/Highway Patrol; public health, county public information officers; volunteer and career fire and ambulance personnel.

> *"At Marin County, we always had a mission statement which includes five things and one of those is safety. By going through the LRSP process, we're more energized and I feel like we actually have a Mission that we're working on, instead of just a Mission Statement that's general and in the background. By having a local road safety plan, we're able to identify specific measures, but also it energizes us and gives us a mission to accomplish. We're here to help people get to and from where they're going on the road safely."*
>
> *Robert Goralka, Former Engineer for Marin County, CA*

- **Contact Your Local Technical Assistance Program (LTAP)** – Every state has an LTAP. Some LTAPs offer specific or specialized safety programs for safety training and assistance. LTAPs can serve several roles during LRSP development including helping convene stakeholders; training; assisting with crash, roadway, and/or traffic data analysis; participating in plan development and solutions; leading road safety assessments; and identifying countermeasures. Contacting a representative from your LTAP may provide key information or resources to initiate safety planning efforts.
- **Participate in Existing Safety Meetings** – By participating in another safety related meeting, you may get an introduction to safety stakeholders and gain a better understanding of safety issues, priorities, and effective solutions that may affect your roadways and decision making. Leverage the knowledge of these groups to inform your own LRSP or use these meetings to contribute to existing safety efforts. Some examples include:
    - Your *local school district* may have a transportation safety working group that meets regularly with local or county law enforcement stakeholders, traffic engineers, and transit operators to discuss safety and operational issues and goals.
    - Many state DOTs have regular Strategic Highway Safety Plan (SHSP) development and implementation meetings throughout the year. California has a Local HSIP Advisory Committee as a part of their SHSP implementation.
    - Through legislation, every county in Wisconsin has established County Traffic Safety Commissions that meet regularly to discuss safety issues with law enforcement, local agencies, school districts, and large employers in the area.
- **Advocacy and Community Groups** - Engaging local advocacy or community groups as you develop your LRSP may provide valuable insight into specific areas of interest in your community.
- **Multi-modal Representation** - Using a multi-modal viewpoint can ensure that safety strategies are more broadly implemented across different modes and users. Pedestrian and bicycle coalitions, local and regional transit, freight companies/businesses, and railroad companies, are possible stakeholders.

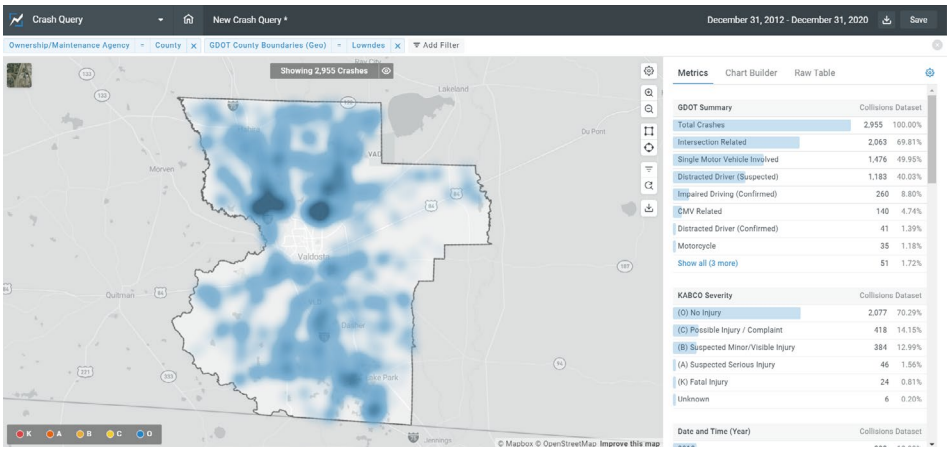
LRSP Kick-off Meeting Template (Source: FHWA)

As you invite your stakeholders and develop your meeting agendas, whether they are formal or informal, here are some things to consider as you engage individuals or the group:

- **Utilize Direct Communication** – Calling a stakeholder rather than sending an email can help engage others who may be hard to reach due to the nature or time schedule of their positions. For example, law enforcement patrol officers or educators may not be able to respond to emails or participate in meetings during "traditional" working hours. Another opportunity would be to find a time to meet for coffee or over lunch.

- **Identify Opportunities to Engage** – To facilitate participation of busy local agency practitioners, take advantage of opportunities to engage stakeholders in their own settings. For example, attend monthly emergency response meetings, engage in the incident management meetings, join the local health coordination team, and have regular check-ins with county commissioners to report traffic deaths and safety complaints.
- **Make Clear Expectations** – Take care that stakeholders clearly understand their roles and responsibilities, which can help ensure long-term commitment and consistent participation.
- **Create a Strong Safety Culture**–The LRSP can provide a forum to transform a viewpoint about traffic safety in your community. New approaches can communicate positive safety messages. Selling safety in simple terms - "getting people home safely" - may result in more significant engagement from both the community and representatives from the 4E's and can promote the success of the LRSP development.
- **Utilize Maps and Graphics for Talking Points** – Maps and graphics are a great way to highlight important information from the LRSP and can be used as conversation starters with stakeholders. If you do not have a local source for crash data, there are some national resources available. Some State DOTs also have mapping tools for crash data by road ownership.
- **Tailor Messaging to the Audience.** Your efforts may benefit by sharing data and messages in multiple ways for your diverse group of stakeholders. For example, crash statistics can be shown in a table, on a map or on a graph. Traffic fatalities and serious injuries can be compared to other community deaths and disease, such as homicides or heart attacks. Some community members may be skeptical that implementing modest improvements and strategies can effectively reduce traffic deaths. However, early implementers share that allowing community members to provide input helped to overcome these concerns. Successful public outreach methods include, meetings, online forums, engaging community groups, random sample surveys, and focus groups. For example, one agency reported that farming communities believed that roadside treatments, like guardrails, would limit access and egress to their fields. Hearing these concerns and following up by sharing the safety benefits of guardrails and how the roadway would be designed helped alleviate their objections and allowed the project to move forward.

A more comprehensive list of possible stakeholders can be found **here.**



Example of a state DOT Crash Mapping Tool
(Source: Georgia DOT **http://www.dot.ga.gov/DS/Crash***)*

Clackamas County, Oregon, created a Transportation Safety Action Plan (TSAP) in 2012 using a holistic approach with broad community participation including Public Health. It was updated in 2019 to include traffic safety culture concepts and Toward Zero Deaths strategies. Read the case study on page 17.

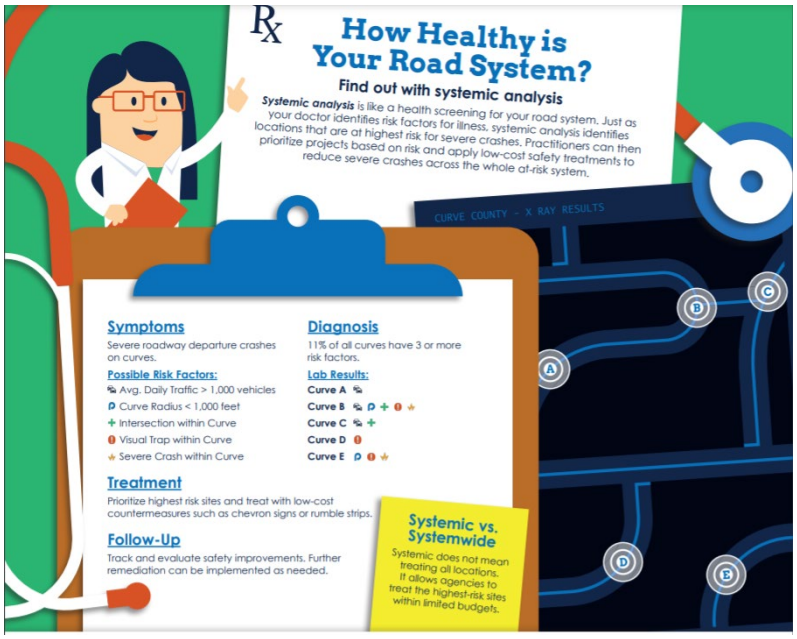
STEP 2
USE SAFETY DATA

Your plan should be data-driven and use all available data to move forward A data-driven process leads to objective and transparent decision-making. It will help your agency identify where your roadway network has the highest risks – like a sub-set of intersections or curves – so you can prioritize a smaller percentage of your road network and install countermeasures where they will be most effective. We call this the systemic approach.

For many local agencies, safety data - including crash data, roadway characteristics, and maintenance logs – are not monitored and shared regularly between stakeholders. This can be a barrier to starting an LRSP, but remember, you can begin developing your LRSP with whatever data you have. You likely have more than you think. Your LRSP is a "living" document that can be updated as more data and analysis become available. Often, the LRSP process helps agencies identify the safety data they have as well as the gaps. This is an opportunity to add an action item in the LRSP to improve the agency's safety data process. The **Developing Safety Plans: A Manual for Local Rural Road Owners** and the **FHWA LRSP DIY website** provide details and resources for gathering and analyzing data.

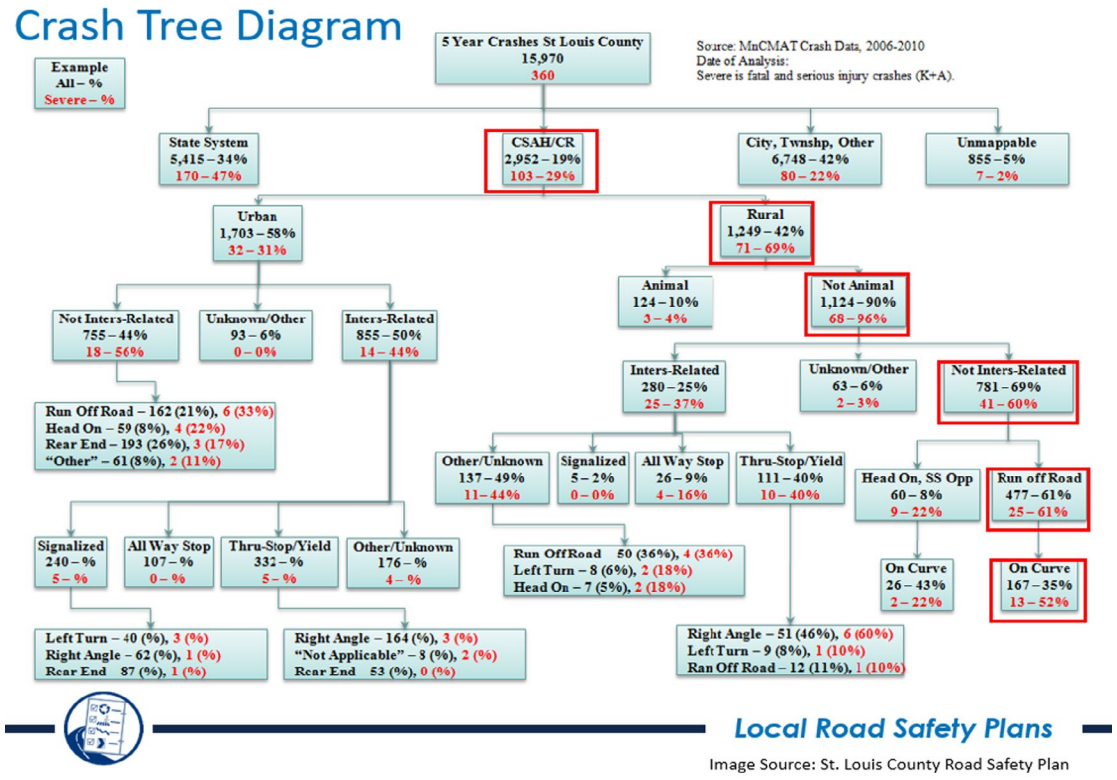
- **Access to Crash Data** – Who maintains the crash data for the roads you own and operate? The answer to this question varies significantly across the country. In some cases, it may be the State Highway Patrol, County Sherriff or city police, or it may even be your State DOT. It is important to know, or learn, which agency stores and maintains the crash data and how you can obtain access to it. This allows you to assess the circumstances of the crashes to make more informed decisions about roadway safety issues to address them correctly. You also need to understand the timeliness and accuracy of the available data. You can always set goals to improve your data.

- **Roadway Data** – How healthy is your roadway? There are roadway characteristics that are at higher risk for crashes, for example, roadway curves (radii) between 500ft -1,000ft, intersections, and pedestrian crossing with no pavement marking or lighting may show a correlation to sever crashes in your community. If your agency does not have roadway inventory data for cross section or geometric features, you may be able to use online tools such as Google Earth or ArcGIS or other mapping tools to get an estimate of your roadway features. Another excellent source can be maintenance staff that spend many hours driving and maintaining the road system. They are often aware of where granular shoulders are difficult to keep flush with the pavement surface, where vegetation made be close to the roadway, and where signs routinely get knocked down.



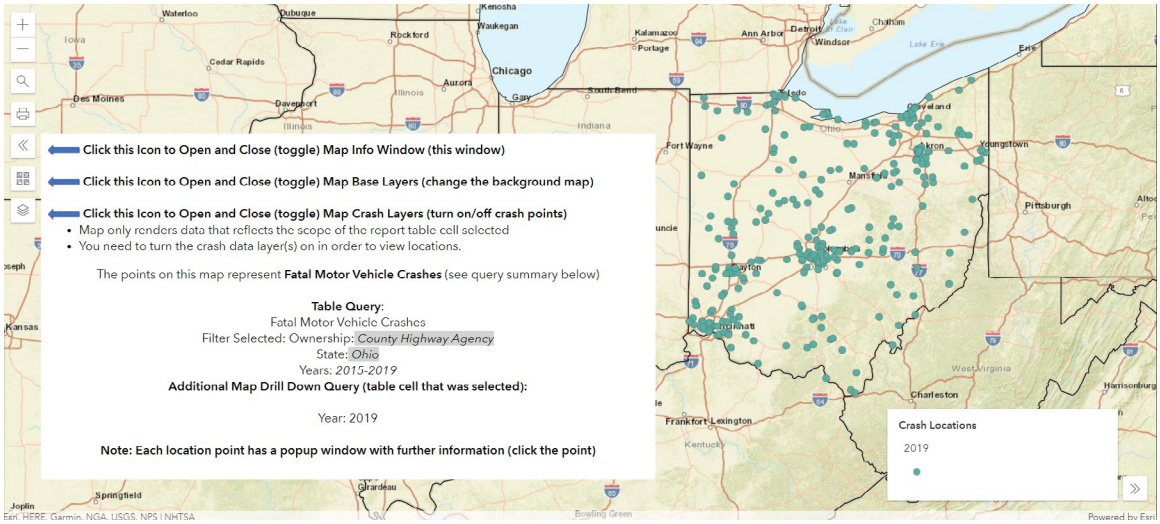
How Healthy is Your Road System Infographic (Source: FHWA)

- **Supplemental Data to Inform Safety Decisions** – If you have a limited amount of data, you can use emphasis and priority areas that are evident for the state or the region. Your State DOT, LTAP, law enforcement agencies, public health department, and Emergency Response may be able to assist. Another source of publicly available data is the US Census data. It may provide you demographic data to identify overrepresentation of crashes. This data for your community may include, but is not limited to, age, disability status, ethnic background, access to vehicle(s), poverty status, and unemployment rate.
- **Public Input** – Getting input from the public on the roadway they travel can help identify safety issues in the community.
- **Emphasis Areas** – Using all of your available safety data, you can identity some of your high-risk roadways and potential emphasis areas for your plan. Common emphasis areas are roadway departure, intersection, and pedestrian crashes. Creating a crash tree diagram (shown below) can be helpful as you identify those roadways with more risk based on crash data. It can also assist when you start prioritizing roadways and projects for your LRSP, such as curves on rural two-lane roads with traffic volumes between 1,000 and 2,000 vehicles per day



Crash Tree Diagram (Source: St. Louis County, MN Road Safety Plan and FHWA)

- **Move to a Systemic Safety Approach** - Under the systemic approach, safety improvements are implemented based on high-risk roadway features, rather than applying safety improvements to hot spots (e.g., those resulting in the most deaths). The systemic approach is recommended in rural areas due to the randomness of crashes. You can find more information on the differences between the proactive systemic approach to safety, the reactive hot spot approach, and the systematic approach by viewing the video **3 Approaches to Address Severe Roadway Crashes**.
- **Explore Available Data Analysis Tools -**There are spreadsheet tools to help analyze your crash data and some states have readily available crash data tools. FHWA has created a spreadsheet tool for crash data analysis. Four specific tools used by early adopters include: the **DDSA Crash Tree Tool** (80MB Excel file), **Crash Data Summary Template**, **United States Roadway Assessment Program (usRAP)**, NHTSA's **Fatality and Injury Reporting System Tool (FIRST)**, and the **Crash Modification Factors Clearinghouse**.



Fatality and Injury Reporting System Tool - FIRST (Source: NHTSA **https://cdan.dot.gov/query***)*

- **Mapping** – Many early adopters report that creating maps of locations of concern or high priority segments were key to identify priority emphasis areas. If GIS mapping is already used for other local agency assets (e.g., asset management, roadways, culverts, signs, right of way, etc.), adding crash data to your mapping tool may help create a comprehensive look at your roadway network. One early adopter enlisted their local University to develop a "map feature" for data collection, which allowed law enforcement officers to use a touch screen to populate the crash information into a crash report.

Step 2 provides an opportunity for you to determine what data you have access to and where gaps may exist. While access to and usability of data is critical to understanding the whole picture related to roadway safety in your area, remember that the key to developing an LRSP is to use the currently available safety data. This data will help you communicate your safety issues, potential emphasis areas, as well as roadways and projects to prioritize for implementation of safety solutions.

> *"LRSP development helped with our understanding the true meaning of 'data-driven.' We did not know enough about our crash, roadway, and other safety data."*
>
> *LRSP Champion*

In Larimer County, Colorado, their annual **Traffic Safety Report** (similar to an LRSP) process includes an annual crash data update and low cost safety improvements deployment, which has led to many safety advancements. Read the full case study on page 20.

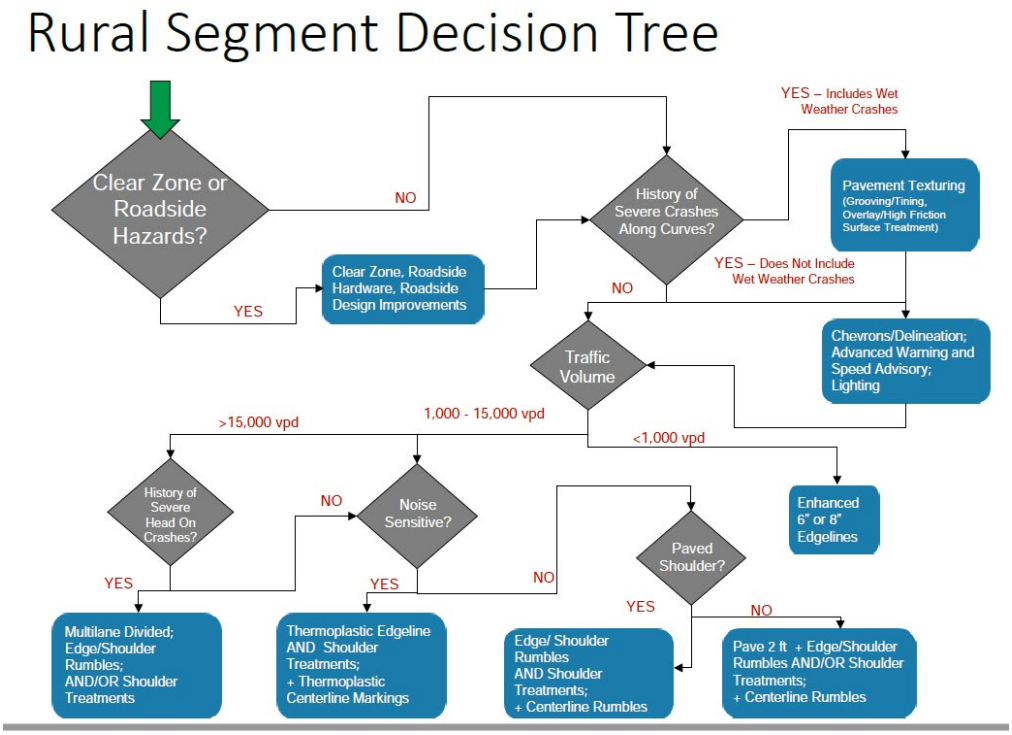
STEP 3
CHOOSE PROVEN SOLUTIONS

Now that you've completed your safety data analysis and identified risk factors, it's time to select cost effective, proven solutions.

- **Choosing Safety Solutions**– The FHWA's Proven Safety Countermeasures and the NHTSA's Countermeasures That Work are great places to start. Some of the proven safety countermeasures include, such as rumble strips, roundabouts, high friction surface treatment, and rectangular rapid flashing beacons. It is important to choose solutions to address the identified safety issues.
- **Low Cost Countermeaures** – Consider the numerous low cost countermeasures that may be easier to implement in maintenance projects, such as signing and pavement marking, and clearing vegetation, or other capital improvement projects. They can also be implemented more widespread as safety projects at the high-risk locations on your system. This would be a systemic deployment of countermeasures.
- **Countermeasure Decision Trees** – It is possible there will be multiple solutions to address your roadway safety issues. Several local agencies have created decision trees to help determine the best countermeasures based on the roadway features, traffic characteristics and context. The example to the right shows a rural roadway departure decision tree.
- **Identify Projects** – Identification and prioritization of specific projects where safety solutions can be implemented is an essential part of the LRSP. This process is data-driven, risk based and transparent in terms of prioritization.
- **Link Projects** – Linking deployment of safety solutions with other projects can allow for sharing of resources. For example, including retroreflective backplates on traffic signal heads as a future maintenance project or adding rumble strips on a future mill and overlay paving project. Coordinating projects with nearby agencies can produce economies of scale. For example, a small town working with the county to implement curve warning signs as a systemic safety treatment can reduce costs.

> *"Begin with the low hanging fruit first, then the bigger projects."*
>
> *LRSP Champion*

Selecting infrastructure, behavioral, and educational countermeasures that address the common crash types and emphasis areas identified in Step 2 is critical to improving safety on your roadways. The LRSP is a tool to help you formalize and prioritize these projects or actions.



Rural Segment Decision Tree (Source: Palm Beach County and FHWA)

STEP 4
IMPLEMENT SOLUTIONS

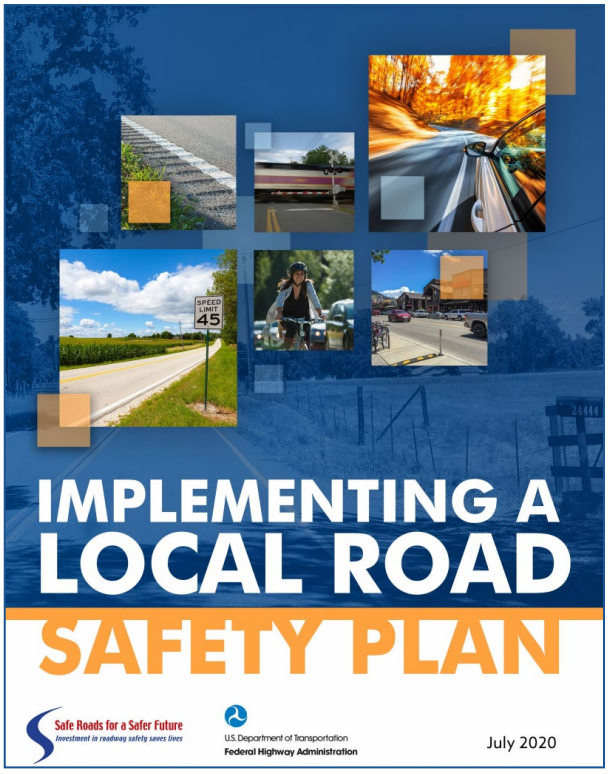
Now that you've selected your solutions, it's time to implement. Implementation takes buy-in, stakeholders, and funding. Remember – "Do what you can, with what you have, where you are." You don't have to do everything at once. You can implement solutions in many types of projects – from everyday road maintenance to capital improvements. Some complementary strategies include public education campaigns, targeted law enforcement, or clearing vegetation at intersections. Many agencies have submitted their LRSPs for approval by their local governing bodies (local elected officials). Their support can help leverage funding and resources inside and outside your agency. Implementing your LRSP means safer roads ahead.

As you develop your LRSP, you should be thinking along the way how it will be implemented. Some examples of what can be implemented from an LRSP are enhancing your agency's safety culture, seeking more complete safety data, deploying low cost safety countermeasures, and prioritizing roadways and projects for safety improvements. One early adopter of the LRSP found it beneficial to create a matrix that identified strategies, outputs, responsible parties, completion dates, performance measures, and a monitoring/evaluation plan for each emphasis area and priority project.

For implementation suggestions, consult the FHWA's **Implementing a Local Road Safety Plan** guide. The implementation guide includes examples and lessons learned from agencies that have created and implemented plans, as well as recommended resources.

The document presents six steps for successful implementation:

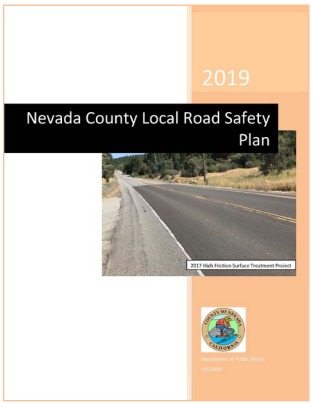
- Step 1 – Maintain Buy-in and Support/Champion
- Step 2 – Identify Funding Mechanisms
- Step 3 – Identify and Prioritize Projects
- Step 4 – Deliver Projects
- Step 5 – Evaluate Implementation
- Step 6 – Continue Communication and Coordination



Implementing a Local Road Safety Plan Cover (Source: FHWA)

Cowlitz County, Washington started with a simple LRSP when the State DOT provided an opportunity for local agencies with a data-driven LRSP to apply for HSIP. They are updating their LRSP to add additional priority projects for the next call for County safety projects. Read the case study on page 16.

Case Study One: Nevada County, CA



Nevada County LRSP (Source: Nevada County)

Prepared By: *Nevada County, CA*
LRSP Coverage Area: *County*
LRSP Length: *20 pages*
LRSP Completion Date: *2019*

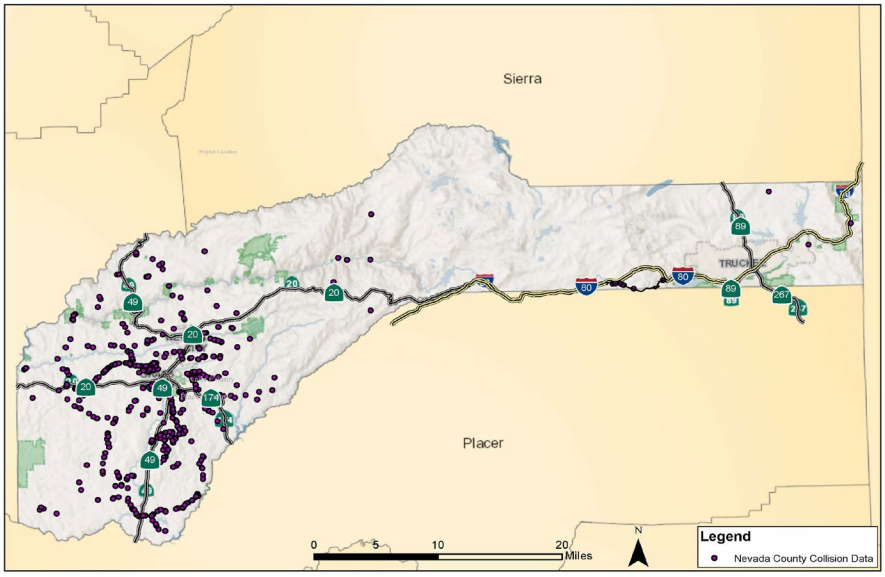
County Size[1]: *978 mi²*
Road Miles[2]: *~562 mi*
Population[3]: *102,241 (2020)*
Crashes: *927 (2015-2017)*
Fatalities: *7 (2015-2017)*

The Caltrans local assistance program provides an opportunity for safety funding through a competitive process for local agencies with LRSPs. Caltrans encourages agencies to prepare an LRSP to create a framework to systemically identify and analyze safety problems and recommend safety improvements. The LRSP offers a proactive approach to addressing safety needs and demonstrates agency responsiveness to safety challenges. The process of developing a LRSP can be tailored to local protocols, needs, and issues. Starting in 2022, the Caltrans HSIP will require an LRSP (or its equivalent) for an agency to be eligible to apply. State funding is also available to local agencies for developing their LRSPs.

In 2017, FHWA, NACE, and the National LTAP Association (NLTAPA) co-hosted a pilot program with five states to accelerate the development of LRSPs. Nevada County was one of five California counties that participated in the LRSP pilot, along with Caltrans and the California LTAP. Nevada County's vision is to have a safe transportation system for all users. The county prepared their LRSP with their own staff totaling approximately 80 hours. They worked with the Nevada County Transportation Commission who hosted the first Stakeholder Meeting. The county sent invitations to key stakeholders and advertised in the local paper, radio news station and internet news provider to gain input on their LRSP.

The plan has three key emphasis areas:

- Emphasis Area 1: Improper Turning and Broadside Collisions
- Emphasis Area 2: Unsafe Speeds, Object Impact and Rear-End Collisions
- Emphasis Area 3: Driving Under the Influence (DUI)



Nevada County Collision Locations 2015-2017 (Source: Nevada County)

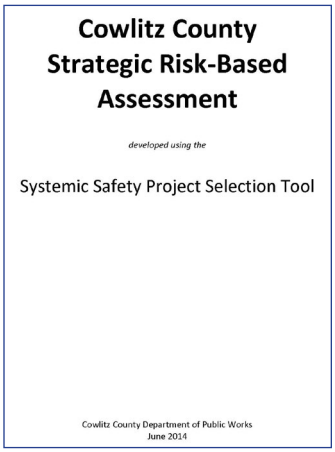
As implementation began, the California Highway Patrol (CHP) intensified education and enforcement at local fairs and other gatherings and increased enforcement already resulting in lower fatality numbers. Additionally, the Nevada County Road Safety and Signing Audit projects and the high friction surface treatment (HFST) projects have reduced crashes at key locations.

Nevada County plans to analyze their data every summer and evaluate its' past efforts to ensure their implemented strategies are effectively reducing severe crashes. Additionally, an annual workshop will be held to discuss the LRSP, results, and future solutions. They anticipate updating their LRSP every three years. For more information on California's efforts to develop LRSPs, watch the video **Local Road Safety Plans-a California Case Study**.

KEY TAKEAWAYS

- Counties can take advantage of the LRSP Pilot effort to create their LRSP using their own staff.
- Adoption of the LRSP by the County Board can be beneficial to the county.
- Creation of the LRSP can allow the county to seek implementation funding from State DOT.
- A county may find it useful to conduct an annual crash update and update their LRSP every three years. This allows them to evaluate their past efforts and plan for the future.

Case Study Two: LRSP Implementation in Cowlitz County, WA



Prepared By: *Cowlitz County, WA*
LRSP Coverage *Area: County*
LRSP Length: *33 pages*
LRSP Completion Date: *2014*

County Size[4]: *1140 mi²*
Road Miles[5]: *~531 mi*
Population[6]: *110,730 (2020)*
Crashes: *470 (2008-2012)*
Fatalities: *9 (2008-2012)*

The **Washington State DOT** supports a County and City Safety Program. The County Safety program provides funding for projects that reduce fatal and serious injury crashes on county roads using engineering improvements/countermeasures. Projects are identified through each county's LRSP, which identifies and prioritizes projects based on the top crash type(s) in the county. Similarly, the City Safety program provides funding for projects that reduce fatal and serious injury crashes on city/town streets and state highways using engineering improvements/countermeasures[7].

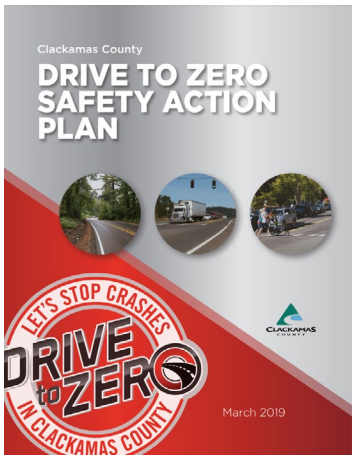
Cowlitz County is in southwestern Washington, along the border with Oregon. The 2020 U.S. Census estimated approximately 110,730 people residing within the county. Cities and towns within Cowlitz County include Longview, Kelso, Woodland, Kalama, and Castle Rock. The county covers approximately 1,140 square miles. Mt. St. Helens National Volcanic Monument is in the eastern part of the county.

Cowlitz County decided to prepare an **LRSP** so that they would be eligible for HSIP funding from Washington State DOT. The state DOT was flexible with the LRSP requirements. The County reported that creating an LRSP allowed the agency to move from reactively addressing safety to proactively addressing safety. Furthermore, the County identified gaps, like realizing that traffic volume counts were not being collected as expected. In addition, Cowlitz County became aware of challenges with pedestrian and bicycle crashes. For other local agencies developing an LRSP, the County shares not to worry about providing too many details in your first plan. Cowlitz County is updating its LRSP, opting to keep the original framework, but adding to more detail to the projects that the county would like to prioritize.

KEY TAKEAWAYS

- Local Road Safety Plans are scalable. You will inevitably add to it over time.
- A data-driven approach can lead to identifying safety issues that your agency was not previously aware of.
- Leverage stakeholder input, available training, and low cost safety improvements for implementation into maintenance, capital improvement, and safety projects.

Case Study Three: Developing the Clackamas County, OR LRSP



Prepared By: *A consultant in cooperation with Clackamas County, OR*

LRSP Coverage Area: *County*

LRSP Length: *74 pages*

LRSP Completion Date: *March 2019*

County Size: *1879 mi²*

Road Miles: *~1400 mi*

Population[8]: *421,401 (2020)*

Crashes: *29,765 (2009-2015)*

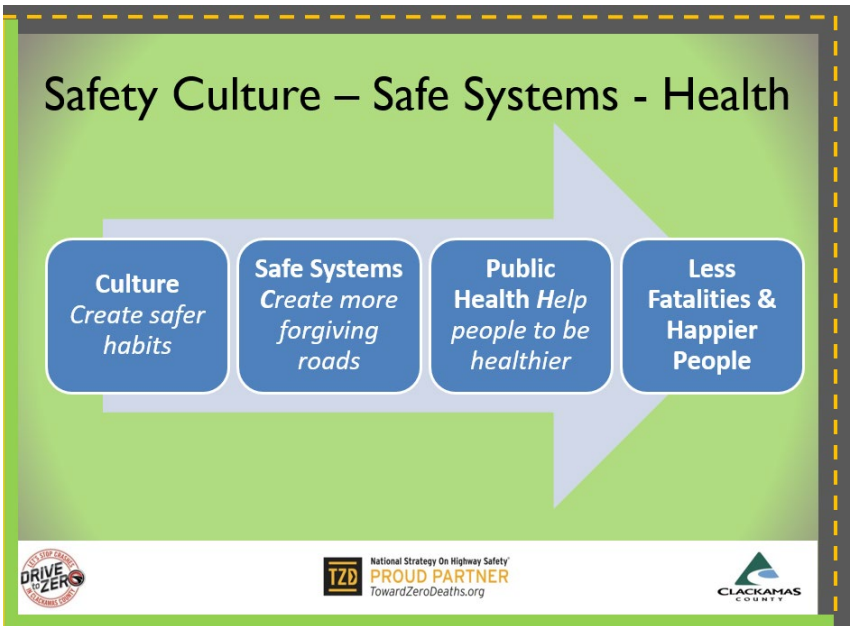
Fatalities: *183 (2009-2015)*

Clackamas County, Oregon experiences between 20 and 40 fatalities each year. That is one death every 9 to 15 days. The County created its original Transportation Safety Action Plan (TSAP) in 2012. The plan laid the groundwork for a holistic approach that encouraged all community members and county departments to take an active role in reducing fatal and serious injury crashes.

In 2017, the County started updating its countywide TSAP. For the update, planners aimed to strengthen and broaden this approach. The new plan incorporates new multi-disciplinary research concepts like traffic safety culture, supports national initiatives like Toward Zero Deaths, and promotes transportation safety within – and across – all departments. In one such collaboration, the county transportation department works closely with the public health department, resulting in the appointment of a shared staff member who helps develop traffic safety efforts from a public health perspective. The image on the right illustrates the relationship between their safety culture, safe system, and public health within the community.

Clackamas County has also produced some low budget Public Service Announcements (PSA) to educate the public about some of their emphasis areas. Check out three of their PSAs - **aggressive driving**, **distracted driving** and **slowing down for the curve**.

The updated Clackamas County TSAP includes countywide policies, a local road safety plan, recommended projects, and a framework for picking future projects. The plan and updates are available on the **Action Plan webpage**.

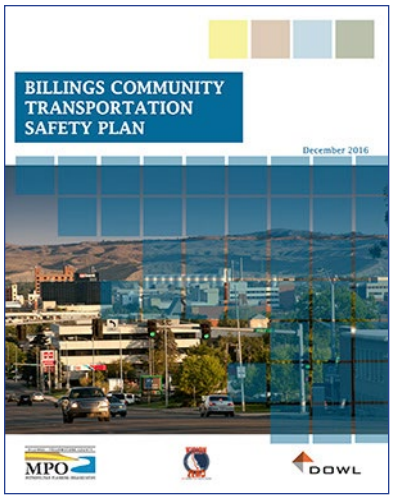


Link Between Safety Culture, Safe Systems, and Health (Source: Clackamas County)

KEY TAKEAWAYS

- Use of a data-driven, systemic approach is imperative to creating an LRSP.
- It is important that the LRSP consider the factors that influence driver behavior and crashes, such as the link between impaired driving and access to substance use disorder treatment resources.
- When creating your LRSP, include the local public health agency in the process. Transportation and public health departments have a lot in common in terms of safety and their input into the LRSP while make a more robust document.
- A board of County Commissioners that recognizes how safety, health, and economic issues fit together is key.

Case Study Four: Coordinating the Billings-Yellowstone County MPO LRSP with the Montana SHSP



Prepared By: *A consultant in cooperation with Billings-Yellowstone County MPO, MT*

LRSP Coverage Area: *MPO*

LRSP Length: *133 pages*

LRSP Completion Date: *December 2016*

MPO Size: *~60 mi²*

Road Miles[9]: *~500 mi*

Population[10]: *181,667 (2020)*

Crashes: *~3000/year (2005-2014)*

Fatalities: *unknown*

The Billings-Yellowstone County MPO finalized a **Community Transportation Safety Plan** (CTSP) for the Billings, Montana planning area in 2016. Plan development was led by a safety advisory committee, which included the MPO, the City of Billings, Yellowstone County, local safety stakeholders, and the Montana Department of Transportation (MDT). MDT was a critical collaborator throughout the process, providing the initial funding for the MPO to hire a consultant, sharing crash data for analysis purposes, and participating in all meetings. The local safety stakeholders also provided critical input for the plan's vision, goals, and emphasis areas. They were also asked to provide information on their current safety programs and efforts to help the MPO identify all available resources, as well as gaps for the selected emphasis areas.

Early in the plan development process, stakeholders reviewed the Montana's SHSP, known as the *Comprehensive Highway Safety Plan* (CHSP) to identify how it could be coordinated with the local effort. The review focused on the vision, goals, and emphasis areas to determine alignment. The end result was:

- The CTSP has the same *Vision Zero* goal as the CHSP.
- The CTSP sets interim goals that align with the CHSP's *Vision Zero* philosophy.
- Two of the three CTSP emphasis areas align with those in the CHSP.
- Many of the CTSP strategies and actions align with proven countermeasures in the CHSP.

As a result of stakeholder and plan coordination efforts, the MPO is planning to obtain safety funding and nurture the new safety collaborations to implement the CTSP.

KEY TAKEAWAYS

- Early coordination with the state DOT can lead to funding and resource collaborations.
- Participation in the state's SHSP update and implementation process can provide local planners with safety background and knowledge they can use to inform the development of their local safety plans.
- Safety stakeholder engagement leads to safety program and project coordination, as well as an identification of where gaps exist.
- LRSP and SHSP alignment ensure the local jurisdiction is in a good position to address safety and receive funding for implementation.

Case Study Five: Regional Safety Plans for Louisiana

Prepared By: *South Central Planning and Development Commission, LA*

LRSP Coverage Area: *Region*

LRSP Length: *38 pages*

LRSP Completion Date: *February 2013*

Region Size: *unknown*

Road Miles: *unknown*

Population: *unknown*

Crashes: *unknown*

Fatalities: *436 (2007-2011)*

The Louisiana Department of Transportation and Development (LaDOTD) removed barriers and provided incentives for MPOs and local jurisdictions to consider safety programs and projects. Initially, LaDOTD provided consultant help and eventually hired in-house staff to develop and implement regional safety plans in the state. The nine Regional Safety Coordinators, hired to update and implement the **regional safety plans**, not only possessed "local" knowledge of the communities and safety needs, but also the ability to advance projects and assist when needed. The coordinators communicate directly with the MPO and local jurisdictions to provide a feedback mechanism to LaDOTD and convey the challenges and opportunities of addressing safety on the local system. Having a designated individual in each region has provided consistency to the safety planning process, and it has also ensured that safety is a major priority.

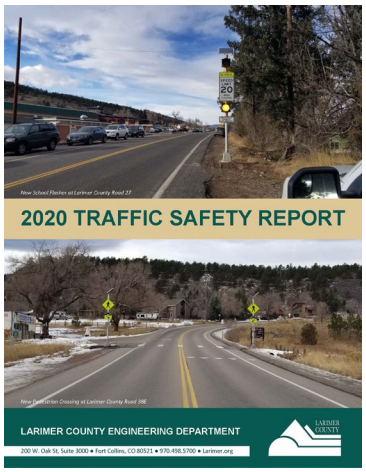
The regional safety plans (see the **South Central Regional Transportation Safety Plan** as an example), follow closely with the emphasis areas, strategies, and actions outlined in the Louisiana SHSP. While each region reviews its' crash data independently, customizing, and adopting relevant portions of the SHSP provide implementable solutions and avoid the reinvention of ideas. In addition to using the SHSP as a resource, LaDOTD developed uniform crash reports to assist each region with safety problem identification (available in the crash section of the LADOTD **Data Reports webpage**). The use of generated reports removes the burden of having MPO or local staff spend time and resources on crash analysis.

Many of the regional safety plans identify roadway departures, intersections, and/or bicycles/pedestrians as key emphasis areas and recommend infrastructure treatments. To address these challenges, the regional coordinators work closely with local jurisdiction representatives and the Louisiana LTAP to review the crash data at a local level, perform road safety assessments and identify low cost treatments. The Louisiana LTAP **Local Road Safety Program** developed a **Crash Data Workshop** to provide the tools necessary for regional and local transportation planners to prioritize road safety issues, develop basic road safety plans, and generate project applications for safety funds.

KEY TAKEAWAYS

- Employ staff to manage regional and/or local safety plans to provide consistency to the process, as well as someone on the "ground" who knows the issues and can provide technical assistance.
- Coordinate regional and local safety efforts with the SHSP to provide effective strategies and actions to follow, without reinventing the wheel.
- Generated crash reports can save regional and local transportation planners time and resources and provide meaningful information on the key safety needs.
- Collaborators such as the Local Technical Assistance Program can provide safety assistance and training opportunities.

Case Study Six: Larimer County LRSP Yields Annual Benefits



Prepared By: *Larimer County, CO Engineering Department*

LRSP Coverage Area: *Unincorporated County*

LRSP Length: *24 pages*

LRSP Completion Date: *2020*

County Size[11]**:** *2,640 mi²*

Unincorporated Road Miles: *887 mi*

County Population[12]**:** *359,066 (2020)*

Unincorporated County Crashes: *379*

Unincorporated County Fatalities: *6 (2020)*

Larimer County is located in north central Colorado, along the border of Wyoming, and is the sixth largest county based on population in the state. It includes two cities (Fort Collins and Loveland), three towns (Berthoud, Estes Park, Timnath, and Wellington), and three municipalities partially located within the county (Berthoud, Johnstown, and Windsor)[13]. The landscape ranges from urban centers in the Eastern plains to mountainous terrain in the west.

In 2009, the county used local funding to review opportunities for low cost safety improvements and assembled a report to demonstrate the effectiveness of these treatments. While the impetus for the original safety efforts can be attributed to a "starter" pot of funding, the work did not end there. The implementation of successful safety improvements, coupled with locally-driven motivation to save lives, led to the development of a Low Cost Safety Program. Now, on an annual basis, the county analyzes its crash data to review trends, evaluate program/project effectiveness, and identify future projects. This information is synthesized and shared through a series of **Annual Reports**, dating back to 2010, with the **2020 Traffic Safety Report** being the most recent.

The county finds the Annual Reports extremely beneficial as they:

- Provide a formalized means to evaluate the effectiveness of safety treatments, justifying that the costs are producing a benefit.
- Provide an opportunity to review data annually to identify emphasis areas and locations with the potential for safety improvements.
- Provide transparency and demonstrate to the public, stakeholders, and elected officials how county staff identify and address the key safety needs.
- Demonstrate the key areas of need and rationale for addressing those issues.
- Help to explain why certain treatments at certain locations are implemented prior to or instead of others.

To complete these reports, the county produces and funds this work with their own staff and financial resources. County leaders recognize that by sharing information on the effectiveness of their safety work, over time, it has created buy-in and support for additional work and validated the importance of safety in the county. For example, the most recent report provides information on the effectiveness of implementing roundabouts at several county intersections.

KEY TAKEAWAYS

- Remember that a small amount of funding can go a long way.
- Identify a few safety treatments and demonstrate their effectiveness. This shows the benefits of the safety plan and can lead to more improvements down the line.
- Share your safety information through annual reports. This provides accountability to the process and sets the local jurisdiction up to continue advancing safety work.
- Creation of annual reports creates a public record of data, low cost safety improvements, and planned future improvements for the county.

Success Story References

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Suggested Resources to Assist with Creating a Plan that Fits Your Agency

FHWA LRSP Development Resources

- Local Road Safety Plan Do It Yourself (DIY) website
- Local Road Safety Plan Template
- Local Road Safety Plans: Your Map to Safer Roadways Infographic
- Developing Safety Plans: A Manual for Local Rural Road Owners (FHWA-SA-12-017)

LRSP Examples

- Nevada County, CA Local Road Safety Plan
- Cowlitz County, WA Strategic Risk-Based Assessment
- Clackamas County, OR Transportation Safety Action Plan
- Clackamas County, OR Action Plan webpage
- Billings-Yellowstone County, MT MPO Community Transportation Safety Plan
- South Central Regional Transportation Safety Plan, LA
- LADOTD Data Reports webpage
- Larimer County, CO Annual Reports
- Larimer County, CO 2020 Traffic Safety Report
- Washington State DOT Highway Safety Improvement Program
- MnDOT County Roadway Safety Plans
- Caltrans Highway Safety Improvement Program
- Tribal Transportation Safety Plans

Stakeholders

- California Local HSIP Advisory Committee
- Wisconsin County Traffic Safety Commissions
- State Safety Contacts
- Local Technical Assistance Programs (LTAP)
- Potential Local Road Safety Plan Stakeholders

Videos

- Local Road Safety Plan Introduction Video
- Local Road Safety Plans – A California Case Study Video
- Clackamas County Aggressive Driving Public Service Announcement
- Clackamas County Distracted Driving Public Service Announcement
- Clackamas County Slowing Down for the Curve Public Service Announcement
- Minnesota's Systemic Approach to Safety Video
- 3 Approaches to Address Severe Roadway Crashes
- Systemic Analysis

Trainings

- Rural Safety Center LRSP Training Webinars
- Systemic Safety Training Part 1, Part 2, and Part 3
- Low Cost Safety Improvements
- Various LRSP Training - Local Road Safety Plan Do It Yourself (DIY) website

Systemic Safety Resources

- Systemic Safety Analysis Infographic
- Systemic Safety Improvements
- Systemic Safety Project Selection Tools
- Highway Safety Benefit-Cost Analysis Guide

Data Sources, Collection, and Analysis Tools

- US Census Data
- Web-based Injury Statistics Query and Reporting System (Centers for Disease Control and Prevention - CDC)
- BRFSS: Behavioral Risk Factor Surveillance System (CDC)
- YRBSS: Youth Risk Behavior Surveillance System (CDC)
- State-based Motor Vehicle Data and Information (CDC)
- Impaired Driving Data (CDC)
- MV PICCS: Motor Vehicle Prioritizing Interventions and Cost Calculator (CDC)
- FIRST: Fatality and Injury Reporting System Tool (NHTSA)
- NEMSIS (NHTSA)
- Road Safety Audits (FHWA)
- Crash Tree Diagram Tool -80MB Excel file (FHWA)
- Crash Data Summary Template (FHWA)
- usRAP: United States Roadway Assessment Program
- Crash Modifications Factors Clearinghouse

National Countermeasure Resources

- FHWA Proven Countermeasures
- NHTSA Countermeasures That Work
- Toward Zero Deaths Toolkit
- NCHRP 500: Guidance for Implementation of the AASHTO Strategic Highway Safety Plan

NATIONAL STAKEHOLDERS

- **FHWA Office of Safety and Resource Center Safety and Design Technical Service Team** – Provide guidance and materials to assist with LRSP development.
- **National Association of County Engineers (NACE)** – Promote local road safety to members and sponsor events and conferences related to the topic.
- **National Association of Development Organizations (NADO)** – Member agency for rural transportation planning organizations (RTPOs), focused on providing assistance in a number of transportation areas, including safety.
- **National Center for Rural Road Safety (Rural Safety Center)** – Promote rural and local road safety through newsletters, trainings, and resource sharing.

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Disclaimer

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the U.S. Department of Transportation.

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