



SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, Kansas

FINAL REPORT

FEBRUARY 2025

THANK YOU!

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LIST OF ABBREVIATIONS:

SS4A: US DOT Safe Streets and Roads For all Program

PDO: Property Damage Only

CDC: Centers for Disease Control and Prevention

STF: Safety Task Force

CSAP: Comprehensive Safety Action Plan

SSA: Safe System Approach

PIP: Public Involvement Plan

ETC: Equitable Transportation Community Explorer tool

KSI: Killed or Severely Injured (Crash type)

KDOT: Kansas Department of Transportation

VRU: Vulnerable Road Users

HIN: High Injury Network

HRN: High Risk Network

LRTP: Long Range Transportation Plan

SHSP: Strategic Highway Safety Plan

NHTSA: National Highway Traffic Safety Administration

FHWA: Federal Highway Administration

CMF: Crash Modification Factors

HSM: Highway Safety Manual

CRF: Crash Reduction Factors

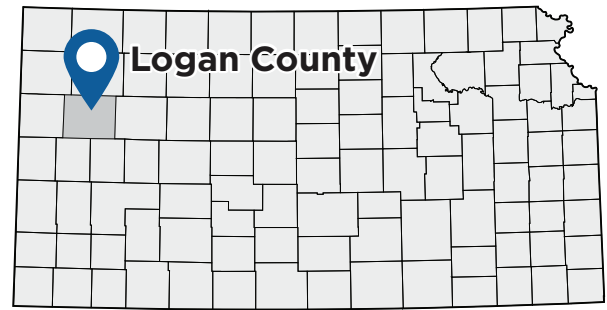
LPI: Leading Pedestrian Interval

MUTCD: Manual on Uniform Traffic Control Devices

BIL: Bipartisan Infrastructure Law

DUI: Driving Under the Influence

EXECUTIVE SUMMARY



Introduction

The US Department of Transportation's Safe Streets and Roads for All (SS4A) program funds roadway safety planning activities aimed at preventing roadway deaths and serious injuries. The SS4A program supports the US Department of Transportation's National Roadway Safety Strategy and Logan County's goal of zero roadway deaths using a Safe System Approach. In September of 2022, a group of cities and counties located along US 83 Highway in western Kansas led by Garden City, applied for a SS4A grant. This grant application was successful, and the group formed the US 83 Coalition (Coalition) to oversee the development of the Comprehensive Safety Action Plans (CSAP) for the US 83 corridor and the participating cities and counties. This report focuses on Logan County, KS.

The project was kicked off in May of 2024 when the US 83 Safety Coalition was convened for a series of meetings that included staff and elected officials from participating cities and counties. Public engagement followed, as did data collection and an analysis of roadway safety concerns throughout the corridor and in the participating communities. This plan uses comprehensive data analysis to identify high-risk roadways and intersections, assess traffic patterns, and evaluate existing infrastructure in communities along the US 83 corridor, including Logan County.

Commitment

The US 83 Coalition recognizes the need for a coordinated effort to identify and prioritize safety concerns on US 83 and within their communities. The Coalition is committed to working collaboratively to develop strategies that will mitigate risks and improve roadway safety for travelers on US 83, as well as residents and visitors to their communities.

The success of this CSAP relies on the commitment and active participation of all stakeholders in the US 83 Safety Coalition. Through this CSAP, the Coalition fosters collaboration among the counties and cities along the corridor. By bringing together residents, local government officials, law enforcement agencies, transportation authorities, and community organizations, collective expertise and resources can be leveraged to implement targeted safety initiatives.

Logan County is committed to reducing the risk of a fatal or serious injury to all road users, with an emphasis on Roadway Departures, Distracted Driving, Large Vehicles, and Unrestrained Occupants. This CSAP outlines countermeasures to reduce distracted driving, promote seatbelt usage, and reduce conflicts at intersections as well as roadway departures through infrastructure projects, public outreach, education and other means.

Safety Task Force

The US 83 Coalition created a Safety Task Force (STF) to guide the development of this action plan. The task force is made up of elected officials, staff from local government, and staff from stakeholder agencies, all of whom were assisted throughout the process by a team of consultant planners and engineers.

The US 83 Coalition Safety Task Force served as the foundation for community engagement, data collection, and planning efforts that informed the development of the CSAP for US 83, as well as the plans for all the participating cities and counties, including Logan County. The task force sought to determine the project objectives and goals, provide a scope of work, create a project schedule and timeline, and determine how resources would be allocated across the project.

Over three meetings, participants were provided context and resources for the planning process plus relevant data and informational materials to identify the safety challenges and needs for the US 83 corridor and for Logan County.

Public Engagement

Online surveys and other outreach events provided opportunities for the public to identify transportation safety issues and provide input on proposed solutions.

A pop-up engagement event was held during the Garden City Fall Fest on Saturday, September 21, 2024. Approximately 140 participants visited the pop-up event to learn about the SS4A project and share their thoughts on roadway safety.

An online survey was conducted from May to August 2024. The survey was advertised on city and county websites, Facebook, and other community social media platforms. 284 surveys were received from the entire corridor, with ten respondents (plus 54 respondents from Oakley) reporting as members of the Logan County community. Survey questions focused on demographic information for the corridor at-large, and for localized information on crash involvement, perceptions of safety, important roadway safety issues, destinations within the community, and comments from respondents. This helped the project team understand issues impacting the entire US 83 corridor and Logan County and the other local communities.

Much was learned about public perceptions of roadway safety along the U83 corridor and in Logan County. Specific locations and items that were identified by Logan County residents and stakeholders included:

- Large commercial vehicles are a safety concern for many residents.
- Many residents expressed a need for passing lanes on US 83.
- Intersections are a major concern for many residents, particularly with many large commercial vehicles entering and exiting US 83.

Crash Trends

Ten years of crash data (2013-2022) was reviewed for Logan County. The data provided a large sample size to identify crash trends.

- During this period, there were 314 total crashes. Five fatal crashes, 18 serious injury crashes, 73 injury crashes, and 218 property damage only (PDO) crashes.
- Most crashes were single car crashes (83%).
- For crashes with other vehicles, 21% were angle-side impact crashes and 30% were rear-end crashes and 26% were Sideswipe: opposite direction.

Equity Analysis

The goal of equity analysis is to distinguish populations that are underserved and under-resourced and assess how they are impacted by outcomes of the transportation system. This plan uses criteria for areas of persistent poverty, historically disadvantaged communities as identified by the USDOT, and the Social Vulnerability Index as defined by the Centers for Disease Control and Prevention (CDC). A review of the equity data available via the DOT ETC Explorer Tool indicates that the census tract that includes Logan County is not identified as a disadvantaged census tract, and thus Logan County is not considered an underserved community. For this reason, equity considerations are not made for this report.

Safety Strategies

The US 83 STF evaluated the results of the data analysis, the safety concerns, and public priorities. Each Safe System element (safe roads, safe speeds, safe road users, safe vehicles, and post-crash care) was considered. **Priority Emphasis Areas** were then identified for each community and Countermeasures were developed to specifically address the following priority safety emphasis areas for Logan County:

1. Roadway Departure Related Crashes
2. Distracted Driving
3. Large Vehicles

Below are **major projects identified** in this CSAP:

1. Improve Road 160 from K-25 to U-40
2. Improve Road CR160 RR Crossing N of US 40
3. Improve Road 230 and Fort Fox Road
4. Improve Road 450

Other Projects:

Roadway Improvements:	Intersection Improvements:
• Rd 230 and Fort Fox Rd between Apache Acre Rd and Road 11 (Thomas County line) • Rd 450 between US-40 and Fort Fox Rd • Rd 460 between US-40 and Gove County CC Rd • Rd 160 between K-25 and US-40 • Rd 400 between Zest Rd and US-40	• Rd 270 and Broadway St • Rd 170 and Apache Acre Rd • Rd 350 and Zest Rd • Rd 170 and Fort Fox Rd • Rd 460 between US 40 and Gove County CC Rd • Rd 400 from Zest Rd to US 40 • Rd 400 and Seneca Rd Intersection

Progress and Transparency

The ability to track progress over time in an open and transparent manner is central to achieving the goals outlined in Logan County's Vision Zero Resolution. Regular progress tracking creates accountability to the public and builds trust between the public and the cities, counties, and agencies that are responsible for roadway safety. Progress and transparency also help create an environment of informed decision making based on effectiveness of chosen interventions and the ability to correct the approach when necessary. Finally, progress and transparency provide a sense of direction and ensures that teams and individuals can see tangible outcomes of their work.

To support progress and transparency, this CSAP provides information on funding, process and policy changes, and other strategies that can assist Logan County in achieving the goals described in their Vision Zero Resolution.

Appendices

Several important documents will be included at the end of this document. These documents support the CSAP but also explain the planning process and the project recommendations in more detail.

PROJECT INTRODUCTION

Roadway safety is an issue that impacts every person and every community in the United States today. Whether you drive, are a passenger, use transit, walk or bike, we are all exposed to risk on our roadways. In the US, roadway crashes account for large numbers of serious injuries and deaths. According to the National Safety Council, in 2022 46,027 people died, and 5.2 million people received medically consulted injuries from motor-vehicle crashes in the United States.

To combat this challenge, the US Department of Transportation (USDOT) has created the Safe Streets and Roads for All (SS4A) grant program. SS4A funds regional, local, and Tribal transportation safety initiatives designed to prevent roadway deaths and serious injuries. The SS4A program supports the *US Department of Transportation's National Roadway Safety Strategy* and their goal of zero roadway deaths using a *Safe System Approach*. SS4A uses an approach that shares the principles, objectives, and policies of a similar concept, Vision Zero – that roadway deaths are unacceptable and preventable. SS4A is a program that implements Vision Zero through the USDOT.

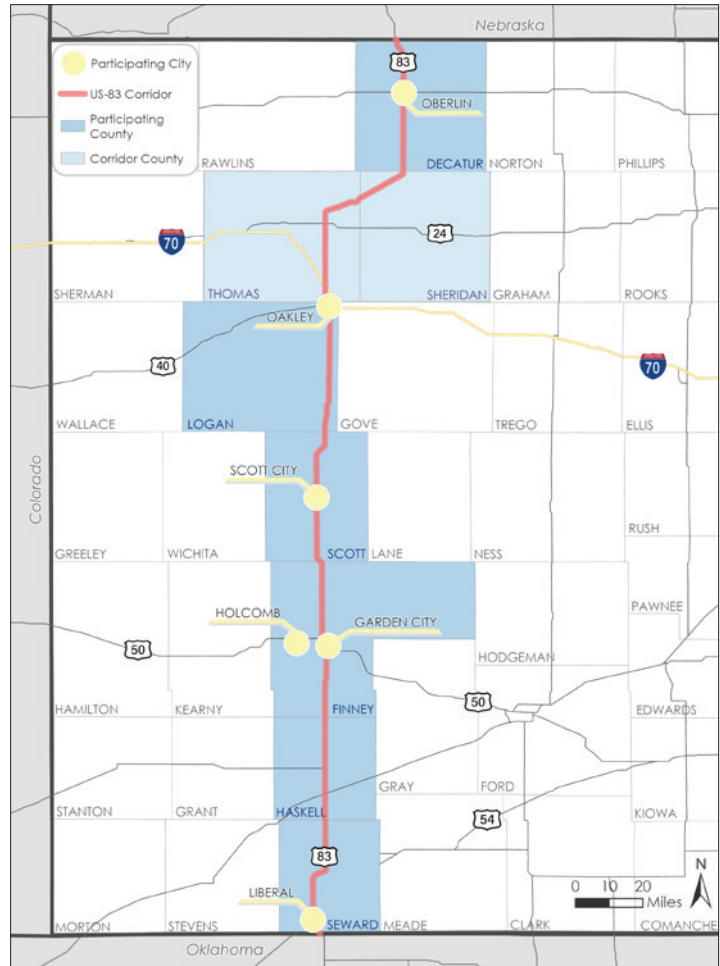


Figure 1: US 83 Corridor and Community Study Area

Communities that successfully apply for a SS4A grant receive funds for roadway safety planning. This planning exercise culminates in a Comprehensive Safety Action Plan (CSAP) for the subject community. In September of 2022, a group of cities and counties located along US 83 highway led by Garden City applied for a SS4A grant. This grant application was successful, and the group formed the US 83 Coalition (Coalition) to oversee the development of the CSAPs for the US 83 corridor and the participating cities and counties. This report focuses on Logan County, KS.

The project was kicked off in May of 2024 when the Coalition was convened for a series of meetings that included staff and elected officials from participating cities and counties. Public engagement followed, as did data collection and an analysis of roadway safety concerns throughout the corridor and in the participating communities. This plan uses comprehensive data analysis to identify high-risk roadways and intersections, assess traffic patterns, and evaluate existing infrastructure in communities along the US 83 corridor, including Logan County.

The information collected and analyzed throughout this process is the basis for the following CSAP. With this information, evidence-based strategies have been identified that focus on the core tenets of SS4A: safer people, safer roads, safer vehicles, safer speeds, and post-crash care. Identifying and improving safety gaps in these areas will create safer roads for Logan County, and more broadly, the US 83 corridor communities as a whole.

COMMITMENT TO COLLABORATION AND SAFETY

The US 83 Coalition recognizes the need for a coordinated effort to identify and prioritize safety concerns on US 83 and within their communities. The Coalition is committed to working collaboratively to develop strategies that will mitigate risks and improve roadway safety for travelers on US 83, as well as residents and visitors to their communities.

The success of this Safety Action Plan relies on the commitment and active participation of all stakeholders in the US 83 Safety Coalition. Through this CSAP, the Coalition fosters collaboration among the counties and cities along the corridor. By bringing together residents, local government officials, law enforcement agencies, transportation authorities, and community organizations, collective expertise and resources can be leveraged to implement targeted safety initiatives.

By working together, we can promote a culture of safety and ensure that our communities are safe places to live, work, and visit. Through regular communication, sharing of best practices, and ongoing prioritization of our initiatives, we will continuously strive to improve safety along the US 83 corridor. This coalition is dedicated to fostering collaboration, innovation, and a proactive approach to addressing safety problems, and we look forward to making a positive impact on the well-being of Logan County, and the rest of the US 83 corridor communities.

SAFE SYSTEM APPROACH

The US Department of Transportation has adopted the Safe System Approach (SSA) model to roadway safety. The SSA is part of the broader National Roadway Safety Strategy which is designed toward a future with zero roadway fatalities and serious injuries. The Safe System Approach model is to create layers of safety redundancy in the roadway system to prevent crashes and reduce harm when crashes occur. To achieve this, the Safe System Approach focuses on six principles and five objectives when evaluating safety plans.

Safe System Approach Principles:

1. Death and serious injury are unacceptable
2. Humans make mistakes
3. Humans are vulnerable
4. Responsibility is shared
5. Safety is proactive
6. Redundancy is crucial

Objectives of the Safe System Approach:

1. Safer People
2. Safer Roads
3. Safer Vehicles
4. Safer Speeds
5. Post-Crash Care



Figure 2: Safe System Approach

PLAN ORGANIZATION

This Comprehensive Safety Action Plan is built on the following eight key components:

1. **Leadership Commitment and Goal Setting** – An official public commitment by a high-ranking official and/or governing body to an eventual goal of eliminating roadway fatalities and serious injuries.
2. **Planning Structure** – A committee, task force, implementation group, or similar body charged with oversight of the CSAP development, implementation, and monitoring.
3. **Engagement and Collaboration** – Robust engagement with the public and relevant stakeholders that allows for both community representation and feedback. Information received is analyzed and incorporated into the CSAP.
4. **Equity Considerations** – Plan development using inclusive and representative processes. Underserved communities are identified through data and other analyses in collaboration with appropriate partners.
5. **Safety Analysis** – A comprehensive analysis of existing conditions, historical trends, and risk attributes that provides a baseline level of fatal and serious injuries across Logan County.
6. **Policy and Process Changes** – Assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize transportation safety.
7. **Strategy and Project Selections** – Identification of a comprehensive set of projects and strategies, shaped by data, the best available evidence and noteworthy practices, as well as stakeholder input and equity considerations, which will address the safety problems described in the CSAP.
8. **Progress and Transparency** – Method to measure progress over time after the CSAP is developed or updated.

LEADERSHIP COMMITMENT AND GOAL SETTING

Committing to zero roadway deaths is ambitious and achieving this goal will be challenging for any community. Leadership from local elected officials on this issue is critically important, as leadership sets the tone for the organization and the community. Elected leadership can steer the course of policy and secure the resources necessary to implement the requisite safety measures effectively. The commitment of elected leadership can result in new laws at the local level, legislative support at the state or federal level, and better enforcement of existing laws. The commitment of leadership also creates a culture of trust, encourages collaboration between, and directs the actions of many critical stakeholders, such as government agencies, community organizations, and the public. Setting measurable goals and creating a timeline for implementation keeps stakeholders focused and motivated, while also enabling performance management.

Logan County has committed to working toward zero deaths on county roadways. This commitment is demonstrated by Resolution #24-14 passed by the Logan County Commissioners on December 16, 2024. The resolution is attached at the end of this document as **Appendix D**.

PLANNING STRUCTURE

SAFETY TASK FORCE

The US 83 Coalition created a Safety Task Force to guide the development of this action plan. The Task Force is made up of elected officials, staff from local government, and staff from stakeholder agencies, all of whom were assisted throughout the process by a team of consultant planners and engineers.

Table 1: Safety Task Force Members

Name	Agency
Ingrid Vandevort	KDOT – Bureau of Transportation Safety
Gary Bennett	KDOT District 6
Lisa Mussman	KDOT Public Affairs
David LaRoche	FHWA
Mackenzie Phillips	Finney County
Robert Reece	Finney County
Larry Brungardt	Finney County
Shane Burns	Garden City Schools
Robin Lujan	Holcomb
Matt Allen	Garden City
Adam Schart	Garden City / Wilson and Company
Matt Allen	Garden City
Mike Muirhead	Garden City
Tyler Patterson	Garden City
Danielle Burke	Garden City, City Administrator
Lisa Mussman	KDOT Public Affairs
David Sporn	Oberlin City Administrator
Brock Sloan	Oakley City Administrator
Scott Carr	Seward County Commissioner
Bradley Pendergast	Scott City
Katie Eisenhour	Scott City Economic Development
C.W. Harper	Finney County, Haskell County, Seward County
Rusty Varnado	Liberal City Manager

The US 83 Coalition Safety Task Force served as the foundation for community engagement, data collection, and planning efforts that informed the development of the US 83 CSAP, as well as the plans for all the participating cities and counties, including Logan County. The task force sought to determine the project objectives and goals, provide a scope of work, create a project schedule and timeline, and determine how resources would be allocated across the project.

ENGAGEMENT AND COLLABORATION

The development of this plan included a robust public engagement process that included members of the public and other stakeholders to obtain meaningful community representation and feedback. This CSAP has incorporated information received during the engagement process into the plan development.

PUBLIC INVOLVEMENT PLAN

A Public Involvement Plan (PIP) was created to guide the engagement of citizens and stakeholder agencies for this project. The PIP provides project background, guiding principles, objectives and relevant community demographics for the US 83 corridor and its communities. It also describes the structure of the public engagement activities, including a description of the Task Force, their meetings and agendas, and how the project team intends to engage the public.

THE GUIDING PRINCIPLES OF THE PIP ARE:

1. Public involvement will be meaningful, productive, and respectful of the participants' time.
2. Feedback generated will be valued and considered.
3. Feedback will be representative of the overall community.
4. Public involvement will lead to a SS4A Comprehensive Safety Action Plan that results in successful implementation that improves the lives of those living and traveling in the study area jurisdictions. By using the input of the community, the plan will meet their needs and gain their support.

Public involvement in the plan was achieved through the following means:

- Three Task Force Meetings
- Online Surveys
- Garden City Fall Fest Pop Up
- Interactive Map

Engagement activities are described in more detail below, and the PIP is included at the end of this document as **Appendix A**.

Safety Task Force Meetings

The Task Force met three times throughout the course of the project to share known and perceived roadway safety issues along US 83 and within their communities and to discuss solutions to reach the goal of eliminating fatal and serious injury traffic crashes. A brief discussion of these meetings can be found below, and comprehensive notes for each meeting can be found in **Appendix B**.

Table 2: Safety Task Force Meetings

US 83 Coalition Safety Task Force Meetings		
Meeting Date	Subject	Location
May 1, 2024	Project Kickoff	Virtual
June 12, 2024	US 83 Summit	Scott City
August 7, 2024	Countermeasures	Virtual

Safety Task Force Meeting 1:

The first US 83 Coalition Safety Task Force Meeting was held virtually via Microsoft Teams on May 1, 2024. The group was convened with the stated purpose: *“To gather input and perspectives from the Task Force about the roadway safety concerns and issues along the US 83 corridor.”* A moderator led participants through a series of questions over roadway safety in the communities along the US 83 corridor. This meeting also introduced the concepts of the SSA and Vision Zero and discussed the goal of producing this CSAP.

Safety Task Force Meeting 2:

The second US 83 Coalition Safety Task Force Meeting was held on June 12, 2024, at the Western Kansas Child Advocacy Center in Scott City, KS. This meeting organized the participants into regional clusters to focus on the North, Central, and South Regions of the US 83 corridor. This meeting focused on visioning a future for the US 83 community, describing the current impact the US 83 corridor has on the communities, and what are the major safety concerns in individual communities. This discussion provided more time and space for community members to describe roadway safety issues in their individual communities, thus providing more information and context to the project team. Finally, the project team used a poll asking: *“What do you hope to accomplish through the US 83 Corridor Safety Action Plan?”* The top three answers were improved safety, better flow of traffic, and planning for the future.

Safety Task Force Meeting 3:

The third and final US 83 Coalition Safety Task Force was held on August 7, 2024, and was held virtually via Microsoft Teams. This meeting focused on identifying countermeasures preferred by each community for their highest priority projects. Like the second meeting, the communities were organized into Small Communities, Medium Sized Communities, and Counties. The project team walked through common countermeasures that can be applied to many of the projects that communities were considering. This helped provide an understanding of the types of projects communities may expect to see in their respective CSAPs.

Online Survey

In addition to the input gathered from the Task Force, Logan County residents were surveyed for input regarding known and perceived roadway safety issues.

An online survey was conducted from May to August 2024. The survey was advertised on city and county websites, Facebook, and other community social media platforms. 284 surveys were received from the entire corridor, with ten respondents reporting as members of the Logan County community.

Survey questions focused on demographic information for the corridor at-large, and for localized information on crash involvement, perceptions of safety, important roadway safety issues, destinations within the community, and comments from respondents. This helped the project team understand issues impacting the entire US 83 corridor and Logan County and the other local communities.

A common theme from the Logan County survey was the high volume of semi-trucks and large commercial vehicles on **US 83 and I-70**. Another commonly reported safety improvement was the need for passing lanes or four lanes on US 83 between communities. Again, large volumes of semi-truck traffic were cited as the problem. **While there were no comments regarding US 40 and K 25, both highways were the sites of multiple fatal and serious injury crashes.**

We have a lot of semis and heavy equipment trucks on our roads.

— Logan County Survey Respondent



Figure 3: Garden City Fall Fest Pop Up Engagement

Interactive Map

An interactive map was created to assist with public engagement efforts. Due to the wide geography of the study area, the map was a helpful tool to reach community members who were unable to attend public meetings in person. The map also helped respondents communicate exactly where they had experienced crashes and other safety concerns in and around the US 83 corridor.

Garden City Fall Fest Pop Up

A pop-up engagement event was held during the Garden City Fall Fest on Saturday, September 21, 2024. Approximately 140 participants visited the pop up to learn about the SS4A project and share their thoughts on roadway safety.

Key Takeaways from Public Engagement

Much was learned about public perceptions of roadway safety along the US 83 corridor and in Logan County. Specific items that were identified by Logan County residents and stakeholders included:

- Semi-trucks and other large vehicles cause safety concerns.
- Intersections along US 83 are unsafe.
- Passing on US 83 is a safety concern.

EQUITY CONSIDERATIONS

Reaching zero deaths on our roadways requires eliminating disparities by prioritizing equity in our transportation system. The goal of considering equity is to identify populations that are underserved and under-resourced, and to assess how they are impacted by safety outcomes of the transportation system. Equity analysis can provide an understanding of the implications of safety risk disparities within our communities.

To identify underserved and under-resourced populations, the US Department of Transportation utilizes a tool called the Equitable Transportation Community (ETC) Explorer tool. This tool is an interactive web application that uses 2020 census tracts and data to explore the cumulative burden communities experience from underinvestment in transportation. The following five components are considered: Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability. The tool uses datasets that indicate burdens in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development.

A review of the equity data available via the DOT ETC Explorer Tool indicates that the census tract that includes Logan County is not identified as a disadvantaged census tract, and thus Logan County is not considered an underserved community. For this reason, equity considerations are not made for this report.

SAFETY ANALYSIS

General safety data was collected to conduct a safety analysis of Logan County. This analysis evaluated roadway safety conditions and crash trends and identified vulnerable locations throughout Logan County. This analysis also assisted in determining the long-range needs of the community and formulated countermeasures and strategies to mitigate risks and address crash trends effectively.

CRASH SUMMARY FOR US 83 CORRIDOR

Prior to examining Logan County, crash data along the US 83 study area was analyzed for a five-year period (2018-2022), encompassing Killed or Severely Injured (KSI) crashes, other injury crashes, and property damage-only crashes. Data is collected and provided by the Kansas Department of Transportation (KDOT).

As shown in **Table 3**, crashes on US 83 declined from 2019 to 2020, with a notable spike in 2021, followed by a decrease in 2022. Property damage-only crashes represent the majority of incidents, followed by other injury crashes and KSI crashes. The highest volume of crashes occurred in 2018, while 2020 recorded the lowest number. Over the five-year period, there were 55 KSI crashes, comprising 18 fatalities (2.1 percent) and 37 serious injury crashes (4.3 percent). In total, 6.4 percent of all crashes resulted in either fatalities or serious injuries.

Table 3: Total US 83 Crashes 2018-2022

Crashes by Year	Fatal	Serious Injury	Other injury	Property Damage Only	Total
2018	5	7	22	153	187
2019	4	5	35	137	181
2020	6	8	26	109	149
2021	3	6	36	130	175
2022	0	11	32	117	160
All Crash Totals	18	37	151	646	852

LOGAN COUNTY EXISTING CONDITIONS ANALYSIS

While the US 83 corridor crash analysis focused on five years of data, for Logan County, the project team reviewed ten years of crash data (2013-2022 and partial data from 2023). The large sample size provided by the ten-year data set provided a more complete understanding of local crash trends. It is important to note that this data captures data collected during the Covid-19 pandemic, which may skew the data to some degree. In addition, FHWA required KDOT to change its serious injury definition in 2019, which resulted in more crashes being classified as “serious injury crashes” after that year.

This 314-crash dataset includes all crashes that occurred in Logan County during the 10-year period. There were five fatal crashes, 18 serious injury crashes, 73 injury crashes, and 218 property damage only (PDO) crashes.

Table 4: Total Logan County Crashes 2013-2022

Logan County	Fatal	Serious Injury	Injury	Property Damage only	Total
Crashes	5	18	73	218	314

Crash Trends Analysis

This analysis aims to understand roadway safety conditions and crash trends, identifying hotspot locations in Logan County. This analysis also aims to determine the top crash type and emphasis areas along the corridor to help formulate relevant countermeasures and strategies to mitigate risks and address crash trends effectively.

Crash by Type

Crash data was analyzed to detail collision types, influencing factors, and risks. Understanding these factors and risks leads to the identification of effective safety measures, targeted interventions, and strategic resource allocation, while supporting data-driven policies to enhance and focus road safety initiatives.

Crash type (e.g., collision with other vehicles, fixed object, pedestrian) analysis is a common method to understand key crash typologies and develop effective countermeasure solutions. The following sections outline the results of the analysis of specific crash types in the study area.

During the study period there were 314 total crashes in Logan County. 96 of these were injury or fatality crashes. Of these, 17% were collisions with another motor vehicle, the other 83% were single car collisions. 91 crashes resulted in an injury. Of injury crashes, about 15.5% were collisions with another motor vehicle, and the remaining 84.5% were single-car crashes. During the study period, five crashes resulted in a fatality.

Table 5 and Table 6 describe crash types that resulted in a KSI crash.

Table 5: Single Car KSI Crash by Type

Single Car KSI Crash Type	Killed	Serious Injury
Overtured	3	10
Fixed Object	0	3
Other non-collision	0	1
Total	3	14

Table 6: Collision with Another Motor Vehicle KSI Crash by Type vs All Crashes

Collision with Another Motor Vehicle Injury Crash Type	Killed	Serious Injury
Angle-Side Impact	1	1
Rear-End	0	2
Head-On	1	0
Sideswipe – Same Direction	0	0
Sideswipe – Opposite Direction	0	1
Total	2	4

Single-Car Crashes Resulting in KSI

Single-car crashes are the most common type, accounting for nearly 83% of all collisions. Among single-car crashes, animal-related incidents are the most common, making up 35% of these crashes. However, five animal-related crashes have resulted in non-serious or fatal injuries. For fatal or injury incidents involving single-car crashes, overturned vehicles are the most frequent, with 53 recorded incidents with 3 fatal and 10 serious injuries.

Table 7: KSI Crash by Single-Car vs All Crashes

Crash Types	Fatal		Serious Injury		Injury	
	Count	Percentage	Count	Percentage	Count	Percentage
Single Car	3	60%	14	78%	63	86%
All Injury	5	100%	18	100%	73	100%

Other Motor Vehicle Crashes Resulting in Fatality or Serious Injury

Head-On Crashes

Head-on crashes occur when the front ends of two vehicles collide directly, typically due to lane encroachment or driver error. Twenty percent of fatal crashes were head on. This underscores the need for data-driven solutions and safety measures to reduce head-on collisions and their severe outcomes.

Angle-Side Impact Crashes

Angle-side impact crashes are defined as the front-end of a vehicle striking the side of another vehicle at an angle. These typically occur at an intersection or when changing lanes. Angle-side impact crashes account for 20 percent of fatal crashes and 5 percent of serious injury crashes. They also account for 5 percent of crashes that resulted in injury. This highlights the need for data-driven safety measures to address this type of crash and severe outcomes.

Rear-End Crashes

Rear-end crashes occur when the front of one vehicle collides with the rear of another vehicle, whether stationary or moving, typically due to driver inattention or sudden stops. Rear-end crashes account for 11% of serious injury crashes and 4% of injury crashes. It is important to understand the underlying factors of rear end crashes and the data-driven safety measures needed to reduce and eliminate all severity and causes of rear-end crashes.

Sideswipe - Opposite Direction

Sideswipe - Opposite Direction crashes occur when one vehicle hits another vehicle going or facing the opposite direction, typically when driving in adjacent opposing lanes. Sideswipes in the opposite direction crashes account for 5% of serious injury crashes. They also account for 1% of crashes that resulted in injury in Logan County.

Crash By Location

Data from 2013 to 2023 was analyzed to map crash locations, helping to pinpoint high-risk areas and contributing factors. Identifying these high-risk areas and factors allows for the development of effective safety measures, targeted interventions, and strategic resource allocation to improve safety along the corridor and in the cities and counties.

State vs Local Road

Table 8 shows where fatal and injury crashes occurred on the local system.

Table 8: Crash by Managing Entity

Crash Types	Fatal		Serious Injury		Injury	
	Count	Percentage	Count	Percentage	Count	Percentage
State	4	80	16	89%	53	73%
Local	1	20	2	11%	19	27%
All Injury	5	100%	18	100%	73	100%

Crash by Mode

The most common fatal and injury crashes by mode of transportation, as seen in **Figure 5** below, include automobiles (33 crashes), pickup trucks (21), and sport utility vehicles (17). Automobiles accounted for the most fatal and serious injuries resulting from crashes (10). Pickup trucks were the most common vehicle experiencing fatal injuries (2).

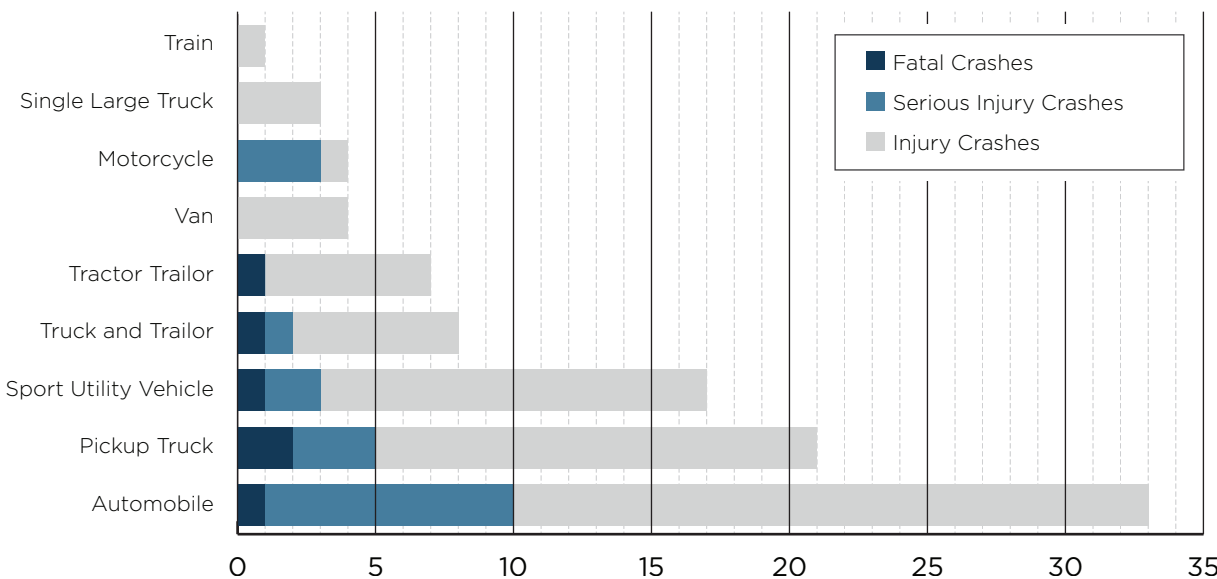


Figure 4: Crash by Mode

Vulnerable Road Users

Vulnerable Road Users (VRU) are generally defined by KDOT as any road user including pedestrians, bicyclists, individuals using mobility aids, and other non-motorized road users who are at greater risk of injury or death in a traffic environment compared to motor vehicles. KDOT's focus on VRU aligns with the Vision Zero and Safe System Approach to create safer road environments for all users by emphasizing the need for appropriate safety measures and infrastructure improvements. There were no VRU crashes in the county outside of the City of Oakley.

Intersection and Roadway Segment Injury and Risk Methodology

To understand which intersections and roadway segments are the most statistically significant in a given geography, the project team created a High Injury Network (HIN) and High-Risk Network (HRN) scoring methodology.

The HIN scoring methodology was developed to identify and prioritize roadway segments and intersections with the highest rates of fatal and severe injury (KSI) crashes. This data-driven approach to the analysis incorporates crash severity, frequency, and roadway characteristics to highlight areas where focused safety improvements will yield the most significant reductions in severe crashes.

The HRN scoring methodology was developed to identify and prioritize roadway segments and intersections with the highest risk of fatal and severe injury (KSI) crashes based on facility attributes. This data-driven approach to the analysis incorporates roadway characteristics, intersection attributes, and location context to highlight areas where focused safety improvements will reduce the number of risk factors present on the system to reduce the likelihood of severe crashes occurring in the future.

The methodology was applied in every city and county in the project area and contributed to the projects and safety interventions recommended in the subsequent CSAP. The complete methodology for the HIN and the HRN can be found in **Appendix F** at the end of this report.

Emphasis Areas

Early in the project, emphasis areas for each community were determined by discussing known traffic safety issues with residents and stakeholders, and then cross checking these concerns against crash data. This information is included in the existing conditions analysis, and a discussion of potential interventions will be discussed later in this document. Emphasis areas that were substantiated by data are described below as Priority Emphasis Areas, underscoring their importance to safety in the study area.

Priority Emphasis Areas:	Other Emphasis Areas:
• Roadway Departure Related Crashes • Distracted Driving • Large Vehicles • Occupant Protection	• Intersections • Impaired Driving • Speed Related • Motorcycle Related • Railroad Related

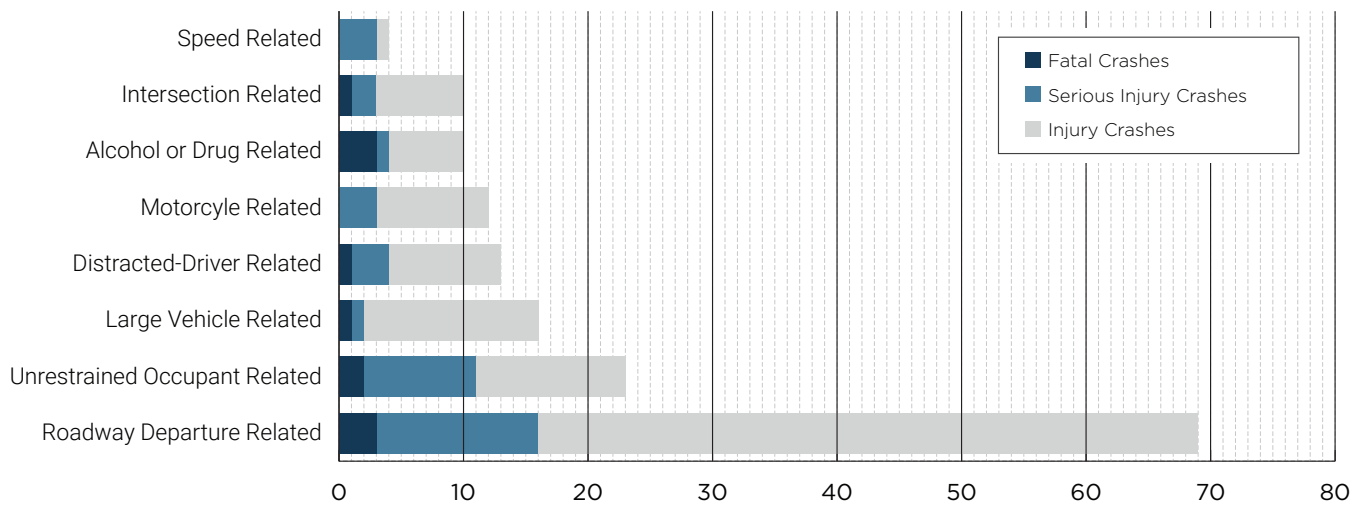


Figure 5: KSI crashes by Emphasis Areas

PRIORITY EMPHASIS AREAS

Roadway Departure

Roadway departure crashes are a leading cause of highway fatalities, accounting for over half of the deaths on US roads each year. In Logan County, three fatal (all overturned) and 66 injury crashes (50 overturned) were attributed to roadway departures, making it the most frequent contributing circumstance for the county. These crashes occur when a vehicle veers out of its designated lane, either crossing the edge line or centerline.

Critical factors contributing to these incidents include excessive speed, roadway geometry such as shoulder width and curve radii, impaired driving, distracted driving, and failure to use seatbelts. The combination of these behaviors not only increases the likelihood of a crash but also exacerbates the severity of injuries and fatalities resulting from such events. Addressing these factors is vital to reducing the frequency and impact of roadway departure crashes for the county.

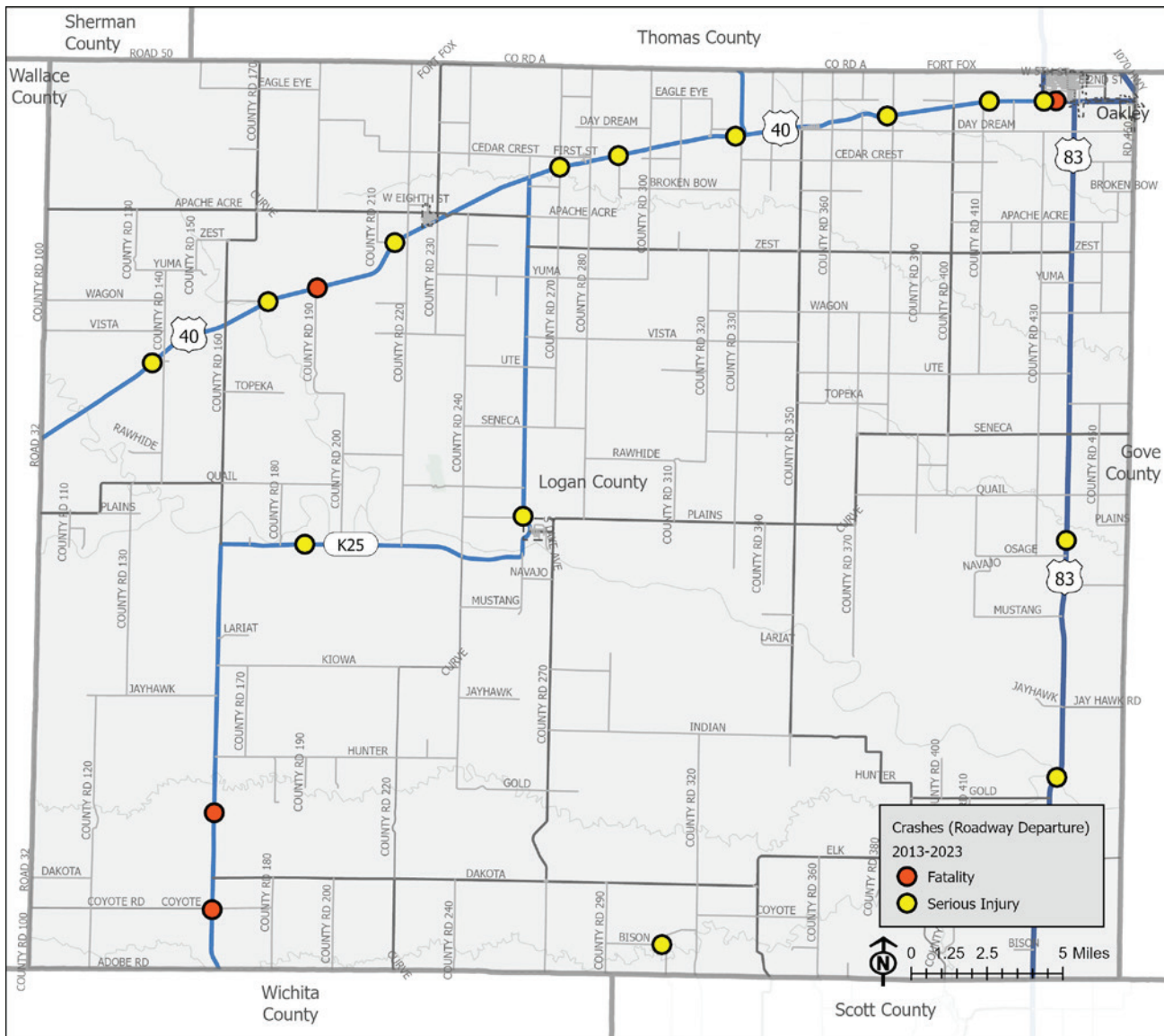


Figure 6: KSI Crashes related to Roadway Departures (one fatality in City of Oakley)

Distracted Driving

Distracted driving occurs when the driver of a vehicle performs any activity that takes their attention from driving. Although crash reports may not have identified distracted driving as a primary cause, it was believed to be a widespread issue that needs to be addressed in order to improve overall safety.

Ongoing education programs, as well as initiatives that promote safe driving habits can reduce the number of related crashes.

Large Vehicles

The third largest contributor to crashes in the study area was large commercial vehicles with 1 fatal and 15 injury crashes. The severity of these types of crashes is typically increased due to the large size and weight of commercial vehicles. These factors indicate that attention needs to be focused on activities such as providing adequate routes for commercial vehicles, and education to develop safe driving behaviors for the operators, traveling public, as well as VRUs to increase safety and reduce these types of crashes.

Occupant Protection

The simple act of wearing a seatbelt is one of the most effective ways to reduce the risk of death or serious injury in a crash. **Occupant protection issues were linked to 2 fatal and 21 injury crashes**, primarily the failure to use seatbelts. This is especially evident in serious roadway departures and intersection crashes, where unrestrained occupants are far more likely to suffer catastrophic outcomes. Consistent seatbelt use across all demographics is crucial for enhancing overall safety on the highway.

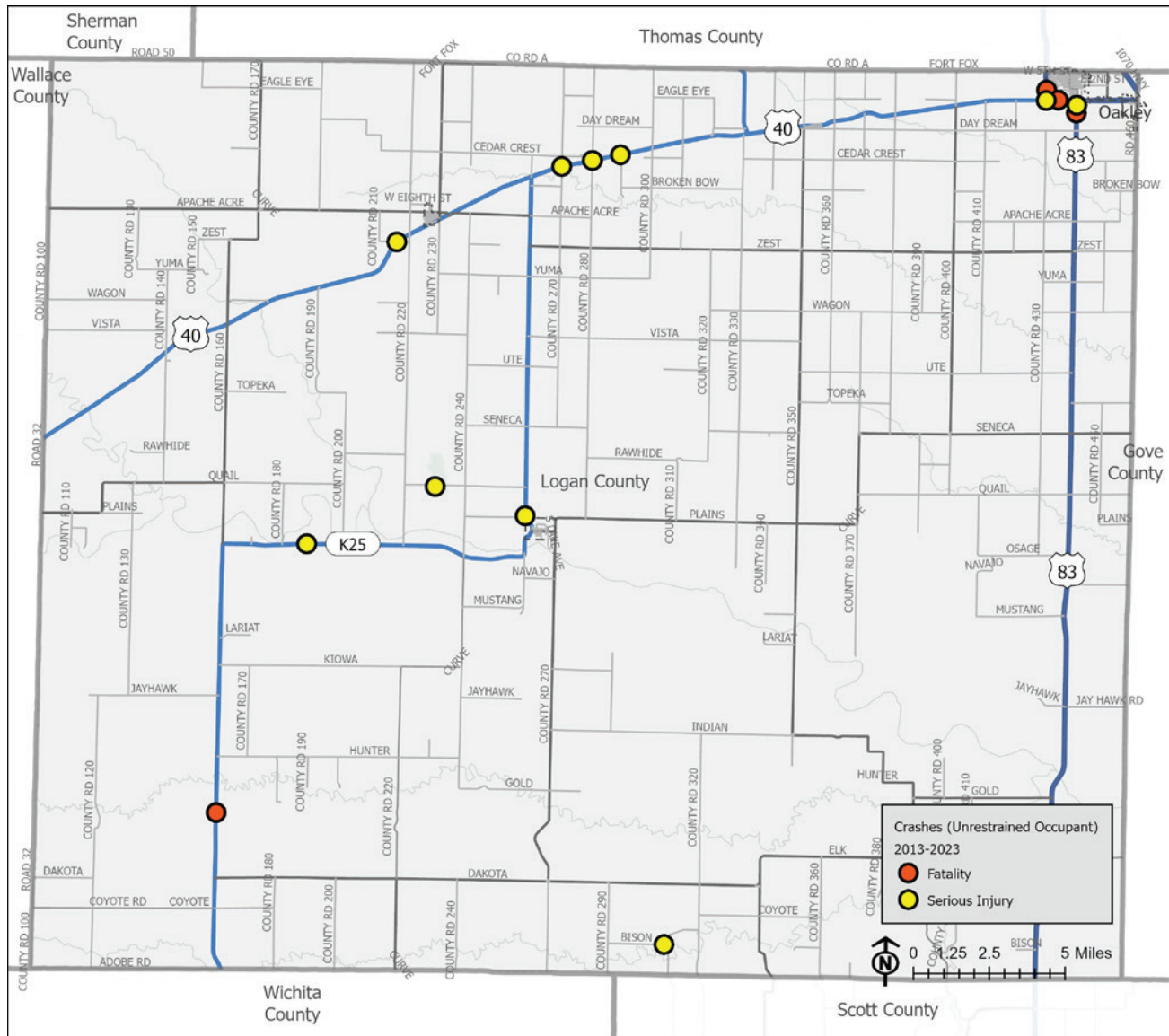


Figure 7: KSI Crashes related to Unrestrained Occupants (two fatalities in City of Oakley)

EMPHASIS AREAS

Intersections

Many different types of crashes can be intersection related, such as side-angle, rear-end, or pedestrian related. There are many intersection safety measures. Some measures could include installation of additional traffic control devices, improved visibility, and road design adjustments to reduce the number of conflict points.

Impaired Driving

Impaired driving is when a vehicle is being operated under the influence of any substance, or in any condition that may reduce the ability to drive safely. During the study period Impaired Driving resulted in 3 fatal and 7 serious injury crashes. Strengthening DUI enforcement and public awareness campaigns could address this issue.

Speed Related

A speed related crash occurs when a driver is speeding, racing, or driving too fast for conditions. Speeding can increase the risk of and the severity of a crash. Designing roadways to encourage lower speeds, increased enforcement of speed limits, and education to improve safe driving behaviors can reduce these types of crashes.

Motorcycle

Motorcycle related crashes can more often result in fatal or injury crashes due to the occupant not being as protected as a person in other types of vehicles. Protective gear, improved visibility, and education to improve safe driving behaviors can reduce these types of crashes.

Railroad

Railroad related crashes can often result in fatality or severe injury crashes due to the extreme difference in size of the train and the vehicle or person. Causes of these crashes can be inattention, poorly maintained crossings and crossing warning devices, and risky behavior. Proper maintenance, and education to improve safe driving behaviors are two ways to reduce these types of crashes.

POLICY AND PROCESS REVIEW

A review of relevant existing documents, policies, plans, and projects is important to understanding the greater context of roadway safety in a region. For this project, two documents were found to be the most impactful on roadway safety for the US 83 corridor and the cities and counties involved: the KDOT Long Range Transportation Plan, and the KDOT Strategic Highway Safety Plan. In addition to these planning documents, the ongoing Great Plains Rural Freight Technology Corridor Project (also known as the U S 83 Advanced Technology Project) will have a positive impact on safety on the US 83 corridor.

KDOT LONG RANGE TRANSPORTATION PLAN

The Long-Range Transportation Plan (LRTP) describes the 25-year plan for transportation in the state of Kansas. One of the primary goals of KDOT's Long Range Transportation Plan (LRTP) is to make traveling on Kansas highways safer, and thus safety is built into many components of the LRTP. Safety is a factor considered in nearly every program included in the LRTP, however specific safety programs and projects are present in the LRTP, including many that will impact the US 83 corridor and its communities.

One of the most impactful programs being implemented was the creation of a Bureau of Transportation Safety. This bureau will oversee the implementation of specific safety strategies that will permeate all KDOT's actions over the next 25 years. The implementation strategies to be utilized by the Bureau are summarized in **Table 10**.

Table 9: KDOT LRTP Bureau of Transportation Safety Implementation Strategies

Strategy / Action	Description
Improve program implementation	KDOT is developing new performance-based analytical processes to improve its identification and evaluation of candidate safety projects.
Adopt a systemic approach to safety	KDOT is updating safety related policies for topics such as rumble strip installation and use of cable median barriers to adopt cost effective safety measures across the state highway system.
Improve safety data	KDOT is undertaking several initiatives to improve the availability and use of data to help incorporate safety into project design. This includes using embedded consultants and developing a LIDAR based system inventory.
Engage the Executive Safety Council	KDOT will reengage the Executive Safety Council to assist with implementing the new SHSP.
Streamline work processes	KDOT will refine safety analysis activities such as right-sizing safety audit scopes based on project development information needs.

KDOT STRATEGIC HIGHWAY SAFETY PLAN

Borne out of the LRTP, the KDOT Strategic Highway Safety Plan (SHSP) is designed to drive KDOT's strategic investments that reduce traffic injuries and deaths through a collaborative process with a wide range of stakeholders. The SHSP describes in greater detail the KDOT programs, projects, and systems designed to reduce serious injuries and deaths on Kansas Roads.

THE GREAT PLAINS RURAL FREIGHT TECHNOLOGY CORRIDOR PROJECT (AKA THE US 83 ADVANCED TECHNOLOGY PROJECT)

In September 2022, the Kansas Department of Transportation was awarded a \$6.7 million Advanced Transportation and Congestion Management Technologies Deployment grant from the Federal Highway Administration to support the US 83 Advanced Technology Project.

US 83 is a critical rural freight corridor for western Kansas serving a variety of industries including agriculture, energy and livestock. Expanding transportation opportunities along the US 83 corridor will improve economic productivity as well as the safe and efficient movement of agriculture products and other freight, benefiting everyone who travels on the corridor.

The Great Plains Rural Freight Technology Corridor Project (US 83 Advanced Technology) will utilize technology aimed at improving safety and economic productivity along US 83. The project limits extend approximately 131 miles, from the Thomas/Sheridan County line south to the Finney/ Haskell County line.

Table 10: Policies and Projects Related to Safety on the US 83 Corridor and Related Communities.

Title	Year	Goals	Strategies	Application
Kansas Dept. of Transportation (KDOT) Long Range Transportation Plan	2021	Safety and Security, plus Transportation System Management.	Use education, enforcement, and engineering to reduce the severity of crashes and reduce the number of travel-related deaths to zero. ----- Adopt a systemic approach to safety.	Provides information about KDOT's Strategic Safety Initiative and an overview of KDOT's priorities and processes related to safety.
Kansas Strategic Highway Safety Plan (SHSP)	2020	To achieve a fatal and injury crash rate of less than 35 crashes per 100-million vehicle miles travel by 2024.	Address: • Roadway Departure • Impaired Driving • Older Drivers • Intersections • Local Roads • Teen Drivers • Pedestrians & Cyclists • Data Support	Provides statewide safety framework to apply to local plans.
The Great Plains Rural Freight and Technology Project	2023-2028	The Great Plains Rural Freight Technology Corridor Project (US 83 Advanced Technology) will utilize technology aimed at improving safety and economic productivity along US 83.	Installation of 90 miles of fiber optic cable ----- Deploy Connected Vehicle Technology and Intelligent Transportation System: • Identify traffic delays • Track oversized loads • Freight signal priority • Work Zone data sharing enhancements	Improving traffic flow, reducing delays, improving communication.

COUNTERMEASURES AND RECOMMENDED PROJECTS

Roadway safety issues determined through public input and data analysis were examined using the Safe System Approach framework. Known safety strategies and countermeasures were then identified that would create a safer condition on Logan County roadways. Each Safe System element (safe roads, safe speeds, safe road users, safe vehicles, and post-crash care) was considered. The countermeasures discussed below were specifically chosen to address the prioritized safety emphasis areas.

When identifying potential safety improvements, it is important to look at national best practices. The countermeasures included in this report were developed by FHWA and NHTSA based on a data-driven approach to improving safety on our roadways. These safety countermeasures are used to help decision makers determine what projects and project elements to consider when seeking to improve roadway safety in their communities.

Multiple resources were used in developing appropriate countermeasures, including:

- FHWA's Proven Safety Countermeasures
 - [Proven Safety Countermeasures | FHWA](#)
- FHWA's Crash Modification Factors (CMF) Clearinghouse
 - [CMF Clearinghouse](#)
- National Highway Traffic Safety Administration's (NHTSA) "Countermeasures that Work"
 - [Countermeasures That Work | NHTSA](#)

FHWA Countermeasures and Crash Modification Factors

The Crash Modification Factor (CMF) Method is found in Part D of the Highway Safety Manual (HSM). CMFs are defined as the ratio of effectiveness of one condition in comparison to another condition and represent the relative change in crash frequency due to a change in one specific condition. A CMF is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. Countermeasures with CMFs less than one are expected to reduce crashes if applied, while those countermeasures with CMFs greater than one are expected to increase crashes.

The CMF Method is used to calculate the expected number of crashes by taking the observed number of crashes and multiplying those crashes by the applicable CMF for the proposed countermeasure. It is recommended that CMFs be applied to a minimum of three (3) years of crash data for urban and suburban sites and five (5) years of crash data for rural sites.

The countermeasures proposed in this document were chosen because of their effectiveness in reducing crashes. Some safety countermeasures that are recommended do not yet have CMF ratings that meet the above guidance, due to the amount of data and peer review that is required; however, preliminary studies show safety benefits because of these countermeasures. The FHWA has also published a list of Proven Safety Countermeasures which, per their website is "*a collection of countermeasures and strategies effective in reducing roadway fatalities and serious injuries...*" Transportation agencies are strongly encouraged to consider widespread implementation of these proven safety countermeasures to accelerate the achievement of local, state, and national safety goals.

NHTSA Countermeasures

NHTSA’s guide to countermeasures: *Countermeasures That Work* is designed to assist state DOT Safety Offices in selecting effective, science-based traffic safety countermeasures for major highway safety problem areas. The guide describes major countermeasure strategies and specific countermeasures; summarizes their use, effectiveness, costs, and implementation time; and provides references to the most important research summaries and individual studies.

NHTSA countermeasure effectiveness is shown using a five-star rating system:

Effectiveness	
★★★★★	Demonstrated to be effective by several high-quality evaluations with consistent results.
★★★★	Demonstrated to be effective in certain situations.
★★★	Likely to be effective based on balance of evidence from high-quality evaluations.
★★	Limited evaluation evidence, but adheres to principles of human behavior and may be effective if implemented well.
★	No evaluation evidence, but adheres to principles of human behavior and may be effective if implemented well.

The countermeasures presented in **Table 11** provide a significant opportunity to reduce traffic related fatalities and serious injuries in Oakley. It should be noted that countermeasures included in the below table are sourced from both the FHWA Countermeasures and the NHTSA Countermeasures. These sources score their countermeasures differently; so, the effectiveness rating appears differently based on the source. It should also be noted that countermeasures don’t exist for every roadway safety issue, for example, there are no countermeasures for *Large Vehicle Related Crashes*.

Table 11: FHWA Countermeasures Relevant to Recommended Projects

Countermeasure	Description	CMF
Intersection Related		
Add Left Turn Lanes	Left turn lanes provide separation from through traffic, space for deceleration, and space to wait to complete a turn.	.60 (for LT) .75 (all)
Access Management (restrict left turns)	Restrict the left turns from side streets onto a main street.	.30 (for LT)
Flashing Beacon Warning Sign	Flashing beacons on warning signs increase driver awareness and recognition of upcoming problems and potential conflicts.	0.90
Add Left Turn Lanes	Left turn lanes provide separation from through traffic, space for deceleration, and space to wait to complete a turn.	0.40
Enhanced Stop Signs	Larger stop signs, use of flasher on sign or use of retroreflective markings to increase visibility of stop signs.	0.90

Countermeasure	Description	CMF
Unrestrained Occupant		
High Visibility Enforcement of Seatbelt and Child Passenger Safety	Both Short Term and Sustained Seat Belt Enforcement	★★★★★
Education Strategies	Employer based and Older Children programs	★★★
Child Restraint Inspection Stations	Child Passenger Safety (CPS) Technician staffed Inspection Stations	★★★
Roadway Departure Related		
Advanced Warning signs	Advanced warning signs around curves or other sight limiting areas or where crash problems exist provide all drivers more time to make decisions based on changing conditions.	.65
Improved Pavement Markings	Clearly delineating travel lanes and high retro-reflectivity allows drivers to better understand where they are located within the roadway.	.64-.88 (6" edge line) .76 (4" edge line)
Access Management	The design, application, and control of entry and exit points along a roadway, including intersections that serve adjacent properties.	.77 to .95
Distracted Driving		
Distracted Driving Education	Education campaigns (PSAs, social media ads, school/workplace education) can be conducted regarding distracted driving.	Needs further evaluation
Impaired Driving Education	Inform the public of the dangers of impaired driving and establish positive social norms that make driving while impaired unacceptable.	★★
Vulnerable Road Users		
Construct Sidewalks	Construct sidewalks to fill in gaps to allow separation of pedestrians and vehicles along roadways.	.11-.35 (Ped)
High Visibility Crosswalks	High-visibility crosswalks use patterns (i.e., bar pairs, continental, ladder) that are visible to both the driver and pedestrian from farther away compared to traditional transverse line crosswalks.	.60 (Ped)
Advance Yield or Stop markings	YIELD Here to Pedestrians" or "STOP Here for Pedestrians" signs 20 to 50 feet in advance of a marked crosswalk.	0.62 (Ped)
Alcohol or Drug Related		
Enforcement of Drug and Alcohol Impaired Driving	Increased enforcement of impaired-driving laws can be a major factor in reducing impaired-driving deaths.	★★★
Impaired Driving Education	Inform the public of the dangers of impaired driving and establish positive social norms that make driving while impaired unacceptable.	★★

Countermeasure	Description	CMF
Excessive Speeds		
Speed Feedback Sign	Speed measuring message sign which displays speeds back to driver.	0.95
Increased Enforcement	Increase enforcement presence in key speeding areas.	★★★★
Create Traffic Calming Policy	Develop neighborhood traffic calming guidance, including policy about installation of traffic speed bumps.	Needs further evaluation
Education related to speeding	Develop education campaigns (PSAs, social media ads, school/workplace education).	★★★
Motorcycle Related		
Motorcycle Awareness Education	Motorcycle rider training, Inform the public for awareness and presence of motorcycles	★★
Increase Conspicuity	Strategies to increase rider conspicuity and use of protective clothing.	★

RECOMMENDED PROJECTS

The below projects were identified using the above-described methodologies and prioritized based on several factors, including how they score on the High Risk and High Injury Networks, if they were identified during public and stakeholder engagement, if it's in the KDOT US 83 Advanced Technology Project, if federal funding is available for the subject project, safety impact of the improvements, and cost and/or feasibility. More information for each project can be found on the Project Sheets included as **Appendix E**.

The projects below are listed in order of priority.

1 Improve Road 160 from K-25 to U-40

PROJECT SELECTION CRITERIA: This is a 7.2-mile segment on Road 160. This proposed project scored high on the Logan County Local Road Safety Plan and has received significant public interest.

Short Term:

- Add a two-foot aggregate shoulder.
- Address fixed objects within the clear zone.

Project Cost: \$650,000

Expanded Short Term:

Flatten and widen fore slopes in addition to short term improvements listed.

Project Cost: \$2.1 Million

Long Term:

- Pave 26-foot roadway designed for heavy trucks.
- Flatten and widen the fore slopes.
- Extend culverts.
- Replace bridge.
- Add edge line and centerline pavement markings.

Project Cost: \$23.5 Million

② Improve Road CR160 RR Crossing N of US 40

PROJECT SELECTION CRITERIA: This project received a high level of public interest at the community meeting.

The project includes improved geometry of the CR 160 Union Pacific railroad crossing and replacing the bridge over North Fork Smokey Hill River.

Project Cost:

- Bridge Replacement Only: \$2.0 Million
- Completer Project: \$6.1 Million

③ Improve Road 230 and Fort Fox Road

PROJECT SELECTION CRITERIA: This project includes 6.6 miles of Road 230 and Fort Fox Road between Apache Acre Road and Road 11. It was a high scoring project on the Logan County Local Road Safety Plan.

Short Term:

Add systemic safety countermeasures including:

- Edge line and centerline pavement markings.
- Update curve signage.
- Delineate roadside hazards.

Project Cost: \$550,000

Long Term:

- Add 18-inch aggregate shoulders to each side.
- Flatten and widen the fore slopes.
- Remove/relocate roadside obstacles.
- Extend culverts.

Project Cost: \$1.83 Million

④ Improve Road 450

PROJECT SELECTION CRITERIA: This project was high scoring on the Logan County Local Road Safety Plan and includes a 1-mile segment of Road 450 between US 40 and Fort Fox Road.

Short Term:

Add systemic safety countermeasures clearing roadside (15 feet each side).

Project Cost: \$100,000

Long Term:

- Remove/relocate roadside obstacles.
- Extend culverts.
- Add post mounted delineators.

Project Cost: \$240,000

OTHER PROJECTS

These other projects scored high on the HIN and the HRN and/or were mentioned during the public engagement period. All these projects are included in the Local Road Safety Plan (LRSP), so additional comments have not been provided in this document. Projects are listed in order of priority and all costs are in 2025 dollars.

Roadway Improvements:	Intersection Improvements:
• Rd 230 and Fort Fox Rd between Apache Acre Rd and Road 11 (Thomas County line) • Rd 450 between US-40 and Fort Fox Rd • Rd 460 between US-40 and Gove County CC Rd • Rd 160 between K-25 and US-40 • Rd 400 between Zest Rd and US-40	• Rd 270 and Broadway St • Rd 170 and Apache Acre Rd • Rd 350 and Zest Rd • Rd 170 and Fort Fox Rd • Rd 460 between US 40 and Gove County CC Rd • Rd 400 from Zest Rd to US 40 • Rd 400 and Seneca Rd Intersection

PROJECT IMPLEMENTATION

The Logan County Vision Zero Resolution adopted on December 16th, 2024, states that the county has a goal to achieve zero fatalities and serious injuries by the year 2035. This report provides guidance to reach that goal in actionable steps that can be taken by Logan County.

PROGRESS AND TRANSPARENCY

The ability to track progress over time in an open and transparent manner is central to achieving the goals outlined in Logan County's Vision Zero Resolution. Regular progress tracking creates accountability to the public and builds trust between the public and the cities, counties, and agencies that are responsible for roadway safety. Progress and transparency also help create an environment of informed decision making based on effectiveness of chosen interventions and the ability to correct our approach when necessary. Finally, progress and transparency provide a sense of direction and ensures that teams and individuals can see tangible outcomes of their work.

FUNDING SOURCES

Funding is critical to implement the strategies and action items in this CSAP and may come from a variety of sources: federal, state, local, and the private sector. These include standard funding program mechanisms and grants as well as new initiative grants. Some sources of funding:

- **Local Agency Funding.** Logan County has various funding sources that can be used to maintain and improve streets and roads as well as enhance other safety measures. Consideration of the CSAP strategies during the allocation of funding, especially for maintenance activities or other street and road improvement projects can support implementation of the CSAP.
- **Safe Streets and Roads for All.** The Bipartisan Infrastructure Law (BIL) established the Safe Streets and Roads for All (SS4A) discretionary program that will provide \$5-6 billion in grants over the five-year program period. With the completion of this CSAP, Logan County is eligible to apply for implementation funding.

- **Coordinate with KDOT to administer annual safety grants funded by the state** that are targeted at behavioral safety projects. Identify and apply for funding for education and enforcement programs annually.
- Support the school district in applying for **Safe Routes to School funding**.

PROCESS AND POLICY CHANGES

Improving roadway safety in our communities requires an examination of processes and policies currently in place that contribute to safety on our roadways. In many instances, simple changes can be made that can have a significant impact on protecting human life.

The following policies, guidelines, and/or standards support achieving CSAP goals.

Vision Zero Resolution

Logan County adopted their Vision Zero Resolution on December 16, 2024. The zero deaths vision acknowledges that even one death on our transportation system is unacceptable and focuses on safe mobility for all road users. The Vision Zero Resolution is included in **Appendix D**.

Post-Crash Care

Post-crash care best practices include both advanced planning activities and countermeasures. Integrating post-crash care into highway safety planning and coordinating post-crash care between highway safety, EMS, and 911 services are important first steps.

Countermeasures include improving emergency medical dispatch and 911 protocols, providing timely on-scene care using model EMS clinical guidelines, providing timely transportation to a trauma center based on national field trauma triage guidelines, and then measuring EMS performance over time.

Incorporating Safety into Project Development Process

Include systemic safety improvements in projects developed by Logan County and KDOT. Include a review of crashes and potential safety improvements when intersections or roadway segments are maintained or improved.

Measuring Progress

After developing the CSAP, progress toward meeting the plan's goals should be measured over time. This progress needs to be transparent to residents and other stakeholders. This can include annual public and accessible reporting on progress toward reducing roadway fatalities and serious injuries, and public posting of the Comprehensive Safety Action Plan online.

Update Design Policies

Roadway design policies, standards, and best practices change over time. An ongoing review and update of local roadway design policies is critical to ensuring roadway safety best practices are implemented when roadways are maintained, improved, or constructed.

NEXT STEPS: PROGRESS AND TRANSPARENCY

The Logan County CSAP is a dynamic document intended to be used by the County and by stakeholders to continually advance transportation safety via the strategies and actions listed within the CSAP.

Plan Leadership

Logan County assumes leadership of this plan and will support implementation. As part of this role, Logan County will continue to utilize the Safety Task Force, whose responsibility will be to conduct updates to the document and implementation of the plan.

Implementation Meetings

Logan County will convene the Safety Task Force a minimum of one time a year to discuss progress and associated challenges with implementing the CSAP.

Stakeholders

The key stakeholders for the CSAP reviewed the data, discussed other known challenges, and collectively agreed to the identified strategies. The County and stakeholders are committed to implementing the policies, programs, and projects that pertain to their individual mission as well as to improving transportation safety within the County. They will do this by:

- Being champions for safety in job responsibilities and personal lives.
- Participating in events and campaigns relevant to this plan.
- Sharing information about transportation safety within agencies and with peers.
- Coming together annually to share progress on safety activities.

Annual Evaluation

When the previous year's crash data is available, Logan County will evaluate progress toward this plan's goals by assessing County-wide fatalities, serious injuries, and crashes. Data will also be analyzed to see if the emphasis areas have been affected.

Other Planning Efforts

Logan County will remain informed of current and new local and statewide safety programs, policies, plans, guidelines, and/or standards. Based on this information, Logan County can continue to identify opportunities to build upon the current plan.

APPENDICES

APPENDIX A: PUBLIC INVOLVEMENT PLAN

APPENDIX B: TASK FORCE SUMMARIES AND NOTES

APPENDIX C: COMMUNITY SURVEY RESULTS

APPENDIX D: VISION ZERO RESOLUTION

APPENDIX E: PROJECT SHEETS

APPENDIX F: HIN/HRN METHODOLOGY

SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, KS

APPENDIX A: PUBLIC INVOLVEMENT PLAN

FEBRUARY 2025



Multi-jurisdictional Safe Streets for All (SS4A)

Public Involvement Plan

Public Involvement Plan

Project Background

This project will result in the creation of a Comprehensive Multi-Jurisdictional Safe Streets for All (SS4A) Action Plan for the jurisdictions of City of Garden City, KS; Finney County, KS; City of Holcomb, KS; Seward County, KS; City of Liberal, KS; Haskell County, KS; Scott County, KS; City of Scott City, KS; Logan County, KS; City of Oakley, KS; Decatur County, KS; and City of Oberlin, KS.

Public Involvement is needed to inform final recommendations, provide qualitative information that may not be available through data, support data findings, and increase project buy-in for final adoption. The ultimate goal of this project is to adopt a plan that, when realized, achieves the goal of zero traffic fatalities.

Per SS4A grant requirements, a task force or similar group must be created to oversee action plan development, implementation, and monitoring. Additionally, community engagement with the public and relevant stakeholders is also required. Feedback from the task force and the public will be used to inform the action plan.

Guiding Principles

The public engagement plan supports the following guiding principles:

1. Public involvement will be meaningful, productive, and respectful of the participant's time.
2. Feedback generated will be valued and considered.
3. Feedback will be representative of the overall community.
4. Public involvement will lead to a SS4A Action Plan that results in successful implementation that improves the lives of those living and traveling in the study area jurisdictions. By using the input of the community, the plan will meet their needs and gain their support.

Objectives

There are four modes of involvement to welcome and cultivate community perspectives for the SS4A plan. Community involvement goals for this plan include informing the analysis, design, and implementation recommendations in a process that helps achieve the goal of zero traffic fatalities.

1. Task Force
2. Public Meetings
3. Online Engagement and Interactive Mapping
4. Meetings / Hearings with Elected Officials

Community Background

Equity is one of the pillars that make up the foundation of this project. To ensure that underserved communities are heard, population survey data will be analyzed to further include these communities in the planning process. The SS4A program prioritizes engagement with underserved communities as identified through data. Based on the Office of Management and Budget's Interim Guidance for the Justice40 Initiative underserved communities in the study area include portions Haskell County, and portions of Liberal and Garden City.

Per the 2020 Census there is large population of community members identifying as Hispanic or Latino in Garden City (54.1%) and Liberal (68.1%). In Garden City 25.2% of the population is foreign born and 29.2% is foreign born in Liberal. Per American Community Survey data, in Garden City 39.6% of residents speak Spanish at home and 42.8% of those Spanish speakers speak English less than "very well." In Liberal 56.6% of residents speak Spanish at home and 49.4% of those Spanish speakers speak English less than "very well." Based on this data, translation and interpretation services will be needed to reach community members.

Internet access is important for portions of the public outreach and all virtual meetings. Per American Community Survey data, in Garden City 5.5% of residents do not have access to a computer with an internet subscription at home, and 4.6% of residents do not have a computer at home, In Liberal, 3.1% of residents do not have access to a computer with an internet subscription at home, and 4.8% do not have a computer at

home. Based on this, in-person meetings and off-line tools will be needed to better include community members.

Additional demographic information will be gathered to determine additional outreach needs.

Engagement Structure

For this Action Plan, a Task Force and the public will be partnered with to include them in each aspect of the project. These groups will assist in giving feedback related to reaching the goal of zero traffic fatalities and guide the project from a local lens.

Task Force

The Task Force will assist in identifying safety emphasis areas, give feedback on countermeasures and assist in prioritizing projects.

Task Force Members

Members of the Task Force will be from each municipality in the project area, and include municipal representatives, local community group leaders, non-profit agency leads, technical professionals, educators, and emergency services members. Task Force members are encouraged to attend public meetings and to invite their networks to join them. A detailed list of Task Force members is in a separate document.

Composition:

- Public Works
- Planning
- City Council Members
- County Representatives
- KDOT Districts
- KDOT Bureaus
- University or School Officials
- Sheriff's Office or Police Chiefs
- Emergency Response (Fire Chief, EMS)
- Local Community Group Leaders
- Non-Profit Agency Leaders

Task Force/Steering Committee Engagement Meetings

A total of four (4) meetings will be held, however, the same meeting may be held in multiple locations resulting in more meetings. Due to the size of the study area virtual meetings will be utilized as much as possible for convenience of participants. Technology such as Miro Boards may be utilized to gather spatial feedback from participants.

Task Force/Steering Committee Potential Locations

County Courthouses, Community Centers/Recreation Centers, Schools, Libraries, City Halls, Religious Institutions, Virtually

Task Force/Steering Committee Engagement includes:

- Meeting One: Task Force Startup and Prelim Data and Safety Analysis
 - Discussions will introduce the project to task force members, an overview of SS4A, the project schedule, and get initial feedback
 - Focused discussion on what and how the community is integrating:
 - Engineering
 - Education
 - Enforcement
 - Emergency Response/EMS

- Meeting includes review of the Preliminary Data and Safety Analysis.
- Task Force meeting occurring after Task 2 will verify the info and data, as well as identify safety emphasis areas, priorities, and countermeasures.
 - A review of the current policies, guidelines, and standards will assist the Task Force with prioritizing transportation safety and lead the way for implementation planning.
- Meeting Two: US-83
- Meeting Three: Implementation Planning
 - Task Force meeting occurring after Task 3 will solicit feedback on countermeasures and prioritize safety projects and actions to be included in the final action plan
 - Prioritized strategies and projects that are approved by the Task Force will be sorted into separate groups ranked by time ranges for project deployment.
- Meeting Four: Draft Report Review
 - Task Force meeting will be used to present the Draft Action Plan Report and discuss next steps

Public Engagement

All members of the communities within the project area should be reached to include them in the process. Project information may be distributed through newspaper articles, local/regional news channels, social media networks, and posted in community spaces. The public will be able to comment on proposed countermeasures and interact with the Task Force on achieving the goal of zero fatalities in their communities.

Public Engagement Meetings

A total of two meetings are planned, however, the same meeting may be held in multiple locations resulting in more meetings. A Spanish language focus group is also proposed to capture information from harder to reach community members. A website with an interactive map and survey will be maintained throughout the life of the project.

Public Engagement Potential Locations

County Courthouses, Community Centers/Recreation Centers, Schools, Libraries, City Halls, Community Events

Public engagements will include:

- Meeting One: Project Purpose & Input: This meeting will proceed the online engagement effort over the summer. This meeting could be held prior to or in conjunction with a City/County Council or Planning Commission meeting. At this meeting folks will learn more about the SS4A program, this project, and provide initial feedback to inform the overall plan.
 - Virtual engagements
 - Survey with online interactive map/website (KH)
 - Convey priorities and receive public input on achieving goals of zero fatalities
 - Potential Spanish and/or Somalian language focus groups to receive input from these communities
- Meeting Two: Implementation Planning
 - In person and virtual after Task 3
 - Solicit feedback on countermeasures
 - Prioritize safety projects and actions to be included in final plan
- Spanish Language Focus Groups
- Meeting Three: Draft Report
 - This engagement effort will be the publishing of the final draft report and will include a comment period. This can be paired with presentations to City/County Councils.

Elected Officials

Plan elements must be adopted by each community to have a fully adopted plan. Ideally a city or county staff member will be the champion before council and firms will be presenting virtually to reduce travel.

Engagement Deliverables

- Presentation Materials
- Draft Vision and Goals
- Task Force and Public Engagement sign-in sheets
- Task force and public engagement feedback summaries

Outreach Channels

The following outreach channels may be used to share project information. The consultant team will rely on information from the Task Force and City / County Staff to determine how to best reach the communities. Transparency and open communication make up a pillar of this Action Plan's foundation, making these outreach channels key aspects of the public engagement.

- Project website
- Interactive map
- Online survey
- Printed media
- Social media
- Official notices
- Contact list
- Community leaders / Task Force
- Translated materials

Draft and Final Report

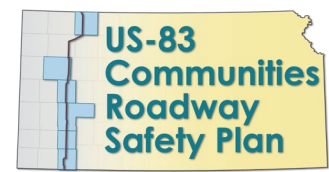
Present to governing bodies for approval for Decatur, Logan and Scott Counties, and the cities of Oakley, Scott City, Oberlin, Liberal and Garden City. Afterwards, the Action Plan will be posted online for public access. The document will be available to help guide policy updates and future projects to lead the project area to the goal of zero traffic fatalities.

SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, KS

APPENDIX B: TASK FORCE SUMMARIES AND NOTES

FEBRUARY 2025



US-83 COMMUNITY ROADWAY SAFETY PLAN

SUMMARY OF TASK FORCE MEETING 1

MAY 1, 2024 | 1 - 3 PM | TEAMS

MEETING PURPOSE

To gather input and perspectives from the Task Force about roadway safety concerns and issues along the US-83 corridor.

ATTENDEES

Staffing

Ashley Winchell, AICP – Wilson & Company, Moderator

Michael Kramer, PE – Wilson & Company, Moderator

Rachel Thomas – Wilson & Company, Moderator

Ryan Deeken – Wilson & Company, Notetaker

Kristen Manthei – Wilson & Company, Notetaker

Natalie Walls – Wilson & Company, Notetaker

Anthony Gallo, PE – Kimley Horn, Support

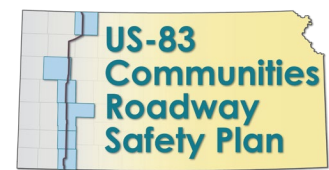
Riley Mitts – Kimley Horn, Support

Emma Habosky – TranSystems

Clyde Prem – TranSystems

Participants

Name	Agency
Ingrid Vandervort	KDOT – Bureau of Transportation Safety
Mackenzie Phillips	Finney County
Robert Reece	Finney County
Shane Burns	Garden City Schools
Robin Lujan	Holcomb
Matt Allen	Garden City



Name	Agency
Adam Schart	Garden City / Wilson & Company
Mike Muirhead	Garden City
Tyler Patterson	Garden City
Lisa Mussman	KDOT – Public Affairs
David Sporn	Oberlin – City Administrator
Brock Sloan	Oakley – City Administrator
Bradley Pendergast	Scott City
Katie Eisenhour	Scott City – Economic Development
Gary Bennett	KDOT
C.W. Harper	Finney County, Haskell County, Seward County
Rusty Varnado	Liberal

WHAT WE HEARD

A moderator led participants through a series of questions over roadway safety in the communities along the US-83 corridor. Highlights from participant responses are summarized below.

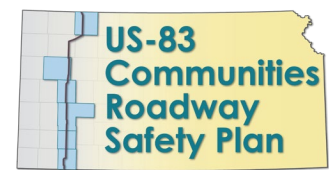
NOTICE ON CRASH DATA

All crash data information that was and will be provided is subject to United States Code, Use Restricted 23 USC 407. [23 USC 407: Discovery and admission as evidence of certain reports and surveys \(house.gov\)](#)

Describe the biggest roadway safety concerns in your community.

Participants in each geography mentioned freight truck traffic as economically positive but also a safety, congestion, and noise concern. Behavioral education in multiple methods and languages was identified as a potential way to improve safety and reach multiple groups of roadway users. Individual comments included:

- Increasing amounts of freight truck traffic has positive and negative impacts.
 - Throughout the whole corridor, not just a lone municipality issue.
 - Amount of freight can cause noise pollution wherever US-83 cuts through a municipality.
 - Helps with economic development.

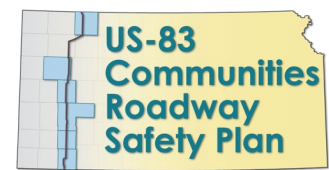


- Oversized loads sometimes have difficulty maneuvering under or around signals that are too low.
- School age children and teens are walking to and from schools. There have been at least two fatal crashes involving school age children and teens along the corridor.
- Speeding, especially exceeding 100 miles per hour, has been increasing. Tickets and enforcement have increased.
- Sight distance can be blocked by retaining walls and vegetation.
- Overhead lighting is not consistent, and the lack of lighting discourages students from walking to school.
- Congestion around bypasses in Garden City has resulted in at least 2 fatal crashes. One involving a bicyclist and the other was a head on crash.
- Pedestrian crossings along the corridor are lacking.
- Transitions from city to county infrastructure can cause roadway user confusion and congestion.
- Roadway geometry is a concern at a few locations where 5 or 6 streets meet at one intersection. Areas around these intersections are fully developed.

Tell us about areas in your community that experience higher safety issues. This could be a specific intersection, neighborhood, stretch of roadway, business location, etc.

Many of the identified areas involved intersections or interchanges. A few neighborhoods or developments were identified in the municipalities, as well as railroad crossings. Specific safety issue areas by municipality are below:

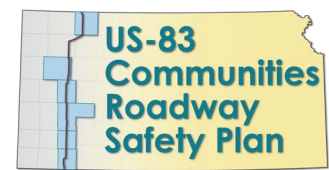
- Garden City
 - East Garden Village
 - “5 Point”
 - Kansas Ave/Campus Drive
 - Schulman Ave
 - McCoy Drive
 - Larue Rd/K-156
 - Mary St/Campus Drive
 - Mary St/3rd St
 - Mary St/Main St
 - Southwind Development
 - Burnside Drive
 - BUS-83/US-83
 - Sagebrush/Wilderness (Bruno Crossing)



- Mary St/Anderson Rd/Jones Ave
 - Acraway Rd
 - Solar Ave
 - VFW Rd
- Holcomb
 - Jones Ave/Old US-50/Main St
 - Henderson St/Jones Ave
 - Jones Ave/N Big Lowe Rd
 - Jones Ave/High School-Middle School intersection
 - Tyson Plant to the west
- Oakley
 - US-83/Union Pacific Railroad
 - US-83/US-40
 - Center Ave/E Front St
- Oberlin
 - US-83/US-36
 - Feed lot north of town on US-83
 - Commercial St/US-83
 - Pedestrian crossing locations and schools
- Scott City
 - US-83/E Road 30 by Poky Feeders
 - US-83/9th St – Near high school
 - US-83/K-4
 - US-83/K-95
- Haskell County
 - US-83/US-56
 - County Road 50/US-83
- Liberal
 - “6 Point” intersection by US-83/US-54
 - Union Pacific Railroad/US-83

Tell us about what kind of roadway safety problems or strategies your community is using or has promoted in the past?

Flashing signage with speeds have been used in Scott City along K-96. This effort has made a difference with speeds along the roadway.



How can we best reach your community about upcoming online engagement?

There are multiple ways that the participants identified as being useful methods of communication with the communities. Scott City is currently updating their comprehensive plan and stated that those engagement events could be a productive way to reach the community. The following are the methods that were mentioned:

- Chamber Newsletters
- City and County Websites
- School districts
- Elected officials
- Major employers

What do you hope to gain for your community out of this plan?

The improvement of safety and helping to ensure that everyone returns home at the end of the day is important to each municipality and community. Potential interchanges and alternate pathways for congestion reduction have been identified. Individual comments included:

- A potential interchange at US-56/US-83
- Alternating passing lanes from Kansas/Oklahoma border to I-70
 - KDOT is planning to develop alternating passing lanes between Garden City and Scott City

A Vision Zero Policy adopted by city or county leadership is a requirement of the grant funding. What tools or information does your community need to adopt a Vision Zero Policy?

Overall, keeping the city and county council members engaged and informed of the project and the process, so they are kept up to date. KDOT will also be an important partner for communities to engage with and be able to take the necessary steps.

Questions from Task Force participants

Some questions from the participants includes the following:

- “With distracted driving, behavior modification is a big goal, but how do we do it?”
- “How do we efficiently spend money to target seemingly random fatal crashes? Focus should be on behavioral strategies.”

POLL RESULTS

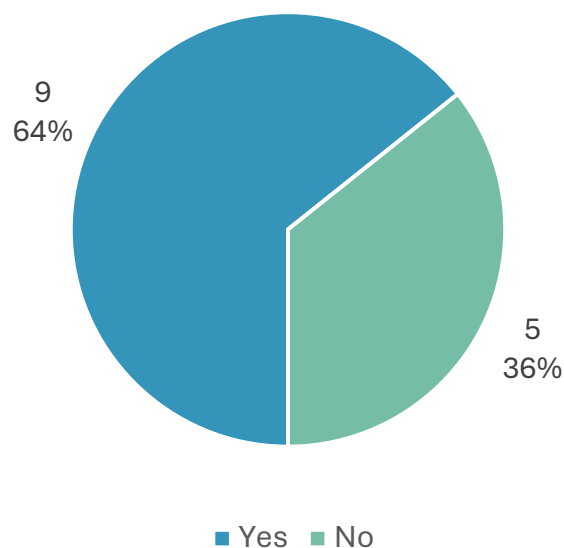
The participants were asked two questions as polls and one open ended question during the meeting. The following section reveals the results of the poll and question responses:

Why is roadway safety important to your community?

- “Reduce fatalities/injuries to road users.”
- “Everyone making it home.”
- “We strengthen communities, businesses and families by reducing transportation fatalities and serious injuries.”
- “The extent to which a road is safe for vehicle occupants, pedestrians and cyclists is an indicator of economic and health equity.”
- “To ensure safe roads for all drivers and quality of life.”
- “Better quality of life, safe routes for transportation and pedestrians.”
- “To ensure the safe transportation for all that travel.”
- “Liberal is the gateway into Kansas for our region. It is essential that our roads remain safe and maintained to ensure civilian passage as well as enhancing the freight corridor in our area.”

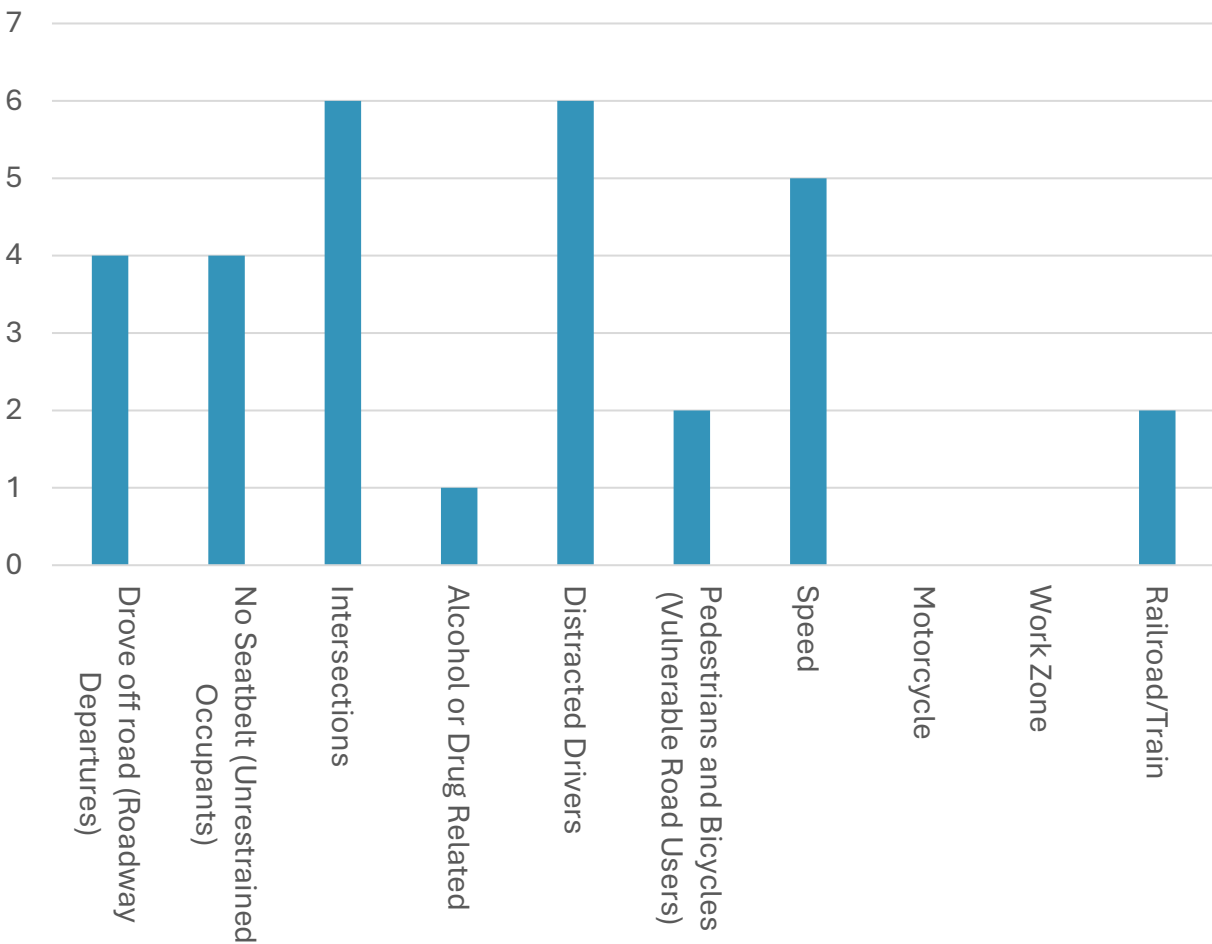
Have you heard of Vision Zero before?

The majority (64%) of participants have heard of Vision Zero before. Those who have not were informed of the concept and why it is key to this project.



Of the following emphasis areas, which is most important to you and your community to invest in?

The top three emphasis areas that were identified were Intersections, Distracted Drivers, and Speed. Participants did not identify the Motorcycle or Work Zone emphasis areas as areas of importance.





US-83 COMMUNITY ROADWAY SAFETY PLAN

SUMMARY OF US-83 SUMMIT

**JUNE 12, 2024 | 10:30 AM - 3 PM | WESTERN KS CHILD ADVOCACY CENTER,
SCOTT CITY, KS**

MEETING PURPOSE

To gather input and perspectives from the Task Force and additional stakeholders about roadway safety concerns and issues along the US-83 corridor.

NOTICE ON CRASH DATA

All crash data information that was and will be provided is subject to United States Code, Use Restricted 23 USC 407. [23 USC 407: Discovery and admission as evidence of certain reports and surveys \(house.gov\)](https://www.congress.gov/23 USC 407)

ATTENDEES

Staffing

Ashley Winchell, AICP – Wilson & Company, Moderator

Michael Kramer, PE – Wilson & Company, Moderator

Rachel Thomas – Wilson & Company, Notetaker

Kristen Manthei – Wilson & Company, Notetaker

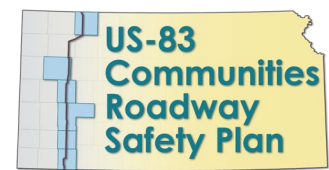
Adam Schart, PE – Wilson & Company, Support

Max Rusch – Wilson & Company, Support

Riley Mitts – Kimley Horn, Notetaker

Slade Engstrom – TranSystems, Facilitator

Tom Hein – TranSystems, Notetaker



Participants

Name	Agency
Ingrid Vandervort	KDOT – Bureau of Transportation Safety
Mackenzie Phillips	Finney County
Shane Burns	Garden City Schools
Adam Schart	Wilson & Company
Lisa Mussman	KDOT – Public Affairs
Brock Sloan	Oakley – City Administrator
Bradley Pendergast	Scott City – City Administrator
Katie Eisenhour	Scott County Development Committee
Gary Bennett	KDOT
C.W. Harper	Finney County, Haskell County, Seward County
Danielle Burke	Garden City – Assistant City Manager
David LaRoche	FHWA
Jeffrey Pounds	Scott County Sherriff
Tyler Patterson	Garden City Public Works & Holcomb Council Member
Shannon Dick	Finney County EDC
Scott Carr	Seward County County Commissioner
Kenneth (Kenny) Jones	Finney County

REGIONAL BREAKOUTS

Meeting participants were divided into breakout groups by regional geography. Breakout groups are as follows:

- North: Scott City, Oakley, Oberlin, Scott County, Logan County, Thomas County, Sheridan County, Decatur County
- Central: Garden City, Holcomb, Finney County
- South: Liberal, Seward County, Haskell County

WHAT WE HEARD

A moderator led participants through a visioning exercise. This involved developing a news headline for 20-40 years in the future along US-83. Highlights from participant responses are summarized below.

THINK 20 YEARS INTO THE FUTURE – THE LOCAL PAPER IS RUNNING A STORY ABOUT US-83. WHAT IS THE HEADLINE? WHAT IS US-83 LIKE IN 2044? 2064?

Participants in each geography declared a statement along the lines of “Four-Lane US-83 Completed” as potential headlines. These varied in distance but held the four-lane aspect throughout. Individual comments included:

- North Region Top Headline: “Past Highway Improvements Have Made US-83 the Safest Highway in Kansas”
 - Truck Bypass Route for Scott City, landowner pushback
 - Oversize loads are disruptive to predictability and safety
 - Parking along US-83 in Scott City needs to be modified
 - Scott City wants downtown revitalization
 - Oakley needs improvements at the US-83/US-40 intersection
 - Oakley residents want the city to stay the same, with no desired growth
- Central Region Main Headlines: “Groundbreaking for US-50 Bypass” and “Four-Lane Divided Highway from the Oklahoma Border”
 - Traffic perception is relative, congestion is relative
 - Seasonality with harvest and manufacturing shift changes
 - Garden City is pro-development right now
 - Sports complex in development east of US-83
 - 4,000 new housing units by 2030, looking at annexing these new areas
 - Garden City Trauma Care can be overwhelmed easily, small capacity, unrated facilities
 - Life flight to Wichita is a major positive
 - Holcomb is looking to grow in population
 - Developments just outside of city limits do not utilize city development codes, as in within 1 mile of the city limits (same with Garden City)
- South Region Top Headline: “Divided US-83 Unites Western Kansas” Subheading: “Diversified Industries Supported by Safer Corridor”
 - SW KS is often overlooked; funding opportunities pit communities against each other
 - Diversify Land Use



- Manufacturing and Ag drives the economy
 - Support and provide more opportunities to grow
 - Not everybody has CDLs
- 2+1 (continuous passing lanes)
 - Prevent people from making unsafe decisions while driving
- Desire to future proof facilities, prepare for autonomous vehicles
- Liberal's population is slowly decreasing based on the Census
 - Not the full story
 - Significant portion of the population are wary of the Census (Immigration)
 - Nearest Immigration office is Wichita and is too far for some
- Finney/Seward Counties are both growing rapidly in population

HOW DOES US-83 IMPACT YOUR COMMUNITY?

Many of the identified impacts were focused on challenges and opportunities. Some of the challenges are speeds, bypass lanes, intersections, and bypasses are causing downtown cores to close early and businesses to close.

Specific impacts by region are below:

- North Region
 - Expectations of service
 - Commerce driven inconvenience
 - How do we sustain safety culture?
- Central Region
 - Passing/intersection improvements from Garden City to Scott City as per KDOT
 - Bypass lanes cause issues
 - Speed differentials
 - Ag traffic pulls put onto US-83 and does not match speed of existing traffic
 - Shoulders not available for passing or vehicle use besides emergencies
 - Adding shoulders may offer benefits
 - Rail can help alleviate traffic
 - Finney County EDC has more info on this
 - Major issues getting development south of Garden City due to rail spur, US-83, and other physical boundaries
- South Region
 - Positive



- Connects Liberal to I-70 and connects to Amarillo
 - Major north-south route in Kansas
- Speed limits in Scott City are heavily enforced
- Liberal is not divided by US-83, the bypass is still a bypass
- Negatives
 - Not a bypass anymore in Garden City
 - Connecting schools to students who walk
 - US-54 divides schools in Liberal
 - Bypass in Liberal prevents people from spending money in Liberal
 - Garden City's downtown is declining, city is livelier around the bypass

SAFETY CONCERNS?

- North Region
 - Pedestrian safety in Scott City
 - Peds and bikes cross the highway to access the park and swimming pool
 - Speeding is significant along the corridor in Scott City when it transfers to four-lanes
 - Speed limit in Scott City is 20mph and it is highly enforced
 - Signal timing needs to be updated around school drop-off and pick-up; traffic backs up into residential areas
- Central Region
 - Ped crossing at Schulman and Spruce
 - Due to retail, lots of ped traffic
 - Want to connect east of town to rest of Garden City
 - Significant increase in traffic anticipated from Sports Complex
 - Upgrade signals at Schulman and Spruce
 - KDOT is examining
 - Trail system is developing eastward, need crossing assistance (ped overpass?)
 - Grade separate US-83?
 - VFW is used as an east bypass for trucks
 - US-83 to US-50
- South Region
 - Bicyclists avoid the corridor
 - Peds avoid the corridor
 - Speed variances (100-140 mph)
 - Drivers making poor decisions, especially in large platoons



- Not enough law enforcement staffing between towns
- Grain lots do not adhere to load limits
 - Increased wear and tear on roads and equipment
 - Slower acceleration for these overloaded trucks
 - Texas has laws on overloaded trucks that may be something to look into
- KDOT and other agencies are not aware of what the actual truck percentages/oversized loads impact and look like on a day-to-day basis
- Many short truck trips (under a mile) going uncounted
 - Cannot get fully up to speed
 - Isolated in specific locations and dependent on what is being harvested

WHAT ELSE SHOULD WE KNOW?

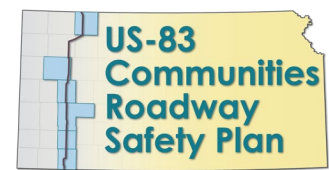
- North Region
 - Let the public/residents decide on short-term options
 - Oakley wants to stay small
- Central Region
 - Near misses?
 - Hard braking data from K-State?
 - Bull haulers pass where they should not
 - No regard to other traffic
 - Pull out into the wrong lane
 - Know that people move for them, so they do not fix their behaviors
 - Windmill blades
 - Escort vehicles
 - Passing on SB US-83, sometimes have to pull out onto the shoulder to avoid being hit
 - Distracted driving
 - Center rumble strips save lives (multiple attested to this)
 - Rumbles do not help when you are driving a semi distracted
 - Most fatalities in Garden City were at night
 - Schulman – bicyclist
 - Wet cake ethanol drivers are a concern
 - Believe champions are project specific
 - Garden City School District buses travel from county line to county line



- Bus accident at Jones/VFW week of 6/3-6/7, car pushed another car into the side of a bus
 - No injuries
- South Region
 - Conflict points
 - US-83 & Spruce/Schulman
 - Annie Scheer & Plymell Rd
 - US-56 & US-83 in Haskell
 - Has train blockages (Grain silos)
 - ~30 people killed in 50 years at this location
 - Issues stopping improvements from happening?
 - Funding
 - Large projects
 - Smaller, faster, more immediate projects should take the lead if they will save lives
 - Infrastructure projects are slow
 - Land acquisition is difficult
 - Western Kansas has been abused compared to central and eastern Kansas
 - Not enough representation in Topeka
 - AADT is not constant along corridor
 - Three schools near the bypass
 - Safety concerns for children
 - Immigrant populations walk
 - Liberal is growing in population
 - Haskell County is the fastest growing county/community in SW KS
 - Garden City has 900 acres of windmill parts that come through the city by rail, but trucks must distribute the parts
 - 500-acre distribution radius
- Do not forget about the in-between locations

INTERACTIVE PARTICIPATION

For an interactive moment, Mentimeter was utilized to poll the participants and anonymously, in real-time display their thoughts for others to see. 16 out of 17 participants responded to the poll question. Participants were asked the following question after the first informative portion of the presentation:

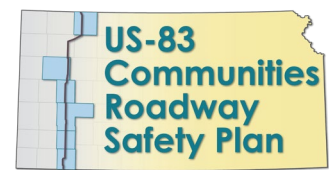


“What do you hope to accomplish through the US-83 Corridor Safety Plan?”

Overall, the top three accomplishments were improved safety, better traffic flow, and planning for the future.

Individual responses were as follows.

- Safer driving conditions
- Better traffic flow
- Improved safety along US-83
- Improved safety
- A safer environment for drivers
- Improved safety and better traffic flow
- Less large truck through cities
- Safety and mobility for all
- Improved traffic flow
- Better signage
- Develop a long-range vision that encourages growth while creating safer highways.
- How to accommodate more truck traffic safely.
- Safer driving fewer fatalities
- Reducing crashes and fatalities
- Gain a unified voice for 83, from Liberal to Oberlin
- Plan for the future
- Collaboration & long-range planning between communities
- Are trucks really accounted for in KDOT analyses?



US-83 COMMUNITY ROADWAY SAFETY PLAN

SUMMARY OF TASK FORCE MEETING 2

AUGUST 7, 2024 | 1-3 PM | TEAMS

MEETING PURPOSE

To identify preferred countermeasures for each community's top emphasis areas.

ATTENDEES

Staffing

Ashley Winchell, AICP – Wilson & Company, Moderator

Michael Kramer, PE – Wilson & Company, Moderator

Kristen Manthei – Wilson & Company, Notetaker

Ryan Deeken – Wilson & Company, Notetaker

Nahaji Kebe – Wilson & Company, Notetaker

Anthony Gallo – Kimley Horn, Support

Riley Mitts – Kimley Horn, Support

John Pileggi – Kimley Horn, Support

Emma Habosky – Transystems, Moderator

Participants

Name	Agency
Ingrid Vandervort	KDOT – Bureau of Transportation Safety
Shane Burns	Garden City Schools
Lisa Mussman	KDOT – Public Affairs
Katie Eisenhour	Scott County Development Committee
C.W. Harper	Finney County, Haskell County, Seward County
Tyler Patterson	Garden City Public Works & Holcomb Council Member
April Warden	County Administrator, Seward County
Mike Muirhead	Director of Public Works, Garden City, KS

Name	Agency
Gerald Bennett	KDOT – District 6
Rusty Varnado	City Manager, Liberal, KS
Matt Allen	City Manager, Garden City, KS
Larry Brungardt	Finney County
Greg	
Robin Lujan	City Manager, Holcomb, KS

DISCUSSION NOTES

MID-SIZED COMMUNITIES

- Q: Are there issues or concerns with our data compared to what you have noticed? Are there additional safety Issues?
 - **Lane departure** on the highway
 - **Failure to follow traffic control** at intersections
 - Issues with traffic laws, **four-way stop control** in particular
 - Volume of traffic based on the size and capacity on the roadway
 - **Concerns for pedestrians**
 - Navigating five lanes or more without protection
 - At midblock, intersections, two-lane roads, and collector roadways
 - Safety concerns with the bypass (Specifically Liberal)
 - Significant truck traffic
 - Access management
 - **More interested in reducing access points** if it will increase safety
 - **Gaps in pedestrian network**
 - **Decent transit riding population**
 - First mile, last mile
- Q: Any issues at intersections?
 - Roundabouts have been considered
 - **Unfeasible due to political resistance**
 - Signage is evaluated and updated as needed during chip seal implementation (Garden City)
 - All signs on Kansas Ave are maintained by Garden City

BREAKOUT ROOM

- Revisit the top community emphasis areas. Let participants ask questions.
- Outline the activity. We are going to talk about these emphasis areas generally. We will be ID'ing preferred countermeasures for each emphasis area. We will use this information to form

recommendations for issues in the community. Further conversations will be held with each community to further tailor these recommendations.

- For each Emphasis Area we are going to work through prioritizing their use in your communities.
 - Tier one – Preferred method(s)
 - Tier two – Secondary method(s)
 - Tier three – Less preferred method(s)
- We will also ID Opportunities and Constraints
 - Here we can add post-its talking about concerns, considerations, etc.
- Switch to Mural Board and start walking through activity.

MURAL BOARDS

COUNTERMEASURE PREFERENCE AT INTERSECTIONS

Countermeasure	Prefer			Secondary			Tertiary		
	Small	Mid	County	Small	Mid	County	Small	Mid	County
Retroreflective Backplates	X	X							
Low-Cost Countermeasures	X	X	X						
Roundabout									X
Dedicated Left and Right Turn		X		X		X			
Yellow Change Intervals				X	X				
Corridor Access Management		X					X		
Reduced Left-Turn Conflict Intersections							X		

- **Challenges**

- *Small Communities*
 - Roundabout at 9th & 83, it keeps trucks moving
 - Lots of **trucks are stopping late** on 9th St.
 - Access management could be difficult on west side of road (road not stated)
 - No room for access road
 - Removing parking along 83 could be a struggle
 - **Businesses are very tied to the parking**, have increased angle of parking previously
 - Long trucks must go elsewhere
 - Potential need for **bypass, but can it be avoided or pushed further into the future?**
- *Mid-Size Communities*
 - Older signal units have less programmability
 - Signals on mast arms with appropriate signage to identify cross traffic
 - **KDOT controls some signals**, may be difficult to update timings
 - More complaints on Mary compared to other streets in terms of traffic
 - **Not open to roundabouts** within political realm
- *County Level*
 - No signalized intersections
 - Seems like folks in Seward County are **not open to roundabouts**
- **Opportunities**
 - *Small Communities*
 - **Retroreflective backplates could be useful** at highway intersections in Scott City
 - Yellow interval in Scott City
 - Roundabouts at park near 12th & Main
 - Need to strategically place in Scott City
 - Potential **3-lane US-83 with a center turn lane**
 - Could K96 still have truck parking?
 - *Mid-Size Communities*
 - **Signage could use visibility updates**
 - Increased wayfinding signage
 - *County Level*
 - Liked reflective signpost markers
 - KDOT was studying roundabout at US-83 & US-54
 - [U.S. 54 Expansion in Seward County - July 19, 2023 - English / Bilingual Meeting / Reunión en Inglés / Bilingüe - KDOT IKE Program \(ksdot.gov\)](#)
 - [U.S. 54 Expansion in Seward County and Other Regional Projects - KDOT IKE Program \(ksdot.gov\)](#)
 - Dodge City: [RoundaboutJuly29.pdf \(ksdot.gov\)](#)
 - Potential for **lighting at key intersections**

COUNTERMEASURE PREFERENCE WITH ROADWAY DEPARTURE

	Prefer			Secondary			Tertiary		
Countermeasure	Small	Mid	County	Small	Mid	County	Small	Mid	County
Safety Edge						X			
Wider Edge Lines			X						
Enhanced Delineation for Horizontal Curves			X						
Rumble Strips						X			
Roadside Design Improvements at Curves									X
Median Barriers									N/A*

*No divided roads at county level

- **Challenges**

- *County Level*

- Lots of roads **don't have shoulders** or paved shoulders
 - Seward County has equipment issues for addressing inclement weather
 - **Rumble strip maintenance is an issue**, also at intersections
 - **Clear zone issues**
 - Farmers plant and farm up to edge of roadway
 - Difficult conversations have occurred with no changes

- **Opportunities**

- *County Level*

- County ROW includes 60, 80, or 100 feet depending on functional class
 - Using millings for shoulders is an option
 - Maintenance of edge lines is important
 - Enhanced delineation should **include clear signage with flashing lights and retroreflective tape**
 - Guardrails are utilized in Seward Co in areas with large drop offs

COUNTERMEASURE PREFERENCE WITH VULNERABLE ROAD USERS

	Prefer			Secondary			Tertiary		
Countermeasure	Small	Mid	County	Small	Mid	County	Small	Mid	County
Low-Cost Countermeasures	X		N/A			N/A			N/A
Crosswalk Visibility Enhancements	X		N/A			N/A			N/A
Bicycle Lanes			N/A		X	N/A	X		N/A
Walkways			N/A			N/A			N/A
Road Diet			N/A		X	N/A			N/A
Pedestrian Hybrid Beacons			N/A			N/A			N/A
Pedestrian Refuge Island			N/A			N/A			N/A

*No VRU crashes at County Level

- **Challenges**
 - *Small Communities*
 - No signals or lighting at 12th & US-83
- **Opportunities**
 - *Small Communities*
 - Walkways would be helpful to pedestrians
 - 12th & US-83
 - Kids Park/Playground (Patton Park)
 - Nursing home
 - Bikes
 - No traffic signals or active crosswalks
 - *Mid-Size Communities*
 - Some **hesitancy within community** with bike lanes and road diets
 - **Newest implementation is working well** so far however in Garden City

FOR TEEN DRIVERS AND OCCUPANT PROTECTION

- *What are the issues you've seen?*
 - Teens are **distracted driving**
 - **Poor driving habits**
 - Scared drivers
 - Seat positions
 - Leaning far back
 - Sleeping passengers
- *What are some potential solutions?*
 - **Drivers' education in high schools** during the school year as well as the summer
 - Education through law enforcement agencies
 - Seatbelt usage
 - Alcohol (Impairment)
 - Using social media for educational campaigns
- *What have you tried before?*
 - SAFE Program in Kansas (unlisted communities are below)
 - Scott County
 - Decatur County
- *Additional comments:*
 - **Kids are buckling up immediately** (small communities)
 - Emergency management may have more insight into seatbelts
 - Seatbelt comfort

DRAFT COMMITMENT (IF TIME ALLOWS)

Draft Ordinance has been added to Mural Board – walk through with your group and answer questions, mark down any concerns, etc.

A few specific questions:

- Is using "Vision Zero" language okay in your community?
- Do you think your community will choose to end or reduce roadway fatalities?

- If reduce – what percentage feels reasonable? 50%? 75%?
- Does 2044/2045 feel like a reasonable year – 20 years in future?
- What does your community need to adopt this resolution and action plan?

RESPONSES

- County Level
 - Seward County – **Received push back** on inclusion of a similar concept to this draft into their plan, **fear of not being realistic**.
 - Even if there has been a fatal or injury crash, the group can still show that there has been a reduction in crashes by using statistics.

US-83 Task Force Meeting Notes

DISCUSSION NOTES – BREAKOUT ROOM #1

**** Moderators, if you feel they are stalling on a question, let them know they don't have to answer right away, and we are just trying to understand their perspective. Then move them onto to the next question. ****

You have about 10 minutes per question! Someone should keep time.

Questions:

1. Describe the biggest roadway safety concern in your community.
 - a. US-83\54 bypass is severely congested – high truck, high traffic, high congestion
 - i. Potential construction of true truck bypass east of garden city in unincorporated area
 - ii. Accounts for 2/3 of the fatal crashes here
 1. bicyclist at Schulman
 2. One at the curve – veh head on
 - b. Spruce St Int
 - i. Fatality
 - ii. First traffic controlled int if coming from southern interchange
 1. Lots of cross traffic
 - iii. At grade ped crossing location at some point
 1. Need for grade sep
 2. City working with KDOT
 - c. Main st to maple to VFW/jones – B50
 - i. Truck traffic issues with residential area here
 - ii. HRRR (high risk rural road) project in this area
 1. 2' paved shoulders with mill and overlay
 - a. Want to construct at same time
 - iii. Jones is major corridor between Holcomb and garden city
 - d. Anderson Rd
 - i. Potentially outside of study area

- ii. Dangerous at night if you are unfamiliar – Jones and Mary
- e. High school is right by the bypass mentioned previously
 - i. Almost 20 buses
 - 1. Jennie Barker Rd
 - a. Will have more commercial and residential dev
 - i. Commercial corridor and several hundred residential units
 - ii. Difficult on a normal day, extremely difficult when there are emergencies
 - iii. Mary and Anderson/Jones is difficult with buses
 - iv. Redistricting
 - 1. New residential developments incoming (500)
- f. 3rd St
 - i. City limits into bypass
 - 1. City infrastructure to county infrastructure
 - a. Tapered from divided highway to undivided highway
 - b. Poor geometry
 - i. Irrigation ditch bridge – bottleneck
 - ii. Traffic may increase due to redistricting here at this area
- g. US-50 – Empirical Foods
 - i. Truck traffic concerns
 - 1. 1000 ac industrial park
 - 2. Heavy truck load and not even fully built out
 - a. Approx. 80/day
 - b. Not including employee parking
 - i. 300-500 with plans to expand
 - 3. Can pull traffic study for this development
- h. Kids not really walking to school much
 - i. Jennie Barker Road
 - 1. Parent complaints on foot traffic across Jennie Barker Rd
 - 2. Same for victor rd

3. Kids coming from MHB to schools, kids use ped touch symbols

Follow up questions (if needed):

- ii. Why do you think this issue is happening?
 - 1.
 - iii. How long has this issue been going on?
 - 1.
 - iv. Has your community done anything to try to fix this issue?
 - 1.
2. Tell us about areas in your community that experience higher safety issues. This could be a specific intersection, neighborhood, stretch of roadway, business location, etc.
 - a. 2 intersections
 - i. 5 points
 1. Buffalo Jones meets N Taylor Ave
 - a. Historically poor intersection (fully developed)
 - ii. Kansas Ave/Campus Dr
 1. Schulman Ave – roadway to major shopping area
 2. McCoy Dr
 - a. All of these become one big issue of congestion and traffic
 - b. For veh and peds
 - c. Drainage concerns with infrastructure barriers complicate designs for improvement
 - iii. LaRue and 156
 1. High traffic – 3-way stop SB doesn't stop
 - iv. Mary and Campus
 1. High traffic
 - a. Congestion concerns, may need redesign
 - b. Mary lane is the issue – 4lane rd with shared Left through lane in both directions
 - i. Congestion worst in the morning with queue – stationary over one traffic cycle

- ii. Staggered signals
- v. 3rd and Mary
- vi. Main and Mary
 - 1. Sight line issues
 - 2. Uncontrolled
 - 3. High speed intersection outside of school zone
- b. Ped issue at Main/3rd at Mary
 - i. Many new people – high refugee population
 - 1. High turnover rates
 - 2. Acclimating to western practices
 - a. 23 dialects in high school
 - b. Hierarchy of needs
 - i. Food, shelter, emergency medical care
 - ii. Secondary resettlement Program
 - 1. Looking to survive and live familiarly not just experience the space
 - iii. Traffic patterns for complexes
 - 1. Showcase where to build sidewalks that are easily used
 - ii. Mary St E-W has poor sidewalk conditions
 - 1. N-S passageway improvements within past 10-15 years
 - iii. Apartments south of college
 - iv. East Garden village – commercial provisions, healthcare, gathering spaces for worship
 - v. college street
 - 1. resettlement community
 - vi. Entryways at Southwind
 - 1. Lots of conflict points
 - a. One access closure in 2-3 years
 - i. One of main entrances into development
 - ii. Will cause issues with people accessing their homes

- vii. Burnside Dr
 - 1. Comp plan potential trail to Southwind
 - a. GC to Holcomb
 - b. Ped and bike trail to connect GC to Southwind
 - i. Similar to trolley trail?
 - ii. 10' trail
 - 2. Major speeding issue here
- viii. B83 meets US-83
 - 1. Concerns here
- ix. Need updates on trail development with Holcomb
 - 1. Issues with connections
 - 2. Issues with funding
 - 3. ID'd in Finney Co Comp Plan
- x. Sagebrush/Bruno Crossing up to Anderson/Jones
 - 1. Low water crossing (Wilderness is Bruno Crossing)
 - a. Gravel roadway
 - 2. Lots of traffic at maple, Anderson, wilderness, and sagebrush
- xi. NW Quad – N of US-50 bypass – Acraway Rd
 - 1. Interest in industrial or commercial dev
 - a. Western KS corridor
 - b. Issues with west side of Acraway and solar avenue
 - i. Major truck stop at solar avenue
 - 1. Trucks blocking traffic or unable to make the turn

Follow up questions (if needed):

- xii. What kinds of safety issues are happening there?
 - 1.
- 3. Tell us about what kind of roadway safety programs or strategies your community is using or has promoted in the past?
 - a.

Follow up questions (if needed):

- i. What kind of success did the program have?
 - 1.
- ii. If the program wasn't successful: What would you do differently if you tried the program again?
 - 1.
- iii. If it was successful: What do you think contributed to the program's success?
 - 1.

*****IF TIME ALLOWS*****

- 4. How can we best reach your community about upcoming online engagement?
 - a.
- 5. What do you hope to gain for your community out of this plan?
 - a.
- 6. A Vision Zero Policy adopted by city or county leadership is a requirement of the grant funding. What tools or information does your community need to adopt a Vision Zero Policy?

Final Thoughts:

US-83 Task Force Meeting Notes

DISCUSSION NOTES – BREAKOUT ROOM #2

**** Moderators, if you feel they are stalling on a question, let them know they don't have to answer right away, and we are just trying to understand their perspective. Then move them onto to the next question. ****

You have about 10 minutes per question! Someone should keep time.

Attendance: Gary Bennett, C.W. Harper

Action Items

- Follow up with Gary Bennet and KDOT PI for document of projects over the past several years (intersection improvements, passing lanes)
- Follow up with Rusty Varnado about issues specific to the City of Liberal (had to drop off)
- Check segment data in GIS on if we're accounting for passing lanes

Questions:

1. Describe the biggest roadway safety concern in your community.
 - a. CW Harper – worked on LRSPs for all of these counties
 - i. “A lot of the issue on US-83 is not the level of traffic but the type of traffic” – lots of trucks, oversized loads, and freight that are nearly impossible to pass
 - ii. Not a lot of “low-hanging fruit” to address on the local system – lots of random run-off road and animal incidents
 - iii. Most of these counties don't have a lot of roadway deaths but they do have a lot of roadway miles – how do you efficiently spend money to target seemingly random deaths; focus should be on behavioral strategies
 - iv. Behavioral issues
 1. Distracted driving
 2. Speeding – number of tickets exceeding 100 miles per hour have increased in the area
 3. Impaired driving
 - a. Anecdotally feels like this has gone down but would need to check against the data
 - b. Feels like enforcement has increased (specifically for marijuana and its transport)

- b. Gary Bennett- focus is Garden City Area
 - i. Distracted driving – behavior modification is a big goal, but how do we do it?
 - ii. Passing opportunities, especially with the freight traffic
- 2. Tell us about areas in your community that experience higher safety issues. This could be a specific intersection, neighborhood, stretch of roadway, business location, etc.
 - a. CW Harper
 - i. Haskell – US-83/US-56 intersection; people run the stop sign, especially truck traffic; in his opinion there are a lot of flashers/beacons but trucks still aren't seeing them and stopping
 - ii. Haskell – County Road 50 – used as a cut-through route; lots of speeding
 - b. Gary Bennett
 - i. In general, KDOT has done a lot of projects to improve safety along the US-83 corridor:
 - 1. Just added passing lanes on 2 sections north of Liberal (community really wants passing lanes due to the heavy freight traffic)
 - 2. KDOT has been buying of ROW for 4-laning
 - 3. Intersection improvements at Sally Rd/US-83
 - 4. Intersection improvements at K-51/US-83
 - ii. "6-point" intersection by US-83/US-54 meet on east side of Liberal – KDOT has already made improvements (taken it from 6 points of access to 4) but more improvements are planned and needed
 - iii. US-83 has the only railroad overpass in Liberal – everything else is at-grade and trains can actually block the entire town for multiple hours – congestion becomes a serious safety issue

*****IF TIME ALLOWS*****

- 3. How can we best reach your community about upcoming online engagement?
 - a. Liberal – school districts, elected officials, major employers (National Beef)
 - b. Smaller communities – elected officials
- 4. What do you hope to gain for your community out of this plan?
 - a. CW Harper
 - i. Haskell – interchange at US-56/US-83

- ii. Push for “2+1” lanes from Oklahoma to I-70 to alternate passing lanes (KDOT is already planning to develop alternating passing lanes between Garden City and Scott City)

US-83 Task Force Meeting Notes

DISCUSSION NOTES – BREAKOUT ROOM #3

**** Moderators, if you feel they are stalling on a question, let them know they don't have to answer right away, and we are just trying to understand their perspective. Then move them on to the next question. ****

You have about 10 minutes per question! Someone should keep time.

- **Room Three:**
 - Cities: Scott City, Oakley, Decatur
 - Counties: Decatur, Logan, Scott
 - Lead: Michael Kramer (facilitator), Ryan Deekan (notes), Emma Habosky (support), Clyde Prem (support)
 - Participants:

Name	Agency	Phone #	RSVP?	Attended
Lisa Mussman – Public Affairs from DOT	KDOT – District 3	(785)874-8107	-	X
David Sporn – City Administrator	Oberlin	(785)475-2217	Y	X
Sandy Rush	Oberlin	(785)475-2217	-	
Brock Sloan – City Administrator	Oakley	(785)671-3136	Y	
Bradley Pendergast	Scott City	(620)872-5322	Y	
Katie Eisenhour - Economic Development	Scott City	(620)872-3525	Y	X
Nora Urban	Decatur County		-	

Other Comments:

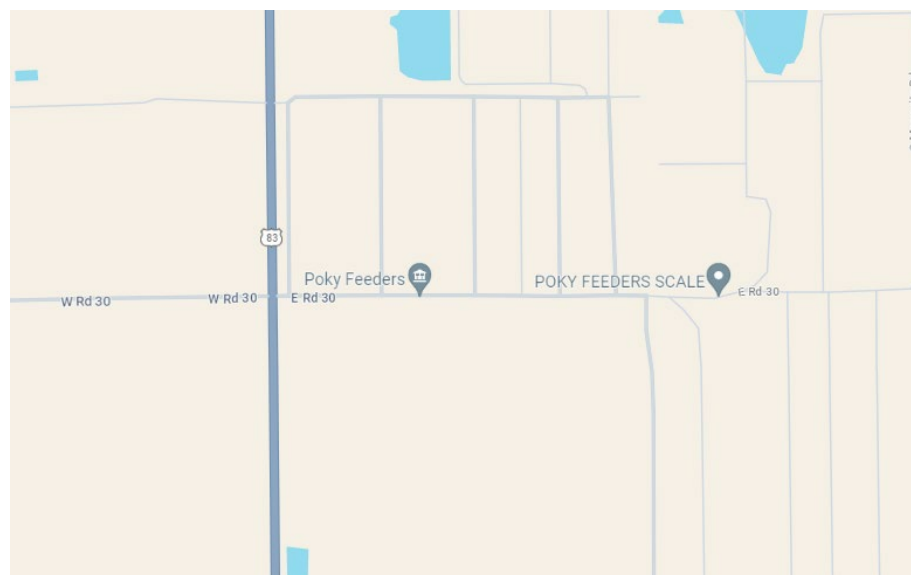
- Reiterated the importance of community involvement

Questions:

1. Describe the biggest roadway safety concern in your community.

Scott City

- US-83 through the heart of the community. 1400 freight going through downtown and high school; lunch hour is very busy
- Embrace and having heightened concerns about freight
- Want more freight, but issues with the high school
- Fatality – one teenager killed while crossing the highway
- Want to be a part of the conversation about a potential by-pass
 1. Want to keep the community balanced
 2. Thinking for the future
- Recent crashes by the Pokee intersections (north of the county line)
 1. Trucks entering in and out of feed yard
 2. Wind farm construction
 3. Caravan of 9 vehicles
 4. Passing lanes are coming
 5. Most concerns about going south to Garden City



6.
 - Going north out of town is better
 1. Intersection with K-4; plenty of time to stop

2. Not a heightened issue

- Crash hotspot by the area

1. People aren't from the area and don't know about the curve

- 9th intersection – not usually involving trucks;
- Large truck's are large
- Think the traffic light is important

1. Flashing light with speed on K-96

- Light levels may not be great so students don't usually walk to school

Oberlin

- US-83 and highway 36
 - Jog in highway with vision blocked in retaining walls
 - North of town – growing feedlot
- Going downhill, so hard to maintain speed
- Commercial and US-83
 - Retaining wall on west side that blocks sight distance
 - Trucks may be going really quickly down him



-
- Some pedestrian crossings in town

Oakley

- Lot of wind turbines through town
- Some trucks can't cross railroad tracks and have to go through town
 - Railroad cantilevers on US-83 don't allow for oversided loads; have to use "Front Road"
 - Union Pacific
- East intersection of US-83 & 40
 - A lot cut across
 - Not designed well for this
 - Cut through this path



Follow up questions (if needed):

- i. Why do you think this issue is happening?
 - 1.
 - ii. How long has this issue been going on?
 - 1.
 - iii. Has your community done anything to try to fix this issue?
 - 1.
2. Tell us about areas in your community that experience higher safety issues. This could be a specific intersection, neighborhood, stretch of roadway, business location, etc.
- a.

Follow up questions (if needed):

- i. What kinds of safety issues are happening there?
 - 1.

3. Tell us about what kind of roadway safety programs or strategies your community is using or has promoted in the past?

a.

Follow up questions (if needed):

i. What kind of success did the program have?

1.

ii. If the program wasn't successful: What would you do differently if you tried the program again?

1.

iii. If it was successful: What do you think contributed to the program's success?

1.

*****IF TIME ALLOWS*****

4. How can we best reach your community about upcoming online engagement?

a. Newsletter

b. City Website

c. Comprehensive plan – Scott City

d. County or city website (oakley uses county)

5. What do you hope to gain for your community out of this plan?

a.

6. A Vision Zero Policy adopted by city or county leadership is a requirement of the grant funding. What tools or information does your community need to adopt a Vision Zero Policy?

a.

US-83 Task Force Meeting Notes

DISCUSSION NOTES – BREAKOUT ROOM #3

**** Moderators, if you feel they are stalling on a question, let them know they don't have to answer right away, and we are just trying to understand their perspective. Then move them onto to the next question. ****

You have about 10 minutes per question! Someone should keep time.

Participants: Lisa Mussman (KDOT, Public Affairs), David Sporn and 2 others (City of Oberlin), ~~Sandy Rush (City of Oberlin)~~, Brock Sloan (City of Oakley), ~~Brad Pendergast (Scott City)~~, Katie Eisenhour (Scott City), ~~Nora Urban (Decatur County)~~, Michael Kramer (Wilson), Ryan Deeken (Wilson), Emma Habosky (TranSystems), and Clyde Prem (TranSystems).

Questions:

1. Describe the biggest roadway safety concern in your community.
 - a. Scott City - US-83 is a hinderance. 1400 heavy loads of freight, going right by high school. Noise issues on Main Street/US-83.
 - i. Makes it an issue for development
 - ii. Middle school girl was killed crossing US-83.
 - iii. Scott City bypass may or may not happen. Make sure the community is involved for that discussion.

Follow up questions (if needed):

- iv. Why do you think this issue is happening?
 1. Scott City – Freight Trucks make a big difference
 - v. How long has this issue been going on?
 - vi. Has your community done anything to try to fix this issue?
2. Tell us about areas in your community that experience higher safety issues. This could be a specific intersection, neighborhood, stretch of roadway, business location, etc.
 - a. Scott City - Pokey intersection has seen serious crashes (W Road 30). Freight truck traffic. Wind farm caravan.
 - i. Passing lanes coming soon
 - ii. Emergency Management Director at Scott City would be a good contact
 - b. Scott City - Intersection with K-4/US-83
 - c. Scott City – US-83 and K-95

- d. Scott City – US-83 intersection with 9th Street
 - i. 20 mph speed limit on US-83
- e. Scott City – Areas near schools
- f. Oberlin – Feed lot north of town on US-83
- g. Oberlin - West Commercial and Highway 83
 - i. Hills and Heavy Vehicles
 - ii. Retaining wall on US-83 blocks sight distance. Poor sight distance
- h. Oberlin – Pedestrian crossing locations and schools along US-83
- i. Oakley – US-83 and US-40 intersection
 - i. Freight traffic has trouble through here
 - ii. Freight traffic will cut through a parking lot
- j. Oakley - Issues with oversized roads being forced to cross the railroad through town instead of US-83. They're too tall for the signals. UPRR
- k. Oakley – Center and E Front Street
- l. Oakley – Railroad crossing issues

Follow up questions (if needed):

- i. What kinds of safety issues are happening there?
3. Tell us about what kind of roadway safety programs or strategies your community is using or has promoted in the past?

- a. Scott City – Unsure if Scott City high school has a SAFE Program

Follow up questions (if needed):

- i. What kind of success did the program have?
- ii. If the program wasn't successful: What would you do differently if you tried the program again?
- iii. If it was successful: What do you think contributed to the program's success?

*****IF TIME ALLOWS*****

4. How can we best reach your community about upcoming online engagement?

- a. Chamber Newsletter – Lindsey Singley(?) at Scott City

- i. Scott City has quite a few engagement tools to work with.
 - b. Oakley – website is tied in with county.
 - c. Scott City can host meetings for the US-83 corridor team as needed
- 5. What do you hope to gain for your community out of this plan?
- 6. A Vision Zero Policy adopted by city or county leadership is a requirement of the grant funding. What tools or information does your community need to adopt a Vision Zero Policy?
 - a. Keep all councils and city administrators aware of the project and informed so that this isn't all dumped on them at once. All participants agreed with this.
 - b. Keep KDOT involved in the processes

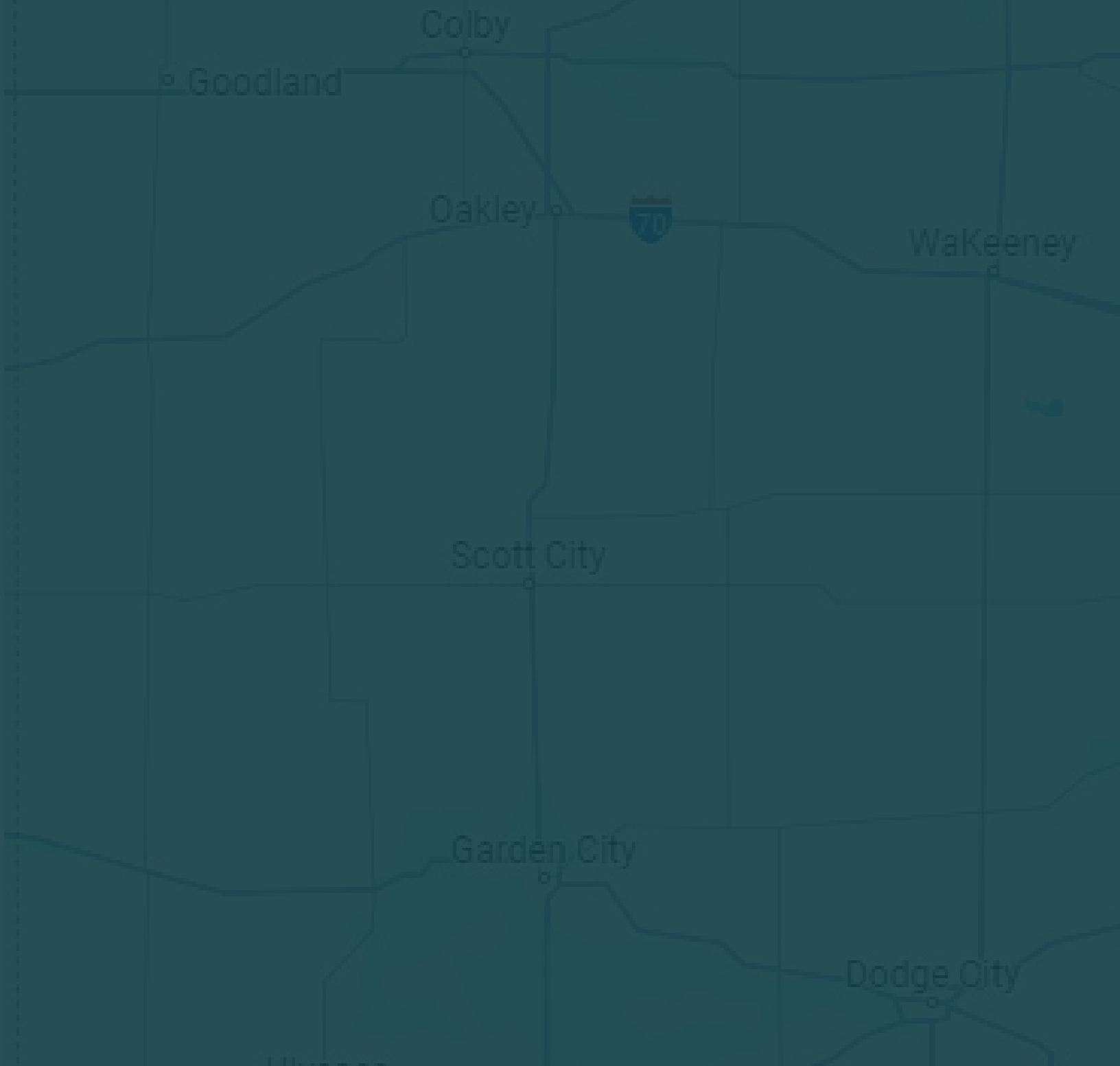
SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, KS

APPENDIX C: COMMUNITY SURVEY RESULTS

FEBRUARY 2025

Logan County Survey Summary Report



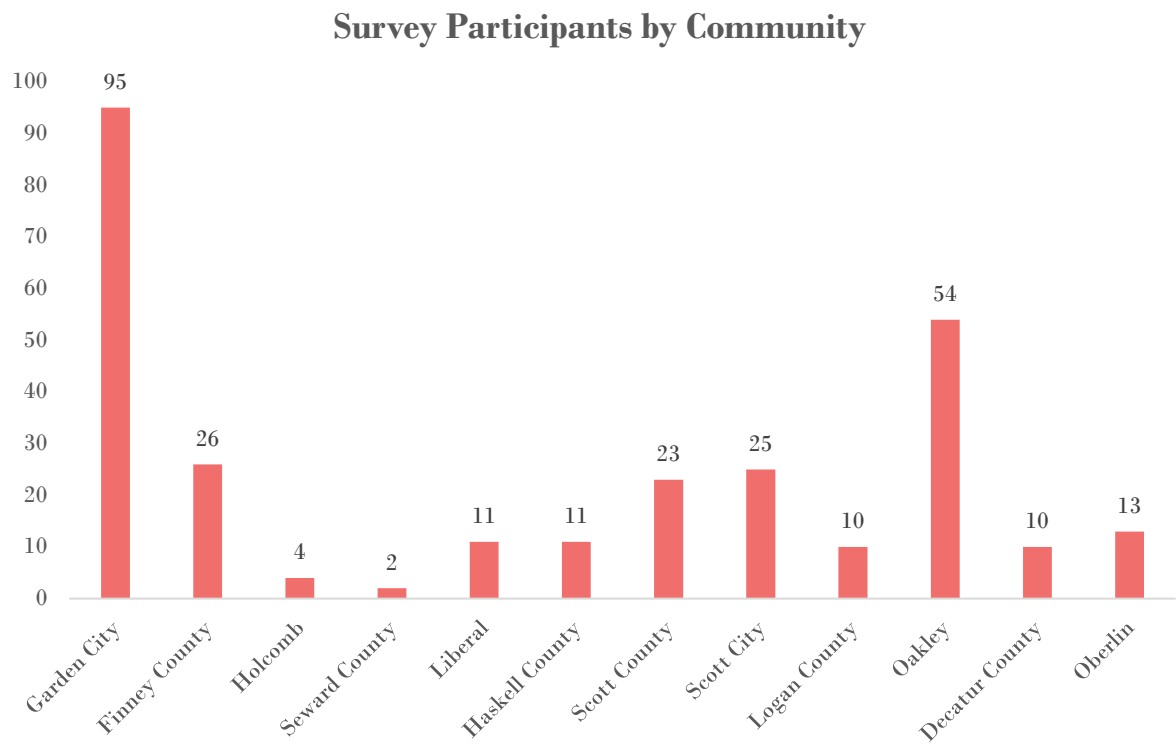
Introduction

As part of the engagement process for the U.S. 83 Communities Roadway Safety Plan, an online survey was conducted for a period of two months from May to July 2024. The survey aimed to understand residents’ transportation habits and street safety concerns within their communities. The survey sought to gather insights on how people travel, their perceptions of the street network, and their experiences with traffic incidents in the communities where they live and/or work. The survey also looked to identify the factors that individuals consider the most important for enhancing street safety.

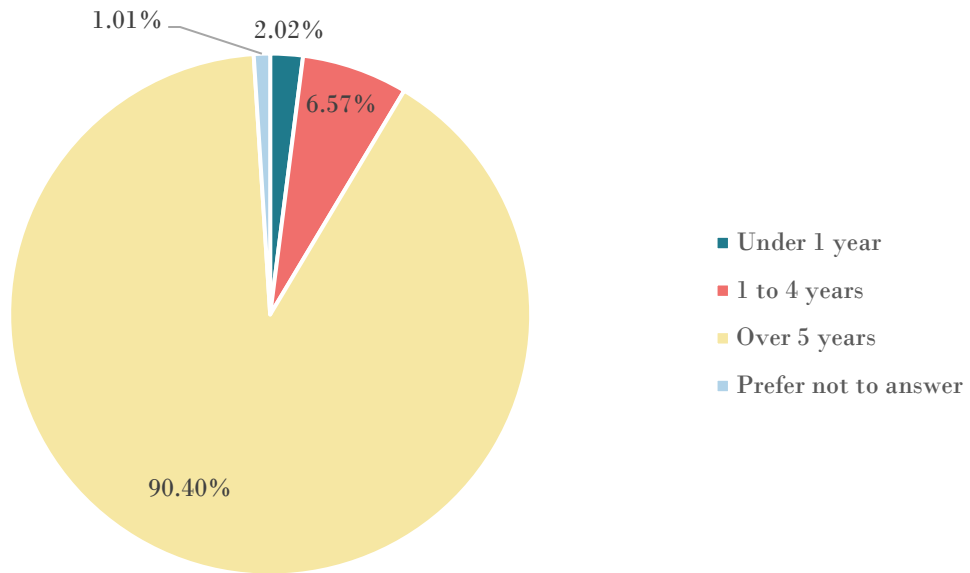
To maximize engagement, the survey was advertised through city and county websites, Facebook, and other community social media platforms. This approach ensured broad participation and diverse perspectives that helped guide the development of the U.S. 83 Communities Roadway Safety Plan.

U.S. 83 Communities Survey Demographics

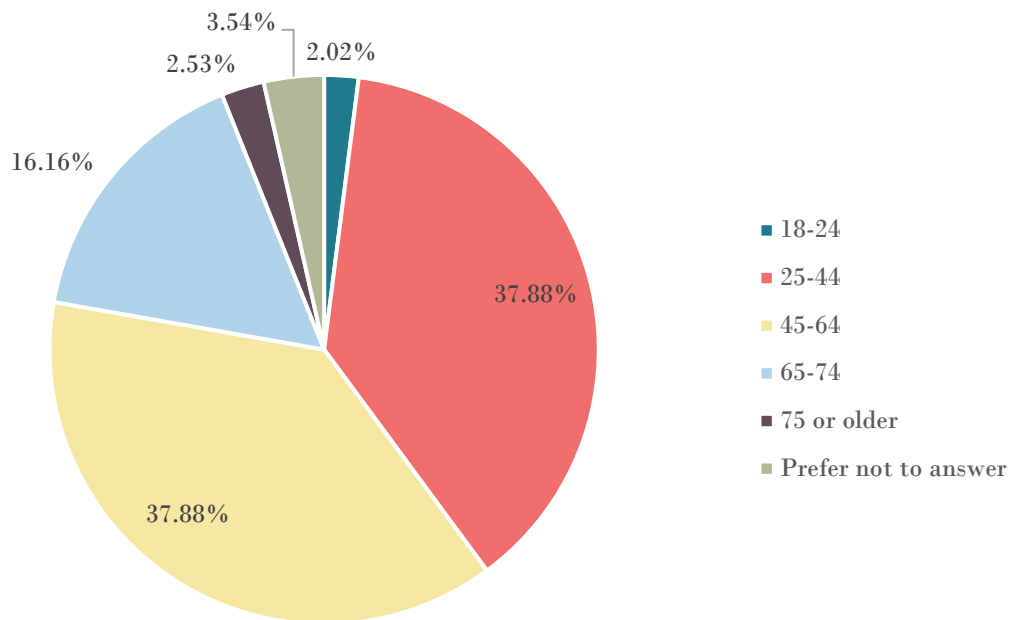
The following data reflects the demographics of the 284 individuals who participated in the survey from across the U.S. 83 Communities Roadway Safety Plan project area (Garden City, Holcomb, Liberal, Oakley, Oberlin, Scott City, Decatur County, Finney County, Haskell County, Logan County, Scott County, and Seward County).



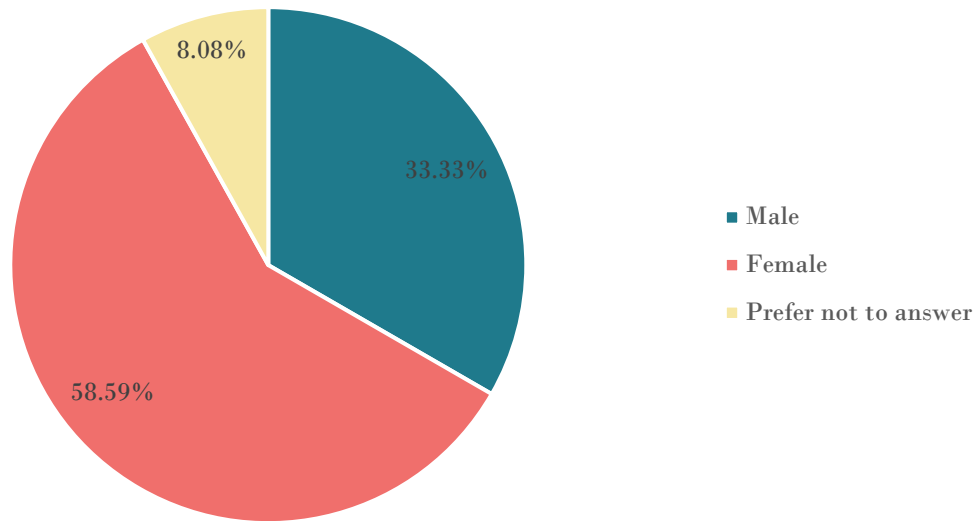
How long have you lived in your community?



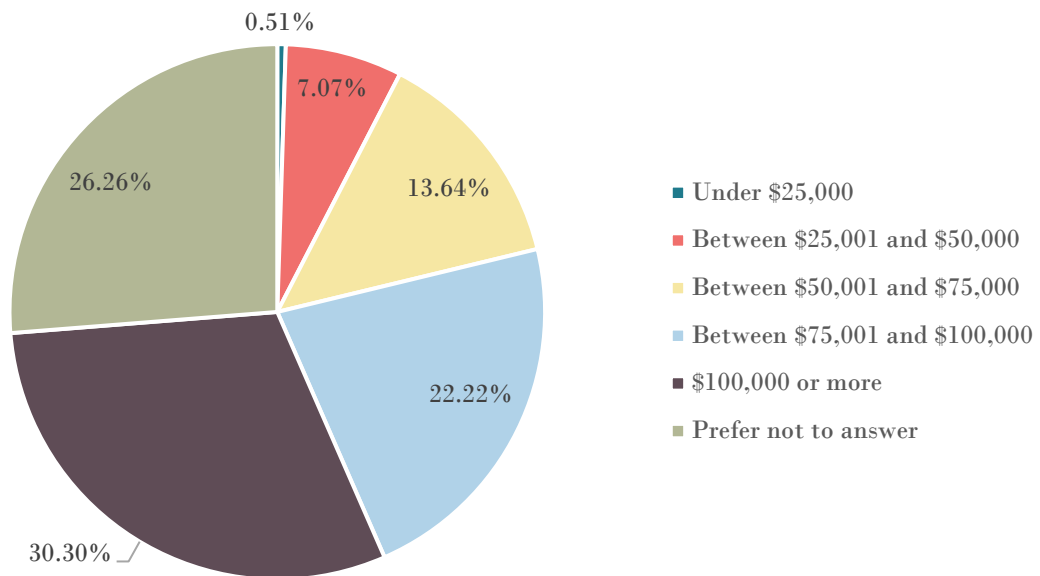
What is your age?



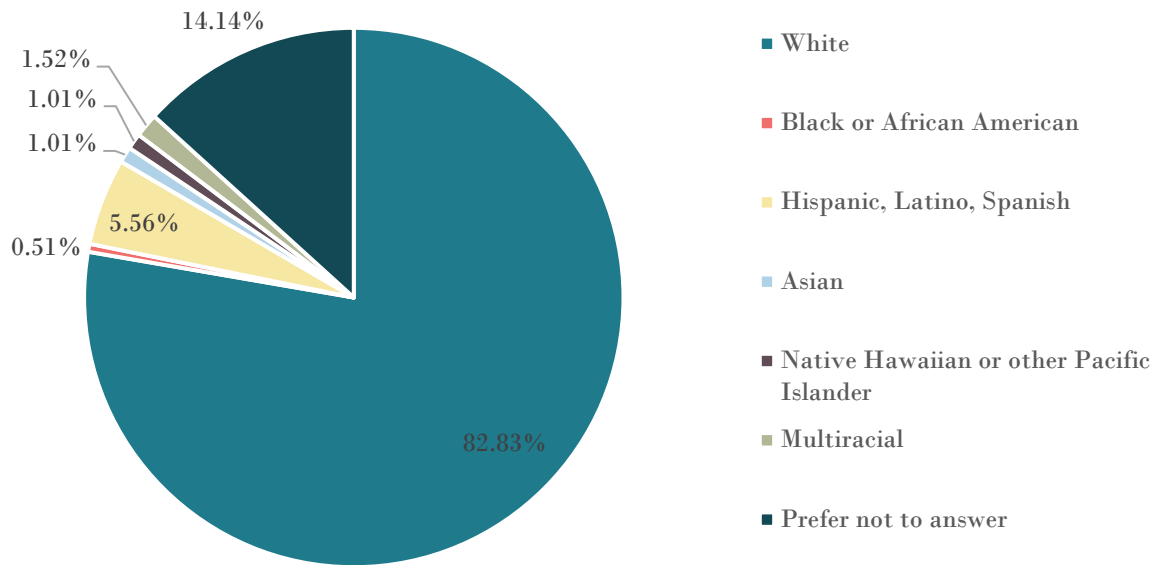
What is your gender identity?



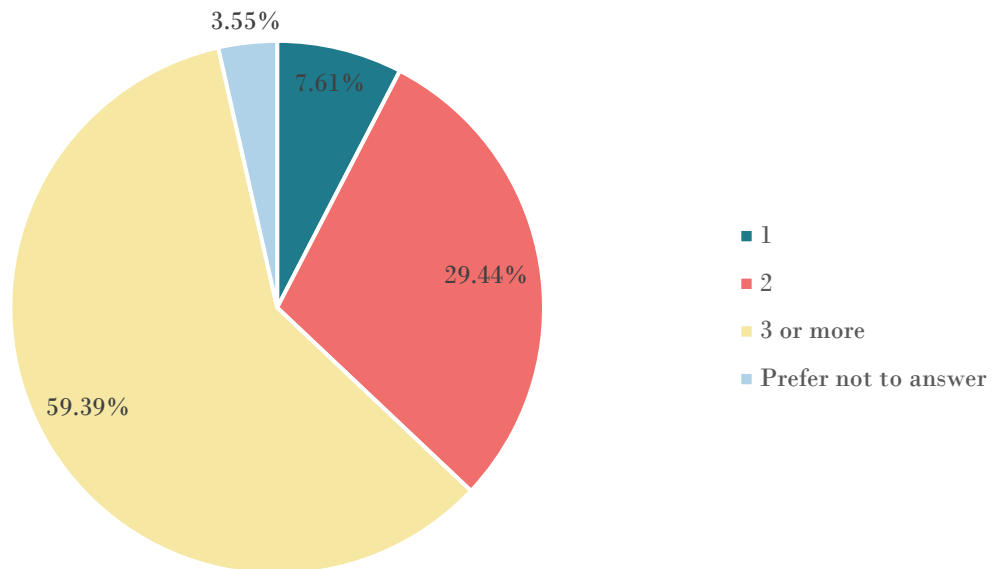
What is your household income?



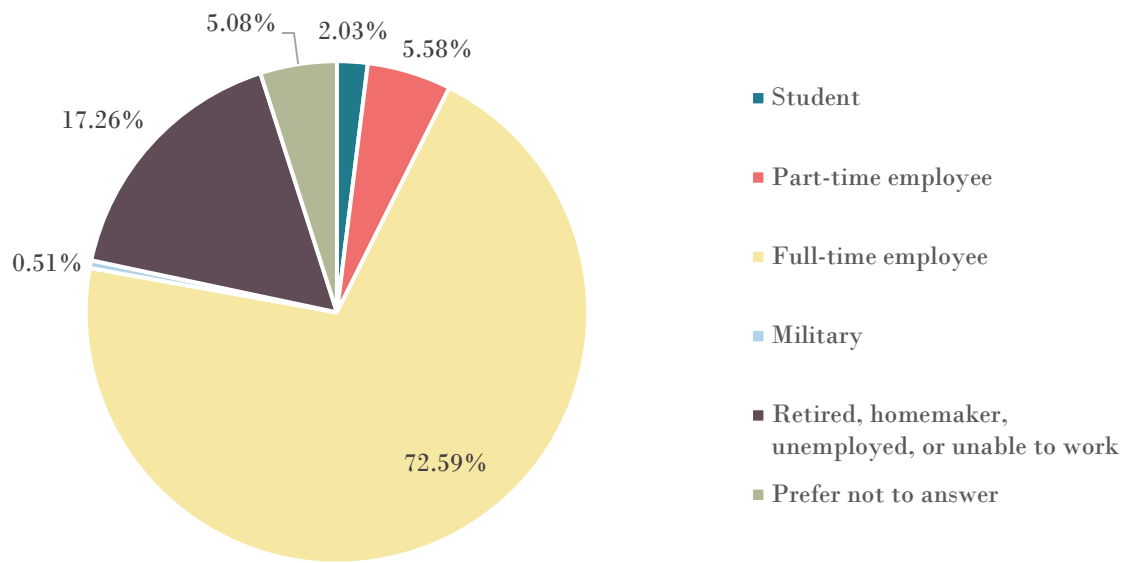
What is your racial/ethnic identity?



How many vehicles are in your household?

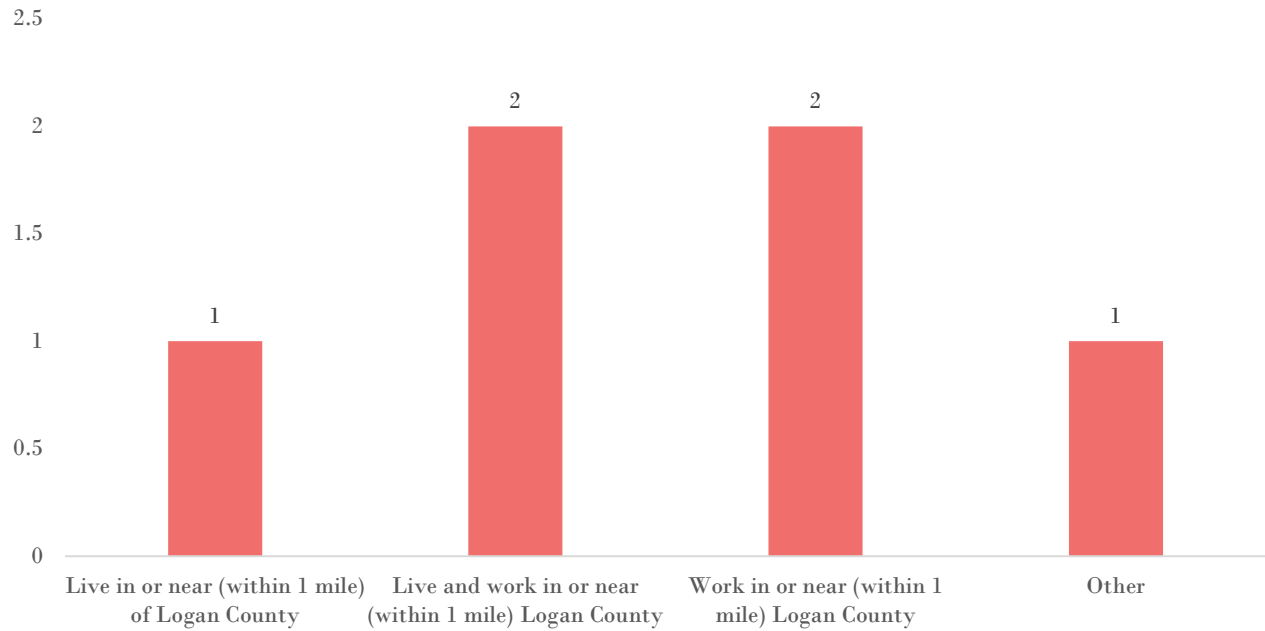


What is your current occupation?

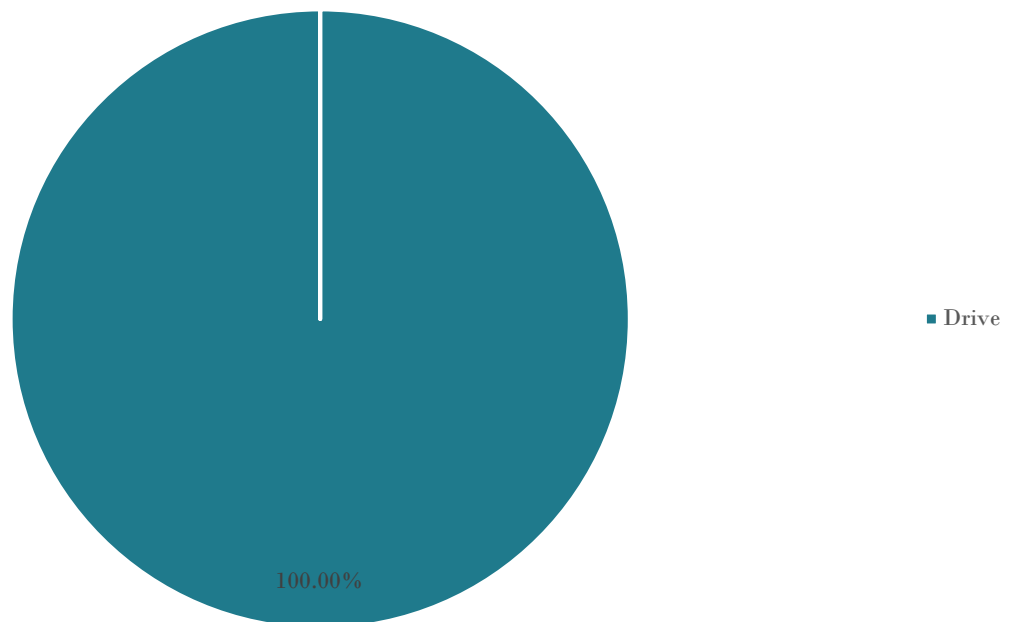


Survey Results – Logan County

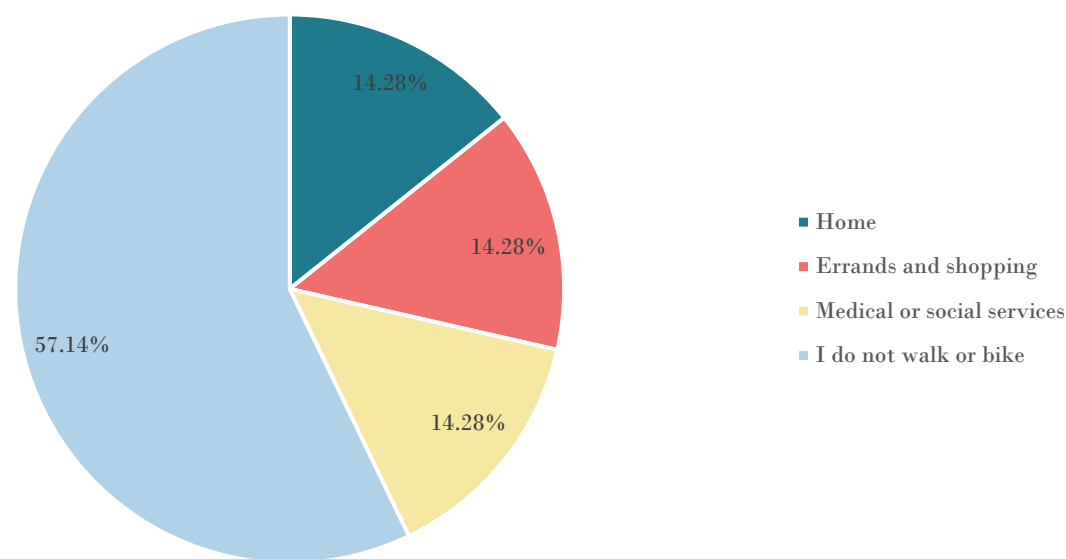
What is your relationship with Logan County?



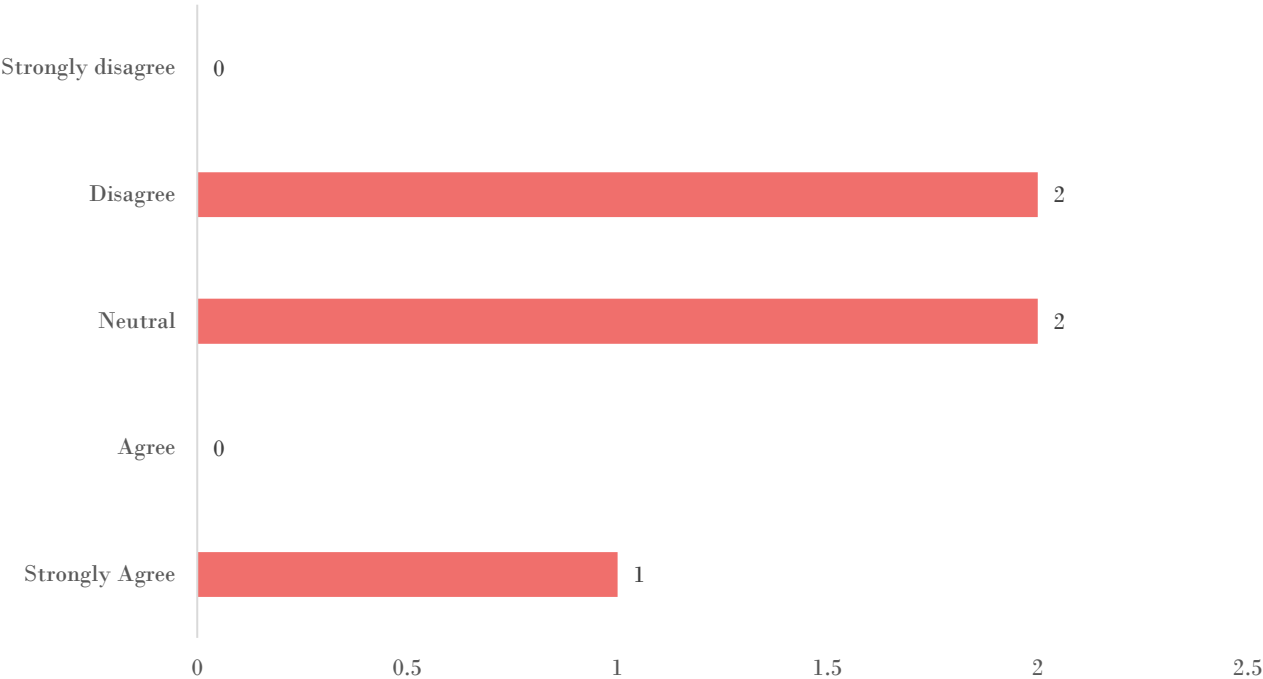
In a typical week, how do you usually travel to Logan County?



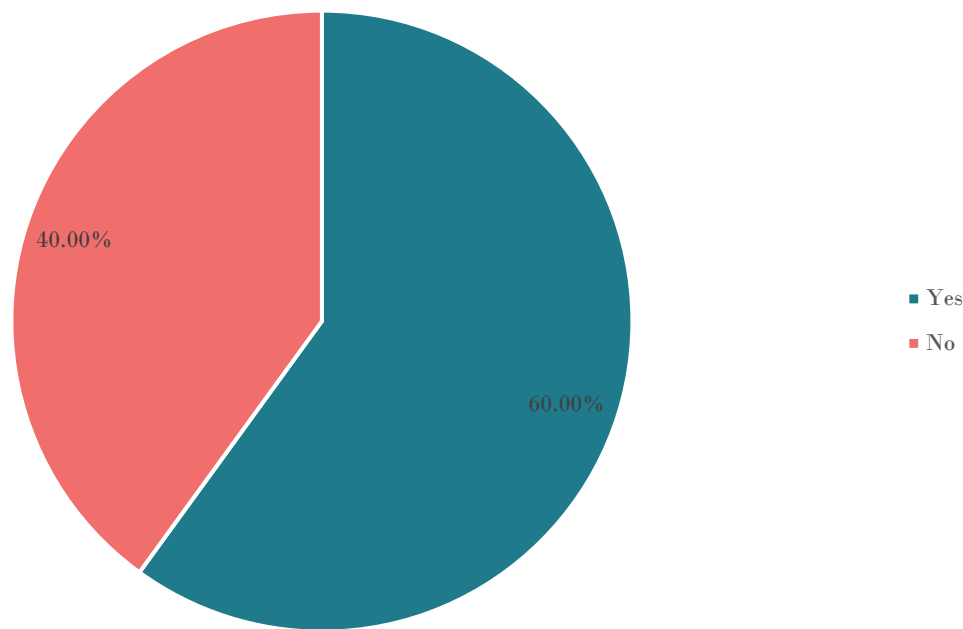
If you walk and/or bike in Logan County, what is your destination?



Based on your experience, how strongly would you agree that Logan County streets are safe?



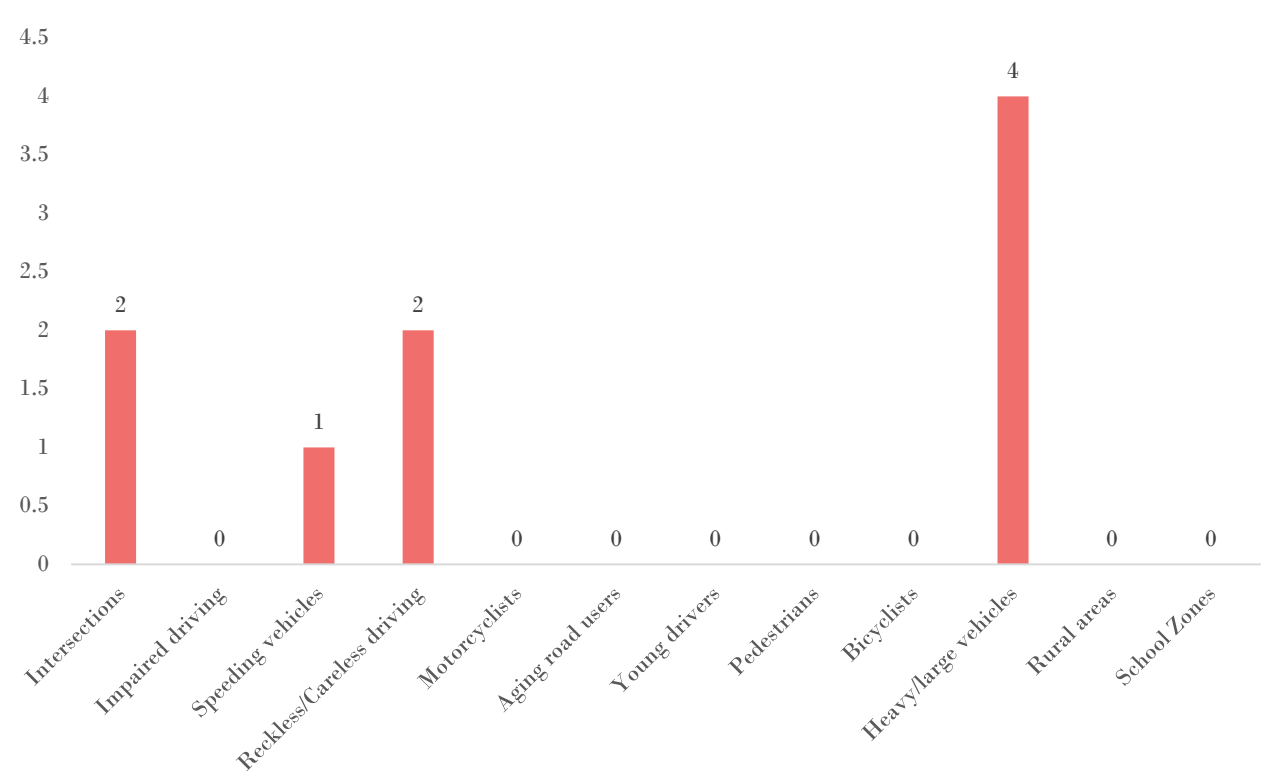
Have you been, or almost been, in a crash in Logan County?



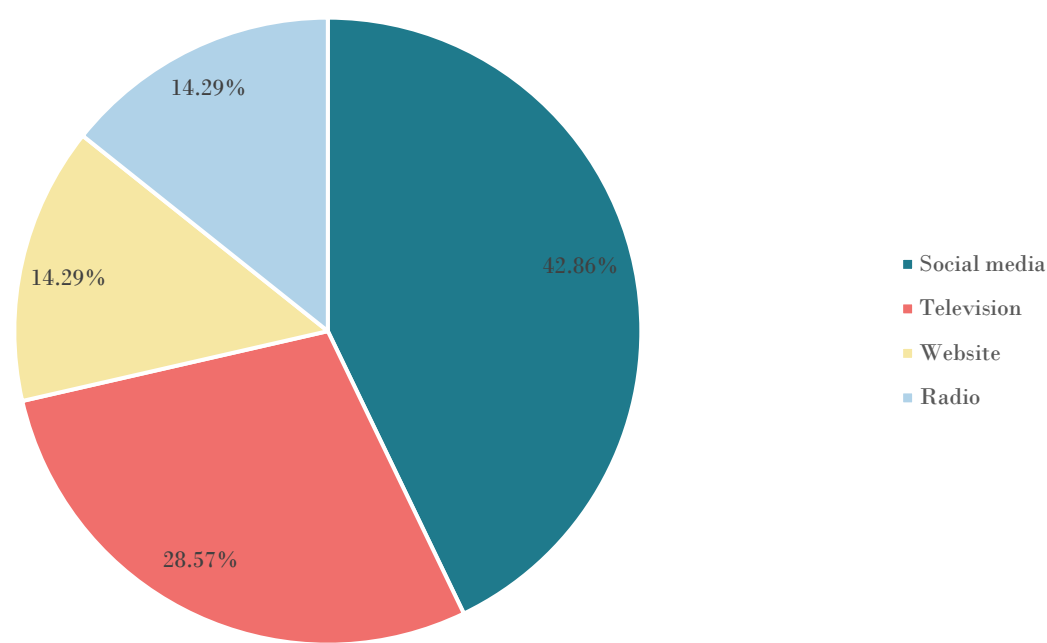
Have you been, or almost been, in a crash in Logan County? Please explain.

Problems at Hwy 83/I70 Junction
Large trucks crossing over I70 near Oakley.
83 and 40 junctions by golf course

What is most important to you in addressing street safety?



How would you prefer to learn about safe roadway practices?



Is there anything else we should know about road safety in your community?

Add Thomas and Sheridan County to this. The traffic doesn't just skip those two.
Need a passing lane between Oakley and Garden City
We have a lot of semis and heavy equipment trucks on our roads

SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, KS

APPENDIX D: VISION ZERO RESOLUTION

FEBRUARY 2025

VISION ZERO RESOLUTION #24-14

A RESOLUTION BY LOGAN COUNTY COMMISSIONERS, THE GOVERNING BODY OF LOGAN COUNTY, KANSAS, ADOPTING A VISION ZERO POLICY AND PROCLAIMING LOGAN COUNTIES COMMITMENT TO END TRAFFIC FATALITIES AND SERIOUS INJURY ACCIDENTS IN LOGAN COUNTY BY 2035 AND IMPLEMENTATION OF A SAFE STREETS AND ROADS FOR ALL PLAN.

WHEREAS, in 2021 the Bipartisan Infrastructure Law established the Safe Streets and Roads for All (SS4A) discretionary program which funds regional, local and Tribal initiatives through grants to prevent roadway deaths and serious injuries; and,

WHEREAS, in 2024 Logan County joined the cities of Oberlin, Oakley, Scott City, Garden City, and Liberal and the counties of Decatur, Logan, Scott, Finney, Haskell and Seward in making an application for a SS4A planning grant from the U.S. Department of Transportation to create SS4A compliant action plans; and,

WHEREAS, the SS4A program supports the U.S. Department of Transportation's National Roadway, Safety Strategy and the goal of zero roadway deaths using a Safe System Approach; and,

WHEREAS, Logan County's Vision Zero policy supports the Kansas Department of Transportation's Drive to Zero program and the goals of the Kansas Strategic Highway Safety Plan; and,

WHEREAS, 5 individual(s) was/were needlessly killed, and 91 individuals were injured on the Logan County roadways between 2013 and 2023; and,

WHEREAS, Logan County recognizes the need for action to increase safety and to prevent deaths and injuries on Logan County roads; and,

WHEREAS, Vision Zero is a proven framework for eliminating traffic deaths and serious injuries through intergovernmental and community partnerships leveraging resources and funds to ensure safe and efficient multimodal transportation; and,

WHEREAS, A comprehensive Vision Zero policy unifies existing safety efforts and elevates improvements through engineering and street design, education and engagement efforts, enforcement and technology, evaluation and data analysis, and equity; and,

WHEREAS, Logan County policies and practices support Vision Zero efforts to lead with roadway design that prioritizes safety and plans for a safe network for all modes of transportation; and,

WHEREAS, Logan County recognizes the need to prioritize hearing from the entire community and supports Vision Zero efforts to address inequities by prioritizing interventions in areas most in need of safety improvements; and,

WHEREAS, Logan County participation in US-83 Communities Roadway Safety Plan Task Force recognizes the need for action to increase safety and to prevent deaths and injuries on Logan County Roads; and,

WHEREAS, Logan County commits to the ongoing collaboration of the US-83 Communities Roadway Safety Plan Task Force to advance a shared vision and future for improvements along US-83 and within the individual communities comprising the task force; and,

WHEREAS, Logan County commits to build and sustain leadership, collaboration and accountability in partnership with public health, law enforcement, policymakers, elected officials, and community members in traffic safety work to advance the strategies of the SS4A plan and the Vision Zero policy; and,

WHEREAS, Logan County recognizes the need for action to increase safety and to prevent deaths and injuries on Logan County roads; and,

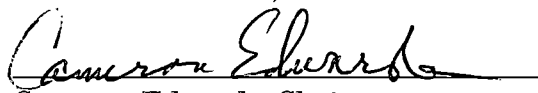
NOW, THEREFORE, BE IT RESOLVED THAT, THE LOGAN COUNTY COMMISSIONERS DO HEREBY:

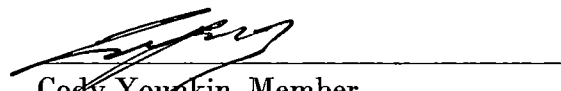
1. Adopt the Logan County Vision Zero policy with the ultimate goal of achieving zero fatalities and serious injuries by the year 2035.
2. Adopt the Logan County Safe Streets for All Action Plan, attached hereto as Exhibit A.

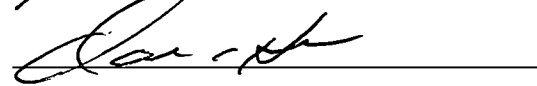
PASSED, APPROVED AND ADOPTED THIS 16TH DAY OF DECEMBER, 2024.



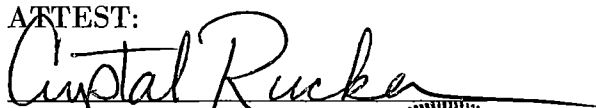
BOARD OF COUNTY
COMMISSIONERS OF
LOGAN COUNTY, KANSAS


Cameron Edwards, Chairman


Cody Younkin, Member


David Hubert, Member

ATTEST:


Crystal Rucker, County Clerk



SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, KS

APPENDIX E: PROJECT SHEETS

FEBRUARY 2025

Improve Road 160 from K-25 to U-40

Location Description

Roadway: Road 160 from K-25 to US-40 (7.2 Mi.)

Project Information

Description:

Short term - Add systemic safety countermeasures including add two-foot aggregate shoulder and address fixed objects within the clear-zone.

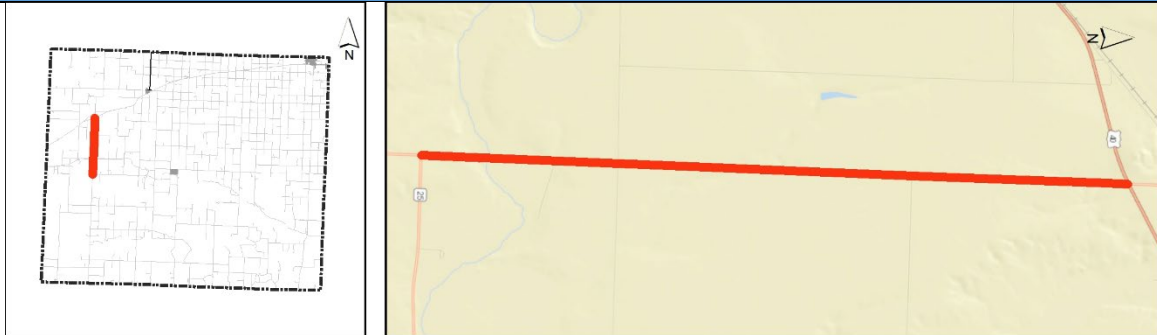
Expanded Short Term - flatten and widen fore slopes in addition to Short Term improvements listed above.

Long term - Pave 26-foot roadway designed for heavy trucks, flatten and widen the fore slopes, extend culverts, replace bridge, and add edge line and centerline pavement markings.

Project Selection Criteria: Selected as high scoring proposed project on Logan County Local Road Safety Plan, and public interest.

Project Cost: Short term: \$650,000 Expanded Short Term \$2.1M Long term \$23.5M

Concept Design/Project Location Map



NO PICS READILY AVAILABLE

Improve Road CR160 RR Crossing N of US 40

Location Description

Roadway: Road CR160 bridge replacement and UP RR Crossing improvement

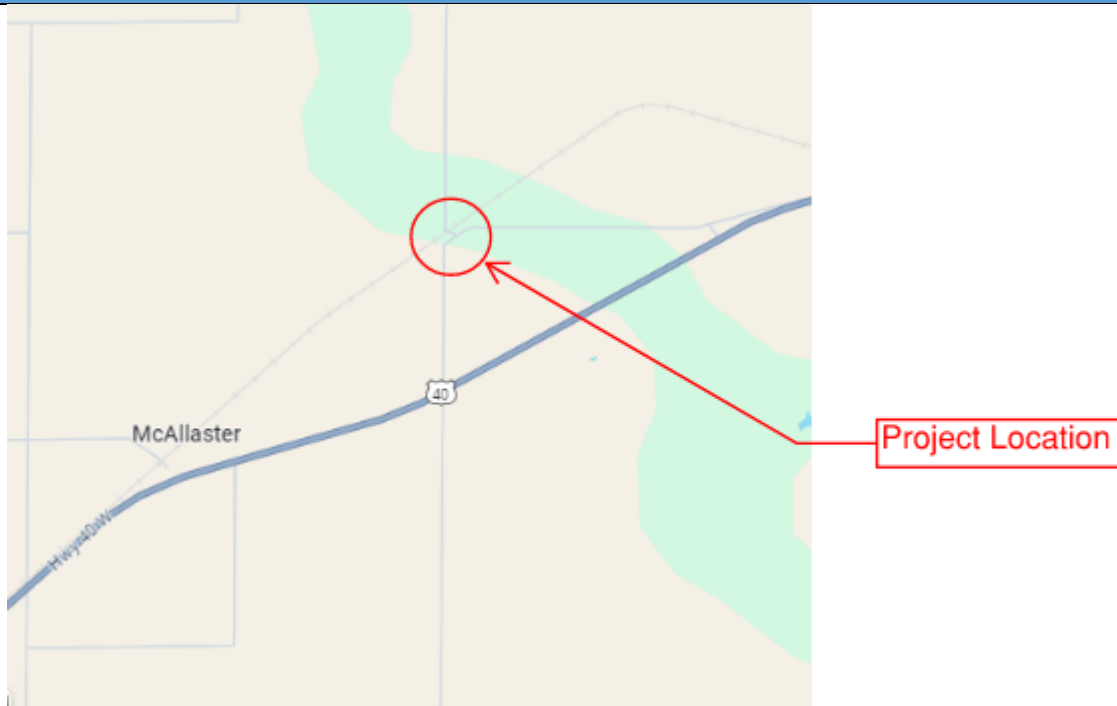
Project Information

Description: Improve geometry of CS160 RR crossing and intersection with Wagon Road, replace bridge over North Fork Smokey Hill River

Project Selection Criteria: High public interest at Community “Meet up” meeting

Project Cost: Bridge Replacement only \$2.0M Complete Project \$6.1M

Concept Design/Project Location Map



NO PICS READILY AVAILABLE

Improve Road 230 and Fort Fox Road

Location Description

Roadway: Rd 230 and Fort Fox Rd between Apache Acre Rd and Road 11 (6.6 Mi.)

Project Information

Description:

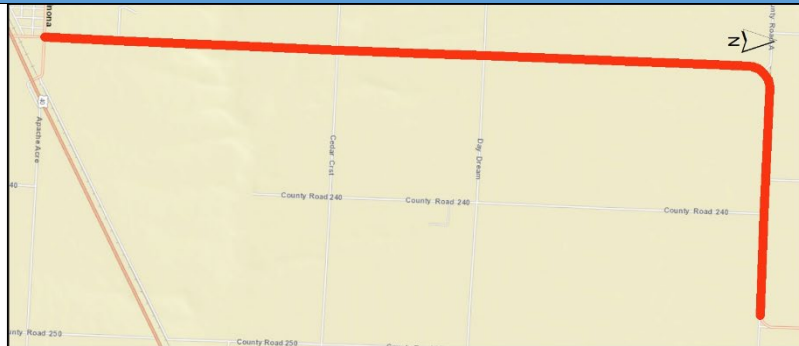
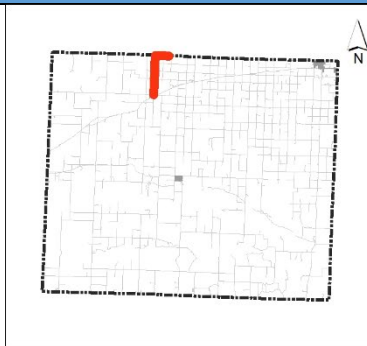
Short term - Add systemic safety countermeasures including edge line and centerline pavement markings, update curve signage, and delineate roadside hazards.

Long term - Add 18-inch aggregate shoulder to each side, flatten and widen the fore slopes, remove/relocated roadside obstacles, extend culverts.

Project Selection Criteria: Selected as high scoring proposed project on Logan County Local Road Safety Plan.

Project Cost: Short term: \$550,000 Long term: \$1.83M

Concept Design/Project Location Map



Improve Road 450

Location Description

Roadway: Rd 450 between US-40 and Fort Fox Rd (1.0 Mi.)

Project Information

Description:

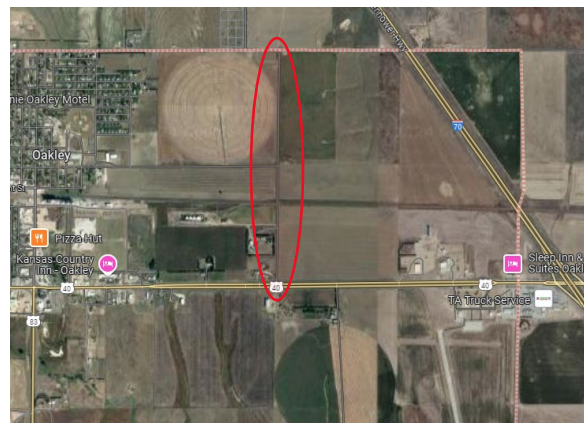
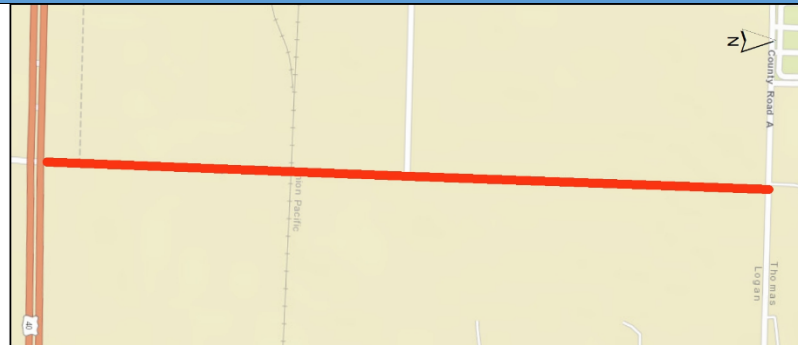
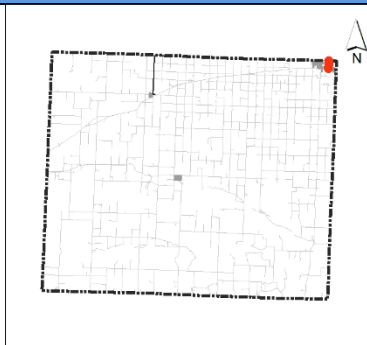
Short term - Add systemic safety countermeasures clearing roadside (15 Ft. each side).

Long term - Remove/relocate roadside obstacles, extend culverts, and add post mounted delineators.

Project Selection Criteria: Selected as high scoring proposed project on Logan County Local Road Safety Plan.

Project Cost: Short term: \$10,000 Long term: \$240,000

Concept Design/Project Location Map



SAFE STREETS AND ROADS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN

Logan County, KS

APPENDIX F: HIN/HRN METHODOLOGY

FEBRUARY 2025

High Injury Network (HIN) Scoring Methodology

The **High Injury Network (HIN)** scoring methodology was developed to identify and prioritize roadway segments and intersections with the highest rates of fatal and severe injury (KSI) crashes. This data-driven approach to the analysis incorporates crash severity, frequency, and roadway characteristics to highlight areas where focused safety improvements will yield the most significant reductions in severe crashes.

Crash Severity Weighting

To evaluate the relative severity of crashes, we employ the **Equivalent Property Damage Only (EPDO)** scoring method. This method assigns weights to different crash types based on their crash costs (insurance cost, costs of life, EMS, medical care, etc.), as provided by **KDOT**¹. The more severe a crash, the higher its weight in the scoring calculation. This helps prioritize locations with fatal and serious injury crashes over those with minor or property-damage-only crashes.

Crash Severity Weights:

- Fatal (K): 1197.47
- Suspected Serious Injury (A): 64.05
- Suspected Minor Injury (B): 20.57
- Possible Injury (C): 11.43
- No Apparent Injury (PDO): 1.00

Formula: The crash severity score for a location is calculated as:

$$\text{Crash Severity Score} = (K \times 1197.47) + (A \times 64.05) + (B \times 20.57) + (C \times 11.43) + (PDO \times 1.00)$$

For each location, the sum of the weighted crash scores were used to determine hotspots.

Crash Summarization

Crashes were summarized by using a 150-foot buffer along the roadway segments and intersections to capture and summarize key crash point attributes, including the number of fatalities and injuries as they relate to the KABCO scale. These values were then entered into the formula above to get a crash severity weight by location.

¹ KDOT crash costs (2023):

- Fatal (K): \$13,999,597
- Suspected Serious Injury (A): \$748,852
- Suspected Minor Injury (B): \$240,505
- Possible Injury (C): \$133,671

HIN Thresholds and Prioritization

To establish a High Injury Network (HIN), we calculate the crash severity score for each segment and intersection and then analyze the resulting network to establish thresholds. This ensures that the HIN captures a significant yet focused portion of the network, representing the historically most dangerous areas for intervention.

Geographic Threshold Differentiation

Given the large project area, there are several differences between areas that suggest thresholds should be localized to the geography (i.e. rural vs urban road segments).

We utilized the **Natural Jenks Method** of distribution to normalize geographies, which scales the data based on the total number of segments and intersections in each city, and places data points into five categories from low to high. This allows for an accurate representation of data clusters and natural breaks.

Garden City and Liberal were evaluated independently as large cities, while the smaller incorporated areas (e.g., Scott City, Oberlin) were grouped with rural areas into a separate category. The analysis distinguishes between urban and rural geographies to account for differing traffic patterns and road types.

For **rural segments**, a **minimum threshold of 1/2 mile** was implemented to prevent elevating small sections with low crash rates. This method ensured that locations with meaningful crash data were prioritized.

For **counties and small cities**, the methodology emphasizes systemic issues over individual crash hotspots. This approach enables broader safety strategies, targeting areas with lower crash frequencies but higher risks.

Prioritization

As mentioned, we used the **Natural Jenks Method** to distribute crash severity scores into five categories, based on the natural distribution of the data. This process helps reveal the inherent groupings in the data by minimizing variance within each category and maximizing the variance between them.

After applying the Natural Jenks Method, only the **top two categories**, corresponding to the highest crash severity scores, were used for prioritization. These categories represent the highest-risk locations in the network, scoring **4** and **5** on the five-point scale.

1. Generating a New Priority Field

A new field was created in the dataset to house the values for these top two priority levels (scores 4 and 5). This field helps identify the most critical intersections and segments across each geography. By isolating these higher-priority areas, we can focus safety interventions on the locations with the greatest potential for reducing severe crashes.

2. Application Across Geographies

This process was applied consistently across all geographies—both urban and rural. For every segment and intersection analyzed:

- **Intersections and segments** that scored in the top two categories (4 and 5) based on crash severity were flagged in the newly generated field as a “priority” location.
- The analysis was repeated for different areas (e.g., Garden City, Liberal, smaller cities, and rural areas) to ensure that the top-priority locations in each geography were highlighted for targeted intervention.

By using the top two categories from the Jenks distribution, we were able to narrow our focus to the locations with the most severe safety concerns, ensuring that limited resources are allocated to the areas with the highest risk of fatal or severe injury crashes.

GIS Visualization

A key component of the HIN is its integration with **GIS**, allowing for spatial analysis and the mapping of crash data. The resulting HIN list should be mapped alongside other project data to help drive project recommendations.

High Risk Network (HRN) Scoring Methodology

The **High Risk Network (HRN)** scoring methodology was developed to identify and prioritize roadway segments and intersections with the highest *risk* of fatal and severe injury (KSI) crashes based on facility attributes. This data-driven approach to the analysis incorporates roadway characteristics, intersection attributes, and location context to highlight areas where focused safety improvements will yield the most significant reductions in severe crashes.

Risk Scoring

To evaluate the fatal and serious injury crash risk of locations across the study area, we scored attributes of the roadways and intersections based on their correlation to KSI crashes. The facilities were categorized into four groups:

- County Intersections
- City Intersections
- County Corridors
- City Corridors

City facilities refer to roadways or intersections located within the six participating cities: Garden City, Liberal, Holcomb, Scott City, Oberlin, and Oakley. In contrast, county facilities include roadways or intersections located outside of the six participating city boundaries. The scoring between city and county facilities were separated based on differing crash patterns depending on the context of the roadway or intersection. Although there are distinct crash patterns within individual cities or counties, many of the communities analyzed lacked a sufficient number of crashes to draw reliable conclusions about crash risk without aggregating data across multiple jurisdictions.

Representative Ratios

The risk scoring is based on the ratio of fatal and serious injury crashes to the centerline miles of roadways or the number of intersections, grouped by various roadway or intersection attributes. The scoring was aggregated for city and county facilities separately. The ratios compared the percentage of fatal and serious injuries crashes occurring in a specific attribute category to the percentage of locations that fall into that category. **Table 1** provides an example calculation of the representative ratios for county intersections.

TABLE 1: SAMPLE REPRESENTATIVE RATIO CALCULATION FOR COUNTY INTERSECTIONS

Daily Entering Vehicles (DEV)	Number of Fatal and Serious Injury Crashes	Number of Intersections	Percentage of Fatal and Serious Injury Crashes	Percentage of Intersections	Representative Ratios
<500	13	2,405	14.8%	67.0%	0.22
500-1,999	26	804	29.5%	22.4%	1.32
2,000-4,999	19	234	21.6%	6.5%	3.31
5,000-9,999	24	130	27.3%	3.6%	7.53
>=10,000	6	18	6.8%	0.5%	13.60

A representativeness ratio of less than 1.0 indicates that a facility with that attribute (e.g., a county intersection with a DEV of <500) is at a lower risk of having a fatal or serious injury crash. A representative ratio of 1.0 indicates that the attribute does not correlate with an increased or decreased risk of fatal and serious injury crashes. Lastly, a ratio greater than 1.0 indicates an increased risk of fatal and serious injury crashes on facilities with that attribute.

Scoring Adjustments

After calculating representative ratios for each facility type and attribute, adjustments were made to finalize scoring values. Adjustments were made for the following reasons:

- To avoid overweighting any single attribute
- To balance the scoring of the same attributes between different groups, such as consistently scoring equity across all facility types and contexts
- To better align scoring with the Local Road Safety Plans, particularly for county facilities
- To account for incomplete or small data subsets leading to high variability

Intersection Risk Scoring

Table 2 and **Table 3** display the scoring used for both county and city Intersections, respectively. Overall, intersection scoring is similar between county and city intersections. The main differences between the two scoring methodologies are as follows:

- In a city context, the number of entering lanes correlated to a higher risk of KSI crashes. As a result, the number of entering lanes is a scoring criteria for city intersections, but not for county intersections.
- The intersection control type was given greater weight in cities compared to counties. In both cities and counties, signalized intersections had a higher rate of KSI crashes compared to other intersection control types. However, there were not enough signalized intersections in the counties to assign elevated scoring for signalized intersections. This is why the intersection control type is weighted higher in cities compared to counties.
- In a city context, the skew of an intersection had a stronger correlation to KSI crashes and was therefore weighted higher.

The total score for county intersections was out of 21, while the total score for city intersections was out of 33. For each intersection, a score was assigned for each attribute based on its intersection

characteristics. These scores were then summed, multiplied by 100, and divided by 21 or 33 depending on the location of the intersection. This resulted in a score out of 100 for each intersection.

TABLE 2: COUNTY INTERSECTION SCORING

Attribute	Total Score	Range/Value	Representative Ratio	Score
DEV	8	<500	0.22	0
		500-1,999	1.32	1
		2,000-4,999	3.31	2
		5,000-9,999	7.53	5
		>=10,000	13.60	8
Control Type	4	Uncontrolled	1.33	1
		No Data	0.46	0
		TWSC	1.86	2
		AWSC	0.00	0
		Signal	40.73	4
Skew	3	No	0.83	0
		Yes	2.97	3
Equity*	2	No	0.70	0
		Yes	1.57	2
FSI Crash History	2	No	Scoring Adjustment	0
		Yes		2
Proximity to Schools	2	No	Scoring Adjustment	0
		Yes		2

**Note: "Equity" denotes if the location is in a census tract that is considered disadvantaged or in an equity area. See project documentation on equity resources and communities.*

TABLE 3: CITY INTERSECTION SCORING

Attribute	Total Score	Range/Value	Representative Ratio	Score
DEV	8	<500	0.00	0
		500-1,999	0.11	0
		2,000-4,999	1.52	2
		5,000-9,999	3.79	4
		>=10,000	8.01	8
Control Type	13	Uncontrolled	0.00	0
		No Data	0.09	0
		TWSC	2.09	2
		AWSC	3.97	4
		Signal	13.45	13
Skew	4	No	0.82	0
		Yes	3.94	4
Equity	2	No	0.58	0
		Yes	1.24	2
FSI Crash History	2	No	Scoring Adjustment	0
		Yes		2
Proximity to Schools	2	No	0.89	0
		Yes	1.20	2
Number of Entering Lanes	2	4	0.77	0
		5	2.36	2
		6	1.16	1
		8	2.56	2

**Note: "Equity" denotes if the location is in a census tract that is considered disadvantaged or in an equity area. See project documentation on equity resources and communities.*

Corridor (Segment) Risk Scoring

Table 4 and **Table 5** show the scoring used for both county and city corridors (roadway segments), respectively. Overall, roadway scoring is similar between county and city intersections. The main differences between the two scoring methodologies are as follows:

- In County Scoring:
 - Crash history included roadway departure crashes.
 - For corridors, access density and the presence of edge line markings were included in the scoring.
- In City Scoring:
 - Vulnerable Road Users (VRU) crash history was included.
 - For corridors, the number of lanes and jurisdictional ownership were included in the scoring.

- Roadway width was weighted higher than in counties. As a stronger correlation between roadway width to KSI crashes was found in cities.

The maximum score county and city roadways may attain was 24. For each roadway segment, a score was assigned for each attribute based on its intersection characteristics. These scores were then summed, multiplied by 100, and divided by 24. This resulted in a score out of 100 for each segment.

TABLE 4: COUNTY CORRIDOR SCORING

Attribute	Total Score	Range/Value	Representative Ratio	Score
AADT	8	<500	0.31	0
		500-1,999	3.02	3
		2,000-4,999	8.37	5
		5,000-9,999	10.79	8
		>=10,000	8.51	8
Roadway Width	3	No Data	0.25	0
		<22	1.40	1
		22+	2.95	3
Proximity to Schools	2	No	0.98	0
		Yes	2.36	2
Equity*	2	No	0.67	0
		Yes	1.76	2
Roadway Departure Crash History	2	No	Scoring	0
		Yes	Adjustment	2
Access Density	5	No Data	0.24	0
		< 5.0	3.07	3
		5 - 9.9	2.23	3
		10 - 14.9	4.44	5
		>=15	4.80	5
Edgeline Markings	2	No Data	0.92	0
		Not Present	1.39	2
		Present	0.95	0

**Note: "Equity" denotes if the location is in a census tract that is considered disadvantaged or in an equity area. See project documentation on equity resources and communities.*

TABLE 5: CITY CORRIDOR SCORING

Attribute	Total Score	Range/Value	Representative Ratio	Score
AADT	8	<500	0.32	0
		500-1,999	0.54	1
		2,000-4,999	1.79	2
		5,000-9,999	4.33	5
		>=10,000	5.85	8
Roadway Width	4	No Data	0.46	0
		<30	3.04	3
		30-40	2.06	2
		40+	3.76	4
Proximity to Schools	2	No	Scoring	0
		Yes	Adjustment	2
Equity*	2	No	0.17	0
		Yes	1.38	2
VRU Crash History	2	No	Scoring	0
		Yes	Adjustment	2
Number of Lanes	4	1	0.00	0
		2	0.71	0
		3	0.00	4
		4	3.93	4
Ownership	4	City	0.75	0
		County	1.55	2
		KDOT	3.59	4

**Note: "Equity" denotes if the location is in a census tract that is considered disadvantaged or in an equity area. See project documentation on equity resources and communities.*

HRN Thresholds and Prioritization

To establish a High Risk Network (HRN), the overall attribute risk score for each intersection and roadway segment was calculated. The resulting network was then analyzed to establish thresholds. This ensures that the HRN captures a significant yet focused portion of the network, representing areas of highest need for intervention.

Geographic Threshold Differentiation

Given the large project area, there are several differences between areas that suggest thresholds should be localized to smaller sub-geographies, similar to what was done for the HIN.

To align with the HIN methodology, we utilized the Natural Jenks Method of distribution to normalize geographies, which scales the data based on the total number of segments and intersections in each city and county, and places them into 5 categories from low to high. This allows for an accurate representation of data clusters and natural breaks.

Differing from the HIN methodology, each jurisdiction was evaluated independently to show a reasonable number of facilities within the High Risk Network for each jurisdiction. This methodology ensured that an actionable HRN was created for each jurisdiction.

Prioritization

As mentioned, the **Natural Jenks Method** was used to distribute crash severity scores into five categories, based on the natural distribution of the data. This process helped reveal the inherent groupings in the data by minimizing variance within each category and maximizing the variance between them.

After applying the Jenks Natural Breaks, only the **top two categories**, corresponding to the highest crash severity scores, were used for prioritization. These categories represent the highest-risk locations in the network, scoring **4** and **5** on the five-point scale.

1. Generating a New Priority Field

A new field was created in the dataset to house the values for these top two priority levels (scores 4 and 5). This field helps identify the most critical intersections and segments across each geography. By isolating these higher-priority areas, safety interventions are focused on the locations with the greatest potential for reducing severe crashes.

2. Application Across Geographies

This process was applied consistently across all geographies—both city and county. For every segment and intersection analyzed:

- **Intersections and segments** that scored in the top two categories (4 and 5) based on risk attributes were flagged in the newly generated field.
- The analysis was repeated for each individual jurisdiction that is a part of the US-83 safety coalition to ensure that the highest priority locations in each geography were highlighted for targeted intervention.

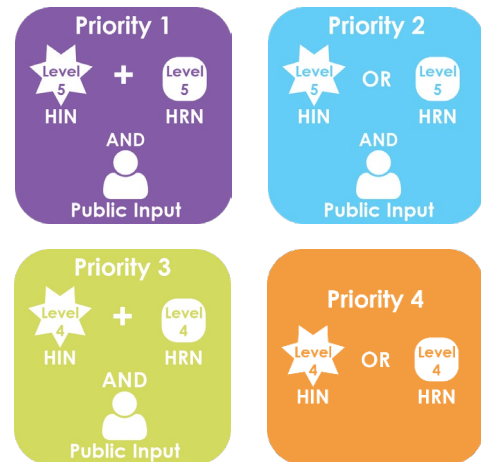
By using the top two categories from the Jenks distribution, the focus was narrowed to the locations with the most severe safety concerns, ensuring that limited resources are allocated to the areas with the highest risk of fatal or severe injury crashes.

GIS Visualization

A key component of the HRN is its integration with **GIS**, allowing for spatial analysis and the mapping of crash data. The resulting HRN list should be mapped alongside other project data to help determine project recommendations.

Final Priority Network HIN/HRN Overlay/ Engagement Results

After the HIN and HRN were created, the Priority Network was created by integrating findings from two key safety analyses—the High Injury Network (HIN) and the High-Risk Network (HRN)—along with community feedback. It categorizes road segments and intersections into various priority levels based on data from the HIN and HRN analyses. These findings are further cross-referenced with locations highlighted by the community during public engagement. The priority levels are defined as follows:



- **Priority Level 1** includes corridors and intersections that scored level 5 on both the HIN and HRN and identified by the community
- **Priority Level 2** includes corridors and intersections identified as level 5 on either the HIN* or the HRN and identified by the community
- **Priority Level 3** includes corridors and intersections identified as level 4 on both the HIN* and HRN and identified by the community
- **Priority Level 4** includes corridors and intersections identified as level 4 or higher on the HIN* or the HRN

*Network segments only exist where there is HIN and HRN alignment

The result is a network of roadway segments and intersections that show severe crash history, risk, and acknowledgment from the public as a known issue. An example of scoring results for Garden City, KS can be seen below.

